TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
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AGENDA

REGULAR COUNCIL MEETING OF THE TOWN OF JEROME
COUNCIL CHAMBERS, JEROME TOWN HALL
600 CLARK STREET, JEROME, ARIZONA

TUESDAY, DECEMBER 09, 2025, AT 7:00 PM

Due to the length of this meeting, Council may recess and reconvene at the time and date announced.

Pursuant to A.R.S. 38-431.02 notice is hereby given to the members of the Council and to the General Public that the Jerome Town Council plans to hold the above meeting. Persons with a disability may request an accommodation such as a sign language interpreter by contacting Kristen Muenz, Deputy Clerk, at 928-634-7943. Requests should be made early enough to allow time to arrange the accommodation. For TYY access, call the Arizona Relay Service at 800-367-8939 and ask for the Town of Jerome at 928-634-7943.

Notice is hereby given that pursuant to A.R.S. 1-602.A.9, subject to certain specified statutory exceptions, parents have a right to consent before the State or any of its political subdivisions make a video or audio recording of a minor child. Meetings of the Town Council are audio and/or video recorded, and, as a result, proceedings in which children are present may be subject to such recording. Parents in order to exercise their rights may either file written consent with the Town Clerk to such recording, or take personal action to ensure that their child or children are not present when a recording may be made. If a child is present at the time a recording is made, the Town will assume that the rights afforded parents pursuant to A.R.S. 1-602.A.9 have been waived.

We acknowledge we are on the traditional lands of the Yavapai and Apache People and we, the Town of Jerome, pay respect to the elders both past and present.

1. CALL TO ORDER/ROLL CALL
Mayor/Chairperson to call meeting to order
Town Clerk to call and record the roll.

2. FINANCIAL REPORTS
Discussion/Possible Action

A. Financial Report and Detail Invoice Register Report for November, 2025

Council will consider and may approve the financial reports for month ending November, 2025.

3. STAFF AND COUNCIL REPORTS
Discussion/Possible Action

A. Reports by the Town Manager / Clerk, Deputy Clerk, Utilities Clerk, Accounting Clerk, Public Works Director, Building Inspector, Library Director, Municipal Magistrate, Police Chief, Fire Chief and Council Members, Which in the Case of Council Member's Reports will be Limited to a Summary of Current Events and will Involve no Action

Council will consider and may approve the staff reports.

4. ZONING ADMINISTRATOR'S REPORT/PLANNING & ZONING AND DESIGN REVIEW BOARD MINUTES
Information/Council Review

A. Report Provided by the Zoning Administrator. Minutes are Provided for Information Only and do Not Require any Action

5. APPROVAL OF MINUTES
Discussion/Possible Action

A. Consider Approval of the November 11th, 2025, Regular Council Meeting Minutes and November 24, 2025, Special Council Meeting Minutes

Council will consider and may approve the November 11th, Regular, and November 24th Special Council Meeting minutes.

6. PETITIONS FROM THE PUBLIC
Pursuant to A.R.S. § 38-431.01(H), public comment is permitted on matters not listed on the agenda, but the subject matter must be within the jurisdiction of the Council. All comments are subject to reasonable time, place and manner restrictions. All petitioners must fill out a request form with their name and subject matter. When recognized by the chair, please step to the podium, state your name and please observe the three (3) minute time limit. No petitioners will be recognized without a request. The Council's response to public comments is limited to asking staff to review a matter commented upon, asking that a matter be put on a future agenda, or responding to criticism.

7. ORDINANCES AND RESOLUTIONS
Discussion/Possible Action

A. Consideration of Resolution No. 684; A Resolution of the Mayor and Town Council of the Town of Jerome, Arizona, Authorizing the Submission of an Application to the Arizona Department of Transportation's State Match Advantage for Rural Transportation (AZ SMART) Fund for Grant Development and Submission Costs for a Federal Discretionary Grant Related to the Verde Avenue Development

Council will consider and may approve the resolution.

8. UNFINISHED BUSINESS
Discussion/Possible Action

A. Consider Removing from the Table and Consideration of Bids in Response to the Town's Issuance of an Invitation for Bids Regarding its Notice of Intent to Sell 655 Holly

Council will consider the bid(s) received and may approve the bid, reject all bids, and / or provide staff direction.

9. NEW BUSINESS
Discussion/Possible Action

A. Consideration of the Aravapai Running Special Event Permit Application for the Annual Cocodona Race Event

Council will consider and may approve the special event permit.

B. Discussion and Possible Staff Direction Regarding the Town of Jerome as a Trust Beneficiary of the Richard J. Martin Revocable Trust

Council will discuss and may provide staff direction.

C. Consideration of a Town of Jerome Appointment as a Designee for the Yavapai County Water Resource and Open Space Committee

Council will consider and may appoint one of their membership or designate it a staff appointment.

D. Consider Removing from the Table and Review of Proposals Received in Response to the RFP for an Advanced Metering Infrastructure System, and Identify 2-3 Respondents to Attend the Upcoming Special Meeting for Further Council and Community Evaluation and Consideration

Council will review the proposals received and provide staff direction.

10. TO AND FROM THE COUNCIL

Council may direct staff regarding items to be placed on a future agenda.

11. ADJOURNMENT

The Town Council may recess the public meeting and convene in Executive Session for the purpose of discussion or consultation for legal advice with the Town Attorney, who may participate telephonically, regarding any item listed on this agenda pursuant to A.R.S. § 38-431.03 (A)(3). The Chair reserves the right, with the consent of Council, to take items on the agenda out of order.

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that this notice and agenda was posted at the following locations on or before 7 p.m. on _____ in accordance with the statement filed by the Jerome Town Council with the Jerome Town Clerk: (1) 970 Gulch Road, side of Gulch Fire Station, exterior posting case; (2) 600 Clark Street, Jerome Town Hall, exterior posting case; (3) 120 Main Street, Jerome Post office, interior posting case.

_____

Kristen Muenz, Deputy Town Clerk

File Attachments for Item:

A. Financial Report and Detail Invoice Register Report for November, 2025

Council will consider and may approve the financial reports for month ending November, 2025.

TOWN OF JEROME
COMBINED CASH INVESTMENT
NOVEMBER 30, 2025

COMBINED CASH ACCOUNTS

99-00-1003	LGIP	1,963.97
99-00-1011	NBA CHECKING	65,345.65
99-00-1013	OAZ CTL BUSINESS SAVINGS	5.00
99-00-1019	ONE AZ CREDIT UNION CHECKING	42,569.32
99-00-1020	OAZ GENERAL SAVINGS	742,070.86
99-00-1050	XPRESS DEPOSIT ACCOUNT	43,118.58
	TOTAL COMBINED CASH	895,073.38
99-00-1800	CASH CLEARING - UTILITY MGMT	(658.92)
99-00-1810	CASH CLEARING - BUSINESS LICEN	30.00
99-00-1000	CASH ALLOCATED TO OTHER FUNDS	(894,444.46)
	TOTAL UNALLOCATED CASH	.00

CASH ALLOCATION RECONCILIATION

10	ALLOCATION TO GENERAL FUND	752,750.28
20	ALLOCATION TO UTILITY FUND	184,971.88
30	ALLOCATION TO HURF FUND	(691,116.14)
35	ALLOCATION TO PARKING FUND	204,390.37
40	ALLOCATION TO FIRE DEPT PENSION & RETIREMENT	15,301.40
50	ALLOCATION TO OPERATING GRANTS REVENUE	89,598.39
60	ALLOCATION TO CAPITAL GRANTS FUND	840,100.24
70	ALLOCATION TO GENERAL FUND CONTINGENCIES FND	(331,455.01)
80	ALLOCATION TO UTILITIES CONTINGENCIES FUND	75,480.48
90	ALLOCATION TO CAPITAL FUND	(245,577.43)
	TOTAL ALLOCATIONS TO OTHER FUNDS	894,444.46
	ALLOCATION FROM COMBINED CASH FUND - 99-00-1000	(894,444.46)
	ZERO PROOF IF ALLOCATIONS BALANCE	.00

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

GENERAL FUND

	ASSETS			
10-00-1000	CASH - COMBINED FUND		752,750.28	
10-00-1005	PETTY CASH - GENERAL GOV		275.00	
10-00-1007	COURT - CHECKING & BOND ACCT		82,043.89	
10-00-1008	COURT - JCEF ACCT		14,613.13	
10-00-1009	COURT - FTG ACCT		10,981.71	
10-00-1014	PETTY CASH - FIRE DEPT		150.00	
10-00-1015	PETTY CASH - LIBRARY		150.00	
10-00-1115	FRANCHISE FEES		4,223.74	
10-00-1120	GF ACCOUNTS RECEIVABLE		(18.27)	
10-00-1135	PROPERTY TAXES		764.22	
10-00-1175	ACCOUNTS RECEIVABLE LEASES		181,939.00	
	TOTAL ASSETS			1,047,872.70
	LIABILITIES AND EQUITY			
	LIABILITIES			
10-00-2401	FEDERAL WH & FICA		(.03)	
10-00-2403	UNEMPLOYMENT TAXES		90.50	
10-00-2406	HEALTH INSURANCE		(2,376.12)	
10-00-2409	PSPRS		118.86	
10-00-2410	WAGES PAYABLE		.01	
10-00-2412	HDHP SAVINGS		236.30	
10-00-2413	WORKMAN'S COMP PR LIABILITY		7,624.76	
10-00-2600	CUSTOMER DEPOSITS		7,154.18	
10-00-2940	COURT LIABILITIES		5,741.47	
10-00-2950	FD PER CALL PAYABLE		(88,107.50)	
10-00-2975	DEFERRED INFLOW LEASES		181,939.00	
10-00-2999	SUSPENSE ACCOUNT		95,000.00	
	TOTAL LIABILITIES			207,421.43
	FUND EQUITY			
10-00-3002	UNRESTRICTED FUND BALANCE		1,013,043.29	
	REVENUE OVER EXPENDITURES - YTD	(172,592.02)		
	BALANCE - CURRENT DATE		(172,592.02)	
	TOTAL FUND EQUITY			840,451.27
	TOTAL LIABILITIES AND EQUITY			1,047,872.70

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	TAX REVENUE					
10-30-4001	PROPERTY TAXES	18,413.07	20,792.60	47,500.00	26,707.40	43.8
10-30-4005	CITY SALES TAXES	105,318.10	295,631.86	1,478,750.00	1,183,118.14	20.0
10-30-4010	STATE SALES TAXES	6,074.04	26,477.29	74,000.00	47,522.71	35.8
10-30-4030	VEHICLE LICENSE TAX	3,778.15	16,537.89	40,000.00	23,462.11	41.3
10-30-4055	FRANCHISE FEES	.00	4,748.80	17,250.00	12,501.20	27.5
	TOTAL TAX REVENUE	133,583.36	364,188.44	1,657,500.00	1,293,311.56	22.0
	LICENSES, PERMITS&OTHER FEES					
10-31-4040	BUILDING PERMITS	150.00	400.00	12,000.00	11,600.00	3.3
10-31-4041	PLANNING & ZONING FEES	.00	700.00	3,000.00	2,300.00	23.3
10-31-4045	BUSINESS LICENSES	300.00	1,950.00	5,000.00	3,050.00	39.0
10-31-4071	FEES-SHORT TERM RENTAL LICENSE	.00	.00	450.00	450.00	.0
	TOTAL LICENSES, PERMITS&OTHER FEES	450.00	3,050.00	20,450.00	17,400.00	14.9
	INTERGOVERNMENTAL REVENUE					
10-32-4015	URBAN REVENUE SHARE	24,364.60	121,823.00	305,000.00	183,177.00	39.9
	TOTAL INTERGOVERNMENTAL REVENUE	24,364.60	121,823.00	305,000.00	183,177.00	39.9
	LIBRARY REVENUE					
10-33-4020	YAVAPAI COUNTY FOR LIBRARY	.00	.00	18,150.00	18,150.00	.0
10-33-4070	RENTS-LIBRARY	862.00	4,310.00	10,250.00	5,940.00	42.1
10-33-4200	LIBRARY CONTRIBUTIONS	.00	.00	2,000.00	2,000.00	.0
	TOTAL LIBRARY REVENUE	862.00	4,310.00	30,400.00	26,090.00	14.2
	POLICE DEPT REVENUE					
10-34-4061	PD PARKING CITATION REVENUE	5,605.75	23,444.00	40,000.00	16,556.00	58.6
10-34-4062	PD REVENUE FROM PARKING FUND	3,750.00	18,750.00	45,000.00	26,250.00	41.7
10-34-4063	POLICE SMART & SAFE AZ FUND	.00	.00	11,000.00	11,000.00	.0
10-34-4064	POLICE OFFICER SAFETY EQUIP RE	129.13	675.50	2,000.00	1,324.50	33.8
10-34-4065	POLICE SERVICES	.00	190.00	4,500.00	4,310.00	4.2
	TOTAL POLICE DEPT REVENUE	9,484.88	43,059.50	102,500.00	59,440.50	42.0

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	COURT REVENUE					
10-35-4035	FINES AND FORFEITURES	3,475.14	20,033.92	57,000.00	36,966.08	35.2
10-35-4037	COURT SECURITY FUND REVENUE	696.53	3,642.16	10,000.00	6,357.84	36.4
	TOTAL COURT REVENUE	4,171.67	23,676.08	67,000.00	43,323.92	35.3
	RENTAL REVENUE					
10-36-4070	RENTS-TOWN PROPERTIES	5,225.80	35,419.96	93,000.00	57,580.04	38.1
10-36-4080	UTILITY REIMBURSEMENTS	260.52	1,696.99	5,000.00	3,303.01	33.9
	TOTAL RENTAL REVENUE	5,486.32	37,116.95	98,000.00	60,883.05	37.9
	FIRE DEPT REVENUE					
10-37-4053	FIRE DEPT SERVICES REV	143.62	3,100.66	12,500.00	9,399.34	24.8
10-37-4090	WILDLAND FIRE FEES	.00	31,583.16	77,000.00	45,416.84	41.0
10-37-4091	WILDLANDS WAGE REIMBURSEMENT	.00	24,771.54	75,000.00	50,228.46	33.0
	TOTAL FIRE DEPT REVENUE	143.62	59,455.36	164,500.00	105,044.64	36.1
	GENERAL FUND REVENUE					
10-38-4000	FUND BALANCE RESERVES	27,083.33	135,416.65	325,000.00	189,583.35	41.7
10-38-4300	INTEREST	639.92	3,445.10	13,500.00	10,054.90	25.5
10-38-4400	SALE OF ASSETS	.00	11,289.49	12,500.00	1,210.51	90.3
10-38-4500	MISCELLANEOUS REVENUES	1,820.57	15,006.97	13,000.00	(2,006.97)	115.4
10-38-4510	INS DIVIDENDS,CLAIMS,REIMBURSM	.00	.00	10,000.00	10,000.00	.0
	TOTAL GENERAL FUND REVENUE	29,543.82	165,158.21	374,000.00	208,841.79	44.2
	ADMINISTRATIVE CHARGES					
10-39-4600	ADMINISTRATIVE CHARGES	16,424.58	82,122.90	197,095.00	114,972.10	41.7
	TOTAL ADMINISTRATIVE CHARGES	16,424.58	82,122.90	197,095.00	114,972.10	41.7
	TOTAL FUND REVENUE	224,514.85	903,960.44	3,016,445.00	2,112,484.56	30.0

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	GENERAL GOVT EXPENSES					
10-41-5001	SALARIES AND WAGES	21,877.35	108,891.21	285,000.00	176,108.79	38.2
10-41-5006	LONGEVITY BONUS	.00	899.00	2,000.00	1,101.00	45.0
10-41-5010	FICA MATCH	1,707.49	8,279.11	22,000.00	13,720.89	37.6
10-41-5011	RETIREMENT MATCH	2,481.92	12,051.11	31,000.00	18,948.89	38.9
10-41-5012	HEALTH/LIFE INSURANCE	6,052.88	30,264.40	67,000.00	36,735.60	45.2
10-41-5013	WORKERS COMPENSATION	79.50	490.24	1,650.00	1,159.76	29.7
10-41-5014	UNEMPLOYMENT INSURANCE	.00	.00	280.00	280.00	.0
10-41-6101	ACCOUNTING AND AUDITING	7,500.00	7,500.00	24,000.00	16,500.00	31.3
10-41-6105	ADVERTISING, PRINTING, & PUBLI	301.42	495.61	4,000.00	3,504.39	12.4
10-41-6110	CONTRACT SERVICES	1,050.00	8,570.93	33,000.00	24,429.07	26.0
10-41-6115	CONVENTIONS AND SEMINARS	.00	1,827.40	3,250.00	1,422.60	56.2
10-41-6116	TRAINING & EDUCATION	50.00	2,376.85	2,750.00	373.15	86.4
10-41-6125	DUES, SUBS & MEMBERSHIPS	261.37	5,839.34	75,000.00	69,160.66	7.8
10-41-6130	ELECTION EXPENSES	.00	.00	1,000.00	1,000.00	.0
10-41-6145	FUEL	93.00	339.06	650.00	310.94	52.2
10-41-6155	INSURANCE	.00	24,364.04	32,500.00	8,135.96	75.0
10-41-6170	LEGAL EXP - GEN GOV	.00	6,825.00	13,000.00	6,175.00	52.5
10-41-6185	MISCELLANEOUS	700.00	805.00	6,000.00	5,195.00	13.4
10-41-6186	BANK FEES - GEN ADMIN	156.74	812.73	2,000.00	1,187.27	40.6
10-41-6188	BANK FEES / MERCH SVCS	257.93	1,099.25	3,500.00	2,400.75	31.4
10-41-6190	OFFICE SUPPLIES	674.49	6,114.67	8,500.00	2,385.33	71.9
10-41-6191	COPIER & EQUIP LEASE EXPENSE	357.51	1,787.55	6,000.00	4,212.45	29.8
10-41-6192	SOFTWARE SUPPORT EXP - GG	3,680.88	19,866.73	29,000.00	9,133.27	68.5
10-41-6193	COMPUTER HARDWARE & SERVICE	.00	7,493.90	3,500.00	(3,993.90)	214.1
10-41-6195	OPERATING SUPPLIES - GEN GOV	132.54	216.79	1,500.00	1,283.21	14.5
10-41-6200	POSTAGE	468.00	1,642.79	4,250.00	2,607.21	38.7
10-41-6220	REP AND MAINT - VEHICLES	.00	1,887.90	2,000.00	112.10	94.4
10-41-6245	SHUTTLE EXPENSES	244.88	1,049.21	3,500.00	2,450.79	30.0
10-41-6250	SMALL TOOLS AND EQUIPMENT	.00	.00	7,500.00	7,500.00	.0
10-41-6265	TELEPHONE	42.24	831.18	2,800.00	1,968.82	29.7
10-41-6275	TRAVEL	.00	289.10	1,500.00	1,210.90	19.3
10-41-6285	TOURISM 1% BED TAX	.00	533.00	11,000.00	10,467.00	4.9
10-41-6286	COMMUNITY HEALTH	.00	.00	750.00	750.00	.0
10-41-6288	OUTSIDE AGENCY REQUEST	.00	.00	1,500.00	1,500.00	.0
10-41-9500	TRANSFERS OUT	17,500.00	87,500.00	210,000.00	122,500.00	41.7
	TOTAL GENERAL GOVT EXPENSES	65,670.14	350,943.10	902,880.00	551,936.90	38.9

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	MAGISTRATE COURT EXPENSES					
10-42-5001	SALARIES AND WAGES	5,326.92	26,414.11	68,000.00	41,585.89	38.8
10-42-5006	LONGEVITY BONUS	.00	.00	290.00	290.00	.0
10-42-5010	FICA AND MEDICARE	407.51	2,020.69	5,200.00	3,179.31	38.9
10-42-5011	RETIREMENT	325.62	1,628.10	4,400.00	2,771.90	37.0
10-42-5012	HEALTH/LIFE INSURANCE	.00	.00	18,750.00	18,750.00	.0
10-42-5013	WORKER'S COMPENSATION	11.70	69.70	230.00	160.30	30.3
10-42-5014	UNEMPLOYMENT	.00	13.41	100.00	86.59	13.4
10-42-6037	COURT SECURITY FUND EXPENSES	291.25	734.86	7,000.00	6,265.14	10.5
10-42-6101	ACCOUNTING AND AUDITING	.00	.00	6,000.00	6,000.00	.0
10-42-6110	CONTRACT SERVICES	420.92	4,953.09	10,500.00	5,546.91	47.2
10-42-6115	CONVENTIONS AND SEMINARS	.00	275.00	400.00	125.00	68.8
10-42-6116	TRAINING & EDUCATION	.00	395.00	500.00	105.00	79.0
10-42-6125	DUES AND SUBSCRIPTIONS	62.00	62.00	300.00	238.00	20.7
10-42-6185	MISCELLANEOUS	.00	.00	200.00	200.00	.0
10-42-6190	OFFICE SUPPLIES	27.63	172.73	200.00	27.27	86.4
10-42-6191	COPIER & EQUIP LEASE EXP	.00	1,849.15	3,750.00	1,900.85	49.3
10-42-6195	OPERATING SUPPLIES - COURT	.00	.00	200.00	200.00	.0
10-42-6265	TELEPHONE	.00	293.28	900.00	606.72	32.6
10-42-6275	TRAVEL	.00	.00	750.00	750.00	.0
	TOTAL MAGISTRATE COURT EXPENSES	6,873.55	38,881.12	127,670.00	88,788.88	30.5

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	POLICE DEPT EXPENSES					
10-43-5001	SALARIES AND WAGES	35,681.37	169,389.43	440,000.00	270,610.57	38.5
10-43-5006	LONGEVITY BONUS	.00	513.00	1,750.00	1,237.00	29.3
10-43-5010	FICA AND MEDICARE	2,920.65	12,979.73	34,750.00	21,770.27	37.4
10-43-5011	RETIREMENT	5,666.13	26,925.96	60,000.00	33,074.04	44.9
10-43-5012	HEALTH INSURANCE	5,159.11	25,804.63	70,000.00	44,195.37	36.9
10-43-5013	WORKER'S COMPENSATION	1,728.70	9,616.16	31,000.00	21,383.84	31.0
10-43-5014	UNEMPLOYMENT	2.50	15.88	600.00	584.12	2.7
10-43-6105	ADVERTISING, PRINTING, & PUBLI	82.18	229.38	300.00	70.62	76.5
10-43-6110	CONTRACT SERVICES	.00	545.00	1,250.00	705.00	43.6
10-43-6116	TRAINING & EDUCATION	.00	2,165.36	4,000.00	1,834.64	54.1
10-43-6120	DISPATCH FEES	.00	16,108.32	50,000.00	33,891.68	32.2
10-43-6125	DUES AND SUBSCRIPTIONS	.00	.00	2,000.00	2,000.00	.0
10-43-6145	FUEL	974.90	4,308.71	12,000.00	7,691.29	35.9
10-43-6172	PROSECUTOR EXP	2,000.00	10,000.00	24,000.00	14,000.00	41.7
10-43-6185	MISCELLANEOUS	.00	225.00	500.00	275.00	45.0
10-43-6192	SOFTWARE SERVICE & SUPPORT	4,927.15	10,514.90	11,000.00	485.10	95.6
10-43-6193	COMPUTER HARDWARE & SERVICE	.00	3,741.52	5,500.00	1,758.48	68.0
10-43-6195	OPERATING SUPPLIES - POLICE	368.17	640.20	2,000.00	1,359.80	32.0
10-43-6200	POSTAGE	10.90	23.04	200.00	176.96	11.5
10-43-6220	REP AND MAINT - VEHICLES	85.10	3,315.41	9,000.00	5,684.59	36.8
10-43-6225	REP AND MAINT - EQUIPMENT	83.13	277.28	2,750.00	2,472.72	10.1
10-43-6234	POLICE OFFICER SAFETY EQUIP EX	288.91	402.89	2,250.00	1,847.11	17.9
10-43-6250	SMALL TOOLS AND EQUIPMENT	378.60	1,071.09	3,000.00	1,928.91	35.7
10-43-6265	TELEPHONE	319.34	2,477.68	7,000.00	4,522.32	35.4
10-43-6280	UNIFORMS	.00	1,341.01	3,500.00	2,158.99	38.3
10-43-7025	VEHICLES, CAP OUTLAY, POLICE	.00	.00	21,000.00	21,000.00	.0
	TOTAL POLICE DEPT EXPENSES	60,676.84	302,631.58	799,350.00	496,718.42	37.9

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	FIRE DEPT EXPENSES					
10-44-5001	SALARIES AND WAGES	20,440.14	104,830.09	363,000.00	258,169.91	28.9
10-44-5002	WILDLAND PERSONNEL	.00	16,032.37	33,000.00	16,967.63	48.6
10-44-5003	VOLUNTEER-EMPLOYEE PER CALL PE	952.50	5,760.00	19,000.00	13,240.00	30.3
10-44-5006	LONGEVITY BONUS	.00	258.00	1,480.00	1,222.00	17.4
10-44-5007	PAYMENT IN LIEU OF BENEFITS	562.76	2,813.80	8,000.00	5,186.20	35.2
10-44-5010	FICA AND MEDICARE	2,201.48	10,325.82	29,500.00	19,174.18	35.0
10-44-5011	RETIREMENT	2,165.15	12,161.83	36,000.00	23,838.17	33.8
10-44-5012	HEALTH INSURANCE	4,204.48	21,568.18	78,000.00	56,431.82	27.7
10-44-5013	WORKER'S COMPENSATION	970.91	6,960.82	29,250.00	22,289.18	23.8
10-44-5014	UNEMPLOYMENT	.00	.00	665.00	665.00	.0
10-44-6116	TRAINING & EDUCATION	459.07	1,851.30	7,000.00	5,148.70	26.5
10-44-6120	DISPATCH FEES	.00	2,861.00	8,800.00	5,939.00	32.5
10-44-6125	DUES AND SUBSCRIPTIONS	.00	178.20	750.00	571.80	23.8
10-44-6145	FUEL	406.01	1,476.53	6,800.00	5,323.47	21.7
10-44-6170	LEGAL EXP - FIRE	.00	.00	750.00	750.00	.0
10-44-6180	MEDICAL EXPENSES	.00	.00	850.00	850.00	.0
10-44-6181	MEDICAL SUPPLIES EXP	99.20	877.37	4,000.00	3,122.63	21.9
10-44-6185	MISCELLANEOUS	.00	(116.00)	1,250.00	1,366.00	(9.3)
10-44-6192	SOFTWARE SERVICE & SUPPORT	1,073.81	3,335.06	3,000.00	(335.06)	111.2
10-44-6193	COMPUTER HARDWARE AND SERVICE	.00	830.42	2,000.00	1,169.58	41.5
10-44-6195	OPERATING SUPPLIES - FIRE DEPT	232.54	232.54	1,500.00	1,267.46	15.5
10-44-6220	REP AND MAINT - VEHICLES	(34.05)	3,690.75	12,500.00	8,809.25	29.5
10-44-6225	REP AND MAINT - EQUIPMENT	.00	.00	3,000.00	3,000.00	.0
10-44-6250	SMALL TOOLS AND EQUIPMENT	97.13	5,151.99	9,200.00	4,048.01	56.0
10-44-6265	TELEPHONE	366.67	2,121.25	3,750.00	1,628.75	56.6
10-44-6270	TRAINING CENTER ASSESSMENT	.00	2,692.00	2,750.00	58.00	97.9
10-44-6276	MISCELLANEOUS WILDLAND	.00	.00	10,000.00	10,000.00	.0
	TOTAL FIRE DEPT EXPENSES	34,197.80	205,893.32	675,795.00	469,901.68	30.5

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	LIBRARY EXPENSES					
10-45-5001	SALARIES AND WAGES	6,614.53	33,619.19	93,500.00	59,880.81	36.0
10-45-5006	LONGEVITY BONUS	.00	170.00	725.00	555.00	23.5
10-45-5007	LIBRARY BENEFIT STIPEND	549.56	2,747.80	7,389.00	4,641.20	37.2
10-45-5010	FICA AND MEDICARE	547.56	2,792.58	7,750.00	4,957.42	36.0
10-45-5011	RETIREMENT	534.72	2,673.60	7,750.00	5,076.40	34.5
10-45-5012	HEALTH INSURANCE	42.96	214.80	650.00	435.20	33.1
10-45-5013	WORKER'S COMPENSATION	15.88	102.14	380.00	277.86	26.9
10-45-5014	UNEMPLOYMENT	.17	5.68	250.00	244.32	2.3
10-45-6110	CONTRACT SERVICES	3,212.02	3,212.02	1,750.00	(1,462.02)	183.5
10-45-6125	COUNTY MEMBERSHIP DUES	.00	.00	1,800.00	1,800.00	.0
10-45-6185	MISCELLANEOUS	.00	.00	250.00	250.00	.0
10-45-6190	OFFICE SUPPLIES	.00	.00	400.00	400.00	.0
10-45-6195	OPERATING SUPPLIES - LIBRARY	363.89	1,907.22	4,750.00	2,842.78	40.2
10-45-6205	PRINT AND NON-PRINT MATERIALS	293.14	567.06	2,750.00	2,182.94	20.6
10-45-6225	REP AND MAINT - EQUIPMENT	.00	.00	200.00	200.00	.0
10-45-6250	SMALL TOOLS AND EQUIPMENT	.00	.00	1,000.00	1,000.00	.0
10-45-6265	TELEPHONE	.00	261.93	1,000.00	738.07	26.2
10-45-6266	E-RATE EXP	42.00	452.00	700.00	248.00	64.6
	TOTAL LIBRARY EXPENSES	12,216.43	48,726.02	132,994.00	84,267.98	36.6
	PLANNING & ZONING EXP					
10-46-5001	SALARIES AND WAGES	4,979.51	23,639.01	70,000.00	46,360.99	33.8
10-46-5006	LONGEVITY BONUS	.00	.00	425.00	425.00	.0
10-46-5010	FICA AND MEDICARE	378.64	1,789.95	5,500.00	3,710.05	32.5
10-46-5011	RETIREMENT	423.75	2,109.75	6,750.00	4,640.25	31.3
10-46-5012	HEALTH INSURANCE	958.82	4,794.10	10,000.00	5,205.90	47.9
10-46-5013	WORKER'S COMPENSATION	23.55	125.32	600.00	474.68	20.9
10-46-5014	UNEMPLOYMENT	2.07	6.93	126.00	119.07	5.5
10-46-6105	ADVERTISING, PRINTING, & PUBLI	.00	.00	100.00	100.00	.0
10-46-6116	TRAINING AND EDUCATION	.00	.00	1,000.00	1,000.00	.0
10-46-6170	LEGAL EXP - P&Z	.00	2,375.00	12,000.00	9,625.00	19.8
10-46-6185	MISCELLANEOUS	.00	.00	20,000.00	20,000.00	.0
10-46-6192	SOFTWARE MAINTENANCE & SUPPORT	324.00	2,817.00	2,500.00	(317.00)	112.7
10-46-6265	TELEPHONE	87.84	351.22	600.00	248.78	58.5
10-46-6275	TRAVEL	.00	.00	250.00	250.00	.0
10-46-6310	HISTORIC PRESERVATION EXP	.00	.00	4,000.00	4,000.00	.0
	TOTAL PLANNING & ZONING EXP	7,178.18	38,008.28	133,851.00	95,842.72	28.4

GENERAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	PARKS EXPENSES					
10-47-5001	SALARIES AND WAGES	661.00	3,138.96	7,750.00	4,611.04	40.5
10-47-5006	LONGEVITY BONUS	6.19	19.87	40.00	20.13	49.7
10-47-5010	FICA AND MEDICARE	52.62	237.48	600.00	362.52	39.6
10-47-5011	RETIREMENT	75.67	326.08	1,000.00	673.92	32.6
10-47-5012	HEALTH INSURANCE	247.55	1,133.68	2,300.00	1,166.32	49.3
10-47-5013	WORKER'S COMPENSATION	21.39	120.92	400.00	279.08	30.2
10-47-5014	UNEMPLOYMENT	.00	.57	10.00	9.43	5.7
10-47-6145	FUEL	120.89	376.29	800.00	423.71	47.0
10-47-6170	LEGAL	.00	.00	250.00	250.00	.0
10-47-6185	MISCELLANEOUS	.00	.00	250.00	250.00	.0
10-47-6192	SOFTWARE SERVICE & SUPPORT	.00	.00	200.00	200.00	.0
10-47-6195	OPERATING SUPPLIES - PARKS	33.12	70.31	500.00	429.69	14.1
10-47-6215	REP AND MAINT - BUILDING	.00	.00	200.00	200.00	.0
10-47-6220	REP AND MAINT - VEHICLES	.00	605.43	2,500.00	1,894.57	24.2
10-47-6225	REP AND MAINT - EQUIPMENT	.00	.00	800.00	800.00	.0
10-47-6230	REP AND MAINT - INFRASTRUCTURE	.00	.00	750.00	750.00	.0
10-47-6250	SMALL TOOLS AND EQUIPMENT	.00	99.12	750.00	650.88	13.2
10-47-6280	UNIFORM EXP PARKS	.00	266.49	450.00	183.51	59.2
10-47-6285	UTILITIES	257.29	1,019.17	2,900.00	1,880.83	35.1
	TOTAL PARKS EXPENSES	1,475.72	7,414.37	22,450.00	15,035.63	33.0
	PROPERTIES EXPENSES					
10-48-5001	SALARIES AND WAGES	4,094.18	19,435.21	50,000.00	30,564.79	38.9
10-48-5006	LONGEVITY BONUS	38.32	123.01	230.00	106.99	53.5
10-48-5010	FICA AND MEDICARE	325.88	1,470.66	3,750.00	2,279.34	39.2
10-48-5011	RETIREMENT	468.68	2,019.02	5,800.00	3,780.98	34.8
10-48-5012	HEALTH INSURANCE	1,533.40	7,019.83	14,000.00	6,980.17	50.1
10-48-5013	WORKER'S COMPENSATION	132.46	735.90	2,300.00	1,564.10	32.0
10-48-5014	UNEMPLOYMENT	.00	3.48	50.00	46.52	7.0
10-48-6110	CONTRACT SERVICES	827.44	3,047.44	10,500.00	7,452.56	29.0
10-48-6140	ENGINEERING FEES	.00	.00	7,500.00	7,500.00	.0
10-48-6145	FUEL	201.49	779.44	1,500.00	720.56	52.0
10-48-6185	MISCELLANEOUS	318.35	706.04	1,250.00	543.96	56.5
10-48-6192	SOFTWARE SERVICE & SUPPORT	.00	.00	75.00	75.00	.0
10-48-6195	OPERATING SUPPLIES - PROPERTIE	33.12	70.31	2,000.00	1,929.69	3.5
10-48-6215	R&M BUILDING - PROPERTIES	7.89	28,615.49	50,000.00	21,384.51	57.2
10-48-6220	REP AND MAINT - VEHICLES	291.40	2,233.44	2,750.00	516.56	81.2
10-48-6225	REP AND MAINT - EQUIPMENT	89.73	89.73	1,100.00	1,010.27	8.2
10-48-6230	REP AND MAINT - INFRASTRUCTURE	169.85	169.85	19,000.00	18,830.15	.9
10-48-6250	SMALL TOOLS AND EQUIPMENT	295.28	541.99	1,500.00	958.01	36.1
10-48-6280	UNIFORM EXP PROPERTIES	.00	266.50	375.00	108.50	71.1
10-48-6285	UTILITIES	3,359.50	16,727.33	47,500.00	30,772.67	35.2
10-48-8040	LEASE PAYMENTS	.00	.00	275.00	275.00	.0
	TOTAL PROPERTIES EXPENSES	12,186.97	84,054.67	221,455.00	137,400.33	38.0

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
TOTAL FUND EXPENDITURES	200,475.63	1,076,552.46	3,016,445.00	1,939,892.54	35.7
NET REVENUE OVER EXPENDITURES	24,039.22	(172,592.02)	.00	172,592.02	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

UTILITY FUND

	ASSETS			
20-00-1000	CASH - COMBINED FUND		184,971.88	
20-00-1015	UTILITIES A/R		71,510.26	
20-00-1080	WWTP REGIONS ACCT		717,397.39	
20-00-1125	MISCELLANEOUS		27.21	
20-00-1190	ALLOWANCE FOR DOUBTFUL ACCTS		(21,000.00)	
20-00-1515	BUILDINGS-PROP, PLANT, EQUIP		2,545,159.57	
20-00-1518	INFRASTRUCTURE		1,553,803.85	
20-00-1520	OPERATING EQUIPMENT-PROP, PLAN		235,211.78	
20-00-1540	CONSTRUCTION WIP		860,545.05	
20-00-1550	BUILDINGS-ACC DEPRECIATION		(1,932,627.40)	
20-00-1555	OPERATING EQUIPMENT-ACC DEPREC		(198,567.65)	
	TOTAL ASSETS			4,016,431.94
	LIABILITIES AND EQUITY			
	LIABILITIES			
20-00-2500	SALES TAX PAYABLE		633.22	
20-00-2600	CUSTOMER DEPOSITS		36,510.45	
20-00-2700	COMPENSATED ABSENCES		7,272.64	
20-00-2980	WWTP LOAN		1,819,000.00	
	TOTAL LIABILITIES			1,863,416.31
	FUND EQUITY			
20-00-3002	UNRESTRICTED FUND BALANCE		1,456,525.75	
20-00-3051	UNRESTRICTED FUND BALANCE		810,217.00	
20-00-3052	UNRESTRICED FUND BALANCE		(175,962.00)	
	REVENUE OVER EXPENDITURES - YTD	62,234.88		
	BALANCE - CURRENT DATE		62,234.88	
	TOTAL FUND EQUITY			2,153,015.63
	TOTAL LIABILITIES AND EQUITY			4,016,431.94

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

UTILITY FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	WATER REVENUE					
20-50-4010	FUND BALANCE RESERVES	7,833.33	39,166.65	94,000.00	54,833.35	41.7
20-50-4085	WATER USAGE FEES	16,728.14	81,185.20	201,000.00	119,814.80	40.4
20-50-4100	WATER CONNECTION FEES	.00	.00	5,000.00	5,000.00	.0
20-50-4500	MISCELLANEOUS	215.00	916.03	1,750.00	833.97	52.3
20-50-4900	TRANSFERS IN	12,083.33	60,416.66	145,000.00	84,583.34	41.7
	TOTAL WATER REVENUE	36,859.80	181,684.54	446,750.00	265,065.46	40.7
	SEWER REVENUE					
20-51-4050	CONNECTION FEES	.00	.00	5,500.00	5,500.00	.0
20-51-4085	SEWER USAGE FEES	17,406.21	84,964.49	200,000.00	115,035.51	42.5
20-51-4900	TRANSFERS IN	6,666.67	33,333.33	80,000.00	46,666.67	41.7
	TOTAL SEWER REVENUE	24,072.88	118,297.82	285,500.00	167,202.18	41.4
	SANITATION REVENUE					
20-52-4085	SANITATION USAGE FEES	13,948.08	68,865.70	190,000.00	121,134.30	36.3
20-52-4500	MISCELLANEOUS	.00	.00	2,000.00	2,000.00	.0
20-52-4900	TRANSFERS IN	5,833.33	29,166.66	70,000.00	40,833.34	41.7
	TOTAL SANITATION REVENUE	19,781.41	98,032.36	262,000.00	163,967.64	37.4
	TOTAL FUND REVENUE	80,714.09	398,014.72	994,250.00	596,235.28	40.0

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

UTILITY FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	WATER EXPENDITURES					
20-50-5001	SALARIES AND WAGES	7,222.24	34,282.15	84,000.00	49,717.85	40.8
20-50-5006	LONGEVITY BONUS	67.59	216.97	375.00	158.03	57.9
20-50-5010	FICA AND MEDICARE	574.86	2,594.06	6,300.00	3,705.94	41.2
20-50-5011	RETIREMENT	826.77	3,561.36	10,000.00	6,438.64	35.6
20-50-5012	HEALTH INSURANCE	2,704.86	12,381.96	24,000.00	11,618.04	51.6
20-50-5013	WORKER'S COMPENSATION	261.55	1,502.82	4,600.00	3,097.18	32.7
20-50-5014	UNEMPLOYMENT	.00	6.15	100.00	93.85	6.2
20-50-6110	CONTRACT SERVICES	1,025.00	4,100.00	16,000.00	11,900.00	25.6
20-50-6116	TRAINING AND EDUCATION	.00	240.00	500.00	260.00	48.0
20-50-6135	PERMIT FEE EXP - WATER	.00	.00	1,250.00	1,250.00	.0
20-50-6140	ENGINEERING FEES	.00	1,180.00	7,000.00	5,820.00	16.9
20-50-6145	FUEL	310.90	992.67	3,250.00	2,257.33	30.5
20-50-6155	INSURANCE	.00	7,697.85	14,000.00	6,302.15	55.0
20-50-6170	LEGAL EXP - WATER	.00	500.00	10,000.00	9,500.00	5.0
20-50-6185	MISCELLANEOUS	.00	746.10	1,750.00	1,003.90	42.6
20-50-6192	SOFTWARE SUPPORT EXP - WATER	385.90	8,088.11	7,500.00	(588.11)	107.8
20-50-6195	OPERATING SUPPLIES - WATER	2,674.99	6,247.51	5,000.00	(1,247.51)	125.0
20-50-6215	R&M BUILDING - WATER	.00	.00	500.00	500.00	.0
20-50-6220	REP AND MAINT - VEHICLES	.00	1,179.92	3,000.00	1,820.08	39.3
20-50-6225	REP AND MAINT - EQUIPMENT	.00	.00	2,000.00	2,000.00	.0
20-50-6230	REP AND MAINT - INFRASTRUCTURE	229.86	7,860.01	175,000.00	167,139.99	4.5
20-50-6232	SPRINGS SECURITY EXP	1,741.27	4,948.24	6,000.00	1,051.76	82.5
20-50-6240	SERVICE TESTS/SYSTEM TESTING	.00	471.00	750.00	279.00	62.8
20-50-6250	SMALL TOOLS AND EQUIPMENT	.00	82.02	2,000.00	1,917.98	4.1
20-50-6271	DWR FEE	.00	.00	1,000.00	1,000.00	.0
20-50-6280	UNIFORM EXP WATER	.00	376.92	450.00	73.08	83.8
20-50-6285	UTILITIES EXP - WATER	39.75	164.47	550.00	385.53	29.9
20-50-6290	ADMINISTRATIVE CHARGE	5,045.83	25,229.15	60,550.00	35,320.85	41.7
	TOTAL WATER EXPENDITURES	23,111.37	124,649.44	447,425.00	322,775.56	27.9

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

UTILITY FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	SEWER EXPENDITURES					
20-51-5001	SALARIES AND WAGES	3,916.59	18,590.28	47,000.00	28,409.72	39.6
20-51-5006	LONGEVITY BONUS	36.65	117.65	240.00	122.35	49.0
20-51-5010	FICA AND MEDICARE	311.74	1,406.75	3,750.00	2,343.25	37.5
20-51-5011	RETIREMENT	448.35	1,931.18	5,500.00	3,568.82	35.1
20-51-5012	HEALTH INSURANCE	1,466.89	6,714.56	14,000.00	7,285.44	48.0
20-51-5013	WORKER'S COMPENSATION	140.60	798.37	2,850.00	2,051.63	28.0
20-51-5014	UNEMPLOYMENT	.00	3.32	50.00	46.68	6.6
20-51-6110	CONTRACT SERVICES	3,325.00	13,300.00	48,750.00	35,450.00	27.3
20-51-6135	PERMIT FEE EXP - SEWER	.00	1,165.21	2,950.00	1,784.79	39.5
20-51-6140	ENGINEERING FEES	.00	3,429.00	14,000.00	10,571.00	24.5
20-51-6145	FUEL	79.95	346.42	2,000.00	1,653.58	17.3
20-51-6155	INSURANCE	.00	7,697.85	14,000.00	6,302.15	55.0
20-51-6170	LEGAL EXP - SEWER	.00	625.00	1,500.00	875.00	41.7
20-51-6185	MISCELLANEOUS	.00	746.10	2,000.00	1,253.90	37.3
20-51-6192	SOFTWARE SUPPORT EXP - SEWER	385.90	4,388.11	7,500.00	3,111.89	58.5
20-51-6195	OPERATING SUPPLIES - SEWER	94.59	6,121.34	12,500.00	6,378.66	49.0
20-51-6220	REP AND MAINT - VEHICLES	.00	605.44	3,000.00	2,394.56	20.2
20-51-6225	REP AND MAINT - EQUIPMENT	.00	.00	600.00	600.00	.0
20-51-6230	REP AND MAINT - INFRASTRUCTURE	152.39	1,178.16	32,000.00	30,821.84	3.7
20-51-6240	SERVICE TESTS/SYSTEM TESTING	331.00	3,841.00	10,500.00	6,659.00	36.6
20-51-6250	SMALL TOOLS & EQUIPMENT (UNDER	814.31	896.33	1,500.00	603.67	59.8
20-51-6280	UNIFORM EXP SEWER	.00	306.68	450.00	143.32	68.2
20-51-6285	UTILITIES	178.67	581.98	2,750.00	2,168.02	21.2
20-51-6290	ADMINISTRATIVE CHARGE	5,045.83	25,229.15	60,550.00	35,320.85	41.7
	TOTAL SEWER EXPENDITURES	16,728.46	100,019.88	289,940.00	189,920.12	34.5

UTILITY FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	SANITATION EXPENDITURES					
20-52-5001	SALARIES AND WAGES	6,230.22	29,576.03	71,500.00	41,923.97	41.4
20-52-5006	LONGEVITY BONUS	58.31	187.18	380.00	192.82	49.3
20-52-5010	FICA AND MEDICARE	495.87	2,237.96	5,750.00	3,512.04	38.9
20-52-5011	RETIREMENT	713.21	3,072.45	9,000.00	5,927.55	34.1
20-52-5012	HEALTH INSURANCE	2,333.36	10,682.31	22,500.00	11,817.69	47.5
20-52-5013	WORKER'S COMPENSATION	406.39	2,294.73	6,500.00	4,205.27	35.3
20-52-5014	UNEMPLOYMENT	.00	5.29	75.00	69.71	7.1
20-52-6111	RECYCLING CONTRACT EXP	340.00	1,165.00	1,800.00	635.00	64.7
20-52-6116	TRAINING & EDUCATION	.00	.00	200.00	200.00	.0
20-52-6142	EQUIPMENT RENTALS	.00	.00	1,000.00	1,000.00	.0
20-52-6145	FUEL	363.59	1,650.00	6,000.00	4,350.00	27.5
20-52-6155	INSURANCE	.00	7,697.85	14,500.00	6,802.15	53.1
20-52-6165	LANDFILL TIPPING FEES	1,744.35	8,200.40	21,000.00	12,799.60	39.1
20-52-6185	MISCELLANEOUS	272.16	3,648.33	8,000.00	4,351.67	45.6
20-52-6192	SOFTWARE SUPPORT EXP - TRASH	385.90	3,144.48	5,930.00	2,785.52	53.0
20-52-6195	OPERATING SUPPLIES - TRASH	33.12	376.28	500.00	123.72	75.3
20-52-6220	REP AND MAINT - VEHICLES	.00	9,554.04	9,000.00	(554.04)	106.2
20-52-6225	REP AND MAINT - EQUIPMENT	30.75	125.83	600.00	474.17	21.0
20-52-6230	R&M TRASH - INFRASTRUCTURE	150.15	150.15	250.00	99.85	60.1
20-52-6250	SMALL TOOLS AND EQUIPMENT	280.00	1,846.55	1,500.00	(346.55)	123.1
20-52-6280	UNIFORM EXP TRASH	.00	266.51	350.00	83.49	76.2
20-52-6290	ADMINISTRATIVE CHARGE	5,045.83	25,229.15	60,550.00	35,320.85	41.7
20-52-9500	TRANSFERS OUT	.00	.00	10,000.00	10,000.00	.0
	TOTAL SANITATION EXPENDITURES	18,883.21	111,110.52	256,885.00	145,774.48	43.3
	TOTAL FUND EXPENDITURES	58,723.04	335,779.84	994,250.00	658,470.16	33.8
	NET REVENUE OVER EXPENDITURES	21,991.05	62,234.88	.00	(62,234.88)	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

HURF FUND

	ASSETS			
30-00-1000	CASH - COMBINED FUND		(691,116.14)	
30-00-1022	OAZ HURF SAVINGS		765,685.43	
	TOTAL ASSETS			74,569.29
	LIABILITIES AND EQUITY			
	FUND EQUITY			
30-00-3002	UNRESTRICTED FUND BALANCE		95,434.86	
	REVENUE OVER EXPENDITURES - YTD	(20,865.57)		
	BALANCE - CURRENT DATE		(20,865.57)	
	TOTAL FUND EQUITY			74,569.29
	TOTAL LIABILITIES AND EQUITY			74,569.29

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

HURF FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	HURF REVENUE					
30-30-4010	HURF FUND BALANCE RESERVE	.00	.00	7,350.00	7,350.00	.0
30-30-4020	HURF REVENUE	4,116.90	16,184.28	48,750.00	32,565.72	33.2
30-30-4300	INTEREST AND INVESTMENT EARNIN	313.82	1,613.84	3,000.00	1,386.16	53.8
30-30-4900	TRANSFERS IN	9,166.67	45,833.35	110,000.00	64,166.65	41.7
	TOTAL HURF REVENUE	13,597.39	63,631.47	169,100.00	105,468.53	37.6
	TOTAL FUND REVENUE	13,597.39	63,631.47	169,100.00	105,468.53	37.6

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

HURF FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	HURF EXPENDITURE					
30-30-5001	SALARIES AND WAGES	5,426.52	26,604.22	38,000.00	11,395.78	70.0
30-30-5006	LONGEVITY BONUS	30.94	384.32	200.00	(184.32)	192.2
30-30-5010	FICA AND MEDICARE	425.41	2,044.06	3,000.00	955.94	68.1
30-30-5011	RETIREMENT	378.50	1,630.42	4,750.00	3,119.58	34.3
30-30-5012	HEALTH INSURANCE	1,238.20	5,668.16	11,500.00	5,831.84	49.3
30-30-5013	WORKER'S COMPENSATION	144.04	807.53	1,900.00	1,092.47	42.5
30-30-5014	UNEMPLOYMENT	.00	2.79	40.00	37.21	7.0
30-30-6140	ENGINEERING FEES	.00	.00	2,500.00	2,500.00	.0
30-30-6142	EQUIPMENT RENTALS	.00	.00	1,000.00	1,000.00	.0
30-30-6145	FUEL	147.01	511.95	1,500.00	988.05	34.1
30-30-6155	INSURANCE	.00	5,131.90	10,500.00	5,368.10	48.9
30-30-6185	MISCELLANEOUS	.00	279.39	1,000.00	720.61	27.9
30-30-6192	SOFTWARE SERVICE & SUPPORT	128.63	771.82	1,575.00	803.18	49.0
30-30-6195	OPERATING SUPPLIES - HURF	33.12	70.31	500.00	429.69	14.1
30-30-6210	PUBLIC RESTROOM SUPPLIES	1,831.43	4,065.31	4,000.00	(65.31)	101.6
30-30-6215	REPAIR & MAINTENANCE - BUILDIN	.00	10.00	500.00	490.00	2.0
30-30-6220	REP AND MAINT - VEHICLES	.00	605.44	1,900.00	1,294.56	31.9
30-30-6225	REP AND MAINT - EQUIPMENT	.00	151.03	1,000.00	848.97	15.1
30-30-6230	REP AND MAINT - INFRASTRUCTURE	1,078.97	26,694.11	45,000.00	18,305.89	59.3
30-30-6250	SMALL TOOLS AND EQUIPMENT	.00	98.49	10,000.00	9,901.51	1.0
30-30-6255	STREET LIGHTS	13.35	4,734.61	14,250.00	9,515.39	33.2
30-30-6260	STREET SUPPLIES	.00	137.58	4,750.00	4,612.42	2.9
30-30-6280	UNIFORM EXP - HURF	.00	266.50	550.00	283.50	48.5
30-30-6290	ADMINISTRATIVE CHARGE	765.42	3,827.10	9,185.00	5,357.90	41.7
	TOTAL HURF EXPENDITURE	11,641.54	84,497.04	169,100.00	84,602.96	50.0
	TOTAL FUND EXPENDITURES	11,641.54	84,497.04	169,100.00	84,602.96	50.0
	NET REVENUE OVER EXPENDITURES	1,955.85	(20,865.57)	.00	20,865.57	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

PARKING FUND

	ASSETS			
35-00-1000	CASH - COMBINED FUND		204,390.37	
	TOTAL ASSETS			204,390.37
	LIABILITIES AND EQUITY			
	FUND EQUITY			
35-00-3002	UNRESTRICTED FUND BALANCE		198,292.34	
	REVENUE OVER EXPENDITURES - YTD	6,098.03		
	BALANCE - CURRENT DATE		6,098.03	
	TOTAL FUND EQUITY			204,390.37
	TOTAL LIABILITIES AND EQUITY			204,390.37

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

PARKING FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	PARKING FUND REVENUE					
35-35-4042	PARKING KIOSK REVENUE	40,866.55	184,608.30	386,000.00	201,391.70	47.8
	TOTAL PARKING FUND REVENUE	40,866.55	184,608.30	386,000.00	201,391.70	47.8
	TOTAL FUND REVENUE	40,866.55	184,608.30	386,000.00	201,391.70	47.8

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

PARKING FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	PARKING FUND EXPENDITURE					
35-35-5001	SALARIES AND WAGES	3,196.69	14,388.59	40,000.00	25,611.41	36.0
35-35-5006	LONGEVITY BONUS	.00	100.00	200.00	100.00	50.0
35-35-5010	FICA MATCH	244.54	1,108.37	2,800.00	1,691.63	39.6
35-35-5013	WORKER'S COMPENSATION	55.94	324.42	950.00	625.58	34.2
35-35-5014	UNEMPLOYMENT	.00	.00	125.00	125.00	.0
35-35-6145	FUEL	45.53	295.86	1,000.00	704.14	29.6
35-35-6185	MISCELLANEOUS	.00	248.70	1,000.00	751.30	24.9
35-35-6186	BANK CHARGES	.00	63.52	100.00	36.48	63.5
35-35-6188	CREDIT CARD PROCESSING FEES	4,848.88	12,965.90	29,815.00	16,849.10	43.5
35-35-6192	SOFTWARE SERVICE AND SUPPORT	9,476.64	11,880.80	22,000.00	10,119.20	54.0
35-35-6195	OPERATING SUPPLIES	.00	524.70	3,000.00	2,475.30	17.5
35-35-6265	TELEPHONE	.00	152.96	6,750.00	6,597.04	2.3
35-35-6290	ADMINISTRATIVE CHARGE	521.67	2,608.35	6,260.00	3,651.65	41.7
35-35-7000	CAPITAL OUTLAY	.00	10,506.66	20,000.00	9,493.34	52.5
35-35-8041	ALLOWANCE FOR ADDITIONAL CAPIT	.00	23,341.44	12,000.00	(11,341.44)	194.5
35-35-9500	TRANSFERS OUT	20,000.00	100,000.00	240,000.00	140,000.00	41.7
	TOTAL PARKING FUND EXPENDITURE	38,389.89	178,510.27	386,000.00	207,489.73	46.3
	TOTAL FUND EXPENDITURES	38,389.89	178,510.27	386,000.00	207,489.73	46.3
	NET REVENUE OVER EXPENDITURES	2,476.66	6,098.03	.00	(6,098.03)	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

FIRE DEPT PENSION & RETIREMENT

	ASSETS		
40-00-1000	CASH - COMBINED FUND	15,301.40	
40-00-1010	INVESTMENTS - PENSION & RELIEF	210,186.63	
40-00-1011	PENSION FUND CASH	21,564.11	
	TOTAL ASSETS		247,052.14
	LIABILITIES AND EQUITY		
	FUND EQUITY		
40-00-3002	UNRESTRICTED FUND BALANCE	247,052.14	
	TOTAL FUND EQUITY		247,052.14
	TOTAL LIABILITIES AND EQUITY		247,052.14

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

FIRE DEPT PENSION & RETIREMENT

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	FIRE DEPT P&R REVENUE					
40-60-4250	TOWN CONTRIBUTION	.00	.00	15,000.00	15,000.00	.0
40-60-4255	STATE PENSION CONTRIBUTION	.00	.00	2,750.00	2,750.00	.0
40-60-4256	RETIREMENT REV FD P&R	.00	59,560.29	10,000.00	(49,560.29)	595.6
	TOTAL FIRE DEPT P&R REVENUE	.00	59,560.29	27,750.00	(31,810.29)	214.6
	TOTAL FUND REVENUE	.00	59,560.29	27,750.00	(31,810.29)	214.6

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

FIRE DEPT PENSION & RETIREMENT

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	FIRE DEPT P&R EXPENDITURE					
40-60-6235	RETIREMENT EXP FD P&R	.00	59,560.29	27,750.00	(31,810.29)	214.6
	TOTAL FIRE DEPT P&R EXPENDITURE	.00	59,560.29	27,750.00	(31,810.29)	214.6
	TOTAL FUND EXPENDITURES	.00	59,560.29	27,750.00	(31,810.29)	214.6
	NET REVENUE OVER EXPENDITURES	.00	.00	.00	.00	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

OPERATING GRANTS REVENUE

	ASSETS			
50-00-1000	CASH - COMBINED FUND		89,598.39	
50-00-1120	OPR GRANTS RECEIVABLE		35,039.75	
50-00-1800	INVENTORY		13,193.06	
	TOTAL ASSETS			137,831.20
	LIABILITIES AND EQUITY			
	LIABILITIES			
50-00-2755	DEFERRED REVENUE - OPR GRANTS		75,489.42	
	TOTAL LIABILITIES			75,489.42
	FUND EQUITY			
50-00-3002	UNRESTRICTED FUND BALANCE		37,207.99	
	REVENUE OVER EXPENDITURES - YTD	25,133.79		
	BALANCE - CURRENT DATE		25,133.79	
	TOTAL FUND EQUITY			62,341.78
	TOTAL LIABILITIES AND EQUITY			137,831.20

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

OPERATING GRANTS REVENUE

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	OPERATING GRANTS REVENUE					
50-40-4066	RICO REV - OPR GRANTS	.00	.00	20,000.00	20,000.00	.0
50-40-4067	POLICE DEPT REV - OPR GRANTS	.00	.00	20,000.00	20,000.00	.0
50-40-4068	FIRE DEPT REV - OPR GRANTS	.00	43,500.00	27,500.00	(16,000.00)	158.2
50-40-4101	WATER TOWER SITING GRANT	.00	.00	45,000.00	45,000.00	.0
50-40-4102	YAVAPAI COUNTY STORM DRAINAGE/	.00	26,000.00	50,000.00	24,000.00	52.0
50-40-4105	COMMUNITY & FOUNDATION GRANT R	.00	.00	20,000.00	20,000.00	.0
50-40-4111	WIFA WATER CONSERVATION GRANT	.00	.00	206,000.00	206,000.00	.0
50-40-4185	MISCELLANEOUS GRANTS	.00	.00	500,000.00	500,000.00	.0
	TOTAL OPERATING GRANTS REVENUE	.00	69,500.00	888,500.00	819,000.00	7.8
	TOTAL FUND REVENUE	.00	69,500.00	888,500.00	819,000.00	7.8

OPERATING GRANTS REVENUE

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	OPERATING GRANTS EXPENDITURE					
50-40-6101	WATER TOWER SITING GRANT	.00	.00	45,000.00	45,000.00	.0
50-40-6102	YAVAPAI COUNTY STORM DRAINAGE/	.00	995.00	50,000.00	49,005.00	2.0
50-40-6105	COMMUNITY INVESTMENT	.00	.00	20,000.00	20,000.00	.0
50-40-6111	WIFA WATER CONSERVATION EXP	.00	.00	206,000.00	206,000.00	.0
50-40-6185	USE OF MISCELLANEOUS GRANTS	.00	40,000.00	500,000.00	460,000.00	8.0
50-40-6236	RICO EXP - OPR GRANTS	.00	.00	20,000.00	20,000.00	.0
50-40-6237	POLICE DEPT EXP - OPR GRANTS	.00	.00	20,000.00	20,000.00	.0
50-40-6238	FIRE DEPT EXP - OPR GRANTS	.00	3,371.21	27,500.00	24,128.79	12.3
	TOTAL OPERATING GRANTS EXPENDITURE	.00	44,366.21	888,500.00	844,133.79	5.0
	TOTAL FUND EXPENDITURES	.00	44,366.21	888,500.00	844,133.79	5.0
	NET REVENUE OVER EXPENDITURES	.00	25,133.79	.00	(25,133.79)	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

CAPITAL GRANTS FUND

	ASSETS			
60-00-1000	CASH - COMBINED FUND		840,100.24	
60-00-1120	CAP GRANTS RECEIVABLE		18,001.25	
	TOTAL ASSETS			858,101.49
	LIABILITIES AND EQUITY			
	LIABILITIES			
60-00-2755	DEFERRED REVENUE - CAP GRANTS		726,409.29	
	TOTAL LIABILITIES			726,409.29
	FUND EQUITY			
60-00-3001	RESTRICTED FUND BALANCE		291,647.29	
60-00-3002	UNRESTRICTED FUND BALANCE		(153,891.34)	
	REVENUE OVER EXPENDITURES - YTD	(6,063.75)		
	BALANCE - CURRENT DATE		(6,063.75)	
	TOTAL FUND EQUITY			131,692.20
	TOTAL LIABILITIES AND EQUITY			858,101.49

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

CAPITAL GRANTS FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	CAPITAL GRANTS REVENUE					
60-70-4105	CDBG DECEPTIOWATERLINE REVENUE	.00	21,732.00	400,000.00	378,268.00	5.4
60-70-4107	YAVAPAI APACHE GAMING DONATION	.00	.00	10,000.00	10,000.00	.0
60-70-4108	FREEPORT MCMORAN - SOCIAL INVE	.00	.00	25,000.00	25,000.00	.0
60-70-4109	BROWNFIELDS GRANT:HOTEL JEROME	.00	.00	500,000.00	500,000.00	.0
60-70-4113	WIFA GRANT-MESCAL SCHOOL	.00	.00	1,450,000.00	1,450,000.00	.0
60-70-4114	WIFA GRANT VERDE CENTRAL & DEC	.00	2,711.25	1,550,000.00	1,547,288.75	.2
60-70-4185	MISCELLANEOUS CAPITAL GRANTS	.00	.00	500,000.00	500,000.00	.0
60-70-4200	FEDERAL GRANTS	.00	.00	2,500,000.00	2,500,000.00	.0
	TOTAL CAPITAL GRANTS REVENUE	.00	24,443.25	6,935,000.00	6,910,556.75	.4
	TOTAL FUND REVENUE	.00	24,443.25	6,935,000.00	6,910,556.75	.4

CAPITAL GRANTS FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	CAPITAL GRANTS EXPENDITURE					
60-70-6105	CDBG DECEPTIWATERLINE EXPENSES	.00	17,997.00	400,000.00	382,003.00	4.5
60-70-6107	YAVAPAI APACHE GRANT EXPENSES	.00	.00	10,000.00	10,000.00	.0
60-70-6108	FREEPORT MCMORAN - SOCIAL INVE	.00	.00	25,000.00	25,000.00	.0
60-70-6109	BROWNFIELDS GRANT:HOTEL JEROME	.00	.00	500,000.00	500,000.00	.0
60-70-6113	WIFA GRANT EXP-MESCAL SCHOOL	.00	5,770.00	1,450,000.00	1,444,230.00	.4
60-70-6114	WIFA GRANT VERDE CENTRAL & DEC	.00	6,740.00	1,550,000.00	1,543,260.00	.4
60-70-6185	MISC EXP - CAP GRANTS	.00	.00	500,000.00	500,000.00	.0
60-70-6200	FEDERAL GRANT EXP	.00	.00	2,500,000.00	2,500,000.00	.0
	TOTAL CAPITAL GRANTS EXPENDITURE	.00	30,507.00	6,935,000.00	6,904,493.00	.4
	TOTAL FUND EXPENDITURES	.00	30,507.00	6,935,000.00	6,904,493.00	.4
	NET REVENUE OVER EXPENDITURES	.00	(6,063.75)	.00	6,063.75	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

GENERAL FUND CONTINGENCIES FND

	ASSETS			
70-00-1000	CASH - COMBINED FUND		(331,455.01)	
	TOTAL ASSETS			(331,455.01)
	LIABILITIES AND EQUITY			
	FUND EQUITY			
70-00-3002	UNRESTRICTED FUND BALANCE		(316,338.00)	
	REVENUE OVER EXPENDITURES - YTD	(15,117.01)		
	BALANCE - CURRENT DATE		(15,117.01)	
	TOTAL FUND EQUITY			(331,455.01)
	TOTAL LIABILITIES AND EQUITY			(331,455.01)

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND CONTINGENCIES FND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	GENERAL FUND CONTINGENCIES REV					
70-25-4090	WILDLANDS REV - CONTINGENCY	10,771.30	10,771.30	75,000.00	64,228.70	14.4
70-25-4295	EXCESS SALES TAX- MISC	.00	.00	2,350,000.00	2,350,000.00	.0
	TOTAL GENERAL FUND CONTINGENCIES RE	10,771.30	10,771.30	2,425,000.00	2,414,228.70	.4
	TOTAL FUND REVENUE	10,771.30	10,771.30	2,425,000.00	2,414,228.70	.4

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

GENERAL FUND CONTINGENCIES FND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	GNERLA FUND CONTINGENCIES EXP					
70-25-6276	WILDLANDS EXP - CONTINGENCY	.00	25,888.31	75,000.00	49,111.69	34.5
70-25-6295	EXPENSE - GF CONTINGENCIES	.00	.00	2,350,000.00	2,350,000.00	.0
	TOTAL GNERLA FUND CONTINGENCIES EXP	.00	25,888.31	2,425,000.00	2,399,111.69	1.1
	TOTAL FUND EXPENDITURES	.00	25,888.31	2,425,000.00	2,399,111.69	1.1
	NET REVENUE OVER EXPENDITURES	10,771.30	(15,117.01)	.00	15,117.01	.0

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

UTILITIES CONTINGENCIES FUND

	ASSETS		
80-00-1000	CASH - COMBINED FUND	75,480.48	
	TOTAL ASSETS		75,480.48
	LIABILITIES AND EQUITY		
	FUND EQUITY		
80-00-3002	ENDING FUND BALANCE	75,480.48	
	TOTAL FUND EQUITY		75,480.48
	TOTAL LIABILITIES AND EQUITY		75,480.48

TOWN OF JEROME
BALANCE SHEET
NOVEMBER 30, 2025

CAPITAL FUND

	ASSETS			
90-00-1000	CASH - COMBINED FUND		(245,577.43)	
90-00-1021	OAZ CAPITAL IMPROVEMENTS		73,137.47	
90-00-1023	ONEAZ WWTP CHECKING		2.26	
	TOTAL ASSETS			(172,437.70)
	LIABILITIES AND EQUITY			
	FUND EQUITY			
90-00-3002	UNRESTRICTED FUND BALANCE		(172,068.01)	
	REVENUE OVER EXPENDITURES - YTD	(369.69)		
	BALANCE - CURRENT DATE		(369.69)	
	TOTAL FUND EQUITY			(172,437.70)
	TOTAL LIABILITIES AND EQUITY			(172,437.70)

TOWN OF JEROME
REVENUES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

CAPITAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
	CAPITAL FUND REVENUES					
90-57-4300	BANK INTEREST - CAPITAL FUND	144.61	751.40	.00	(751.40)	.0
90-57-4515	INTERIM WWTP LOAN	.00	.00	1,000,000.00	1,000,000.00	.0
	TOTAL CAPITAL FUND REVENUES	144.61	751.40	1,000,000.00	999,248.60	.1
	TOTAL FUND REVENUE	144.61	751.40	1,000,000.00	999,248.60	.1

TOWN OF JEROME
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 5 MONTHS ENDING NOVEMBER 30, 2025

CAPITAL FUND

		PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
	CAPITAL FUND EXPENDITURES					
90-57-7027	WWTP CONSTRUCTION EXP	.00	134.05	.00	(134.05)	.0
90-57-7030	INTERIM WWTP LOAN EXP	.00	287.04	1,000,000.00	999,712.96	.0
90-57-7031	WWTP LEGAL SERVICES EXP	.00	700.00	.00	(700.00)	.0
	TOTAL CAPITAL FUND EXPENDITURES	.00	1,121.09	1,000,000.00	998,878.91	.1
	TOTAL FUND EXPENDITURES	.00	1,121.09	1,000,000.00	998,878.91	.1
	NET REVENUE OVER EXPENDITURES	144.61	(369.69)	.00	369.69	.0

Report Criteria:
Detail report type printed

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
1000	#1 FOOD STORE	111225KM1	October 2025 Fuel-Fire De	1	11/12/2025	352.42	.00	352.42	102489	11/12/2025
		111225KM1	October 2025 Fuel-PD Par	2	11/12/2025	45.53	.00	45.53	102489	11/12/2025
		111225KM1	October 2025 Fuel-Properti	3	11/12/2025	101.09	.00	101.09	102489	11/12/2025
		111225KM1	October 2025 Fuel-Old Sh	4	11/12/2025	93.00	.00	93.00	102489	11/12/2025
Total 1000:						592.04	.00	592.04		
1031	ALL-MED EQUIPMENT &	111925KM1	Inv. 841163 Monthly Tank	1	11/19/2025	99.20	.00	99.20	102505	11/19/2025
Total 1031:						99.20	.00	99.20		
1046	ANGELA BRADSHAW NA	111925KM2	Reimburse For Court Secu	1	11/19/2025	291.25	.00	291.25	102506	11/19/2025
Total 1046:						291.25	.00	291.25		
1050	APS	110525KM1	Acct 7575770000 Civic Ce	1	11/05/2025	1,125.82	.00	1,125.82	102469	11/05/2025
		110525KM1	Acct 7575770000 Solar Cr	2	11/05/2025	312.50-	.00	312.50-	102469	11/05/2025
		110525KM1	Acct 3216010000 Hotel Jer	3	11/05/2025	41.16	.00	41.16	102469	11/05/2025
		110525KM1	Acct 2383901000 Upper P	4	11/05/2025	54.17	.00	54.17	102469	11/05/2025
		110525KM1	Acct 4246290000 WWTP	5	11/05/2025	178.67	.00	178.67	102469	11/05/2025
		110525KM1	Acct 0070528763 Holly Ho	6	11/05/2025	32.48	.00	32.48	102469	11/05/2025
		110525KM1	Acct 6506951000 Police St	7	11/05/2025	190.85	.00	190.85	102469	11/05/2025
		110525KM1	Acct 5613490000 Upper P	8	11/05/2025	59.30	.00	59.30	102469	11/05/2025
		110525KM1	Acct 2353720000 Gulch Fir	9	11/05/2025	43.12	.00	43.12	102469	11/05/2025
		110525KM1	Acct 8061950000 Sunshin	10	11/05/2025	39.75	.00	39.75	102469	11/05/2025
		110525KM1	Acct 0421621000 Fire Stati	11	11/05/2025	355.97	.00	355.97	102469	11/05/2025
		110525KM1	Acct 8468241000 Middle P	12	11/05/2025	41.35	.00	41.35	102469	11/05/2025
		110525KM1	Acct 0024240000 Lower P	13	11/05/2025	41.75	.00	41.75	102469	11/05/2025
		110525KM1	Acct 8198655640 Main St	14	11/05/2025	27.81	.00	27.81	102469	11/05/2025
		110525KM1	Acct 6109570000 Perkinsvi	15	11/05/2025	284.03	.00	284.03	102469	11/05/2025
		110525KM2	Acct 2839800000 Mocking	1	11/05/2025	78.68	.00	78.68	102470	11/05/2025
		110525KM2	Acct 1976520000 Co-op	2	11/05/2025	184.33	.00	184.33	102470	11/05/2025
		110525KM2	Acct 3601574879 Park Pan	3	11/05/2025	60.72	.00	60.72	102470	11/05/2025
		111225KM2	Acct 4533627223 Public R	1	11/12/2025	55.67	.00	55.67	102490	11/12/2025
		111225KM2	Acct 9438060000 Hull Roof	2	11/12/2025	16.84	.00	16.84	102490	11/12/2025
Total 1050:						2,599.97	.00	2,599.97		
1056	ARIZONA BUG COMPANY	112525KM1	Inv. 22240 Pest Control at	1	11/25/2025	100.00	.00	100.00	102521	11/25/2025
Total 1056:						100.00	.00	100.00		
1071	ARIZONA SECRETARY O	110525KM3	2025 Election Officer ReCe	1	11/05/2025	50.00	.00	50.00	102471	11/05/2025
Total 1071:						50.00	.00	50.00		
1135	BLUE 360 MEDIA	112525KM2	Inv. IN2509269493 Crimina	1	11/25/2025	62.00	.00	62.00	102522	11/25/2025
Total 1135:						62.00	.00	62.00		
1158	CANDACE GALLAGHER	111225KM6	INV. 11-05-25 Codification	1	11/12/2025	525.00	.00	525.00	102491	11/12/2025
		111225KM6	INV. 10-13-25 Codification	2	11/12/2025	525.00	.00	525.00	102491	11/12/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
Total 1158:						1,050.00	.00	1,050.00		
1170	CASELLE	110525KM4	INV. INV-12686 Maintenan	1	11/05/2025	1,157.73	.00	1,157.73	102472	11/05/2025
		110525KM4	INV. INV-12686 Maintenan	2	11/05/2025	385.90	.00	385.90	102472	11/05/2025
		110525KM4	INV. INV-12686 Maintenan	3	11/05/2025	385.90	.00	385.90	102472	11/05/2025
		110525KM4	INV. INV-12686 Maintenan	4	11/05/2025	385.90	.00	385.90	102472	11/05/2025
		110525KM4	INV. INV-12686 Maintenan	5	11/05/2025	128.63	.00	128.63	102472	11/05/2025
		110525KM4	INV. INV-12686 Maintenan	6	11/05/2025	128.63	.00	128.63	102472	11/05/2025
Total 1170:						2,572.69	.00	2,572.69		
1178	CENTURY LINK	111925KM4	ACCT 88707005 GG Line	1	11/19/2025	4.37	.00	4.37	102507	11/19/2025
Total 1178:						4.37	.00	4.37		
1195	CITY OF COTTONWOOD	111225KM3	Inv. 0009364 Dispatching f	1	11/12/2025	4,027.08	.00	4,027.08	102492	11/12/2025
		111225KM3	Inv. 0009364 Dispatching f	2	11/12/2025	715.25	.00	715.25	102492	11/12/2025
Total 1195:						4,742.33	.00	4,742.33		
1206	COLBY & POWELL, PLC	111925KM3	Inv. 11832 Prep of FY25 Au	1	11/19/2025	7,500.00	.00	7,500.00	102508	11/19/2025
Total 1206:						7,500.00	.00	7,500.00		
1213	CONTRACT WASTEWATE	111225KM5	Inv. 1016417 October 2025	1	11/12/2025	1,025.00	.00	1,025.00	102494	11/12/2025
		111225KM5	Inv. 1016417 October 2025	2	11/12/2025	3,325.00	.00	3,325.00	102494	11/12/2025
		111225KM5	Inv. 1016417 October 2025	3	11/12/2025	130.00	.00	130.00	102494	11/12/2025
		111225KM5	Inv. 1016417 October 2025	4	11/12/2025	1,300.00	.00	1,300.00	102494	11/12/2025
		111225KM5	Inv. 1016417 October 2025	5	11/12/2025	280.52	.00	280.52	102494	11/12/2025
Total 1213:						6,060.52	.00	6,060.52		
1264	DIESEL DIRECT WEST	110525KM5	INV. 86881865 Fuel for Oc	1	11/05/2025	224.36	.00	224.36	102473	11/05/2025
		110525KM5	INV. 86881865 Fuel for Oc	2	11/05/2025	28.04	.00	28.04	102473	11/05/2025
		110525KM5	INV. 86881865 Fuel for Oc	3	11/05/2025	28.04	.00	28.04	102473	11/05/2025
		112525KM3	INV. 86914935 Fuel for 11-	1	11/25/2025	139.23	.00	139.23	102523	11/25/2025
		112525KM3	INV. 86914935 Fuel for 11-	2	11/25/2025	17.40	.00	17.40	102523	11/25/2025
		112525KM3	INV. 86914935 Fuel for 11-	3	11/25/2025	17.40	.00	17.40	102523	11/25/2025
Total 1264:						454.47	.00	454.47		
1322	FOUR-D LLC	110525KM7	Inv. 00000950 October Wor	1	11/05/2025	1,196.25	.00	1,196.25	102476	11/05/2025
		110525KM7	Inv. 00000950 October Wor	2	11/05/2025	362.50	.00	362.50	102476	11/05/2025
		110525KM7	Inv. 00000950 Reimbursem	3	11/05/2025	327.35	.00	327.35	102476	11/05/2025
Total 1322:						1,886.10	.00	1,886.10		
1369	HILL BROTHERS CHEMIC	111925KM5	Inv. INV13141772 Supplies	1	11/19/2025	2,641.87	.00	2,641.87	102509	11/19/2025
Total 1369:						2,641.87	.00	2,641.87		
1412	JANICE PONTIOUS	111925KM6	Reimburse for Station Sup	1	11/19/2025	165.28	.00	165.28	102510	11/19/2025
Total 1412:						165.28	.00	165.28		
1419	JC CULLEN INC	110525KM8	Inv. 159366 November IP P	1	11/05/2025	34.57	.00	34.57	102477	11/05/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
		110525KM8	Inv. 159366 November IP P	2	11/05/2025	34.56	.00	34.56	102477	11/05/2025
Total 1419:						69.13	.00	69.13		
1503	LEGEND	110525KM10	Inv. 2517997 Testing on 10	1	11/05/2025	51.00	.00	51.00	102479	11/05/2025
		110525KM10	Inv. 2518211 Testing on 10-	2	11/05/2025	75.00	.00	75.00	102479	11/05/2025
		111925KM8	Inv. 2519166 Testing Servic	1	11/19/2025	75.00	.00	75.00	102512	11/19/2025
Total 1503:						201.00	.00	201.00		
1507	LIFE & PROPERTY SAFE	112525KM4	INV. 15539 Annual Fire Ala	1	11/25/2025	619.35	.00	619.35	102524	11/25/2025
		112525KM4	INV. 15539 Battery Replac	2	11/25/2025	108.09	.00	108.09	102524	11/25/2025
Total 1507:						727.44	.00	727.44		
1576	NAPA AUTO PARTS	110525KM14	Inv. 391245 Credit for Core	1	11/05/2025	34.05-	.00	34.05-	102480	11/05/2025
		110525KM14	Inv. 391246 Fluids for Tras	2	11/05/2025	51.48	.00	51.48	102480	11/05/2025
		110525KM14	Inv. 391349 FD Hose & Cla	3	11/05/2025	54.31	.00	54.31	102480	11/05/2025
		110525KM14	Inv. 392242 Mirror	4	11/05/2025	30.75	.00	30.75	102480	11/05/2025
		110525KM14	Inv. 392377 Pulleys	5	11/05/2025	185.61	.00	185.61	102480	11/05/2025
		110525KM14	Inv. 392599 PD Unit 29 Te	6	11/05/2025	49.97	.00	49.97	102480	11/05/2025
Total 1576:						338.07	.00	338.07		
1598	NORTHERN CHEMICAL C	110525KM11	Inv. 712032-00 Toilet Paper	1	11/05/2025	1,831.43	.00	1,831.43	102481	11/05/2025
Total 1598:						1,831.43	.00	1,831.43		
1603	ODP BUSINESS SOLUTIO	111925KM9	Inv. 447507762001 Tabs &	1	11/19/2025	80.45	.00	80.45	102513	11/19/2025
		111925KM9	Inv. 447514921001 PD Fol	2	11/19/2025	65.47	.00	65.47	102513	11/19/2025
		111925KM9	Inv. 444401290001 Mints	3	11/19/2025	23.59	.00	23.59	102513	11/19/2025
Total 1603:						169.51	.00	169.51		
1615	FLOWBIRD AMERICA, IN	110525KM6	INV. AI003734 Flowbird Ap	1	11/05/2025	16.75	.00	16.75	102475	11/05/2025
Total 1615:						16.75	.00	16.75		
1625	PERSONNEL SAFETY EN	111225KM8	INV. 106030 Medical Cabin	1	11/12/2025	202.89	.00	202.89	102496	11/12/2025
		111225KM8	INV. 106028 Med Cabinet	2	11/12/2025	71.29	.00	71.29	102496	11/12/2025
		111225KM8	INV. 106027 Med Cabinet	3	11/12/2025	54.27	.00	54.27	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	4	11/12/2025	33.12	.00	33.12	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	5	11/12/2025	33.12	.00	33.12	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	6	11/12/2025	33.12	.00	33.12	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	7	11/12/2025	33.12	.00	33.12	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	8	11/12/2025	33.12	.00	33.12	102496	11/12/2025
		111225KM8	INV. 106029 Medical Cabin	9	11/12/2025	33.12	.00	33.12	102496	11/12/2025
Total 1625:						527.17	.00	527.17		
1626	PETE'S DIESEL SERVICE	111925KM11	Inv. 270384 Garbage Truck	1	11/19/2025	140.00	.00	140.00	102515	11/19/2025
		111925KM11	Inv. 270384 Garbage Truck	2	11/19/2025	140.00	.00	140.00	102515	11/19/2025
Total 1626:						280.00	.00	280.00		
1643	PRESCOTT LAW GROUP,	110525KM12	INV. 10041 Prosecutor Ser	1	11/05/2025	2,000.00	.00	2,000.00	102482	11/05/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
Total 1643:						2,000.00	.00	2,000.00		
1647	FlexPrint, LLC	110525KM13	INV5700523-INT Copier Le	1	11/05/2025	357.51	.00	357.51	102474	11/05/2025
Total 1647:						357.51	.00	357.51		
1723	SCOTT KOLU	111925KM12	Reimburse for New Shuttle	1	11/19/2025	61.25	.00	61.25	102516	11/19/2025
Total 1723:						61.25	.00	61.25		
1728	SEDONA RECYCLES, INC	111225KM9	INV. JRME1025 Hauling &	1	11/12/2025	340.00	.00	340.00	102497	11/12/2025
Total 1728:						340.00	.00	340.00		
1735	SHAW LAW FIRM, PLLC	111925KM13	Inv. 28229 TR2024-000028	1	11/19/2025	255.00	.00	255.00	102517	11/19/2025
Total 1735:						255.00	.00	255.00		
1812	TOWN OF JEROME - UTIL	110525KM16	Acct. 7015.01 Fire Station	1	11/05/2025	229.58	.00	229.58	102484	11/05/2025
		110525KM16	Acct. 7054.01 Town Utilities	2	11/05/2025	177.32	.00	177.32	102484	11/05/2025
		110525KM16	Acct. 1014.03 Town Utilities	3	11/05/2025	46.41	.00	46.41	102484	11/05/2025
		110525KM16	Acct. 6023.03 Town Utilities	4	11/05/2025	46.41	.00	46.41	102484	11/05/2025
		110525KM16	Acct. 7002.01 Town Utilities	5	11/05/2025	243.65	.00	243.65	102484	11/05/2025
		110525KM16	Acct. 7060.01 Town Utilities	6	11/05/2025	229.58	.00	229.58	102484	11/05/2025
Total 1812:						972.95	.00	972.95		
1813	TOWN OF JEROME PR	111725KM1	Payroll Transfer 2 for Nove	1	11/17/2025	95,000.00	.00	95,000.00	102504	11/17/2025
		112525KM5	Payroll Transfer 1 for Dece	1	11/25/2025	95,000.00	.00	95,000.00	102525	11/25/2025
Total 1813:						190,000.00	.00	190,000.00		
1827	UNISOURCE ENERGY SE	111925KM14	Acct 0559820000 Fire Dept	1	11/19/2025	70.20	.00	70.20	102518	11/19/2025
		111925KM14	Acct 7505930000 Civic Ce	2	11/19/2025	102.51	.00	102.51	102518	11/19/2025
		111925KM14	7133613001 - 655 Holly -	3	11/19/2025	12.82	.00	12.82	102518	11/19/2025
		111925KM14	Acct 4185213088 621 Main	4	11/19/2025	11.04	.00	11.04	102518	11/19/2025
		111925KM14	Acct 6937260000 Police D	5	11/19/2025	21.77	.00	21.77	102518	11/19/2025
		111925KM14	Acct 4353340000 Perkinsvi	6	11/19/2025	21.35	.00	21.35	102518	11/19/2025
		111925KM14	Acct 2353340000 Co-op Ut	7	11/19/2025	22.60	.00	22.60	102518	11/19/2025
Total 1827:						262.29	.00	262.29		
1851	VERDE VALLEY HARDWA	111225KM13	Ref. 84088 Couplers	1	11/12/2025	65.84	.00	65.84	102501	11/12/2025
		111225KM13	Ref. 84159 Drill Bits	2	11/12/2025	13.35	.00	13.35	102501	11/12/2025
		111225KM13	Ref. 84253 Properties Sup	3	11/12/2025	39.04	.00	39.04	102501	11/12/2025
		111225KM13	Ref. 84445 Wheel Mount	4	11/12/2025	97.13	.00	97.13	102501	11/12/2025
		111225KM13	Ref. 84452 Brushes & Whe	5	11/12/2025	84.31	.00	84.31	102501	11/12/2025
		111225KM13	Ref. 84508 Nails	6	11/12/2025	7.89	.00	7.89	102501	11/12/2025
		111225KM13	Ref. 84558 Couplers	7	11/12/2025	81.26	.00	81.26	102501	11/12/2025
		111225KM13	Ref. 84785 Rubber Caps	8	11/12/2025	25.01	.00	25.01	102501	11/12/2025
		111225KM13	Ref. 84827 Flex Couplers	9	11/12/2025	46.12	.00	46.12	102501	11/12/2025
Total 1851:						459.95	.00	459.95		
1854	VERDE VALLEY NEWSPA	110525KM17	STMT. 183465 Sept-Oct 20	1	11/05/2025	301.42	.00	301.42	102485	11/05/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
Total 1854:						301.42	.00	301.42		
1859	VERIZON WIRELESS	110525KM19	Acct 870476021-00001 Sh	1	11/05/2025	37.87	.00	37.87	102487	11/05/2025
		110525KM19	Acct 870476021-0001 FD	2	11/05/2025	89.98	.00	89.98	102487	11/05/2025
		110525KM19	Acct 870476021-00001 PZ	3	11/05/2025	37.87	.00	37.87	102487	11/05/2025
		110525KM19	Acct 870476021-00002 PD	4	11/05/2025	49.97	.00	49.97	102487	11/05/2025
		110525KM19	Acct 870476021-00002 PZ	5	11/05/2025	49.97	.00	49.97	102487	11/05/2025
		110525KM19	Acct 870476021-00003 FD	6	11/05/2025	276.69	.00	276.69	102487	11/05/2025
		110525KM19	Acct 870476021-00003 PD	7	11/05/2025	269.37	.00	269.37	102487	11/05/2025
Total 1859:						811.72	.00	811.72		
1903	WM CORPORATE SERVI	111225KM15	Inv. 484-4655-3 Acct. 30-53	1	11/12/2025	1,744.35	.00	1,744.35	102503	11/12/2025
Total 1903:						1,744.35	.00	1,744.35		
1914	YAVAPAI CO. EDUCATION	110525KM20	Inv. 25-1123 Internet Servic	1	11/05/2025	503.00	.00	503.00	102488	11/05/2025
		110525KM20	Inv. 25-1123 Internet Servic	2	11/05/2025	503.00	.00	503.00	102488	11/05/2025
		110525KM20	Inv. 25-1123 Internet Servic	3	11/05/2025	324.00	.00	324.00	102488	11/05/2025
		110525KM20	Inv. 25-1123 Internet Servic	4	11/05/2025	324.00	.00	324.00	102488	11/05/2025
		110525KM20	Inv. 25-1124 Library E-Rate	5	11/05/2025	42.00	.00	42.00	102488	11/05/2025
Total 1914:						1,696.00	.00	1,696.00		
1968	COAST TO COAST	111225KM4	Inv. A2838656 LaserJet Ca	1	11/12/2025	474.51	.00	474.51	102493	11/12/2025
Total 1968:						474.51	.00	474.51		
2004	GHA Technologies Inc.	111225KM7	Quote 2880979 Firewall &	1	11/12/2025	3,212.02	.00	3,212.02	102495	11/12/2025
Total 2004:						3,212.02	.00	3,212.02		
2006	Wired Up Systems LLC	111925KM15	Inv. 128605 Security Monit	1	11/19/2025	82.96	.00	82.96	102519	11/19/2025
		112525KM6	Inv. 126115- OR 127315, 1	1	11/25/2025	82.96	.00	82.96	102526	11/25/2025
Total 2006:						165.92	.00	165.92		
2013	PAVEMENT SEALANTS &	111925KM10	Inv. 26276 HP Permanent	1	11/19/2025	891.13	.00	891.13	102514	11/19/2025
Total 2013:						891.13	.00	891.13		
2016	T2 SYSTEMS, INC.	110525KM15	INV. UPS00056478 Data Pl	1	11/05/2025	8,274.04	.00	8,274.04	102483	11/05/2025
		111225KM10	INV. UPS00056588 Auto O	1	11/12/2025	337.50	.00	337.50	102499	11/12/2025
		111225KM10	INV. MP000004944 Mobile	2	11/12/2025	1,688.76	.00	1,688.76	102499	11/12/2025
Total 2016:						10,300.30	.00	10,300.30		
2033	T2 Systems Canada Inc.	111225KM11	INV. IRIS0000153091 Digit	1	11/12/2025	327.32	.00	327.32	102498	11/12/2025
		111225KM11	INV. IRIS0000153498 Digit	2	11/12/2025	409.15	.00	409.15	102498	11/12/2025
Total 2033:						736.47	.00	736.47		
2034	Yavapai County	111925KM16	Reimbursement for PANT	1	11/19/2025	3.45	.00	3.45	102520	11/19/2025
Total 2034:						3.45	.00	3.45		

Town of Jerome
Live 12.12.2022

Paid Invoice Report - Detail Report
Check issue dates: 11/1/2025 - 11/30/2025

Vendor Number	Name	Invoice Number	Description	Seq	Invoice Date	Invoice Amount	Discount Amount	Check Amount	Check Number	Check Issue Date
2052	TERRI CARD	111225KM12	Reimburse for assorted Ca	1	11/12/2025	30.47	.00	30.47	102500	11/12/2025
Total 2052:						30.47	.00	30.47		
2094	Verde Valley Rental	110525KM18	Inv. 105033-2 Compactor,	1	11/05/2025	229.86	.00	229.86	102486	11/05/2025
		110525KM18	Inv. 103045-2 70 Lb Makita	2	11/05/2025	92.93	.00	92.93	102486	11/05/2025
		111225KM14	Inv. 103006-2 Plate Compa	1	11/12/2025	94.91	.00	94.91	102502	11/12/2025
Total 2094:						417.70	.00	417.70		
2115	Kristin Jay	110525KM9	LMP Refund for Closed Ac	1	11/05/2025	63.35	.00	63.35	102478	11/05/2025
Total 2115:						63.35	.00	63.35		
2116	Jessie Rae Pfeiffer	111925KM7	LMP Refund for Closed Utli	1	11/19/2025	92.82	.00	92.82	102511	11/19/2025
Total 2116:						92.82	.00	92.82		
Grand Totals:						250,683.17	.00	250,683.17		

Report Criteria:
Detail report type printed

File Attachments for Item:

A. Reports by the Town Manager / Clerk, Deputy Clerk, Utilities Clerk, Accounting Clerk, Public Works Director, Building Inspector, Library Director, Municipal Magistrate, Police Chief, Fire Chief and Council Members, Which in the Case of Council Member's Reports will be Limited to a Summary of Current Events and will Involve no Action

Council will consider and may approve the staff reports.

For the meeting of December 9, 2025

MONTHLY STAFF REPORT TO THE MAYOR AND COUNCIL

Brett Klein, Town Manager/Clerk

My activities have included:

- Met with Town Attorney to discuss the final steps on the JHS property exchange.
- Presented to the Cottonwood Rotary Club, which originated in Jerome, on the happenings in Jerome.
- Continued work with The Planning Center on the Code revisions and Landscape plan.
- Finalized the packet for submission to USDA on the WWTP upgrade. Following the government shutdown, awaiting their o.k. to send it.
- Met with engineers to finalize plans for the Gulch drainage project and the re-bid of Deception water line.
- Coordinated the retirement celebration for retired Fire Chief Rusty Blair.
- Began work on the FY 2027 budget preparation, beginning with the Capital Improvement Plan.
- Met with Fire Department staff to discuss the transition, operations and administration.
- Submitted pay request number 1 to WIFA as the design planning ramps up for Verde Central, School Street Regulator and Mescal syphon line.
- Conducted follow-up work and research regarding community land trusts.
- Reviewed and compiled responses to the water meter RFP.
- Completed the onboarding of a new police employee and the termination paperwork of a police employee.
- Worked with various individuals on their special event requests.
- Facilitated two public records requests.
- Met with retiring Fire Chief to discuss the analyst role.
- Facilitated the paperwork for receiving a 2018 Chevy Tahoe from Yavapai County.

**** CONGRATULATIONS TO ****

David Freeman (Police) on completing 1 year of service effective December 11, 2025.

Following is an accounting of sales tax revenues for October, and a recent water flow report.

TOWN OF JEROME, AZ

CITY SALES TAXES PER ADOR ONLINE REPORTS

SALES TAX REVENUES

	FY2026 Actual - (based on to-date DOR website)	FY2025 Actual - (based on DOR website)	Actually Received Thus Far
July	113,426	110,631	11,933
August	73,823	89,419	145,492
September	87,532	91,512	190,314
October	105,790	120,090	295,632
November		133,502	
December		100,280	
January		96,559	
February		114,868	
March		95,109	
April		91,014	
May		148,298	
June		117,505	
June - Late		104,818	
Total YTD	**380,571**	**1,413,605**	**295,632**

TOWN OF JEROME, AZ

Comparison of Restaurant/Bar, Accomodation and Retail Sales Tax Revenues

	RESTAURANTS/BARS (Bus Class 11)			ACCOMMODATION (Bus Class 44/144)			RETAIL (Bus Class 17)		
	FY2026 actual	FY2025 actual	+/- Compared to Last Yr	FY2026 actual	FY2025 actual	+/-	FY2026 actual	FY2025 actual	+/-
July	37450	38302	(852)	12363	16719	(4,356)	47190	39902	7,288
August	26010	35053	(9,043)	12054	15495	(3,441)	27243	30,560	(3,317)
September	39664	38,469	1,195	13702	18570	(4,868)	25593	25196	397
October	37459	40220	(2,761)	15324	17090	(1,766)	34975	45030	(10,055)
November		45587			25020			54553	
December		40137			16021			33812	
January		36643			15354			43836	
February		40291			15443			29130	
March		39,051			16360			28280	
April		53934			22888			54546	
May		47188			19292			43382	
June		45329			18493			32525	
Total YTD	**140,583**	**500,204**		53,443	**216,745**		135,001	**460,752**	

Added 1% Bed Tax	Monthly total	**TOTAL TO DATE**
July	1,978	1,978
August	1,854	3,832
September	2,108	5,940
October	2,357	8,297
November		
December		
January		
February		
March		
April		
May		
June		

WATER FLOWS REPORT

Reading Date		WALNUT GPM	VERDE GPM
2024	1-Oct	57	306
	7-Oct	57	300
	14-Oct	57	300
	21-Oct	66	289
	28-Oct	57	295
	4-Nov	61	300
	12-Nov	57	275
	18-Nov	57	275
	25-Nov	57	275
	2-Dec	61	275
	9-Dec	57	280
	16-Dec	61	274
	23-Dec	61	271
	30-Dec	60	280
2025	6-Jan	61	273
	13-Jan	57	265
	21-Jan	57	180
	27-Jan	57	195
	3-Feb	57	200
	10-Feb	57	200
	18-Feb	57	230
	24-Feb	57	198
	3-Mar	52	203
	10-Mar	52	200
	17-Mar	48	180
	24-Mar	43	188
	31-Mar	44	190
	07-April	44	185
	14-April	40	175
	21-April	40	157
	28-April	40	158
	05-May	40	156
	12-May	40	150
	19-May	40	156
	27-May	40	176
	02-June	40	160
	09-June	36	193
	16-June	36	152
	23-June	29	241
	30-June	29	243
	07-July	26	250
	14-July	26	250
	22-July	29	268
	28-July	29	230
	04-Aug	29	250
	11-Aug	32	245
	18-Aug	32	265
	25-Aug	36	265
	2-Sept	32	234
	8-Sept	36	255
	15-Sept	32	252
	22-Sept	36	258
	29-Sept	36	250
	6-Oct	36	265
	13-Oct	40	265
	20-Oct	40	248
	27-Oct	40	250
	3-Nov	40	240
	10-Nov	48	246
	17-Nov	40	255
	24-Nov	48	200
	1-Dec	44	165

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 FAX (928) 634-0715

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December 2025 Staff Report for November Activity submitted by Kristen Muenz, Finance Director & Deputy Clerk

- Posted town notices and meeting agendas throughout the month at the three locations in town (Gulch Road, Post Office, Town Hall).

- Assembled packets for and attended Town Council meetings. Posted audio recordings of meetings on Municode and Soundcloud. Completed minutes for some meetings.

- Assisted staff members, department heads, board members, residents, service agents, and contractors with a range of inquiries or tasks and helped answer the phone when needed.

- Processed Payables, Payroll, New Employee Set-Up & Employee Modifications, Check & Cash Deposits, Journal Entries and Bank Reconciliation.

- Processed Business License Applications & performed file updates and adjustments.

- Processed STR License Applications & performed file updates.

- Maintained files from FY 2025 & 2026 per the Secretary of State's Retention Schedule, including filing documents in the long-term file room for safety.

- Performed notarizations for members of the public by appointment.

- Processed annual Fire Department Per-Call Payments for employees & non-employee volunteers.

- Permits and Licensing activities for November:

  Business Licenses

  - 8 Businesses were sent renewal notices.
  - 6 Businesses sent in their renewal application.
  - 1 Business applied for a NEW business license.
  - 4 Business License renewals were issued.
  - 27 Business Licenses are pending approval (due to short-staff and vacations).
  - Spreadsheet of Tour & Mobile Food Vendor License updates attached.

  STR Licenses

  - No new STR applications were received.
  - No new STR/Vacation Rental Licenses were issued.
  - 19 Total STR Licenses are currently issued/active.

- 2 STR licenses are still in pending status.
- 3 STR licenses are still ACTIVE (license was approved and property has not changed hands) but the units are currently long-term or unused.
- The total Jerome STR housing units (whole house or separately available units within the same property) is now 26-27, depending on if the owners of 511 School Street rent 1 or 2 units, although 1 active unit may have been converted to a long-term rental recently.
- A notice of compliance with the Business Licensing process was sent to all active Short-Term Rentals and we have received some response:
    - 11 STR units have an active Business License (2 of these are triplexes= 6 units).
    - Of those, 2 STR's have had a new License issued.
    - 1 potential new STR sent in a new Business License Application.
    - A total of 5 STR's applications are pending approvals.

In town	C	C.A	Name of FOOD VENDOR Business	TP	Business Type	Expires	App submitted	T	Scanned/ HC to Fire Insp.	$ received	Payment Rcvd Y/N	Certificate to Manager	Color/Year	Issued	Notes
0	/	25	All Cooped Up in AZ	#	Food Truck	TBD	9/17/2025		9/18/2025	TBD	TBD	1/0/1900	0	1/0/1900	Waiting for: Health, Food Handlers, Payment-CLOSING OUT
0	V	25	Dog Town USA and Beyond	#	Food Truck	Sep	8/13/2025		8/19/2025	9/24/2025	$50.00	9/25/2025	Blue	9/25/2025	Received COI, Provisional Health License (exp 10-31-25)
0	EV	24	Frosty Cauldron	#	Food Truck	Sep	1/0/1900		0-Jan	1/0/1900	0	9/24/2024	Beige	9/25/2025	Unsuspended in Feb-25/REVOKED 9-15-25
0	1	#	Green River Food	#	Food Truck	Nov	1/0/1900		0-Jan	1/0/1900	0	na	na	na	has not renewed in over 12 mths-CLOSED
0	1	#	Mad Honey Food Truck	#	Food Truck	June	1/0/1900		1/0/1900	1/0/1900	0	9/9/2024	Beige	9/10/2024	Sending 2nd notice
0	1	#	Merkins Vineyard Kebab Wagon	#	Food Truck	Sept	1/0/1900		1/0/1900	1/0/1900	0	9/30/2024	Gray	9/30/2024	Closed per Deb, Bookkeeper
0	EV	#	Nora Jean's Koffee Koach	#	Food Truck	Sep	9/8/2025		8-Sep	9/8/2025	$50.00	9/23/2025	Blue	23-Sep	Recvd: COI, TPT, Health License, Food Handlers, Fire, Payment

In town	C	C.A	Name of TOUR Business	TP	Business Type	Expires	App submitted	T	Scanned/ HC to Fire Insp.	$ received	Payment Rcvd Y/N	Certificate to Manager	Color/Year	Issued	Notes
0	1	#	Elevated Sedona Wine & Brew Tours	na	TOUR	May	5/27/2025	n	TBD	5/27/2025	50	6/23/2025	Beige	6/23/2025	Tour Co- app. by Council 5-9-23 Rcvd. COI for 2025
x	2	#	Haunted Tours of Jerome	#	TOUR	June	9/25/2025		9/25/2025	9/25/2025	50	1/21/2025	Beige Su	1/22/2025	Was overdue 2024 due to length of time to inps.-good thru 2026
0	1	#	Sip Sedona	#	TOUR	June	1/0/1900		1/0/1900	1/0/1900	0	1/0/1900	Sugar	10/9/2024	Sending 2nd notice-Out-of-Business? Emailing owner
0	2	#	Wine Tours of Sedona	na	TOUR	June	11/13/2025	T	TBD	11/13/2025	50	1/0/1900	Beige	10/2/2024	Sent 2nd notice- made contact- waiting for COI 11-30-25
x	1	20	Jerome Ghost Tours	#	TOUR	Dec	1/6/2025		6-Jan	1/6/2025	X	2/11/2025	Beige Su	12-Feb	States the approved routes have not changed
0		TB	US Ghost Adventures (new app)	#	TOUR	TBD	9/8/2025		NA	10/15/2025	20	na	na	na	Original App denied-Jan 2025-No TPT/ Reapplied Sep 2025-tabled 11-11-25
0	N	25	Capt. Ron's Magical Mystery Tour	#	TOUR	TBD	12/30/2024		na	12/30/2024	X	TBD	TBD	TBD	Approved 1-14-25/Waiting on COI before Issuing License
X	N	25	Wicked City Tours LLC	#	Tour	April	4/8/2025		NA	45755	50	4/21/2025	Blue	4/22/2025	Approved by council 4-21-25-WALKING TOUR

KEY:
Current
Due to Renew
Current Activity
Pending
Expired
Closed or Denied
Food Truck
Tour Company
0=No OR No Data
X=Yes

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA 86331
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December 2025 staff report for November activity submitted by Terri Card.

- Current debt (45 days past due):

14 accounts were on the shut-off list at the beginning of October. 12 accounts were sent Yellow Tags, and 0 accounts were shut off because accounts were paid in full or payments were made.

Balance owed on shut-off accounts from December billing: $1716.32
Balance owed at end of November: $4525.81
Late fees: $140

- A copy of the December AR Aging report is attached.

Rentals
All renters made their rental payments and are on track.

Terri Card ☼ Customer Relations ☼
Town of Jerome 600 Clark Street Jerome, Arizona 86331 t.card@jerome.az.gov

Town of Jerome

Aging Report - Acct number only
Report Date: 11/30/2025

Dec 01, 2025 8:02AM

Report Criteria:
Include inactive customers
Include active customers
Include customers with a credit balance
Aged using billing periods

Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
1000.01	184.26	87.15	91.33	5.78	.00	09/15/25	194.26-		
1001.03	184.24	184.24	.00	.00	.00	11/24/25	184.24-		
1003.02	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
1006.02	123.94	123.94	.00	.00	.00	11/15/25	123.94-		
1007.02	155.80	155.80	.00	.00	.00	11/05/25	155.80-		
1008.02	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
1009.05	46.41	42.79	3.62	.00	.00	11/20/25	130.51-		
1010.01	92.13	92.13	.00	.00	.00	11/17/25	92.13-		
1011.01	92.13	92.13	.00	.00	.00	11/15/25	92.13-		
1013.01	123.94	123.94	.00	.00	.00	11/17/25	123.94-		
1014.03	46.41	46.41	.00	.00	.00	11/06/25	46.41-		
1015.01	184.26	92.13	92.13	.00	.00	10/29/25	92.13-		
1016.01	184.26	92.13	92.13	.00	.00	10/22/25	92.13-		
1018.03	155.80	155.80	.00	.00	.00	11/18/25	155.80-		
1021.01	44.77-	44.77-	.00	.00	.00		.00		
1022.01	123.94	123.94	.00	.00	.00	11/13/25	123.94-		
1024.01	110.87-	110.87-	.00	.00	.00	11/28/25	124.00-		
1025.01	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
1027.01	92.13	92.13	.00	.00	.00	11/10/25	184.26-		
1028.04	92.13	92.13	.00	.00	.00	11/12/25	92.13-		
1029.01	155.80	155.80	.00	.00	.00	11/03/25	311.60-		
1030.02	216.05	216.05	.00	.00	.00	11/17/25	216.05-		
1031.03	.02	.00	.00	.00	.02		.00	Final	06/01/12
1031.11	123.94	123.81	.13	.00	.00	11/27/25	123.94-		
1032.01	92.26	92.13	.13	.00	.00	11/10/25	92.00-		
1036.10	46.41	46.41	.00	.00	.00	11/13/25	46.41-		
1038.02	34.17	34.17	.00	.00	.00	11/17/25	100.00-		
1040.01	17.34	17.34	.00	.00	.00	11/17/25	17.34-		
1042.01	271.60	271.60	.00	.00	.00	11/13/25	271.60-		
1044.02	328.98	164.49	164.49	.00	.00	10/23/25	164.49-		
1051.02	184.24	275.61-	59.16	59.16	341.53	11/15/25	184.24-		
1055.05	252.87	.00	.00	.00	252.87		.00	Final	12/12/19
1055.06	92.13	92.13	.00	.00	.00	11/14/25	92.13-		
1056.02	91.37	91.37	.00	.00	.00	11/12/25	185.00-		
1057.01	92.13	92.13	.00	.00	.00	11/17/25	92.13-		
1058.05	92.13	92.13	.00	.00	.00	11/25/25	92.13-		
1060.02	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
1061.01	123.94	123.94	.00	.00	.00	11/17/25	123.94-		
1063.02	154.19	58.18-	46.41	46.41	119.55	04/07/25	300.00-		
1064.04	434.24	.00	.00	.00	434.24		.00	Final	11/25/13
1064.08	60.18-	60.18-	.00	.00	.00		.00	Final	01/08/18
1064.12	393.22	.00	.00	.00	393.22		.00	Final	04/30/20
1064.15	164.49	164.49	.00	.00	.00	11/04/25	328.98-		
1065.01	78.78-	78.78-	.00	.00	.00		.00		
1069.02	123.94	123.94	.00	.00	.00	11/13/25	123.94-		
1071.05	123.94	123.94	.00	.00	.00	11/03/25	381.82-		
1073.01	4.66-	4.66-	.00	.00	.00	11/28/25	114.00-		
1074.01	92.13	92.13	.00	.00	.00	11/04/25	92.13-		
1076.01	73.47	.00	.00	.00	73.47		.00	Final	04/26/22
1076.02	92.82-	92.82-	.00	.00	.00		.00	Final	10/31/22
1076.04	149.23	.00	.00	.00	149.23	09/28/23	149.23-	Final	12/01/23
1076.05	173.32	173.32	.00	.00	.00	11/15/25	173.32-		
1077.01	66.79	66.79	.00	.00	.00	11/12/25	66.79-		

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Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
1078.02	66.79	66.79	.00	.00	.00	11/12/25	66.79-		
1079.02	309.11	309.11	.00	.00	.00	11/13/25	309.11-		
1080.01	210.37	76.79	66.79	66.79	.00	09/03/25	66.79-		
1081.01	49.84	47.38	2.46	.00	.00	10/28/25	99.68-		
1082.01	74.71-	74.71-	.00	.00	.00	11/24/25	200.00-		
1083.05	95.11	49.84	45.27	.00	.00	09/22/25	100.00-		
1084.01	67.05	49.84	17.21	.00	.00	10/02/25	120.00-		
1085.02	42.56-	42.56-	.00	.00	.00		.00	Final	10/02/13
1085.04	49.84	49.84	.00	.00	.00	11/15/25	49.84-		
1086.02	137.16	68.58	68.58	.00	.00	10/20/25	68.58-		
1087.01	49.84	49.84	.00	.00	.00	11/17/25	49.84-		
1088.06	49.84	46.24	3.60	.00	.00	11/18/25	49.84-		
1091.02	94.76	94.76	.00	.00	.00	11/10/25	94.76-		
1093.02	68.58	68.58	.00	.00	.00	11/05/25	68.58-		
1094.01	49.84	49.84	.00	.00	.00	11/03/25	49.84-		
1096.03	137.04	31.87	30.26	30.25	44.66		.00		
1097.04	68.58	68.58	.00	.00	.00	11/10/25	68.58-		
1098.01	42.56	.00	.00	.00	42.56		.00	Final	06/24/13
1098.02	1.84-	1.84-	.00	.00	.00		.00	Final	12/23/21
1098.03	197.60	.00	.00	.00	197.60	02/26/24	100.00-	Final	03/31/24
1098.04	244.54	59.84	97.35	87.35	.00	11/24/25	87.35-		
1100.02	68.58	68.58	.00	.00	.00	11/13/25	68.58-		
1104.08	19.45	.00	.00	.00	19.45		.00	Final	07/01/22
1109.01	40.30-	40.30-	.00	.00	.00	10/16/25	300.00-		
1125.03	101.04-	101.04-	.00	.00	.00	09/15/25	200.00-		
1131.01	66.79	66.79	.00	.00	.00	11/20/25	66.79-		
1132.01	82.13	82.13	.00	.00	.00	11/12/25	92.13-		
1133.01	184.26	92.13	92.13	.00	.00	10/28/25	92.13-		
1135.02	417.41	.00	.00	.00	417.41		.00	Final	01/01/14
1135.03	409.64	78.58	78.58	78.58	173.90	11/25/25	100.00-		
1139.01	92.13	92.13	.00	.00	.00	11/03/25	184.26-		
1150.04	320.12	.00	.00	.00	320.12		.00	Final	08/31/20
1150.06	49.84	49.84	.00	.00	.00	11/10/25	49.84-		
1151.02	49.84	49.84	.00	.00	.00	11/20/25	49.84-		
1160.02	286.39	102.13	92.13	87.74	4.39	08/18/25	276.39-		
1161.01	32.50	32.50	.00	.00	.00		.00		
1162.03	123.94	123.94	.00	.00	.00	11/17/25	123.94-		
1163.01	163.76	.00	.00	.00	163.76		.00	Final	07/01/15
1165.04	92.13	92.13	.00	.00	.00	11/05/25	92.13-		
1166.02	294.28	104.76	94.76	94.76	.00	09/11/25	232.86-		
1167.01	4.15-	4.15-	.00	.00	.00	11/18/25	83.00-		
1167.16	82.44-	82.44-	.00	.00	.00	08/19/24	82.44-	Final	07/01/22
1168.01	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
1169.02	120.94	120.94	.00	.00	.00	11/24/25	124.88-		
1170.01	133.58-	133.58-	.00	.00	.00	11/10/25	267.16-		
1171.05	92.13	92.13	.00	.00	.00	11/07/25	92.13-		
1173.06	8.84-	8.84-	.00	.00	.00	11/06/25	92.13-		
1174.02	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
1177.01	536.65	.00	.00	.00	536.65		.00	Final	10/31/16
1178.01	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
1312.04	522.70	.00	.00	.00	522.70		.00	Final	08/21/12
1312.10	123.94	123.94	.00	.00	.00	11/25/25	247.88-		
1313.04	557.60	.00	.00	.00	557.60		.00	Final	03/01/12
1313.10	3.81	.00	.00	.00	3.81	10/14/24	57.00-	Final	10/01/24
1313.11	123.94	123.94	.00	.00	.00	11/24/25	381.82-		
1314.07	44.39	44.39	.00	.00	.00		.00		
1332.01	46.41	44.37	2.04	.00	.00	10/08/25	46.41-		
1334.01	762.67	.00	.00	.00	762.67		.00	Final	01/01/22

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Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
1341.01	261.26-	261.26-	.00	.00	.00		.00	Final	01/01/22
1342.05	52.41	52.41	.00	.00	.00	11/13/25	52.41-		
1343.04	123.94	123.94	.00	.00	.00	11/11/25	123.94-		
2000.02	91.25	91.25	.00	.00	.00	11/19/25	271.00-		
2001.01	467.24	.00	.00	.00	467.24		.00	Final	10/01/18
2001.02	155.80	155.80	.00	.00	.00	11/12/25	155.40-		
2002.03	46.41	46.41	.00	.00	.00	11/13/25	46.41-		
2003.02	92.13	92.13	.00	.00	.00	11/05/25	82.13-		
2004.02	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
2005.01	92.13	92.13	.00	.00	.00	11/07/25	92.13-		
2006.03	123.94	123.94	.00	.00	.00	11/15/25	123.94-		
2007.02	184.24	184.24	.00	.00	.00	11/10/25	184.24-		
2008.01	123.94	123.94	.00	.00	.00	11/04/25	123.94-		
2010.03	123.94	123.94	.00	.00	.00	11/10/25	123.94-		
2011.05	184.26	92.13	92.13	.00	.00	10/27/25	92.13-		
2013.01	123.94	123.94	.00	.00	.00	11/19/25	123.94-		
2014.01	123.40	123.40	.00	.00	.00	11/10/25	124.00-		
2015.02	406.91-	462.83-	38.72	17.20	.00	03/12/25	1,500.00-		
2016.05	206.10	.00	.00	.00	206.10		.00	Final	02/02/20
2016.06	288.64	133.94	123.94	30.76	.00	10/22/25	225.00-		
2017.01	92.13	92.13	.00	.00	.00	11/14/25	92.13-		
2018.01	92.13	92.13	.00	.00	.00	11/12/25	92.13-		
2019.02	328.98	164.49	164.49	.00	.00	10/23/25	164.49-		
2020.01	155.80	155.80	.00	.00	.00	11/10/25	155.80-		
2021.06	471.26	.00	.00	.00	471.26		.00	Final	08/30/20
2021.07	123.94	123.94	.00	.00	.00	11/25/25	122.88-		
2022.01	155.80	155.80	.00	.00	.00	11/06/25	155.80-		
2023.03	92.13	92.13	.00	.00	.00	11/05/25	92.13-		
2024.01	247.88	123.94	123.94	.00	.00	11/01/25	123.94-		
2025.02	123.94	123.94	.00	.00	.00	11/24/25	123.94-		
2026.02	591.52	133.94	123.94	133.94	199.70	10/21/25	300.00-		
2028.01	123.94	123.94	.00	.00	.00	11/07/25	123.94-		
2029.01	123.94	123.94	.00	.00	.00	11/14/25	123.94-		
2030.01	190.01	190.01	.00	.00	.00	11/18/25	92.13-		
2031.01	325.90	162.95	162.95	.00	.00	10/06/25	325.90-		
2032.03	184.26	92.13	92.13	.00	.00	10/06/25	286.39-		
2034.01	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
2037.03	123.94	123.94	.00	.00	.00	11/10/25	123.94-		
2038.01	184.26	92.13	92.13	.00	.00	10/22/25	92.13-		
2042.01	55.29-	55.29-	.00	.00	.00		.00	Final	04/22/21
2042.02	123.94	123.30	.64	.00	.00	11/15/25	123.94-		
2043.03	123.94	123.94	.00	.00	.00	11/10/25	123.94-		
2044.01	92.20	92.13	.07	.00	.00	11/06/25	92.12-		
2046.02	58.60-	58.60-	.00	.00	.00		.00	Final	11/10/12
2046.05	1,457.87	.00	.00	.00	1,457.87		.00	Final	05/27/21
2046.07	74.79	74.79	.00	.00	.00	11/05/25	74.79-		
2047.02	155.80	155.80	.00	.00	.00	11/12/25	155.80-		
2054.01	371.43	174.49	164.49	32.45	.00	10/14/25	200.00-		
2055.01	106.52	92.13	14.39	.00	.00	10/10/25	77.74-		
2058.02	46.41	46.41	.00	.00	.00	11/14/25	46.41-		
2059.01	247.88	123.94	123.94	.00	.00	10/09/25	381.82-		
2061.02	162.95	162.95	.00	.00	.00	11/14/25	162.95-		
2062.01	68.58	68.58	.00	.00	.00	11/10/25	68.58-		
2063.01	68.58	68.58	.00	.00	.00	11/10/25	68.58-		
2067.02	272.81-	272.81-	.00	.00	.00		.00		
2068.01	68.58	68.58	.00	.00	.00	11/26/25	68.58-		
2070.01	81.63-	81.63-	.00	.00	.00	11/19/25	65.43-		
2071.01	65.26-	65.26-	.00	.00	.00	11/13/25	150.00-		

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Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
2073.02	820.12	131.05	121.05	121.05	446.97	08/28/25	300.00-		
2077.01	98.40	49.84	48.56	.00	.00	11/10/25	50.00-		
2078.01	94.76	94.76	.00	.00	.00	11/17/25	94.76-		
2079.03	49.84	49.84	.00	.00	.00	11/03/25	159.52-		
2080.02	92.82	46.41	46.41	.00	.00	10/20/25	46.41-		
2081.01	25.68-	25.68-	.00	.00	.00	08/25/25	300.00-		
2083.02	49.84	49.84	.00	.00	.00	11/12/25	29.95-		
2084.01	123.94	123.94	.00	.00	.00	11/05/25	123.94-		
2085.02	382.13	382.13	.00	.00	.00	11/13/25	382.13-		
2086.01	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
2089.04	164.49	164.49	.00	.00	.00	11/18/25	164.49-		
2093.02	397.02	.00	.00	.00	397.02	10/30/24	605.53-	Final	12/01/24
2093.03	311.60	155.80	155.80	.00	.00	10/23/25	155.80-		
2100.01	6.38	6.38	.00	.00	.00	10/09/25	60.40-		
2102.09	311.78	.00	.00	.00	311.78		.00	Final	07/29/15
2102.13	247.88	123.94	123.94	.00	.00	10/02/25	123.94-		
2103.01	123.94	123.94	.00	.00	.00	11/06/25	123.94-		
2104.08	184.26	92.11	92.13	.02	.00	10/27/25	92.13-		
2105.03	.38-	.38-	.00	.00	.00		.00	Final	02/05/21
2105.04	503.43	170.27	164.49	164.49	4.18	11/24/25	329.00		
2107.01	66.06	66.06	.00	.00	.00	11/17/25	66.06-		
2109.03	92.13	92.13	.00	.00	.00	11/14/25	92.13-		
2110.01	434.82-	434.82-	.00	.00	.00	08/07/23	3,000.00-		
2113.01	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
2115.01	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
2119.05	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
2120.01	123.94	123.94	.00	.00	.00	11/13/25	123.94-		
2121.02	68.58	68.58	.00	.00	.00	11/13/25	68.58-		
2122.05	216.05	216.05	.00	.00	.00	11/24/25	216.05-		
2123.01	10.96-	10.96-	.00	.00	.00	11/06/25	105.11-		
2124.01	123.94	123.94	.00	.00	.00	11/20/25	123.94-		
2125.02	68.58	68.58	.00	.00	.00	11/10/25	68.58-		
2126.06	387.04	102.13	92.13	102.13	90.65	10/28/25	100.00-		
2127.07	36.85	.00	36.85	.00	.00	09/28/25	92.13-	Final	09/12/25
2128.02	701.82	133.94	133.94	133.94	300.00	09/29/25	122.88-		
2130.06	216.05	216.05	.00	.00	.00	11/05/25	92.13-		
2131.02	583.02	.00	.00	.00	583.02		.00	Final	11/01/11
2131.04	42.56-	42.56-	.00	.00	.00		.00	Final	11/01/12
2131.09	89.87	.00	.00	.00	89.87	01/02/24	283.93-	Final	03/31/24
2131.10	137.16	68.58	68.58	.00	.00	10/29/25	137.16-		
2132.02	123.94	123.94	.00	.00	.00	11/11/25	123.94-		
3000.03	184.24	183.37	.87	.00	.00	11/14/25	184.24-		
3001.02	437.87	.00	.00	.00	437.87		.00	Final	05/31/21
3001.04	195.33	.00	.00	.00	195.33		.00	Final	10/31/22
3003.01	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
3004.01	290.68	.00	.00	.00	290.68		.00	Final	11/05/13
3004.07	52.41	52.41	.00	.00	.00	11/13/25	52.41-		
3005.02	123.94	123.94	.00	.00	.00	11/15/25	123.94-		
3007.01	66.79	66.79	.00	.00	.00	11/18/25	66.79-		
3009.01	155.80	155.80	.00	.00	.00	11/17/25	155.80-		
3010.01	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
3011.01	123.94	123.94	.00	.00	.00	11/19/25	247.88-		
3012.03	195.64-	195.64-	.00	.00	.00	06/30/25	783.06-		
3013.01	123.94	123.94	.00	.00	.00	11/06/25	123.94-		
3014.01	92.13	92.13	.00	.00	.00	11/13/25	92.13-		
3015.01	164.49	164.49	.00	.00	.00	11/13/25	164.49-		
3016.01	123.58	123.58	.00	.00	.00	11/06/25	124.00-		
3017.01	460.82	.00	.00	.00	460.82		.00	Final	03/20/13

Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
3017.03	286.39	102.13	92.13	92.13	.00	09/30/25	286.39-		
3018.01	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
3019.01	96.04	96.04	.00	.00	.00	11/10/25	96.04-		
3021.01	49.84	49.84	.00	.00	.00	11/17/25	49.84-		
3022.03	68.58	68.58	.00	.00	.00	11/17/25	68.58-		
3023.01	294.89	.00	.00	.00	294.89		.00	Final	05/01/11
3023.05	66.06	66.06	.00	.00	.00	11/13/25	66.06-		
3024.02	46.41	46.41	.00	.00	.00	11/12/25	46.41-		
3025.02	123.94	123.94	.00	.00	.00	11/05/25	123.94-		
3026.02	317.58	133.94	123.94	59.70	.00	10/28/25	240.00-		
3029.01	123.94	94.43	29.51	.00	.00	11/10/25	123.94-		
3030.09	262.51	107.67	133.94	20.90	.00	11/20/25	219.49-		
3032.12	164.49	164.49	.00	.00	.00	11/17/25	164.49-		
3035.01	114.58	114.58	.00	.00	.00	11/24/25	300.00-		
3038.01	123.94	123.94	.00	.00	.00	11/12/25	123.94-		
3039.02	266.20-	266.20-	.00	.00	.00		.00	Final	04/01/17
3039.04	219.61	219.61	.00	.00	.00	11/10/25	219.61-		
3040.01	119.39	119.39	.00	.00	.00	11/12/25	119.39-		
4000.01	164.49	164.49	.00	.00	.00	11/17/25	164.49-		
4001.01	528.96	.00	.00	.00	528.96		.00	Final	02/22/18
5000.04	247.88	123.94	98.43	25.51	.00	04/10/25	773.46-		
5001.01	384.39	.00	.00	.00	384.39	10/15/24	210.83-	Final	11/07/24
5001.02	229.58	229.58	.00	.00	.00	11/15/25	229.58-		
5005.01	44.72	44.72	.00	.00	.00	11/15/25	44.72-		
5006.01	459.16	229.58	229.58	.00	.00	10/16/25	229.58-		
5007.01	482.85	482.85	.00	.00	.00	11/14/25	464.70-		
5008.03	229.58	229.58	.00	.00	.00	11/10/25	229.58-		
5009.02	256.37	256.37	.00	.00	.00	11/14/25	256.37-		
5010.01	293.28	254.28	39.00	.00	.00	11/10/25	215.28-		
5011.02	229.58	229.58	.00	.00	.00	11/06/25	229.58-		
5012.01	229.58	229.58	.00	.00	.00	11/13/25	229.58-		
5013.01	483.52	483.52	.00	.00	.00	11/13/25	483.52-		
5014.01	229.58	229.58	.00	.00	.00	11/13/25	229.58-		
5015.01	74.79	74.79	.00	.00	.00	11/10/25	74.79-		
5016.01	273.73	273.73	.00	.00	.00	11/13/25	251.66-		
5016.02	184.26	92.13	92.13	.00	.00	10/24/25	92.13-		
5016.03	92.13	92.13	.00	.00	.00	11/17/25	92.13-		
5016.04	92.13	92.13	.00	.00	.00	11/04/25	92.13-		
5017.04	240.62	240.62	.00	.00	.00	11/10/25	229.58-		
5018.03	1,085.69	1,085.69	.00	.00	.00	11/24/25	787.70-		
5019.03	236.94	236.94	.00	.00	.00	11/10/25	236.94-		
5020.01	44.72	44.72	.00	.00	.00	11/19/25	89.44-		
5021.01	123.94	123.94	.00	.00	.00	11/07/25	123.94-		
5022.01	44.72	44.72	.00	.00	.00	11/10/25	44.72-		
5023.02	229.58	229.58	.00	.00	.00	11/10/25	229.58-		
5025.01	123.94	123.94	.00	.00	.00	11/24/25	123.94-		
5027.01	44.50	44.50	.00	.00	.00	11/24/25	44.50-		
5029.01	485.36	485.36	.00	.00	.00	11/10/25	419.14-		
5031.06	229.58	201.73	27.85	.00	.00	11/05/25	459.16-		
5039.01	229.58	229.58	.00	.00	.00	11/14/25	229.58-		
5041.03	319.02	319.02	.00	.00	.00	11/06/25	319.02-		
5043.01	1,675.61	1,675.61	.00	.00	.00	11/10/25	1,388.64-		
5046.03	184.86	184.86	.00	.00	.00	11/24/25	184.86-		
5047.01	1,455.03	1,455.03	.00	.00	.00	11/10/25	1,269.03-		
5049.04	229.58	229.58	.00	.00	.00	11/17/25	229.58-		
5052.06	44.72	44.72	.00	.00	.00	11/19/25	44.72-		
5055.01	849.26	849.26	.00	.00	.00	10/20/25	2,500.00-		
5057.01	789.32	789.32	.00	.00	.00	11/10/25	689.98-		

Town of Jerome

Aging Report - Acct number only
Report Date: 11/30/2025

Dec 01, 2025 8:02AM

Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
5058.02	260.24	260.24	.00	.00	.00	11/17/25	249.20-		
5059.04	229.58	229.58	.00	.00	.00	11/12/25	229.58-		
5061.01	184.86	184.86	.00	.00	.00	11/05/25	184.86-		
5062.01	178.14	178.14	.00	.00	.00	11/19/25	178.14-		
5064.02	246.92	246.92	.00	.00	.00	11/17/25	229.58-		
5067.04	229.58-	229.58-	.00	.00	.00	06/30/25	1,836.64-		
5074.06	2,412.48-	2,412.48-	.00	.00	.00	11/04/25	450.00-		
5076.01	456.22	450.58	5.64	.00	.00	11/13/25	456.23-		
5077.03	229.58	229.58	.00	.00	.00	11/10/25	229.58-		
5078.02	234.23	.00	.00	.00	234.23		.00	Final	07/01/15
5080.01	459.16	229.58	229.58	.00	.00	10/21/25	776.00-		
5083.11	474.16	229.58	244.58	.00	.00		.00		
5089.01	485.20	242.60	239.71	2.89	.00	10/15/25	183.40-		
5092.01	547.46	273.73	273.73	.00	.00	10/15/25	284.77-		
5093.01	1,466.35	.00	.00	.00	1,466.35		.00	Final	09/15/12
5093.05	229.58	229.58	.00	.00	.00	11/19/25	229.58-		
5094.02	235.30	235.30	.00	.00	.00	11/10/25	235.30-		
5095.02	733.16	733.16	.00	.00	.00	11/10/25	629.91-		
5096.03	229.58	229.58	.00	.00	.00	11/19/25	229.58-		
5097.01	588.95	239.58	239.58	109.79	.00	11/20/25	349.37-		
5098.06	459.16	229.58	229.58	.00	.00	10/09/25	137.44-		
5100.04	75.10-	75.10-	.00	.00	.00		.00	Final	07/01/12
5100.07	92.13	92.13	.00	.00	.00	11/10/25	92.13-		
6000.02	360.28	360.28	.00	.00	.00	11/03/25	360.28-		
6001.01	276.38	276.38	.00	.00	.00	11/12/25	276.38-		
6003.01	503.47	174.49	164.49	164.49	.00	09/30/25	503.47-		
6004.02	92.13	92.13	.00	.00	.00	11/07/25	92.13-		
6005.03	123.94	123.94	.00	.00	.00	11/14/25	123.94-		
6006.01	184.23	184.23	.00	.00	.00	11/17/25	184.24-		
6007.02	274.30	274.30	.00	.00	.00	11/10/25	274.30-		
6008.01	572.41	572.41	.00	.00	.00	11/12/25	572.41-		
6009.03	255.62	255.62	.00	.00	.00	11/10/25	255.62-		
6010.03	231.26	231.26	.00	.00	.00	11/10/25	92.80-		
6011.02	123.93	123.93	.00	.00	.00	11/17/25	123.94-		
6012.01	92.13	92.13	.00	.00	.00	11/17/25	92.13-		
6013.02	123.94	123.94	.00	.00	.00	11/13/25	123.94-		
6014.01	311.60	155.80	155.80	.00	.00	10/23/25	155.80-		
6015.01	87.35	87.35	.00	.00	.00	11/17/25	87.35-		
6017.02	184.24	184.24	.00	.00	.00	11/13/25	183.92-		
6018.01	288.97	288.97	.00	.00	.00	11/10/25	288.97-		
6019.02	271.60	271.60	.00	.00	.00	11/13/25	271.60-		
6020.05	382.29	133.94	123.94	123.94	.47	09/11/25	327.05-		
6021.04	92.13	92.13	.00	.00	.00	11/24/25	286.39-		
6022.02	46.41	46.41	.00	.00	.00	11/13/25	46.41-		
6023.03	46.41	46.41	.00	.00	.00	11/06/25	46.41-		
6025.03	87.51	.00	.00	.00	87.51	01/09/24	125.02-	Final	01/01/24
6025.04	49.84	49.84	.00	.00	.00	11/26/25	59.52-		
6026.02	3,793.99	.00	.00	.00	3,793.99		.00	Final	12/02/10
6026.05	1,148.88	1,148.88	.00	.00	.00	11/10/25	1,689.68-		
6027.02	144.89	.00	.00	.00	144.89		.00	Final	12/01/17
6027.04	137.16	68.58	68.58	.00	.00	10/04/25	215.74-		
6028.08	184.26	92.13	92.13	.00	.00	10/27/25	184.26-		
6029.01	21.04-	21.04-	.00	.00	.00	11/14/25	80.00-		
6031.02	92.13	92.13	.00	.00	.00	11/15/25	92.13-		
6032.01	255.62	255.62	.00	.00	.00	11/13/25	255.62-		
6033.04	414.45	203.63	210.82	.00	.00	11/17/25	828.90-		
6040.03	697.60	.00	.00	.00	697.60		.00	Final	10/01/11
6040.04	184.26	92.13	92.13	.00	.00	10/27/25	238.52-		

Town of Jerome

Aging Report - Acct number only
Report Date: 11/30/2025

Customer Number	Balance	11/30/2025	10/31/2025	09/30/2025	08/31/2025	Last Pmt Date	Last Pmt Amount	Msg	Final Bill Date
6041.02	123.94	123.94	.00	.00	.00	11/14/25	123.94-		
7001.06	36.92	36.92	.00	.00	.00	11/26/25	152.40-		
7002.01	243.65	243.65	.00	.00	.00	11/06/25	243.65-		
7004.01	92.13	92.13	.00	.00	.00	11/25/25	92.13-		
7005.04	670.09	.00	.00	.00	670.09		.00	Final	05/03/12
7005.05	37.27-	37.27-	.00	.00	.00		.00	Final	11/01/13
7005.10	198.88	54.72	54.72	44.72	44.72	08/18/25	89.44-		
7006.01	62.51-	62.51-	.00	.00	.00	04/17/23	62.51-	Final	09/08/11
7006.11	110.82-	110.82-	.00	.00	.00	10/07/25	300.00-		
7009.01	99.68	49.84	49.84	.00	.00	10/09/25	99.08-		
7010.01	542.62	542.62	.00	.00	.00	11/13/25	542.62-		
7015.01	229.58	229.58	.00	.00	.00	11/06/25	229.58-		
7017.03	.99	.99	.00	.00	.00	11/10/25	29.58-		
7022.01	44.72	44.72	.00	.00	.00	11/06/25	44.72-		
7024.02	198.83	.00	.00	.00	198.83		.00	Final	12/31/22
7025.01	184.26	92.13	92.13	.00	.00	10/27/25	92.13-		
7026.04	123.94	123.94	.00	.00	.00	11/03/25	247.88-		
7029.01	26.30	.00	.00	.00	26.30	02/02/23	92.82-	Final	02/17/23
7029.02	123.94	123.94	.00	.00	.00	11/14/25	123.94-		
7040.03	440.77	.00	.00	.00	440.77		.00	Final	02/02/17
7044.02	144.16	.00	.00	.00	144.16	12/26/24	44.72-	Final	03/01/25
7044.03	89.44	44.72	44.72	.00	.00	10/04/25	144.16-		
7046.02	164.49	160.50	3.99	.00	.00	10/20/25	503.47-		
7047.01	44.72	44.72	.00	.00	.00	11/12/25	44.72-		
7052.02	92.13	76.91	15.22	.00	.00	11/17/25	184.26-		
7053.02	320.01	.00	.00	.00	320.01		.00	Final	12/01/18
7053.07	123.94	123.94	.00	.00	.00	11/19/25	123.94-		
7054.01	177.32	177.32	.00	.00	.00	11/06/25	177.32-		
7057.02	26.04	26.04	.00	.00	.00	11/10/25	26.04-		
7058.01	296.17	.00	.00	.00	296.17		.00	Final	12/01/13
7059.01	46.86-	46.86-	.00	.00	.00		.00	Final	11/01/13
7059.02	463.21	.00	.00	.00	463.21		.00	Final	03/12/20
7059.03	17.59-	17.59-	.00	.00	.00	10/10/25	47.41-		
7060.01	229.58	229.58	.00	.00	.00	11/06/25	229.58-		
8001.01	2,013.83	2,013.83	.00	.00	.00	11/15/25	2,038.84-		
8004.04	1,379.43	1,379.43	.00	.00	.00	11/13/25	1,378.68-		
8012.03	60.00	37.59	22.41	.00	.00	11/03/25	60.00-		
8014.03	317.28	317.28	.00	.00	.00	11/05/25	634.56-		
8022.03	2,844.00	2,844.00	.00	.00	.00	11/13/25	2,844.00-		
8023.03	267.52	267.52	.00	.00	.00	11/03/25	267.52-		
8028.01	347.36	.00	.00	.00	347.36		.00	Final	03/31/12
9999.01	8,784.02-	8,784.02-	.00	.00	.00		.00	Final	01/01/22
10100.01	123.94	123.94	.00	.00	.00	11/10/25	123.94-		
Grand Totals:									
	69,026.33	37,399.62	7,163.17	1,936.87	22,526.67				

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943

Founded 1876
Incorporated 1899

December 2025 Staff Report for November Activity Submitted by Michele Sharif, Accounting Clerk/Administrative Specialist

- Attended and transcribed minutes for November 11, 2025, Regular Council Meeting
- Processed bank reconciliations in Caselle as needed to assist Finance Director
- Monthly reconciliation of petty cash and cash drawer
- Answered phones and assisted at office window as needed
- Continued upkeep and organization of both office and public bulletin boards
- Ride-a-longs with Public Works during Water Meter Routes.
- Download all batch reconciliation documentation from Xpress Bill Pay for November.
- JPD auctions closed: desk lamp, 2 cameras, 4 laptops - currently awaiting payment
- Received information for Ford Taurus from JPD to process and list on auction site.
- Documented and completed process shredding old checks (older than 6 months).
- Completed commercial sanitation account audit – provided details to Town Manager.
- Attend VVTPO meeting via zoom November 12, 2025
- Continued document clean-up and organization on shared drive, project will be ongoing.
- Started updating water meter information from route ride-a-longs.
- Received parking inventory information from ZA, beginning to organize data for Town Manager and Council.
- Visited Fire Department to establish method to organize digital and hard copy files after Chief's retirement.
- Organized Town Hall to host Chief Blair's retirement and awards ceremony.
- Drafted basic temporary business license information, provided to Town Manager and ZA.

JEROME MUNICIPAL COURT
Hon. Angela M. Bradshaw Napper, Magistrate
P. O. Box 335 / 600 Clark Street
Jerome, AZ 86331 Phone (928) 649-3250

TO: Jerome Town Council

FROM: Angela M. Bradshaw Napper, Magistrate

SUBJECT: Monthly Staff Report

DATE: December 1, 2025

Regular court business was slow in November, but with a jury trial scheduled for mid-December, court staff had plenty of time to prepare and train for what often feels like a big event for a small court. The court clerk has been working to standardize procedures related to jury trials and been training in cooperation with other Yavapai county municipal courts.

We continue to make forward progress with recommendations from August's court security assessment with assistance from Chief San Felice and Marty Boland. I am grateful for their thoughtful input and dedication to making the court and town hall more secure.

I recently completed a mandatory training about implementation of new time standard for DUI offense. Since the court clerk has now been on staff for over six months, I believe that we will be able to better assess how closely the Court is to achieving time standards set for by the Arizona Supreme Court. Of note, time standards are significantly different that the constitutional right to a speedy trial, and different kinds of cases (civil traffic, criminal misdemeanors, DUIs) have different standards applied from time of filing to adjudication.

Visitors to the Court are always welcome. We look forward to the winter season. And, as always, I am grateful to be of service.

MONTHLY REVENUE REMITTANCE

Oct 2025

TOTAL DISBURS

SUBTOTALS:		28.00	3,866.86	4,283.78	28.00	8,206.64
JCEF		28.00		4,171.67 Gen Fund		
FTG		0.00		112.11 Splits		

FUND	CODE	GL ACCT	OTH AGY	STATE	TOWN	COUNTY	
Jud Collect Enhan Fnd (Local TPF 12-116 - $7 Court)	ZJCL	4-13-03	28.00				
Jud Collect Enhan Fnd (LOCAL T22) (Other Fees)	ZJCLF	4-13-02					
Jud Collect Enhan Fnd (LOCAL T22) (Filing and Answer Fees)	ZJCLF	4-13-01					
Fill the Gap Revenue (MFTG)	FTGREV	4-98-03					(S2 WRITE-IN)
ADPS Forensic Fund	ZADPS	2-14-08		150.00			159.95 ZADPS & ZDNAS
Arson Detection Reward Fund - Title 22 Fees	ZADRF	2-13-05					0.00 ZADRF
Arson Detection Reward Fund	ZADRF	2-11-05					
Address Confidentiality Program Assmt 12-116.05	ZCAA1	2-15-33					0.00 ZCAA1, ZDVSF & ZTECH
Citz Clean Elect Fund (10% Base) - 16-949D, 954C (NOT Photo)	ZCEF	2-14-03		266.70			
Crim Jstc Enhnc Fnd Penalty (47% Base) - 12-116.01A, 41-2401	ZCJEF	2-14-01		1,128.44			
Child Passenger Restraint Fund 28-907C	ZCPRF	2-11-11					
Drug & Gang Enforcement Acct - 13-34xx, 13-811C	ZDECJ	2-11-25					
DNA 3% of Base Fine - 12-116.01C	ZDNAS	2-14-05		9.95			
DUI Abatement Fnd - 28-1304A, 1382,3 (Extrm DUI, $250)	ZDUIA	2-15-11					
DV Shelter Services Fund (DV Assmt) 12-116.06, 12-284.03A2	ZDVSF	2-15-34					(S2 WRITE-IN)
FARE Fee Special Collections (19%) AO 2003-126	ZFAR1	2-13-23		50.36			59.34 ZFAR 1 & 3
FARE Delinquency Fee ($35.00 Fee) AO 2003-126	ZFAR2	2-13-22					0.00 ZFAR 2 & 4
FARE Enhanced Spec Collection Fee	ZFAR3	2-13-25		8.98			
FARE Enhanced Deliquency Fee	ZFAR4	2-13-24					
FTG Penalty Assmt (7% of Base) - 12-116.01B, 41-2421J	ZFTGS	2-14-04		186.65			
Highway Users Rev Fnd (HURF) (REG 80% Out/ST Plates) 28-2533C	ZHRF3	2-11-36					
Jud Collect Enhan Fnd (ST TP - $11) 12-113, 12-116	ZJCS	2-13-52		44.00			52.00 ZJCS 52 & ZJCS 53
Jud Collect Enhan Fnd (ST TP - $2 PubDef Trng) 12-116	ZJCS	2-13-53		8.00			
Jud Collect Enhan Fnd (CVLTP) Title 22-281C1 (18.39% of Fee)	ZJCSF	2-13-51					
Medical Srvs Enhan Fnd (13% Base) 12-116.02F, 36-2219.01	ZMSEF	2-14-02		346.65			
2011 Additional Assemt ($8) 12-116.04C	ZOS1	2-15-31		224.00			364.11 ZOS 1-99
Prison Construction & Operations Fnd 5-395.01A4, 41-1651	ZPCOF	2-15-13					
Peace Officer Training Equip Fnd (2019-$4) 12-116.10, 41-1731	ZPOTE	2-15-42		109.52			
Probation Surcharge ($5) 12-114.01	ZPRSU/6/9	2-14-06		559.96			
Public Safety Equipment Fnd 5-395-397, 28-1381-88, 41-1723	ZPSEF	2-15-14		425.00			425.00 ZGFDU & ZPSEF
Drug Tech Registration Fnd (Drug lab) 13-3423, 28-737.___	ZTECH	2-15-35					
Victim Rights Penalty (2019 - $9) 12-116.08 (37.6%)	ZVCAF	2-15-43		92.58			246.45 ZVCAF & ZVRF
Victims Rights Enforcement Fund ($4) 12-116.09, 41-1722	ZVREA	2-15-37		78.08			
Victim Rights Penalty (2019 - $9) 12-116.08 (62.4%)	ZVRF	2-15-44		153.87			
Forfeited Overpayments		4-91-04					
Installment Payment Fee		4-39-08					
Attorney Reimbursement Fees (Indigent Defense)	ZATT	2-31-01					0.00 ZATT & ZPUBZ
Confidential Address Assmt - LOCAL DV/Sx (5%) 12-116.05	ZCAA2	4-29-22					
Court Enhancement Fee	ZCE	4-30-04					2,606.49 ZCAA2 & ZFINES
Defensive Driving School Fee 28-3396	ZDDS	4-31-01			668.44		
Default Fees - LOCAL	ZDEFF	4-32-01			181.11		181.11 ZDEFF & ZWARF
Deferred Prosecution Fees	ZDFEE	4-31-02					
Fines - CT Penalties - 13-811A & 28-1554B	ZFINE	4-21-10			725.24		
Fines - CR (NT) Penalties - 13-811A & 28-1554B	ZFINE	4-22-30					2,606.49 ALL ZFINES
Fines - CR T (DUI) Penalties - 13-811A & 28-1554B	ZFINE	4-22-10			55.00		
Fines - CR T (NDUI) Penalties - 13-811A & 28-1554B	ZFINE	4-22-20			51.71		
Fines - CR T (GBSE) Penalties - 13-811A & 28-1554B	ZFINE	4-21-95			61.49		
Fines - CR Penalties - 13-811A & 28-1554B	ZFINE	4-59-04					
Fines - LOCAL CIVIL TRAFFIC	ZFINE	4-49-07			1,713.05		
TITLE 22 OTHER FEES (LOCAL JCEF)	ZJCLF	4-13-02					
COURT SECURITY FEE	ZMCSF	4-30-25			696.53		
Miscellaneous (T22) Filing/Answer Fees 22-281C3	ZMISC	4-11-01					28.00 ZLCL & ZMISC
Miscellaneous (T22) Other Fees 22-281C3	ZMISC	4-11-02					
2011 Additional Assmt - Citing Agcy Share	ZOS	2-51-03					
Officer Safety Equip - LCOAL PD 12-116.04D	ZOS3	4-23-03			112.11		
2011 Additional Assmt - State Citing Agencies	ZOS5	2-15-32					
Non-Refundable Overpayments	ZOVF	4-91-02					
Public Defender Fees	ZPUBZ	4-39-71					(S3 WRITE-IN)
License Plate Violation (Susp/Dispay) 28-4139	ZSLPX/ZHRFC	4-23-02			19.10		
Warrant Fee	ZWARF	4-32-03					
Jail (incarceration) Fees	ZJF	4-33-21					
2011 Additional Assmt - Justice Courts Share	ZOS2	2-21-53				28.00	
CITIZENS CLEAN ELCTIONS FUND 1%	ZCEF2	2-14-09		24.12			299.87 ZCEF & ZCEF2

PASS-THROUGH MONIES:		Received	
OVERPAYMENT REPORT			
Carried Forward from Previous Month		$0.00	
RECEIVED in current month	ZOVR 2-72-01	$0.00	(S5 WRITE-IN)
DISBURSED (Hold Rcpt Refund) in current month		$0.00	
Allocation Adjustments		$0.00	
Balance at End of Current Month			
UNAPPLIED PAYMENTS REPORT			
Carried Forward from Previous Month		$0.00	
Received, not applied this month	UAP 2-79-11		(S5 WRITE-IN)
Allocated During Current month		$0.00	
Balance at End of Current Month		$0.00	
DEFERRED AGENCEY ALLOCATIONS REPORT			
Carried Forward from Previous Month		$0.00	
Agency Not Assigned in Current Month	DAA 2-99-02	$0.00	
Allocated During Current month		$0.00	
Balance at End of Current Month		$0.00	
BOND REPORT			
Carried Forward from previous month		$3,000.00	
RECEIVED in current month	ZBND 2-71-01		
CONVERTED (Exonerated) to Fines/Fees		$0.00	
DISBURSED in current month			
FORFEITED in current month		$0.00	
Balance at End of Current Month:		$3,000.00	
RESTITUTION REPORT			
Carried Forward from previous month		$0.00	
RECEIVED in current month	ZREST 2-41-01	$0.00	
DISBURSED in current month		$0.00	
Balance at End of Current Month		$0.00	

TOTAL REVENUE FOR DISBURSEMENT		**$8,154.52**
JCEF account	$28.00	
FTG account	$0.00	
State Revenue	$3,866.86	
City/Town	$4,283.78	
Yavapai County	$28.00	
Other Agencies		
TOTAL DISBURSEMENTS		$8,206.64
PASS-THROUGH MONIES:		$0.00
Overpayment Refunds	$0.00	
Unapplied Payments	$0.00	
Bonds (ZBND)	$0.00	
Restitution (ZREST)	$0.00	
Agency Not Assigned - not yet allocated	$0.00	
SABA TOTAL (Total Revenue)		**$8,206.64**

I, Chelsey Lennon, Court Clerk of Jerome Municipal Court, Yavapai County, State of Arizona, do hereby certify that the foregoing is a true and correct account of the funds collected by the Court for the month of: October-25

Signature

Second Verification:

Verified by:

Town Staff

JEROME MUNICIPAL COURT

CITY/TOWN DISBURSEMENT
45931

TOWN OF JEROME	CODE	GL	AMOUNT
Forfeited Overpayments		4-91-04	0.00
Confidential Address Assmt - LOCAL DV/Sx (5%) 12-116.05	ZCAA2	4-29-22	0.00
Defensive Driving School Fee 28-3396	ZDDS	4-31-01	668.44
Default Fees - LOCAL	ZDEFF	4-32-01	181.11
Deferred Prosecution Fees	ZDFEE	4-31-02	0.00
Fines - CT Penalties - 13-811A & 28-1554B	ZFINE	4-21-10	725.24
Fines - CR (NT) Penalties - 13-811A & 28-1554B	ZFINE	4-22-30	0.00
Fines - CR T (DUI) Penalties - 13-811A & 28-1554B	ZFINE	4-22-10	55.00
Fines - CR T (NDUI) Penalties - 13-811A & 28-1554B	ZFINE	4-22-20	51.71
Fines - CR T (GBSE) Penalties - 13-811A & 28-1554B	ZFINE	4-21-95	61.49
Fines - CR Penalties - 13-811A & 28-1554B	ZFINE	4-59-04	0.00
Fines - LOCAL CIVIL TRAFFIC	ZFINE	4-49-07	1,713.05
TITLE 22 OTHER FEES (LOCAL JCEF)	ZJCLF	4-13-02	0.00
Jud Collect Enhan Fnd (LOCAL T22) (Other Fees)	ZJCLF	4-13-02	0.00
COURT SECURITY FEE	ZMCSF	4-30-25	696.53
Miscellaneous (T22) Filing/Answer Fees 22-281C3	ZMISC	4-11-01	0.00
Miscellaneous (T22) Other Fees 22-281C3	ZMISC	4-11-02	0.00
Non-Refundable Overpayments	ZOVF	4-91-02	0.00
License Plate Violation (Susp/Dispay) 28-4139	ZSLPX/ZHRFC	4-23-02	19.10
Warrant Fee	ZWARF	4-32-03	0.00
OTHER CLERK FEES	ZLCL	4-39-09	0.00

SUBTOTAL - City/Town, General Fund **$4,171.67**

Attorney Reimbursement Fees (Indigent Defense)	ZATT	2-31-01	0.00	
Public Defender Fees	ZPUBZ	4-39-71	0.00	
Court Enhancement Fee	ZCE	4-30-04		**0.00**
Officer Safety Equip - LCOAL PD 12-116.04D	ZOS3	4-23-03		**112.11**
2011 Additional Assmt - Citing Agcy Share	ZOS	2-51-03		**0.00**

SUBTOTAL - City/Town, Split Accounts **$112.11**

City/Town TOTAL: **$4,283.78**

October 2025 $$$ RECONCILIATION

FOOTHILLS Bank - Jerome Municipal Court acct XXX-3419

ending balance on 9/30/25	**$**	**78,090.08**			
Deposits to account, per bank stmt:	**$**	**9,057.55**	(SABA deposits in AJACS)	(money in transit)	
			$ 8,215.39		$842.16

Checks cleared & charge-back debits:	date cleared:			
#2407	10/3/2025	$	28.00	Jerome JCEF
#2406	10/14/2025	$	4,768.08	Town of Jerome
#2405	10/15/2025	$	73.95	Yavapai County
#2404	10/16/2025	$	3,135.90	State of Arizona
#2409	10/20/2025	$	50.00	refund for overpayment citation #1305015189
TOTAL:		**$**	**8,055.93**	

ending balance on 10/31/25: **$ 79,091.70**

Other Court Accounts: (closing balances as of current month's end)

JCEF	$14,823.13
Fill the Gap	$11,172.86

OFFICER SAFETY EQUIPMENT FUND - PD - Town Revenue (code# 4-23-03)

2024		2025	
		JAN	$ 123.56
JULY	$ 125.26	FEB	$ 69.38
AUG	$ 91.39	MAR	$ 187.59
SEPT	$ 123.13	APR	$ 124.65
OCT	$ 156.94	MAY	$ 97.47
NOV	$ 78.03	JUNE	$ 152.60
DEC	$ 58.18	**YTD (fiscal)**	$ 1,388.18

OFFICER SAFETY EQUIPMENT FUND - PD - Town Revenue (code# 4-23-03)

2025		2026	
		JAN	
JULY	$ 118.72	FEB	
AUG	$ 81.52	MAR	
SEPT	$ 98.67	APR	
OCT	$ 112.11	MAY	
NOV		JUNE	
DEC		**YTD (fiscal)**	$ 411.02

2025-2026	Gross	ZOS3 4-23-03 off. safety equip.	ZMCSF 4-30-25 ct. security fee	June - May **NET to Town**
July	$ 5,369.50	$ 118.72	$ 739.50	$ 4,511.28
August	$ 4,423.41	$ 81.52	$ 591.13	$ 3,750.76
Sept	$ 4,768.08	$ 98.67	$ 700.00	$ 3,969.41
October	$ 4,283.78	$ 112.11	$ 696.53	$ 3,475.14
November				
December				
2026				
January				
February				
March				
April				
May				
June				
TOTAL	**$ 18,844.77**	**$ 411.02**	**$ 2,727.16**	**$ 15,706.59**

JEROME POLICE DEPARTMENT

RUSSELL J. SAN FELICE, CHIEF
305 MAIN STREET
POST OFFICE BOX 335
JEROME, ARIZONA 86331
(928) 634-8992
FAX (928) 649-2776

December 2, 2025

TO: Honorable Mayor and Jerome Town Council

FROM: Russell J. San Felice, Chief of Police

Attached please find the police activity reports for November 2025.

During the month of November, the police department responded to 138 calls for service. There was one fairly serious domestic violence incident near the end of the month. This incident resulted in a suspect stealing the victim's car and fleeing into Cottonwood. The suspect was apprehended with the assistance of Cottonwood PD. Cottonwood had an earlier domestic violence incident with the same suspect. Our officer charged the suspect with assault, theft of means of transportation and various traffic violations.

Jerome Police Officers and Parking Officers conducted several enforcement actions over the month of November. There were 391 parking citations written and 8 parking violation warning. There were 25 citations and 8 warnings for various moving traffic violations. There was one DUI arrest and one suspended driver case.

For the November 2025 status report, here are the kiosk totals:

November 2025: $44,502.25
November 2024: $33,481.35

Current Fiscal year total (July 1, 2025-June 30, 2026): $186,301.35

Respectfully,

Russell J. San Felice
Chief of Police

JEROME POLICE DEPARTMENT
305 MAIN STREET
JEROME, AZ 86331
(928) 634-8992

Calls For Service Totals By Call Type

11/01/2025 to 11/30/2025

Call Type		Totals
10-34	Motorist Assist	4
247S	Civil Stanby	1
410	Criminal Damage	1
415F	Domestic Disturbance	1
476	Animal Control Problem	5
487	Theft	1
500	Welfare Check	1
585	Traffic Hazard	3
692	DUI	1
903	Follow-Up	7
908F	Found Property	3
908L	Lost or Stolen Property	3
917	Abandoned Vehicle	1
918	Mentally Ill Person	1
961	Accident - No injuries	2
962	Accident - With Injuries	1
AA	Agency Assist	7
AC	Animal Cruelty	1
ACPD	Assist Clarkdale PD	1
ADPS	Assist DPS	2
AF	Assist Fire Department	1
AYCSO	Assist YCSO	8
BI	Background Investigation	1
CA	Citizen Assist	4
CO	Call Out	3
CSEC	Court Security	3
FF	Family Fight	1
FP	Foot Patrol	2
INFO	Information	4
MISC	Miscelleanous	1
NOISE	Noise Complaint	1
OA	Officer Assist	1
OT	Oversize Truck	3
PARK	Parking Complaint	1
PE	Parking Enforcement	26
PS	Civil Paper Service	1
SC	Security Check	16
SL	Shoplifting	2

JEROME POLICE DEPARTMENT
305 MAIN STREET
JEROME, AZ 86331
(928) 634-8992

Calls For Service Totals By Call Type

11/01/2025 to 11/30/2025

Call Type		Totals
SLC	Street Light Check	3
SS	Suspicious Situation	3
T/S	Traffic Stop	2
TO	Traffic Offense	1
TRN	Training	3
Grand Total for all calls		138

Jerome Fire Department

P.O. Box 1025 Jerome, AZ 86331 Tel. (928) 649-3034 Fax (928) 649-3039
E-mail: admin@jeromefd.org

Fire Department Report
Month: November Year: 2025

Calls by Type	Number	Resident	Non-Resident
EMS Calls	3	3	0
Residential Fire	0	0	0
Commercial Fire	0	0	0
Wildland	0	0	0
Still Assignment	0	0	0
Station Staffing	3	3	0
Citizen Assist	3	3	0
Agency Assist	1	1	0
Special Duty	7	5	2
Snake Removal	1	1	0
Tech Rope Rescue	0	0	0
MVA/Rescue	3	0	3
HazMat	1	1	0
Dispatch Error	0	0	0
Totals:	**24**	**19**	**5**

Department Meetings and Drills	Number
Officer's Meeting	**1**
Work Session	**1**
Rope Drill	**1**
Drills	**5**

JFD Calls and Meetings hours worked	Total Hours: 253:24

Meetings	Date
PAWUIC-Whiting	11/06
Verde Valley Fire Marshals meeting-Whiting	11/20

Education:

There were no external classes or training during the month of November.
In December John Krmpotich will take a Radio programing class held by Sedona Fire.
This class is on the radio that both Jerome Fire and Jerome PD use.

Weekly Training:

Date	Training	Instructor
Thursday November 6th	ED Patch LZ set up	Whiting/ R. San Felice
Thursday November 13th	Apparatus placement around town	Giles
Thursday November 20th	Steep angle rescue	Supple
Saturday November 22nd	Vortex set up	Lee
Thursday November 27th	Thanksgiving	

Department Affairs and Ongoing Projects

- The November meeting schedule was slow due to the holidays; I expect them to pick up after the first of the year.
- We have been working on a hazardous fuels grant that we have not been able to address in the past, vehicle checks and daily training have increased.

- This November there were 24 requests for service Our Fire Department personnel perform their tasks in a professional manner with no injuries occurring.
- The Fire department's new truck received and stickered emergency lights have been installed. The radio will be ordered and installed next budget year.

Prevention

- We had a total of 32 loads with a total of 142 hours combined with our citizens and fuels crew.
- 17 Firewise activities

November Fire Department Activities and Run Report:

Incident	Date	Time	Day	Incident Type	Description	#
25-121	11/1/25	18:01	Sat	Special Duty Resident	Sewer Leak	5
J-257	11/3/25	9:00	Mon	Snake Removal & Relocation - R	10" Diamond Back	1
25-122	11/4/25	15:51	Tue	Hazmat Resident	Smell of Gas	5
J-258	11/7/25	13:30	Fri	Station Staffing	Station Staffing	2
J-259	11/8/25	8:30	Sat	Station Staffing	Station Staffing	4
J-260	11/11/25	9:45	Tue	Citizen Assist Resident	Install smoke detector	1
25-123	11/12/25	11:33	Wed	EMS Resident	74 YOF - Fall with injury	6
25-124	11/12/25	12:34	Wed	EMS Resident	74 YOF - Seizure	5
J-261	11/12/25	14:00	Wed	Citizen Assist Resident	Disabled Vehicle - Flat Tire	2
J-262	11/13/25	10:07	Thu	Agency Assist Resident	Stuck Vehicle	1
J-263	11/14/25	8:30	Fri	Special Duty Non-Resident	Vehicle Lockout	1
25-125	11/18/25	10:04	Tue	EMS Resident	81 YOM - Possible Stroke	5
J-264	11/18/25	12:00	Tue	Special Duty Resident	Clear road debris	1
J-265	11/18/25	12:30	Tue	Special Duty Resident	Welfare Check	2
25-126	11/19/25	21:22	Wed	MVA/Rescue Non-Resident	2 Vehicle accident	5
J-266	11/22/25	14:12	Sat	Special Duty Non-Resident	Vehicle Jumpstart	1
J-267	11/23/25	12:40	Sun	Special Duty Resident	Vehicle lockout	3
25-127	11/23/25	12:54	Sun	MVA/Rescue Non-Resident	Vehicle off the road, 50 Feet	6
25-128	11/23/25	14:23	Sun	Special Duty Resident	Rocks in the road	4
25-129	11/23/25	22:18	Sun	MVA/Rescue Non-Resident	Single vehicle Non injury	5
J-268	11/26/25	16:00	Wed	Citizen Assist Resident	Vehicle Lockout	1
J-269	11/29/25	8:00	Sat	Station Staffing Resident	Station Staffing	5
25-130	11/30/25	15:58	Sun	EMS Resident	80 YOM neck pain	5
25-131	11/30/25	18:55	Sun	MVA/Rescue Resident	Pedestrian VS. Vehicle	6

November 2025 Burn Pile Log

JC stands for Jerome citizens.

Date	Address	Adult Prob.	# Fuels Crew	FC Hrs.	Fuels Crew Total Hrs.	# Loads	# crew	# Hrs.	Town Firewise Total Hrs.
11/3/2025	219 Beale				0	2	2	4	8
11/5/2025	842 Gulch				0	3	2	4	8
11/5/2025	300 Level		1	3	3				0
11/11/2025	295 Mine Rd				0	6	3	8	24
11/11/2025	219 Diaz				0	1	2	2	4
11/11/2025	842 Gulch				0	2	2	2	4
11/12/2025	713 Main				0	2	2	2	4
11/12/2025	29 Magnolia				0	1	1	1	1
11/13/2025	29 Magnolia				0	1	1	2	2
11/13/2025	842 Gulch				0	2	2	2	4
11/14/2025	Wastewater Plant		2	5	10				0
11/25/2025	842 Gulch				0	2	2	2	4
11/25/2025	222 First Ave				0	8	2	8	16
11/26/2025	842 Gulch				0	2	2	4	8
11/26/2025	Wastewater Plant		2	7	14				0
11/28/2025	Wastewater Plant		2	7	14				0
11/29/2025	Wastewater Plant		2	7	14				0
		0	**9**	**29**	**55**	**32**	**23**	**41**	**87**
	Jerome Citizen Hours-	Adult Prob.	Firewise	FW Hrs.	Firewise Total Hrs.	# Loads	JC# Crew	JC# Hrs.	JC Total Hrs.

Thank you for your continuing support
Jerome Fire Department

TOWN OF JEROME, ARIZONA

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 FAX (928) 634-0715 m.boland@jerome.az.gov

Celebrating Our 124nd Anniversary
1899 - 2025

Founded 1876
Incorporated 1899

November 2025
PUBLIC WORKS
MONTHLY REPORT

NORMAL WEEKLY DUTIES

- TRASH: Monday, Wednesday, and Friday.
- PARKS: Clean parks, Weed whip, and Mow.
- RECYCLE: Pickup cardboard Monday, Wednesday, and Friday. The trailer goes to recycle on Thursdays.
- WATER: Read water meters on Thursdays.
- HURF: Clean curb and gutters, Weed whip.
- SEWER: Repair lines.

OTHER PROJECTS

- Water leak on Hampshire. Dug up, fixed and repaired.
- Winterize tanks on Sunshine Hill.
- Winterize the cooler at the co-op.
- Shut down the water and rebuilt the 2-inch valves on the 2-inch regulator on Giroux so we could rebuild the regulator.
- Remove the stickers from the cop car being sold.
- Run out on Allen springs to change batteries and check things.
- Clean up rockslides and ditches with the tractor.
- Work on the lights for the trash truck.
- Some grading on Dundee Rd.
- Change out the bulbs in the courtroom.
- Asphalt patch throughout town.

Regulators-

11/13/2025 2” Giroux rebuild, no parts replaced, will need a new CRD gasket.

File Attachments for Item:

A. Report Provided by the Zoning Administrator. Minutes are Provided for Information Only and do Not Require any Action

Founded 1876
Incorporated 1899

Town of Jerome, Zoning Administrators Report

Town Council: Tuesday, December 09, 2025
Prepared by: William Blodgett, Zoning Administrator

Planning & Zoning Commission- The regular meeting of the Planning & Zoning Commission was cancelled for November, with no items ready for review.

Design Review Board- The Regular meeting of the town of Jerome's Design Review Board was cancelled due to proximity to the Thanksgiving Holiday.

Code Enforcement-

Code enforcement for October was relatively light, and focused on Parking related issues for November's efforts.

Administrative Approvals-

No administrative approvals were made during the month of November.

Other Business-

November was busy in the Planning & Zoning Office. New projects have been submitted and I am working with the applicants to complete these applications for review. Additionally some existing/ongoing projects in town will be resubmitting for review of changes, or planned changes, to these projects.

A study of the C-1 Parking, and the parking demands and requirements for the C-1 district has been completed. A full Residential inventory is now in progress to coincide with JPD's planned update to a new parking management system in the spring.

A rock retaining wall (or "Rockery") failed at the end of November, partially blowing out at the end of Holly & Douglas Rd. The property owner, Verde Exploration, has been made aware of the issue and plans are underway to determine repair options. This experience has heightened the need for some policies and standards regarding "Rockeries", which is actively underway. A full recordation and inspection of the Rockeries in town is intended to begin in January.

A Jerome local, Kim Miceli, has volunteered to lead the Town Garden maintenance and expansion efforts, and has formulated a plan that I support, that will be coming to the Council.

File Attachments for Item:

A. Consider Approval of the November 11th, 2025, Regular Council Meeting Minutes and November 24, 2025, Special Council Meeting Minutes

Council will consider and may approve the November 11th, Regular, and November 24th Special Council Meeting minutes.

TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943
www.jerome.az.gov

MINUTES

REGULAR COUNCIL MEETING OF THE TOWN OF JEROME
COUNCIL CHAMBERS, JEROME TOWN HALL
600 CLARK STREET, JEROME, ARIZONA

TUESDAY, NOVEMBER 11, 2025, AT 7:00 PM

Due to the length of this meeting, Council may recess and reconvene at the time and date announced.

7:00PM (0:27) 1. CALL TO ORDER/ROLL CALL

Mayor/Chairperson to call meeting to order
Town Clerk to call and record the roll.

Present were Mayor Alex Barber, Vice Mayor Jane Moore, and Council members Dr. Jack Dillenberg and Sonia Sheffield. Council member Izzy Sharif was absent at the start of the meeting and joined later via telephone.
Staff Present included Town Manager, Brett Klein, Zoning Administrator, Will Blodgett, and Administrative Specialist/Accounting Clerk, Michele Sharif.

7:00PM (0:41) 2. FINANCIAL REPORTS

Discussion/Possible Action

A. Financial Report and Detail Invoice Register Report for October, 2025

Council will consider and may approve the financial reports for month ending October 2025.

Mayor Barber introduced the financial reports.
Vice Mayor Moore made a motion to approve the financial reports.
Councilmember Dillenberg seconded the motion.
By unanimous vote the motion carried.

Motion to approve financial reports.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG		X	X			
MOORE	X		X			
SHARIF					X	
SHEFFIELD			X			

7:01PM (1:04) 3. STAFF AND COUNCIL REPORTS

Discussion/Possible Action

A. Reports by the Town Manager / Clerk, Deputy Clerk, Utilities Clerk, Accounting Clerk, Public Works Director, Building Inspector, Library Director, Municipal Magistrate, Police Chief, Fire Chief and Council Members, Which in the Case of Council Member's Reports will be Limited to a Summary of Current Events and will Involve no Action

Council will consider and may approve the staff reports.

Mayor Barber introduced the staff and council reports.
Mr. Klein gave a brief update regarding the School St. regulator and the plans for the Deception waterline project.
Councilmember Dillenberg made the motion to approve the staff and council reports.
Vice Mayor Moore seconded the motion.
Mayor Barber called the question, and the motion carried.

Motion to approve staff and council reports.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG	X		X			
MOORE		X	X			
SHARIF					X	
SHEFFIELD			X			

7:02PM (2:08) 4. ZONING ADMINISTRATOR'S REPORT/PLANNING & ZONING AND DESIGN REVIEW BOARD MINUTES

Information/Council Review

A. Report Provided by the Zoning Administrator. Minutes are Provided for Information Only and do Not Require any Action

Mayor Barber introduced item 4.
Mr. Blodgett noted a slower month with fewer issues. The planned haunted house was canceled due to organizer setbacks but may return next year.
Vice Mayor Moore asked if he thought any work sessions might bring to light any known issues with the zoning ordinance.
Mr. Blodgett answered he didn't think it was necessary to have a generalized work session over a goal oriented one and that discussions will wait until consultant input is received, with public participation planned later.

7:04PM (4:48) 5. APPROVAL OF MINUTES

Discussion/Possible Action

A. Consider Approval of the October 14, 2025, Regular Council Meeting Minutes

Council will consider and may approve the October 14th Regular Council Meeting Minutes.

Mayor Barber introduced the minutes seeking any corrections or clarifications. With no corrections she made the motion to approve the meeting minutes from the October 14, 2025, Regular Council Meeting.
Council members Sheffield and Dillenberg seconded the motion.
Mayor Barber called the question and the motion carried.

Motion to approve meeting minutes from October 14th Regular Council Meeting.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE			X			
SHARIF					X	
SHEFFIELD		X	X			

7:05PM (5:13) 6. PETITIONS FROM THE PUBLIC

Henry Vincent, resident, expressed concerns about transparency and communication regarding the Muma House sale, the Verde Exploration litigation, and the proposed Holly Street property sale. He questioned the handling of each matter, potential financial impacts, and the Town's involvement in real estate, emphasizing the need for more clear public communication and accountability.

7:11 PM 7. NEW BUSINESS

Discussion/Possible Action

7:11PM (11:59) A. Consideration of the Jerome Chamber of Commerce Special Event Permit Application for the Annual Town Dinner at Spook Hall

Council will consider and may approve the special event permit.

Mayor Barber introduced the special event application making the motion to approve.
Vice Mayor Moore and Councilmember Dillenberg seconded the motion.
Upon calling the question the motion carried.

Motion to approve special event application for Town Dinner at Spook Hall.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE		X	X			
SHARIF					X	
SHEFFIELD			X			

After the vote Councilmember Sharif joined the meeting by phone.

DRAFT

7:13PM (13:42) B. Consideration of Bids in Response to the Town's Issuance of an Invitation for B Regarding its Notice of Intent to Sell 655 Holly

Council will consider the bid(s) received and may approve, and / or provide staff direction.

Mayor Barber introduced Item 7B and turned the discussion over to Mr. Klein. He explained that 655 Holly was purchased about three and a half years ago to provide affordable housing for Town employees during a period of high housing costs. One employee lived in the home for approximately two years, generating rental revenue while completing improvements. After the employee moved out, and with the Town's acquisition of another multi-unit workforce housing property, Council began considering selling 655 Holly while still preserving its use for affordable housing.

To that end, the Town explored a community land trust model and issued an invitation for bids. One bid was received from the Verde Valley Community Development Organization (VVCDO), which outlined needed repairs, costs, and income-eligibility guidelines. Their proposal would return part of the Town's investment, account for prior rental revenue and improvements, and keep the property available long-term for Jerome employees or other local workers if no employee qualifies at a given time.

Council discussed options: proceeding with the land trust proposal; selling on the open market with the risk of short-term rental conversion; or selling with a deed restriction. Staff noted that three employees had expressed interest in purchasing the home at an affordable price consistent with the land trust model, and that the property originally cost the Town $295,000.

VVCDO representatives described their qualifications and the land trust structure: purchasing the home, appraised at roughly $300,000, investing about $45,000 in repairs, and reselling the structure, not the land, to an eligible buyer for about $190,000 under a 99-year ground lease of roughly $1,100 per year. They explained the shared-equity resale formula and the trust's role in keeping the home permanently affordable.

One resident raised concerns about financing limitations for homes on leased land, including restricted access to HELOCs. VVCDO responded that several Arizona lenders now support land-trust mortgages and committed to providing lender contacts.

Council and public comments focused on the Town's equity loss, alternatives such as retaining the home as a rental, concerns about losing control of housing stock, and whether selling only the structure benefits employees long-term. Additional questions covered the appraisal, inspection results, deed-restriction options, and VVCDO's planned repairs.

Staff emphasized that the proposal is conceptual and any next step would involve directing legal counsel to draft terms for future Council review. Councilmember Dillenberg asked for clarification on the vote; staff and the Town Attorney explained that Council was being asked only to identify a tentative winning bidder as required by the formal bid process before an agreement can be drafted.

After lengthy discussion, and in light of concerns about financial impacts and long-term workforce housing needs, a motion was made by Councilmember Dillenberg and seconded by Vice Mayor Moore to table the item to the November 24 meeting at 5:00 p.m.

Motion to table bids and discussion until November 24 Special Meeting.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG	X		X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

8:01PM (1:01:20) C. Consideration of a Conditional Use Permit (CUP) for Three (3) Residential Apartment Units at 310 Queen Street

Council will consider and may approve a CUP for 310 Queen Street.

Mayor Barber introduced the item for consideration.

Mayor Barber introduced the item to consider approval of a Conditional Use Permit for three residential apartment units at 310 Queen Street. The property has 10 approved parking spaces, which must be contained on-site per zoning requirements.

Mayor Barber entered a motion to approve the CUP.

Vice Mayor Moore seconded the motion.

By unanimous vote the motion passed, with a request that future applications include detailed parking plans.

Motion to approve CUP for 310 Queen Street.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

DRAFT

8:04PM (1:04:07) D. Consideration of Bids and Approval of, and Awarding of, the Contract in the Amount of $133,194.68 to Total Maintenance Erosion Control, LLC, for the Gulch Drainage Improvements

Council will consider and may award the contract to Total Maintenance and Erosion Control, LLC in the amount of $133,194.68.

Council considered bids for the Gulch drainage improvements project, with Mr. Klein clarifying that there were 4 bids received, this being the lowest bid at $133,194.68.
Councilmember Dillenberg made the motion to approve awarding the bid to Total Maintenance Erosion Control, LLC.
Mayor Barber seconded the motion, then called the question and the motion carried.

Motion to award contract to Total Maintenance Erosion Control, LLC.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER		X	X			
DILLENBERG	X		X			
MOORE			X			
SHARIF			X			
SHEFFIELD			X			

After the vote the Vice Mayor asked the Town Manager to clarify how the project is being paid for.
Mr. Klein informed Council this will be paid for with 2 years of Yavapai County Drainage grant funds and the rest from the operating budget.

8:07PM (1:07:19) E. Consider Removing from the Table (From January 2025) and Consideration of a Tour Company Business License Application for US Ghost Adventures LLC

Council will take the item from the table and then consider and may approve the Tour Company Business License.

Mayor Barber introduced the item for consideration.
There was slight confusion whether this was an item to be removed from the table or if it was a new application submission for consideration.
Mayor Barber made the motion to remove the item from the table for discussion and vote.
Vice Mayor Moore seconded the motion.
Mayor Barber called the question and by unanimous vote the item was removed from the table for discussion.

Motion to remove from the table.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

Council reconsidered the tour company business license application for U.S. Ghost Adventures. The applicant was not present, and staff noted that while minimum requirements were met, several uncertainties remained. Council discussed whether to deny or postpone the item, expressing concern about the applicant's lack of participation and unresolved details regarding tour operations.
Councilmember Dillenberg made the motion to table the item until a representative could be present to answer questions.
Vice Mayor Moore seconded the motion.
Mayor Barber called the question and the motion passed unanimously.

Motion to table the item until a representative can be present.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG		X	X			
MOORE	X		X			
SHARIF			X			
SHEFFIELD			X			

* After the conclusion of the meeting it was confirmed that on January 14th this item was denied and not tabled.

8:12PM (1:12:37) F. Consideration of a Remote Tasting Room Series 19 Liquor License on Location at 114 Jerome Avenue for dba The Original Jerome Winery

Council will consider and may approve the Series 19 Liquor License.

Mayor Barber introduced item F.
It was explained that this is a secondary tasting room on the same premises as the first one and the applicant is pursuing

this avenue to clean up their bookkeeping.
Councilmember Dillenberg made the motion to approve the series 19 Liquor License.
Vice Mayor Moore seconded the motion.
Mayor Barber called the question and the motion passed.

Motion to approve series 19 Liquor License

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG	X		X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

8:13PM (1:13:36) G. Review Proposals Received in Response to the RFP for an Advanced Metering Infrastructure System and Identify 2-3 Respondents to Attend the Upcoming Special Meeting for Further Council and Community Evaluation and Consideration

Council will review the proposals received and provide staff direction.

Mayor Barber introduced the item.
Mr. Klein explained due to an irregularity the bid deadline was extended to December 1st and all respondents were notified via addendum. He asked that the item be tabled until the December meeting.
Mayor Barber made the motion to table the item.
Council member Dillenberg seconded the motion.
Mayor Barber called the question and the motion carried.

Motion to table to December meeting.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG		X	X			
MOORE			X			
SHARIF			X			
SHEFFIELD			X			

8:15PM (1:15:10) 8. TO AND FROM THE COUNCIL

Council may direct staff regarding items to be placed on a future agenda.

Mayor Barber introduced the item and there were no updates to share.

8:15PM (1:15:49) 9. EXECUTIVE SESSION

On a public majority vote of the members, Council may enter into executive session in accordance with ARS § 38-431.03 (A)(1) and (3)

A. Discussion on Fire Chief's Potential Retirement Agreement and Interim / Future Staff Leadership Plans for the Fire Department

The Council will discuss and consult with its attorney for the purpose of receiving legal advice regarding a potential retirement / temporary employment and consulting agreement between the Town and its outgoing Fire Chief and may provide its representatives and legal counsel with instructions regarding said agreement and Fire Department Leadership.

Mayor Barber introduced the item, making the motion to enter into executive session.
Vice Mayor Moore seconded the motion.
with 5 ayes the motion carried and council entered executive session at 8:16p.m.

Motion to enter execute session at 8:16p.m.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

After the vote Council took a 10 minute recess prior to starting the executive session.

DRAFT

9:04PM (0:01) B. Return to Open Session and Consider Action to be Taken from the Executive Session Including the Potential Approval of an Agreement and Further Staff Direction

Council may make a motion to take necessary action as a result of the Executive Session discussions.

Council returned to open session at 9:04p.m.
Mayor Barber made the motion to approve the retirement agreement with temporary employment through June 30th.
Councilmember Sharif seconded.
Mayor Barber called the question, and the motion passed by unanimous vote.

Motion to approve agreement with temporary employment through 6/30/2026

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE			X			
SHARIF		X	X			
SHEFFIELD			X			

9:05PM (1:01) 10. ADJOURNMENT

Mayor Barber entered a motion to adjourn the meeting.
Councilmember Dillenberg seconded the motion.
By unanimous vote the meeting adjourned at 9:05p.m.

Motion to adjourn at 9:05 p.m.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG		X	X			
MOORE			X			
SHARIF			X			
SHEFFIELD			X			

APPROVE:

Alex Barber, Mayor

ATTEST:

Brett Klein, Town Manager

DRAFT

TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943
www.jerome.az.gov

DRAFT MINUTES

SPECIAL COUNCIL MEETING OF THE TOWN OF JEROME
COUNCIL CHAMBERS, JEROME TOWN HALL
600 CLARK STREET, JEROME, ARIZONA

MONDAY, NOVEMBER 24, 2025, AT 5:00 PM

5:00 PM 1. CALL TO ORDER/ROLL CALL

Mayor/Chairperson to call meeting to order
Town Clerk to call and record the roll.

Present were Mayor Alex Barber, Vice Mayor Jane Moore, and Councilmembers Dr. Jack Dillenberg, and Sonia Sheffield. Councilmember Issam "Izzy" Sharif joined via speakerphone.
Staff members included Town Manager/Clerk Brett Klein, Zoning Administrator Will Blodgett, and Deputy Clerk Kristen Muenz.

5:01 (0:40) 2. PETITIONS FROM THE PUBLIC

There were no petitions from the public.

5:01 PM 3. NEW BUSINESS

Discussion/Possible Action

5:01 (0:48) A. Discussion, Consideration and Possible Staff Direction Regarding the Council Prioritization of Capital Improvements for Potential Inclusion in Fiscal Year 2027 Budget

Council will engage in a work session type discussion and may prioritize capital projects for budget purposes and provide staff direction regarding the same.

Town Manager Klein introduced the Capital Improvements Projects, explaining briefly that we have many items which are top priority, some of which will be handled first because we have already secured grant funding to complete them.
Council reviewed and briefly discussed the list of Capital Improvement Projects, but no items were requested to be added or omitted.
Mayor Barber said there will be many more budget meetings, and we need to keep in mind any projects that need to be added to the list.

5:15 (14:59) B. Consider Removing from the Table and Consideration of Bids in Response to the Town's Issuance of an Invitation for Bids Regarding its Notice of Intent to Sell 655 Holly

Council will consider the bid(s) received and may approve, and / or provide staff direction.

Mayor Barber introduced the item by saying that we have been trying to find ways for people to live here. She explained that we used to require 5 department heads to live in town, and now we only require 2, but she would continue to fight to keep the Fire and Police Chiefs in town as it was important for them to be able to respond to emergencies.
Town Manager Klein pointed out that he had submitted a new staff report and briefly explained that the purpose of purchasing the house at 655 Holly Avenue was for affordable staff housing. He reminded council that the item had been tabled at the last meeting.
Mayor Barber moved to remove the item from the table and discuss.
Vice Mayor Moore seconded the motion, and it carried unanimously.

Motion to Remove Item 3B from the Table for Discussion

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG			X			
MOORE		X	X			
SHARIF			X			
SHEFFIELD			X			

Town Manager Klein briefly explained the land trust agreement again and gave some examples as to the benefits or liabilities of maintaining the house.
Councilmember Sharif stated that the question was, do we sell or keep the house. It was a liability because of the type of house and the location. Also, while some work had been done, most of the house was not updated. Councilmember Sharif said that if we keep it and rent it, we would we have a plan to have someone put money back into house.
Jerome resident Carol Anne Teaue said that she represented the house next door, which was listed for sale, and she disagreed with the estimate that 655 Holly could not be 100% rented. She also felt it was not doing anyone any favors to have a land trust and only sell the brick and boards of the house.
Town Manager Klein refuted this and explained that the design of the land trust is to keep the cost of the house within the buying market of town employees.
There was some discussion as to the current housing marked, and Councilmember Jack Dillenberg commented that it could be rented again.
Councilmember Sheffield stated that it was difficult, and she was unsure of the best decision.
Mayor Barber replied that it was okay to be unsure, we need to do the best we can for the town.
Town Manager Klein explained that the land trust was the best way for the town to recover some equity in the house. Also, we recently purchased 621 Main Street, which had 3 units in total, 2 of which were available as affordable employee housing.
Ms. Teague made comments comparing a land trust to a modular house, but Manager Klein pointed out that the difference would be it was not mobile, and the neighborhood would be other homeowners. He added that the town attorney pointed out the difference is mobile home neighborhood make profits off the land where a land trust is a non-profit who hold the land to keep the price down.
Councilmember Sharif repeated that to keep the house, we would need to put money back into it to make it rentable He added that the town needed funds for a garbage truck and we have to make hard decisions.
Vice Mayor Moore asked about the possibility of offering it for sale to someone in town.
Town Manager Klein explained that we could open it up for bidding, but we would have to take the highest bid and that would price out town employees.
Vice Mayor Moore asked about the land trust lease and representatives from the Verde Valley Community Land Trust were given the opportunity to explain briefly.
Council member Dillenberg asked what the downside to selling the house was.
Town Manager Klein explained that if the council would like to maintain control and the guarantee of employee housing, the land trust would keep it affordable. If they wanted to look into trying to recoup as much money as possible, then they could consider selling instead.
Councilmember Sheffield pointed out that when we purchased 655 Holly, we were looking at a soon to retire Police and Fire Chief and needed housing. Now both those things have happened, and the need is not as great as it was.
Councilmember Dillenberg said that he wanted to consider selling but if we go that route, we want to make sure it is good decision.
Mayor Barber asked if we want to look at a deed restriction and then compare options apples to apples
Councilmember Sheffield agreed that she would like more information.
Mayor Barber said that we need a trash truck, we are trying really hard to do it and not waste the town's money.
There was a brief discussion as to whether the item can be tabled again.
Town Manager Klein explained that they want to prioritize housing, look at the land trust. However, if they wished to prioritize funding, they would need to reject the bid and give staff directions.
Vice Mayor Moore moved to table the item until the next meeting for more information.
Jack 2nds.
Councilmember Dillenberg seconded the motion.
Brett asks Town Manager Klein asked for clarification on what information they would like to see at the next meeting, and Mayor Barber said we would like to see an example of a deed restriction.
The vote was called and carried with a majority.

Note: Councilmember Sharif experienced connection issues with the speakerphone and was forced to disconnect at 5:57 P.M.

Motion to Table to the Next Council Meeting for More Information

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER			X			
DILLENBERG		X	X			
MOORE	X		X			
SHARIF					X	
SHEFFIELD			X			

4. TO AND FROM THE COUNCIL

Council may direct staff regarding items to be placed on a future agenda.

There was no to and from the council. The meeting proceeded directly from item 3B to adjournment.

6:15PM (1:14:30) 5. ADJOURNMENT

Mayor Barber made a motion to adjourn the meeting.
Councilmember Dillenberg seconded the motion.
Mayor Barber called the question and by majority vote the meeting adjourned at 6:15 p.m.

Motion to Adjourn at 6:15 P.M.

COUNCILMEMBER	MOTION	SECOND	AYE	NAY	ABSENT	ABSTAIN
BARBER	X		X			
DILLENBERG		X	X			
MOORE			X			
SHARIF					X	
SHEFFIELD			X			

APPROVE:

Alex Barber, Mayor

ATTEST:

Brett Klein, Town Manager

DRAFT

File Attachments for Item:

A. Consideration of Resolution No. 684; A Resolution of the Mayor and Town Council of the Town of Jerome, Arizona, Authorizing the Submission of an Application to the Arizona Department of Transportation's State Match Advantage for Rural Transportation (AZ SMART) Fund for Grant Development and Submission Costs for a Federal Discretionary Grant Related to the Verde Avenue Development

Council will consider and may approve the resolution.

TOWN OF JEROME, ARIZONA

Jerome Town Hall and Civic Center
600 Clark Street
P.O. Box 335, Jerome, AZ 86331
(928) 634-7943 FAX (928) 634-0715

Founded 1876
Incorporated 1899

RESOLUTION NO. 684

A RESOLUTION OF THE MAYOR AND TOWN COUNCIL OF THE TOWN OF JEROME, ARIZONA, AUTHORIZING THE SUBMISSION OF AN APPLICATION TO THE ARIZONA DEPARTMENT OF TRANSPORTATION'S STATE MATCH ADVANTAGE FOR RURAL TRANSPORTATION (AZ SMART) FUND FOR GRANT DEVELOPMENT AND SUBMISSION COSTS FOR A FEDERAL DISCRETIONARY GRANT RELATED TO VERDE AVENUE DEVELOPMENT.

WHEREAS, the Town of Jerome seeks to improve local infrastructure and transportation networks to support long-term economic development and safety for residents; and

WHEREAS, the Town intends to pursue a Federal Discretionary Grant through the United States Department of Transportation (USDOT) for Verde Avenue Development improvements; and

WHEREAS, the Arizona State Match Advantage for Rural Transportation (AZ SMART) Fund administered by the Arizona Department of Transportation (ADOT) provides a mechanism to support the preparation and submission of federal transportation grant applications by rural communities; and

WHEREAS, the total cost of the grant development and submission for the Verde Avenue project is expected to be $6,400, and the Town intends to request $3,200 from the AZ SMART Fund to match its local contribution of $3,200.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Town Council of the Town of Jerome, Arizona, as follows:

1. The Town of Jerome supports the submission of an application to the AZ SMART Fund in the amount of $3,200 for Grant Development and Submission services related to the Verde Avenue Development project.

2. The Mayor and/or Town Manager are hereby authorized to execute all documents and take all actions necessary to submit said application and to carry out the purposes of this Resolution.

3. The Town of Jerome commits to providing the required 50% match ($3,200) through local funds or in-kind services as outlined in the application.

For TTY Access, Call the Arizona Relay Service at 1-800-367-8939 and ask for Town of Jerome at 928-634-7943

ADOPTED AND APPROVED by a majority vote of the Jerome Town Council on the 9th day of December, 2025.

APPROVED:

_____
Christina "Alex" Barber, Mayor

ATTEST:

_____
Brett Klein, Town Manager/Clerk

APPROVED AS TO FORM:



_____
Gust Rosenfeld, PLC, BY: John A. Gaylord, Town Attorney

File Attachments for Item:

A. Consider Removing from the Table and Consideration of Bids in Response to the Town's Issuance of an Invitation for Bids Regarding its Notice of Intent to Sell 655 Holly

Council will consider the bid(s) received and may approve the bid, reject all bids, and / or provide staff direction.

RECORDING REQUESTED
BY AND WHEN RECORDED
MAIL TO:

Housing Manager
City of Sedona
102 Roadrunner Drive
Sedona, AZ, 86336

(Space Above for Recorder's Use)

USE DEED RESTRICTION
(Owner-Occupied Short-Term Rental or No Short-Term Rental)

APN:_____

The City of Sedona, an Arizona municipal corporation ("City") and _____ an _____ ("Declarant") enter into the following use deed restriction ("Deed Restriction") concerning the property described as APN:_____ with an address of: _____("Property"), as more particularly described in Exhibit A. City and Declarant are sometimes hereinafter each singularly referred to as "Party" and collectively referred to as the "Parties."

COVENANTS AND RESTRICTIONS

NOW, THEREFORE, for and in consideration of the Fifteen Dollars ($15.00), in hand paid to Declarant by the City, the mutual promises and covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of such consideration is mutually acknowledged, the Parties agree as follows:

1. **Covenant Running with the Land**. Declarant does hereby covenant and agrees to restrict, and does by this instrument restrict, the future use of the Property for a term of 49 years, which 49 year term is renewed upon each and every conveyance and as set forth below, by the establishment of this covenant running with the land. The City shall cause to be recorded this Deed Restriction against the Property in the Official Records of the appropriate County.

2. **Definitions**. The following definitions shall apply to the Property and this Deed Restriction:
   a. **City** shall include employees of City, its agents, contractors and vendors retained by City who are tasked with enforcing the restrictive covenants contained herein.
   b. **Declarant** shall mean any person or entity that acquires an ownership interest in the Property.

c. **Dwelling Unit** means a room or rooms, all facilities, units, dwellings (including, but not limited to a duplex, multiple, or single family) or residential structures intended for occupancy as living quarters, or any segment thereof, on the Property.

d. **Primary Residence** shall mean the occupation and use of a residence as the legal primary residence of the Declarant, which shall be determined by the City taking into account the following circumstances:
i. Voter Registration in the City of Sedona (or signing an affidavit stating that the applicant is not registered to vote in any other jurisdiction);
ii. Stated address on Arizona Driver's License or Arizona Identification Card;
iii. Stated address on motor vehicle registration;
iv. Stated residence for income and tax purposes;
v. Such other circumstances as well as such processes for verification and investigation deeded appropriate by the City in determining the applicant is continuously occupying and using the residence as a primary residence.
vi. The Declarant must be a natural person with only one primary residence.

e. **Short-Term Rental** shall mean the rental, lease, sublease, exchange, use, or sale of the Property, or any portion thereof, for a period of time that is fewer than thirty (30) days.

3. **Restrictive Covenants; Use of the Property; Violations**.

a. **Restrictive Covenants.** The following restrictive covenants shall apply to the Property (as selected by Declarant):

i. ☐**Short-Term Rental Prohibited:** Use of the Property as a Short-Term Rental is prohibited. All Dwelling Units shall be leased or rented on a non-transient basis. In no event shall any Dwelling Unit lease or rental terms (initial or any renewals) be less than 30 days. All leases or rental terms shall be in writing and signed by Declarant or Declarant's agent and the tenant.

ii. ☐ **Owner Occupied Short-Term Rental:** Declarant may use a portion of a Dwelling Unit as a Short-Term Rental so long as the Dwelling Unit is also concurrently occupied by the Declarant as their Primary Residence when used as a Short-Term Rental.

b. **Notice.** Declarant acknowledges Declarant is required to notify any lender, appraiser and title company of Declarant's intent to enter into this Deed Restriction and cause such Deed Restriction to be recorded against the Property. The Declarant shall provide notice to and obtain permission from their Lender in order to record this Deed Restriction.

c. **Deed Restriction Runs with the Land**. Declarant intends, declares and covenants, on behalf of itself and all Subsequent Declarants and operators of the Property, that during the term of this Deed Restriction, all of the covenants and agreements set forth in this Deed Restriction regulating and restricting the use and occupancy of the Property (i) shall be and are covenants running with the Property, encumbering the Property, and are binding upon all subsequent Declarants, owners, and operators of the Property, (ii) are not merely personal covenants of Declarant, and (iii) shall bind Declarant and all subsequent owners during the term of this Deed Restriction. Declarant hereby agrees that any and all requirements of the laws of the State of Arizona to be satisfied in order for the provisions of this Deed Restriction to constitute deed restrictions and covenants running with the land shall be deemed to be satisfied in full, and any requirements or privities of estate or title are intended to be satisfied hereby, to ensure that these restrictions will run with the land. For the

term of this Deed Restriction, each and every contract, deed or other instrument hereinafter executed conveying the Property or any portion thereof shall expressly provide that such covenants contained herein shall survive and be effective regardless of whether such contract, deed or other instrument hereafter executed conveying the Property or any portion thereof provides that such conveyance is subject to this Deed Restriction and such conveyance renews the 49 year term of the Deed Restriction.

4. **Default by Declarant; Inspection**.
   a. Use or lease of the Property which is not allowed or is prohibited by this Deed Restriction shall constitute a default and shall be subject to the enforcement provisions and remedies contained in this Deed Restriction.
   b. City or its designee has the authority to inspect and monitor the Property, or otherwise ensure continued compliance with the terms of the Deed Restriction. If the City has reasonable cause to believe that the occupancy or use of the Property is in violation of any provision of this Deed Restriction, the City may inspect the Property between the hours of 8:00a.m. and 5:00p.m., Monday through Friday, after providing the Declarant and occupants with at least twenty-four (24) hours written notice. Notice to the occupants may be given by posting notice on the door to the Property. This Deed Restriction shall constitute permission to enter the Property during such times upon such notice without further consent. A default by Declarant shall include breach of the covenants set forth in this Deed Restriction, including without limitation any of the following:
      i. Any ownership, use or occupancy of the Property in violation of Section 3 above.
      ii. Any action by the Declarant to encumber the Property in a manner that conflicts with the terms of this Deed Restriction or renders compliance with the terms of this Deed Restriction impossible or impractical.

5. **Liability Waiver.** This Deed Restriction has the potential to reduce the value of the subject property. To the maximum extent permitted by law, the City of Sedona shall not be responsible nor be held liable for any direct, indirect, incidental, special, consequential or punitive damages, or any loss of any type whatsoever, if such Use Deed Restriction results in a decline in property value of the deed restricted property. Additionally, the City of Sedona shall not be responsible nor be held liable for any extended length of time required to sell, transfer or convey said property or for any other indirect or incidental factors influencing the sale/resale of the deed restricted property.

6. **No Representation by City; Right to Professional Advice.** The City of Sedona has not provided any advice or guidance to Declarant related to this Deed Restriction. Declarant acknowledges that they have the right to consult counsel and/or a real estate professional regarding this Deed Restriction and have either availed themselves of that right or waived it.

7. **Notice and Cure**. In the event a violation of this Deed Restriction is discovered, the City shall send a written Notice of Default to the Declarant detailing the nature of the default and providing thirty (30) days for the Declarant to cure such default. Notwithstanding the foregoing or any other term of this Deed Restriction, a default for lease or use of the Property as a Short-Term Rental shall be cured by the Declarant immediately. The notice shall state that the Declarant may request an appeal of the violation finding in writing within 15 days of such notice, in which event the City shall administratively review the finding and, if the violation finding is upheld, the Declarant may request in writing within 15

days of such administrative decision a hearing before the Board of Adjustment. A decision by the Board of Adjustment may only be judicially appealed in superior court per the Arizona Rules of Procedure for Special Actions.

If no administrative or City appeal is timely requested in writing and the violation is not cured within 30 days of mailing the notice of default, the Declarant shall be deemed to be in violation of this Deed Restriction. If an administrative or City appeal is requested, the decision of the City shall be final for the purpose of determining if a violation has occurred and, if such violation is not cured within 15 days of such final determination, the Declarant shall be deemed to be in violation of this Deed Restriction. If a decision of the City is judicially appealed, an order of the Court confirming the violation shall be final for the purpose of determining if a violation has occurred and, if such violation is not cured within 15 days of such final determination, the Declarant shall be deemed to be in violation of this Deed Restriction.

8. **Remedies**. In the event of violation, non-performance, default or breach of any term of this Deed Restriction by the Declarant, City shall have the right to enforce Declarant's obligations herein by an action for any equitable remedy, including injunction or specific performance, as well as pursue an action to recover damages. In addition, any amount due and owing to the City shall bear interest at the rate of 1.8% per month, compounded annually until paid in full. The City shall be entitled to recover any costs related to the enforcement of this Deed Restriction, including but not limited to, attorney's fees, court filing costs, and City recording costs. In addition to any other remedy provided by law or equity, the City may attach a lien for any amount due to City upon the Property. The Declarant expressly waives any objection to the attachment of a lien for amounts due to the City. In the event of a transfer or conveyance of the Property which violates the terms of this Deed Restriction and constitutes a violation of this Deed Restriction, both the grantor and grantee shall be jointly and severally liable for any damages and costs due under this Deed Restriction.

9. **Consensual Lien**. For the purpose of securing each Declarant's compliance with and performance of this Deed Restriction, Declarant hereby grants to the City a lien against the Property in an amount equal to the cost reasonably incurred by the City in enforcing the servitudes and burdens imposed by this Deed Restriction upon the Property in the prosecution of legal action against any Declarant or former Declarant who violates the covenants and restrictions set forth herein and against any person or entity who occupies the burdened Property in violation of this Deed Restriction. Each person or entity who accepts or claims ownership of, or a right to occupy the Property, hereby consents to the foregoing lien.

10. **Liquidated Damages**. In the event of a violation of the Deed Restriction by the Declarant, the determination of actual monetary damages would be difficult to ascertain. Therefore, the City and Declarant hereby agree that liquidated damages shall be calculated and applied in the amount of FIVE HUNDRED DOLLARS ($500.00) per day for each day that the Declarant is in violation of this Deed Restriction and has failed to timely cure the violation. Liquidated Damages shall be in addition to the City's ability to recover costs as set forth in Section 8 above. Liquidated Damages shall be in addition to the City's right to seek equitable remedies of injunction and/or specific performance. In the event of any unauthorized lease or use of the Property or Short-Term Rental, any amounts collected or receipt of other things of value by the Declarant or assigns under such leases shall be paid to the City as liquidated damages as demanded by the City (in lieu of the $500 daily liquidated damages), including such amounts collected or received by the Declarant prior to receipt of a Notice of Default and prior to expiration of a thirty (30) day period to cure, and such amounts shall be in addition

to the right of the City to recover costs and seek equitable remedies.

11. **No Release of Deed Restriction in Event of Tax Sale.** In the event of a tax sale, this Deed Restriction shall remain in full force and effect, shall run with and burden the land and shall constitute a condition of the subdivision and land use approval which shall survive any sale of the Property through a tax lien sale process.

12. **Declarant's Reserved Rights**. Declarant reserves to itself, and to its representatives, heirs, successors, assigns, transferees, agents, and lessees, all rights inuring from ownership of the Property not otherwise restricted or prohibited by virtue of this Deed Restriction, including, but not limited to, the right to engage in or permit others to engage in all uses of the Property that are not expressly prohibited by this Deed Restriction, and are not inconsistent with the purposes of this Deed Restriction.

13. **Successors and Assigns Bound**. Declarant hereby agrees and acknowledges that the Property shall be held, sold, conveyed, owned, and used subject to the applicable terms, conditions and obligations imposed by this Deed Restriction relating to the use of the Property, and matters incidental thereto. Such terms, conditions, and obligations are a burden and restriction on the use of the Property, as applicable.

The provisions of this Deed Restriction shall (subject to the limitations contained herein and without modifying the provisions of this Deed Restriction) be enforceable as equitable servitudes and conditions, restrictions and covenants running with the land, and shall be binding on the Declarant and upon each and all of its respective heirs, devisees, successors, and assigns, grantees, officers, directors, employees, agents, representatives, executors, trustees, successor trustees, beneficiaries, administrators, any person who claims an interest in the Property, and upon future Declarants of the Property and each of them.

14. **No Other Restrictions**. This Deed Restriction imposes no other obligations or restrictions on Declarant, and neither its successors, nor any other person or entity claiming under them, shall be in any way restricted from using the Property except as provided herein or as otherwise provided in the Sedona City Code and Land Development Code.

15. **General Provisions**.

a. Controlling Law. The interpretation and performance of this Deed Restriction shall be governed by the laws of the State of Arizona and applicable federal law.

b. Jurisdiction; Venue; Waiver of Jury Trial. The Parties to the full extent permitted by law, hereby knowingly, intentionally and voluntarily, do the following: (1) Submit to personal jurisdiction in the State of Arizona with respect to any action arising from or relating to this Deed Restriction; (2) Agree that the Superior Court of Arizona, Coconino County or Yavapai County, depending on the location of the Property, shall have exclusive jurisdiction to hear and determine all claims or disputes between the parties pertaining directly or indirectly to this Deed Restriction; (3) Waive any claim that the court in Subpart (2) is an inconvenient forum or an improper forum based on lack of venue; and (4) Acknowledge and agree that (i) any controversy which may arise under, as a result of, or in connection with this Deed Restriction would be based upon difficult or complex issues, and (ii) as a result, any lawsuit arising out of any such controversy shall be tried in a court of competent jurisdiction by a judge sitting without a jury.

c. Liberal Construction. Any general rule of construction to the contrary notwithstanding, this Deed Restriction shall be liberally construed to effect the purposes of this Deed Restriction. If any provision in this Deed Restriction is found to be ambiguous, an interpretation consistent with the purposes of this Deed Restriction that would render the provision valid shall be favored over any

interpretation that would render it invalid.

d. Severability. If any provision of this Deed Restriction or the application thereof is found to be invalid, the remaining provisions of this Deed Restriction or the application of such provisions other than that found to be invalid shall not be affected thereby.

e. Termination of Rights and Obligations. A party's rights and obligations under this Deed Restriction terminate upon transfer of the party's interest in the Deed Restriction or Property, except that liability for acts, omissions or breaches occurring prior to transfer shall survive transfer.

f. Captions. The captions in this Deed Restriction have been inserted solely for convenience of reference and are not a part of this Deed Restriction and shall have no effect upon its construction or interpretation.

16. **Modification**. This Deed Restriction shall not be amended, released, terminated, or removed from the Property without the prior written consent of the City.

EXECUTED as of the _____ day of _____, 2023.

DECLARANT:

INSERT NAME OF DECLARANT

_____

Date: _____

INSERT NAME OF DECLARANT

_____

Date: _____

ACKNOWLEDGEMENT

STATE OF ARIZONA)
) ss.
City of _____)

On this _____ day of _____, _____, before me, the undersigned Notary Public, personally appeared _____ ***[ADD FULL NAME]*** and _____ ***[ADD FULL NAME],*** whose identity/ies was/were proven to me on the basis of satisfactory evidence to be the person who they claim to be, and acknowledged that they signed the Warranty Deed.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

My Commission Expires:

City of Sedona, an Arizona municipal corporation

DATED: _____

By: _____

Karen Osburn
Its: City Manager

EXHIBIT A
TO
DEED RESTRICTION

[See attached legal description]

INVITATION FOR BIDS

Town of Jerome
Post Office Box 335
Jerome, Arizona 86331

Solicitation Title:	INVITATION FOR BIDS TO PURCHASE REAL PROPERTY FOR USE IN A COMMUNITY LAND TRUST
Solicitation Number:	2025-003
Release:	9/30/2025
Advertisements:	Verde Valley News on 9/30, 10/4, 10/7, and 10/11
Final Inquiries Due:	October 20, 2025, at 12:00 p.m.
Bid Deadline:	October 21, 2025, at 4:00 p.m.
Bid Opening:	Bids will be reviewed for completeness as they are received. All will be opened no later than October 22, 2025 at 12:00 p.m.
Town Representative:	Brett Klein b.klein@jerome.az.gov (928) 634-7943

In accordance with the Town of Jerome Procurement Policy, competitive sealed Bids will be received until the date and time referenced above (the "Bid Deadline"). Bids must be received on, or prior to, the Bid Deadline. Late Bids will not be accepted.

The Town is soliciting offers to purchase the real property and improvements located at 655 Holly Ave (APN 401-07-080A). Full, detailed information may be obtained at Jerome Town Hall (600 Clark Street, Jerome AZ, 86331), by appointment.

ATTENTION

- The Town reserves the right to amend the solicitation schedule as necessary.
- The Town reserves the right to reject any or all proposals or to withhold the award for any reason.
- Every proposal shall be accompanied by a certified check, cashier's check, or surety bond for ten percent of the amount of the bid as a guarantee that the offeror will enter into an agreement to complete the purchase contemplated herein.
- All times are local to Jerome, Arizona.

SOLICITATION INFORMATION AND SCHEDULE

Solicitation Number [2025-003]
Property Sale for Community Land Trust

The Town of Jerome is soliciting competitive sealed bids with the intention of entering into a contract for the sale of real property. The Town reserves the right to reject any and all bids, for any reason or for no reason, at its sole discretion.

This solicitation is for the purchase of Yavapai County Assessor's Parcel Number 401-07-080A, located at 655 Holly Avenue in Jerome (the "Property"). The Property contains a split-level historic home in as-is condition.

The goal of this Solicitation is to see the Property developed and utilized in a Community Land Trust, to serve as a new workforce housing option for Town employees and others who live and work within Town limits. The Town hopes to receive bids from nonprofit or community organizations that commit to utilizing the Property for this purpose, and to take title subject to specific deed restrictions. The Town expects such deed restrictions to include, but not necessarily be limited to, the following substantial provision:

> .... as long as Grantee holds title to the Property, the Property shall only be used for rental or purchase of structures and improvements thereon by persons who demonstrate an annual household income below or equal to one hundred fifty (150) percent of the then-current Area Median Income (AMI) for Yavapai County as part of the Prescott Valley-Precott AZ MSA, as determined by the U.S. Department of Housing and Urban Development or successor agency thereto. *See* https://www.huduser.gov/portal/datasets/il.html ....

The successful bidder will be expected to complete the purchase by executing a real estate purchase and sale agreement acceptable to the Town in form and substance. The agreement will contain a commitment by the purchaser to utilize the Property in a Community Land Trust for the provision of workplace housing. Town reserves the right to cancel this solicitation and any proposed award in the event that it is unable to negotiate a mutually-acceptable agreement.

The Town reserves the right to negotiate simultaneously with multiple bidders; however, the Town does not expect to make more than one Award based on this solicitation. The Town reserves the right to waive informalities, irregularities, or minor discrepancies in any submission.

A qualifying Bid must be received on or before the Bid Deadline, in a sealed envelope, at Jerome Town Hall. A qualifying Bid shall consist of 1) the Bid Sheet attached hereto as Exhibit A; 2) a narrative description of the offeror's proposed use of the Property; and 3) a certified check, cashier's check, or surety bond for ten percent of the amount of the bid as a guarantee that the offeror will enter into an agreement to complete the purchase.

All written portions of a qualifying Bid must be submitted in English, on standard 8/12" x 11" paper, with a minimum font size of 12.

Offers shall remain open for ninety (90) days after the Bid Opening, and may not be amended or withdrawn within this period without written permission by the Town; however, the Town may, at its sole discretion, release any offer and return the security at any time. Should any offeror refuse to enter a contract under the terms and conditions of this solicitation, the Town may retain the security as liquidated damages and not as a penalty.

All Bids shall become property of the Town and matters of public record. Requests for nondisclosure of trade secrets or other proprietary data must be made known within the offer. The Town cannot guarantee the confidentiality of any submitted information due to public record laws. In no event will any offeror be reimbursed for the cost of responding to this solicitation.

EXHIBIT A
TO
INVITATION FOR BIDS TO PURCHASE REAL PROPERTY FOR USE IN A COMMUNITY LAND TRUST

BID SHEET

Offeror

Firm/Company/Offeror: _____

Contact Person: _____

Contact Email Address: _____

Mailing Address: _____

Phone: _____

Type of Organization

- ○ Individual or Single-Member LLC
- ○ Corporation
- ○ Partnership
- ○ Trust
- ○ Limited Liability Company
- ○ Other _____

Tax ID#: _____

Bid Purchase Price: _____

Proposed Closing Date: _____

Intended Use of Property: See attached.

Intent to be bound by Bid: _____
(Signature of Individual Authorized to Sign Offer)

_____
(Printed Name)

_____
(Email address)

TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 FAX (928) 634-0715

Founded 1876
Incorporated 1899

STAFF SUMMARY REPORT

FROM: Brett Klein, Town Manager/Clerk

ITEM: **Item: Consideration of Bids in Response to the Town's Issuance of an IFB for the Notice of Intent to Sell 655 Holly**

MEETING DATE: November 11, 2025

Summary:

Subsequent to the Town's issuance of an invitation for bids for the intent to sell the 655 Holly Street property, the Town received one bid. The one bid was not too surprising based on the subject matter in the notice which matched the Town Council's desire for use of that property. The one bid was from the Verde Valley Community Development Organization (VVCDO), which outlined their intent to operate the property as a Community Land Trust. Based on their risk, the Town Council's desire to keep this property available for Town employee / workforce housing, and necessary expenses, staff believe the bid is highly competitive. The outline of an agreement and formal purchase offer should be a win-win-win. It will allow the Town to recuperate some much needed funds by selling this property after purchasing 621 Main Steet for the same thing; retain the property for purchase by Town employees at a well-below market rate; and partner with an organization that can administer a community land trust, thereby preserving this property as a Town employee / workforce housing option in perpetuity. It is likely the Town could receive significantly more money if it issued an Invitation for Bids with no employee / workforce housing restrictions, but what the winning bidder would do with the property would be an unknown variable.

Fiscal Impact:

The Town would receive funding of $143,500~ which could be designated for use of a much-needed sanitation truck.

Recommendation:

Staff recommend Council approve the lone bid for 655 Holly with the VVCDO.

EXHIBIT A
TO
INVITATION FOR BIDS TO PURCHASE REAL PROPERTY FOR USE IN A COMMUNITY LAND TRUST

BID SHEET

Offeror

Firm/Company/Offeror: Verde Valley Community Development organization

Contact Person: Mary A. Chicoine

Contact Email Address: administration@vvcdo.com

Mailing Address: P.O. Box 157, Cottonwood, Arizona 86326

Phone: 928-598-8851

Type of Organization

- ○ Individual or Single-Member LLC
- ○ Corporation
- ○ Partnership
- ○ Trust
- ● Limited Liability Company
- ○ Other _____

Tax ID#: 86-2451065

Bid Purchase Price: $143,500

Proposed Closing Date: February 1, 2026

Intended Use of Property: The property will be placed in the Verde Valley Community Land Trust for workforce housing.

Intent to be bound by Bid: Mary A Chicoine
(Signature of Individual Authorized to Sign Offer)

Mary A Chicoine
(Printed Name)

administration@vvcdo.com
(Email address)

October 21, 2025

The Verde Valley Community Development Corporation (VVCDO) respectfully submits the following bid in response to the Town of Jerome's Bid Solicitation Titled: **Invitation for Bids to Purchase Real Property for Use in a Community Land Trust with Solicitation Number 2025-003**. The Verde Valley Community Development Organization (VVCDO) is a nonprofit public charity recognized as tax-exempt by the IRS under Section 501(c)(3), EIN Number 86-2451065. One of its primary programs is the Verde Valley Community Land Trust (VVCLT).

Overview: The Verde Valley Community Land Trust (VVCLT) is a program of the VVCDO committed to the permanent stewardship of land and the permanent affordability of any housing located upon its land. Land acquired by the VVCDO is rarely resold. It is retained by the VVCLT, held in trust for the community. It provides for the exclusive use of its land by leasing out separate parcels to individual homeowners, cooperative housing corporation(s), non- profit developers of rental housing, or other nonprofit, governmental, or for-profit entities. The ground leases will last for typically 99 years. Buildings on the land are sold at an affordable price, and the owner holds the deed to the property while leasing the land from the VVCLT. The VVCLT will retain first right of refusal as an option to repurchase these buildings, should their owners ever choose to sell. The resale price is determined by a formula contained in the ground lease. This formula, which usually yields a resale price that is lower than the building's market value, is designed to give the seller a fair return for his/her investment, while giving future buyers fair access to a home at an affordable price. By design and by intent, the VVCLT is committed to preserving the affordability of housing (and other structures) – one owner after another, in perpetuity.

Protecting Occupancy, Use, Condition & Design of Affordable Housing: The VVCLT provides a durable mechanism not only for preserving the affordability of housing, but for preserving the occupancy, use, condition, and design of that housing as well. Embedded in the ground lease – or embedded in the deed covenant, if the VVCLT is serving as the steward for deed-restricted housing – are provisions that: (a) require the housing to be continually occupied as the owner's principal residence; (b) restrict the housing's use as a sub- leased rental property; (c) require the housing to be kept in good repair; and (d) require the housing to be maintained in compliance with local building and zoning codes.

Land Acquisition: The VVCDO/VVCLT can acquire land in three ways: (1) Purchase land at its market price, using funds they receive from public sources or funds that are donated or loaned from private sources; (2) Receive land as a gift from a private donor or governmental entity; and (3) Acquire land for a below-market price through a mechanism known as a "bargain sale,"

where the seller accepts cash for a portion of the land's value and claims a tax deduction for the remainder of the land's value.

Buildings on VVCLT Land: When the VVCLT acquires a parcel of land, there may already be a single-family house or a multi-unit building on the land. In other cases, the VVCLT can become an active developer, constructing new housing on lands recently acquired or previously "banked" for future development. VVCLTs may also make land available to another nonprofit organization for the construction of affordable housing. When affordably priced homes come into a VVCLT's portfolio because of inclusionary zoning, density bonuses, or other regulatory mandates or incentives, the VVCLT will become the long-term steward for occupancy, eligibility, and affordability controls imposed by local governments on housing built by for-profit developers.

Homeowner Eligibility: The VVCLT will target households with incomes equal to or below 150% of the Yavapai County Area Median Income which is updated annually by the United States Department of Housing and Urban Development (HUD). See the attached for AMI values for 2025. Secondary requirements include:

- Completing a HUD-approved homebuyer education course and participating in pre-purchase homebuyer education and counseling.
- Being a first-time homebuyer as defined by HUD. The HUD definition of a first-time homebuyer is an individual who has not owned a principal residence within the three years prior to purchasing a new home.
- Owning and occupying the property as their primary residence.
- Qualifying for a fixed rate, fully amortizing mortgage not to exceed 30 years with debt ratios that meet underwriting requirements.
- Meeting employment and residency requirements as specified in the acquisition of the property. This bid requires the property to be used as a new workforce housing option for Town of Jerome employees and others who live and work within Town of Jerome limits.
- Being at least 18 years old.
- Being a U.S. citizen or registered alien.

Financing: Though homes for sale through the VVCLT are more affordable than market-rate housing, few low-income or moderate-income households will be able to buy a VVCLT home out of their own savings. They will need mortgage financing. Consequently, the VVCLT will work with local lenders to secure mortgages for our homeowners. It is the intent of the VVCLT that a homeowner will pay no more than 30% of a household's gross income. For owners, housing costs include principal, interest, property taxes, and hazard insurance. For renters, costs include rent and tenant-paid utilities (except telephone and cable).

Home Purchase and Resale Formula: An appraisal is secured on the property. The price of the appraised value of the land is subtracted from the total appraised value. The remaining value is reduced by defined percentage to make the home financially accessible to income-qualified home buyers. A resale formula is used to determine the maximum price at which a shared equity home can be resold, providing an opportunity for the homeowner to benefit from some portion of the home's appreciation while still remaining affordable to households at the program's target income levels. The appraisal-based formula will be used for the calculation. The appraisal-based formula calculates the resale price using a percentage of the increase in market value since the home's purchase. The homeowner will receive 25% of the home's appreciation with 75% being retained by the VVCLT.

Purchase Price of Home:

Project Calculation:		
Estimated Purchase Price	$210,000	
(Purchase price is estimated to be the amount we sell it for)		
Renovation Cost – per contract		$ 38,000
Contingency		$ 7,500
Administrative/Legal/Etc/Closing Costs		$ 21,000
Proceeds to Town of Jerome		$143,500
Balance	**$210,000**	**$210,000**

Town of Jerome to remove all appliances and furniture from inside and outside the property. Clean all overgrowth around the home.

Project Economics:		
Proceeds to Town of Jerome	$143,500	
VVCDO to pay at bid		$ 14,350 Bid Bond*
VVCDO to pay upon sale of 655 Holly		$129,150
Balance	**$143,500**	**$143,500**

A copy of the Bid Bond documentation is attached.

FY 2025 Income Limits Summary

FY 2025 Income Limit Area	Median Family Income	FY 2025 Income Limit Category	Persons in Family							
			1	2	3	4	5	6	7	8
Prescott Valley-Prescott, AZ MSA	$87,300	Very Low (50%) Income Limits ($)	31,700	36,250	40,750	**45,300**	48,950	52,550	56,200	59,800
		Extremely Low Income Limits ($)*	19,050	21,800	26,650	**32,150**	37,650	43,150	48,650	54,150
		Low (80%) Income Limits ($)	50,750	58,000	65,250	**72,500**	78,300	84,100	89,900	95,700
		AMI (100%) Income Limits ($)	61,100	69,800	78,550	**87,300**	94,300	101,250	108,250	115,200
		AMI (120%) Income Limits ($)	68,150	77,900	87,600	**97,350**	105,150	112,950	120,700	128,500
		AMI (150%) Income Limits ($)	76,150	87,000	97,900	**108,800**	117,450	126,150	134,850	143,550

NOTE: **Yavapai County** is part of the **Prescott Valley-Prescott, AZ MSA**, so all information presented here applies to all of the Prescott Valley-Prescott, AZ MSA. The **Prescott Valley-Prescott, AZ MSA** contains the following areas: Yavapai County, AZ.

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)
Verde Valley Community Development Organization
40 Stutz Bearcat
Sedona AZ 86336

SURETY:
(Name, legal status and principal place of business)
NGM Insurance Company
55 West St
Keene NH 03431

OWNER:
(Name, legal status and address)
Town of Jerome
PO Box 335
Jerome AZ 86331

BOND AMOUNT: $10% of amount bid

PROJECT:
(Name, location or address, and Project number, if any)
Purchase real property for use in a community and land trust
#2025-003
655 Holly Ave (APN 401-07-080A)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in ful l force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Wai ver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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User Notes: (1970025050)

Signed and sealed this 3rd day of October, 2025

Verde Valley Community Development Organization
(Contractor as Principal) *(Seal)*

(Witness) Mark Tuffe, VVCDO Board Chair

(Title) Mary A Chicoine, Executive Director

(Witness)

NGM Insurance Company
(Surety)

(Title) Jenna L Sparks, Attorney-In-Fact

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User Notes: (1970025050)

Init.

/

MAIN STREET AMERICA INSURANCE | Trusted Choice

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That NGM Insurance Company, a Florida corporation having its principal office in the City of Jacksonville, State of Florida, pursuant to Article IV, Section 2 of the By-Laws of said Company, to wit:

> "Article IV, Section 2. The board of directors, the president, any vice president, secretary, or the treasurer shall have the power and authority to appoint attorneys-in-fact and to authorize them to execute on behalf of the company and affix the seal of the company thereto, bonds, recognizances, contracts of indemnity or writings obligatory in the nature of a bond, recognizance or conditional undertaking and to remove any such attorneys-in-fact at any time and revoke the power and authority given to them. "

does hereby make, constitute and appoint David Sparks, Jenna L Sparks, Melissa Schooler

its true and lawful Attorneys-in-fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed, bonds, undertakings, recognizances, contracts of indemnity, or other writings obligatory in nature of a bond subject to the following limitation:

1. **No one bond to exceed** Twenty Five Million Dollars ($25,000,000)

and to bind NGM Insurance Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of NGM Insurance Company; the acts of said Attorney are hereby ratified and confirmed.

This power of attorney is signed and sealed by facsimile under and by the authority of the following resolution adopted by the Directors of NGM Insurance Company at a meeting duly called and held on the 2nd day of December 1977.

> Voted: That the signature of any officer authorized by the By-Laws and the company seal may be affixed by facsimile to any power of attorney or special power of attorney or certification of either given for the execution of any bond, undertaking, recognizance or other written obligation in the nature thereof; such signature and seal, when so used being hereby adopted by the company as the original signature of such office and the original seal of the company, to be valid and binding upon the company with the same force and effect as though manually affixed.

IN WITNESS WHEREOF, NGM Insurance Company has caused these presents to be signed by its Assistant Secretary and its corporate seal to be hereto affixed this 24th day of August, 2023.

NGM INSURANCE COMPANY By:

Lauren K. Powell
Vice President, Corporate Secretary

NGM INSURANCE COMPANY FOUNDED 1923 FLORIDA

State of Wisconsin,
County of Dane.

On this 24th day of August, 2023, before the subscriber a Notary Public of State of Wisconsin in and for the County of Dane duly commissioned and qualified, came Lauren K. Powell of NGM Insurance Company, to me personally known to be the officer described herein, and who executed the preceding instrument, and she acknowledged the execution of same, and being by me fully sworn, deposed and said that she is an officer of said Company, aforesaid: that the seal affixed to the preceding instrument is the corporate seal of said Company, and the said corporate seal and her signature as officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Company; that Article IV, Section 2 of the By-Laws of said Company is now in force.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at Madison, Wisconsin this 24th day of August, 2023.

My Commission Expires May 21, 2027

AARON BOCHNIAK NOTARY PUBLIC STATE OF WISCONSIN

I, Nathan Hoyt, Assistant Vice President of NGM Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Company which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company at Madison, Wisconsin this 3rd day of October, 2025.

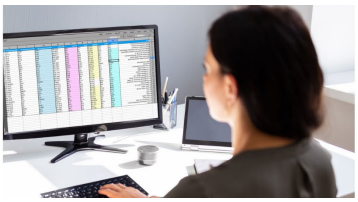
Nathan Hoyt Assistant, Vice President

WARNING: Any unauthorized reproduction or alteration of this document is prohibited.
TO CONFIRM VALIDITY of the attached bond please call **1-603-354-5281**.
TO SUBMIT A CLAIM: Send all correspondence to 55 West Street, Keene, NH 03431
Attn: Bond Claim Dept. or call our Bond Claim Dept. at 1-603-358-1437.

The Network for Public Health Law

Ideas. Experience. Practical answers.






HOUSING SECURITY
Fact Sheet

Community Land Trusts

Overview

Safe, stable housing can contribute to improvements in mental and physical health, civic engagement, social skills, educational and professional achievement, and can decrease use of emergency services.[1] When housing is affordable, it can prevent stunted growth in children and decrease hospitalizations.[21] Homeownership is in the nation's best interest because it brings stability to families, can revive struggling communities, and contribute to economic growth.[3] Unfortunately, safe and stable housing via ownership is not attainable for everyone. The number of people in the U.S. experiencing homelessness has been increasing steadily for four years, and as of January 2020, that number is over 580,000.[4] Thirty percent of households nationwide are considered "housing cost burdened" because they spend more than 30% of their incomes on housing, and renters are more than twice as likely to be housing cost burdened than homeowners.[5] Because of this burden, renters can have difficulty saving for a down payment and transitioning into homeownership. Renters are also unable to accumulate wealth by way of building value (equity) in their residences and cannot pass their residences to their loved ones to build generational wealth.

A system of "shared ownership" called a community land trust (CLT) can make homeownership permanently more affordable and accessible, especially in areas facing rapid economic change and appreciating land values.[6] CLTs drive the cost of housing down by separating the price of the land from the price of the residence on the land. CLTs, typically organized as non-profits, buy properties and sell the residences on the properties for a low price to individuals or families with low incomes.[7] The CLTs then lease the underlying land to the buyers for a low price and a long lease term. Typically, the leases last 99 years and cost the homebuyers anywhere from $1 per year to $100 per month.[8] Proceeds from the land leases typically go toward the CLT's administrative expenses, fund a long-term property repair reserve, and/or cover property taxes.[9] The buyer is then free to use the land and make improvements to the property as desired, the same as traditional homeowners. However, CLTs often have power through the land lease agreement to force a homeowner to make necessary repairs if the residence falls into disrepair.[10]

When a homeowner decides to sell their home and give up their land lease, the sale price of their home is determined by a CLT-adopted formula that takes into consideration improvements made to the property, market conditions, and other factors. They are required to sell the home to someone who meets the CLT's income requirements, and the CLT typically

[1] More information on the health benefits of homeownership can be found in the Mortgage and Homeownership Assistance Fact Sheet.

reserves the right to buy the house back.[11] The equity on the residence is usually split between the seller and the CLT, allowing the seller to benefit from their ownership and any improvements they made on the residence that increased its value, but keeping the residence affordable for the next buyer.

The table below offers a comparison of CLT and traditional homeownership.[12]

Typical CLT Homeownership	**Traditional Homeownership**
Mortgage from a bank	Mortgage from a bank
Accumulates limited equity	Accumulates full equity
Free to make improvements to the land and the residence	Free to make improvements to the land and the residence
Homeowners may bequeath their land lease	Homeowners may bequeath both their land and their residence
Varies, but may share responsibility with the CLT for repairs, insurance, property taxes, etc.	Responsible for all repairs, insurance, property taxes, etc.
Homeowner owns only the residence, leases the land	Homeowner owns both the residence and the land
Must sell to a person with low income according to CLT restrictions	May sell to anyone
Must sell for a below-market price set by the CLT	May sell for any price

History and Prevalence

The CLT model emerged in the U.S. during the civil rights movement, as an effort to provide opportunities for long-term stability and independence for African Americans in the south.[13] The first CLT was established in Ohio in 1969, but the model did not rise to prevalence until the 1990s.[14] Today, there are over 160 CLTs across the country.[15] The model has also spread to other continents and is continuing to gain popularity in North and South America, Australia, Africa, and Europe.[16] CLTs in the United Kingdom have been "growing exponentially for a decade."[17]

The largest CLT in the world operates in Vermont – the Champlain Housing Trust has over 3,000 homes available for families and individuals with low incomes.[18] The Trust has a variety of residences and land types, from manufactured home lots, to condominiums, to four-bedroom single family homes, all offered at prices 30% to 400% lower than area medians.[19] In Texas, the Houston CLT helped house 47 people in 21 homes between June 2019 and June 2020, and according to its annual report is the fastest growing CLT in the country.[20] The median sale price of residences in the Houston CLT is just over $75,000, more than three times lower than the area median of $240,000.[21]

State and local governments can encourage CLT formation and growth through subsidies for land purchases and other policy measures. For example, in the Fall of 2021, the mayor of Baltimore, Maryland announced that $4 million would be given to CLT initiatives as "part of a broader mixed-income housing strategy."[22] The state of California adopted a law in 2016 designed to keep property taxes low for CLT properties. The law requires assessors to consider the fact that the CLT is in place intentionally to keep value appreciation low in order to keep prices low, leading to a lower assessed land value and lower property taxes.[23]

Impact

CLTs are immensely valuable to the communities they operate in. By regulating sale and resale prices of residences and granting 99-year leases, they keep housing affordable in the long term without losing money or significantly disadvantaging residents. Although funding for land purchases and residence repairs or new construction can be difficult to acquire, once the initial investments are made, CLTs are self-sustaining and do not require significant additional resources.[24] CLTs are also beneficial because they are sensitive to local needs and priorities. They are governed by boards that often include subject-matter experts, local government leaders, and community members, including those who live in the CLT-sponsored residences.[25] CLTs can also protect their communities from negative consequences of gentrification because they own the land and are not at the mercy of changes in the economy that can begin to price people out of their communities.[26]

CLT residences and residents are not subject to the same negative stigma that surrounds other affordable housing programs – such as rent controlled units and project-based housing – because CLT residences are often spread throughout a community, with CLTs buying up whatever property they can when it is financially feasible to do so. Residents are also homeowners – they are not as transient as renters, and they have an incentive to improve and maintain their properties. Although CLT residents cannot benefit financially as significantly from homeownership as traditional homeowners because of equity sharing and resale price restrictions, unlike renters they do experience some appreciation in value and get a return on their investment.[27] Finally, CLT residents have low rates of foreclosure likely due to affordable purchase prices and the willingness of many CLTs to assist their residents in case of default.[28]

Conclusion

Community land trusts are emerging as a sustainable and effective tool to improve housing affordability and help under resourced families and individuals become homeowners. Although CLTs have not been as widely studied for effectiveness as more prevalent housing affordability tools such as rent control and public housing have, the data that does exist suggests that CLTs may be one of the most effective tools for increasing homeownership. Some even refer to CLTs as “proven winner[s].”[29] While some minor challenges for establishing CLTs exist (e.g., securing initial funding), states and local governments and non-profit organizations should consider establishing them in their communities to improve the health and wellbeing of community members who could not otherwise secure safe and affordable housing.

SUPPORTERS

Robert Wood Johnson Foundation

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This document was developed by Brianne Schell, J.D., M.A., for the Network for Public Health Law – Eastern Region Office.
The Network for Public Health Law provides information and technical assistance on issues related to public health. The legal information and assistance provided in this document does not constitute legal advice or legal representation. For legal advice, please consult specific legal counsel.

January 2022

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TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 FAX (928) 634-0715

Founded 1876
Incorporated 1899

STAFF SUMMARY REPORT

FROM: Brett Klein, Town Manager/Clerk

ITEM: **Item: Consideration of Bids in Response to the Town's Issuance of an IFB for the Notice of Intent to Sell 655 Holly**

MEETING DATE: November 24, 2025

Summary:

At the November 11th meeting in which the 655 Holly Street bids were being considered, I was quite perplexed at the outcome. I cannot think of a negative to engaging with VVCDO on a Community Land Trust (CLT). The Town always talks about not being followers; being unique and doing what is right for the Town. This is an opportunity to do just that. I believe the perspective was slightly off. The Town is not only receiving $143,500 on its original investment of $295,000. The Town purchased the property for employee housing. That goal is still realized by selling it to the CLT – AND, the Town receives $143,500, plus is not paying for much needed repairs and updates, nor retaining it as an ongoing asset and liability.

We have three (3) employees who have expressed interest in purchasing it at the price the land trust would be selling it at, and not at a price the open market would dictate. They would not be eligible for the open market price. Community Land Trusts are common for low-moderate wage municipal employees who work in a community where home prices preclude them from being able to purchase a home where they work.

Fiscal Impact:

The Town would receive funding of $143,500~ which could be designated for use of a much-needed sanitation truck.

Recommendation:

Staff recommend Council approve the lone bid for 655 Holly with the VVCDO.

APPRAISAL OF REAL PROPERTY



LOCATED AT
655 Holly Ave
Jerome, AZ 86331
See Addendum

FOR
Pinnacle Bank
2855 W SR89A
Sedona, AZ 86336

OPINION OF VALUE
300,000

AS OF
09/30/2025

BY
Carolyn Stewart
Peaks Appraisal Service
5876 N Mountaineer Rd
Flagstaff, AZ 86004-2826
(928) 607-9077
carolyn@peaksappraisal.com

Item A.

Uniform Residential Appraisal Report

File # PA.0925.18

The purpose of this summary appraisal report is to provide the lender/client with an accurate, and adequately supported, opinion of the market value of the subject property.

SUBJECT

Property Address 655 Holly Ave | City Jerome | State AZ | Zip Code 86331

Borrower Town of Jerome | Owner of Public Record Town of Jerome | County Yavapai

Legal Description See Addendum

Assessor's Parcel # 401-07-080A & 401-07-080 | Tax Year 2025 | R.E. Taxes $ 0

Neighborhood Name Jerome | Map Reference 39150 | Census Tract 0019.02

Occupant ☐ Owner ☐ Tenant ☒ Vacant | Special Assessments $ 0 | ☐ PUD | HOA $ 0 ☐ per year ☐ per month

Property Rights Appraised ☒ Fee Simple ☐ Leasehold ☐ Other (describe)

Assignment Type ☐ Purchase Transaction ☐ Refinance Transaction ☒ Other (describe) Construction Rehap

Lender/Client Pinnacle Bank | Address 2855 W SR89A, Sedona, AZ 86336

Is the subject property currently offered for sale or has it been offered for sale in the twelve months prior to the effective date of this appraisal? ☐ Yes ☒ No

Report data source(s) used, offering price(s), and date(s). The Subject property has not been listed for sale in the past 12 months. Verified by Sedona VV MLS and site inspection.

CONTRACT

I ☐ did ☐ did not analyze the contract for sale for the subject purchase transaction. Explain the results of the analysis of the contract for sale or why the analysis was not performed.

Contract Price $ | Date of Contract | Is the property seller the owner of public record? ☐ Yes ☐ No | Data Source(s)

Is there any financial assistance (loan charges, sale concessions, gift or downpayment assistance, etc.) to be paid by any party on behalf of the borrower? ☐ Yes ☐ No

If Yes, report the total dollar amount and describe the items to be paid.

NEIGHBORHOOD

Note: Race and the racial composition of the neighborhood are not appraisal factors.

Neighborhood Characteristics				One-Unit Housing Trends				One-Unit Housing			Present Land Use %	
Location	☐ Urban	☒ Suburban	☐ Rural	Property Values	☐ Increasing	☒ Stable	☐ Declining	PRICE	AGE		One-Unit	65 %
Built-Up	☒ Over 75%	☐ 25-75%	☐ Under 25%	Demand/Supply	☐ Shortage	☒ In Balance	☐ Over Supply	$ (000)	(yrs)		2-4 Unit	01 %
Growth	☐ Rapid	☒ Stable	☐ Slow	Marketing Time	☐ Under 3 mths	☒ 3-6 mths	☐ Over 6 mths	150	Low	0	Multi-Family	01 %
Neighborhood Boundaries	Jerome-Perkinsville Rd to the North, Hampshire Ave to the East & to the South and 89A							1,900	High	120	Commercial	33 %
								691	Pred.	90	Other	%

Neighborhood Description Jerome, Arizona is a small town west of Clarkdale, AZ. It is a historic copper mining community established in 1899. There is no longer mining in the area. Jerome is now a popular tourist attraction due to the views, historical buildings and is cultural community with art studios, wine vineyards near by and Verde River.

Market Conditions (including support for the above conclusions) There are few sales in the neighborhood since most home owners do not sell often. The over all market in Jerome in the past 12 months indicate a rising market with sales prices increasing during the summer selling season.

SITE

Dimensions See County Map | Area 2614 sf | Shape Irregular/Typical | View B;Res;Pano

Specific Zoning Classification R1-5 | Zoning Description Single Family Residential (5,000 ft² minimum lot area)

Zoning Compliance ☐ Legal ☒ Legal Nonconforming (Grandfathered Use) ☐ No Zoning ☐ Illegal (describe)

Is the highest and best use of subject property as improved (or as proposed per plans and specifications) the present use? ☒ Yes ☐ No If No, describe See addendum.

Utilities	Public	Other (describe)		Public	Other (describe)	Off-site Improvements - Type	Public	Private
Electricity	☒	☐	Water	☒	☐	Street Gravel	☒	☐
Gas	☒	☐	Sanitary Sewer	☒	☐	Alley None	☐	☐

FEMA Special Flood Hazard Area ☐ Yes ☒ No | FEMA Flood Zone X | FEMA Map # 04025C1775G | FEMA Map Date 09/03/2010

Are the utilities and off-site improvements typical for the market area? ☒ Yes ☐ No If No, describe

Are there any adverse site conditions or external factors (easements, encroachments, environmental conditions, land uses, etc.)? ☐ Yes ☒ No If Yes, describe

No adverse easements of encroachments were noted. Common easements for utility lines are normal.

IMPROVEMENTS

General Description		Foundation		Exterior Description	materials/condition	Interior	materials/condition
Units	☒ One ☐ One with Accessory Unit	☐ Concrete Slab	☒ Crawl Space	Foundation Walls	Conc/Block - Ave	Floors	HWF/Cpt/Cpt - Gd
# of Stories	2	☒ Full Basement	☐ Partial Basement	Exterior Walls	Stucco - Ave	Walls	Drywall - Ave
Type	☒ Det. ☐ Att. ☐ S-Det./End Unit	Basement Area	944 sq.ft.	Roof Surface	Asphalt Shingle - Av	Trim/Finish	Wood - Ave
☒ Existing	☐ Proposed ☐ Under Const.	Basement Finish	74 %	Gutters & Downspouts	None	Bath Floor	Tile - Ave
Design (Style)	Multi Level	☐ Outside Entry/Exit	☐ Sump Pump	Window Type	Single/Dual Pane-Av	Bath Wainscot	Tile - Gd
Year Built	1914	Evidence of ☐ Infestation		Storm Sash/Insulated	None	Car Storage	☐ None
Effective Age (Yrs)	30	☐ Dampness	☐ Settlement	Screens	Screens - Ave	☒ Driveway	# of Cars 1
Attic	☒ None	Heating ☒ FWA	☐ HWBB ☐ Radiant	Amenities	☐ Woodstove(s) # 0	Driveway Surface	Gravel
☐ Drop Stair	☐ Stairs	☐ Other	Fuel Nat Gas	☐ Fireplace(s) # 0	☐ Fence None	☐ Garage	# of Cars 0
☐ Floor	☐ Scuttle	Cooling ☐ Central Air Conditioning		☒ Patio/Deck Open	☒ Porch Cvd	☐ Carport	# of Cars 0
☐ Finished	☐ Heated	☐ Individual	☒ Other Evap	☐ Pool None	☐ Other None	☐ Att.	☐ Det. ☐ Built-in

Appliances ☐ Refrigerator ☒ Range/Oven ☐ Dishwasher ☐ Disposal ☐ Microwave ☐ Washer/Dryer ☐ Other (describe)

Finished area **above** grade contains: 0 Rooms 0 Bedrooms 0.0 Bath(s) 0 Square Feet of Gross Living Area Above Grade

Additional features (special energy efficient items, etc.). None/Typical

Describe the condition of the property (including needed repairs, deterioration, renovations, remodeling, etc.). C3;No updates in the prior 15 years;See Addendum

Are there any physical deficiencies or adverse conditions that affect the livability, soundness, or structural integrity of the property? ☐ Yes ☒ No If Yes, describe

No physical deficiencies and adverse conditions are noted.

Does the property generally conform to the neighborhood (functional utility, style, condition, use, construction, etc.)? ☒ Yes ☐ No If No, describe

The home conforms to the neighborhood.

Uniform Residential Appraisal Report

File # PA.0925.18

There are 0 comparable properties currently offered for sale in the subject neighborhood ranging in price from $ 200,000 to $ 500,000 .

There are 1 comparable sales in the subject neighborhood within the past twelve months ranging in sale price from $ 200,000 to $ 500,000 .

SALES COMPARISON APPROACH

FEATURE	SUBJECT	COMPARABLE SALE # 1		COMPARABLE SALE # 2		COMPARABLE SALE # 3	
Address	655 Holly Ave Jerome, AZ 86331	39 Paradise Ln Jerome, AZ 86331		711 Clark St Jerome, AZ 86331		38 Paradise Ln Jerome, AZ 86331	
Proximity to Subject		0.33 miles NW		0.15 miles SW		0.31 miles NW	
Sale Price	$		$ 350,000		$ 330,000		$ 225,000
Sale Price/Gross Liv. Area	$ 276.10 sq.ft.	$ 394.14 sq.ft.		$ 396.63 sq.ft.		$ 239.36 sq.ft.	
Data Source(s)		SVVARMLS #537175;DOM 200		SVVARMLS#536549;DOM 74		SVVARMLS #535062;DOM 13	
Verification Source(s)		Yavapai County Rec. 13299		Yavapai County Rec. 38249		Yavapai County Rec. 15662	
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION	+(-) $ Adjustment	DESCRIPTION	+(-) $ Adjustment	DESCRIPTION	+(-) $ Adjustment
Sales or Financing Concessions		ArmLth Cash;0		ArmLth Conv;0		ArmLth Cash;0	
Date of Sale/Time		s04/25;c03/25		s09/24;c08/24	+33,000	s04/24;Unk	+33,750
Location	N;Res;	N;Res;		N;Res;		N;Res;	
Leasehold/Fee Simple	Fee Simple	Fee Simple		Fee Simple		Fee Simple	
Site	2614 sf	5663 sf	-45,000	3920 sf	0	4356 sf	-20,000
View	B;Res;Pano	B;Res;Pano		B;Res;Pano		B;Res;Pano	
Design (Style)	DT2;Multi Level	DT1;Single Lvl	0	DT2;Multi Level		DT1;Single Lvl	0
Quality of Construction	Q4	Q4		Q4		Q4	
Actual Age	111	121	0	85	0	76	0
Condition	C3	C3		C3		C5	+80,000
Above Grade Room Count (Total / Bdrms. / Baths)	0 / 0 / 0.0	5 / 2 / 1.0	-10,000	3 / 1 / 1.0	-10,000	4 / 2 / 1.0	-10,000
Gross Living Area	0 sq.ft.	888 sq.ft.	-88,800	832 sq.ft.	-83,200	940 sq.ft.	-94,000
Basement & Finished	944sf699sfwo	0sf	+69,900	832sf832sfwo	+13,300	213sf0sfwo	+69,000
Rooms Below Grade	0rr1br1.1ba2o		+17,500	0rr1br0.5ba2o	+10,000		+17,500
Functional Utility	Adequate	Adequate		Adequate		Adequate	
Heating/Cooling	FAU/Evap	FAU/CAC	0	FAU/Evap		FAU/Evap	
Energy Efficient Items	Typical	Typical		Typical		Typical	
Garage/Carport	1dw	1dw		None	+15,000	1dw	
Porch/Patio/Deck	Porch, Patio	Porch, Patio		Porch, Patio		Porch, Patio	
Other Amenities	Basement Stg	Storage	0	Storage	0	Storage	0
Net Adjustment (Total)		☐ + ☒ -	$ -56,400	☐ + ☒ -	$ -21,900	☒ + ☐ -	$ 76,250
Adjusted Sale Price of Comparables		Net Adj. 16.1 % Gross Adj. 66.1 %	$ 293,600	Net Adj. 6.6 % Gross Adj. 49.8 %	$ 308,100	Net Adj. 33.9 % Gross Adj. 144.1 %	$ 301,250

I ☒ did ☐ did not research the sale or transfer history of the subject property and comparable sales. If not, explain Yavapai County GIS, Realquest and Sedona Verde Valley Multiple Listing Service

My research ☐ did ☒ did not reveal any prior sales or transfers of the subject property for the three years prior to the effective date of this appraisal.

Data Source(s) Yavapai County GIS, Realquest and Sedona Verde Valley Multiple Listing Service

My research ☐ did ☒ did not reveal any prior sales or transfers of the comparable sales for the year prior to the date of sale of the comparable sale.

Data Source(s) Yavapai County GIS, Realquest and Sedona Verde Valley Multiple Listing Service

Report the results of the research and analysis of the prior sale or transfer history of the subject property and comparable sales (report additional prior sales on page 3).

ITEM	SUBJECT	COMPARABLE SALE #1	COMPARABLE SALE #2	COMPARABLE SALE #3
Date of Prior Sale/Transfer				
Price of Prior Sale/Transfer				
Data Source(s)	Yavapai County Record	Yavapai County Record	Yavapai County Record	Yavapai County Record
Effective Date of Data Source(s)	10/06/2025	10/06/2025	10/06/2025	10/06/2025

Analysis of prior sale or transfer history of the subject property and comparable sales The Subject has not transferred ownership in the past 36 months. None of the Comparables Sales have had prior transfers in the past year.

Summary of Sales Comparison Approach The Jerome market presents a scarcity of recent, relevant sales data. No prior transactions match the Subject's unique feature of a fully below-grade basement. Furthermore, only one sale within the past year falls within 30% of the Subject's Gross Living Area (GLA), designated as Comp #1. Comps #2 and #3, though older than one year, are necessary inclusions to accurately depict the general market dynamics.

Comp #1 receives the primary weighting for its superior sales date.

Comp #2 is weighted second for offering strong comparisons in site size and condition.

Comp #3 is given the lowest weight due to its condition but provides supporting data regarding basement presence, property age, and overall size.

Indicated Value by Sales Comparison Approach $ 300,000

RECONCILIATION

Indicated Value by: Sales Comparison Approach $ 300,000 **Cost Approach (if developed) $** **Income Approach (if developed) $**

The Sales Comparison Analysis is the most reliable indicator of value for this area as it directly reflects current market transactions. The Cost Approach was not used due to the difficulty in accurately determining depreciation. The Income Approach was unsuitable because the area is primarily owner-occupied, making income capitalization less applicable.

This appraisal is made ☐ "as is", ☒ subject to completion per plans and specifications on the basis of a hypothetical condition that the improvements have been completed, ☐ subject to the following repairs or alterations on the basis of a hypothetical condition that the repairs or alterations have been completed, or ☐ subject to the following required inspection based on the extraordinary assumption that the condition or deficiency does not require alteration or repair: Subject to completion of repairs stated in attached cost.

Based on a complete visual inspection of the interior and exterior areas of the subject property, defined scope of work, statement of assumptions and limiting conditions, and appraiser's certification, my (our) opinion of the market value, as defined, of the real property that is the subject of this report is $ 300,000 **, as of** 09/30/2025 **, which is the date of inspection and the effective date of this appraisal.**

Uniform Residential Appraisal Report

File # PA.0925.18

ADDITIONAL COMMENTS

Comparable Sales Comments:

The Appraiser primarily sought comparable sales that closed within the past 90 days, were located within one mile of the Subject, and bracketed the Gross Living Area (GLA) and room count within 20% of the prevailing neighborhood market norms. All potential comparables were rigorously reviewed and reconciled within the value range outlined on Page #2 of the Uniform Residential Appraisal Report (URAR).

The three sales ultimately included in this report were determined to be the best available and most comparable to the Subject property, providing the necessary support for the valuation. All adjustments made for dissimilarities between the Subject and the comparables are market-derived, verifiable, and adhere strictly to FNMA guidelines.

Adjustments

Site: Home sites in Jerome are often sloped and present challenges in providing functional outside spaces, such as yards, patios, and parking. The Subject's site is located on a slope, and the total parcel size of 2,614 square feet is based on two adjacent parcels (APN 401-07-080A, which holds the home, and APN 401-07-080, which is utilized as a patio area). Comp #1 is situated on a more level parcel and is over twice the size of the Subject's land, necessitating a market adjustment based on paired sales analysis. Comp #3 is also sloped but has a larger parcel with some level surplus land; therefore, a market adjustment is applied to account for the value of this excess usable land.

Living Area and Features

Differences in living area are adjusted at approximately 30% of the average price per square foot for the area. Adjustments for features are applied as follows:

Bedrooms are included in the living area adjustment.

Full Baths are adjusted at $10,000 each.

Half Baths are adjusted at $7,500 each.

Sales Date (Market Conditions)

An adjustment for market appreciation is applied to Comparables #2 and #3. Since these properties sold in 2024, an adjustment is warranted to reflect the measurable increase in value across the Verde Valley region (Cottonwood, Clarkdale, and Jerome) since that time.

Specific, recent market data for Jerome alone is limited, but its market trends are typically included within the greater Verde Valley area analysis.

The overall Cottonwood market demonstrated significant appreciation: in September 2025, the median sale price for homes in Cottonwood was $447,250, representing an increase of 22.5% compared to the previous year.

Effective Age:

Despite planned updates and renovation, the Subject property retains an estimated Effective Age of 30 years due to the retention of its older foundational infrastructure. This determination is consistent with the surrounding neighborhood, where the majority of homes exceed 50 years of actual age.

COST APPROACH

COST APPROACH TO VALUE (not required by Fannie Mae)

Provide adequate information for the lender/client to replicate the below cost figures and calculations.

Support for the opinion of site value (summary of comparable land sales or other methods for estimating site value) The cost approach is typically not required by FNMA and is often not completed. The cost approach serves a valuation purpose for determining market value, not for insurance purposes. Site value is based on sales in the area with consideration of utility of the site, location and view. $80,000 - $125,000.

ESTIMATED ☐ REPRODUCTION OR ☐ REPLACEMENT COST NEW	OPINION OF SITE VALUE			=$ 110,000
Source of cost data	DWELLING	Sq.Ft. @ $		=$
Quality rating from cost service Effective date of cost data		Sq.Ft. @ $		=$
Comments on Cost Approach (gross living area calculations, depreciation, etc.)				=$
	Garage/Carport	Sq.Ft. @ $		=$
	Total Estimate of Cost-New			=$
	Less Depreciation	Physical	Functional	External =$( )
	Depreciated Cost of Improvements			=$
	"As-is" Value of Site Improvements			=$
Estimated Remaining Economic Life (HUD and VA only) 40 Years	**INDICATED VALUE BY COST APPROACH**			**=$**

INCOME

INCOME APPROACH TO VALUE (not required by Fannie Mae)

Estimated Monthly Market Rent $ X Gross Rent Multiplier = $ Indicated Value by Income Approach

Summary of Income Approach (including support for market rent and GRM)

PUD INFORMATION

PROJECT INFORMATION FOR PUDs (if applicable)

Is the developer/builder in control of the Homeowners' Association (HOA)? ☐ Yes ☐ No Unit type(s) ☐ Detached ☐ Attached

Provide the following information for PUDs ONLY if the developer/builder is in control of the HOA and the subject property is an attached dwelling unit.

Legal Name of Project

Total number of phases Total number of units Total number of units sold

Total number of units rented Total number of units for sale Data source(s)

Was the project created by the conversion of existing building(s) into a PUD? ☐ Yes ☐ No If Yes, date of conversion.

Does the project contain any multi-dwelling units? ☐ Yes ☐ No Data Source

Are the units, common elements, and recreation facilities complete? ☐ Yes ☐ No If No, describe the status of completion.

Are the common elements leased to or by the Homeowners' Association? ☐ Yes ☐ No If Yes, describe the rental terms and options.

Describe common elements and recreational facilities.

Uniform Residential Appraisal Report

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This report form is designed to report an appraisal of a one-unit property or a one-unit property with an accessory unit; including a unit in a planned unit development (PUD). This report form is not designed to report an appraisal of a manufactured home or a unit in a condominium or cooperative project.

This appraisal report is subject to the following scope of work, intended use, intended user, definition of market value, statement of assumptions and limiting conditions, and certifications. Modifications, additions, or deletions to the intended use, intended user, definition of market value, or assumptions and limiting conditions are not permitted. The appraiser may expand the scope of work to include any additional research or analysis necessary based on the complexity of this appraisal assignment. Modifications or deletions to the certifications are also not permitted. However, additional certifications that do not constitute material alterations to this appraisal report, such as those required by law or those related to the appraiser's continuing education or membership in an appraisal organization, are permitted.

SCOPE OF WORK: The scope of work for this appraisal is defined by the complexity of this appraisal assignment and the reporting requirements of this appraisal report form, including the following definition of market value, statement of assumptions and limiting conditions, and certifications. The appraiser must, at a minimum: (1) perform a complete visual inspection of the interior and exterior areas of the subject property, (2) inspect the neighborhood, (3) inspect each of the comparable sales from at least the street, (4) research, verify, and analyze data from reliable public and/or private sources, and (5) report his or her analysis, opinions, and conclusions in this appraisal report.

INTENDED USE: The intended use of this appraisal report is for the lender/client to evaluate the property that is the subject of this appraisal for a mortgage finance transaction.

INTENDED USER: The intended user of this appraisal report is the lender/client.

DEFINITION OF MARKET VALUE: The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: (1) buyer and seller are typically motivated; (2) both parties are well informed or well advised, and each acting in what he or she considers his or her own best interest; (3) a reasonable time is allowed for exposure in the open market; (4) payment is made in terms of cash in U. S. dollars or in terms of financial arrangements comparable thereto; and (5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions* granted by anyone associated with the sale.

*Adjustments to the comparables must be made for special or creative financing or sales concessions. No adjustments are necessary for those costs which are normally paid by sellers as a result of tradition or law in a market area; these costs are readily identifiable since the seller pays these costs in virtually all sales transactions. Special or creative financing adjustments can be made to the comparable property by comparisons to financing terms offered by a third party institutional lender that is not already involved in the property or transaction. Any adjustment should not be calculated on a mechanical dollar for dollar cost of the financing or concession but the dollar amount of any adjustment should approximate the market's reaction to the financing or concessions based on the appraiser's judgment.

STATEMENT OF ASSUMPTIONS AND LIMITING CONDITIONS: The appraiser's certification in this report is subject to the following assumptions and limiting conditions:

1. The appraiser will not be responsible for matters of a legal nature that affect either the property being appraised or the title to it, except for information that he or she became aware of during the research involved in performing this appraisal. The appraiser assumes that the title is good and marketable and will not render any opinions about the title.

2. The appraiser has provided a sketch in this appraisal report to show the approximate dimensions of the improvements. The sketch is included only to assist the reader in visualizing the property and understanding the appraiser's determination of its size.

3. The appraiser has examined the available flood maps that are provided by the Federal Emergency Management Agency (or other data sources) and has noted in this appraisal report whether any portion of the subject site is located in an identified Special Flood Hazard Area. Because the appraiser is not a surveyor, he or she makes no guarantees, express or implied, regarding this determination.

4. The appraiser will not give testimony or appear in court because he or she made an appraisal of the property in question, unless specific arrangements to do so have been made beforehand, or as otherwise required by law.

5. The appraiser has noted in this appraisal report any adverse conditions (such as needed repairs, deterioration, the presence of hazardous wastes, toxic substances, etc.) observed during the inspection of the subject property or that he or she became aware of during the research involved in performing the appraisal. Unless otherwise stated in this appraisal report, the appraiser has no knowledge of any hidden or unapparent physical deficiencies or adverse conditions of the property (such as, but not limited to, needed repairs, deterioration, the presence of hazardous wastes, toxic substances, adverse environmental conditions, etc.) that would make the property less valuable, and has assumed that there are no such conditions and makes no guarantees or warranties, express or implied. The appraiser will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because the appraiser is not an expert in the field of environmental hazards, this appraisal report must not be considered as an environmental assessment of the property.

6. The appraiser has based his or her appraisal report and valuation conclusion for an appraisal that is subject to satisfactory completion, repairs, or alterations on the assumption that the completion, repairs, or alterations of the subject property will be performed in a professional manner.

Uniform Residential Appraisal Report

File # PA.0925.18

APPRAISER'S CERTIFICATION: The Appraiser certifies and agrees that:

1. I have, at a minimum, developed and reported this appraisal in accordance with the scope of work requirements stated in this appraisal report.

2. I performed a complete visual inspection of the interior and exterior areas of the subject property. I reported the condition of the improvements in factual, specific terms. I identified and reported the physical deficiencies that could affect the livability, soundness, or structural integrity of the property.

3. I performed this appraisal in accordance with the requirements of the Uniform Standards of Professional Appraisal Practice that were adopted and promulgated by the Appraisal Standards Board of The Appraisal Foundation and that were in place at the time this appraisal report was prepared.

4. I developed my opinion of the market value of the real property that is the subject of this report based on the sales comparison approach to value. I have adequate comparable market data to develop a reliable sales comparison approach for this appraisal assignment. I further certify that I considered the cost and income approaches to value but did not develop them, unless otherwise indicated in this report.

5. I researched, verified, analyzed, and reported on any current agreement for sale for the subject property, any offering for sale of the subject property in the twelve months prior to the effective date of this appraisal, and the prior sales of the subject property for a minimum of three years prior to the effective date of this appraisal, unless otherwise indicated in this report.

6. I researched, verified, analyzed, and reported on the prior sales of the comparable sales for a minimum of one year prior to the date of sale of the comparable sale, unless otherwise indicated in this report.

7. I selected and used comparable sales that are locationally, physically, and functionally the most similar to the subject property.

8. I have not used comparable sales that were the result of combining a land sale with the contract purchase price of a home that has been built or will be built on the land.

9. I have reported adjustments to the comparable sales that reflect the market's reaction to the differences between the subject property and the comparable sales.

10. I verified, from a disinterested source, all information in this report that was provided by parties who have a financial interest in the sale or financing of the subject property.

11. I have knowledge and experience in appraising this type of property in this market area.

12. I am aware of, and have access to, the necessary and appropriate public and private data sources, such as multiple listing services, tax assessment records, public land records and other such data sources for the area in which the property is located.

13. I obtained the information, estimates, and opinions furnished by other parties and expressed in this appraisal report from reliable sources that I believe to be true and correct.

14. I have taken into consideration the factors that have an impact on value with respect to the subject neighborhood, subject property, and the proximity of the subject property to adverse influences in the development of my opinion of market value. I have noted in this appraisal report any adverse conditions (such as, but not limited to, needed repairs, deterioration, the presence of hazardous wastes, toxic substances, adverse environmental conditions, etc.) observed during the inspection of the subject property or that I became aware of during the research involved in performing this appraisal. I have considered these adverse conditions in my analysis of the property value, and have reported on the effect of the conditions on the value and marketability of the subject property.

15. I have not knowingly withheld any significant information from this appraisal report and, to the best of my knowledge, all statements and information in this appraisal report are true and correct.

16. I stated in this appraisal report my own personal, unbiased, and professional analysis, opinions, and conclusions, which are subject only to the assumptions and limiting conditions in this appraisal report.

17. I have no present or prospective interest in the property that is the subject of this report, and I have no present or prospective personal interest or bias with respect to the participants in the transaction. I did not base, either partially or completely, my analysis and/or opinion of market value in this appraisal report on the race, color, religion, sex, age, marital status, handicap, familial status, or national origin of either the prospective owners or occupants of the subject property or of the present owners or occupants of the properties in the vicinity of the subject property or on any other basis prohibited by law.

18. My employment and/or compensation for performing this appraisal or any future or anticipated appraisals was not conditioned on any agreement or understanding, written or otherwise, that I would report (or present analysis supporting) a predetermined specific value, a predetermined minimum value, a range or direction in value, a value that favors the cause of any party, or the attainment of a specific result or occurrence of a specific subsequent event (such as approval of a pending mortgage loan application).

19. I personally prepared all conclusions and opinions about the real estate that were set forth in this appraisal report. If I relied on significant real property appraisal assistance from any individual or individuals in the performance of this appraisal or the preparation of this appraisal report, I have named such individual(s) and disclosed the specific tasks performed in this appraisal report. I certify that any individual so named is qualified to perform the tasks. I have not authorized anyone to make a change to any item in this appraisal report; therefore, any change made to this appraisal is unauthorized and I will take no responsibility for it.

20. I identified the lender/client in this appraisal report who is the individual, organization, or agent for the organization that ordered and will receive this appraisal report.

Uniform Residential Appraisal Report

File # PA.0925.18

21. The lender/client may disclose or distribute this appraisal report to: the borrower; another lender at the request of the borrower; the mortgagee or its successors and assigns; mortgage insurers; government sponsored enterprises; other secondary market participants; data collection or reporting services; professional appraisal organizations; any department, agency, or instrumentality of the United States; and any state, the District of Columbia, or other jurisdictions; without having to obtain the appraiser's or supervisory appraiser's (if applicable) consent. Such consent must be obtained before this appraisal report may be disclosed or distributed to any other party (including, but not limited to, the public through advertising, public relations, news, sales, or other media).

22. I am aware that any disclosure or distribution of this appraisal report by me or the lender/client may be subject to certain laws and regulations. Further, I am also subject to the provisions of the Uniform Standards of Professional Appraisal Practice that pertain to disclosure or distribution by me.

23. The borrower, another lender at the request of the borrower, the mortgagee or its successors and assigns, mortgage insurers, government sponsored enterprises, and other secondary market participants may rely on this appraisal report as part of any mortgage finance transaction that involves any one or more of these parties.

24. If this appraisal report was transmitted as an "electronic record" containing my "electronic signature," as those terms are defined in applicable federal and/or state laws (excluding audio and video recordings), or a facsimile transmission of this appraisal report containing a copy or representation of my signature, the appraisal report shall be as effective, enforceable and valid as if a paper version of this appraisal report were delivered containing my original hand written signature.

25. Any intentional or negligent misrepresentation(s) contained in this appraisal report may result in civil liability and/or criminal penalties including, but not limited to, fine or imprisonment or both under the provisions of Title 18, United States Code, Section 1001, et seq., or similar state laws.

SUPERVISORY APPRAISER'S CERTIFICATION: The Supervisory Appraiser certifies and agrees that:

1. I directly supervised the appraiser for this appraisal assignment, have read the appraisal report, and agree with the appraiser's analysis, opinions, statements, conclusions, and the appraiser's certification.

2. I accept full responsibility for the contents of this appraisal report including, but not limited to, the appraiser's analysis, opinions, statements, conclusions, and the appraiser's certification.

3. The appraiser identified in this appraisal report is either a sub-contractor or an employee of the supervisory appraiser (or the appraisal firm), is qualified to perform this appraisal, and is acceptable to perform this appraisal under the applicable state law.

4. This appraisal report complies with the Uniform Standards of Professional Appraisal Practice that were adopted and promulgated by the Appraisal Standards Board of The Appraisal Foundation and that were in place at the time this appraisal report was prepared.

5. If this appraisal report was transmitted as an "electronic record" containing my "electronic signature," as those terms are defined in applicable federal and/or state laws (excluding audio and video recordings), or a facsimile transmission of this appraisal report containing a copy or representation of my signature, the appraisal report shall be as effective, enforceable and valid as if a paper version of this appraisal report were delivered containing my original hand written signature.

APPRAISER

Signature Carolyn Stewart
Name Carolyn Stewart
Company Name Peaks Appraisal Service
Company Address 5876 N Mountaineer Rd
Flagstaff, AZ 86004-2826
Telephone Number (928) 607-9077
Email Address carolyn@peaksappraisal.com
Date of Signature and Report 10/17/2025
Effective Date of Appraisal 09/30/2025
State Certification # 20935
or State License #
or Other (describe) State #
State AZ
Expiration Date of Certification or License 03/31/2026

ADDRESS OF PROPERTY APPRAISED

655 Holly Ave
Jerome, AZ 86331
APPRAISED VALUE OF SUBJECT PROPERTY $ 300,000

LENDER/CLIENT

Name No AMC
Company Name Pinnacle Bank
Company Address 2855 W SR89A, Sedona, AZ 86336
Email Address

SUPERVISORY APPRAISER (ONLY IF REQUIRED)

Signature
Name
Company Name
Company Address
Telephone Number
Email Address
Date of Signature
State Certification #
or State License #
State
Expiration Date of Certification or License

SUBJECT PROPERTY

☐ Did not inspect subject property
☐ Did inspect exterior of subject property from street
Date of Inspection
☐ Did inspect interior and exterior of subject property
Date of Inspection

COMPARABLE SALES

☐ Did not inspect exterior of comparable sales from street
☐ Did inspect exterior of comparable sales from street
Date of Inspection

Addendum

File No. PA.0925.18

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

Legal Description:
The surface only to a depth of 25 feet of Lot 6 and the West half of Lot 8, Block 2, MOUNTAIN VIEW SUBDIVISION, according to the plat of record in Book 2 of Maps, page 65, records of Yavapai County, Arizona[cite: 69, 70].

Subject - Overall Condition of the Property

The subject property is built with materials and construction methods consistent with its age and the local market. Given the challenging hillside topography of Jerome, the residence utilizes a two-level design built directly into the grade. After the proposed renovations, the home would be considered as C3 condition (C3 property is functional, habitable, and well-maintained relative to its age, but it shows some wear and tear and may need minor repairs or updates to aging components).

The first level is an unfinished basement/storage area at street level. The second level contains all the finished living space (accessed via a staircase from the first level) and is situated against the hillside. Because this main living level is partially below the exterior grade, the ANSI standard requires that the entire second level be classified as Below-Grade Finished Square Footage. Accordingly, the subject property does not report any Above-Grade Gross Living Area (GLA)

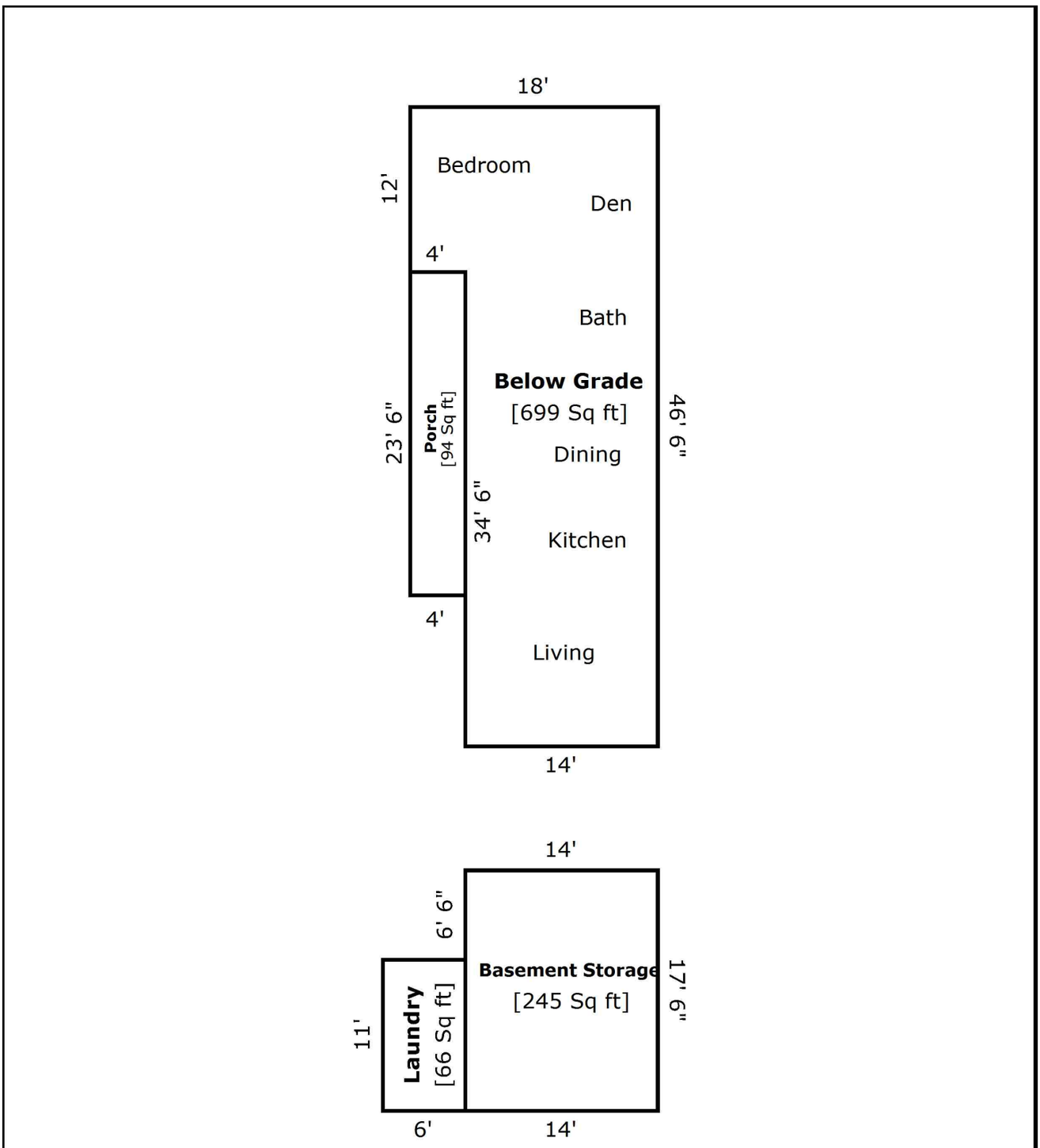
Note: While this classification affects how the square footage is reported on an appraisal form (separating it from the GLA), it doesn't necessarily mean the space has a lower market value.

An appraiser is expected to consider the quality of the finish, light, walkout access, and the local market's perception of the space when determining the property's overall value.

In markets where finished walk-out lower levels or hillside homes are common and valued similarly to above-grade space, the home's living area is still assign a comparable value, but the area is reported separately as below grade to comply with the ANSI standard.

Building Sketch

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



TOTAL Sketch by a la mode

Area Calculations Summary

Non-living Area		
Basement Storage	245 Sq ft	17.5 × 14 = 245
Porch	94 Sq ft	4 × 23.5 = 94
Laundry	66 Sq ft	11 × 6 = 66
Below Grade	699 Sq ft	18 × 12 = 216 34.5 × 14 = 483

Borrower	Town of Jerome				File No.	PA.0925.18	
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

APPRAISAL AND REPORT IDENTIFICATION

This Report is one of the following types:

☒ Appraisal Report (A written report prepared under Standards Rule 2-2(a) , pursuant to the Scope of Work, as disclosed elsewhere in this report.)

☐ Restricted Appraisal Report (A written report prepared under Standards Rule 2-2(b) , pursuant to the Scope of Work, as disclosed elsewhere in this report, restricted to the stated intended use only by the specified client and any other named intended user(s).)

Comments on Standards Rule 2-3

I certify that, to the best of my knowledge and belief:
- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- Unless otherwise indicated, I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- Unless otherwise indicated, I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice that were in effect at the time this report was prepared.
- Unless otherwise indicated, I have made a personal inspection of the property that is the subject of this report.
- Unless otherwise indicated, no one provided significant real property appraisal assistance to the person(s) signing this certification (if there are exceptions, the name of each individual providing significant real property appraisal assistance is stated elsewhere in this report).

Reasonable Exposure Time

(USPAP defines Exposure Time as the estimated length of time that the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal.)

My Opinion of Reasonable Exposure Time for the subject property at the market value stated in this report is: _____

Exposure time for the Subject property is estimated at 30-90 days.

Comments on Appraisal and Report Identification

Note any USPAP-related issues requiring disclosure and any state mandated requirements:

I have performed prior services regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment. The lender/client is aware.

The appraiser certifies and agrees that this appraisal was prepared in accordance with the requirements of Title XI of the Financial Institutions, Reform, Recovery, and Enforcement Act (FIRREA) of 1989, as amended (12 U.S.C. 3331 et se.), and any applicable implementing regulations in effect at the time the appraiser signs the appraisal certification.

Appraisal Fee: The appraisal fee paid to Carolyn Stewart of Peaks Appraisal is $500

APPRAISER:

Signature: Carolyn Stewart
Name: Carolyn Stewart
Certified Residential Appraiser
State Certification #: 20935
or State License #:
State: AZ Expiration Date of Certification or License: 03/31/2026
Date of Signature and Report: 10/17/2025
Effective Date of Appraisal: 09/30/2025
Inspection of Subject: ☐ None ☒ Interior and Exterior ☐ Exterior-Only
Date of Inspection (if applicable): 09/30/2025

SUPERVISORY or CO-APPRAISER (if applicable):

Signature:
Name:
State Certification #:
or State License #:
State: Expiration Date of Certification or License:
Date of Signature:
Inspection of Subject: ☐ None ☐ Interior and Exterior ☐ Exterior-Only
Date of Inspection (if applicable):

Supplemental Addendum

File No. PA.0925.18

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

CERTIFICATION ADDENDUM –

This report and its conclusions were developed and conveyed per the requirements and standard of USPAP (Uniform Standards of Professional Appraisal Practice) 2025, Fannie Mae, Freddie Mac, the Code of Appraisal Ethics and Standard of Professional Appraisal Practice of the Appraisal Institute.

INTENDED USER –

This report is intended for use by Pinnacle Bank, and is to evaluate the property that is the subject of this appraisal for banking, finance transactions only; subject to the stated Scope of Work, purpose of the appraisal, reporting requirements of the appraisal form and the Definition of Market Value. No additional Intended Users are identified by this Appraiser. No other use of this report is intended, permitted, or implied.

This appraisal report is signed with a digital signature so it can be transported electronically by PDF procedures. The signature complies with all federal and state laws, it is a true representation of the appraiser's signature, is secure and irrevocable. While there is no way to prevent unethical or criminal tampering, this signature is password protected, binding the appraiser to the accuracy and completeness of the appraisal report

SCOPE OF WORK –

•The scope of the assignment agreed by the client and appraiser included a complete visual inspection of the subject property interior and exterior areas excluding the attic, crawlspace and areas which are not easily accessible or may be visually obstructed.
•Inspection of the neighborhood.
•Inspection of each comparable sale from the street.
•Verify and analyze data from reliable public and third party sources.
•Report the analysis, opinion and conclusions on 1004 appraisal form.
•The Cost Approach is not required by FNMA and not completed do insufficient market data of vacant home sites to determine site value and the difficulty of determining depreciation, the cost approach is not given any consideration in the final analysis. The Cost approach is for valuation purposes for market value and no for insurance purposes. The definition of Market value is not equivalent to insurable value. Insurable value is not authorized and should not be relied on for this report.

SUBJECT PROPERTY –

The address and/or owners name of the subject property was provided by the client to the appraiser. A search of county records and a third party property data base were utilized to attain plat map and recorded property data.

INSPECTION –

An "appraisal inspection" is not the same as a "home inspection". The term "inspection" used in this report is defined as a visual inspection of the property, its components and the comparable sales used.

It is recommended that the client and/or home owner should employ the services of a qualified home inspector which can verify the soundness, livability and structural integrity of the property.

The appraiser is not qualified to detect hazardous materials and has no knowledge of the existence of such materials on or in the property including mold, radon gas, mercury, lead base paint, formaldehyde materials, termites, and other hazardous materials which may or may not be present on the property, and was not observed by the appraiser. The presence of hazardous materials may affect the value of the property. The value estimated is predicated on the assumption that there is no such material on or in the property that would cause a loss in value.
As per the Fannie Mae Selling Guide, this appraiser is not considered to be an expert in the field of environmental hazards

MARKET CONCESSIONS –

It is an Extraordinary Assumption that the sales and listings used in the report are considered similar to the Subject in market concessions and are true arm's length transactions unless otherwise stated. This information is not typically available to the public unless published in county records or by the listing agent.

Signature	Carolyn Stewart	Signature	
Name	Carolyn Stewart	Name	
Date Signed	10/17/2025	Date Signed	
State Certification #	20935 State AZ	State Certification #	State
Or State License #	State	Or State License #	State

Supplemental Addendum

File No. PA.0925.18

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

HIGHEST AND BEST USE

The highest and best use of the Subject property is as improved. The Subject is Legally Permissible based on its current zoning. The site size, shape and land to building ratio allow for good utility making it Physically Possible. Based on the current market, a single family home is Financial Feasible and Maximally Productive.

ANSI –

Fannie Mae Standardized Property Measuring Guidelines

https://singlefamily.fanniemae.com/media/30266/display

Updated guidance Appraisers will be required to use the Square Footage-Method for Calculating: ANSI® Z765-2021 (American National Standards Institute®) Measuring Standard for measuring, calculating, and reporting gross living area (GLA) and non-GLA areas of subject properties for appraisals requiring interior and exterior inspections with effective dates of April 1, 2022 or later on loans sold to Fannie Mae.

Historically, Fannie Mae's Selling Guide has not required the use of a specific measurement standard. This policy update will standardize the method used to measure, calculate, and report GLA and non-GLA areas of subject properties.

All footprint sketches and floor plans must be computer-generated (not hand-drawn), indicate all the dimensions needed to calculate the GLA and other required areas such as garage and basement, and show the calculations to demonstrate how the estimate for gross living area was derived.

Fannie Mae considers a level to be below-grade if any portion of it is below-grade, regardless of the quality of its finish or the window area of any room. Therefore, a walk-out basement with finished rooms would not be included in the above-grade room count.

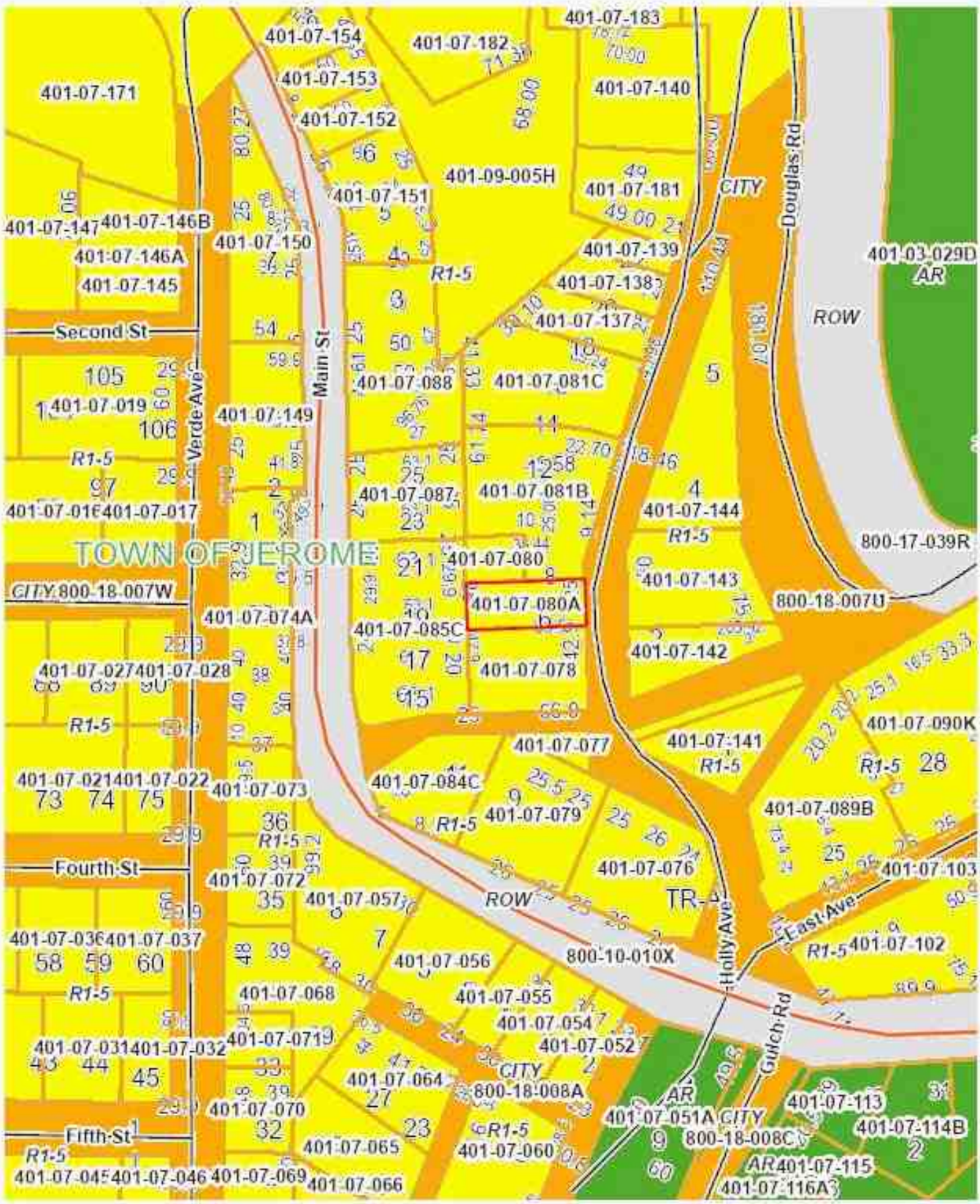
Signature	Carolyn Stewart	Signature	
Name	Carolyn Stewart	Name	
Date Signed	10/17/2025	Date Signed	
State Certification #	20935 State AZ	State Certification #	State
Or State License #	State	Or State License #	State

Location Map

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



County Map



Disclaimer: Map and parcel information is believed to be accurate but accuracy is not guaranteed. No portion of the information should be considered to be, or used as, a legal document. The information is provided subject to the express condition that the user knowingly waives any and all claims for damages against Yavapai County that may arise from the use of this data.

Aerial Map

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Subject Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Subject Front

655 Holly Ave

Sales Price	
G.L.A.	0
Tot. Rooms	0
Tot. Bedrms.	0
Tot. Bathrms.	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



Subject Rear



Subject Street

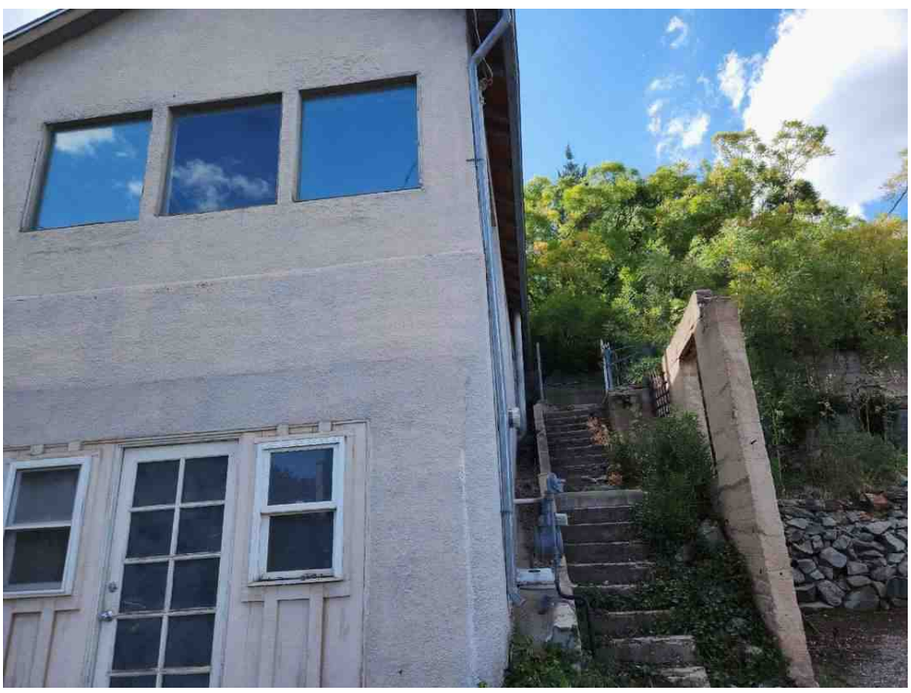
Subject Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Subject Side

655 Holly Ave
Sales Price
G.L.A. 0
Tot. Rooms 0
Tot. Bedrms. 0
Tot. Bathrms. 0.0
Location N;Res;
View B;Res;Pano
Site 2614 sf
Quality Q4
Age 111



Subject Side



Subject Street

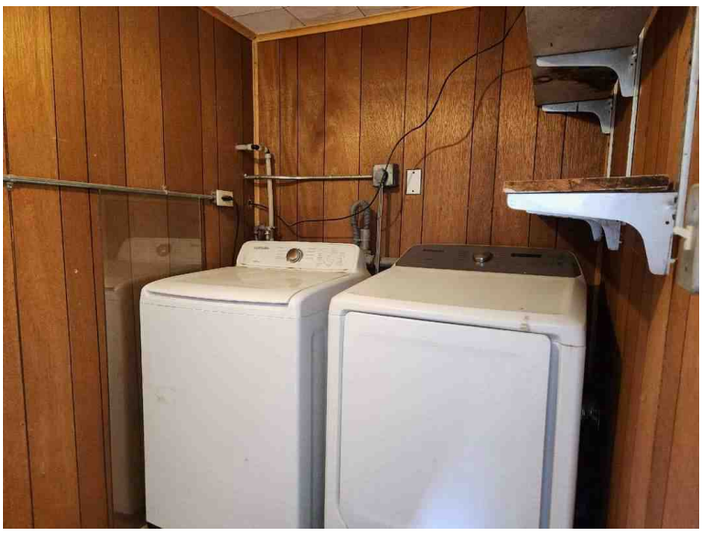
Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Basement Storage

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



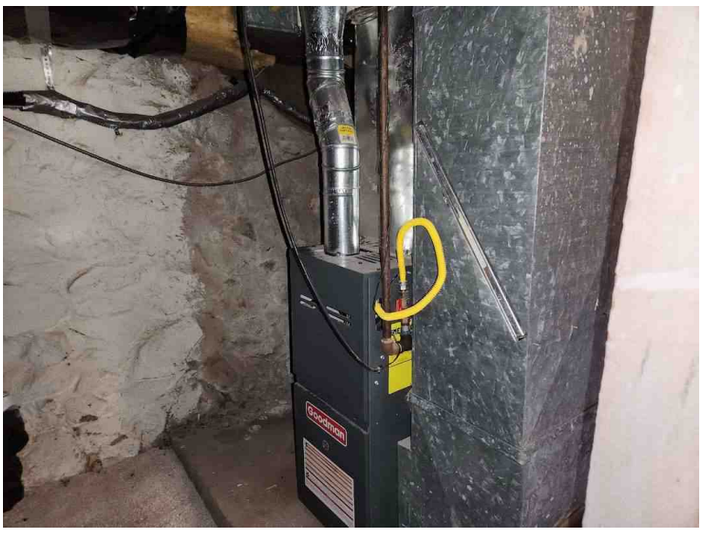
Laundry Room



Garage

Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



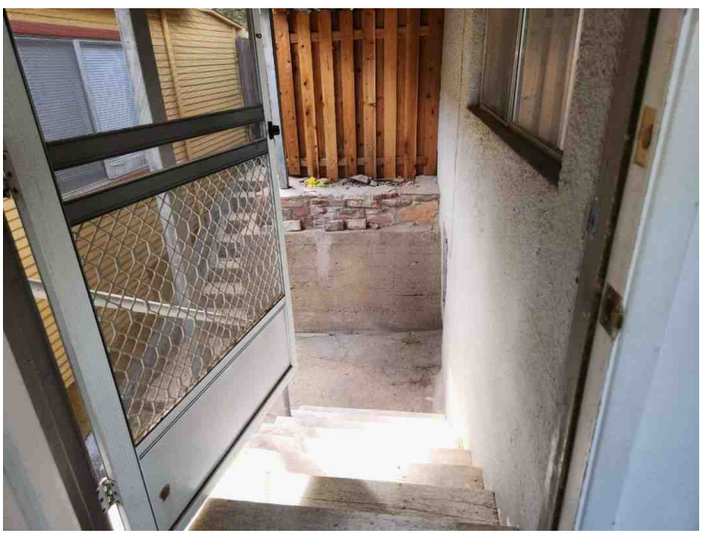
Basement - Furnace

655 Holly Ave

Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



Street View



Porch

Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

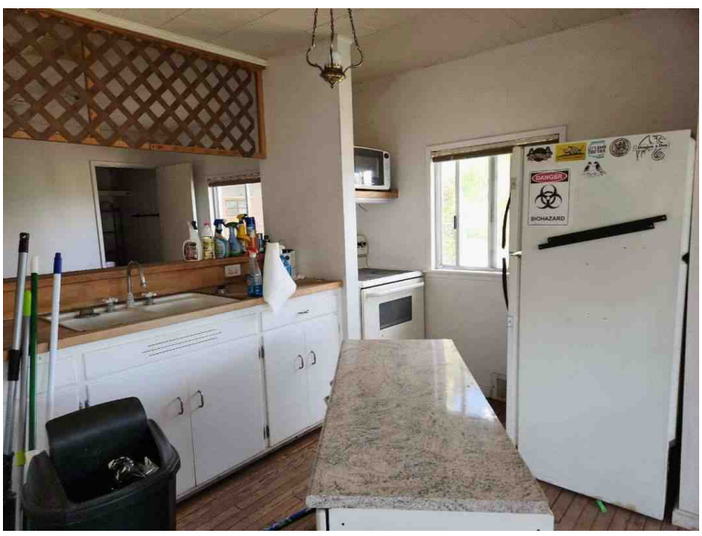


Living Room

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



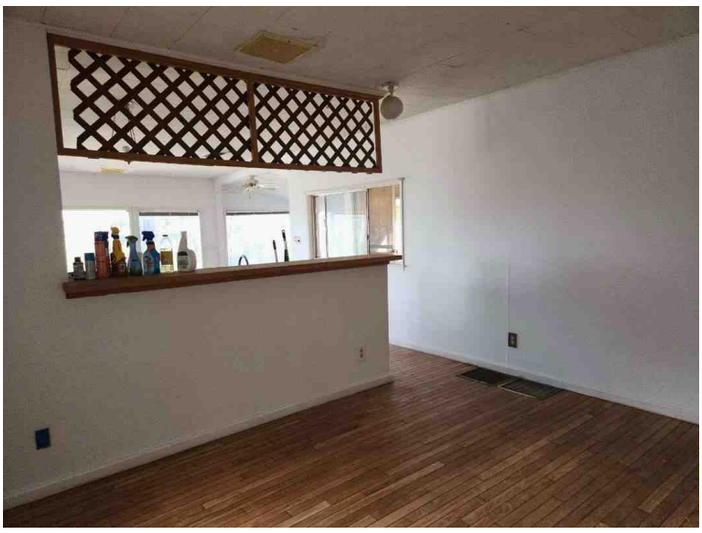
Living Room



Kitchen

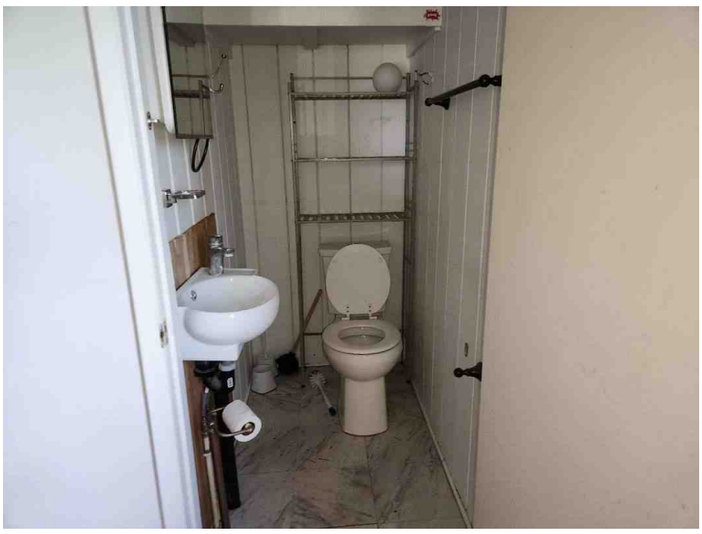
Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						

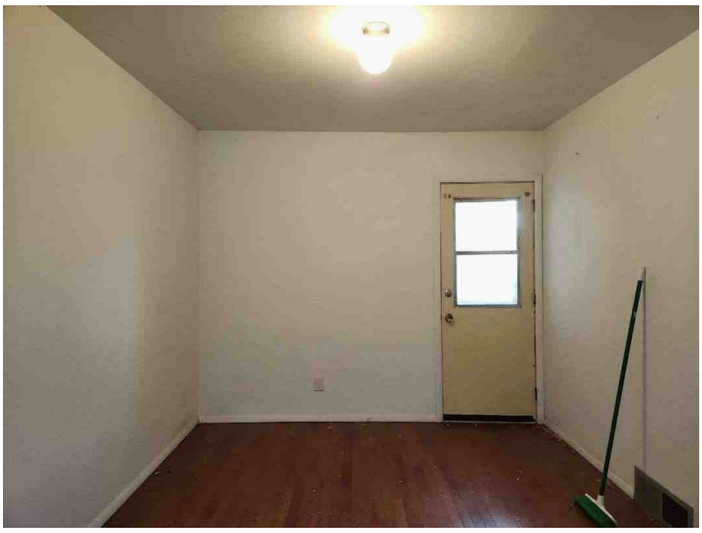


Dining

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



1/2 Bath



Den

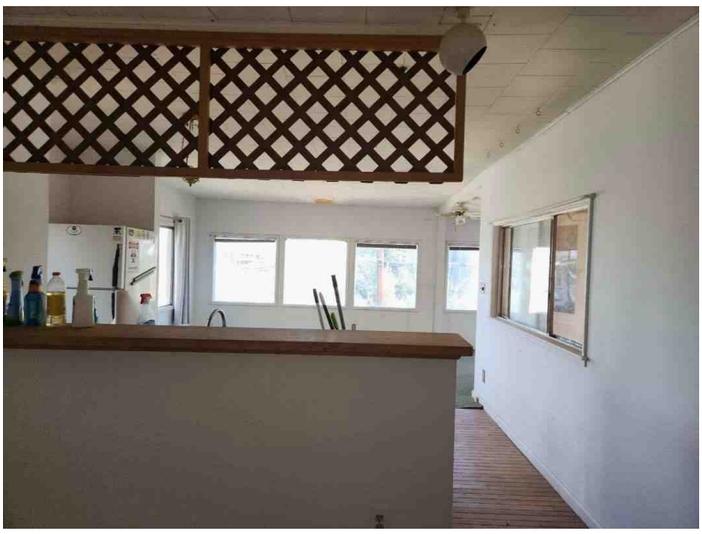
Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Bedroom

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



Kitchen



Bath

Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Dining

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



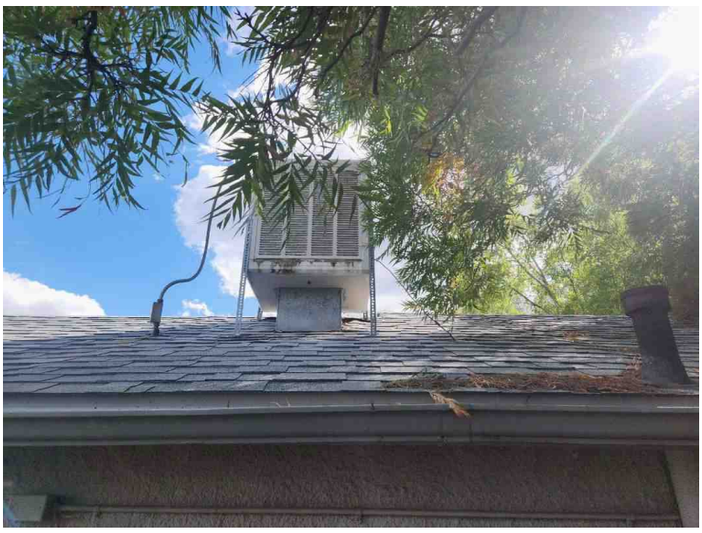
Dining



Dining

Subject Interior Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Dining

655 Holly Ave	
Sales Price	
Gross Living Area	0
Total Rooms	0
Total Bedrooms	0
Total Bathrooms	0.0
Location	N;Res;
View	B;Res;Pano
Site	2614 sf
Quality	Q4
Age	111



Dining



Dining

Comparable Photo Page

Borrower	Town of Jerome						
Property Address	655 Holly Ave						
City	Jerome	County	Yavapai	State	AZ	Zip Code	86331
Lender/Client	Pinnacle Bank						



Comparable 1

39 Paradise Ln

Prox. to Subject	0.33 miles NW
Sale Price	350,000
Gross Living Area	888
Total Rooms	5
Total Bedrooms	2
Total Bathrooms	1.0
Location	N;Res;
View	B;Res;Pano
Site	5663 sf
Quality	Q4
Age	121



Comparable 2

711 Clark St

Prox. to Subject	0.15 miles SW
Sale Price	330,000
Gross Living Area	832
Total Rooms	3
Total Bedrooms	1
Total Bathrooms	1.0
Location	N;Res;
View	B;Res;Pano
Site	3920 sf
Quality	Q4
Age	85



Comparable 3

38 Paradise Ln

Prox. to Subject	0.31 miles NW
Sale Price	225,000
Gross Living Area	940
Total Rooms	4
Total Bedrooms	2
Total Bathrooms	1.0
Location	N;Res;
View	B;Res;Pano
Site	4356 sf
Quality	Q4
Age	76

Estimated Cost for Renovations and Repairs - Page 1

J.D.S Improvements LLC
ROC#328514
290 South 6th Place
Cottonwood, AZ 86326
US
jds@jdsimprovements.com
www.jdsimprovements.com

J.D.S. IMPROVEMENTS

Estimate 1387

ADDRESS
Mary Chicoine
655 Holly Ave
Jerome, AZ 86331

DATE	TOTAL
09/08/2025	$38,000.00

DATE	DESCRIPTION	AMOUNT
	Renovation Quote – 655 Holly Ave, Jerome, AZ 86331	38,000.00
	Total Contract Price: $38,000 Scope of Work – Itemized Costs Task Bid Amount Ceiling replacement & patching (with paint finish) $5,500 Windows (5 units) $5,000 Window tinting (5 units) $900 Bathroom remodel $6,500 Chain-link fence (~50 lf, 6') $1,800 Siding (localized Hardie repairs) $2,000 Handrails & protection wall $3,200 Laundry room (pre-hung door, valves, drain) $2,500 Crawl space repairs $1,100 Electrical upgrades $2,100 Cabinetry & counters $3,400 Front area carpet (sunroom only) $1,200 Miscellaneous carpentry $800 Interior painting (full) $3,800 Termite treatment (allowance) $1,200 Total $38,000	

Estimated Cost for Renovations and Repairs - Page 2

DATE	DESCRIPTION	AMOUNT
	Inclusions	
	Labor, supervision, and project management for all listed scopes.	
	Materials and fixtures as specified for each task, using mid-grade selections unless otherwise approved.	
	Interior painting of all walls, ceilings, and trim.	
	Exterior painting of repaired siding to match existing finish.	
	Disposal and haul-off of construction debris created by our work.	
	One-year workmanship warranty; manufacturer warranties passed through.	
	Exclusions	
	Asbestos abatement or remediation (if discovered during demo).	
	City/county permitting fees, plan review, or special inspections.	
	Utility company fees for connection or service upgrades.	
	Client-directed scope changes, upgrades, or substitutions beyond inclusions.	
	Contract Protections	
	Unforeseen Conditions: Hidden issues (rot, structural damage, subfloor replacement, plumbing leaks, electrical deficiencies, asbestos/lead) will be documented and issued as a Change Order for written approval before proceeding.	
	Material Escalation: Pricing assumes current market rates. Any increase over 5% prior to procurement may be subject to a Change Order.	
	Code Compliance: Any modifications mandated by inspectors beyond the defined scope will be addressed through Change Orders.	
	Scope Limitations: Work is limited to items listed in this proposal. Any additional requests will be priced separately.	
	Payment Schedule	
	Deposit (65%) due at signing: $24,700	
	Progress Payment (25%) due at substantial completion of ceilings, windows, and bathroom rough-in: $9,500	
	Final Payment (10%) due upon completion and client walkthrough: $3,800	

~God Bless you always~
~And~
~Thank you for your business~

TOTAL $38,000.00

THANK YOU.

Estimated Cost for Renovations and Repairs - Page 3

Accepted By

Accepted Date

Department of Insurance and Financial Institutions

State of Arizona

CRA - 20935

This document is evidence that: **CAROLYN S STEWART** has complied with the provisions of Arizona Revised Statutes, relating to the establishment and operation of a:

Certified Residential Real Estate Appraiser

and that the Deputy Director of Financial Institutions of the State of Arizona has granted this license to transact the business of a:

Certified Residential Real Estate Appraiser

CAROLYN S STEWART

This license is subject to the laws of Arizona and will remain in full force and effect until expired, surrendered, revoked or suspended as provided by law.

Expiration Date : **March 31, 2026**

Form SCNLGL - "TOTAL" appraisal software by a la mode, inc. - 1-800-ALAMODE

File Attachments for Item:

A. Consideration of the Aravapai Running Special Event Permit Application for the Annual Cocodona Race Event

Council will consider and may approve the special event permit.

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335 JEROME ARIZONA 86331
(928) 634-7943

Founded 1876
Incorporated 1899

Permit #

Special Event Permit Application

Thank you for choosing the Town of Jerome for your special event.

Please fill out this packet and submit to the Town Manager.

- All information must be submitted at least **60** days prior to the event.
- Fee(s), due at the time of application submission.
- For questions regarding Special Event Permits, please contact Jerome Town Hall at (928) 634-7943.

Town Use Only

Date Submitted 11/5/25 Fee $100.00 Date Paid Rec'd 11/10/25

Paid via ☑ Check # 4653 ☐ C C ☐ Cash

Special Event Approval

Town Manager
Approve ☐ Deny ☐ Date _____ Comments _____

*Fire Inspector
Approve ☐ Deny ☐ Date _____ Comments _____

*Zoning Administrator
Approve ☐ Deny ☐ Date _____ Comments _____

*Police Chief
Approve ☐ Deny ☐ Date _____ Comments _____

*Building Inspector/Public Works
Approve ☐ Deny ☐ Date _____ Comments _____

*Other approvals as needed based on scope of event

Special Event Fee Schedule

Non-profit 501C3 with no entry fee — No Fee
Town Sponsored/Co-Sponsored — No Fee
Film Permits — Fee based on production type

$25 per day — *Special Event Permit*
Special Event Liquor License — $75 / $100

Special Event Permit Application

****

Checklist of Requirements

- [x] **1.** Completed Special Event Permit Application.
- [x] **2.** Completed Application for Facility Use (if applicable).
- [x] **3.** Completed Hold Harmless Agreement of Indemnification.
- [x] **4.** Completed Site Plan in 8 ½" x 11" or 8 ½" x 14" format that includes:
    - **a.** A map of the event area(s) including the location(s) for stage(s), performers, vendors, barriers/fencing (including type), sound amplification equipment and speakers, race/run routes, tents/canopies, and any points of entry and exit where applicable.
    - **b.** List of all participating vendor(s)/businesses (if applicable).
    - **c.** Accessibility, parking and/or traffic control plan.
    - **d.** Restroom plan.
    - **e.** Trash and waste removal plan.
    - **f.** Community outreach (if applicable)
- [ ] **5.** Certificate of insurance in the amount of no less than one million dollars ($1,000,000) of general liability coverage naming the Town of Jerome as additional insured and referencing the specific activity and date(s).

Insurnace certs will be provided in january once our 2026 policy becomes active.

- [ ] **6.** Liquor License (if applicable). N/A
- [ ] **7.** Liquor Liability Insurance (if applicable). N/A
- [ ] **8.** Health Department Approval (if applicable). Will be provided once obtained
- [ ] **9.** All other permits required by County or State Agencies. Will be provided once obtained
- [ ] **10.** Permit filing fee. Check for $100 mailed
- [ ] **11.** Written approval from Police Chief/Fire Inspector (if applicable). Will be provided once obtained

Applicant Information

Applicant's Contact Information

Name of Applicant Steve Aderholt Date: 11/5/25

Name of Organization/Sponsor Aravaipa Running

Federal Tax or 501 (c)(3) Numbe.

Business Mailing Addres.

City State AZ Zip

Business Email steve@aravaiparunning.com

Business Phone # Cell Phone #

Authorized Contacts for Event

Please list any other authorized contacts for the Event, including an emergency contact that will be available during the event. At least one **must** be provided.

Name Steve Aderholt Phon.

Name Erika Snyder Phone

Emergency contact for Event*

Name Steve Aderholt Phone

***Emergency contact should be a party available for duration of event including set up and tear down.**

If additional contacts need to be shared, please use a separate sheet to list additional points of contact

Event Information

Name of Event Cocodona

Date(s) / Time(s) of Event – If multiple dates (Not including set-up/tear-down time)

Start: Date: 5/5/26 Time 6:00am End: Date 5/6/26 Time 9:00pm

Start: Date: _____ Time _____ End: Date _____ Time _____

Start: Date: _____ Time _____ End: Date _____ Time _____

Set-Up Date/Time: From 5/4/26 (Date) 7:00am (Time) To 5/4/26 (Date) 6:00pm (Time)

Tear-Down Date/Time: From 5/6/26 (Date) 8:00pm (Time) To 5/6/26 (Date) 9:30pm (Time)

Number of expected/estimated Participants 980

80-miler $350
125-miler $645

Will an admission or registration fee be charged? YES ■ NO ☐ Fee $ 250-miler $1,745

Please briefly describe the event:

Cocodona is an ultra-distance trail running race encompasing five race distances; 250, 125, 100, 80, and 40-milers. The 250 and 80-mile distances pass through Jerome (on the same route). The 125-miler starts in Jerome at the Gold King Mine Ghost Town.

Event Details

Special Events which occur on a Town right-of-way or on property owned or leased by the Town require an "Application for Facility Use." Please complete and submit along with the Special Event Permit Application.

Will the Special Event take place on property owned or leased by the Town of Jerome?

■ YES ☐ NO

If yes, which property? Various city sidewalks. See attached route map.

If no, what is the **physical address** for the event? _____

Please note that Separate permits or approvals may be required by County or State agencies, depending on the type of event or where there may be the presence of alcohol or food for sale, or by donation. Documentation of all applicable approvals must be provided ***30 days prior*** *to the event.*

Will the Special Event require the use of temporary signage?

■ YES ☐ NO

**All signage must comply with Section 509 of the Jerome Zoning Ordinance. A separate sign permit for special events is not required. To hang signs from Town owned property will require prior approval.*

Some sponsor signage at the 125-miler start at Gold King Mine Ghost Town. Course will be marked with pin flags, flagging tape, and road stickers (see route map). ADOT may require 36"x36" pedestrian crossing signs in town along Hwy89A.

Event Details Continued

Will Alcohol be Sold?

☐ YES ■ NO ☐ By Donation

If yes, you must submit approval documents from the Arizona Department of Liquor Licenses and Control, at least 30 days prior to the event.

Will Food be Sold?

☐ YES ■ NO ☐ By Donation

If yes, you must submit approval documents from the Yavapai County Health Services Department, or proof of a prior event approval or Special Event Variance granted by Yavapai County Health Services in the same calendar year.

Will there be outdoor, amplified sound at the event?

■ YES ☐ NO

Please provide a brief description of outdoor/amplified sound to be used:

A Small PA system will be used for music and race announcements at Gold King Mine Ghost Town on May 6th from 6:00AM - 7:15AM

Jerome Town Code section 10-1-13 restricts the volume and hours of outdoor sound and amplification devices. Loud noise that is a public nuisance, is prohibited. The Town reserves the right to limit the hours of the Special Event to avoid unreasonable interference with adjacent properties.

Will there be outdoor lighting, or other electrical needs?

■ YES ☐ NO

Please provide a brief description of the electrical requirements for the event:

A small generator will be used to power minimal lighting to the tents at the aid station at the Jerome Historic State Park and another at the 125-miler starting area at the Gold King Mine Ghost Town.

Will the event include other vendors/businesses in addition to the business/entity applying for this permit?

☐ YES ■ NO

If yes, please provide a list of all participating vendors to the Town of Jerome Manager prior to the event. Including the business name(s), dba, owner(s) name(s), physical business location, contact telephone number(s) and vendors' TPT license number.

Will the event require the use of tents or canopies or other temporary structures? *

■ YES ☐ NO

**Please include the placements of tents or canopies on the site plan, with points of entry or exit clearly marked, including the exact type of structure – Please note set-up and tear-down time(s) must be indicated on Page 4.*

See route map/State Park map for tent placement

Special Event Access

Will the event require the use of fencing, ropes, barricades, or other types of barriers? *

☒ YES ☐ NO

*Please note barriers and any points of entry or exit through barriers should be clearly marked on your site plan, including exact type of fencing or barriers to be used.

See route map/State Park map for cones and directional sign placement

Will the event require the closure and/or detour of any roadway, sidewalk, or other public access route?

☐ YES ☒ NO

Please include a description of the primary access routes to the event/property and available parking for the crowds anticipated. (Special traffic control may be required for larger events)

Minimal parking needs at Gold King Mine Ghost Town and Jerome State Historic Park. Adequate parking at both locations.

Will the use of portable restrooms be necessary during the event?

☒ YES ☐ NO

Please note the use of portable restrooms may be required on a case-by-case basis.

Will trash be created during the special event?

☒ YES ☐ NO

Briefly description of the receptacles to be used and/or efforts to minimize litter around Town during the event:

Trash and recycle cans will be placed at the Gold King Mine Ghost Town and Jerome State Historic Park. Volunteers will manage these cans and swap out liners as needed. Minimal trash/recycling will be generated. Full trash/recycle liners will be halued away to our dumpsters in Sedona.

Cleanup of the site(s), including removal of all waste and temporary structures, must be completed by 10:00 a.m. of the morning following the end of the Special Event. Please refer to and comply with Jerome Town Code, section 9-1, Garbage and Trash Collection.

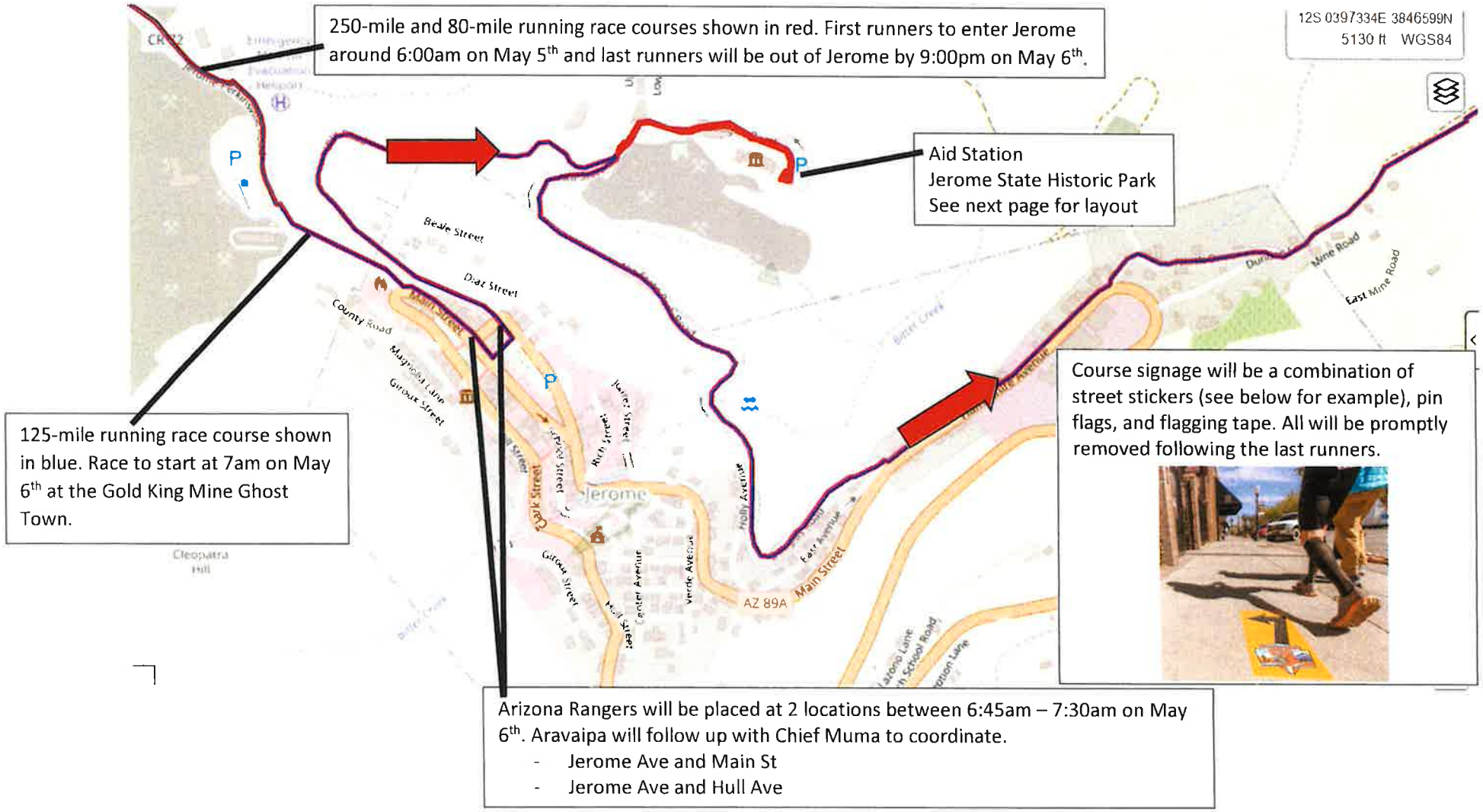
Has any community outreach been completed in regard to this special event?

☒ YES ☐ NO

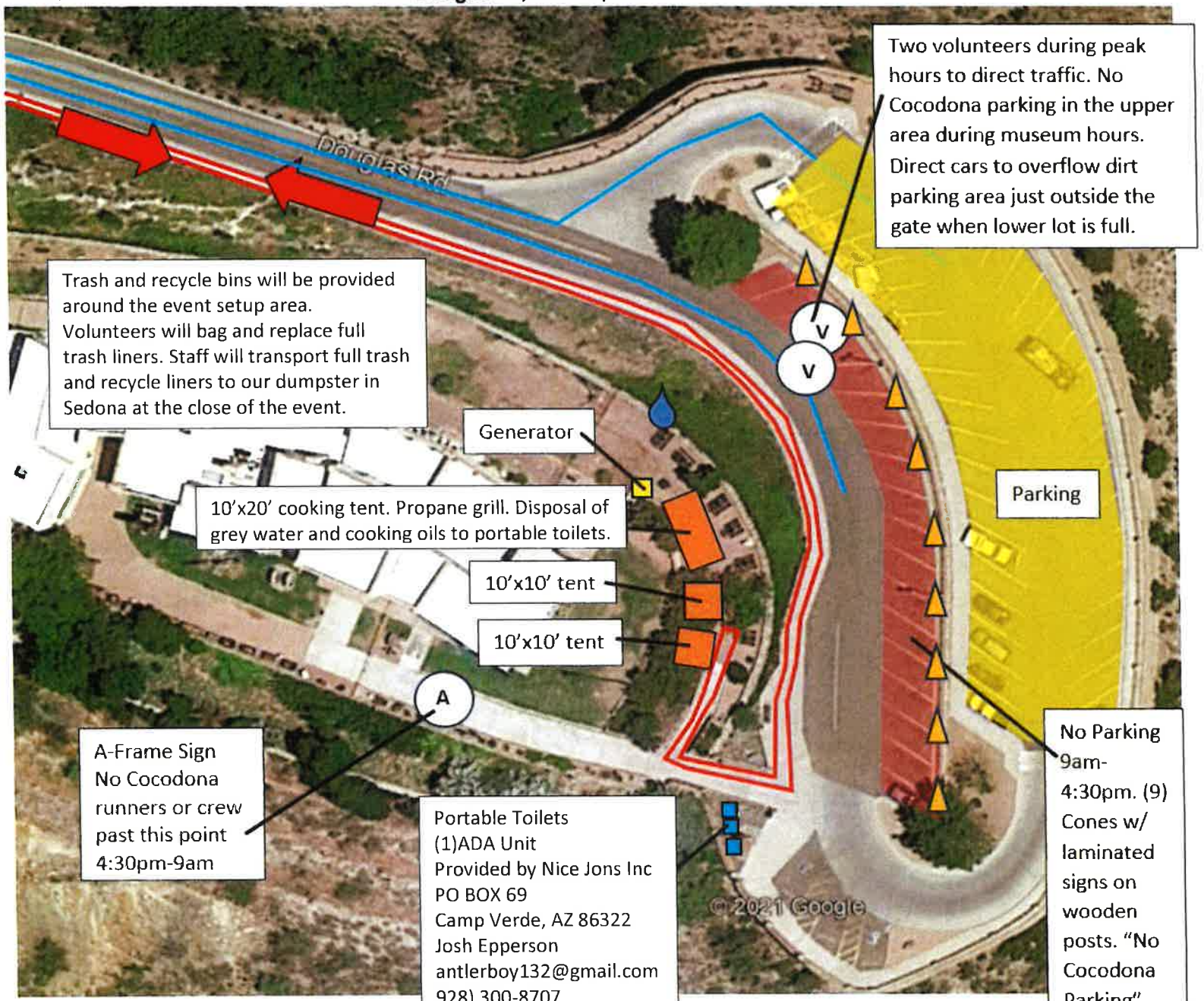
Please give a brief description of any outreach to neighboring residents and/or businesses regarding the special event, including any feedback received from that outreach.

Over the years, we have attempted to partner with multiple hotels and restaurants to host our packet pick-up and a dinner for runners. Return correspondence has been minimal and none have had interest in partnering with the race.

Cocodona – 2026 Course Map in Jerome



Jerome State Historic Park **100 Douglas Rd, Jerome, AZ**



Special Event Hold Harmless and Indemnification Agreement

I, Steve Aderholt of Aravaipa Running ([*Insert Company Name*] ("**Permittee**"), shall, through the signing of this Special Event Hold Harmless and Indemnification Agreement ("**Agreement**"), in consideration for the issuance of a Special Event Permit for [*Insert description of event*] ("**Special Event**") and to the furthest extent allowed by law, agree to indemnify, hold harmless and defend the Town of Jerome, Arizona and its elected officials, officers, agents, employees and volunteers (collectively "**Indemnitee**") from any and all loss, liability, fines, penalties, forfeitures, costs and damages (whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage) incurred by any Indemnitee, from any and all claims, demands, and actions in law or equity (including attorney's fees and all costs of litigation), arising or alleged to have arisen directly or indirectly out of the Special Event (collectively, "**Claims**") Permittee's obligations under this Agreement shall apply regardless of whether Town or its elected officials, officers, employees, agents, or volunteers are negligent, but shall not apply to any loss, liability, fines, penalties, forfeitures, costs or damages to the extent caused solely by the gross negligence, or caused by the willful misconduct of Town or its officers, officials, employees, agents or volunteers.

Permittee acknowledges the contagious nature of communicable diseases and voluntarily assumes the risk that Permittee, its officials, officers, employees, agents, volunteers, or invitees may be exposed to, or infected by, by participating in the Special Event, and that such exposure or infection may result in personal injury, illness, permanent disability, and death. Permittee understands that the risk of becoming exposed or infected at the Special Event may result from the actions, omissions, or negligence of Permittee and others, including but not limited to, Town employees, volunteers and participants and their families.

Prior to and throughout the duration of the Special Event, Permittee shall pay for and maintain in full force and effect all insurance as required in the application submitted by the Permittee for the Special Event, which is incorporated into and part of this Agreement, or as may be authorized or required in writing by Town Manager or his/her designee at any time and in his/her sole discretion.

Permittee shall conduct all defense of any Claims at his/her/its sole cost. The fact that insurance required under this Agreement is obtained shall not be deemed to release or diminish the liability of Permittee, including without limitation, liability assumed under this Agreement. The duty to indemnify shall apply to all claims regardless of whether any such insurance policies are applicable. The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend exists regardless of any ultimate liability of Permittee. The policy limits of any such insurance do not act as limitation upon the amount of defense and/or indemnification to be provided by the Permittee. Approval and or purchase of any insurance contracts or policies shall in no way relieve Permittee from liability nor limit the liability of the Permittee, its officials, officers, employees, agents, volunteers, or invitees.

The Town of Jerome shall be reimbursed for all costs and attorney's fees incurred by Town in enforcing this Agreement.

Signed this 5th day of November, 2025.

Signature: Steve Aderholt

Printed Name: Steve Aderholt

Witness Signature: Erika Snyder

Printed Name: Erika Snyder

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA 86331
PHONE (928) 634-7943 FAX (928) 634-0715

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Application for Facility Use

Please complete and return this application and Hold Harmless Agreement (attached) to the office of the Town Clerk, P.O. Box 335, Jerome, AZ 86331, together with a CERTIFICATE OF INSURANCE, if required by the Town, naming the Town of Jerome as an Additional Insured with respect to this event.

YOUR APPLICATION MUST BE APPROVED BY THE TOWN BEFORE A PERMIT CAN BE ISSUED and should be submitted at least 60 days prior to the event.

****

Name of Applicant: Steve Aderholt

Address. _____

Telephon _____

If applicant is an organization, list officers:

Name	Address	Telephone
Jamil Coury		

Requesting the use of:

- ☐ **UPPER PARK (Parcel 401-06-156)**
- ☐ **LOWER PARK/SLIDING JAIL (Parcel 401-06-075)**
- ☐ **COUNCIL CHAMBERS (Parcel 401-10-002)**
- ☐ **300 LEVEL PARKING LOT (Parcel 401-03-015L)**
- ☐ **MIDDLE PARK (Parcel 401-06-015)**
- ■ **ALL OTHER TOWN RIGHT OF WAY**

Date(s) of Use: May 5th and 6th, 2026

Rain Date: N/A

Hours of Use: 6am on 5/5/26 thru 9pm on 5/6/26 Approximate # of people: 980

In making this application, the undersigned does hereby agree to comply with all ordinances and regulations of the Town of Jerome, the laws of the State of Arizona and the regulations of Yavapai County which govern such usage.

Steven Aderholt Digitally signed by Steven Aderholt Date: 2025.11.05 08:56:26 -07'00'
Signature

11/5/26
Date of application

Steve Aderholt
Print Name

Address

Telephone

File Attachments for Item:

B. Discussion and Possible Staff Direction Regarding the Town of Jerome as a Trust Beneficiary of the Richard J. Martin Revocable Trust

Council will discuss and may provide staff direction.

LAW OFFICES
BOYLE, PECHARICH, CLINE, WHITTINGTON & STALLINGS, P.L.L.C.

William R. Whittington
Jonathan A. Millet
Stephen W. Polk
Nancy Hargiss-Tatlock

125 North Granite Street
Prescott, Arizona 86301
Telephone: (928) 445-0122
Facsimile: (928) 445-8021
prescottlawoffices.com
dwhite@bpcws.com
rpecharich@bpcws.com

Devon M. White
Tomas A. Montoya
Robert S. Pecharich, Of Counsel
John C. Stallings, Of Counsel

November 6, 2025

Via U.S. Mail Only
Town of Jerome
Attn: Brett Klein, Town Manager
P.O. Box 335
Jerome, AZ 86331

With a copy to:
John Austin Gaylord
Gust Rosenfeld P.L.C.
One East Washington Street, Suite 1600
Phoenix, Arizona 85004

Re: Notice to Trust Beneficiary; Waiver of Inventory, Appraisement and Accounting – The Richard J. Martin Revocable Trust dated October 14, 2008, as restated on November 14, 2013, and restated again on June 3, 2025 (together, and as restated, the "Trust").

Dear Mr. Klein and Mr. Gaylord:

Our office represents Charles W. Runyon, Jr., Trustee of the Trust. You are a beneficiary of the Trust following Richard J. Martin's death on October 7, 2025.

Pursuant to the Arizona trust code, we are enclosing a Notice to Trust Beneficiaries. This notice provides the name and contact information of the Trustee. Additionally, because you are a beneficiary of the Trust, we are enclosing for your records a copy of the pertinent section of the Trust that confirms your beneficial interest.

Please feel free to contact our office if you have any questions.

Sincerely,
BOYLE, PECHARICH, CLINE,
WHITTINGTON & STALLINGS, P.L.L.C.

Devon M. White
Robert S. Pecharich

RSP/DMW
Enclosures: Listed
Cc. Charles W. Runyon, Trustee

SECOND RESTATEMENT OF THE RICHARD J. MARTIN REVOCABLE TRUST

On the 14th day of November, 2013, RICHARD J. MARTIN, as Settlor, executed a restatement of THE RICHARD J. MARTIN REVOCABLE TRUST (hereinafter the "Trust"), originally established on the 14th day of October, 2008. RICHARD J. MARTIN was named as Trustee of the Trust.

Pursuant to Article 6, Paragraph (A) of the Trust, Settlor reserved the right to amend the Trust in whole or in part at any time during his lifetime by an instrument in writing signed by Settlor. Settlor now desires to exercise his right to amend the Trust by restating the Trust in its entirety.

NOW, THEREFORE, RICHARD J. MARTIN hereby restates the Trust in its entirety by revoking Articles One through Nine thereof and by substituting the following Articles in place thereof:

[redacted]

3. **DISPOSITIVE PROVISIONS**

(A) Payment of Income and Principal While Settlor is Living

1. While Settlor is living, any income received by Trustee shall be held or disbursed as directed by Settlor. In addition, Trustee shall pay to Settlor such portion or portions of principal, up to the whole thereof, as Settlor shall request from time to time.

(B) Distribution of Trust after Settlor's Death

1. Upon the death of Settlor, Trustee shall distribute the remaining principal and undistributed income of the Trust as follows:

[redacted]

[redacted]

(e) $100,00.00 shall be distributed to the Town of Jerome upon the following conditions:

i. To be expended only for the creation of a public park.

ii. For expenses of only planning and materials and specifically not for labor or construction costs other than planning and materials, including but not limited to picnic tables, benches, trees, and other landscaping and park-like improvements.

iii. To be located on Town property, ~~on Yavapai County Parcel # 401-06-015.~~ Said location ~~on that parcel number~~ is more specifically designated ~~on a plat of said area, as~~ within attached ~~hereto~~ as Exhibit "A" and made a part hereof by reference.

iv. The Town of Jerome to agree, in writing, to complete the public park project within two (2) years of written notice of the gift from the Trustee.

v. The Town to maintain the completed park as a public park for the benefit and enjoyment of the general public.

vi. If the Town of Jerome fails to complete construction of this public park within two (2) years from the date of a written notice of this gift from my Trustee, the Town is to reimburse my Trust all sums advanced to the Town for the park. However, if the Town shows good cause for delay in completion of the park, my Trustee may, in his or her discretion, agree to extend the completion date.

(f) The Town of Jerome may decline this gift by written renunciation as provided herein and, if so, this $100,000.00 shall be distributed by my Trustee to the Town of Jerome solely for the use by Jerome Fire Department. If any funds are reimbursed by the Town to my Trust, those funds shall be used solely for the recruitment, retention, and training of volunteer firefighters, and shall not be used to pay the salaries of Town employees performing work for the Jerome Fire Department.

[redacted]

(i) Distribution if all Named Beneficiaries And Descendants are Deceased

If, or to the extent, the above provisions do not provide for distribution of the trust estate or any part thereof, such interest shall be distributed free of trust, upon termination of all prior estates or interests, to the intestate heirs of Settlor as then determined by the laws of the State of Arizona as then in effect.

(j) Settlor has intentionally elected to distribute the assets of this Trust in the manner set forth herein, because Settlor feels that the Trust estate is best utilized as herein provided. If any person shall contest the validity of this Trust or my Last Will, for any cause or reason whatsoever, Trustee shall distribute to that person the sum of ONE DOLLAR ($1.00) and no more.

[redacted]

[redacted]

IN WITNESS WHEREOF, Settlor and Trustee has signed this Second Restatement of Trust on the 3rd day of June, 2025.

RICHARD J. MARTIN
Settlor and Trustee

STATE OF ARIZONA)
) ss:
County of Yavapai)

Acknowledged before me this 3rd day of June, 2025, by RICHARD J. MARTIN, as his free and voluntary act for the uses and purposes therein stated.

Notary Public

My Commission Expires:

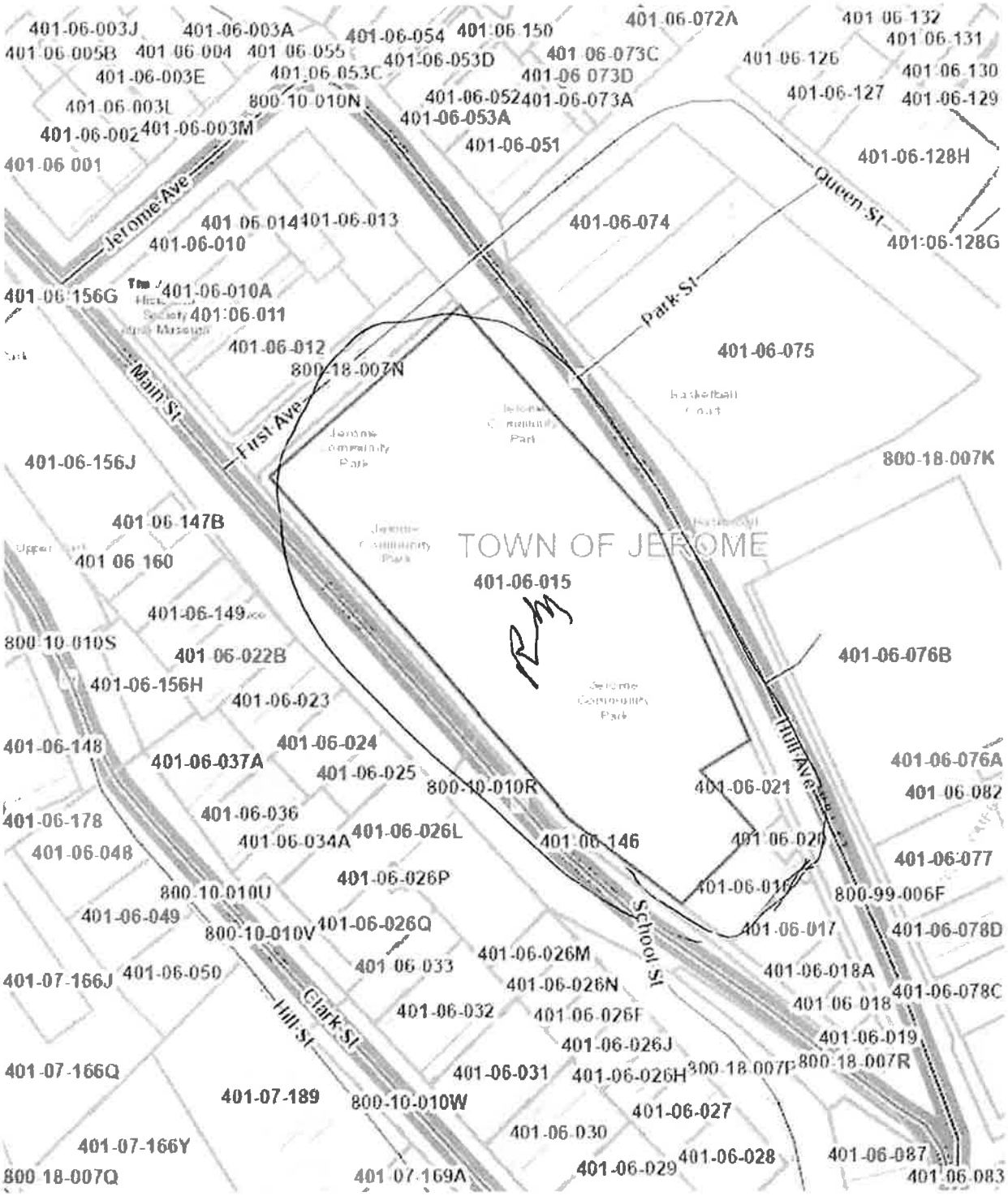
8/4/2028

LUKE OLIVER
NOTARY PUBLIC - ARIZONA
YAVAPAI COUNTY
COMMISSION # 671943
MY COMMISSION EXPIRES
AUGUST 04, 2028

Exhibit A

BOYLE, PECHARICH, CLINE,
WHITTINGTON & STALLINGS, P.L.L.C.

Jerome Community Park



Disclaimer: Map and parcel information is believed to be accurate but accuracy is not guaranteed. No portion of the information should be considered to be, or used as, a legal document. The information is provided subject to the express condition that the user knowingly waives any and all claims for damages against Yavapai County that may arise from the use of this data.

Map printed on: 5.23.2025

File Attachments for Item:

C. Consideration of a Town of Jerome Appointment as a Designee for the Yavapai County Water Resource and Open Space Committee

Council will consider and may appoint one of their membership or designate it a staff appointment.

YAVAPAI COUNTY BOARD OF SUPERVISORS

www.yavapaiaz.gov

District 5
MARY MALLORY, Chair
District5@ YavapaiAZ.GOV

District 1
L. BROOKS COMPTON, Vice Chair
District1@YavapaiAZ.GOV

District 2
DEE JENKINS, Supervisor
District2@YavapaiAZ.GOV

District 3
NIKKI CHECK, Supervisor
District3@YavapaiAZ.GOV

District 4
CHRIS KUKNYO, Supervisor
District4@YavapaiAZ.GOV

YAVAPAI COUNTY

1015 Fair Street
Prescott, AZ 86305
928-771-3200

County Manager
PHIL BOURDON
Phil.Bourdon@yavapaiaz.gov

Deputy County Manager
MARTIN BRENNAN
martin.brennan@yavapaiaz.gov

Assistant County Manager
TYLER GOODMAN
tyler.goodman@yavapaiaz.gov

Clerk of the Board/
Special Districts Coordinator
JAYME RUSH
Jayme.rush@yavapaiaz.gov

November 5, 2025

Dear Mayors and Council members:

We are pleased to formally invite your city or town to participate on the Yavapai County Water Resources and Open Space Committee. Yavapai County, through the Sonoran Institute, has received grant funding to facilitate discussions regarding these important topics. We sincerely look forward to engaging with your community to collectively shape the direction of this Committee with the desire to cultivate meaningful positive outcomes for the residents of Yavapai County.

To maintain a manageable Committee size, we ask that you designate one representative from your city or town and an alternate. Ideally, these will be elected officials who have knowledge of water resource and open space matters in your community.

Once the process begins, we will seek input from all stakeholders to help define what success for this Committee will be. A potential first phase of discussions could include:

- Identifying areas of agreement and collaboration to strengthen our voice on regional water issues and open space.
- Discussing how to better utilize the tools already in our toolbox to positively impact our regional water supply.
- Identifying opportunities to integrate the Committee with existing regional efforts.
- Understanding the relevant issues, goals, and alignment among municipalities, unincorporated communities, and stakeholders across Yavapai County.
- Creating foundational documents for the Committee.
- Defining opportunities for shorter-term success (simpler issues ripe for collaboration) and longer-term objectives with a process for addressing them.

We seek to convene the Committee in January 2026. Please respond to this letter with your interest in participating, as well as with the names of the designated representative and alternate by December 19, 2025, by emailing kerri.gump@yavapaiaz.gov.

We look forward to collaborating with you!

Sincerely,

Mary Mallory

Mary Mallory, Chair

Cc:
Brooks Compton, Vice-Chair
Nikki Check, Supervisor
Chris Kuknyo, Supervisor
Dee Jenkins, Supervisor

File Attachments for Item:

D. Consider Removing from the Table and Review of Proposals Received in Response to the RFP for an Advanced Metering Infrastructure System, and Identify 2-3 Respondents to Attend the Upcoming Special Meeting for Further Council and Community Evaluation and Consideration

Council will review the proposals received and provide staff direction.

TOWN OF JEROME

POST OFFICE BOX 335, JEROME, ARIZONA 86331
(928) 634-7943 FAX (928) 634-0715

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STAFF SUMMARY REPORT

FROM: Brett Klein, Town Manager/Clerk

ITEM: **Item: Consideration of Bids in Response to the Town's Issuance of a RFP for Water Meters**

MEETING DATE: December 9, 2025

Summary:

In June, 2026, the Town received a grant from the Water Finance Authority (WIFA) for water meters with the overarching goals of conserving water and having real-time accurate data. The Town subsequently issued a RFP to receive proposals from eligible vendors and to obtain more information regarding the automated meters. The Town received seven (7) bids, all of which could be purchased utilizing the Town's FY 2026 budgeted funds and the WIFA grant. Town staff have analyzed the bids and will discuss at the meeting certain recommendations. Town staff also request Council to assist in identifying 2-3 vendors you would like to meet with prior to making a final decision. During the process I believe you will learn that the meters pose no health risks and are actually more safe than a cell phone or microwave oven.

Fiscal Impact:

The Town has received an 80% grant from WIFA for $206,000~. The impact to the Town would be the remaining 20% which was budgeted for in line item 20-50-6230 that with 42% of the budget year elapsed has expended only $7,860 out of $175,000.

Recommendation:

Staff recommend Council identify 2-3 vendors to invite back for in-depth questions, answers and understanding of their bid, installation process, meters used, meter reading processes, warranty, trouble shooting, etc.

Town of Jerome

Addendum to the Request for Proposals for

Advanced Metering Infrastructure System

Please take note that due to an irregularity discovered, most notably with the submission deadline, proposals will be accepted until **Monday, December 1, 2025, at 5:00 p.m AZST.**

Furthermore, there will be **no surety bond requirement upon submission**.

No proposals submitted have been reviewed yet. If you have submitted a proposal and would like to use this extra time to resubmit, please advise Town Manager Brett Klein that you are resubmitting. Otherwise, your previously submitted proposal will be honored.

For questions regarding the RFP, timeline and administrative issues, please contact Brett Klein at: b.klein@jerome.az.gov

For technical questions please contact Public Works Director Marty Boland at m.boland@jerome.az.gov or (520) 904-5272

For a listing of current meters, please contact Michele Sharif at m.sharif@jerome.az.gov or (928) 634-7943

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA, 86331
(928) 634-7943

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REQUEST FOR PROPOSAL

FOR

ADVANCED METERING INFRASTRUCTURE SYSTEM

PROJECT NO.

Submission Deadline: WEDNESDAY, NOVEMBER 5, 2025
No later than 12:00 PM – Arizona Time

Town of Jerome
Attn: Town Clerk
PO Box 335
600 Clark St.
Jerome, AZ 86331

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NOTICE TO RESPONDENTS

REQUIRED PROPOSAL PACKAGE FORMS

THE FOLLOWING ITEMS MUST BE COMPLETED AND SUBMITTED WITH THIS COMPLETE AND INTACT PROPOSAL PACKAGE FOR A PROPOSAL TO BE CONSIDERED RESPONSIVE. ANY AND ALL DEFICIENCIES OF ITEMS LISTED BELOW WILL BE CONSIDERED AN ADEQUATE REASON TO REJECT THE PROPOSAL IN ITS ENTIRETY.

- Complete Proposal Package
- Acknowledgement of Addenda
- Executed Proposal Documents
  - Proposal
  - Fee Proposal
  - Non-Collusion Certificate
  - Certificate of Ownership
  - Respondent Qualifications, Representations, and Warranties
- Signatures, Seals, & Notaries (wherever necessary)

This information is provided for your use in preparing all documents as required for a complete proposal. Please double-check all requirements. If you have any questions regarding what is required with a submittal, please call and ask.

REQUEST FOR PROPOSAL

Town of Jerome
Advanced Metering Infrastructure System

Notice is hereby given that the Town of Jerome, Arizona, is requesting proposals from qualified person(s) or vendors (collectively, "respondents") to replace the Town's outdated water meters with an advanced metering infrastructure (AMI) system.

The Town of Jerome intends to implement a water meter replacement program and system-wide conversion of the Town's current water meters to an AMI. Existing meters will be replaced with equivalent-sized AMI meters that can capture and transmit water meter data to centralized software to streamline operations, improve subsequent billing processes, and enhance customer satisfaction.

The scope of work for this project includes, but is not limited to, providing the following:

- Water meters.
- RF-enabled (radio frequency) endpoints.
- Network software and infrastructure, including base stations and repeaters, where necessary and applicable.
- Software and equipment training.

The procurement time to complete the project is 180 calendar days from the date of the Notice to Proceed.

The Town of Jerome will receive and accept proposals until 12:00 p.m. On November 5, 2025, at Jerome Town Hall, 600 Clark St, Jerome, Arizona 86331. Proposals received after that time will not be accepted. The Town of Jerome reserves the right to reject any or all proposals and to award all or part of the proposal. Nevertheless, except when rejections of proposals are required by law, the Town reserves the right to waive any informality of the proposal. The Town intends to award the contract contemplated in this RFP to the responsible and responsive respondent whose proposal is determined, in writing, to be the most advantageous to the Town and best meets the overall needs of the Town, taking into consideration the evaluation criteria set forth in this RFP.

Brett Klein
Town Manager/Town Clerk

Posting Date:

Publishing Dates:

GENERAL PROJECT INFORMATION

The Town of Jerome is located on the side of Cleopatra Hill in the Black Hills of Arizona. The Town is the sole provider of metered water services within Town limits, as well as specific locations outside of Town limits. The Town, which has stretches of exposed water utility lines, experiences "four seasons," with some nights reaching freezing or below-freezing temperatures, typically from December to March.

The Town's existing water meter system comprises a variety of meter sizes (5/8" to 4"), some of which are more than 20 years old, to serve the community's roughly 450 residents and many tourists. Current metering practices include public works employees manually reading all meters, then supplying the reads to the finance department, which uploads and checks all information before running monthly statements.

Project Description
The Town of Jerome hereby requests proposals from experienced individuals or companies capable of implementing a system-wide conversion to an advanced metering infrastructure (AMI) system, comprising 332 new equivalent-sized AMI meters. The project will involve replacing all existing meters; however, it's anticipated that the Town Council may allow users to opt out at their request. Therefore, it is preferable for proposed AMI systems to be compatible with the Town's current Sensus meters. Installation guidelines will be provided by the awarded supplier to the installation company. The Town anticipates that this project will move forward as quickly as possible, with all meters to be installed within six months. Each respondent is requested to provide as much relevant information as possible within the scope of this RFP, including but not limited to the respondent's capabilities with respect to project management, the products and components proposed, service, maintenance, warranties, and post-installation support and service.

The purpose of this RFP is to invite cost proposals for services related to implementing a fixed-base AMI system and its management and maintenance as described in this RFP.

The Town of Jerome wishes to procure an AMI system that:

1. Provides integrated time interval data daily.
2. Replaces existing water meters (a majority are in utility easements or Town rights-of-way) and increases the accuracy of the reads associated with the system through the use of modern technology-based products.
3. Increases the efficiency of the water system, lowers operating costs, and enhances customer service.
4. Provides water meter reading redundancy.
5. Provides an option that enables the meters to be read using a drive-by method, utilizing a mobile reading device capable of reading the same transmitter as the fixed base transmitter, or some other method that equals or exceeds those described.
6. Provides that while in fixed base mode, the system has two-way communication capability, which allows the system to poll the transmitter at each meter location for a current read, and which also allows for upgrades of the fixed base transmitter firmware to incorporate technological advances and/or as deemed useful and necessary by the Town of Jerome.

7. Provides real-time meter leak detection on the distribution and customer sides of the meter.
8. Provides component pricing and after-sales service costs following project completion. Includes warranty information and system specifications.
9. Provides a system backhaul that interfaces with radio or cellular components, as fiber is not available.
10. Interfaces with the Town's billing software, Caselle.

Include any specifications and pricing pertaining to any additional costs, regardless of payment cycle, monthly, quarterly, annually, or otherwise, over and above the costs of installation.

Proposal Guidelines:
As part of this RFP, each respondent shall submit pricing for the water meters, necessary components for operation, software and hardware, battery life and replacement specifications, if boosters/repeaters would be needed, a minimum and maximum price for every meter type listed, the maximum escalation for the percentage of increase after the first five years, and training. Thereafter, if the Town of Jerome determines to proceed with selecting a respondent, the Town and the selected respondent shall enter into negotiations for a final contract; the terms of which shall be generally consistent with this RFP. In conjunction with any contract which may be awarded in this process, the Town of Jerome will reach an agreement on provisions for securing the metering system.

The Town of Jerome is looking for longevity from this project. It is expected that the new system will have a 20-year lifespan, with warranties to ensure product life begins at the time of installation of the unit. Battery life, as well as instructions for replacing batteries in the system, must be specified in the proposal, along with the associated price. All meter sizes must be compatible with our current system, which will be provided. The system must also allow for the future development and growth of the Town. Any upgrades/changes to the system and/or meters must be agreed to in writing by the Town Manager before proceeding.

Smart Utility Network Respondent References
Respondents must provide three references for utility systems with sizes (or larger), customer counts, and service areas (i.e., weather/location) similar to those of Jerome that are successfully using the proposed system version. Respondent must demonstrate a minimum of five years of experience in the field.

Project Objectives – Short Term
The Town of Jerome wishes to acquire and implement an AMI system to satisfy the needs of the community. The following are short-term goals for Jerome:

- Reduce water loss.
- Improve water conservation/water accountability.
- Replace all meters in the system with an AMI system.
- Reduce the current labor required by the Public Works and Utility departments in completing monthly billing.
- Improve customer service.
- Install all system components within six months.
- A system that supports direct communication to meters in the field.

Project Objectives – Long Term
Future objectives are as follows:

- Reduction in time spent reading meters to allow more time for infrastructure projects.
- Improve response times to potential problems.
- Asset management.
- Availability of information for emergency preparedness.
- Real-time leak detection.

Proprietary Information
All materials submitted in response to this solicitation, including samples, shall become the property of the Town and are therefore subject to public release, upon request. Respondents shall clearly mark any proprietary information contained in their submittal with the words "Proprietary Information." Respondents shall not mark any Solicitation Form as proprietary. Marking all or nearly all of a submittal as proprietary may result in rejection of the submittal.

Respondents should be aware that the Town is required by law to make its records available for public inspection. All respondents, by submission of material marked proprietary, acknowledge and agree that the Town will have no obligation to advocate for nondisclosure in any form, nor will the Town assume any liability to the respondents in the event that the Town must legally disclose these materials.

Minimum Qualifications
Respondents shall possess the qualifications and Arizona licenses as required by law, in addition to having extensive knowledge, expertise, and experience for the products they are recommending. Selected respondents will be required to supply, execute, and meet the terms of a standard General Services Contract, including insurance requirements, in a form acceptable to the Town Attorney. Approval of the Town Council will be required for the award of a contract. A sample agreement has not been provided with this request; however, respondents are encouraged to include a sample agreement with their proposal package, if available.

Proposal Submittal Delivery
Submit proposals to: Town of Jerome
Attn: Brett Klein, Town Clerk
PO Box 335
Jerome, AZ 86331
928-634-7943

Proposals may also be sent to the following email: b.klein@jerome.az.gov

Proposals may be hand-delivered, but must be received by 12:00 p.m. on November 5, 2025, at 600 Clark St., Jerome, AZ 86331, and **must** specify attention to Brett Klein, Town Clerk.

EVALUATION CRITERIA

The Town reserves the right to and will likely reject any proposals that do NOT meet the minimum criteria described in this RFP. For proposals meeting or exceeding the minimum criteria, the Town will review each proposal based on the criteria shown below. The Town intends to select the most highly qualified respondent based on demonstrated competence and qualifications to negotiate a contract.

A. General Information

a. Brief overview of the respondent and legal organization of the company.
b. Submission requirements met.
c. SAM.gov Unique Entity ID number (UEI) as required by grant funding.
d. Description of at least three but no more than five similar projects in which the respondent participated for each applied service category. Describe the respondent's role in the project and the scope of work that demonstrates the respondent's expertise. Provide the name and contact information for each project. It is preferred that similar projects have been conducted in a similar topography to the Town of Jerome.

B. AMI Information Requirements

a. Communication Propagation Study with a "Fixed Base" Communication system for the AMI system.
b. Explain if the AMI system will include any cellular network.
c. Explain if the AMI includes a free or paid customer engagement web portal.
d. Explain if the AMI provides top-of-the-hour time-synchronized readings across the entire system with at least an update every hour.
e. Explain if the meters, endpoints, and AMI infrastructure are manufactured by the same company.
f. Explain if the current meters and endpoints will be able to integrate with the AMI system.
g. Describe if the system can identify unauthorized usage on marketed accounts.
h. Describe if the system can configure high or low usage parameters and identify accounts in violation.
i. Explain how many users the system can support at one time.
j. Explain if the software enhancements, upgrades, updates, and patches are included in the pricing structure or if it will be an annual cost for these items.

C. Endpoint Information and Requirements.

a. Describe the endpoint collection process and if it collects at the top of the hour and is synchronized with 15-minute reads from the water meter.
b. Describe if the endpoint has two-way communication.
c. Describe the temperatures the endpoint can withstand during storage and operations.
d. Describe if the endpoint can be installed via pit or remote.
e. Describe the network firmware updates.
   (i) Describe whether they can be done remotely, with infrared, or local updates.
f. Explain the environmental conditions the endpoints can withstand, including flooding or submerged pit application.

g. Describe the warranty for the endpoints and whether it is included.

D. Customer Portal Information and Requirements

a. Explain if the customer portal is owned and developed by the AMI manufacturer.
b. Explain if the web portal will be accessible through a standard internet browser.
c. Explain if the customer portal will allow the customer to set up a leak notification through the portal and let the customer be notified via email.
d. Explain if the utility customer service representative will be able to see the same view as the customer or if the web portal will be different for the customer and the utility staff.
e. Explain if the customer will be able to export consumption data in Comma Separated Value (CSV) format.

E. Training Information and Requirements

a. Describe who will be providing the training (e.g., Manufacturer Certified Trainers).
b. Describe if there will be web-based training for future head-end system updates and upgrades, and if there will be any cost that may be associated with the training.
c. Describe if training materials for end users will be available online or in electronic form.

F. Other

a. Describe if you can replace a current meter in need of replacement with a non-AMI meter for an opt-out member and invoice separately from the project.

INSTRUCTIONS TO RESPONDENTS

General
No clarification as to the meaning of the plans, specifications, or other pre-bid documents will be made to any respondent orally. Should conflicts occur between drawings and/or specifications, the respondent shall be deemed to have estimated the most expensive interpretation of the conflict, unless the respondent asks for written clarification before submission of the proposal. All requests for such clarification shall be in writing to:

Questions: Brett Klein
Town of Jerome
PO Box 335
Jerome, AZ 86331
b.klein@jerome.az.gov

To be given consideration, a request for written clarification must be received at least four (4) days prior to the proposal opening. All such clarifications and any supplemental instructions will be in the form of a written addendum to the specifications. All such addenda will be transmitted to all respondents two days prior to the proposal opening. All addenda so issued shall become part of the Contract Documents.

Attention is called to the sheets in this RFP that include the words "**REQUIRED FOR SUBMITTAL**" at the bottom of the page. These sheets should be used and submitted with the proposal that is sent to the Town of Jerome, or pages with similar formatting containing all the same information should be included with the proposal.

Proposals shall be made upon the Proposal Documents contained in and submitted with this RFP. All papers bound with or attached to the proposal are necessary parts and must not be detached.

Each Proposal must be submitted in an envelope, addressed to Brett Klein, Town Manager, at Town of Jerome, 600 Clark St., PO Box 335, Jerome, Arizona 86331. Proposals will be returned unopened if not properly sealed when submitted.

Each envelope containing a proposal must be plainly marked on the outside as "TOWN OF JEROME ADVANCED METERING INFRASTRUCTURE SYSTEM." The envelope should bear on the outside the name of the respondent and their address. If forwarded by mail, the envelope containing the proposal must be enclosed in another envelope addressed to Brett Klein, Town Manager, at Town of Jerome, 600 Clark St., PO Box 335, Jerome, Arizona 86331.

Acknowledgement of Addenda
If any addenda are published prior to the proposal due date, the acknowledgement page must be signed by the contractor and returned with the proposal documents. If they are not included, the proposal will be disqualified.

PROPOSAL TIMELINE

TOWN OF JEROME – ADVANCED METERING INFRASTRUCTURE SYSTEM

PROPOSAL PACKAGE AVAILABLE	October 6, 2025 Electronically from Brett Klein, at: b.klein@jerome.az.gov Or on the Town website, at: www.jerome.az.gov Town of Jerome Phone: (928) 634-7943
PROPOSALS DUE	November 5, 2025, 4:00 PM Office of the Town Clerk Town of Jerome 600 Clark St. PO Box 335 Jerome, AZ 86331
ANTICIPATED CONTRACT AWARD	December 9, 2025
ANTICIPATED NOTICE TO PROCEED	To be agreed upon (No later than December 31, 2025)

Questions regarding the project specifications should be directed in writing to Brett Klein at the Town of Jerome (email: b.klein@jerome.az.gov).

PROPOSAL DOCUMENTS

The following documents and information requested thereon are required to be submitted with your proposal.

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

_____

_____

_____

REQUIRED FOR SUBMITTAL

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by _____,

a corporation organized under the laws of the State of Arizona, a partnership consisting of _____

_____, or an individual trading as _____ of the

City of _____, and holder of Arizona State Contractor's License(s):

Classification(s) _____

No.(s) _____

Respectfully Submitted,

_____
Respondent

_____
Address

_____
By (Officer & Title)

_____
Date

ATTEST:

_____
(Officer and Title)

_____
Witness (if respondent is an individual)

REQUIRED FOR SUBMITTAL

Town of Jerome

Proposal Document B – Fee Proposal

Respondent _____

Mailing Address _____

City _____ State _____ Zip _____

Telephone _____

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

REQUIRED FOR SUBMITTAL

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 5/8” AMI Meter	299			
2	1” threaded AMI Meter	17			
3	1 ½” flanged AMI Meter	13			
4	2” AMI Meter	2			
5	4” AMI Meter	1			
6	AMI System Software	1			
7	AMI System Training	1			
8	AMI Data Collection Hardware/Software	1			
9	FCC Registration	1			
SUBTOTAL COSTS – BASE PROPOSAL					
GRAND TOTAL, BASE PROPOSAL					

GRAND TOTAL – BASE PROPOSAL (in words):_____

_____

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor’s convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: _____

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this _____ day of _____ 2025.

_____ _____

Signature Phone Number

_____ _____

Written Name Email Address

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: _____

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this _____ day of _____ 2025.

_____ _____

Signature Phone Number

_____ _____

Written Name Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: _____

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this _____ day of _____ 2025.

_____ _____

Signature Phone Number

_____ _____

Written Name Email Address

RFP Bid Responses - Water Meters

Respondent	Grand Total Cost	Interface with Caselle Y/N	References/Similar Jobs	User Fee	Battery Warranty	Completion of all Items Y/N	Meter Type	Sam.gov/ UEI Y/N	Public Works Comments
Ferguson Water Works	$ 250,892.00	**Y**	Cottonwood, AZ Chandler, AZ Wickenberg, AZ		20 Years	**Y**	Mueller Neptune	**Y**	Limited warranty on performance, material and workmanship
Western Environmental Utility Company	$ 279,849.73	**Y**	Clarkdale, AZ Sedona, AZ Prescott, AZ	Y - $1.03/ per meter monthly user fee	20 Years	**Y**	Badger Recordall	**Y**	Good application - nearby contracts; most expensive but still in range
Metron Farnier LLC	$ 187,160.00	**Y**	Camp Verde, AZ Avra Water Company (Tucson) Erie, CO	**N**	20 Years	**Y**	Spectrum	**Y**	No wires; good temperature range; locatl applications
Fortiline	$ 233,430.76 + $9,188.98* (one time customer portal set up)	**Y**	Orange, VA Stedman, NC Lovettsville, VA	Y - $.15/ monthly	20 Years	**Y**	Kampstrup	**Y**	Asked a lot of questions; came on site; long run time but nothing local; low user fee
PureOps/Master Meter Inc	$ 210,936.78 +taxes	**Y**	Rose Valley Utilities (Driveby) Springerville (Driveby) Southwestern Utilities (AMI)	Y - $.91/user monthly	20 Years	**Y**	Master Meter	**Y**	middle of the group in terms of pricing and proposal; solid comparables
Aquaflow	$ 216,820.52 Alt 1 - $ 192,540.57 Alt 2 - $ 146,056.46	**Y**	Big River Development District Alpine Water System Pine Strawberry, AZ	Y - $.55/user monthly	20 Years	**Y**	Spirely	**Y**	Well made meter; good temp range and rebuildable - provided quotes for different types; local mountainous terrain experience
Innovative Utility Solution	$ 156,259.50	**Y**	Wilcox, AZ Silma, CO Maquoketa, IA	**N**	20 Years	**Y**	Next Meter Aqua Master	**Y**	Local and mountainous terrain; may need add'l poles; lowest price

TOWN OF JEROME, ARIZONA
POST OFFICE BOX 335, JEROME, ARIZONA, 86331
(928) 634-7943

Founded 1876
Incorporated 1899

REQUEST FOR PROPOSAL

FOR

ADVANCED METERING INFRASTRUCTURE SYSTEM

PROJECT NO.

Submission Deadline: WEDNESDAY, NOVEMBER 5, 2025
No later than 12:00 PM – Arizona Time

Town of Jerome
Attn: Town Clerk
PO Box 335
600 Clark St.
Jerome, AZ 86331

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NOTICE TO RESPONDENTS

REQUIRED PROPOSAL PACKAGE FORMS

THE FOLLOWING ITEMS MUST BE COMPLETED AND SUBMITTED WITH THIS COMPLETE AND INTACT PROPOSAL PACKAGE FOR A PROPOSAL TO BE CONSIDERED RESPONSIVE. ANY AND ALL DEFICIENCIES OF ITEMS LISTED BELOW WILL BE CONSIDERED AN ADEQUATE REASON TO REJECT THE PROPOSAL IN ITS ENTIRETY.

- Complete Proposal Package
- Acknowledgement of Addenda
- Executed Proposal Documents
  - Proposal
  - Fee Proposal
  - Non-Collusion Certificate
  - Certificate of Ownership
  - Respondent Qualifications, Representations, and Warranties
- Signatures, Seals, & Notaries (wherever necessary)

This information is provided for your use in preparing all documents as required for a complete proposal. Please double-check all requirements. If you have any questions regarding what is required with a submittal, please call and ask.

REQUEST FOR PROPOSAL

Town of Jerome
Advanced Metering Infrastructure System

Notice is hereby given that the Town of Jerome, Arizona, is requesting proposals from qualified person(s) or vendors (collectively, "respondents") to replace the Town's outdated water meters with an advanced metering infrastructure (AMI) system.

The Town of Jerome intends to implement a water meter replacement program and system-wide conversion of the Town's current water meters to an AMI. Existing meters will be replaced with equivalent-sized AMI meters that can capture and transmit water meter data to centralized software to streamline operations, improve subsequent billing processes, and enhance customer satisfaction.

The scope of work for this project includes, but is not limited to, providing the following:

- Water meters.
- RF-enabled (radio frequency) endpoints.
- Network software and infrastructure, including base stations and repeaters, where necessary and applicable.
- Software and equipment training.

The procurement time to complete the project is 180 calendar days from the date of the Notice to Proceed.

The Town of Jerome will receive and accept proposals until 12:00 p.m. On November 5, 2025, at Jerome Town Hall, 600 Clark St, Jerome, Arizona 86331. Proposals received after that time will not be accepted. The Town of Jerome reserves the right to reject any or all proposals and to award all or part of the proposal. Nevertheless, except when rejections of proposals are required by law, the Town reserves the right to waive any informality of the proposal. The Town intends to award the contract contemplated in this RFP to the responsible and responsive respondent whose proposal is determined, in writing, to be the most advantageous to the Town and best meets the overall needs of the Town, taking into consideration the evaluation criteria set forth in this RFP.

Brett Klein
Town Manager/Town Clerk

Posting Date:

Publishing Dates:

GENERAL PROJECT INFORMATION

The Town of Jerome is located on the side of Cleopatra Hill in the Black Hills of Arizona. The Town is the sole provider of metered water services within Town limits, as well as specific locations outside of Town limits. The Town, which has stretches of exposed water utility lines, experiences "four seasons," with some nights reaching freezing or below-freezing temperatures, typically from December to March.

The Town's existing water meter system comprises a variety of meter sizes (5/8" to 4"), some of which are more than 20 years old, to serve the community's roughly 450 residents and many tourists. Current metering practices include public works employees manually reading all meters, then supplying the reads to the finance department, which uploads and checks all information before running monthly statements.

Project Description

The Town of Jerome hereby requests proposals from experienced individuals or companies capable of implementing a system-wide conversion to an advanced metering infrastructure (AMI) system, comprising 332 new equivalent-sized AMI meters. The project will involve replacing all existing meters; however, it's anticipated that the Town Council may allow users to opt out at their request. Therefore, it is preferable for proposed AMI systems to be compatible with the Town's current Sensus meters. Installation guidelines will be provided by the awarded supplier to the installation company. The Town anticipates that this project will move forward as quickly as possible, with all meters to be installed within six months. Each respondent is requested to provide as much relevant information as possible within the scope of this RFP, including but not limited to the respondent's capabilities with respect to project management, the products and components proposed, service, maintenance, warranties, and post-installation support and service.

The purpose of this RFP is to invite cost proposals for services related to implementing a fixed-base AMI system and its management and maintenance as described in this RFP.

The Town of Jerome wishes to procure an AMI system that:

1. Provides integrated time interval data daily.
2. Replaces existing water meters (a majority are in utility easements or Town rights-of-way) and increases the accuracy of the reads associated with the system through the use of modern technology-based products.
3. Increases the efficiency of the water system, lowers operating costs, and enhances customer service.
4. Provides water meter reading redundancy.
5. Provides an option that enables the meters to be read using a drive-by method, utilizing a mobile reading device capable of reading the same transmitter as the fixed base transmitter, or some other method that equals or exceeds those described.
6. Provides that while in fixed base mode, the system has two-way communication capability, which allows the system to poll the transmitter at each meter location for a current read, and which also allows for upgrades of the fixed base transmitter firmware to incorporate technological advances and/or as deemed useful and necessary by the Town of Jerome.

7. Provides real-time meter leak detection on the distribution and customer sides of the meter.
8. Provides component pricing and after-sales service costs following project completion. Includes warranty information and system specifications.
9. Provides a system backhaul that interfaces with radio or cellular components, as fiber is not available.
10. Interfaces with the Town's billing software, Caselle.

Include any specifications and pricing pertaining to any additional costs, regardless of payment cycle, monthly, quarterly, annually, or otherwise, over and above the costs of installation.

Proposal Guidelines:
As part of this RFP, each respondent shall submit pricing for the water meters, necessary components for operation, software and hardware, battery life and replacement specifications, if boosters/repeaters would be needed, a minimum and maximum price for every meter type listed, the maximum escalation for the percentage of increase after the first five years, and training. Thereafter, if the Town of Jerome determines to proceed with selecting a respondent, the Town and the selected respondent shall enter into negotiations for a final contract; the terms of which shall be generally consistent with this RFP. In conjunction with any contract which may be awarded in this process, the Town of Jerome will reach an agreement on provisions for securing the metering system.

The Town of Jerome is looking for longevity from this project. It is expected that the new system will have a 20-year lifespan, with warranties to ensure product life begins at the time of installation of the unit. Battery life, as well as instructions for replacing batteries in the system, must be specified in the proposal, along with the associated price. All meter sizes must be compatible with our current system, which will be provided. The system must also allow for the future development and growth of the Town. Any upgrades/changes to the system and/or meters must be agreed to in writing by the Town Manager before proceeding.

Smart Utility Network Respondent References
Respondents must provide three references for utility systems with sizes (or larger), customer counts, and service areas (i.e., weather/location) similar to those of Jerome that are successfully using the proposed system version. Respondent must demonstrate a minimum of five years of experience in the field.

Project Objectives – Short Term
The Town of Jerome wishes to acquire and implement an AMI system to satisfy the needs of the community. The following are short-term goals for Jerome:

- Reduce water loss.
- Improve water conservation/water accountability.
- Replace all meters in the system with an AMI system.
- Reduce the current labor required by the Public Works and Utility departments in completing monthly billing.
- Improve customer service.
- Install all system components within six months.
- A system that supports direct communication to meters in the field.

Project Objectives – Long Term
Future objectives are as follows:

- Reduction in time spent reading meters to allow more time for infrastructure projects.
- Improve response times to potential problems.
- Asset management.
- Availability of information for emergency preparedness.
- Real-time leak detection.

Proprietary Information
All materials submitted in response to this solicitation, including samples, shall become the property of the Town and are therefore subject to public release, upon request. Respondents shall clearly mark any proprietary information contained in their submittal with the words "Proprietary Information." Respondents shall not mark any Solicitation Form as proprietary. Marking all or nearly all of a submittal as proprietary may result in rejection of the submittal.

Respondents should be aware that the Town is required by law to make its records available for public inspection. All respondents, by submission of material marked proprietary, acknowledge and agree that the Town will have no obligation to advocate for nondisclosure in any form, nor will the Town assume any liability to the respondents in the event that the Town must legally disclose these materials.

Minimum Qualifications
Respondents shall possess the qualifications and Arizona licenses as required by law, in addition to having extensive knowledge, expertise, and experience for the products they are recommending. Selected respondents will be required to supply, execute, and meet the terms of a standard General Services Contract, including insurance requirements, in a form acceptable to the Town Attorney. Approval of the Town Council will be required for the award of a contract. A sample agreement has not been provided with this request; however, respondents are encouraged to include a sample agreement with their proposal package, if available.

Proposal Submittal Delivery
Submit proposals to: Town of Jerome
Attn: Brett Klein, Town Clerk
PO Box 335
Jerome, AZ 86331
928-634-7943

Proposals may also be sent to the following email: b.klein@jerome.az.gov

Proposals may be hand-delivered, but must be received by 12:00 p.m. on November 5, 2025, at 600 Clark St., Jerome, AZ 86331, and **must** specify attention to Brett Klein, Town Clerk.

EVALUATION CRITERIA

The Town reserves the right to and will likely reject any proposals that do NOT meet the minimum criteria described in this RFP. For proposals meeting or exceeding the minimum criteria, the Town will review each proposal based on the criteria shown below. The Town intends to select the most highly qualified respondent based on demonstrated competence and qualifications to negotiate a contract.

A. General Information

a. Brief overview of the respondent and legal organization of the company. **Aquaflow Solutions Inc.** is a Glendale-based wholesale waterworks distributor supplying Arizona municipalities with reliable products and technology. We provide RG3/Tesla Duo water meters, AMI/AMR meter-reading systems, Cambridge Brass fittings, and Dresser/JCM repair clamps. Aquaflow is a fully incorporated Arizona company with an established team structure, local support, and a proven reputation for dependable service and waterworks solutions.
b. Submission requirements met. Yes
c. SAM.gov Unique Entity ID number (UEI) as required by grant funding. CYLSGQJVL457
d. Description of at least three but no more than five similar projects in which the respondent participated for each applied service category. Describe the respondent's role in the project and the scope of work that demonstrates the respondent's expertise. Provide the name and contact information for each project. It is preferred that similar projects have been conducted in a similar topography to the Town of Jerome. Aquaflow Solutions served as the lead distributor and technical support partner responsible for supplying properly sized water meters for full system upgrades. Our role included managing procurement, overseeing orders, coordinating installation schedules, and ensuring that each meter was deployed accurately and according to system requirements. We supported the utility through complete AMI/AMR integration by assisting with billing-system configuration, cloud-based data setup, and validation of all meter data flowing into the billing platform. Aquaflow worked directly with both the manufacturer and the utility's billing staff to configure, test, and verify end-to-end system functionality. Field training, installation oversight, and system testing were conducted on-site to ensure that all meters were activated and fully operational prior to going live.
After installation, Aquaflow continued working with billing personnel throughout the first year to ensure smooth operation, proper workflow adoption, and full staff training. Our support included post-installation monitoring, routine maintenance of the meter/billing system, and ongoing verification of data accuracy to ensure long-term system reliability.

Project References — Similar Terrain & System Environments
1. Big River Development District
Contact: Curtiss Martin – **C: 928-276-1104**
Service Count: ~1,300 services
System: Mobile drive-by AMR
Relevance: Mountainous/uneven terrain similar to the Town of Jerome
2. Alpine Water Systems
Contact: Shawna Metzger – **C: 928-339-4631**
Service Count: ~600 services
System: Mobile drive-by AMR
Relevance: Mountain regions comparable to Jerome

3. Pine-Strawberry DWID
Contact: Kyle Wortman – **C: 928-517-1218**
Service Count: ~3,600 services
System: Mobile drive-by AMR; preconfigured for fixed-base conversion
Relevance: Forested and mountainous elevations similar to Jerome

4. Rim Trail Water Company
Contact: Harry Jones – **C: 928-595-1111**
Service Count: ~125 services
System: Mobile drive-by AMR
Relevance: High-elevation rural terrain

5. ICR Water Users Association
Contact: Derek Scott – **C: 928-925-1294**
Service Count: ~1,800 services
System: Mobile drive-by AMR
Relevance: Mountainous terrain and dispersed service locations

B. AMI Information Requirements

a. Communication Propagation Study with a "Fixed Base" Communication system for the AMI system. Propagation study was done prior to bidding project for these estimated quantities.
b. Explain if the AMI system will include any cellular network. Yes. The AMI system includes full cellular capability through our LPN fixed-base architecture. The system allows the utility to operate in fixed-base mode, cellular mode, or a hybrid combination of both within the same platform. This provides maximum flexibility, coverage, and redundancy, enabling the Town to utilize fixed-base communication where optimal and cellular service in areas where terrain or site conditions require additional reach.
c. Explain if the AMI includes a free or paid customer engagement web portal. No, this would be a separate purchase for the town.
d. Explain if the AMI provides top-of-the-hour time-synchronized readings across the entire system with at least an update every hour. Endpoint synchronization is under 1 minute. Transmission resolution and intervals are hourly with15 minute intervals.
e. Explain if the meters, endpoints, and AMI infrastructure are manufactured by the same company. Yes; all three are manufactured by RG3 Meter Company.
f. Explain if the current meters and endpoints will be able to integrate with the AMI system. The existing meters will only integrate if the Town cuts the existing touch-read wire and manually connects it to our Solo endpoint. While this method is technically possible, we **do not recommend** exposing or using bare wires due to reliability, environmental concerns, and long-term maintenance issues. For this reason, we have quoted a complete replacement of the meter reading system to ensure accuracy, durability, and full AMI performance. For customers who choose not to participate in the AMI program, we recommend leaving their existing meters in place as they are. These accounts can remain on touch-read or be manually read and entered into the billing system as required.
g. Describe if the system can identify unauthorized usage on marketed accounts. No, it cannot detect unauthorized usage.
h. Describe if the system can configure high or low usage parameters and identify accounts in violation. High and low consumption parameters are of the billing system and identified within Caselle Billing, however, we have immediate leak alarm systems integrated into the endpoint.
i. Explain how many users the system can support at one time. No limit.
j. Explain if the software enhancements, upgrades, updates, and patches are included in the pricing structure or if it will be an annual cost for these items. Yes, there are annual

system support costs and they are included in the pricing structure. These will be billed annually form the manufacturer.

C. Endpoint Information and Requirements.

a. Describe the endpoint collection process and if it collects at the top of the hour and is synchronized with 15-minute reads from the water meter. Yes, transmission resolution and intervals are hourly with15 minute intervals.
b. Describe if the endpoint has two-way communication. Yes, it has two way communication.
c. Describe the temperatures the endpoint can withstand during storage and operations. Our published warranty operating temperature for our end point is -40 degrees to 185 degrees fahrenheit.
d. Describe if the endpoint can be installed via pit or remote. We can install pit or remote. Interior or exterior wall mount, pit/vault/through the lid.
e. Describe the network firmware updates.
   (i) Describe whether they can be done remotely, with infrared, or local updates. They can be done over the air (OTA) and be preformed remotely via LPN or on-site through Tesla Drive Software.
f. Explain the environmental conditions the endpoints can withstand, including flooding or submerged pit application. Operating humidity 0-100% non condensing. IP68 for meter pit environment. Fully potted, perfectly tuned, high surface area PCB antenna. Mount and lid for increased range and network stability. Operating temp -40 degrees to 185 degrees fahrenheit.

g. Describe the warranty for the endpoints and whether it is included. 20 year warranty (10 year full/ 10 year prorated).

D. Customer Portal Information and Requirements

a. Explain if the customer portal is owned and developed by the AMI manufacturer. We do not have a customer portal; we have integration for API third party.
b. Explain if the web portal will be accessible through a standard internet browser. N/A
c. Explain if the customer portal will allow the customer to set up a leak notification through the portal and let the customer be notified via email. N/A
d. Explain if the utility customer service representative will be able to see the same view as the customer or if the web portal will be different for the customer and the utility staff. N/A
e. Explain if the customer will be able to export consumption data in Comma Separated Value (CSV) format. N/A

E. Training Information and Requirements

a. Describe who will be providing the training (e.g., Manufacturer Certified Trainers). RG3 will be providing training with certified trainers on-site and remote.
b. Describe if there will be web-based training for future head-end system updates and upgrades, and if there will be any cost that may be associated with the training. We can do web based training for future updates and upgrades. The associated cost will be included in the annual system support.
c. Describe if training materials for end users will be available online or in electronic form. Either.

F. Other

a. Describe if you can replace a current meter in need of replacement with a non-AMI meter for an opt-out member and invoice separately from the project. Yes, we can do a straight read, touch read or AMR.

INSTRUCTIONS TO RESPONDENTS

General

No clarification as to the meaning of the plans, specifications, or other pre-bid documents will be made to any respondent orally. Should conflicts occur between drawings and/or specifications, the respondent shall be deemed to have estimated the most expensive interpretation of the conflict, unless the respondent asks for written clarification before submission of the proposal. All requests for such clarification shall be in writing to:

Questions: Brett Klein
Town of Jerome
PO Box 335
Jerome, AZ 86331
b.klein@jerome.az.gov

To be given consideration, a request for written clarification must be received at least four (4) days prior to the proposal opening. All such clarifications and any supplemental instructions will be in the form of a written addendum to the specifications. All such addenda will be transmitted to all respondents two days prior to the proposal opening. All addenda so issued shall become part of the Contract Documents.

Attention is called to the sheets in this RFP that include the words "**REQUIRED FOR SUBMITTAL**" at the bottom of the page. These sheets should be used and submitted with the proposal that is sent to the Town of Jerome, or pages with similar formatting containing all the same information should be included with the proposal.

Proposals shall be made upon the Proposal Documents contained in and submitted with this RFP. All papers bound with or attached to the proposal are necessary parts and must not be detached.

Each Proposal must be submitted in an envelope, addressed to Brett Klein, Town Manager, at Town of Jerome, 600 Clark St., PO Box 335, Jerome, Arizona 86331. Proposals will be returned unopened if not properly sealed when submitted.

Each envelope containing a proposal must be plainly marked on the outside as "TOWN OF JEROME ADVANCED METERING INFRASTRUCTURE SYSTEM." The envelope should bear on the outside the name of the respondent and their address. If forwarded by mail, the envelope containing the proposal must be enclosed in another envelope addressed to Brett Klein, Town Manager, at Town of Jerome, 600 Clark St., PO Box 335, Jerome, Arizona 86331.

Acknowledgement of Addenda
If any addenda are published prior to the proposal due date, the acknowledgement page must be signed by the contractor and returned with the proposal documents. If they are not included, the proposal will be disqualified. Addenda Acknowledged-Attached Copy

PROPOSAL TIMELINE

TOWN OF JEROME – ADVANCED METERING INFRASTRUCTURE SYSTEM

PROPOSAL PACKAGE AVAILABLE	October 6, 2025 Electronically from Brett Klein, at: b.klein@jerome.az.gov Or on the Town website, at: www.jerome.az.gov Town of Jerome Phone: (928) 634-7943
PROPOSALS DUE	November 5, 2025, 4:00 PM Office of the Town Clerk Town of Jerome 600 Clark St. PO Box 335 Jerome, AZ 86331
ANTICIPATED CONTRACT AWARD	December 9, 2025
ANTICIPATED NOTICE TO PROCEED	To be agreed upon (No later than December 31, 2025)

Questions regarding the project specifications should be directed in writing to Brett Klein at the Town of Jerome (email: b.klein@jerome.az.gov).

PROPOSAL DOCUMENTS

The following documents and information requested thereon are required to be submitted with your proposal.

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

Acknowledged 12-01-2025 -Addenda Attached.

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by Aquaflow Solutions Inc,

a corporation organized under the laws of the State of Arizona, a partnership consisting of _____

_____, or an individual trading as _____ of the

City of _____, and holder of Arizona State Contractor's License(s):

Classification(s) N/A

No.(s) N/A

Respectfully Submitted,

Aquaflow Solutions Inc
Respondent

11009 N. 51st Drive Glendale,AZ 85304
Address

Mike Ellis – Municipal Sales Representative
By (Officer & Title)

12-01-2025
Date

ATTEST:

Mike Ellis
(Officer and Title)

_____
Witness (if respondent is an individual)

Town of Jerome

Proposal Document B – Fee Proposal

Respondent Aquaflow Solutions Inc

Mailing Address 11009 N. 51st Drive City Glendale

State AZ Zip 85304 Telephone 602-733-7777

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
Fixed Based Proposal Quote #11015		Est. Qty.	Units	Unit Price	Total Price
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299	299	$373.30	$111,617.15
2	1" threaded AMI Meter	17	17	$587.70	$9,990.88
3	1 ½" flanged AMI Meter	13	13	$1,264.77	$16,442.01
4	2" AMI Meter	2	2	$1,628.70	$3,257.39
5	4" AMI Meter	1	1	$5,506.17	$5,506.17
6	AMI System Software	1	1	$26,658.43	$26,658.43
7	AMI System Training	1	1	Included in Software	Included in Software
8	AMI Data Collection Hardware/Software	1	1	$ 28,333.45	$ 28,333.45
9	FCC Registration/ Subscription Fee Per Mtr	1	322	$6.52	$2,164.91
SUBTOTAL COSTS – BASE PROPOSAL				$64,359.04	$203,970.39
GRAND TOTAL, BASE PROPOSAL				$216,820.52	

GRAND TOTAL – BASE PROPOSAL (in words):two hundred sixteen thousand eight hundred twenty dollars and fifty two cents.

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Aquaflow Solutions Inc

11009 N.51st Drive
Glendale AZ 85304
602-733-7777

QUOTE

DATE	QUOTE #
12/1/2025	11015

COMPANY
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

SHIP TO
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

CUST P.O. #	PROJECT DESCRIPTION	REQUESTED BY	QUOTE EXPIRES	TERMS	REP
	SOLO FIXED		12/1/2025		LP

QTY	U/M	DESCRIPTION	UNIT PRICE	TOTAL
1	ea	450 PACKAGE (450PKG) - LAPTOP (1 DAY ON-SITE TRAINING). RUGGED LAPTOP WITH TESLE DRIVE ROUTE SOFTWARE LOADED (COMTLAPTOP + TDRIVE), TESLA MDM SOFTWARE APPLICATION (MDM), 450 TRX MOBILE DATA COLLECTOR (TRANS450), 450 TRUCK MOUNT ANTENNA (TRKANT450), TAMPER MINI RATCHET WITH BIT DRIVER (TPBIT), FCC LICENSING (450FCC), RG3 BILLING INTEGRATION (MDMBI), REMOTE TRAINING. SOFTWARE LICENSE PAID WITH REQUIRED ANNUAL SUBSCRIPTION.	17,392.03	17,392.03T
1	ea	FNC 450 BUILDING (60' LMR 600). FIXED NETWORK COLLECTOR FOR BUILDING INSTALLATION (OFFICE, SHOP, FIRE DEPT., ETC.) INCLUDES A 450 TRANSCEIVER, COAX, 24' BASE POLE, OMNI ANTENNA, INSTALLATION TESLA DRIVE, AND TESLA MDM SETUP AND TRAINING. TESLA DRIVE RUNS IN THE BACKGROUND ON UTILITY OFFICE COMPUTER. 110V AC POWER AND INTERNET PROVIDED BY THE UTILITY. DOES NOT INVCLUDE MOBILIZATION (PART #MOB).	14,244.44	14,244.44T
332	ea	AMI ANNUAL SUBSCRIPTION FEE PER METER (AMIT2) 251-1000	6.52081	2,164.91T
5	ea	DUO COLLECTOR (450 FNC) (SOLAR PACKAGE) IDEAL FOR SMALLER COVERAGE AREAS OF UP TO 1,000 METER. COVERAGE AREA IS ROUGHLY 1 MILE DEPENDING ON HEIGHT, TOPOGRAPHY AND GROUND COVER. TYPICALLY MOUNTS ON POLES, BUILDINGS, TANKS, OR PHONE TYPE TOWERS. INSTALLING WITHIN LINE OF SITE OF BASE STATION CREATES BACKHAUL REDUNDANCY. CELLULAR DATA RELOAD (#RELOAD) REQUIRED. *INSTALLATION AND MOBILIZATION SEPARATE IF NEEDED. **REQUIRES AT LEAST ONE PAIR OF FCC LICENSED FREQUENCIES.	1,717.802	8,589.01T
36	ea	MOBILIZATION HOURLY RATE. TRAVEL TIME FROM LONG VIEW, TX TO AND FROM LOCATION BY HOUR. TRAVEL IS CALCULATED BY WELL-KNOWN SOFTWARE SUCH AS GOOGLE MAPS, APPLE OR OTHER. ONLY ONE MOBILIZATION FEE WILL BE CHARGED FOR ALL INFRASTRUCTURE INSTALLED PER TRIP	257.40	9,266.40T
16	ea	HOURLY RATE TO INSTALL METERS, REGISTERS, POLES, TOWERS OR FIXED NETWORK EQUIPMENT ON TOWERS, POLES, BUILDINGS, ETC. ALL INSTALLATION AND FIELD WORK SUBCONTRACTED TO METER INSTALL GROUP, LLC..	343.75	5,500.00T
299	ea	INTEGRATED (BRASS BOTTOM, NO CHECK VALVE, OPTICAL, GALLONS, SOLO 1 COM WIRE) #PD07RGBOSRG3	373.30151	111,617.15T
17	ea	1" PD METER - RADIO NOT INTEGRATED (NO CHECK VALVE, OPTICAL, GALLONS, SOLO 1 COM WIRE) #PD10RGBOSRG3	587.69882	9,990.88T
13	ea	1.5" PD METER - RADIO NOT INTEGRATED (GALLONS, SOLO 1 COM WIRE) #PD15RGBHSRG3	1,264.77	16,442.01T

		SUBTOTAL
E-mail	Web Site	**SALES TAX (6.3%)**
info@aquaflowaz.com	www.aquaflowaz.com	**TOTAL**

Aquaflow Solutions Inc

11009 N.51st Drive
Glendale AZ 85304
602-733-7777

QUOTE

DATE	QUOTE #
12/1/2025	11015

COMPANY
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

SHIP TO
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

CUST P.O. #	PROJECT DESCRIPTION	REQUESTED BY	QUOTE EXPIRES	TERMS	REP
	SOLO FIXED		12/1/2025		LP

QTY	U/M	DESCRIPTION	UNIT PRICE	TOTAL
2	ea	2" PD METER - RADIO NOT INTEGRATED (GALLONS, SOLO 1 COM WIRE) #PD20RGBHSRG3	1,628.695	3,257.39T
1	ea	4" SPIRELY ULTRASONIC WATER METER, 316 STAINLESS STEEL BODY WITH ENCODER MODULE. 14" LL #US040RGDRG3L	5,506.17	5,506.17T

		SUBTOTAL	$203,970.39
E-mail	Web Site	SALES TAX (6.3%)	$12,850.13
info@aquaflowaz.com	www.aquaflowaz.com	**TOTAL**	**$216,820.52**

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Aquaflow Solutions Inc

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 01 day of December 2025.

Mike Ellis
Signature

602-733-7777
Phone Number

Mike Ellis
Written Name

info@aquaflowaz.com
Email Address

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Aquaflow Solutions Inc

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 01 day of December 2025.

Mike Ellis
Signature

602-733-7777
Phone Number

Mike Ellis
Written Name

info@aquaflowaz.com
Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Aquaflow Solutions Inc

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 01 day of December 2025.

Mike Ellis
Signature

602-733-7777
Phone Number

Mike Ellis
Written Name

info@aquaflowaz.com
Email Address

Alternate Bids for Your Consideration

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
Alternate #1 Duo Cellular End Point Quote #11014		Est. Qty.	Units	Unit Price	Total Price
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299	299	$448.57	$134,122.30
2	1" threaded AMI Meter	17	17	$669.80	$11,386.63
3	1 ½" flanged AMI Meter	13	13	$1,346.05	$17,498.60
4	2" AMI Meter	2	2	$1,716.26	$3,432.51
5	4" AMI Meter	1	1	$5,506.17	$5,506.17
6	AMI System Software	1	1	$7,018.30	$7,018.30
7	AMI System Training	1	1	Included in Software	Included in Software
8	AMI Data Collection Hardware/Software	0	0	$0.00	$0.00
9	FCC Registration/ Subscription Fee Per Mtr	1	322	$6.52	$2,164.91
SUBTOTAL COSTS – BASE PROPOSAL				$ 16,711.67	$181,129.42
GRAND TOTAL, BASE PROPOSAL				$192,540.57	

GRAND TOTAL – BASE PROPOSAL (in words):one hundred ninety two thousand five hundred forty and fifty seven cents.

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Aquaflow Solutions Inc

11009 N.51st Drive
Glendale AZ 85304
602-733-7777

QUOTE

DATE	QUOTE #
12/1/2025	11014

COMPANY	SHIP TO
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331	TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

CUST P.O. #	PROJECT DESCRIPTION	REQUESTED BY	QUOTE EXPIRES	TERMS	REP
	DUO CELLULAR ENDPOINT		12/1/2025		LP

QTY	U/M	DESCRIPTION	UNIT PRICE	TOTAL
1	ea	SOFTWARE & BILLING INTEGRATION PACKAGE (PKGSBI) NO COMPUTER W/ 1 DAY ON SITE TRAINING.TESLA DRIVE ROUTE SOFTWARE (LAPTOP NOT PROVIDED), TESLA MDM SOFTWARE APPLICATION (MDM), RG3 SIDE BILLING INTEGRATION (MDMBI), AND REMOTE TRAINING. SOFTWARE LICENSE PAID WITH REQUIRED ANNUAL SUBSCRIPTION FEE	7,018.30	7,018.30T
332	ea	AMI ANNUAL SUBSCRIPTION FEE PER METER (AMIT2) 251-1000	6.52081	2,164.91T
299	ea	5/8" X 3/4" PD METER - RADIO NOT INTEGRATED (NO CHECK VALVE, OPTICAL, GALLONS, DUO 1 COM WIRE) #PD07RGBODRG3	448.56957	134,122.30T
17	ea	1" PD METER - RADIO NOT INTEGRATED (NO CHECK VALVE, OPTICAL, GALLONS, DUO 1 COM WIRE) #PD10RGBODRG3	669.80176	11,386.63T
13	ea	1.5" PD METER - RADIO NOT INTEGRATED (GALLONS, DUO 1 COM WIRE) #PD15RGBHDRG3	1,346.04615	17,498.60T
2	ea	2" PD METER - RADIO NOT INTEGRATED (GALLONS, DUO 1 COM WIRE) #PD20RGBHDRG3	1,716.255	3,432.51T
1	ea	4" SPIRELY ULTRASONIC WATER METER, 316 STAINLESS STEEL BODY WITH ENCODER MODULE. 14" LL #US040RGDRG3L	5,506.17	5,506.17T

		SUBTOTAL	$181,129.42
E-mail	Web Site	SALES TAX (6.3%)	$11,411.15
info@aquaflowaz.com	www.aquaflowaz.com	**TOTAL**	**$192,540.57**

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
Alternate #2 Tesla 4 MDB Quote #11013		Est. Qty.	Units	Unit Price	Total Price
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299	299	$302.56	$90,465.26
2	1" threaded AMI Meter	17	17	$509.12	$8,655.07
3	1 ½" flanged AMI Meter	13	13	$983.39	$12,784.11
4	2" AMI Meter	2	2	$1,325.64	$2,651.28
5	4" AMI Meter	1	1	$5,506.17	$5,506.17
6	AMI System Software	1	1	$16,338.35	$16,338.35
7	AMI System Training	1	1	Included in Software	Included in Software
8	AMI Data Collection Hardware/Software	0	0	$0.00	$0.00
9	FCC Registration/ Subscription Fee Per Mtr	1	1	$1,000.00	$1,000.00
SUBTOTAL COSTS – BASE PROPOSAL				$ 25,965.23	$137,400.24
GRAND TOTAL, BASE PROPOSAL				$146,056.46	

GRAND TOTAL – BASE PROPOSAL (in words):one hundred forty six thousand fifty six and forty six cents.

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Aquaflow Solutions Inc

11009 N.51st Drive
Glendale AZ 85304
602-733-7777

QUOTE

DATE	QUOTE #
12/1/2025	11013

COMPANY
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

SHIP TO
TOWN OF JEROME ATTN: TOWN CLERK PO BOX 335 600 CLARK ST. JEROME, AZ 86331

CUST P.O. #	PROJECT DESCRIPTION	REQUESTED BY	QUOTE EXPIRES	TERMS	REP
	TESLA 4 MDB		12/1/2025		LP

QTY	U/M	DESCRIPTION	UNIT PRICE	TOTAL
1	ea	RUGGED LAPTOP WITH TESLA DRIVE ROUTE SOFTWARE LOADED(COMTLAPTOP), TESLA MDM SOFTWARE SETUP (MDM), 900 TRANSCEIVER (TRANS900), 900 TRUCK MOUNT ANTENNA (TRKANT900), TAMPER MINI RATCHET WITH BIT DRIVER (TPBIT), RG3 BILLING INTEGRATION (MDMBI), REMOTE TRAINING. SOFTWARE LICENSE PAID WITH REQUIRED ANNUAL SUBSCRIPTION FEE	16,338.35	16,338.35T
1	ea	AMR ANNUAL SUBSCRIPTION FEE PER METER (AMRT1MINIMUM; 1-555) INCLUDES SOFTWARE LICENSES, SOFTWARE UPDATES, DATA STORAGE, AND UNLIMITED TECHNICAL SUPPORT. MINIMUM APPLIES TO LESS THAN 555 METERS (AMRT1). CHARGED DIRECTLY TO END USER AT FIXED PRICE.	1,000.00	1,000.00T
299	ea	5/8" X 3/4" PD METER - GALLONS - NO CHECK VALVE - TESLA 4 INTEGRATED REGISTER #PD07TGBT	302.5594	90,465.26T
17	ea	1" PD METER - GALLONS - NO CHECK VALVE - TESLA 4 INTEGRATED REGISTER #PD10TGBT	509.12176	8,655.07T
13	ea	1.5" PD METER - GALLONS - NO CHECK VALVE - TESLA 4 INTEGRATED REGISTER #PD15TGBT	983.39308	12,784.11T
2	ea	2" PD METER - GALLONS - TESLA 4 INTEGRATED REGISTER #PD20TGBT	1,325.64	2,651.28T
1	ea	4" SPIRELY ULTRASONIC WATER METER, 316 STAINLESS STEEL BODY WITH ENCODER MODULE. 14" LL #US040RGDRG3L	5,506.17	5,506.17T

SUBTOTAL	$137,400.24
SALES TAX (6.3%)	$8,656.22
TOTAL	**$146,056.46**

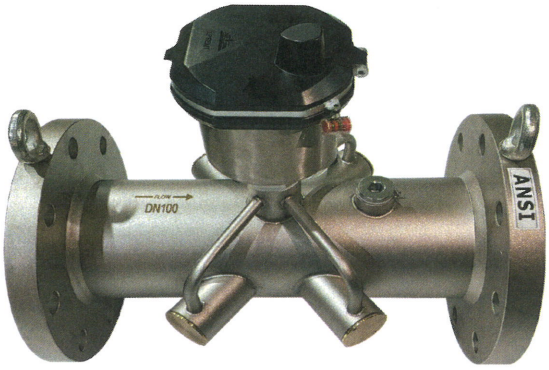
E-mail	Web Site
info@aquaflowaz.com	www.aquaflowaz.com

MEASURE TODAY. ENSURE TOMORROW

SpiRely™ Series

AWWA ULTRASONIC WATER METER

Spire Metering offers the latest in Commercial/Industrial ultrasonic metering technology for reliable flow measurement. The rugged SpiRely water meter will provide sustained flow accuracy for the life of the meter while providing connectivity to smart AMR/AMI solutions.



Applications

- Any Application that requires high accuracy across all flow rates for revenue billing
- Municipal water and water distribution network
- Waste water, irrigation water, reclaim water and storm water
- Commercial buildings:
  Malls, campus, hospitals, industrial parks, airports, facilities
- Industrial water:
  Steel, heavy manufacturing plants, power plants, food & beverage
- Leak and tamper detection, DMA (District Metered Area) leakage detection system
- AMR/AMI projects which require flow accuracy with low life cycle costs

Features & Benefits

- No moving parts; dependable ultrasonic performance without maintenance; lifetime accuracy without degrading
- Fully encapsulated in a heavy-duty enclosure with IP68 / NEMA 6P submerssible rating
- Straight through flow cell design without diameter reduction, neither strainer. Ignorable pressure loss, saves significant pumping cost
- NSF61-G proved. Meets or exceeds AWWA C715
- Detect active leak, backflow, tampering, flow rate, and pipe burst
- 10 years battery lifetime with battery life indication.
- Does not measure entrained air in pipe and is unaffected by magnetic interference
- AMR / AMI ready
- Pulse, Sensus UI 1203, Modbus and 4-20mA
- Data Logger with 700 daily totals and 24 monthly totals



SPIRE METERING TECHNOLOGY

Spire Metering Technology LLC, 34 Saint Martin Drive, Suite 13, Marlborough, MA 01752, USA
For Sales Contact : RG3 Meter Company | 903.753.3456 sales@rg3meter.com www.RG3Meter.com

SpiRely™ Series
AWWA ULTRASONIC WATER METER



SpiRely™ series Ultrasonic Water Meter is specially designed for municipal, commercial and industrial water metering applications where the demand is challenging and traditional mechanical water meters fail.

The SpiRely™ series is carefully engineered to offer robust performance in harsh environments. The flow sensor utilizes a crystal to generate an ultrasonic signal. There are no moving parts to wear out over time, as in traditional mechanical meters. The electronics, transducers and cables are all encapsulated in a heavy-duty metal enclosure which is NEMA 6P/IP68 submerssible rated. It is suitable for both outdoor and indoor applications and anywhere the meter may be submersible.

The SpiRely™ series offers the most advanced water flow measurement by using state-of-the-art multi-path ultrasonic technology. It employs 4 pairs of ultrasonic transducers to interrogate the flow from different positions, so that flow profile distortion has minimal impact on the measurement results. This is a significant improvement compared to single-path ultrasonic flow meters, because it is very common in real applications that there is not enough straight-pipe run after an elbow, a valve or a pump, or the sensor installation is not perfectly aligned with existing pipe line. In those scenarios, turbulence (swirl) or other type of secondary flow could cause errors with single-path flow meters.



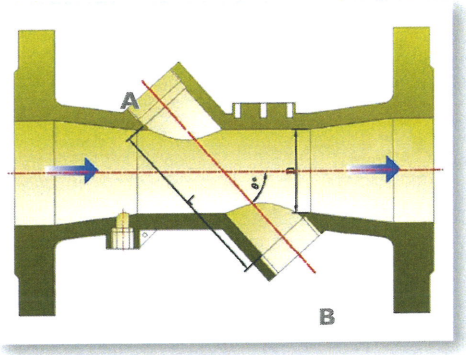
The technical specification of the SpiRely™ series water meter meets the ISO 4064 (or OIML R49) water meter standards for Class D accuracy, and exceeds the AWWA C715 water meter standard. The operational temperature ranges from 32.2°F to 140°F continuous duty. The large display can be set to display the flow total, flow rate, working time, leakage alarm, reverse flow, and more. The meter also has an output interface which can be configured as Sensus UI1203, RS485/Modbus, or pulse.

Spire Metering's SpiRely™ series Ultrasonic Water Meter stands out among the competition due to itsrugged design, multi-path technology,wide dynamic range, and long lasting battery. The SpiRely™series is even able to perform reliably when the water has high particulate or the environment is harsh. Both commercial and industrial installations can profit from the advantages of precision, wear-free water flow measurement, operational security and long service life.

SpiRely™ Series
AWWA ULTRASONIC WATER METER

Operating Principle

The SpiRely™ series ultrasonic water meter consists of a flow-cell, a pair of ultrasonic flow transducers and an integrator. The transducers are firmly mounted on the flow-cell at the optimal position. As illustrated, the transducers face each other with one on the upstream, and the other on the downstream.



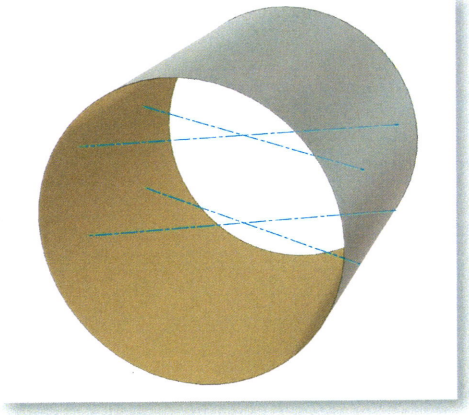
The integrator (or calculator) controls the two ultrasonic transducers to transmit and receive ultrasounds to conduct precise flow measurement. Specifically, it operates the two transducers which transmit a pulse of ultrasonic energy into the water flow toward the opposite transducer. The integrator detects the pulse signal which has traveled within the flow tube, and then is received by the opposite transducer. With advanced digital signal processing technology, the integrator precisely measures the arrival (or transit) time of each pulse signal.

Since the transit-time difference between the two pulses is directly proportional to flow velocity, it can calculate the flow velocity and flow rate. This is accomplished by combining it with the geometry of the flow-cell and fluid dynamics theory.

Only ultrasonic pulses are used to interrogate the flow which enables the meter to have no moving parts. Since the principle is based on the transit-time *difference* instead of transit-time, all the interfering factors, such as temperature, pressure, solids concentration and water quality, are cancelled out. The end result is an ultrasonic metering system which is inherently robust!

Unique Multi-path Technology

In real application, it is not easy to install the flow sensor perfectly in line with the pipe line. A slight misalignment could cause flow profile distortion inside the flow sensor, and thus cause significant measurement errors. Spire Metering developed a unique multi-path technology to solve this problem. Four pairs of ultrasonic transducers are mounted on the flow sensor body to interrogate the flow from four different paths. A flow calculation algorithm based on fluid dynamics theory is then used to derive an average flow reading with improved accuracy.



SpiRely™ Series
AWWA ULTRASONIC WATER METER

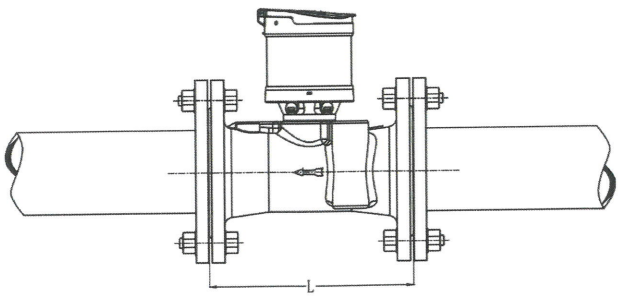
Technical Specifications

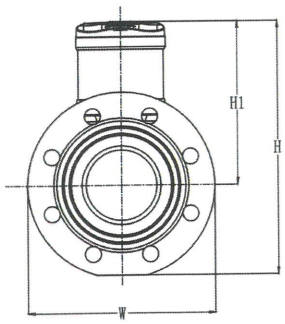
Metrology Performance

	Unit	Nominal Size						
		DN50	DN80	DN100	DN150	DN200	DN250	DN300
		2"	3"	4"	6"	8"	10"	12"
Start Flow	GPM	0.1	0.15	0.18	0.3	0.5	0.5	1
Minimum Flow Rate (100%+/-5%)	GPM	0.56	1.4	2.24	5.59	8.8	10	14
Normal Flow Range Lower Limit (100%+/-1.5%)	GPM	1	2.5	3.5	9	18	28	40
Normal Flow Range Upper Limit (100%+/-1.5%)	GPM	270	640	1100	2300	4000	6200	9600
Safe Max Operating Capacity	GPM	270	640	1100	2300	4000	6200	9600
Pressure Loss at SMOC	psi	3.08	3.14	2.99	2.84	3.37	3.07	2.87

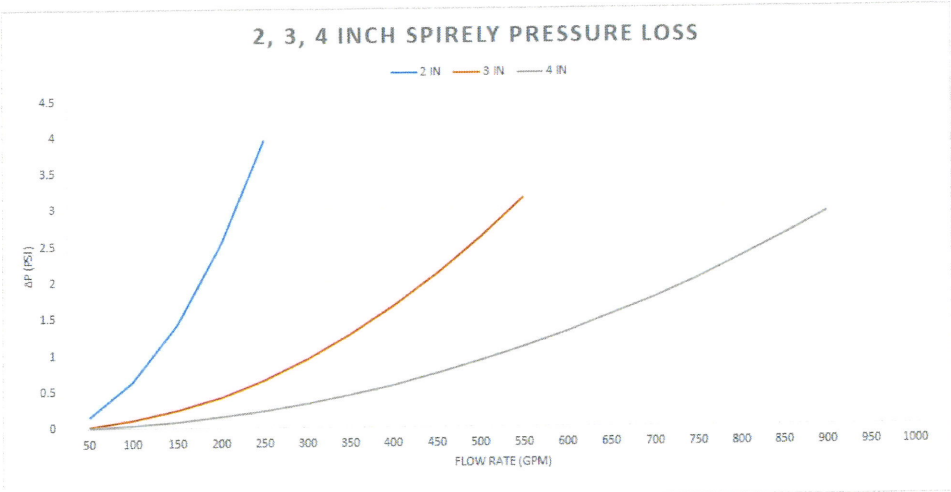
Dimensions and Weight

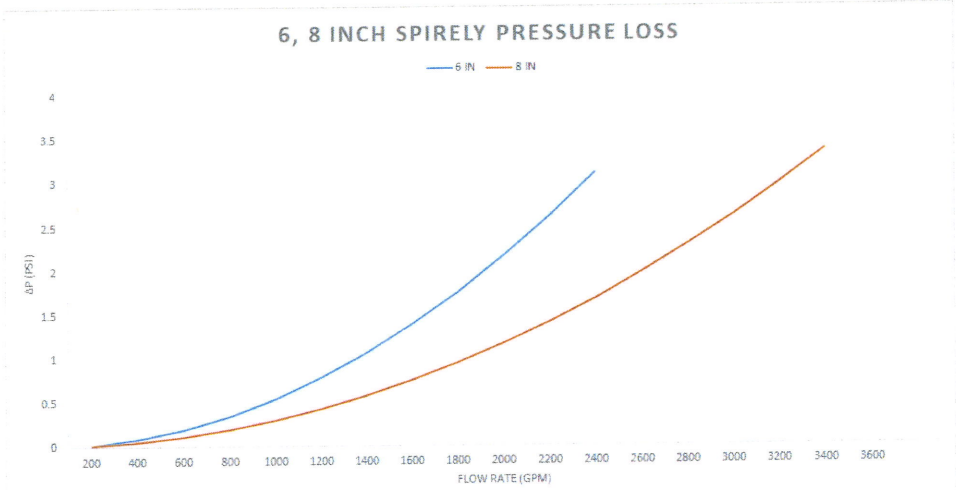
L	mm	432	305	356	457	508	451	502
	inch	17"	12"	14"	18"	20"	17.75"	19.75"
W	mm	150	190	229	279	343	406	502
	inch	5.91	7.48	9.01	10.98	13.5	15.98	19.75
H1	mm	220	240	250	280	300	325	340
	inch	8.8	9.45	9.84	11.02	11.81	12.8	13.38
H	mm	300	335	365	420	472	528	590
	inch	11.81	13.18	14.37	16.8	18.58	20.78	23.22
Weight	kg	11	16	20	33	48	60	86
	lbs	24.2	35.2	44	72.6	105.6	132	189.2

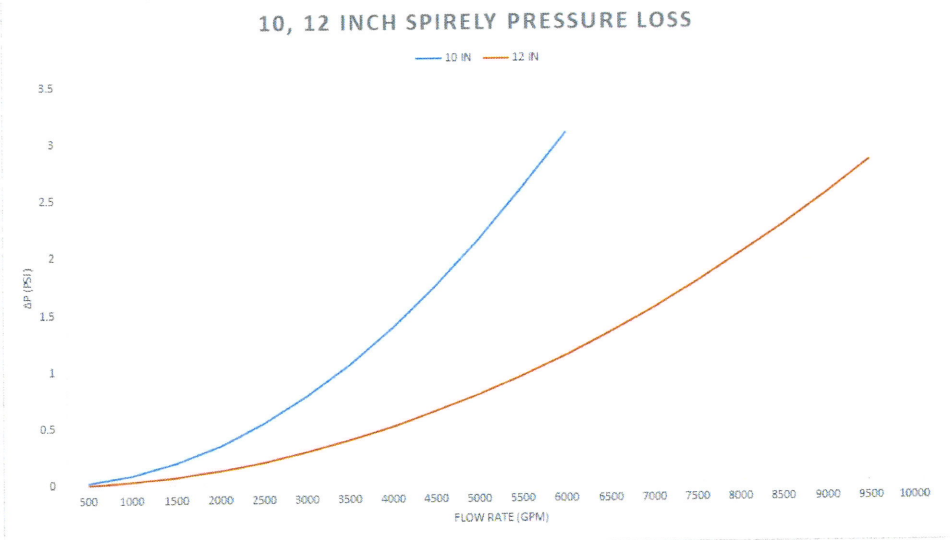




SpiRely™ Series
AWWA ULTRASONIC WATER METER







SpiRely™ Series
AWWA ULTRASONIC WATER METER

Electrical Data	
Power Supply:	Battery, 3.6V, Lithium
Replacement Interval:	10 years
Backup Power Supply:	Internal SuperCap
Communication Interface:	Pulse, RS485 / MODBUS, Sensus UI 1203, 4-20mA
CE approval:	EN61326-1:2006

Metrology Data	Meets AWWA C715 standard as well as ISO4064 / OIML R49 standard
Accuracy Class:	2 (according to ISO4064 / OIML R49)
Metrological Class:	D (according to ISO4064 / OIML R49)
Temperature Rating:	T30
Meets ANSI / AWWA Standards:	C715-18 Type II, C750-19

Mechanical Data	
Environmental Class:	B. Optional A
Electromagnetic Class:	E1
Environmental Temp:	32~131°F
Permission Flow Condition:	Full pipe, water with suspended solids less than 5%. Solid size less than 1/16". Non viscous fluids.
Permissible Flow Temp:	32.2~140°F for permanent installation and up to 185°F for short term (<24hours). Higher temperature rating available upon request. However, factory calibration is done at room temperature only.
Enclosure Protection:	NEMA 6P / IP68
Integrator Detachable:	No
Lid Cover Protection:	Yes
Working Pressure:	232 psi
Body Material:	316 stainless

Pressure Loss

The pressure loss of a flow sensor is proportional to the square on the flow : $\Delta p = k \times Q^2$
Here Δp is pressure loss, Q is volume flow rate and k is the coefficient.
All meters have Δp less than 0.63bar at Q3, meet ISO4064 / OIML R49 standard and AWWA standard.

About Spire Metering Technology

Spire Metering is a global leader in flow and energy management solutions. Through continuous innovation, we transform complex ultrasonic technology into affordable, reliable solutions for accurate flow and energy measurement.

Optical Encoder

Description



The Optical Encoder provides a high resolution encoded output using an industry standard ASCII communication protocol. The direct read mechanical odometer is permanently sealed and magnetically driven. With no battery and frictionless LED optical technology, the Optical Encoder provides a long and accurate service life for all AMR and AMI applications.

Application:
The Optical Encoder is designed for use with RG3 Positive Displacement water meters. The Optical Encoder provides connectivity with RG3 Tesla endpoints, RG3 approved touch modules, and other RG3 approved AMR and AMI technology solutions.

Mounting:
The Optical Encoder in its shroud assembly uses a bayonet mount compatible with RG3 5/8" and 1" Positive Displacement water meters. The bayonet mount allows positioning of the register in any of four orientations for direct reading convenience. The Optical Encoder can be removed from the meter without disrupting water service.

Operation:
The Optical Encoder uses LED light paths to determine the exact position of each number wheel. Readings obtained by an AMR or AMI device are retrieved directly from the position of the encoder's odometer.

Magnetic Drive Communication:
Reliable and dependable register coupling is provided through a direct-drive, high-strength magnetic field, through the meter body to the wetted magnet.

Connections:
The Optical Encoder provides 3 wire communication to AMR and AMI devices. In-line RG3 or Nicor connectors are available for easy connection and installation. Optionally, the encoder can be purchased with flying lead bare wire for field splice connection or fully pre-wired and potted to an AMR or AMI device.

Tamper Resistant Features:
The Optical Encoder is secured to the meter with a tamper resistant Torx screw. It can be installed at the factory or in the field.

Construction:
The hermetically sealed, IP68 rated Optical Encoder assembly is constructed of a strengthened glass lens top and a corrosion-resistant metal bottom. The encoder gearing is self-lubricating thermoplastic to minimize friction and provide long, reliable life. The shroud assembly is constructed of nylon plastic for UV resistance and strength.

Temperature:
The operating range of the Optical Encoder is 14° to 158° F.

Standards:
The Optical Encoder exceeds all applicable requirements of AWWA Standard C707.

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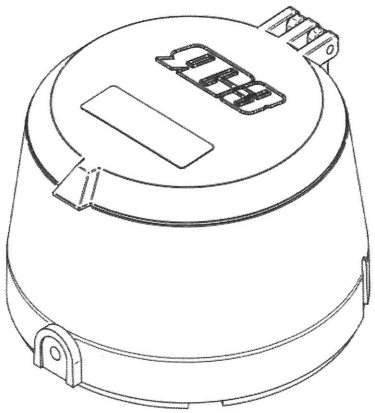
Optical Encoder

SPECIFICATIONS:

Encoder Type	Direct read, permanently sealed, magnetic drive, absolute encoder
Unit of Measure	U.S. Gallons or Cubic Feet
Test Circle	360° circle with ten divisions
Number Wheels	8 digits
Weight	10 ounces
Humidity	0 to 100% condensing
Temperature	14° to 158° F
Signal Output	Industry standard ASCII Format
Electronic Resolution	8-dial resolution for AMR and AMI
Signal Type	3-wire for AMR and AMI (red=power, black=ground, green=data)
Power Source	External – No internal battery



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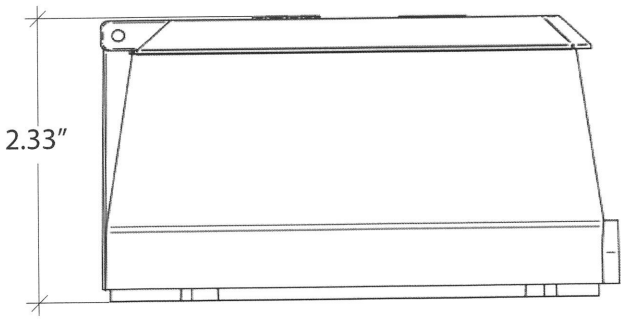

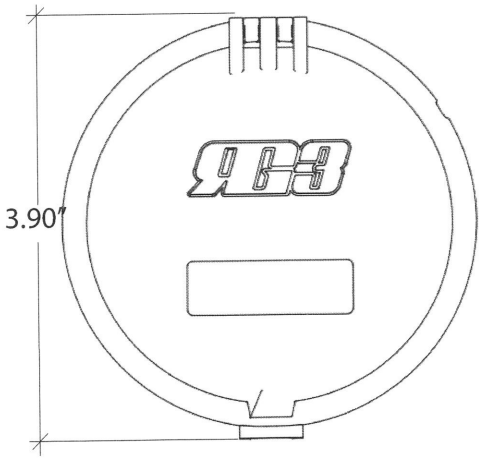

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Positive Displacement
Large Cold Water Meters

1 1/2" (DN 40 mm) - 2" (DN 50 mm)

Data Sheet

Applications - For use in measurement of potable cold water in residential, commercial and industrial services where flow is in one direction only.

General - All Positive Displacement cold water meters (1 1/2" - 2") conform to American Water Works Association (AWWA) C700 Standard Specifications latest revision.

Measuring Chambers - Measuring chambers are made of suitable engineering plastics to meet AWWA C700 standards. The piston has approximately the same specific gravity as water. All of the spindles are stainless steel.

Lead Free Main Case - The main cases are made of Bismuth BiAlloy CDA89836 or EnviroBrass™ II C89520 and are in compliance with NSF / ANSI 61 standards and the Safe Drinking Water Act (NSF 372). The serial number is permanently marked on the body, along with the size, direction of flow and manufacturer (RG3). The bolts are made of stainless steel to prevent corrosion.

Main Case	Lead Free Bronze
Measuring Unit	Thermoplastic
O-Ring	Nitrile Rubber
Magnet	Ceramic Ferrite
Strainer	Thermoplastic
Register Lens	Tempered Glass
Register Housing & Lid	Bronze or Polymer
Gearing Wheels	Thermoplastic

Installation - The meter must be installed in a clean pipeline, free from any foreign materials. The meter should be installed with the direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in horizontal or inclined lines.

Strainers - All meters have a strainer installed in the meter and are made of a polypropylene plastic. The strainers are located near the inlet port in the main case just before the measuring chamber. The strainer screens are rigid, snug fitting and have an effective straining area of at least double that of the main case inlet. All strainers are easily removable and replaceable.

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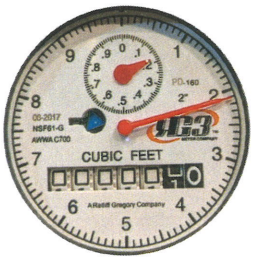
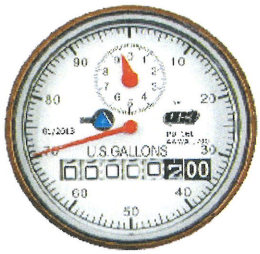
LGPD12241

Direct Read Sealed Registers - Registers are the straight read, magnetic drive, odometer type with a sweep hand and leak detector. Registers are hermetically sealed to prevent fogging. Registers are roll sealed and dry with a 360° test view. All direct reading register cups are made of copper to prevent corrosion and covered with a high-strength, impact-resistant glass lens to prevent breakage. The register housings and lids are made of high strength polymer or copper alloy. All registers are secured to the main case by means of a tamper-proof Torx screw to allow for in-line service replacement.

Registers include:
- Company name
- Month and year of manufacture
- Center sweep hand
- Large, easy to read numbers
- Size of meter
- Unit of measure
(Example U.S. Gallons, Cubic Feet, or m3)
- Low flow / leak indicator





Registers include an odometer, which will give the total amount of water flow. One sweep of the hand will be equal to:

1-1/2 & 2" meters 100 gallons/10 cu ft

Register Options

Direct Read	Bronze or Plastic
AMR	Tesla 4 TR Integrated Transceiver Register
AMI or AMR	Tomahawk Encoder with Tesla Solo or Duo

Magnetic Drive - Meters use high strength magnets to provide positive, reliable and dependable register coupling.

Characteristics- Meets or exceeds latest revision of AWWA C700 Dimensional Standards. Operational Temperature range 33°F.-80°F.

All Bronze Construction	Direct Read & AMR/AMI Register Options	American Made	Excellent Start Up & Low Flow Rate	Built-in Strainer

Tamper-proof Features - Registers contain a locking device to prevent theft of water usage. Removing the register requires a special tool.

Maintenance - The measuring chamber assembly can be removed in order to be repaired or replaced.

Warranty - Standard 5 year new meter accuracy warranty and a 25 year main case warranty.
* Refer to full warranty for detailed warranty guidelines and standards.

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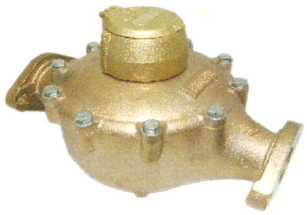
LGPD12241

Positive Displacement
Large Cold Water Meters

1-1/2" (DN 40 mm) - 2" (DN 50 mm)





Specifications

Model		PD 15	PD 20
Size		1-1/2"	2"
Low Flow	USGPM	1 -1/2	2
Normal Flow	USGPM	5-100	8-160
High Flow	USGPM	100	160
Continuous	USGPM	50	80
Max Pressure	PSI	150	150
Extreme High Flow (Intermittent)	USGPM	120	170
Operating Tempature	Deg. F	33°-80°	33°-80°
Length	Inches	13"	17"
Height	Inches	7 - 15/16"	8 - 1/2"
Weight	Pounds	25lb	34.6lb
Ends		Flanged	Flanged

* Due to continuous research and product enhancement, RG3 Meter Company reserves the right the change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.

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LGPD12241

LPN 450 TRX

We've got you covered.

RG3 Licensed Private Network (LPN) data collectors offer a strategic two-way communication option for smart water and smart gas deployments. The LPN 450 TRX mobile data collector operates in the 450-470 MHz frequency band spectrum creating a highly reliable private network with far-reaching range.

The two-way system incorporates rich security features and is end-to-end upgradable remotely with over-the-air updates. The proprietary LPN RF protocol provides time-synced operations to alleviate network RF collision. Data is time-stamped and mapped to show how it travelled through the network.

LPN 450 TRX

LPN 450 TRX The 450 TRX mobile data collector is a solid-state industrial piece of hardware that connects to a computer or tablet with a Windows operating system via USB-C or Bluetooth. It is compact and easily transferred from one place to another. It operates in the 450-470 MHz licensed frequency band and is used for collecting meter data, programing, troubleshooting, and other two-way functions in a Licensed Private Network (LPN).

AMI Hybrid Capabilities The 450 TRX can be used to collect hourly data from your meter system, even if your primary read strategy is drive-by AMR. When not in field use, the 450 TRX can be used as a stand alone AMI base station to stream meter data to Tesla Net MDM. Your utility can use the standard drive-by AMR antenna or erect a separate AMI antenna installed at a greater height for increased reach and coverage.

Extensive Range With the standard AMR drive-by antenna, the 450 TRX can easily read meters a mile away when not blocked by a major obstruction. That kind of reading range lowers cost and time to read meters in a drive-by AMR application. It can also provide a large area of coverage around your office when not being used in the field.

Features and Benefits

- Solid state durability
- Light weight and easily portable
- Plug-and-play operation
- Licensed Private Network with low RF interference
- Two-way communications
- Time-Stamped readings and alarms
- End-to-End security
- Live stream meter readings and alarms

Specifications

Dimensions	6.5" x 3.2" x 3.1"
Weight	1 lbs
Operating Temperature	-4°F to +140°F (-20°C to +60°C)
Storage Temperature	-40°F to +185°F (-40°C to +85°C)
Humidity	0% to 95% non-condensing
Operating Power	12VDC
Data Connection	USB-C or Bluetooth or Ethernet
Frequency Band	450-470 MHz
Approvals	FCC Part 90 and Part 15
AMI Backhaul	Ethernet



LPN BLACK BOX PRODUCT DATA SHEET

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450TRXDS12241

Tesla 4 TR - Transceiver Register

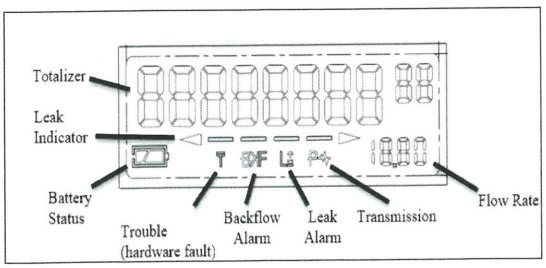
Description

Applications: The Tesla 4 TR Transceiver Register is a solid-state encoder with no mechanical numerical wheels. It is equipped with an integrated 1-Watt transceiver contained entirely inside the hermetically sealed enclosure . Tesla 4 TR is ideal in harsh meter pit environments with its standard external antenna. It is designed for use with all RG3 meters and to retrofit most other manufactures' meters (Badger, Neptune, Sensus, Mueller (Hersey), Master Meter, Zenner, etc.). Tesla 4 TR provides 2-way wireless connectivity with RG3 Tesla Drive AMR reading software which eliminates the need for physical access to the meter after installation.



Operating Characteristics: The digital reading transmitted by Tesla 4 TR integrated 1-Watt transceiver is retrieved directly from the register's internal magnetic sensor coupled to the wetted magnet through the meter body. Tesla 4 TR magnetic sensors are always on and always watching. This technology provides real time reads and eliminates interpretation of odometer wheels by means of LED, optical character recognition, or electromechanical contacts that could wear out. The Tesla 4 TR solution provides superior long-term performance and the most accurate counting solution available.

LCD: Tesla 4 TR is equipped with a large LCD for easy reading. The LCD provides a 10-digit programmable meter read and a 6 segment leak detector indicator with flow direction arrows. Flow rate, water movement, battery status, tamper, back flow, leak warning, and transmission indicator are shown on the LCD as appropriate. At 20% battery life remaining, the battery status indicator begins to flash on and off. Status indicators are sent as part of the AMR extended message. The LCD is always active and requires no tools for visual reading.



Specifications

Encoder Type	Straight reading, permanently sealed, electronic LCD absolute encoder with field programmable integrated 1-Watt RF transceiver for AMR applications.
Encoder Display	10-digit LCD totalizer, 6 segment leak detector, flow direction arrows, rate of flow, battery status, leak alarm, and back-flow alarm
Unit of Measure	U.S. gallons, Imperial gallons, cubic feet, cubic meters, and liters
Flow Rate	Units of Measure per Minute
Numerals	7.44 mm (.293") high and 7.24 mm (.285 wide)
Humidity	0 to 100% condensing
Weight	238 grams or 8.5 oz
Temperature	-40° to 185°F (-40° to 85°C)
Status Indicators	Electronic and visual icons for: Totalizer, flow rate, back-flow, leak, battery indicator (including 20% battery life alarm)
Signal Output	1-Watt RF Transmission
Signal Type	Unlicensed Frequency (902 MHz-928 MHz)
Battery	D cell lithium thionyl chloride battery with capacitor, fully encapsulated within Tesla 4 TR housing
Battery Life	25 Years (calculated)
Warranty	20 Years (Prorated)

Tesla412241

Water Movement Indicator: Six segments illuminate in succession ending in an arrow to demonstrate directionality and to simulate water flow. The water movement indicator activates immediately upon water movement. Cessation of segment movement demonstrates that water movement has stopped within the past 20 seconds. After 20 seconds all segments disappear.

Flow Rate: Flow rate is clearly displayed in the applicable unit of measurement and updated every 10 seconds. If the unit of measure is gallons, for example on a residential meter, displayed flow rates range from 1/10th gpm to 1,999 gpm.

Back flow: The back flow indicator is activated after 4 units of back flow and remains illuminated for 30 days. A back flow flag is sent with the extended RF message, as long as the indicator is activated.

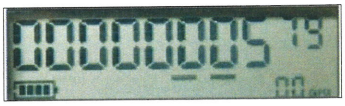
No Flow: No Flow is activated when no usage has occurred in the past 30 days. The No Flow remains until usage occurs. A No-Flow flag is sent with the extended RF message as long as the indicator is activated.

Battery Status: Tesla 4 TR uses a D cell lithium thionyl chloride battery with capacitor to provide a true 25 year battery profile. Tesla 4 TR adjusts the battery status indicator based on actual usage to provide the most accurate and up to date information to the utility. When the battery reaches 20%, the battery status icon on the LCD begins to flash on and off. Battery status is sent with the extended RF message each time Tesla 4 TR is read.

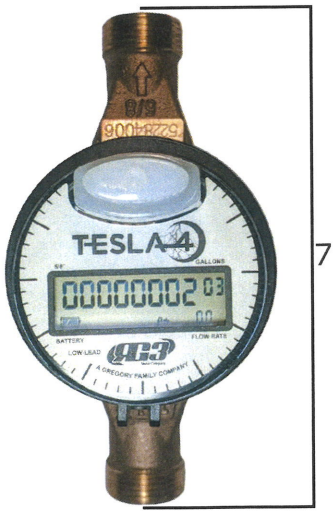
Trouble: Tesla 4 TR monitors it's own systems internally. When an unexpected event occurs, Tesla 4 TR resets the problematic section. If the unexpected event was software related, the reset will clear the issue and normal operation will continue. If the problem is located in hardware, a reset will not rectify the difficulty. If the Tesla 4 TR experiences 3 resets over the life of the product, a "T" is raised on the LCD to indicate the alarm visually. The Trouble status is sent with the extended RF message if activated each time Tesla 4 TR is read.

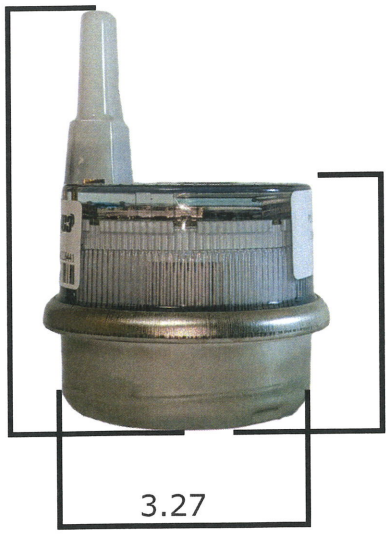
Leak Detection: Leak monitoring is constant. As a standard, the leak flag is triggered after 48 hours of continuous water movement. The leak flag will turn off if no water movement occurs for a period of 1 hour to ensure that the utility is not wasting resources addressing a leak that was in reality high usage.

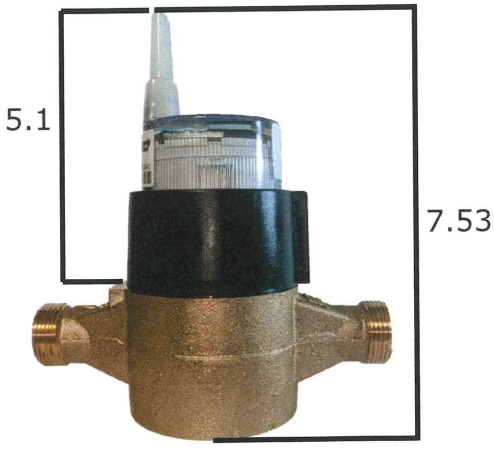
Dimensions



Actual Size LCD





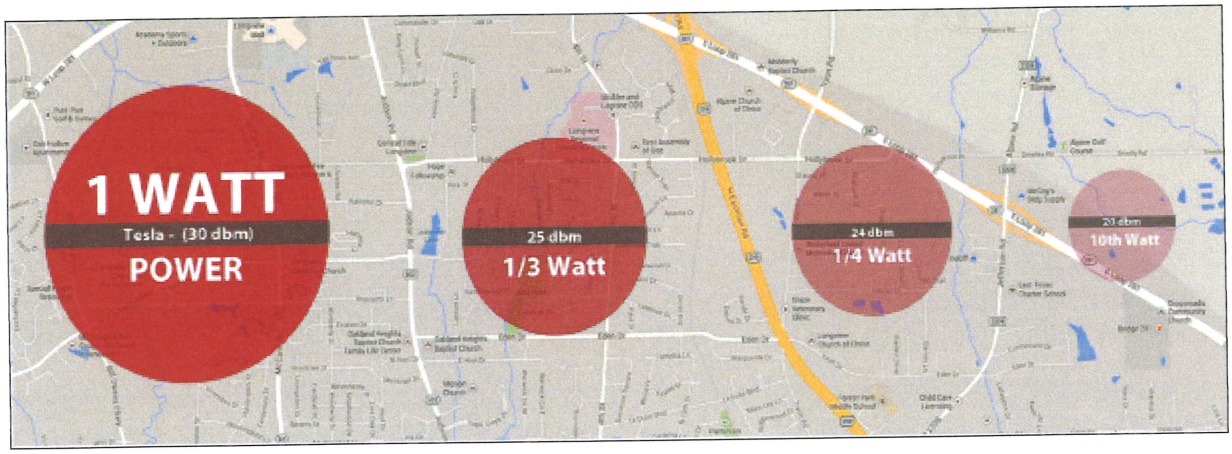


Tesla412241

Leak Counter: The leak counter indicates the number of days a leak has been occurring. The information is transmitted every time Tesla 4 TR is read. This enables the utility to provide warning to the customer and then respond accordingly if the customer has not resolved the issue. The leak counter resets after 10 days of non-continuous use.

Time Sync for Water Loss Identification: Every time Tesla 4 TR reads, it syncs time with the reading device. Tesla 4 TR time sync is a 2-Way transmission function and can only be accomplished with true 2-way communication. This feature is important because water loss identification through metering requires the comparison of water volumes recorded by customer and mainline meters over a specific period of time to the water volumes discharged from the treatment facilities or the volume passing through system zone meters over this same period of time. Distribution leak detection requires time synchronization to avoid "clock drift", a phenomena where two clocks do not run at the exact speed and after a period of time, "drift apart". By syncing time with the reading device, Tesla 4 TR avoids clock drift completely and delivers the most accurate leak detection possible.

Transmission: Tesla 4 TR technology starts where the rest of the industry's most advanced solutions top out. All functions are accomplished through streamlined 2-way communication utilizing the FCC approved unlicensed 902-928 MHz band. To ensure transmission success, Tesla 4 TR employs Cyclic Redundancy Checks (CRC), Spread Spectrum Frequency Hopping Modulation, and Channel Coding.



***Rule of Thumb: 6dbm gain = twice the distance of Transmission**

Transmission Power: Tesla 4 TR transmits at a full 1-watt. Unlike 1-way bubble up technologies that throw hundreds of thousands of wasted transmissions and large amounts of unnecessary energy into the atmosphere each month, Tesla 4 TR's extremely efficient 1 watt power is environmentally friendly. Although Tesla 4 TR has 10 times the transmission power of other leading AMR technologies, the total monthly output of electromagnetic radiation is at least 10,000 times less than comparable technologies, or roughly 5% of the amount emitted by the average cell phone each month in the US.

Drive-By (AMR) Read: Tesla 4 TR transmits its associated meter number, current read, number of digits transmitted, unit of measurement, battery status, leak counter, and back flow, tamper, and leak flags as applicable. Individual meters can be read alone or all meters can be read at once.

Transmission Indicator: The transmission indicator illuminates when Tesla 4 TR conducts RF activity, allowing the operator to visually confirm transmission has been sent.

Resolution for 5/8" to 4" Meter Applications: "Absolute" 10-digit meter reading on the LCD with precise visual readings down to the hundredths of a gallon or thousandths of a cubic foot/meter. Electronic output includes 8-digit remote meter reading. 1 to 8 digits can be communicated for billing.

Resolution for 6" through 12" Meter Applications: "Absolute" 9-digit meter reading on LCD with precise visual readings down to the whole unit. Electronic output includes 8-digit remote meter reading. 1 to 8 digits can be communicated for billing.

Factory Programming: When combined with an RG3 meter, Tesla 4 TR is factory programmed with a reading of 1 gallon and associated to its companion meter's serial number, type, and size. Factory programmed Tesla 4 TR register/meter combinations are ready for installation upon delivery just like a direct read meter with no additional operations needed.

Construction: Tesla 4 TR shroud assembly is constructed from engineered polycarbonate with a hermetically sealed stainless steel bottom. The enclosure is UV-resistant, weatherproof, and fully encapsulated to withstand harsh environments and to protect the solid state electronics. External antenna screw terminal pins are molded into the engineered polycarbonate lens and back sealed with a potting compound eliminating any opportunity for moisture intrusion at the connections making Tesla 4 TR suitable for installation in all environments, including continuously submerged water meter pits. Electronic circuitry is gold plated to provide increased corrosion resistance before it is encapsulated by high quality endothermic potting material that diminishes the expansion and contraction related to temperature extremes. Electronics are designed to provide immunity to electrical surges. Tesla 4 TR uses magnetically driven thermoplastic floating gears to minimize friction and provide long, reliable life. Tesla 4 TR counting mechanisms are permanently active magnetic sensors. The power source is an internal lithium battery with capacitor that is independently encapsulated in potting for redundant protection against moisture.

Precision Counting: Tesla 4 TR uses magnetic sensors that detect changes and disturbances in the magnetic field of the wetted meter magnet like flux, strength, and direction. This precision technology allows Tesla 4 TR to accurately count with resolutions that far exceed the flow capabilities of any water, while remaining sensitive enough to count down to the thousandths of a gallon.

Antenna: Tesla 4 TR is equipped with an integrated antenna that is external to the register for superior propagation and to ensure strong and reliable transmissions in flooded pit environments.

Watchdog: All mechanical and electronic devices are subject to the effects of their environment. Tesla 4 TR is equipped with an internal watchdog that reboots the electronics if faced with an external interference such as a close proximity lightning strike or other uncontrollable event.

Electrical: Tesla 4 TR electronic circuitry is gold plated and designed to provide immunity to electrical surges and transients per IEC801-2, IEC801-4 Severity Level 4.

Data Log / Consumption: Tesla 4 TR retains 120 days of hourly data. Consumption data can be wirelessly extracted at the meter site with no need to access the meter physically.

Tesla 4 TR can Retro-Fit to the Following Manufactures Meters :

Badger Meter, Inc. · Sensus The Measure of the Future · Hersey Meters · Neptune Technology Group · Master Meter · Zenner

RG3 Meter Company

Tesla412241

TESLA DUO AMI ENDPOINTS FOR WATER

We've got you covered.

Tesla Duo (Duo) multi-network AMI water endpoints give you several options to read your meters from the office, as well as, a drive-by AMR backup option. Each Duo is both a cellular endpoint and a point-to-multi-point RF fixed-network endpoint, combining the two leading AMI technology options into one. Using the multi carrier eSIM over the LTE-M network, each Duo evaluates the signal strength at the installation location of multiple public cellular network carriers and chooses the strongest. The built in 450-470 MHz RF transceiver gives the Duo the ability to overcome poor cellular coverage areas and any dead spots in the service area. It also provides you with a built in network guarantee so you will have peace of mind knowing that you will always have a network available. Utilizing both public cellular networks and a utility owned Licensed Private Network provides the greatest coverage possible and unmatched redundancy. Combining the two most effective AMI read methods into one Tesla Duo multi-network endpoint produces the most versatile technology available and makes it very easy for you to read your meters from the office.



Instant AMI

As soon as a Tesla Duo endpoint is installed, you can read it from your office. When an endpoint is activated, it immediately communicates with cell networks and the Licensed Private Network (LPN) if fixed data collectors are installed. If a Duo is outside of the 450 MHz LPN coverage area, or no fixed network data collectors are installed, it will operate as a cellular endpoint. If LPN coverage becomes available in the future, the Duo will automatically switch to the 450 MHz LPN network and then back to the cellular networks if LPN coverage is ever unavailable. The automatic network switch feature makes installing or expanding your system extremely easy and hassle-free.

Future Proof Redundant Coverage

The Tesla Duo provides superior network coverage simply because it uses multiple networks. Typical cell endpoint challenges such as cellular tower coverage drops, tower equipment changes, and localized cell dead spots are easily overcome with built-in alternative cellular carrier options and the utility owned 450 MHz LPN. Factors that can adversely affect traditional fixed networks like new construction and vegetation growth can be damaging to a utility owned network over time. Duo AMI endpoints overcome these obstacles by switching networks automatically. The ability to move between networks as needed affords the Tesla Duo multi-network endpoint more opportunity to deliver meter data than any other technology. Auto compensating for changes in your meter system creates a highly resilient future proof technology with multiple paths of redundancy.

Cellular Endpoint

When public cellular network coverage is available, Tesla Duo endpoints are self-contained. Simply install and you will be reading from the office. If cell dead spots exist in your system, Tesla Duos can use the utility owned 450 MHz Licensed Private Network to communicate.

Point-to-Multi-point RF Fixed Network Endpoint

When cellular coverage isn't optimal everywhere in your meter system, 450 MHz LPN fixed data collectors can be installed to overcome cell network problem spots. Fixed Network Collectors can cover large areas where utility towers already exist but can also cover small areas economically using Duo Collectors (see rg3meter.com for information on Duo Collectors).

Guarantee of Network Performance

Tesla Duo eSIM cards are able to automatically switch between multiple cellular cariers. If the cellular communication networks that support any Tesla Duo endpoint discontinue operation, the already built in 450 MHz transceiver can immediately be used for both drive-by AMR and fixed network AMI reading strategies. The 450 MHz Licensed Private Network is owned by the utility, providing built-in security and peace of mind. If the primary method of data delivery has been over the LPN and something catastrophic happens to a fixed data collector, the Tesla Duo will automatically begin sending meter data over the strongest cellular network available.

Installation

The Tesla Duo housing design allows for pit or wall installation with no change in products. In meter pit installations, the low-profile lid mount rugged design brings the endpoint above the mud, water, and depths of the meter pit environment giving them the best opportunity for solid antenna propagation which translates directly into exceptional range. To ensure a long-life cycle, Tesla Duo endpoints are solid state devices built to be completely submerged for their entire service life without danger of water intrusion. Firmware can be updated at any time after installation over the air (OTA) for future feature additions and bug fixes. Tesla Duo multi-network endpoints are plug-and-play with no programming required making them easy and fast to install.

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Encoder Compatibility

While RG3 offers a battery free analog encoder and a universal encoder that can retrofit any meter with a removable register, Tesla Duo endpoints work with any wired make or model encoder register of any manufacture that uses the industry standard UI-1203 communication protocol. They also have the capability to detect most major manufacturer encoder register brands and utilize extended protocols if offered. They are perfect for upgrading older systems from walk-by or drive-by to read from the office AMI.

Tesla Duo endpoints can be read from the office (AMI) and or by drive-by (AMR), with no programming required to switch between the two read strategies. When using the 450-470 FCC Licensed Private Network, Tesla Duo endpoints utilize a secure and protected proprietary time-synchronized, RF protocol.

Features and Benefits

- TeslaDuo eSIM cards are purchased with 10 years of pre-paid data for cost control. (Verizon is not pre-paid)
- Secure, encrypted, true 2-way communication provides greater functionality.
- Near real-time alerts and alarms improve customer service.
- TeslaDuo automatically switches to the public cellular network with the strongest signal if LPN coverage is not successful, creating unparalleled network coverage redundancy.

Multi-Network Migratable

- Tesla Duo automatically migrates between the 450-470 MHz Licensed Private Network and multiple public cellular networks creating multi-network redundant coverage, giving you the best opportunity possible to read your meters from anywhere.
- Simultaneous redundant read strategies for enhanced system reliability.
- 120 days of hourly reads stored in the endpoint for data redundancy.

Long-Life Rugged Design

- IP68 Environmental Rating for the highest protection against the meter pit environment.
- Ultra rugged, fully potted, solid-state design.

- Mount in lid antenna for increased range and network stability.
- Remote Over the Air (OTA) updates increase endpoint and system longevity.
- 20-year warranty (10-year full /10-year prorated).

Plug-and-Play Installation

- Tesla Duo installation is quick, easy, and requires no programming.
- Endpoints are pre-configured at the factory for immediate deployment.
- No expertise needed. Install, record data, and move on.
- Automatic successful network communication verification after installation
- Endpoint serial numbers are barcoded to reduce human data errors.

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DUODS12241

TESLA DUO

Description

Tesla Duo (Duo) water AMI endpoints are equipped with a cellular modem and multi carrier eSIM along with a 450 MHz RF transceiver for independent dual network communication with a drive-by AMR backup. Each endpoint can use multiple existing public cellular networks, or a point-to-multi-point Licensed Private Network (LPN) in the 450 – 470 MHz band to deliver meter data to the utility securely and with great flexibility. When used primarily as a cellular endpoint, the Duo can compensate for poor cellular areas and cell dead spots by supplementing those areas with the 450 MHz LPN. While the cellular and LPN networks can be used independently, the redundancy of multi-network coverage creates an extremely effective future evolving multi-network option not achievable with a single network. Each Tesla Duo can be read by drive-by AMR as a backup.



Functionality

Operation: Tesla Duo water endpoints communicate with the encoder to capture interval read data and meter status information. The endpoints then send read and endpoint status information over the Licensed Private Network or public cellular networks. Two-way communication provides for time synchronization, on demand reads, over the air firmware updates, and remote shut off valve control. Multi-network coverage gives the utility the flexibility to install Fixed Network Collectors in places that make sense, while utilizing existing public cellular networks in other parts of the system, or switch from one network to another after installation for future network optimization. This speeds installations while presenting multiple options to overcome future system environmental changes such as vegetation growth, building construction, or expansion as a system evolves.

Activation: Tesla Duo water endpoints are shipped in an inactive, non-transmitting state. After installation, the endpoints begin communicating data once the encoder indicates water has been used. Alternatively, a magnet can be used to manually activate the endpoints and verify the encoder connection.

Data Storage: Tesla Duo endpoints store 120 days of hourly data for local retrieval via data log.

Output Message: Tesla Duo water endpoints communicate a unique serial number, meter reading data, and applicable status indicators such as flags and alarms.

Application

Read Strategies: Tesla Duo water endpoints can send AMI meter related information through multiple public cellular networks, a utility owned private point-to-multi-point fixed network, AMR drive-by or switch between the read strategies with no programing required. A Multi-Network approach can also be chosen to utilize all network options simultaneously for redundancy and optimization. When more than one network is available, the Tesla Duo automatically switches between them so that the information collected has the best chance of reaching the utility.

Configurations: Tesla Duo water endpoints can be installed in indoor, outdoor and pit lid applications. As with all radio frequency (RF) endpoints of any manufacturer, mounting through or under a metallic pit lid has a negative impact on signal propagation. A polymer pit lid is highly suggested for optimal performance. The electronics and battery assembly are fully encapsulated in epoxy for environmental integrity. The endpoint is available with a connector assembly for ease of installation.

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TeslaDuo-Duo12242

Specifications

Approvals	Part 90, part 15, part 22, part 24, and part 27 of the FCC rules
Battery	Non-replaceable D-Cell lithium thionyl chloride with HLC capacitor for extended life
Battery life	20 years[1]
Connection to register	Bare wire (splice), RG3, Nicor or other industry-standard connectors
Data resolution	4–8 digits[2]
Encoder disconnect	An alarm is sent if communication with the encoder is interrupted as in the case of theft or vandalism
Endpoint to endpoint synchronization	< 1 min
Firmware updates	Over the air (OTA) firmware updates can be performed remotely via cellular network, the 450 MHz LPN or on-site through Tesla Drive software
Inputs	Single or dual port
Installation Locations	Interior or exterior wall mount, pit/vault, through-the-lid[3]
Meter encoder compatibility	All RG3 meter and encoders as well as most major manufacturers of water meters[4]
Meter flags and alarms	Back flow, Tamper, Leak, Major Leak, Diagnostic and Battery Status flags as well as supporting extended flags and alarms from multiple meter manufacturers[4]
Meter interface	Pulse or Encoder
Network compatibility	Tesla Net
Network topology	450 – 470 MHz Licensed Private Network (point-to-multi-point) and AT&T, Verizon, T-Mobile and other public cellular LTE-M networks
Network type	Two-way[5]
On-board storage	120 days of hourly read data
Operating humidity	0%-100% non-condensing
Operating temperature	-40° to 185°F (-40° to 85°C)
Physical characteristics	Height 6.5″ Width of Threads 1.8″ Width of Cap at Threads 1.98″ (2-1/8″ pit lid hole required) Dimensions of Base 3.2″w x 3.1″ d Weight: 1 lb Color: black
Remote shut-off	Open, close, partially closed – controlled from Tesla MDM or Tesla Drive software[6]
Security	AES 256 encryption and authentication
AMI read transmission resolution	Hourly
AMI read transmission interval	Cellular: Up to 4 times per day / 450 MHz LPN: 15 minutes
AMI Major Leak alarm transmission	Immediate
Warranty	20 years[1, 7]

[1] Battery life warranty invalid if product is stored more than 1 year before installation and activation
[2] Reports all digits that are electronically available from register
[3] Pit/vault installation under non-metallic lid
[4] Contact factory for specific meters and flags/alarms supported
[5] Two-way communication for time synchronization, remote configuration, on-demand reads, historical data log retrieval, valve control, and firmware over the air (OTA) updates
[6] Contact factory for specific valves supported
[7] Refer to RG3 standard warranty for details

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TeslaDuo-Duo12242

LPN DUO COLLECTOR



We've got you covered.

RG3 Licensed Private Network (LPN) data collectors offer a strategic two-way communication option for smart water and smart gas deployments. The Tesla Net LPN operates in the 450-470 MHz frequency band spectrum creating a highly reliable private network with extensive coverage and far-reaching range.

The two-way system incorporates rich security features and is end-to-end upgradable remotely with over-the-air updates. The proprietary LPN RF protocol provides time-synced operations to alleviate network RF collision. Data is time-stamped and mapped to show how it travelled through the network. The result is extremely reliable network coverage.



LPN Duo Collector

Big Impact – Small Package LPN Duo Collectors (DCs) send and receive information to Tesla AMI endpoints over a Licensed Private Network and then send collected data over one of multiple public cellular networks (Verizon, AT&T, T-Mobile, etc.), depending on which has the strongest signal at the time. DCs are ideal for communicating with up to 1,000 endpoints within a 1/2-mile radius (approximately 1 sq mile) or farther depending on geography and installation height. DCs can store up to 38,250 reads that can be retrieved manually with a 450 TRX mobile data collector as a backup.

Easy Installation Installing a Duo Collector is as easy as mounting it and plugging it in. DCs can be installed anywhere using the two provided mounting holes. DCs come with a cord and power converter to be powered by a standard 110v outlet with ground. If A/C power isn't available, a solar power package can be added to make the Duo Collector self-contained. They can be screwed to a wall, clamped to a pole, or placed on the back of a street sign or light. A simple website registration is required after installation.

Extreme Duty Outside of power options and firmware, DCs are identical to Tesla Duo AMI endpoints. They have the same compact 6.5" x 3.2" form factor, fully potted electronics, and are also constructed with a 450-470 MHz LPN transceiver and a cellular modem. Since DCs were constructed to withstand 20 years completely submerged in a challenging meter pit environment, it is easy to see how the rugged design will provide a very long service life when mounted to an elevated tank, pole, building, or inside an office. They are built to operate in extreme temperatures ranging from -40°F to +185°F (-40°C to +85°C) and can easily stand up to a hurricane.



Features and Benefits

- Easy for utility personnel to install
- Quickly provide network coverage to a large subdivision (roughly 96 city blocks)
- Super easy way to read your meters from the office AMI
- Licensed Private Network with low RF interference
- Two-way communications
- Time-Stamped readings and alarms
- Over-the-air remote firmware updates
- End-to-End security
- Hourly usage data
- Data Storage for redundant transmissions
- IP-68 weatherproof enclosure
- Built in duplexer for single antenna
- Near real time alarms
- Easy to add to existing network

Specifications

Dimensions	6.5" x 3.2" x 3.1"
Weight	3 lbs
Mounting Options	Pole or wall mount
Operating Temperature	-40°F to +185°F (-40°C to +85°C)
Enclosure Rating	IP-68
Humidity	0% to 95% non-condensing not including AC power converter or solar package
Operating Power	110VAC, Solar
Surge Protection	3330 joules
Frequency Band	450-470 MHz
Approvals	Part 90, Part 15, Part 22, Part 24, & Part 27 of the FCC rules
Backhaul Options	Cellular
# of Endpoints Served	1,000
Capacity of Read Storage	38,200 reads

LPN DUO COLLECTOR PRODUCT DATA SHEET

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LPN FIXED NETWORK COLLECTOR

We've got you covered.

RG3 Licensed Private Network (LPN) Fixed Network Collectors offer a strategic two-way communications option for smart water and smart gas deployments. Tesla Net LPN operates in the 450-470 MHz frequency band spectrum creating a highly reliable private network with extensive coverage and far-reaching range.



The two-way system incorporates rich security features and is end-to-end upgradable remotely with over-the-air updates. The proprietary LPN RF protocol provides time-synced operations to alleviate network RF collision. Data is time-stamped and mapped to show how it travelled through the network. The result is extremely reliable network coverage.

High-Capacity FNC Base Station and Repeater

Rugged Simplicity LPN Fixed Network Collectors (FNC) can operate as a base station or a repeater depending on internet connectivity. If plugged into Ethernet or connected to WiFi, the FNC is a base station. If not, it is a repeater. FNCs are elegantly designed with only a solid-state transceiver array and a few supporting components. The simplicity of the build makes LPN Fixed Network Collectors affordable, extremely durable, and maintenance free.

Scalability and Performance Depending on antenna installation height, geography, building construction, and land cover, LPN Base Stations and Repeaters can provide a coverage radius of up to 3.5-miles. A single FNC base station can communicate with up to 48,000 endpoints and store 38 million reads. FNC base stations can communicate with up to 12 FNC repeaters within a 10-mile radius. The repeater mode duty cycle limits FNC repeaters to 12,000 endpoints and a capacity of 153,000 reads.

Data Backhaul Ethernet is the preferred backhaul because hardwired connections are the most reliable and the data transfer speed allows utilities to view data in near real time. Wi-Fi is the second preference and offers similar performance. As a backup, stored data is also retrievable manually with a 450 TRX mobile data collector.

Features and Benefits

- Up to 38 Square Miles (3.5 mile radius from tower) of network coverage from a single Fixed Network Collector
- FNC to FNC communication up to 10 miles
- Quickly migrate part or all of your meter system to read from the office AMI
- Licensed Private Network with low RF interference
- Two-way communications
- Time-Stamped readings and alarms
- Two backhaul options
- Over-the-air remote firmware updates
- End-to-End security
- Hourly usage data
- Near real-time alarms
- Data Storage for redundant transmissions
- Point-to-Multi-Point network
- Easy to add Solo Repeaters as coverage needs grow

Specifications

	FNC Base Station	FNC Repeater
Enclosure Dimensions	20" x 16" x 8"	20" x 16" x 8"
Weight	34 lbs	34 lbs
Mounting Options	Pole mount	Pole mount
Operating Temperature	-4°F to +140°F (-20°C to +60°C)	-4°F to +140°F (-20°C to +60°C)
Storage Temperature	-40°F to +185°F (-40°C to +85°C)	-40°F to +185°F (-40°C to +85°C)
Enclosure Rating	NEMA 3R	NEMA 3R
Humidity	0% to 95% non-condensing	0% to 95% non-condensing
Operating Power	110VAC	110VAC, Solar
Backup Battery (UPS)	Yes	Yes
Surge Protection	3330 joules	3330 joules
Frequency Band	450-470 MHz	450-470 MHz
Approvals	FCC Part 90 and Part 15	FCC Part 90 and Part 15
Backhaul Options	Wired (Ethernet/Fiber), Wi-Fi	--
# of Endpoints Served	48,000	12,000
# of Repeaters Served	12	--
Capacity of Read Storage	38,000,000 reads	153,000 reads
Backup Mode Read Retrieval	Yes	Yes

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LPN SOLO REPEATER



We've got you covered.

RG3 Licensed Private Network (LPN) data collectors offer a strategic two-way communication option for smart water and smart gas deployments. The Tesla Net LPN operates in the 450-470 MHz frequency band spectrum creating a highly reliable private network with extensive coverage and far-reaching range.

The two-way system incorporates rich security features and is end-to-end upgradable remotely with over-the-air updates. The proprietary LPN RF protocol provides time-synced operations to alleviate network RF collision. Data is time-stamped and mapped to show how it travelled through the network. The result is extremely reliable network coverage.







LPN Solo Repeater

Big Impact – Small Package LPN Solo Repeaters communicate with Tesla AMI endpoints and LPN Fixed Network Collectors over a Licensed Private Network. Solo Repeaters are typically positioned in areas that have poor nework coverage due to geography or other obstructions. They are installed high enough to overcome the interference caused by the obstruction and relay the endpoint data to an LPN Fixed Network Collector. Solo Repeaters are ideal for communicating with up to 1,000 endpoints within a 1/2-mile radius (approximately 1 sq mile).

Easy Installation Installing a Solo Repeater is as easy as mounting it with the two provided mounting holes and plugging it in. Solo Repeaters come with a cord and power converter to be powered by a standard 110v outlet with ground. If A/C power isn't available, a solar power package can be added to make the Solo Repeater self-contained. They can be screwed to a wall, clamped to a pole, or placed on the back of a street sign or light. Mount it, plug it in, and your done.

Extreme Duty Outside of power options and firmware, Solo Repeaters are identical to Tesla Solo AMI endpoints. They have the same compact 6.5"x 3.2" form factor, fully potted electronics, and are also constructed with a 450-470 MHz LPN transceiver. Since Solo Repeaterss were constructed to withstand 20 years completely submerged in a challenging meter pit environment, it is easy to see how the rugged design will provide a very long service life when mounted to an elevated tank, pole, building, or inside an office. They are built to operate in extreme temperatures ranging from -40°F to +185°F (-40°C to +85°C) and can easily stand up to a hurricane.

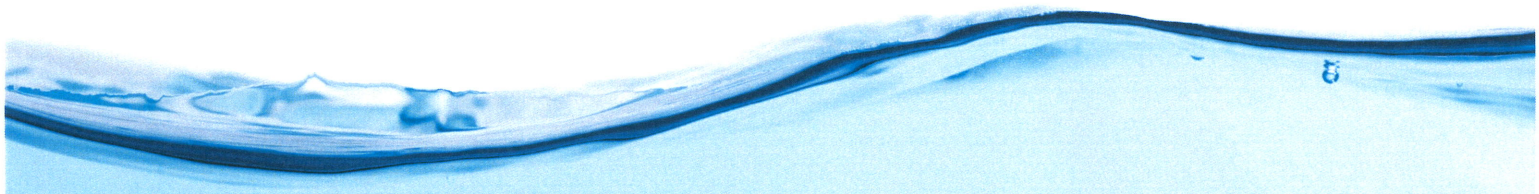


Features and Benefits

- Easy for utility personnel to install
- Quickly extend network coverage to a large subdivision (roughly 96 city blocks)
- Easy way to send meter reads to your office (AMI)
- Licensed Private Network with low RF interference
- Two-way communications
- Time-Stamped readings and alarms
- Over-the-air remote firmware updates
- End-to-End security
- Hourly usage data
- Easy to add to existing network
- IP-68 weatherproof enclosure
- Built in duplexer for single antenna
- Near real time alarms
- Mount it, plug it in & your done

Specifications

Dimensions	6.5" x 3.2" x 3.1"
Weight	3 lbs
Mounting Options	Pole or wall mount
Operating Temperature	-40°F to +185°F (-40°C to +85°C)
Enclosure Rating	IP-68
Humidity	0% to 95% non-condensing not including AC power converter or solar package
Operating Power	110VAC, Solar
Surge Protection	3330 joules
Frequency Band	450-470 MHz
Approvals	Part 90, Part 15, Part 22, Part 24, & Part 27 of the FCC rules
Backhaul Options	--
# of Endpoints Served	3,000



LPN DUO COLLECTOR PRODUCT DATA SHEET

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TESLA SOLO AMI ENDPOINTS FOR WATER

We've got you covered.

Tesla Solo (Solo) AMI water endpoints allow you to read meters from the office. They use a 450-470 MHz transceiver to send and receive information to data collectors over a Licensed Private Network (LPN). They automatically migrate between drive-by AMR and read from the office AMI with no programming. Solos come configured from the factory and do not require any additional setup on site. The plug-and-play design makes them fast and easy to install. The endpoint housing design allows for pit or wall installation with no change in products.



Exceptional Range

Tesla Solo endpoints offer exceptional range, while eliminating network RF signal collision. They can communicate with Tesla Fixed Network Collectors (FNC) up to 3.5 miles away. FNC Repeaters can communicate with FNC Base Stations up to 10 miles. As a general rule of thumb, operating in the 450-470 MHz band affords Solo endpoints 400% more range than that of unlicensed 900 MHz systems.

Greater range to Fixed Network Collectors translates directly into improved coverage. Cost is lowered by reducing the number of FNCs needed to read the meters and performance is raised by increasing the number of successful transmissions to LPN infrastructure.

Long-Term Network Performance

Meter pits tend to fill up with materials that block RF signals. Solo endpoints have a low-profile lid mount design that brings the LPN omnidirectional antenna above the mud, water, and depths of the meter pit environment. Removing the opportunity for the meter pit to block the radio signal generally improves the total range of Solo endpoints by up to 250% over technologies that use antennas built in the register, even if they use the same 450-470 MHz band. The mount in the lid design keeps the antenna above dirt and water that will eventually fill a meter pit which helps maintain network performance over time.

Super-Duty Construction

To ensure a long-life cycle, Solo endpoints are solid state devices built to be completely submerged for their entire service life without danger of water intrusion. They are designed for the toughest environments and extreme temperatures. Firmware can be updated at any time after installation over the air (OTA) for future feature additions and bug fixes.

Encoder Capability

While RG3 offers a battery-free analog encoder and a universal encoder that can retrofit any meter with a removable register, Solo endpoints work with any wired make or model encoder register of any manufacture that use the industry standard UI-1203 communication protocol. They also have the capability to detect most major manufacturer encoder register brands and utilize extended protocols if offered. They are perfect for upgrading older systems from walk-by or drive-by to read from the office AMI.

Long-Life Rugged Design

- IP68 Environmental Rating for the highest protection against the meter pit environment.
- Ultra rugged 100% solid-state design with no moving parts.
- Fully potted, perfectly tuned, high surface area PCB antenna for excellent propagation.
- Mount in lid antenna for increased range and network stability.
- 20-year warranty (10-year full / 10-year prorated).

Migratable Between AMI and AMR

- Solo endpoints automatically migrate between drive-by AMR and read from the office AMI.
- Add a data collector and your system will read AMI from the office.
- If no collector is in range, you can read your system by AMR drive-by.
- 120 days of hourly reads stored in the endpoint for data redundancy.

Two-Way Communication

- Secure, encrypted, true two-way communication provides greater functionality.
- Time synchronous RF protocol expands efficiency.
- On Demand Reads assists in billing inquiries.
- Near real-time alerts and alarms improve customer service.
- Remote Over the Air (OTA) updates increase endpoint and system longevity.

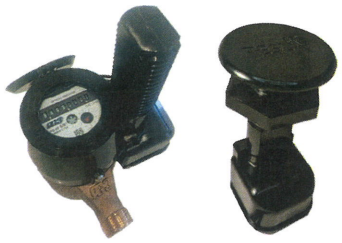
Plug-and-Play Installation

- Solo installation is quick, easy, and requires no programming.
- Endpoints are pre-configured at the factory for immediate deployment.
- No expertise needed. Install, record data, and move on.
- Automatic successful network communication verification after installation.
- Endpoint serial numbers are barcoded to reduce human data errors.

TESLA SOLO

Description

Tesla Solo (Solo) AMI / AMR water endpoints transmit meter data over a point-to-multi-point Licensed Private Network (LPN) in the 450 – 470 MHz band for smart water applications. Tesla Solo endpoints can be used in AMI and AMR applications.



Functionality

Operation: Tesla Solo endpoints communicate with an encoder register to capture and relay interval read data and meter status information over 450 MHz point-to-multi-point Licensed Private Network. Two-way communication provides for time synchronization, on demand reads, over the air firmware updates, and remote shut off valve control. Solo endpoints are designed for AMI fixed network reading while offering AMR drive-by reading with no programming. Solo endpoints can be used in Hybrid AMR / AMI systems and can easily migrate from AMR to AMI.

Activation: Tesla Solo endpoints are shipped in an inactive, non-transmitting state. After installation, the endpoints begin communicating data once the encoder indicates water has been used. Alternatively, a magnet can be used to manually activate the endpoints and verify the encoder connection.

Data Storage: Tesla Solo endpoints store 120 days of hourly data for local data log retrieval.

Output Message: Tesla Solo AMI / AMR endpoints communicate a unique serial number, meter reading data, and applicable status indicators such as flags and alarms.

Application

Read Strategies: Tesla Solo AMI / AMR endpoints can be utilized in a drive-by AMR, fixed network AMI or combination of the two read strategies simultaneously with no programming needed.

Configurations: Tesla Solo water endpoints can be installed in indoor, outdoor and pit lid applications. As with all radio frequency (RF) endpoints of any manufacturer, mounting through or under a metallic pit lid has a negative impact on antenna propagation. Polymer meter pit lids are highly recommended for optimal performance. The electronics and battery assembly are fully encapsulated in epoxy for environmental integrity. The endpoint is available with a connector assembly for ease of installation.

2912 South Access Rd.
Longview, TX 75602
PH: 903-753-3456
Fax: 903-753-5678
RG3METER.COM

Specifications

Approvals	FCC part 90 and part 15
Battery	Non-replaceable D-Cell lithium thionyl chloride with HLC capacitor for extended life
Battery life	20 years[1]
Connection to register	Bare wire (splice), RG3, Nicor or other industry-standard connectors
Data resolution	4–8 digits[2]
Encoder disconnect	An alarm is sent if communication with the encoder is interrupted as in the case of theft or vandalism
Endpoint to endpoint synchronization	< 1 min
Firmware updates	Over the air (OTA) firmware updates can be performed remotely via the LPN or on-site through Tesla Drive software
Inputs	Single or dual port
Installation Locations	Interior or exterior wall mount, pit/vault, through-the-lid[3]
Meter encoder compatibility	All RG3 meter and encoders as well as most major manufacturers of water meters[4]
Meter flags and alarms	Back flow, Tamper, Leak, Major Leak, Diagnostic and Battery Status flags as well as supporting extended flags and alarms from multiple meter manufacturers[4]
Meter interface	Pulse or Encoder
Network compatibility	Tesla Net
Network type	Two-way[5]
Network topology	450 - 470 MHz Licensed Private Network (point-to-multi-point)
On-board storage	120 days of hourly readings – per port
Operating humidity	0%-100% non-condensing
Operating temperature	-40° to 185°F (-40° to 85°C)
Physical characteristics	Height 6.5″ Width of Threads 1.8″ Width of Cap at Threads 1.98″ (2-1/8″ pit lid hole required) Dimensions of Base 3.2″w x 3.1″ d Weight: 1 lb Color: black
Remote shut-off	Open, close, partially closed – controlled from Tesla MDM or Tesla Drive software[6]
Security	AES 256 encryption and authentication
AMI read transmission resolution	Hourly
AMI read transmission interval	15 minutes
AMI Major Leak alarm transmission	Immediate
Warranty	20 years[1, 7]

[1] Battery life warranty invalid if product is stored more than 1 year before installation and activation
[2] Reports all digits that are electronically available from register
[3] Pit/vault installation best performance under non-metallic lid
[4] Contact factory for specific meters and flags/alarms supported
[5] Two-way communication for time synchronization, remote configuration, on-demand reads, historical data log retrieval, valve control, and firmware over the air (OTA) updates
[6] Contact factory for specific valves supported
[7] Refer to RG3 standard warranty for details

2912 South Access Rd.
Longview, TX 75602
PH: 903-753-3456
Fax: 903-753-5678
RG3METER.COM

SoloSS12241

Town of Jerome

Addendum to the Request for Proposals for

Advanced Metering Infrastructure System

Please take note that due to an irregularity discovered, most notably with the submission deadline, proposals will be accepted until **Monday, December 1, 2025, at 5:00 p.m AZST.**

Furthermore, there will be **no surety bond requirement upon submission**.

No proposals submitted have been reviewed yet. If you have submitted a proposal and would like to use this extra time to resubmit, please advise Town Manager Brett Klein that you are resubmitting. Otherwise, your previously submitted proposal will be honored.

For questions regarding the RFP, timeline and administrative issues, please contact Brett Klein at: b.klein@jerome.az.gov

For technical questions please contact Public Works Director Marty Boland at m.boland@jerome.az.gov or (520) 904-5272

For a listing of current meters, please contact Michele Sharif at m.sharif@jerome.az.gov or (928) 634-7943

Thomas Otto
Utility Solutions Specialist
Mobile: 623-734-6115

Town of Jerome, Arizona

Advanced Metering Infrastructure (AMI) System Proposal

Submitted by: Ferguson Waterworks | Intelligent Utility Solutions
Date: Nov 5, 2025

Thomas Otto
Utility Solutions Specialist
Mobile: 623-734-6115

Cover Letter

Dear Mr. Klein,

Ferguson Waterworks is pleased to submit our proposal for the Town of Jerome's Advanced Metering Infrastructure (AMI) System. We appreciate the opportunity to support the Town's transition to a modern, reliable, and scalable metering system. This proposal reflects Ferguson's commitment to providing high-quality solutions built upon Neptune Technology Group's proven AMI platform.

The proposed Neptune AMI system is fully compatible with Jerome's current Sensus meters and offers flexibility through both AMR (drive-by) and AMI (fixed network) configurations. Additionally, Ferguson can provide cellular connectivity through Neptune's multicarrier cellular network for locations outside the primary coverage area.

We welcome the opportunity to review the Town's current metering configuration and discuss how our integrated approach can enhance efficiency, reduce water loss, and improve customer service.

Respectfully,

Thomas Otto
Utility Solutions Specialist
Ferguson Waterworks | Intelligent Utility Solutions
Mobile: 623-734-6115

Thomas Otto
Utility Solutions Specialist
Mobile: 623-734-6115

Executive Summary

The Town of Jerome seeks to replace its aging water meter system with a modern AMI platform capable of accurate, real-time metering data and improved operational efficiency. Ferguson Waterworks, in partnership with Neptune Technology Group, proposes a fully integrated Neptune AMI solution utilizing multicarrier cellular connectivity, Neptune 360 software, and the My360 customer engagement portal. This system will ensure Jerome's water utility remains sustainable, scalable, and adaptable for decades.

System Description and Technical Response

Ferguson proposes the Neptune T-10 mechanical meter line paired with the R900i multi-carrier cellular integrated AMI endpoint. This combination provides accurate, maintenance-free performance and supports both fixed-network AMI and mobile AMR collection modes.

The Neptune AMI system uses multicarrier cellular communication to transmit data securely to the Neptune 360 head-end software, ensuring reliable coverage and minimizing infrastructure costs. The system supports over-the-air firmware upgrades, two-way communication, and data redundancy for high reliability. All transmitted data is encrypted and compliant with AWWA and NIST cybersecurity standards.

The proposed solution integrates directly with the Town's Caselle billing software via standard API interface.

Customer Portal and Analytics

Neptune's My360 portal provides Jerome residents access to detailed water usage information, leak alerts, and customized notifications. Utility staff and customers share synchronized data views for improved transparency. My360 allows consumption exports in CSV format and includes options for email and text-based alerts.

Implementation and Training

The Town of Jerome's deployment is expected to be completed within six months of the Notice to Proceed. Ferguson will coordinate closely with the Town's public works and finance teams to minimize disruption.

Training will be provided by Neptune-certified trainers and will include classroom and field sessions. Web-based refresher training and system update sessions are also included.

Stage 1

Kickoff Meeting
Completion Date – Beginning of project

Stage 2

File Validation
Start Date – Beginning of project

Thomas Otto
Utility Solutions Specialist
Mobile: 623-734-6115

Projected Completion Date – typically 1 month

Stage 3

Software Provisioning
Start Date – end of stage 2
Projected Completion Date – typically 1-3 days

Stage 4

Training
Start Date – end of stage 3
Projected Completion Date – typically 1-3 days

Stage 5

Project Closeout
Completion Date – typically 2 months from kickoff

Warranty and Support

Neptune's MACH 10 meters include a 20-year prorated warranty (first 10-years full, remaining 10-years prorated), and endpoints are covered for up to 20 years, including communication performance. Ferguson provides local technical support, warranty coordination, and system performance monitoring.

Fee Proposal

Item No.	Description	Est. Qty.	Units	Unit Price	Total Price
1	¾ x 5/8" AMI Meter	299	299	$446.00	$133,354.00
2	1" threaded AMI Meter	17	17	$646.00	$10,982.00
3	1 ½" flanged AMI Meter	13	13	$1,073.00	$13,949.00
4	2" AMI Meter	2	2	$1,306.00	$2,612.00
5	4" AMI Meter	1	1	$4,340.00	$4,340.00
6	AMI System Software - Annual Subscription	332 per year	332	$25.00	$8,300.00
7	AMI System Training	1	1	$7,555.00	$7,555.00
8	AMI Data Collection Hardware/Software	1	0	$-	$-
9	FCC Registration	1	0	$-	$-
	Optional Services				
	Meter Install 3/4 - 1"	316	316	$175.00	$55,300.00

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Mobile: 623-734-6115

	Meter Install 1.5" - 2"	15	15	$350.00	$5,250.00
	Meter Install 4"	1	1	$1,000.00	$1,000.00
	3/4" & 1" Pitbox Excavation, Removal & Reset Excavation for pit boxes with obstructive debris and soil, to create a clean, accessible environment for meter installation. Required for meter installations exceeding one pit box or reachable depth or pit boxes set on top of water meter connection fittings	Est. 20%	66	$125.00	$8,250.00
	*Any product not listed above is offered at 25% off list price				
	List price is twice Ferguson cost				
	Grand Total (includes optional installs)				**$250,892.00**
	Estimated 20 year cost				
	Initial cost		1		$250,892.00
	Year 2		1		$8,549.00
	Year 3		1		$8,805.47
	Year 4		1		$9,069.63
	Year 5		1		$9,341.72
	Year 6		1		$9,621.97
	Year 7		1		$9,910.63
	Year 8		1		$10,207.95
	Year 9		1		$10,514.19
	Year 10		1		$10,829.62
	Year 11		1		$11,154.51
	Year 12		1		$11,489.14
	Year 13		1		$11,833.82
	Year 14		1		$12,188.83
	Year 15		1		$12,554.49
	Year 16		1		$12,931.13
	Year 17		1		$13,319.06
	Year 18		1		$13,718.64
	Year 19		1		$14,130.19
	Year 20		1		$14,554.10
	Assumes 3% CPI Increase each year				

Thomas Otto
Utility Solutions Specialist
Mobile: 623-734-6115

	Annual increase will be based on CPI, capped at 5%				
	Total				**$465,616.11**

Total (20 year): Four Hundred Sixty-five Thousand Six Hundred Sixteen Dollars and Eleven Cents.

Appendices and References

Cottonwood, City of

Mike Traynor: mtraynor@cottonwoodaz.gov

Neptune AMI system and meter installs, project expected to end December 2025

Approx 5K total services

Chandler, City of

Chase Price: chase.price@chandleraz.gov

Converted existing Neptune AMR system (2005 – 2024) to Neptune AMI system (2024 – 2025).

Approx 95K total services

Wickenburg, Town of

Matt Egan: megan@wickenburgaz.gov

Turn-key system install in 2016 to convert walk by system to drive by system with AMI in Wickenburg Ranch. Awarded contract October 2025 to convert remaining system to AMI.

Approx 3K total services

PROPOSAL DOCUMENTS

The following documents and information requested thereon are required to be submitted with your proposal.

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

None

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by Ferguson Wateworks,

a corporation organized under the laws of the State ~~of Arizona,~~ Virginia a partnership consisting of _____

_____, or an individual trading as _____ of the

City of _____, and holder of Arizona State Contractor's License(s):

Classification(s) _____

No.(s) _____

Respectfully Submitted,

Ferguson Waterworks

Respondent

8314 E Long Mesa Dr, Prescott Valley, 86314

Address

Thomas Otto, Utility Specialist

By (Officer & Title)

November 5, 2025

Date

ATTEST:

Thomas Otto, Utility Specialist

(Officer and Title)

_____

Witness (if respondent is an individual)

Town of Jerome

Proposal Document B – Fee Proposal

Respondent Ferguson Waterworks

Mailing Address 8314 E Long Mesa Dr, Prescott Valley, 86314

City _____ State _____ Zip _____

Telephone 623-734-6115

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

REQUIRED FOR SUBMITTAL

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 5/8” AMI Meter	299			
2	1” threaded AMI Meter	17			
3	1 ½” flanged AMI Meter	13			
4	2” AMI Meter	2			
5	4” AMI Meter	1			
6	AMI System Software	1			
7	AMI System Training	1			
8	AMI Data Collection Hardware/Software	1			
9	FCC Registration	1		$0	
SUBTOTAL COSTS – BASE PROPOSAL					
GRAND TOTAL, BASE PROPOSAL				See enclose fee schedule	

GRAND TOTAL – BASE PROPOSAL (in words):_____

_____

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor’s convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Ferguson Waterworks

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 30th day of October 2025.

Signature

623 734 6115
Phone Number

Thomas Otto
Written Name

Thomas.otto@ferguson.com
Email Address

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Ferguson Waterworks

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 30th day of October 2025.

Signature

623-734-6115
Phone Number

Thomas Otto
Written Name

Thomas.Otto@ferguson.com
Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Ferguson Waterworks

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 30th day of October 2025.

Signature

623-734-6115
Phone Number

Thomas Otto
Written Name

Thomas.Otto@ferguson.com
Email Address

Subcontractor Submittal for optional install.

Town of Jerome

Advanced Metering Infrastructure (AMI) System – Implementation Project

Created by:

Phoenix Water Solutions
1606 E University Dr Suite 109
Phoenix, AZ 85034
(602) 445-3943

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Phoenix Water Solutions RFP Installation Overview

Town of Jerome – Advanced Metering Infrastructure (AMI) System Implementation Project

Phoenix Water Solutions (PWS) has prepared this installation proposal in support of the Town of Jerome's Advanced Metering Infrastructure (AMI) System Implementation Project.

Our team is prepared to perform all installations and related work to successfully replace 332 existing water meters with new AMI-enabled meters, as outlined in the Town's RFP. The scope includes pit box excavation, meter removal, installation, endpoint mounting, programming, all data points captured in the field and provided to the TOJ.

We recognize the unique conditions of Jerome's hillside topography and aging infrastructure and bring to this project a highly qualified installation workforce with proven experience in municipal AMI deployments across Arizona and California.

Field Capabilities

Our experienced field technicians are proficient in residential and commercial meter installation and have been specifically prepared for the scope and conditions of the TOJ meter upgrade project. Core capabilities include:

- Installation of ¾" through 4" water meters
- Debris cleanout and pit box restoration
- Endpoint and antenna integration (through lid or bottom mount)
- Meter programming
- Meter box adjustments for accessibility
- Plumbing reconnections and adjustments (e.g., valve access, service line positioning)
- Real-time field documentation, including GPS location, time stamps, and before/after photos

All installations are completed in accordance with manufacturer specifications, TOJ technical standards, and internal quality control protocols. PWS will support in ensuring full data integrity and compliance for project reporting, inspections, and federal funding guidelines (including WIFA funded requirements).

Site Familiarity & Pre-Bid Understanding

Phoenix Water Solutions (PWS) has thoroughly reviewed the Town of Jerome Advanced Metering Infrastructure (AMI) System RFP, including all technical specifications, and compliance requirements.

Our team has extensive experience performing meter upgrade projects in rural communities with similar characteristics—rocky terrain, historic infrastructure, and varying conditions of service lines. Based on our precon assessment with Town of Jerome field staff we understand and anticipate the following field conditions throughout the project duration:

- Varying types of meter boxes and sizes
- Legacy service line materials
- Metered locations vary throughout the town with pit boxes on hillsides and areas requiring coordinated access
- Excavation and restoration requirements across certain residential & commercial service locations

We are fully prepared to adapt in the field and escalate concerns as needed through the proper communication channels defined by the Town of Jerome.

Full-Scope Installation Delivery

Phoenix Water Solutions delivers a turnkey field operation for this scope.

- No subcontracted labor – all crews are in-house & trained with varying years of experience
- Designated field supervisors are assigned to oversee all activities
- Quality Assurance is built into our bid and install process
- Our backend administrative team tracks production, submits reporting, and assists in daily recordkeeping

We are fully equipped to support Change Order procedures if needed for additional repairs or work outside the defined bid items when pre-approved by the Town of Jerome.

Service Agency & Service Agents

As a fully registered and licensed contractor in the state of Arizona, Phoenix Water Solutions is uniquely positioned to deliver high-quality, fully compliant utility infrastructure services for municipal, district, and public agency clients across the state. Our qualifications, certifications, and in-house capabilities not only meet—but exceed—the expectations set forth for public works contractors in Arizona.

Regulatory Compliance & Licensing

PWS holds a valid Arizona Registrar of Contractors license for CR-37 (Plumbing) under license number ROC #339119. We are fully registered with the Arizona Corporation Commission and maintain active status with all required state and municipal licensing authorities.

PWS is a Registered Service Agency with the Arizona Department of Weights and Measures (AZDWM), ensuring that all metering services we perform—including removal, installation, calibration, and testing—are legally authorized, traceable, and compliant with Arizona state standards.

These credentials reflect our unwavering commitment to regulatory adherence, technical accuracy, and public accountability.

Certified Service Agents & Metering Expertise

PWS employs certified service agents and technicians trained in the installation, replacement, and maintenance of water, BTU, and electric meters. Our staff are familiar with a wide variety of AMI and AMR technologies, endpoint integrations, and service line plumbing repairs.

Our technicians undergo routine field and safety training to ensure alignment with:

- ADOSH (Arizona Division of Occupational Safety and Health) safety and confined space standards
- Equipment-specific manufacturer specifications
- Local utility and water agency protocols, GIS documentation, and meter data formats

In-House Workforce Model

PWS performs all installations using in-house, full-time employees—not subcontractors. This model allows for:

- Greater control over quality, schedule, and documentation

- Professionalism and consistency across job sites
- Streamlined issue resolution and reduced delays

Our crews are uniformed, background-checked, and trained to uphold strict jobsite standards with minimal disruption to customers.

Integrated Turnkey Delivery

With a deep understanding of metering infrastructure, PWS offers a turnkey service model that includes:

- Project mobilization and workforce deployment
- Field data capture (serial numbers, photos, GPS, and field notes)
- Component replacement (boxes, lids, valves)
- Quality control and warranty-backed labor
- Digital transmittals and reporting in agency-requested formats

Whether performing 500 meter retrofits or replacing tens of thousands of meters under an AMI upgrade, PWS delivers clean, consistent, and fully documented work across all phases of the project.

Trusted by Utilities & Districts Across Arizona

With a focus on quality, reliability, and long-term infrastructure outcomes, PWS has become a trusted partner for metering projects statewide. Our licensing, internal systems, and field-tested workforce make us a strong fit for any public agency or utility seeking a contractor who understands the regulatory, logistical, and technical demands of utility service installation work.

Process to Complete Work

Proposed Work Plan and Approach

Phoenix Water Solutions (PWS) will provide professional services for the replacement of all water meters and transmitters in support of the Town of Jerome AMI System Upgrade Project.
This involves the replacement and activation of approximately 332 existing water meters ranging in size from ⅝”×¾” to 4”.
PWS will carry out all field installation activities well within the 180 calendar days required from Notice to Proceed (NTP), adhering to typical project working hours of 7:00 AM to 5:00 PM, Monday through Friday, excluding Town-observed & Federal holidays. Our team will work directly with the selected AMI vendor to ensure accurate installation, data verification, and seamless transition of data into the Town’s Caselle billing software.

Timeline, Rate of Production & Staffing Plan

Based on the Town of Jerome’s system size, variances in meter locations, and project requirements, PWS anticipates the following staffing plan & installation timeline:
Deployment Timeline

- Total Working Days: ~15-25
- Total Calendar Days: ~30-45 days from Notice to Proceed
- Estimated Daily Output: 11–16 meters installed per technician per day (depending on access, topography, and meter size)

This timeline accounts for the total of 332 meter replacements, with additional time allotted for cleanouts, service line repairs, or extended scopes of work.

Estimated Production Rates

- Production will vary slightly based on terrain, meter box accessibility, and property types (residential vs. commercial)
- Installations will be executed in logical route phases to minimize disruption, ensure efficient crew movement, and support coordination with the Town’s staff.
- Each meter will be activated and verified for data transmission prior to completion.

Project Completion Accounts For

- Locating and access due to Jerome’s hillside topography
- Cleanout and/or pit box adjustments for accessibility to valve and meter unions
- Restoration of ground surfaces
- GPS and photo documentation for each data point collected
- Final QC checks and weekly close out reviews coordinated with AMI Vendor and TOJ

All records will be compiled into daily and weekly progress reports shared with project manager. PWS will also support final punch list completion and assist with warranty documentation handoff at project close-out.

Deployment Team

Project Manager – Oversees overall planning, scheduling, and reporting of field activities. The Project Manager ensures proper documentation, monitors productivity metrics, coordinates any field change requests, and maintains close communication with TOJ and the AMI contractors' management team to ensure compliance throughout our execution.

Field Supervisor – Provides daily leadership in the field and technical oversight, ensuring safety procedures, meter install specs, and data capture standards are met. The supervisor verifies proper meter installation, endpoint activation, and documentation, while coordinating any issue resolution with the Town of Jerome.

2–3 Field Technicians per Crew – Responsible for meter installations, endpoint activation, and data collected for each location. Crews are trained to handle minor plumbing repairs, cleanouts, and site restoration. Technicians are trained in confined-space safety and public interaction to ensure minimal disruption to residents and businesses.

Support Technicians (as needed) – Deployed to assist with specialized field tasks, rework, or punch list completion, and to maintain schedule adherence.

PWS's deployment model includes flexibility for scaling manpower to match project pacing and to accommodate factors such as terrain challenges, weather, or unforeseen conditions—ensuring consistent productivity and quality-driven outcomes from start to finish.

Installation Protocol

1. Pre-Inspection & Documentation
    - Conduct a visual inspection of the meter box and surrounding infrastructure
    - Photograph and log conditions of piping, valves, fittings, boxes, and meter reads
    - Note any discrepancies or variances at each location
2. Meter Changeout
    - Remove existing meter and return to Town per requirements
    - Install new meter level and aligned
    - Mount endpoint and verify data transmission
    - Backfill and clean site; confirm box is flush with grade
3. Post-Installation Verification
    - Record and submit the following at each location:
        - Address
        - Old and new serial numbers
        - Old final meter read
        - New IMR

- Date/time of installation
- Arrival and departure photos
- Valve position

4. RTU & Damage Handling
    - Document and report inaccessible or unsafe sites
    - Notify Town of Jerome of any property damage and coordinate repairs immediately

All removed materials will be returned to Town of Jerome at the designated location. Any supplemental scopes such as curb stop replacement, pit box resets, storage & staging will be handled by PWS on a case-by-case basis and priced separately, as they are excluded from our base bid. These items will be coordinated directly with the Town of Jerome well in advance of their occurrence.

Quality Control & Project Oversight

PWS integrates quality assurance into every stage of field execution to ensure full compliance with contract standards and expectations:

- **Daily Supervisor Checks**: Field supervisors will validate install quality, safety protocols, and documentation completion
- **Weekly QA Reviews**: Completed installs will be audited for compliance and data accuracy
- **Photo Validation**: All meter reads and endpoint/transmitter pairings must be verified against digital photos
- **Issue Escalation & Rework**: Any site failing inspection or data transfer will be flagged for rework
- **Endpoint Verification**: Units that fail to transmit properly to the AMI network will be reprogrammed, repositioned, or replaced as directed

Work Order Management & Data Handling

Phoenix Water Solutions (PWS) utilizes a cloud-based digital system to collect, organize, and submit all installation data in real time. This ensures compliance with the Town of Jerome's documentation standards while supporting efficient communication, progress tracking, and project oversight.

Key capabilities include:

- Daily uploads of installation data from the field
- Dashboards showing installation status, exceptions, and photos
- Data export in approved formats for import into Caselle
- Long-term storage of installation data (photos, GPS, meter reads) for at least 12 months post-completion
- Meter and endpoint installation logs
- Before-and-after photo documentation
- GPS coordinates and timestamps
- Serial numbers and field notes linked to each service address

- Endpoint signal verification reports
- Compatibility with the AMI vendor's digital record-keeping system and the Town's Caselle billing software for seamless work order processing and audit tracking

This digital documentation process ensures accuracy, transparency, and efficiency from field installation to project closeout, allowing the Town of Jerome to monitor installation performance in real time.

Exception & Damage Reporting

All inaccessible or obstructed sites, as well as discovered damaged or corroded valves, meter boxes, or service lines, will be thoroughly documented with photographic evidence and promptly reported to Town representatives.

PWS will not independently perform corrective actions outside the approved scope without direction from the Town.

This process protects the Town's liability and ensures alignment with established procedures.

All reported exceptions will include:

- Description of issue and location
- Supporting photo documentation
- GPS coordinates and timestamp
- Recommended next steps or required approvals

Inventory Tracking & Management

PWS will maintain detailed inventory control of all supplied materials (meters, gaskets, washers, valves, lids, boxes, and related components) from the time of checkout at the designated staging area until successful installation or approved return.

Daily inventory documentation will include:

- Detailed logs of materials used, returned, or remaining in possession
- Notification and return of damaged, defective, or excess materials
- Daily reconciliation reports submitted to support transparency and accuracy
- Secure storage and tracking of all provided materials to prevent loss or misallocation

Warranty & Customer Satisfaction

All workmanship performed by Phoenix Water Solutions (PWS) is backed by a 12-month warranty from the date of installation.

Covered at no charge:

- Installation related leaks, data transmission issues, or faulty fittings/gaskets

Response time:

- All end-user or Town-reported concerns will be acknowledged same business day
- A field technician will be dispatched within 24 hours to assess and resolve the issue

Escalations:

- Issues beyond the defined scope will be elevated through the project manager and coordinated with the Town under standard utility procedures

Documentation:

- All warranty visits will be logged with photographs, corrective actions, and confirmation of completion for recordkeeping

Post-warranty support:

- PWS remains available to assist with ongoing service or maintenance needs beyond the warranty period

Communication & Management Process

As a key subcontractor, PWS will align its communication strategy with all Town of Jerome requirements regarding documentation, scheduling, reporting, and field visibility.
Our approach ensures clear, timely, and accurate communication; seamless coordination with project management team; and real-time visibility into field progress and installation quality. This plan defines our strategies for documentation, meetings, and reporting to maintain a strong working relationship and keep the project on schedule.

Customizable Dashboards

Pre-Construction Coordination

- PWS will participate in the pre-construction meeting with AMI vendor and the Town of Jerome to review project requirements, safety expectations, and coordination protocols.
- All required submittals, safety plans, and work schedules will be submitted for review and approval prior to field mobilization.
- Property access coordination will be managed in collaboration with the Town, ensuring all service locations are verified before installation begins.

Daily Updates

- Number of meters installed (by size and location)
- RTUs, communication issues, or exceptions encountered (with supporting photos)
- Site-specific conditions affecting installation or scheduling
- Inventory usage and field material status
- Any safety or customer-related incidents encountered in the field

Weekly Reporting

- Installation summary and progress status
- RTU and exception reports
- QA/QC verification records
- Inventory reconciliation and material usage logs
- Summary of completed vs. pending service locations

Progress Meetings

- PWS will attend weekly progress meetings with the Town of Jerome to review ongoing activities and resolve open issues.

- Discussion topics will include:
  - Weekly lookahead schedules
  - Site-specific challenges or access limitations
  - Material tracking and inventory review
  - QC review and resolution of flagged items
  - Coordination of public notifications or traffic control

Daily Check-Ins

PWS On-Site Supervisors will conduct daily field briefings with the installation crews to confirm:

- Installation goals and planned routes for the day
- Utility or customer-related concerns raised by field staff
- Updates on defective legacy materials at service locations
- Adjustments to crew assignments or schedules as needed

Customer & Property Owner Notification

Phoenix Water Solutions (PWS) understands that property owner notifications—such as door hangers, call centers, or access permission forms—are not currently part of the base installation scope. However, should the Town of Jerome require this support, PWS is fully capable of assisting with notification efforts upon request and will price these services accordingly.

This includes, but is not limited to:

- Distribution of door hangers prior to and after meter replacement
- Delivery of 48-hour advance notices to affected residents and businesses
- Collection of signed access permission forms for meters located outside public rights-of-way

All notices and templates will be coordinated with and approved by the Town of Jerome before use if this responsibility is assigned to PWS during the course of the project.

Adherence to Project Standards & Practices

- **Materials Handling:**
  All materials provided by the Town of Jerome will be handled and installed per manufacturer specifications and Town requirements. Any discrepancies, damage, or shortages will be immediately documented and reported for direction.
- **Professional Execution:**
  All installation work will be performed efficiently, safely, and respectfully, with full attention to

site preservation and community impact. Ground disturbances, meter box adjustments, and restoration areas will be restored to their original or improved condition, maintaining property appearance and public safety.

Tailored Metrics & Delivery

- If additional data fields or reporting formats are required by the Town of Jerome, PWS can promptly adjust field documentation and reporting templates to meet specific project needs.
- PWS's digital workflow system allows for on-demand customization of installation logs, photo reports, and progress dashboards for greater transparency.

Client-Specific Goals

- Regular communication ensures that PWS's field performance, documentation standards, and reporting schedules stay fully aligned with project oversight and the Town's operational priorities.
- Adjustments to production pacing, data formatting, or field scheduling can be made to address unique site conditions or Town preferences.

Installation Pricing

Town of Jerome

Advanced Metering Infrastructure (AMI) System

– Implementation Project

Phoenix Water Solutions, LLC
1606 E University Dr Ste 109
Phoenix, AZ 85034
(602) 962-9348

Service Address
Town of Jerome
600 Clark St
Jerome, Arizona 86331

Description	Price	QTY	Subtotal
3/4" Meter & Endpoint Installation Pre- and post-install visual inspection of meter box, piping, and fittings Removal of existing meter and return to Town-designated location Installation of new Endpoint & meter, level and aligned per spec Documentation of: Old meter read and serial number Endpoint/transmitter/MTU number New meter serial number and install timestamp Address, GPS, & Route Photo documentation of install and surrounding condition Site cleanup, backfill, and restoration to pre-construction condition	[redacted]	299	[redacted]
1" Meter & Endpoint Installation Pre- and post-install visual inspection of meter box, piping, and fittings Removal of existing meter and return to Town-designated location Installation of new Endpoint & AMI meter, level and aligned per spec Documentation of: Old meter read and serial number Endpoint/transmitter/MTU number New meter serial number and install timestamp Address, GPS, & Route Photo documentation of install and surrounding condition Site cleanup, backfill, and restoration to pre-construction condition	[redacted]	17	[redacted]

1.5" Meter & Endpoint Installation Pre- and post-install visual inspection of meter box, piping, and fittings Removal of existing meter and return to Town-designated location Installation of new Endpoint & AMI meter, level and aligned per spec Documentation of: Old meter read and serial number Endpoint/transmitter/MTU number New meter serial number and install timestamp Address, GPS, & Route Photo documentation of install and surrounding condition Site cleanup, backfill, and restoration to pre-construction condition Flange Kits, Nuts, Bolts, etc. excluded	[redacted]	13	[redacted]
2" Meter & Endpoint Installation Pre- and post-install visual inspection of meter box, piping, and fittings Removal of existing meter and return to Town-designated location Installation of new Endpoint & AMI meter, level and aligned per spec Documentation of: Old meter read and serial number Endpoint/transmitter/MTU number New meter serial number and install timestamp Address, GPS, & Route Photo documentation of install and surrounding condition Site cleanup, backfill, and restoration to pre-construction condition Flange Kits, Nuts, Bolts, etc. excluded	[redacted]	2	[redacted]
4" Meter & Endpoint Installation Pre- and post-install visual inspection of meter box, piping, and fittings Removal of existing meter and return to Town-designated location Installation of new Endpoint & AMI meter, level and aligned per spec Documentation of: Old meter read and serial number Endpoint/transmitter/MTU number New meter serial number and install timestamp Address, GPS, & Route Photo documentation of install and surrounding condition Site cleanup, backfill, and restoration to pre-construction condition Flange Kits, Nuts, Bolts, etc. excluded	[redacted]	1	[redacted]
	Total		[redacted]

Appendix A – Installation Scope Summary

Phoenix Water Solutions | Town of Jerome AMI Project

Phoenix Water Solutions has been actively engaged with the Town of Jerome project since early 2025, conducting a preliminary field review and coordination with the Town's water operator to assess existing conditions and meter configurations throughout the system. This early involvement has allowed PWS to develop a strong understanding of the Town's infrastructure, terrain, and site access considerations, ensuring that our installation pricing and schedule are grounded in real field data rather than assumptions.

Our team has completed thousands of meter retrofits and replacements for municipalities, utilities, and national REITs. PWS specializes in turnkey meter installation and deployment. Our team has worked with all major metering models and capable of installing and commissioning all major AMI platforms

Primary Scope of Work

- Removal of existing meters at designated service locations.
- Installation and alignment of new AMI meters and endpoints per manufacturer requirements.
- Endpoint programming and data entry into head-end system or handheld device as applicable
- Comprehensive Field documentation
- QC inspection and turnover package at each service (photos, install sheets, exception logs).
- Coordination with the selected system provider for testing, verification, and system integration

Ancillary & Variable Scope Items

The following item has been identified as a variable add-on to the base installation scope:

- Pit Box Excavation & Replacement:
  If access to valve/curb stop or meter unions are obstructed due to buried, deteriorated, or misaligned boxes, PWS will excavate, remove, and re-install pit boxes as needed to complete the meter changeout.
    - This would be billed on a unit rate basis and only performed with prior written approval from the distributor and/or Town of Jerome project lead.

Variable Item	Price
3/4" & 1" Pitbox Excavation, Removal & Reset Excavation for pit boxes with obstructive debris and soil, to create a clean, accessible environment for meter installation. Required for meter installations exceeding one pit box or reachable depth or pit boxes set on top of water meter connection fittings	[redacted]

Additional Support Services Available

The following optional services can be provided by PWS upon request:

- Meter box and lid replacements
- Lid drilling
- Temporary bypass connections
- Curb & angle stop replacement
- Service line repair or replacement
- Sawcut asphalt/concrete
- Call center services
- Resident notifications

PWS Commitment to Safety & Quality

At Phoenix Water Solutions (PWS), safety, quality, and professionalism are the cornerstones of our field operations. Every project—regardless of size or scope—is executed in strict compliance with Arizona Division of Occupational Safety and Health (ADOSH) standards, best practices in environmental management, and rigorous internal quality control protocols.

ADOSH Compliance & Field Safety

PWS prioritizes full compliance with Arizona's Division of Occupational Safety and Health (ADOSH) for all jobsite activities. Our team members receive ongoing training and certification in:

- Confined space entry and ventilation protocols
- Hazardous material awareness and environmental protections
- Personal protective equipment (PPE) usage and safety protocol adherence
- Lockout/tagout procedures and emergency response

Confined Space Safety

Large meter work, vault access, and enclosed spaces are handled by three-person crews trained in confined space entry.

- Required safety equipment includes tripods, air quality monitors, confined space ladders, and ventilation tools.
- Respiratory protection and rescue protocols are followed per ADOSH confined space requirements.

Comprehensive Employee Safety Training

PWS enforces a documented health and safety policy led by a dedicated Safety Coordinator. Our employee training program includes:

- Basic Safety Training: Hazard recognition, emergency action plans, bloodborne pathogens, and fire prevention
- Field Safety: Ladder safety, power tool operation, mobile equipment use, and heat stress prevention
- Ongoing ADOSH Certification & Refreshers: Updated training on confined space entry, traffic control, and PPE

Quality Control & Installation Best Practices

PWS follows a standardized and documented installation process that ensures high-quality work and strict adherence to project specifications.

Pre-Installation Assessment

- Identify and document landscaping, traffic, meter box conditions, and service line material before beginning work.
- Proactively address potential obstacles to prevent unnecessary delays or service disruptions.

Installation & Quality Assurance

- Technicians follow a step-by-step documented procedure to ensure all meters are installed correctly.
- Leak-checks, AMI/AMR endpoint verification, and field site cleanup are conducted at every installation site.
- Experienced in working with various service line materials including copper, galvanized steel, ductile iron, and PVC.

Post-Installation Verification

- Before-and-after photo documentation
- Meter readings and serial number confirmation
- Before-and-after site documentation, including photographs and GPS data for complete tracking and accountability.

Project & Data Management

PWS ensures seamless integration between installation crews, project oversight teams, and utility systems through advanced project and data management tools.

- On-Site Project Management: PWS will assign an on-site manager(s) responsible for project staffing & installation oversight, customer complaint resolution & emergency response, appointment scheduling & inventory control, and daily quality control audits & compliance reporting.
- PWS-ITS Work Order Management System: PWS utilizes its Installation Tracking System (PWS-ITS) to manage and track all meter change-out programs.

  Key Features of PWS-ITS:

  - Centralized Data Management: Tracks meter locations, make, model, serial number, and installation status.
  - Real-Time Quality Control: Captures installation data, including accuracy test results and leak detection logs.

- Photo & Document Storage: Logs images for quality assurance and work validation.
- Seamless Data Integration: Automatically transfers data to the Utility's billing software and GIS mapping system.

Customer Service Commitment

PWS prioritizes professional, ethical, and customer-focused service in all installation projects.

- Customer Communication & Scheduling: Flexible scheduling for commercial and multi-family properties, minimizing service disruptions. Coordination with municipality & customers for complex meter replacements requiring extended service shutdowns. 24/7 emergency response availability and after-hours contact support.
- Professionalism & Trust: Technicians wear PWS-branded uniforms and carry photo ID badges. Vehicles clearly marked with company name and contact information. PWS enforces a documented Code of Conduct across all employees. Comprehensive background checks and drug testing for all employees.

Installation Warranty & Follow-Up

- All labor is covered under a 12-month workmanship warranty
- Any post-installation issues caused by meter replacement will be corrected at no cost
- PWS provides 24/7 contact availability for urgent follow-ups during the project

Equipment & Resource Readiness

PWS equips all employees with specialized tools and safety equipment necessary to complete meter installations efficiently and safely.

Standard Equipment & Tools

- Fleet vehicles equipped with lifts, safety lights, and company branding
- Personal Protective Equipment (PPE), confined-space safety tools, and traffic safety gear
- Portable meter testing benches
- Hand and power tools for cleaning meter boxes, removing stubborn fittings, and securing new installations
- Vacuum pumps and air blowers for flooded meter boxes
- Valve keys, lid lifters, and generators

Hiring & Employment

PWS is committed to maintaining a workforce that meets all legal, regulatory, and safety requirements.

- E-Verify & Legal Compliance: PWS participates in E-Verify to ensure all employees are legally authorized to work in the United States. Employees adhere to City-mandated badge requirements and uniform policies.
- Employee & OSHA Training: All field technicians receive ADOSH safety training and confined space certification. Continuous training programs ensure employees remain up to date on all confined space, hazardous work, and environmental protection protocols.

Environmental Management

PWS complies with Arizona Department of Environmental Quality (ADEQ) and local environmental regulations during all phases of work.

- Environmental Standards & Waste Management: Follows EPA & ADEQ standards for hazardous waste disposal and lead-free material usage. Recycling and water conservation programs integrated into our installation approach. Where applicable, meter boxes, lids, and related materials are recycled or repurposed.

Exclusions List

The purpose of this Exclusion List is to clearly outline the scope of work that is not covered by Phoenix Water Solutions (PWS) for the Rubidoux Community Services District (RCSD) AMI Implementation Phase I project. This document is a key part of the overall bid and aims to provide transparency, manage expectations, and ensure clear communication between all parties. By explicitly stating what is excluded from the scope, both RCSD and PWS can allocate resources effectively and avoid misunderstandings.

It is essential to review this Exclusion List alongside the main proposal to understand the limitations of the services provided.

Note: This list is illustrative and may not include every potential exclusion. Any concerns should be discussed and resolved prior to bid submission. Items listed here may be performed as additional services if authorized.

Labor Exclusions

1. **Overtime, Off-Hours, and Weekend Work –** Not covered unless explicitly approved in writing.
2. **Non-Specialized Labor –** Tasks outside PWS's standard water meter installation, box lid, piping, and trenching are excluded.
3. **Management of Other Subcontractors –** PWS is not responsible for managing subcontractors outside its direct hire.

Material Exclusions

1. **Material Price Fluctuations –** Price increases after contract execution are not included.
2. **Owner-Supplied Materials –** PWS assumes no liability for issues involving provided meters or parts.
3. **Specialty or High-End Materials –** Not included unless specifically listed in the bid pricing schedule.

Work Scope Exclusions

1. **Design Changes –** Any revisions to scope, location, or materials not defined in the RFP or bid documents are excluded.
2. **Archaeological or Environmental Discovery –** Not responsible for handling buried historical or environmental finds.
3. **Soil and Environmental Testing –** Not included unless specifically noted.
4. **Landscaping and Water Table Issues –** Restoration beyond typical backfill (e.g., turf, landscaping, or high water table mitigation) is excluded.
5. **Utility Connections –** System-side utility service or mainline connections are not included unless specified.
6. **Permit and Licensing Fees –** PWS assumes the prime contractor will obtain permits unless otherwise agreed.
7. **Code Compliance –** Any changes made to meet new or updated codes after bid submission are excluded.
8. **Pitbox Lids --** Endpoint lid drilling or lid replacement is not included in this line item. PWS can mount endpoints through existing pre-drilled lids or utilize slotted lids that allow a no-drill slip-in installation. Final

endpoint mounting approach and lid compatibility should be confirmed with Ferguson based on the selected meter system and endpoint hardware.

Safety and Compliance

1. **Asbestos and Hazardous Material Removal –** Not included unless discovered and approved by Change Order.
2. **Specialized Safety Gear –** Not included unless specified in the contract or required by regulation.

Financial Exclusions

1. **Contingency Costs –** Any unforeseen conditions not described in the contract documents will require a Change Order.
2. **Interest on Late Payments –** Not included unless previously defined in the agreement.
3. **Third-Party Inspections or Consultant Costs –** These are excluded unless expressly stated.

Project Management and Timelines

1. **Delays Caused by Others –** PWS is not responsible for delays caused by the District, vendors, weather, permitting, or external contractors.
2. **Dispute Mediation or Legal Representation –** Legal costs arising from third-party disputes are excluded.

Miscellaneous Exclusions

1. **Force Majeure –** PWS is excluded from liability for delays or damages resulting from events beyond reasonable control, including natural disasters, severe weather, pandemics, strikes, or governmental actions.
2. **Public Relations and Marketing –** Costs, labor, or materials related to promotional, outreach, or public information campaigns are not included unless specifically requested and quoted.
3. **Dispute Resolution and Legal Fees –** Legal costs, mediation, or arbitration involving third parties (e.g., homeowners, subcontractors, vendors) are not included unless specifically approved by the District.

Leak and Infrastructure Exclusions

1. **Leaks on Incorrect Side of Meters –** PWS is not responsible for leaks on the service/customer side of the meter or due to incorrect labeling of water service lines. Any post-installation issue outside the defined work zone is excluded.
2. **Old Infrastructure Failures –** Failures due to deteriorated, improperly marked, or undocumented legacy infrastructure (including brittle lines, shallow depths, or corroded valves) are not covered under base contract terms and must be reviewed for additional scope via Change Order.

Large Meter Exclusions

1. **External Valve Locations –** Excludes additional work for meter vaults that do not have both supply and return valves located outside the vault. Any added requirement to install or relocate valves is not included.
2. **Permit Acquisition (PWS) –** PWS is not responsible for obtaining permits. Any permitting requirements must be coordinated and managed by the prime contractor or owner.
3. **Meter Start-up Responsibility –** The process of initializing, activating, or calibrating meters after installation is excluded unless explicitly included in the agreed scope.

4. **Installation Requirements –** Any unique or project-specific installation requirements not defined in the contract or bid documents are excluded and subject to additional review and pricing.
5. **Documentation Requirements –** Additional documentation requests (e.g., detailed reports, special data formatting) not specified during the bid process are not included.
6. **Meter Delivery Responsibilities –** PWS excludes responsibility for delivering large meters to the job site unless clearly defined in the contract. Clarification is needed on whether the responsibility lies with the prime contractor, the District, or PWS.
7. **Heavy Meters Consideration –** The handling, transportation, and installation of heavy meters requiring special equipment, coordination, or additional labor are excluded unless previously discussed and priced.
8. **Weights and Measures –** The calibration and certification of meters through a Weights and Measures process is excluded from the scope and pricing unless otherwise stated.

Note: The exclusions outlined above reflect tasks, resources, and responsibilities outside the original scope and pricing for the Rubidoux AMI Implementation Project. If any of these items are requested during the course of the project, PWS will prepare a formal estimate for approval prior to execution. This approach supports transparency, scope alignment, and successful project delivery.

PHOENIX
WATER SOLUTIONS

YOUR GUIDE TO OUR METER SERVICING



Elevate Your Property's Efficiency and Reliability With Our Tailored Meter Servicing Solution

OUR METER SERVICING EXPERTISE

We are dedicated to providing exceptional meter servicing that aligns with our core values of water conservation, client return on investment (ROI), and seamless service integration. With us, we know how key it is to have water meters that work right and give you the information you need.

NATIONWIDE REACH

Full time Technicians covering 25 States

We have offices in Florida, Arizona, California, Michigan, and Texas.

BRAND PROMISE

- Turnkey Solutions
- Quantified ROI
- Proactive Solutions
- Water Utility Experts
- Data-Driven Services
- Simplified Payment Solutions
- Commitment to Relationships
- Water Conservation Leadership

WHERE NEED MEETS EXPERTISE

Versatile System Knowledge: Proficient with a wide range of metering systems.
Custom Pricing Models: Flexible pricing to meet unique customer requirements.



Who We Are

We were founded in 2015 with a mission to elevate the country's water conservation standards through technology and service. We build and support solutions that reduce waste and address our partner's and customer needs.

Our Mission

Phoenix Water Solutions strives to conserve our most precious resource by installing data-driven technologies and sustainable infrastructure. Through our services, we reduce waste and make communities proactive with their water management turning their expense into an asset.

Detailed Documentation Process

- GPS Coordinates: Precise location tracking.
- Serial Numbers: Ensuring accurate identification.
- Time Stamps: Verifiable service times.
- Photos: Visual proof of condition and service.
- Field Notes: Comprehensive records of visit.

Customized Service Approach

- Tailored systems for seamless data integration.
- Strategic use of specialized tools for enhanced partnership support.

Professionalism in Action

- Technicians provide live updates.
- Company-branded uniforms and vehicles for easy recognition.
- Thorough final checks to guarantee perfect functioning.

SERVICES OFFERED

VAULT METER INSTALLS

Our Technicians are Confined Space Certified for vault meter installations.

LARGE METER CAPABILITY

We also specialize in servicing large meters, including those in vaults or wells, ranging from 3 to 10 inches.

MONTHLY READING SERVICE

Our monthly water meter reading service ensures accuracy and timeliness for billing cycles.

MUNICIPAL & PRIVATE SECTOR COLLABORATION

We are equipped to handle the needs of both private companies and public entities, offering contracted services for comprehensive water meter management.

GENERAL METER SERVICING

We install comprehensive ¾-inch and 1-inch metering systems, suitable for both indoor and outdoor applications.

GET IN TOUCH WITH US

602-962-9348
www.phoenixwatersolutions.com
info@phoenixwatersolutions.com

WE STAND OUT WITH OUR EXTENSIVE KNOWLEDGE IN SERVICING A VAST ARRAY OF METER SYSTEMS:

DIEHL Metering · Metron-Farnier Smart Water Meters & Systems · ZENNER USA All that counts. · Itron · NextCentury Submetering Systems · WATER SCOPE · MASTER METER · inovonics · Badger Meter · Aclara · TAPWATCH · NEPTUNE Technology Group · ZERENITI · kamstrup · MUELLER Mueller Water Products · SENSUS a xylem brand

Easy Installation, Seamless Integration

Neptune® E-CODER®)R900*i*™



The Neptune® E-CODER®)R900*i* ™ is designed as an all-in-one package – pairing absolute encoder technology with the reliable connectivity of any Neptune R900® System endpoint. The E-CODER register provides an easy-to-read LCD display combined with flexible AMR/AMI connectivity and is compatible with any Neptune mechanical meter. Integrated endpoints eliminate the hassle of wiring while delivering reliable and accurate data to optimize system performance, improve customer service, and support water conservation initiatives.

- Eliminate the hassle of endpoint programming and wiring
- Flexible meter reading options with AMR/AMI capabilities
  - R900 (AMR/AMI)
  - LoRaWAN® (AMI)
  - Cellular (AMI)
- Peace of mind with access to 96 days of historical consumption data
- Prevent tampering and environmental damage with no external wires
- Improve service quality and billing accuracy with detailed consumption data
- Reduce inventory with an all-in-one register and endpoint package
- Pinpoint trouble areas quickly with flags that identify leaks, reverse flow, and tampering
- Streamline testing and onsite troubleshooting with on-screen flow rate and flags

NEPTUNE
TECHNOLOGY GROUP

Endpoint Specifications

Electrical Specifications

- Endpoint power: Lithium battery with capacitor

Transmitter Specifications:

- Two-way endpoint
- Meter Reading & Flag Interval:
  - Every 15 minutes
  - Leak, Backflow, Tamper
- Data Logging Interval:
  - 96 days of hourly data

Environmental Conditions

- Operating Temperature: -22°F to +149°F (-30°C to +65°C)
- Storage Temperature: -40°F to +158°F (-40°C to +70°C)
- Operating Humidity: 100% condensing, fully submersible (Pit Set version only)

Materials

- Register Housing:
  - Engineer polymer
  - Roll-sealed copper (Pit Set version only)
- Lens: Tempered Glass

Options

Compatibility

- Available for every size Neptune mechanical meter
- Handhelds/mobile devices with belt clip transceiver – mobile RF
- Mobile data collector RF
- R900® gateway – fixed network RF
- LoRaWAN gateway – fixed network RF

Resolution & Capacity

High Resolution (8-digit reading)

	Size	G	ft³	m³
T-10 (Includes disc side of TRU/FLO)	⅝", ¾", 1"	0.1	0.01	0.001
T-10 (Includes disc side of HPPIII)	1½", 2"	1	0.1	0.01
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	1½", 2", 3", 4"	1	0.1	0.01
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	6", 8", 10"	10	1	0.1

Register Capacity

	Size	G	ft³	m³
T-10®(Includes disc side of TRU/FLO®)	⅝ ", ¾", 1"	10,000,000	1,000,000	100,000
T-10 (Includes disc side of HPPIII)	1½", 2"	100,000,000	10,000,000	1,000,000
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	1½", 2", 3", 4"	100,000,000	10,000,000	1,000,000
HP Turbine (Includes FS Turbine, HPPIII, Turbine Side of TRU/FLO)	6", 8", 10"	1,000,000,000	100,000,000	10,000,000

Units of Measure

- U.S. Gallons, Cubic Feet, Imperial Gallons, Cubic Metres

Antennas

- Internal antenna (not available on LoRaWAN or cellular)
- Optional through-the-lid antenna
- 18" coax
- 6' coax
- 20' coax

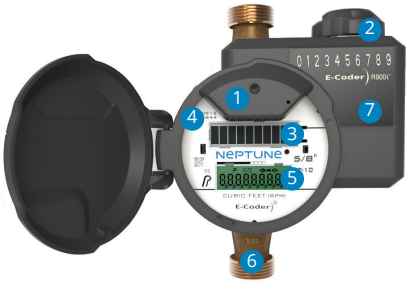
Warranty

- Neptune provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

LCD Display

- 9-digit display for extra resolution on manual reads.

1. Internal Antenna
2. External Antenna Port
3. Solar Panel
4. Date of Manufacture
5. LCD Display
6. T-10® Meter
7. R900® Endpoint Integrated



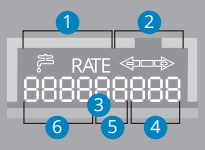
FLOW INDICATOR
Shows the direction of flow through the meter: ON Water in use. OFF Water not in use. Flashing Water is running slowly. (-) Reverse flow. (+) Forward flow.

LEAK INDICATOR
Displays a possible leak: OFF No leak indicated. Flashing Intermittent leak indicates that water has been used for at least 50 of the 96 15-minute intervals during a 24-hour period. On Continuously Indicates water use for all 96 15-minute intervals during a 24-hour period.

RATE OF FLOW
Average flow rate is displayed every twelve seconds on LCD display.

RATE

LCD DISPLAY
Nine-digit LCD displays the meter reading in billing units of measure: U.S. gallons, cubic feet, Imperial gallons, or cubic metres.
1. E-CODER basic reading/customary 6-digit remote reading
2. Customary sweep hand digits
3. E-CoderPLUS reading (8-digit remote reading)
4. Testing units used for diagnostics
5. Extended reading units
6. Customary billing units



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A PRODUCT SHEET OF NEPTUNE TECHNOLOGY GROUP

T-10 Meter

SIZES ⅝", ¾", AND 1"



Every T-10® water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

The T-10 water meter consists of three major assemblies: a register, a lead free, high-copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant maincase will withstand harsh service conditions; internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element is unaffected by meter position of in-line piping stresses while the unique chamber seal extends the low-flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

KEY FEATURES

REGISTER

- Magnetic-driven, low-torque registration ensures accuracy
- Impact-resistant register
- High-resolution, low-flow leak detection
- Bayonet-style register mount allows in-line serviceability
- Tamperproof seal pin deters theft
- Date of manufacture, size, and model stamped on dial face

LEAD FREE MAINCASE

- NSF/ANSI 372, NSF/ANSI 61
- Lifetime guarantee
- Resists internal pressure stresses and external damage
- Handles in-line piping variations and stresses
- Provides residual value vs. plastic or composite
- Electrical grounding continuity

NUTATING DISC MEASURING CHAMBER

- Positive displacement
- Widest effective flow range for maximum revenue
- Proprietary polymer materials maximize long-term accuracy
- Floating chamber design is unaffected by in-line piping stresses

Specifications

- NSF/ANSI 372, NSF/ANSI 61
- National Type Evaluation Program (NTEP) certification

Application

- Cold water measurement of flow in one direction in residential service applications

Maximum Operating Water Pressure

- 150 psi (1034 kPa)

Maximum Operating Water Temperature

- 80°F

Measuring Chamber

- Nutating disc technology design made from proprietary synthetic polymer

Options

Sizes

- 5/8", 5/8" x 3/4"
- 3/4", 3/4" SL, 3/4" x 1"
- 1", 1" x 1 1/4"

Units of Measure:

- U.S. gallons, imperial gallons, cubic feet, cubic metres

Register Types

- Direct reading: bronze box and cover (standard)

Remote Reading:

- ProCoder™, E-CODER®, E-CODER®)R900*i*™, ProCoder™)R900*i*™

Bottom Caps

- Synthetic polymer (5/8" only)
- Cast iron
- Lead free, high-copper alloy

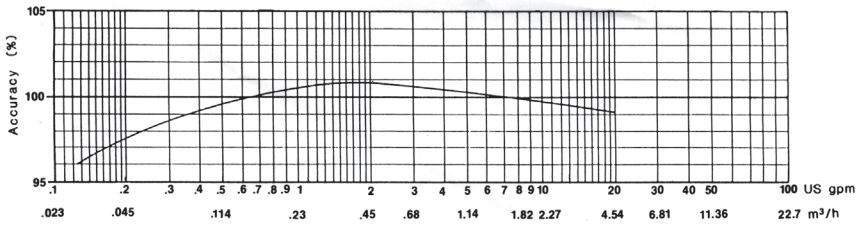
Connections

- Lead free, high-copper alloy, straight or bent

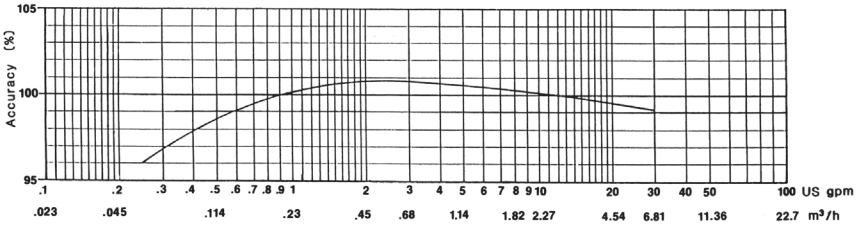
Environmental Conditions

- Operating temperature: +33° F to +149° F (0° C to +65° C)
- Storage temperature: +33° F to +158° F (0° C to +70° C)

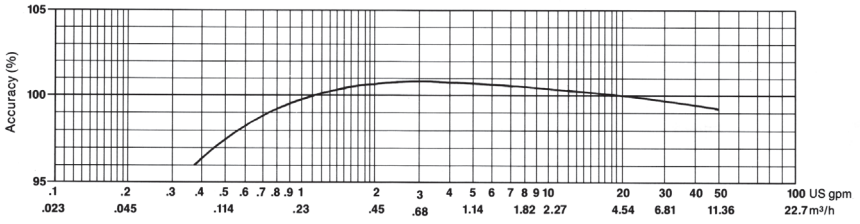
5/8" ACCURACY



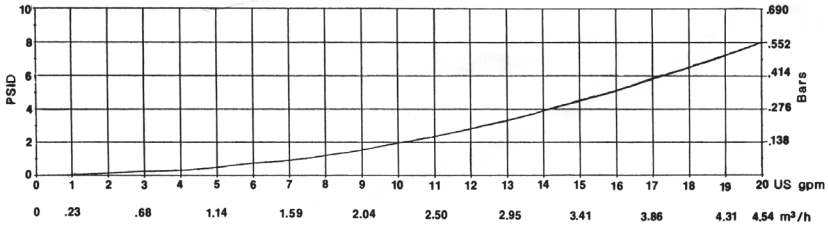
3/4" ACCURACY



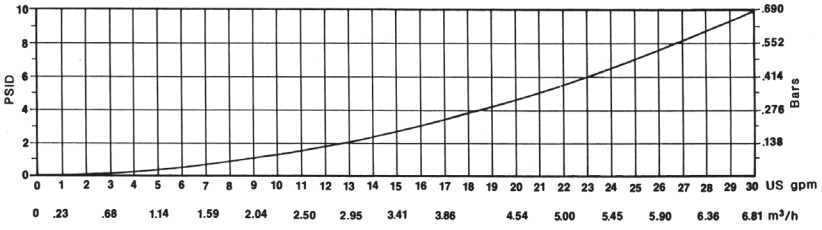
1" ACCURACY



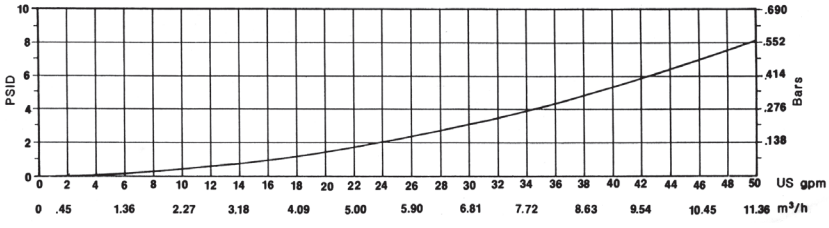
5/8" PRESSURE LOSS



3/4" PRESSURE LOSS



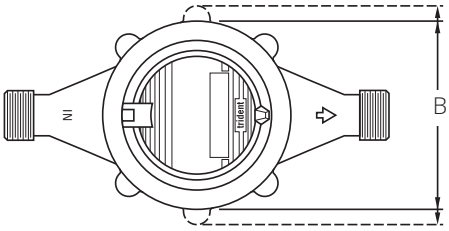
1" PRESSURE LOSS

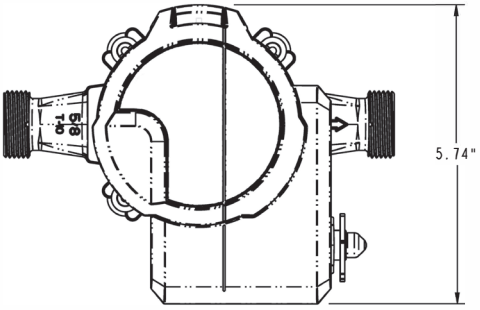


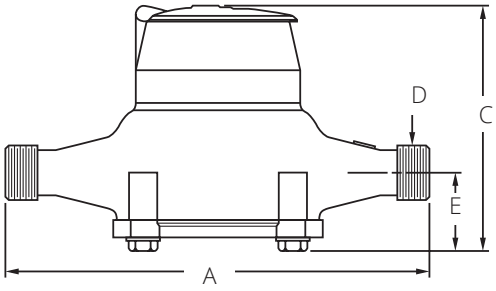
These charts show typical meter performance. Individual results may vary.

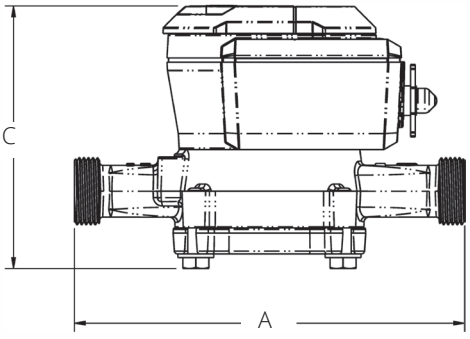
Dimensions

Meter Size	A	B	C					D-	E-	Weight lbs/kg
	in/ mm	in/ mm	Std. in/mm	ARB in/mm	ProCoder™ or E-CODER®	ProCoder™) R900*i*™ or ProCoder™) R450*i*™	E-CODER®) R900*i*™or E-CODER®) R450*i*™	NPSM Thread	in/ mm	
⅝"	7½ 191	3⅝ 92	4⅜ 111	5¼ 133	5¼ 133	5¼ 133	5¼ 133	¾" - 14"	1½ 38	3¼ 1.4
⅝" x ¾"	7½ 191	3⅝ 92	4⅜ 111	5¼ 133	5¼ 133	5¼ 133	5¼ 133	1" - 11½"	1½ 38	3⅜ 1.5
Pre 2011 ⅝"	7½ 191	3⅝ 92	4⅞ 124	5½ 146	5½ 139	5½ 139	5½ 139	¾" - 14"	1⅝ 41	3¾ 1.7
Pre 2011 ⅝" x ¾"	7½ 191	3⅝ 92	4⅞ 124	5½ 146	5½ 139	5½ 139	5½ 139	1" - 11½"	1⅝ 41	4 1.8
¾"	9 229	4⅜ 111	5½ 140	6¼ 159	6¼ 159	6¼ 159	6¼ 159	1" - 11½"	1⅞ 48	6 2.7
¾" SL	7½ 191	4⅜ 111	5½ 140	6¼ 159	6¼ 159	6¼ 159	6¼ 159	1" - 11½"	1⅞ 48	5½ 2.5
¾" x 1"	9 229	4⅜ 111	5½ 140	6¼ 159	6¼ 159	6¼ 159	6¼ 159	1¼" - 11½"	1⅞ 48	6½ 2.9
1"	10¾ 273	6½ 165	6⅜ 162	7 178	7 178	7 178	7 178	1¼" - 11½"	2⅛ 54	9¾ 4.4
1" x 1¼"	10¾ 273	6½ 165	6⅜ 162	7 178	7 178	7 178	7 178	1½" - 11½"	2⅛ 54	10¼ 4.6









Operating Characteristics

Meter Size	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
5/8"	1/2 to 20 US gpm 0.11 to 4.55 m³/h	1 to 20 US gpm 0.23 to 4.5 m³/h	1/8 US gpm 0.03 m³/h
3/4"	3/4 to 30 US gpm 0.17 to 6.82 m³/h	2 to 30 US gpm 0.45 to 6.8 m³/h	1/4 US gpm 0.06 m³/h
1"	1 to 50 US gpm 0.23 to 11.36 m³/h	3 to 50 US gpm 0.68 to 11.4 m³/h	3/8 US gpm 0.09 m³/h

Registration

ProRead Registration (per sweep hand revolution)		5/8"	3/4" & 1"
10	US Gallons	√	√
10	Imperial Gallons	√	√
1	Cubic Foot	√	√
0.1	Cubic Metre	√	√
Register Capacity ProRead, ProCoder, and E-CODER		**5/8"**	**3/4" & 1"**
10,000,000	US Gallons	√	√
10,000,000	Imperial Gallons	√	√
1,000,000	Cubic Feet	√	√
100,000	Cubic Metres	√	√
ProCoder and E-CODER High Resolution (8-digit reading)		**5/8"**	**3/4" & 1"**
0.1	US Gallons	√	√
0.1	Imperial Gallons	√	√
0.01	Cubic Feet	√	√
0.001	Cubic Metres	√	√

Warranty

Neptune® provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

Guaranteed Compatibility

All T-10 water meters are guaranteed adaptable to our ProRead™, AutoDetect, ProCoder™, E-CODER®, E-CODER®)R900*i*™, E-CODER®)R450*i*™, ProCoder™)R900*i*™, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

NEPTUNE TECHNOLOGY GROUP

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A PRODUCT SHEET OF NEPTUNE TECHNOLOGY GROUP

T-10® METER

SIZES: 1 ½" and 2"



Every Neptune® T-10® water meter meets or exceeds the latest AWWA C700 Standard. Its nutating disc, positive displacement principle has been time-proven for accuracy and dependability since 1892, ensuring maximum utility revenue.

The T-10 water meter consists of three major assemblies: a register, a lead free, high-copper alloy maincase, and a nutating disc measuring chamber.

The T-10 meter is available with a variety of register types. For reading convenience, the register can be mounted in one of four positions on the meter.

The corrosion-resistant maincase will withstand harsh service conditions: internal water pressure, rough handling, and in-line piping stress.

The innovative floating chamber design of the nutating disc measuring element protects the chamber from frost damage while the unique chamber seal extends the low-flow accuracy by sealing the chamber outlet port to the maincase outlet port. The nutating disc measuring element utilizes corrosion-resistant materials throughout and a thrust roller to minimize wear.

KEY FEATURES

Register

- Magnetic-driven, low-torque registration ensures accuracy
- Impact-resistant register
- High-resolution, low-flow leak detection
- Bayonet-style register mount allows in-line serviceability
- Tamperproof seal pin deters theft
- Date of manufacture, size, and model stamped on dial face

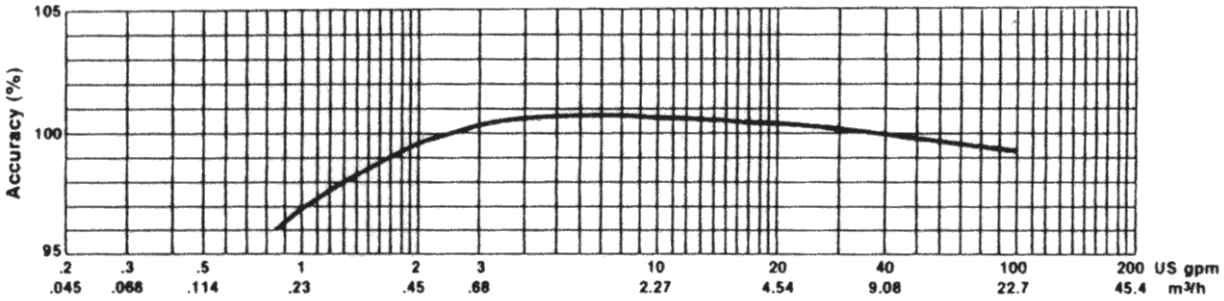
Lead Free Maincase

- Made from lead free, high-copper alloy
- NSF/ANSI 61 Certified
- NSF/ANSI 372 Certified
- Lifetime guarantee
- Resists internal pressure stresses and external damage
- Handles in-line piping variations and stresses
- Provides residual value vs. plastic
- Electrical grounding continuity

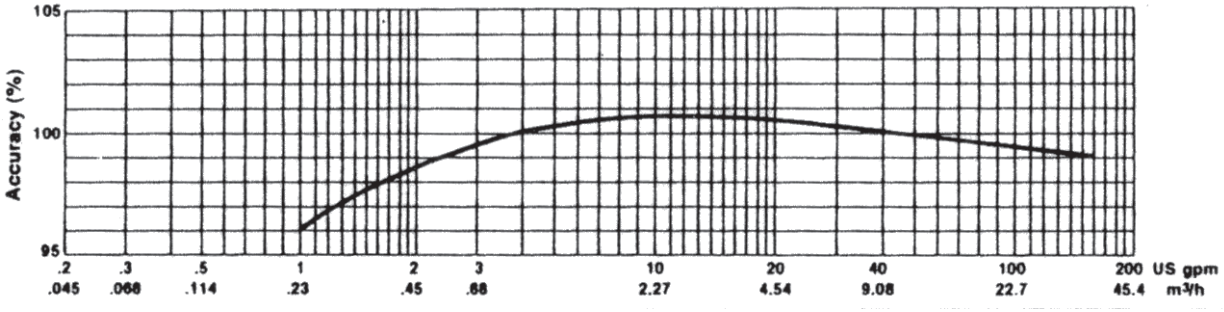
Nutating Disc Measuring Chamber

- Positive displacement
- Widest effective flow range for maximum revenue
- Proprietary polymer materials maximize long-term accuracy
- Floating chamber design is unaffected by in-line piping stres

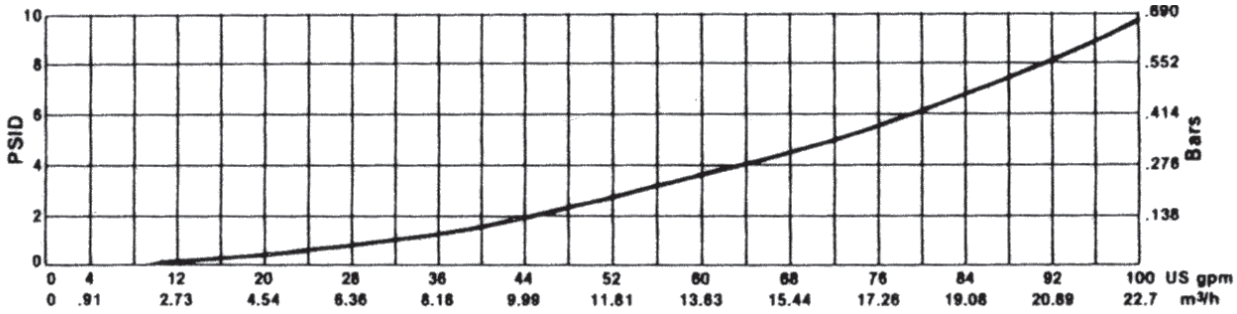
1 ½" Accuracy



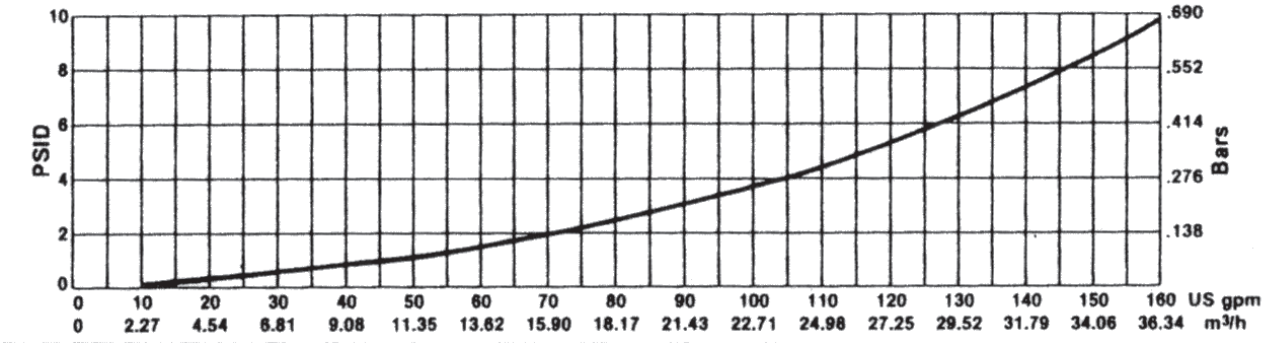
2" Accuracy



1 ½" Pressure Loss



2" Pressure Loss



These charts show typical meter performance. Individual results may vary.

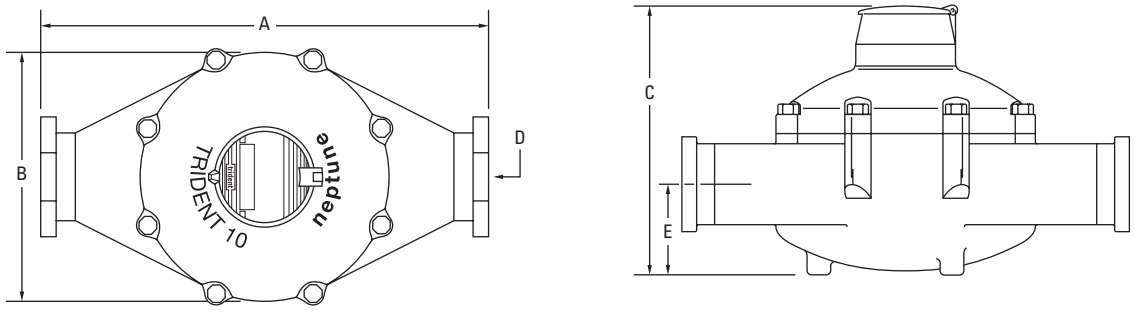
Operating Characteristics

Meter Size	Normal Operating Range @100% Accuracy (±1.5%)	AWWA Standard	Low Flow @ 95% Accuracy
1 ½"	2 to 100 US gpm 0.46 to 22.73 m³/h	5 to 100 US gpm 1.1 to 22.7 m³/h	¾ US gpm 0.17 m³/h
2"	2 ½ to 160 US gpm 0.57 to 36.36 m³/h	8 to 160 US gpm 1.8 to 36.3 m³/h	1 US gpm 0.23 m³/h

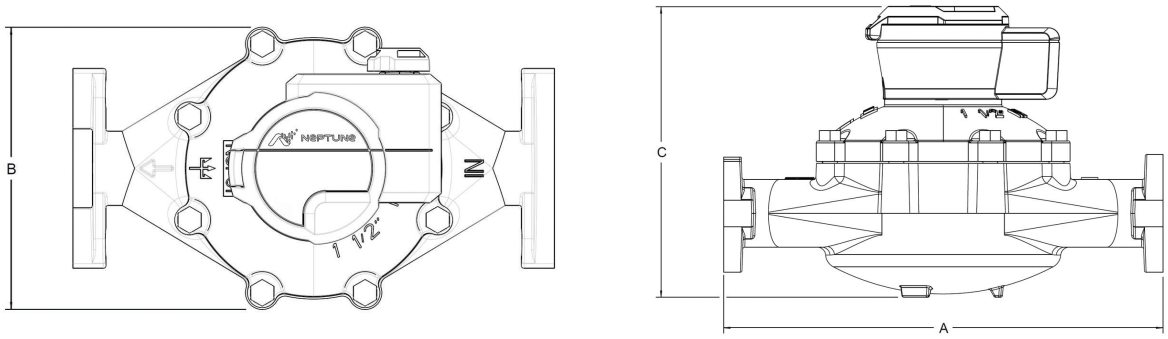
Dimensions

Meter Size	A in/mm	B in/mm	C-Std. in/mm	C-ARB in/mm	C- E-CODER®) R900*i*™ or ProCoder™) R900*i*™	D- Threads per inch	D- Thread Type	E in/mm	Weight lbs/kg
1 ½" Screw End	12 5/8 321	8 1/16 205	8 1/8 206	8 13/16 220.3	8 3/8 213	11 ½	1 ½ NPT	2 9/16 65	31 14.1
1 ½" Flanged End	13 330	8 1/16 205	8 1/8 206	8 13/16 220.3	8 3/8 213	—	—	2 9/16 65	35 15.9
2" Screw End	15 ¼ 387	9 7/16 240	9 5/16 237	9 15/16 248.4	9 ½ 241	11 ½	2" NPT	3 1/8 79	40 18.1
2" Flanged End	17 432	9 7/16 240	9 5/16 237	9 15/16 248.4	9 ½ 241	—	—	3 1/8 79	44 20.0

T-10 With Standard Register



T-10 With E-CODER®)R900*i*™ or ProCoder™)R900*i*™ Pit Register



Guaranteed Compatibility

All T-10 meters are guaranteed adaptable to our ProRead™, ProCoder™, E-CODER®, E-CODER®)R900*i*™, E-CODER®)R450*i*™, ProCoder™)R900*i*™, TRICON®/S, TRICON/E®3, and Neptune Utility Systems™ without removing the meter from service.

Specifications

Certification

- NSF/ANSI 61, NSF/ANSI 372

Application

- Cold water measurement of flow in one direction

Maximum Operating Water Pressure

- 150 psi (1,034 kPa)

Maximum Operating Water Temperature

- 80°F

Measuring Chamber

- Nutating disc technology design made from proprietary synthetic polymer

Registration

ProRead Registration (per sweep hand revolution)		**1 ½"**	**2"**
100	US Gallons	✓	✓
100	Imperial Gallons	✓	✓
10	Cubic Feet	✓	✓
1	Cubic Metre		✓
.01	Cubic Metre	✓	
Register Capacity ProRead, ProCoder, and E-CODER		**1 ½"**	**2"**
100,000,000	US Gallons	✓	✓
100,000,000	Imperial Gallons	✓	✓
10,000,000	Cubic Feet	✓	✓
100,000	Cubic Metres	✓*	
1,000,000	Cubic Metres	✓**	✓
E-CODER High Resolution (8-digit reading)		**1 ½"**	**2"**
1	US Gallons	✓	✓
1	Imperial Gallons	✓	✓
0.1	Cubic Feet	✓	✓
0.01	Cubic Metres		✓
0.001	Cubic Metres	✓	
ProCoder High Resolution (8-digit reading)		**1 ½"**	**2"**
1	US Gallons	✓	✓
1	Imperial Gallons	✓	✓
0.1	Cubic Feet	✓	✓
0.01	Cubic Metres	✓	✓

**ProRead and E-CODER only **ProCoder only*

Options

Sizes

- 1 ½" flanged or threaded end
- 2" flanged or threaded end

Units of Measure

- U.S. gallons, imperial gallons, cubic feet, cubic metres

Register Types

- ProCoder, E-CODER, E-CODER)R900*i*, ProCoder)R900*i*

Measuring Chamber

- Synthetic polymer

Companion Flanges

- Lead free, high-copper alloy

Environmental Conditions

- Operating temperature: +33°F to +149°F (0°C to +65°C)
- Storage temperature:
- +33°F to +158°F (0°C to +70°C)

Test Ports

- 1" (optional)

Warranty

Neptune provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

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Superior Accuracy. Zero Maintenance.

Neptune® MACH 10® Ultrasonic Meter



The MACH 10® ultrasonic water meter features solid state ultrasonic technology including a factory-calibrated, replaceable unitized measuring element (UME) with no degradation of accuracy over time. Combined with a corrosion-resistant, lead free, high-copper alloy maincase, the MACH 10 is built to withstand demanding service conditions and deliver sustained accuracy over the life of the meter.

- Sizes 3” through 12”
- Extended low-flow range for superior leak detection
- Accuracy sustained over meter life
- Can be installed in both horizontal and vertical applications
- Open flow path design with low pressure loss
- Advanced ultrasonic technology with easily replaceable UME design
- Lead free, high-copper alloy maincase
- UL Listed and FM Approved (standard)
- Available in standard turbine and compound lay lengths
- No maintenance

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Specifications

AWWA C715 Compliant

NSF/ANSI 61 Certified

UL Listed/FM Approved (Standard)

Maximum Operating Water Pressure

- 175 psi

Operating Water Temperature Range

- +33°F to +122°F (+0.5°C to +50°C)

Environmental Conditions

- Operating temperature: +14°F to +149°F (-10°C to +65°C)
- Storage temperature: -40°F to +158°F (-40°C to +70°C)

Expected Battery Life

- 10 years

Applications

- Potable water
- Fire service
- Reclaim water

Warranty

- Neptune provides a limited warranty for performance, materials, and workmanship. See warranty statement for details.

System Compatibility

- Compatible with Neptune R900® System. Also available as MACH 10®)R900*i*™ for an integrated radio solution and MACH 10®)TC for Sensus Touch Coupler compatibility.

Operating Characteristics

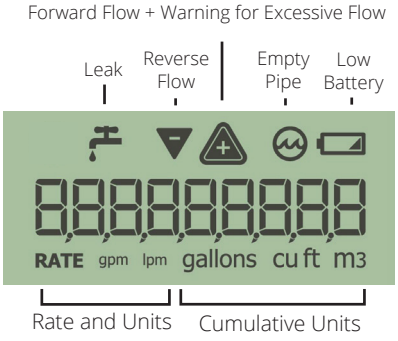
Meter Size	Extended Low Flow @ 100% Accuracy (+/- 3.0%)	Normal Operating Range @ 100% Accuracy (+/- 1.5%)	Safe Maximum Operating Capacity	
			Normal Operation (Non Fire Service)	Fire Service
3″	0.50 U.S. gpm	0.75 to 500 U.S. gpm	500 U.S. gpm	420 U.S. gpm
4″	0.75 U.S. gpm	1.5 to 1250 U.S. gpm	1250 U.S. gpm	1100 U.S. gpm
6″	1.0 U.S. gpm	2.0 to 2000 U.S. gpm	2000 U.S. gpm	1800 U.S. gpm
8″	4.0 U.S. gpm	6.0 to 4000 U.S. gpm	4000 U.S. gpm	4000 U.S. gpm
10″	6.0 U.S. gpm	10.0 to 6500 U.S. gpm	6500 U.S. gpm	6500 U.S. gpm
12″	8.0 U.S. gpm	12.0 to 8000 U.S. gpm	8000 U.S. gpm	8000 U.S. gpm

Registration

High Resolution (8-digit reading)		3″	4″	6″ - 12″
1	U.S. Gallons	√	√	
10	U.S. Gallons			√
0.1	Cubic Feet	√	√	
1	Cubic Feet			√
0.01	Cubic Metres	√	√	
0.1	Cubic Metres			√

LCD Display

9-digit display for extra resolution on manual reads.



Dimensions

Meter Size	Length	Height	Weight
3″	12″	9½″	39 lbs
	17″	9½″	42 lbs
4″	14″	11″	51 lbs
	20″	11″	57 lbs
6″	18″	12¾″	79 lbs
	24″	12¾″	91 lbs
8"	20"	15 ⅜"	160 lbs
10"	26"	17 ⁹⁄₁₀"	264 lbs
12"	19 ⁷⁄₁₀"	20"	292 lbs

Available Units of Measure

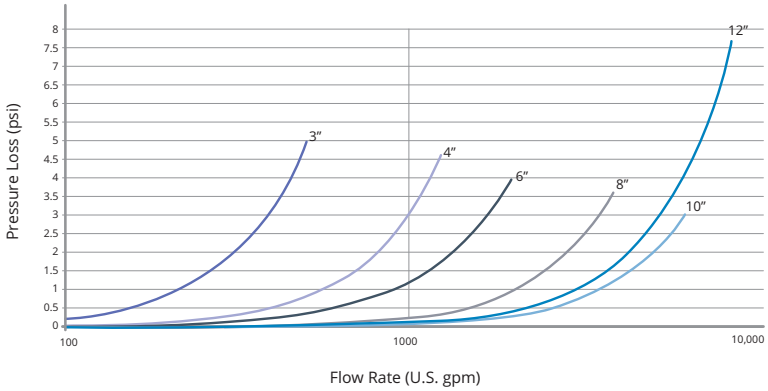
Consumption	Rate
Gallons	GPM
Cubic Feet	GPM
Cubic Metres	LPM



Unitized Measuring Element (UME)

Pressure Loss

This chart shows typical meter performance. Individual results may vary.



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Neptune® 360™
Meter Data Management Platform

A Product of Neptune Technology Group



NEPTUNE TECHNOLOGY GROUP

#winyourday

Turn Information into Action

Data is just data unless you can use it effectively. Go beyond basic meter reading and billing with Neptune® 360™ and gain a deeper understanding of the data you collect for faster, more informed decisions.

From mobile meter reading to an AMI network, use the same software platform. Your utility and consumer data all in one place, without the burden of maintaining IT infrastructure.

Integrate and share your data seamlessly, respond to your customers faster, and proactively identify and resolve issues quickly with software designed specifically for water utilities.

Putting Your Data in View

Having data is one thing, making sense of it is another. Neptune 360 delivers an intuitive, user-friendly design, making data clear and easy to interpret. Examining your entire AMI network using system-wide Key Performance Indicators and geographical views assists with identifying areas of concern and finding ways to maximize operational efficiencies.

Quickly access a dashboard view of your largest water customers while also providing consumers self-service access to their water consumption. Analysis of individual trends and usage patterns helps resolve customer service calls with confidence. Detailed reporting of consumption activity, potential leaks, and reverse flow will keep you ahead of issues that could impact your utility's revenue.





Lift Your IT Burden with a Cloud-Based Solution

Boost utility efficiency with Neptune 360. No longer install servers or perform upgrades. All you need is an Internet browser to log on from anywhere at any time.

Share Information

Your management, maintenance, customer service, water conservation, and other departments all need fast, easy access to information. Share and leverage actionable data captured by Neptune 360, empowering collaboration and helping predict impacts on your utility. The platform seamlessly integrates meter data, event data, and alerts directly with third-party work order systems, customer portals, hydraulic modeling applications, and other systems through Application Programming Interfaces (APIs).

A True Sense of Security

Ease your security concerns and stay focused on the critical work of water. Neptune 360 is SOC-certified and operates from a continuously-monitored world-class data center, providing the highest level of security, redundancy, and disaster recovery services.

An Application that Grows as You Grow

From mobile meter reading today, to moving to an AMI network tomorrow, the same software platform is utilized. Apply trend analysis in rate structure planning and usage initiatives. The modular-based platform makes it easy to turn on new features as your needs evolve, bringing you critical data to proactively plan for tomorrow.

Trust the Data

Data accuracy and dependability matter. By implementing the highest-level architecture, Neptune ensures data integrity with processes and tools to maintain quality from the meter to the platform as part of routine business operation.

Neptune® My360™ Consumer Portal

Enhance utility customer service and operational efficiency by providing consumers with a convenient, proactive way to monitor their own water consumption 24/7. Users no longer have to wait for a bill to detect possible issues, which means less water lost and fewer high bill complaints.

Users can set water thresholds and out-of-town alerts for greater peace of mind. And water conservation is encouraged when consumers can see how much they actually use with easy-to-read charts and graphs.

Neptune My360 is web-based to work on all devices and is always up-to-date. Easily customize to your utility's branding and get up and running quickly without the need for complex integrations.

My360™



NEPTUNE 360™

Analyze and share meaningful data with a platform that empowers utilities. Actionable insights help you achieve your goals and objectives.



METERS MATTER

Stream accurate actionable data right into Neptune® 360™.



WALK-BY DATA

Sync collected data easily.



FUTURE PROOF AMI

Connect AMI network data.



MOBILE

Incorporate mobile data collection.



BRING YOUR OWN DEVICE

Eliminate specialized devices and communicate efficiently.



THIRD PARTY SOFTWARE

Link data with third party applications (such as CIS and ESRI).



CONSUMER PORTAL

Intuitive self-service solution to view consumption and encourage conservation.



+ ACT QUICKLY
+ PLAN FOR THE FUTURE
+ MANAGE GROWTH



Specifications

Neptune 360

- Google Chrome and Microsoft Edge web browsers supported
- When using touch screen monitors, Neptune recommends Microsoft Edge web browser for optimal viewing and performance

Neptune 360 Mobile

Neptune 360 Mobile supports Android, iPhone, and iPad devices running the following operating systems:

- Android:
  - Recommended device manufacturers: Samsung, Nexus, or Motorola
  - Supported OS Versions: 5.1 – 11
- iOS:
  - Versions 10.3.1 – 15

Neptune My360

- A web browser with Internet connectivity is required
- Responsive design with capability to run on desktop, laptop, tablet and mobile devices

AICPA SOC
aicpa.org/soc4so
SOC for Service Organizations | Service Organizations ™

Neptune® 360™ Mobile

Neptune 360 Mobile provides direct communication via wireless from the field without the need to go back into the office, yielding data on demand for more efficient customer service. Other application capabilities include RF Test, Off-Cycle Read, and Data Log to capture 96 days of hourly historical consumption — addressing customer issues faster.

96
days of hourly historical consumption

Bring Your Own Device to Field Operations

Save money and time with Neptune 360 Mobile — use your utility's existing Android or iOS cell phones or tablet devices to perform meter reading. Pair with a Neptune R900® System belt clip transceiver or mobile data collector and expand your field device options when performing re-reads, reading monthly routes or even responding to high water bill complaints.

Neptune® 360™ Benefits



- Neptune-managed system with no installation required
- Cloud-based solution in a world-class data center with the highest level of security and disaster recovery/redundancy
- 24/7 software system monitoring
- Retain data ownership in a system designed exclusively for water utilities
- Integrate and access Data Analytics across departments — helping your utility achieve goals and objectives
- Identify potential leaks, excessive consumption, and reverse flow to proactively resolve issues faster
- Migrate easily from mobile to fixed network
- Aid Non-Revenue Water reduction, conservation, and rate planning
- A single platform across devices that can be accessed anywhere at any time

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Support Customer Service and Water Conservation Efforts

Neptune® My360™ Consumer Portal



Enhance utility customer service and operational efficiency by providing consumers with a convenient, proactive way to monitor their own water consumption 24/7. Users no longer have to wait for a bill to detect possible issues, which means less water lost and fewer high bill complaints.

Users can set water thresholds and out-of-town alerts for greater peace of mind. And water conservation is encouraged when consumers can see how much they actually use with easy-to-read charts and graphs.

Neptune My360 is web-based to work on all devices and is always up-to-date. Get up and running quickly without the need for complex integrations.

- Easily customize to utility branding
- Visibility into consumer portal usage and adoption
- Self-service access to consumer data reduces customer calls and high bill complaints
- Responsive design works on desktop, laptop, tablet, and mobile devices
- Intuitive dashboard that highlights potential issues faster

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NEPTUNE TECHNOLOGY GROUP

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NEPTUNE
TECHNOLOGY GROUP

Know Your Way Forward



Solution Overview

Win Your Day with Technology Designed for the *Business of Water.*

At Neptune®, products aren't just products. We have a passion for delivering innovative, reliable solutions developed to address your most important priorities, timeframe, and budget. When you buy Neptune, you are assured a solution that is always forwards and backwards compatible with your other Neptune asset investments. Neptune will help you minimize cost, eliminate inefficient processes, and maximize revenue. Our products and services are "future proof", enabling you to build on rather than change out.

Striving to always be your *most valued partner*, we offer solutions tailored to you so that you can focus on the *critical work of water.*

Find the Right Solution for You

Intuitive, User-Friendly Software
Your data, safe, and always available

The introduction of advanced technology to utilities has opened a flood gate of possibilities: from increasing efficiency and accuracy to time and cost savings. Software is the engine that drives this innovation and acts as the dashboard — keeping an eye on your water operations to ensure that they are running smoothly.

Neptune® 360™

Neptune® 360™ provides you with a single, easy-to-use, integrated solution no matter how you collect your data. Manage, share, and secure your data with cloud-based software designed exclusively for the *business of water.*

Neptune 360 gives you the ability to tailor your software to your utility with a platform that can grow with your needs, and without added IT infrastructure. Transition from a mobile metering system to fixed network with ease. Seamlessly integrate across departments, providing access to actionable data to optimize operational efficiency.

Neptune 360 provides on-demand access to your critical data, helping you quickly identify potential leaks, excessive consumption, and reverse flow — improving customer response time and enabling proactive and efficient issue identification and resolution. All data can be viewed in a single user interface for any read method.

Monitored 24/7 from a world-class data center, Neptune 360 assures you of the highest level of security, redundancy, and disaster recovery protection for your data.

Neptune® 360™ Mobile

Neptune® 360™ Mobile provides direct communication to the office using standard wireless devices you already own, including smart phones and tablets. Get your data on demand just by opening a web browser. Check trends, sync data from the field, and answer customer questions with ease, without ever having to go into the office.

NEPTUNE 360™



Neptune® 360™

Neptune® 360™ Mobile

Data Collection That Works For You
The flexibility to migrate at your own pace

There are many different avenues to collecting the data that drives the software, including walk by, drive by, or AMI. All of these share the same function – receiving information. Only Neptune allows you the flexibility to customize data collection to your individual criteria. One size definitely does not fit all. Neptune provides the flexibility to choose the right option, or hybrid of options, for you as your needs continue to change and grow.

The Neptune R900® System

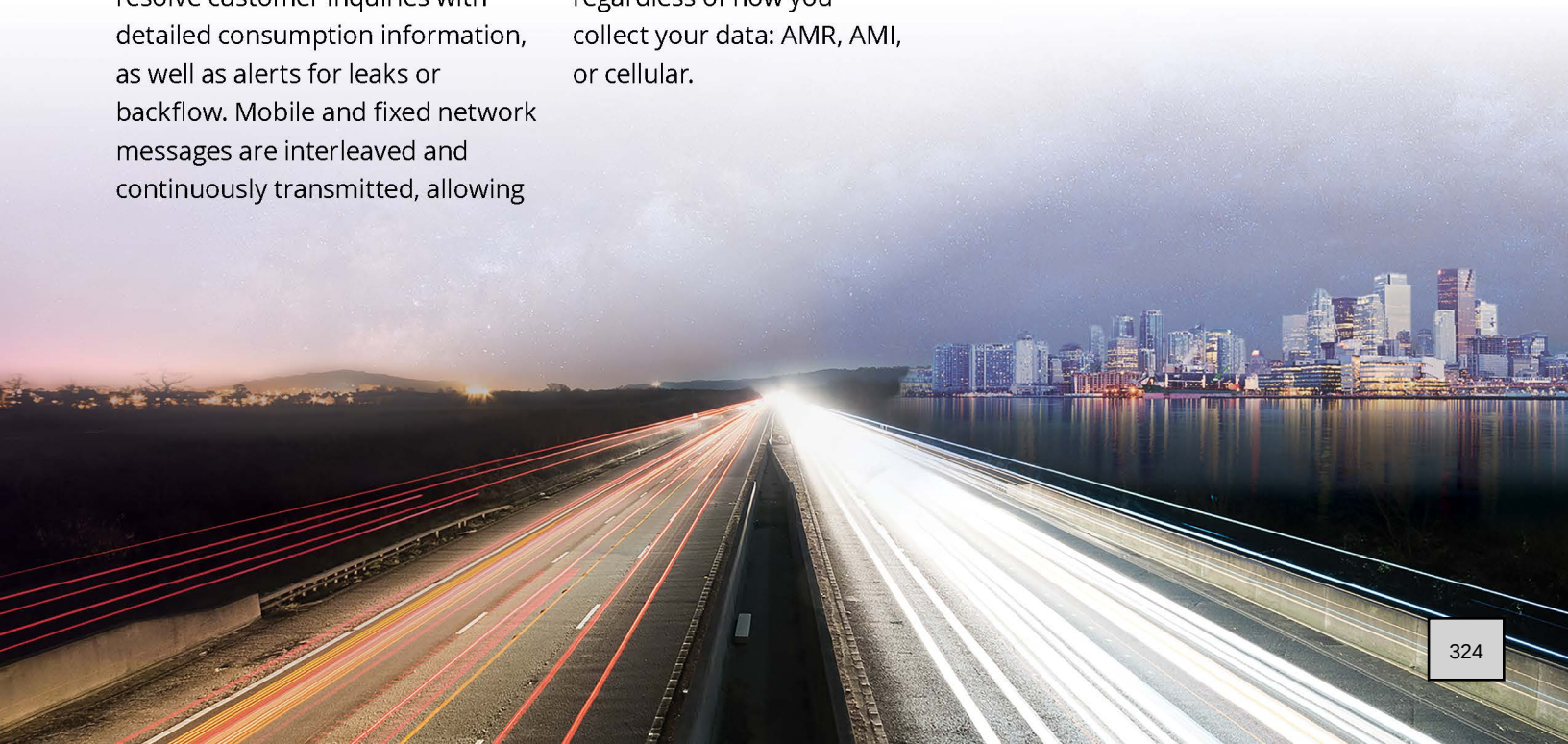
Neptune's R900® System is comprised of data collectors, endpoints, and connectivity working together seamlessly to receive and transmit information about your system and ensure that your operations are running efficiently and effectively.

Neptune's R900 System endpoints eliminate the need for separate reading systems, site visits, endpoint reprogramming, or re-configuration. Neptune endpoints greatly improve access to meter readings and help to proactively identify potential issues and resolve customer inquiries with detailed consumption information, as well as alerts for leaks or backflow. Mobile and fixed network messages are interleaved and continuously transmitted, allowing you to maintain backup mobile-reading capability with the same endpoints. Gateways collect metering consumption data as well as daily leak, reverse flow, and days of no flow alerts from all communication-enabled meters and send it to a cloud-based server to optimize your fixed network.

Neptune will configure the right mix of products to achieve your goals, regardless of how you collect your data: AMR, AMI, or cellular.



ProCoder™)R900i™ with T-10® Meter





Belt Clip Transceiver



Mobile Data Collector

The **mobile data collector** offers a portable meter reading option that fits in any vehicle to make Automatic Meter Reading (AMR) accurate and efficient. Data is available in real time, allowing you the ability to view and share consumption activity graphs on-site to address high bill complaints and other customer inquiries.

The **belt clip transceiver** offers multi-platform compatibility and accelerates data retrieval by eliminating meter access issues and reducing meter reading time.

Neptune's cellular solution offers you the flexibility to meet your business needs either as a last mile supplement, or for your full AMI deployment. Easily integrated into your existing R900 System, Neptune's cellular solution assures a reliable, highly secure, and easy-to-deploy AMI data solution to start collecting actionable meter data immediately.

If you choose to own or operate your own network, Neptune's **proprietary AMI solution** is flexible and tailored to each utility. Or, save time and money with a **Network-as-a-Service (NaaS)** solution that outsources the management and monitoring of your AMI infrastructure for the life of your project—including design, installation, and ongoing operations and maintenance. We facilitate deployment of a communication infrastructure that optimizes your AMI network performance with no operational burden and a design that can grow with your needs.

Neptune will configure the right mix of products to achieve your needs, regardless of how you collect your data.



Neptune® Gateway



Cellular Endpoint Wall Version



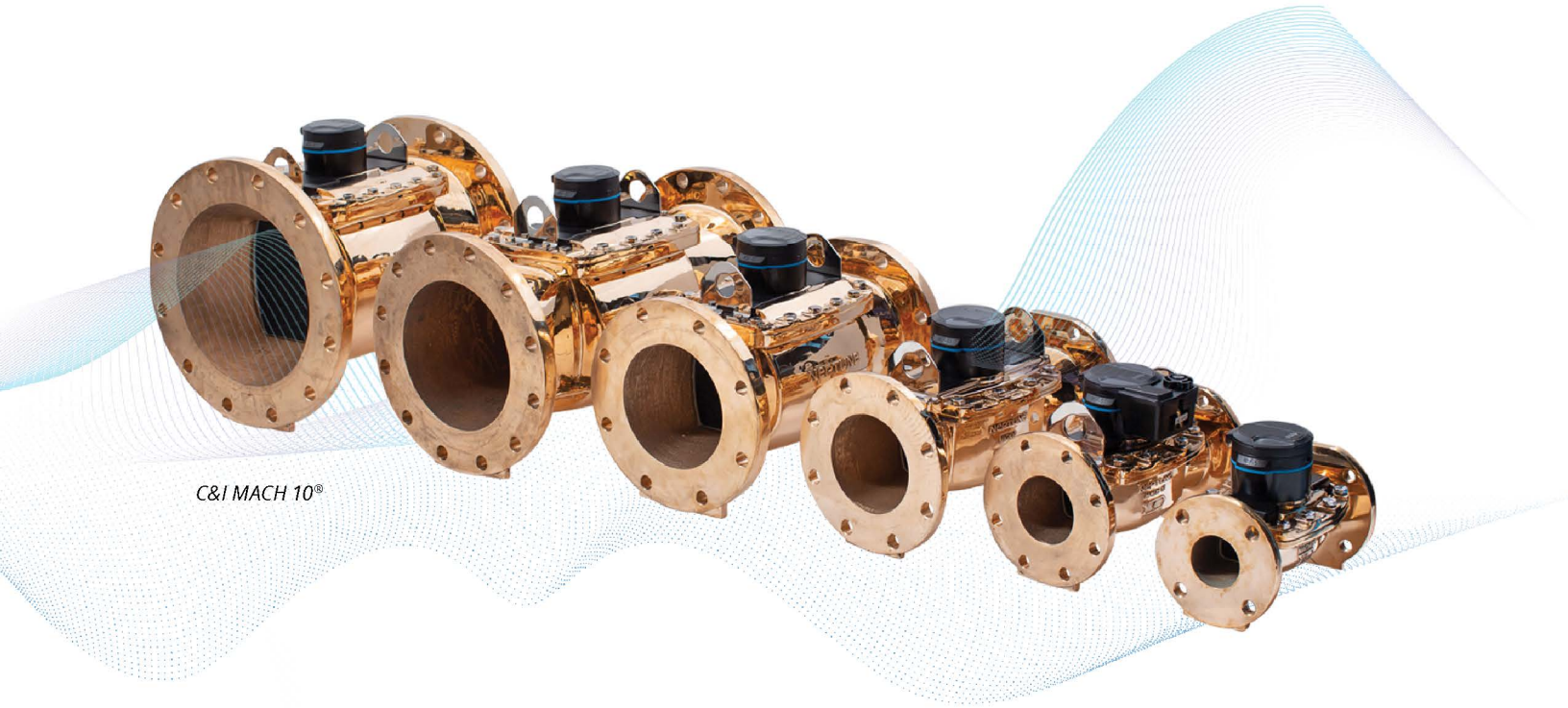
Pit Version

A Better Meter Matters

Accurate measurement tools to maximize revenue

The water meter is the critical source of the precise data collected to help you manage your water resources and take informed action. Neptune offers a full line of residential and commercial meters that provide you with the best source of measurement of the data that is crucial to keeping your operation running reliably and efficiently. Our meters are accurate, durable, and engineered to measure every drop, minimizing Non-Revenue Water and the need to frequently maintain or replace your meters.

Neptune offers different types of metering technologies so that you can select the right meter for your application.



C&I MACH 10®

MACH 10® Ultrasonic Water Meters

SIZES: ⅝", ¾", 1", 1½", 2", 3", 4", 6", 8", 10", 12"

The MACH 10® features no moving parts that wear and tear over time, ensuring maintenance-free, sustained accuracy and performance over the life of the meter and maximum revenue generation from your metering program. Its high-resolution measurement allows you to accurately capture extremely low flow rates, while a rugged, lead free bronze maincase adds to its long-term performance. Save time and money while delivering superior accuracy, and unmatched sampling rates. The MACH 10 is also available with an integrated endpoint, which eliminates the hassle of wiring and reliably delivers data to optimize system performance. Ideal for potable, fire service and reclaim water applications, the MACH 10 meter line is highly versatile and allows for reduction in inventory and standardization on one reliable meter.



C&I MACH 10®



MACH 10®)R900i

The C&I MACH 10® has the only solid state, field-replaceable Unitized Measuring Element (UME) that can be easily changed out at the end of its ten-year life for additional convenience and savings.





T-10® Meter

T-10® Mechanical Meters

SIZES: ⅝", ¾", 1", 1½", 2"

The Neptune T-10® meter is time proven for dependability and provides a wide effective flow range for maximum revenue. Its proprietary polymer measuring chamber maximizes long-term accuracy, and the durable lead free bronze maincase is guaranteed for the life of the meter.

TRU/FLO® Compound Meters

SIZES: 2" HP, 3;" 4", 6", 6" X 8"

The TRU/FLO® captures reads with technology specially designed for extremely wide flow rate applications. Combining low-flow sensitivity with high-flow capacity, the TRU/FLO ensures accurate measurement at all flow rates. For reading convenience, registers can be mounted in any one of four positions on the meter.



TRU/FLO® Compound Meter



HP Turbine Meter

High Performance (HP) Turbine Meters

SIZES: 1½", 2", 3", 4", 6", 8", 10"

The Neptune HP Turbine water meter exceeds industry standards for performance and accuracy with the widest flow ranges of any turbine meter on the market. The rugged, lead free, high-copper alloy maincase is corrosion-resistant, lightweight, and compact, and offers the flexibility of adaptability for both present and future systems.

Neptune offers different types of metering technologies so that you can select the right meter for your application.

HP PROTECTUS® III Stainless Steel (S) Fire Service Meters
SIZES: 4," 6", 8", 10"

Neptune's HP PROTECTUS® III S Fire Service water meter is the industry standard for combined fire service/drinking water applications, measuring extremely wide flow ranges. Designed to measure both domestic and fire service water usage through a single water line, the HP PROTECTUS® III S accurately and reliably registers leaks and unauthorized use from fire service lines.

High Performance (HP) Fire Service Turbine Stainless Steel (S) Meters
SIZES: 3", 4", 6", 8", 10"

The Neptune® HP Fire Service S meter is designed to measure both domestic and fire service usage where flow rates are moderate to high. Exceeding continuous flow rate industry standards, it offers some of the widest flow ranges of any fire service turbine meter on the market.



HP Fire Service Turbine Meter



HP PROTECTUS® III Stainless Steel Fire Service Meter

Registers

Neptune registers provide reliable, accurate meter reading, advanced customer consumption data, and priority alarms for continuous leaks, tamper, and reverse flow events. Neptune registers help you increase efficiency by providing detailed data to help you improve customer service outcomes.

Choose between standalone registers or those integrated with endpoints to provide two-way communications of your advanced metering data. Simultaneous mobile and fixed reading capabilities facilitate migration from mobile to fixed network reading without site visits or reprogramming. Neptune gives you the flexibility to combine the right register with the right meter for your needs.



E-CODER® and T-10® Meter



ProCoder™



E-CODER®)R900i™



ProCoder™)R900i™



Neptune can help you to bridge the gap between where you are today and where you want to be in the future. Our approach is to build on rather than change out, to help you make the most of the resources in which you've already invested. Neptune ensures that our products and services are "future proof", offering backward and forward compatibility that prevents you from having to rip and replace, to minimize cost, eliminate inefficient processes, and maximize revenue. Working together we can help you to best serve your customers while protecting and preserving the water in your community — because every drop matters.

Being your leading partner in water metering tools, technology, and connectivity, we will guide the way forward and connect you to **what's next in water**.

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A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

Cellular Endpoint

1. WARRANTY EFFECTIVE DATE

This warranty will be effective for any cellular endpoint that is shipped on or after June 1, 2021. Each warranty referenced in this statement begins at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from a Neptune-authorized distributor of water meters (that later date is referred to as "the Date of Shipment").

2. CELLULAR ENDPOINT

Neptune Technology Group Inc. warrants that the cellular endpoint (which includes a Neptune-supplied battery that is not intended to be removable or replaceable) shall be free from defects in manufacture and design for a period of twenty (20) years from the "Date of Shipment" (such period being the "Warranty Period"). Neptune shall not be responsible for any defects in the cellular endpoint (whether due to design, materials, manufacture, or otherwise) which manifest themselves after the expiration of the Warranty Period. Neptune will repair or replace a non-performing cellular endpoint free of charge for the first ten (10) years, and at the then-current list price during the remaining ten (10) years according to the discount schedule at the right. Replacement cellular endpoints are warranted for the balance of the original applicable cellular endpoint warranty.

Year of Failure	Cellular Endpoint
	Replacement Price Discount*
1-10	Full replacement: 100%
11	70%
12	70%
13	60%
14	60%
15	50%
16	45%
17	40%
18	35%
19	30%
20	25%

** Replacement price discount percentages will be applied towards the then-current list price in effect for the year product is accepted by Neptune under warranty conditions. Replacement endpoints are warranted for one (1) year after date of shipment or balance of original endpoint warranty, whichever is greater.*

3. WARRANTIES ARE INAPPLICABLE UNDER CERTAIN CONDITIONS

This warranty does not include field replacement labor or materials costs, which are the responsibility of the utility. This warranty does not apply if product is placed in non-recommended installations; may have been repaired with parts not recommended by Neptune; converted, altered, or connected by other than Neptune recommended procedures; is used with other than genuine Neptune meter registers and components or read by equipment not approved or licensed by Neptune; or damaged due to improper care or maintenance, or improper periodic testing (please refer to the Cellular Endpoint Installation and Maintenance Guide). This warranty does not apply to any cellular endpoint that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the cellular endpoint's ability of performance, including but not limited to: misuse; improper handling; application or installation; excessive operating conditions; tampering or unauthorized repairs and modifications; accidental or intentional damage; or acts of God. In no event shall Neptune be liable for special, incidental, indirect, or consequential damages, including, without limitation, lost revenue. Neptune contracts with third parties to provide cellular data service, as available, to and for the cellular endpoint.

CUSTOMER ACKNOWLEDGES THAT CELLULAR DATA SERVICE IS MADE AVAILABLE ONLY WITHIN THE OPERATING RANGE OF THE NETWORKS. SERVICE MAY BE TEMPORARILY REFUSED, INTERRUPTED, OR LIMITED BECAUSE OF: (A) FACILITIES LIMITATIONS; (B) TRANSMISSION LIMITATIONS CAUSED BY ATMOSPHERIC, TERRAIN, OTHER NATURAL OR ARTIFICIAL CONDITIONS ADVERSELY AFFECTING TRANSMISSION, WEAK BATTERIES, SYSTEM OVERCAPACITY, MOVEMENT OUTSIDE A SERVICE AREA OR GAPS IN COVERAGE IN A SERVICE AREA AND OTHER CAUSES REASONABLY OUTSIDE OF A CELLULAR DATA PROVIDER'S CONTROL SUCH AS, BUT NOT LIMITED TO, INTENTIONAL OR NEGLIGENT ACTS OF THIRD PARTIES THAT DAMAGE OR IMPAIR THE NETWORK OR DISRUPT SERVICE; OR (C) EQUIPMENT MODIFICATIONS, UPGRADES, RELOCATIONS, REPAIRS, AND OTHER SIMILAR ACTIVITIES NECESSARY FOR THE PROPER OR IMPROVED OPERATION OF SERVICE.

CUSTOMER ACKNOWLEDGES THAT CELLULAR DATA SERVICE MAY BE PROVIDED FROM A PROVIDER'S CARRIER PARTNER(S). CARRIER PARTNER NETWORKS ARE MADE AVAILABLE AS-IS AND THE CELLULAR DATA SERVICE PROVIDER MAKES NO WARRANTIES OR REPRESENTATIONS AS TO THE AVAILABILITY OR QUALITY OF ROAMING SERVICE PROVIDED BY CARRIER PARTNERS, AND THE CELLULAR DATA SERVICE PROVIDER WILL NOT BE LIABLE IN ANY CAPACITY FOR ANY ERRORS, OUTAGES, OR FAILURES OF CARRIER PARTNER NETWORKS.

CUSTOMER UNDERSTANDS AND AGREES THAT IT: (1) HAS NO CONTRACTUAL RELATIONSHIP WITH THE UNDERLYING CELLULAR DATA PROVIDER; (2) IS NOT A THIRD-PARTY BENEFICIARY OF ANY AGREEMENT BETWEEN NEPTUNE AND THE UNDERLYING CELLULAR DATA PROVIDER; (3) THAT THE UNDERLYING CELLULAR DATA PROVIDER HAS NO LIABILITY OF ANY KIND TO CUSTOMER, WHETHER FOR BREACH OF CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE; AND (4) THAT DATA TRANSMISSIONS AND MESSAGES MAY BE DELAYED, DELETED OR NOT DELIVERED, AND NO EMERGENCY CALL CAPABILITY EXISTS.

THE ABOVE WARRANTY FOR THE CELLULAR ENDPOINT IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE CELLULAR ENDPOINT. ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE CELLULAR ENDPOINT ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH A CELLULAR ENDPOINT AFTER THIS POINT ARE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE CELLULAR ENDPOINT. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

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A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

5/8” to 2” MACH 10® Ultrasonic Meter

1. TERMS OF LIMITED WARRANTY

With respect to its Neptune® MACH 10® water meter (“MACH 10”), Neptune Technology Group Inc. (“Neptune”) warrants that for meters sold on or after August 1, 2021, for potable water or combined potable water and residential fire service applications, the MACH 10 meter will be warranted to be free from manufacturing defects in workmanship and material as follows:

The MACH 10 will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from a Neptune-authorized distributor of water meters (that later date is referred to as “the Date of Shipment”), and will remain for a period of 18 months from the Date of Shipment, or 12 months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material. Neptune makes the following additional warranties with respect to certain MACH 10 components, dependent upon the size of meter:

Replacement Price Discount		
Year of Failure	5/8” to 1” MACH 10®	1.5” to 2” MACH 10®
1-10	Full replacement 100%	Full replacement 100%
11	70%	n/a
12	70%	n/a
13	60%	n/a
14	60%	n/a
15	50%	n/a
16	45%	n/a
17	40%	n/a
18	35%	n/a
19	30%	n/a
20	25%	n/a

**Replacement price discount percentages will be applied towards the then-current list price in effect for the year product is accepted by Neptune under warranty conditions. Replacement MACH 10 electronics are warranted for one (1) year after date of shipment or balance of original MACH 10 warranty, whichever is greater.*

a) Lead Free Bronze Maincase

i) 5/8” – 1” MACH 10

Neptune warrants that the MACH 10 lead free bronze maincase will be free from manufacturing defects in workmanship and material for twenty (20) years from the Date of Shipment.

ii) 1½” – 2” MACH 10

Neptune warrants that the MACH 10 lead free bronze maincase will be free from manufacturing defects in workmanship and material for ten (10) years from the Date of Shipment.

b) Electronics (Battery, PCB, Transducers, LCD)

i) 5⁄8” – 1” MACH 10

Neptune warrants that the electronics of the MACH 10 will be free from manufacturing defects in workmanship and material for a period of twenty (20) years from the Date of Shipment. Neptune will repair or replace a non-performing MACH 10 free of charge for the first ten (10) years and at a discount of the then-current list price during the following ten (10) years per the schedule at the right. The MACH 10 warranty does not include the external housing that encapsulates the electronics.

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ii) 1½" – 2" MACH 10
Neptune warrants the electronics of the MACH 10 will be free from manufacturing defects in workmanship and material for a period of ten (10) years from the Date of Shipment. Neptune will repair or replace a non-performing MACH 10 free of charge during the ten (10) year Warranty Period. The MACH 10 warranty does not include the external housing that encapsulates the electronics.

With respect to Section 1 and subparts a) and b), the period from the Date of Shipment to the expiration of the specified time period is the "Warranty Period" with respect to each specified component. Neptune shall not be responsible for any defects in the MACH 10 or any specified component (whether due to design, materials, manufacture, or otherwise) that manifest themselves after the expiration of the specified Warranty Period.

2. MACH 10 METER ACCURACY

Provided that the MACH 10 meter and the components specified in Section 1 and subparts a) and b) are functioning properly (regardless of whether the MACH 10 meter and specified components are within or outside an applicable Warranty Period), Neptune makes the following warranties with respect to meter accuracy, dependent upon the size of meter:

i) 5/8" – 1" MACH 10
Neptune MACH 10 meters are warranted to meet or exceed meter accuracy of ±1.5% for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for twenty (20) years from Date of Shipment. Neptune further warrants the MACH 10 to meet or exceed extended low flow accuracy of ±3% for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for twenty (20) years from Date of Shipment.

ii) 11/2" – 2" MACH 10
Neptune MACH 10 meters are warranted to meet or exceed meter accuracy of ±1.5% for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from date of shipment. Neptune further warrants the MACH 10 to meet or exceed extended low flow accuracy of ±3% for the published ranges set forth in Neptune's current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from Date of Shipment.

3. WARRANTY RETURNS

If a Neptune MACH 10 meter fails an accuracy test during an applicable Warranty Period, it may be returned to Neptune for evaluation. Any MACH 10 meter proved to the satisfaction of Neptune to have failed the warranties set forth in this Certificate of Warranty will, at the option of Neptune, be repaired or replaced at no cost to the customer. An accuracy test shall be conducted by the customer according to then-current AWWA testing standards. Any meter being returned for repair to Neptune under this performance warranty must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet Neptune's published accuracy specifications, then the customer will be charged a nominal testing fee by Neptune in such cases. If after the meter has been tested by Neptune, Neptune determines that the meter has failed the warranties set forth in this Certificate of Warranty, then Neptune will repair or replace the meter at Neptune's option. Repaired or replacement MACH 10 meters are warranted for one (1) year after Date of Shipment of the repaired or replacement MACH 10 meter or the balance of the original MACH 10 meter warranty, whichever is greater.

4. RESPONSIBILITY LIMITED TO COSTS OF REPLACEMENT AND REPAIR

If the MACH 10 fails to meet the warranties set forth in Sections 1 and 2 of this Certificate of Warranty, then Neptune, at its option shall repair or replace the MACH 10 or part thereof, provided that (a) the MACH 10 is delivered to a Neptune representative, (b) the MACH 10 is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the MACH 10. Neptune's liability is limited to its costs of replacement and repair of the non-performing MACH 10, and without limitation, this warranty does not include field replacement, labor, or materials costs, which are the responsibility of the customer. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.

5. WARRANTIES ARE INAPPLICABLE UNDER CERTAIN CONDITIONS

The warranties set forth in this Certificate of Warranty do not apply to any MACH 10 meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the ability of the MACH 10 to perform, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; foreign materials in the water; aggressive water conditions; tampering or unauthorized repairs or modifications; accidental or intentional damage; or acts of God. This Certificate of Warranty shall not apply if the product is placed in a non-recommended installation, is connected or altered by other than Neptune recommended procedures or is read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third-party reading systems. In addition, this Certificate of Warranty shall not apply if third-party reading equipment is believed to have caused damage to the MACH 10. In order to determine its liability, if any, under this Certificate of Warranty, Neptune shall have the right to inspect any MACH 10 meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

THE ABOVE WARRANTY FOR THE MACH 10 WATER METER IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE MACH 10. **ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE MACH 10 ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH A MACH 10 WATER METER AFTER THIS POINT SHALL BE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE MACH 10 WATER METER. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

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A NEPTUNE TECHNOLOGY GROUP WARRANTY STATEMENT

3” to 12” MACH 10® Ultrasonic Meter

1. TERMS OF LIMITED WARRANTY

With respect to its Commercial and Industrial Neptune® MACH 10® water meter (“MACH 10”), Neptune Technology Group Inc. (“Neptune”) warrants that MACH 10 meters sold on or after August 1, 2021, for potable water or combined potable water and fire service applications, will be warranted to be free from manufacturing defects in workmanship and material as follows:

The MACH 10 will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from a Neptune-authorized distributor of water meters (that later date is referred to as “the Date of Shipment”), and will remain for a period of 18 months from the Date of Shipment, or 12 months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material. Neptune makes the following additional warranties with respect to certain MACH 10 components.

a) Lead Free Bronze Maincase

Neptune warrants at the Date of Shipment that the lead free, high copper bronze maincase of the MACH 10 will be free from manufacturing defects in workmanship and material for the life of the meter.

b) Electronics (Battery, PCB, Transducers, LCD)

Neptune warrants that the unitized measuring element (UME) and/or electronics of the MACH 10 will be free from manufacturing defects in workmanship and material for a period of ten (10) years from the Date of Shipment. Neptune will repair or replace a non-performing MACH 10 UME free of charge for the first five (5) years and at a discount of the then-current list price, during the following five (5) years per the schedule to the right. The MACH 10 warranty does not include the external housing that encapsulates the electronics.

Year of Failure	MACH 10®
	Replacement Price Discount*
1-5	Full replacement 100%
6	70%
7	60%
8	45%
9	35%
10	25%

** Replacement price discount percentages will be applied towards the then-current list price in effect for the year product is accepted by Neptune under warranty conditions. Replacement MACH 10 electronics are warranted for one (1) year after date of shipment or balance of original MACH 10 warranty, whichever is greater.*

With respect to Section 1 and subparts a) and b), the period from the Date of Shipment to the expiration of the specified time period is the “Warranty Period” with respect to each specified component. Neptune shall not be responsible for any defects in the MACH 10 or any specified component (whether due to design, materials, manufacture, or otherwise) that manifest themselves after the expiration of the specified Warranty Period.

2. MACH 10 METER ACCURACY WARRANTY

Provided that the MACH 10 meter and the components specified in Section 1 and subparts a) and b) are functioning properly (regardless of whether the MACH 10 meter and specified components are within or outside an applicable Warranty Period detailed above), Neptune makes the following warranties with respect to meter accuracy:

Neptune MACH 10 meters are warranted to meet or exceed new meter accuracy per AWWA specifications of ±1.5% for the published ranges set forth in Neptune’s current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from Date of Shipment. Neptune further warrants the MACH 10 to meet or exceed extended low flow accuracy of ±3% for the published ranges set forth in Neptune’s current product sheet in existence at the time of the Date of Shipment of the MACH 10 meter for ten (10) years from Date of Shipment (that period being the “Accuracy Warranty Period”).

3. WARRANTY RETURNS

If a Neptune MACH 10 meter fails an accuracy test during the Accuracy Warranty Period, the meter or UME may be returned to Neptune for evaluation. An accuracy test shall be conducted by the customer according to then-current AWWA testing standards. Any meter being returned for repair to Neptune under the accuracy warranty must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet Neptune's published accuracy specifications, then the customer will be charged a nominal testing fee by Neptune in such cases. If after the meter has been tested by Neptune, Neptune determines that the meter has failed the accuracy warranty set forth in this Certificate of Warranty, then Neptune will repair or replace the meter at Neptune's option. Repaired MACH 10 meters are warranted for one (1) year after Date of Shipment of the repaired MACH 10 meter or the balance of the applicable original MACH 10 meter warranty (maincase, UME/electronics, or accuracy), whichever is greater.

If a replacement UME is deemed necessary, the new UME will include a new original warranty as specified in Sections 1 and 2 of this Certificate of Warranty.

4. RESPONSIBILITY LIMITED TO COSTS OF REPLACEMENT AND REPAIR

If the MACH 10 fails to meet the warranties set forth in Sections 1 and 2 of this Certificate of Warranty, then Neptune, at its option shall repair or replace the MACH 10 or part thereof, provided that (a) the MACH 10 is delivered to a Neptune representative, (b) the MACH 10 is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the MACH 10. Neptune's liability is limited to its costs of replacement and repair of the non-performing MACH 10, and without limitation, this warranty does not include field replacement, labor, or materials costs, which are the responsibility of the customer. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.

5. WARRANTIES ARE INAPPLICABLE UNDER CERTAIN CONDITIONS

The warranties set forth in this Certificate of Warranty do not apply to any MACH 10 meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the ability of the MACH 10 to perform, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; foreign materials in the water; aggressive water conditions; tampering or unauthorized repairs or modifications; accidental or intentional damage; or acts of God. This Certificate of Warranty shall not apply if the product is placed in a non-recommended installation, is connected or altered by other than Neptune recommended procedures or is read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third-party reading systems. In addition, this Certificate of Warranty shall not apply if third-party reading equipment is believed to have caused damage to the MACH 10. In order to determine its liability, if any, under this Certificate of Warranty, Neptune shall have the right to inspect any MACH 10 meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

THE ABOVE WARRANTY FOR THE MACH 10 WATER METER IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY NEPTUNE WITH RESPECT TO THE MACH 10. **ALL OTHER WARRANTIES, CONDITIONS, TERMS, REPRESENTATIONS, OR OTHER LEGALLY OPERATIVE PROVISIONS CONCERNING THE MACH 10 ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY, CONDITION, TERM, AND REPRESENTATION OR OTHER LEGALLY OPERATIVE PROVISION AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** THIS PARAGRAPH IS EXPRESSLY INTENDED TO EXCLUDE FROM THIS CONTRACT ALL STATUTORY AND COMMON LAW WARRANTIES TO THE MAXIMUM EXTENT PERMITTED BY LAW. TO AVOID ANY AMBIGUITY OR MISUNDERSTANDING, ALL PROBLEMS ARISING WITH A MACH 10 WATER METER AFTER THIS POINT SHALL BE BUYER'S RESPONSIBILITY. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE MACH 10 WATER METER. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

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Neptune T-10, HP Turbine, TRU/FLO® Compound Cold Water Meters Warranty

ARB® UTILITY MANAGEMENT SYSTEMS™

1. Terms of Limited Warranty.

With respect to its Neptune T-10, HP TURBINE, TRU/FLO® Compound Water Meters (collectively the "Water Meters"), Neptune Technology Group Inc. ("Neptune") warrants the following on meters sold on or after 11/1/92:

The Water Meters will be, at the later of (i) the date of original purchase from Neptune or (ii) the date of original shipment from Neptune-authorized distributor of Water Meters (that later date is referred to as "the Date of Shipment") and will remain for a period of eighteen (18) months from the Date of Shipment, or twelve (12) months from date of installation, whichever comes first, free from manufacturing defects in workmanship and material.

(a) Maincase. The no-lead high copper alloy or Brass maincase of the Water Meters will be at the Date of Shipment free from manufacturing defects in workmanship and material for the life of the Water Meter.

(b) Frost Protection. All Neptune T-10 Cold Water Meters shipped with a synthetic polymer or cast iron bottom cap will, commencing upon the Date of Shipment, be warranted against chamber damage for a period of ten (10) years.

(c) Registers. Standard, roll sealed registers of the Water Meters will be at the Date of Shipment, and shall remain for the following periods, free from manufacturing defects in workmanship and material for a period of ten (10) years. The ARB®, ProRead™ (ARB VI), and E-Coder® (ARB VII) system registers are warranted for ten (10) years from Date of Shipment. All ProRead encoder receptacles shipped after January 1, 2001 shall be warranted for five years from the Date of Shipment. All other components and parts are covered under Neptune's standard one-year material and workmanship guarantee.

(d) Meter Accuracy for Neptune T-10. Neptune T-10 Meters and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters are warranted to meet or exceed, as listed herein, accuracy standards of the AWWA Standard C700-95 for a period of: (i) five (5) years from Date of Shipment for 5/8", 3/4" and 1" meters; (ii) for a period of two (2) years from the Date of Shipment for 1 1/2" and 2" meters; or (iii) the applicable registration shown below, whichever occurs first. Neptune further guarantees that the Neptune T-10 and Neptune T-10 nutating disc chambers in TRU/FLO Compound Water Meters will perform to at least Repaired Meter Accuracy Standards, according to AWWA Manual M-6 Chapter 5 (1999) Table 5.3 for an additional ten (10) years or the registration shown below, whichever occurs first.

(e) **Meter Accuracy for HP Turbine and TRU/FLO.** The HP Turbine and TRU/FLO Compound Cold Water Meters will perform, for a period of one (1) year from the Date of Shipment, to American Water Works Association ("AWWA") accuracy standards for new water meters.

SIZE	EXTENDED LOW FLOW ACCURACY	NEW METER ACCURACY	REPAIRED METER ACCURACY
⅝ & ⅝"x ¾"	⅛ US gpm @ 95% 5 years or 500,000 gallons	500,000 gallons	1,500,000 gallons
¾"	¼ US gpm @ 95% 5 years or 750,000 gallons	750,000 gallons	2,250,000 gallons
1"	⅜ US gpm @ 95% 5 years or 1,000,000 gallons	1,000,000 gallons	3,000,000 gallons
1 ½"	¾ US gpm @ 95% 2 years or 1,600,000 gallons	1,600,000 gallons	5,000,000 gallons
2"	1 US gpm @ 95% 2 years or 2,700,000 gallons	2,700,000 gallons	8,000,000 gallons

NEPTUNE TECHNOLOGY GROUP INC.

ISO 9001 DNV DNV Certification, Inc. REGISTERED FIRM

W METER 09.11

2. Warranty Return.

If a Neptune Water Meter fails an accuracy test during an applicable warranty period, it may be returned to Neptune for repair or replacement at Neptune's option. An accuracy test shall be conducted by the customer according to AWWA standards. Any meter being returned for repair to Neptune under this performance guarantee must be returned with a copy of the customer's test results. If the meter is returned to Neptune without a copy of the test results or if Neptune's factory test shows the meter to meet current AWWA standards, the customer will be charged a nominal testing fee by Neptune in such cases. Neptune will repair or replace the meter at Neptune's option after the meter has been tested by Neptune. Meters repaired or replaced under the performance guarantee will be guaranteed to perform to AWWA repaired meter accuracy standards.

3. Warranties are exclusive.

The warranties set forth in this certificate of warranty are in lieu of any other warranty, guarantee, or representation, whether expressed or implied, including without limitation, the warranty of merchantability and the warranty of fitness for a particular purpose.

4. Damages limited to costs of replacement and repair.

If the Water Meter fails to meet the warranties set forth in Paragraph 1 of this Certificate of Warranty, Neptune, at its option shall, without charge of labor or materials, repair or replace the Water Meter or part thereof, provided that (a) the Water Meter is delivered to a Neptune representative, (b) the Water Meter is accompanied by a Return Material Authorization (RMA), and (c) all costs of delivery to Neptune are assumed by the purchaser of the Water Meter. Neptune's liability is limited to its costs of replacement and repair of the defective water meter. Damages resulting from miscalculation of water usage or lost revenue or profit are not recoverable from Neptune. It is the responsibility of the customer to periodically verify the operation and accuracy of its meters.

5. Warranties are inapplicable under certain conditions.

The warranties set forth in this Certificate of Warranty do not apply to any Water Meter that has been damaged by, or subjected to, conditions which, in the opinion of Neptune, have affected the Water Meter's ability of performance, including but not limited to: misuse; improper handling, application or installation; excessive operating conditions; foreign materials in the water; aggressive water conditions; tampering or unauthorized repairs or modifications; accidental or intentional damage; acts of God. This Certificate of Warranty shall not apply if product is placed in non-recommended installation, is connected or altered by other than Neptune recommended procedures, is used with other than genuine Neptune meter registers and components, or read by equipment not approved or licensed by Neptune. Neptune makes no claims concerning operability and/or compatibility or third party reading systems. In addition, this Certificate of Warranty shall not apply if third party reading equipment is believed to have caused damage to the meter or register. In order to determine its liability, if any, under this Certificate of Warranty, Neptune shall have the right to inspect any Water Meter or part thereof that is claimed to be defective at Neptune or other location designated by Neptune.

NEPTUNE'S LIABILITY WITH RESPECT TO BREACHES OF THE FOREGOING LIMITED WARRANTY SHALL BE LIMITED AS STATED HEREIN. NEPTUNE'S LIABILITY SHALL IN NO EVENT EXCEED THE PURCHASE PRICE. NEPTUNE SHALL NOT BE SUBJECT TO AND DISCLAIMS THE FOLLOWING: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY NEPTUNE, OR ANY UNDERTAKINGS, ACT OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL, SPECIAL, MULTIPLE, EXEMPLARY, AND PUNITIVE DAMAGES WHATSOEVER.

NEPTUNE TECHNOLOGY GROUP INC.

ISO 9001 DNV DNV Certification, Inc. REGISTERED FIRM

BACKGROUND AND QUALIFICATIONS

FERGUSON WATERWORKS – BACKGROUND AND QUALIFICATIONS

Largest Distributor
Offering Customizable Solutions

33,000+
Associates

$29.7 Billion
Annual sales in FY 2023

1,700+
Locations

Over 1 Million
Customers Worldwide

70
Years of Operation

Publicly Traded
Listed on NYSE & LSE

37,000
Suppliers

Ferguson is a leading value-added distributor in North America, providing expertise, solutions, and products from infrastructure, plumbing, and appliances to HVAC (heating, ventilation, and air conditioning), fire, fabrication, and more. Our more than 1,700 final-mile locations are within 60 miles of 95% of the North American population, and we build long-term relationships with our customers by providing a valuable experience – in our branches and online – rooted in exceptional service. **Since 1953,** Ferguson has been a source of quality supplies for a variety of industries, each working together to help build better infrastructure, better homes, and better businesses.

Ferguson is proud to provide best-in-class products, service, and capabilities across the following industries: Waterworks, Commercial/Mechanical, Facilities Supply, Fire and Fabrication, HVAC, Industrial, Residential Trade, Residential Building and Remodel, and Residential Digital Commerce. **With 70 years of industry experience,** Ferguson's associates are dedicated to understanding the latest products and services available, so they can recommend the system or tool best suited for a Utility's immediate and future needs. The professionals we serve help transform the world we live in, and we are their trusted partners with the scale, expertise, and solutions to provide peace of mind.

Ferguson's expansive product offering allows for the availability of material for on-time jobsite delivery and by leveraging the resources of a nationwide company. Ferguson is positioned to manage the extensive range of projects that this highly specialized industry demands.

We are Ferguson, and **Together We Build Better**.

CORPORATE VALUES, MISSION, AND VISION



METER AND AUTOMATION GROUP BACKGROUND (MAG)

When Ferguson deployed its first AMI project in 2008, the decision was made on a national level to invest in substantial sales, installation, and ongoing support resources for AMR/AMI projects with the Meter and Automation Group (MAG). Ferguson's in-house team of metering experts are highly trained in the latest metering technology and project management support. Our strong relationship with the top 4-meter manufacturers allows us to offer municipalities access to an extensive range of automated meter reading (AMR), advanced metering infrastructure (AMI), products and solutions. Our MAG team will clearly identify the specific needs of your municipality and will help you select the right AMR/AMI technology based on your requirements and project goals.

In addition to guiding a municipality through the selection of meter system products from top brands, our MAG team members will also provide municipalities with support throughout the installation process. We will help strategically design your utility's metering system to ensure the most accurate readings of meter data. Additionally, Ferguson can leverage its branch network and municipal sales focus to bring unprecedented support. **Ferguson's MAG has sixteen years of experience inclusive of Product Specialists, General, Area, and Sales Managers, IT Integration and Installation Project Managers, and Municipal Sales Associates for additional support.**

Dedicated Ferguson AMR/AMI sales, service and support employees

More than 2 million points sold since the year 2000

In-house project management team provides assistance for a variety of water meter installation services

Project management services for subcontractor installation and integration

Service and support with a customized maintenance program after sale and installation

METER AND AUTOMATION GROUP BENEFITS

- ✓ **Quality Meter & Technology Supplier:** Ferguson works hand in hand with many of our manufacturing vendors to offer products and solutions to our customers in need every day. Our rigorous supplier qualification enables us to maintain a detailed list of approved manufacturers, manufacturing sites and specific products from qualified suppliers nationwide.
- ✓ **Finance Solutions:** Ferguson has partnered with firms that specialize in Waterworks project financing so we can help Utilities explore creative funding options to drive higher returns and get more done.
- ✓ **Expansive Product Offerings and Solutions:** Developing knowledgeable and quality focused associates strengthens our ability to partner with our customers and manufactures, offering detailed product knowledge, problem solving solutions, and cost-savings opportunities. Ferguson's expansive product offering allows for the availability of material for on-time jobsite delivery and by leveraging the resources of a nationwide company.
- ✓ **AMR/AMI Technology Experts:** With 70 years of industry experience, Ferguson Waterworks is one of the largest suppliers of water, sewer and storm management products and services to multiple segments of the Waterworks sector. Our associates are dedicated to understanding the latest products and services available, so they can recommend the system or tool best suited for the Utility's immediate and future needs.
- ✓ **Meter Testing:** Our Meter and Automation Group (MAG) provides meter testing services that ensure your system provides accurate real-time water use data, leak alerts, and more.
- ✓ **Support & Project Management:** Ferguson provides project management and installation services such as field mapping, instruction, and testing for new water meter systems.
- ✓ **Data Analytics Support:** Intelligent metering systems and cloud-based analytics software applications can provide unprecedented access to real-time information about consumption demand and system efficiency, which allows forward-thinking Utilities to use predictive analysis to preemptively correct problems.
- ✓ **Network & Meter Installation:** Ferguson partners with experienced national and regional meter installers. All approved Installation partners will comply with the scope of work generated by Ferguson and the Utility. The installers will also adhere to the meter manufacturer's installation specifications, and all other applicable local, state, and federal codes/regulations.



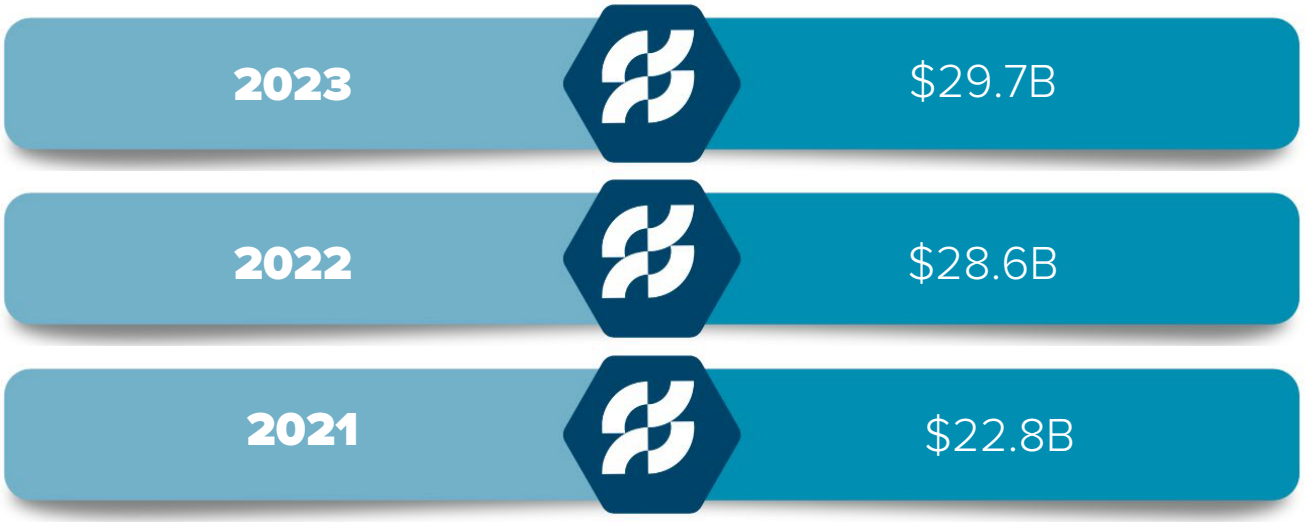
FINANCIALS

- **COMPANY LEGAL STRUCTURE:** Ferguson is a Limited Liability Company (LLC).
- **HEADQUARTER'S ADDRESS:** 751 Lakefront Commons, Newport News, VA 23606
- **FERGUSON'S FEDERAL TAX ID:** 54-1211771
- **FERGUSON'S D-U-N-S NUMBER:** 00-895-5171
- **E-VERIFY:** 1205487
- **SAM.gov UNIQUE ENTITY ID NO.:** G3UJV497QGU3
- **VERIFICATION OF CURRENT BONDING CAPACITY:** Maximum amount of bond authorized to issue: $50,000,000 Single $200,000,000 Aggregate.
- **BANK REFERENCE:** Bank of America Acct: 3752290835 for all inquiries please visit www.bankvod.com

MAIN CORPORATE SITE: Ferguson is part of Ferguson plc, which is listed on the New York Stock Exchange (NYSE: FERG) and the London Stock Exchange (LSE: FERG) and is in the FTSE 100 index of listed companies.

Ferguson's earnings statements are located in Ferguson's Annual Report at www.corporate.ferguson.com. Key sections include our businesses, investors, financial details, media, and sustainability. There is also information on our strategy and links to our business unit websites.

COMPANY REVENUE FOR PAST 3 YEARS



LOCAL PRESENCE AND NATIONAL CAPABILITY

LOCAL CAPABILITY

LOCAL FERGUSON OFFICE
8314 East Long Mesa Drive, Prescott Valley, AZ 86314

Ferguson has over 1,700 branch locations across the U.S, and roughly 300 of those are dedicated to commercial/municipal Waterworks**.** This allows us to maintain additional stocking levels to ensure that the Tribe will never have to wait for deliveries. This also means that there is no need to tie up funds in the Tribe's warehouse inventory.

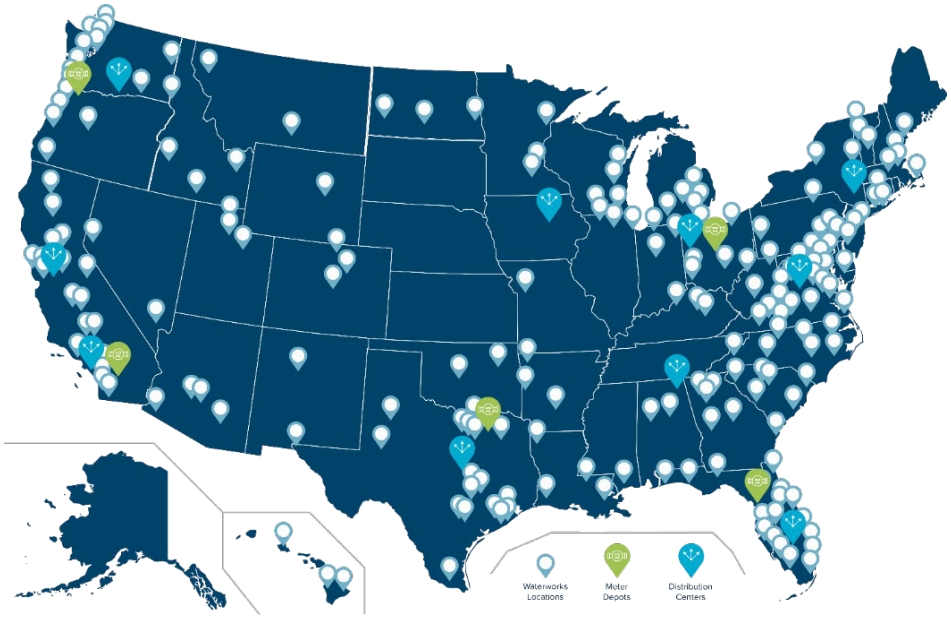
Our team has expansive industry knowledge and experience in the state of Arizona, and we work alongside the local Ferguson Waterworks team to offer substantial project resources. This scope includes immediate meter inventories, phone and on-site technical support, meter testing, project management, RMA assistance, and more.



Map illustrates Ferguson's local support platform.

NATIONAL CAPABILITY

Our Waterworks locations and regional Meter Depots allow us to maintain a dedicated metering inventory, ensuring our customers have reliable access to the products they need. Our well-trained staff will also be able to quickly respond to any issues as they arise, as the success of any AMI/AMR system is dependent on solid project experience and support. We utilize our inventory management system and communicate with our partners for product availability and lead times.



Map illustrates Ferguson's national support

MANUFACTURER BACKGROUND – NEPTUNE

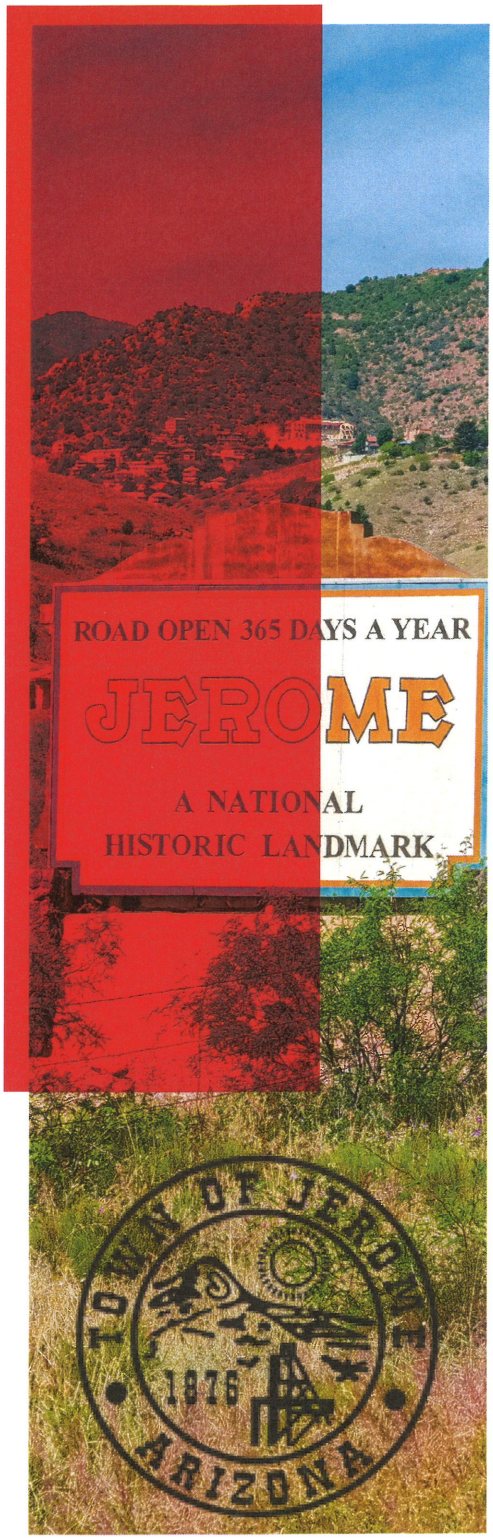
Neptune is an AMR/AMI systems vendor with a successful history for **130 years**. As a leading provider of meter reading systems and water measurement products, Neptune has continually focused on the evolving needs of water utilities – revenue optimization, operational efficiencies, and improved customer service. Our vision is to be viewed as the ***most valued partner*** of our utility customers and help them manage the world's scarce water, energy, and human funding resources.

Neptune's fully integrated manufacturing facility ensures a dependable and dedicated support for all hardware, software, and support for mobile Advanced Meter Reading (AMR) and fixed-base Advanced Metering infrastructure (AMI) systems. All Neptune water meters meet or exceed American Water Works Association standards as well as all the revised requirements of the Safe Drinking Water Act (SDWA). Accurate meter readings are guaranteed with Neptune's absolute encoder technology — a field-proven meter reading concept first introduced in 1964. This solid foundation allows a seamless migration from manual data collection to handheld, mobile, and fixed network radio frequency systems. Neptune's migration approach means you'll never outgrow Neptune technology.

Neptune has approximately 700 employees in North America producing meter reading systems and water measurement products. Neptune's state-of-the-art, ISO9001-certified, 300,000-square-foot facility in Tallassee, Alabama houses our integrated manufacturing, engineering, and support capabilities. Additionally, Neptune opened its Atlanta based Innovation Center in the spring of 2017 with a focus on software and hardware development, including IT support.

KEY FACTS

- 715 employees located in the US, Canada, and Mexico
- 300,000 square foot manufacturing facility
- 100% lead free foundry
- 4000+ AMR/AMI reading systems deployed
- System hardware optimized for water applications
- Superior battery management
- Common software platform optimized for mobile and fixed network applications
- Integrated RF MIU and absolute encoder technologies for Neptune meters
- R900™ building block for Smart Water solutions - Supports fixed base AMI and back up mobile AMR
- Cloud Based Data Management Software - offered as a Software-as-a-Service (SaaS) model AMI infrastructure support offered as Network-as-a-Service (NaaS) model



kamstrup | FORTILINE SMART UTILITY SOLUTIONS

Jerome, Arizona

REQUEST FOR PROPOSAL FOR ADVANCED METERING INFRASTRUCTURE SYSTEM

PREPARED FOR: Brett Klein, Town Manager/Town Clerk
DUE: November 5, 2025 | 12:00 PM Local Time

PRIMARY: Rhonda Duran
Rhonda.Duran@fortiline.com
M: (602) 245-8060

SECONDARY: Joe Ferguson
Joe.Ferguson@fortiline.com
M: (704) 754-3288

BRANCH MANAGER:
Robert Bonnewell
Robert.Bonnewell@fortiline.com
6400 Lear Lane
Prescott, AZ 86301
P: (928) 224-1097

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03 Project Management

04 Experience & References

05 Appendix

FORTILINE
SMART UTILITY SOLUTIONS

Town of Jerome, Arizona
Request for Proposal for Advanced Metering Infrastructure System
600 Clark St. Jerome, AZ 86331

Fortiline Waterworks is pleased to present this Letter of Transmittal and our response to the RFP referenced above. Our response is based upon a detailed review of the requirements and assembled in order to exceed the needs and desires of the Town of Jerome for a turn-key Advanced Metering Infrastructure (AMI) system to replace it's existing metering system.

Jerome's desire to move to more accurate and reliable technology shows vision, an understanding of AMI's ability to improve customer service and a desire to conserve valuable water resources by reducing waste. Incorporated in 1997, Fortiline has over 70 locations serving 23 states and is the third largest full-service provider to the water, wastewater, utility, and construction industries in the country. Our experience enables us to anticipate and address the Town of Jerome's specific needs, ensuring a seamless and responsive partnership throughout the life of the system.

We are excited to collaborate with Kamstrup to present the Town of Jerome a range of exceptional water meters. As a global supplier of ultrasonic water meters, having made their first in 1991, Kamstrup now sells their meters in over 80 countries around the world. Kamstrup's US headquarters is located in Cumming, GA.

Kamstrup meters have proven to be highly reliable in the field, with a historic global failure rate of less than 0.5%. Combined with a starting low flow rate of 0.008 gpm and guaranteed new meter accuracy for the 20-year warrantied life of the meter, it's easy to see why utilities name Kamstrup as their brand of choice.

Fortiline's partnership with Kamstrup allows us to bring a long-term AMI solution that is accurate and reliable while maximizing the value of Jerome's's investment. Together, with our proven expertise, Fortiline and Kamstrup are uniquely equipped to meet all of the Town of Jerome's needs outlined in this response by delivering reliable, efficient, and tailored support every step of the way.

We further certify that this proposal has been prepared and submitted independently and without collusion, consultation, or agreement with any other individual or entity submitting a proposal pursuant to this RFP.

Should you have any questions about the proposal please feel free to contact Rhonda Duran at (602) 245-8060 or Rhonda.Duran@fortiline.com.

Thank you for your consideration,

Fortiline Smart Utility Solutions

01 FORTILINE EXECUTIVE SUMMARY

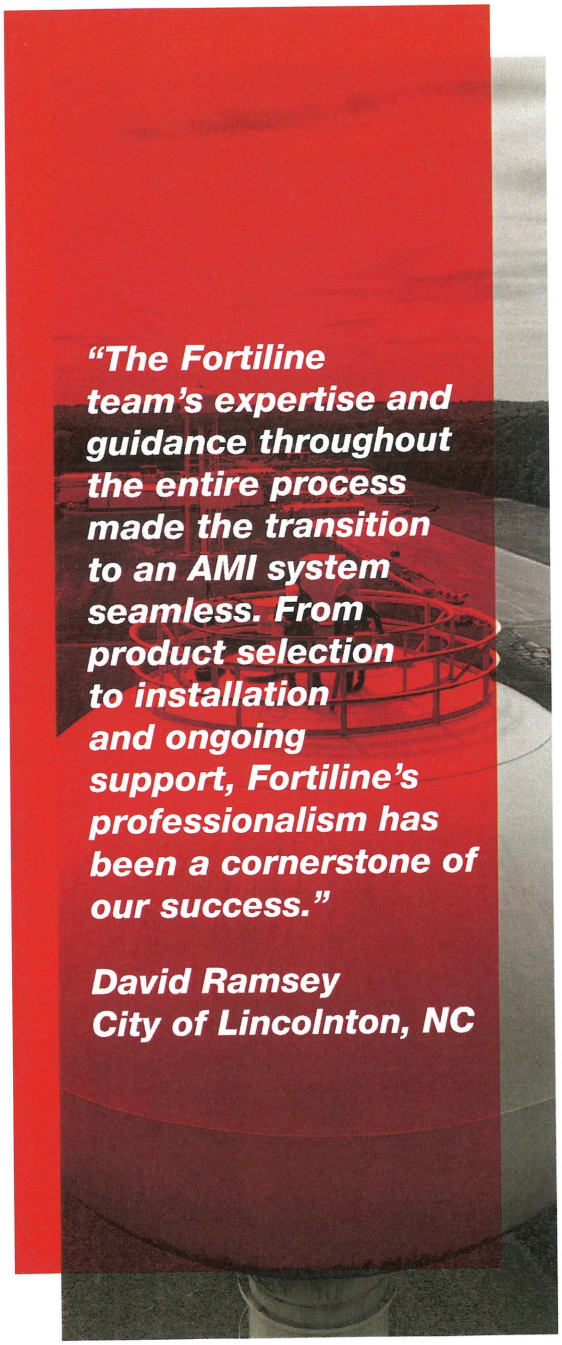
Bringing the Town of Jerome a Total Metering Solution

The Town of Jerome's commitment to modernizing their water distribution system is evident in their Water Meter Replacement Project RFP. The Town's current meter system has aged past the point of accuracy and reliability. Updating Jerome's water distribution system will not only secure safe, reliable, and efficient water service for its residents and businesses, but also reduce the Town's water loss and labor expenses.

Fortiline Waterworks, in partnership with Kamstrup, is proud to present a proven solution designed to address Jerome's water distribution challenges of inaccurate readings leading to high water loss, labor intensive manual reads, and a lack of accurate system data. The Town of Jerome has the opportunity to implement Kamstrup's fully-integrated, smart metering solution that may significantly:

> ***Reduce Water Loss and Increase Revenue***
>
> ***Boost Operational Efficiency and Cost Savings***
>
> ***Enhance Customer Service and Transparency***
>
> ***Drive a Rapid Return on Investment***

The Kamstrup solution is more than a metering system, it is a data driven platform that empowers Jerome's water department to work smarter, faster, and with greater control. With the support of Kamstrup's reliable, intelligent metering platform and Fortiline's experienced support team, the Town of Jerome will gain control of its water system, reduce operational costs, and strengthen its service to residents for decades to come.



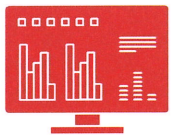
JEROME'S SHORT-TERM BENEFITS

Kamstrup water meters offer the Town of Jerome a powerful solution to enhance operational efficiency, customer service, and water conservation efforts. By replacing all existing meters with highly accurate ultrasonic technology, these meters will benefit the Town in multiple ways including, but not limited to the following:



PROVIDING NEAR "REAL-TIME" INFORMATION IN THE WATER SYSTEM.

Kamstrup's AMI water meter reports to the network every three hours. Each radio transmission report contains eighteen hourly readings for redundancy and notification of any active alarms. When an alarm is activated, it is transmitted immediately.



INCREASING THE INFORMATION AVAILABLE WITHIN THE READING SYSTEM.

Kamstrup's system provides utilities with temperature readings for both metered water and the ambient air, "Burst" alarms for large leaks, and Histogram Data that illustrates the rate and volume at which water has flowed through the meter.



ELEVATING JEROME'S CUSTOMER SUPPORT

When armed with Kamstrup's AMI Solution, Jerome's Customer Support and Utility Representatives can access metering data at the push of a button.

LONG-TERM VISION

Jerome's **LONG-TERM VISION** for an AMI system focuses on continued operational efficiency by providing tools and technology it needs to improve water accountability while delivering exceptional service to its residents. Fortiline's response to Jerome's RFP is a combination of the best products in the marketplace and top-tier service. We know there are many solutions available to you, each offering their own value. However, we firmly believe that we are presenting you with the best value and quality service on the market. As you read through the remainder of our response, please remember these key points:



The Kamstrup Meter System WILL reduce your non-revenue water more than any other meter available.



Kamstrup is the easiest AMI system to implement and use.



Kamstrup's historically proven reliability means LESS MAINTENANCE and DATA LOSS than similar systems.

Through this project, the Town of Jerome is investing in a smarter, more resilient water system that delivers measurable operational benefits while meeting the evolving needs of its community. Fortiline Waterworks appreciates the opportunity to partner with Jerome on this critical infrastructure project and is confident that our Kamstrup solution offers the best value, reliability, and long-term benefi t for the Town and its customers.

FORTILINE

02 PROPOSED SOLUTION OVERVIEW

The centerpiece of Fortiline Waterworks' proposed solution to Jerome's water metering needs is the Kamstrup flowIQ series meter. The flowIQ series is a leader in the next generation of smart water meters. This electronic, cold water meter has been specifically engineered to provide water monitoring for households, multi-unit buildings, and commercial applications. With size options ranging from 5/8" to 1", the flowIQ 2200 fits the majority of standard meter sizing. For larger applications, the flowIQ 3200 covers sizes from 1½" to 4" while the flow IQ 4200 covers sizes from 6" to 12".

The flowIQ series exemplifies the latest principles in water metering and Kamstrup's company values. Their focus on sustainable accuracy led to the development of this intelligent and compact meter composed of a radio, register, battery, and electronics. FlowIQ meters are hermetically closed and vacuum-sealed. Coupled with the fact that these meters have no internal moving parts to wear down over time, they retain 100% new meter accuracy throughout their lifetime.

Additionally, the flowIQ 2200 is able to begin registering flow rates at as little as 0.008 gpm, 0.035 gpm for the flowIQ 3200, and 1.4 gpm for the flowIQ 4200. This ultra-low flow ability will increase utility revenue by ensuring that the water being produced is being billed for customers with the smallest of leaks are fixing them, thereby conserving Jerome's valuable water resources.

While leak, burst, tamper, and battery alarms are standard within AMR and AMI systems, Kamstrup's meters also provide a "Dry" alarm that sends a notification when a meter is not full of water. Separately, the Kamstrup meter allows for customizable options for alarm ranges for factors such as battery, burst, dry, leak, tamper, and temperature. These personalized options may be programmed in the factory, field, or office through Kamstrup's READy Manager.

Kamstrup's ultrasonic metering system is simple enough to ensure a smooth transition for nearly every customer. Their superior meters, partnered with user-friendly software makes capturing potential water loss and non-revenue water easier than ever before.

WHY CHOOSE

ULTRASONIC WATER METERS

Ultrasonic water meter technology is highlighting just how much water has been left behind by mechanical meters over the last century. By providing utilities the ability to more accurately measure their water usage, the ultrasonic technology revolution is changing how they interact with their customers, operate and manage their business, and how utility employees go about their daily tasks.

BENEFITS AT A GLANCE

Superior Flow Rate Measuring

This ensures Jerome receives payment for the water it supplies, while encouraging residents to promptly address minor leaks and preserve the community's vital water supply.

Industry Leading Reliability

With a failure rate below 0.5% globally, it is technology you can put in and continue to rely upon for years to come. Fewer failures means less maintenance and more productivity.

Simplest AMI System

A meter, collector, READy Converter, and software on an Android device and Windows PC are all you need. Basic training for Kamstrup software takes hours, not days.

Long-term Solution

Ultrasonic meters have no internal moving parts to wear down over time Ultrasonic meters have 98.5% accuracy throughout their lifetime making them simpler and easier to maintain.



KAMSTRUP'S REVOLUTIONARY AMI SYSTEM INCLUDES:

01 flowIQ 2200, 3200, & 4200

02 AMI COLLECTOR

03 READY CONVERTER

04 READY MANAGER

05 ANDROID DEVICE

KAMSTRUP

flowIQ METER SERIES

Our partnership with Kamstrup allows us to offer the Town of Jerome the flowIQ meter series, a comprehensive lineup of smart water meters designed for residential, commercial, and industrial applications.

Why Choose Kamstrup's flowIQ Meter Series?

Kamstrup's ultrasonic water meters provide unmatched accuracy, durability, and intelligence, helping utilities:

- Reduce non-revenue water with highly accurate, near real-time measurement
- Improve billing accuracy with industry-leading low-flow reading capabilities
- Enhance operational efficiency with remote data access and advanced diagnostics
- Lower maintenance costs with no internal moving parts and long battery life

"Once all of our meters are changed, our revenue increase may reach $500,000 per year with the low flows we get from the [Kamstrup] meter."

Josh Miller
Assistant Utilities Director
St. Lucie West Services District, FL

The flowIQ meter series is more than just a collection of meters, it's a breakthrough in water metering technology, setting new standards in **accuracy, durability, and efficiency**. As ultrasonic meters, they deliver pinpoint precision and unmatched longevity, ensuring utilities and customers benefit from reliable and precise measurements for decades.

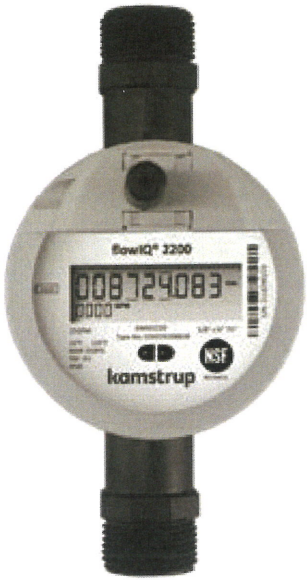
Kamstrup has built a global reputation of industry-leading reliability, with an astonishing **meter failure rate of less than 0.5%**, a testament to their unwavering commitment to quality. Backed by a 20-year warranty for meters 1" and smaller, and a 10-year warranty for those 1 ½" and above, the flowIQ series is more than just a new meter, it's an investment in long-term accuracy and performance.

Designed for maximum efficiency, the flowIQ meter series can **detect flow rates as low as 0.008 gallons per minute**, ensuring that every drop of produced water is accounted for. This ultra-low flow detection not only maximizes utility revenue but also empowers customers to detect and address even the smallest leaks, ultimately conserving valuable community water resources.

MEET THE METERS

flowIQ 2200 – THE IDEAL RESIDENTIAL SOLUTION

The Kamstrup flowIQ 2200 is designed for single-family homes and multi-unit buildings. With size options ranging from 5/8" to 1", the flowIQ 2200 fits the majority of standard meter sizings.[1]



Key Features

- Highly precise ultrasonic measurement for cold and reclaimed water[2]
- Leak detection and water conservation with Acoustic Leak Detection (ALD)
- Ultra-low flow detection (starting at 0.008 GPM) for capturing minimal water usage. Guaranteed measurement accuracy from 0.05 to 55 gpm
- Hermetically sealed, vacuum-protected electronics to prevent humidity damage
- NSF/ANSI 61-certified lead-free materials for safe drinking water
- Long-lasting lithium battery with up to 20 years of operation

flowIQ 3200 – SMART METERING FOR SMART BUSINESS

The Kamstrup flowIQ 3200 is designed to revolutionize water management for residential, multi-unit, and light commercial applications. With size options ranging from 1 ½" to 4", the flowIQ 3200 fits the majority of standard meter sizings.



Key Features

- Constructed from high-performance thermoplastic and 316L stainless steel, free from lead and other heavy metals
- Compliant with AWWA C715-18 and CN1044 fire service meter guidelines
- Low head loss design, reducing back-pressure and lowering energy consumption
- Begins measuring flow at 0.035 gpm. Guaranteed measurement accuracy from 0.4 to 700 gpm
- NSF/ANSI 61-certified lead-free materials for safe drinking water
- Powered by a long-lasting lithium battery with an operational life of up to 20 years, minimizing maintenance and replacements
- Integrated ALD sensors available in select sizes

1 *Please refer to the flowIQ2200 Data Sheet for further details.*
2 *For information concerning reclaimed water specifications, contact your local meter specialist.*

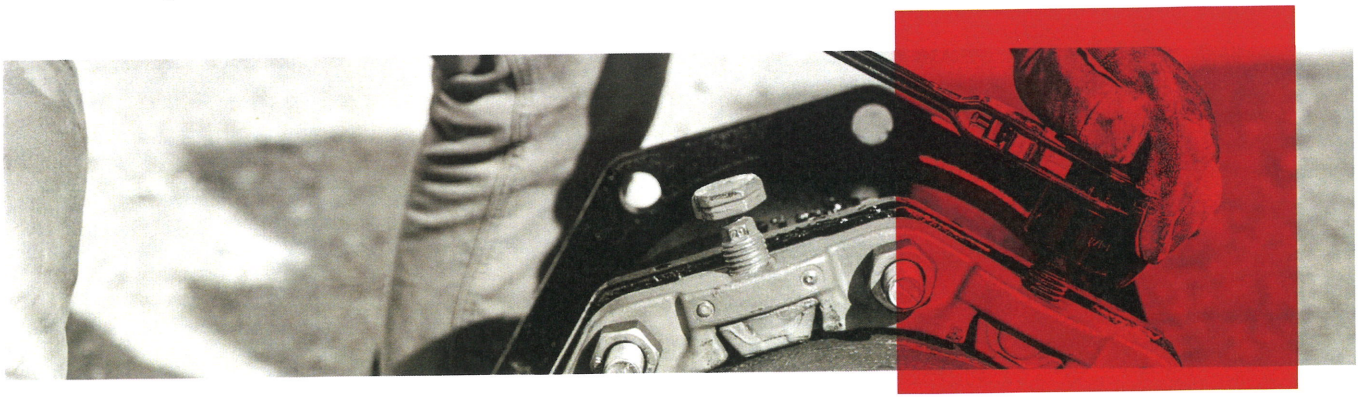
flowIQ 4200 – INDUSTRIOUS METERING

The Kamstrup flowIQ 4200 is engineered for commercial, industrial, and multi-unit residential applications. With size options ranging from 6" to 12", the flowIQ 4200 fits the majority of standard large meter sizings.

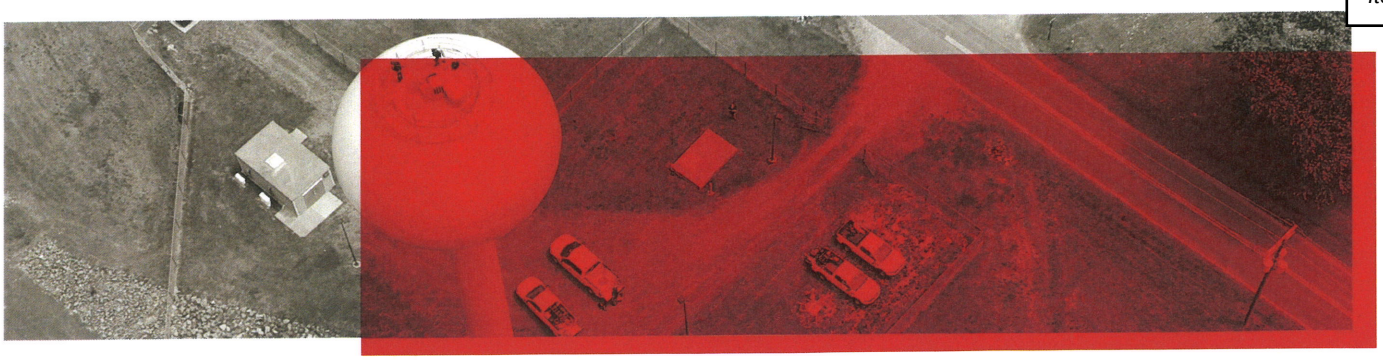


Key Features

- Hermetically sealed, vacuum-protected electronics to prevent humidity damage
- Begins measuring flow at 1.4 gpm. Guaranteed measurement accuracy from 2.8 to 1400 gpm[1]
- NSF/ANSI 61-certified lead-free materials for safe drinking water
- Coated split flanges constructed of Cast Iron
- Field-replaceable battery with a 20-year lifespan, reducing waste and lowering the total cost of ownership
- Constructed from 316L stainless steel and high-performance thermoplastic, ensuring durability and compliance with NSF/ANSI 61 Drinking Water Standards



1 *Accuracy range varies according to meter size. Please refer to attached Data Sheet for further information.*



COMMUNICATION OPTIONS

The flowIQ Series supports a variety of communication options, depending on meter type:

- **AMR - 450-470 MHz (RF)**
- **AMI - 912.5, 915, or 918.5 MHz 0 Wireless Radio (RF)1**

RADIO FREQUENCY COMMUNICATIONS

Advanced Metering Infrastructure - AMI

Kamstrup's Advanced Metering Infrastructure (AMI) network leverages an FCC-licensed radio frequency (450–470 MHz) to deliver reliable, long-distance data transmission with minimal signal loss. By helping each utility secure a licensed frequency, Kamstrup ensures that utilities own the rights to their network and benefit from lower infrastructure costs.

Key Features

- **Low-Band Frequency:** Propagates effectively through vegetation and over long distances, reducing the need for extra collectors and repeaters.
- **Secure Data Transmission:** Standard encryption protocols protect transmitted data at every stage.
- **Automatic Power & Path Optimizations:** Dynamically selects the best collector and transmission strength for each meter, ensuring top-tier reliability.
- **Dual-Band Radios (AMI & AMR):** Even in AMI mode, meters can be read via fallback AMR without reprogramming, offering total flexibility.
- **Near Real-Time Data:** Utilities receive frequent updates without needing a vehicle or staff on site.
- **Proactive Maintenance & Alarms:** Continuous or scheduled transmissions allow quick detection of leaks, tampering, and abnormal usage, reducing water loss and improving customer service.

1 *This version is intended for use with Wireless M-Bus – US Localization of European standard for remote reading of meters EN 13757-4.*

ACOUSTIC LEAK DETECTION (ALD) TECHNOLOGY

Kamstrup's Acoustic Leak Detection (ALD) Technology is a sophisticated system designed to detect and locate leaks within a municipality's water distribution network. Using advanced sensors and algorithms within the meters themselves to monitor your network continuously, this technology provides real-time insights into the condition of your infrastructure.

PRECISE LEAK DETECTION

Kamstrup's ALD Technology excels in pinpointing leaks with a high degree of accuracy, regardless of their size or severity. By detecting leaks early, you can prevent water loss and minimize infrastructure damage.

REAL-TIME MONITORING

Stay ahead of potential issues with continuous real-time monitoring. The system offers timely alerts when it identifies a potential leak, enabling proactive responses and reducing downtime.

COST SAVINGS

Addressing water loss and preventing infrastructure damage can lead to significant cost savings. By investing in ALD technology, you can reduce water expenses and lower maintenance costs.

ENVIRONMENTAL RESPONSIBILITY

Reducing water waste is a crucial part of environmental stewardship. By conserving water resources and minimizing energy consumption, you will contribute to sustainability efforts.

IMPROVED CUSTOMER SERVICE

Maintaining reliable service ensures customer satisfaction. With Kamstrup's technology, you can enhance service reliability, earning you the trust of your customers.

SCALABILITY

ALD Technology is adaptable to suit utilities of various sizes. It seamlessly integrates with existing infrastructure, ensuring a flexible solution for your specific needs.

DATA-DRIVEN DECISIONS

Our system provides valuable data insights that will allow you to analyze consumption trends, track performance, and optimize network operations efficiently.

EASE OF IMPLEMENTATION

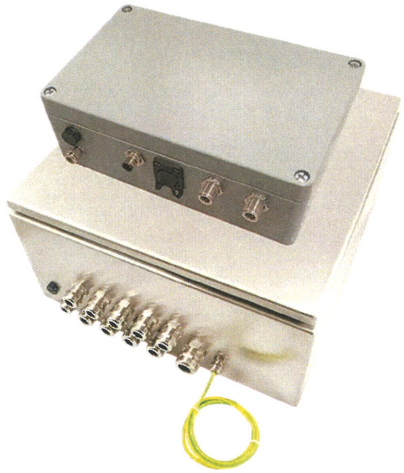
Fortiline's team ensures a straightforward installation process and offers unparalleled support to guarantee seamless integration with your existing meters and control systems.

This technology identifies leaks of all sizes, enabling their prompt repair, restoration of water resources, and minimizing losses to municipalities. The ALD features of the flowIQ 2200 & 3200 meter may be utilized at any point during the life of the meter with the purchase and activation of the Leak Detector software.

ADDITIONAL HARDWARE

KAMSTRUP READY COLLECTOR[1]

The READy Collector is a central, two-way network component designed for Advanced Metering Infrastructure (AMI) systems. Built to withstand harsh conditions, it reliably collects consumption data from up to 25,000 water meters and relays that information to Kamstrup's READy Manager software. Its robust design eliminates the need for coaxial cabling, using straightforward wiring between a Collector Top and a Base unit.



Key Features

- **Two-Way Communication:** Ensures fast, secure, and intelligent data exchanges with meters.
- **Rugged Construction:** Built for elevated or hard-to-reach installations, including water towers or storage tanks.
- **High-Level Security:** Provides individual encryption keys, ensuring protected data transmissions.
- **Automatic Event Alerts:** Transmits warnings and alarms in real time for proactive maintenance.
- **Plug-and-Play Components:** The Collector Top and Base are easy to install, replace, or upgrade.

KAMSTRUP READy CONVERTER (ADVANCED)

The READy Converter Advanced is a portable, all-in-one solution for drive-by or walk-by meter reading. It uses Wireless M-Bus technology (912.5–918.5 MHz) to collect consumption data from smart water meters and sends it to a smartphone or tablet. Its lightweight, battery-powered design makes it ideal for utilities transitioning to automated reading while maintaining flexibility in the field.



Key Features

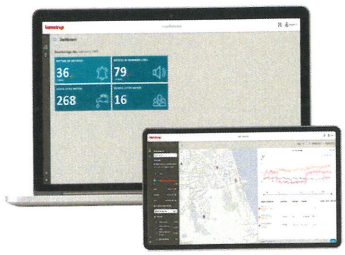
- **High-Speed Meter Reading:** Receives data from up to 30 smart meters per second, perfect for drive-by routes.
- **Rugged & Compact:** Packaged in a sturdy suitcase with a durable, rechargeable battery that can last up to 8 hours.
- **Easy Integration:** Syncs data with the READy smartphone/tablet app, eliminating the need for complex infrastructure.
- **Simple Deployment:** Ships with antennas, mobile device holders, and a quick-start guide for rapid setup.
- **Secure Wireless Protocol:** Uses Wireless M-Bus (C mode) with strong encryption to protect consumption data.

1 *To move the data from the collectors to READy Manager software for viewing by Jerome, the utility should provide an ethernet connection to "hard wire" to the collector's modem, or, a SIM card from their current cellular carrier for 250-500MB of data monthly. Our experience has found most utilities who purchase SIM cards for this pay about $25 per month per card, but that may vary depending on the utility's cellular plan for their employees.*

REMOTE MANAGEMENT & MONITORING

SOFTWARE OVERVIEW

SMART SOFTWARE THAT IS SIMPLE TO USE.



Water utilities today face growing challenges in maintaining accuracy, reducing costs, and improving customer satisfaction. Kamstrup meets these demands head-on with the flowIQ range of ultrasonic water meters, complemented by the powerful READy Manager and READy App software platform. Together, they deliver a streamlined, highly accurate, and scalable metering solution.

During training, Fortiline will work with Jerome to customize the fields visible in READy Manager at no additional cost. If the Town later needs READy Manager connected to other software (outside their billing system), Fortiline and Kamstrup can assist through FTP (File Transfer Portal) or API (Application Programming Interface). FTP interfaces typically cost a few thousand dollars, while more complex ones can reach up to $10K. API services are included with the Annual Hosting fee.

READy MANAGER AND APP

READy Manager is Kamstrup's core Meter Data Management (MDM) platform. READy and it's mobile app connect seamlessly with flowIQ meters (and other Kamstrup devices) to gather and organize consumption data for water utilities. READy Manager helps utilities to provide customers with precise, verifiable consumption data to quickly resolve billing issues. This visibility is crucial for accurate billing, timely leak detection, and ensuring customers are informed and confident in their usage.

READy Manager Key Features

- **All-in-One Hosted Platform:** Access consumption data, meter alarms, and historical logging in a user-friendly PC interface. All information is securely stored on Kamstrup's servers.
- **Remote Monitoring:** Access near-real-time or scheduled meter readings and alarms, enabling quick detection of leaks, bursts, or tampering.
- **Data Visualization & Reporting:** Graphs and dashboards provide insights into hourly, daily, or monthly consumption patterns.
- **Automated Data Handling:** Schedule meter reads, generate custom reports, and export data to billing, GIS platforms, or other third-party software with minimal effort.
- **User-Friendly Interface:** Requires minimal training, allowing staff to quickly view, manage, and export consumption data.
- **Configurable Alarms and Notifications:** Set leak, burst, and temperature thresholds remotely; receive email or text notifications when an event occurs.



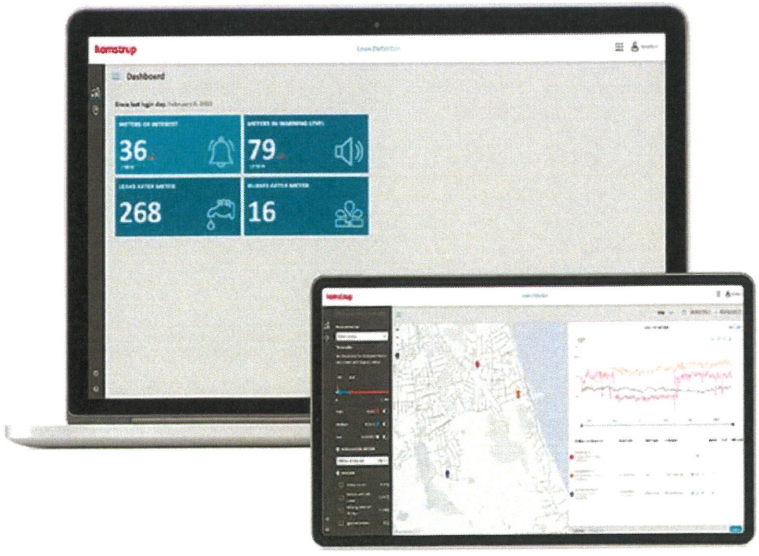
READy App Key Features

- **Mobile Meter Reading:** Pair a smartphone or tablet with a Bluetooth converter for drive-by meter reading—no bulky equipment required.
- **Real-Time Sync:** Update consumption data, meter positions, and installation notes instantly between the field and the office.
- **Integrated Installation Tools:** Check signal strength, configure network components, and replace meters on the spot, with data seamlessly syncing back to READy Manager.
- **Usage Logging:** View meter data logs and info codes on the go, helping field technicians diagnose issues without returning to the office.

LEAK DETECTOR

Proactive Leak Detection & Non-Revenue Water Reduction

Water Intelligence leverages advanced algorithms and continuous data gathering to help utilities pinpoint the root causes of water loss. By analyzing both district and customer level meter data in near real time, you can quickly identify leaks on main lines, service connections, or at customer premises—before they turn into costly emergencies



Real-Time, Visual Insights

- Kamstrup's Leak Detector uses continuous monitoring and advanced algorithms to detect abnormalities in service lines at any flow level, **preventing significant water loss and infrastructure damage**. A dynamic map interface color-codes the riskiest meters, allowing utility staff to quickly pinpoint potential leaks, prioritize repairs, and allocate resources efficiently. By offering real-time analytics and intuitive visualization, Leak Detector reduces non-revenue water, minimizes costs, and enhances overall network reliability.

Data-Driven Decisions, Delivered Simply

Intuitive Web Portal: Access powerful dashboards from any modern browser—no specialized software required.

Seamless Integration: Connect Water Intelligence to your existing Kamstrup READy Manager or other data management systems, ensuring all meter readings, logs, and alarm statuses flow into one centralized place.

Configurable Alerts & Reporting: Tailor alarms for night flows, abnormal consumption, or suspected bursts. Generate visual reports that clearly convey water loss trends and system performance to stakeholders.

Flexible, Scalable, and Secure

Cloud-Based Hosting: Hosted on Microsoft Azure data centers within the U.S., Water Intelligence is designed for reliability, scalability, and compliance with local data regulations.

Minimal Infrastructure: All you need is an internet connection; no additional on-site servers. The platform easily accommodates more meters, districts, or modules as your needs grow.

Mobile Compatibility: Access or review water balances and potential leaks on smartphones or tablets—ideal for field crews needing quick updates.



CUSTOMER PORTAL

H2O ANALYTICS

H2O CUSTOMER PORTAL

Fortiline's proposed Customer Portal solution for the Town of Jerome is provided by H2O Analytics, a browser-based solution that can help the Town of Jerome turn its data into efficiency gains, improved customer satisfaction, and enhanced conservation efforts.

Solution Overview

- Browser-based Portal and Mobile Apps allow your Customers direct access to their meter data
- Integrated with your existing billing and metering systems for quick and easy implementation
- Customers control notification messages for leaks and high use conditions
- Notifications are delivered via email, text message and computerized voice calls
- Delegated administration for full utility control of user account information



H2O Customer Portal allows utilities to go beyond simple monthly statements and engage customers with interactive technologies. Allowing customers to visualize and understand their water usage through intuitive charts, proactive alerts, and notifications improves customer service and encourages changes in customer consumption.

The Customer Portal is browser-based and provides Jerome's customers with access to their account information and notification configuration options. H2O Analytics has the ability to construct private-labeled web, Android, and iOS versions of the Customer Portal, integrating the Town of Jerome's branding into the Customer Portal.

Systems Integrations

The H2O Customer Portal's processes for integrating with Kamstrup's READy Manager are all automated. This allows for the seamless transfer of meter readings and alerts between the two systems. Integrating with the Town of Jerome's preferred billing provider requires access to the utility's billing database, customer account information, and customer contact information.

The H2O Analytic Engine provides automated processing of Jerome's in-house billing system and meter data from Kamstrup's READy Manager MDMs. As a cloud-based platform, there is no hardware and very little software required at your location.

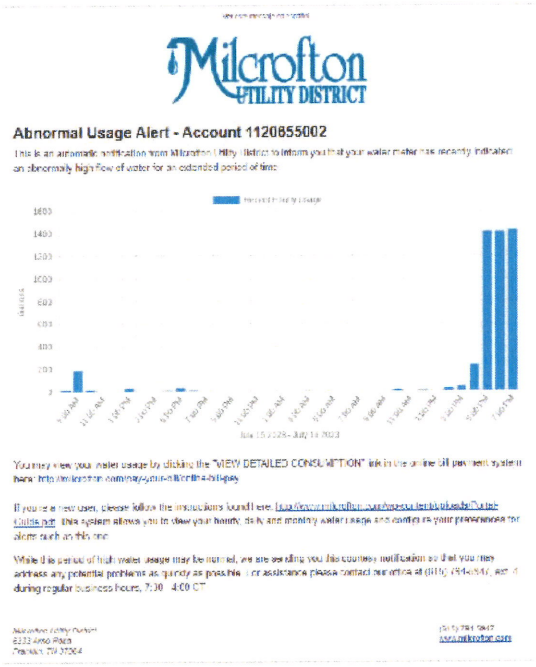
Alerts and Notifications

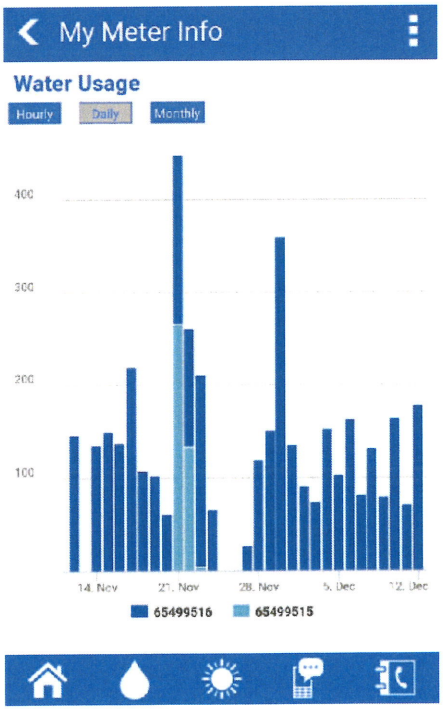
Customer alerts can be triggered from any desired system alert code. Additionally, the H2O Analytic Engine learns your customer's typical water usage schedule and sends an Abnormal Usage alert for non-regular high usage events. The Town of Jerome Utilities Department will also be able to program usage restriction rules. Restriction Violation alerts are sent when those parameters are broken.



The Town of Jerome will be able to reach its customers over multiple channels. H2O Customer Portal allows the utility send notifications via email, SMS text messaging, and computerized "text-to-voice" telephone calls. By supporting all three of these notification protocols, Jerome will be able to reach a larger percentage of is customer than ever before.

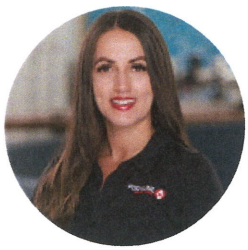
Utility personnel will also have delegated administration access. This allows the Town of Jerome to control the user account maintenance. Additionally, utility staff have the ability to record, save, and re-use notification templates. With Field Intelligence, it is just as easy to send notifications out to a map-based selection of customers as it is to send out a mass notification to all your customers.





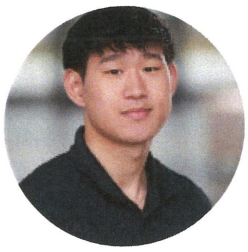
03 | FORTILINE PROJECT MANAGEMENT

Fortiline's exceptional team of Project Managers have over 100 years of combined industry experience. Each member of the Project Management team is dedicated to using our tried-and-true management methods to ensure that your project runs as smoothly as possible. Working together with your staff, our team will accomplish your project goals effectively and efficiently.



RHONDA DURAN | METER SPECIALIST FOR ARIZONA

Rhonda received her bachelors degree from UTEP in Physics and has since built nine years' experience spanning contractor and municipal sales, RFP management, and annual contracts across Arizona and New Mexico. Rhonda combines strong technical expertise with a customer-focused approach. As your Meter Specialist, Rhonda will leverage her industry knowledge to deliver efficient metering solutions to support you in achieving your operational and sustainability goals.



KEVIN SHEN | PROJECT MANAGER

Kevin Shen received his BA in Commerce and Business from Rhodes College. His work experience has revolved around the waterworks industry. As your Project Manager, Kevin will work with the Town's personnel to ensure clear communication between the utility, Fortiline, and Kamstrup. He will be available to answer questions you may have and will work with you every step of the way.



JOE FERGUSON | REGION METER MANAGER

Joe's role in the project is to support the Fortiline team and work as a liaison with Kamstrup in achieving the desired project goals. Joe brings over 20 years' experience working with several meter lines to provide solutions to water utilities across the southern and eastern United States. His background in AMR and AMI solutions with multiple manufacturers gives him a unique perspective and the ability to ensure successful project delivery.



CALEB JONES | NATIONAL METER DIRECTOR

As National Meter Director, Caleb supports the PM team with technical and administrative guidance. With a Mechanical Engineering degree and a background in water meter manufacturing, engineering, and operations, he offers a problem-solving perspective to every project.

DB UTILITY

Your Turn-Key AMI Partner

DB Utility is a full-service AMI installation contractor specializing in residential and commercial water meter and collector installations. Our proven process integrates seamlessly with leading manufacturers and distributors to ensure on-time delivery, pristine quality, and satisfied utilities.



Our Services

- Water Meter Installations: 5/8"–12", residential & commercial
- Collector Installation & Maintenance: Tower, pole, and rooftop applications
- Turnkey Project Management: Scheduling, data management, QA/QC
- Resident Communication: Call center, SMS & QR-based appointment system
- Software Integration: Billing & WOMS support with live data tracking

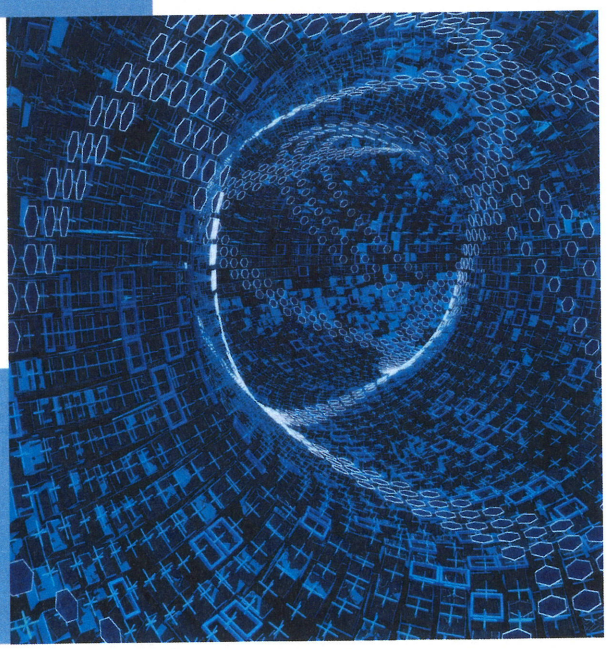
Why DB Utility?

- ✓ Trusted Partnerships: Installed for distributors nationwide
- ✓ Scalable Teams: Local crews deployed across 20+ states
- ✓ Reliability: Zero missed deadlines on active projects
- ✓ End-to-End Support: From kickoff through warranty closeout

Over 50k meters installed in 2025

> "They work hard, communicate, and do what they say they are going to do."

> "Their reliability, timeliness, and consideration for our customers is only part of what makes them a great contractor to partner with."



Active Regions

CO, TX, NM, AZ, GA, FL, OR, WA, ID, UT, KS, NE, SD, ND, OK, MT, LA

KAMSTRUP

PROJECT MANAGEMENT



AMY NEWMAN | PROJECT MANAGER

Amy brings over 15 years of project management experience, with a focus on Kamstrup implementations across the U.S. She's led projects from small pilots to systems with 100,000+ endpoints. With expertise in LEAN and Six Sigma, Amy drives efficient operations, training, and support—guiding each customer with industry best practices.



VICTOR GONZALES | REGIONAL DISTRIBUTION SALES MANAGER

Victor's role as Regional Sales Manager, oversees business growth and customer support throughout Arizona. Before joining Kamstrup, Victor spent nearly 11 years in distribution sales, developing lasting customer relationships and expanding market share. This combination of field experience and sales leadership gives Victor a strong understanding of customer needs, operational challenges, and long-term project success.

FORTILINE

HELP DESK & SUPPORT



Both Fortiline Waterworks and Kamstrup have their own customer service departments. These departments work together to form a network of personnel that is dedicated to ensuring both the Town and their consumer customers are supported through the life of the project and beyond.

Fortiline Waterworks maintains a Support Center, located in Concord, NC. The support center keeps regular business hours, Monday - Friday, 8am - 5pm EST. Our team of support staff are here to support the Town of Jerome. We are able to resolve 95% of the customer issues we are tasked with. However, in the case that we are unable to find a solution, we will open a support case with Kamstrup that will provide a resolution.

Kamstrup's customer service support is easily accessible via an online support ticketing system housed in their online portal, My Kamstrup. This allows for 24/7 reporting. The Service Desk portion of the My Kamstrup site also allows customers to view the progress of their request and all communication in one place. You also find troubleshooting guides, tutorials, and FAQs located there.

Finally, your local Meter Specialist, Rhonda Duran, and Project Manager, Kevin Shen, will act as your personal Fortiline representatives. Both Rhonda and Kevin are dedicated and driven professionals who will work to ensure that the Town of Jerome's project is completed as smoothly as possible.

Our solution provides customer support every step of the way.

kamstrup | FORTILINE SMART UTILITY SOLUTIONS

04 FORTILINE EXPERIENCE & REFERENCES

Incorporated in 1997, Fortiline, Inc. has grown to over 70 locations, serving 23 states, and is the third largest full-service provider to the water, wastewater, utility, and construction industries in the country. Although our company began as a supplier, we have expanded our expertise over the last quarter of a century to include a smart utility solutions department that specializes in water metering. Fortiline Waterworks began selling AMR water metering systems in 2005 and completed our first AMI meter project in 2014.

Throughout the last decade, Fortiline Waterworks has worked to foster relationships with manufacturers at the forefront of the water metering industry, including Kamstrup. We have been a distributor for the Danish company since 2015 and began collaborating with them on AMI projects in 2017. Kamstrup is a global supplier of ultrasonic meters, having made their first in 1991, and are now selling in over 80 countries around the world. The headquarters of their US operations are located in Cumming, GA.

Kamstrup Meters have proven to be highly reliable in the field, with a historic global failure rate of less than 0.5%. Combined with a starting low flow rate of 0.008 gpm and guaranteed new-meter accuracy for the 20-year warrantied life of the meter, its easy to see why Kamstrup is the brand of choice for so many utilities.

Moreover, Kamstrup understands that although their meters are designed to capture, record, and transmit detailed data, that information is only helpful if you can analyze it. Their softwares, READy Manager and Leak Detector are simultaneously intelligent enough to process the metering data and straightforward enough that it is easy to use. Powerful data, intelligent software, and easy on-boarding allows Fortiline and Kamstrup to bring Jerome a long-term AMI solution that is accurate and reliable.

Our partnership with Kamstrup has spanned over many projects. In fact, Kamstrup has completed case studies on many of our joint ventures including the Eastern Band of Cherokee Indians, Iredell Water Corporation, Lincolnton, and Milcrofton. You can find these in depth project studies on Kamstrup's US website under the "Insights" section.



FORTILINE

IREDELL WATER CORPORATION, NC

In the rural community of Iredell, the transition from a failing AMR system to Kamstrup's flowIQ meters and AMI system yielded impressive results: increased sales, reduced water loss, and freed-up employee time previously spent on time-consuming drive-by readings.

Meter Type: AMI Water Meters
Sensor Count: 10,200
Services: System Hosting/Product
Services Project Start: 10/2021

Installation: Subcontractor (G2 Utilities, Inc.)
Contact: Danny Sloan
Email: dsloan@iredellwater.com
Phone: (704) 876-0672

DARE COUNTY, NC

Dare County, situated along the coast, posed numerous challenges for implementing metering infrastructure. However, Fortiline's proficient team and the reliable performance of Kamstrup's flowIQ meters and AMI system successfully navigated these obstacles. With over 20,000 installations completed and minimal issues encountered, Dare County now serves as a strong advocate for the effectiveness of Fortiline's service and Kamstrup's AMI system.

Meter Type: AMI Water Meters
Sensor Count: 21,000
Services: System Hosting/Product
Services Project Start: 09/2021
Project End: Ongoing

Installation: Subcontractor (G2 Utilities, Inc.)
Contact: Jessica King
Email: Jessica.King@DareNC.gov
Phone: (252) 475-5990
Address: 600 Mustian St., Kill Devil Hills, NC 27948

CITY OF ORANGE, VA

Orange has seen a successful installation of most residential meters, with the remaining installations scheduled for completion in the near future. The utility has already seen improvements in metering performance, achieving between 98.5% and 100% daily read rates.

Meter Type: AMI Water Meters Sensor Count: 2500
Services: System Hosting/Product Services
Project Start: 04/2025
Project End: Ongoing
Installation: Fortiline Installation

Installation: Fortiline Installation
Contact: Larry Bond, Director of Public Works
Email: l.bond@townoforangeva.gov
Phone: (540) 718-7672
Address: 119 Belleview Ave, Orange, Virginia 22960

STEDMAN, NC

Stedman went from a manual read system to a full AMI deployment with ALD. Within the first week of meters being installed a large leak was found on the utility side and was able to be repaired, saving the town water and lost revenue.

Meter Type: AMI Water Meters with Acoustic Leak Detection software
Sensor Count: 800
Services: System Hosting/Product
Services Project Start: 03/2022
Project End: 12/2022

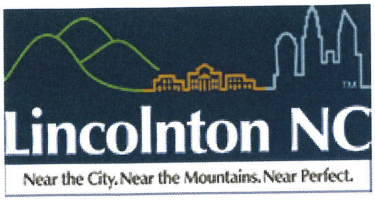
Installation: Fortiline Installation
Contact: Connie Veederr, Town Clerk/ Finance Officer
Email: townofstedman@gmail.com
Phone: (910) 323-1892
Address: PO Box 220, 5110 Front Street, Stedman, NC 28391

AMI REFERENCES

CUSTOMER CONTACT NAME AND INFORMATION	ADDRESS AND PHONE NUMBER	PROJECT DETAILS
Sumter County, SC Alfred H. Conyers, Jr. aconyers@sumtercountysc.gov	1289 North Main Street Sumter, SC 29153 803-774-3855	Billing Software: Qs1 Project Start: March 2025 Project End: July 2025 Endpoints: 1600
Malone, FL Karen Mercer depclerk@malonefl.net	5182 9th Ave Malone, FL 32445 (850) 569-2308	Billing Software: CreativeTech Project Start: July 2024 Project End: September 2024 Endpoints: 313
Brooker, FL[1] Charlene Thomas brooker1022@windstream.net	17435 Tetstone Ave Brooker, FL 32622 (352) 485-1022	Billing Software: Jayhawk Software Project Start: March 2025 Project End: April 2025 Endpoints: 212
Iredell Water Corporation, NC Danny Sloan dsloan@iredellwater.com	571 Jennings Rd. Statesville, NC 28625 (704) 876-0672	Billing Software: AS400 Project Start: 10/15/2021 Project End: 5/1/2022 Endpoints: 10,200
Dare County, NC[2] William Nash william.nash@darenc.com	600 Mustian St. Kill Devil Hills, NC 27948 (252) 475-5990	Billing Software: Tyler Munis Project Start: 10/1/2018 Project End: 6/1/2023 Endpoints: 24,000
City of Lincolnton, NC David Ramsey, Business Service Manager dramsey@lincolntonnc.org	P.O. Box 617 Lincolnton, NC (704) 736-8980	Billing Software: Tyler Encode Project Start: 6/1/2019 Project End: 7/1/2021 Endpoints: 6,500
Tappahannock, VA Eric Pollitt, Town Manager epollitt@tappahannock-va.gov	915 Church Lane Tappahannock, VA 22560 (804) 443-3336	Billing Software: Edmonds Project Start: 4/4/2022 Project End: 8/17/2023 Endpoints: 1,450
Keysville, VA Sherry Marker townoffice@townofkeysville.com	120 J. Street Keysville, VA 23947 (434) 736-9551	Billing Software: Muni-Link Project Start: 10/21/2020 Project End: Mar 2021 Endpoints: 400
Narrows, VA John Davis, Director of Utilities jdavis@townofnarrows.org	210 Main Street Narrows, VA 24124 (540) 599-3670	Billing Software: Edmonds Project Start: Sep. 2022 Project End: Jan. 2023 Endpoints: 1,200

1 Brooker carries an AMR system.
2 Dare County started their system as an AMR deployment and then migrated to an AMI system.

CUSTOMER CONTACT NAME AND INFORMATION	ADDRESS AND PHONE NUMBER	PROJECT DETAILS
Eastern Band of Cherokee Indians, NC Ethan Arch ethanarch@nc-cherokee.com	1846 Painttown Road Cherokee, NC 28719 (828) 359-6100	Billing Software: Tyler Munis Project Start: 11/1/2019 Project End: 5/1/2021 Endpoints: 2,800
King George, VA Patti Norris-Barker pvanderweert@co.kinggeorge.state.va.us	9207 Kings Highway King George, VA 22485 (540) 775-2746	Billing Software: Muni-Link Project Start: May 2022 Project End: May 2024 Endpoints: 4,000
Lovettsville, VA Stephen Gates, Utilities Director sgates@lovettsvilleva.gov	6 E Pennsylvania Ave. Lovettsville, VA 20180 (540) 822-5788	Billing Software: Harris Flexbill Project Start: 7/1/2019 Project End: 10/1/2019 Endpoints: 970
Maysville, NC Schumata Brown, Town Manager townmanager@bizec.rr.com	404 Main St. Maysville, NC 28555 (910) 743-4441	Billing Software: Utility Billing Project Start: 1/1/2019 Project End: 9/20/2020 Endpoints: 450
Harrisburg, NC Monty L. Jordan mjordan@harrisburgnc.org	4100 Main St. Ste. 101 Harrisburg, NC 28075 (704) 455-0729	Billing Software: Tyler Encode Project Start: 1/1/2019 Project End: 6/1/2022 Endpoints: 6,200
Stanley, NC Craig Roseberry, Public Works Director croseberry@townofstanley.org	416 Hwy 27 S Stanley, NC 28164	Billing Software: Harris Project Start: 3/10/2022 Project End: 10/20/2022 Endpoints: 2,400



To whom it may concern:

I am delighted to share my experience with Kamstrup AMI water meters and Fortiline as our trusted supplier during our transition to an AMI (Advanced Metering Infrastructure) system. This journey has been truly transformative for our water utility, and I cannot emphasize enough the significant benefits we've reaped from this partnership.

First and foremost, Kamstrup's AMI water meters have revolutionized the way we manage our water distribution system. The accuracy and real-time data they provide have been nothing short of exceptional. Our ability to monitor water consumption, detect leaks, and identify irregularities in our network has greatly improved. This level of insight has allowed us to optimize our operations, reduce water losses, and ultimately save both resources and costs. We immediately realized a reduction in our Non-Revenue Water. Before the implementation of the project we typically had a 25% loss on water produced and water billed. After implementation our water loss was reduced to less than 10%. In addition, our sewer revenue is based off of water usage so we not only realized an increase in water revenue but also sewer revenue. When Kamstrup says the meters read almost every drop – they truly do. We have reduced the number of "truck rolls" significantly which is another large reduction in costs. The ability to see a leak in the office and notifying the customer knowing that it is their leak is invaluable and allows our crews to focus efforts elsewhere.

Fortiline's role as our supplier has been equally impressive. Their dedication to providing high-quality equipment and their commitment to our project's success has been commendable. Their team's expertise and guidance throughout the entire process made the transition to an AMI system seamless. From product selection to installation and ongoing support, Fortiline's professionalism has been a cornerstone of our success.

One of the key highlights of this transition has been the ease of integration. Kamstrup's AMI system seamlessly integrated with our existing infrastructure, minimizing downtime and disruptions. The transition was remarkably smooth, thanks to the meticulous planning and execution by both Kamstrup and Fortiline. This ensured that our customers experienced minimal inconvenience during the upgrade process.

From an operational standpoint, AMI water meters have demonstrated exceptional performance and reliability. The meters have proven to be durable, with minimal maintenance required. Our failure rates have dropped significantly, resulting in substantial cost savings and improved operational efficiency. This reliability has allowed us to focus more on proactive measures to optimize our water distribution system.

The benefits of switching to an AMI system have extended beyond operational improvements. We've seen enhanced customer satisfaction as well. With the ability to provide our customers with accurate and timely data on their water usage, we've empowered them to make informed decisions about their consumption. This transparency has fostered trust and improved communication between our utility company and our customers.

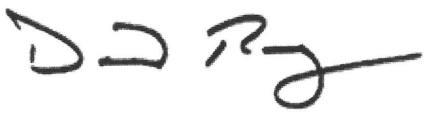
Additionally, the remote reading capabilities of Kamstrup's AMI system have streamlined our billing processes, reducing the margin for human error and increasing the efficiency of our administrative tasks. This has resulted in cost savings and allowed us to allocate resources more effectively.

In conclusion, our partnership with Kamstrup and Fortiline in transitioning to an AMI system has been nothing short of transformative. The benefits in terms of operational efficiency, cost savings, improved customer relations, and environmental impact have been substantial. I wholeheartedly endorse Kamstrup's AMI water meters and Fortiline as a supplier to any water utility company looking to enhance its operations and provide better services to its customers.

This partnership has proven to be an invaluable asset to our organization, and we look forward to continued success in the years to come.

Should you have any questions or need additional information please give me a call.

Regards,



David Ramsey
Business Services Director
City of Lincolnton
dramsey@lincolntonnc.org
704-736-8980

County of Dare
P.O. Box 1000 | Manteo, North Carolina 27954 | 252.475.5000

September 13, 2023

To Whom it May Concern:

In 2019 Dare County Utilities began looking to upgrade their meters to an automated meter system. Multiple companies presented their product and we acquired a meter from each of those companies for testing. In Dare County we have shifting sand dunes and low water tables so the reliability of the product and its ability to read in harsh conditions was a must. To test the meters, we placed them in a five-gallon bucket of water and buried them in the deepest sand dune we could find, then we left them there. During the next few weeks, we would drive by the area where we buried the meters to see which ones still read. At the end of the trial, we had the most success out of the Kamstrup meter.

Since 2019 we have implemented a 4-year program to purchase and install 25,000 meters in our system. In the past four years we have only had six failures:

- two were frozen from the customer leaving the meter lid off
- one customer tried to pry the meter top off to see what was inside
- three had screen failures but the meter was still recording, and we were able to pull data (Fortiline immediately replaced these no questions asked)

Fortiline has been very good to work with, their staff is fast and responsive, and they listen. More than once we have sat down with their engineering teams to discuss if there were any improvements we would like to see. Their team listened and made improvements on the first design making the meter that much better. I cannot say enough about Fortiline's install crew and their professionalism and customer relations. If there was an issue or complaint, they fixed it often going above and beyond to make the customer happy and to take the pressure off the utility.

Operationally we have seen a decrease in unaccounted for water. Prior to 2019 unaccounted for water was around 17%, when last totaled we are now around 8%

unaccounted for water. What we have been able to contribute this to is customer side leaks that the old mechanical meters were not picking up. The Kamstrup ability to read to .02 gpm catches everything, even with the larger meters. The downside to all of this is customers are going to push back because they "never had a problem prior to the new meter", it has been an uphill battle getting people to see the benefits of these meters. Once you learn how to accurately read the data you will be able to impress your customer with your knowledge of their water usage. If they don't believe you just start telling them about their bathroom habits, they start to listen real quick.

As far as finances go I don't have a concrete or specific number to share, there are so many variables I have never taken the time to do the math. Customers are wasting less water by fixing leaks they were unaware of so there is a decrease in sales. However that is offset by lower production cost, less chemicals, less energy, less wear and tear on equipment. The big thing for me has been the increase in our ability to help the customer and gaining a better public image. When we show up to a home now we are not the bad guy that says sorry it went through the meter you have to pay for it, and no I can't tell you when it happened. Now we can say it happened at this date and time, when you have the ability to show this it dings a person's memory to an event that occurred. We have heard it all:

- The bulkhead guy cut my water line that day
- That's when the pool guy was out, he forgot to take the hose out of the pool
- Oh, that's the weekend I started my irrigation system and the list goes on and on.

Kamstrup makes a solid product that Dare Utilities has been very happy with. I can get long winded so let me just say that if you have any questions please feel free to give me a call I will be more than happy to answer them. 252-475-5606

William Nash

Public Utilities Director

Dare County Water Department

05 FORTILINE APPENDIX

A Bid Forms

B Pricing

C Vendor Technical Documents

D Propagation Study

E Authority to do Business

F Special Conditions, Disclaimers, and Exceptions

G Warranties

A | Bid Forms

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

None

REQUIRED FOR SUBMITTAL

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by Fortiline, Inc d/b/a Fortiline Waterworks,

a corporation organized under the laws of the State of ~~Arizona, a partnership consisting of~~ South Carolina (Foreign Act thority - Arizona)

~~, or an individual trading as~~ of the

City of Prescott, and holder of Arizona State Contractor's License(s):

Classification(s) CR-37

No.(s) ROC 344938

Respectfully Submitted,

Fortiline, Inc d/b/a Fortiline Waterworks
Respondent

15850 Dallas Parkway, Dallas, TX 75248
Address

Andy Iverson, Asst Secretary
By (Officer & Title)

11/3/25
Date

ATTEST:

Gary Hibbs VP - Treasury
(Officer and Title)

Witness (if respondent is an individual)

REQUIRED FOR SUBMITTAL

Town of Jerome

Proposal Document B – Fee Proposal

Respondent Fortiline, Inc d/b/a Fortiline Waterworks

Mailing Address 6400 Lear Ln

City Prescott State Arizona Zip 86301

Telephone (602) 245-8060

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

REQUIRED FOR SUBMITTAL

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299		$446.82	$133,599.20
2	1" threaded AMI Meter	17		$522.25	$8,878.25
3	1 ½" flanged AMI Meter	13		$1,476.45	$19,193.86
4	2" AMI Meter	2		$1,723.36	$3,446.73
5	4" AMI Meter	1		$3,108.88	$3,108.88
6	AMI System Software	1		$14,758.75	$14,758.75
7	AMI System Training	1		$18,642.92	$18,642.92
8	AMI Data Collection Hardware/Software	1		$31,802.18	$31,802.18
9	FCC Registration	1		Included	Included
SUBTOTAL COSTS – BASE PROPOSAL				$72,481.61	$233,430.76
GRAND TOTAL, BASE PROPOSAL			*Does not include customer portal pricing which has been provided in a separate quote.		$233,430.76*

GRAND TOTAL – BASE PROPOSAL (in words):_____

Two hundred thirty-three thousand, four hundred and thirty dollars, seventy-six cents

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Fortiline, Inc d/b/a Fortiline Waterworks

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 3rd day of November 2025.

Signature

469-203-5815
Phone Number

Andy Iverson, Asst. Secretary
Written Name

andrew.iverson@fsrece.com
Email Address

REQUIRED FOR SUBMITTAL

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Fortiline, Inc d/b/a Fortiline Waterworks

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 3rd day of November 2025.

Signature

469-203-5815
Phone Number

Andy Iverson, Asst. Secretary
Written Name

andrew.iverson@reece.com
Email Address

REQUIRED FOR SUBMITTAL

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Fortiline, Inc d/b/a Fortiline Waterworks

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 3rd day of November 2025.

Signature

469-203-5815
Phone Number

Andy Iverson, Asst Secretary
Written Name

andrew.iverson@reece.com
Email Address

REQUIRED FOR SUBMITTAL

B | Pricing

QUOTE

FORTILINE WATERWORKS

CUSTOMER NO	QUOTING BRANCH	QUOTE NO	QUOTE DATE	PAGE
220247	FORTILINE PEORIA	6743874	10/24/25	1

CUSTOMER

ALL BIDDERS PEORIA
8051 W. OLIVE AVE.
PEORIA, AZ 85345

PROJECT INFORMATION

TOWN OF JEROME

LINE	QTY	UOM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
			********** IF, AFTER THE DATE OF THIS QUOTE, ANY NEW OR INCREASED TARIFFS, DUTIES OR OTHER GOVERNMENT-IMPOSED COSTS ON MATERIALS USED IN THE WORK BECOMES EFFECTIVE, THE CONTRACT PRICE SHALL BE ADJUSTED TO REFLECT THE ACTUAL INCREASED COST TO FORTILINE. FORTILINE SHALL PROMPTLY NOTIFY THE CUSTOMER OF ANY SUCH COST IMPACT. FAILURE OF FORTILINE AND THE CUSTOMER TO AGREE ON ANY PRICE ADJUSTMENT SHALL NOT RELIEVE THE CUSTOMER'S OBLIGATION TO PAY THE INCREASED COST. **********		
			METERS AND HARDWARE		
30	299	EA	5/8X3/4 FLOWIQ 2200 MTR COMP PEO	319.1100	95,413.89
40	6	PKG	3/4" METER GASKET 1/8" 100/PK	9.8500	59.10
50	299	EA	3/4" METER INSTALL CHARGE	100.0000	29,900.00
70	17	EA	1" FLOWIQ 2200 METER SS FLG 10" LL	388.0000	6,596.00
80	1	PKG	1" METER GASKET 1/8" 100/PK	12.9600	12.96
90	1	EA	1"X2-5/8 MTR CPLG NL	22.6200	22.62
100	17	EA	1" METER INSTALL CHARGE	100.0000	1,700.00
120	13	EA	1-1/2 FLOWIQ 3200 METER SS FLG 13" LL	1,132.6400	14,724.32
130	26	EA	1-1/2" METER BOLT & GASKET SET	13.9500	362.70
160	13	EA	1-1/2" METER INSTALL CHARGE	225.0000	2,925.00
180	2	EA	2" FLOWIQ 3200 METER SS FLG 17" LL	1,256.3500	2,512.70
190	4	EA	2" METER BOLT & GASKET SET	17.9500	71.80
220	2	EA	2" METER INSTALL CHARGE	325.0000	650.00
230	1	EA	4" FLOWIQ 3200 METER SS FLG 14" LL	2,482.0500	2,482.05
240	2	EA	4" FLG BOLT KIT HDG A307B	14.0400	28.08
250	2	EA	4" FLG GSKT 1/8" FF RR	3.6600	7.32

ALL STOCK DELIVERIES ARE SUBJECT TO SHIPPING CHARGES

All PVC and HDPE material is quoted for shipment within 7 days of quote/bid date. All other material is quoted for shipment within 30 days of quote/bid date.
After 7 days for PVC and HDPE or 30 days for all other material, ALL quoted prices are subject to review based on current market conditions.

CUSTOMER NO	JOB NAME	QUOTE NO	QUOTE DATE	PAGE
220247	TOWN OF JEROME	6743874	10/24/25	2

LINE	QTY	UOM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
260	1	EA	4" METER INSTALL CHARGE	400.0000	400.00
			Package Sub-total:		**157,868.54**
300	1	EA	**AMI SYSTEM HARDWARE** READY CONVERTER US ADVANCED 669640020- ***INCLUDES TWO CONVERTERS, CAR ANTENNA PLUS CHARGERS**	2,250.0000	2,250.00
340	1	EA	KAMSTRUP AMI RF COLLECTOR SET	15,000.0000	15,000.00
350	1	EA	COLLECTOR INSTALL CHARGE	6,000.0000	6,000.00
360	120	EA	EXTERNAL ANTENNA F/PIT MOUNT 24.6' CABLE 66-97-915	54.9500	6,594.00
			Package Sub-total:		**29,844.00**
			AMI SYSTEM SOFTWARE		
430	1	EA	FORTILINE MTR PRJCT MANAGEMENT INCLUDES TRAINING AND BILLING INTERFACE	6,500.0000	6,500.00
450	1	EA	DO IT YOURSELF <1500 KAMSTRUP PROJECT MANAGEMENT 692YS00000	10,995.0000	10,995.00
470	1	EA	READY AMI MANAGER SOFTWARE 251-800 METERING POINTS	2,450.0000	2,450.00
480	1	EA	LEAK UP AND RUNNING	1,600.0000	1,600.00
500	1	EA	AMI HOSTING UP TO 800 PTS	6,450.0000	6,450.00
510	1	EA	LEAK DETECTOR SOFTWARE 250-800	3,350.0000	3,350.00
			Package Sub-total:		**31,345.00**
			UTILITY PROVIDES ASSET FOR COLLECTOR MOUNTING AND SIM CARD OR ETHERNET CONNECTION FOR BACKHAUL. **PLASTIC LIDS RECOMMENDED FOR BEST PERFORMANCE. EXTERNAL ANTENNAE (ADDITIONAL COST) MAY ALSO BE UTILIZED.** **LARGER METERS MAY REQUIRE EXTRA PARTS AT ADDITIONAL EXPENSE TO ADJUST LAY LENGTH TO MATCH NEW METERS.**		

ALL STOCK DELIVERIES ARE SUBJECT TO SHIPPING CHARGES

All PVC and HDPE material is quoted for shipment within 7 days of quote/bid date. All other material is quoted for shipment within 30 days of quote/bid date.
After 7 days for PVC and HDPE or 30 days for all other material, ALL quoted prices are subject to review based on current market conditions.

CUSTOMER NO	JOB NAME	QUOTE NO	QUOTE DATE	PAGE
220247	TOWN OF JEROME	6743874	10/24/25	3

LINE	QTY	UOM	DESCRIPTION	UNIT PRICE	TOTAL PRICE

Subtotal:	219,057.54
Tax:	14,373.22
Bid Total:	233,430.76

ALL STOCK DELIVERIES ARE SUBJECT TO SHIPPING CHARGES

All PVC and HDPE material is quoted for shipment within 7 days of quote/bid date. All other material is quoted for shipment within 30 days of quote/bid date.

After 7 days for PVC and HDPE or 30 days for all other material, ALL quoted prices are subject to review based on current market conditions.

Ent By TNT 11/05/25 11:13:51

QUOTE

FORTILINE WATERWORKS

CUSTOMER NO	QUOTING BRANCH	QUOTE NO	QUOTE DATE	PAGE
220247	FORTILINE PEORIA	6748672	11/03/25	1

CUSTOMER

ALL BIDDERS PEORIA
8051 W. OLIVE AVE.
PEORIA, AZ 85345

PROJECT INFORMATION

TOWN OF JEROME

LINE	QTY	UOM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
			********** IF, AFTER THE DATE OF THIS QUOTE, ANY NEW OR INCREASED TARIFFS, DUTIES OR OTHER GOVERNMENT-IMPOSED COSTS ON MATERIALS USED IN THE WORK BECOMES EFFECTIVE, THE CONTRACT PRICE SHALL BE ADJUSTED TO REFLECT THE ACTUAL INCREASED COST TO FORTILINE. FORTILINE SHALL PROMPTLY NOTIFY THE CUSTOMER OF ANY SUCH COST IMPACT. FAILURE OF FORTILINE AND THE CUSTOMER TO AGREE ON ANY PRICE ADJUSTMENT SHALL NOT RELIEVE THE CUSTOMER'S OBLIGATION TO PAY THE INCREASED COST. **********		
			H2 ANALYTICS CUSTOMER PORTAL PRICING - TOWN OF JEROME UP TO 350 METERS		
90	1	EA	**ONE TIME FEE** CUSTOMER PORTAL	5,000.0000	5,000.00
			PRICE INCLUDES HOURLY DATA ANALYTICS, CUSTOMER PORTAL, SINGLE SIGN ON (SSO) AND STD IMPLEMENTATION CONSULTING		
160	1	EA	**ANNUAL RECURRING FEES** ANNUAL HOSTING/SUPPORT FEE	3,500.0000	3,500.00
			MONTHLY RECURRING FEES MONTHLY VOIP FEES - PER PHONE SMS MESSAGE		
220	1	EA	FIRST 2000 PER MONTH	.1800	.18
230	1	EA	NEXT 2000 PER MONTH	.1500	.15
240	1	EA	ADDITIONAL PER MONTH	.1200	.12

ALL STOCK DELIVERIES ARE SUBJECT TO SHIPPING CHARGES

All PVC and HDPE material is quoted for shipment within 7 days of quote/bid date. All other material is quoted for shipment within 30 days of quote/bid date.
After 7 days for PVC and HDPE or 30 days for all other material, ALL quoted prices are subject to review based on current market conditions.

CUSTOMER NO	JOB NAME	QUOTE NO	QUOTE DATE	PAGE
220247	TOWN OF JEROME	6748672	11/03/25	2

LINE	QTY	UOM	DESCRIPTION	UNIT PRICE	TOTAL PRICE
				Subtotal:	8,500.45
				Tax:	688.53
				Bid Total:	9,188.98

ALL STOCK DELIVERIES ARE SUBJECT TO SHIPPING CHARGES

All PVC and HDPE material is quoted for shipment within 7 days of quote/bid date. All other material is quoted for shipment within 30 days of quote/bid date.

After 7 days for PVC and HDPE or 30 days for all other material, ALL quoted prices are subject to review based on current market conditions.

Ent By RD4 11/03/25 17:43:12

C | Vendor Technical Documents

kamstrup

Data sheet

flowIQ® 2200

» **RF**
» **Encoded**

- Multiple radio options available
- Ultrasonic measurement
- Sustainable measurement accuracy
- Temperature measurement
- IP68 Vacuum sealed construction
- Lead free and certified to NSF/ANSI 61
- Flow measurement in display
- Acoustic leak detection in service and distribution lines



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Meter modes	7
Display and info codes	8
Data registers	9
Integrated communication	10
State of the art meter reading system (READy)	11
Pressure loss	11
Ordering details	12
Configuration - flowIQ® 2200	13
Dimensional sketches – flowIQ® 2200	15
Dimensions	17
Accessories	17

Electronic ultrasonic cold-water meter for measurement of cold-water consumption in households, multi-unit buildings and industry

Sustainable accuracy
Ultrasonic flow measurement guarantees sustainable accuracy and longevity. Ultrasonic flow measurement is based on the transit time method, and all measurements, references, readings, calculations and data communication are controlled by an advanced, specially designed electronic circuit. Thus, the meter includes no moving parts, which makes flowIQ® 2200 less sensitive to wear and tear and impurities in the water.

Construction
The meter is hermetically closed and vacuum-sealed to prevent humidity from reaching the electronics and avoid condensation between the glass and display. The meter is IP68 (submersible) type tested and suitable for installation in meter pits.

Installation
flowIQ® 2200 is easy to install in all operating environments, horizontally as well as vertically, independent of piping and installation conditions. Consumption data can be read visually from the display, using an optical eye, and remotely read by various integrated communication protocols.

Specific features
flowIQ® 2200 measures the water and environment temperatures and it includes acoustic leak detection, securing that water loss is discovered quickly.

The unique combination of all the flowIQ® 2200 features reduce current operating costs to measure water usage and minimizes unexpected expenses in connection with possible leakage.

Environmentally friendly
The meter has been approved according to Drinking Water Standards and is certified to NSF/ANSI 61. The meter housing and measuring part are made of the high-performance thermoplastic material polyphenylene sulfide (PPS) with 40% fiberglass, which is free from lead and other heavy metals. The environmental report, Carbon Footprint, documents the meter's high reusability and low environmental impact, including recycling of materials.

Hygiene
To protect the health of the consumers Kamstrup has a hygienic manufacturing process of the water meters.

Kamstrup also has a highly automated manufacturing process and only uses materials approved for drinking water. Furthermore, the products get disinfected before dispatch. The hygiene is being controlled by external accredited laboratories and by frequent audits.

General description
flowIQ® 2200 is a hermetically sealed water meter intended for measurement of cold and *reclaimed water consumption in residentials and multi-unit buildings.

flowIQ® 2200 employs the ultrasonic measurement principle, based on Kamstrup's experience since 1991, with the initial development and production of static ultrasonic meters.

flowIQ® 2200 is available in an Encoded Output version with 2 x A-cell battery supply and a RF version with 1 x D-cell battery supply.

One of flowIQ® 2200's many advantages is the fact that it has no wearing parts, which ensures a high and stable accuracy throughout its lifetime. flowIQ® 2200 complies with all the AWWA C715-18 guideline for Ultrasonic Water Meters.

** For information concerning reclaimed water we refer to document no.: FILE100003532*

flowIQ® 2200 measures the water consumption electronically, as a volume, using a pair of ultrasonic signals. Through two ultrasonic transducers, an ultrasonic signal is sent with and against the flow direction. A transducer serves both as a 'speaker' when transmitting and as a 'microphone' when a signal is received. The ultrasonic signal traveling with the flow will be the first to reach the opposite transducer, while the signal running against the flow will be received a little later.

The time difference between the two signals can be converted into flow velocity, and thereby also into a volume. The measuring principle is a proven, long-term stable and accurate measuring principle.

In addition to volume reading, an indication of current flow and several other information codes are displayed. All registers are saved daily in the meter data logger (EEPROM) and are kept for 460 days. Furthermore, monthly data for the latest 36 months (3 years), hourly data for the latest 100 days (about 3 and a half months) and 50 info code events are saved.

flowIQ® 2200 is powered by an internal lithium battery which can provide up to 20 years operating life.

flowIQ® 2200 is available with a choice of integrated data communication options:

- 912.5, 915 or 918.5 MHz - RF
- 450-470 MHz - RF
- Encoded Output

The meter is fitted with an optical eye which makes it possible to read saved consumption data and info codes, stored in the meter's data logger. Using an optical reading head, it is also possible to change the meter configuration, e.g. data packages.

flowIQ® 2200 can and must only be opened by Kamstrup A/S. If the meter has been opened and the sealing has been broken, the meter is no longer valid for billing purposes and the warranty is void.

Technical data

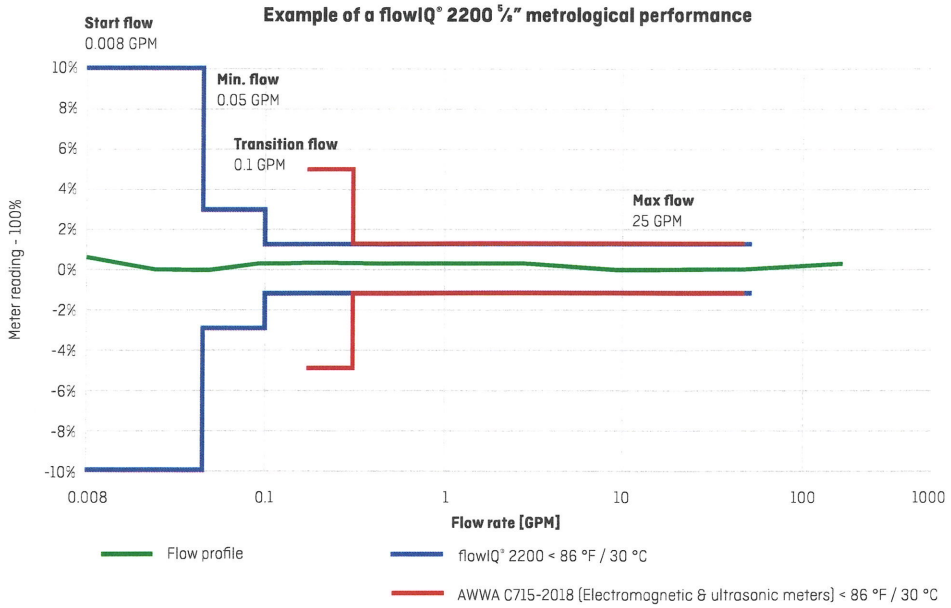
Electrical data

Battery (flowIQ® 2200 RF)	1 x D-Cell battery, 3.6V, 19Ah. The battery warranty does not apply at meter temperatures above t_{BAT} > 95 °F / 35° C
Battery (flowIQ® 2200 E0)	2 x A-Cell battery, 3.6V, 3.6Ah. The battery warranty does not apply at meter temperatures above t_{BAT} > 95 °F / 35° C

Mechanical data

Protection class	IP68-rated (waterproof/submersible)
Mechanical environment	Class M1 (Measuring Instruments Directive classification)
Ambient/meter temperature	
- flowIQ® 2200, composite	35... 130 °F / 1.5... 55 °C
- flowIQ® 2200, metal	35... 130 °F / 1.5... 55 °C
Water temperature	
- flowIQ® 2200, composite	33... 120 °F / 0.5... 50 °C
- flowIQ® 2200, metal	33... 120 °F / 0.5... 50 °C
Storage temp. empty sensor	-10... 140 °F / -20... 60 °C
Maximum operating pressure	250 PSI (17 bar)

Accuracy



The above flow profile is an example of a flowIQ® 2200 5/8" metrological performance and does not represent a generic profile for all Kamstrup water meters. Each meter will have an unique flow profile however all within both Kamstrup and AWWA C715-2018 limitations.

Note: At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow.

Approved meter data

Certified to NSF/ANSI 61
Complies to part 15 of the FCC rules, ISED, IFT and with AWWA C715-18

Material

Wetted parts (composite model)

Meter housing and flow part	Polyphenylene sulfide (PPS) with fiberglass (40 %) reinforcement, PSU, extenders made from PA12
Reflectors	Stainless steel 316

Wetted parts (2-part body)

Flow part, threaded	Stainless Steel 316L
O-ring/gasket	EPDM
Measuring tube	PPS with fiberglass
Reflectors	Stainless steel

External meter parts

Top ring (sealing)	Polycarbonate (gray)

Meter sizes

flowIQ® 2200 is available in the sizes shown in table below:

XX = Communication module Y = Battery suply ZZ = Country code

Type number	Meter size Inches	Start flow[1] (S) [GPM]/ [L/h]	Min. flow[1] [GPM]/ [L/h]	Transition flow [GPM]/ [L/h]	Max flow [GPM]/ [m³/h]	Sat. flow rate [GPM]/ [m³/h]	Pressure loss SMOC [PSI]/ [bar]	Connection on meter NPSM thread	Lay length [Inches]/ [mm]	Strainer	Temp. measurement of water
02-K-XX-Y-1-8A-8ZZ	⅝" x ½"	0.008/ 2	0.05/ 11.4	0.1/ 22.7	25/ 5.68	35/ 7.95	6.2/ 0.43	¾"	7½"/ 190	Yes	Yes
02-K-XX-Y-1-8B-8ZZ	⅝" x ¾"	0.008/ 2	0.05/ 11.4	0.1/ 22.7	25/ 5.68	35/ 7.95	7.7/ 0.53	1"	7½"/ 190	Yes	Yes
02-K-XX-Y-1-8R-8ZZ	⅝" x ¾"	0.008/ 2	0.05/ 11.4	0.1/ 22.7	25/ 5.68	35/ 7.95	7.7/ 0.53	1"	5.1"/ 130	Yes	Yes
02-K-XX-Y-1-8C-8ZZ	¾"	0.011/ 2.5	0.05/ 11.4	0.1/ 22.7	32/ 7.27	45/ 10.22	9.0/ 0.62	1"	7½" or 9"/ 229	Yes	Yes
02-L-XX-Y-1-8B-8ZZ	⅝" x ¾"	0.013/ 3	0.10/ 22.8	0.15/ 34.1	25/ 5.68	35/ 7.95	3.8/ 0.26	1"	7½"/ 190	No	Yes
02-L-XX-Y-1-8N-8ZZ	¾"	0.013/ 3	0.10/ 22.8	0.15/ 34.1	35/ 7.95	49/ 11.13	3.9/ 0.27	1"	7½"/ 190	No	Yes
02-L-XX-Y-1-8L-8ZZ	¾"	0.013/ 3	0.10/ 22.8	0.15/ 34.1	35/ 7.95	49/ 11.13	3.9/ 0.27	1"	9"/ 229	No	Yes
02-L-XX-Y-1-8D-8ZZ	1"	0.022/ 5	0.25/ 56.8	0.4/ 90.8	55/ 12.49	77/ 17.49	3.1/ 0.21	1¼"	10¾"/ 273	No	Yes

Note! 02-K-02-D-1-8C-8UB can be ordered with a 1½" extension and washer (installed by the customer) to fit 7½" or 9" lay lengths

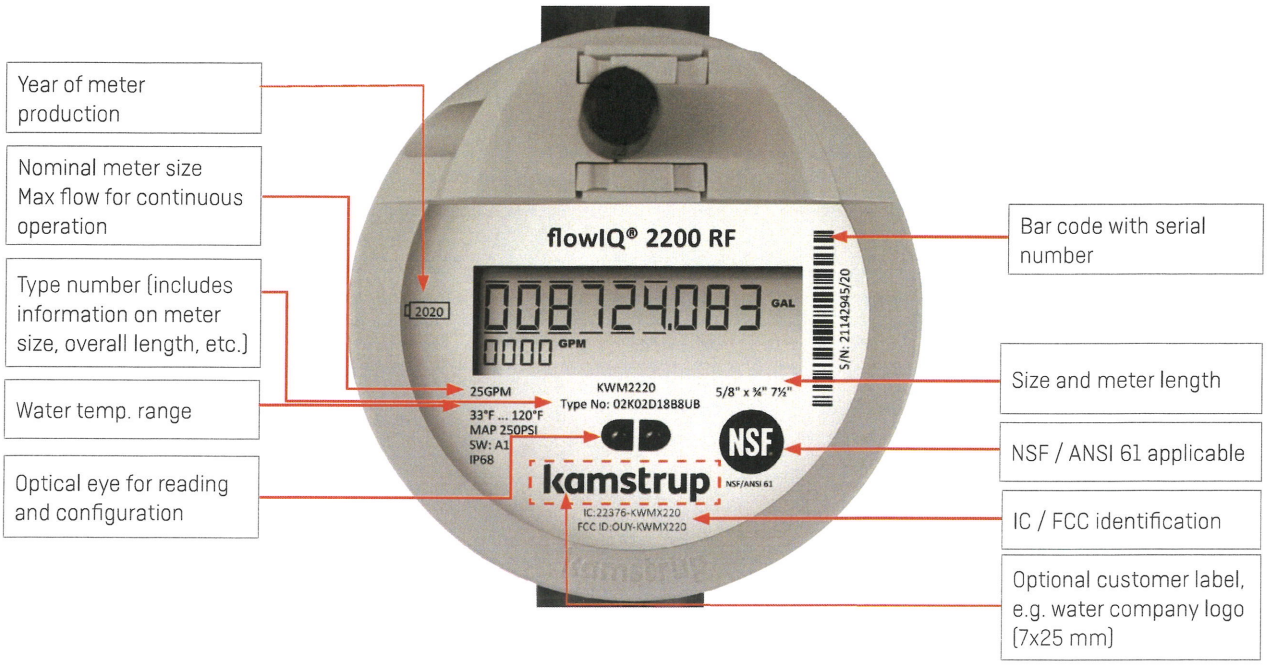
Note! Flow specifications only apply at temperatures below 86 °F / 30 °C

[1] At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow

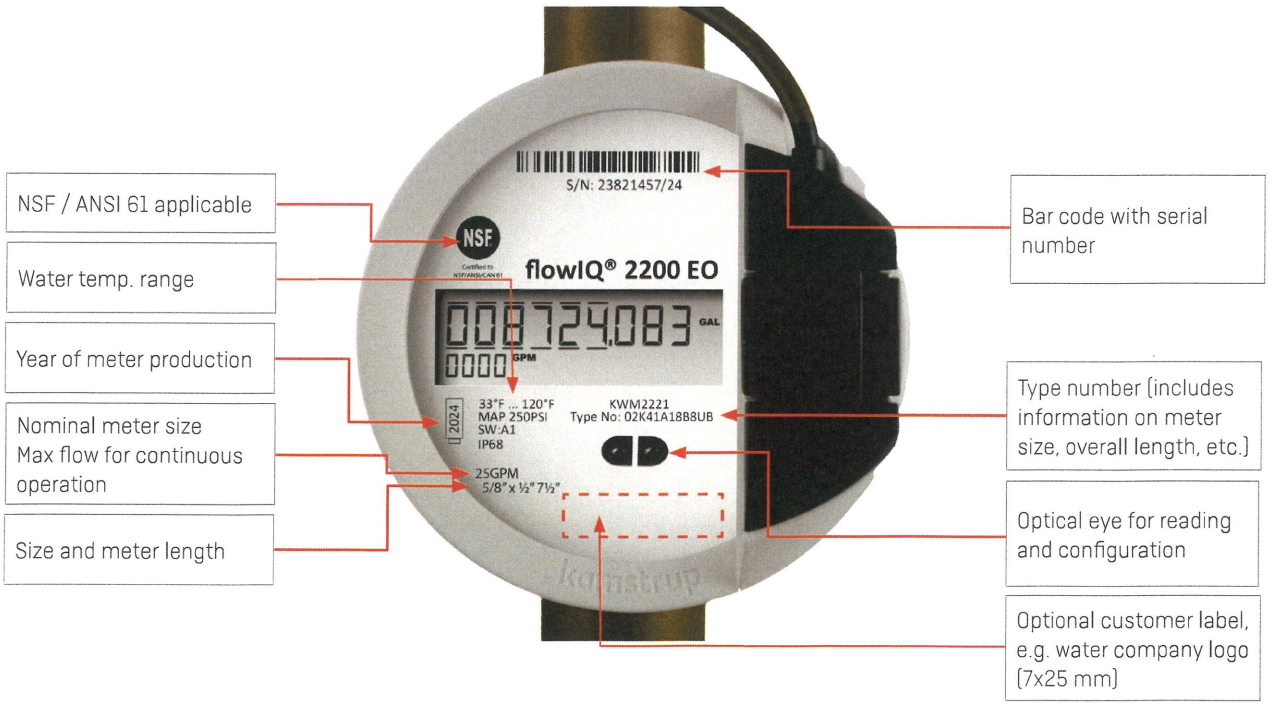
Meter face details

Meter information in permanent laser engraved text

RF top label



Encoded top label



Core features

Water meters placed throughout the network make it possible to gather information that can be of vital importance for an effective water supply, asset management and improved customer service.

Acoustic leakage detection
flowIQ® 2200 water meter introduces integrated acoustic leak detection that allows you to monitor your service connections for possible leaks. Like a fine-meshed network of noise-loggers, all your meters monitor the noise in the distribution lines and service connections to detect possible leaks – 24/7.

Temperature monitoring
flowIQ® 2200 measures water and ambient temperatures respectively. Information on temperatures above or below the configured temperature in the meter will warn the utility of potential frost damage or quality issues. These measurements can be used to monitor the installation and will indicate the water's quality.

Current flow display
Besides the consumed volume, flowIQ® 2200 also shows the current flow in the display. The flow display has been designed with user experience in mind, where it can be advantageous, for example during installation, to be able to see the current consumption. In this context, it is important to stress that the metrological approval of the water meter is related to the volume reading only. Due to the meter's update time, the flow display, in case of rapidly increasing/decreasing flow, may turn out to be slower than the real flow and not a one-to-one correlation between the flow display and the volume growth. In general, one would expect the flow display to stabilize after about half a minute of constant flow and thereafter to be consistent with volume growth.

Consumption above max flow
The meter logs information on consumption above max flow. This information can be used to indicate if the meter size for a given installation is correct.

Consumption histogram
The meter tracks consumptions in different flow intervals for further analysis of the consumption patterns for the specific installation.

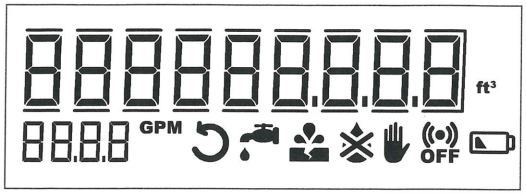
Meter modes

flowIQ® 2200 can operate in two modes, Normal and Verification mode.
Verification mode is only used by authorized laboratories during verification.

flowIQ® 2200 RF	Normal mode	Verification mode
Flow measurement and flow display update	1 s	0.125 s
Volume integration and volume display update	8 s	1 s

flowIQ® 2200 E0	Normal mode	Verification mode
Flow measurement and flow display update	2 s	0.125 s
Volume integration and volume display update	16 s	1 s

Display and info codes



The large display with totalized volume, flow rate and intuitive info codes on flowIQ® 2200 makes it easy for end users to understand their own consumption data.

flowIQ® 2200 includes a large number of intelligent info codes and alarms. An info code indicates a special condition in the meter. If the info code is available in the display, the related symbol is on when it has been activated. If the 'condition' is not active, the sign is OFF. The info codes provide you with the exact knowledge you need to target your efforts within operations optimization, customer information, water loss and tampering. The info codes in the display have the following meaning and function:

Info code	Meaning
	The water in the meter has not been stagnant for one continuous hour during the last 24 hours. This can be a sign of a leaky faucet or toilet cistern or indicate a leakage after the meter.
	The water consumption has been consistently high for half an hour, which indicates a pipe burst.
	Attempt of fraud. The meter is no longer valid for billing.
	The meter is dry. In this case nothing will be measured.
	The water flows through the meter in the wrong direction.
OFF	RADIO OFF flashes. The meter is still in transport mode with the built-in radio transmitter turned off. The transmitter turns on automatically when water runs through the meter for the first time.*
OFF	RADIO OFF lights permanently. The radio is switched off permanently. Can be activated via METERTOOL.*
	The symbol appears when the expected capacity left is 6 months or less.

	Switch off automatically when the condition that activated them no longer exists.
	Disappears when the water has been stagnant for one hour.
	Disappears when the consumption falls to normal level.
	Disappears when the water no longer flows in the wrong direction.
	Disappears when the meter is filled with water.

**RADIO OFF is not available for Encoded Output meters*

Data registers

The water meter has a permanent memory, in which the values of various data loggers are saved. The loggers can be read via the meter's optical eye and from communications protocols

The following registers are logged:

Description	Yearly logger	Monthly logger	Daily logger	Hourly logger
Logger depth	20 years	36 months	460 days	2400 hours
Operating hours	✓	✓	✓	✓
Info codes incl. hour counter	✓	✓	✓	✓
Volume	✓	✓	✓	✓
Volume reverse	✓	✓	✓	✓
Acoustic Noise Value Day			✓	
Flow max incl. date	✓	✓		
Flow min. incl. date	✓	✓		
Flow max day incl. Timestamp			✓	
Flow min. day incl. Timestamp			✓	
Water temp. max	✓	✓	✓	
Water temp. min.	✓	✓	✓	
Water temp. avg.	✓	✓	✓	
Ambient temp. max	✓	✓	✓	
Ambient temp. min.	✓	✓	✓	
Ambient temp. avg.	✓	✓	✓	

Every time the information code changes, date and info codes are logged. Thus, it is possible to data read the latest 50 changes of the information code as well as the date the change was made.

Integrated communication

The meter supports a variety of different communication options depending on meter type. All radio supported meters can be used with Kamstrup's external antenna. Transmission properties and data packages are defined in the configuration number YY-ZZZ. These can be changed with METERTOOL, MeterToolX or READy App through the optical IR interface or with a READy converter.*

**Depending on communication protocol*

RF

Kamstrup RF is based on Wireless M-Bus which is a mature and proven technology for remote reading of smart meters. Wireless M-Bus provides a robust, simple and secure reading of meters and requires a low initial investment, but is flexible enough to be expanded whenever desired. Wireless M-Bus is based on an European standard (EN 13757-4) applicable to devices for reading consumption of water, electricity or energy. The data encryption consists of a 128-bit AES counter mode encryption. Both AMR 912.5, 915 and 918.5 MHz and AMI 450-470 MHz are available.

For additional information about the Kamstrup RF communication module, please refer to the module data sheet, document no.: FILE100003480.

Encoded Output

The Sensus Encoded Output and TouchRead are implemented based on Sensus specification UI-1203 and UI1204. Encoded Output is compatible with several 3rd party RF network systems. Kamstrup Encoded Output supports Sensus Encoded Output systems and Sensus TouchRead systems. In addition, Neptune ProRead, Neptune E-coder systems and others are supported.

For additional information about the Kamstrup Encoded Output communication module, please refer to the Encoded Output module data sheet, document no.: FILE100003729.

State of the art meter reading system (READy)

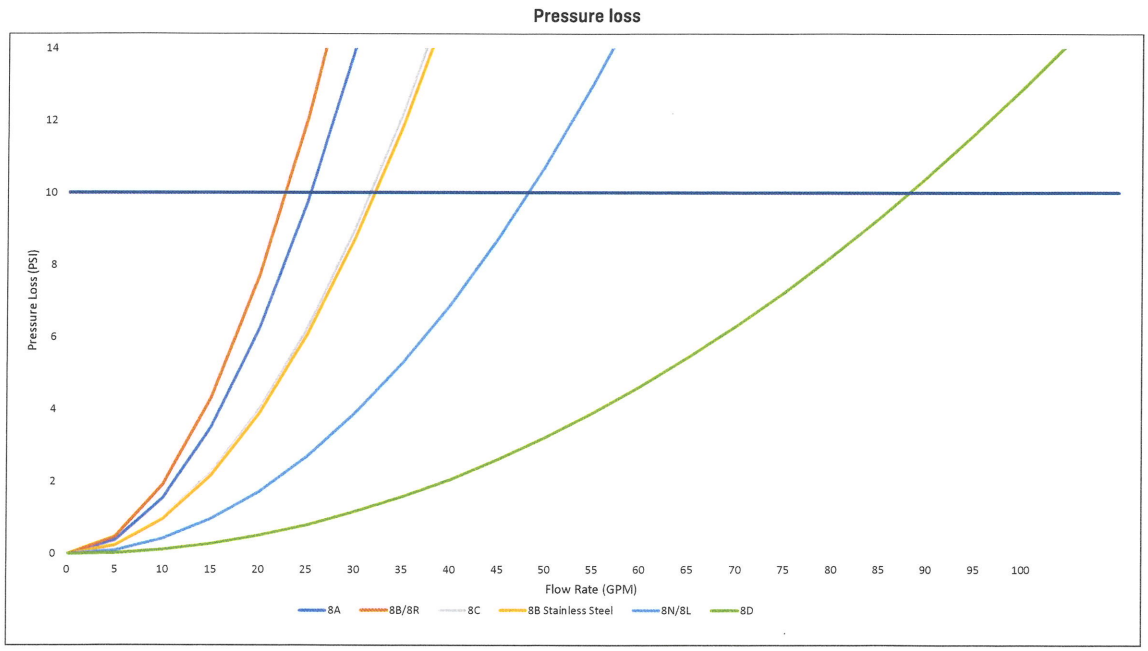
Standardized and open communication
902-928 MHz band RF is an open standard, following EN13757-4:2010, which means that while the flowIQ® 2200 can be configured with or without encryption of the transmitted signal, encryption is required in the United States.

Encryption protects personal data against unauthorized monitoring. Furthermore, the encryption file provides easy access to import meter data for reading programs.

Pressure loss

According to AWWA C715-18 Type I guideline the maximum pressure loss must not exceed 10 PSI (0.69 bar) at SMOC.

The following graph shows pressure loss with respect to flow rate:



See Technical description for Water Meters North America: Document no.: FILE100001331, for more information about pressure loss.

Ordering details

Start your order by stating the type number of the selected model of flowIQ® 2200.

The type number includes information on meter type, meter version, size, lay length, service connection and time zone.

Subsequently the meter configuration, which determines customer-specific requirements such as number of digits in display etc., is selected. The configuration is completed during programming of the final meter.

Accessories are enclosed separately to be mounted by the installer.

Meter type - flowIQ® 2200

Type	□□	□	□□	□	□	□□	□	□□
Meter generation								
Second generation	02							
Mechanical design								
Composite, PPS		K						
Stainless steel		L						
Communication								
RF			02					
Encoded Output			41					
Power supply								
D-cell				D				
2 x A-cell				A				
Dynamic range								
AWWA C715-18					1			
Meter size								
⅝" x ½" (25GPM); ¾" NPSM; 7½"						8A		
⅝" x ¾" (25GPM); 1" NPSM; 7½"						8B		
⅝" x ¾" (25 GPM); 1" NPSM; 5.1"						8R		
¾" (32GPM); 1" NPSM; 7½" or 9"; includes 1½" extension						8C		
¾" (35GPM); 1" NPSM; 7½"						8N		
¾" (35GPM); 1" NPSM; 9"						8L		
1" (55GPM); 1¼" NPSM; 10¾"						8D		
Meter type								
Cold water							8	
Reclaimed water[1)]							9	
Country code								
North America, FCC and NSF approved								UB
Canada, ISED and NSF approved								CA
Mexico, IFT and NSF approved								MX

[1)] *Only available for RF communication*

The features included in the type number cannot be changed once the meter has been produced.

Configuration - flowIQ® 2200

Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
Display views														
Standard	810													
GMT offset (time zone)														
USA Eastern (GMT-5)		28												
USA Central (GMT-6)		24												
USA Mountain (GMT-7)		20												
USA Pacific (GMT-8)		16												
Target date (handled as order data)														
Max values averaged over time (1..120 min.)														
2 minutes			002											
Customer label (2060-) Alphanumeric														
Customer label blank (default)				5000										
Kamstrup serial number				0010										
Incremented number - 8 digits				8004										
Customer specific labels				MMMM										
Leakage message limit														
OFF					9									
Flow continuously > 0.25% of max flow					2									
Flow continuously > 0.5% of max flow					3									
Flow continuously > 1.0% of max flow					4									
Flow continuously > 2.0% of max flow					5									
Pipe burst limit														
OFF						0								
Flow > 5% of max flow for 30 minutes						1								
Flow > 10% of max flow for 30 minutes						2								
Flow > 20% of max flow for 30 minutes						3								
Ambient Temperature low limit														
OFF							0							
Ambient temperature < 2 °C/ 36 °F							2							
Ambient temperature < 3 °C / 37 °F							3							
Ambient temperature < 6 °C / 43 °F							6							
Ambient Temperature high limit														
OFF								0						
Ambient temperature > 35 °C / 95 °F								3						
Ambient temperature > 45 °C / 113 °F								6						
Data logger profile														
Standard RF									04					
Standard Encoded Output									15					

To be continued on next page...

Configuration - flowIQ® 2200

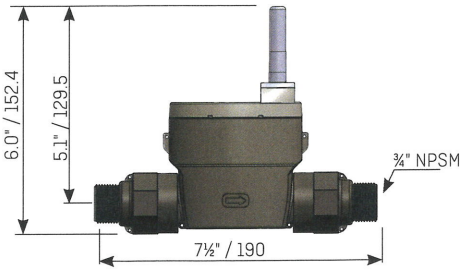
Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
...continued from previous page														
Display resolution (alphanumeric)														
0000000.00 USgal - 0.01 GPM - Billing in 1,000s (recommended for residential meters)										220				
000000000 ft³ - 0000 GPM - Billing in 1,000s (recommended for district meters)										154				
For additional options please refer to FILE100002712														
Temperature units of measure														
Fahrenheit											1			
Celsius											0			
Encryption level														
Encryption with separately forwarded key												3		
No encryption (applicable for Encoded meters)												0		
Communication														
For communication protocols please refer to the section "Integrated Communication"														

	DDD	JJ	LLL	MMMM	N	P	S	U	RR	CCC	V	T	YY	ZZZ
Unless otherwise stated in the order, Kamstrup supplies the following:	810	□□	002	5000	4	3	3	3	04	220	1	3	YY	ZZZ

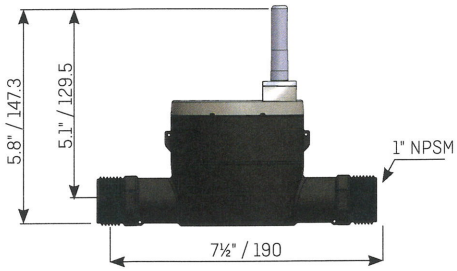
Note: JJ (time zone) and target date are not predefined and has to be chosen in the ordering system.

Dimensional sketches – flowIQ® 2200

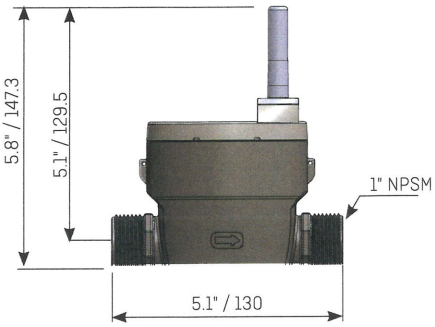
Type: 8A – Size: 25 GPM ⅝" x ½" x 7½"



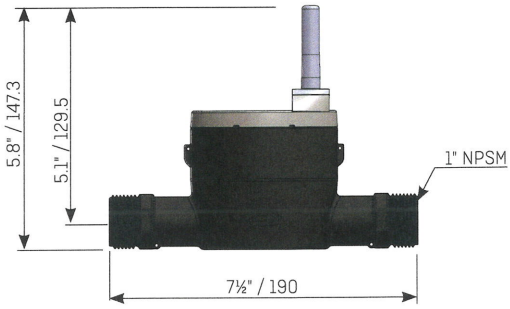
Type: 8B – Size: 25 GPM ⅝" x ¾" x 7½"



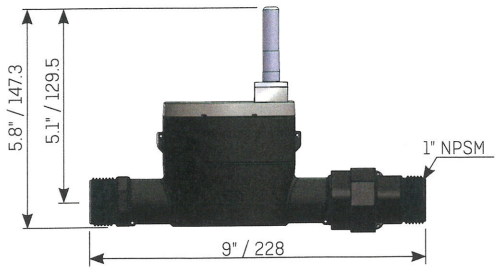
Type: 8R – Size: 25 GPM ⅝" x ¾" x 5.1"



Type: 8C – Size: 32 GPM ¾" x ¾" x 7½"



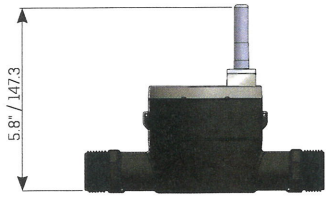
Type: 8C+ – Size: 32 GPM ¾" x ¾" x 9"



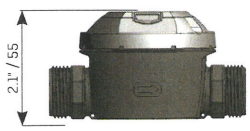
Encoded Output has the exact same dimensions as RF – apart from the meter cup height.

Examples:

Type: 8B – Size: 25 GPM ⅝" x ¾" x 7½"

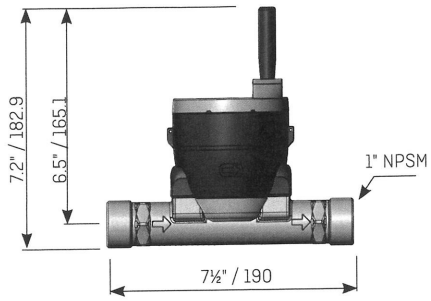


Type: 8R – Size: 25 GPM ⅝" x ¾" x 5.1"

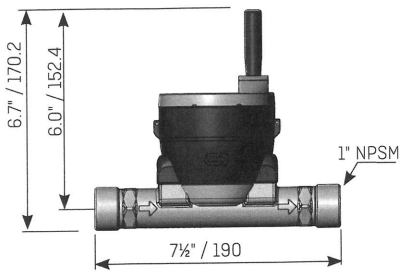


Dimensional sketches – flowIQ® 2200

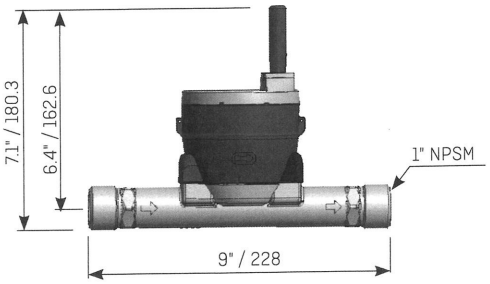
Type: 8B – Size: 25 GPM ⅝" x ¾" x 7½"



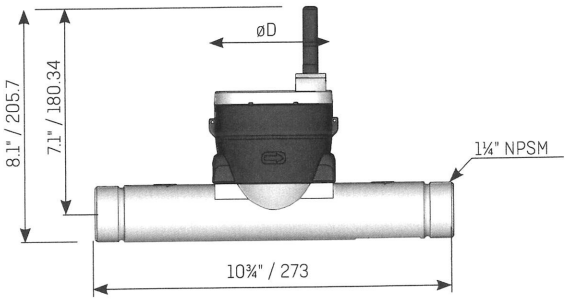
Type: 8N – Size: 35 GPM ¾" x 1" x 7½"



Type: 8L – Size: 35 GPM ¾" x 1" x 9"



Type: 8D – Size: 55 GPM 1" x 1¼ " x 10¾"



NOTE! Same threads for in- and outlet. / Dimensions: Inches/mm

Dimensions

flowIQ® 2200 RF

Mechanical design	Meter type	Meter size GPM	NPSM thread	L	H	øD	Weight approx. [Lbs / Kg]
				[Inches / mm]			
Composite	8A	25	¾"	7½" / 190	6.0" / 152.4	3.6" / 91.4	1.08 / 0.49
Composite	8B	25	1"	7½" / 190	5.8" / 147.3	3.6" / 91.4	1.01 / 0.46
Composite	8R	25	1"	5.1" / 130	5.8" / 147.3	3.6" / 91.4	1.01 / 0.46
Composite	8C	32	1"	7½" / 190	5.8" / 147.3	3.6" / 91.4	1.01 / 0.46
Composite	8C+	32	1"	9" / 228	5.8" / 147.3	3.6" / 91.4	1.10 / 0.50
Stainless steel	8B	25	1"	7½" / 190	7.2" / 182.9	3.6" / 91.4	1.01 / 0.46
Stainless steel	8N	35	1"	7½" / 190	6.7" / 170.2	3.6" / 91.4	2.2 / 1.0
Stainless steel	8L	35	1"	9" / 228	7.1" / 180.3	3.6" / 91.4	2.5 / 1.13
Stainless steel	8D	55	1¼"	10¾" / 273	8.1" / 205.7	3.6" / 91.4	4.1 / 1.86

flowIQ® 2200 E0

Mechanical design	Meter type	Meter size GPM	NPSM thread	L	H	øD	Weight approx. [Lbs / Kg]
				[Inches / mm]			
Composite	8A	25	¾"	7½" / 190	2.1" / 55	3.6" / 91.4	0.90 / 0.41
Composite	8B	25	1"	7½" / 190	2.1" / 55	3.6" / 91.4	0.86 / 0.39
Composite	8R	25	1"	5.1" / 130	2.1" / 55	3.6" / 91.4	0.86 / 0.39
Composite	8C	32	1"	7½" / 190	2.1" / 55	3.6" / 91.4	1.01 / 0.46
Composite	8C+	32	1"	9" / 228	2.1" / 55	3.6" / 91.4	0.93 / 0.42
Stainless steel	8B	25	1"	7½" / 190	3.9" / 101	3.6" / 91.4	1.87 / 0.85
Stainless steel	8N	35	1"	7½" / 190	3.9" / 101	3.6" / 91.4	1.87 / 0.85
Stainless steel	8L	35	1"	9" / 228	3.9" / 101	3.6" / 91.4	2.09 / 0.95
Stainless steel	8D	55	1¼"	10¾" / 273	4.2" / 109	3.6" / 91.4	2.82 / 1.28

Accessories

See accessories for water meters on Kamstrup.com, document no.: FILE100000644.
Accessories are ordered separately in CPQ (Kamstrup ordering system) and will be delivered as single parts in the packaging.

kamstrup

Data sheet

flowIQ® 3200

» **RF**
» **Encoded**

- Ultrasonic measurement
- Sustainable measurement accuracy
- Flow measurement in display
- Multiple radio options available
- IP68 Vacuum sealed construction
- Lead free and certified to NSF/ANSI 61
- Fire Service approved



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Electronic ultrasonic cold water meter for measurement of cold water consumption in households, multi-unit buildings and industry

Sustainable accuracy
Ultrasonic flow measurement guarantees sustainable accuracy and longevity. Ultrasonic flow measurement is based on the transit time method, and all measurements, references, readings, calculations and data communication are controlled by an advanced, specially designed electronic circuit. Thus, the meter includes no moving parts, which makes flowIQ® 3200 less sensitive to wear and tear and impurities in the water.

Construction
The meter is hermetically closed and vacuum-sealed to prevent humidity from reaching the electronics and avoid condensation between the glass and display. The meter is IP68 (submersible) type tested and suitable for installation in meter pits.

Installation
flowIQ® 3200 is easy to install in all operating environments, horizontally as well as vertically, independent of piping and installation conditions. Consumption data can be read visually from the display, using an optical eye, and remotely read, by various integrated communication protocols.

Specific features
flowIQ® 3200 measures the water and environment temperatures and it includes leak detection, securing that water loss is discovered quickly.

The unique combination of all the flowIQ® 3200 features reduces current operating costs to measure water usage and minimizes unexpected expenses in connection with possible leakage.

Environmentally friendly
The meter has been approved according to Drinking Water Standards and is certified to NSF/ANSI 61. The meter housing and measuring part are made of the high performance thermoplastic material polyphenylene sulfide (PPS) with 40% fiberglass, which is free from lead and other heavy metals. The environmental report, Carbon Footprint, documents the meter's high reusability and low environmental impact, including recycling of materials.

Hygiene
To protect the health of the consumers Kamstrup has a hygienic manufacturing process of the water meters.

Kamstrup also has a highly automated manufacturing process and only uses materials approved for drinking water. Furthermore the products gets disinfected before dispatch. The hygiene is being controlled by external accredited laboratories and by frequent audits.

General description
flowIQ® 3200 is a hermetically sealed water meter intended for measurement of cold and *reclaimed water consumption in residentials and multi-unit buildings and commercial applications.

flowIQ® 3200 employs the ultrasonic measurement principle, based on Kamstrup's experience since 1991, with the initial development and production of static ultrasonic meters.

flowIQ® 3200 is available in an Encoded Output version with 2 x A-cell battery supply and a RF version with 1 x D-cell battery supply.

One of flowIQ® 3200's many advantages is the fact that it has no wearing parts, which ensures a high and stable accuracy throughout its lifetime. flowIQ® 3200 complies with all the AWWA C715-18 and CN1044 fire service guideline for Ultrasonic Water Meters.

In the flowIQ® 3200 series a composite housing is mounted on a stainless steel meter body. Thus, the electronics are fully protected against internal or external penetration of water.

flowIQ® 3200 is suitable for measurement in multi-unit apartments and light commercial premises. The meter is suitable for mounting in pump stations or wellheads, as it will also function in fully submerged conditions.

flowIQ® 3200 measures the water consumption electronically, as a volume, using a pair of ultrasonic signals. Through two ultrasonic transducers, an ultrasonic signal is sent with and against the flow direction. A transducer serves both as a 'speaker' when transmitting and as a 'microphone when a signal is received. The ultrasonic signal traveling with the flow will be the first to reach the opposite transducer, while the signal running against the flow will be received a little later. The time difference between the two signals can be converted into flow velocity, and thereby also into a volume. The measuring principle is a proven, long-term stable and accurate measuring principle.

In addition to volume reading, an indication of current flow and a number of other information codes are displayed. All registers are saved daily in the meter data logger (EEPROM) and are kept for 460 days. Furthermore, monthly data for the latest 36 months, hourly data for the latest 100 days and 50 info code events are saved.

flowIQ® 3200 is powered by an internal lithium battery which can provide up to 20 years operating life.

flowIQ® 3200 is available with a choice of integrated data communication options:

- 912.5, 915 or 918.5 MHz – RF
- 450-470 MHz - RF
- Encoded Output

The meter is fitted with an optical eye which makes it possible to read saved consumption data and info codes, stored in the meter's data logger. Using an optical reading head, it is also possible to change the meter configuration e.g. data packages.

flowIQ® 3200 can and must only be opened by Kamstrup A/S. If the meter has been opened and the sealing has thus been broken, the meter is no longer valid for billing purposes and the warranty is void.

** For information concerning reclaimed water we refer to document no.: FILE100003532*

Technical data

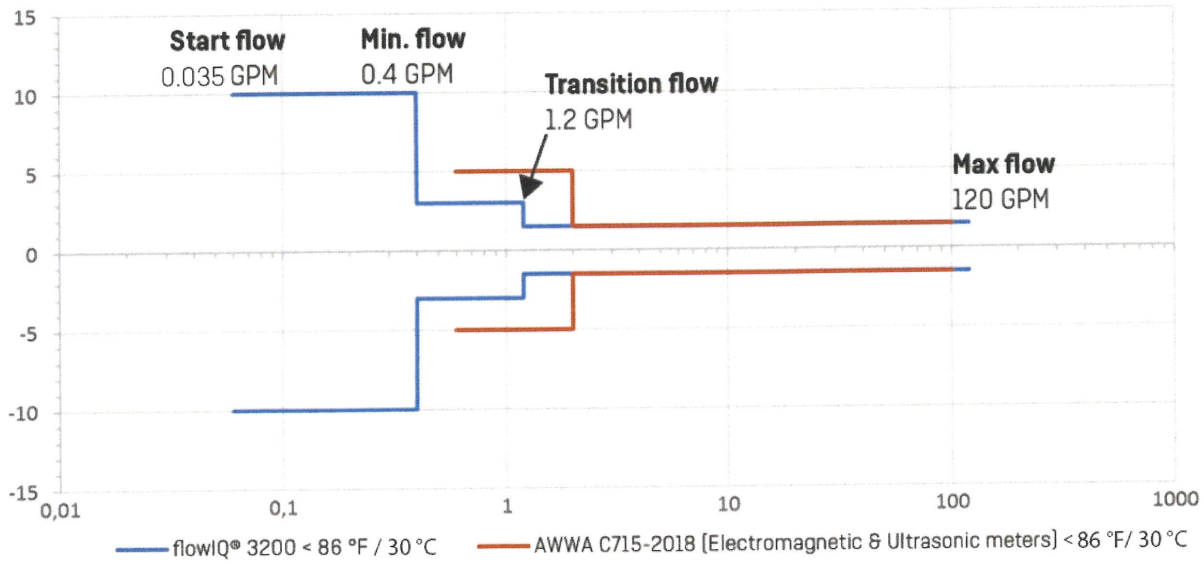
Electrical data

Battery (flowIQ® 3200 RF)	D-cell battery, 3.6V, 19Ah. The battery warranty does not apply at meter temperatures above t_{BAT} > 95 °F / 35 °C
Battery (flowIQ® 3200 E0)	2 x A-Cell battery, 3.6V, 3.6Ah. The battery warranty does not apply at meter temperatures above tBAT > 95 °F / 35 °C

Mechanical data

Protection class	IP68-rated (waterproof/submersible)
Mechanical environment	Class M1 (Measuring Instruments Directive classification)
Maximum operating pressure	Oval flange mounted, 300 PSI / (20.7 bar)
	Round flange mounted, 275 PSI (19 bar)
Ambient/meter temperature	35...130 °F / 0.5...55 °C
Water temperature	33...120 °F / 0.5...50 °C
Storage temp. empty sensor	-10...140 °F / -20...60 °C

Accuracy



Note: At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow

Approved meter data

Certified to NSF/ANSI 61.
Complies to part 15 of the FCC rules, ISED, IFT and with AWWA C715-18 and CN1044.

Material

Wetted parts

Flow part, threaded/flanged	Stainless Steel 316L
O-ring/gasket	EPDM
Measuring tube	PPS with fiberglass
Reflectors	Stainless steel

External meter parts

Meter housing	Polyphenylene sulfide (PPS) – 40% fiberglass
Cover	Glass
Spring ring	Stainless steel
Top ring (sealing)	Polycarbonate (gray)

Meter sizes

flowIQ® 3200 is available in the sizes shown in table below:

XX = Communication module Y = Battery supply ZZ = Country code

Type number	Meter size Inches	Start flow (S) [GPM]/ [L/h]	Min. flow [GPM]/ [L/h]	Transition flow[1] [GPM]/ [m³/h]	Max flow [GPM]/ [m³/h]	Sat. flow rate [GPM]/ [m³/h]	Pressure loss SMOC [PSI]/ [bar]	Connection on meter	Lay length [Inches]/ [mm]	Strainer	Temp. measurement of water
02-L-XX-Y-1-8F-8ZZ	1½"	0.035/ 8	0.4/ 90.8	1.2/ 0.27	120/ 27.25	168/ 38.16	5.5/ 0.38	1½"[2]	13"/ 330	No	Yes
02-L-XX-Y-1-8H-8ZZ	2"	0.088/ 20	0.5/ 113.6	1.5/ 0.34	160/ 36.34	224/ 50.88	1.8/ 0.12	2"	17"/ 432	No	Yes
02-L-XX-Y-1-8M-8ZZ	2"	0.088/ 20	0.5/ 113.6	1.5/ 0.34	160/ 36.34	224/ 50.88	1.8/ 0.12	2"	15¼"/ 387	No	Yes
02-L-XX-Y-1-8K-8ZZ	3"	0.22/ 50	1.1/ 249.8	7.5/ 1.70	350/ 79.49	490/ 111.29	3.5/ 0.24	3"	12"/ 305	No	Yes
02-L-XX-Y-1-8P-8ZZ	4"	0.35/ 80	1.7/ 386.1	5/ 1.14	700/ 158.99	980/ 222.58	4/ 0.27	4"	14"/ 356	No	Yes

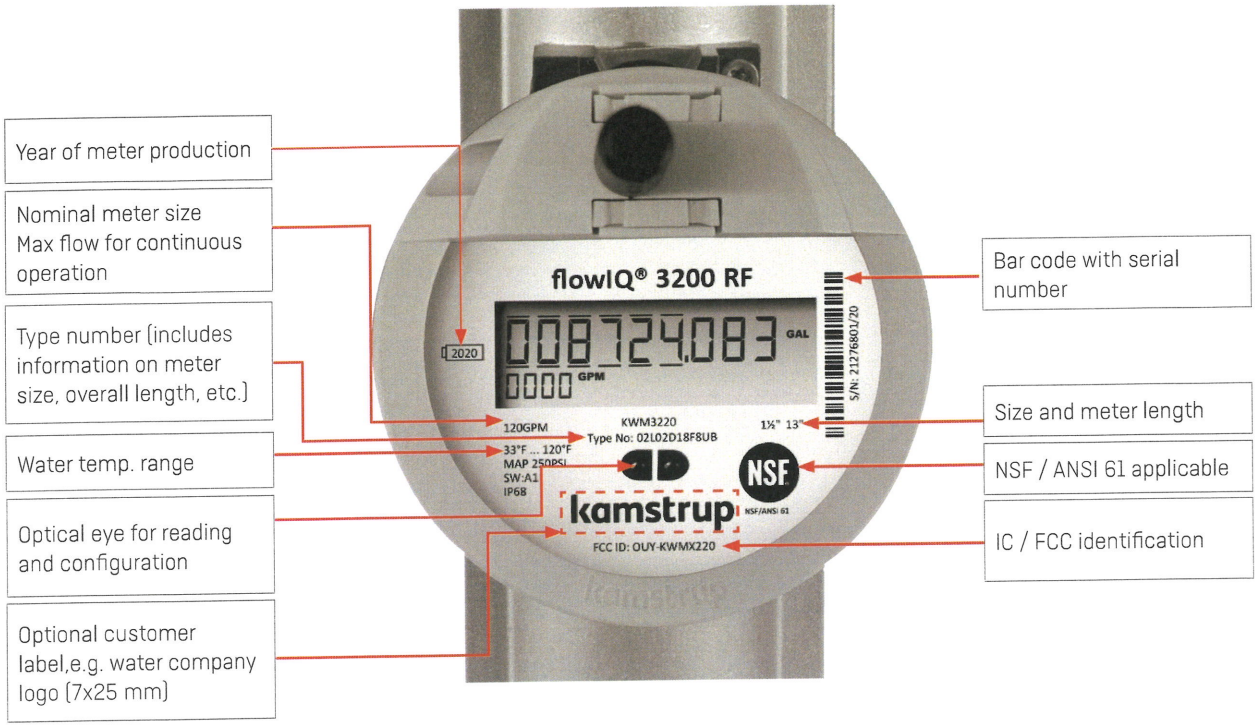
[1] At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow.

[2] Only >1½"meters are recognized by the CN1044 approval standard for fire service meters.

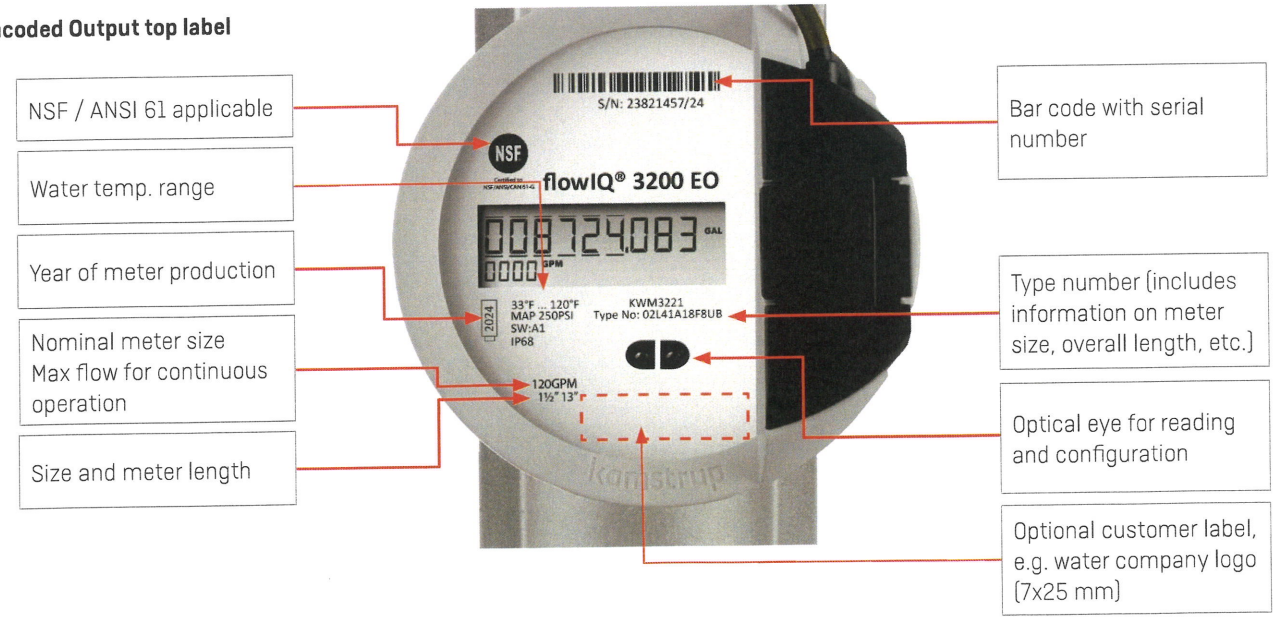
Meter face details

Meter information in permanent laser engraved text. Note: Only FM fire service meters will be stamped with the FM approval mark.

RF top label



Encoded Output top label



Core features

Water meters placed throughout the network make it possible to gather information that can be of vital importance for an effective water supply, asset management and improved customer service.

Temperature monitoring
flowIQ® 3200 measures ambient temperatures.

Information on temperatures above or below the configured temperature in the meter will warn the utility on potential frost damages or quality issues.

These measurements can be used to monitor the installation and will indicate the water's quality.

Consumption above max flow
The meter logs information on consumption above max flow. This information can be used to indicate if the meter size for a given installation is correct.

Consumption histogram
The meter tracks consumptions in different flow intervals for further analysis of the consumption patterns for the specific installation.

Acoustic Leakage Detection
For 1½" and 2", the flowIQ® 3200 water meter introduces integrated acoustic leak detection, enabling continuous monitoring of both distribution mains and service lines without the need for additional hardware or external reading infrastructure. This built in functionality expands Kamstrup's proactive leak detection solution, offering near system wide coverage that enhances operational efficiency, reduces non-revenue water, and supports long-term asset management strategies.

Current flow display
Besides the consumed volume, flowIQ® 3200 also shows the current flow in the display. The flow display has been designed with user experience in mind, where it can be advantageous, for example during installation, to be able to see the current consumption. In this context, it is important to stress that the metrological approval of the water meter is only related to the volume reading. Due to the meter's update time, the flow display, in case of rapidly increasing/decreasing flow, may turn out to be slower than the real flow and not a one-to-one correlation between the flow display and the volume growth.

In general, one would expect the flow display to stabilize after about half a minute of constant flow and thereafter to be consistent with volume growth.

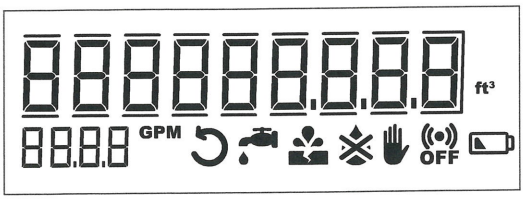
Meter modes

flowIQ® 3200 can operate in two modes, Normal and Verification mode.

Verification mode is only used by authorized laboratories during verification.

flowIQ® 3200 RF	**Normal mode**	**Verification mode**
Flow measurement and flow display update	1 s	0.125 s
Volume integration and volume display update	8 s	1 s
flowIQ® 3200 E0	**Normal mode**	**Verification mode**
Flow measurement and flow display update	2 s	0.125 s
Volume integration and volume display update	16 s	1 s

Display and info codes



The large display with totalized volume, flow rate and intuitive info codes on flowIQ® 3200 makes it easy for end users to understand their own consumption data.

flowIQ® 3200 includes a large number of intelligent info codes and alarms. An info code indicates a special condition in the meter. If the info code is available in the display, the related symbol is on when it has been activated. If the 'condition' is not active, the sign is OFF. The info codes provide you with the exact knowledge you need to target your efforts within operations optimization, customer information, water loss and tampering. The info codes in the display have the following meaning and function:

Info code	Meaning
	Water in the meter has not been stagnant for one continuous hour during the latest 24 hours. This can be a sign of a leaky faucet or toilet cistern or indicate a leakage after the meter.
	The water consumption has been consistently high for half an hour, which indicates a pipe burst.
	Attempt of fraud. The meter is no longer valid for billing.
	The meter is dry. In this case nothing will be measured.
	The water flows through the meter in the wrong direction.
OFF	RADIO OFF flashes. The meter is still in transport mode with the built-in radio transmitter turned off. The transmitter turns on automatically on the first time water runs though the meter.*
OFF	RADIO OFF lights permanently. The radio is switched off permanently. Can be activated via METERTOOL..*
	The symbol appears when the expected capacity left is 6 months or less.

	Switch off automatically when the condition that activated them no longer exists.
	Disappears when the water has been stagnant for one hour.
	Disappears when the consumption falls to normal level.
	Disappears when the water no longer flows in the wrong direction.
	Disappears when the meter is filled with water.

*RADIO OFF *is not available for Encoded Output meters*

Data registers

The water meter has a permanent memory, in which the values of various data loggers are saved. The loggers can be read via the meter's optical eye and from communications protocols.

The following registers are logged:

Description	Yearly logger	Monthly logger	Daily logger	Hourly logger
Logger depth	20 years	36 months	460 days	2400 hours
Operating hours	✓	✓	✓	✓
Info codes incl. hour counter	✓	✓	✓	✓
Volume	✓	✓	✓	✓
Volume reverse	✓	✓	✓	✓
Flow max incl. date	✓	✓		
Flow min. incl. date	✓	✓		
Flow max day incl. timestamp			✓	
Flow min. day incl. timestamp			✓	
Water temp. max	✓	✓	✓	
Water temp. min.	✓	✓	✓	
Water temp. avg.	✓	✓	✓	
Ambient temp. max	✓	✓	✓	
Ambient temp. min.	✓	✓	✓	
Ambient temp. avg.	✓	✓	✓	

Every time the information code changes, date and info codes are logged. Thus, it is possible to data read the latest 50 changes of the information code as well as the date the change was made.

Integrated communication

The meter supports a variety of different communication options depending on meter type. All radio supported meters can be used with Kamstrup's external antenna. Transmission properties and data packages are defined in the configuration number YY-ZZZ. These can be changed with METERTOOL, MeterToolX or READy App through the optical IR interface or with a READy Converter.*

**Depending on communication protocol*

RF

Kamstrup RF is based on Wireless M-Bus which is a mature and proven technology for remote reading of smart meters. Wireless M-Bus provides a robust, simple and secure reading of meters and requires a low initial investment, but is flexible enough to be expanded whenever desired. Wireless M-Bus is based on an European standard (EN 13757-4) applicable to devices for reading consumption of water, electricity, or energy. The data encryption consists of a 128-bit AES counter mode encryption. Both AMR 912.5, 915 and 918.5 MHz and AMI 450-470 MHz are available.

For additional information about the Kamstrup RF communication module, please refer to the RF module data sheet, document no.: FILE100003480.

Encoded Output

The Sensus Encoded Output and TouchRead are implemented based on Sensus specification UI-1203 and UI1204. Encoded Output is compatible with several 3rd party RF network systems. Kamstrup encoded output supports Sensus Encoded Output systems and Sensus TouchRead systems. In addition, Neptune ProRead, Neptune E-coder systems and others are supported.

For additional information about the Kamstrup Encoded Output communication module, please refer to the Encoded Output module data sheet, document no.: FILE100003729.

State of the art meter reading system (READy)

Standardized and open communication

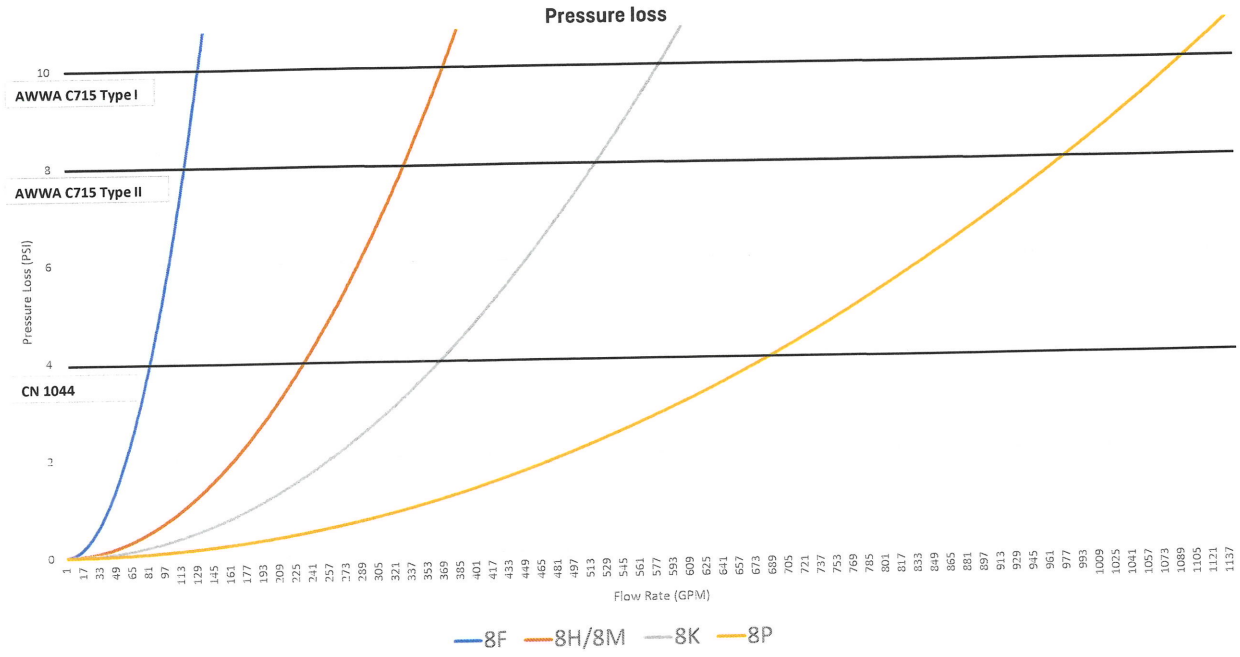
902-928 MHz band RF is an open standard, following EN13757-4:2010, which means that while the flowIQ® 3200 can be configured with or without encryption of the transmitted signal, encryption is required in the United States.

Encryption protects personal data against unauthorized monitoring. Furthermore, the encryption file provides easy access to import meter data for reading programs.

Pressure loss

According to AWWA C715-18 Type I the maximum pressure loss must not exceed 10 PSI (0.69 bar) for ½"-2"meters and 8 PSI (0.55 bar) for 3"-4" at SMOC.

According to CN1044 the maximum pressure loss must not exceed 4 PSI (0.27 bar) at SMOC for FM fire service meters.
The following graph shows pressure loss with respect to flow rate:



See document no.: FILE100000199 for more information about pressure loss.

Ordering details

Start your order by stating the type number of the selected model of flowIQ® 3200. The type number includes information on meter type - meter version, size, lay length, service connection and time zone.

Subsequently the meter configuration, which determines customer-specific requirements such as number of digits in display etc., is selected. The configuration is completed during programming of the final meter.

Meter type - flowIQ® 3200

Type	□□	□	□	□	□	□□	□	□□
Meter generation								
Second generation	02							
Mechanical design								
Stainless steel		L						
Communication								
RF			02					
Encoded Output			41					
Power supply								
D-cell				D				
2 x A-cell				A				
Dynamic range								
AWWA C715-18 and CN1044					1			
Meter size								
1½" (120GPM); 1½" Flange; 13"						8F		
2" (160 GPM); 2" Flange; 17"						8H		
2" (160 GPM); 2" Flange; 15¼"						8M		
3" (350 GPM); 3" Flange; 12"						8K		
4" (700 GPM); 4" Flange; 14"						8P		
Meter type								
Cold water							8	
Reclaimed water[1)]							9	
Country code								
North America, FCC and NSF approved								UB
Canada, ISED and NSF approved								CA
FM fire service approved								FM
Mexico, IFT and NSF approved								MX

[1)] *Only available for RF communication*

Fiber gaskets can be ordered with flowIQ® metal meters.

The features included in the type number cannot be changed once the meter has been produced.

Configuration - flowIQ® 3200

Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
Display views [1]														
Standard	810													
GMT offset (time zone)														
USA Eastern (GMT-5)		28												
USA Central (GMT-6)		24												
USA Mountain (GMT-7)		20												
USA Pacific (GMT-8)		16												
Target date (handled as order data)														
Max values averaged over time (1..120 min.)														
2 minutes			002											
Customer label (2060-) Alphanumeric														
Customer label blank (default)				5000										
Kamstrup serial number				0010										
Incremented number - 8 digits				8004										
Customer specific labels				MMMM										
Leakage message limit														
OFF					9									
Flow continuously > 0.1% of max flow (not recommended)					1									
Flow continuously > 0.25% of max flow					2									
Flow continuously > 0.5% of max flow					3									
Flow continuously > 1.0% of max flow					4									
Flow continuously > 2.0% of max flow					5									
Pipe burst limit														
OFF						0								
Flow > 5% of max flow for 30 minutes						1								
Flow > 10% of max flow for 30 minutes						2								
Flow > 20% of max flow for 30 minutes						3								
Ambient Temperature low limit														
OFF							0							
Ambient temperature < 2 °C / 36 °F							2							
Ambient temperature < 3 °C / 37 °F							3							
Ambient temperature < 6 °C / 43 °F							6							
Ambient Temperature high limit														
OFF								0						
Ambient temperature > 35 °C / 95 °F								3						
Ambient temperature > 45 °C / 113 °F								6						
Data logger profile														
Standard (default)									04					
Standard Encoded Output									15					

To be continued on next page...

Configuration - flowIQ® 3200

Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
...continued from previous page														
Display resolution (alphanumeric)														
0000000.00 USgal - 0.01 GPM - Billing in 1,000s (recommended for residential meters)										223				
000000000 ft³ - 0000 GPM - Billing in 1,000s (recommended for district meters)										154				
For additional options please refer to FILE100002712														
Temperature units of measure														
Fahrenheit											1			
Celsius											0			
Encryption level														
Encryption with separately forwarded key												3		
No encryption (applicable for Encoded meters)												0		
Communication														
For communication protocols please refer to the specific module data sheets														

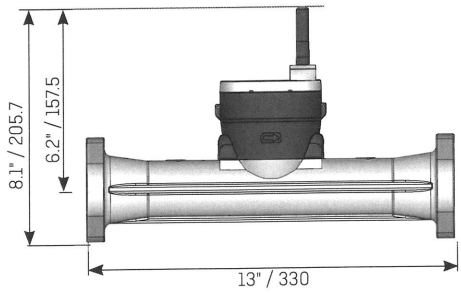
	DDD	JJ	LLL	MMMM	N	P	S	U	RR	CCC	V	T	YY	ZZZ
Unless otherwise stated in the order, Kamstrup supplies the following:	810	□□	002	5000	4	3	3	3	04	154	1	3	yy	ZZZ

Note: JJ (timezone) and target date are not predefined and has to be chosen in the ordering system.

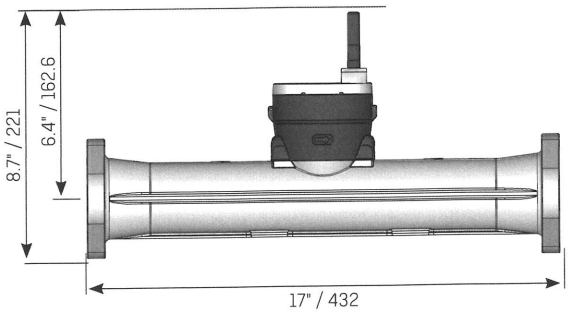
Dimensional sketches – flowIQ® 3200

NOTE! Same flanges for in- and outlet.

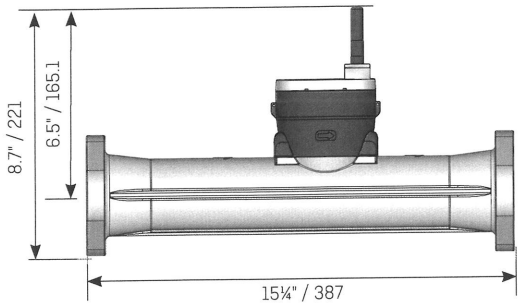
Type: 8F – Size: 120 GPM 1½" x 1½" x 13"



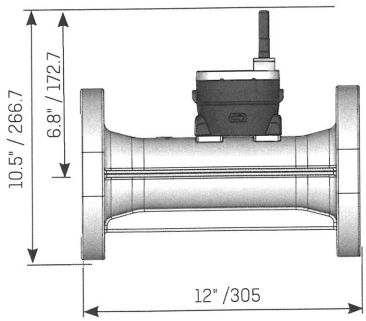
Type: 8H – Size: 160 GPM 2" x 2" x 17"



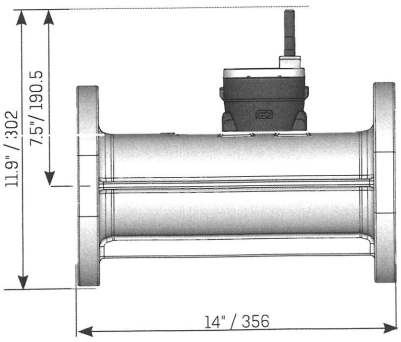
Type: 8M – Size: 160 GPM 2" x 2" x 15¼"



Type: 8K – Size: 350 GPM 3" x 3" x 12" T



Type: 8P – Size: 700 GPM 4" x 4" x 14"

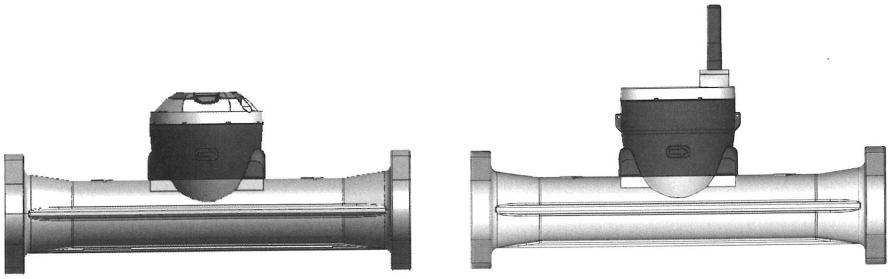


Dimensional sketches – flowIQ® 3200

Encoded Output and RF have the exact same dimensions apart from the meter cup height.

Example:
Type: 8F – Size: 120 GPM 1½" x 1½" x 13"

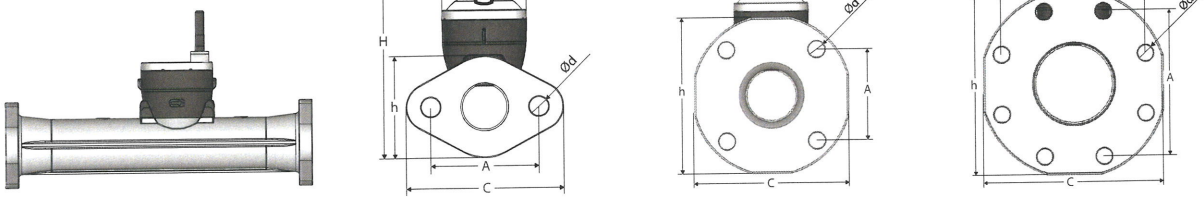
Size: 120 GPM 1½" x 1½" x 13"



Dimensions

flowIQ® 3200 RF

Meter type	Meter size GPM	Connection	L	H	h	A	C	d	Weight approx. [Lbs / Kg]
			[Inch / mm]						
8F	120	1½" flange	13"/ 330	8.07"/205	3.6"/ 91.4	4.0"/ 101.6	5.7"/ 144.8	0.79"/ 20.07	13/ 5.9
8H	160	2" flange	17"/ 432	8.66"/220	4.13"/ 104.9	4.49"/ 114	6.54"/ 166.1	0.79"/ 20.07	19/ 8.6
8M	160	2" flange	15¼"/ 387	8.66"/220	4.13"/ 104.9	4.49"/ 114	6.54"/ 166.1	0.79"/ 20.07	17/ 7.7
8K	350	3" flange	12"/ 305	10.47"/265.9	7.24"/ 183.9	4.24"/ 107.7	7.24"/ 183.9	0.75"/ 19.05	31/ 14.1
8P	700	4" flange	14"/ 356	11.85"/301	8.66"/ 220	6.93"/ 176	8.66"/ 220	0.75"/ 19.05	43/ 19.5



flowIQ® 3200 EO

Meter type	Meter size GPM	Connection	L	H	h	A	C	d	Weight approx. [Lbs / Kg]
			[Inch / mm]						
8F	120	1½" flange	13"/ 330	5.39"/ 137	3.6"/ 91.4	4.0"/ 101.6	5.7"/ 144.8	0.79"/ 20.07	9.3/ 4.2
8H	160	2" flange	17"/ 432	5.98"/ 152	4.13"/ 104.9	4.49"/ 114	6.54"/ 166.1	0.79"/ 20.07	14.2/ 6.5
8M	160	2" flange	15¼"/ 387	5.98"/ 152	4.13"/ 104.9	4.49"/ 114	6.54"/ 166.1	0.79"/ 20.07	16.2/ 7.4
8K	350	3" flange	12"/ 305	7.7"/ 198	7.24"/ 183.9	4.24"/ 107.7	7.24"/ 183.9	0.75"/ 19.05	34.1/ 15.5
8P	700	4" flange	14"/ 356	9.17"/ 233	8.66"/ 220	6.93"/ 176	8.66"/ 220	0.75"/ 19.05	44.5/ 20.2

kamstrup

Data sheet

flowIQ® 4200

» **RF**
» **Encoded Output**

- Ultrasonic measurement
- Sustainable measurement accuracy
- Flow measurement in display
- Multiple radio options available
- Fire service approved
- IP68 Vacuum sealed construction
- Lead free and certified to NSF/ANSI 61
- Replaceable battery
- Coated split flanges in cast iron



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Meter sizes	5
Meter face details	6
Core features	7
Meter modes	7
Replaceable battery	7
Display and info codes	8
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Configuration	13
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Accessories	15

Electronic ultrasonic cold water meter for measurement of cold water consumption in multi-unit buildings, commercial applications and industry

Sustainable accuracy
Ultrasonic flow measurement guarantees sustainable accuracy and longevity. Ultrasonic flow measurement is based on the transit time method, and all measurements, references, readings, calculations and data communication are controlled by an advanced, specially designed electronic circuit. Thus, the meter includes no moving parts, which makes flowIQ® 4200 less sensitive to wear and tear and impurities in the water.

Construction
The meter is hermetically closed and vacuum-sealed to prevent humidity from reaching the electronics and avoid condensation between the glass and display. The meter is IP68 (submersible) and is suitable for installation in meter pits.

Installation
flowIQ® 4200 is easy to install horizontally as well as vertically, independent of piping and installation conditions. Consumption data can be read visually from the display, using an optical IR interface head, or remotely read, by various integrated communication protocols.

Specific features
flowIQ® 4200 measures the environmental temperatures.

The battery package is replaceable without decommissioning the meter, allowing for easy and convenient asset management.

flowIQ® 4200 utilizes split flanges allowing for flexible installation options.

Environmentally friendly
The meter has been approved according to Drinking Water Standards and is certified to NSF/ANSI 61. The meter housing is made of stainless steel which is free from lead and other heavy metals. The environmental report, Carbon Footprint, documents the meter's high reusability and low environmental impact, including recycling of materials.

Hygiene
To protect the health of the consumers Kamstrup has a hygienic manufacturing process of the water meters.

Kamstrup also has a highly automated manufacturing process and only uses materials approved for drinking water. The hygiene is being controlled by external accredited laboratories and by frequent audits.

General description
flowIQ® 4200 is a hermetically sealed water meter intended for measurement of cold water consumption in multi-unit buildings, commercial applications and industry.

flowIQ® 4200 employs the ultrasonic measurement principle, based on Kamstrup's experience since 1991, with the initial development and production of static ultrasonic meters.

One of flowIQ® 4200's many advantages is the fact that it has no wearing parts, which ensures a high and stable accuracy throughout its lifetime. flowIQ® 4200 complies with all the AWWA C715-18 and CN1044 fire service guideline for Ultrasonic Water Meters.

In the flowIQ® 4200 series a composite housing is mounted on a stainless steel meter body with coated split flanges in cast iron. The electronics are fully protected against internal and external penetration of water.

The meter is suitable for mounting in pump stations or wellheads, as it will also function in fully submerged conditions.

flowIQ® 4200 measures the water consumption electronically as a volume, using two pairs of ultrasonic signals. Through four ultrasonic transducers, an ultrasonic signal is sent with and against the flow direction. A transducer serves both as a 'speaker' when transmitting and as a 'microphone when a signal is received. The ultrasonic signal traveling with the flow will be the first to reach the opposite transducer, while the signal running against the flow will be delayed. The time difference between the two signals can be converted into flow velocity, and thereby also into a volume. The measuring principle is a proven, long-term stable and accurate measuring principle.

In addition to volume reading, an indication of current flow and a number of other information codes are displayed. All registers are saved daily in the meter data logger (EEPROM) and are kept for 460 days. Furthermore, monthly data for the latest 36 months, hourly data for the latest 100 days and 50 info code events are saved.

flowIQ® 4200 is powered by a double D-cell internal lithium battery which can provide up to 20 years operating life depending on usage and configuration.

flowIQ® 4200 is available with a choice of two integrated data communication options:

- 912.5, 915 or 918.5 MHz - RF
- 450-470 MHz - RF
- Encoded Output

The meter is fitted with an optical eye which makes it possible to read saved consumption data and info codes, stored in the meter's data logger. Using an optical reading head, it is also possible to change the meter configuration, e.g. data packages.

flowIQ® 4200 can and must only be opened by Kamstrup A/S – or by Kamstrup instructed personnel in regard to battery replacement.

Technical data

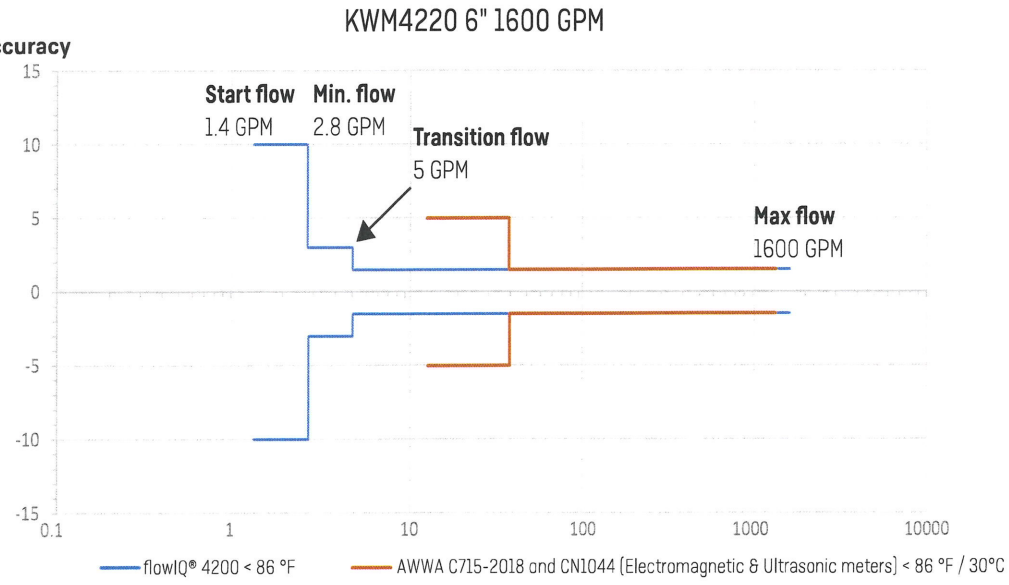
Electrical data

Battery	2 x D-cell batteries, 3.6V. The battery warranty does not apply at meter temperatures above t_{BAT} > 95 °F / 35 °C

Mechanical data

Protection class	IP68-rated (waterproof/submersible)
Mechanical environment	Class 1 (Measuring Instruments Directive classification)
Maximum operating pressure	Round flange mounted, 275 PSI
Ambient/meter temperature	35... 130 °F / 0.5... 55 °C
Water temperature	33... 120 °F / 0.5... 50 °C
Storage temp. empty sensor	-10... 140 °F / -20... 60 °C
Upstream/Downstream Pipe Length Req.	U0/D0

Accuracy



Note: At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow.

Approved meter data

Certified to NSF/ANSI 61

Complies to part 15 of the FCC rules, ISED, AWWA C715-18 and with CN1044

Material

Wetted parts

Flow part, flanged	Stainless Steel 316L
O-ring/gasket	EPDM
Transducer pocket	PPS with fiberglass

Non-wetted parts

Split flanges	Cast iron, EN-GJS-500-7C-black-FBE coating

External meter parts

Meter housing	Polyphenylene sulfide (PPS) – 40 % fiberglass
Cover	Glass
Top ring (sealing)	Polycarbonate (gray)

Meter sizes

flowIQ® 4200 is available in sizes shown in the table below:

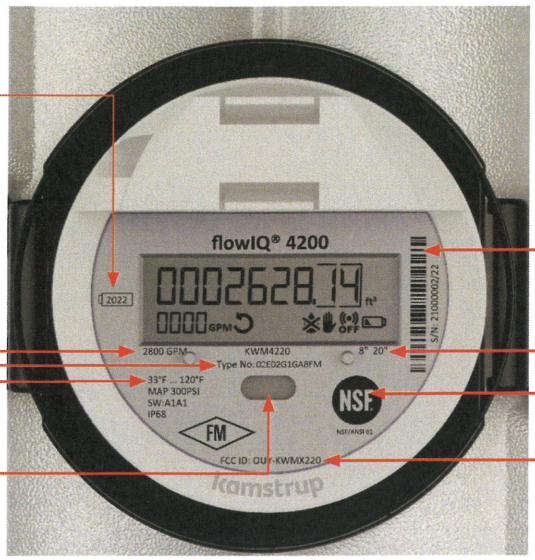
XX = Communication module ZZ = Country code

Type number	Meter size Inches	Start flow (S) [GPM]/ [L/h]	Min. flow [GPM]/ [L/h]	Transition flow[1] [GPM]/ [m³/h]	Max flow [GPM]/ [m³/h]	Sat. flow rate [GPM]/ [m³/h]	Pressure loss SMOC[3] [PSI]/ [bar]	Connection on meter	Lay length [Inches]/ [mm]	Split flanges weight [lbs]/ [Kg]	Total weight [lbs]/ [Kg]
02-E-XX-G-1-FR-8ZZ[2]	6"	1.4/ 318	2.8/ 635	5/ 1.136	1600/ 317.97	1960/ 445.16	2.66/ 0.183	6"	11.8"/ 299.7	31/ 14.1	60/ 27.2
02-E-XX-G-1-GA-8ZZ[2]	8"	1.7/ 386	4/ 908	7/ 1.590	2800/ 635.95	3920/ 890.33	3.9/ 0.886	8"	13.8"/ 350.5	42/ 19.1	86/ 39.0
02-E-XX-G-1-GJ-8ZZ	10"	2/ 454	5/ 1136	8/ 1.817	4500/ 1022.06	6300/ 1430.89	4.2/ 0.954	10"	17.7"/ 450	64/ 29.0	134/ 60.8
02-E-XX-G-1-GS-8ZZ	12"	2.3/ 522	6/ 1363	10/ 2.271	5500/ 1249.19	7700/ 1748.86	2.8/ 0.636	12"	19.7"/ 500	84/ 38.1	185/ 83.9

[1] At flows between 'Start flow' and 'Maximum flow' measurement occurs – however the accuracy is only guaranteed in the range from minimum flow to maximum flow.
[2] Spool piece is available for this meter size. Lay length 6" with spool piece = 18"/457mm; lay length 8" with spool piece = 20"/508mm.
[3] SMOC = Safety Maximum Operating Capacity (pressure).

Meter face details

Meter information in permanent laser engraved text.



Year of meter production

Nominal meter size
Max flow for continuous operation

Type number (includes information on meter size, overall length, etc.)

Water temp. range

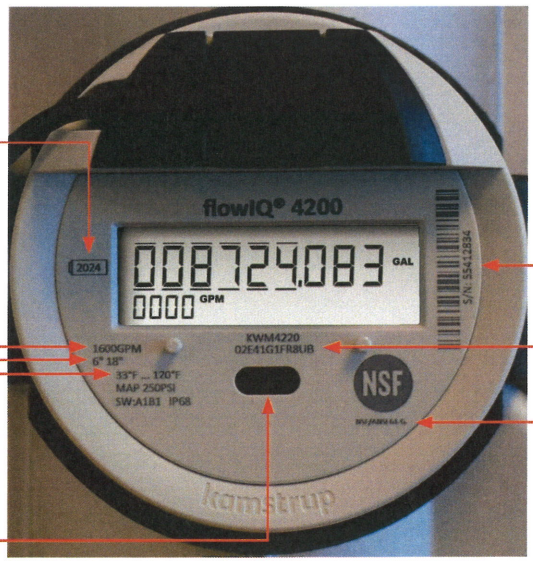
Optical IR interface for reading and configuration

Bar code with serial number

Size and meter length

NSF/ ANSI 61 applicable

IC / FCC identification



Year of meter production

Nominal meter size
Max flow for continuous operation

Size and meter length

Water temp. range

Optical IR interface for reading and configuration

Bar code with serial number

Type number (includes information on meter size, overall length, etc.)

NSF/ ANSI 61 applicable

Core features

Water meters placed throughout the network make it possible to gather information that can be of vital importance for an effective water supply, asset management and improved customer service.

Temperature monitoring
flowIQ® 4200 measures ambient temperatures.

Information on temperatures above or below the configured temperature in the meter will warn the utility on potential frost damages or quality issues.

The measurements can be used to monitor the installation and to give an indication of the quality of the water.

Consumption above max flow
The meter logs information on consumption above max flow. This information can be used to indicate if the meter size for a given installation is correct.

Consumption histogram
The meter tracks consumptions in different flow intervals for further analysis of the consumption patterns for the specific installation.

No consumption
If no consumption has been measured for a long period of time the meter will inform the utility, as this indicates a potential problem with the installation.

Current flow display
Besides the consumed volume, flowIQ® 4200 also shows the current flow in the display. The flow display has been designed with user experience in mind, where it can be advantageous, for example during installation, to be able to see the current consumption. In this context, it is important to stress that the metrological approval of the water meter is only related to the volume reading. Due to the meter's update time, the flow display, in case of rapidly increasing/decreasing flow, may turn out to be slower than the real flow and not a one-to-one correlation between the flow display and the volume growth.

In general, one would expect the flow display to stabilize after about half a minute of constant flow and thereafter to be consistent with volume growth.

Meter modes

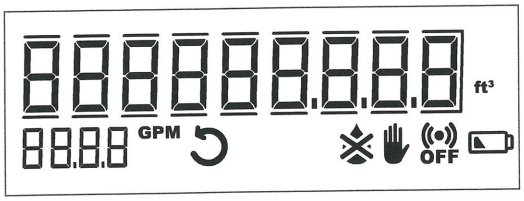
KWM4220:	Normal mode	Verification mode
Flow measurement and flow display update	1 s	0.125 s
Volume integration and volume display update	8 s	1 s

Replaceable battery

flowIQ® 4200 has two built-in D-cell lithium batteries that supply the meter. When replacing the battery, Kamstrup's Battery replacement kit no: 66-99-821 must be utilized with the relevant replacement guide.

The battery replacement kit can ONLY be ordered through Kamstrup's product service. Otherwise the warranty is void. Kamstrup's product service will also help you with the training tutorial.

Display and info codes



The large display of flowIQ® 4200 shows the totalized volume, flow rate and info.

An info code indicates a special condition in the meter. If the info code is available in the display, the related symbol is on when it has been activated. If the 'condition' is not active, the sign is off.

Info code	Condition
	Attempt of fraud. The meter is no longer valid for billing.
	The meter is dry. In this case nothing will be measured.
	The water flows through the meter in the wrong direction.
OFF	*RADIO OFF flashes. The meter is still in transport mode with the built-in radio transmitter turned off. The transmitter turns on automatically on the first time water runs though the meter.
OFF	*RADIO OFF lights permanently. The radio is switched off permanently. Can be activated via METERTOOL.
	The symbol appears when the expected capacity left is 6 months or less.

	Switch off automatically when the condition that activated them no longer exists.
	Disappears when the water no longer flows in the wrong direction.
	Disappears when the meter is filled with water.

**RADIO OFF is not available for Encoded Output meters*

Data registers

The water meter has a permanent memory, in which the values of various data loggers are saved.

The loggers can be read via the meter's optical IR interface.

The following registers are logged:

Description	Yearly logger	Monthly logger	Daily logger	Hourly logger
Logger depth	20 years	36 months	460 days	2400 hours
Operating hours	✓	✓	✓	✓
Info codes incl. hour counter	✓	✓	✓	✓
Volume	✓	✓	✓	✓
Volume reverse	✓	✓	✓	✓
Flow max year incl. Date	✓			
Flow min. year incl. Date	✓			
Flow max month incl. Date		✓		
Flow min. month incl. Date		✓		
Flow max day incl. Timestamp			✓	
Flow min. day incl. Timestamp			✓	
Ambient temp. Max Year	✓			
Ambient temp. Min. Year	✓			
Ambient temp. Avg. Year	✓			
Ambient temp. Max Month		✓		
Ambient temp. Min. Month		✓		
Ambient temp. Avg. Month		✓		
Ambient temp. Max Day			✓	
Ambient temp. Min. Day			✓	
Ambient temp. Avg. Day			✓	

Every time the information code changes, date and info codes are logged. Thus, it is possible to data read the latest 50 changes of the information code as well as the date the change was made.

Integrated communication

The meter supports a variety of different communication options depending on meter type. All radio supported meters can be used with Kamstrup's external antenna. Transmission properties and data packages are defined in the configuration number YY-ZZZ. These can be changed with METERTOOL, MeterToolX or READyApp through the optical IR interface or with a READy Converter.*

**Depending on communication protocol.*

RF

Kamstrup RF Is based on Wireless M-Bus which is a mature and proven technology for remote reading of smart meters. Wireless M-Bus provides a robust, simple and secure reading of meters and requires a low initial investment, but is flexible enough to be expanded whenever desired. Wireless M-Bus is based on an European standard (EN 13757-4) applicable to devices for reading consumption of water, electricity, or energy. The data encryption consists of a 128-bit AES counter mode encryption. Both AMR 912.5, 915 and 918.5 MHz and AMI 450-470 MHz are available.

For additional information about the Kamstrup RF communication module, please refer to FILE100003480.

Encoded Output

The Sensus Encoded Output and TouchRead are implemented based on Sensus specification UI-1203 and UI1204. Encoded Output is compatible with several 3rd party RF network systems. Kamstrup Encoded Output supports Sensus Encoded Output systems and Sensus TouchRead systems. In addition, Neptune ProRead, Neptune E-coder systems and others are supported.

For additional information about the Encoded Output communication module, please refer to FILE100003729.

State of the art meter reading system (READy)

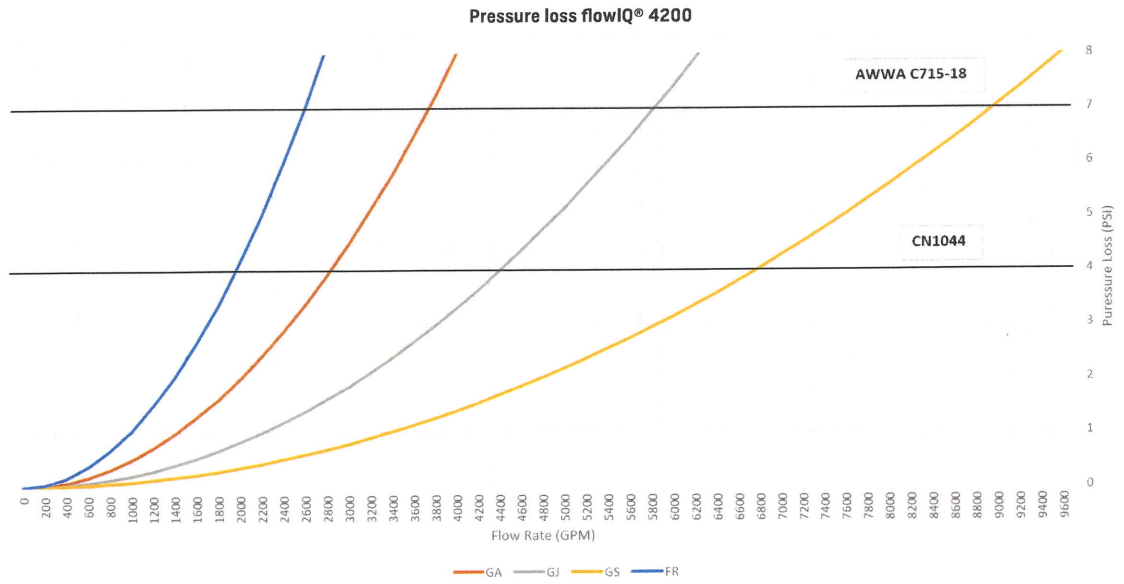
Standardized and open communication
902-928 MHz band RF is an open standard, following EN13757-4:2010, which means that while the flowIQ® 4200 can be configured with or without encryption of the transmitted signal, encryption is required in the United States.

Encryption protects personal data against unauthorized monitoring. Furthermore, the encryption file provides easy access to import meter data for reading programs.

Pressure loss

According to AWWA C715-18 guideline Type II) the maximum pressure loss must not exceed 7 PSI (0.48 bar) at SMOC for water meters. According to CN1044 the maximum pressure loss must not exceed 4 PSI (0.27 bar) at SMOC for Fire Service water meters.

The following graph shows pressure loss with respect to flow rate:



The pressure loss graph is indicative, please see document no.: FILE100000198 for more information about pressure loss.

Ordering details

An order is initiated by stating the type number of the selected model of flowIQ® 4200. The type number includes information on meter type - meter version, size, lay length, service connection and time zone.

Subsequently the meter configuration, which determines customer-specific requirements such as number of digits in display etc., is selected. The configuration is completed during programming of the final meter.

Accessories are enclosed separately to be mounted by the installer.

Meter type - flowIQ® 4200

Type	□□	□	□□	□	□	□□	□	□□
Meter generation								
Second generation	02							
Mechanical design								
Stainless steel with iron split flanges		E						
Communication								
RF			02					
Encoded Output			41					
Power supply								
Double D-cell				G				
Dynamic range								
AWWA C715-18					1			
Meter size								
6" x 11.8" (1600 GPM)						FR		
8" x 13.8" (2800 GPM)						GA		
10" x 17.7" (4500 GPM)						GJ		
12" x 19.7" (5500 GPM)						GS		
Meter type								
Cold water							8	
Country code								
North America, FCC and NSF approved								UB
Canada, ISED and NSF approved								CA
FM fire service approved								FM

The features included in the type number cannot be changed once the meter has been produced.

Configuration

Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
Display views [1]														
Standard	810													
GMT offset Time zone														
USA Eastern (GMT-5)		28												
USA Central (GMT-6)		24												
USA Mountain (GMT-7)		20												
USA Pacific (GMT-8)		16												
Target date (handled as order data)														
Max values averaged over time (1..120 min.)														
2 minutes			002											
Customer label														
Customer label blank				5000										
Leakage message limit														
OFF					9									
Pipe burst limit														
OFF						0								
Ambient Temperature low limit														
OFF							0							
Ambient temperature < 2 °C / 36 °F							2							
Ambient temperature < 3 °C / 37 °F							3							
Ambient temperature < 6 °C / 43 °F							6							
Ambient Temperature high limit														
OFF								0						
Ambient temperature > 35 °C / 95 °F								3						
Ambient temperature > 45 °C / 113 °F								6						
Data logger profile														
Standard (default)									04					
Standard Encoded Output									15					

To be continued on next page...

Configuration

Config	DDD □□□	JJ □□	LLL □□□	MMMM □□□□	N □	P □	S □	U □	RR □□	CCC □□□	V □	T □	YY □□	ZZZ □□□
...continued from previous page														
Display resolution (alphanumeric)														
000000000 ft³ - 0000 GPM – Billing in 1,000s										154				
0000000000 Usgal - 0000 GPM - Billing in 10s (recommended for district meters)										224				
For additional options please refer to FILE100002712														
Temperature units of measure														
Fahrenheit											1			
Celsius											0			
Encryption level														
Encryption with separately forwarded key												3		
No encryption (applicable for Encoded meters)												0		
Communication														
For communication protocols please refer to the specific module data sheets														

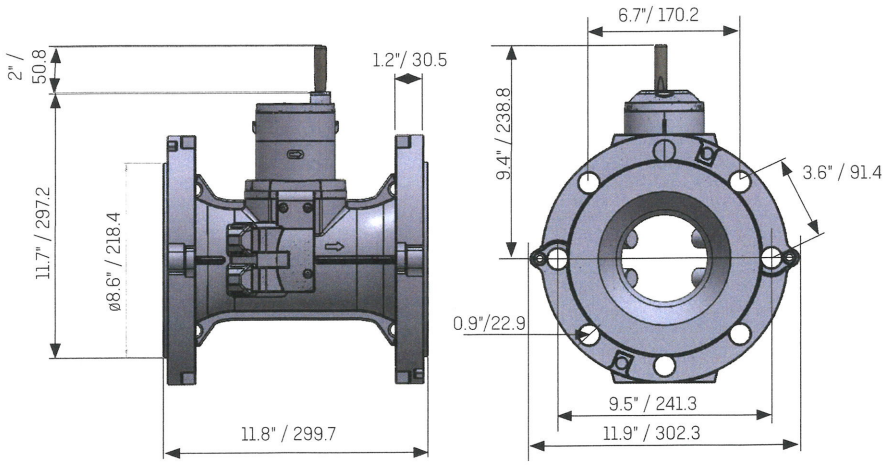
	DDD	JJ	LLL	MMMM	N	P	S	U	RR	CCC	V	T	YY	ZZZ
Unless otherwise stated in the order, Kamstrup supplies the following:	810	□□	002	5000	0	0	3	3	04	224	1	3	YY	ZZZ

Note: JJ (timezone) and target date are not predefined and has to be chosen in the ordering system.

Dimensional sketches

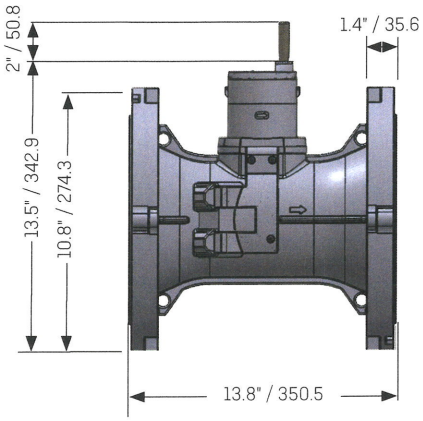
Type: FR Size: 1600 GPM 6" x 11.8"

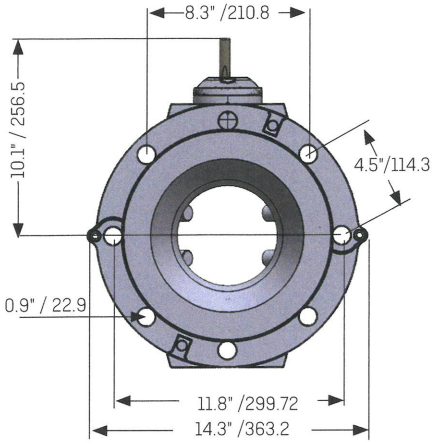
NOTE! Same flanches for in- and outlet. / Dimensions: Inches/mm



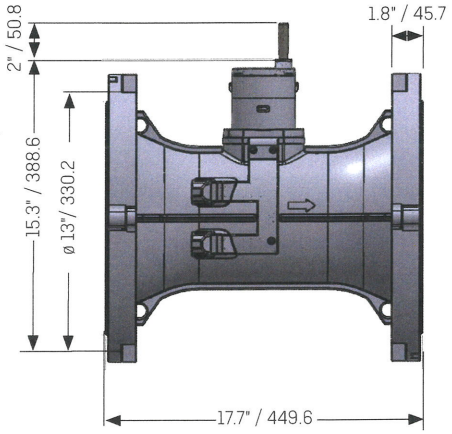
Dimensional sketches

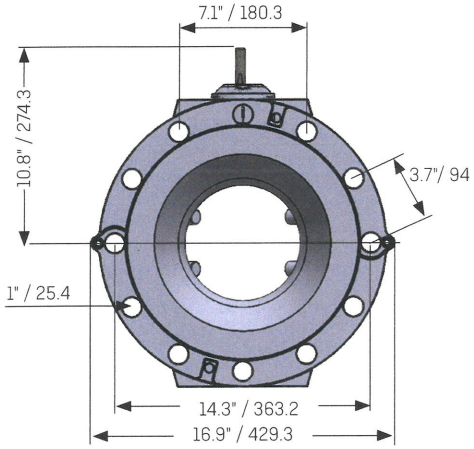
Type: GA Size: 2800 GPM 8" x 13.8"



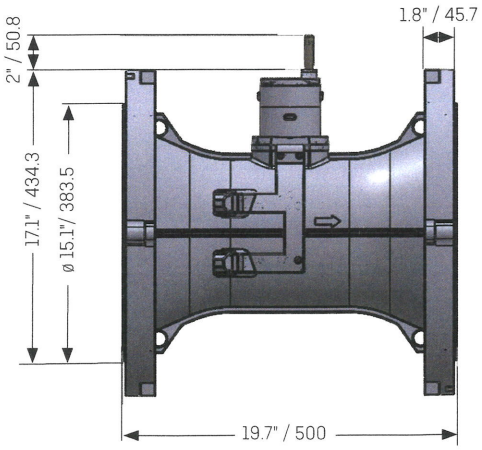


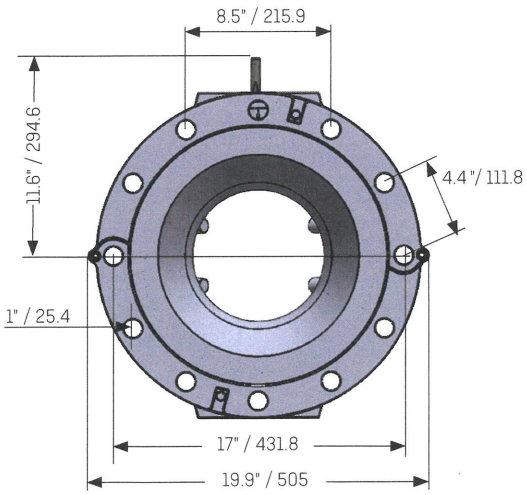
Type: GJ Size: 4500 GPM 10" x 17.7"





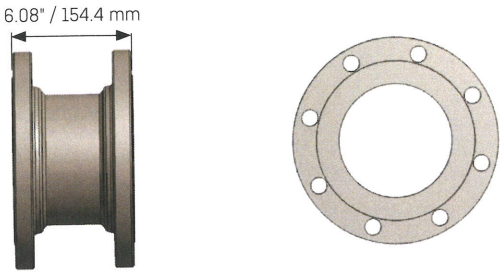
Type: GS Size: 5500 GPM 12" x 19.7"



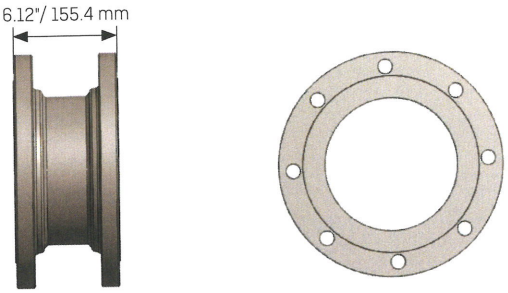


Dimensional sketches

Spool piece for 6" (FR)



Spool piece for 8" (GA)



Accessories

See Accessories for Water Meters on Kamstrup.com.

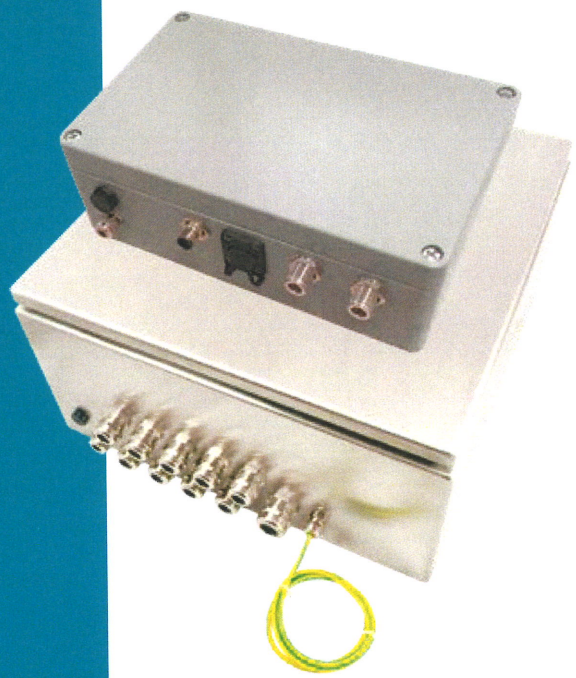
Accessories are ordered separately in CPQ (Kamstrup ordering system) and will be delivered as single parts in the packaging.

Kamstrup Water Metering, LLC
2855 Forsyth Commerce Way, Building 200
Cumming, GA 30040, USA
T: +1 (404) 835-6716
info-us@kamstrup.com
kamstrup.com

Data sheet

Kamstrup READy Collector

- Data collector for smart meter reading
- Rugged design
- 2-way intelligent network
- High level of security, individual encryption keys
- Optional Cellular connection
- Intelligent power management
- Instant event notification
- Plug-and-play installation



Contents

A READy Suite component 3
Features 3
Technical data 4
Ordering data 6
Approvals and Markings 7

A READy Suite component

The Kamstrup READy Collector is a central easy to use two way network component in your AMI network. The data is collected from the meters, stored until the planned transmission and displayed in READy Manager the Meter Data Management software. The data can be collected in a number of differing time frames up to hourly readings, and If an event occurs, this data will be transmitted immediately, independent of your data scheme.

The Kamstrup READy Collector is a rugged design that is to be uses in the harshest of conditions, such at the top of towers or elevated storage tanks, where service can be difficult. Temperature extremes and lightning protection has been thoughtfully included in the engineering of the collector unit. Other important features of the system is that no coax is necessary between the Collector unit and bottom unit, just standard off the shelf wiring components. The bottom unit has been built with industrialized components incorporating multiple surge protection systems, and power supply for use in the most challenging conditions.

Features

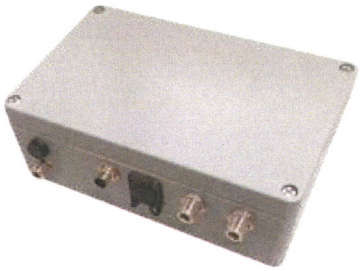
- Easiest to learn and understand system available
- No IT experience necessary
- Built in redundancy
- Fault tolerant system
- Two-way communication
- High-level security all the way
- Intelligent power management
- Instant event notification

Technical data

The Kamstrup READy Collector can be ordered as prepared for one and up to four READy Collector top units.
The system consists of a READy Collector Base unit supplying power and network for the READy Collector Top unit.
Both a READy Collector Top and a READy Collector Base are required.

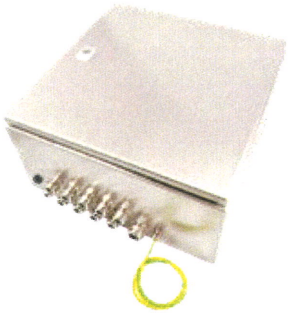
Kamstrup READy Collector Top

Dimensions (without connections)	10.2 x 6.3 x 3.6 inches 260 x 160 x 91 mm
Weight	6.23 lb 2.85 kg
Operating temperature	-22 to 149 °F (-30 to 65 °C)
Storage temperature	-40 to 185 °F (-40 to 85 °C)
Enclosure rating	NEMA 4, IP66
Power input	24 VDC
Frequency	450 - 470 MHz FCC license required
Capacity	Up to 25.000 Kamstrup Water meters
Supported meters	flowIQ® 2250 and 3250



Kamstrup READy Collector Base

Dimensions (without connections)	15.5 x 12.3 x 7.1 inches 394 x 313 x 181 mm
Weight	Dependant on configuration
Operating temperature	-22 to 149 °F (-30 to 65 °C)
Storage temperature	-40 to 185 °F (-40 to 85 °C)
Enclosure rating	NEMA 4, (IP66)
Power input	110-265 VAC 50/60 Hz
Power output	24 VDC/10 A



AMI-antenna

Length	58 inches
Frequency	440 – 470 MHz
Gain	3 dB



Antenna cables

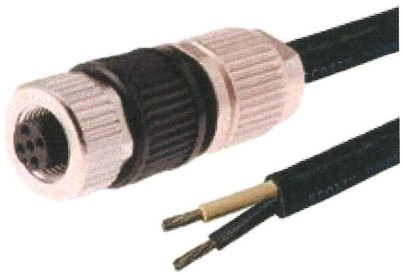
6.5 feet (2 m)
16.4 feet (5 m)



Technical data

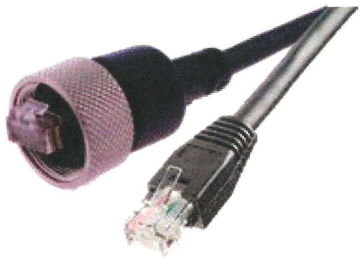
Power cable to READy Collector Top

Length between READy Collector Top and Base:
6.5 feet (2 m)
50 feet (15 m)
80 feet (24.5 m)
150 feet (45.7 m)
200 feet (61 m)
240 feet (73 m)
Note: Must match length with the Ethernet cable.



Ethernet cable to READy Collector Top

Length between READy Collector Top and Base:
6.5 feet (2 m)
50 feet (15 m)
80 feet (24.5 m)
150 feet (45.7 m)
200 feet (61 m)
240 feet (73 m)
Note: Must match length with the Power cable.



Sierra Wireless modem

For the READy Collector Base



GSM antenna

Used for the Sierra Wireless modem
Comes with a 16'4" cable



Ordering data

To order the READy Collector Base with all equipment use order number: **READyCollector**.
Order the Ready Collector Top on: **6696100000**

For individual ordering, use the following order numbers:

READy Collector Top	
READy Collector Top	6696100000
READy Collector Base	
READy Collector Base without modem	6696200000
READy Collector Base with modem	6696210000
Note: Antenna for modem not included, see accessories	
Accessories	
AMI Antenna	
Note: The system requires two antennas for each READy Collector Top	6697450
Antenna cables for READy Collector top	
Cable between READy Collector Top and AMI antennas	
6.5 feet (2 m)	5000 398
16.4 feet (5 m)	5000 388
Note: The system requires a pair of two equally lengths	
Ethernet cable to READy Collector	
Length between READy Collector Top and Base	
6.5 feet (2 m)	5000 476
50 feet (15 m)	5000 478
80 feet (24.5 m)	5000 480
150 feet (45.7 m)	5000 482
200 feet (61 m)	5000 484
240 feet (73 m)	5000 486
Note: Must match length with the power cable	
Power cable to READy Collector	
Length between READy Collector Top and Base	
6.5 feet (2 m)	5000 477
50 feet (15 m)	5000 479
80 feet (24.5 m)	5000 481
150 feet (45.7 m)	5000 483
200 feet (61 m)	5000 485
240 feet (73 m)	5000 487
Note: Must match length with the Ethernet cable	
Installation parts	
Bracket kit for READy Collector Top	5915 519
Antenna beam 39" (1 m)	5000 474
Bracket for Antenna beam	5000 475
Modem	
SIERRA Wireless Modem RV50X	1308101
Antenna for SIERRA Wireless Modem RV50X	1653105

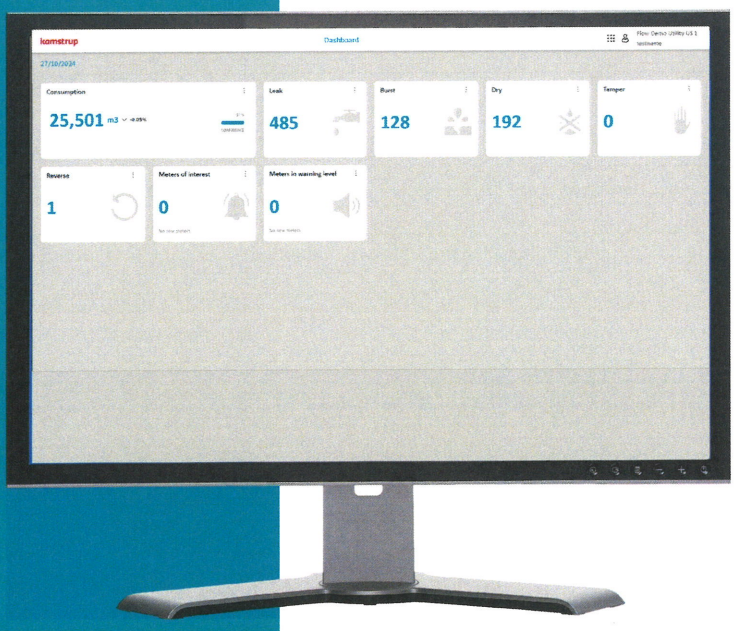
kamstrup

Data sheet

READy Manager and App

Intuitive, scalable, cloud- and app-based single platform solution for reading and managing data from intelligent water meters

- Powerful and flexible data integration and API support
- App with built-in meter installation tool
- Effective alarm management
- Near real-time notifications



READy Manager: Easy to use and with a multitude of functionalities

READy Manager is Kamstrup's software solution for managing meter and radio data, network collectors, and intelligent alarm management and notifications as well as data reporting and integrations. The solution is highly intuitive and job execution centric, allowing the user to easily view and manage system occurrences from a top-down perspective, e.g., the at a glance dashboard displays alarm summaries making it possible to dive into actions from there. READy Manager is hosted regionally in a Microsoft Azure cloud setup with up-to-date rigorous security protection to keep your data safe.

Highlighted features:

Data Management

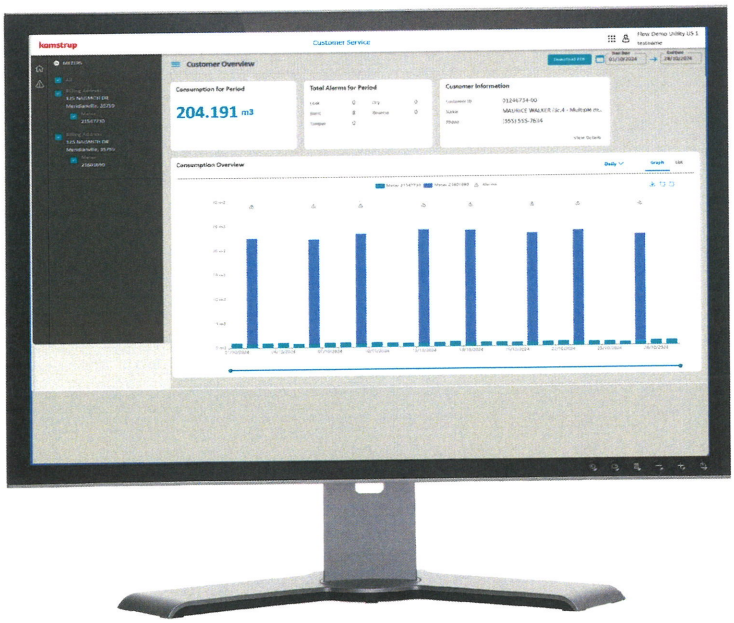
- Single software platform for AMR, AMI and NB-IoT data reading and alarm support
- High data security utilizing Kamstrup encryption keys for advance security with AES-128 bit encryption
- Alarm management for thresholds and normal vs. high priority alarms
- Data import and export functionality for customer integrations and data analysis
- Management of mobile route creation and AMR reads/ alarms
- Network Collector management and notifications
- Alarm notifications via email or SMS

Data Integration

- Flexible user-defined import and export integrations with customizable CSV, fixed width, or API formats for billing or data analysis
- Automatic import and export functionality (scheduling)
- Possibility of receiving readings by email (predefined intervals)
- Advanced filtering
- API integration using REST and Webhook (SHA-256) via JSON (e.g. for consumption to do billing)

Data Visualization

- At a Glance Dashboard for a fast operational overview
- An optimized customer service module that facilitates the good consumer dialog
- Meter/Collector location on a map
- Automatic GIS coordinates based on addresses
- Alarms overview with flexible filtering options
- Display of logged data from meters
- Grouping of meters
- User defined custom columns and groups
- Analysis of users by high/low or no consumption



READy Manager: Hardware and software requirements

PC core components

Type	Minimum	Recommended
Processor	Intel Core I3 compatible processor (2.4 GHz)	Intel Core i5 compatible processor (Intel Core i5-6300U, 2.4 GHz or faster)
RAM	8 GB	16 GB

System and connectivity requirements

Microsoft Windows 10 (64 bit) compatible device (e.g., PC). The device must be fully updated via Windows Update.

Internet access and open outgoing TCP/443 is required.

Data retention

Reading data collected via network and drive-by is thinned according to the following rules:

- During the first 13 months, all readings are stored
- After 13 months, readings are compressed to 1 per day
- After 5 years, all readings are deleted

Security

Kamstrup is ISAE3000 and ISO27001:2022 certified, and works in alignment to relevant aspects of CIS18 and the IEC62443 set of standards.

READy App – mobile reading and installation tool

READy App is a mobile application that – together with a Bluetooth®-connected converter – changes your smartphone into an efficient installation, reading, data logging, and field tool. READy App is extremely intuitive and enables meter reading and data synchronization with the READy HES data management software easy.

The application supports meter installation, AMR meter reading (incl. AMI fallback reading), and exchange of meters. Additionally, it can be used together with a Bluetooth®- connected optical read-out head to read the data logger in the meter.

In reading mode, a map shows the geographical position of not yet read meters, making meter reading with READy App very simple and efficient. Visual and audible notifications guide the user on the progress of meter reading.

READy App features

- Easy and intuitive user interface
- Map and list view of meters and routes
- Graphical display of logged data from meters
- Display of alarms
- In-field synchronization of data with READy Manager
- Verification of the signal strength from meters
- Configuration of network components.



READy App recommended hardware

Supported smart phones	Supported tablets
Samsung Galaxy S23	Samsung Galaxy Tab S9
Samsung A Series A54	
HUAWEI P60	

Must be Android OS version 11.0 or newer to comply with security updates.

Hardware

Memory	Minimum 8 GB
Connection	Wi-Fi, Bluetooth 5.0
Display size and resolution	Minimum 4.3" and 1024 x 768

In addition, some features require the following:

Memory	Minimum 12 MB
Connection	Wi-Fi, Bluetooth 2.1
Display size and resolution	Minimum 4.3" and 1024 x 768

- Mobile data access (SIM card) for using map view
- Integrated camera in smartphone (for easy pairing of PC software and smartphone app).

Software

Andriod OS	Minimum version 11 (Security updated)l

IP access to PC software via Wi-Fi Google Play access (Google account).

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Data Sheet

Water Intelligence US

- Cloud based platform for analyzing data
- Intuitive dashboards and detailed overview of the distribution network
- Advanced algorithm processing based on meter data
- Utilizing new technologies to help utilities reduce their non-revenue water



Contents

Water Intelligence	2
Modules for Water Intelligence	3
Hardware requirements	5
Data requirements	5
System requirements	6
Other requirements	7
Data hosting	7

Water Intelligence

Non-revenue water is a well-known global problem that results in large volumes of water being lost. It is a challenge faced by many water utilities, and it is often caused by increased urbanization and ageing distribution networks, which lead to a higher demand and increased prices.

There are different approaches to find the root cause of the water loss problem and different approaches of how it can be reduced. However, the complexity is often underestimated because of the different types of water loss, each of which needs to be dealt with differently.

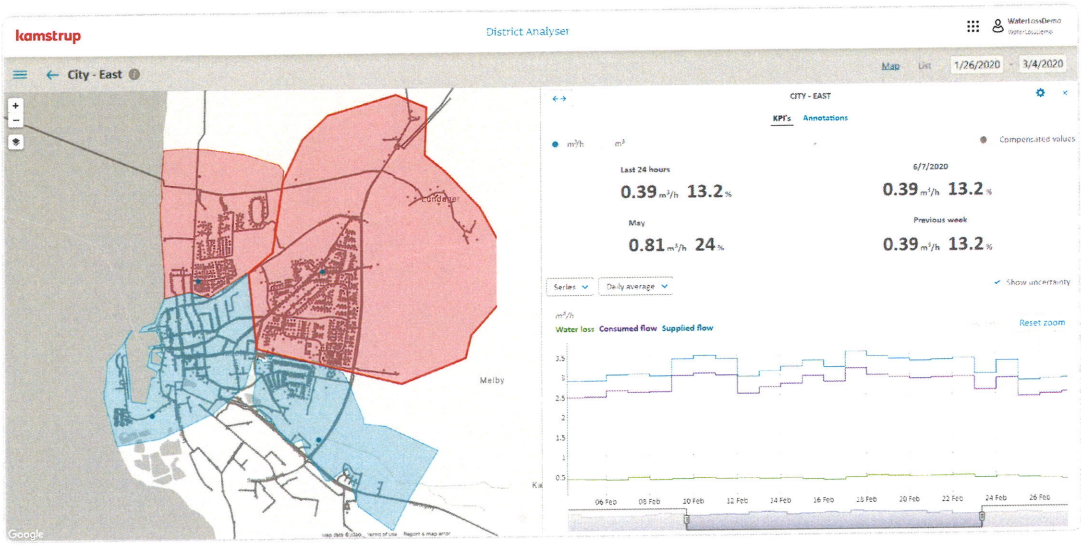
With our Water Intelligence platform, you will be provided with a solution that scales to meet the demands of your utility.

With a simple and intuitive web interface, Water Intelligence is tailored and designed to bring power and simplicity to the process of fighting non-revenue water.

Modules for Water Intelligence

District Analyzer

Get a complete overview of your distribution network split into districts. For each district, you will receive detailed information on inlet flow, consumption, night flow and water loss, which lets you monitor developments closely, target your efforts and act as soon as the water loss increases in a district.



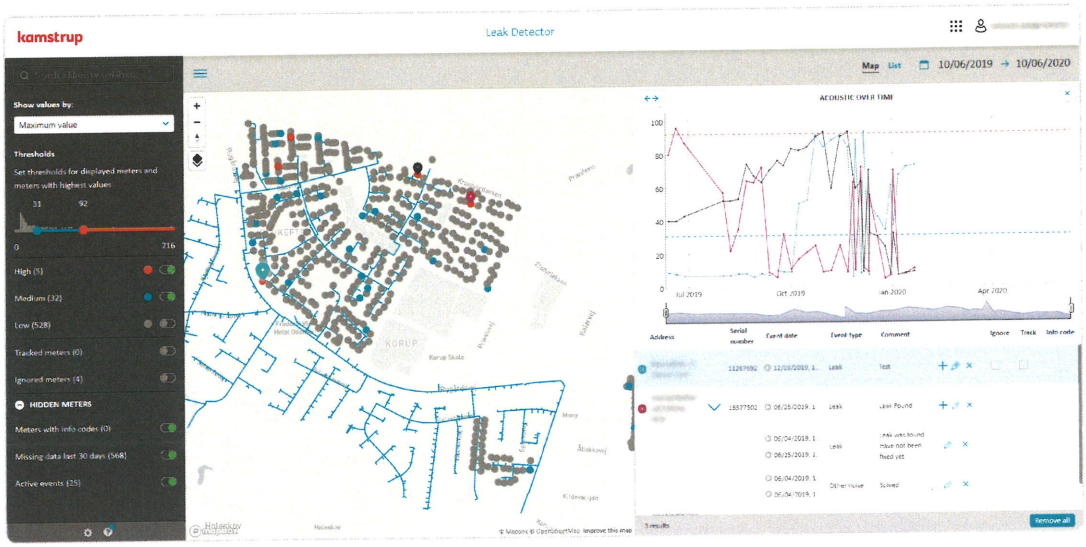
Features that are included in District Analyzer consists of:

- Map view with color coded districts
- List view with meta data for districts
- Graphical representation of consumed water, supplied water and water loss
- KPI reporting based on water loss during last day, week and month
- Intuitive drawing tool for districts/sections
- Integration of pipe layer network to know where meters are in connection to the pipes
- Addition of compensated water such as pipe flushing
- Alarm system to indicate if a water balance is moving in a wrong direction.
- Advanced algorithms to monitor water balances

Modules for Water Intelligence

Leak Detector

It can be difficult to find leaks in the system, especially those on the service pipes. With the advanced technology of Leak Detector, you get a complete overview of potential leakages in your distribution network, without searching for them yourself. With this application, you will receive 24/7 monitoring of your distribution network, which lets you target your efforts where they will be most effective.



Features that are included in Leak Detector consists of:

- Map view with color coded installations
- List view with meta data for all meters
- Track meters to always have a list of important installations that needs to be tracked every day, week or month
- Add events and comments to installations with findings from the field, to easier make a decisions based on past findings
- Graphical representation of data to quickly determine if an installation is requiring immediate action
- Integration of pipe layer network to know where meters are in connection to the pipes
- Advanced filtering giving you the possibility to quickly find high-risk installations
- Build a work-order list with installations that have active events
- Correlate alarms with active alarms to determine if a leak is before or after the meter

Hardware requirements

Windows
To use the Water Intelligence website on Windows, you need the following:

- Windows 7, Windows 8, Windows 8.1, Windows 10 or later
- An Intel Pentium 4 processor or later that is SSE2-capable
- 2 GB of RAM

Linux
To use the Water Intelligence website on Linux, you need the following:

- 64-bit Ubuntu 14.04+, Debian 8+, openSUSE 13.3+ or Fedora Linux 24+
- An Intel Pentium 4 processor or later that is SSE2-capable
- 2 GB of RAM

Data requirements

District Analyzer
To make a coherent analysis of the network, it is a requirement that we can receive data from the district meter(s) in your network.

- The district meter(s) must be remotely read from an API or an FTP server
- The district meter(s) must be remotely read on a daily or hourly basis
- It must be possible to define inbound and outbound district meter(s) for each district
- The consumption meter(s) must be present in READy Manager at all times
- The consumption meter(s) must be read either through AMR or AMI

Leak Detector
To utilize the full potential of the Leak Detector module, we advise you to have the solution with daily values.

- The consumption meter(s) must be present in READy Manager at all times
- The consumption meter(s) must be read either through AMR or AMI

System requirements

Kamstrup recommends that you use the Water Intelligence website using a modern web or mobile browser to get the optimal experience. This section covers the system requirements for viewing and using the Water Intelligence website.

Browser requirements
The Water Intelligence website supports many popular web and mobile browsers. By using one of the following browsers, we can guarantee an optimal experience:

- Microsoft Internet Explorer 8 or newer (it is recommended to use the latest Microsoft Edge browser)
- Google Chrome, latest version

Recommended settings for mobile devices
With the rapid development of mobile devices, it is utterly important for us that you can have the same experience on your mobile device as you have on your desktop computer. This is why we have also optimized the Water Intelligence website to be compatible with the following mobile devices:

Android
- Devices: All android phones and tablets
- Android 5.0+

Windows
- Devices: All tablets and smartphones
- Windows 8.1+

For Android, the Water Intelligence website does not fully support the earlier versions of the WebKit browsers that were previously used in 2013 by Google. Instead, consider using the Chrome Mobile browser if you experience any problems.

Other requirements

JavaScript
Water Intelligence uses JavaScript for many functions and features. For the full experience, it is required to enable JavaScript in your browser. Consult your browser's Help section for information on how to change this setting.

Cookies
Some features and functions of the Water Intelligence website, e.g. region selection for the map, user sign-in and statistical analysis, require browser cookies to be enabled. Consult your browser's Help section for information on how to change this setting. For more information about Kamstrup's use of cookies, see https://www.kamstrup.com/en-en/about-kamstrup/cookie-information.

Internet connection
To use the Water Intelligence website, it is required to have an internet connection. As with any other web-based application, it is a must that we can get in contact with the data that we need in order to make the analysis reports as coherent as possible. 1 Mbps is recommended for using the Water Intelligence website.

Data hosting

All data that rests within the Water Intelligence suite is hosted on the Microsoft Azure platform on a cloud hosted environment in the United States of America to ensure optimal performance on load times.

We have also created the data center in US to ensure that data stays within US, thus complying with data regulations and laws.

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Data Sheet

READy Converter, Advanced

- All-in-one box solution
- Flexible converter suitcase for meter reading
- Rugged design
- Long battery lifetime
- Support of Wireless M-Bus Communication, C mode



Contents

Part of READy Suite	2
What is in the suitcase?	3
Technical data	3
Mechanical data	4
Power supply	4
Dimensions	5
Marking/standards	5
FCC Cautions	6
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Safety information/disposal	8
Order information	8
Accessories	8

Part of READy Suite

READy Converter, Advanced is part of the READy Suite and is responsible for the automatic data collection from smart water meters equipped with Wireless M-Bus communication.

READy Suite is a unique standardized Wireless M-Bus solution for easy and fast reading of smart water meters.

The reading of the smart water meters takes place using the READy Converters which receives data and sends this to a smartphone/tablet which is responsible for storing the data. Each READy device can contain data from up to 15,000 meters.

The direct communication between the smart water meters and READy Converter is based on a comprised one-way communication protocol focusing on fast, safe and robust data communication and long battery lifetime. This comprised communication protocol is called C mode.

Due to the optimized Wireless M-Bus communication protocol, the READy Converter advanced can receive data from up to 30 smart water meters per second, making it a perfect drive-by solution.



What is in the suitcase?

READy Converter is delivered ready to use in a box containing:

- 2 x READy Converter
- 2 x whip antenna
- 2 x mobile holders
- 2 x magnetic roof antenna w/ 118" cable
- 1 x quick guide

The intuitive quick guide leads you through the installation of the PC software and the smartphone app and shows you how to connect software, app and converter unit with each other.

Technical data

READy Converter

Communication interfaces

Meter reading	Wireless M-Bus, C mode
Data transfer to smartphone/tablet	Smartphone/tablet wireless interface

Further interfaces

Charging	Micro USB
Optical interface	3 x LED for battery status
User interface	ON/OFF button

Frequencies

Wireless M-Bus	912.5 / 915 / 918.5 MHz
Wireless reader interface	2.4 – 2.5 GHz

Mechanical data

READy Converter

LxWxD (in inches)	4.7" x 2.5" x .94" (without whip antenna) 10.8" x 2.5" x .94" (with whip antenna)
Weight (incl. antenna)	5.6 oz
IP protection class	IP41
Antenna plug	SMA (reversed polarity)
Charging plug	Micro USB

Suitcase

LxWxD	14.96" x 10.43" x 6.10"
Weight	141 oz
IP protection class	IP41

Temperature range

Charging	50 °F – 113 °F
Operation	14 °F - +131 °F
Storage	32 °F – 140 °F
Humidity	< 85 %, non-condensing

Power supply

READy Converter

3.6 VDC internal, rechargeable battery

Operation time (fully charged)	Up to 8 hours
Charging time (fully discharged)	Up to 9 hours
Charging consumption	Min. 500 mA

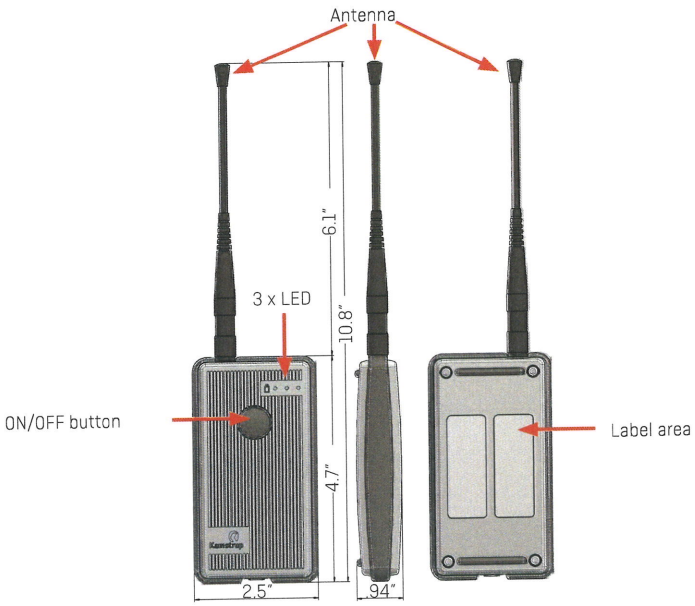
To function optimally, READy Converter must be fully charged at least once every half year.

Supported meter types

Kamstrup meters and modules supporting AMR communication (912.5 - 918.5 MHz).

Dimensions

READy Converter



Marking/standards

FCC ID: OUY-READYAMR3
RoHS
FCC part 15B
FCC part 15C
IC: 22376-READYAMR3

FCC Cautions

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of FCC rules.

Operation is subject to the following 2 conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

This equipment has been approved for portable operation, and unless otherwise advised in separate supplemental instructions for individual wireless transmitter(s), requires minimum 0.6" spacing be provided between antenna(s) and all person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.

Canadian Compliance Statement

English:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Complies with the Canadian ICES-003 Class B specifications.

This device complies with RSS 247 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

This radio transmitter IC ID 22376-READYAMR4 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Whip antenna:
2.5 dBi

Roof top antenna:
5.2 dBi

Français:

Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

(1) Cet appareil ne doit pas provoquer d'interférences et

(2) Cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Cet appareil est conforme à la norme canadienne RSS 247. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Cet émetteur radio IC ID 22376-READYAMR4 a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés cidessous, avec le gain maximal autorisé indiqué. Les types d'antenne non inclus dans cette liste et ayant un gain supérieur au gain maximum indiqué pour tout type répertorié sont strictement interdits pour l'utilisation avec cet appareil.

Antenne fouet:
2,5 dBi

Antenne de toit:
5,2 dBi

Safety information/disposal

Do not try to disassemble READy Converter.
Do not expose READy Converter to open fire.
Please return READy Converter to Kamstrup A/S if the above specifications cannot be fulfilled.

Order information

READy Converter	READyConverterI

Accessories

Magnetic roof antenna, complete	6696 010
Mobile holder	6696 025
Whip antenna	5005 001

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D | Propagation Study

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Propagation Study

Jerome, AZ

Consultant/Radio Planner	DEGN
Date	October 24th, 2025
Version	01.00
Approver	MAHS

Facts – from the questionnaire

No. of Meters: 332

Meter location: 100% indoor

Requested Performance: hourly

Extra info:

Conditions

The following situations are not included in the measured performance:

- Failure of third-party communications (e.g. GSM network or IP infrastructure)
- Defective meters or collectors
- Poor meter box/pit maintenance
- Meters or collectors that have been affected by external factors (e.g. vandalism, physical harm or enclosure)
- Installations that are not performed or not possible to perform in accordance with the installation instructions and training of the vendor.
- The sites should be established within 150 feet of the specified locations. Alternative locations need approval by Kamstrup.
- Antenna must be placed at minimum the specified height (above ground) and free from surrounding roofs and structures.

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Service Area

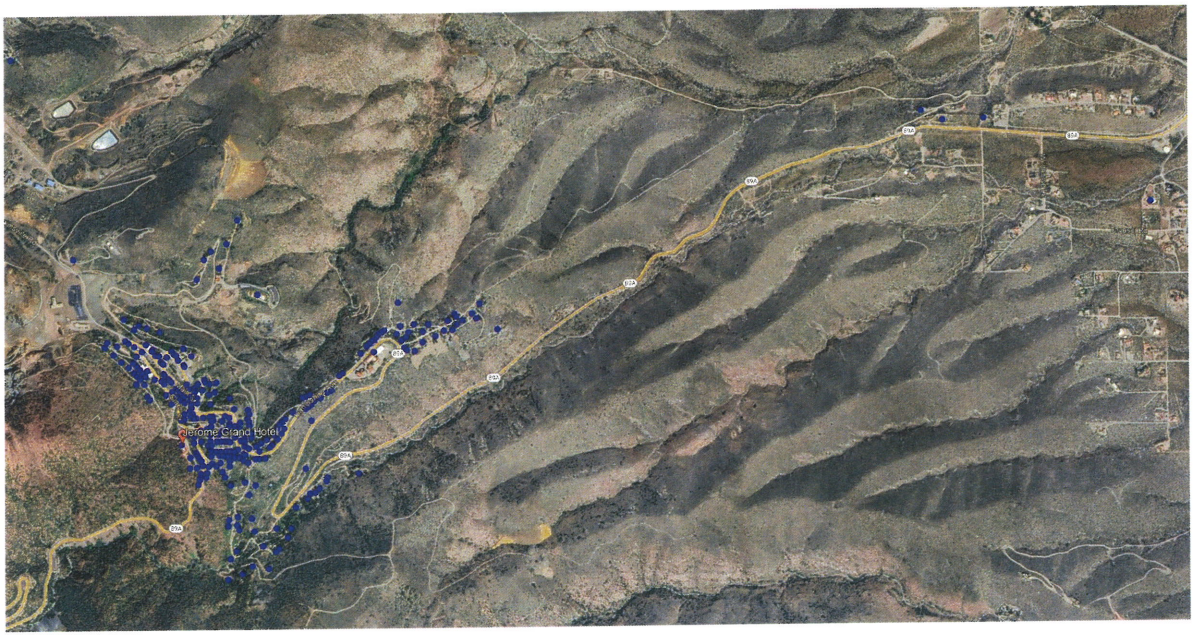

Figure 1: Service Area

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Site placement & Radio cover

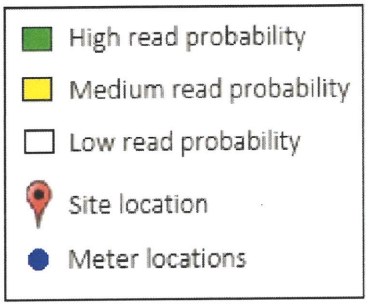
Assets Used

Asset Name	Structure Type	Address/Coordinates	Min. antenna height
Jerome Grand Hotel	New Pole	34.747629°, -112.114937°	65’

Table 1 Assets Used

Study results

When analyzing the scenarios presented in this section, refer to the legend below:



High Read Probability: Highlighted Green on the Map – very likely to receive daily reads from meter

Medium Read Probability: Highlighted Yellow on the map – likely to receive reads every other day to every seven days

Low read Probability: No highlighting shown on map – likely to not have radio signal coverage from collector

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Coverage – Indoor

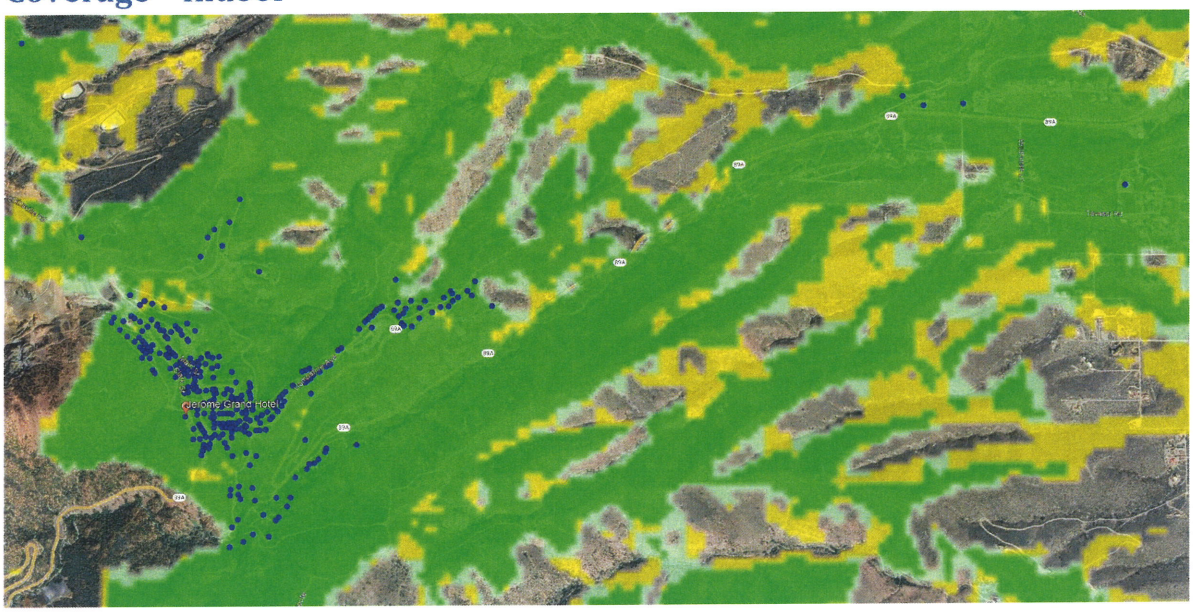

Figure 3: Indoor

Results of the propagation study

Budget with 1 collector and 1-2% external antennas for 99% coverage and 97% hourly reads for all ground floor meters with approximately 3 meters outside of coverage.

*Please note items indoors may impede signal in some cases

E | Special Conditions, Disclaimers, and Exceptions

FORTILINE
SMART UTILITY SOLUTIONS

Fortiline, Inc. d/b/a Fortiline Waterworks ("Fortiline") Exceptions to Customer Bids and Purchase Orders

These Exceptions are incorporated into and are part of Fortiline's response to Customer's request for bids or acceptance of Customer's purchase order and specifically amend or replace, as applicable, any contrary provisions in Customer's documents (the "Agreement") as follows:

1. Pricing: Due to current supply chain issues impacting pricing, the actual unit price for the Customer's project can only be determined as each product is released for shipment.
2. Payment: In no event shall Fortiline agree to payment from Customer contingent upon their receipt of payment from their customer.
3. Retainage/Offsets/Setoffs: In no event shall Fortiline agree to any retainage, offsets, and setoffs by Customer.
4. Delivery:
   a. Deliveries of all products shall be made as agreed upon by written approval by both parties. Notwithstanding the foregoing, due to current supply chain challenges, including manufacturers' declaring force majeure, Fortiline will, use commercially reasonable efforts to meet the delivery requirements of Customer.
   b. Notwithstanding the foregoing and regardless of other provisions in the Agreement,
      i. Fortiline shall not be liable for any liquidated damages due to any circumstances beyond its reasonable control; and
      ii. Fortiline may suspend deliveries if Customer's account is delinquent.
5. Lien Waiver: Fortiline shall issue a lien waiver to Customer after receipt of full payment from Customer.
6. Warranty:
   a. Fortiline makes no warranties, express or implied, related to the products other than Fortiline warrants that products shall meet the specifications set forth in the Agreement. In addition, Fortiline shall furnish to Customer the manufacturers' certificates of warranty for the products listed in the Agreement. The warranty supplied by Fortiline shall remain in force for the full period identified by the warranty certificates.
   b. Notwithstanding the foregoing, Fortiline's warranty obligations shall not apply to any defect which arises from an improper installation or use.
7. Patents and Copyrights:
   a. Fortiline shall use commercially reasonable efforts to assist Customer in any claims or suits brought against Customer, its officers, agents, and/or employees based on a claim that the products sold by Fortiline pursuant to this Agreement constitute infringement of any United States Letters Patent or violate any other proprietary interest (including copyrights, trademarks and trade secrets), provided Customer notifies Fortiline in writing promptly of such claim or suit.
   b. Notwithstanding the foregoing, Fortiline will provide Customer with the same license rights provided to Fortiline as it relates to any use of patented and copyrighted design, device, tool, material, equipment, or process to be performed under the Agreement, to the extent permitted by Fortiline's provider. Fortiline will assist Customer in any indemnification claim against the provider for patent or copyright infringement as it relates to any such patented and copyrighted design, device, tool, material, equipment, or process.
   c. Irrespective of provisions to the contrary, with respect to any patent and copyright claims, Fortiline shall have no liability unless Fortiline has actual knowledge of a potential patent and copyright claim and fails to disclose such knowledge to Customer prior to the delivery of any services which become subject to a patent and copyright claim. In addition, Fortiline shall have no duty or obligation to conduct any patent and copyright searches or legal analysis of the results of any such search, unless Customer agrees to pay for costs associated therewith.
8. Indemnification: Fortiline shall defend, indemnify and hold Customer, its agents and employees harmless from any claims or suits, actual monetary damages, costs (including reasonable attorney fees) (collectively, "Claims") to the extent caused by Fortiline's negligence or willful misconduct. Fortiline shall not, however, defend, indemnify or hold Customer, its agents and employees harmless from any Claims to the extent caused by the negligence or willful misconduct of Customer or its agents or employees.
9. Limitation of Liability:
   a. In no event shall Fortiline be liable for any amount in excess of amounts paid by Customer under the Agreement during the twelve-month period prior to the event giving rise to such liability. Under no circumstances will Fortiline be liable for any type of incidental, special, punitive, indirect or consequential damages to Customer or any of its customers, including but not limited to, lost revenue, lost profits, replacement goods, cost of replacement goods, loss of technology, rights or services, loss of information or interruption or loss of use of service or equipment, even if advised of the possibility of such damages, arising under any theory of agreement, tort (including negligence), strict liability or otherwise.
   b. The parties acknowledge that Fortiline set its prices and entered into this Agreement in reliance upon the limitations of liability and the disclaimers of warranties and damages set forth herein and that the same form an essential basis of the bargain between the parties. The parties agree that the limitation and exclusions of liability and disclaimer specified in this Agreement will survive and apply even if found to have failed of their essential purpose.

If any conflict exists between the Exceptions and any provision contained in the Agreement or any other Customer document, the provisions of these Exceptions shall control and prevail.

FORTILINE
SMART UTILITY SOLUTIONS

Pricing Disclaimer

1. Prices may include applicable taxes, which the utility will be responsible for payment of said taxes if they are not able to produce a state tax-exempt certificate for Fortiline, Inc. to keep on file.
2. If, after the date of this Quote/Purchase Order, any new or increased tariffs, duties, or other government-imposed costs on materials used in the work becomes effective, the Contract Price shall be adjusted to reflect the actual increased cost to the Contractor. The Contractor shall promptly notify the [Owner/Buyer] of any such cost impact. Failure to agree on a price adjustment shall not relieve the Buyer's obligation to pay the increased cost, and the Contractor shall be entitled to an extension of time if such tariffs result in material shortages or delays and/or Contractor may permanently suspend performance because of a delay or the inability of the parties to agree upon an adjusted price.
3. Fortiline's standard terms and conditions of sale apply.
4. Payment for all meters, software, hardware, electronics, training and project management is due 30 days from the receipt of invoice.
5. Washers, flange kits, and bolt and gasket kit pricing are included as separate line items based on the meter quantities given and are subject to change. Large meter pricing and ancillary items like filler flanges, spool pieces, or additional parts necessary to ensure the new meter fits in place of the old meter are not included.
6. Installation prices given are for normal installs. Installation costs are for labor only unless otherwise noted and are for replacement of existing meter with a new meter of the same laying length and connection configuration. Additional adapters such as yoke expansion fittings, tailpieces, setting modifications, spacers, meter boxes etc. are to be supplied by Fortiline at additional costing and subject to additional installation charges. Fortiline takes every reasonable precaution to avoid damage to utility piping and meter settings. The installer will inspect each meter and setting for leaks, fragile materials, etc. before proceeding. If a valve or connection nut cannot be operated with reasonable effort, Fortiline will consult the utility. A breakdown of installation costs outside of normal installs available upon request.
7. The term Force Majeure as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbance, act of public enemy, orders of any kind of government of the United States or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, droughts, arrests, restraints of government and people, civil disturbances, explosions, breakage or accidents to machinery, pipelines, or canals, government tariffs or government interference or other causes not reasonably within control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lockouts shall be entirely within the discretion of the party having the difficulty, and that the above requirements that any Force Majeure shall be remedied with all reasonable dispatch shall not require the settlements of strikes and lockouts by exceeding to the demands of the opposing party or parties when such settlement is unfavorable in the judgment of the party having the difficulty.
8. Any additional bond requirements, Performance, Payment, etc. will result in additional charges.
9. The Municipality shall be solely responsible for providing and maintaining a continuous and reliable power source to each collector location.

Submittal Disclaimer

1. We have always prided ourselves on delivering quality products, the best value, and superior customer service. What sets us apart in this industry is this dedication to service. Since Fortiline was formed in 1997, our goal has remained the same: to supply customers with the latest products by reputable manufacturers at the most competitive prices. Exceeding our customers' expectations is what we strive for in every aspect of our business.
2. As a part of our dedication to service, we point out that this submittal contains certain information provided to Fortiline by manufacturers. Fortiline makes no warranties, express or implied, related to the products other than Fortiline warrants that the products shall meet the specifications set forth in the Agreement. Fortiline also disclaims the warranties of merchantability, fitness for a particular purpose and any warranty of non-infringement. In addition, Fortiline shall furnish to Customer any manufacturers certificates of warranty for the products listed in this submittal to the extent possible. Fortiline will not be liable for any type of incidental, special, punitive, indirect or consequential damages.

F | Warranties

kamstrup

General terms and conditions of sale and delivery for AMI READy Collector

of Kamstrup Water Metering L.L.C.

1.0 Definitions

1.1. Definitions. As used herein: (a) Seller. Seller shall refer to Kamstrup Water Metering L.L.C. and shall include its agents, subsidiaries, parent company, and any affiliated entity of Seller; (b) Buyer. Buyer shall refer to the purchaser of goods sold by Seller as set forth in the particular Sales Order, and shall include all agents, subsidiaries, parent company, and any affiliated entity of Buyer; (c) Sales Order. Sales Order shall refer to the purchase order acceptance, order confirmation or invoice issued by Seller reflecting the sale of the Products to Buyer; and (d) Products. Products shall refer to the Kamstrup AMI READy Collector, and related services if any, sold by Seller to Buyer as identified in the Sales Order.

2.0 Application

2.1. These terms and conditions shall apply to and shall govern all Sales Orders, agreements or other documents which memorialize an agreement to purchase Products from Seller, regardless of whether such Sales Order or other document references these terms and conditions. All shipments, services, sales and quotations between Seller and Buyer are subject to these terms and conditions.

3.0 Acceptance

3.1. No order by Buyer shall be effective until confirmed by Seller. No effect shall be given to any terms proposed in Buyer's purchase order, proposal, sales note, acknowledgment or other document which add to, vary from, or conflict with the Sales Order or with these terms and conditions unless otherwise agreed in writing. Any such proposed terms shall be void. Except as set forth herein, the Sales Order and these terms and conditions constitute the entire agreement between Buyer and Seller with respect to the subject matter of a Sales Order. Buyer shall be deemed to have accepted and acknowledged the Sales Order and these terms and conditions unless Buyer notifies Seller in writing of its rejection of the Sales Order and/or these terms and conditions within three (3) working days of Buyer's receipt of the Sales Order.

4.0 Termination

4.1. Seller may terminate any Sales Order or any part thereof without liability at any time by written notice. If Seller terminates any part of a Sales Order, then Buyer shall be relieved of any obligation with regard to the terminated portion of the Sales Order. Any sums paid by Buyer pursuant to a Sales Order or any portion of a Sales Order that has been terminated shall be refunded by Seller.

5.0 Price

5.1. Unless another currency is specified on the Sales Order, all monetary amounts are deemed to be expressed in US$. For orders up to $15,000, the price specified in the Sales Order shall not include any packaging, shipping or transportation costs or charges for any international or domestic freight, import duties or storage. For orders over $15,000, those items are included in the price specified in the Sales Order. A handling fee in the amount of $30.00 shall be added to all Sales Orders for less than $150.00. Unless otherwise specified in the Sales Order, the price does not include any services related to the Products, including installation, travel, consultation, evaluation, or service. Buyer may return the packaging materials to Seller, at Buyer's own expense, and shall be credited the cost of the returned packaging if such materials are received by Seller in undamaged condition.

5.2. In the event the Buyer requests changes in respect of customised Products already in progress:

5.2.1. More than 30 working days prior to date of dispatch: Kamstrup will apply an alteration/cancellation fee of $165 per cancellation.

5.2.2. 0-30 working days prior to date of dispatch: No alteration or cancellation is possible (except for return fee model – see below).

6.0 Return of goods

6.1. Products may be returned to Seller within 30 days from the date of delivery for any reason, subject to the following terms:

6.1.1. Minimum sales value of returned goods: $385. Return will not be accepted below this amount.

6.1.2. Configured Products: a credit note shall be issued for the invoice amount reduced by eighty (80) percent.

6.1.3. Non-configured Products: a credit note shall be issued for the invoice amount reduced by forty (40) percent.

6.1.4. Products that Kamstrup has purchased from third parties specially for Buyer cannot be returned.

7.0 Payment

7.1. Buyer shall pay for Products in accordance with the terms set forth in the Sales Order, or as otherwise set forth in a

General terms and conditions for AMI READy Collector

subsequent writing executed by both Buyer and Seller. If no such terms are set forth, Seller shall issue an invoice to Buyer via email or mail to the address of Buyer set forth in the Sales Order. All invoices are payable no later than thirty (30) days after receipt by Buyer. Payment shall not be contingent upon any payment to the Buyer from any third party. Seller may, at its discretion, require pre-payment from Buyer, or may require such credit terms as it deems appropriate. Seller may change any credit terms, at any time, in its discretion. If Buyer has a delinquent account with Seller, then any subsequent purchasing orders will not be processed until Buyer's account balance becomes current. Buyer may not set off any sums owed to Seller for any reason.

8.0 Taxes

8.1. Buyer shall pay, in addition to any invoiced amounts, all taxes, if applicable, upon the production, sale, shipment, or use of the Products, including, without limitation, all federal, state, or local property, license, privilege, sales, use, excise or gross receipts taxes or other like taxes and tariffs. In the event that Seller is required to pay any such taxes, Buyer shall reimburse Seller on demand for such payments and any penalties or fees related thereto.

9.0 Product Descriptions, Modifications, Improvements

All representations or references on Seller's website, in sales brochures, technical data sheets and offers as to size, weight, technical specifications, price and other details of the Products are approximate and shall not be binding on Seller unless expressly incorporated in a Sales Order. Such references are not to be deemed warranties. Seller reserves the right, at any time, to alter, change, or modify the Products without notification to Buyer, provided that the alteration, change or modification does not adversely affect the price, quality or substantial function of the Products.

10.0 Delivery

10.1. Subject to section 5.1, delivery shall be "Delivered At Place" (DAP) (Incoterms® 2020).

10.2. Shipment; Installments

10.2.1. All dates of delivery set forth in a Sales Order are approximate and nonbinding. Seller will use commercially reasonable efforts to ship the Products on or before the estimated supply date set forth in the Sales Order.

10.3. Shipment; Delays

10.3.1. Buyer acknowledges and agrees that lead time will vary according to availability of supply, transportation delays, manufacturing problems and other conditions, and that, consequently, all delivery dates communicated by Seller are estimates. Delay in delivery of any shipment of Products shall not relieve Buyer of its obligations to accept that shipment or any other shipment. Under no circumstances shall Seller, because of late delivery or non-delivery, be liable to Buyer, its agents or any other persons for any special or consequential damages, whether based upon lost goodwill, lost profits, work stoppage, impairment of or breach of contract, negligence or other alleged causes of losses to Buyer.

10.4. Seller reserves the right to deliver in installments. All such installments shall be separately invoiced and paid when due, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Buyer of its obligation to accept remaining deliveries.

10.5. Risk of Loss

10.5.1. All risk of loss during shipment of the Products shall be in accordance with Incoterms® (2020) as referenced in the Sales Order. If no such Incoterm® is referenced, all shipments shall be shipped DAP (Delivered At Place, Incoterms® 2020).

11.0 Claims

11.1. Buyer shall inspect the Products immediately upon receipt and shall, within three (3) business days from the date of delivery, give written notice of any claim that the Products do not conform to their description as set forth in the Sales Order covering the Products or that the Products are damaged. Notations regarding such a claim shall be made on the applicable bill of lading, air waybill or delivery receipt. If Buyer does not provide such notice within the three (3) day period, the Products shall be deemed accepted by Buyer. Buyer expressly waives any rights it may have to reject or revoke acceptance of the Products after such three (3) day period. In no event, however, shall Seller be responsible for any damage or loss to Products resulting from the transportation, importation or storage of the Products.

12.0 Limited Warranty

12.1. Material and workmanship

12.2. Seller warrants that the Products shall be free from defects in Materials and Workmanship for a period (the "Warranty Period") of 24-month from date of delivery to Buyer.

During the relevant Warranty Period, Seller shall, at its sole discretion, repair or replace any defective Products at no cost or refund the purchase price for the defective Products.

12.3. WARRANTY EXCLUSIONS

ALL KAMSTRUP WARRANTIES SHALL NOT APPLY IN ANY OF THE FOLLOWING CASES: (A) PRODUCTS THAT ARE DEFECTIVE OR DAMAGED BY NEGLIGENCE OR ACCIDENT OR NATURAL DISASTERS OR EXTREME WEATHER CONDITIONS OR BY OTHER CIRCUMSTANCES BEYOND KAMSTRUP'S REASONABLE CONTROL; (B) PRODUCTS THAT HAVE BEEN IMPROPERLY STORED, COMMISSIONED, INSTALLED, USED OR MAINTAINED BY BUYER OR A THIRD PARTY, OR THAT HAVE BEEN USED OR MAINTAINED NOT IN ACCORDANCE WITH ANY INSTRUCTIONS, MANUALS, SPECIFICATIONS OR OTHER DOCUMENTATION PROVIDED BY KAMSTRUP, OR IN THE ABSENCE OF SUCH DOCUMENTATION, GENERALLY ACCEPTED INDUSTRIAL PRACTICES; (C) PRODUCTS WHICH HAVE BEEN USED IN ENVIRONMENTS WITH EXPOSURE TO ELECTROMAGNETIC PHENOMENA OR OTHER ABNORMAL ELECTRICAL INTERFERENCE, INCLUDING WITHOUT LIMITATION UNNATURAL MAGNETIC FIELDS, RADIATION OR ELECTROMAGNETIC PULSES, OR EXCESSIVE ELECTRICAL CURRENT, EXCEPT

General terms and conditions for AMI READy Collector

TO THE EXTENT PERMITTED IN THE PRODUCT SPECIFICATION; (D) PRODUCTS WHERE ANY SERIAL NUMBER OR SECURITY SEAL HAS BEEN INTERFERED WITH; (E) NORMAL WEAR AND TEAR, WHICH DOES NOT AFFECT ITS FUNCTIONALITY; (F) PRODUCTS THAT ARE EXPERIMENTAL, DEVELOPMENTAL, PROTOTYPE, OR PILOT; OR (G) PRODUCTS WHICH HAVE BEEN USED AFTER DISCOVERY OF THE DEFECT.

12.4. Product Return

12.4.1. IF, WITHIN THE APPLICABLE WARRANTY PERIOD, (I) BUYER DISCOVERS ANY DEFECTS IN MATERIALS OR WORKMANSHIP, AND (II) NOTIFIES SELLER IN WRITING OF SUCH DEFECTS, AND (III) RETURNS THE DEFECTIVE PRODUCTS TO SELLER, SELLER SHALL, AT SELLER'S SOLE DISCRETION, REPAIR OR REPLACE THE DEFECTIVE PRODUCTS, OR REFUND THE PURCHASE PRICE FOR THE DEFECTIVE PRODUCTS. NO WARRANTY CLAIMS WILL BE PROCESSED IF RECEIVED AFTER THE WARRANTY PERIOD. REJECTED PRODUCTS MAY BE RETURNED ONLY WITH SELLER'S PRIOR EXPRESS WRITTEN CONSENT AND AT BUYER'S COST AND RISK. IF PRODUCTS ARE RETURNED WITHOUT SELLER'S PRIOR CONSENT, SELLER MAY REFUSE TO ACCEPT THE RETURNED PRODUCTS AND MAY RETURN THEM TO SELLER AT BUYER'S COST AND EXPENSE.

12.5. Set-Off

12.5.1. IN NO CASE WHATSOEVER, INCLUDING JUSTIFIED WARRANTY CLAIMS, IS THE BUYER ENTITLED TO RETAIN ANY MONIES OWED TO SELLER, EXCEPT UPON THE WRITTEN CONSENT OF SELLER. FURTHER, THE WARRANTIES PROVIDED FOR HEREIN SHALL NOT APPLY IN THE EVENT BUYER HAS FAILED TO REMIT PAYMENT IN FULL FOR SUCH PRODUCTS.

12.6. WARRANTY DISCLAIMER

12.6.1. WARRANTY DISCLAIMER. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT, ALL OF WHICH ARE HEREBY EXPRESSLY DISCLAIMED.

13.0 Limitation of Liability

13.1. NOTWITHSTANDING ANY OTHER PROVISION OF THESE TERMS AND CONDITIONS, THE LIABILITY OF SELLER, WHETHER BASED IN TORT, BREACH OF CONTRACT, BREACH OF WARRANTY, OR OTHERWISE, SHALL NOT EXCEED THE PRICE OF THE PRODUCTS IN QUESTION OR WITH RESPECT TO WHICH SUCH BREACH, DEFAULT, OR NEGLIGENCE IS CLAIMED. BUYER ACKNOWLEDGES THAT THE REMEDIES PROVIDED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY THIRD PARTY, IN CONTRACT, TORT OR OTHERWISE, FOR ANY LOSS OF PROFITS OR BUSINESS, LOSS OF USE OR DATA, OR FOR ANY SPECIAL, INCIDENTAL, INDIRECT, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES RELATING TO THE PRODUCTS, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, IN THE EVENT THAT ANY CLAIM IS BROUGHT AGAINST SELLER FOR PRODUCT LIABILITY, SELLERS'S LIABILITY SHALL BE LIMITED TO A MAXIMUM OF AVAILABLE INSURANCE COVERAGE AVAILABLE FOR SUCH DAMAGE, IF ANY. ANY AMOUNT IN EXCESS THEREOF SHALL BE BORNE BY THE BUYER. SELLER SHALL NOT BE LIABLE FOR ANY DEFECT THAT WAS CAUSED BY THE PRODUCTS HAVING BEEN INTEGRATED INTO PRODUCTS OF BUYER OR THOSE OF ITS CUSTOMERS. SELLER SHALL NOT BE LIABLE IN THE EVENT THE PRODUCTS SUPPLIED WERE IMPROPERLY USED, TREATED, HANDLED, STORED OR SUPPLIED BASED ON BUYER'S INSTRUCTIONS (INCLUDING, WITHOUT LIMITATION, DESIGN DETAILS, SPECIFICATIONS, PLANS, TEMPLATES OR STORAGE AND TRANSPORT RULES).

13.2. SELLER SHALL HAVE NO LIABILITY TO BUYER IF ANY PATENT INFRINGEMENT OR CLAIM THEREOF IS BASED UPON THE USE OF THE PRODUCTS DELIVERED HEREUNDER IN CONNECTION WITH A PROCESS OR IN COMBINATION WITH EQUIPMENT, DEVICES, OR SOFTWARE NOT SUPPLIED OR APPROVED IN WRITING BY SELLER, OR USED IN A MANNER FOR WHICH THE PRODUCTS WERE NOT DESIGNED.

14.0 Indemnity

14.1. Buyer agrees to defend, indemnify and hold Seller, its officers, directors and employees, harmless from and against losses, damages, expenses, actions, attorney fees, liabilities, penalties, fines, duties as well as for any claims for injury, illness, or death of persons and damage to property arising out of, or in connection with: i) the Products after their delivery; ii) any action or inaction taken by Buyer, its employees, agents or independent contractors, with regard to the services provided with regard to the Products comprising the Sales Order; iii) arising out of or resulting from any violation by Buyer, its employees, agents, or independent contractors, of any applicable law, regulation or other mandate by a competent authority; or iv) the infringement or violation of any third party intellectual property rights which may be suffered by Seller due to the act or omission of Buyer, its employees, agents, or independent contractors.

15.0 Intellectual Property

15.1. Buyer acknowledges Seller's exclusive right, title, and interest in trademarks, logos and other markings of Seller relating to the Products, as well as in any and all manuals or documents provided by Seller relating to the Products (collectively, "Seller's Marks"), and will not at any time do or cause to be done any act or thing contesting or in any way impairing or tending to impair this right, title, and interest.

15.2. Buyer acknowledges that Seller reserves all rights and benefits afforded under federal and international intellectual property laws in all Intellectual Property relating to the Products. "Intellectual Property" means all intellectual property and/or proprietary rights, including without limitation all rights of inventorship and authorship, in inventions, patents, patent applications, and know how, for any Product, process, method, machine, manufacture, design,

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composition of matter, or any new or useful improvement thereof, as well as all copyrights, trademark, trade dress and service mark rights and all rights in trade secrets, computer software, data and databases, and mask works.

15.3. Buyer is not authorized to make any changes, additions, improvements, alterations, or modifications of any sort to the Products. Whether authorized or unauthorized, any changes, additions, improvements, alterations, or modifications of any sort to the Products made by Buyer shall inure to the benefit of Seller, and Seller shall have full right, title, and interest in them.

15.4. The rights and obligations set forth in this Section shall survive the termination of these terms and conditions.

16.0 Security Interest

16.1. Buyer hereby grants a security interest in the Collateral to the Seller to secure the payment and performance of the Obligations listed below. The Collateral shall consist of all Products now owned and hereafter acquired and wherever located, as defined in Article 9 of the Uniform Commercial Code as enacted in Georgia, which are Products acquired by the Buyer from Seller, and, all proceeds (cash and non-cash) and Products of the foregoing. The Obligations shall consist of: (i) all of Buyer's present and future indebtedness and obligations to Seller; (ii) all amounts owed under any modifications, additional advances, renewals, extensions or substitutions of any of the foregoing obligations; (iii) all costs associated with Seller's exercise of its rights hereunder; and (iv) any of the foregoing that may arise after the filing of a petition by or against Buyer under the Bankruptcy Code, even if the obligations do not accrue because of the automatic stay under Bankruptcy Code § 362 or otherwise. Any capitalized term used in this Section 16, and not otherwise defined in these Terms, shall have the meaning given to it in Article 9 of the Georgia Uniform Commercial Code. Buyer agrees to execute and deliver to Seller any and all documents necessary to perfect Seller's security interest, including all financing statements.

17.0 Cancellation for Default

17.1. Seller reserves the right to cancel all or any part of any Sales Order, without liability towards Buyer, if Buyer fails to perform under any applicable provision of these terms and conditions or of any applicable Sales Order and the failure is not cured within ten (10) days after delivery of written notice to Buyer by Seller. In the event of cancellation, Seller may exercise all rights and remedies available to it hereunder and under law.

18.0 Remedies

18.1. Seller's remedies shall be cumulative and shall include any remedies allowed by law. Seller's waiver of any breach by Buyer shall not constitute a waiver of any other breach of the same or any other provision. Acceptance of any payments shall not waive any breach. In any dispute involving moneys owed to Seller, Seller shall be entitled to all costs of collection, including reasonable attorney's fees and interest at 15% per annum or the highest rate allowed by law, whichever is greater, unless Seller agrees to a lower amount. The confiscation or detention of a shipment by any governmental authority shall not affect or diminish the liability of the Buyer to the Seller to pay all charges or other money due promptly on demand.

19.0 Insolvency

19.1. Seller shall have the right to cancel any outstanding Sales Order or any part thereof, without any liability whatsoever in the event of (i) insolvency, or anticipated insolvency, of Buyer, (ii) commencement of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Buyer; or (iii) the appointment of an assignee for the benefit of creditors of Buyer or a receiver or trustee for Buyer.

20.0 Disputes

20.1. Any controversy or claim arising out of or relating to these terms and conditions, or the breach thereof, shall be subject to the exclusive jurisdiction of the State courts of Georgia.

21.0 Force Majeure

21.1. Seller shall not be liable for any delay in performance of its obligations and responsibilities under a Sales Order due to causes beyond its control, and without its fault or negligence, such as but not limited to war, epidemics, embargo, national emergency, insurrection or riot, acts of the public enemy, fire, flood or other natural disaster, provided that said party has taken reasonable measures to notify the other promptly in writing, of delay.

22.0 Governing Law

22.1. These terms and conditions shall be governed by and interpreted in accordance with the laws of the State of Georgia, U.S.A., exclusive of the U.N. Convention on the International Sale of Goods.

23.0 Severability

23.1. If any provision of a Sales Order, including these terms and conditions, shall be judged by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, such adjudication shall not affect or modify any other provision of the Sales Order, or these terms and conditions and the effect thereof shall be confined to the provision as to which such adjudication is made.

24.0 Notice

24.1. Any notice or other communication required or permitted by these terms and conditions must be given in writing and must be delivered by personal delivery (including personal delivery by overnight courier such as Federal Express, DHL, or similar overnight courier), first class mail (registered or certified), telecopy or e-mail (with a copy sent by personal delivery or first class mail), in each case addressed as follows, or to such other address or addresses as may be hereafter furnished by one party to the other

party in compliance with the terms hereof. Notice will be deemed given when received or delivered to the principal business address of the relevant party.

25.0 Miscellaneous

25.1. Seller reserves the right to change, modify, add, or delete portions of these terms and conditions from time to time without further notice. The headings contained in these terms and conditions are included for convenience and shall not affect the language included herein.

26.0 Entire Agreement

26.1. Except as provided for herein, these terms and conditions, together with the Sales Order contain all of the terms and conditions governing the sale of the Products and may not be modified or amended by Buyer except by written agreement duly executed by the parties. Aside from the terms of any Sales Order, all prior agreements, representations, statements, negotiations and undertakings, whether oral or written, are superseded by these terms and conditions.

kamstrup

General terms and conditions of sale and delivery for Stainless Steel/PPS Meters and other Products.

for Kamstrup Water Metering L.L.C.

1.0 Definitions

1.1. Definitions. As used herein: (a) Seller. Seller shall refer to Kamstrup Water Metering L.L.C.; (b) Buyer. Buyer shall refer to the purchaser of goods sold by Seller as set forth in the particular Sales Order; (c) Sales Order. Sales Order shall refer to the purchase order acceptance, order confirmation or invoice issued by Seller reflecting the sale of the Products to Buyer; and (d) Products. Products shall refer to Kamstrup's flowIQ® water meters with a stainless steel or PPS housing (referred to as "Meters") and/or products other than meters (e.g. flow parts, antennas, collectors, other accessories and spare parts, referred to as "Non-Meter Products"), and related services if any, sold by Seller to Buyer as identified in the Sales Order.

2.0 Application

2.1. These terms and conditions shall apply to and shall govern all Sales Orders, agreements or other documents which memorialize an agreement to purchase Products from Seller, regardless of whether such Sales Order or other document references these terms and conditions. All shipments, services, sales and quotations between Seller and Buyer are subject to these terms and conditions.

3.0 Acceptance

3.1. No order by Buyer shall be effective until accepted or confirmed in writing by Seller. No effect shall be given to any terms proposed or referenced in Buyer's purchase order, proposal, sales note, acknowledgment or other document issued by Buyer which add to, vary from, or conflict with the Sales Order or with these terms and conditions. Any such Buyer proposed terms shall be void. Except as set forth herein, the Sales Order and these terms and conditions constitute the entire agreement between Buyer and Seller with respect to the subject matter of a Sales Order. Buyer shall be deemed to have accepted and acknowledged the Sales Order and these terms and conditions unless Buyer notifies Seller in writing of its rejection of the Sales Order and/or these terms and conditions within three (3) working days of Buyer's receipt of the Sales Order.

4.0 Termination

4.1. Seller may terminate any Sales Order or any part thereof without liability at any time by written notice. If Seller terminates any part of a Sales Order for convenience, then Buyer shall be relieved of any obligation with regard to the terminated portion of the Sales Order. Any sums paid by Buyer pursuant to a Sales Order or any portion of a Sales Order that has been terminated shall be refunded by Seller.

5.0 Price

5.1. Unless another currency is specified on the Sales Order, all monetary amounts are deemed to be expressed in US$. For orders up to $2000, the price specified in the Sales Order shall not include any packaging, shipping or transportation costs or charges for any international or domestic freight, import duties or storage. For orders over $2000, packaging and transportation on a DAP (Delivery at Place) Incoterms 2020 basis are included in the price specified in the Sales Order, unless otherwise stated in the Sales Order.

5.2. A handling fee in the amount of $500 shall apply to all shipments with a value of less than $2000. Unless otherwise specified in the Sales Order, the price for Products does not include any related services, including without limitation installation, travel, consultation, evaluation, or maintenance. Buyer may return the packaging materials to Seller, at Buyer's own expense, and shall be credited the cost of the returned packaging if such materials are received by Seller in undamaged condition.

5.3. No Sales Order may be canceled, altered or held, in whole or in part, without Seller's prior written consent, which may be granted or denied at Seller's sole discretion and in its own interest. If approved, the following cancellation and/or alteration fee shall apply to cover Seller's costs for materials, fabrication, engineering, testing, handling, and administration. This fee is calculated as a percentage of the canceled Product's price (excluding taxes) and is applied as follows:

5.3.1. 50% for approved cancellation or alteration requests received 60–90 days before shipment,

General terms and conditions of sale and delivery

5.3.2. 75% for approved cancellation or alteration requests received 30–60 days before shipment, and

5.3.3. 100% for approved cancellation or alteration requests received less than 30 days before shipment.

5.4. Seller may revise the prices for Products and services listed in its published price list at any time, by giving 30-day notice.

6.0 Return of goods

6.1. No Products or parts may be returned to Seller, without Seller's prior written consent, which may be granted or denied at Seller's sole discretion and in its own interest. If approved, returns must be made within 30 days from the date of delivery, and are subject to the following conditions:

6.1.1. Returned Products must have a value of at least $385. Products valued below this amount are not eligible for return.

6.1.2. Configured Meters and configured Non-Meter Products are not eligible for return.

6.1.3. For approved returns of non-configured Meters and non-configured Non-Meter Products, a return fee of 50% of the invoice amount will apply. Seller will issue a credit note for 50% of the invoice amount.

6.1.4. Products that Seller has purchased from third parties specifically for Buyer cannot be returned.

7.0 Payment

7.1. Buyer shall pay for Products in accordance with the terms set forth in the Sales Order, or as otherwise set forth in a subsequent writing executed by both Buyer and Seller. If no such terms are set forth, Seller shall issue an invoice to Buyer via email or mail to the address of Buyer set forth in the Sales Order. All invoices are payable no later than thirty (30) days after receipt by Buyer. Seller reserves the right to suspend its performance of any obligations under the Contract, including but not limited to delivery of Products, until such time as the overdue payment is made in full or security satisfactory to Seller has been provided.

7.2. Payment shall not be contingent upon any payment to the Buyer from any third party. Seller may, at its discretion, require pre-payment from Buyer, or may require such credit terms as it deems appropriate. Seller may change any credit terms, at any time, in its discretion. If Buyer has a delinquent account with Seller, then any subsequent purchasing orders will not be processed until Buyer's account balance becomes current. Buyer may not set off any sums owed to Seller for any reason.

8.0 Taxes

8.1. Buyer shall pay, in addition to any invoiced amounts, all taxes, if applicable, upon the production, sale, shipment, or use of the Products, including, without limitation, all federal, state, or local property, license, privilege, sales, use, excise or gross receipts taxes or other like taxes and tariffs. In the event that Seller is required to pay any such taxes, Buyer shall reimburse Seller on demand for such payments and any penalties or fees related thereto.

9.0 Product Descriptions, Modifications, Improvements

All representations or references on Seller's website, in sales brochures, technical data sheets and quotations as to size, weight, technical specifications, price and other details of the Products are approximate and shall not be binding on Seller unless expressly incorporated in a Sales Order. Such references are not to be deemed warranties. Seller reserves the right, at any time, to alter, change, or modify the Products without notification to Buyer, provided that the alteration, change or modification does not adversely affect the price, quality or substantial function of the Products.

10.0 Delivery

10.1. Subject to section 5.1, delivery shall be "Delivered At Place" (DAP) (Incoterms® 2020).

10.2. Shipment; Installments

10.2.1. All dates of delivery set forth in a Sales Order are approximate and nonbinding. Seller will use commercially reasonable efforts to ship the Products on or before the estimated supply date set forth in the Sales Order.

10.3. Shipment; Delays

10.4. Buyer acknowledges and agrees that lead time will vary according to availability of supply, transportation delays, manufacturing problems and other conditions, and that, consequently, all delivery dates communicated by Seller are estimates.

10.4.1. Delay in delivery of any shipment or installment of Products shall not discharge Buyer of its obligations to accept that or any other shipment or installment. Under no circumstances shall Seller, because of late delivery or non-delivery, be liable to Buyer, its agents or any other persons for any special or consequential damages, whether based upon lost goodwill, lost profits, work stoppage, impairment of or breach of contract, negligence or other alleged causes of losses to Buyer.

10.5. Seller reserves the right to deliver in installments. All such installments shall be separately invoiced and paid when due, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Buyer of its obligation to accept remaining deliveries.

10.6. Risk of Loss

10.6.1. All risk of loss during shipment of the Products shall be in accordance with Incoterms® (2020) as referenced in the Sales Order. If no such Incoterm® is referenced, all shipments shall be shipped DAP (Delivered At Place, Incoterms® 2020).

11.0 Claims

11.1. Buyer shall inspect the Products immediately upon receipt and shall, within three (3) business days from the date of delivery, give written notice of any claim that the Products do not conform to their description as set forth in the Sales Order covering the Products or that the Products are damaged. Notations regarding such a claim shall be made on the applicable bill of lading, air waybill or delivery receipt. If Buyer does not provide such notice within the three (3) day period, the Products shall be deemed

accepted by Buyer. Buyer expressly waives any rights it may have to reject or revoke acceptance of the Products after such three (3) day period. In no event, however, shall Seller be responsible for any damage or loss to Products resulting from the transportation, importation or storage of the Products.

12.0 Limited Warranty

12.1. Material and workmanship
Seller warrants that the Products shall be free from defects in Materials and Workmanship during the Warranty Period defined as follows:
For Meters:
(a) of 5/8"x1/2" – 1", the Warranty Period is twenty (20) years from the date of delivery to Buyer; and
(b) of 1½" and larger, the Warranty Period is ten (10) years from date of delivery to Buyer.
For Non-Meter Products:
the Warranty Period is twenty-four (24) months from the date of deliver to Buyer.

12.2. During the relevant Warranty Period, Seller shall, at its sole discretion, repair or replace any defective Products at no cost or refund the purchase price for the defective Products.

12.3. The following sections 12.4 (Accuracy) and 12.5 (Battery Life) apply only with respect to Meters.

12.4. Accuracy

12.4.1. Seller warrants that the Meters (except for those covered in 12.4.2 below) will perform to the accuracy as defined in AWWA C715-18 (section 4.2.8 thereto) and to AWWA M6 manual (chapter 5, Testing new meters and table 5-3 defining test rates in accordance with AWWA C715).

12.4.2. In case the Meters do not comply with the warranties set out in 12.4.1 or 12.4.2, Seller shall, at its sole discretion, repair or replace any defective Meter at no cost or refund the purchase price of such defective Meters:
(a) for year one (1) through year twenty (20) following the date of delivery for the defective Meters in the size range of 5/8" x 1/2" – 1"; and
(b) for year one (1) through year ten (10) following the date of delivery for the defective Meters in the size range of 1½" and larger.

12.4.3. Any Meter accuracy claims shall be subject to verification - initiated by Seller - through testing by a NIST Traceable laboratories or ISO 17025 accredited laboratories.

12.5. Battery Life

12.5.1. Based on operation of the Meters with either communication via the three wire encoded output or with communication via the embedded radio at an ambient operating temperature not higher than stated in the technical documentation, the warranty on the system battery in the Meter shall be for a period of (a) for 5/8" x 1/2" – 1" Products, twenty (20) years from date of delivery to Buyer, (b) for 1½" and larger Meters, ten (10) years from date of delivery to Buyer and (c) for 6" – and larger Meters, ten (10) years from date of delivery to Buyer.

For (a) and (b) of section 12.5.1 Seller shall, at its sole discretion, (i) replace any Meters that contain defective batteries at no cost for year one (1) through year ten (10) following the date of delivery or (ii) refund the purchase price for the Meters that contain defective batteries. For (c) of section 12.5.1, Seller shall, at its sole discretion, during year one (1) through year ten (10) following the date of delivery, at no cost (i) replace any defective batteries or (ii) replace any Meter that contain defective batteries.
For 5/8"x1/2" – 1" Meter only, during the period commencing with year eleven (11) through year twenty (20) following the date of delivery to Buyer, Seller shall, at its sole discretion, replace any Meters that contain defective batteries at a cost to Buyer equal to the price set out in the price list valid at the time of return of the Meter, minus the discount according to the following schedule:

Year	Discount	Year	Discount
11	75%	16	40%
12	75%	17	30%
13	50%	18	20%
14	50%	19	10%
15	50%	20	10%

The warranty related to battery life for the Meters is void if the Meters at any time have been configured into priority mode.

12.6. WARRANTY EXCLUSIONS

12.6.1. ALL SELLER WARRANTIES SHALL NOT APPLY IN ANY OF THE FOLLOWING CASES: (A) PRODUCTS THAT ARE DEFECTIVE OR DAMAGED BY NEGLIGENCE OR ACCIDENT OR NATURAL DISASTERS OR EXTREME WEATHER CONDITIONS OR BY OTHER CIRCUMSTANCES BEYOND SELLER'S REASONABLE CONTROL; (B) PRODUCTS THAT HAVE BEEN IMPROPERLY STORED, COMMISSIONED, INSTALLED, USED, REPAIRED, MAINTAINED OR ALTERED BY BUYER OR A THIRD PARTY, OR THAT HAVE BEEN USED OR MAINTAINED NOT IN ACCORDANCE WITH ANY INSTRUCTIONS, MANUALS, SPECIFICATIONS OR OTHER DOCUMENTATION PROVIDED BY SELLER, OR IN THE ABSENCE OF SUCH DOCUMENTATION, GENERALLY ACCEPTED INDUSTRIAL PRACTICE); (C) PRODUCTS WHICH HAVE BEEN (I) USED WITH WATER WHICH CONTAINS LEVELS OF FOREIGN MATTER, INCLUDING WITHOUT LIMITATION, DIRT, SAND, MINERALS, DEBRIS, DEPOSITS, BIOFILMS, CHEMICAL SUBSTANCES OR OTHER IMPURITIES WHICH INTERFERE WITH OR DEGRADE THE PRODUCT OR IS NOT IN ACCORDANCE WITH MINIMUM POTABLE WATER STANDARDS REQUIRED BY APPLICABLE LAW, PROVIDED THAT, WITH RESPECT ONLY TO RECLAIMED WATER METERS: (x) USING SUCH METERS WITH WATER THAT IS NOT POTABLE WILL NOT INVALIDATE THE WARRANTY, EXCEPT WHERE POOR WATER QUALITY

ADVERSELY AFFECTS THE ACCURACY OF THE METERING EQUIPMENT TO AN UNUSUAL DEGREE, IN WHICH CASE THE WARRANTY WILL BE INVALIDATED; AND (y) USING SUCH METERS WITH WATER THAT CONTAINS FOREIGN MATTER WILL NOT INVALIDATE THE WARRANTY UNLESS SELLER DETERMINES (AT ITS SOLE DISCRETION) THAT SUCH FOREIGN MATTER HAS DAMAGED THE METERS OR AFFECTED THEIR ACCURACY TO A DEGREE WHICH IS OUTSIDE THE ACCURACY LEVELS STATED IN SECTION 12.4; OR (II) USED IN OTHER UNUSUAL ENVIRONMENTAL CONDITIONS OR IN ENVIRONMENTS WITH EXPOSURE TO ELECTROMAGNETIC PHENOMENA OR OTHER ABNORMAL ELECTRICAL INTERFERENCE, INCLUDING WITHOUT LIMITATION UNNATURAL MAGNETIC FIELDS, RADIATION OR ELECTROMAGNETIC PULSES, OR EXCESSIVE ELECTRICAL CURRENT, EXCEPT TO THE EXTENT PERMITTED IN THE PRODUCT SPECIFICATION; (D) PRODUCTS WHERE ANY SERIAL NUMBER OR SECURITY SEAL HAS BEEN INTERFERED WITH; (E) NORMAL WEAR AND TEAR; (F) PRODUCTS THAT ARE EXPERIMENTAL, DEVELOPMENTAL, PROTOTYPE, OR PILOT; OR (G) THE DISCONTINUATION OF NETWORK/COMMUNICATION SERVICES (INCLUDING BY LOSS OF CONCESSION, DISSOLUTION, BANKRUPTCY, OR CESSATION OF BUSINESS), OR THE PHASE-OUT OR REPLACEMENT OF THE NETWORKS AND/OR COMMUNICATION TECHNOLOGIES SUPPORTING THE PRODUCTS IF SUCH CHANGES RENDER THE PRODUCT UNABLE TO FUNCTION AS REPRESENTED AT THE TIME OF ENTERING INTO THE CONTRACT; (H) ANY DISRUPTION OR DEGRADATION IN PRODUCT PERFORMANCE DUE TO VULNERABILITIES OR DEFICIENCIES IN NETWORKS TO WHICH THE PRODUCT IS CONNECTED; OR ANY DEFECT OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM CYBER-RELATED INCIDENTS, INCLUDING WITHOUT LIMITATION HACKING, MALWARE, VIRUSES, RANSOMWARE, DATA BREACHES, UNAUTHORIZED ACCESS, OR ANY OTHER FORM OF CYBER-ATTACK OR DIGITAL INTERFERENCE (COLLECTIVELY, "CYBER-RELATED INCIDENTS"); OR (I) PRODUCTS WHICH HAVE BEEN USED AFTER DISCOVERY OF THE DEFECT.

12.7. Product Return

12.7.1. IF, WITHIN THE APPLICABLE WARRANTY PERIOD, (I) BUYER DISCOVERS ANY DEFECTS IN MATERIALS OR WORKMANSHIP, AND (II) NOTIFIES SELLER IN WRITING OF SUCH DEFECTS, AND (III) RETURNS THE DEFECTIVE PRODUCTS TO SELLER, SELLER SHALL, AT SELLER'S SOLE DISCRETION, REPAIR OR REPLACE THE DEFECTIVE PRODUCTS, OR REFUND THE PURCHASE PRICE FOR THE DEFECTIVE PRODUCTS. NO WARRANTY CLAIMS WILL BE PROCESSED IF RECEIVED AFTER THE WARRANTY PERIOD. REJECTED PRODUCTS MAY BE RETURNED ONLY WITH SELLER'S PRIOR EXPRESS WRITTEN CONSENT AND AT BUYER'S COST AND RISK. IF PRODUCTS ARE RETURNED WITHOUT SELLER'S PRIOR CONSENT, SELLER MAY REFUSE TO ACCEPT THE RETURNED PRODUCTS AND MAY RETURN THEM TO SELLER AT BUYER'S COST AND EXPENSE.

12.8. Set-Off

12.8.1. IN NO CASE WHATSOEVER, INCLUDING JUSTIFIED WARRANTY CLAIMS, IS THE BUYER ENTITLED TO RETAIN ANY MONIES OWED TO SELLER, EXCEPT UPON THE WRITTEN CONSENT OF SELLER. FURTHER, THE WARRANTIES PROVIDED FOR HEREIN SHALL NOT APPLY IN THE EVENT BUYER HAS FAILED TO REMIT PAYMENT IN FULL FOR SUCH PRODUCTS.

12.9. WARRANTY DISCLAIMER

12.9.1. WARRANTY DISCLAIMER. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT, ALL OF WHICH ARE HEREBY EXPRESSLY DISCLAIMED.

13.0 Limitation of Liability

13.1. NOTWITHSTANDING ANY OTHER PROVISION OF THESE TERMS AND CONDITIONS, THE LIABILITY OF SELLER, WHETHER BASED IN TORT, BREACH OF CONTRACT, BREACH OF WARRANTY, OR OTHERWISE, SHALL NOT EXCEED THE PRICE OF THE PRODUCTS IN QUESTION OR WITH RESPECT TO WHICH SUCH BREACH, DEFAULT, OR NEGLIGENCE IS CLAIMED. BUYER ACKNOWLEDGES THAT THE REMEDIES PROVIDED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REMEDIES. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY THIRD PARTY, IN CONTRACT, TORT OR OTHERWISE, FOR ANY LOSS OF PROFITS OR BUSINESS, OPERATING LOSS, LOSS OF USE OR DATA, LOSS OF TIME, LOSS OF GOODWILL, LOSSES INCURRED UNDER CONTRACTS WITH THIRD PARTIES, OR FOR ANY SPECIAL, INCIDENTAL, INDIRECT, EXEMPLARY, PUNITIVE OR CONSEQUENTIAL DAMAGES RELATING TO THE PRODUCTS OR ARISING OUT OF BREACH OF CONTRACT, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, IN THE EVENT THAT ANY CLAIM IS BROUGHT AGAINST SELLER FOR PRODUCT LIABILITY, SELLERS'S LIABILITY SHALL BE LIMITED TO A MAXIMUM OF AVAILABLE INSURANCE COVERAGE AVAILABLE FOR SUCH DAMAGE, IF ANY. ANY AMOUNT IN EXCESS THEREOF SHALL BE BORNE BY THE BUYER. SELLER SHALL NOT BE LIABLE FOR ANY DEFECT THAT WAS CAUSED BY THE PRODUCTS HAVING BEEN INTEGRATED INTO PRODUCTS OF BUYER OR THOSE OF ITS CUSTOMERS. SELLER SHALL NOT BE LIABLE IN THE EVENT THE PRODUCTS SUPPLIED WERE IMPROPERLY USED, TREATED, HANDLED, STORED OR SUPPLIED BASED ON BUYER'S INSTRUCTIONS (INCLUDING, WITHOUT LIMITATION, DESIGN DETAILS, SPECIFICATIONS, PLANS, TEMPLATES OR STORAGE AND TRANSPORT RULES).

13.2. SELLER SHALL HAVE NO LIABILITY TO BUYER IF ANY PATENT INFRINGEMENT OR CLAIM THEREOF IS BASED UPON THE USE OF THE PRODUCTS DELIVERED HEREUNDER IN CONNECTION WITH A PROCESS OR IN COMBINATION WITH EQUIPMENT, DEVICES, OR SOFTWARE NOT SUPPLIED OR APPROVED IN WRITING BY SELLER, OR USED IN A MANNER FOR WHICH THE PRODUCTS WERE NOT DESIGNED.

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14.0 Indemnity

14.1. Buyer agrees to defend, indemnify and hold Seller, its officers, directors and employees, harmless from and against losses, damages, expenses, actions, attorney fees, liabilities, penalties, fines, duties as well as for any claims for injury, illness, or death of persons and damage to property arising out of, or in connection with: i) the Products after their delivery; ii) any action or inaction taken by Buyer, its employees, agents or independent contractors, with regard to the services provided with regard to the Products comprising the Sales Order; iii) arising out of or resulting from any violation by Buyer, its employees, agents, or independent contractors, of any applicable law, regulation or other mandate by a competent authority; or iv) the infringement or violation of any third party intellectual property rights which may be suffered by Seller due to the act or omission of Buyer, its employees, agents, or independent contractors.

15.0 Intellectual Property

15.1. Buyer acknowledges Seller's exclusive right, title, and interest in trademarks, logos and other markings of Seller relating to the Products, as well as in any and all manuals or documents provided by Seller relating to the Products (collectively, "Seller's Marks"), and will not at any time do or cause to be done any act or thing contesting or in any way impairing or tending to impair this right, title, and interest.

15.2. Buyer acknowledges that Seller reserves all rights and benefits afforded under federal and international intellectual property laws in all Intellectual Property relating to the Products. "Intellectual Property" means all intellectual property and/or proprietary rights, including without limitation all rights of inventorship and authorship, in inventions, patents, patent applications, and know how, for any Product, process, method, machine, manufacture, design, composition of matter, or any new or useful improvement thereof, as well as all copyrights, trademark, trade dress and service mark rights and all rights in trade secrets, computer software, data and databases, and mask works; in each case whether registered or unregistered, existing now or in the future worldwide.

15.3. Buyer is not authorized to disassemble, decompile, or reverse engineer the Products; or make any changes, additions, improvements, alterations, or modifications of any sort to the Products. Whether authorized or unauthorized, any changes, additions, improvements, alterations, or modifications of any sort to the Products made by Buyer shall inure to the benefit of Seller, and Seller shall have full right, title, and interest in them.

15.4. If Buyer establishes or acquires by operation of law or otherwise any rights to the Intellectual Property Rights, or any part thereof, it hereby transfers and assigns such rights, to the extent transferable, to Seller (or to another member of the Kamstrup Group, as directed by Seller) free of charge. For non-transferable rights, Buyer grants Seller an exclusive, irrevocable, royalty-free, worldwide license to use, exploit, and sublicense such rights.

15.5. The rights and obligations set forth in this Section shall survive the termination of these terms and conditions.

16.0 Security Interest

16.1. Buyer hereby grants a security interest in the Collateral to the Seller to secure the payment and performance of the Obligations listed below. The Collateral shall consist of all Products now owned and hereafter acquired and wherever located, as defined in Article 9 of the Uniform Commercial Code as enacted in Georgia, which are Products acquired by the Buyer from Seller, and, all proceeds (cash and non-cash) and Products of the foregoing. The Obligations shall consist of: (i) all of Buyer's present and future indebtedness and obligations to Seller; (ii) all amounts owed under any modifications, additional advances, renewals, extensions or substitutions of any of the foregoing obligations; (iii) all costs associated with Seller's exercise of its rights hereunder; and (iv) any of the foregoing that may arise after the filing of a petition by or against Buyer under the Bankruptcy Code, even if the obligations do not accrue because of the automatic stay under Bankruptcy Code § 362 or otherwise. Any capitalized term used in this Section 16, and not otherwise defined in these Terms, shall have the meaning given to it in Article 9 of the Georgia Uniform Commercial Code. Buyer agrees to execute and deliver to Seller any and all documents necessary to perfect Seller's security interest, including all financing statements.

17.0 Cancellation for Default

17.1. Seller reserves the right to cancel all or any part of any Sales Order, without liability towards Buyer, if Buyer fails to perform under any applicable provision of these terms and conditions or of any applicable Sales Order, including a payment default, and the failure is not cured within ten (10) days after delivery of written notice to Buyer by Seller. In the event of cancellation, Seller may exercise all rights and remedies available to it hereunder and under law.

18.0 Remedies

18.1. Seller's remedies shall be cumulative and shall include any remedies allowed by law. Seller's waiver of any breach by Buyer shall not constitute a waiver of any other breach of the same or any other provision. Acceptance of any payments shall not waive any breach. In any dispute involving moneys owed to Seller, Seller shall be entitled to all costs of collection, including reasonable attorney's fees and interest at 15% per annum or the highest rate allowed by law, whichever is greater, unless Seller agrees to a lower amount. The confiscation or detention of a shipment by any governmental authority shall not affect or diminish the liability of the Buyer to the Seller to pay all charges or other money due promptly on demand.

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19.0 Insolvency

19.1. Seller shall have the right to cancel any outstanding Sales Order or any part thereof, without any liability whatsoever in the event of (i) insolvency, or anticipated insolvency, of Buyer, (ii) commencement of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Buyer; or (iii) the appointment of an assignee for the benefit of creditors of Buyer or a receiver or trustee for Buyer.

20.0 Product Compliance

20.1. Products are configured for use in the State or Country in which they are delivered by Seller and according to specific requirements. If used elsewhere, they may not comply with applicable laws and regulations and may not function according to specifications. Seller assumes no liability for non-compliance and performance issues arising from such use. Buyer agrees to indemnify and hold Seller and its affiliates harmless from all liabilities, claims, damages, losses, penalties, costs and expenses (including reasonable attorney fees and legal costs) resulting from or arising in connection with any non-compliance with applicable laws, regulations, and standards required for the sale and use of the Products in a State other than where they are delivered.

21.0 Force Majeure

21.1. Seller shall not be liable for any delay in performance of its obligations and responsibilities under a Sales Order due to causes beyond its control, and without its fault or negligence, such as but not limited to war, epidemics, embargo, national emergency, insurrection or riot, acts of the public enemy, fire, flood or other natural disaster, industrial disputes (including local strikes and/or lockouts), Cyber-Related Incidents, breakdowns or disruptions in telecommunication, discontinuation of network/communication services (including by loss of concession, dissolution, bankruptcy, or cease of business), or sunsets or replacements of networks and/or communication technologies, import or export restrictions, acts of government, inability to source components affecting the industry as a whole, as well as any similar conditions affecting a sub-supplier's performance vis-à-vis Seller; provided that, said party has taken reasonable measures to notify the other promptly in writing, of delay.
If the effects of the relevant event continue for a period of more than three consecutive months, then either party shall be entitled to terminate the Contract.

21.2. If, between the date of Seller's quotation (or, if none, order confirmation) and the date of Product delivery, there is an aggregate increase exceeding 10% in the Seller's cost of any raw material, component, transportation, duties, taxes, or any combination thereof (relative to the cost at the time of the quotation or, if none, order confirmation), or if changes in laws, regulations, tariffs, or other governmental requirements result in such an increase, the full amount of such increased costs shall be automatically and unilaterally added to the price payable by Buyer. Seller reserves the right to adjust the price accordingly or require Buyer to pay these additional costs as a condition for delivery. Any delay in payment of such costs entitles Seller to suspend or cancel delivery without liability. Buyer assumes all risks associated with such cost increases, and Seller has no obligation to absorb or mitigate these costs. This provision is without prejudice to Section 8.1.

22.0 Export Control and Sanctions

22.1. Products may be subject to export controls and the delivery is conditional upon obtaining required export authorizations. Buyer shall at all times comply with all applicable U.S. Anti-boycott, sanctions and export control laws, rules and regulations for any subsequent export, re-export or transfer.

22.2. Each Party represents and warrants that it is not subject to any sanctions or trade restrictions imposed by the United States (US), the United Nations (UN), or the European Union (EU), any other applicable jurisdiction. If either Party becomes subject to such sanctions or restrictions, preventing performance of the Contract, the other Party shall have the right to terminate the Sales Order immediately upon written notice, without liability or obligation for such termination.

22.3. Buyer shall not knowingly transfer, export, or re-export Products, directly or indirectly, to any country, entity or individual that is under sanctions or embargo by the UN, EU, US or any other relevant international regulatory body. Buyer shall conduct appropriate screening and due diligence to ensure compliance with these restrictions.

22.4. In compliance with U.S. export controls and sanctions laws, Buyer shall not sell, export, or re-export, directly or indirectly, any Products to the Russian Federation or Belarus, or for use therein. Buyer shall use best efforts to prevent any third parties downstream, including resellers distributors, or end-users, from circumventing these restrictions and shall maintain adequate monitoring mechanisms to ensure compliance.

22.5. Seller may suspend or terminate any agreement with Buyer without notice and claim damages if Buyer breaches any representation or undertaking under clauses 21.1–21.4.

23.0 Governing Law and Dispute Resolution

23.1. The Contract shall be governed by and interpreted in accordance with the laws of the State of Georgia, U.S.A., exclusive of the U.N. Convention on the International Sale of Goods.

23.2. Any controversy or claim arising out of or relating to the Contract, or the breach thereof, shall be subject to the exclusive jurisdiction of the State courts of Georgia.

24.0 Severability

24.1. If any provision of a Sales Order, including these terms and conditions, shall be judged by a court of competent jurisdiction to be invalid, illegal or unenforceable in any

General terms and conditions of sale and delivery

respect, such adjudication shall not affect or modify any other provision of the Sales Order, or these terms and conditions and the effect thereof shall be confined to the provision as to which such adjudication is made.

25.0 Notice

25.1. Any notice or other communication required or permitted by these terms and conditions must be given in writing and must be delivered by personal delivery (including personal delivery by overnight courier such as Federal Express, DHL, or similar overnight courier), first class mail (registered or certified), telecopy or e-mail (with a copy sent by personal delivery or first class mail), in each case addressed as follows, or to such other address or addresses as may be hereafter furnished by one party to the other party in compliance with the terms hereof. Notice will be deemed given when received or delivered to the principal business address of the relevant party.

26.0 Miscellaneous

26.1. Seller reserves the right to change, modify, add, or delete portions of these terms and conditions from time to time without further notice. The headings contained in these terms and conditions are included for convenience and shall not affect the language included herein.

27.0 Entire Agreement

27.1. Except as provided for herein, these terms and conditions, together with the Sales Order contain all of the terms and conditions governing the sale of the Products and may not be modified or amended by Buyer except by written agreement duly executed by the parties. Aside from the terms of any Sales Order, all prior agreements, representations, statements, negotiations and undertakings, whether oral or written, are superseded by these terms and conditions.

kamstrup

General Licensing Conditions for software

Delivered by Kamstrup A/S – CVR No. 21 24 81 18

1.0 General terms and conditions

1.1. These General Licensing Conditions (the "Conditions") shall apply to any agreement (the "Agreement") between Kamstrup A/S ("Kamstrup") and Licensee for the use of the Software and relevant documentation ("Documentation") provided by Kamstrup. Licensee terms of any form shall not apply unless specifically agreed.

2.0 Software License

2.1. Kamstrup hereby grants to Licensee the non-exclusive and non-transferable right to use the Software as defined in the Agreement. No further license or right to use is granted under these Conditions and any intellectual property contained in the Software shall remain Kamstrup's property at all times. "Use" shall mean (i) install, store, read, run and display the Software for the purpose of executing the program instructions for data processing and (ii) make the required temporary copies necessary for this process. The license remains in force until the Licensee stops using the Software or until termination of the Agreement in accordance with these Conditions. The Parties agree that these Conditions shall also apply (i) to any Software and/or Documentation updates, upgrades, error corrections, enhancements etc. and (ii) to customer-specific adaptations and extensions to standard Software.

2.2. Conditions of Use:

2.2.1. The Software and Documentation shall only be Used in accordance with these Conditions and Licensee shall comply with the instructions given by Kamstrup (including, but not limited to the Documentation).

2.2.2. The license is limited to the number of metering points, number of users and/or use at the agreed server locations as agreed between the Parties.

2.2.3. Unless otherwise agreed in writing, Licensee is entitled to use the Software and the Documentation for its own business only and shall not use or permit the use by, on behalf of or for the benefit of any third party or company in any way whatsoever, either free of charge or against payment. Subject to Kamstrup´s written consent, Licensee shall be entitled to have the Software installed at an operations provider (outsourcing) provided that the provider is located in the country where the Software will be used and the provider´s use of the Software is strictly limited to the purpose of Licensee being able to use the Software in accordance with these Conditions.

2.2.4. Licensee may make one backup copy of the Software solely for replacing the original Software if the original Software is not in working order. The copy may not be used at the same time as the original version of the Software. Otherwise, Licensee is not entitled to sub-license, copy, translate, alter, modify, produce derived forms of, disassemble, reverse engineer, decompile or use the Software and the Documentation other than in the contractually agreed manner or to the extent permitted by mandatory law, and shall prevent others from carrying out such prohibited activities.

2.2.5. All security matters of the IT-system on which the Software is used are Licensee's sole and exclusive responsibility. Licensee shall implement the necessary measures such as a disaster recovery and business continuity plans and shall make regular backup copies of all stored data (including all reported measurement data, databases, computer records and computer programs) in accordance with best computing practices.

2.2.6. Use of the Software outside the documented hardware, peripheral and software configurations is permitted (i) if the configured hardware and software infrastructure is temporarily inoperable; in this case the license is temporarily and without additional charge extended to suitable replacement infrastructure until the failure is remedied, provided the replacement infrastructure is under Licensee's direct control, or (ii) if the Software is used with suitable replacement infrastructure if the use of the infrastructure according to the original configurations is permanently discontinued. The use of the Software with temporary or permanent replacement infrastructure shall be at Licensee's sole risk and responsibility. Licensee shall track and keep records on the use, copying, storage and disclosure of the Software.

2.2.7. Kamstrup, or an independent auditor appointed by Kamstrup, may inspect any systems, records, documents or copies at Licensee's premises in order to audit the compliance with the obligations related to the Software. The costs for such inspection shall be borne by Kamstrup, unless it is determined that Licensee is in breach of its obligations under the Agreement, in which case Licensee shall

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bear the costs. Licensee shall make available such records to Kamstrup or its representative for this purpose.

3.0 Fee

3.1. The License Fee covers the delivery and use of the Software and the Documentation by Licensee in accordance with these Conditions. The License Fee is an one-time fee.

3.2. The Maintenance Fee covers the delivery and use of Patches and Releases. The Maintenance Fee is a yearly fee.

4.0 Invoicing and Terms of Payment

4.1. The agreed Fees shall be payable in advance, not in arrears. Except where otherwise agreed, all fees, costs and prices shall be payable in EUR. They shall be exclusive of any value added tax or other taxes and costs that may apply under the relevant jurisdiction. All payments shall be made in full without any deduction or set off to the bank account specified by Kamstrup no later than thirty (30) days after receipt of the invoice. If any sum payable under the Agreement is not timely paid in full, Kamstrup may charge interest at a rate of two (2) per cent per commenced month as from the due date (or, if lower, the maximum rate permitted by law) and/or, in case of failure to make payments within twenty (20) days after the due date, terminate the Agreement. Without limiting Kamstrup's right for late or non-payment, the User may not Use any new Data from the due date of the payment until to the date of actual payment.

5.0 Warranty

5.1. Kamstrup warrants that, if no maintenance or hosting contract has been concluded between the Parties for the software, for a period of 90 days, or otherwise, for the period of the maintenance or hosting contract, the Software materially fulfils the functionality as set out in the Documentation. Kamstrup further warrants the compatibility / interoperability of the Software with the tested and documented Kamstrup hardware; however, Kamstrup does not warrant that the Software will operate in all configurations and applications which Licensee may select for use.

5.2. In the event of a defect (i.e. breach of the warranty defined in this clause) during the warranty period, Licensee shall notify Kamstrup without undue delay in writing and provide all information to Kamstrup to analyse the defect. Kamstrup shall, within a reasonable time after receipt of the timely and substantiated defect notification, at its discretion (i) rectify such a defect by providing an adequate workaround solution, (ii) supply a replacement solution substantially fulfilling the same functional specifications or (iii) reimburse the reduction in value of the non-complying parts of the delivery.

5.3. This warranty is subject to Licensee's compliance with its obligations under the Agreement and does not apply to (i) third party software (ii) copies of the Software not originating from Kamstrup or not produced in the contractually agreed manner, (iii) Software used or installed on other than approved hardware and software configuration, (iv) Software that was subjected to improper or negligent installation or use or that suffered an accident for which Kamstrup is not responsible, (v) Software modified, extended or combined with other programs by Licensee or a third party without previous written approval, or (vi) Software that was subjected to treatment not conforming with environment, energy supply or operational limitation requirements specified in the Documentation or (vii) defects resulting from interfacing to third party systems.

5.4. THE WARRANTIES AND REMEDIES STATED IN THIS CLAUSE SHALL BE LICENSEE'S SOLE AND EXCLUSIVE WARRANTIES AND REMEDIES IN CASE OF SOFTWARE DEFECTS OR DEFAULTS; ALL WARRANTIES AT LAW ARE EXCLUDED.

6.0 Intellectual Property Rights

6.1. All rights, title and legal claims, including but not limited to copyright, trademarks and other intellectual property rights relating to the Software, Documentation and other deliveries made available hereunder to Licensee (including intellectual property rights to customer specific adaptations of standard Software, even if funded by Licensee), with the exception of the rights expressly granted in the Agreement, remain in their entirety the ownership of Kamstrup, its licensors or suppliers.

6.2. Kamstrup warrants that, to the best of its knowledge, the Software does not infringe third party intellectual property rights in a way prohibiting the use in the country where the Software is licensed for use.

6.3. In case the Software infringes third party intellectual property rights that Kamstrup should have been aware of, Kamstrup shall indemnify Licensee for all reasonable costs and fees, provided that Licensee (a) immediately notifies Kamstrup of any claim, (b) allows Kamstrup to conduct any proceedings or accept any settlement with the third party and (c) assists Kamstrup in defending such claims if required.

6.4. If the Software infringes third party intellectual property rights, Kamstrup shall, at its own cost and at its sole discretion, either (i) modify the Software and Documentation so that it no longer infringes the respective third party intellectual property right, (ii) supply to Licensee a replacement solution essentially fulfilling the same functional specifications, (iii) obtain at its own cost the authorization for Licensee to use the respective third party intellectual property right or (iv) reimburse to Licensee the reduction in value of the infringing parts of the Software or Documentation.

6.5. Kamstrup's warranty under this Clause does not apply for any infringement of third party intellectual property rights caused by implementing Licensee's specifications, or for any use or modification by Licensee which is not in accordance with the Documentation or Kamstrup´s instructions.

6.6. THE WARRANTIES AND REMEDIES STATED HEREIN SHALL BE LICENSEE'S SOLE AND EXCLUSIVE WARRANTIES AND REMEDIES IN CASE OF INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

General Licensing Conditions for software

7.0 Liability

7.1. Notwithstanding any other provision in the Agreement

7.1.1. Kamstrup´s aggregate liability under or in connection with the Agreement shall be limited to 50 % of the License Fee or (if applicable) the Maintenance Fee payable for the 12 month period in which any claim arises.

7.1.2. Kamstrup shall not be liable, whether by way of indemnity, breach of statutory duty, in contract or in tort (including negligence) or under any other legal theory for any operating loss, loss of profits or revenues, loss of production, loss of contract, cost of capital or for any financial or economic loss, loss of data or any indirect, incidental or consequential damage whatsoever.

7.1.3. The remedies set out in the Agreement are Licensee´s sole and exclusive remedies for any claim arising out of or in connection with the Agreement.

7.1.4. The limitations of liability shall not apply in case of gross negligence or wilful misconduct.

8.0 Termination

8.1. Each Party may terminate the Agreement by written notice with immediate effect if (i) the other Party materially fails to perform or comply with the Agreement or the applicable laws relating to the subject matter of the Agreement and fails to cure such default within a period of 30 days or (ii) the other Party goes into involuntary dissolution or bankruptcy or has a receiver appointed. Kamstrup may also terminate the Agreement with immediate effect in case of a non-authorized transfer or assignment of the Software, Documentation, the Agreement or parts thereof by Licensee, or, if Licensee merges with, has substantially all assets or stock acquired by a third party or acquires substantially all assets or stock of a third party which is in direct competition with Kamstrup.

8.2. Upon termination of the Agreement, Licensee shall immediately and permanently discontinue the use of and delete on its IT system the Software and Documentation and shall return the Software and Documentation (including any modification, electronic and other copies and recordings thereof) to Kamstrup without delay. For avoidance of doubt, there shall be no refund of any element of the License Fee, Maintenance Fee or other fees by reason of termination.

9.0 Miscellaneous

9.1. End of Life

9.1.1. Kamstrup may, at its discretion, decide to cease to support Software. Kamstrup will provide the Licensee with at least 90 days' written notice of the last date of commercial availability of the affected product (the "End of Sale Date"). Kamstrup will continue to support such products for a period of 3 years after the End of Sale Date, on the terms of Kamstrup's software support agreement. Kamstrup will have no obligation to continue support of such products after such 3 year period has expired.

9.2. Delivery and Acceptance

9.2.1. Kamstrup shall deliver (transmit, hand over or otherwise make available) one (1) copy of the Software in object code/machine-readable form on the appropriate media, the required license keys and one (1) set of the Documentation. Third party software and Documentation shall be delivered in the form and number as delivered by the third party supplier. In case a hosting contract is in place, the Software will be installed on a Kamstrup server and Licensee will be provided adequate access.

9.3. Confidentiality

9.3.1. All documents, information and data, whatever the medium, form or content, that Licensee receives from Kamstrup during the performance of the Agreement (i) shall be treated as confidential, (ii) shall not be transmitted or disclosed to third parties without Kamstrup's prior written consent. Licensee shall ensure that its employees and subcontractors receive such confidential information on a need-to-know basis only and comply with the confidentiality obligations as set out in this clause. This confidentiality obligation shall survive expiry or termination of the Agreement.

The confidentiality obligation does not apply to documents, information and data that (i) is generally available from public sources or in the public domain through no fault of Licensee, (ii) was received from a third party without breach of a nondisclosure obligation, (iii) is required to be disclosed by law subject to Licensee's obligation to notify Kamstrup of such disclosure in a timely manner; or (iv) approved for disclosure with Kamstrup's prior written consent.

9.4. Amendments

9.4.1. Modifications and amendments to the Agreement shall only be valid when made in writing and signed by authorized representatives of both Parties. This procedure may only be waived in writing.

9.5. Assignment

9.5.1. Licensee shall not assign, sub-license, lease or otherwise transfer, share or commercialize, whether in whole or in part, the Software and Documentation or any rights or obligations under the Agreement without the prior written consent of Kamstrup. Any breach of this obligation shall constitute a material breach and entitle Kamstrup to terminate the Agreement with immediate effect.

9.6. Force Majeure

9.6.1. Force Majeure shall be defined as an occurrence resulting from any cause beyond a Party's reasonable control, including blackouts, power failures, inclement weather, fire, explosions, natural disasters, epidemics, strikes, work stoppages, labour slow-downs, industrial disputes, sabotage, destruction of production facilities, riots or civil disturbances, acts of government or governmental agencies, including changes in laws or regulations that materially and adversely impact the Party, its suppliers or licensors or any virus, worm or other harmful computer program. The affected Party shall not be considered to be in breach of the Agreement during the Force Majeure event and its consequences. The affected Party shall inform the other Party in writing as soon as practicable after the Force Majeure event has occurred and provide information on

General Licensing Conditions for software

the consequences of such Force Majeure event. Payment obligations shall never be impaired by Force Majeure.

9.7. Severability

9.7.1. Should any provision of the Agreement be invalid or unenforceable, the remaining provisions shall not be affected thereby and the invalid or unenforceable provision shall be substituted by a valid and enforceable provision reflecting as closely as possible the Parties' original intent and commercial effect.

9.8. Contractual Documents

9.8.1. In the event that the Agreement and the documents mentioned herein contain contradictory provisions, and provided that circumstances do not indicate otherwise, the provisions shall apply in the order as follows: 1. The Agreement; 2. Appendices to the Agreement.

9.9. Entire Agreement

9.9.1. The Agreement (with its Appendices) shall be the entire agreement between the Parties in respect of the subject matter hereof and shall supersede any prior agreement, whether in writing or any other form.

10.0 Applicable Law and Dispute Resolution

10.1. The parties shall seek to settle any dispute arising out of or in connection with the Agreement, including disputes relating to the existence or validity of the Agreement, through mediation administered by the Danish Institute of Arbitration in accordance with its rules on mediation in force at the time the request for mediation was submitted. The mediation shall take place in Aarhus, Denmark.

10.2. If the mediation has not resulted in a settlement within 45 days of the request for mediation having been submitted by either party, then the dispute shall be settled by arbitration administered by the Danish Institute of Arbitration in accordance with the rules of arbitration procedure adopted by the Danish Institute of Arbitration and in force at the time when such proceedings are commenced. The arbitration shall take place in Aarhus, Denmark.

10.3. The laws of Denmark, excluding any choice of law rules, shall govern the Agreement and the settlement of disputes. The United Nations Convention on Contracts for the International Sale of Goods shall not apply.

NEXT METERS

Response to:

REQUEST FOR PROPOSAL:
AUTOMATIC WATER METERING SOLUTION

Prepared for:

Town of Jerome, AZ

Attn: Brett Klein, Town Clerk
PO Box 335
Jerome, AZ 86331
928-634-7943

TOWN OF JEROME 1876 ARIZONA

Innovative Utility Solutions

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IUS & NEXT Meters: Letter of Intent

Dear Town Manager Brett Klein and Town Council Members,

Get ready to transform your utility infrastructure with NEXT Meters' cutting-edge response an Automatic Water Metering Solution! Innovative Utility Solutions& Next are thrilled to introduce our Fenix Radio Frequency (RF) and LTE-M Cellular Solution—a game-changer designed to empower the Town of Jerome with smart, scalable, and sustainable metering technology. At NEXT, we're not just redefining metering; we're building stronger communities through innovation, reliability, and future-proof solutions.

Why Choose NEXT's Fenix Solution?

Our Fenix system is a powerhouse, blending RF, Cellular, Drive-by, and Walk-by reading capabilities into a single, versatile unit. With seamless communication and autonomous network switching, Next ensures your meter reads are always delivered 24/7, rain or shine. Here's why Fenix stands out:

- Unmatched Versatility: Supports water, gas, and electric metering on the same infrastructure, offering Jerome the flexibility to upgrade the electric AMI system in the future with minimal changes.
- Nationwide Reach: Following NEXT's 2025 acquisition of Fenix USA, we proudly serve over 5 million radio services and 1,000+ metering systems across the U.S., including: 400+ locations across Arizona, totaling 75,000+ endpoints.
- Resilient Connectivity: Combines primary 900 MHz RF for robust fixed AMI reading, multi-carrier LTE-M cellular for plug-and-play deployment, plus drive-by and walk-by options for one-off or off cycle reads. Backwards Compatibility:
- Since inception, all NEXT products have been backwards compatible, ensuring long-term support for your investment.
- Industry-Leading Warranty: The only AMI provider offering a full 20-year warranty (not prorated) on our products if 20 years of service are prepaid.
- Flexible Pricing: Prepay options lock in rates for up to 20 years, freeing up future capital for other town projects.
- Ready When You Are: Materials are stocked at our 70,000 sq ft warehouse in Tampa, FL, ready to ship within 72 hours of order.

Who We Are: NEXT Meters

Founded 14 years ago, NEXT is a U.S.-designed, vertically integrated AMI leader dedicated to sustainable utility solutions. With corporate offices in Logan, Utah, and warehousing, labs, and testing in Tampa, Florida, we're equipped to support utilities nationwide. To date, we've deployed nearly 5 million metering devices across the U.S. and Canada, serving 190+ utility customers with over 40,000 devices manufactured and deployed monthly.

Seamless Installation with NEXT's Mobile App

Our industry-leading mobile app (available on iOS and Android) is your all-in-one tool for installation and maintenance, streamlining deployment with:

- Up to 20 photos per site (before and after installation).
- GPS coordinates captured during each install.
- Pipe surveys with dropdown options for type, size, and material.
- Mobile reading and data downloads via Bluetooth.
- Old meter reading documentation for accuracy.

Best-in-Class Supply Chain & Deployment Certainty

NEXT's robust supply chain ensures timely delivery with minimal risk. With radios stocked in Tampa, FL, we guarantee shipment within 72 hours of order, so your project stays on track.

Expert Integration & Project Management

Our team brings decades of experience in utility integration and deployment. Fenix has a proven track record of seamless integration with Caselle, ensuring a fast, low-risk transition. We'll work closely with the Town of Jerome to identify the optimal path for deployment, minimizing disruptions and maximizing efficiency.

A Win-Win Partnership for the Future

NEXT's Fenix solution isn't just about meeting today's needs—it's about building a long-term partnership. Our multi-utility AMI solutions for water, gas, and electric integrate seamlessly with your CIS provider, delivering unmatched reliability and scalability. With NEXT, the Town of Jerome gains a trusted partner committed to innovation, sustainability, and community growth.

We're excited to bring our cutting-edge technology to the Town of Jerome and look forward to powering a smarter, more connected future together!

Sincerely,



Stan Pachorek
Sales Director
Innovative Utility Solutions
Gilbert, Arizona
Cell/text: 480-678-1668
Email: Stan@iuswater.com

BUSINESS OVERVIEW

NEXT Meters is redefining the utility metering industry with smart, open, and future-proof solutions that empower water, gas, and electric utilities to modernize their infrastructure, unlock real-time insights, and conserve resources for stronger communities.

Our Mission:
"To promote conservation of utilities for the betterment of our communities."
This mission is at the heart of every product and innovation we deliver — helping utilities operate more efficiently, reduce waste, and ensure reliable service for generations to come.

The Flagship: Ultrasonic Smart Meters
NEXT's primary offering is its advanced Ultrasonic Smart Meter — a state-of-the-art device with no moving parts, delivering unmatched measurement precision, long-term reliability, and continuous real-time consumption data. Ideal for full-scale AMI deployments, this meter enables utilities to achieve maximum accuracy, detect leaks faster, and support proactive conservation goals.

Complementing this flagship line, NEXT also provides trusted Positive Displacement (PD) meters, widely used for residential and commercial services. By pairing these with the Next Register (NR4), utilities can cost-effectively transform existing mechanical meters into smart endpoints, extending asset life while migrating to AMI on their own terms.

Powerful MDM and Advanced Analytics
NEXT's intelligent Head-End System (HES) is designed as a cloud-native, API-driven platform that securely aggregates, processes, and analyzes meter data in real time. At the HES level, AI and machine learning tools detect usage anomalies, identify leaks or tampering, optimize demand forecasting, and help utilities make data-driven operational decisions.

The NEXT HES integrates seamlessly with GIS, SCADA, billing (CIS), asset management, and customer engagement systems through secure RESTful APIs, webhooks, and modern data pipelines — ensuring utilities gain enterprise-wide visibility and automation without vendor lock-in.

Always Connected — The NEXT Communication Stack
Every NEXT device comes equipped with a robust, layered communication stack for maximum uptime:

- Primary 900 MHz RF for fixed AMI reading.
- Backup multi-carrier LTE-M cellular for plug-and-play deployment and nationwide coverage.
- Drive-by and walk-by options for efficient reading in remote or low-density areas.
- Autonomous network switching that automatically selects the best available channel to keep data flowing 24/7.

Customer Service: The Key to Long-Term Success
NEXT pairs advanced technology with exceptional customer service to help utilities succeed for the long term. From deployment to daily operations and future upgrades, our team stands ready with responsive support, training, and expert guidance. By backing every product with reliable service, we help utilities build trust, improve service quality, and ensure resilient, sustainable operations for years to come.

NEXT's Vision for the Future:
At NEXT, we are not just delivering AMI solutions — we are shaping the future of utility management. By combining innovative technology, seamless integration, and unparalleled support, NEXT empowers utilities to enhance operational efficiency, strengthen customer relationships, and build a more sustainable future.



EXECUTIVE SUMMARY

The NEXT Solution for Advanced Metering Infrastructure (AMI) leverages a robust, multi-network solution, highest quality ultrasonic meters, and an advanced, cloud-based Head-End System (HES) to provide utilities with a comprehensive, future-ready AMI platform.

NEXT's system includes an intuitive Field Mobile Application and a Customer Portal, enabling advanced control, remote configuration, and detailed usage reporting. By using open architecture and multi-layer connectivity — including LTE-M, 900 MHz RF, and drive-by options — the NEXT solution eliminates the need for costly proprietary network investments and accelerates the timeline to full AMI deployment.

NEXT's modular HES and communication stack support robust reporting and AI-powered analytics, which can be customized by utilities without the need for specialized proprietary scripting. Seamless integration with third-party systems — including CIS/billing, SCADA, GIS, and payment platforms — ensures smooth data exchange and real-time synchronization across utility operations.
The NEXT platform is designed to be user-friendly, scalable, and secure, giving utilities the tools they need for effective system management, greater operational efficiency, and deeper customer engagement.

120 team members

190 Utility customers

2 Locations

5 Million Devices Deployed

$46 million donated to community causes

14 years in operation

About NEXT

Founded over 14 years ago, NEXT is a leading, U.S.-designed, vertically integrated AMI company dedicated to delivering sustainable utility solutions across North America. With corporate offices and engineering based in Logan, Utah, and warehousing, labs, and testing operations in Tampa, Florida, NEXT supports utilities with a strong nationwide presence and robust operational backbone.

To date, NEXT has deployed nearly 5 million metering devices, with a total installed base exceeding 10 million meters across the United States and Canada, serving over 190 utility customers. Each month, NEXT manufactures and deploys more than 40,000 devices, ensuring utilities have access to reliable, scalable smart metering technology when and where they need it.

NEXT's dedicated team brings together over 200 years of combined AMI experience, united by a mission to help communities conserve critical resources for the betterment of future generations. Backed by resilient U.S. and global manufacturing partners, NEXT combines proven technology, operational excellence, and a strong commitment to sustainability to help utilities modernize responsibly and efficiently.

Our Mission

"To promote conservation of utilities for the betterment of our communities."

Beautifully Simple Affordable Quality Effortless Integration

Continuous Innovation Unparalleled Service Reaching for the Stars



Beautifully Simple

We believe that advanced technology shouldn't feel complicated. Every solution we build is designed to be intuitive and easy to deploy, so our partners and customers spend less time figuring things out and more time seeing results. From plug-and-play hardware to user-friendly software, we make complex utility management beautifully simple.

Affordable Quality

Quality shouldn't come at a premium that limits access. Our products combine durable engineering and rigorous standards with practical pricing, making high-performance metering and communication accessible for utilities of every size. We focus on cost-effectiveness without ever cutting corners on what matters most: accuracy, reliability, and long-term value.

Effortless Integration

Seamless compatibility is at the heart of our open architecture. Whether retrofitting legacy systems or building new networks, our solutions drop in and work smoothly with existing meters, infrastructure, and utility platforms. Our intuitive software and mobile apps make configuration, monitoring, and data collection easy for field teams and office staff alike — so integration isn't just technical, it's practical and user-friendly every step of the way.

Continuous Innovation

Standing still isn't an option. We are committed to pushing the boundaries of what's possible in smart metering and utility technology. Through relentless R&D, customer-driven feedback, and forward-thinking partnerships, we deliver features and improvements that keep our solutions ahead of tomorrow's challenges.

Unparalleled Service

Technology is only half the story — our people and our commitment complete it. We pride ourselves on providing personal, responsive service that solves problems quickly and builds lasting trust. From project kickoff to long-term support, we stand with our customers every step of the way.

Reaching for the Stars

Our mission is bigger than meters and modules — we aim to transform the way communities manage energy and water for a smarter, more sustainable future. By staying bold, adaptable, and visionary, we reach beyond today's limits and help our partners do the same

Strategy & Vision

Vertically integrated business strategy

NEXT Meters is a vertically integrated company — designing, developing, and supporting our hardware, software, and communication solutions under one roof. This structure delivers clear value to our utility partners: greater quality control, faster innovation cycles, and streamlined support.

Industry leaders across sectors — from Apple to Tesla — have demonstrated how vertical integration reduces supply chain risks, accelerates time to market, and ensures tighter alignment between design and manufacturing. According to Harvard Business Review and Forbes, vertically integrated companies consistently outperform fragmented supply chains when resilience, reliability, and cost control are critical.

NEXT applies these same principles in the utility metering space. By owning the design of our meters, registers, communication stack, and software platform — and backing this with both domestic and global manufacturing — we ensure unmatched interoperability, consistent product quality, and unmatched lead times, even in challenging supply chain environments.

The result: Utilities gain a single trusted partner for their complete AMI ecosystem — with one point of accountability, faster service, and solutions built to work seamlessly together from day one.

Engineering **Manufacturing** **Sales** **Delivery** **Support**



NEXT's Vision for the Future

NEXT's vision is to empower utilities to build smarter, more resilient, and more sustainable communities through open, future-ready metering solutions enhanced by intelligent data and continuous innovation. We believe the future of utility management must be flexible, transparent, and conservation-driven — free from vendor lock-in and designed to maximize the life and value of existing infrastructure.

NEXT is leading this transformation by combining advanced ultrasonic metering hardware, a robust multi-layer communication stack, and an intelligent Head-End System (HES) enhanced with AI and machine learning. These capabilities help utilities detect leaks sooner, identify anomalies, optimize maintenance, and make proactive operational decisions to conserve resources and manage costs.

NEXT continues to invest in our utility partners by developing tools that extend value beyond the meter. This includes behind-the-meter homeowner awareness and alerting, giving end-users clear visibility into usage and leak events, as well as in-front-of-the-meter distribution management tools like pressure monitoring, Outage Management System (OMS) integration, and peak usage analytics. Together, these innovations provide deeper network intelligence and help utilities maintain safe, efficient, and resilient distribution systems.

Setting a New Standard in Quality Assurance

Why Our QA Process Exists

At Next Meters, we believe in progress through continuous improvement. With every product we've developed, we use real-world experience to refine and perfect our approach. The launch of the Next Meter represents the latest and most advanced step in that ongoing evolution. It's an evolution built on rigorous testing, constant learning, and a commitment to delivering the most reliable metering technology in the industry.

Key Takeaways:

- ✓ Every meter undergoes 13 QA checkpoints to deliver proven reliability.
- ✓ Gigabytes of data are captured per meter to help us achieve a near-zero failure rate.
- ✓ The NM4 sets a new standard for quality assurance, ensuring each unit is built, tested, and trusted to last.

What We Built From That Commitment

Beyond the Industry Standard

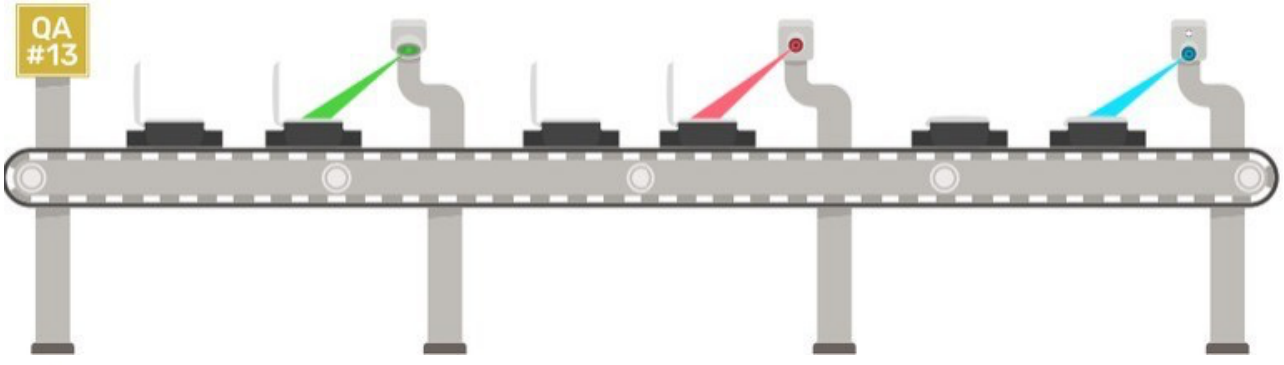
Through years of refinement, we've created the most rigorous Quality Assurance system the metering industry has ever seen. The QA process behind every NM4 is modeled more after a surgical device or aerospace component than a utility meter. While most companies aim to meet the bare minimum, we exceed it at every stage.



Inside the QA Process

We gather gigabytes of data on every NM4 produced—serial numbers, flow testing, timestamps, visual records, firmware versions, calibration stats, and more. This data fuels our commitment to a near-zero failure rate and gives us unmatched insight into the performance of each individual unit.

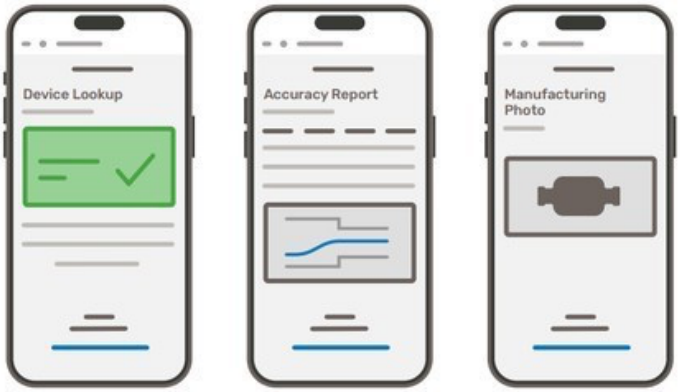
- **13 Dedicated QA Stations:**
  The NM4 is subjected to 13 different QA checks. At each station, hundreds of parameters are verified. If anything is off, even by a fraction, the unit is flagged and held until fixed or scrapped entirely.
- **Total Traceability:**
  Every part of the meter carries a specific serial number. This allows us to trace each NM4 back to when it was assembled, where each part came from, and even what batch of raw material was used.
- **Laser-Printed Accuracy:**
  Once the NM4 passes final flow testing, we laser-print the accuracy results inside the meter cover. While competitors only ensure their meters are "within range," we share exactly how your specific unit performed.
- **Photographic Evidence:**
  Dozens of photos are taken during assembly to document visual quality and verify correct build at key milestones. Customers can view their product's photo in the Warranty Lookup section of our app by scanning the NM4.



Customer-Facing Transparency

Through the "Warranty Lookup" section of our app, customers can:

- Customers can Scan the barcode to see the actual factory photo of their NM4
- View flow testing and accuracy results of their particular meter See
- warranty status & expiration



Tests We Perform

Here's a sample of what happens during the manufacturing process:

- Flatness & fit validation of meter body
- Microscopic reflector tube check
- Flow tube spacing verification
- LCD display check & photo validation
- X-ray inspection of soldering
- Circuit board testing & programming
- Wire connection continuity check Low-power current testing
- Pressure testing for leak prevention
- Calibration testing at low, mid, & high flow rates

Quality Assurance Goal: Zero Failures

The Next Meters Expectation

While hitting 0% failure is a stretch in any industry, it's our expectation. Others build in acceptable failure rates. We don't. We test, retest, and push every NM4 unit to the edge so chances are you'll never need the warranty. That said, every NM4 is backed by a 20-year warranty.

20 YEAR FULL WARRANTY

Backwards Compatible.
Forward Thinking.

We don't build products that force you to upgrade. Every NEXT product is fully backwards compatible with existing systems. We believe products should last and integrate, not expire.



The New Standard in Metering

The NM4 is the result of years of iteration and dedication to make the best ultrasonic water meter on the market. It's what happens when you never stop improving.

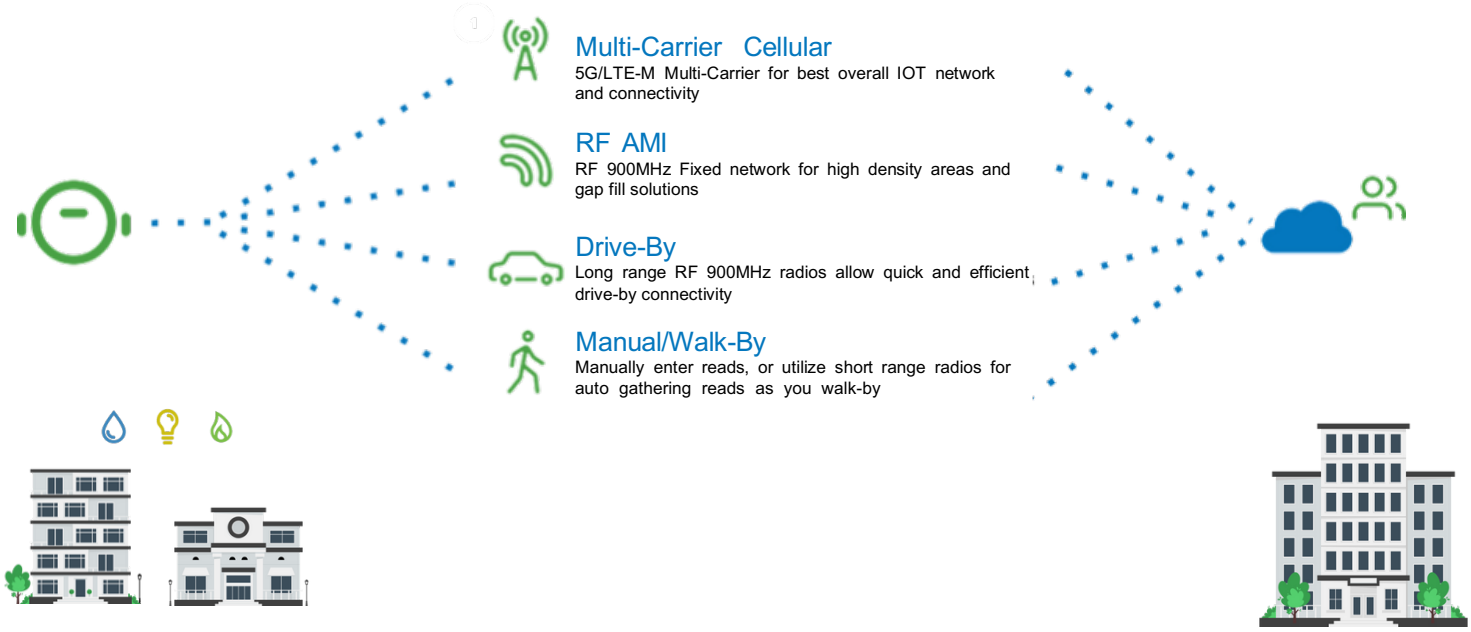
The NM4 isn't just a product. It's a commitment. And we can't wait to show you why.

Built for Scale. Made for America.

NEXT leverages a combination of global manufacturing capabilities and Build America, Buy America (BABA) compliant production to deliver high-quality utility metering solutions. With our dedicated U.S. production facility in Atlanta and all products designed and tested here in the United States, we ensure the highest standards of performance and reliability. This balanced approach allows us to scale quickly to meet demand, reduce lead times, and ensure our solutions align with local and federal requirements. By combining global efficiency with local compliance and innovation, we help our customers get the right products when they need them — without compromise.

Next-Connect — The Industry's Most Resilient Communication Stack

Historically, AMI systems have forced utilities to choose a single network — RF, LoRa, or cellular — each with limitations and coverage gaps. NEXT eliminates that risk with a fully integrated, multi-layer communication stack built into every device. Each endpoint connects first through multi-carrier LTE-M cellular, then seamlessly switches to 900 MHz RF for AMI or AMR networks when needed. This design answers every "what-if" scenario for connectivity — no matter the topography, density, or location. With NEXT, connectivity is no longer a problem — it's solved.



1 Multi-Carrier Cellular

NEXT Meters use built-in multi-carrier LTE-M technology that automatically connects to major cellular networks like Verizon, AT&T, or T-Mobile—whichever has the strongest signal—ensuring every meter stays online, anywhere, without extra infrastructure or repeaters.

2 900 Band RF AMI

NEXT Meters also support long-range 900 MHz RF AMI networks, using solar-powered gateways to collect meter data in real time—ideal for covering wide service areas or remote zones without relying on grid power or costly wired infrastructure.

3 900 Band RF AMR

NEXT Meters use secure 900 MHz RF for walk-by and drive-by AMR, providing reliable wireless meter reading over long distances—perfect for quick, efficient route reads without needing line-of-sight or expensive handheld upgrades.

4 Manual read via mobile app

For meters not yet upgraded to AMI, NEXT provides a simple manual read option—utility staff can securely collect accurate reads on-site using the NEXT Mobile App, ensuring smooth operations during phased rollouts or mixed-system deployments.

Power of Choice

Whether you need cellular with RF-AMI backup, RF-AMI with cellular gap-fill, or want to start with cost-effective AMR Drive-By and upgrade to full AMI later—NEXT Meters deliver the flexibility to match any utility's strategy, budget, and timeline. Roll out at your pace, control your costs, and future-proof your system with confidence.

2 PRODUCT OVERVIEW

NEXT offers a flexible, future-ready portfolio of utility metering solutions for water, gas, and electric applications. The portfolio combines proven meter technologies with advanced, interoperable smart registers and a robust multi-layer communication stack to support AMI and AMR deployments at any scale.

Core Water Product Families



Ultrasonic (NM4)

NEXT's ultrasonic meters are designed for high-accuracy measurement with no moving parts. They deliver precise, real-time consumption data, exceptional durability, and long service life — making them ideal for utilities transitioning to advanced metering infrastructure (AMI) with minimal maintenance requirements. Available through in 3/4'' and 1'' configurations.



Positive Displacement (PD) Meters

NEXT's PD meter line includes residential, commercial, and industrial water meters with oscillating piston measuring chambers, available in lead-free bronze or polymer main cases. These meters meet or exceed AWWA C700 standards and are NSF/ANSI certified for potable water. They deliver reliable measurement across wide flow ranges and are approved for horizontal or vertical installation.

Next Register (NR4)

The NR4 is a universal, fully programmable smart register designed to retrofit onto most existing mechanical water meters in the field — including popular brands like Badger, Neptune, Sensus, and Master Meter. By reading the magnetic signature of the meter's measuring chamber, the NR4 converts conventional meters into smart meters without needing full meter replacements.





NEXTConnect

For completely new meter deployment or to re-automate existing investments by embracing a meter-neutral, open architecture. Connect to any register with encoded or pulse output and enjoy the benefits of true next-generation AMI, regardless of existing meter brand, footprint, or age.

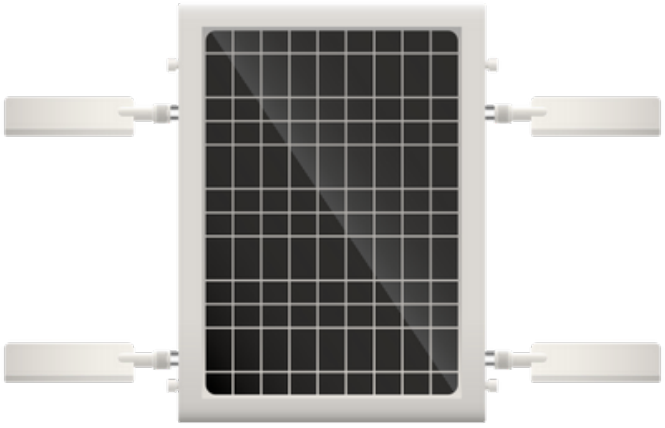


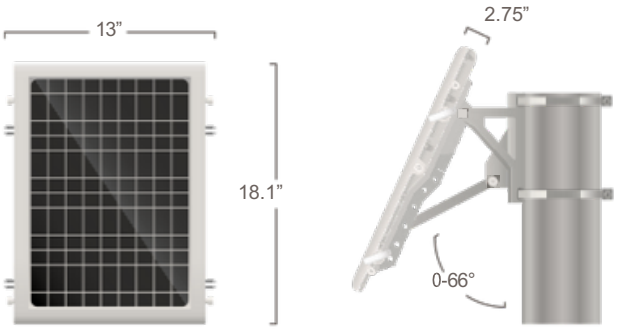
Smart Valve

Meter-neutral for retrofits or new installs that even use multiple meter brands within the same system. Extended antenna to accommodate pit and non-pit settings for optimum connectivity.
Benefit from meter-neutral remote shutoff.

NextLink

Solar-Powered Connectivity





The NextLink (NL4) is the ultimate all-in-one solar-powered Gateway and Repeater. Featuring the fastest charging and longest-lasting battery in its class, the NextLink ensures seamless connectivity with the simplest deployment.

Flexible Deployment

Recognizing the critical need for reliable connections, especially in areas with limited power and network access, we have designed the NextLink to integrate effortlessly into diverse environments.

The NextLink’s all-in-one design combines an efficient solar panel, a high-capacity battery, and powerful radios, enabling installation in virtually any location—regardless of wired power or network infrastructure availability.

Extending Communication

NextLinks work seamlessly together to extend your wireless meter network even into areas outside of cellular coverage.

Powerful external antennas ensure reliable communication for meter points spread over long distances as well as in high-density submetering applications.

Sustainable Longevity

Built with a robust cast-aluminum housing and fully waterproof design, the NextLink is engineered to withstand even the harshest conditions. Through rain or shine, the NextLink delivers connectivity using renewable solar power, making it both a practical and eco-friendly fixed-wireless solution.

Key Benefits

- Built-in 5G LTE cellular
- Operates as a Gateway and Repeater to expand coverage
- Fully recharges with only 6 hours of full sunlight
- Efficient power management provides up to 7 days of operation without sunlight
- 2-way meter communication
- High-gain external antennas for extended range
- Battery will continue to charge in freezing temperatures
- IP-68 rated for outdoor use
- All-in-one unit eliminates the headache and problems associated with piecemeal kits
- 5-year standard warranty

Programming and Additional Information

Programming & Verification

Programming is the process of associating the NextLink’s serial number with the property where it is installed. This ensures it can communicate with the NextCity Cloud.

To quickly program a large number of devices at once, you can use the CSV file uploader tool on the NextCity web portal. The web portal also offers a rapid programming interface to program additional devices later on.

The NextCity mobile app is ideal for on-site programming and verification.

App Store iOS App

Google Play Android App

You can check the NextLink’s current battery status by viewing the LED on the device. When a magnet is held by the device’s battery indicator LED (located just below the antenna on the upper right-hand side of the device), it will light up to indicate the device’s current battery.

- FULL BATTERY
- LOW BATTERY
- VERY LOW (Radios are turned off)

Current battery levels can also be checked in the NCSS mobile app or on the NextCentury web platform.

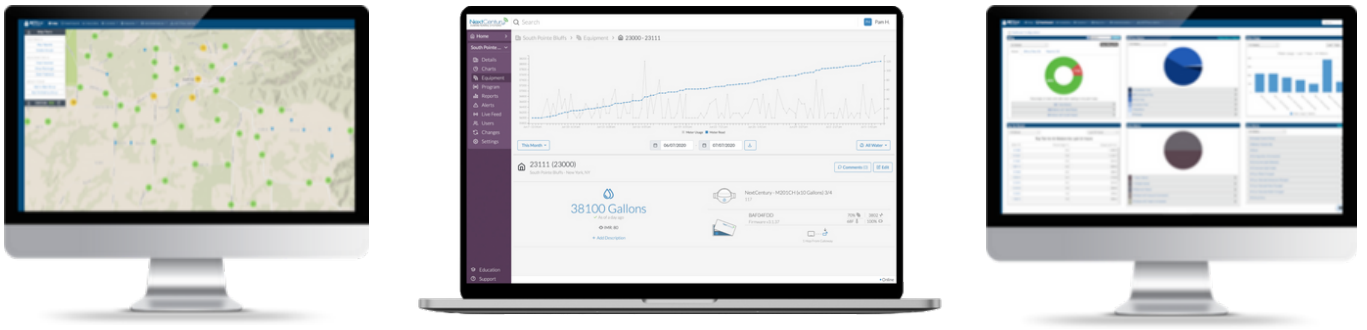
Software Portfolio

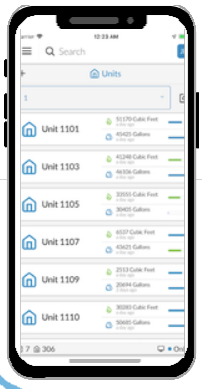
NextCity™ HES

NextCity™ is a versatile, cloud-based Meter Data Management System (MDMS) that powers your entire AMI network. It goes beyond storage — providing clear, actionable insights through intuitive widget-based dashboards, GPS mapping, configurable device health alerts, and flow alarms.

Fully integrated with all NEXT mobile apps, NextCity™ lets utilities manage, configure, and control every device in the field — from leak detection to network tools — anytime, anywhere. Updates, network management, and remote configuration are all at your fingertips, reducing truck rolls and maximizing efficiency.

Built on open architecture, NextCity™ connects seamlessly with billing, GIS, SCADA, and customer portals, ensuring you stay flexible as your system grows. From a few hundred meters to citywide deployments, NextCity™ keeps your data working for you — smarter, faster, and always connected.





NCSS Field Installation

The NextCity™ Field Mobile Application is a wireless workforce provisioning tool that supports the deployment, configuration, and management of all NEXT AMI hardware. No proprietary handheld device is required — the app works seamlessly on standard Apple and Android smart devices and is included as part of the NextCity™ software suite.

NCSS Manual Read

The NEXT Manual Meter Read Application gives utility field technicians an easy, modern way to collect reads from meters that have not yet automated or require manual verification. Technicians can receive assigned routes directly on their Apple or Android devices, collect reads in the field, capture photos for visual validation, and add notes for each service address. All collected data is automatically synced back to the NEXT Head-End System (HES) in real time, ensuring accurate records and seamless integration with the utility's billing and operational systems.



Smarter AMI.
Smarter Homes.

Overview

The NEXT Customer Portal is a secure, web-based platform that gives homeowners direct access to their water usage data—empowering them to take control, set alerts, and conserve water more effectively.

When a utility enables the Customer Portal, every household can easily view detailed meter reads, monitor daily and hourly trends, and spot unusual spikes that may signal leaks or waste. Homeowners can set up custom alerts for high usage, backflow, or freezing conditions—helping them catch issues early and avoid costly surprises.

Accessible anytime on a smartphone, tablet, or computer, the NEXT Customer Portal puts the power of water conservation directly in the hands of homeowners



2024
By the Numbers
Together, we're creating a better world.

31,158,511,608
Gallons of Water Saved

4,038
Properties Saved from Abandoned 3rd Party Hardware

19,238
Leaks Detected

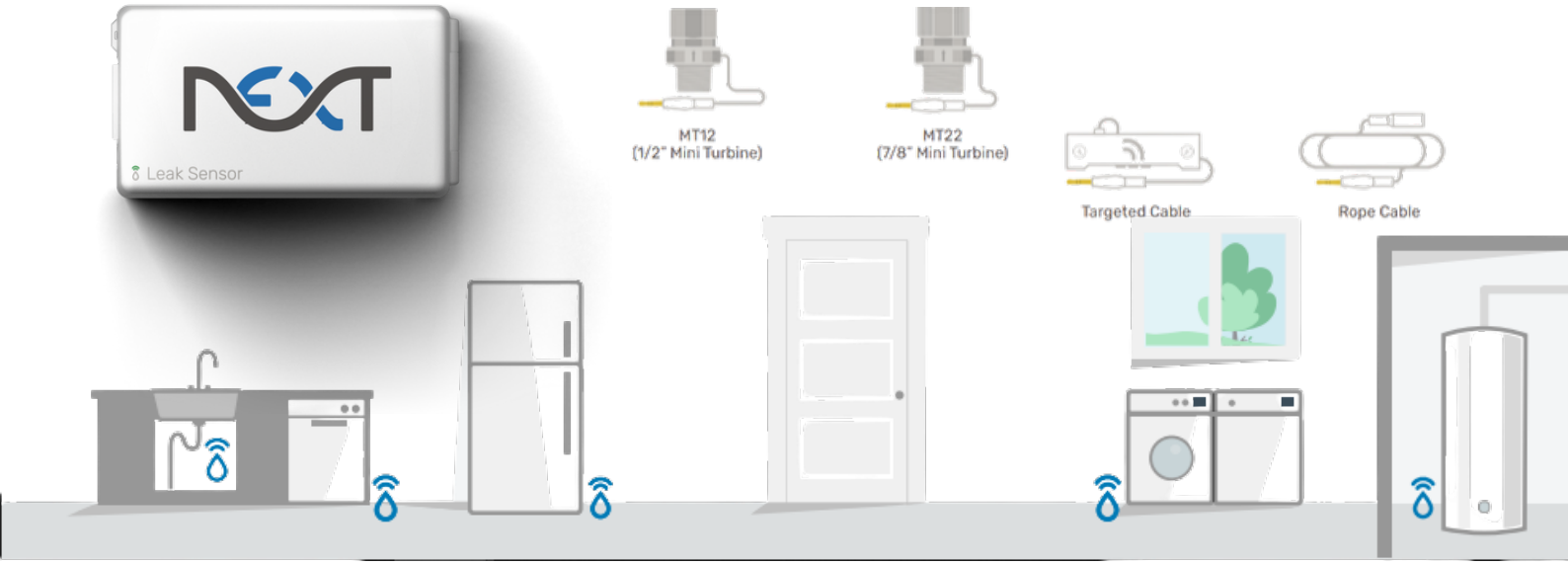
27,119
Freezing Meters Detected and Reported

Seamless In-Home Leak Monitoring

The NEXT Leak Monitoring Solution extends advanced water leak detection directly into each home, providing a simple and reliable way for utilities to help residents protect their property and conserve water.

Homeowners receive real-time alerts via phone call, text, or email whenever a potential leak is detected—enabling immediate action to prevent water loss or damage. In-home devices also provide an audible chirp to ensure no alert goes unnoticed.

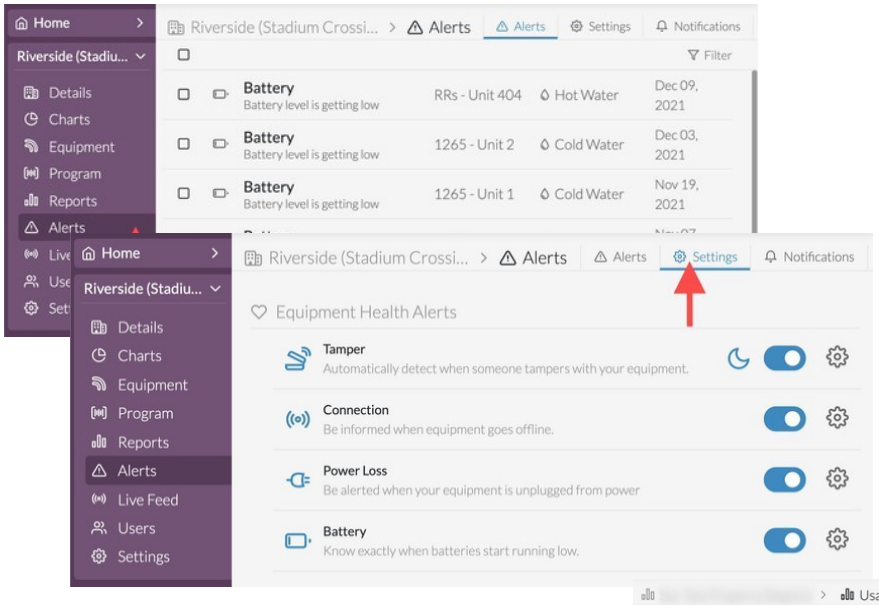
Fully integrated with the NEXT Customer Portal, this solution gives residents complete visibility and control over leak alerts and usage trends, putting water conservation and property protection at their fingertips—without the need for costly third-party sensors or separate systems.

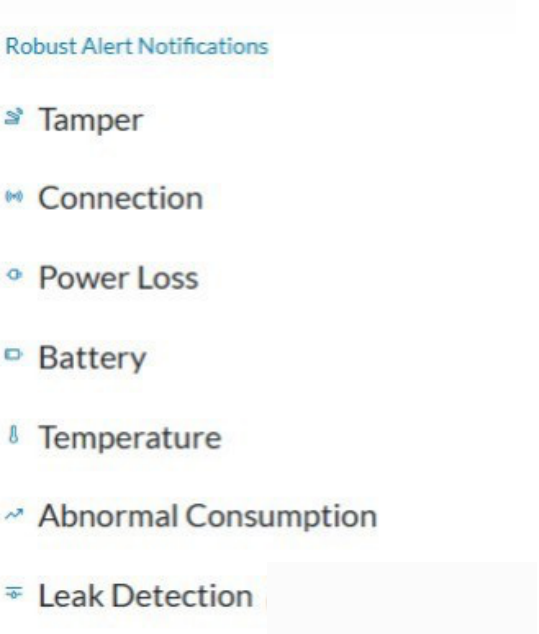


Alerts and Reports

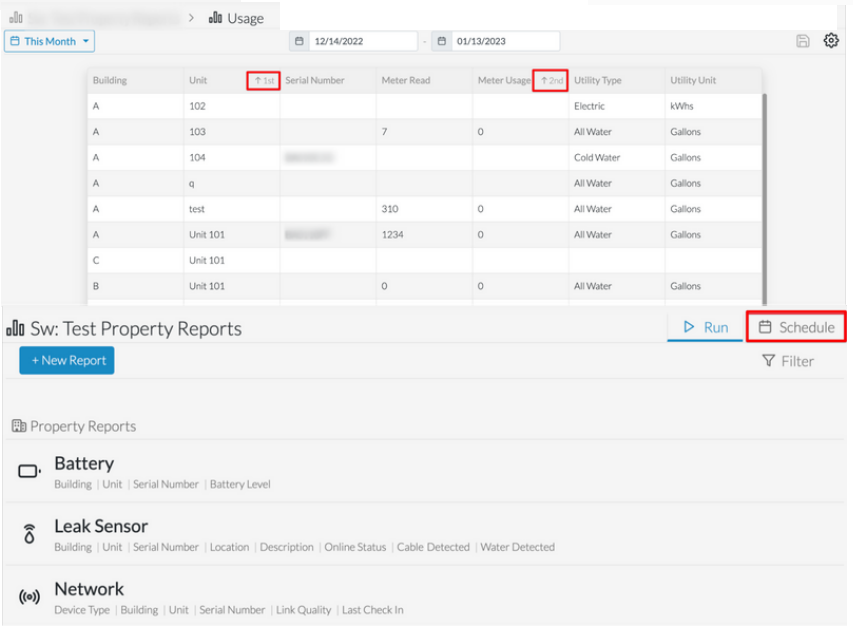
Item D.

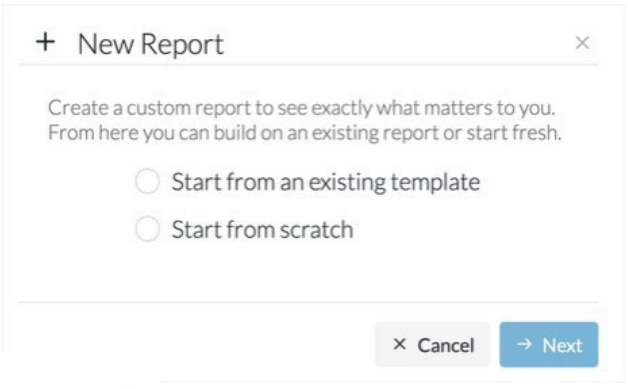
The NextCity™ platform provides a comprehensive suite of configurable alerts and alarms as part of its standard offering. Utilities can set custom parameters for each alert — including recipients, timing, and communication methods (such as email or text). The system also enables utilities to track whether notifications have been successfully delivered to consumers, supporting proactive customer engagement and faster issue resolution.





The available standard reports include: Alarm Report, All Valves with Failed ACKS, AMR Updates, Battery Levels, Consumption Report, Daily Readings Report, Device Changes, Device Commands, Device Group Report, Devices with Lost Communication, Firmware Version, Inactive Flow, Meter Alarm Report, Meters by Size, QA Report, Radio Communication Failure, Skipped Install Report, Valves Turned in the last 24 Hours, Valves with Failed ACKS, Valves with Queued Commands, and Wake Up Interval Report. The system dashboard view is configurable, allowing users to change the thresholds for each widget to create their desired view of the full system health at a glance.





Custom Reports:
NextCity™ makes advanced reporting simple and flexible. Utilities can easily create custom reports tailored to their specific operational or regulatory needs and schedule them for automatic delivery to the right team members or stakeholders. Reports can be generated on a recurring basis — daily, weekly, or monthly — and securely delivered by email or direct system integration, ensuring that decision-makers always have up-to-date insights without manual effort.

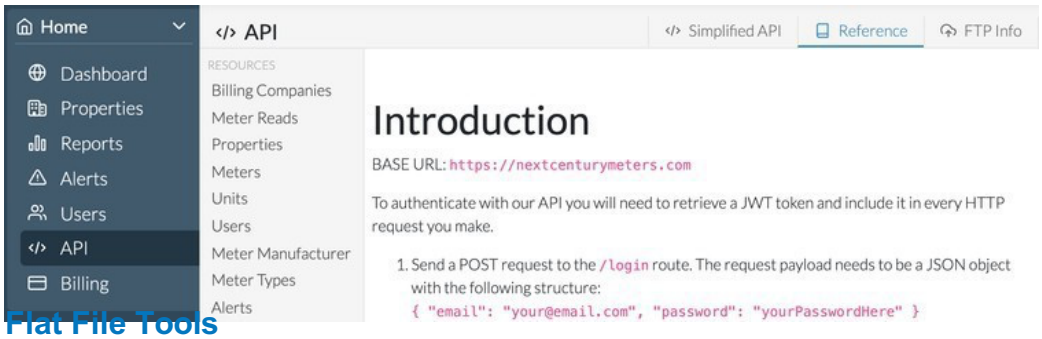
SYSTEM INTEGRATIONS

System among Systems

A critical, yet often underemphasized, aspect of AMI implementation is the integration with other key systems, such as CIS, payment vendors, and GIS. NEXT's approach prioritizes identifying all essential integration points and thoroughly assessing their impact on connected systems. Through structured discussions, the project team will collaboratively develop a comprehensive integration plan, addressing each phase—Build, Test, Initial Deployment, and Mass Deployment—while focusing on core characteristics, including objectives, capabilities, values, and technology requirements.

To further streamline the process, NextCity™ includes an embedded custom file mapping tool, which accelerates integration timelines and allows for quick adjustments as needed, ensuring a seamless, efficient integration experience.

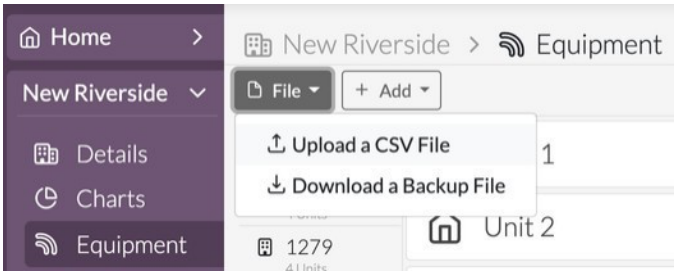
Imbedded API Tools



NEXT offers over 150 pre-built API integration pathways, ready for seamless implementation. Our library of APIs is continually expanding, ensuring transparent data access and comprehensive integration with third-party applications.

Flat File Tools

Many water utilities prefer flat file integrations, especially for their Customer Information Systems (CIS). This approach involves exchanging a text-based file between NextCity™ and the CIS vendor. The two common types of flat file exchanges are: (1) a Comma Separated Values (CSV) file, which is typically preferred, and (2) a fixed-length field file.



CIS Integrations

There are four common integrations that enable the NextCity™ headend and the CIS to function properly. These integrations are:

- **Premise Upload**. One-time integration that extracts the customer and premise information from the utility's CIS and imports it into NextCity™,
- **Meter Change Out:** Meter change out (i.e. installation) information from NextCity™ that is sent to CIS,
- **Billing Response:** Recurring data file NextCity™ sends to the CIS and contains the meter read for the specified time at the specified accounts,
- **Data Synchronization:** Sent from CIS and contains changes in customer/account information.

Advanced Integrations While flat files are the standard, NEXT can support advanced file formats (e.g., XML, JSON) or custom integrations. However, advanced integrations beyond flat files require a discovery call and a defined scope of work to accommodate additional development efforts, ensuring compatibility and functionality.

Robust | Secure | Scalable



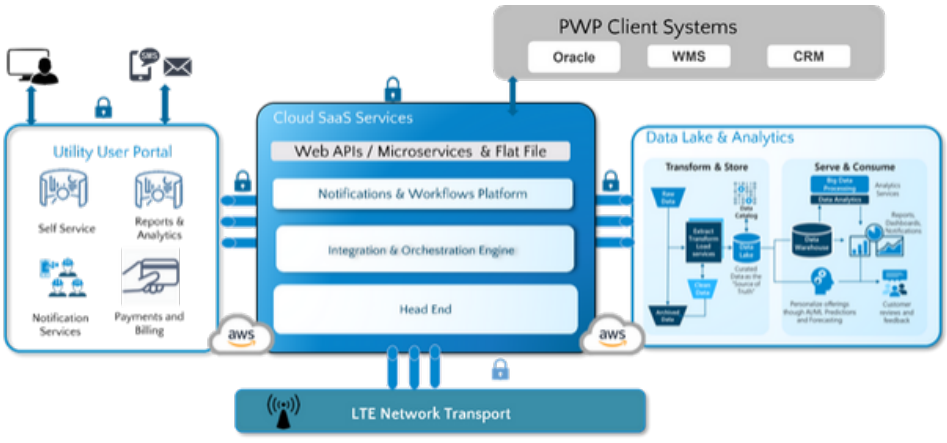
NEXT partners with AWS to deliver a reliable, secure, and scalable solution that empowers utilities to maximize their operational efficiency. By leveraging AWS's advanced infrastructure, the NEXT Platform ensures that your data is securely managed with industry-leading encryption and compliance standards. AWS's robust architecture allows NEXT to provide highly resilient connectivity and seamless scalability, handling everything from AMI endpoints to data management and software integration.

Amazon Web Services (AWS) provides robust security measures for hosting, including ISO/IEC 27018 certification and Tier IV SSAE 16-certified data centers. With over 15 security certifications in the U.S. and 14 global certifications, AWS upholds stringent standards across multiple countries. All data hosted on AWS is backed up and stored securely, with failover and disaster recovery protocols ensuring resilience against both natural and man-made threats. AWS data centers are located in the United States and designed for redundancy, with published disaster recovery testing results to ensure transparency and reliability.

Telecom carriers, including AT&T, Verizon, and T- Mobile, ensure robust data transmission security through AES 256 encryption and substantial investments in advanced cybersecurity measures.
These carriers, recognized for their leadership in IoT security, provide secure connectivity from IoT endpoints to enterprise systems, keeping customer data isolated from the open internet. LTE CAT-M
networks, dedicated to IoT applications, offer secure and private connectivity options like VPN and private network configurations, reducing security risks by limiting exposure to potential threats. Each carrier follows stringent security protocols, with practices that are proprietary and certified to meet industry standards such as ISO 27001. This commitment to security ensures that all data transmissions are fully secured from endpoint devices to cellular networks, providing reliable, isolated, and safe data handling across the IoT ecosystem.



The NextCity™ platform is built for scalability and security, utilizing AWS's big data applications, databases, and monitoring tools, like DynamoDB and EC2, to enable automatic scaling and advanced security. AWS Auto Scaling services ensure optimal performance and availability, while real-time system monitoring via the AWS dashboard provides full visibility into performance and uptime.



Data security is integral at every stage, with SSL-encrypted sessions, role-based authentication, public/private key-pair access, and optional features like two-factor authentication and customizable password reset intervals for enhanced protection. Comprehensive access logs and an auditing tool allow utilities to monitor all user activity for thorough oversight. This design ensures that as the utility's needs grow, the NextCity™ platform scales seamlessly, maintaining robust security and performance standards
across all levels.

3 PROJECT DEPLOYMENT

Project Deployment Overview

Next Meters will deliver a phased and structured deployment designed to provide the Town of Jerome with a reliable, future-ready AMI system. The backbone of the solution will be a robust RF network built on strategically placed gateways to ensure system-wide coverage and performance. To further enhance resiliency, the network design incorporates cellular backhaul as a backup, ensuring continuous data transmission even in the unlikely event of primary network disruption.

Following Notice of Award, NEXT will lead the deployment of the network infrastructure, including propagation studies, delivery, installation, and commissioning of RF gateways. System integration and CIS validation will run in parallel, ensuring the new AMI platform seamlessly connects with the Town's existing Caselle CIS. Once gateways are active and validated, the Town may begin deploying endpoints at its preferred pace. NEXT will fully support this process with training, data management, and system project oversight.

This approach offers the Town several key benefits:

- Guaranteed Performance: NEXT guarantees a minimum 98.5% connectivity rate for all deployed endpoints within a four-day billing window.
- Reliability and Redundancy: RF gateways provide stable coverage, while cellular backhaul ensures uninterrupted data flow.
- Flexibility: The Town controls the pace of endpoint deployment, supported by NEXT's training and system expertise.
- Seamless Integration: Parallel CIS testing and validation guarantee that billing, reporting, and operational workflows are fully aligned before large-scale deployment.
- Future-Ready Architecture: A scalable network design capable of supporting advanced applications such as pressure monitoring, temperature sensing, and proactive leak detection.
- Knowledge Transfer: Town staff gain hands-on training during the initial rollout and ongoing support, ensuring long-term ownership and operational independence.

Through this deployment model, NEXT provides Jerome with a proven, resilient AMI foundation that balances town-led flexibility with vendor-backed expertise, redundancy safeguards, and a performance guarantee that exceeds industry standards.

Next Installation & Deployment Approach

Next Meters will provide project management focused on data integration, system configuration, and overall deployment support rather than on-site day-to-day supervision. Our team will coordinate closely with the Town to ensure the AMI system is properly configured, tested, and aligned with the Town's CIS and MDM requirements. We will deliver clear communication, documentation, and reporting to support the Town's internal deployment schedule and long-term system success.

As part of our scope, Next Meters will install the network infrastructure—including gateways, base stations, and antennae—to ensure reliable system coverage and performance. This includes propagation studies, site verification, physical installation, configuration, and commissioning. Once installed, we will validate system functionality and provide the Town with all necessary documentation and training.

Meter installation will be managed at the Town's chosen pace. Next Meters is working with a qualified third-party installer to provide the Town with a full Turn-key solution.

IUS & NEXT Key Personnel



Stan Pachorek, Regional Sales Director
With 40 years of dedicated experience in the utility services industry, Stan has built a distinguished career working with industry leaders, including Elster, Honeywell, Krause, and Mueller. His expertise spans advanced metering infrastructure (AMI), metering technologies, and utility solutions, with a strong focus on serving the unique needs of the Southeastern United States. Throughout his career, Stan has cultivated deep relationships with utilities, municipal leaders, and industry partners, earning a reputation for delivering innovative, reliable, and cost-effective solutions. His commitment to customer success and industry knowledge has positioned him as a trusted advisor in the utility sector.



Arek Ryzak, Regional Sales Director
With more than ten years dedicated to metering and Advanced Metering Infrastructure (AMI), Arek brings deep expertise in both water and electrical systems. His career has been built on advancing metering technologies while fostering strong client relationships and delivering solutions that provide lasting value. Arek thrives on working closely with customers to understand their needs, overcome challenges, and ensure long-term success. A graduate of Purdue University, he now resides in Colorado and enjoys contributing to the growth and innovation of the communities he serves.



Julie Harper, NEXT Training Specialist
Formerly a utility billing manager herself, Julie arrives with insider knowledge of what utility billing teams deal with on a day-to-day basis and 24 years of management and training experience. Julie's attention to detail and personal experience help deliver a training experience for the utility team that connects NEXT's functionality to real life scenarios.



Drew Fosler, Integration Specialist/NEXT Customer Service
Drew possesses a unique value as he has both field experience and software integration expertise specifically for the NEXT solution. Whether Drew is onsite or remote, he has a talent for communicating education and solutions in a way that connects with everyone from the field team to the IT team to the billing team. Drew's good-natured, conscientious approach puts everyone at ease and elevates the customer experience. He has been in this role for over 5 years.



Jason Barretto, NEXT Customer Experience Manager
Jason has provided product engineering, customer service, and tech support to the tech industry for over 9 years. With a deep knowledge and talent for solutions, he has worked with a vast range of advancing and innovative tech allowing him to troubleshoot and solve any and all obstacles with the utmost knowledge and care. Arriving to NEXT and specializing in AMI technology and utility operations since 2018, Jason personally built the customer service division, ensuring the NEXT team intricately understands the AMI solution, utility objectives and solution delivery. Jason has delivered analytic, measurable success rates on customer inquiries with his division, maintaining an average of 30-60 seconds for an initial response on the chat window, and a full 5-star customer rating for the division.

DCC Installation Partner's Resume

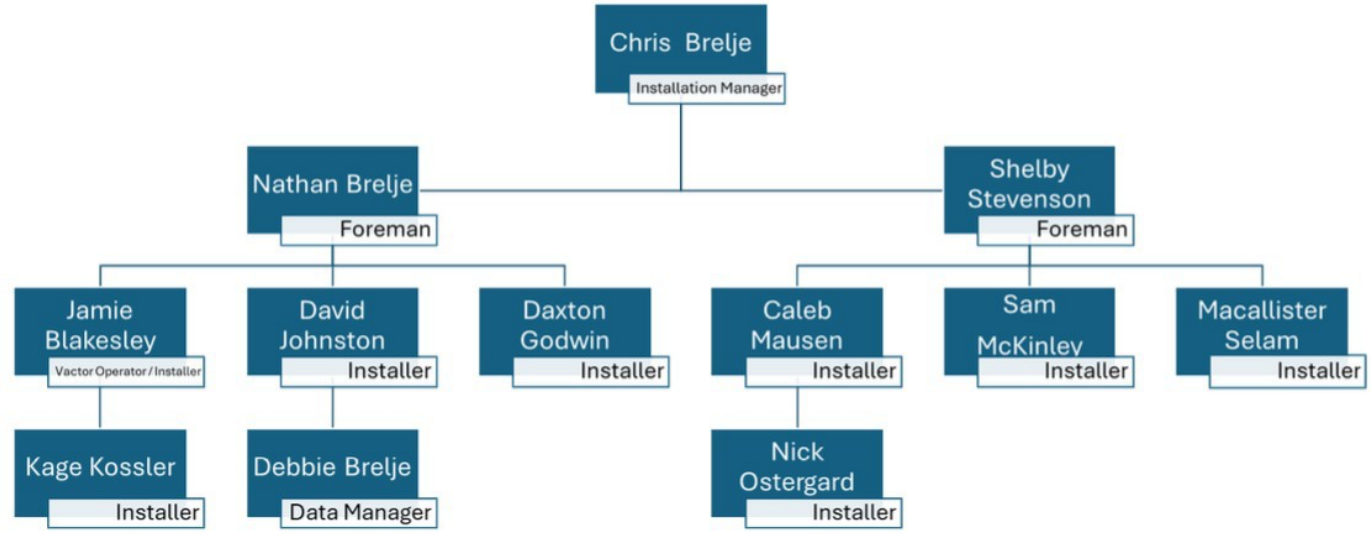
Chris Brelje is the owner of Diversified Construction and Consulting LLC. Chris will be the responsible installation manager for Breckenridge Colorado's meter installation project. He has 31 years of experience in the water municipality industry.

Chris Brelje's experience is as follows:
City of Gresham – Field Foreman (1988- 2006)
Starting as an entry level staff member, I quickly worked my way to a Field Foreman running installation and repair crews that installed residential water meters up to and including 24"commercial mag meters. I did hot taps, fire hydrant installs / rebuilds, repaired main breaks, completed vault installs and solved any other problems that a large water district would typically encounter.

City of Bend - Water Operations Supervisor (2006–2014)
I held a State of Oregon Distribution level 4 and was the city's DRC (Direct Responsible Charge). I worked with the public, delivering safe drinking water with my staff that included over60 people in the Meter and Backflow Specialist Department, Customer Service Department, R&M Field Crews, Field Inspectors, Water Billing and the Water Treatment Plant. I developed SOP's (Standard Operating Procedures) for all new staff on how to address the public. I also trained existing staff in customer service expectations as well as how to deal with hostile people and conflict resolution.

Diversified Construction and Consulting LLC – Owner (2020 – present)
We currently install water meter systems 90% of the year in Oregon, Washington, and Utah. Our operations are based out of Sunriver, OR. Staff varies in size, but we usually have 8 full-time employees and up to 9 part-time employees. Many of the part time employees live in other states and have seasonal jobs with extremely flexible work schedules.

Recent cities that we have installed AMR/AMI meters systems for are
Coos Bay, OR - 6,100 meters with mixed service line materials.
Toppenish, WA - 2,300 meters with galvanized service materials.
Cedar Hills, UT - 2,400 "Culinary" (Potable) meters with mixed service line materials and an additional 2,200 cut in "PI" (Pressure Irrigation meters). Most of those PI meters required hydro excavation ranging from 3' to 9' deep.
Our business is built on equal opportunities for all staff. We currently have 4 women on staff and 2 Native Americans. That represents 50% of our staff that has worked as installers of water meters and services for the last 4 years.



Proposed Project Timeline and Key Dates

Proposed Deployment Timeline

- December 1st, 2025 – Proposal Due
- December 2025 – Evaluation, Interviews, and Selection
- January 14, 2025 – Anticipated Notice of Award

Gateway & Infrastructure Deployment (Next Meters)

- February 15th, 2026 – Notice to Proceed (Day 0)
- By April 15th, 2026 (+60 days): Delivery of gateways, base stations, and antennae to Jerome.
- April- May 2026: On-site installation and commissioning of all gateways and supporting infrastructure, including propagation study verification.
- Late May 2026: Infrastructure validation and turnover to the Town.

CIS Integration, Testing& Validation (in parallel with gateway deployment)

- February 2026 – May 2026: Next Meters will work with Town IT to configure and validate data integration with the current Caselle CIS.
- Integration tasks will proceed in parallel with gateway installation to compress the overall schedule. Activities include:
  - Establishing secure data paths from gateways to the hosted AMI platform.
  - Conducting end-to-end validation of meter data, billing extracts, and reconciliation processes.
- This parallel track ensures that by the time gateways are commissioned, the system is already tested and aligned with CIS workflows.

Training & Knowledge Transfer

- May 2026: Initial training sessions for Town staff on installation, programming, troubleshooting, and CIS/MDM workflows.
- May – July 2026: Ongoing field-based and classroom training during the first three months of meter deployment to reinforce knowledge and address real-world scenarios.
- Deliverables include course materials, job aids, and documentation for long-term reference.

Meter Deployment (DCC)

- May 2026: With gateways live and CIS validated, the town's meter deployment beings
- Ongoing: Next Meters will provide system project management, training, and communication verification support, and will coordinate with a qualified third-party installer if requested.

4 TRAINING AND SUPPORT

NEXT University - New Customer Training Program

We are thrilled to support your onboarding with a comprehensive training proposal designed to ensure each team member can efficiently utilize our platform. This proposal outlines a structured training program to guide administrators, users, and field installers, maximizing their productivity and familiarity with NEXT's user-friendly tools. Our goal is to equip your team with the skills and knowledge to leverage the full capabilities of our platform from day one.

Sample of Training Sessions Overview:

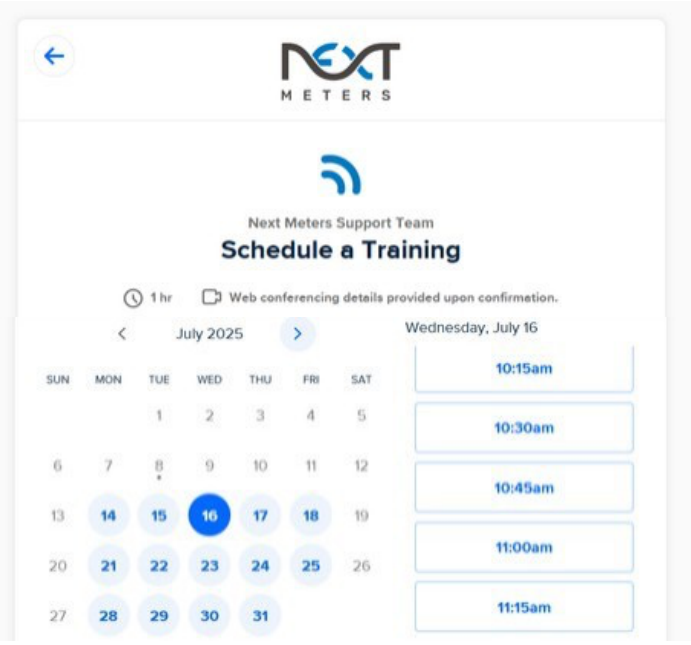
- Management/Admin Training (30 Min)
- User Training 1 - User Setup/Platform Basics (60 Min)
- User Training 2 – Advanced Controls and Features (60 Min)
- Billing Process Training
- Customer Portal Setup and Service
- Hardware Install/Field Training

"In 20+ years of AMI, as a vendor, user and salesman this was the best AMI system training I have ever been a part of"

Gregg Smith - PSI

Continuous Training for Continuous Confidence

To keep your team sharp and up to date long after the initial rollout, we also provide flexible refresher trainings tailored to every user role — whether it's a deep dive for network administrators, practical sessions for customer service staff, or hands-on guidance for field technicians. These retraining sessions help reinforce best practices, introduce new features as they're released, and ensure that every team member can confidently operate, configure, and troubleshoot the system as your needs evolve. Sessions can be easily scheduled anytime through our website, giving your utility the peace of mind that expert support and continuous improvement are always just a click away.

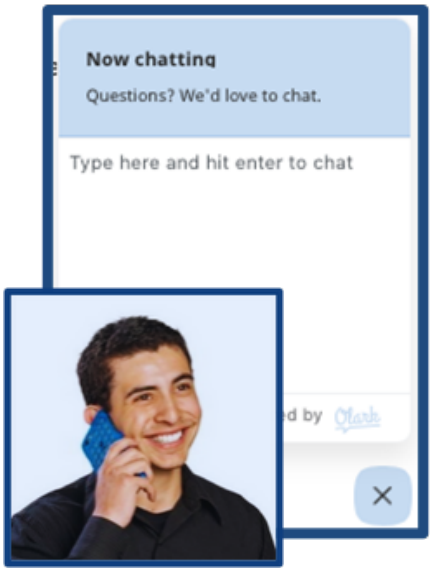


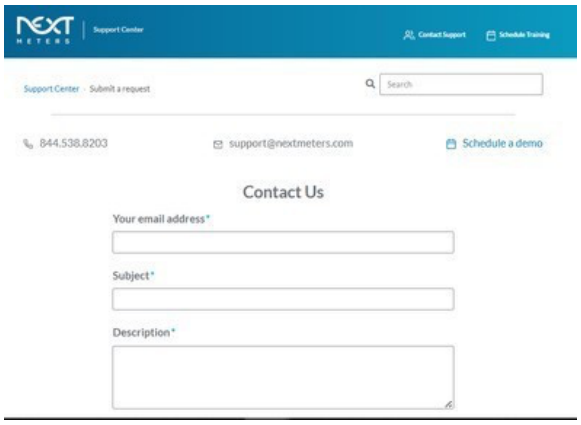
On-going Support

Committed to Long Term Success

NEXT is committed to partnering with utilities for the entire lifespan of the system. This support encompasses every aspect of the NEXT Platform, including AMI endpoints, connectivity, onboarding, installation, integration, software, and ongoing assistance. Our dedicated experts are available on demand, ensuring the success of each utility.

NEXT takes an account manager approach to every customer relationship, assigning a dedicated account manager who serves as the single point of contact after installation is complete. This account manager's mission is to ensure each customer stays fully trained, properly installed, and continuously supported — and that our solutions consistently meet or exceed expectations. Backed by direct access to our technical, integration, and training teams, your account manager will coordinate any additional support you need, acting as a trusted partner committed to your utility's long-term success.



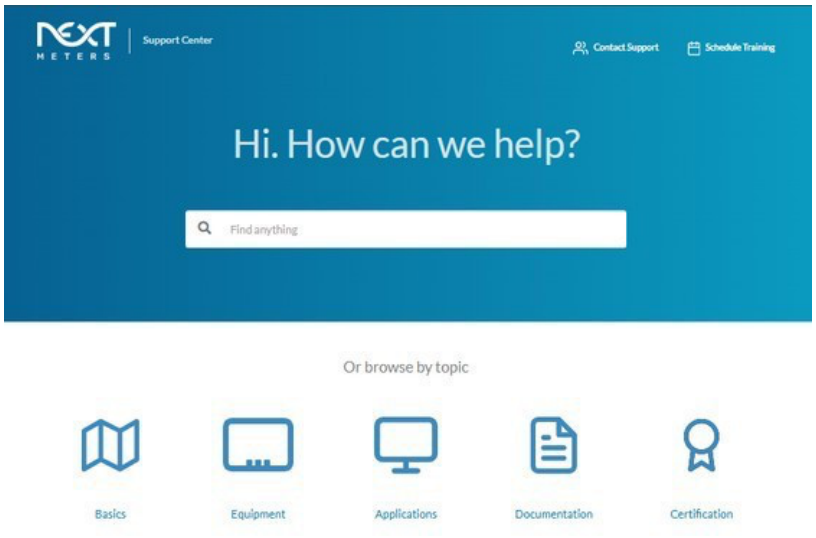


Immediate Support

We provide live phone, chat, and email support from 5 a.m. to 4 p.m. PST on weekdays. Our support team delivers prompt, real-time assistance at no additional cost for the entire lifespan of your system. Average response time for live chat is just 30–60 seconds, with a consistent 5-star satisfaction rating. Extended email support is available 24/7, with guaranteed responses within 48 business hours. For critical system emergencies, our 24/7 support line ensures issues are resolved quickly and efficiently.

Support Center

In addition, NEXT includes an online Knowledge Center with FAQs, instructional videos, and step-by-step tutorials, providing easy access to information whenever you need it. Our Support Center also offers a comprehensive library of product documentation, how-to guides, installation manuals, videos, and white papers — ensuring your team always has the resources to work smarter and solve problems fast.





5 FINANCIAL HEALTH

Statement of Financial Health

Next Meters Global LLC

Next Meters Global LLC, operating as Next Meters and Next Century Submetering Systems, is a financially stable and well-capitalized organization with a strong track record in delivering metering technology solutions to commercial, residential, and municipal clients across North America and Canada. Our mission is to promote the conservation of utilities for the betterment of our communities. We stand out as we design both the hardware and the software for our products which provides a fully integrated product and a seamless customer experience. We have an amazing support team that provides top shelf service. We'll help get our system implemented as well as keep it running day in day out. We have been operating for over 10 years. We have over 3.5 million devices deployed. Metering is about accountability and we hold ourselves accountable for our products as well as our customers' experience with those products.

Our financial health is demonstrated by the following key indicators:

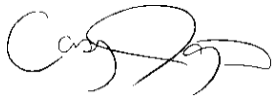
1. Strong Capital Base
   The company maintains a healthy balance sheet, supported by equity investments and consistent reinvestment in operations and product innovation. Our financial structure ensures long-term viability and scalability for large infrastructure projects such as municipal metering initiatives.
2. Consistent Revenue Growth
   Over the past several years, Next Meters Global has achieved year-over-year revenue growth driven by increasing adoption of our wireless metering technologies and expanding customer base. We invest in our products, staying on the leading edge of technology. We take on the difficult things so that the customer can enjoy a product that works and is simple to use.
3. Positive Cash Flow & Liquidity
   The company maintains positive operational cash flow that is reinvested into the company to support further R&D efforts, investment in fixed assets and inventory as well as providing a return on investment to owners. We have the financial flexibility to manage large-scale deployments and ongoing system support. We have healthy relationships with our banking partners.
4. Minimal Debt and Conservative Leverage
   Next Meters Global operates with conservative long-term debt, ensuring low financial risk and operational independence. Our conservative fiscal approach positions us well to

absorb market fluctuations while maintaining a commitment to product quality and client satisfaction.

5. Experienced Financial Leadership
   The company is led by a seasoned executive team. Our internal controls, financial reporting systems, and strategic planning processes are aligned with best practices and audited regularly. We have a long-term focus which guides the operational decisions that are made on a day-to-day basis.
6. Vendor & Customer Confidence
   We maintain strong relationships with our contract manufacturers, suppliers, distributors, and customers, including property management groups, billing companies, and municipal entities. Our financial reliability is a key factor in our ongoing partnerships.

Next Meters Global is well-positioned to undertake and fulfill the requirements of this municipal metering project. Our financial strength, paired with our technical expertise and proven operational capacity, ensures we can deliver quality products with the highest level of service. We welcome the opportunity to provide additional financial documentation, including audited financial statements, credit references, or bank letters, upon request and under mutual NDA.

Regards,



Casey Jorgensen,
CFO Next Meters Global, LLC

6 PROJECT PRICING & REFERENCES

Proposal Introduction – AMI Endpoints on Existing Meters

This proposal allows the Town of Jerome to replace its existing meters while modernizing communications through deployment of the NC4 AMI endpoint with the NEXT Connect AMI stack. The NC4 endpoint is fully compatible with all encoded output meters, including pulse-output models.

This compatibility provides the Town with significant flexibility: existing meters can continue to be utilized and optimized, while replacement or upgrades can occur as needed over time.

The following section provides a line-item breakdown of materials, labor, software, integration, and service costs specific to this option.

Cellular Activation fee added in the event the Town wanted Cellular Backup on their meters. This function is already built in, but is not required.

Pricing Notes and Assumptions

Pricing Notes:

- Flexible Financing: Financing options available in 3-, 5-, 7-, and 10-year terms. First payment can typically be deferred for up to 18 months.
- Training Support: Onsite training is available and can be customized to align with the project timeline and the utility's operational needs.
- We have included an assumed 3% annual increase after 24 months

General Assumptions

- Ownership of removed meters will remain with the Utility unless otherwise agreed upon in writing. Removal of existing
- meters is included in the scope; however, disposal and/or storage of removed meters is the responsibility of the Utility. The
- Utility will provide a staging and storage location for all project materials unless this service is specifically included in the Contractor's scope.
- Storage conditions must be secure, weather-protected, and accessible. The
- Utility will provide a dumpster and handle all waste removal.
- The Utility will provide accurate and complete customer address and account data prior to deployment. Public
- communications are the responsibility of the Utility unless otherwise specified.
- The Utility will facilitate access to locked or gated properties.
- The project timeline assumes continuous and uninterrupted access to all installation locations during normal business hours.
- Delays due to weather, access restrictions, or Utility-requested pauses may result in schedule adjustments or change orders.
- Any delays in approval, or changes to project scope, may require repricing.
- All final terms and agreements are subject to negotiation and execution of a formal contract.

References

NOTE: Through a recent merger, the Fenix USA has become NEXT Meters. Legacy customers may still identify their system as a "Fenix" solution.

Utility Name: City of Maquoketa, IA Contact: Joey Trivette
Email: jtrivette@alliancewater.com
Phone: (563) 503-9742
Location: Maquoketa, IA
Number of Meter Accounts: 2,600 Meter Type: Kamstrup/Diehl System Type: Cellular AMI

Utility Name: Palacios, TX Contact: Cindy Raleigh
Email: craleigh@cityofpalacios.org
Phone: 361 972 3605
Location: Palacios, TX
Number of Meter Accounts: 2,350 System Type: Cellular AMI

Utility Name: Wilcox, AZ Contact: Robert Linton
Email: rlinton@willcox.az.gov
Phone: 520-766-4464
Location: Wilcox, AZ
Number of Meter Accounts: 1820 System Type: Cellular AMI

Utility Name: Silma, CO Contact: Myke McCune
Email: Myke@townofsimla.com
Phone: 7193689178
Location: Silma, CO
Number of Meter Accounts: 320 System Type: Cellular AMI

7 REQUIRED FORMS

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

None

REQUIRED FOR SUBMITTAL

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by Innovative Utility Solutions LLC,

a corporation organized under the laws of the State of Arizona, a partnership consisting of _____

_____, or an individual trading as _____ of the

City of _____, and holder of Arizona State Contractor's License(s):

Classification(s) _____

No.(s) _____

Respectfully Submitted,

Innovative Utility Solutions LLC
Respondent

4158 Nyala Drive Colorado Springs, CO 80922
Address

Stan Pachorek Sales Director
By (Officer & Title)

November 26th, 2025
Date

ATTEST:

_____
(Officer and Title)

_____
Witness (if respondent is an individual)

Town of Jerome

Proposal Document B – Fee Proposal

Respondent Innovative Utility Solutions LLC

Mailing Address 4158 Nyala Drive

City Colorado Springs State CO Zip 80922

Telephone (719)-627-1436

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 3/4" AMI Meter	299		$240.77	$71,990.23
2	1" threaded AMI Meter	17		$358.68	$6,097.56
3	1 ½" flanged AMI Meter	13		$1,352.38	$17,580.94
4	2" AMI Meter	2		$1,495.90	$2,991.80
5	4" AMI Meter	1		$7,526.35	$7,526.35
6	AMI System Software	1		$18,315.92	$18,315.92
7	AMI System Training	1		$15,000.00	$15,000.00
8	AMI Data Collection Hardware/Software	1		$15,163.10	$15,163.10
9	FCC Registration	1		$1,593.60	$1,593.60
SUBTOTAL COSTS – BASE PROPOSAL				$61,046.70	$156,259.50
GRAND TOTAL, BASE PROPOSAL				**$156,259.50**	

GRAND TOTAL – BASE PROPOSAL (in words): All Next Meters have built in RF Technology for drive by backup.

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Innovative Utility Solutions LLC

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 26th, day of November 2025.

Stan Pachorek	(480)-678-1668
Signature	Phone Number
Stan Pachorek	stan@iuswater.com
Written Name	Email Address

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Innovative Utility Solutions LLC

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 26th, day of November 2025.

Stan Pachorek	(480)-678-1668
Signature	Phone Number
Stan Pachorek	stan@iuswater.com
Written Name	Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Innovative Utility Solutions LLC

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 26th, day of November 2025.

Stan Pachorek	(480)-678-1668
Signature	Phone Number
Stan Pachorek	stan@iuswater.com
Written Name	Email Address

8 ADDENDUM 1 – PROPAGATION STUDY & CCA

Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

SUMMARY INFORMATION

Service Area (square miles)	**1 +/-**
Total Endpoints	**Water 332 +/-**

REQUEST INFORMATION

Solution Architect:	Jason Barretto
Account Manager:	Hunter Pittman

INFORMATION PROVIDED

	FILE NAME	DATE RECEIVED
Coverage Request For:	Meter Location_Numbers_Sizes.xls	10.27.25
Endpoint Locations:	**Jerome AZ**	10.27.25

ANALYSIS COVERAGE AREA

Analysis is based on service location addresses provided by Arek Ryzak with 323 water addresses geocoded.

Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

ENDPOINT LOCATIONS MAP – WATER

Next CCA - Jerome AZ - Addresses



Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

COLLECTOR COVERAGE ANALYSIS

Collector Coverage Analysis was conducted using the available information and assumptions stated in this document. Study Assumes water meters mounted under plastic lids. Some areas may have lower signal levels and field evaluation is recommended to confirm full coverage.

Collector Type	Location	Height	Latitude	Longitude
NextLink	Jerome Grand Hotel – Roof	~50 – 75 FT	34.747673	-112.11494
NextLink	Pole Install 1	8 FT	34.75628	-112.11688
NextLink	Pole Install 2	8 FT	34.75126	-112.10376

Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

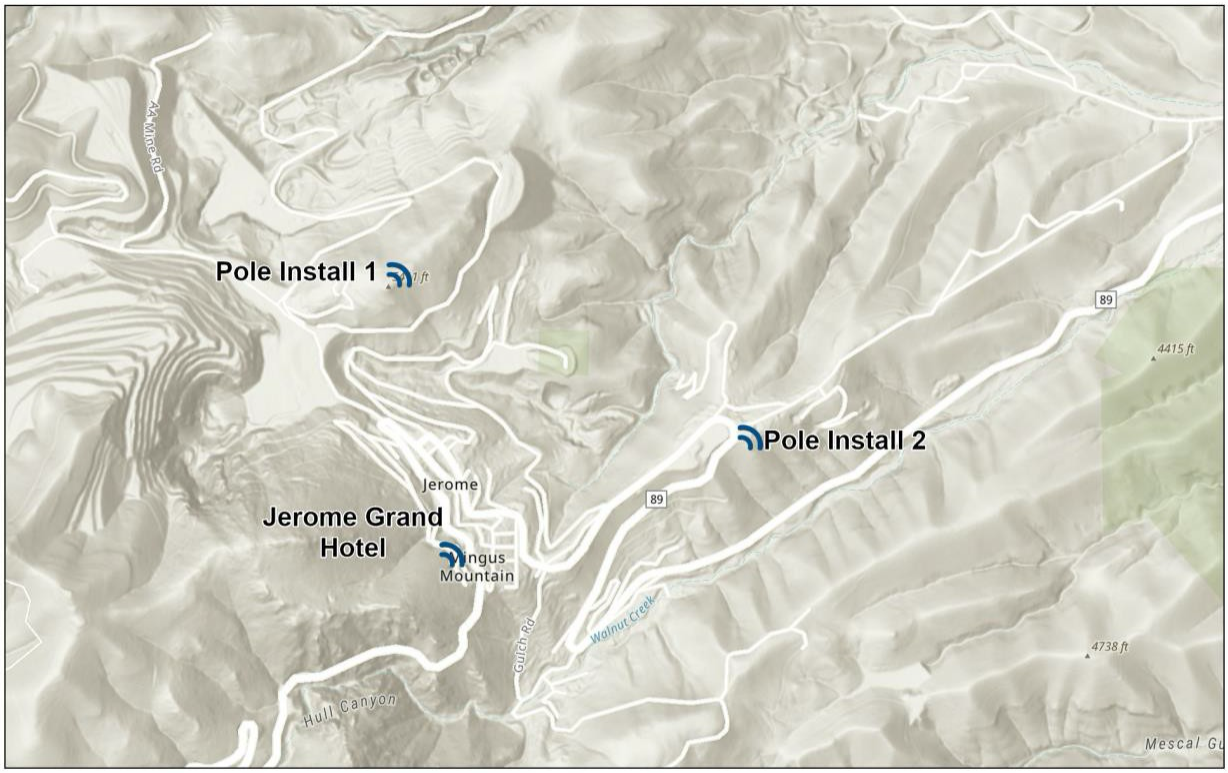
Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

Proposed Collector Locations

Next CCA - Jerome AZ - Collector Locations



11/5/2025

Collector GPS

World_Hillshade

1:20,000

0 0.13 0.25 0.5 mi

0 0.23 0.45 0.9 km

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

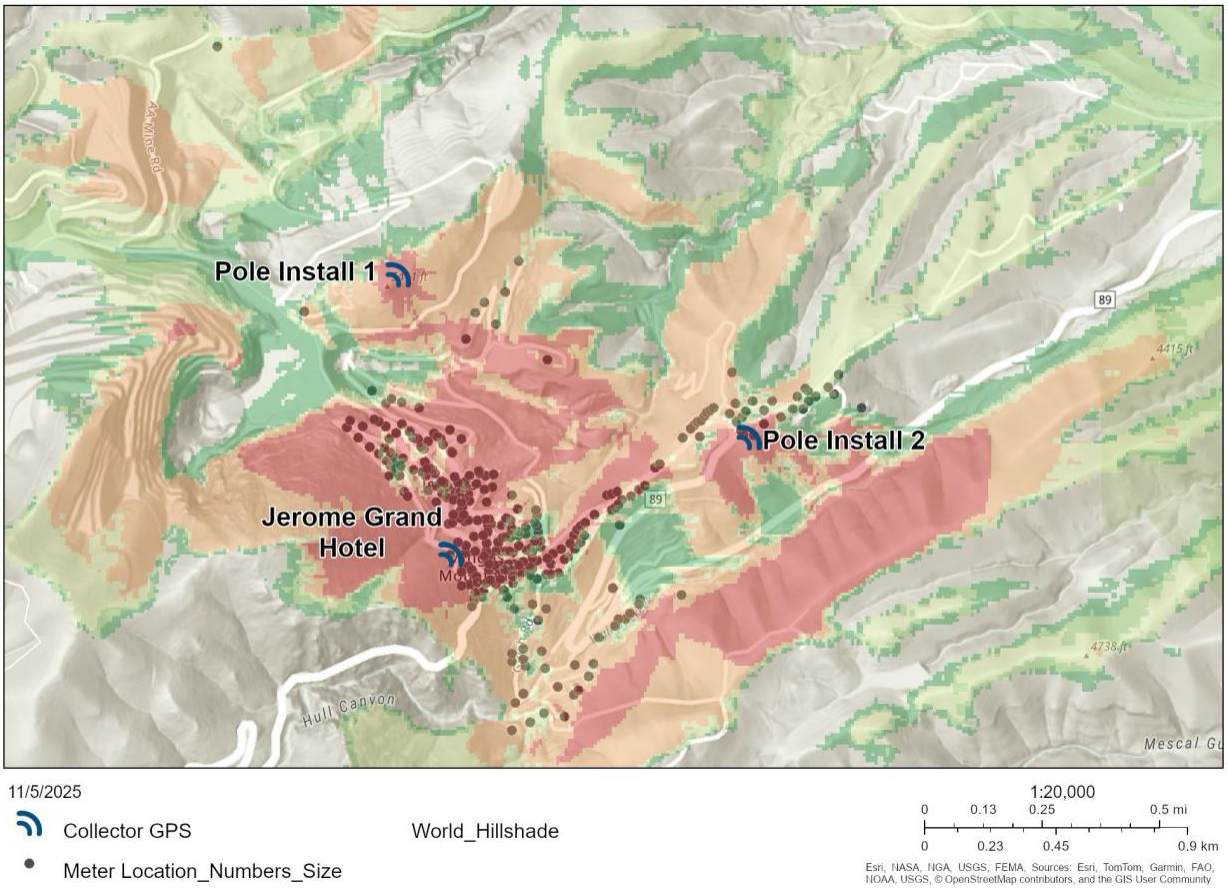
Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

Collector Propagation:

Next CCA - Jerome AZ - Collector Propagation



RF Legend

Good signal — Low Signal

dBm -60 -80 -105

Next City® AMI Solution

NEXT ® Collector Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

ASSUMPTIONS MADE

- Submitted information including but not limited to street addresses, service area, GPS coordinates, and meter locations are accurate.
- If GPS coordinates or a GIS shapefile are not provided for endpoint locations, street addresses are geocoded into decimal-degree Latitude and Longitude using ESRI's StreetMap Premium for ArcGIS North America HERE address locaters.
- Data from third party providers such as USGS National Elevation Dataset (NED), USGS National Land Cover Database (NLCD), Tele-Atlas municipal boundaries, cellular providers, and the RF propagation software used by NEXT is accurate.
- NEXT endpoints are installed and maintained according to "NEXT Water Endpoint Installation Manual" using a NEXT approved endpoint installation kit in a location that allows two-way communication between the endpoint and the collector network
    - Pit or vault installation are through a non-metal pit lid and the pit or vault lid is at or above grade
    - Indoor installations are mounted as high as possible in the floor joists above grade on an exterior wall

CLARIFICATIONS

- Cellular coverage within the utility service area is required to deploy NEXT cellular endpoints.
- Review the collector coverage analysis with your NEXT representative to understand how it may be used by the utility as a tool to deploy the system.
- All endpoints are to be installed in compliance with the published NEXT installation guidelines.
- The Next City collector coverage analysis is subject to change for reasons which may include but are not limited to; consultation with the customer, site visit by NEXT authorized personnel, and the availability of new or updated information.

Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

SUMMARY INFORMATION

Service Area (square miles)	**1 +/-**
Total Endpoints	**Water 332 +/-**

REQUEST INFORMATION

Solution Architect:	Jason Barretto
Account Manager:	Hunter Pittman

INFORMATION PROVIDED

	FILE NAME	DATE RECEIVED
Coverage Request For:	Meter Location_Numbers_Sizes.xls	10.27.25
Endpoint Locations:	**Jerome AZ**	10.27.25

ANALYSIS COVERAGE AREA

Analysis is based on service location addresses provided by Arek Ryzak with 323 water addresses geocoded.

Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

ENDPOINT LOCATIONS MAP – WATER

Next CCA - Jerome AZ - Addresses



10/30/2025

Meter Location_Numbers_Size

World_Hillshade

1:20,000

0 0.13 0.25 0.5 mi

0 0.23 0.45 0.9 km

Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

CELLULAR COVERAGE ANALYSIS

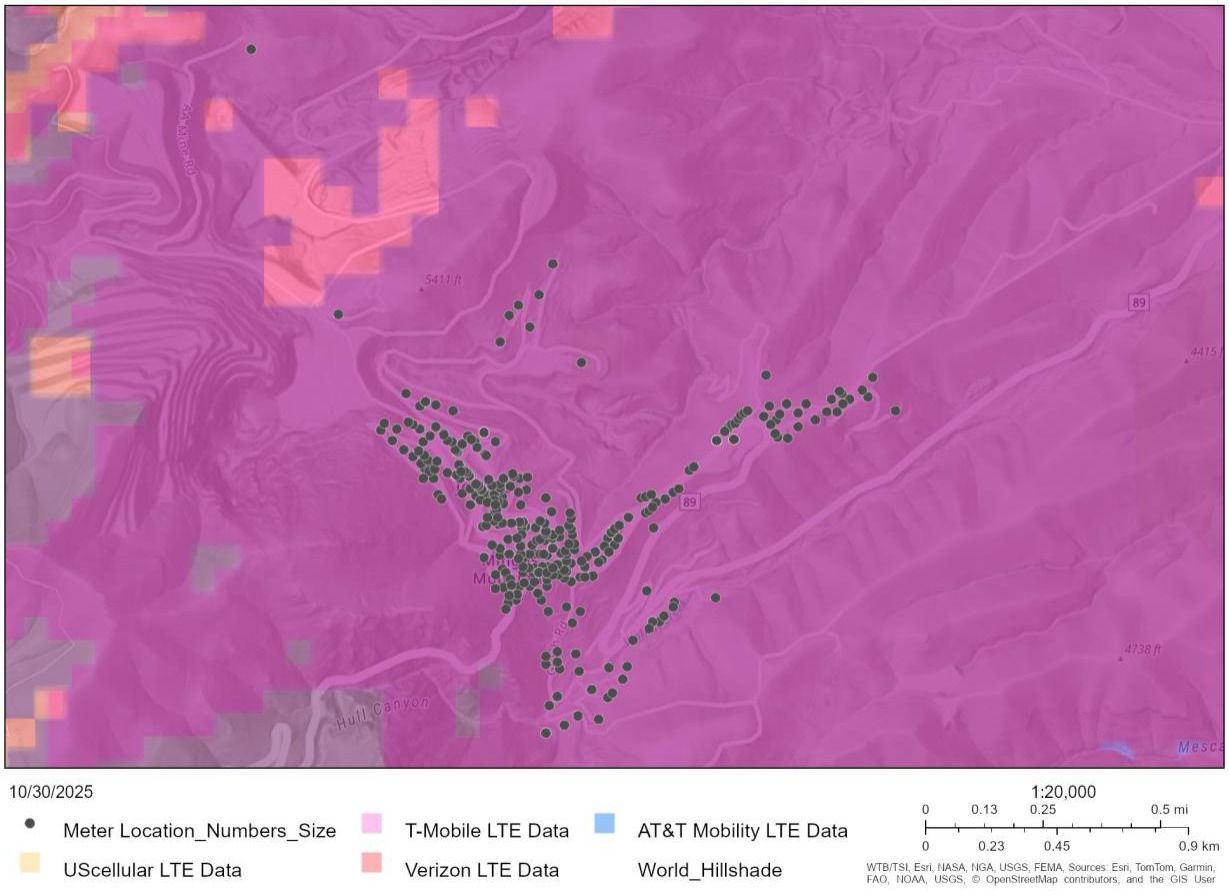
A check of our cellular network providers' Machine-to-Machine (M2M) cellular network coverage for the service locations provided has indicated that LTE-M cellular coverage is available. This service area has LTE-M coverage displayed below according to AT&T, T-Mobile, Verizon, US Cellular data and coverage maps. Some areas may have lower signal levels and field evaluation is recommended to confirm full coverage.

Quad - US Cellular / T-Mobile / Verizon / AT&T:

WATER:

100% Estimated coverage across T-Mobile/ Verizon/ AT&T/ US Cellular

Next CCA - Jerome AZ - Quad



Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

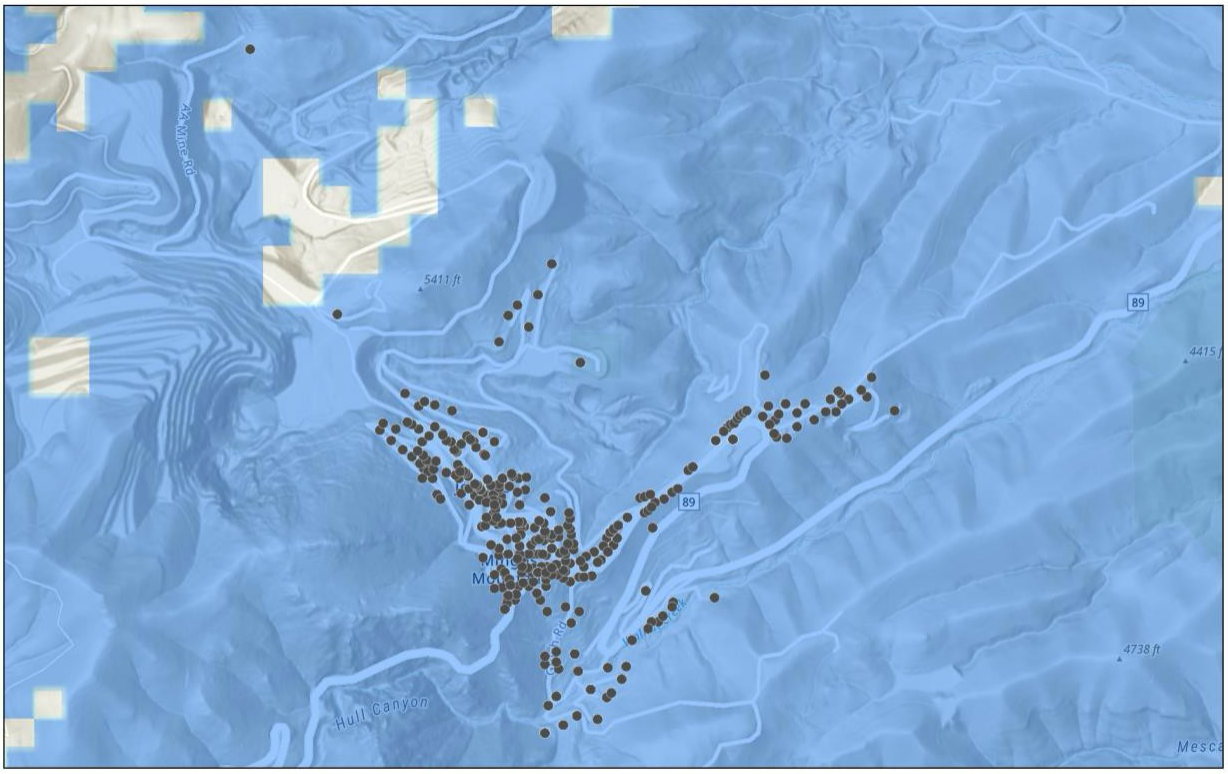
Project: Jerome AZ

Revision: 1.0

AT&T:

WATER:
100% Estimated coverage across AT&T

Next CCA - Jerome AZ - AT&T



10/30/2025

Meter Location_Numbers_Size

AT&T Mobility LTE Data

World_Hillshade

1:20,000

0 0.13 0.25 0.5 mi

0 0.23 0.45 0.9 km

WTB/TSI, Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

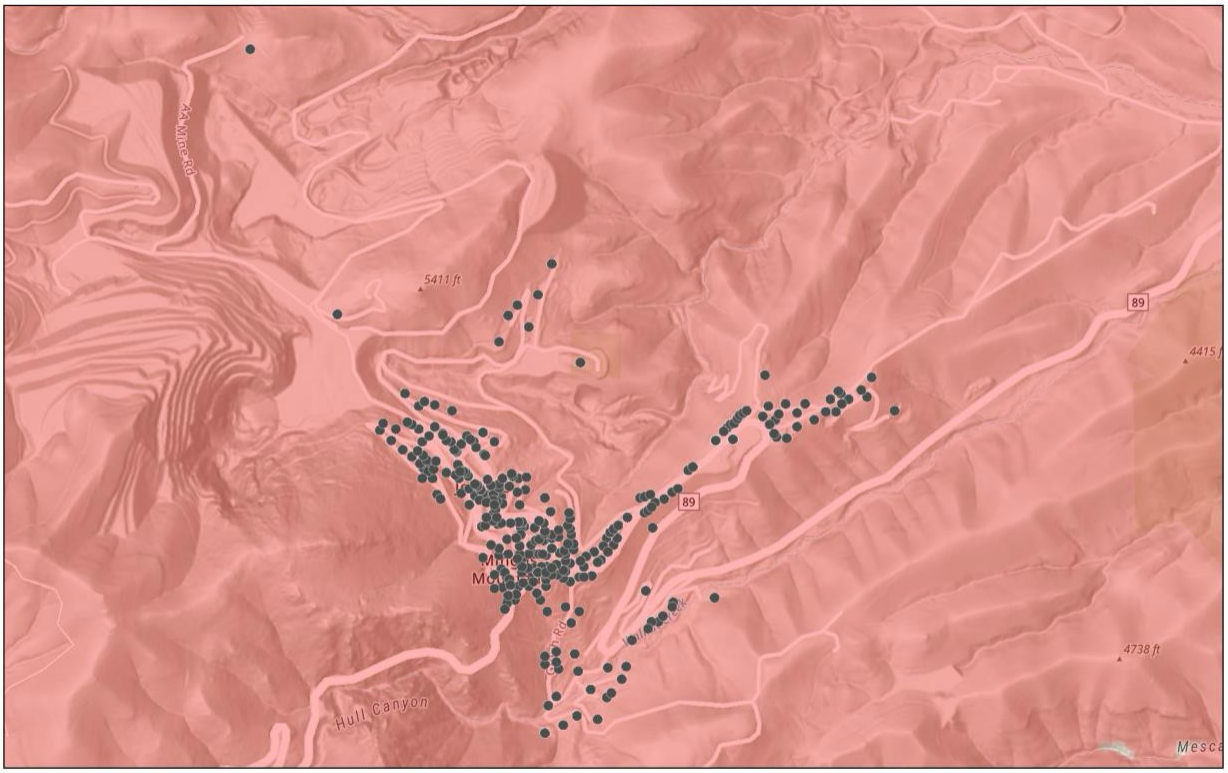
Project: Jerome AZ

Revision: 1.0

Verizon:

WATER:
100% Estimated coverage Verizon

Next CCA - Jerome AZ - Verizon



10/30/2025

Meter Location_Numbers_Size

Verizon LTE Data

World_Hillshade

1:20,000

0 0.13 0.25 0.5 mi

0 0.23 0.45 0.9 km

WTB/TSI, Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

T-Mobile:

WATER:
100% Estimated coverage T-Mobile

Next CCA - Jerome AZ - T-Mobile



Next City® AMI Solution

NEXT ® Cellular Coverage Analysis (CCA)

Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

US Cellular:

WATER:

NO US Cellular coverage found in area

Next CCA - Jerome AZ - US Cellular



Customer: Jerome AZ

Date Issued: 10.30.25

Project: Jerome AZ

Revision: 1.0

ASSUMPTIONS MADE

- Submitted information including but not limited to street addresses, service area, GPS coordinates, and meter locations are accurate.
- If GPS coordinates or a GIS shapefile are not provided for endpoint locations, street addresses are geocoded into decimal-degree Latitude and Longitude using ESRI's StreetMap Premium for ArcGIS North America HERE address locaters.
- Data from third party providers such as USGS National Elevation Dataset (NED), USGS National Land Cover Database (NLCD), Tele-Atlas municipal boundaries, cellular providers, and the RF propagation software used by NEXT is accurate.
- NEXT endpoints are installed and maintained according to "NEXT Water Endpoint Installation Manual" using a NEXT approved endpoint installation kit in a location that allows two-way communication between the endpoint and the cellular network
    - Pit or vault installation are through a non-metal pit lid and the pit or vault lid is at or above grade
    - Indoor installations are mounted as high as possible in the floor joists above grade on an exterior wall

CLARIFICATIONS

- Cellular coverage within the utility service area is required to deploy NEXT cellular endpoints.
- Review the cellular coverage analysis with your NEXT representative to understand how it may be used by the utility as a tool to deploy the system.
- All endpoints are to be installed in compliance with the published NEXT installation guidelines.
- The Next City cellular coverage analysis is subject to change for reasons which may include but are not limited to; consultation with the customer, site visit by NEXT authorized personnel, and the availability of new or updated information.

8 ADDENDUM 2- PRODUCT SPECIFICATION SHEETS

Specifications & Installation Guide

NextMeter Outdoor

Ultrasonic Meter with NextConnect™ Wireless



The ultrasonic NextMeter Outdoor (NM4-O) combines advanced solid-state measurement technology with the NextConnect wireless platform, giving users the flexibility to customize their solution as their needs change.

Next Ultrasonic Technology

The NextMeter combines advanced ultrasonic technology with the industry's leading AMR solution in a simple, user-friendly design, ensuring seamless deployment while delivering significant savings on installation costs.

NextMeter's ultrasonic technology precisely detects even the smallest flows and maintains exceptional accuracy across all flow rates. With no moving parts to degrade, this reliability and precision are sustained throughout the meter's entire lifespan.

Flexible Communications

The NextConnect wireless solution equips all meter endpoints with 5G LTE cellular communication, enabling direct meter reading within coverage areas. Additional built-in wireless technologies offer redundancy and scalability, enabling fixed-network, walk-by, and drive-by reading options.

Durability

The NextMeter's solid-body design ensures exceptional strength and long-term, maintenance-free operation. Its seamless flow-body eliminates internal gaskets, a common failure point in traditional meters. Constructed with an advanced glass-reinforced polymer, it offers superior durability, resistance to deterioration, and safeguards against water contamination.

Key Benefits

- Multi-carrier 5G LTE-M cellular
- Extra large 10-digit LCD display for easy reading
- Drives revenue gains with maximum recapture rates
- Minimal head loss due to open flow-tube design
- Easily switch between walk-by, drive-by, fixed-network, and cellular reading technologies
- Real-time data and alerting
- NTEP Approved
- IP 68 rated for outdoor use
- Output for use with pulse or encoded end-points

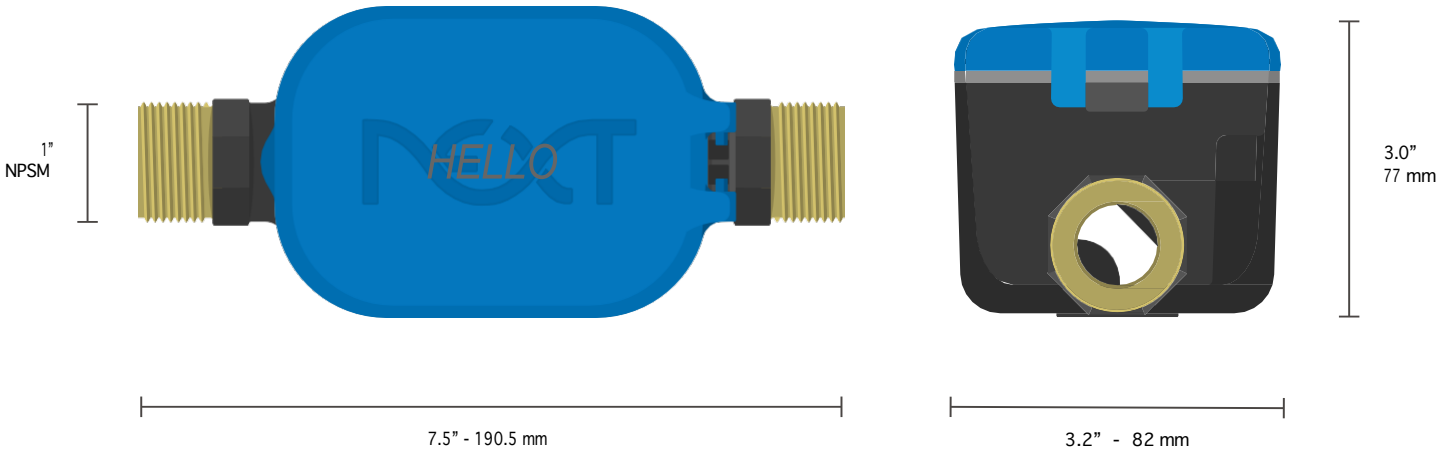
Warranty

- 20-year warranty

Specifications & Installation Guide

Specifications

Dimensions



Applications

Models	Meter Size	Connection (NPSM)	Lay Length	Max Flow (GPM)
NM4-O ¾"	⅝" x ¾"	1"	7 ½"	25
NM4-O ¾"	¾" x ¾"	1"	7 ½"	30
NM4-O ¾"	¾" Full*	1"	9"	30
NM4-O 1"	1" Full*	1.25"	10.75"	50

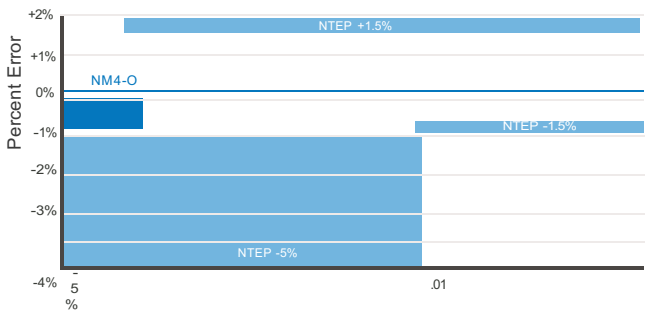
** Available with 1 ½" extension coupling*

Approvals

FCC ID: 2A8EC-NM4O (*Pending*) | IC: 28950-NM4O (*Pending*)
NSF/ANSI/CAN 61 & 372
NTEP/CTEP Approval 23-055
Conforms to AWWA C715-18

Performance

Measures flow as low as .01 gpm and up to 30 gpm
Exceeds AWWA accuracy standards



Temperature

Accuracy tested up to 150° F | 66°C

Environment

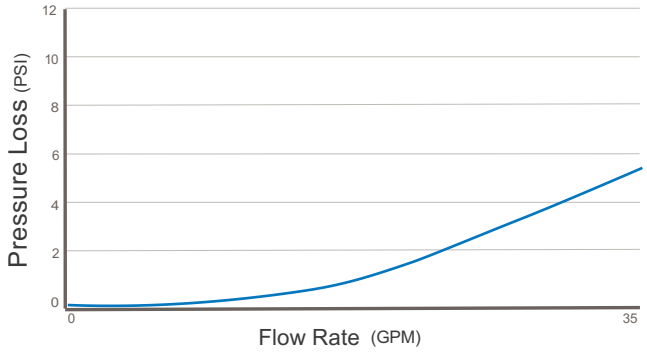
Indoor or outdoor installation
Ambient Temp: 33°F to 140°F | 1°C to 60°C
Optimal Storage Temp: 0°F to 100°F | -18°C to 38°C

Outputs

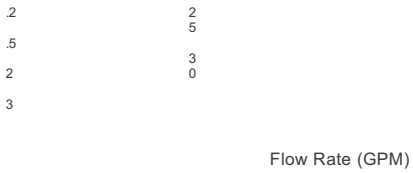
Pulse and encoded output with accessory cable

Pressure

Up to 200 psi operating pressure
Minimal head loss: less than 2 psi at 15 gpm



551


.2
.5
2
3
2
5
3
0
Flow Rate (GPM)

Specifications (cont.)

Power

Typical 20+ year battery longevity

Communications

Multi-carrier 5G cellular with simple LTE-M

Built-in NextConnect radio 902-928 MHz wireless

Includes walk-by, drive-by, and fixed-network technologies

Data

Web and mobile app (Android & iOS)

API access to interval data

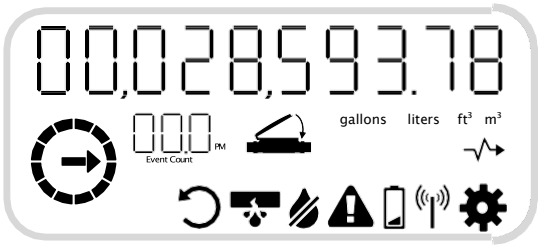
Hourly high-resolution meter read

Ambient and water temperature

Flow profiling with abnormal & reverse flow detection

Cloud-configurable alerts and notifications

LCD Display



The LCD displays a 10-digit meter read, as well as the current flow rate and unit of measure. The flow indicator wheel spins when any flow is detected. The following status icons will show when applicable:


LCD display is inactive; close lid, then open again to view active display


The flow tube is dry


A burst pipe has been detected


Battery has less than 10 months remaining


Transmitting meter read data


Wired output, pulse is being sent


The meter is accepting a new configuration



Shows in place of the flow rate, count increments when meter configuration updated

Warranty

Next Meters warrants the NM4-O to be free from defects under normal use for a period of 20 years from the date of manufacture.

For full warranty information, please refer to the Data Gathering System Warranty document.

docs.nextmeters.com/warranty

Due to continuous product improvement and the need to comply with evolving regulations, Next Meters reserves the right to modify product specifications without prior notice.

Contact

For additional information or assistance, please visit our Support Center or contact our Product Support Team:

support.nextcenturymeters.com

(844) 538 8203

support@nextcenturymeters.com

Specifications & Installation Guide

Installation

Qualifying Installations

The meter location must have su"cient finished clearance to facilitate reading, inspection, and eventual replacement of the meter or coupling gaskets.

Building plumbing engineering must comply with local building code and e!ectively prevent backflow through system design which may include backflow prevention check valves.

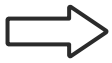
Design of plumbing system should include a shuto! valve upstream of the meter to facilitate future maintenance of the meter and other plumbing components.

Installation Instructions

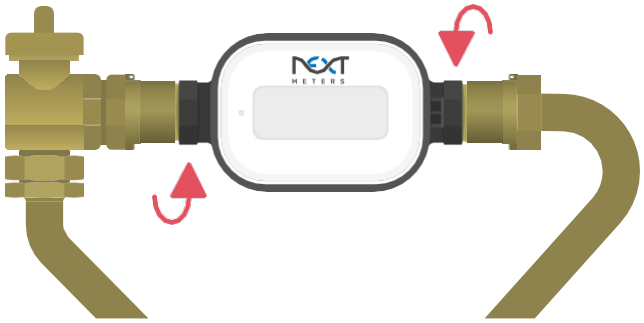
Ensure that supply lines are in alignment. Do not rely on tightening the connection to pull pipes together or into alignment.

Before installation, ensure that the water line has been turned o! and that the meter connection is the correct size. Use couplings when necessary.

The meter must be installed in the correct direction of flow. The flow direction arrows can be seen on both sides of the meter.



Place the meter in the meter setter. Tighten to no greater than 15 ft-lb of torque or as specified by the meter setter supplier.

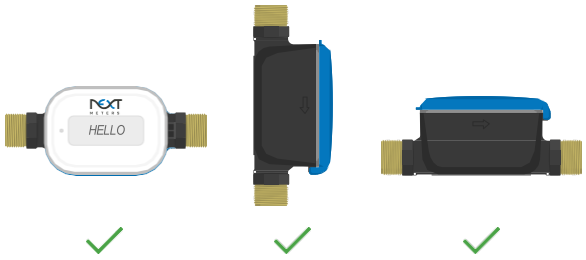


Inline Options

When electrical grounding of the water supply line is required, an approved bonding jumper should be installed.

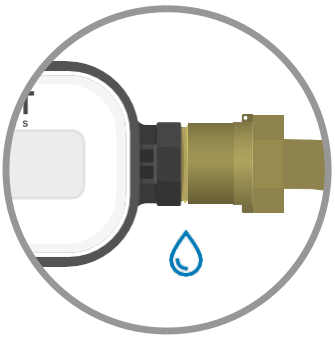
The NextMeter Outdoor can be installed horizontally or vertically.

Orient the register display facing the direction that will be most convenient for reading.



Pressurizing Line

The NextMeter will begin measuring flow once air has evacuated and water has completely filled the line.



After pressurizing, carefully inspect the connections for moisture to ensure a water-tight connection has been made.

Specifications & Installation Guide

Programming & Wireless Communication

Programming & Configuration

Programming is the process of associating the meter's serial number with the unit number and water utility type where it is installed.

To quickly program a large number of devices at once, you can use the CSV file uploader tool on the NextCity Web Portal. The web portal also o!ers a rapid programming interface to program additional devices later on.

The NextCity Mobile App is ideal for on-site programming, verification, and troubleshooting.

App Store
iOS App

Google Play
Android App

Location Setup

Using the web or mobile app, create the location of the installation by adding the street address. Then add the serial number of the equipment being installed.

Scan the Meter's Barcode

Using a the mobile app's built-in barcode scanner or an accessory barcode scanner, input the serial number of the meter.



Enter any location, pictures, or description information that will be useful for tracking and maintenance.

Wireless Communication

Open the cover of the NextMeter to initiate a two-way wireless check-in.

The meter's LED indicator will blink green two times verifying its connection to the Cloud.



If green blinks are not seen, connect a Meter Out Antenna or install a NextLink Cellular Repeater nearby.

The meter cover can be closed and opened again to retry. If green blinks are not seen after retrying, additional network equipment may be necessary.

Resident App



This service gives residents the ability to view meter data, analyze usage trends, and receive critical alerts on their mobile devices.

Enable the Leak Monitoring Service subscription for optional immediate alerting of sustained high-flow (burst pipe).

Once configured, alerts will automatically be sent via phone, text, and/or email to residents. Alert notifications are repeated until one of the contacts confirms the alert has been received.

Testing & Quality Assurance

Performance in Application

The NextMeter is engineered to perform far beyond these basic requirements. Its rated maximum pressure far exceeds standard water supply specifications. And should a water system become over-pressured, the engineered and tested burst pressure is several times this operating maximum, ensuring that the NextMeter is unlikely to be a point of failure, even in a plumbing system operating out of specification.

Pressure Endurance Testing

The NextMeter's advanced engineering and pressure endurance extends throughout its lifetime operation. This performance is verified using accelerated-life testing, in which the NextMeter is pressurized to 300 psi in cycles 100,000 times (see AWWA C715-18).

A typical single or multi-jet submeter will begin to leak or completely burst within an average of 15,000 pressure cycles. The NextMeter can endure over 100,000 pressure cycles, ensuring its operating integrity over its full service life.

Design & Material Specifications

The NextMeter boasts a unibody design that is incredibly strong and resilient for long term maintenance-free operation. This contiguous flow-body design eliminates internal gaskets which are often a point of early failure in conventional meter designs.

Advanced glass-reinforced polymer o!ers increased durability, resistance to deterioration, and protection against water contamination.

NSF Testing

The NSF testing is conducted to evaluate the quality and safety of the NM4-O NextMeter in compliance with NSF standards. The test ensures that the meter is free from harmful contaminants and can operate e"ciently without posing any health risks.

Contact Information

For additional information or assistance, please visit our Support Center or contact our Product Support Team:

support.nextmeters.com

(844) 538 8203

support@nextmeters.com

Television and Radio Interference Information

Television and Radio Interference

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment o! and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit di!erent from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 40cm between the radiator and your body.

ISED Statement: This radio transmitter 28950-NM40 has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

ISEDC Radiation Exposure Statement: This equipment complies with the ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 40cm between the radiator and your body.

Television and Radio Interference (French)

Déclaration d'ISDE: Cet émetteur radio 28950-NM4O a été approuvé par ISDE pour fonctionner avec les types d'antennes énumérés ci-dessous, avec le gain maximal autorisé indiqué. Les types d'antennes non inclus dans cette liste, dont le gain est supérieur au gain maximal indiqué pour ce type, sont strictement interdits avec cet appareil.

Cet appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada (Innovation, Sciences et Développement économique Canada) applicables aux appareils exemptés de licence. Son utilisation est soumise aux deux conditions suivantes:

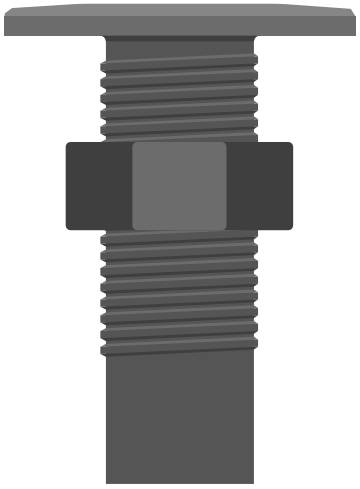
(1) Cet appareil ne doit pas causer d'interférences; et
(2) Cet appareil doit tolérer toute interférence, y compris celles qui pourraient nuire à son bon fonctionnement.

Déclaration d'ISDE relative à l'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements du CNR-102 d'ISDE, établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé en maintenant une distance minimale de 40 cm entre le radiateur et votre corps.

Specifications & Installation Guide

NextConnect

Smart Metering Made Simple



The NextConnect (NC4) is a universal 5G LTE-M cellular meter endpoint. Capable of supporting fixed-network, walk-by, drive-by, and cellular applications, it's designed to scale your metering deployments with the simplicity of a single device.

Flexible Communications

With the NextConnect wireless solution, all of your meter endpoints are enabled with 5G LTE-M cellular communication, allowing them to directly sync meter data within coverage areas without additional infrastructure.

Additional built-in wireless technologies offer redundancy and scaleability, enabling the NextConnect to also communicate through fixed-network, walk-by, or drive-by reading methods. No matter what method is used to collect reads, all data is brought into the same platform, eliminating the need for manual entry or reporting from multiple systems.

Meter+ Simplified

Using Meter+ Technology, the NextConnect enhances your meter with auto protocol detection. One single model works for all meter types across pulse and encoded outputs, simplifying your installations.

Added smart alerts quickly surface potential issues of meter health and utility usage, empowering you with the insights that matter most.

Durability

Engineered for tough outdoor environments and sealed with a 20+ year battery, the NextConnect delivers consistent, maintenance-free performance that you can count on.

Key Benefits

- Multi-carrier 5G LTE-M cellular
- Single model for cellular, drive-by, fixed-network, and walk-by reading
- Meter+ Technology with protocol auto-detection
- Single model reads all industry standard wire output meters
- 20+ year battery life for maintenance-free operation
- IP-68 rated for outdoor & meter pit installations
- Compact design, high-strength housing
- Secure and easy mounting
- Add new endpoints easily-without building new infrastructure.

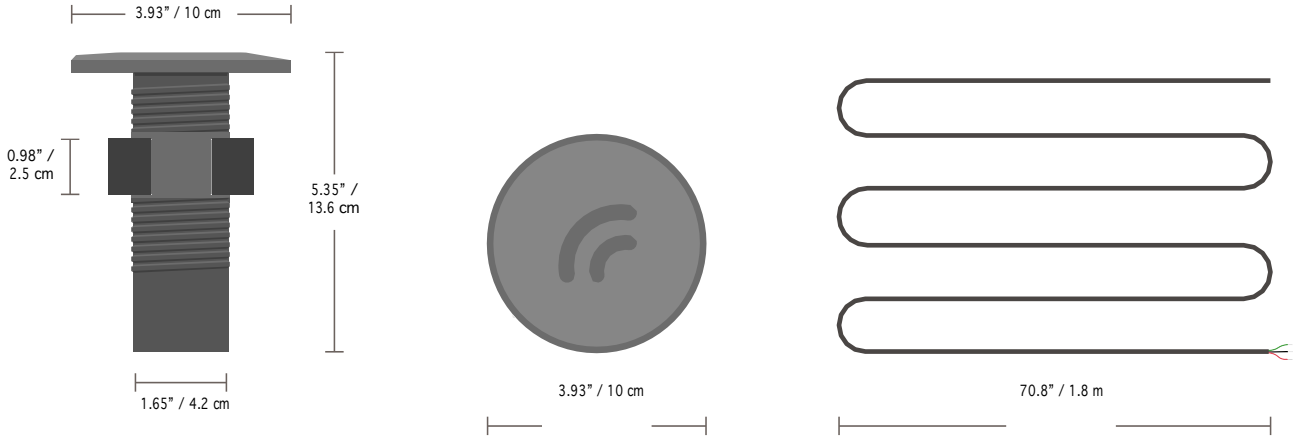
Warranty

- 20-year warranty

Specifications & Installation Guide

Specifications

Dimensions



Approvals

FCC ID: 2A8EC-NC4 (*Pending)*

IC: 28950-NC4 (*Pending)*

Contains FCC ID: 2ANPO00NRF9151

Contains IC ID: 24529-NRF9151

Communications

Multi-carrier 5G cellular with simple LTE-M

Wireless fixed-network, drive-by, and walk-by reading modes

Seamless operation between wireless technologies

Data

Mobile and web access for configuration and monitoring

API access to interval data

Supports detailed hourly full-resolution meter read

Cloud-configurable alerts and notifications

Power

20+ year high capacity battery

Environment

Engineered for long-term outdoor durability

Operates in temperatures from -40ºC to 60ºC

Waterproof sealed construction, IP-68 rated

Meter+ Protocol Compatibility

Auto protocol detection & wide compatibility

Passive pulse sensing (reed switch, open drain, etc.)

Active voltage pulse (max 16v)

Encoded UI-1203 (Sensus), Neptune, GWF, & Elster protocols

Warranty

Next Meters warrants the NC4 to be free from defects in materials and workmanship for a period of 20 years when installed in accordance with these instructions and with limitations as detailed in complete warranty.

docs.nextmeters.com/warranty

Due to continuous product improvement and the need to comply with evolving regulations, Next Meters reserves the right to modify product specifications without prior notice.

Contact

For additional information or assistance, please visit our Support Center or contact our Product Support Team:

support.nextcenturymeters.com

(844) 538 8203

support@nextmeters.com

Specifications & Installation Guide

Installation

Qualifying Installations

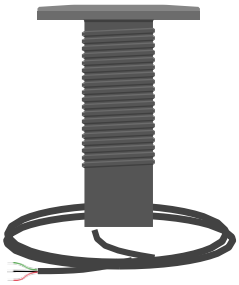
The NextConnect is primarily designed for use in outdoor meter pits. It is compatible with pit lid mounting holes from 1.7 to 2.1 inches (43 to 53 mm) in diameter.

The top of the NextConnect should be kept clear to avoid potential signal disruptions. Where possible, the area immediately surrounding the device should also be kept free of large objects that could interrupt device communications.

Doing this will also make it easier to locate and service the NextConnect and its connected meter when necessary. For best performance, poly/plastic lids are recommended.

Package Contents

A



A) NextConnect (NC4) with attached cable

B



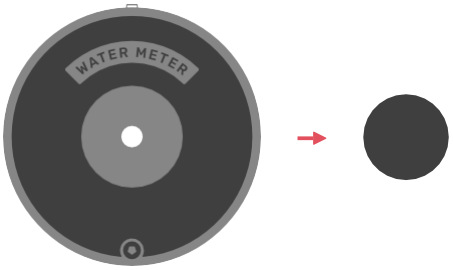
B) Mounting Nut

Instructions

Note: for installations in locations beyond meter pits, NextConnect wall mount accessories are available for purchase. Contact us for more information.

1. Remove Lid Cutout

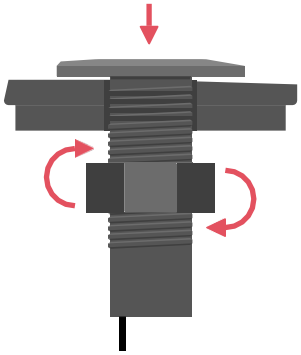
Drill a 1 ⅞" hole (standard pit lid mounting size) in the meter pit lid for mounting. If using metal lids, verify location and take proper safety precautions.



Use a 1 ⅞" hole saw for poly lids or a metal-cutting hole saw for cast iron lids

2. Secure the NextConnect to the Lid

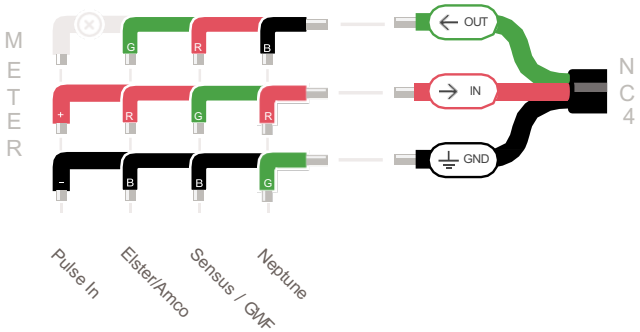
Insert the NextConnect through the mounting cutout and secure it to the lid using the provided mount nut.



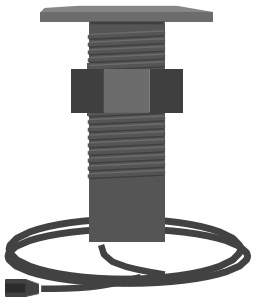
Tighten mounting nut until snug and flush with lid. Do not overtighten; hand-tight is su"cient.

3. Connect Cables

Splice the wiring of the NextConnect and the water meter. Follow the wiring guide below for your specific meter.



NextConnect is available with bare wire or pre-terminated options including NICOR and ITRN connectors. These simplify installs and ensure water-tight, tool-free connections in supported meter pits.



560

Specifications & Installation Guide

Programming & Wireless Communication

Configuration

The NextConnect is designed to be easily configured to switch between pulse or encoded meters using the NextCity Mobile App.

App Store
iOS App

Google Play
Android App

Once you've logged into the app, select the Direct Connect tool to connect to the NextConnect. This will allow you to verify or make changes to its configuration.

Wireless Made Easy

Use a magnet to verify device connectivity. A magnet swipe initiates a check-in. The LED will blink green when the NextConnect communicates with the Cloud.



If green blinks are not seen after 15 seconds, you may need to reposition the pit lid, ensure the antenna is unobstructed, or use a cellular Repeater.

An additional magnet swipe can initiate another check-in to retry.

Programming

Programming is the process of associating the NC4's serial number with the location and water utility type where it is installed.

To quickly program a large number of devices at once, you can use the CSV file uploader tool on the NextCity web portal. The web portal also o!ers a rapid programming interface to program additional devices later on.

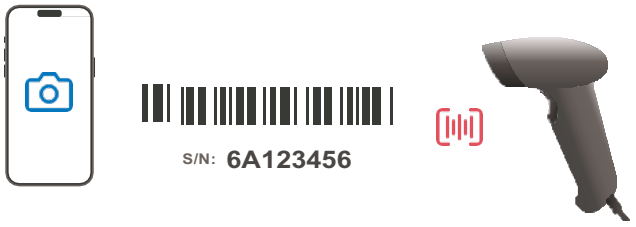
The NextCity mobile app is ideal for on-site programming and verification.

After you log into the app, select the correct property. Then select "Program NextConnect."

Program the NextConnect by entering its serial number.

You can use the app's built-in barcode scanner to scan the NextConnect's barcode, or you can enter the serial

number manually.



Resident App



This service gives residents the ability to view meter data, analyze usage trends, and receive critical alerts on their mobile devices.

Enable the Leak Monitoring Service subscription for optional immediate alerting of sustained high-flow (burst pipe).

Once configured, alerts will automatically be sent via phone, text, and/or email to residents. Alert notifications are repeated until one of the contacts confirms the alert has been received.

Television and Radio Interference Information

Television and Radio Interference

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment o! and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit di!erent from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 40cm between the radiator and your body.

ISED Statement: This radio transmitter 28950-NC4 has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

ISEDC Radiation Exposure Statement: This equipment complies with the ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 40cm between the radiator and your body.

Television and Radio Interference (French)

Déclaration d'ISDE: Cet émetteur radio 28950-NC4 a été approuvé par ISDE pour fonctionner avec les types d'antennes énumérés ci-dessous, avec le gain maximal autorisé indiqué. Les types d'antennes non inclus dans cette liste, dont le gain est supérieur au gain maximal indiqué pour ce type, sont strictement interdits avec cet appareil.

Cet appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada (Innovation, Sciences et Développement économique Canada) applicables aux appareils exemptés de licence. Son utilisation est soumise aux deux conditions suivantes:

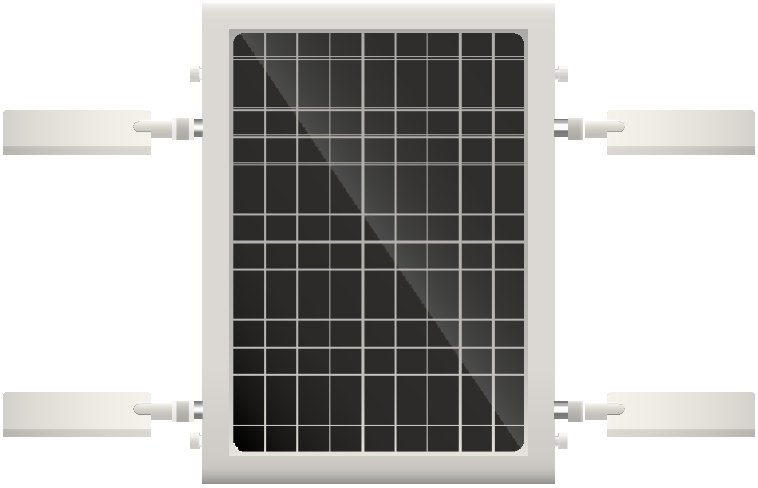
(1) Cet appareil ne doit pas causer d'interférences; et
(2) Cet appareil doit tolérer toute interférence, y compris celles qui pourraient nuire à son bon fonctionnement.

Déclaration d'ISDE relative à l'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements du CNR-102 d'ISDE, établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé en maintenant une distance minimale de 40 cm entre le radiateur et votre corps.

Specifications & Installation Guide

NextLink

Solar-Powered Connectivity



The NextLink (NL4) is the ultimate all-in-one solar-powered Gateway and Repeater. Featuring the fastest charging and longest-lasting battery in its class, the NextLink ensures seamless connectivity with the simplest deployment.

Flexible Deployment

Recognizing the critical need for reliable connections, especially in areas with limited power and network access, we have designed the NextLink to integrate effortlessly into diverse environments.

The NextLink's all-in-one design combines an efficient solar panel, a high-capacity battery, and powerful radios, enabling installation in virtually any location—regardless of wired power or network infrastructure availability.

Extending Communication

NextLinks work seamlessly together to extend your wireless meter network even into areas outside of cellular coverage.

Powerful external antennas ensure reliable communication for meter points spread over long distances as well as in high-density submetering applications.

Sustainable Longevity

Built with a robust cast-aluminum housing and fully waterproof design, the NextLink is engineered to withstand even the harshest conditions. Through rain or shine, the NextLink delivers connectivity using renewable solar power, making it both a practical and eco-friendly fixed-wireless solution.

Key Benefits

- Multi-carrier 5G LTE-M cellular
- Operates as a Gateway and Repeater to expand coverage
- Fully recharges with only 6 hours of full sunlight
- Efficient power management provides up to 7 days of operation without sunlight
- 2-way meter communication
- High-gain external antennas for extended range
- Battery will continue to charge in freezing temperatures
- IP-68 rated for outdoor use
- All-in-one unit eliminates the headache and problems associated with piecemeal kits

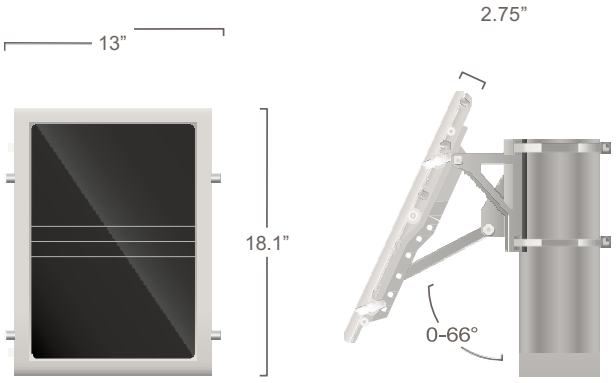
Warranty

- 5-year standard warranty

Specifications & Installation Guide

Specifications

Dimensions



Approvals

- FCC ID: 2A8EC-NL4
- IC ID: 28950-NL4
- Contains FCC ID: 2ANPO00NRF9151
- Contains IC ID: 24529-NRF9151

Communications

- Multi-carrier 5G cellular with simple LTE-M
- Easy mobile app configuration
- Built-in NextConnect receiver for meter communication
- Seamlessly operates as a relay to extend network

Data

- AMI solution, continuous meter communication
- Mobile and web access for configuration and monitoring
- Supports detailed utility usage history

Power

- Solar-powered, integrated 15W panel
- Built-in ESD protection for lightning protection
- High capacity rechargeable battery
- Supports operation through extended low-light weather
- Field-replaceable battery

Temperature

- Operation from -40ºF to 140ºF | -40ºC to 60ºC

Environment

- Engineered for long-term outdoor durability
- Compact design, industrial quality cast aluminum
- Weather-resistant construction, IP-68 rated
- Designed to withstand strong winds and harsh conditions

Installations

- Accessories included for pole, wall, or roof mounting
- Mobile app guides optimal solar panel positioning
- Simple LED status feedback

Warranty

Next Meters warrants the NL4 to be free from defects in materials and workmanship for a period of five years from date of manufacture when installed in accordance with these instructions and with limitations as detailed in the complete warranty.

docs.nextmeters.com/warranty

Due to continuous product improvement and the need to comply with evolving regulations, Next Meters reserves the right to modify product specifications without prior notice.

Contact

For additional information or assistance, please visit our Support Center or contact our Product Support Team:

support.nextmeters.com

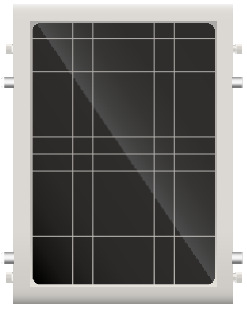
(844) 538-8203 | support@nextmeters.com

Specifications & Installation Guide

Installation

Full Package Contents

A



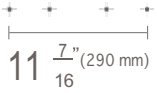
B



C



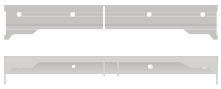
D



E



F



G



H



I

J



A) NextLink NL4 (Qty: 1)
B) Fasteners:

M8x18mm (Qty: 4) M8x30mm (Qty: 8)
M8x35mm (Qty: 1) M8x45mm (Qty: 1)
M8x50mm (Qty: 1) Washers (Qty: 8)
Locknuts (Qty: 2)

C) Safety Cable (Qty: 1)
D) Mounting Template (Qty: 1)
E) Flat Mount Brackets (Qty: 2)
F) Pivot Mount Brackets (Qty: 2)
G) Pivot Bar (Qty: 1)
H) Pole Mount (Qty: 1)
I) Antenna (Qty: 4)
J) Band Clamps (Qty: 2)

Qualifying Installations

The NextLink should be installed in an orientation and location that maximizes the solar panel's ability to charge the device.

Choose a location with clear lines of sight to the sky year-round. When using a mount that allows you to adjust the angle, choose an angle that will allow the panel to face the sun directly at midday.

Where possible, the NextLink should be installed no less than 10 feet (3 meters) from the ground. Higher installations are generally preferred. Use a stable ladder when necessary. Take appropriate safety precautions.

For latitudes that experience significant variations in the position of the sun between seasons, you should angle the panel to face where the sun would be in the winter.

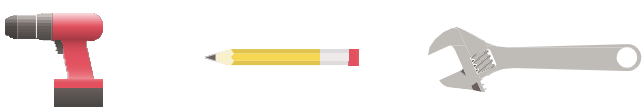
In locations where snow is expected, flat mounting is not recommended. The buildup of snow on the solar panel will disrupt device charging.

The NextLink mounting systems are designed to withstand significant environmental pressures. However, it is vital to complete the installation process, including the installation of the safety cable, to ensure protection of persons and property in the event of mounting system failure caused by extreme weather.

Failure to follow these instructions may cause you to forfeit the protections guaranteed in our warranty.

Required Tools

To install the NextLink, you will need the following:

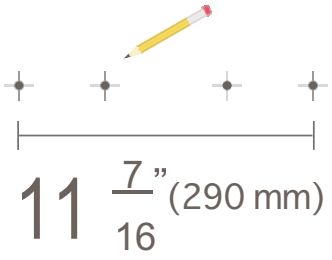


Mounting Options

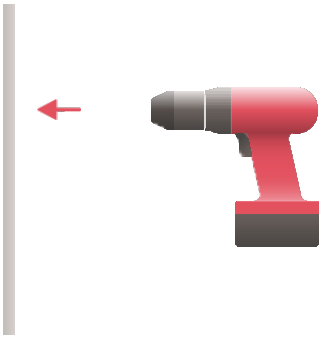
NextLink can be mounted three ways: Wall Pivot, Pole, or Flat Mount. All required hardware (besides tools) for each option is included in the box.

Installation: Wall Pivot Mount

Using the pivot mount side of the included drilling template, mark the holes for the mounting hardware on the surface where the device will be mounted.



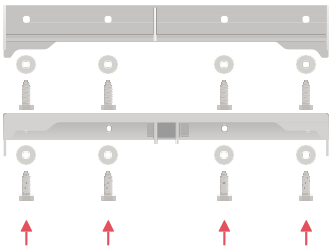
Drill the holes using a 1/4" drill bit.



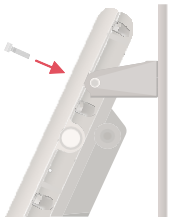
Drill with 1/4” Drill Bit	Pencil	Adjustable Wrench

Installation (cont.)

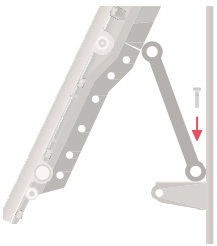
Using the holes drilled in the last step, attach the brackets to the surface using eight (8) M8x30mm lag bolts and washers. You will use four (4) bolts/washers per bracket.



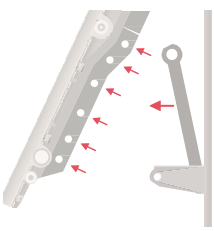
Attach the top of the NextLink to the top mount bracket using two (2) M8x18mm socket head cap screws. At this stage, these screws should be hand tightened.



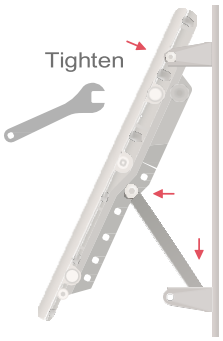
Attach one end of the pivot bar to the center mounting location of the lower mount bracket using the M8x35mm bolt and an M8 locknut. At this stage, these fasteners should only be hand tightened.



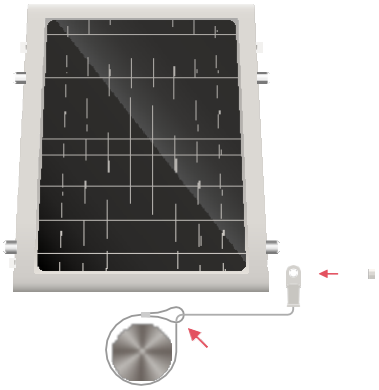
Attach the opposite end of the pivot bar to the NextLink. Choose the appropriate set of holes in the center of the NextLink to optimize the angle of the solar panel (relative to the sun). Use the M8x45mm bolt and M8 locknut.



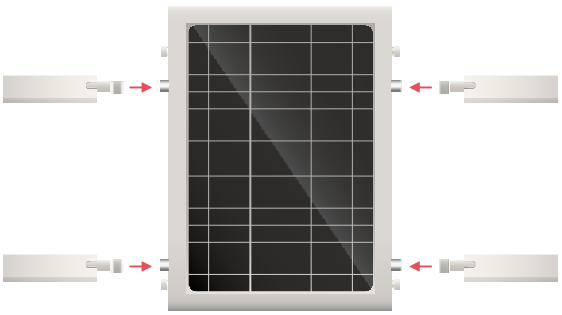
Once the appropriate angle is achieved, use a wrench to tighten all bolts connecting the NextLink and mounting hardware well beyond hand tight to ensure a secure connection. Do not use excessive force, which can result in over-tightening.



Attach the safety cable to a solid mounting point near the NextLink. Then remove one of the M8x18mm screws and use it to bolt the end of the safety cable to the mount bracket and the NextLink.



Attach the antennas by hand tightening them to the connection points on the sides of the NextLink. Any antenna can be connected to any connection point.



Proceed to programming instructions on page 8.

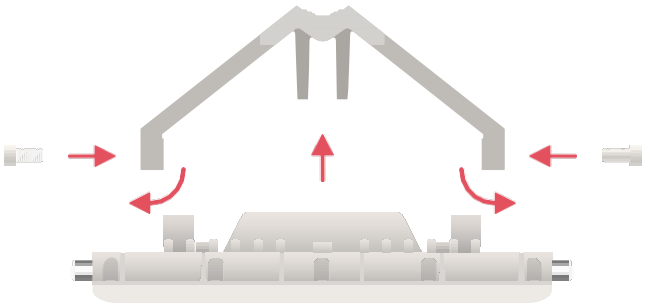
Installation (cont.)

Installation: Pole Mount

Note: It is recommended that two people work together to complete pole mount installations.

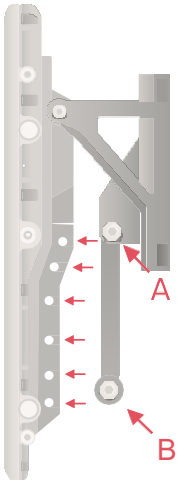
Hook the arms of the pole mount into the ears of the NextLink.

Loosely attach the arms to the ears with two (2) M8x18mm screws.

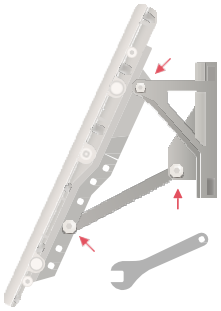


Attach one end of the pivot bar to the pole mount using the M8x50mm bolt and M8 locknut (see item A in the illustration below).

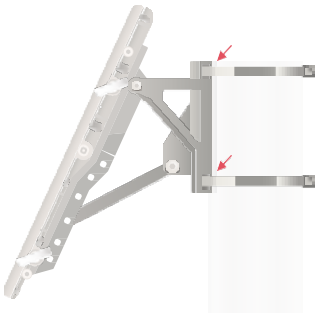
Attach the opposite end of the pivot bar to the NextLink (see item B in the illustration below). Choose the appropriate set of holes in the center of the NextLink to optimize the angle of the solar panel (relative to the sun). Use the M8x45mm bolt and M8 locknut.



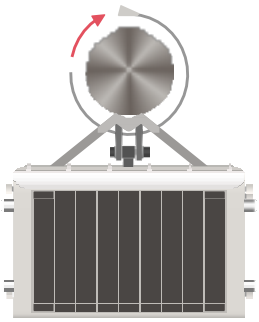
Once the appropriate angle is achieved, use a wrench to tighten all bolts connecting the NextLink and mounting hardware well beyond hand tight to ensure a secure connection. Do not use excessive force, which can result in over-tightening



To connect pole mount to the pole, slide the band clamps through the slots at the top and bottom of the pole mount, then around the pole.



Fasten the band clamps around the pole. One person should hold the NextLink in place as the other tightens the band clamps around the pole.

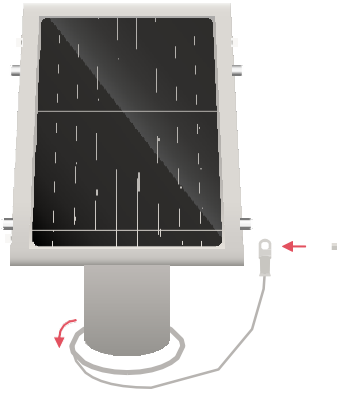


Important: Install the band clamps to no more than 18 in-lbs of torque. Do not overtighten. Do not use an impact driver to tighten. Overtightening can compromise installation integrity.

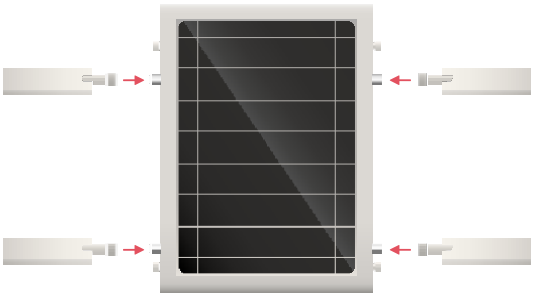
Installation (cont.)

Attach the safety cable to a solid mounting point near the NextLink. Then remove one of the M8x18mm screws and use it to bolt the end of the safety cable to the mount bracket and the NextLink.

If no solid mounting point is available, you can loop the safety cable around the pole before securing it to the NextLink.



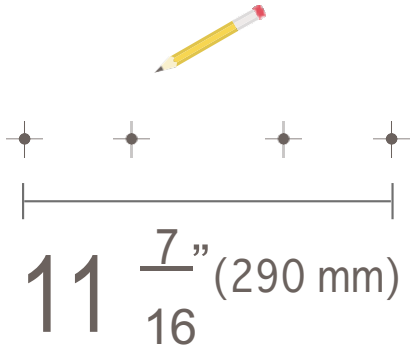
Attach the antennas by hand tightening them to the connection points on the sides of the NextLink. Any antenna can be connected to any connection point.



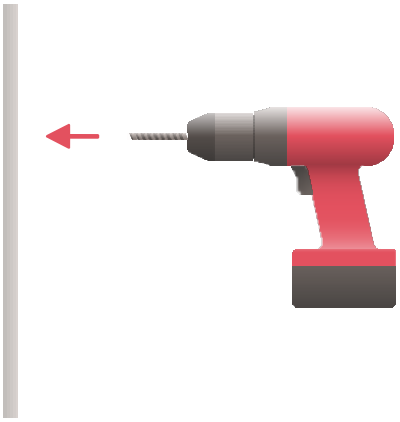
Proceed to programming instructions on page 8.

Installation: Flat Mount

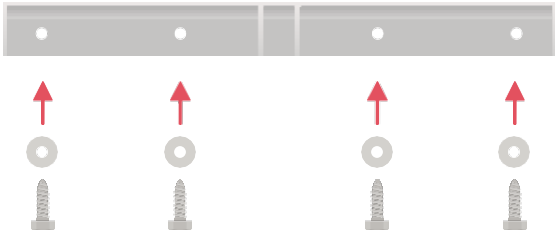
Using the flat mount side of the included drilling template, mark the holes for the mounting hardware on the surface where the device will be mounted.



Drill the holes using a 1/4" drill bit.

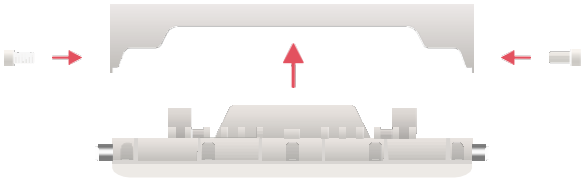


Using the holes drilled in the previous step, attach the brackets to the surface using eight (8) M8x30mm lag bolts and washers. You will use four (4) bolts/washers per bracket.

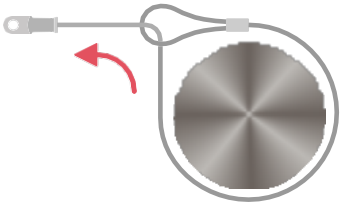


Installation (cont.)

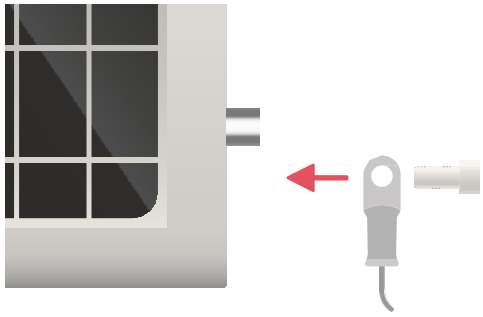
Attach the NextLink to the mounts using four (4) M8x18mm socket head cap screws.



Attach the safety cable to a solid mounting point near the NextLink. Depending on your installation location, you may need to loop the cable through itself around a mounting point.



Remove one of the M8x18mm screws and use it to bolt the end of the safety cable to the mount bracket and the NextLink.



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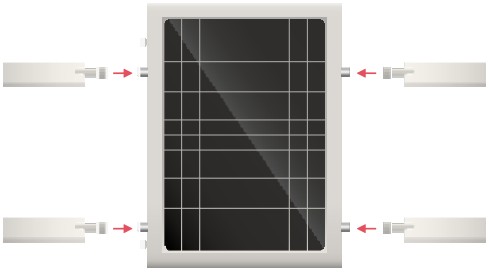


Proceed to programming instructions on page 8.

Programming and Additional Information

Programming & Verification

Programming is the process of associating the NextLink's serial number with the property where it is installed. This ensures it can communicate with the NextCity Cloud.

To quickly program a large number of devices at once, you can use the CSV file uploader tool on the NextCity web portal. The web portal also o!ers a rapid programming interface to program additional devices later on.

The NextCity mobile app is ideal for on-site programming and verification.

App Store
iOS App

Google Play
Android App

After logging in to the app or web platform, select or create the property that corresponds to the NextLink.

On the mobile app, tap "Program NextLink".

On the web platform, select "Equipment", then "Network" (located in the top right corner).

Program the NextLink by entering its serial number. You can also scan the device barcode (located on the back of the NextLink) using the barcode scanner in the mobile app.

Wave a magnet below the antenna on the upper right-hand side to verify communication with the network. Two green LED blinks indicate successful connectivity.

If no confirmation is received, relocate the NextLink or add additional NextLinks as needed.

LED Status Information

You can check the NextLink's current battery status by viewing the LED on the device. When a magnet is held by the device's battery indicator LED (located just below the antenna on the upper right-hand side of the device), it will light up to indicate the device's current battery.

- FULL BATTERY
- LOW BATTERY
- VERY LOW (Radios are turned off)

Current battery levels can also be checked in the NCSS mobile app or on the NextCentury web platform.

Long-Term Battery Information

The NextLink's field-replaceable battery has a lifespan of 7-10 years. You will receive alerts within the NCSS app starting several months before the battery needs to be replaced.

Television and Radio Interference

Television and Radio Interference

FCC Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment o! and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit di!erent from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 40cm between the radiator and your body.

ISED Statement: This radio transmitter 28950-NL4 has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Included external antenna:

- Type: DiPole
- 698-824MHz: Gain of 2.19dBi
- 824-960MHz: Gain of 2.20dBi
- 1710-2200MHz: Gain of 3.8dBi

This device complies with Innovation, Science and Economic Development Canada’s licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

ISEDC Radiation Exposure Statement: This equipment complies with the ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 40cm between the radiator and your body.

Television and Radio Interference (French)

Déclaration d'ISDE: Cet émetteur radio 28950-NL4 a été approuvé par ISDE pour fonctionner avec les types d'antennes énumérés ci-dessous, avec le gain maximal autorisé indiqué. Les types d'antennes non inclus dans cette liste, dont le gain est supérieur au gain maximal indiqué pour ce type, sont strictement interdits avec cet appareil.

Antenne externe incluse:

- Type : Dipôle
- 698-824 MHz : Gain de 2,19 dBi
- 824-960 MHz : Gain de 2,20 dBi
- 1 710-2 200 MHz : Gain de 3,8 dBi

Cet appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada (Innovation, Sciences et Développement économique Canada) applicables aux appareils exemptés de licence. Son utilisation est soumise aux deux conditions suivantes:

(1) Cet appareil ne doit pas causer d'interférences; et
(2) Cet appareil doit tolérer toute interférence, y compris celles qui pourraient nuire à son bon fonctionnement.

Déclaration d'ISDE relative à l'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements du CNR-102 d'ISDE, établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé en maintenant une distance minimale de 40 cm entre le radiateur et votre corps.

MUELLER

SOLID STATE METER (SSM)

Sizes 1 ½" & 2"

Applications: The Mueller solid state meter (SSM) is available in 11/2" and 2" sizes. The SSM meter provides 8 digits of granular data for visual reads and 8 digits in encoded electronic format for use in Mueller Mi.Net AMR / AMI applications. The meter can be used in any residential or commercial application where a high degree of accuracy at low flow rates is important.

Construction: The SSM meter utilizes a stainless steel body with a polymer measuring tube and patented stainless steel reflectors. A heat treated glass lens and polymer lid and surround provide protection for the liquid crystal display. 3.6 volt lithium batteries provide power for the processor for 20 years of life. All internal electronics are potted to prevent water intrusion in the toughest environments.

Operation: The SSM meter utilizes ultrasonic measurement technology to provide outstanding accuracy across a broad flow range with extremely low pressure loss. The static meter design means there are no moving parts inside the meter so it will not degrade in accuracy over the life of the meter due to mechanical wear, providing exceptional revenue for years to come.

With ultra-low flow accuracy of 95% at 0.08 GPM on the 1 1/2" sizes, the SSM is capable of wringing every drop of revenue from your system and detecting the smallest leaks and backflow conditions. The stainless steel reflectors and measuring tube design channel water over the reflectors to keep them free of debris and increase the velocity of the water as it passes through the tube, contributing to the high degree of meter accuracy.

The display provides large numerals and icons that permit verification of the 8-digit meter volume as well as direction of flow, error and alarm status, and battery life. A unique, never duplicated 8-digit serial number on the SSM meter faceplate and lid identifies it as the basis for all systems communication. The register face plate and housing provide visual information specific to the registration units, model, size, date of manufacture, and billing units, to provide verifiable and retrievable data in the event it is required.

Conformance To Standards: Mueller SSM meter complies with AWWA C-715 requirements for accuracy and odometer wheel height as well as the American Standard Code for Information Interchange or ASCII.

Operation: When interrogated by a Mueller AMR / AMI device, the SSM meter communicates the unique 8-digit serial number and 8-digit electronic reading in ACSII format where it can be recorded and maintained within the reporting structure of the AMR / AMI system. In the event that field testing is required, an optical button located on the display faceplate can be utilized to place the meter in test mode which provides excellent resolution for testing purposes.



SOLID STATE METER
SIZES 1 ½" & 2"

Maintenance: The Mueller SSM meter is designed and manufactured to provide a 20 year service life with virtually no maintenance required. Meter lids are available as replacement components in the event of vandalism or the need for meter retrofits.

MATERIALS AND SPECIFICATIONS

Model	Solid State Meter (SSM)
Register Type	Solid State Encoder Register
Sizes	11/2" & 2" Ultrasonic Meters
Standards	Manufactured and tested to meet or exceed all applicable accuracy and pressure loss requirements of the AWWA C-715 standard and the American Standard Code for Information Interchange (ASCII)
Temperature Operating Range	34ºF to 158ºF
Storage Temperature Range	-4ºF to 158ºF
Water Temperature Range	34ºF to 140ºF
Connection Options	18" Nicor Connector, 5' flying lead wire, with factory potted connections
Materials	Processor / register housing and lid - thermoplastic; Register lens – heat treated, tempered glass; LCD, polymer measuring tube, SST reflectors
AMR / AMI Compatibility	Mi.Net AMR / AMI system, and other AMR / AMI systems that can utilize the standard 8-digit encoder protocol output.

SOLID STATE METER (SSM)

Sizes 1 ½" & 2"

GENERAL TECHNICAL DATA

	1.5" AND 2"
Potable Water Temperature Range	34 ... 122 °F
Ambient Operating Temperature	34 ... 158 °F
Ambient Storage Temperature	-4 ... +140 °F (>90° F max. for one hour)
Maximum Pressure	psi 300
Power Supply	3.6 VDC lithium battery
Battery Lifetime	20 years
Interfaces	Industry standard Encoder protocol, ASCII output for compatibility with all AMR / AMI systems
Data Storage	Alarms and consumption values
Protection class	IP 68
Operating performance	In the temperature range of 45 to 85 ºF, meter consumption measurement is accurate to ±1.5% over the normal flow range (reference: approved test bench, ISO9001 certified.

TECHNICAL DATA DISPLAY

	1.5" AND 2"
Display	LCD, 8-digit Visual resolution in US Gallons to 0.1 and Ft3 to 0.01
Units	Flow and volume (GPM, gal, Ft3)
Values Displayed	Volume - flow - reverse flow - water temperatures - display test - error and alarm status - battery lifetime

APPROVAL

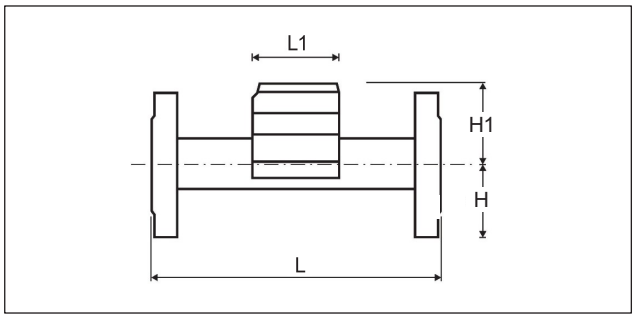
	1.5" AND 2"
NSF	Complies with NSF / ANSI Standard 61, Annex F/G
AWWA	Meets or exceeds applicable sections of the AWWA / ANSI C715 Standards
FCC	Complies with FCC part 15 B

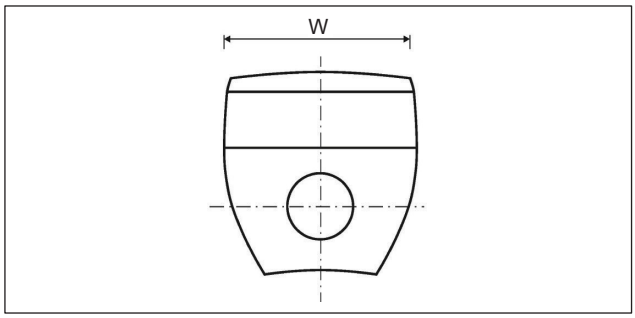
MATERIAL

	1.5" AND 2"
Measuring Pipe	Stainless Steel
Register Housing	Engineered Polymer
Transducers	Composite
Reflectors	Stainless steel

SOLID STATE METER (SSM)

DIMENSIONS

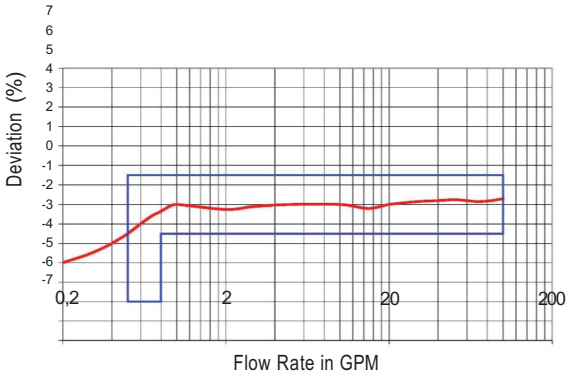




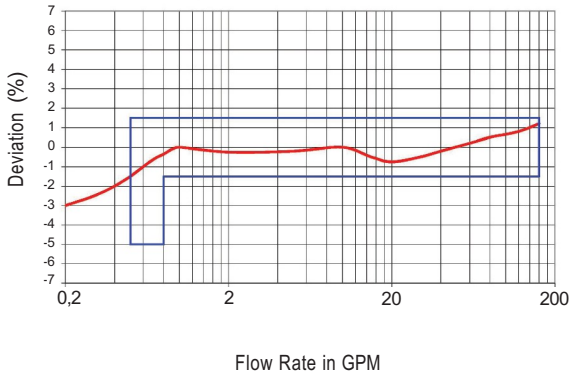
SIZE			1.5"	2" L
Lay Length	L	Inch	13"	17"
Register Length	L1	Inch	3.5"	3.5"
Register Width	W	Inch	3.75"	3.75"
Height to Center of Pipe	H1	Inch	2"	2.5"
Height to Center of Pipe	H1	Inch	3.3"	3.3"
Net Weight		Lb.	14.1	19.2

TYPICAL FLOW CHARTS

Typical Flow Chart 1 1/2" Mueller SSM



Typical Flow Chart 2" Mueller SSM



TECHNICAL DATA

SIZE			1.5"	2" L
Lay Length	L	Inch	13"	17"
Operating Flow Range		GPM	0.8 - 100	0.8 - 160
Low Flow Range		GPM	0.5 - 0.8	0.55 - 0.8
Operating Range accuracy		%	±1.5	±1.5
Low Flow Range accuracy		%	-5 / ±1.5	-5 / ±1.5
Pressure Loss			3.5 psi at 70 GPM	3.6 psi at 110 GPM

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MUELLER

ABB MEASUREMENT & ANALYTICS | DATA SHEET | DS/FET400-EN REV. H

AquaMaster4 FEW4 and FET4

Electromagnetic flowmeter



Measurement made easy

The ideal flowmeter for potable water distribution networks, revenue metering and irrigation applications

Multiple measurement parameters

- flow rate, flow velocity, volume flow (forward, reverse and net) and pressure (option)

Integrated mobile communications

- NB-IoT (LTE Cat NB1 for China) & 4G LTE Cat1 with fall back to 3G

Multiple power options

- battery (with up to 10 years' life), renewable and AC mains

Wide range of sensor styles and size

- reduced bore DN40 to 600, virtual full bore DN40 to 200, full bore DN250 to 2400 and probe 300 to 1000 mm

Ideal for arduous applications

- IP68 for submersion up to 10 m that are prone to flooding and up to 5 m buriable

Verification

- in-situ diagnostics and self-checking capabilities to OIML type P

Flexible communications

- pulse, Modbus™ and Sensus™ with NFC interface to mobile smartphone/tablet

Diverse data options for mobile communications

- CSV/JSON files exchange through explicit FTPS/FTP (TLS1.2-based encryption) or MQTTS/MQTT Sparkplug B for 4G/3G and data exchange through LwM2m (over CoAP with DTLS 1.2 encryption) for NB-IoT (China Telecom IoT Platform)

Product is certified to NSF/ANSI/CAN 61-G, OIML R49:2013 & MID

Applications

- Water supply in district/zonal metering area
- Revenue metering
- Leak monitoring in district/zonal metering area
- Survey and flow investigation
- Irrigation and abstraction
- Fire suppression systems

Additional product features

- In-situ diagnostics and optional self-checking capabilities with OIML R49 type P
- High and low flowrate alarms
- Backward compatible with legacy AquaMaster sensors
- Drinking water certifications: WRAS, NSF-61, ACS, AS/NZS 4020
- Certificates: OIML R49:2013, MID MI-001, NMI 10, PAC and UL 327 B
- Wireless certification: CE-RED, FCC/IC, PTCRB, SRRC, ACMA/RCM

Values to you

- Solution from the masters of flow measurement – in 1988, ABB invented and designed the world's first battery-powered electromagnetic flowmeter for DMA (District Metered Area)
- Invest smartly through 'single box' DMA solution – combining measurement (flow & pressure), data logging and mobile communications
- Have greatest confidence in your billing based on highest accuracy with widest flow range revenue meter
- Get early warnings for leaks or bursts and reduce NRW (Non-Revenue Water) – highest confidence in night line performance
- Have highest confidence in the wet calibration – our flow rigs are certified by various national independent accredited bodies/laboratories all linked by the 'International Laboratory Accreditation Cooperation' (ILAC)
- Frequent granular data of process (flow rates and totalizer) and diagnostic parameters help to reduce operational cost or eliminate energy wastage and will enable you to control your supply and demand more accurately
- Get data at a higher resolution for precise and specific periods of interest anytime and every time
- Cyber Security assurance for data confidentiality and integrity including changes made in configuration settings or firmware upgrades with complete traceability which could be requested over air in near real time
- Fit-and-flow with factory default settings. Use the ABB Velox Interface mobile smartphone/tablet app to easily change configuration/settings to your preference
- Lowest total cost of ownership (TOTEX) over complete product lifecycle
- Maximum confidence in the health of the flowmeter through the use of ABB's SRV500 in-situ verification tool

Overview

FEX41X/FEX43X

Multiple power options

- 2 x internal batteries (up to 10 years life)
- Solar
- Wind
- AC mains

Interactive phone/tablet app – simple and easy

- Secured and easy
- Contactless
- Chart and retrieve data
- Offline configuration
- **Google Play™** Easy firmware update

Configurable features

- In-built logger
- Pressure measurement
- Self-checking



Communications options

- Pulse output
- Modbus
- Sensus protocol

Multiple sensor options

- Reduced bore DN40 to 600
- Virtual full bore DN40 to 200
- Full bore DN250 to 2400
- Probe 300 to 1000 mm



Measurement performance

- Accuracy up to ±0.2 % ±0.5 mm/s whichever is greater
- Range (R) up to R1000

Drinking water approvals

NSF-61 | WRAS | AS/NZS 4020 | DVGW | ACS | D.M. 174

Wide environmental conditions

- IP68 to 10 m and up to 5 m buriable
- –20 to 60 °C
- **Comparable to DIN ISO 12944** Corrosion resistance

Product type approvals

OIML R49:2013 for accuracy class 1 and 2 | MID MI-001 | NMI 10 | PAC

Calibration rig approvals

ISO 17025 | UKAS | NATA | SIMT | NIST traceable | NABL

FEX45X

Multiple power options

- 6 x internal batteries (up to 8 years life)
- Solar
- Wind
- AC mains

Interactive phone/tablet app – simple and easy

- Secured and easy
- Contactless
- Chart and retrieve data
- Offline configuration
- **Google Play** Easy firmware update

Configurable features

- In-built logger
- Pressure measurement
- Self-checking



Communications options

- Pulse output
- Modbus
- 4G/ nB - IoT

Data options

- FTPS/MQTTS with Sparkplug B
- CSV/JSON

Multiple sensor options

- Reduced bore DN40 to 600
- Virtual full bore DN40 to 200
- Full bore DN250 to 2400
- Probe 300 to 1000 mm

Measurement performance

- Accuracy up to ±0.2 % ±0.5 mm/s whichever is greater
- Range (R) up to R1000

Drinking water approvals

NSF-61 | WRAS | AS/NZS 4020 | DVGW | ACS | D.M. 174

Wide environmental conditions

- IP68 to 10 m and up to 5 m buriable
- –20 to 60 °C
- **Comparable to DIN ISO 12944** Corrosion resistance

Product type approvals

OIML R49:2013 for accuracy class 1

and 2 | MID MI-001 | NMI 10 | PAC

...Overview

Why is AquaMaster4 your first choice for distribution networks and revenue metering applications?

Your challenge	Our offering	Advantages for you
Do you have confidence in your revenue meter and therefore in your water balance table? 	AquaMaster4 offers highest accuracy with a wide flow range. Our 0D upstream and downstream reduced bore sensor is virtually insensitive to hydraulic disturbances as it conditions the upstream fluid flow profile within the sensor's central measuring zone giving superior performance; especially during the night when the flow rate is low. The AquaMaster4's in-built optional cellular engine and data logger runs at high speed, logging at a fast rate giving the user total flexibility to download (typically 15 minutes) logged data; then investigate, in precise detail, flow and pressure activity during a period of interest at even higher time resolution. Such high resolution data facilitates step testing, leakage detection, water network analysis, reduces operational expenses and eliminates energy wastage. The in-built logger delivers accuracies which are not possible when using an external data logger.	Increase in revenue for authorized water consumption and early warnings on leaks (non-revenue water) 
Do you want to reduce the cost for commissioning and interacting with the product? 	A free app (Velox Interface) is available for use with Android™ smartphones and tablets. This supports simple configuration changes to made on your touchscreen color phone/tablet. Just touch to upload, then configure offline, touch again to update the AquaMaster4 configuration. The logger contents can be downloaded as a file in industry-standard CSV format in the same manner. To ensure the product remains up-to-date with the latest features and enhancements, the firmware is updated using the Velox Interface app. 'Fit-and-Flow' data storage inside AquaMaster4 eliminates the need to match a remote sensor with a transmitter in the field. On initial installation, the self-configuration sequence replicates all calibration factors, meter size and serial numbers, together with customer site-specific settings, into the transmitter automatically, eliminating the opportunity for error.	Increase productivity of your staff/contractor and eliminate poor quality through human error 
Do you want to have the lowest operational expenditure throughout the lifecycle of the product? 	Using standard off-the-shelf 'D' lithium cells, the AquaMaster4 can be operated for up to 10 years. Using a simple DC (6 to 32 V) connection from sources as small as a 5 W solar panel/wind generator, AquaMaster4 can be operated with green energy sources. There is no longer any need for bespoke cables and laptops to connect to each transmitter.	Lower cost of ownership 
	In-situ self checking of flowmeter health enables the user to meet regulatory/technical requirements. In 1995, ABB invented and designed the world's first in-situ verification system for electromagnetic flowmeters. Building on ABB's fingerprint philosophy, each flowmeter is verification tested before shipping from the factory. SRV500 enables the operator to choose whether to either use the factory fingerprint or, after product commissioning, to create a new fingerprint based on real site conditions.	Simplifies compliance to ISO 9001 traceability without any additional effort 

FEX41X / FEX43X

Protective cover with wire to the contactless coupler

The removable cover protects the transmitter display from accidental impact damage





Wall mount contactless coupler

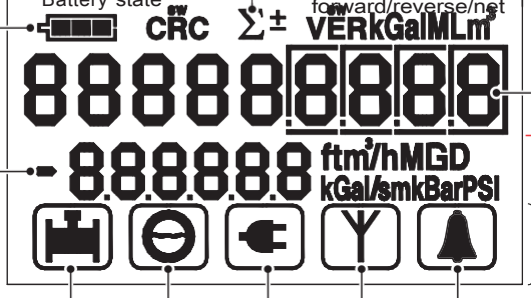
The wall mount coupler allows users to communicate easily using a mobile phone/tablet when the transmitter is located in inaccessible places (for example, a pit)

Upper display:
forward flow total/reverse flow total/net flow total

Totalizer:

Battery state

forward/reverse/net



Display

Sensor fault

Empty pipe condition

Mains failure

Mobile communications

Alarm condition read diagnostics

Lower display:
flow rate
flow velocity,
pressure

5 alarm icons



Contactless communication

Interacting with the transmitter is easily achieved with an Android smartphone/tablet over NFC

IP68 connectors

IP68 rated as standard, the transmitter can be fully submerged for up to 2 meters

Anti-tamper seal

Secured against any tampering, meeting MID MI-001 regulations

Power supply enclosure

Enclosure for battery, AC or renewable power options

...Overview

FEX45X



NFC Cover with wire to the contactless coupler/USB

The removable cover enables contactless communication with USB termination or extension to wall mount contactless coupler



Wall mount contactless coupler

The wall mount coupler allows users to communicate easily using a mobile phone/tablet when the transmitter is located in inaccessible places (for example, a pit)

In-built data logger (optional)

Optional multi-speed, flowrate and pressure internal logger runs at high speed, allowing user to request logged data at any interval (typically set to one minute, but can be as fast as 15 seconds)

Contactless communication

AquaMaster4 is the first instrument to feature a contactless interface using industry standard Near Field Communication (NFC). A free App (Velox) available for use with Android and Windows smartphones and tablets supports simple configuration changes to be made on your touchscreen color phone/tablet.



Wireless communication

In–built cellular engine (4G/nB- IoT) sends logged data of measurement along with changes in configuration settings either as summary report or in reply to ad hoc requests with alarm notification for diagnostics

Fit and flow

No need to match sensor and transmitter, as the sensor stores all calibration factors, site settings and serial numbers

Power options

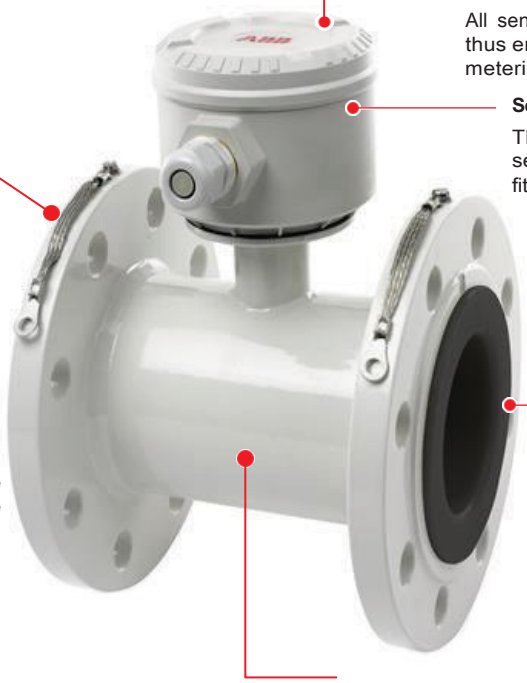
Plug-in external power supply unit (PSU) with option to select Battery/AC Main/Solar or Wind which is a 3.6 V DC interface only. Integral flowmeters are powered with internal batteries.

IP68 connectors

IP68 rated as standard, the transmitter can be fully submerged for up to 2 meters

Range of flange options

ISO 7005, DIN, EN 1092-1 PN10/PN16 / PN25/PN40
ANSI/ASME B16.5/16.47 series B Class 150/Class 300
AWWA C207 Class B/D/E
AS 4087 PN16
AS2129 Table E
JIS 7.5K/10K/5K



IP68, NEMA 6P

All sensor types are, as standard, inherently submersible thus ensuring suitability for installation in chambers and metering pits that are prone to flooding

Sensor memory

The sensor stores all calibration factors, site settings and serial numbers enabling users to fit-and-flow

Drinking water approvals

NSF-61 | WRAS | AS/NZS 4020 | DVGW | ACS | D.M. 174

EN ISO 12944 C4 grade comparable corrosion resistance

Zinc-based primed with =70 µm (optional 300 µm) thick paint coat will give long lasting corrosion resistance even in arduous applications

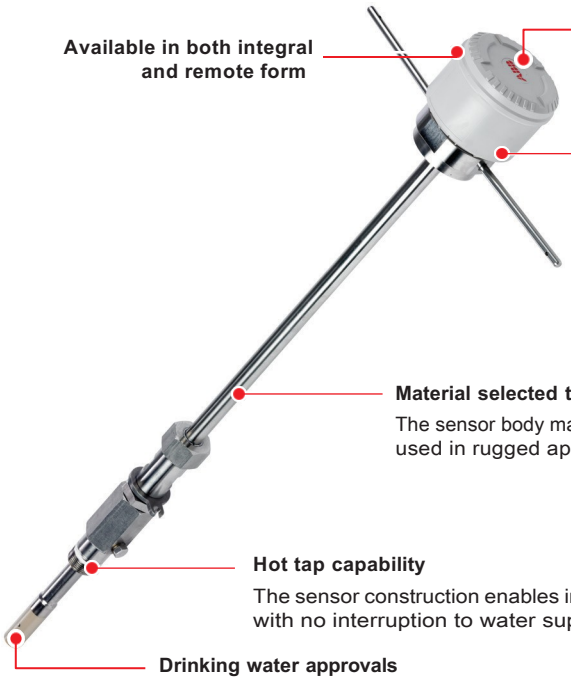
Upstream and downstream pipe length

Reduced bore DN40 to 600 requires 0D upstream and downstream

Virtual full bore DN40 to 200 requires 5D upstream and 0D downstream (0D upstream and 0D downstream to OIML R49:2013 only)

Full bore DN250 to 2400 requires 5D upstream and 2D downstream (3D upstream and 0D downstream to OIML R49:2013 only)

Available in both integral and remote form



IP68, NEMA 6P

All sensor types are, as standard, inherently submersible thus ensuring suitability for installation in chambers and metering pits that are prone to flooding

Sensor memory

The sensor stores all calibration factors, site settings and serial numbers enabling users to fit-and-flow

Material selected to last

The sensor body material enables it to be used in rugged applications

Hot tap capability

The sensor construction enables installation with no interruption to water supply

Drinking water approvals

NSF-61 | WRAS | ACS

Item D.

Calibration in ABB flow laboratory



Figure 1 ABB calibration rig – certificated by ISO, UKAS, NATA, SIMT and NIST traceable

ABB's flow calibration facilities are certified by various national independent accredited bodies/laboratories and these are all are linked by the 'International Laboratory Accreditation Cooperation' (ILAC7).

Flowmeters in ABB's facilities can be calibrated by one of the following methods:

- gravimetric (using weigh scales)
- volumetric (using the meter prover)
- comparison (using reference meters)

Additionally, ABB's laboratories are checked against each other and against external accredited laboratories using transfer standard meters.

Gravimetric

In this method, the flowmeter is calibrated in a pipeline, with water being pumped through it from a sump. A diverter valve situated downstream directs the flow from the meter either back to the sump or to a tank of sufficient capacity attached to a highly accurate weighing system.

Volumetric

There are two main methods of volumetric calibration:

- Fixed volume volumetric tank method
  - This method works in a similar way to the gravimetric method, except that the flow from the meter is diverted into a tank of known volumetric capacity. This eliminates the need for a weighing system or to calculate the volume of water from its weight.
- Fixed volume ball meter prover
  - In this method, the diverter valve directs the flow from the meter into a meter prover. The prover is a precisely manufactured section of pipe containing a sphere that is three percent larger in diameter than the pipe. Two detector switches are situated in the pipe at a fixed distance apart. The volume of water that is contained in the pipe between the switches is known as the calibrated volume.
  -

Comparison

In this method, the flowmeter under calibration is installed in a pipeline in series with a reference, or master, flowmeter with a known calibration. Once the flow of water through both meters is stable, a timer is started and the outputs of both meters are simultaneously monitored. After a set period, the timer is stopped. Using the data from the calibration run enables the average flowrate of the meter under test to be compared with the master meter, with the difference being the error.

Advantages of ABB's calibration rig

ABB has one of the largest calibration facilities in the world, capable of pumping 2.5 m^3/s, enabling larger meters to be calibrated at high flowrates.

All of ABB calibration facilities are continuously pumped enabling a flowmeter to calibrated at a steady flowrate (for example, over 300 or 600 seconds; or longer if required), to reduce a meter's random uncertainty errors during calibration.

ABB's high turndown flowmeters (those with a high R number) can be calibrated over an extended flow range, guaranteeing accurate flowmeter performance over its full operating range.

Verification

What is verification?

Verification is the inspection and testing of a product to establish that it meets regulatory/technical requirements. Industrial instrumentation is robust, very reliable and designed to operate for many years with minimal maintenance. In today's competitive environment customers are looking for ways to maximize their profitability, regular product verifications is one way to ensure processes continuously operate at their peak.

The ABB verification story

Customers in the water and process industries have been able to save large sums of money thanks to ABB's innovations in product verification over the last two decades.

1995
CalMaster released

Worlds first flow verification system

Step change in regulatory compliance and flow maintenance

Tests to within 1 % of original calibration certificate

2006
CalMaster2 released

Worlds first battery powered flowmeter verification system

2008
VeriMaster and ScanMaster released

Flow verification testing without interrupting the measurement

Testing using revolutionary in-built diagnostics coming from the flowmeter itself

2017
SRV500 released

Multi-product verification platform

Digital solution with secure data storage in ABB cloud

Flexible licence options

Introducing SRV500

The next generation verification tool suite for use with ABB's complete range of active electronic flowmeters. Download the software for free and use the instrument-specific test routine to provide the best possible check of product health, without stopping your process.

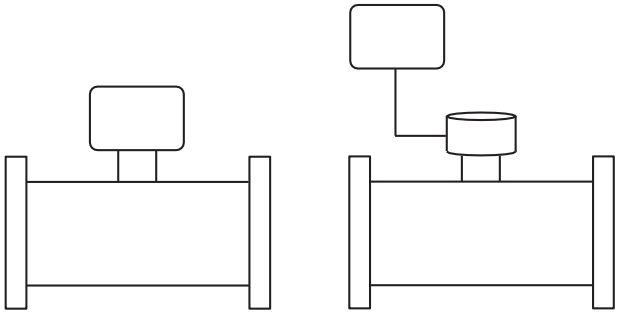
SRV500 verifies the condition and performance of the flowmeter under test. With the licensed software version, test reports can be generated and stored locally for further analysis. SRV500 also analyzes the product internal diagnostics and compares the results with historical measurements.

SRV500 enables the operator to choose whether to use either the factory fingerprint or to create a new fingerprint based on real site conditions after product commissioning. All verifications performed in the field can then be compared with the fingerprint data and previous tests to ensure flowmeter performance has not degraded.



Specification – transmitter (41X/43X)

Mounting on flow sensor



Integral with sensor

Remote with up to 150 m (492 ft) cable

Power supply



Battery AC mains Solar Wind

Battery power

Only use 3.6 V lithium thionyl chloride D batteries recommended by ABB

Note. The following batteries work with the product:

- SAFT LS33600
- Eve ER34615
- GB Cell ER34615
- cT-energy ER34615
- OmniCel ER34615
- GEBC ER34615
- LiYa ER34615
- Fanso ER34615H

The above batteries comply with the safety requirements of IEC60086-4, and have a maximum peak discharge current of less than 500mA.

Nominal battery life

Sensor style	Size	Integral mount transmitter	Remote mount transmitter
Reduced bore	DN40 to 80	10.5 years	8 years
	DN100 to 300	7 years	5.5 years
	DN350 to 600	6 years	5 years
Virtual full bore	DN40 to 200	10.5 years	8 years
Full bore	DN250 to 600	6 years	5 years
	DN700 to 2400	2.5 years	2 years
Probe	300 to 1000 mm	10.5 years	8 years

Test conditions:

- acquisition = 15 seconds
- pulse output = 2 Hz @ 5 ms
- alarm output on = 25 %
- logger rate = 1 minute
- with pressure
- integral verification self check = 15 minutes
- ambient temperature = 20 °C

Battery capacity and life are significantly shortened:

- when the operating environment temperature ranges between –20 and 0 °C or 50 and 70 °C (–4° and 32 °F or 122 and 158 °F)
- when data acquisition is less than 15 seconds
- when pulse output width > 5 ms and output frequency is set high
- with extended NFC interface use
- Class 2/Class 1 calibration to OIML R49 & MID options (CM2 & CM1 in ordering code)
- when Modbus or Sensus output is in use

Mains supply (option – remote only)

- 95 to 240 V AC, 50/60 Hz, 3 VA
- Mains connection cable: approx. 3 m (9.8 ft)

Internal backup power time for:

- DN40 to 200: 16 days
- DN250 to 600: 6 days
- DN700 to 2400: 3 days

Renewable power (option)

- Solar or wind
- Input voltage: 6 to 32 V DC @ 5 W
- Max. current: 200 mA

Internal backup time for:

- DN40 to 200: 48 days
- DN250 to 600: 18 days
- DN700 to 2400: 9 days

Note. Renewable energy generators do not operate at maximum capacity. For example, low wind speeds, dirty solar panels and shorter daylight periods all reduce capacity. Consequently, some installations may require generators with a capacity greater than the specified 5 W minimum.

Inputs

- IP68 connectors, mains cable (remote only)
- Sensor cable (remote only). ABB sensor cable supplied as standard. SWA cable available (via adapter box) on application
- Pressure transducer connection (option)

Configuration/User interface

ABB Velox Interface app on a compatible tablet or smartphone. Operating systems of smartphone or tablet are Android (Oreo or newer). Functions of Velox Interface include configuration, diagnostics, logger data retrieval and transmitter flash update.

Outputs

- Pulse/Alarm
- RS485 Modbus
- Sensus protocol

Pulse outputs (option)

- Passive Output 1: forward pulses
- Passive Output 2: reverse pulses
- +35 V @ 20 mA solid state, unipolar
- Isolated with one common, shared with alarm output max. ±50 V to earth
- 50 Hz max., programmable pulse width, default 2 ms *

* Increasing pulse width beyond 2 ms at frequencies greater than 10 Hz reduces battery life

Modbus interface (option)

- Modbus RTU over 2-wire EIA-485
- Supported baud rates: 9600 and 19200
- Max. devices on bus segment: 32
- Max. response time, 1 registered read: 60 ms
- Max. response time, 1 registered write: 600 ms

Alarm outputs (option)

- Indicates any problem with measurement, power supply or flowrate alarm
- Bi-directional, solid state
- +35 V @ 50 mA
- Isolated with one common, shared with pulse outputs

Automatic meter reading (AMR)

3-wire Sensus compatible

Logger

Logger function	Flow and pressure	Forward, reverse, and net flow totals
No. of records	45871	3120
Logging interval *	15 seconds 30 seconds 1 minute 5 minutes 15 minutes (selectable)	24 hours (fixed)
Logger capacity	31 days @ 1 minute 477 days @ 15 minutes	8 years

* Based on a default 15 second measurement rate when operating on battery or renewable power

Retrieval of logger data file via smartphone/tablet – see **Configuration/User interface** on page 12

Logger data file format

- .csv for easy import into databases/spreadsheets
- Time-stamped records with flow, pressure and totalizers in user-configured units of measurement

Response time (programmable)

>0.1 second (mains-powered)

15 seconds (battery-powered + external renewable energy)

Environmental and operating conditions

Ingress rating

IP68 (NEMA 6P), <2 m (6 ft)

Submerged

9 months accrued time

Humidity

0 to 100 %

Temperature ranges

Storage: –20 to 60 °C (–4 to 140 °F)

Ambient: –25 to 60 °C (–13 to 140 °F)

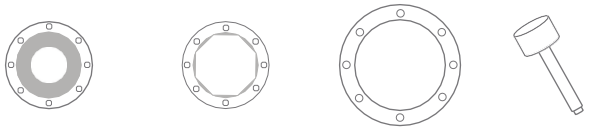
Transmitter vibration

IEC 60068-2-6 (2007)

Vibration level 2g

Options

Compatible sensor styles



Reduced bore	Virtual full bore	Full bore	Probe
DN40 to 600	DN40 to 200	DN250 to 2400	300 to 1000 mm

External pressure transducer (option)

Up to 20 and 40 bar absolute

Backward compatibility (option)

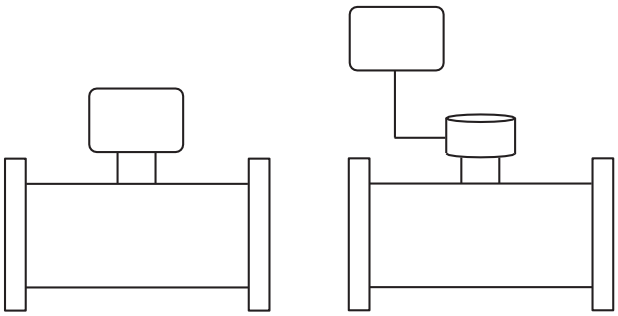
- Full compatibility with legacy AquaMaster remote sensors. Plugs directly into AquaMaster4 with no specific configuration required.

MID/Tamper detection (option)

- Switch selectable inside the tamper-evident, seal-protected enclosure
- Prevents changes to meter configuration that affect the meter/output accuracy

Specification– transmitter (FEX45X)

Mounting on flow sensor



Integral with sensor

Remote with up to 150 m (492 ft.) cable

Power supply



Battery AC mains Solar Wind

Battery power

6/4 lithium thionyl chloride 'D' batteries.

Note. The following batteries work with the product:

- SAFT LS33600 *
- Eve ER34615 *
- GB Battery ER34615
- cT-energy ER34615
- OmniCel ER34615
- GEBC ER34615
- LiYa ER34615
- Fanzo ER34615H

* Preferred

Nominal External Battery Power Supply Unit (PSU) only:

FTPS/FTP

Sensor style	Size	Integral	Remote
Reduced bore	DN40 to 80	8.5 years	7 years
	DN100 to 300	7 years	6.5 years
	DN350 to 600	7 years	6 years
Octagonal bore	DN40 to 200	8.5 years	7 years
Full bore	DN250 to 600	7 years	6 years
	DN700 to 2400	4 years	4 years

MQTTS/MQTT with Sparkplug B

Sensor style	Size	Integral	Remote
Reduced bore	DN40 to 80	11 years	9 years
	DN100 to 300	9 years	7.5 years
	DN350 to 600	8.5 years	7.5 years
Octagonal bore	DN40 to 200	11 years	9 years
Full bore	DN250 to 600	8.5 years	7.5 years
	DN700 to 2400	4.5 years	4 years

Test conditions:

- acquisition = 15 seconds
- pulse output = 2 Hz @ 5 ms
- alarm output on = 25 %
- logger rate = 1 minute
- with pressure
- integral verification self check = 15 minutes
- ambient temperature = 20 °C
- mobile communication transmission interval of:
  - 24 h for Detailed Report through 4G over FTPS/FTP/MQTTS/MQTT with Sparkplug B, or- 6 h for Summary Report through NB - IoT over LwM2M Battery capacity and life are significantly shortened:
- when the operating environment temperature ranges between –20 and 0 °C or 50 and 70 °C (–4° and 32 °F or 122 and 158 °F)
- when data acquisition is less than 15 seconds
- when pulse output width > 5 ms and output frequency is set high
- with extended NFC interface use
- Class 2/Class 1 calibration to OIML R49 & MID options (CM2 & CM1 in
- ordering code)
- when Modbus output is in use
- with extended use of mobile communications

Mains supply (option – remote only)

- 95 to 240 V AC, 50/60 Hz, 3 VA
- Mains connection cable: approx. 3 m (9.8 ft)

Renewable power (option)

- Solar or wind
- Input voltage: 6 to 32 V DC @ 5 W
- Max. current: 200 mA

Internal backup time for:

- DN40 to 200: 5 days
- DN250 to 600: 3 days
- DN700 to 2400: 1 day

Note. Renewable energy generators do not operate at maximum capacity. For example, low wind speeds, dirty solar panels and shorter daylight periods all reduce capacity. Consequently, some installations may require generators with a capacity greater than the specified 5 W minimum.

Nominal External Backup Power for Mains and Renewable Power Supply Unit (PSU) FTPS/FTP:

Sensor style	Size	Integral	Remote
Reduced bore	DN40 to 80	5.5 years	5 years
	DN100 to 300	5 years	4 years
	DN350 to 600	4.5 years	4 years
Octagonal bore	DN40 to 200	5.5 years	5 years
Full bore	DN250 to 600	4.5 years	4 years
	DN700 to 2400	2.5 years	2.5 years

Note. Test conditions are the same as for battery-operated transmitter with 4 batteries only.

MQTTS/MQTT with Sparkplug B

Sensor style	Size	Integral	Remote
Reduced bore	DN40 to 80	6.5 years	5 years
	DN100 to 300	5.5 years	4.5 years
	DN350 to 600	5 years	4.5 years
Octagonal bore	DN40 to 200	6.5 years	5.5 years
Full bore	DN250 to 600	5 years	4.5 years
	DN700 to 2400	3 years	3 years

Battery change-over backup time

- Approximately 2 minutes

Antenna

- Internal
- External (option)

Note. Mobile communications do not operate if the internal antenna is under water . The general advice is to mount the antenna as high as possible, always outside of any metal enclosures and not under the surface of the ground.

Inputs

- IP68 connectors, mains cable (remote only)
- Sensor cable (remote only). ABB sensor cable supplied as standard. SWA cable available (via adapter box) on application
- Pressure transducer connection (option)

Configuration/User interface

ABB Velox Interface app on a compatible tablet or smartphone. Operating systems of smartphone or tablet are Andoid (Oreo or newer). Functions of Velox Interface include configuration, diagnostics, logger data retrieval and transmitter flash update.

IMPORTANT (NOTE)
Please ensure all required regulatory approvals are in place before you put the FEX45X transmitter in use.

use.

Outputs

- Pulse/Alarm
- RS485 Modbus
- Mobile communications (4G fall back to 3G/NB-IoT)

Pulse outputs (option)

- Passive Output 1: forward pulses
- Passive Output 2: reverse pulses
- +35 V @ 20 mA solid state, unipolar
- Isolated with one common, shared with alarm output Max ±50 V to earth
- 50 Hz max., programmable pulse width, default 2 ms*

* Increasing pulse width beyond 2 ms at frequencies greater than 10 Hz reduces battery life

Modbus interface (option)

- Modbus RTU over 2-wire EIA-485
- Supported baud rates: 9600 and 19200
- Max. devices on bus segment: 32
- Max. response time, 1 registered read: 60 ms
- Max. response time, 1 registered write: 600 ms

Alarm outputs (option)

- Indicates any problem with measurement, power supply or flowrate alarm
- Bi-directional, solid state
- +35 V @ 50 mA
- Isolated with one common, shared with pulse outputs

Mobile communications – 4G/3G

- 4G LTE Cat1 with fall back to 3G (HSPA/HSPA+)
- Data exchange via FTPS/FTP or MQTTS/MQTT Sparkplug B (V 3.0.0) (TLS1.2 encryption with digital certificate based mutual authentication) protocol
- Data exchange format configurable to CSV/JSON
- Data exchange interval, 15 mins, 30 mins, 1 hour, 2 hours, 4 hours, 6 hours, 8 hours, 12 hours or 24 hours configurable

Mobile communications – NB – IoT

- NB – IoT over China Telecom
- Data exchange via LwM2M (DTLS 1.2 encryption)
- Data exchange format JSON (JavaScript Object Notation) for China Telecom
- Data exchange interval 1 hour, 6 hours, 12 hours or 24 hours configurable

Logger

Logger function	Flow, pressure, forward, reverse, and net flow totals
No. of records	45792
Logging interval *	15 seconds 30 seconds 1 minute 5 minutes 15 minutes (selectable)
Logger capacity	31 days @ 1 minute 477 days @ 15 minutes

* Based on a default 15 second measurement rate when operating on battery or renewable power

Logger data file format

- .csv for easy import into databases/spreadsheets
- Time-stamped records with flow, pressure and totalizers in user-configured units of measurement

Audit logger

- Time-stamped records for all events, such as configuration changes, diagnostics, regular alarms and critical alarms (firmware update, change of totalizer, roll over of totalizer, reset of totalizer).
- stored as standard (3000 records) and critical (1000 records) events in separate database.
- available as .csv for easy import into databases/ spreadsheets

Response time (programmable)

>0.1 second (mains-powered)

15 seconds (battery-powered + external renewable energy)

Report types in mobile communications

- Summary report with totalizer (fwd., reverse and net),- flow rate, alarm status (OK/Not OK), signal quality, and battery life along with Pressure
- Detail report with totalizer (fwd., reverse, and net), flow rate, pressure log, alarm, signal quality, battery life
- Diagnostic alarm report

Remote requests through mobile communications

- Summary report, detail report, and audit log report
- Firmware update
- Configuration changes
- Device Certificate update

...Specification – transmitter (FEX45X)

Environmental and operating conditions

Ingress rating

IP68 (NEMA 6P), <2m (6 ft.), for 360 hours (Tested according to IEC 60529)

Humidity

0 to 100 %

Temperature ranges

Storage: –20 to 60 °C (–4 to 140 °F)

Ambient: –25 to 60 °C (–13 to 140 °F)

Environmental classification

O, M1 and E2 for internal antenna devices & E1 for external antenna devices

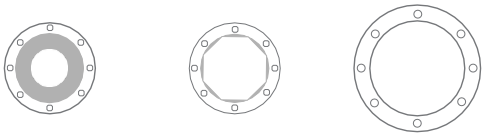
Transmitter vibration

IEC 60068-2-6 (2007)

Vibration level 2g

Options

Compatible sensor styles



Reduced bore
DN40 to 600

Octagonal bore
DN40 to 200

Full bore
DN250 to 2400

External pressure transducer (option)

Up to 20 and 40 bar absolute

Backward compatibility (option)

- Full compatibility with legacy AquaMaster remote sensors. Plugs directly into AquaMaster 4 with no specific configuration required. Note the transmitter is not compatible with legacy telemetry applications and software applications

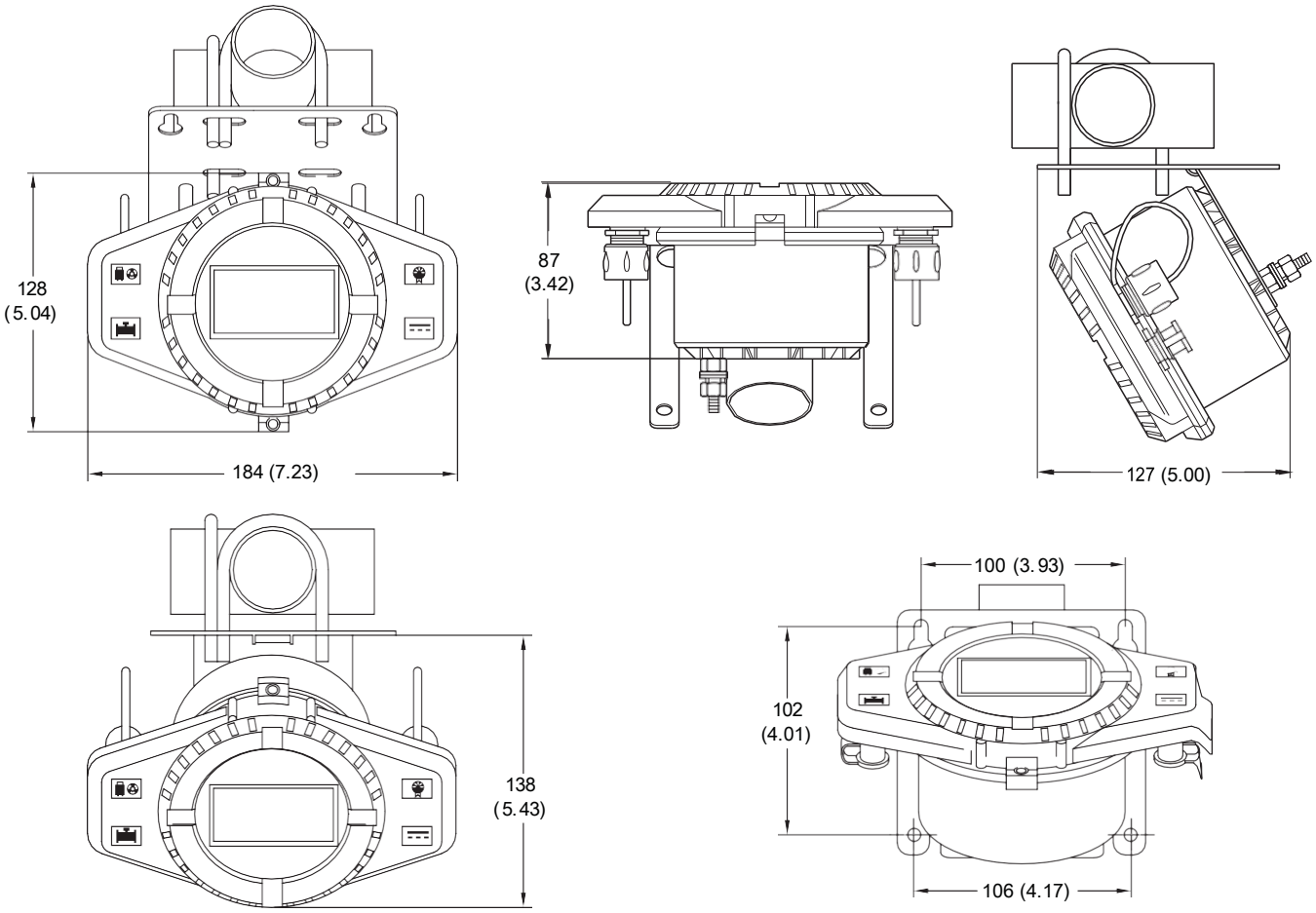
Read-only switch

- Switch selectable inside the SIM card chamber
- Prevents changes to meter configuration that affect the meter/output accuracy

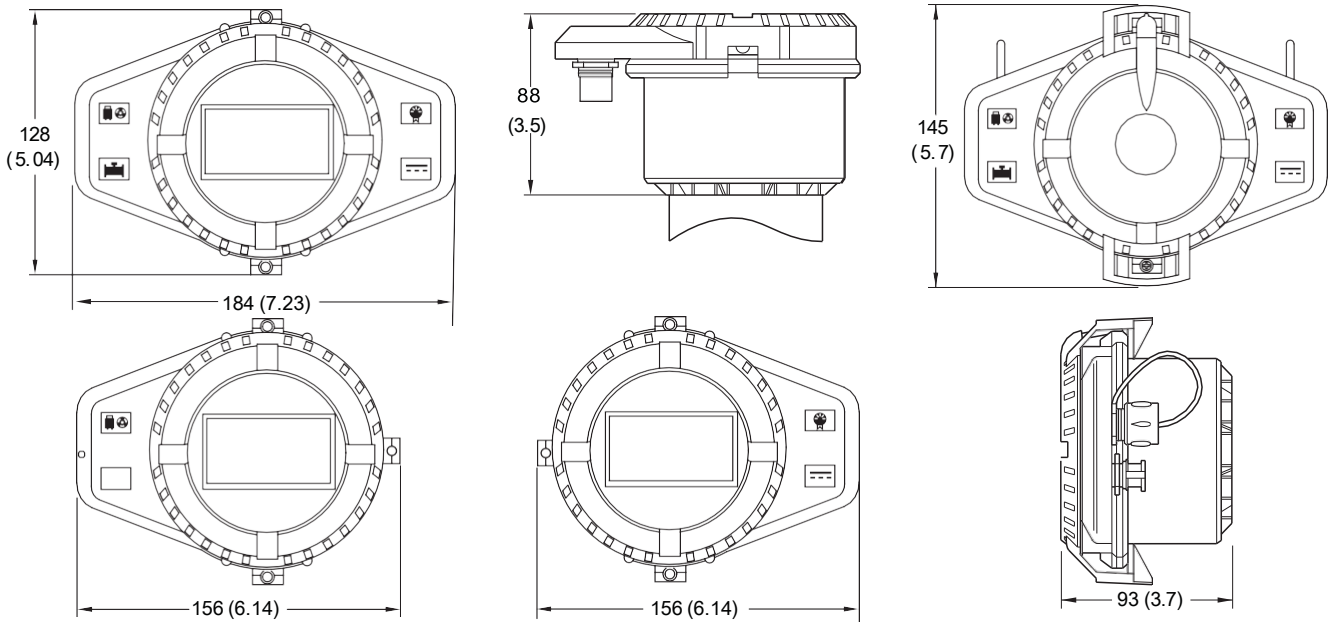
Specification

Dimensions – transmitter (41X/43X)

Dimensions in mm (in)



Wall-/Pipe-mount remote transmitter



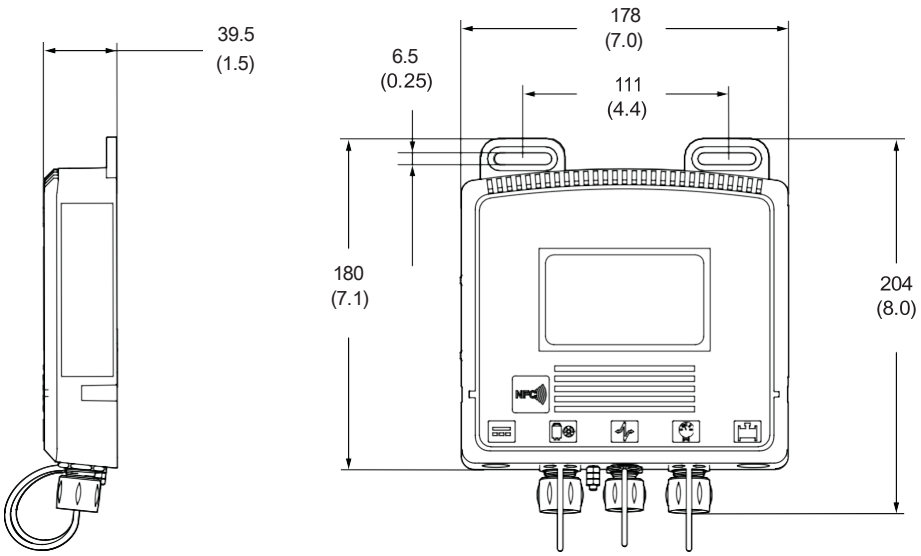
Integral transmitter

Transmitter with NFC aerial cover

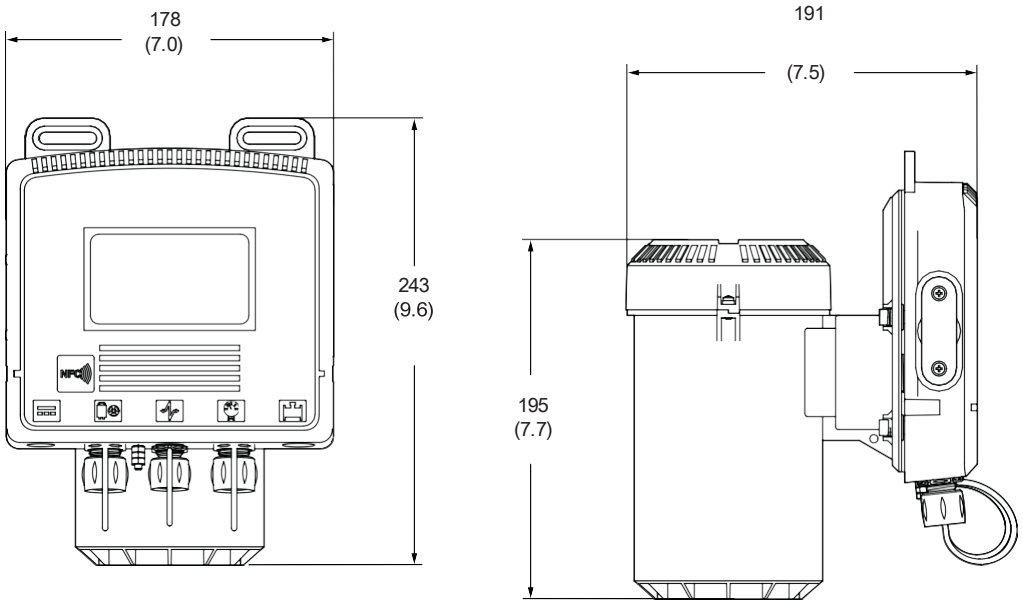
…Specification

Dimensions – FET450

Dimensions in mm (in)

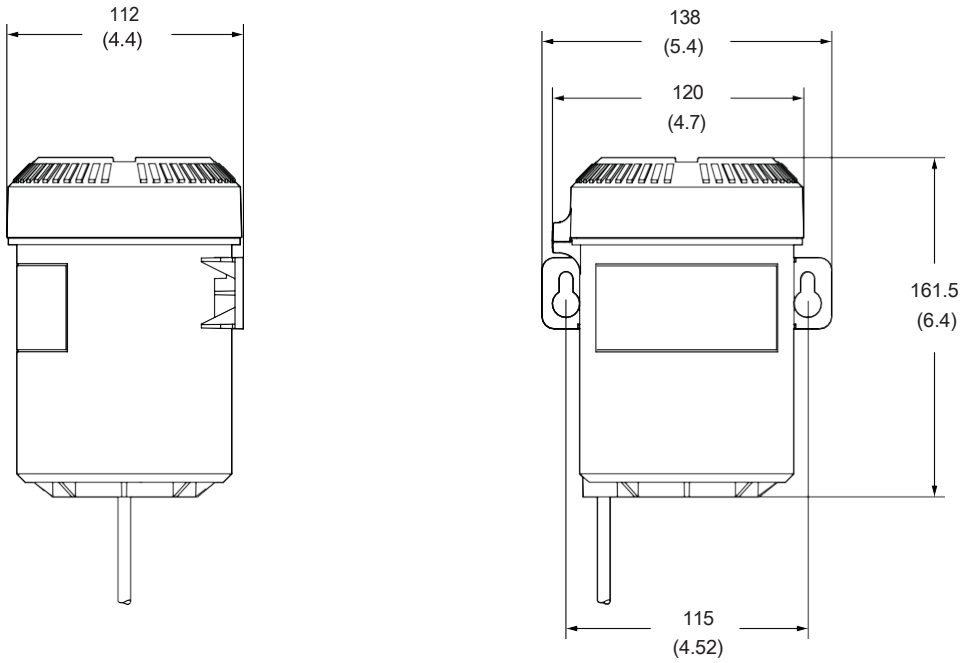


Wall-/Pipe-mount remote transmitter

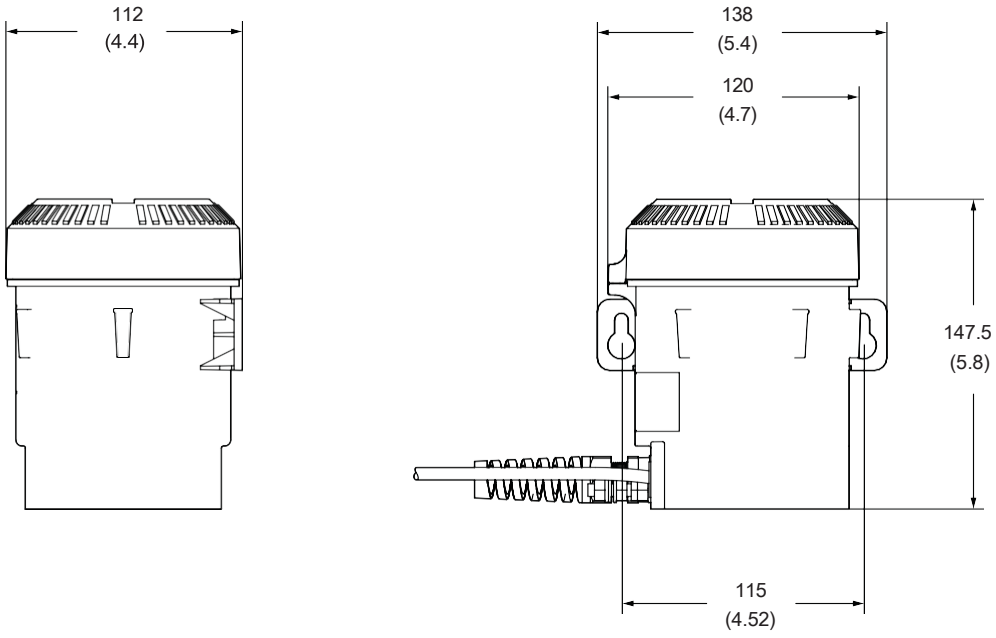


Integral transmitter

Dimensions – Power supply unit for FET452



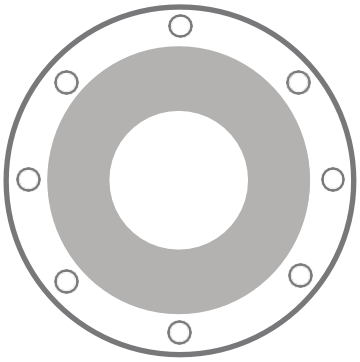
Battery power supply unit (PSU)



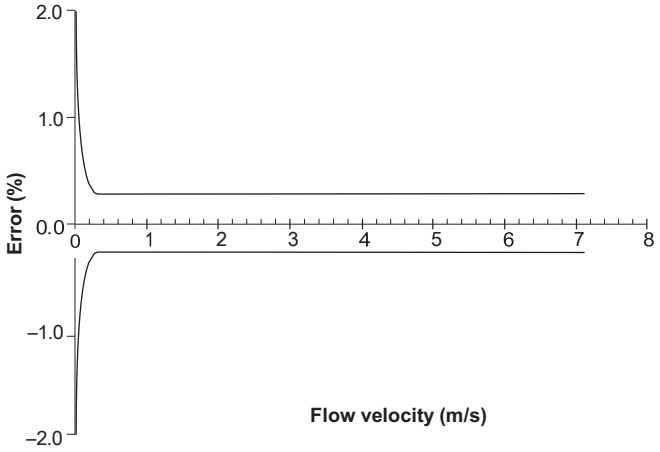
Mains/renewable power supply unit (PSU)

...Specification

Reduced bore sensor



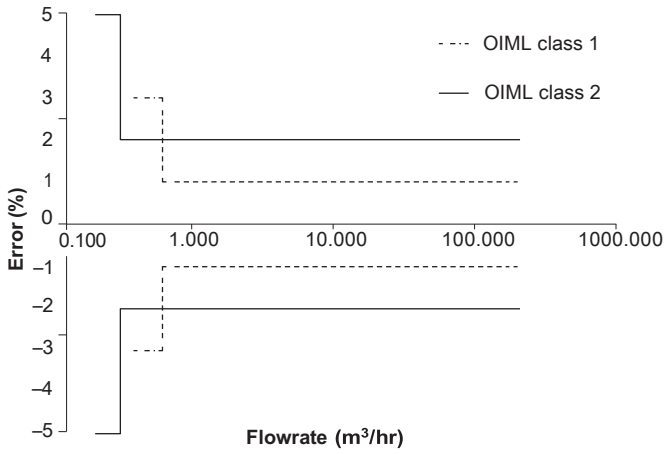
Measurement accuracy



	Mains powered		Battery/Renewable energy powered	
DN	Class 2 ±0.5 or ±0.4 %	Class 1 ±0.2 %	Class 2 ±0.5 or ±0.4 %	Class 1 ±0.2 %
40 to 600	±1 mm/s *	±0.5 mm/s *	±2 mm/s *	±1 mm/s *

* Whichever is the greater

Metrological performance to OIML R49:2013



			Mains powered		Battery/Renewable energy powered	
			Class 2 (R = 1000)	Class 1 (R = 500)	Class 2 (R = 400)	Class 1 (R = 160)
DN	in	Q3 (m³/h)	Q1 (m³/h)	Q1 (m³/h)	Q1 (m³/h)	Q1 (m³/h)
40	11/2	25	0.025	0.05	0.063	0.16
50	2	40	0.04	0.08	0.10	0.25
65	21/2	63	0.063	0.13	0.16	0.39
80	3	100	0.10	0.20	0.25	0.63
100	4	160	0.16	0.32	0.40	1
125	5	160	0.16	0.32	0.40	1
150	6	400	0.40	0.80	1	2.50
200	8	630	0.63	1.26	1.58	3.94
250	10	1000	1	2	2.50	6.25
300	12	1600	1.60	3.20	4	10
350	14	1600	1.60	3.20	4	10
400	16	2500	2.50	5	6.25	15.63
450	18	2500	2.50	5	6.25	15.63
500	20	4000	4	8	10	25
600	24	6300	6.30	12.60	15.75	39.38

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

			Mains powered		Battery/Renewable energy powered	
			Class 2 (R = 1000)	Class 1 (R = 500)	Class 2 (R = 400)	Class 1 (R = 160)
DN	in	Q3 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)
40	11/2	110	0.11	0.22	0.28	0.69
50	2	176	0.18	0.35	0.44	1.10
65	21/2	277	0.28	0.55	0.69	1.73
80	3	440	0.44	0.88	1.10	2.75
100	4	704	0.70	1	1.76	4.40
125	5	704	0.70	1	1.76	4.40
150	6	1761	1.76	3.52	4.40	11
200	8	2774	2.77	5.55	6.93	17.34
250	10	4403	4.40	8.81	11	27.52
300	12	7045	7	14	17.61	44
350	14	7045	7	14	17.61	44
400	16	11007	11	22	27.52	68.79
450	18	11007	11	22	27.52	68.79
500	20	17611	17.61	35.22	44	110
600	24	27738	27.7	55.5	69	173

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

Bore sizes and flange types

Bore size range

DN40 to 600

Flanges to standards

ASME
AWWA
ISO 7005 EN1092-1
DIN
AS4087
AS2129
JIS

Pressure limitations for flanges

As per flange rating
PN25 max. process temperature 50 °C (122 °F)
PN40 max. process temperature 40 °C (104 °F)

Pressure equipment directive 97/23/EC

This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.

Bore and flange material

- DN40 to 200: SG iron
- DN250 to 600: carbon steel
- All sizes (DN 40 - 600) coated with light gray 2-pack epoxy (RAL9002)
- Primer: Interpon PZ660 zinc-based system, 70 microns thick
- Top coat: Interpon 610 light gray polyester powder coating (RAL 9002), up to 150 microns thick, comparable to EN ISO 12944 grade C4
- As a special requirements: 2-pack epoxy primer/finish @ 300 µm DFT

Terminal box for remote sensors

Polycarbonate

Environmental and process conditions

Ingress rating

- IP68 (NEMA 6P) to 10 m (33 ft) for continuous submersion (Tested for 1500 hours according to IEC 60529)
- For buriable applications: 1 m < sensor depth ≤ 5 m

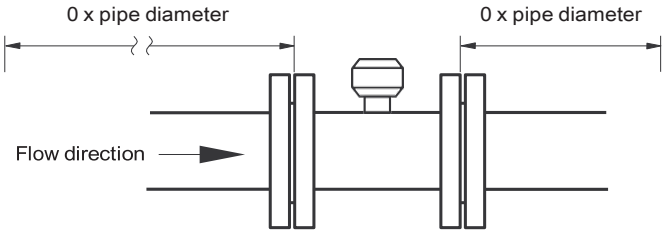
Temperature ranges

Ambient: –25 to 70 °C (–13 to 158°F)
Process: –6 to 70 °C (21 to 158 °F)
Ambient (OIML R49): –25 to 55 °C (–13 to 131 °F)

Conductivity

>20 µS/cm

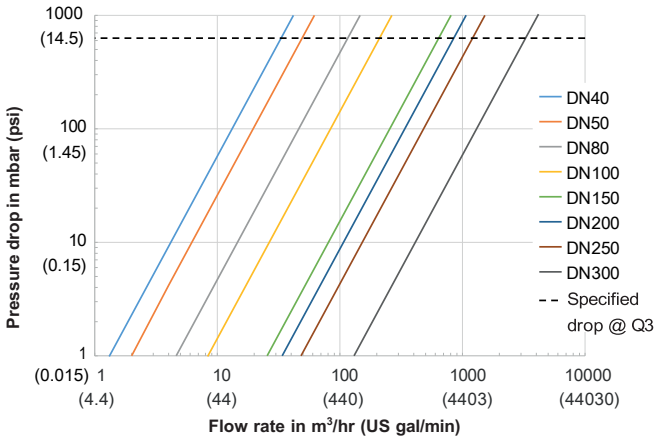
Upstream and downstream pipe conditions



Pressure loss

Flow rate	Pressure loss in bar (psi)
Q_3	DN40 - 50 < 0.4 (5.8)
Q_3	DN65 - 600 < 0.63 (9.1)
$Q_3/2$	<0.16 (2.3)

Reduced bore sensor pressure drop (typical)



Potable water approvals

WRAS*
ACS#
NSF – 61#
AZ/NZS 4020*

Approvals, certification and safety

NSF

Certified to NSF/ANSI/CAN 61-G

Certified to NSF/ANSI/CAN 61-G

* Material approval
#Meter Approval

...Specification

...Reduced bore sensor

Metrological certifications

- OIML R49:2013 for accuracy class 1 and 2 and water temperature class T50 0.1 to 50 °C (32.18 to 122 °F)
- Environmental class: O, M1 ,E1** and E2*
- MID MI-001
- NMI 10 for Australia
- PAC for China

			Mains powered			Battery/Renewable energy powered		
			Class 2.5 (R = 630	Class 2 (R = 1000)	Class 1 (R = 500)	Class 2.5 (R = 250	Class 2 (R = 400)	Class 1 (R = 160)
DN	in	Q3 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)
40	11/2	25	0.04	0.025	0.05	0.1	0.062	0.062(3)
50	2	40	0.063	0.04	0.08	0.16	0.1	0.1(3)
65	21/2	63	0.1	0.063	0.063(2)	0.252	0.157	0.39
80	3	100	0.159	0.1	0.1(2)	0.4	0.25	0.625
100	4	160	0.254	0.16	0.32	0.64	0.4	1
125	5	160	0.254	0.16	0.32	0.64	0.4	1
150	6	400	0.63	0.4	0.4(2)	1.6	1	1(3)
200	8	630	1	0.63	0.63(2)	2.52	1.575	1.575(3)
250	10	1000	1.59	1	2	4	2.5	6.25
300	12	1600	2.54	1.6	3.2	6.4	4	10
350	14	1600	2.54	1.6	3.2	6.4	4	10
400	16	2500	7.94(7)	5(1)	5	20(8)	12.5(4)	15.63
450	18	2500	7.94(7)	5(1)	5	20(8)	12.5(4)	15.63
500	20	4000	6.35	4	8	63.5(9)	40(5)	100(6)
600	24	6300	10	6.3	12.6	100(9)	63(5)	157.5(6)

(1) R = 500, (2) R = 1000, (3) R = 400, (4) R = 200, (5) R = 100 (6) R = 40 (7) R = 315 (8) R = 125 (9) R = 63

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

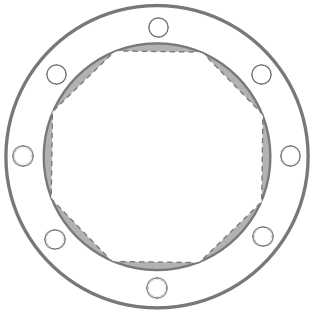
UL Fire Service approval (41X/43X)

Size	UL low flow GPM	UL high flow GPM	Pressure drop (psi)
2	6	235	≤ 10
21/2	6.5	280	≤ 9
3	6	465	≤ 7
4	10	630	≤ 6
6	20	1780	≤ 4
8	20	3345	≤ 8
10	45	4450	≤ 6
12	85	5245	≤ 2

* Applicable only for internal antenna devices of FEX45X & all options of FEX43X

** Applicable for external antenna devices of FEX45X

Full bore sensor



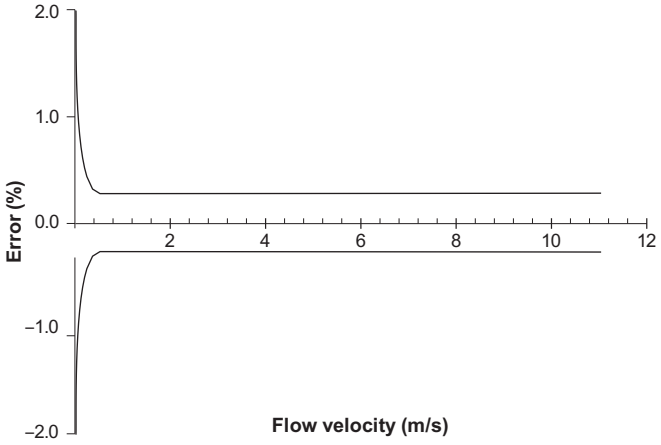
DN40 to 200

Virtual full bore, polypropylene liner

DN250 to 2400

Full bore, elastomer or hard rubber liner

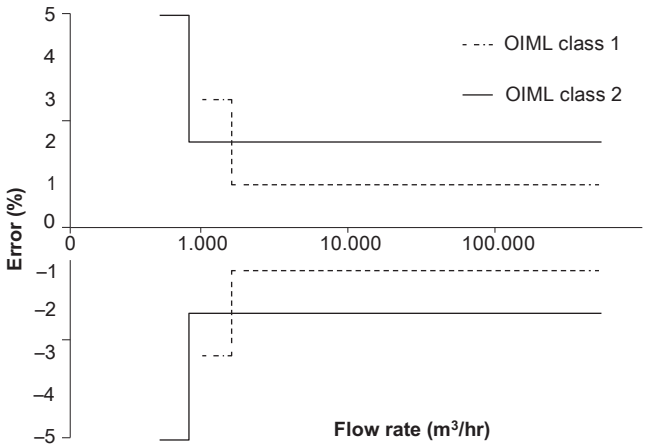
Measurement accuracy



	Mains powered		Battery/Renewable energy powered	
DN	**Class 2** ±0.5 or ±0.4 %	**Class 1** ±0.2 %	**Class 2** ±0.5 or ±0.4 %	**Class 1** ±0.2 %
40 to 600	±2 mm/s *	±1 mm/s *	±4 mm/s *	±2 mm/s *
700 to 2400	±4 mm/s *	±2 mm/s *	±6 mm/s *	±3 mm/s *

* whichever is the greater

Metrological performance to OIML R49:2013



			Mains powered		Battery/Renewable energy powered	
			Class 2 (R = 500)	**Class 1 (R = 250)**	**Class 2 (R = 250)**	**Class 1 (R = 125)**
DN	**in**	**Q3 (m³/h)**	**Q1 (m³/h)**	**Q1 (m³/h)**	**Q1 (m³/h)**	**Q1 (m³/h)**
40	11/2	40	0.08	0.16	0.16	0.32
50	2	63	0.13	0.25	0.25	0.50
65	21/2	100	0.20	0.40	0.40	0.80
80	3	160	0.32	0.64	0.64	1.28
100	4	250	0.50	1	1	2
125	5	250	0.50	1	1	2
150	6	630	1.26	2.52	2.52	5.04
200	8	1000	2	4	4	8
250	10	1600	3.20	6.40	6.40	12.80
300	12	2500	5	10	10	20
350	14	4000	8	16	16	32
400	16	4000	8	16	16	32
450	18	6300	12.60	25.20	25.20	50.40
500	20	6300	12.60	25.20	25.20	50.40
600	24	10000	20	40	40	80
			Class 2 (R = 315)	**Class 1 (R = 160)**	**Class 2 (R = 160)**	**Class 1 (R = 80)**
700	28	16000	50.79	100	100	200
750	30	16000	50.79	100	100	200
800	32	16000	50.79	100	100	200
900	36	25000	79.37	156.20	156.25	312
1000	40	25000	79.37	156.20	156.25	312
1050	42	25000	79.37	156.20	156.25	312
1100	44	40000	126.98	250	250	500
1200	48	40000	126.98	250	250	500
1350	54	63000	200.00	393.7	393.75	787
1400	56	63000	200.00	393.70	393.75	787
1500	60	63000	200.00	393.70	393.75	787
1600	64	63000	200.00	393.70	393.75	787
1650	66	63000	200.00	393.7	393.7	787
1800	72	100000	317.46	625	625	1250
1950	78	100000	317.46	625	625	1250
2000	80	100000	317.46	625	625	1250
2100	84	100000	317.46	625	625	1250
2200	88	160000	507.94	1000	1000	2000
2400	96	160000	507.94	1000	1000	2000

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

...Specification

...Full bore sensor

			Mains powered		Battery/Renewable energy powered	
			Class 2 (R = 500)	Class 1 (R = 250)	Class 2 (R = 250)	Class 1 (R = 125)
DN	in	Q3 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)	Q1 (US gal/ min)
40	11/2	176	0.35	0.70	0.7	1.41
50	2	277	0.55	1.11	1.11	2.22
65	21/2	440	0.88	1.76	1.76	3.52
80	3	704	1.41	2.82	2.82	5.64
100	4	1101	2.20	4	4.40	8.81
125	5	1101	2.20	4	4.40	8.81
150	6	2774	5.55	11.10	11.10	22.2
200	8	4403	8.8	17.6	17.6	35.2
250	10	7045	14.09	28.2	28.2	56.4
300	12	11007	22	44	44	88
350	14	17611	35	70	70.4	141
400	16	17611	35	70	70.4	141
450	18	27738	55.48	111	111	222
500	20	27738	55.48	111	111	222
600	24	44029	88	176	176	352

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

			Class 2 (R = 315)	Class 1 (R = 160)	Class 2 (R = 160)	Class 1 (R = 80)
700	28	70446	224	440	440	881
750	30	70446	224	440	440	881
800	32	70446	224	440	440	881
900	36	110072	349	688	688	1374
1000	40	110072	349	688	688	1374
1050	42	110072	349	688	688	1374
1100	44	176115	559	1101	1101	2201
1200	48	176115	559	1101	1101	2201
1350	54	277381	881	1733	1734	3465
1400	56	277381	881	1733	1734	3465
1500	60	277381	881	1733	1734	3465
1600	64	277381	881	1733	1734	3465
1650	66	277381	881	1733	1734	3465
1800	72	440287	1398	2752	2752	5504
1950	78	440287	1398	2752	2752	5504
2000	80	440287	1398	2752	2752	5504
2100	84	440287	1398	2752	2752	5504
2200	88	704459	2236	4403	4403	8806
2400	96	704459	2236	4403	4403	8806

Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

Bore sizes and flange types

Bore size range

DN40 to 2400

Flanges to standards

ASME
AWWA
ISO 7005 EN1092-1
DIN
AS4087
AS2129
JIS

Pressure limitations for flanges

As per flange rating
PN25 max. process temperature 50 °C (122 °F)
PN40 max. process temperature 40 °C (104 °F)

Pressure equipment directive 97/23/EC

This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.

Bore and flange material

- DN40 to 200: SG iron
- DN250 to 2400: carbon steel
- Sizes DN40 to 200 coated with light gray 2-pack epoxy (RAL9002)
  - Primer: Interpon PZ660 zinc-based system, 70 microns thick
  - Top coat: Interpon 610 light gray polyester powder coating (RAL 9002), up to 150 microns thick, comparable to EN ISO 12944 grade C4
  - As a special requirements: 2-pack epoxy primer/ finish @ 300 µm DFT
- Sizes DN250 to 400: In-organic Zinc based system for the flanges and painted Cast aluminum housing (Paint coat ≥ 80 µm, RAL 9002)
- Sizes DN450 to 2400: Welded steel Design (Paint coat ≥ 80 µm, RAL 9002)

Terminal box for remote sensors

Polycarbonate

Environmental and process conditions

Ingress rating

- DN40 -200 & DN450 - 2400 : IP68 (NEMA 6P) to 10 m (33 ft) for continuous submersion (Tested for 1500 hours according to IEC 60529)
- For buriable applications (DN40 to 200, virtual full bore, polypropylene liner and DN450 to 2400, full bore, rubber liner): 1 m < sensor depth ≤ 5 m
- DN250 - 400: IP68 (NEMA 6P) to 10 m (33 ft) for periodic submersion (Tested for 1500 hours according to IEC 60529)

Temperature ranges

Ambient: –25 to 70 °C (–13 to 158°F)

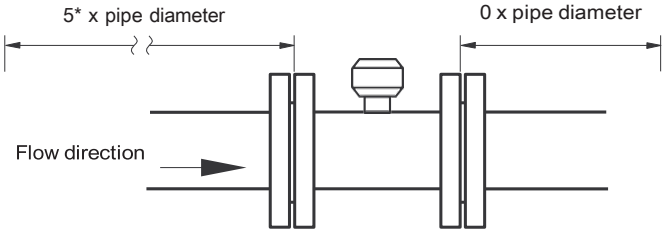
Ambient (OIML R49): –25 to 55 °C (–13 to 131 °F)

		Process temperature	
Liner material	**Bore size**	**Minimum**	**Maximum**
Polypropylene	DN40 to 200	–6 °C (21 °F)	70 °C (158 °F)
Rubber	DN250 to 2400	–10 °C (14 °F)	80 °C (176 °F)

Conductivity

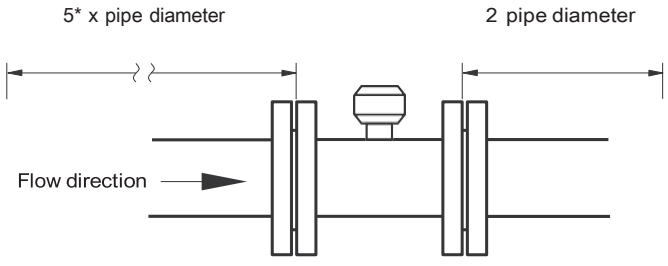
>20 µS/cm

Upstream and downstream pipe conditions (virtual full bore DN40 to 200)



* Upstream 0 x pipe diameter for OIML R49 Class 2 (± 2%) accuracy only

Upstream and downstream pipe conditions (full bore DN250 to 2400)

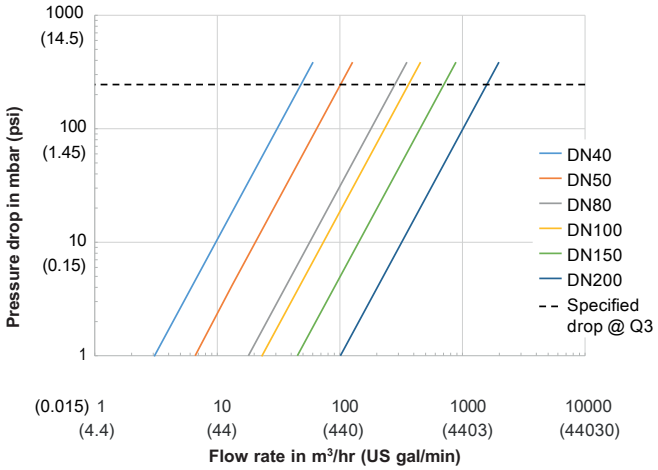


* Upstream 3 x pipe diameter for OIML R49 Class 2 (± 2%) accuracy only

Pressure loss

Flow rate	**Pressure loss in bar (psi)**
Q_3	<0.1 bar (1.5 psi) for DN40 and DN50 <0.16 bar (2.4 psi) for DN65 to DN250
Q_3	< 0.1 bar (1.5 psi) for sizes DN250 and larger

Virtual full bore sensor pressure drop (typical)



Potable water approvals

WRAS*

ACS#

NSF – 61#

AZ/NZ 4020*

Approvals, certification and safety

NSF

Certified to NSF/ANSI/CAN 61-G

Certified to NSF/ANSI/CAN 61-G

* Material approval

#Meter Approval

…Specification

...Full bore sensor

Metrological certifications

- OIML R49:2013 for accuracy class 1 and 2 and water temperature class T50 0.1 to 50 °C (32.18 to 122 °F)
- Environmental class: O, M1 ,E1** and E2*
- MID MI-001
- NMI 10 for Australia
- PAC for China

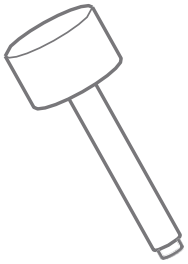
			Mains powered				Battery/Renewable energy powered	
			Class 2.5 (R = 315)	Class 2 (R = 500)	Class 1 (R = 250)	Class 2.5 (R = 160)	Class 2 (R = 250)	Class 1 (R = 125)
DN	in	Q3 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)	Q1 (m^3/h)
40	11/2	40	0.127	0.08	0.08(1)	0.25	0.16	0.32
50	2	63	0.2	0.126	0.126(1)	0.394	0.25	0.504
65	21/2	100	0.32	0.20	0.20(1)	0.625	0.40	0.4(2)
80	3	160	0.508	0.32	0.32(1)	1	0.64	0.64(2)
100	4	250	0.79	0.50	0.5(1)	1.56	1	1(2)
125	5	250	0.79	0.50	0.5(1)	1.56	1	1(2)
150	6	630	2	1.26	2.52	3.94	2.52	5.04
200	8	1000	3.17	2	4	6.25	4	8
250	10	1600	5.08	3.20	6.40	10	6.40	12.80
300	12	2500	7.94	5	10	15.625	10	20
350	14	4000	63.5(8)	40(3)	40(3)	25.0	16	16(2)
400	16	4000	63.5(8)	40(3)	40(3)	25.0	16	16(2)
450	18	6300	100(8)	63(3)	63(3)	39.375	25.20	25.2(2)
500	20	6300	100(8)	63(3)	63(3)	39.375	25.20	25.2(2)
600	24	6300	100(8)	63(3)	63(3)	63(3)	39.37(4)	78.75(5)
700	28	10000	80(7)	50(6)	100(3)	158.7(8)	100(3)	200(9)
750	30	10000	80(7)	50(6)	100(3)	158.7(8)	100(3)	200(9)
800	32	10000	80(7)	50(6)	100(3)	158.7(8)	100(3)	200(9)
900	36	10000	125(5)	80(7)	158.7(8)	250(10)	158.7(8)	-
1000	40	16000	128(7)	80(6)	160(3)	254(8)	160(3)	-
1050	42	16000	128(7)	80(6)	160(3)	254(8)	160(3)	-
1100	44	16000	200(5)	128(7)	253.9(8)	400(10)	254(8)	-
1200	48	16000	200(5)	128(7)	253.9(8)	400(10)	254(8)	-
1350	54	16000	254(8)	200(5)	400(10)	400(10)	400(10)	-
1400	56	16000	254(8)	200(5)	400(10)	400(10)	400(10)	-
1500	60	16000	254(8)	200(5)	400(10)	400(10)	400(10)	-
1600	64	16000	400(10)	200(5)	400(10)	400(10)	400(10)	-
1650	66	16000	400(10)	200(5)	400(10)	400(10)	400(10)	-
1800	72	16000	400(10)	317.5(9)	-	-	-	-

(1) R = 500, (2) R = 250, (3) R = 100, (4) R = 160, (5) R = 80, (6) R = 200,
(7) R = 125, (8) R= 63, (9) R = 50, (10) R = 40
Q2 = 1.6 * Q1
Q4 = 1.25 * Q3
Q3/Q1 = R

* Applicable only for internal antenna devices of FEX45X & all options of FEX43X

** Applicable for external antenna devices of FEX45X

Insertion flowmeter



Mounting

Integral transmitter

On probe sensor

Remote transmitter

Off probe sensor

Insertion details

Size range

300 to 1000 mm (12 to 40 in)

Pipe sizes

200 to 8000 mm (8 to 320 in) nominal bore

Pressure limitations

20 bar (295 psi) absolute

Pressure equipment directive 97/23/EC

This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.

Sensor body material

316L stainless steel

Sensor tip material

PEEK

Terminal box material for remote sensors

Polycarbonate

Threaded connection

1 in BSP

1 in NPT

11/2 in BSP

Pressure tapping provision

1/8 in BSP

Note: Insertion flow meters are recommended to be used with Metallic pipes only.

Environmental and process conditions

Ingress rating

IP68 (NEMA 6P) to 10 m (33 ft)

Temperature ranges

Ambient: –20 to 60 °C (–4 to 140 °F)

Process: 0 to 60 °C (32 to 140 °F)

Conductivity

>50 µS/cm

Metrological performance and certifications

Velocity accuracy

±2 % of rate or ±2 mm/s (±0.08 in/s) whichever is the greater

Volume accuracy

Refer to ISO 7145-1982 (BS 1042 section 2.2) for details

Flow condition

Fully developed profile in accordance with ISO 7145-1982 (BS1042 section 2.2.)

Maximum flow

The maximum velocity depends upon the actual insertion length. Typical insertion lengths are 0.125 and 0.5 x pipe diameter. Figure 2 is a guide* to the maximum allowable velocity for different insertion lengths.

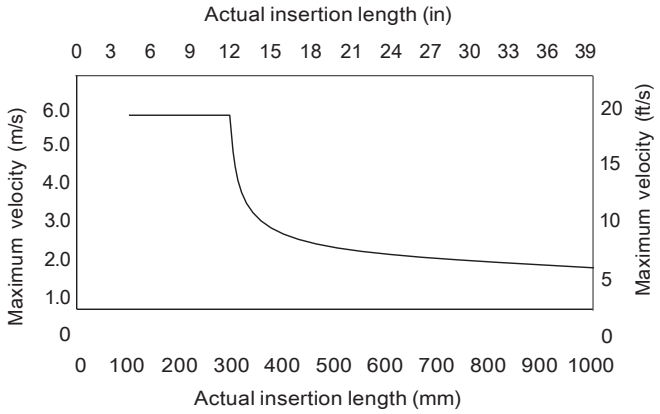


Figure 2 Maximum allowable velocity for different insertion lengths

Potable water approvals for wetted parts

WRAS

ACS

NSF-61

* Figure 2 is intended as a guide only. Factors that influence the maximum insertion length into the pipe include: flow sensor mounting components (for example, standoffs, bushes and valves) pipeline vibration, fluid vibration and pump noise.

…Specification

...Insertion flowmeter

Pressure transducer (option)

Ingress protection

IP68 to 10 m (33 ft)

Wetted parts

303L stainless steel, Viton® and 96 % alumina

Process temperature range

–10 to 50 °C (14 to 122 °F) (protect transducer from frost)

Ambient temperature range

–20 to 70 °C (–4 to 158 °F)

Pressure range (specify when ordering)

20 and 40 bar absolute

Accuracy (typical)

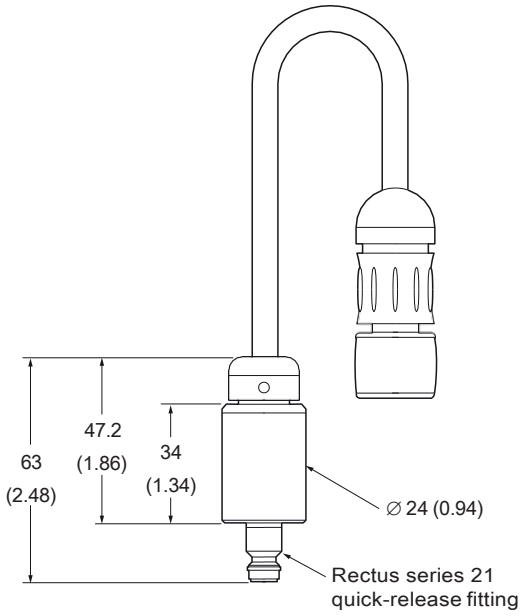
- < ±0.1 % of span + thermal errors
- Thermal zero shift < 0.01 % span/°C
- Thermal span shift < ±0.015 %/°C

Potable water approvals for wetted parts

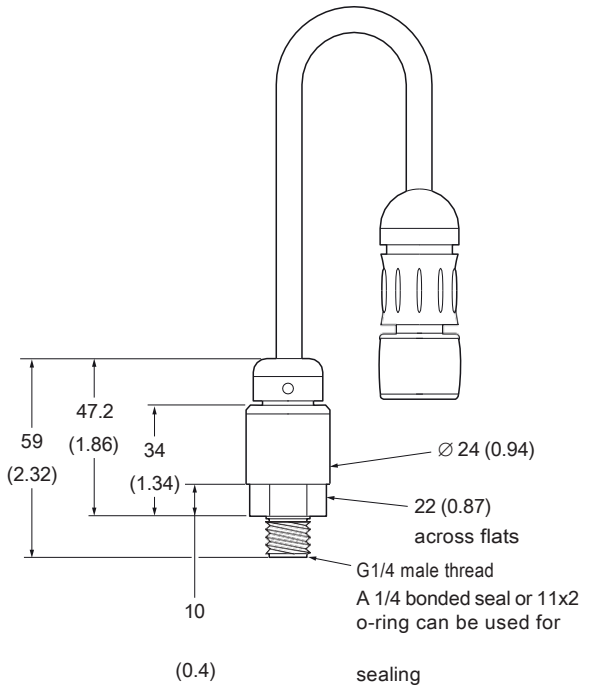
WRAS

Dimensions

Dimensions in mm (in)
All dimensions nominal



20 bar transsducer



40 bar transsducer

Dimensions – sensors

R-style sensor – DN 40 to DN 300 (11/2 to 12 in)

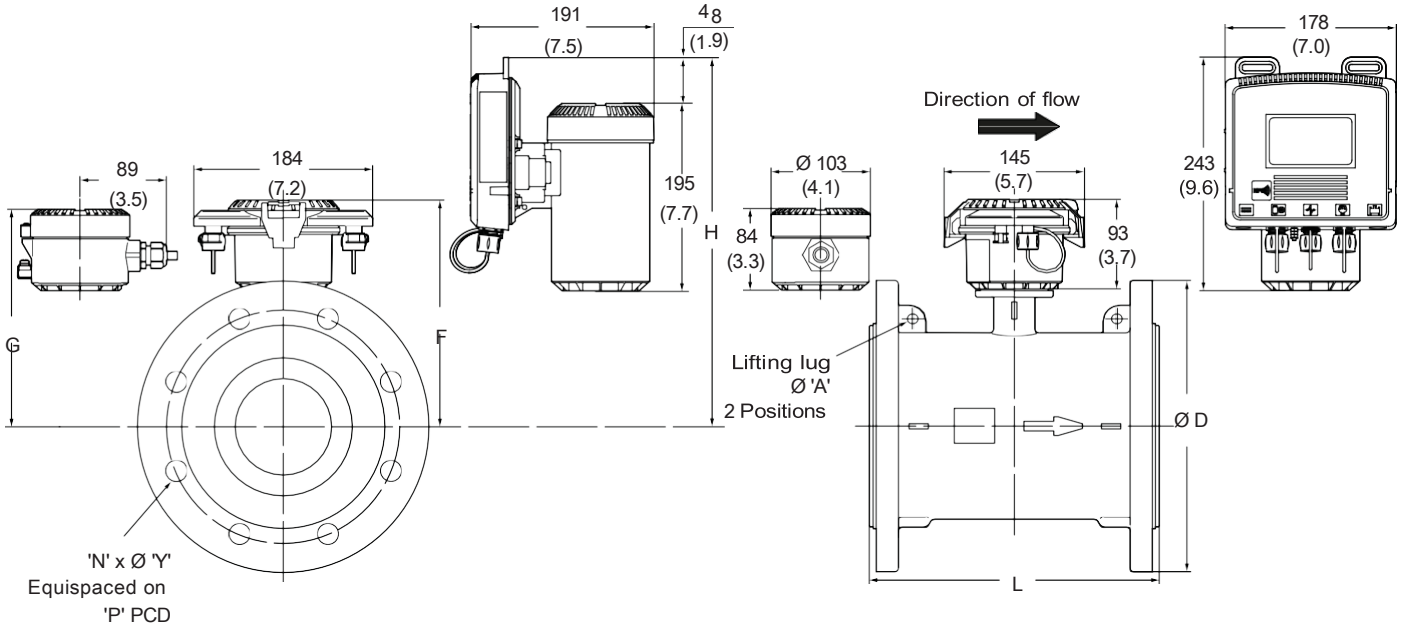


Figure 3 R-style sensor – DN 40 to DN 300 (11/2 to 12 in)

Table 1 R-style sensor – DN 40 to DN 80 (11/2 to 3 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	Tx. height H	Lifting lug A	Integral FEW411/ FEW431	Remote	Integral FEW451
DN 40 (11/2 in)	EN 1092	PN 10, 16, 25	150 (5.9)	4	19 (0.75)	110 (4.3)	200 (7.9)	158 (6.2)	149 (5.9)	308 (12.1)	N/A	13 (29)	12 (27)	15 (34)
	ASME B16.5	CL150			15.7 (0.62)	98 (3.9)								
	AS 2129	Table E	135 (5.3)		14 (0.55)									
	JIS B2220	5K	120 (4.7)		15 (0.59)	95 (3.7)		154 (6.1)	144 (5.7)	304 (12.0)		11 (24)	8 (18)	13 (29)
		10K	140 (5.5)		19 (0.75)	105 (4.2)								
DN 50 (2 in)	EN 1092	PN 10, 16, 25	165 (6.5)	4	19 (0.75)	125 (4.9)	200 (7.9)	162 (6.4)	153 (6.0) 152 (6.0)	312 (12.3)	N/A	15 (32) 12 (26)	14 (30) 9 (20)	17 (38) 14 (31)
	ASME B16.5	CL150				121 (4.8)								
	AS 2129	Table E	150 (5.9)		18 (0.71)	114 (4.5)								
	AS 4087	PN 16												
	JIS B2220	5K	130 (5.1)		15 (0.59)	105 (4.1)								
		10K	155 (6.1)		19 (0.75)	120 (4.7)								
DN 65 (2 1/2 in)	EN 1092	PN 10, 16	185 (7.3)	4	19 (0.75)	145 (5.7)	200 (7.9)	176 (6.9)	167 (6.6)	326 (12.8)	N/A	19 (42)	18 (40)	21 (47)
		PN 25		8										
	ASME B16.5	CL150	165 (6.5)	4	20 (0.79)	140 (5.5)		168 (6.6)	158 (6.2)	318 (12.5)		14 (31)	11 (24)	16 (36)
	AS 2129	Table E												
	AS 4087	PN 16			18 (0.71)	127 (5.0)								
	JIS B2220	5K			15 (0.59)	130 (5.1)								
		10K	175 (6.9)		19 (0.75)	140 (5.5)								
DN 80 (3 in)	EN 1092	PN 10, 16, 25	200 (7.9)	8	19 (0.75)	160 (6.3)	200 (7.9)	181 (7.1)	172 (6.8)	331 (13.0)	N/A	21 (47)	20 (44)	23 (51)
	ASME B16.5	CL150			20 (0.79)	152 (6.0)								
	AS 2129	Table E	185 (7.3)	4	18 (0.71)	146 (5.8)		174 (6.9)	165 (6.5)	324 (12.8)		17 (37)	14 (31)	
	AS 4087	PN 16												
	JIS B2220	5K	180 (7.1)		19 (0.75)	145 (5.7)								
		10K	185 (7.3)	8		150 (5.9)								

…Dimensions – sensors

...R-style sensor – DN 40 to DN 300 (11/2 to 12 in)

Table 2 R-style sensor – DN 100 to DN 300 (4 to 12 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD	No. holes	Bolt hole dia.	Bolt hole PCD	Sensor length	Tx. height	T. box height	Tx. height	Lifting lug	Integral FEW411/ FEW431	Remote	Integral FEW451
			D	N	Y	P	L	F	G	H	A			
DN 100 (4 in)	EN 1092	PN 10, 16			19 (0.75)	180 (7.1)								
		PN 25	235 (9.3)	8	23 (0.91)	190 (7.5)		202 (8.0)	193 (7.6)	352 (13.9)		27 (60)	26 (58)	29 (64)
	ASME B16.5	CL150			19 (0.75)	191 (7.5)								
	AS 2129	Table E	215 (8.5)								N/A			
	AS 4087	PN 16		4	18 (0.71)	178 (7.0)	250 (9.9)	212 (8.3)	203 (8.0)	362 (14.3)		23 (51)	20 (44)	25 (56)
	JIS B2220	5K	200 (7.9)	8		165 (6.5)								
		7.5K	238 (9.4)	4	19 (0.75)	195 (7.7)								
		10K	210 (8.3)	8		175 (6.9)								
DN 125 (5 in)	EN 1092	PN 10, 16			18 (0.71)	210 (8.3)								
		PN 25	270 (10.6)		28 (1.10)	220 (8.7)		221 (8.7)	212 (8.3)	371 (14.6)		30 (66)	29 (64)	32 (71)
	ASME B16.5	CL150			22 (0.87)	216 (8.5)								
	AS 2129	Table E	255 (10.0)	8	18 (0.71)	210 (8.3)	250 (9.9)				N/A			
	JIS B2220	5K	235 (9.3)		19 (0.75)	200 (7.9)		212 (8.3)	203 (8.0)	362(14.3)		26 (57)	23 (51)	28 (62)
		10K	250 (9.8)		23 (0.91)	210 (8.3)								
DN 150 (6 in)	EN 1092	PN 10, 16			23 (0.91)	240 (9.5)								
	ASME B16.5	CL150	300 (11.8)		22 (0.87)	242 (9.5)			224 (8.8)			35 (77)	34 (75)	37 (82)
	EN 1092	PN 25		8	26 (1.02)	250 (9.8)								
	AS 2129	Table E	280 (11.0)		22 (0.87)	235 (9.3)	300 (11.8)	233 (9.2)		383(15.1)	10.2 (0.40)			
	AS 4087	PN 16			18 (0.71)				223 (8.8)			33 (73)	31 (68)	35 (78)
	JIS B2220	5K	265 (10.4)		19 (0.75)	230 (9.1)								
		7.5K	290 (11.4)	6		247 (9.7)								
		10K	280 (11.0)	8	23 (0.91)	240 (9.5)								
DN 200 (8 in)	EN 1092	PN 10	370 (14.6)	8	23 (0.91)	295 (11.6)								
		PN 16												
		PN 25	360 (14.2)	12	28 (1.10)	310 (12.2)		259 (10.2)		409 (16.1)		68 (150)	67 (147)	70 (155)
	ASME B16.5	CL150	370 (14.6)		22 (0.87)	298 (11.7)								
	AS 2129	Table E				292 (11.5)	350 (13.8)		249 (9.8)		10.2 (0.40)			
	AS 4087	PN 16	335 (13.2)	8	18 (0.71)									
	JIS B2220	5K	320 (12.6)		23 (0.91)	280 (11.0)		258 (10.2)		408 (16.1)		51 (112)	48 (106)	53 (117)
		7.5K	342 (8.7)		19 (0.75)	299 (11.8)								
		10K	330 (13.0)	12	23 (0.91)	290 (11.4)								
DN 250 (10 in)	EN 1092	PN10	395 (15.6)		22 (0.87)	350 (0.87)								
		PN16	405 (15.9)	12	26 (1.02)	355 (14.0)								
		PN25	425 (16.7)		30 (1.18)	370 (14.6)								
	AS 2129	Table E	405 (15.9)		22 (0.87)	356 (14.0)								
	AS 4087	PN 16		8			450 (17.7)	285 (11.2)	276 (10.9)	435 (17.1)	10.2 (0.40)	78 (172)	75 (165)	80 (177)

		5K	385 (15.2)	12	23 (0.91)	345 (13.6)							
	JIS B2220	7.5K	410 (16.1)	8		360 (14.2)							
		10K	400 (15.8)	12	25 (0.98)	355 (14.0)							
	ASME B16.5	CL150	406 (16.0)	12	22 (0.87)	362 (14.3)							
		PN10	445 (17.5)	12	22 (0.87)	400 (15.8)							
	EN 1092	PN16	460 (18.1)		26 (1.02)	410 (16.1)							
		PN25	485 (19.1)	16	30 (1.18)	430 (16.9)							
	AS 2129	Table E	455 (17.9)	12	26 (1.02)	406 (16.0)							
DN 300 (12 in)	AS 4087	PN 16			22 (0.87)		500 (19.7)	310 (12.2)	301 (11.9)	460(18.1)	10.2 (0.40)	115 (253)	112 (247)	117 (258)
		5K	430 (16.9)	12		390 (15.4)							
	JIS B2220	7.5K	464 (18.3)	10	23 (0.91)	414 (16.3)							
		10K	445 (17.5)	16	25 (0.98)	400 (15.8)							
	ASME B16.5	CL150	483 (19.0)	12	22 (0.87)	432 (17.0)							

R-style sensor – DN 350 to DN 600 (14 to 24 in)

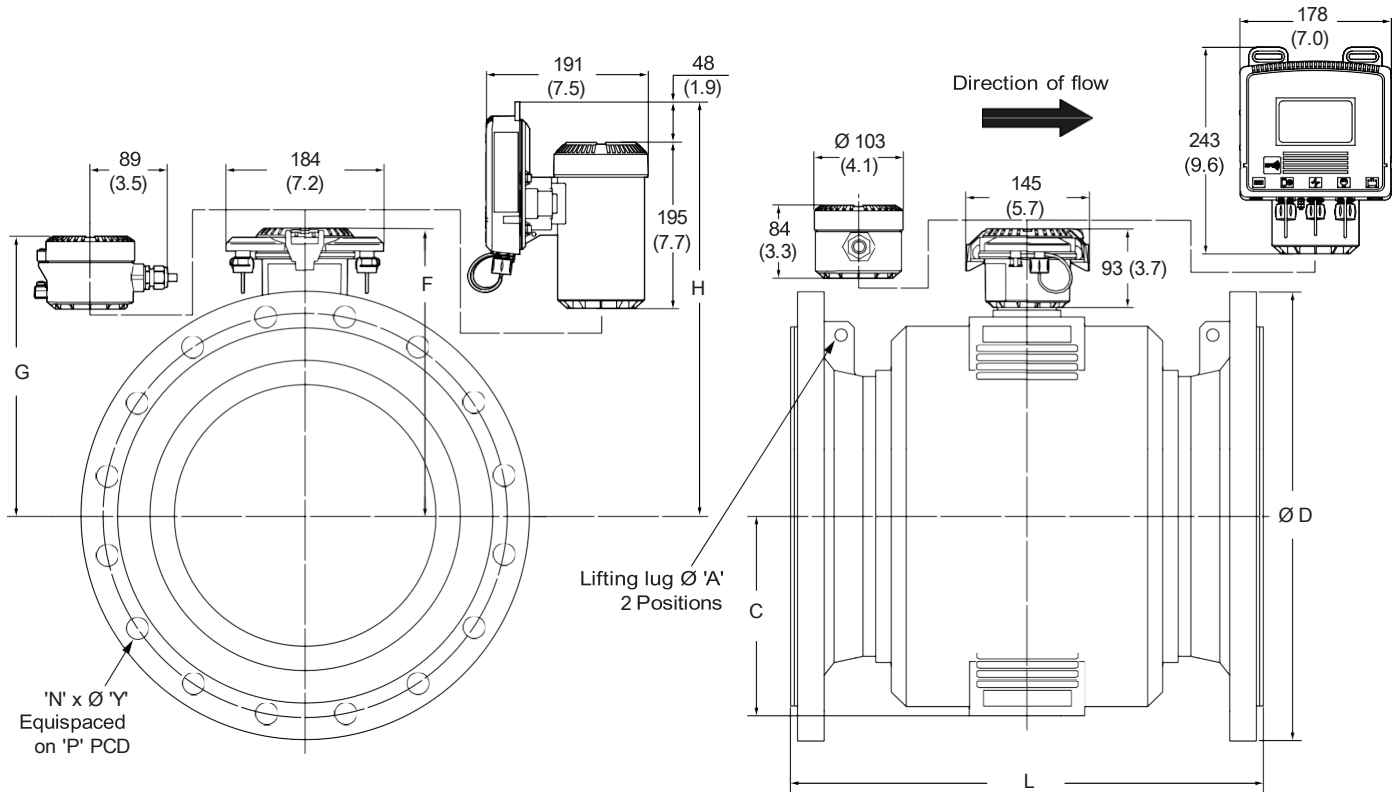


Figure 4 R-style sensor – DN 350 to DN 600 (14 to 24 in)

…Dimensions – sensors

...R-style sensor – DN 350 to DN 600 (14 to 24 in)

Table 3 R-style sensor – DN 350 to DN 600 (14 to 24 in)

Sensor size	Flange		Dimensions in mm (in)										Approx. weight kg (lbs)		
	Standard	Class	Flange OD D	No. Holes N	Bolt hole dia Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	Tx. height H	Lifting lug A	Cover flat C	Integral FEW411/ FEW431	Remote	Integral FEW451
DN 350 (14 in)	EN 1092	PN 10	505 (19.9)	16	22 (0.87)	460 (18.1)	550 (21.7)	334 (13.2)	324 (12.8)	484 (19.1)	14.5 (0.57)	231 (9.1)	102 (225)	100 (220)	104 (230)
		PN 16	520 (20.5)		26 (1.02)	470 (18.5)									
		PN 25	555 (21.9)		33 (1.30)	490 (19.3)									
	ASME B16.5	CL150	535 (21.1)		29.5 (1.16)	476 (18.8)									
	AS 2129	Table E	525 (20.7)	12	26 (1.02)	470 (18.5)									
	AS 4087	PN 16													
		5K	480 (18.9)			435 (17.1)									
	JIS B2220	7.5K	530 (20.7)	10	25 (0.98)	472 (18.6)									
		10K	490 (19.3)	16		445 (17.5)									
DN 400 (16 in)	EN 1092	PN 10	565 (22.3)	16	26 (1.02)	515 (20.3)	600 (23.6)	360 (14.2)	354 (13.9)	510 (20.1)	14.5 (0.57)	257 (10.1)	117 (258)	115 (254)	119 (263)
		PN 16	580 (22.8)		30 (1.18)	525 (20.7)									
		PN 25	620 (24.4)		36 (1.42)	550 (21.7)									
	ASME B16.5	CL150	600 (23.6)		29.5 (1.16)	540 (21.3)									
	AS 2129	Table E	580 (22.8)	12	26 (1.02)	521 (20.5)									
	AS 4087	PN 16													
		5K	540 (21.3)	16	25 (0.98)	495 (19.5)									
	JIS B2220	7.5K	582 (22.9)	12		524 (20.6)									
		10K	560 (22.1)	16	27 (1.06)	510 (20.1)									
DN 450 (18 in)	EN 1092	PN 10	615 (24.2)	20	26 (1.02)	565 (22.3)	700 (27.6)	388 (15.3)	379 (14.9)	538 (21.2)	14.5 (0.57)	285 (11.2)	162 (357)	160 (353)	164 (362)
		PN 16	640 (25.2)		30 (1.18)	585 (23.0)									
		PN 25	670 (26.4)		36 (1.42)	600 (23.6)									
	ASME B16.5	CL150	635 (25.0)	16	32.5 (1.28)	578 (22.8)									
	AS 2129	Table E	640 (25.2)	16	26 (1.02)	584 (23.0)									
	AS 4087	PN 16		12											
		5K	605 (23.8)	16	25 (0.98)	555 (21.9)									
	JIS B2220	7.5K	652 (25.7)	12	27 (1.06)	585 (23.0)									
		10K	620 (24.4)	20		565 (22.3)									
DN 500 (20 in)	EN 1092	PN 10	670 (26.4)	20	26 (1.02)	620 (24.4)	770 (30.3)	419 (16.5)	410 (16.2)	569 (22.4)	14.5 (0.57)	316 (12.5)	219 (483)	217 (477)	221 (488)
		PN 16	715 (28.2)		33 (1.30)	650 (25.6)									
		PN 25	730 (28.7)		36 (1.42)	660 (26.0)									
	ASME B16.5	CL150	700 (27.6)		32.5 (1.28)	635 (25.0)									
	AS 2129	Table E	705 (27.8)	16	26 (1.02)	641 (25.2)									
	AS 4087	PN 16													
		5K	655 (25.8)	20	25 (0.98)	605 (23.8)									
	JIS B2220	7.5K	706 (27.8)	12	27 (1.06)	639 (25.2)									

		10K	675 (26.6)	20		620 (24.4)									
DN 600 (24 in)	EN 1092	PN 10	780 (30.7)		30 (1.18)	725 (28.6)	920 (36.2)	446 (17.6)	437 (17.2)	596 (23.5)	14.5 (0.57)	343 (13.5)	317 (699)	315 (695)	319 (704)
		PN 16	840 (33.1)		36 (1.42)	770 (30.3)									
		PN 25	845 (33.3)	20	39 (1.54)										
	ASME B16.5	CL150	815 (32.1)		35.5 (1.40)	749.5 (29.5)									
	AS 2129	Table E	825 (32.5)	16	33 (1.30)	756 (29.7)									
	AS 4087	PN 16			30 (1.18)										
		5K	770 (30.3)	20	27 (1.06)	715 (28.2)									
	JIS B2220	7.5K	810 (31.9)	16		743 (29.3)									
		10K	795 (31.3)	24	33 (1.30)	730 (28.7)									

V-style sensor – DN 40 to DN 200 (11/2 to 8 in)

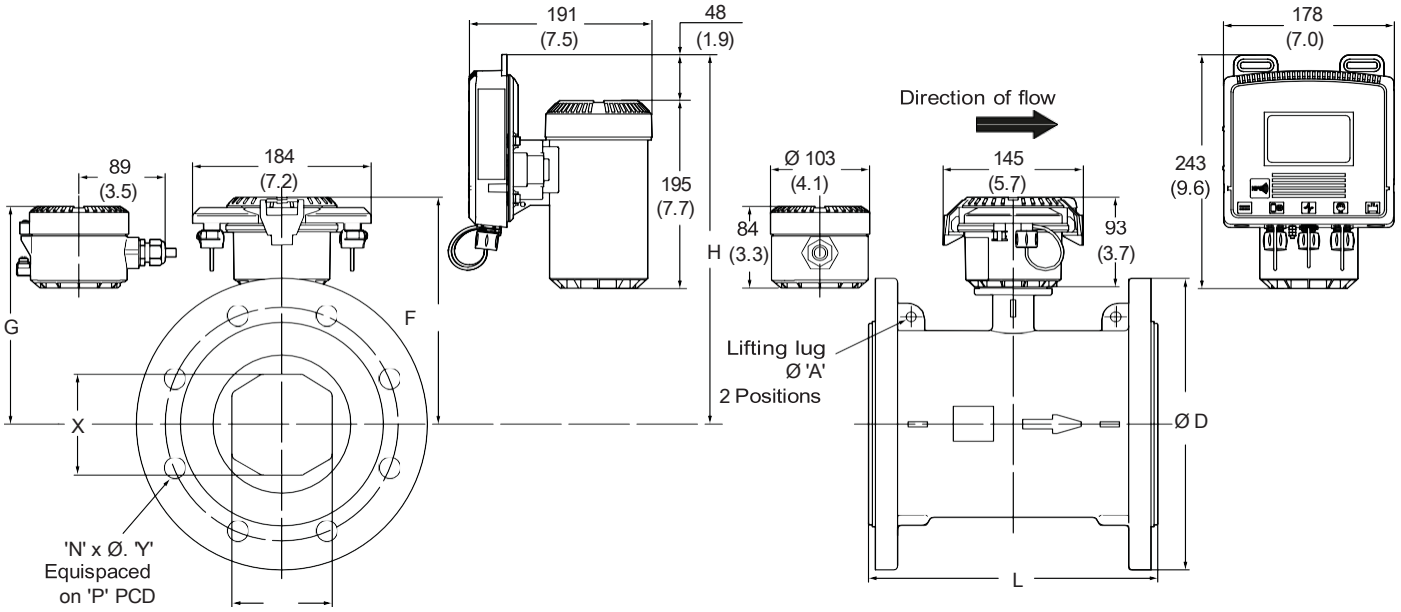


Figure 5 V-style sensor – DN 40 to DN 200 (11/2 to 8 in)

Item D.

…Dimensions – sensors

...V-style sensor – DN 40 to DN 200 (11/2 to 8 in)

Table 4 V-style sensor – DN 40 to DN 200 (11/2 to 8 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	Tx. height H	Lifting lug A	Integral FEW411 FEW431	Remote	Integral FEW451
DN 40 (11/2 in)	EN 1092	PN 10, 16, 25	150 (5.9)	4	19 (0.75)	110 (4.3)	200 (7.9)	158 (6.2)	149 (5.9)	308 (12.1)	N/A	13 (29)	12 (27)	15 (33)
	ASME B16.5	CL150	135 (5.3)		15.7 (0.62)	98 (3.9)								
	AS 2129	Table E			14 (0.55)									
	JIS B2220	10K	140 (5.5)		19 (0.75)	105 (4.2)								
	EN 1092	PN 10, 16, 25	165 (6.5)		19 (0.75)	125 (4.9)		154 (6.1)	144 (5.7)	304 (12)		10 (22)	7 (15)	12 (27)
DN 50 (2 in)	ASME B16.5	CL150	150 (5.9)	4	18 (0.71)	121 (4.8)	200 (7.9)	162 (6.4)	153 (6.0)	312 (12.3)	N/A	14 (31)	13 (29)	16 (36)
	AS 2129	Table E				114 (4.5)								
	AS 4087	PN 16			19 (0.75)	120 (4.7)						11 (24)	8 (18)	13 (29)
	JIS B2220	10K	155 (6.1)		19 (0.75)	145 (5.7)								
DN 65 (21/2 in)	EN 1092	PN 10, 16	185 (7.3)	4			200 (7.9)	176 (6.9)	167 (6.6)	326 (12.9)	N/A	16 (35)	15 (33)	18 (40)
		PN 25		8										
	ASME B16.5	CL150	165 (6.5)	4	20 (0.79)	140 (5.5)		168 (6.6)	158 (6.2)	318 (12.5)		13 (29)	10 (22)	15 (33)
	AS 2129	Table E			18 (0.71)	127 (5.0)								
	AS 4087	PN 16												
	JIS B2220	10K	175 (6.9)		19 (0.75)	140 (5.5)								
DN 80 (3 in)	EN 1092	PN 10, 16, 25	200 (7.9)	8	19 (0.75)	160 (6.3)	200 (7.9)	181 (7.1)	172 (6.8)	331 (13.1)	N/A	17 (38)	16 (36)	19 (42)
	ASME B16.5	CL150		4	20 (0.79)	152 (6.0)								
	AS 2129	Table E			18 (0.71)	146 (5.8)		174 (6.9)	165 (6.5)	324 (12.8)		16 (36)	13 (28)	18 (40)
	AS 4087	PN 16	185 (7.3)											
	JIS B2220	10K		8	19 (0.75)	150 (5.9)								
DN 100 (4 in)	EN 1092	PN 10, 16	235 (9.3)	8	19 (0.75)	180 (0.71)	250 (9.9)	202 (8.0)	193 (7.6)	352 (13.9)	N/A	19 (42)	18 (40)	21 (47)
		PN 25			23 (0.91)	190 (7.5)								
	ASME B16.5	CL150			19 (0.75)	191 (7.5)								
	AS 2129	Table E	215 (8.5)		18 (0.71)	178 (7.0)		212 (8.3)	203 (8.0)	362 (14.2)				
	AS 4087	PN 16												
		7.5K	230 (9.1)	4		175 (6.9)								
	JIS B2220	10K	230 (9.1)	8	19 (0.75)	190 (7.7)								
DN 125 (5 in)	EN 1092	PN 10, 16	270 (10.6)	8	18 (0.71)	210 (8.3)	250 (9.9)	221 (8.7)	212 (8.3)	371 (14.6)	N/A	30 (66)	29 (64)	32 (71)
		PN 25			28 (1.10)	220 (8.7)								
	ASME B16.5	CL150			22 (0.87)	216 (8.5)								
	AS 2129	Table E	255 (10.0)		18 (0.71)	210 (8.3)		212 (8.3)	203 (8.0)	362 (14.3)		24 (53)	21 (46)	26 (58)
	JIS B2220	10K	250 (9.8)		23 (0.91)	201 (8.3)								
DN 150 (6 in)	EN 1092	PN10, 16	300 (11.8)	8	23 (0.91)	240 (9.5)	300 (11.8)	233 (9.2)	224 (8.8)	383 (15.1)	10.2 (0.40)	35 (77)	34 (75)	37 (82)
	ASME B16.5	CL150			22 (0.87)	242 (9.5)								
	EN 1092	PN 25			26 (1.02)	250 (9.8)								
	AS 2129	Table E	280 (11.0)		22 (0.87)	235 (9.3)						34 (75)	31 (68)	36 (80)
	AS 4087	PN 16			18 (0.71)			235 (9.3)	225 (8.9)	385 (15.2)				
		7.5K	290 (11.4)	6	19 (0.75)	247 (9.7)								
	JIS B2220	10K	280 (11.0)	8	23 (0.91)	240 (9.5)								

DN 200 (8 in)	EN 1092	PN10	370 (14.6)	8	23 (0.91)	295 (11.6)	350 (13.8)	259 (10.2)	249 (9.8)	409 (16.1)	10.2 (0.40)	67 (147) 66 (145) 69 (153)
		PN16		12								
	ASME B16.5	PN 25	360 (14.2)		28 (1.10)	310 (12.2)						
		CL150	370 (14.5)		22 (0.87)	298 (11.7)						
	AS 2129	Table E	335 (13.2)	8		292 (11.5)						
	AS 4087	PN 16			18 (0.71)			258 (10.2)	249 (9.8)	408 (16.1)		53 (116) 50 (110) 55 (122)
	JIS B2220	7.5K	342 (8.7)		19 (0.75)	299 (11.8)						
		10K	330 (13.0)	12	23 (0.91)	290 (11.4)						

F-style sensor – DN 250 to DN 400 (10 to 16 in)

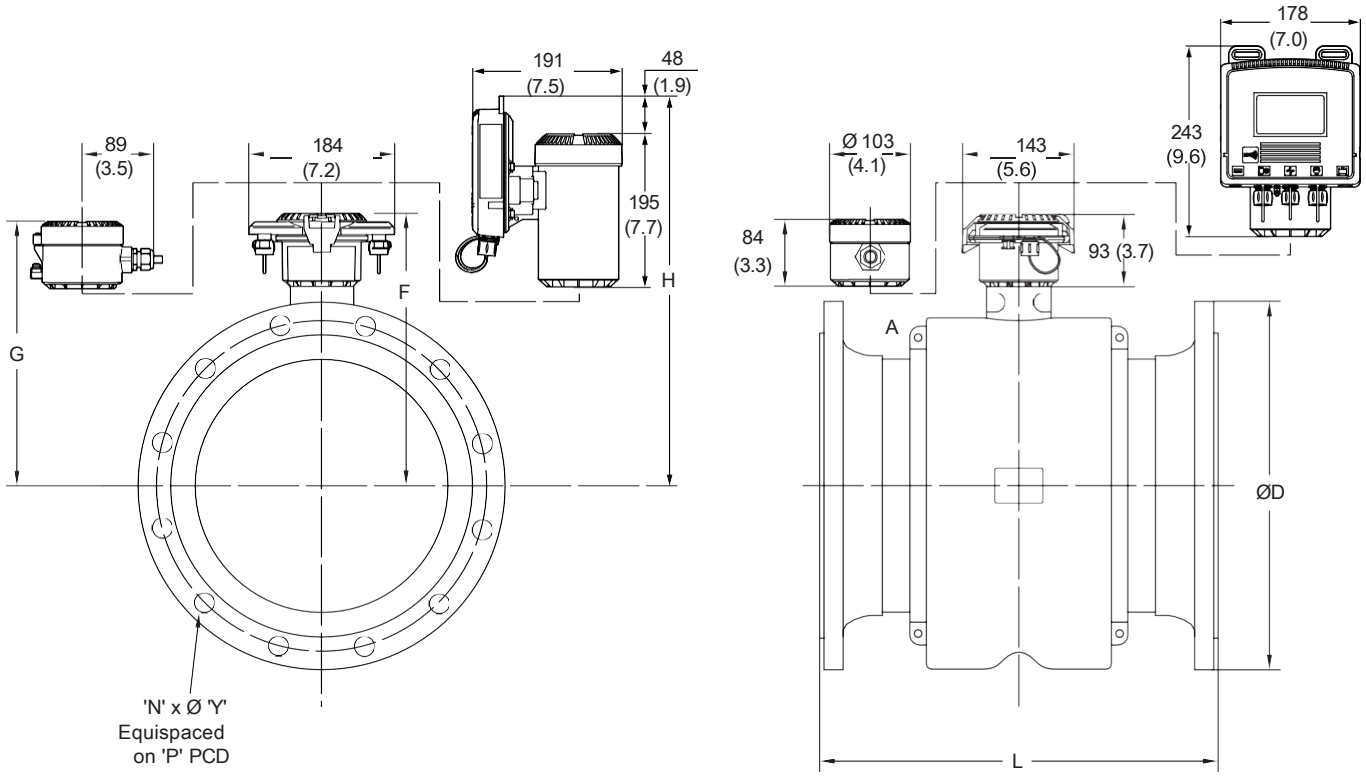


Figure 6 F-style sensor – DN 250 to DN 400 (10 to 16 in)

Item D.

…Dimensions – sensors

...F-style sensor – DN 250 to DN 400 (10 to 16 in)

Table 5 F-style sensor – DN 250 to DN 400 (10 to 16 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	Tx. height H	Lifting lug A	Integral FEW411/ FEW431	Remote	Integral FEW451
DN250 (10 in)	EN 1092 or DIN	PN10	395 (15.55)	12	22 (0.87)	350 (13.78)	450 (17.72)	319 (12.56)	310 (12.20)	469 (18.46)	N/A	61 (134)	59 (130)	63 (139)
		PN16	405 (15.94)		26 (1.02)	355 (13.98)						65 (143)	63 (139)	67 (148)
		PN25	425 (16.73)		30 (1.18)	370 (14.57)						84 (185)	82 (181)	86 (190)
		PN40	450 (17.72)		33 (1.30)	385 (15.16)						95 (209)	93 (205)	97 (214)
	AS4087	PN16	405 (15.94)	8	22 (0.87)	356 (14.02)						65 (143)	63 (139)	67 (148)
		PN35	430 (16.93)	12	26 (1.02)	381 (15.00)						95 (209)	93 (205)	97 (214)
	JIS B2220	5K	385 (15.16)	12	23 (0.91)	345 (13.58)						65 (143)	63 (139)	67 (148)
		10K	400 (15.75)		25 (0.98)	355 (13.98)								
	ASME B16.5	CL300	445 (17.52)	16	29 (1.13)	387 (15.25)						105 (231)	103 (227)	107 (236)
		CL150	405 (15.94)	12	26 (1.02)	362 (14.25)						70 (154)	68 (150)	72 (159)
DN300 (12 in)	EN 1092 or DIN	PN10	445 (17.52)	12	22 (0.87)	400 (15.75)	500 (19.69)	342 (13.46)	333 (13.11)	492 (19.37)	N/A	74 (163)	72 (159)	76 (168)
		PN16	460 (18.11)		26 (1.02)	410 (16.14)						80 (176)	78 (172)	82 (181)
		PN25	485 (19.09)	16	30 (1.18)	430 (16.93)						100 (220)	98 (216)	102 (225)
		PN40	515 (20.28)		33 (1.30)	450 (17.72)	600 (23.62)					130 (287)	128 (282)	132 (291)
	JIS B2220	5K	430 (16.93)	12	23 (0.91)	390 (15.35)						80 (176)	78 (172)	82 (181)
		10K	445 (17.52)	16	25 (0.98)	400 (15.75)								
	AS4087	PN16	455 (17.91)	12	22 (0.87)	406 (15.98)	500 (19.69)							
		PN35	490 (19.29)	26	26 (1.02)	438 (17.24)						130 (287)	128 (282)	132 (291)
	ASME B16.5	CL300	520 (20.47)	16	32 (1.25)	451 (17.75)						150 (331)	148 (326)	152 (336)
		CL150	485 (19.09)	12	26 (1.02)	432 (17.00)						105 (231)	103 (227)	107 (236)
DN 350 (14 in)	EN 1092 or DIN	PN10	505 (19.88)	16	22 (0.87)	460 (18.11)	550 (21.65)	357 (14.06)	348 (13.70)	507 (19.96)	N/A	95 (209)	93 (205)	97 (214)
		PN16	520 (20.47)		26 (1.02)	470 (18.50)						110 (243)	108 (238)	112 (247)
		PN25	555 (21.85)		33 (1.30)	490 (19.29)						145 (320)	143 (315)	147 (324)
		PN40	580 (22.83)		36 (1.42)	510 (20.08)	650 (25.59)					195 (430)	193 (425)	197 (435)
	JIS B2220	5K	480 (18.90)	12	22 (0.87)	435 (17.13)						95 (209)	93 (205)	97 (214)
		10K	490 (19.29)	16	25 (0.98)	445 (17.52)								
	AS4087	PN16	525 (20.67)	12	26 (1.02)	470 (18.50)	550 (21.65)					130 (287)	128 (282)	132 (291)
		PN35	550 (21.65)	16	30 (1.18)	495 (19.49)						185 (408)	183 (403)	187 (412)
	ASME B16.5	CL300	585 (23.03)	20	32 (1.25)	514(20.25)						140 (309)	138 (304)	142 (314)
		CL150	535 (21.06)	12	29 (1.14)	476 (18.75)						105 (231)	103 (227)	107 (236)
DN 400 (16 in)	EN 1092 or DIN	PN10	565 (22.24)	16	26 (1.02)	515 (20.28)	600 (23.62)	399 (15.71)	390 (15.35)	549 (21.61)	N/A	103 (227)	101 (223)	105 (232)
		PN16	580 (22.83)		30 (1.18)	525 (20.67)						126 (278)	124 (273)	128 (283)
		PN25	620 (24.41)		36 (1.42)	550 (21.65)						170 (375)	168 (370)	172 (380)
		PN40	660 (25.98)		39 (1.54)	585 (23.03)	650 (25.59)					258 (569)	256 (564)	260 (574)
	JIS B2220	5K	540 (21.26)	12	25 (0.98)	495 (19.49)						103 (227)	101 (223)	105 (232)
		10K	560 (22.05)	16	27 (1.06)	510 (20.08)						116 (256)	114 (251)	118 (261)
	AS4087	PN16	580 (22.83)	12	26 (1.02)	521 (20.51)	600 (23.62)					154 (340)	152 (335)	156 (344)
		PN35	610 (24.02)	20	30 (1.18)	552 (21.73)						302 (666)	300 (661)	304 (670)
	ASME B16.5	CL300	650 (25.59)	24	35 (1.38)	572 (22.50)						265 (584)	263 (580)	267 (589)
		CL150	600 (23.62)	12	29 (1.14)	540 (21.25)						175 (386)	173 (381)	177 (391)

F-style sensor – DN 450 to DN 600 (18 to 24 in)

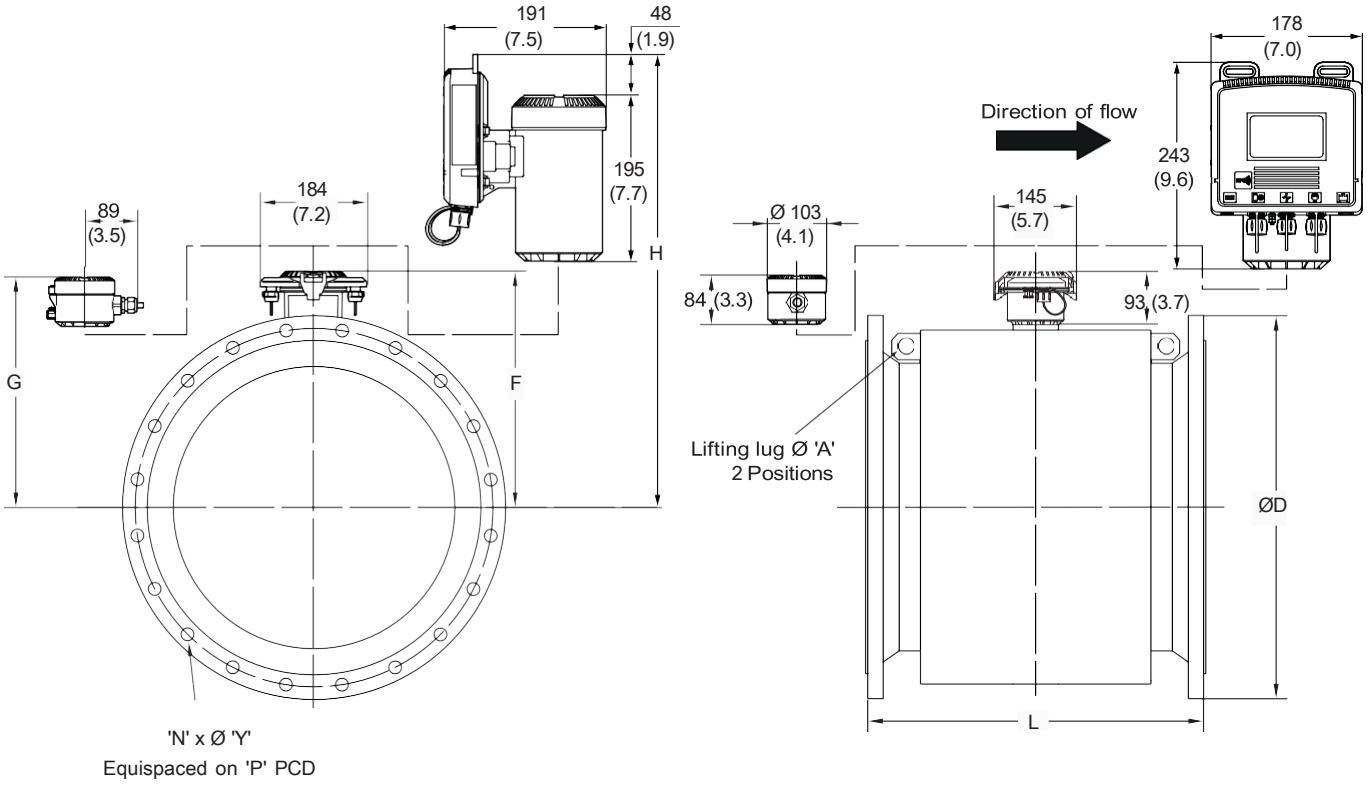


Figure 7 F-style sensor – DN 450 to DN 600 (18 to 24 in)

Item D.

…Dimensions – sensors

...F-style sensor – DN 450 to DN 600 (18 to 24 in)

Table 6 F-style sensor – DN 450 to DN 600 (18 to 24 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	Tx. height H	Lifting lug A	Integral FEW411/ FEW431	Remote	Integral FEW451
DN450 (18 in)	EN 1092 or DIN	PN10	615 (24.21)	20	26 (1.02)	565 (22.24)	600 (23.62)	407 (16.02)	398 (15.67)	557 (21.93)	30 (1.18)	173 (381)	171 (377)	175 (386)
		PN16	640 (25.20)		30 (1.18)	585 (23.03)						188 (414)	186 (410)	190 (419)
		PN25	670 (26.38)		36 (1.42)	600 (23.62)	686 (27.01)					245 (540)	243 (536)	247 (545)
		PN40	685 (26.97)		39 (1.54)	610 (24.02)						315 (694)	313 (690)	317 (699)
	JIS B2220	5K	605 (23.82)	16	25 (0.98)	555 (21.85)						165 (364)	163 (359)	167 (369)
		10K	620 (24.41)	20	27 (1.06)	565 (22.24)						177 (390)	175 (386)	179 (395)
	AS4087	PN16	640 (25.20)	12	26 (1.02)	584 (22.99)	600 (23.62)					232 (511)	230 (507)	234 (516)
		PN35	675 (26.57)	20	33 (1.30)	610 (24.02)						328 (723)	326 (719)	330 (728)
	ASME B16.5	CL300	710 (27.95)	24	35 (1.38)	629 (24.75)						368 (811)	366 (807)	370 (816)
		CL150	635 (25.00)	16	32 (1.26)	578 (22.75)						250 (551)	248 (547)	252 (556)
DN500 (20 in)	EN 1092 or DIN	PN10	670 (26.38)	20	26 (1.02)	620 (24.41)	600 (23.62)	407 (16.02)	398 (15.67)	557 (21.93)	30 (1.18)	190 (419)	188 (414)	192 (424)
		PN16	715 (28.15)		33 (1.30)	650 (25.59)						240 (529)	238 (525)	242 (534)
		PN25	730 (28.74)		36 (1.42)	660 (25.98)	700 (27.56)					300 (661)	298 (657)	302 (666)
		PN40	755 (29.72)		42 (1.65)	670 (26.38)	762 (30.00)					392 (864)	390 (860)	394 (869)
	JIS B2220	5K	655 (25.79)		25 (0.98)	605 (23.82)	600 (23.62)					190 (419)	188 (414)	192 (424)
		10K	675 (26.57)		27 (1.06)	620 (24.41)								
	AS4087	PN16	705 (27.76)	16	26 (1.02)	641 (25.24)						290 (639)	288 (635)	292 (644)
		PN35	735 (28.94)	24	33 (1.30)	673 (26.50)						435 (959)	433 (955)	437 (964)
	ASME B16.5	CL150	700 (27.56)	20	32 (1.26)	635 (25.00)						300 (661)	298 (657)	302 (666)
		CL300	775 (30.51)	24	35 (1.38)	659 (25.94)	762 (30.00)					490 (1080)	488 (1076)	492 (1085)
DN600 (24 in)	EN 1092 or DIN	PN10	780 (30.71)	20	30 (1.18)	725 (28.54)	800 (31.50)	458 (18.03)	449 (17.68)	608 (23.94)	30 (1.18)	284 (626)	282 (622)	286 (631)
		PN16	840 (33.07)		36 (1.42)	770 (30.31)						318 (701)	316 (697)	320 (706)
		PN25	845 (33.27)		39 (1.54)	770 (30.31)						460 (1014)	458 (1010)	462 (1019)
		PN40	890 (35.04)		26 (1.02)	705 (27.76)	890 (35.04)					600 (1323)	598 (1318)	602 (1328)
	JIS B2220	5K	770 (30.31)		27 (1.06)	715 (28.15)						275 (606)	273 (602)	277 (611)
		10K	795 (31.30)	24	33 (1.30)	730 (28.74)						306 (675)	304 (670)	308 (679)
	AS4087	PN16	825 (32.48)	16	30 (1.18)	756 (29.76)	800 (31.50)					382 (842)	380 (838)	384 (847)
		PN35	850 (33.46)	24	36 (1.42)	781 (30.75)						452 (996)	450 (992)	454 (1001)
	ASME B16.5	CL300	915 (36.02)	24	41 (1.61)	813 (32.00)						550 (1213)	548 (1208)	552 (1217)
		CL150	815 (32.09)	20	35 (1.38)	750 (29.50)						425 (937)	423 (933)	427 (942)

F-style sensor – DN 700 to DN 2400 (28 to 96 in)

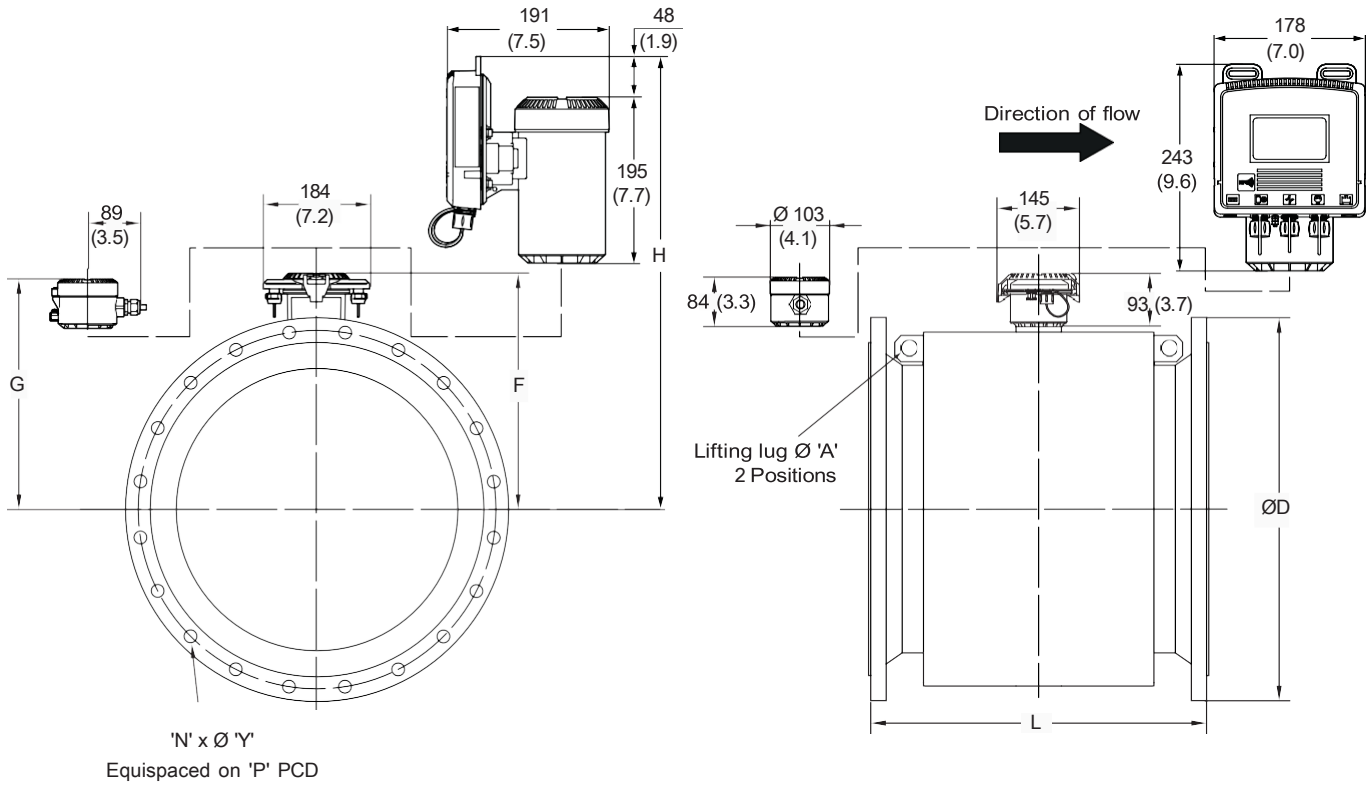


Figure 8 F-style sensor – DN 700 to DN 2400 (28 to 96 in)

Table 7 F-style sensor – DN 700 (28 in)

Sensor size	Flange		Dimensions in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD	No. holes	Bolt hole dia.	Bolt hole PCD	Sensor length	Tx. height	T. box height	Tx. height	Lifting lug	Integral FEW411/ FEW431	Remote	Integral FEW451
			D	N	Y	P	L	F	G	H	A			
DN700 (28 in)		5K	875 (34.45)		27 (1.06)	820 (32.28)						213 (470)	211 (466)	215 (474)
		10K	905 (35.63)		33 (1.30)	840 (33.07)						251 (554)	249 (549)	253 (558)
	EN 1092 or DIN	PN6	860 (33.86)		26 (1.02)	810 (31.89)	700 (27.56)					187 (413)	185 (408)	189 (417)
		PN10	895 (35.24)	24	30 (1.18)	840 (33.07)						235 (519)	233 (514)	237 (523)
		PN16	910 (35.83)		36 (1.42)	840 (33.07)						270 (596)	268 (591)	272 (600)
		PN25	960 (37.80)		42 (1.65)	875 (34.45)	800 (31.50)					419 (924)	417 (920)	421 (929)
		PN40	995 (39.17)		48 (1.89)	900 (35.43)	910 (35.83)					632 (1394)	630 (1389)	634 (1398)
	AWWA C207	CLASS B	927 (36.50)		32 (1.26)	864 (34.02)	700 (27.56)					247 (545)	245 (541)	249 (549)
		CLASS D	927 (36.50)	28								270 (596)	268 (591)	272 (600)
		CLASS E	927 (36.50)		32 (1.26)	864 (34.02)		497 (19.57)	492 (19.37)	647 (25.47)	30 (1.18)	434 (957)	432 (953)	436 (962)
		CLASS F	1035 (40.75)		44 (1.73)	940 (37.01)						674 (1486)	672 (1482)	676 (1491)
	AS 4087	PN16	910 (35.83)	20	30 (1.18)	845 (33.27)	700 (27.56)					356 (785)	354 (781)	358 (790)
		PN35	935 (36.81)	24	36 (1.42)	857 (33.74)	910 (35.83)					584 (1288)	582 (1284)	586 (1292)
	AS 2129	TABLE D			30 (1.18)		910 (35.83)					308 (680)	306 (675)	310 (684)
		TABLE E	910 (35.83)	20	33 (1.30)	845 (33.27)	700 (27.56)					274 (605)	272 (600)	276 (609)
	ASME B16.47	CL150 SERIES A	925 (36.42)	28	35 (1.38)	864 (34.00)	790 (31.10)					454 (1001)	452 (997)	456 (1006)
		CL150 SERIES B	835 (32.87)	40	22 (0.87)	795 (31.31)	910 (35.83)					368 (812)	366 (807)	370 (816)
	ASME B16.47	CL300 SERIES A	1035 (40.75)	28	45 (1.75)	940 (37.00)	940 (37.01)					1002 (2210)	1000 (2205)	1004 (2214)
		CL300 SERIES B	920 (36.22)	36	35 (1.38)	857 (33.75)	910 (35.83)					680 (1500)	678 (1495)	682 (1504)

…Dimensions – sensors

...F-style sensor – DN 700 to DN 2400 (28 to 96 in)

Table 8 F-style sensor – DN 750 to DN 900 (30 to 36 in)

Sensor size	Flange Standard	Flange Class	Dimensions in mm (in) Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Tx. height F	T. box height G	T. box height H	Lifting lug A	Approx. weight kg (lbs) Integral FEW411/ FEW431	Remote	Integral FEW451
DN750 (30 in)	JIS	JIS5K	945 (37.20)	24	33 (1.30)	880 (34.65)	762 (30.00)	523 (20.59)	518 (20.39)	673 (26.5)	30 (1.18)	245 (541)	243 (536)	247 (545)
		JIS10K	970 (38.19)			900 (35.43)						317 (699)	315 (695)	319 (704)
	AWWA C207	CLASS B	984 (38.74)	28	32 (1.26)	914 (35.98)						268 (591)	266 (587)	270 (596)
		CLASS D	984 (38.74)									322 (710)	320 (706)	324 (715)
		CLASS E	984 (38.74)									472 (1041)	470 (1037)	474 (1045)
		CLASS F	1092 (42.99)		44 (1.73)	997 (39.25)						755 (1665)	753 (1661)	757 (1669)
	AS 4087	PN16	995 (39.17)	20	33 (1.30)	927 (36.50)						410 (904)	408 (900)	412 (909)
		PN35	1015 (39.96)	28	36 (1.42)	940 (37.01)	990 (38.98)					713 (1572)	711 (1568)	715 (1577)
	AS 2129	TABLE D	995 (39.17)	20	33 (1.30)	927 (36.50)	990 (38.98)					390 (860)	388 (856)	392 (865)
		TABLE E	995 (39.17)		36 (1.42)		762 (30.00)					350 (772)	348 (768)	352 (777)
	ASME B16.47	CL150 SERIES A	985 (38.78)	28	35 (1.38)	914 (36.00)	830 (32.67)					505 (1114)	503 (1109)	507 (1118)
		CL150 SERIES B	885 (34.84)	44	22 (0.87)	846 (33.31)	990 (38.98)					368 (812)	366 (807)	370 (816)
	ASME B16.47	CL300 SERIES A	1090 (42.91)	28	48 (1.87)	997 (39.25)	975 (38.39)					1002 (2210)	1000 (2205)	1004 (2214)
		CL300 SERIES B	990 (38.98)	36	38 (1.50)	921 (36.25)	990 (38.98)					797 (1758)	795 (1753)	799 (1762)
DN800 (32 in)	JIS	JIS5K	995 (39.17)	24	33 (1.30)	930 (36.61)	800 (31.50)	547 (21.54)	542 (21.34)	697 (27.44)	30 (1.18)	280 (618)	278 (613)	282 (622)
		JIS10K	1020 (40.16)	28	33 (1.30)	950 (37.40)						328 (724)	326 (719)	330 (728)
	EN 1092 or DIN	PN6	975 (38.39)	24	30 (1.18)	920 (36.22)						239 (527)	237 (523)	241 (532)
		PN10	1015 (39.96)	34	33 (1.30)	950 (37.40)						312 (688)	310 (684)	314 (693)
		PN16	1025 (40.35)		39 (1.54)	950 (37.40)	800 (31.50)					366 (807)	364 (803)	368 (812)
		PN25	1085 (42.72)	24	48 (1.89)	990 (38.98)	950 (37.40)					599 (1321)	597 (1317)	601 (1325)
		PN40	1140 (44.88)		56 (2.20)	1030 (40.55)	1040 (40.94)					919 (2027)	917 (2022)	921 (2031)
	AWWA C207	CLASS B	1060 (41.73)	28	38 (1.50)	978 (38.50)	800 (31.50)					334 (737)	332 (732)	336 (741)
		CLASS D	1060 (41.73)									394 (869)	392 (865)	396 (874)
		CLASS E	1060 (41.73)		38 (1.50)	978 (38.50)	880 (34.65)					591 (1303)	589 (1299)	593 (1308)
		CLASS F	1150 (45.28)		44 (1.73)	1054 (41.50)						886 (1954)	884 (1949)	888 (1958)
	AS 4087	PN16	1060 (41.73)	20	36 (1.42)	984 (38.74)	800 (31.50)					482 (1063)	480 (1059)	484 (1068)
		PN35	1060 (41.73)	28			1040 (40.94)					802 (1769)	800 (1764)	804 (1773)
	AS2129	TABLE D	1060 (41.73)		36 (1.42)	984 (38.74)	1040 (40.94)					440 (971)	438 (966)	442 (975)
		TABLE E	1060 (41.73)	20			800 (31.50)					410 (904)	408 (900)	412 (909)
	ASME B16.47	CL150 SERIES A	1060 (41.73)	28	41 (1.63)	978 (38.50)	950 (37.40)					674 (1486)	672 (1482)	676 (1491)
		CL150 SERIES B	940 (37.01)	48	22 (0.87)	900 (35.44)	1040 (40.94)					456 (1006)	454 (1001)	458 (1010)
	ASME B16.47	CL300 SERIES A	1150 (45.28)	28	51 (2.01)	1054 (41.50)	1120 (44.09)					1219 (2688)	1217 (2684)	1221 (2692)
		CL300 SERIES B	1055 (41.54)	32	41 (1.63)	978 (38.50)	1040 (40.94)					985 (2172)	983 (2168)	987 (2176)
DN900 (36 in)	JIS	JIS5K	1095 (43.11)	24	33 (1.30)	1030 (40.55)	900 (35.43)	598 (23.54)	593 (23.35)	748 (29.45)	30 (1.18)	347 (766)	345 (761)	349 (770)
		JIS10K	1120 (44.09)	28	33 (1.30)	1050 (41.34)						419 (924)	417 (920)	421 (929)
	EN 1092 or DIN	PN6	1075 (42.32)	24	30 (1.18)	1020 (40.16)						300 (662)	298 (657)	302 (666)
		PN10	1115 (43.90)		33 (1.30)	1050 (41.34)						396 (874)	394 (869)	398 (878)
		PN16	1125 (44.29)	28	39 (1.54)	1050 (41.34)						485 (1070)	483 (1065)	487 (1074)
		PN25	1185 (46.65)		48 (1.89)	1090 (42.91)	1040 (40.94)					757 (1669)	755 (1665)	759 (1674)
		PN40	1250 (49.21)		56 (2.20)	1140 (44.88)	1170 (46.06)					1219 (2688)	1217 (2684)	1221 (2692)
	AWWA C207	CLASS B	1168 (45.98)	32	38 (1.50)	1086 (42.76)	900 (35.43)					397 (876)	395 (871)	399 (880)
		CLASS D										436 (962)	434 (957)	438 (966)
		CLASS E										744 (1641)	742 (1636)	746 (1645)
		CLASS F	1270 (50.00)		51 (2.01)	1168 (45.98)						1064 (2346)	1062 (2342)	1066 (2351)
	AS 4087	PN16	1175 (46.26)	24	36 (1.42)	1092 (42.99)						686 (1513)	684 (1508)	[illegible]
		PN35	1185 (46.65)	32	39 (1.54)	1105 (43.50)	1170 (46.06)					1103 (2432)	1101 (2428)	[illegible]
	AS 2129	TABLE D					1170 (46.06)					574 (1266)	572 (1262)	[illegible]
		TABLE E					900 (35.43)					580 (1279)	578 (1275)	582 (1284)

ASME B16.47	1175 (46.26)	24	36 (1.42)	1092 (42.99)				
	CL150 SERIES A 1170 (46.06)	32	41.3 (1.63)	1086 (42.75)	1120 (44.09)	933 (2057)	931 (2053)	935 (2062)
	CL150 SERIES B 1055 (41.54)	44	25.4 (1.00)	1010 (39.75)	1170 (46.06)	655 (1445)	653 (1440)	657 (1449)
	CL300 SERIES A 1270 (50.00)	32	54 (2.13)	1168 (46.00)	1180 (46.46)	1533 (3380)	1531 (3376)	1535 (3385)
	CL300 SERIES B 1170 (46.06)		44.5 (1.75)	1089 (42.87)	1170 (46.06)	1206 (2659)	1204 (2655)	1208 (2664)

…F-style sensor – DN 700 to DN 2400 (28 to 96 in)

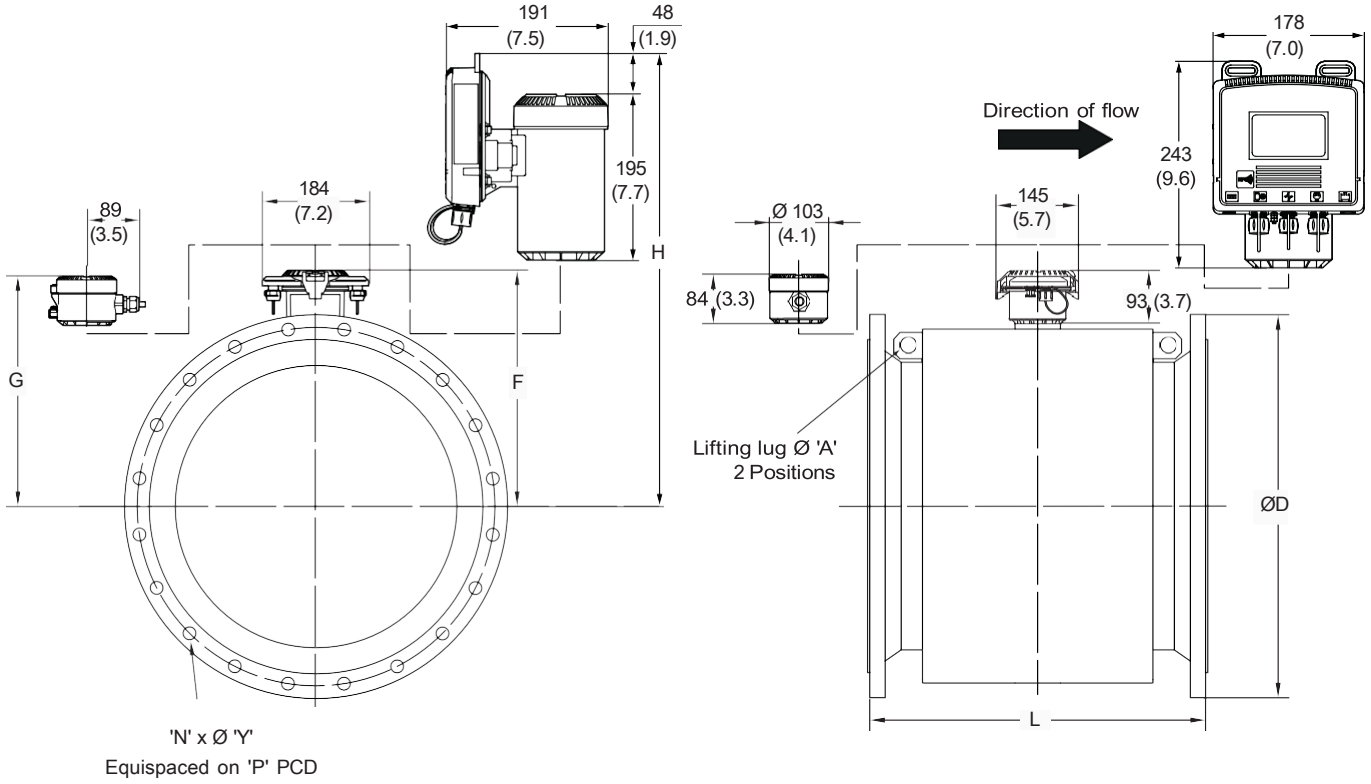


Figure 9 F-style sensor – DN 700 to DN 2400 (28 to 96 in)

Table 9 F-style sensor – DN 1000 (40 in)

Sensor size	Flange		Dimensional in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD	No. holes	Bolt hole dia.	Bolt hole PCD	Sensor length	Trans height	Tx. box height	Tx. box height	Lifting lug	Integral FEW411/ FEW431	Remote	Integral FEW451
			D	N	Y	P	L	F	G	H	A			
DN1000 (40 in)	JIS	JIS5K	1195 (47.05)	28	33 (1.30)	1130 (44.49)	1000 (39.37)	648 (25.51)	643 (25.31)	798 (31.42)	30 (1.18)	407 (898)	405 (893)	409 (902)
		JIS10K	1235 (48.62)		39 (1.54)	1160 (45.67)						505 (1114)	503 (1109)	507 (1118)
	EN 1092 or DIN	PN6	1175 (46.26)		30 (1.18)	1120 (44.09)						348 (768)	346 (763)	350 (772)
		PN10	1230 (48.43)		36 (1.42)	1160 (45.67)						469 (1034)	467 (1030)	471 (1039)
		PN16	1255 (49.41)		42 (1.65)	1170 (46.06)						613 (1352)	611 (1348)	615 (1356)
		PN25	1320 (51.97)		56 (2.20)	1210 (47.64)	1170 (46.06)					1004 (2214)	1002 (2210)	1006 (2218)
		PN40	1360 (53.54)			1250 (49.21)	1300 (51.18)					1486 (3277)	1484 (3272)	1488 (3281)
	AWWA C207	CLASS B	1289 (50.75)	36	38 (1.50)	1200 (47.24)						474 (1045)	472 (1041)	476 (1050)
		CLASS D	1289 (50.75)									618 (1363)	616 (1359)	620 (1367)
		CLASS E	1289 (50.75)									922 (2033)	920 (2029)	924 (2038)
		CLASS F	1378 (54.25)		51 (2.01)	1276 (50.24)						1300 (2867)	1298 (2862)	1302 (2871)
	AS 4087	PN16	1255 (49.41)	24	36 (1.42)	1175 (46.26)						740 (1632)	738 (1628)	742 (1636)
		PN35	1275 (50.20)	36	39 (1.54)	1194 (47.01)	1300 (51.18)					1316 (2902)	1314 (2897)	1318 (2906)
	AS 2129	TABLE D	1255 (49.41)		36 (1.42)		1300 (51.18)					682 (1504)	680 (1500)	684 (1508)
		TABLE E	1255 (49.41)	24	39 (1.54)	1175 (46.26)	1000 (39.37)					652 (1438)	650 (1434)	654 (1442)
	ASME B16.47	CL150 SERIES A	1290 (50.79)	36	41 (1.63)	1200 (47.25)	1090 (42.91)					1034 (2280)	1032 (2276)	1036 (2284)
		CL150 SERIES B	1175 (46.26)	44	29 (1.13)	1121 (44.13)	1300 (51.18)					809 (1784)	807 (1780)	811 (1788)
	ASME B16.47	CL300 SERIES A	1240 (48.82)	32	45 (1.75)	1156 (45.50)	1150 (45.28)					1287 (2838)	1285 (2833)	1289 (2842)
		CL300 SERIES B	1275 (50.20)	40		1191 (46.87)	1300 (51.18)					1560 (3440)	1558 (3435)	1562 (3444)

Item D.

…Dimensions – sensors

...F-style sensor – DN 700 to DN 2400 (28 to 96 in)

Table 10 F-style sensor – DN 1050 to DN 1400 (42 to 56 in)

Sensor size	Flange Standard	Flange Class	Flange OD D	No. holes N	Bolt hole dia. Y	Bolt hole PCD P	Sensor length L	Trans height F	Tx. height G	Tx. height H	Lifting lug A	Approx. weight kg (lbs) Integral FEW411/ FEW431	Approx. weight kg (lbs) Remote	Approx. weight kg (lbs) Integral FEW451
DN1050 (42 in)	AWWA C207	CLASS B	1346 (52.99)	36	38 (1.50)	1257 (49.49)	1067 (42.01)	701 (27.6)	697 (27.44)	851 (33.5)	30 (1.18)	559 (1233)	557 (1228)	561 (1237)
		CLASS D										614 (1354)	612 (1350)	616 (1359)
		CLASS E										1102 (2430)	1100 (2426)	1104 (2434)
		CLASS F	1448 (57.01)		51 (2.01)	1340 (52.76)						1522 (3356)	1520 (3352)	1524 (3360)
	ASME B16.47	CL150 SERIES A	1345 (52.95)		41.3 (1.63)	1257 (49.50)						1200 (2646)	1198 (2642)	1202 (2650)
		CL150 SERIES B	1225 (48.23)	48	28.6 (1.13)	1172 (46.13)	1365 (53.74)					910 (2007)	908 (2002)	912 (2011)
		CL300 SERIES A	1290 (50.79)	32	44.5 (1.75)	1207 (47.50)	1170 (46.06)					1432 (3158)	1430 (3153)	1434 (3162)
		CL300 SERIES B	1335 (52.56)	36	47.6 (1.87)	1245 (49.00)	1365 (53.74)					1804 (3978)	1802 (3973)	1806 (3982)
DN1100 (44 in)	JIS	JIS5K	1305 (51.38)	28	33 (1.30)	1240 (48.82)	1118 (44.02)	701 (27.60)	697 (27.44)	851 (33.5)	30 (1.18)	478 (1054)	476 (1050)	480 (1059)
		JIS10K	1345 (52.95)		39 (1.54)	1270 (50.00)						679 (1497)	677 (1493)	681 (1502)
	AWWA C207	CLASS B	1403 (55.24)	40	38 (1.50)	1315 (51.77)						605 (1334)	603 (1330)	607 (1339)
		CLASS D	1403 (55.24)									695 (1533)	693 (1528)	697 (1537)
		CLASS E	1404 (55.28)	40	38 (1.50)							1132 (2496)	1130 (2492)	1134 (2501)
		CLASS F	1505 (59.25)	36	51 (2.01)	1397 (55.00)						1640 (3616)	1638 (3612)	1642 (3620)
DN1200 (48 in)	JIS	5K	1420 (55.91)	32	33 (1.30)	1350 (53.15)	1200 (47.24)	753 (29.65)	748 (29.49)	903 (35.55)	30 (1.18)	653 (1440)	651 (1436)	655 (1445)
		10K	1465 (57.68)		39 (1.54)	1380 (54.33)						819 (1806)	817 (1802)	821 (1810)
	EN 1092 or DIN	PN6	1405 (55.31)		33 (1.30)	1340 (52.76)						538 (1187)	536 (1182)	540 (1191)
		PN10	1455 (57.28)		39 (1.54)	1380 (54.33)						753 (1661)	751 (1656)	755 (1665)
		PN16	1485 (58.46)		48 (1.89)	1390 (54.72)						981 (2163)	979 (2159)	983 (2168)
		PN25	1530 (60.24)		56 (2.20)	1420 (55.91)	1560 (61.42)					1654 (3647)	1652 (3643)	1656 (3651)
		PN40	1575 (62.01)		62 (2.44)	1460 (57.48)						2229 (4915)	2227 (4910)	2231 (4919)
	AWWA C207	CLASS B	1511 (59.49)	44	38 (1.50)	1422 (55.98)	1200 (47.24)					746 (1645)	744 (1641)	748 (1650)
		CLASS D	1511 (59.49)									886 (1954)	884 (1949)	888 (1958)
		CLASS E	1511 (59.49)		38 (1.50)	1422 (55.98)						1389 (3063)	1387 (3058)	1391 (3067)
		CLASS F	1651 (65.00)	40	51 (2.01)	1543 (60.75)						2300 (5071)	2298 (5067)	2302 (5076)
	AS 4087	PN16	1490 (58.66)	32	36 (1.42)	1410 (55.51)	1200 (47.24)					1207 (2661)	1205 (2657)	1209 (2666)
	AS 2129	TABLE-D	1490 (58.66)	32	36 (1.42)		1560 (61.42)					1118 (2465)	1116 (2461)	1120 (2470)
		TABLE-E	1490 (58.66)	32	39 (1.54)		1200 (47.24)					1085 (2393)	1083 (2388)	1087 (2397)
	AS 4087	PN35	1530 (60.24)	40	42 (1.65)	1441 (56.73)	1560 (61.42)					2211 (4875)	2209 (4871)	2213 (4879)
	ASME B16.47	SERIES A	1510 (59.45)	44	41 (1.63)	1422 (56.00)	1320 (51.97)					1612 (3554)	1610 (3550)	1614 (3559)
	CL150 B 16.47	SERIES B	1390 (54.72)		32 (1.25)	1335 (52.56)	1560 (61.42)					1178 (2598)	1176 (2593)	1180 (2602)
	ASME CL300 B 16.47	SERIES A	1465 (57.68)	32	51 (2.01)	1372 (54.00)	1400 (55.12)					2051 (4522)	2049 (4518)	2053 (4527)
		SERIES B	1510 (59.45)	40	51 (2.01)	1416 (55.75)	1560 (61.42)					2446 (5393)	2444 (5389)	2448 (5397)
DN1350 (54 in)	AWWA C207	CLASS B	1683 (66.26)	44	44 (1.73)	1594 (62.76)	1350 (53.15)	848 (33.39)	843 (33.19)	998 (39.29)	45 (1.77)	942 (2077)	940 (2073)	944 (2082)
		CLASS D										1026 (2262)	1024 (2258)	1028 (2267)
		CLASS E										1834 (4044)	1832 (4039)	18

DN1400 (56 in)	EN 1092 or DIN	PN6	1630 (64.17)	36	36 (1.42)	1560 (61.42)	1400 (55.12)	848 (33.39)	843 (33.19)	998 (39.29)	45 (1.77)	774 (1707)	772 (1702)	776 (1711)
		PN10	1675 (65.94)		42 (1.65)	1590 (62.60)						1080 (2381)	1078 (2377)	1082 (2386)
		PN16	1685 (66.34)		48 (1.89)							1293 (2851)	1291 (2847)	1295 (2855)
		PN25	1755 (69.09)		62 (2.44)	1640 (64.57)	1820 (71.65)					2483 (5475)	2481 (5470)	2485 (5479)
		PN40	1795 (70.67)		62 (2.44)	1680 (66.14)						3202 (7060)	3200 (7055)	3204 (7064)
	ASME CL150 B 16.47	SERIES A	1745 (68.70)	48	48 (1.87)	1651 (65.00)	1500 (59.06)							
		SERIES B	1600 (62.99)	60	32 (1.25)	1543 (60.75)	1820 (71.65)					2365 (5214)	2363 (5210)	2367 (5219)
	ASME CL300 B 16.47	SERIES A	1710 (67.32)	28	60 (2.37)	1600 (63.00)	1600 (62.99)					1706 (3762)	1704 (3757)	1708 (3766)
		SERIES B	1765 (69.49)	36	60 (2.37)	1651 (65.00)	1820 (71.65)					3166 (6980)	3164 (6976)	3168 (6985)
												3873 (8539)	3871 (8535)	3875 (8543)

…F-style sensor – DN 700 to DN 2400 (28 to 96 in)

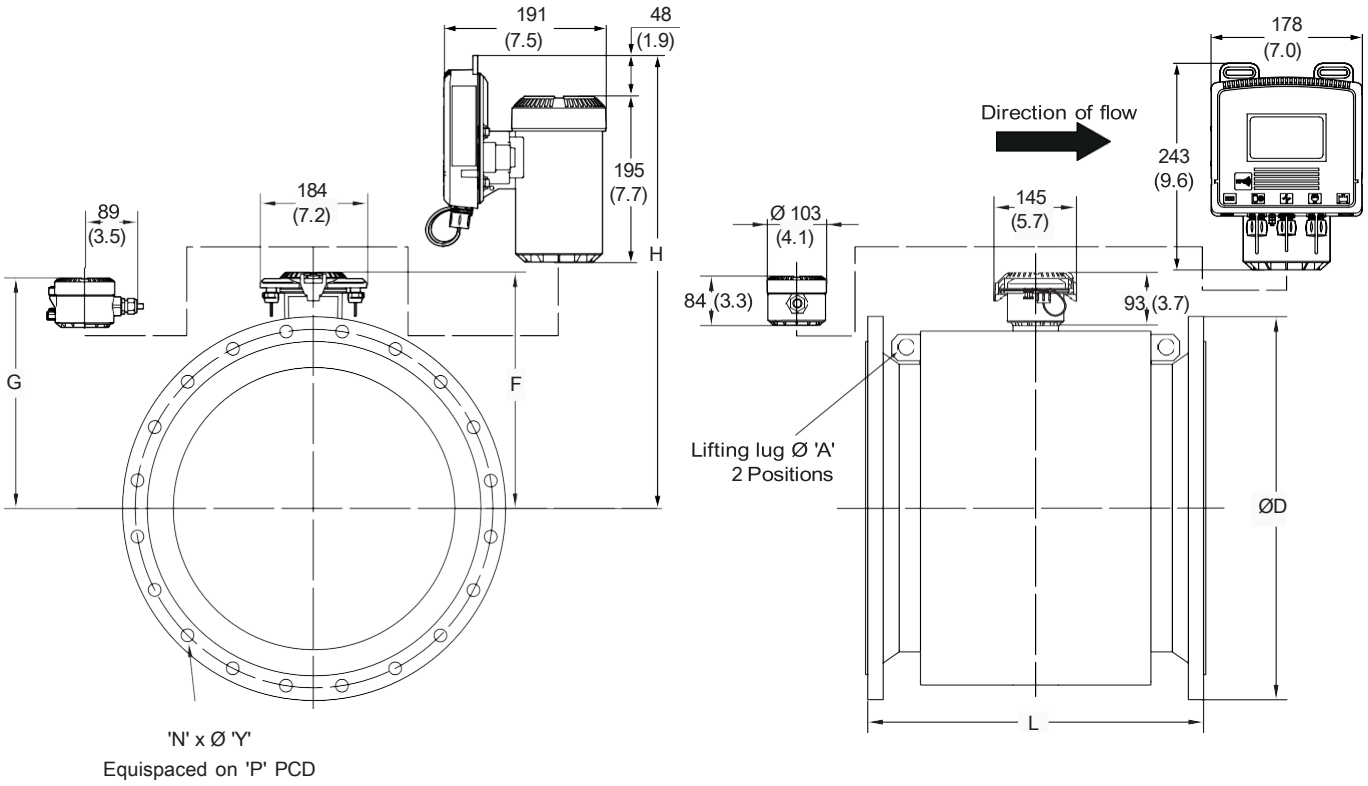


Figure 10 F-style sensor – DN 700 to DN 2400 (28 to 96 in)

Item D.

…Dimensions – sensors

...F-style sensor – DN 700 to DN 2400 (28 to 96 in)

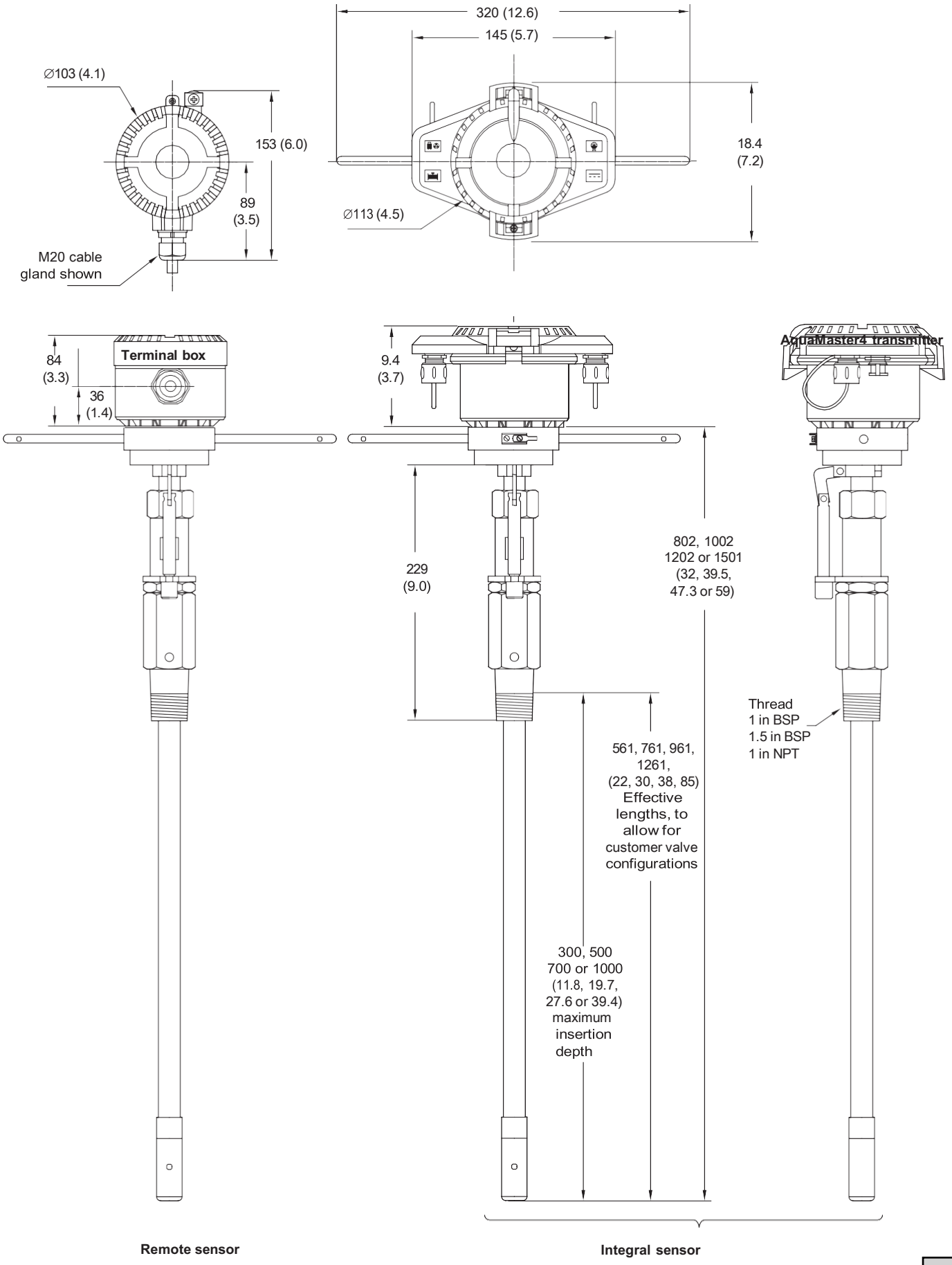
Table 11 F-style sensor – DN 1050 to DN 2400 (60 to 96 in)

Sensor size	Flange		Dimensional in mm (in)									Approx. weight kg (lbs)		
	Standard	Class	Flange OD	No. Holes	Bolt Hole Dia	Bolt Hole PCD	Sensor length	Trans Height	Tx. Height	Tx. Height	Lifting Lug	Integral FEW411/ FEW431	Remote	Integral FEW451
			D	N	Y	P	L	F	G	H	A			
DN1500 (60 in)	JIS	5K	1730 (68.11)	36	33 (1.30)	1660 (65.35)	1524 (60.00)	958 (37.72)	953 (37.52)	1108 (43.62)	45 (1.77)	1137 (2507)	1135 (2503)	1139 (2512)
		10K	1795 (70.67)	40	45 (1.77)	1700 (66.93)						1568 (3457)	1566 (3453)	1570 (3462)
	AWWA C207	CLASS B	1854 (72.99)	52	44 (1.73)	1759 (69.25)						1290 (2844)	1288 (2840)	1292 (2849)
		CLASS D	1854 (72.99)									1569 (3460)	1567 (3455)	1571 (3464)
		CLASS E	1854 (72.99)									2497 (5505)	2495 (5501)	2499 (5510)
	ASME CL150 B 16.47	SERIES A	1855 (73.03)		47.6 (1.87)							2847 (6277)	2845 (6273)	2849 (6281)
		SERIES B	1725 (67.91)		35 (1.38)	1662 (65.44)	1950 (76.77)					2031 (4478)	2029 (4474)	2033 (4482)
	ASME CL300 B 16.47	SERIES A	1810 (71.26)	32	60 (2.37)	1702 (67.00)	1640 (64.57)					3717 (8195)	3715 (8191)	3719 (8199)
		SERIES B	1880 (74.02)	40	60 (2.37)	1764 (69.44)	1950 (76.77)					4181 (9218)	4179 (9214)	4183 (9222)
DN1600 (64 in)	EN 1092 or DIN	PN6	1830 (72.05)	40	36 (1.42)	1760 (69.29)	1600 (62.99)	959 (37.76)	954 (37.56)	1109 (43.66)	45 (1.77)	1033 (2278)	1031 (2273)	1035 (2282)
		PN10	1915 (75.39)		48 (1.89)	1820 (71.65)						1509 (3327)	1507 (3323)	1511 (3332)
		PN16	1975 (77.76)		56 (2.20)	1820 (71.65)						1955 (4311)	1953 (4306)	1957 (4315)
		PN25	1930 (75.98)		62 (2.44)	1860 (73.23)	2080 (81.89)					3201 (7057)	3199 (7053)	3203 (7062)
		PN40	2025 (79.72)		70 (2.76)	1900 (74.80)						4375 (9646)	4373 (9641)	4377 (9650)
DN1650 (66 in)	AWWA C207	CLASS B	2032 (80.00)	52	44(1.75)	1930(75.98)	1650 (64.96)	1009 (39.72)	1004 (39.53)	1159 (45.63)	45 (1.77)	1497 (3301)	1495 (3296)	1499 (3305)
		CLASS D	2032 (80.00)									1763 (3887)	1761 (3883)	1765 (3892)
[N1800 (72 in)	EN 1092 or DIN	PN6	2045 (80.51)	44	39 (1.54)	1970 (77.56)	1800 (70.87)	1074 (42.28)	1069 (42.09)	1224 (48.19)	45 (1.77)	1356 (2990)	1354 (2986)	1358 (2994)
		PN10	2115 (83.27)		48 (1.89)	2020 (79.53)						1949 (4297)	1947 (4293)	1951 (4302)
		PN16	2130 (83.86)		56 (2.20)							2524 (5565)	2522 (5561)	2526 (5569)
		PN25	2195 (86.42)		70 (2.76)	2070 (81.50)	2340 (92.12)					4422 (9749)	4420 (9745)	4424 (9754)
	AWWA C207	CLASS B	2197 (86.50)	60	44 (1.73)	2096 (82.52)	1800 (70.87)					1833 (4042)	1831 (4037)	1835 (4046)
		CLASS D										2147 (4734)	2145 (4729)	2149 (4738)
												2312 (5098)	2310 (5093)	2314 (5102)
DN1950 (78 in)	AWWA C207	CLASS B	2362 (92.99)	64	51(2.01)	2261(89.02)	1950 (76.77)	1184 (46.61)	1179 (46.42)	1334 (52.52)	45 (1.77)	2684 (5918)	2682 (5913)	2686 (5922)
		CLASS D										1781 (3927)	1779 (3923)	1783 (3931)
DN2000 (80 in)	EN 1092 or DIN	PN6	2265 (89.17)	48	42 (1.65)	2180 (85.83)	2000 (78.74)	1184 (46.61)	1179 (46.42)	1334 (52.52)	45 (1.77)	2580 (5688)	2578 (5684)	2582 (5693)
		PN10	2325 (91.54)		48 (1.89)									
		PN16	2345 (92.32)		62 (2.44)	2230 (87.80)						3230 (7121)	3228 (7117)	3232 (7126)
		PN25	2425 (95.47)		70 (2.76)	2300 (90.55)	2600 (102.36)					5896 (12999)	5894 (12995)	5898 (13003)
DN2100 (84 in)	AWWA C207	CLASS B	2534 (99.76)	64	51(2.01)	2426 (95.51)	2100 (82.68)	1288 (50.71)	1283 (50.51)	1438 (56.61)	45 (1.77)	2570 (5666)	2568 (5662)	2572 (5671)
		CLASS D										2942 (6486)	2940 (6482)	2944 (6491)
DN2200 (88 in)	EN 1092 or DIN	PN6	2475 (97.44)	52	42 (1.65)	2390 (94.09)	2200 (86.61)	1288 (50.71)	1283 (50.51)	1438 (56.61)	45 (1.77)	2446 (5393)	2444 (5389)	2448 (5397)
		PN10	2550 (100.39)		56 (2.20)	2440 (96.06)						3202 (7060)	3200 (7055)	3204 (7064)

DN2400 (96 in)	EN 1092 or	PN6	2685 (105.71)	56	42 (1.65)	2600 (102.36)	2400 (94.49)	1388	1283	1538	45	2846 (6275)	2844 (6270)	2848 (6279)
	DIN	PN10	2760 (108.66)		56 (2.20)	2650 (104.33)		(54.65)	(50.51)	(60.55)	(1.77)	4111 (9064)	4109 (9059)	4113 (9068)

Table 12 F-style sensor – DN 1500 to DN 2400 (42 to 96 in)

Dimensions – insertion flowmeter

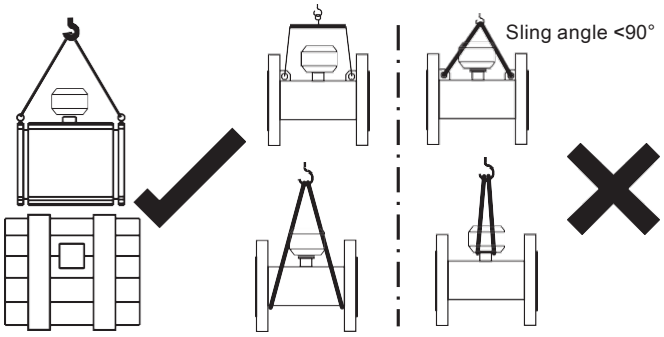


Installation requirements – sensor

This section is intended to give an overview of installation of a flowmeter. For Installation requirements, technical information and Health and Safety precautions refer to User Guide OI/FER100/FER200-EN.

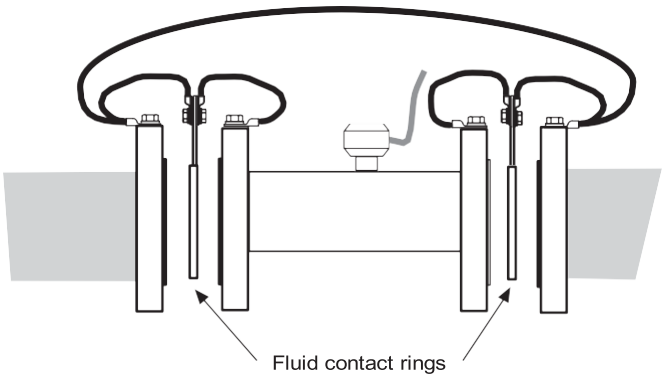
Unpacking the flowmeter

Care must be taken when lifting the flowmeter to use the lifting hooks provided or sling under the body of the meter. Never lift the flowmeter using the terminal connection box of the sensor cable as this causes damage and invalidates the warranty.

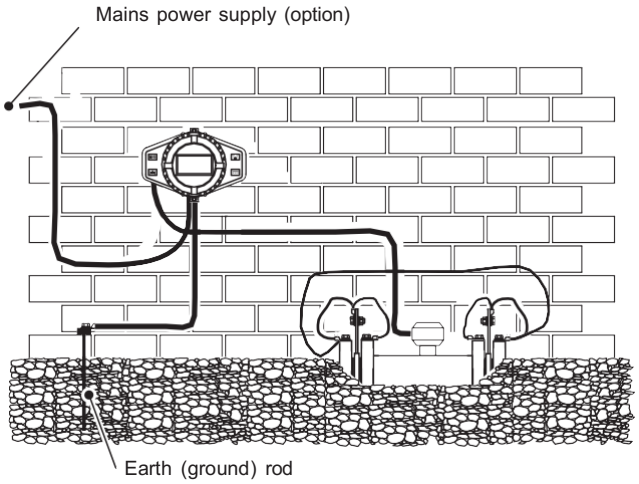


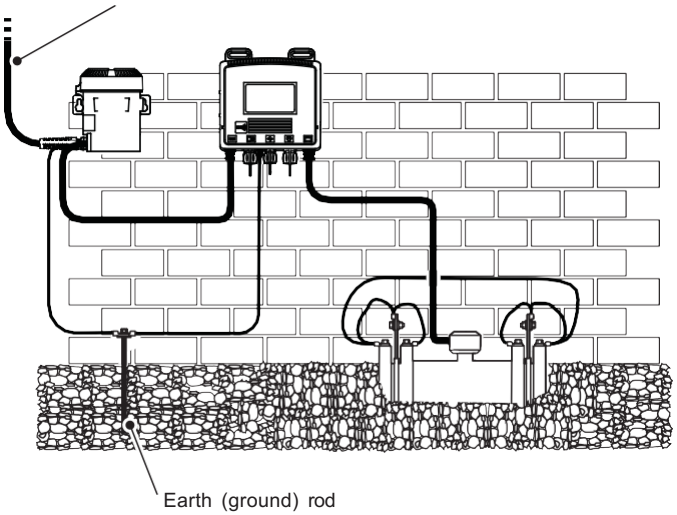
Grounding

The flowmeter sensor must be cross-bonded to the upstream and downstream pipes. For technical reasons, this potential must be identical to the potential of the metering fluid. The fluid connection is made by installing 2 fluid contact rings (for grounding).



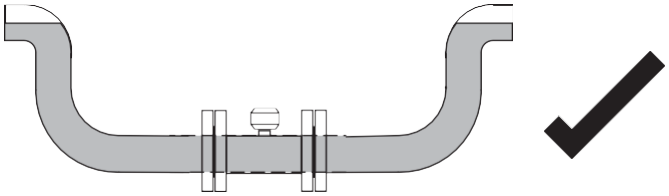
Note. The grounding arrangements shown below are applicable to both cathodic and non-cathodic protected installations.





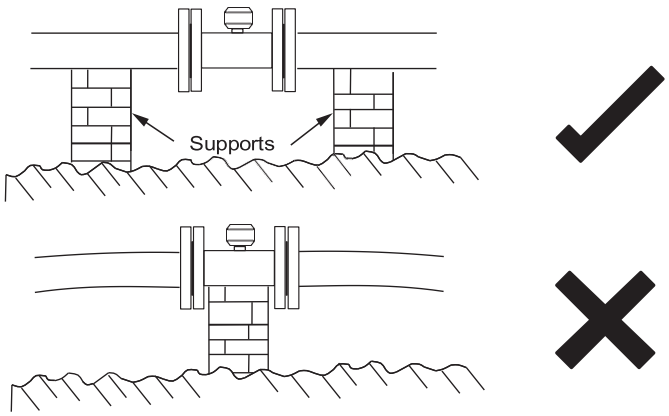
Mounting

The installation conditions shown below must be observed to achieve the best operational results. The sensor tube must always be completely full.

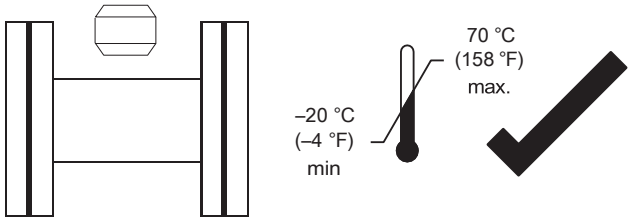


The flow direction must correspond to the identification plate. The flowmeter measures the flowrate in both directions. Forward flow is the factory setting.

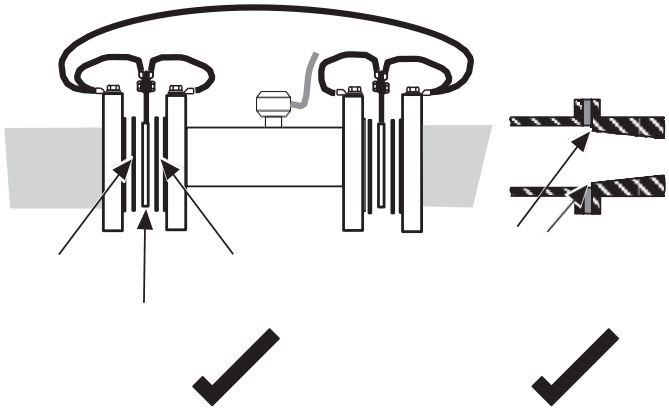
The flowmeter must be installed without mechanical tension (torsion, bending). If necessary, support the pipeline.



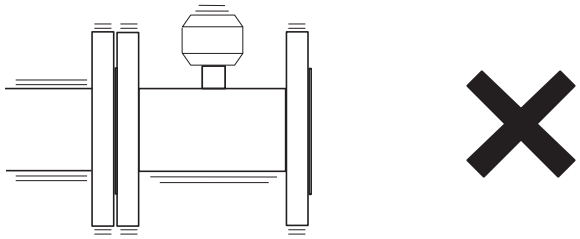
The flange seal material must be compatible with the fluid and fluid temperatures.



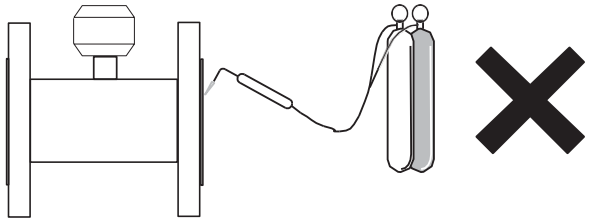
Seals must not extend into the flow area as this causes turbulence that adversely influences flowmeter accuracy.



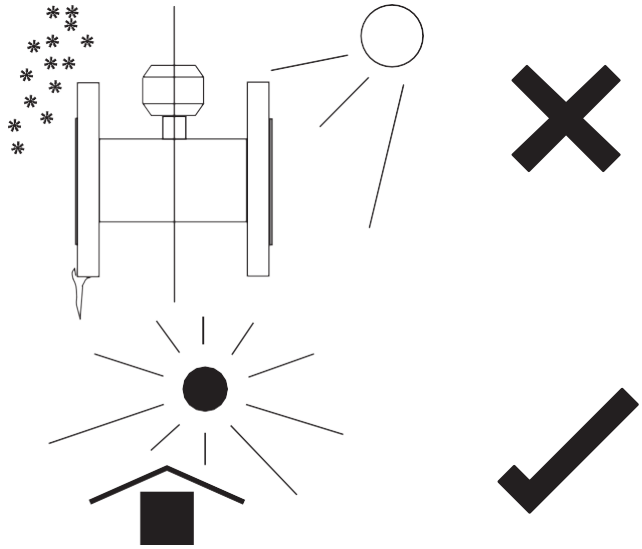
The pipeline must not exert any forces and torques on the flowmeter (for example, vibration).



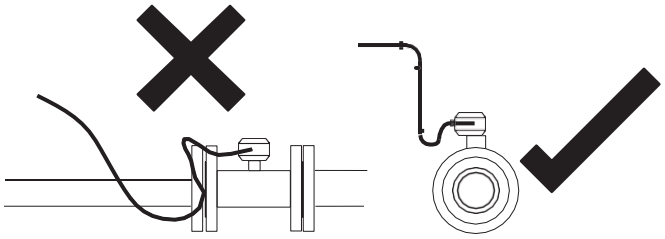
The flowmeter must not be submitted to localized heating during installation; take care to remember this is a measuring instrument.



The flowmeter must not be exposed to direct sunlight. Provide appropriate sun protection where necessary.

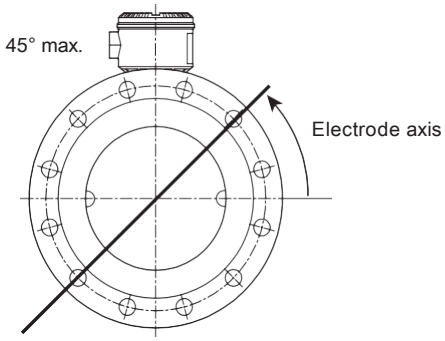


The cable to the flowmeter must be installed neatly or within a conduit. Both loose or conduit installations must have a u-bend below terminal connection box height to enable any water to run off thus avoiding any capillary action into the flowmeter sensor.



Electrode axis

The electrode axis must be horizontal wherever possible or no more than 45° from horizontal.



Item D.

Installation requirements – transmitter (41X/43X)

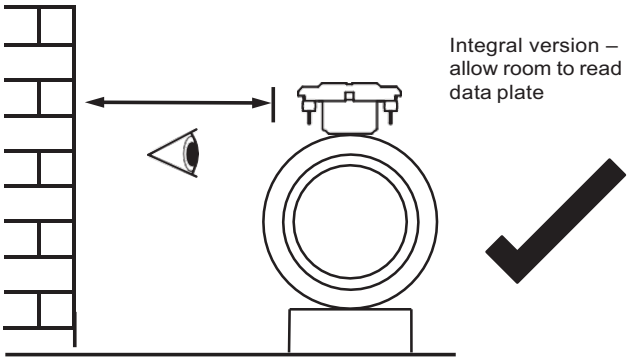


Figure 11 Siting

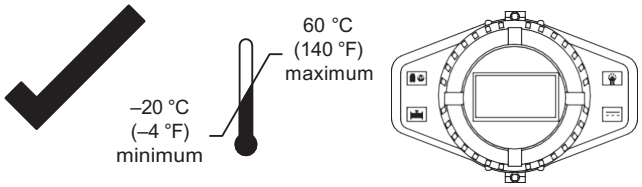


Figure 12 Within temperature limits

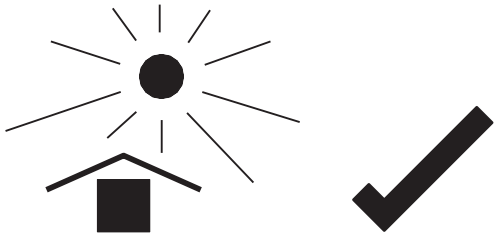


Figure 13 Shade

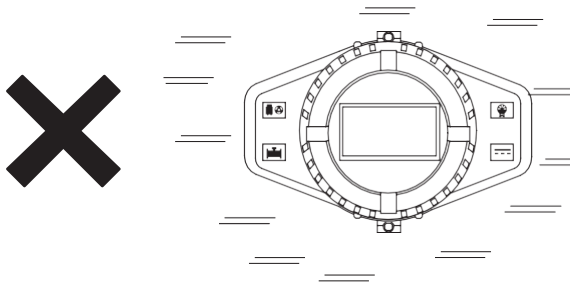


Figure 14 Vibration

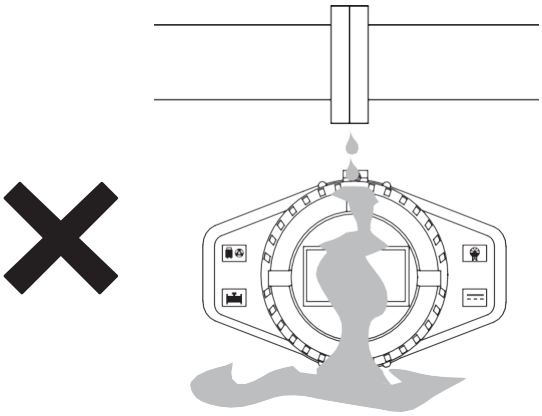


Figure 15 Spillage

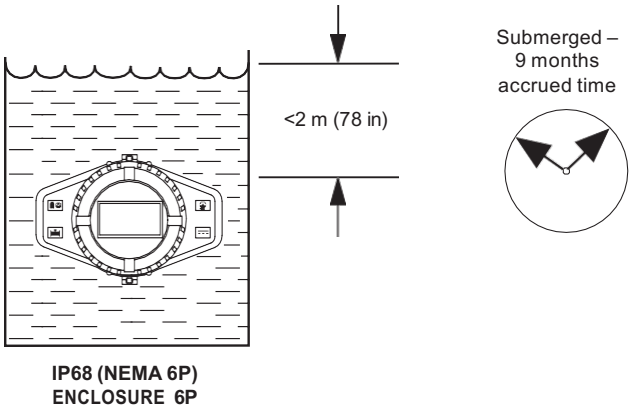


Figure 16 Within environmental rating

Installation conditions – FET 450

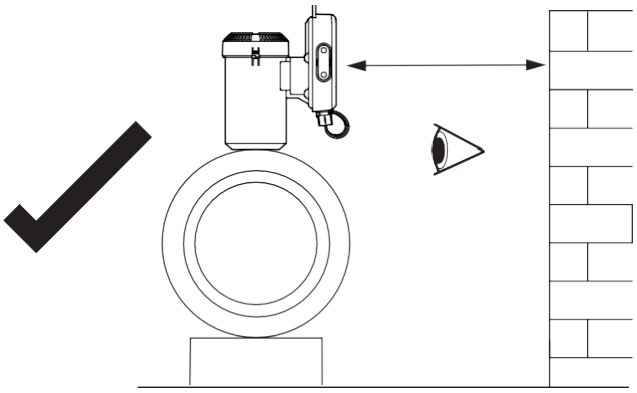


Figure 17 Siting

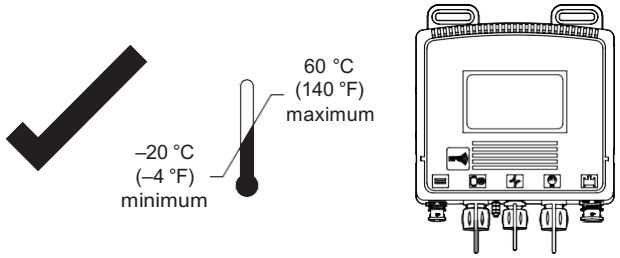


Figure 18 Within temperature limits

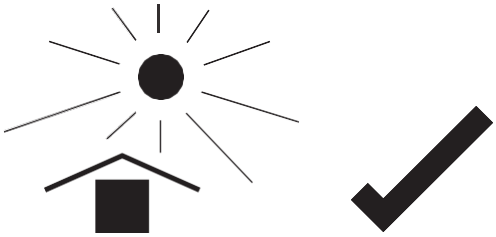


Figure 19 Shade

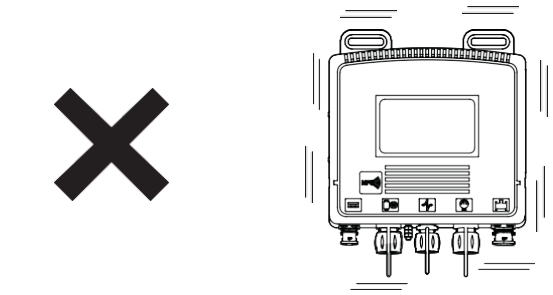


Figure 20 Vibration

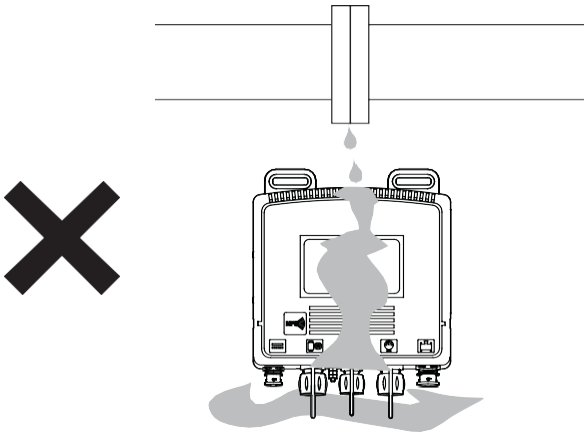


Figure 21 Spillage

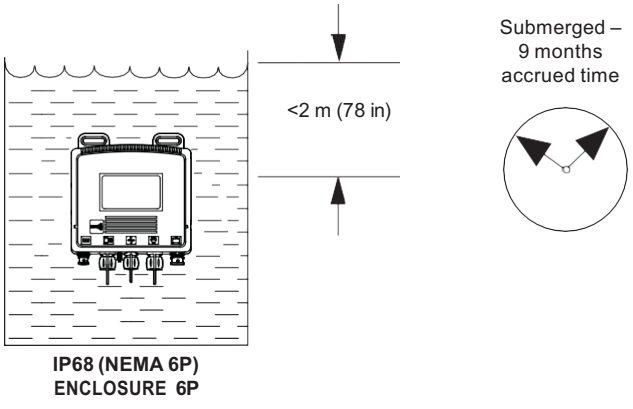


Figure 22 Within environmental rating

Item D.

...Installation requirements – FET 450

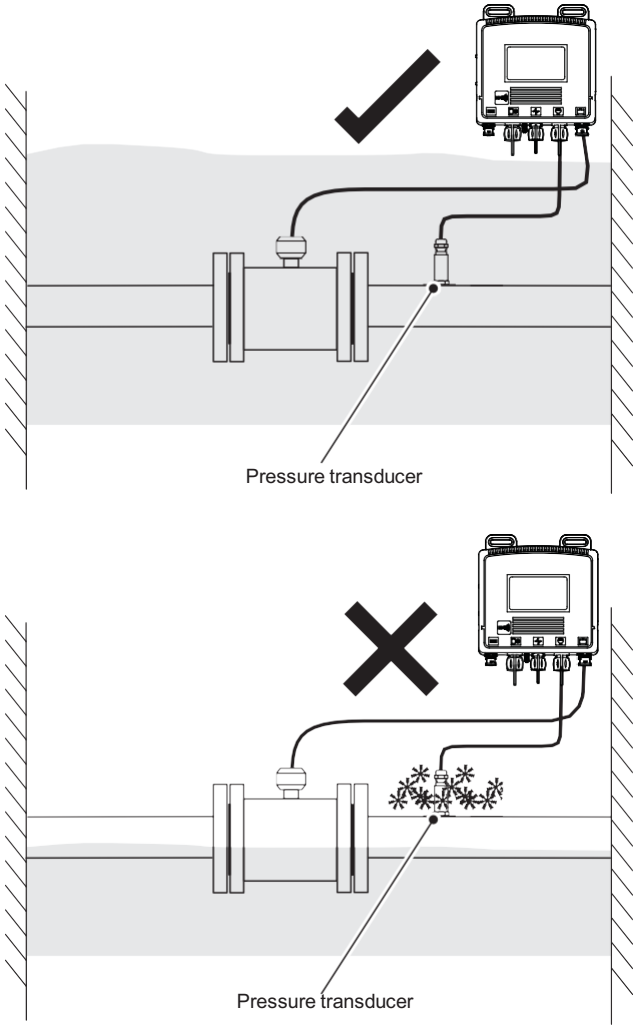


Figure 23 Pressure transducer – protect from frost

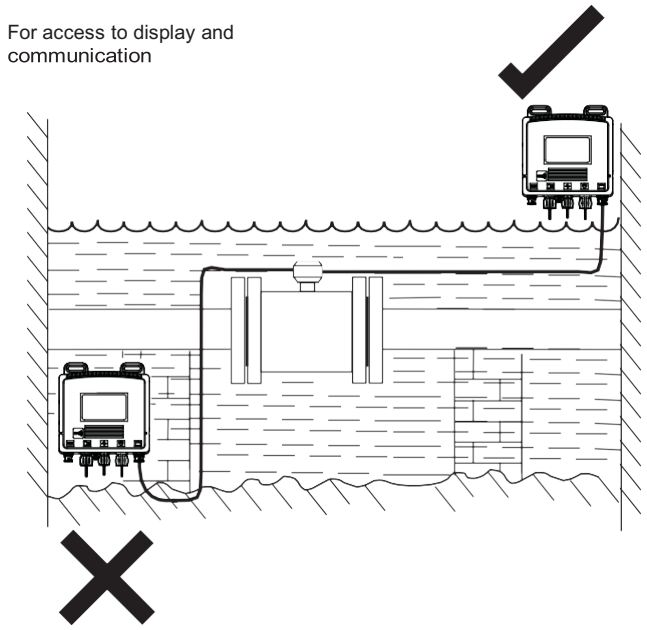


Figure 24 Access to transmitter

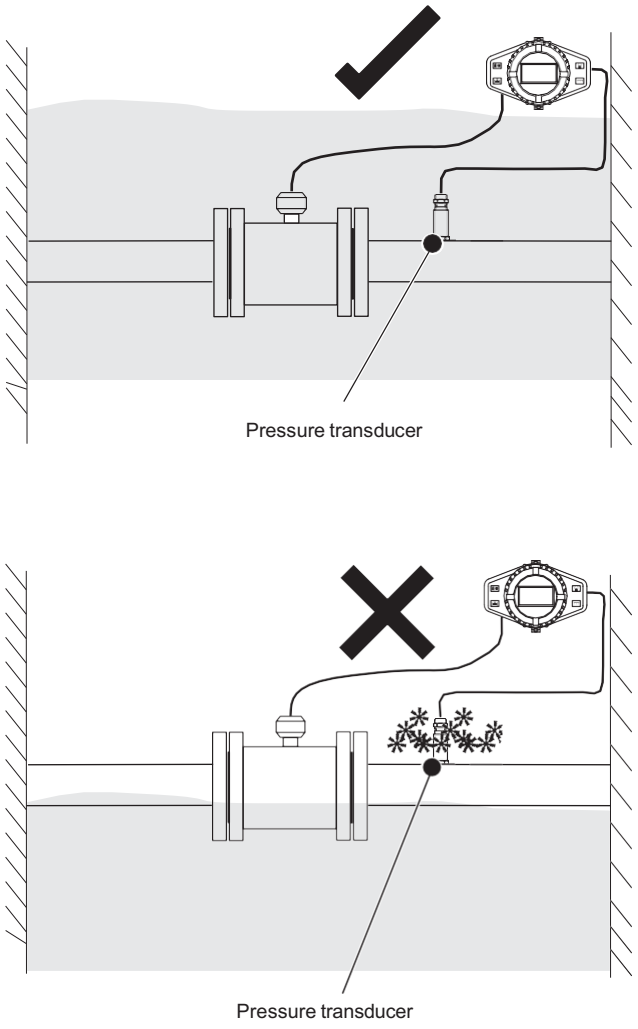


Figure 25 Pressure transducer – protect from frost

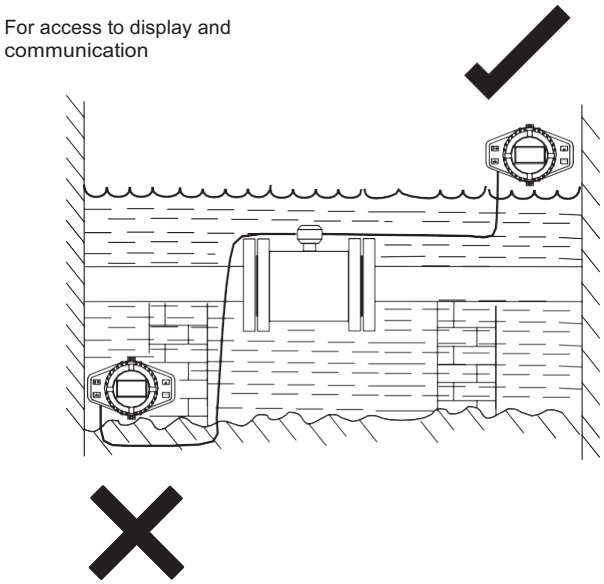


Figure 26 Access to transmitter

AquaMaster4 series differences

		AquaMaster4		
	Features	**41X (standard)**	**43X (advanced)**	**45X (premium)**
Mounting	Integral	✓	✓	✓
	Remote	✓	✓	✓
Sensors	Full bore flanged rubber DN250 to DN2400	✓	✓	✓
	Virtual full bore flanged polypropylene DN40 to DN200	✓	✓	✓
	Reduced bore flanged rubber DN40 to DN600	✓	✓	✓
	Probe 300 to 1000 mm	✓	✓	
Measurement	Class 2/0.5 % calibration	✓		
	Class 2/0.4 % calibration		✓	✓
	Class 1 calibration		✓	✓
	Class 2/0.2 % calibration		✓	✓
	Extended range class 1 and 2 calibration		✓	✓
	Totalizer	✓	✓	✓
	Pressure		✓	✓
	Internal logger		✓	✓
Power	AC (100 to 230 V, 50 or 60 Hz)		✓	✓
	Battery	✓	✓	✓
	Renewable (solar/wind)		✓	✓
Outputs	Digital outputs	✓	✓	✓
	Modbus		✓	✓
	Sensus compatible	✓	✓	
	Mobile communications			✓
Special application needs	Sensor submerged (up to 10 m) or buried (up to 5 m) *	✓	✓	✓
	Retrofit with legacy AquaMaster sensors		✓	✓

*DN40 to 600 reduced bore, DN40 to 200 virtual full bore sensors and DN450 to 2400 full bore sensors

Ordering information

Electromagnetic flowmeter

	1,2,3,4,5,6	7	8,9,10,11	12,13	14	15	16	17,18	19	20,21
Sensor and transmitter										
Standard integral flowmeter	FEW411									
Standard remote flowmeter	FEW412									
Advanced integral flowmeter	FEW431									
Advanced remote flowmeter	FEW432									
Premium integral flowmeter	FEW451									
Premium remote flowmeter	FEW452									
Sensor only										
Standard remote sensor	FEW418									
Advanced remote sensor	FEW438									
Premium remote sensor	FEW458									
Sensor style/liner material										
Full bore/rubber liner		F								
Virtual full bore/polypropylene liner		V								
Reduced bore/rubber liner		R								
Probe/PEEK		A								
Meter size										
DN40 (11/2 in)			0040							
DN50 (2 in)			0050							
DN65 (21/2 in)			0065							
DN80 (3 in)			0080							
DN100 (4 in)			0100							
DN125 (5 in)			0125							
DN150 (6 in)			0150							
DN200 (8 in)			0200							
DN250 (10 in)			0250							
DN300 (12 in)			0300							
300 mm (12 in) insertion probe length			P030							
DN350 (14 in)			0350							
DN400 (16 in)			0400							
DN450 (18 in)			0450							
DN500 (20 in)			0500							
500 mm (20 in) insertion probe length			P050							
DN600 (24 in)			0600							
DN700 (28 in)			0700							
700 mm (28 in) insertion probe length			P070							
DN750 (30 in)			0750							
DN800 (32 in)			0800							
DN900 (36 in)			0900							
DN1000 (40 in)			1000							
1000 mm (40 in) insertion probe length			P100							
DN1050 (42 in)			1050							
DN1100(44 in)			1100							
DN1200 (48 in)			1200							
DN1350 (54 in)			1350							
DN1400 (56 in)			1400							
DN1500 (60 in)			1500							
DN1600 (64 in)			1600							
DN1650 (66 in)			1650							
DN1800 (72 in)			1800							
DN1950 (78 in)			1950							
DN2000 (80 in)			2000							
DN2100 (84 in)			2100							
DN2200 (88 in)			2200							
DN2400 (96 in)			2400							
Others			9999							

Continued on next page …

…Ordering information

…Electromagnetic flowmeter

	1,2,3,4,5,6	7	8,9,10,11	12,13	14	15	16	17,18	19	20,21
	See page 53									
Process connection type										
ANSI/ASME B16.5/16.47 series B Class 150				A1						
ANSI/ASME B16.5/16.47 series B Class 300				A3						
AWWA C207 Class B – DN700 to 2400 (28 to 96 in)				C1						
AWWA C207 Class D – DN700 to 2400 (28 to 96 in)				C2						
AWWA C207 Class E – DN700 to 2400 (28 to 96 in)				C3						
AS 4087 PN 16 – DN40 to 2400 (11/2 to 96 in)				E1						
AS 2129 Table E – DN40 to 2400 (11/2 to 96 in)				E4						
JIS 7.5K – DN40 to 2400 (11/2 to 96 in)				J0						
JIS 10K – DN40 to 2400 (11/2 to 96 in)				J1						
JIS 5K – DN40 to 2400 (11/2 to 96 in)				J2						
1 in BSP coupling (1/8 in pressure tap) – probe only				N1						
11/2 in BSP coupling (1/8 in pressure tap) – probe only				N2						
1 in NPT coupling (1/8 in pressure tap) – probe only				N3						
ISO 7005, DIN, EN 1092 – 1 PN 10 – DN40 to 2400 (11/2 to 96 in)				S1						
ISO 7005, DIN, EN 1092 – 1 PN 16 – DN40 to 2400 (11/2 to 96 in)				S2						
ISO 7005, DIN, EN 1092 – 1 PN 25 – DN40 to 2400 (11/2 to 96 in)				S3						
ISO 7005, DIN, EN 1092 – 1 PN 40 – DN40 to 2400 (11/2 to 96 in)				S4						
Others				Z9						
Process connection material										
Carbon steel					B					
Stainless steel carrier (probe only)					J					
Brass seal carrier (probe only)					K					
Without (probe only)					U					
Measuring electrodes material										
Stainless steel 316L (1.4404)						R				
Super austenitic steel (1.4529)						U				
Other						Z				
Grounding accessories										
Without							A			
2 grounding rings (standard)							E			
Protection class – transmitter/sensor										
IP68, NEMA 6P/IP68, NEMA 6P – integral, remote cable not fitted and not potted (IP68 only after potting by others)								80		
IP68, NEMA 6P/IP68, NEMA 6P – remote mount cable fitted and potted								81		
Power supply										
Battery powered – battery not fitted									B	
Battery powered – battery fitted									L	
AC + internal back-up									K	
AC + external back-up – battery not fitted									H	
AC + external back-up – battery fitted									J	
External renewable energy + internal back-up									R	
External renewable energy + internal + external back-up – battery not fitted									M	
External renewable energy + internal + external back-up – battery fitted									N	
Outputs										
Modbus + pulse output *										M4
Pulse output										B1
Sensus communication protocol compatible + pulse output *										S1
4G										C1
4G + pulse output										C2
4G + Modbus + pulse output										C4
nB-IoT										J1
nB-IoT + pulse output										J2
nB-IoT Modbus + pulse output										J4
Without (FEW411, FEW412 and sensor only)										Y0

* With 3KXF221400L0XXX FEW4 sensor cable – see **Accessories** on page 60.

Options – add to order code as required	
Logger and protocol	
Internal logger option	LPN**
Internal Logger with MQTT + Sparkplug B	LPQ
Calibration type (3 test points as standard)	
Class 2.5 calibration – FEW411 and FEW412 only	RCS
Class 2/0.5 % factory calibration – FEW411 and FEW412 only	RCC
Class 2/0.4 % factory calibration – standard with FEW43X and FEW45X only	RCD[1]
Class 2/0.2 % factory calibration – option with FEW43X and FEW45X only	RCB[2]
Class 1 factory calibration – option with FEW43X and FEW45X only	RCF[2]
Extended range Class 2 calibration – option with FEW43X and FEW45X only	RCM[3]
Extended range Class 1 calibration – option with FEW43X and FEW45X only	RCN[3]
2 % factory calibration (probe only)	RCW
Number of test points	
1	TV1
5	TV5
Signal cable length and type	
5 m (approx. 15 ft)	SC1
10 m (approx. 30 ft)	SC2
20 m (approx. 66 ft)	SC4
30 m (approx. 98 ft)	SC6
50 m (approx. 164 ft)	SCA
100 m (approx. 328 ft)	SCE
150 m (approx. 492 ft)	SCG
Additional cables	
Sensus cable, 5 m	SR1
Sensus cable, 20 m	SR4
Renewable energy cable, 10 m	SP2
Accessories	
11/2 in ball valve	AB
RS485 lead with MIL connector for Modbus	AT
NFC to Wall mount Coupler 5 m cable	AJ
NFC to Wall mount Coupler, 10 m cable	AK
NFC to USB, 10 m cable	AL
NFC to USB, 20 m cable	AM
Display protective cover	
Display protective cover without NFC	AD1
Display protective cover with NFC, 5 m cable	AD2
Display protective cover with NFC, 20 m cable	AD3
Mobile Communication Accessories	
Remote antenna 5 m	G7
Remote antenna 10 m	G8
Mobile Communication Territory	
USA, Canada & Mexico	GTA
China	GTC
Australia, Argentina, Columbia, Chile, Brazil, Bolivia Peru & Panama*	GTD
Rest of the world	GTZ
Pressure span	
2000 kPa/20 bar/300 psi	PS3
4000 kPa/40 bar/580 psi	PS4
Pressure transducer	
Remote, cable length 10 m (33 ft)	PT5
Remote, cable length 20 m (65 ft)	PT6
Other usage certifications[5]	
Measuring Instruments Directive (MID)	CM1
OIML R49	CM2
NMI M10/R49	CM3[4]
UL Fire Service approval	CMF
PAC	CMP

[1] Calibration option RCD will have a reduced R (Q3/Q1) value without verification and are dependent on optional selection " Other Usage certification - CM2/CM3", refer to table 12 & 13

[2] Calibration option RCB/RCF will have a reduced R (Q3/Q1) value with verification and are dependent on optional selection " Other Usage certification - CM1/CM2/CM3", refer to table 12 & 13

[3] Calibration options RCM/RCN will have a extended R (Q3/Q1) value with verification and are dependent on optional selection "Other Usage certification - CM1/CM2/CM3", refer to page 22 & 26

[4] Calibration option RCS will have R (Q3/Q1) value without verification and are dependent on optional selection " Other Usage Certification - CM3" refer to page 22 & 26.

[5] If no selection made, standard factory calibration/verification.

*Contact ABB Sales/Support for any Latin American countries not specified above

**For FEW45X, the default protocol would be FTPS/FTP

…Ordering information

…Electromagnetic flowmeter

Potable water approvals	
WRAS - cold water approval*	CWA
NSF-61#	CWC
AZ/NZS 4020*	CWE
ACS#	CWF
WRAS - 60 °C water approval*	CWK
WRAS - 50 °C water approval*	CWN
Without	CWY
Other options	
With customer property label	KL
Documentation language	
German	M1
Spanish	M3
French	M4
English	M5
Chinese	M6
Polish	M9
Italian	M2
Portuguese	MA
Turkish	MT
Transmitter Software Function Package	
Backward-compatible to legacy AquaMaster Sensors (for FEW452 only)	NFL

* Material approval

#Meter Approval

Transmitter

Product coding field number	1,2,3,4,5,6	7	8,9
Transmitter only			
Standard remote transmitter	FET412		
Advanced remote transmitter	FET432		
Premium remote transmitter	FET452		
Power supply			
Battery powered – battery not fitted		B	
Battery powered – battery fitted		L	
AC + internal back-up		K	
AC + external back-up – battery not fitted		H	
AC + external back-up – battery fitted		J	
External renewable energy + internal back-up		R	
External renewable energy + internal + external back-up – battery not fitted		M	
External renewable energy + internal + external back-up – battery fitted		N	
Outputs			
Modbus			M4
Pulse output			B1
Sensus communication protocol compatible			S1
4G			C1
4G + pulse output			C2
4G + Modbus + pulse output			C4
nB-IoT			J1
nB-IoT + pulse output			J2
nB-IoT + Modbus output + pulse output			J4
Without (FEW411 and FEW412 only)			Y0

Options – add to order code as required	
Logger and protocol	
Internal logger option	LPN
Internal Logger with MQTT + Sparkplug B	LPQ
Additional cables	
Sensus cable, 5 m	SR1
Sensus cable, 20 m	SR4
Renewable energy cable, 10 m	SP2
Accessories	
RS485 lead with MIL connector for Modbus	AT
NFC to Wall mount Coupler, 5 m cable	AJ
NFC to Wall mount Coupler, 10 m cable	AK
NFC to USB, 10 m cable	AL
NFC to USB, 20 m cable	AM
Display protective cover	
Display protective cover without NFC	AD1
Display protective cover with NFC, 5 m cable	AD2
Display protective cover with NFC, 20 m cable	AD3
Mobile Communication Accessories	
Remote antenna 5 m	G7
Remote antenna 10 m	G8
Mobile Communication Territory	
USA, Canada & Mexico	GTA
China	GTC
Australia, Argentina, Columbia,Chile, Brazil ,Bolivia, Peru & Panama*	GTD
Rest of the world	GTZ
Pressure span	
2000 kPa/20 bar/300 psi	PS3
4000 kPa/40 bar/580 psi	PS4
Pressure transducer	
Remote, cable length 10 m (33 ft)	PT5
Remote, cable length 20 m (65 ft)	PT6
Other usage certifications	
OIML R49	CM2
NMI M10	CM3
Documentation language	
German	M1
Spanish	M3
French	M4
English	M5
Chinese	M6
Polish	M9
Italian	M2
Portuguese	MA
Turkish	MT
Transmitter Software Function Package	
Backward-compatible to legacy AquaMaster Sensors (for FET452 only)	NF

…Ordering information

...Transmitter

Probe bore gauge tool

	1,2,3,4	5	6,7,8,9
Probe bore gauge tool	APBGT		
Housing			
R1 housing		2	
Bore size			
700 mm			700
760 mm			760
800 mm			800
900 mm			900
1000 mm			1000
1100 mm			1100
1200 mm			1200
1400 mm			1400
1500 mm			1500
1600 mm			1600
1800 mm			1800
2000 mm			2000
2200 mm			2200

Transmitter electronics only

	1,2,3,4, 5, 6	7	8,9
Standard integral transmitter generic	F E T 4 1 9		
Standard remote transmitter generic	F E T 4 1 0		
Advanced integral transmitter generic	F E T 4 3 9		
Advanced remote transmitter generic	F E T 4 3 0		
Power supply			
Battery powered – battery not fitted		B	
AC + internal back-up		K	
External renewable energy + internal back-up		R	
Outputs			
Modbus			M4
Pulse output			B1
Sensus communication protocol compatible			S1
Without			Y0

Additional codes to be added as required	MT
Logger and protocol	
Internal logger option	LPN
Pressure span	
2000 kPa/20 bar/300 psi	PS3
4000 kPa/40 bar/580 psi	PS4
Others	PSZ
Pressure transducer	
Remote, cable length 10 m (33 ft)	PT5
Remote, cable length 20 m (65 ft)	PT6
Documentation language	
German	M1
Spanish	M3
French	M4
English	M5
Chinese	M6
Polish	M9
Italian	M2
Portuguese	MA
Turkish	MT

Calibration/flow accuracy specification table

Calibration of the flowmeter to different calibration types and other usage certifications is done to meet the following values of R (Q3/Q1) for sizes DN40 to DN600.

Table 13 Calibration/verification of calibration values for "Other Usage Certification" MID (CM1)/OIML (CM2), Reduced Bore Sensor sizes DN40 - 600

	Reduced bore sensor			
	Mains powered		Battery/renewable energy powered	
DN	**Class 2**	**Class 1**	**Class 2**	**Class 1**
40	250	200	160	100
50	250	200	160	100
65	250	200	160	100
80	250	200	160	100
100	250	200	160	100
125	250	200	160	100
150	250	200	160	100
200	250	200	160	100
250	250	200	160	100
300	250	200	160	100
350	250	200	63	63
400	160	200	63	63
450	160	200	63	63
500	160	200	63	40
600	160	200	63	40

Table 14 Calibration/verification of calibration values for "Other Usage Certification" MID (CM1)/OIML (CM2), Full Bore Sensor sizes DN40 - 600

	Full bore sensor			
	Mains powered		Battery/renewable energy powered	
DN	**Class 2**	**Class 1**	**Class 2**	**Class 1**
40	200	125	80	63
50	200	125	80	63
65	200	125	80	63
80	200	125	80	63
100	200	125	80	63
125	200	125	80	63
150	200	125	80	63
200	200	125	80	63
250	200	125	80	63
300	200	125	80	63
350	80	80	80	63
400	80	80	80	63
450	80	80	80	63
500	80	80	80	63
600	80	80	80	63
700	80	80	40	40
750	80	80	40	40
800	80	80	40	40
900	63	40	40	-
1000	63	40	40	-
1050	63	40	40	-
1100	63	-	40	-
1200	63	-	40	-

Accessories

Ordering code	Description
3KXF208400L0100	AM4 battery pack 10 lithium D cells
3KXF208400L0200	AM4 battery pack 50 lithium D cells
3KXF208400L0300	AM4 display protective cover
3KXF208400L0400	AM4 display protective cover NFC 5 m cable
3KXF208400L0500	AM4 display cover NFC 20 m Cable
3KXF208400L0600	AM4 RS485 lead Mil connectors Modbus
3KXF221400L0100	FEW4 sensor/pulse/Modbus cable 5 m (15 ft approx.)
3KXF221400L0200	FEW4 sensor/pulse/Modbus cable 10 m (30 ft approx.)
3KXF221400L0300	FEW4 sensor/pulse/Modbus cable 20 m (66 ft approx.)
3KXF221400L0400	FEW4 sensor/pulse/Modbus cable 30 m (98 ft approx.)
3KXF221400L0500	FEW4 sensor/pulse/Modbus cable 50 m (164 ft approx.)
3KXF221400L0600	FEW4 sensor cable 100 m junction box/Mil
3KXF221400L0700	FEW4 sensor cable 150 m junction box/Mil
3KXF221400L0800	FEW4 sensor cable 500 m
3KXF221400L0900	FEW4 junction box and cable – M20 to Mil
3KXF208400L0700	AM4 Sensus cable 5 m (15 ft approx.)
3KXF208400L0800	AM4 Sensus cable 20 m (66 ft approx.)
3KXF208400L0900	AM4 renewable energy cable 10 m
3KXF208400L1000	AM4 pulse output cable 1 m
3KXF208400L2100	AM4 pressure transducer 20 bar 10 m
3KXF208400L2200	AM4 pressure transducer 20 bar 20 m
3KXF208400L2500	AM4 pressure transducer 40 bar 10 m
3KXF208400L2600	AM4 pressure transducer 40 bar 20 m
3KXF221400L1100	FEW4 terminal box potting compound 200 g
3KXF221400L1200	FEW4 ball valve stainless steel 11/2 in BSP
3KXF221400L1300	FEW4 bush stainless steel 11/2 in M x 1 in BSP
3KXF221400L1400	FEW4 ball valve stainless steel 11/2 in NPT
3KXF221400L1500	FEW4 bush stainless steel 11/2 in M x 1 in NPT
3KXF221400L1600	FEW4 AquaProbe seal replacement kit
3KXF208400L2700	AM4 transmitter seal kit
3KXF208400L2800	AM4 battery connector kit
3KXF221400L1700	FEW4 preamp board and potting kit
3KXF208400L2900	AquaMaster 4 – demonstration kit (FEX41X/FEX43X)
3KXF221400L1800	FEW4 terminal box maintenance kit
3KXF208400L3000	AM4 antitamper security kit
3KXF208400L3100	AM4 remote transmitter mounting bracket kit
3KXF221400L1900	FEW4 earth strap kit
3KXF208400L3700	External battery PSU with batteries not fitted for Tx (FET450)
3KXF208400L3800	External battery PSU with batteries fitted for Tx (FET450)
3KXF208400L3900	AC PSU with D-cell batteries not fitted for Tx (FET450)
3KXF208400L4000	AC PSU with D-cell batteries fitted for Tx (FET450)
3KXF208400L4100	Renewable PSU with D-cell batteries not fitted for Tx (FET450)
3KXF208400L4200	Renewable PSU with D-cell batteries fitted for Tx (FET450)
3KXF208400L5200	NFC to USB, 10 m cable for FEX450
3KXF208400L5300	NFC to USB, 20 m cable for FEX450

Ordering code	Description
3KXF208400L4400	NFC to wall mount coupler, 5 m (FEX450)
3KXF208400L4500	NFC to wall mount coupler, 20 m (FEX450)
3KXF208400L4600	Battery holder sub-assembly for AC/Ren operated Tx (FET450)
3KXF208400L4700	Battery holder subassembly for battery operated Tx (FET450)
3KXF208400L4800	Demo kit for AM4 Mobile Comms with NB-IOT for China
3KXF208400L4900	Demo kit for AM4 Mobile Comms with 4G for Europe and Asia
3KXF208400L5000	Demo kit for AM4 Mobile Comms with 4G for North America
3KXF208400L5100	Demo kit for AM4 Mobile Comms with 4G for Australia
3KXF208400L5600	FET450 PSU Mounting Bracket
3KXF208400L5800	External Remote Antenna with 5 m cable
3KXF208400L5900	External Remote Antenna with 10 m cable
3KXF208400L6000	Battery Holder for External Battery PSU
3KXF208400L6100	Battery Holder for AC Mains and Renewable PSU

Acknowledgements

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- Google Play is a trademark of Google LLC.
- Modbus is a registered trademark of Schneider Electric USA, Inc.
- Sensus is a registered trademark of Sensus USA, Inc.
- Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.

Notes

Notes

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ABB Measurement & Analytics

For your local ABB contact, visit:
www.abb.com/contacts

For more product information, visit:
www.abb.com/measurement

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DS/FET400-EN Rev. H 07.2025

4.1.4. Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

The Grantee is "Actively" registered with SAMS (Service for Award Management) and has been assigned the following UEI Number: 86-6000270. found at www.sam.gov. Include date SAM.GOV registration begins and ends YT2CGQQEMVJ9.

The Grantee further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

Town of Jerome

A. PROPOSAL

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Advertisement for Bids, by the Town Manager, the undersigned Bidder:

Having carefully examined the bidding documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the BID SCHEDULE.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount bid.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completion of the work includes lead time for obtaining the necessary material and/or equipment. Bidder agrees to pay, as liquidated damages, 2 times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The Bidder hereby acknowledges receipt of and agrees his proposal is based on the following Addenda. (If there are no addenda, write NONE below).

NONE

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of thirty (30) days after the bid deadline.

THIS PROPOSAL IS SUBMITTED BY Metron Farnier, LLC _____, a corporation organized under the laws of the State of Arizona, a partnership consisting of Limited Liablity Corporation or individual trading as _____ _____ of the City of _____ and is the holder of Arizona State Contractor's License(s):

Classification(s) _____
No. (s)_ _____

Respectfully Submitted,

Metron Farnier, LLC
Firm

5665 Airport Blvd, Boulder, CO 80301
Address

Matt Kosorok, VP Enterprise Solutions
By (Officer & Title)

November 5, 2025
Date

ATTEST:

_____
(Officer and Title)

_____
Witness (if Bidder is an Individual)

REQUIRED FOR SUBMITTAL

Town of Jerome

B. BID SCHEDULE

Firm Name Metron Farnier, LLC

Mailing Address 5665 Airport Blvd

City Boulder State Colorado Zip 80301

Telephone 303-449-8833

PURSUANT to an in compliance with the Bid Package, Notice of Invitation to Bid, Instructions to Bidders, and the Bid Documents relating to the construction of:

TOWN OF JEROME
ADVANCED AUTOMATIC METERING INFRASTRUCTURE PROGRAM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Bid Schedule and table is for the convenience of the Town of Jerome to analyze the individual components of the Bid and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Bid Schedule shall be the same as listed on the proposal to the Town of Jerome.

BID SCHEDULE INSTRUCTIONS:

1. All Items will be paid for as Lump Sums. The "ENGINEERS ESTIMATED QUANTITY/BID SCHEDULE" and the "CONTRACTORS UNIT PRICE" will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The Owner reserves the right to recalculate the following Schedules if they appear malapportioned.

3. The Lump Sum amounts indicated below are to include the Supplier's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

BID SCHEDULE Town of Jerome Advanced Automatic Metering Infrastructure Program					
		Est. Qty	**Units**	**Unit Price**	**Total Price**
CIVIL BASE BID					
1	¾ x 5/8" AMR Meter	299		$390.00	$116,610.00
2	1" threaded AMR Meter	17		$585.000	$9,945.00
3	1 ½" flanged AMR Meter	13		$900.00	$11,700.00
4	2" AMR Meter	2		$1,250.00	$2,500.00
5	4" AMR Meter	1		$4,400.00	$4,400.00
6	AMR System Software	1		$0.00	$0.00
7	AMR System Training	1		$0.00	$0.00
8	AMR Data Collection Hardware/Software	1		$0.00	$0.00
9	FCC Registration	1		$0.00	$0.00
SUBTOTAL COSTS – BASE BID					
GRAND TOTAL, BASE BID (This number to be used for the Contractors Bid Bond)				$145,155.00	

GRAND TOTAL – BASE BID (in words)

One hundred and forty-five thousand one hundred and fifty-five dollars

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze bids, use as a basis for any supplemental agreements, and for partial progress payments.

REQUIRED FOR SUBMITTAL

INSTALLATION PRICING - SCHEDULE A

Metron
Town of Jerome, Arizona

Installation pricing -Schedule A

	Discription		Metron Preferred Pricing	
		Qty	Each	Subtotal
1	Installation of utility meters – 5/8x3/4"	299	$ 105.00	$ 31,395.00
2	Installation of utility provided meters – 1"	17	$ 105.00	$ 1,785.00
3	Installation of utility provided meters – 1.5" (Flanged)	13	$ 225.00	$ 2,925.00
4	Installation of utility provided meters – 2" (Flanged)	2	$ 225.00	$ 450.00
5	Installation of utility provided meters – 3" (Flanged)	0	$ 375.00	$ -
6	Installation of utility provided meters – 4" (Flanged)	1	$ 450.00	$ 450.00
		Meter Install	**Sub-Total**	**$ 37,005.00**
7	Install non-functioning Curb Stop (Dry) (Company provided part)-3/4"	As Needed	$ 65.00	
8	Install non-functioning Curb Stop ((Wet/Live) (Company provided part))-3/4"	As Needed	$ 195.00	
9	Regrade of meter boxes (As Needed or requested – Does not include boxes incased in concrete)	As Needed	$ 20.00	
10	Box Replacement (no charge if box is provided by Town-Does not include boxes incased in concrete)	As Needed	$ 20.00	
11	Pull Box as needed to access meter to safely replace (up to, two boxes deep up to 12" - 24" deep)	As Needed	$ 75.00	
12	Pull Box as needed to access meter for replacement (3 boxes deep or greater 25" or more in depth)	As Needed	$ 150.00	
13	GPS Location (Includes Mapping of meter locations at customers request)		$ 2,500.00	
16	Workflow/Document Management		$ 1,500.00	$ 1,500.00
17	Mobilization		$ 3,500.00	$ 3,500.00
		Total		**$ 42,005.00**

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze bids, use as a basis for any supplemental agreements, and for partial progress payments.

REQUIRED FOR SUBMITTAL

TOWN OF JEROME, ARIZONA | Advanced Automatic Metering Infrastructure Program

METER AND INSTALLATION COMBINED PRICING - SCHEDULE A+B

Item	Description	Qty	Unit Price	Subtotal
1	¾ x 5/8" AMR Meter	299	$390.00	$116,610.00
2	1" Threaded AMR Meter	17	$585.00	$9,945.00
3	1 ½" Flanged AMR Meter	13	$900.00	$11,700.00
4	2" AMR Meter	2	$1,250.00	$2,500.00
5	4" AMR Meter	1	$4,400.00	$4,400.00
6	AMR System Software	1	$0.00	$0.00
7	AMR System Training	1	$0.00	$0.00
8	AMR Data Collection Hardware/Software	1	$0.00	$0.00
9	FCC Registration	1	$0.00	$0.00
	Materials Subtotal			$145,155.00
	INSTALLATION PRICING – SCHEDULE A			
1	Install 5/8 x 3/4" Meters	299	$105.00	$31,395.00
2	Install 1" Meters (Owner Provided)	17	$105.00	$1,785.00
3	Install 1.5" (Flanged) Meters	3	$225.00	$675.00
4	Install 2" (Flanged) Meters	2	$225.00	$450.00
5	Install 3" (Flanged) Meters	1	$375.00	$375.00
6	Install 4" (Flanged) Meters	1	$450.00	$450.00
7	Install Non-Functioning Curb Stop (Dry) – 3/4"	As Needed	$65.00	—
8	Install Non-Functioning Curb Stop (Wet/Live) – 3/4"	As Needed	$195.00	—
9	Regrade Meter Boxes	As Needed	$20.00	—
10	Box Replacement (Town Provided)	As Needed	$100.00	—
11	Pull Box – Meter Replacement (Up to 24" depth)	As Needed	$75.00	—
12	Pull Box – Meter Replacement (3'+ depth)	As Needed	$150.00	—
13	GPS Location & Mapping			$2,500.00
14	Workflow / Document Management			$1,500.00
15	Mobilization			$3,500.00
	Installation Subtotal			$42,005.00
	TOTAL PROJECT BID			$187,160.00

REQUIRED FOR SUBMITTAL

C. NON-COLLUSION CERTIFICATE

ADVANCED AUTOMATIC METERING INFRASTRUCTURE PROGRAM

Company Name: Metron Farnier, LLC

The undersigned Vendor hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a bid to the Town of Jerome for consideration in the award of this solicitation.

Dated this 5th day of November 2025.

Signature

303-449-8833
Phone Number

Matt Kosorok, VP Enterprise Solutions
Written Name

Matt.Kosorok@metron-us.com
Email Address

REQUIRED FOR SUBMITTAL

E. VENDOR QUALIFICATIONS, REPRESENTATIONS, AND WARRANTIES

ADVANCED AUTOMATIC METERING INFRASTRUCTURE PROGRAM

Company Name: Metron Farnier, LLC

The undersigned Vendor hereby certifies as follows:

X1 Taxes and Leins – Vendor has no unsatisfied tax or judgement lien on record.

X2 Vendor's Examination – Vendor has made its own examination, investigation and research regarding the requirements of the solicitation including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, facilities necessary to perform. Vendor fully understands the character of the work and services, the manner in which payment is to be made, the terms and conditions of the draft agreement and the solicitation. Vendor acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Vendor hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the draft agreement and the solicitation, and at the prices as bid.

Dated this 5th day of November 2025.

Signature

303-449-8833
Phone Number

Matt Kosorok
Written Name

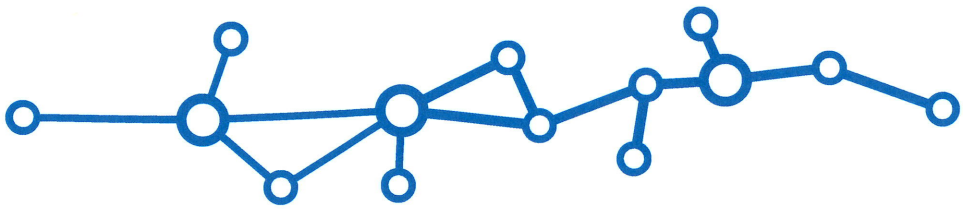
Matt.Kosorok@metron-us.com
Email Address

REQUIRED FOR SUBMITTAL

The Business of Water.
Simplified.

TOWN OF JEROME, AZ
RFP QUESTIONS

Metron-Farnier, LLC
5665 Airport Blvd,
Boulder, CO 80301
Alex Schechter
alex.schechter@metron-us.com
12/01/2025



A. GENERAL INFORMATION

a. Brief overview of the vendor and legal organization of the company

Metron Response:

Metron Farnier has been supplying advanced metering solutions to utilities for over 30 years and has been an innovation leader within the industry. It is a limited liability company headquartered in Boulder, CO. Metron has a presence in all 50 states.

b. Submission requirements met

Metron Response:

Metron feels submission requirements have been met.

c. SAM.gov Unique Entity ID number (UEI) as required by grant funding.

Metron Response:

DBJVLTWLZQV1

d. Description of at least three (3) but no more than five (5) similar projects in which the vendor participated for each applied service category. Describe the vendor's role in the project and scope of work that demonstrates the vendor's expertise. Provide the name and contact information for each project. It is preferred that the similar project have been conducted in similar topography to the Town of Jerome.

Metron Response:

Below are five similar projects in which Metron participated, demonstrating our expertise across various applied service categories. These projects include deployments in diverse and challenging topographies, many of which share similarities to the Town of Jerome's environment:

Reference 1: (Municipal Utility) Town of Camp Verde, AZ
Client Name: Town of Camp Verde
Client Project Name: Meter Changeout Project
Client Reference Name & Title: Jeff Low – Utilities Director
Client Phone Number: 928-469-9063
Client Email: jeff.low@campverde.az.gov
Location of Work: Camp Verde, Arizona
Total Endpoints: 2,200
Initial Timeframe for Duration and Completion of Work: 1 year to complete all work including installation and billing
Scope of Work / Description of Work Performed (including systems integrated): Metron supplied cellular AMI water meters for the district's service area. The Town of Camp Verde handled all self-installation, supported by Metron's technical team for configuration and ongoing system support.
Comments: The Town of Camp Verde has had a successful time with the Metron product with a strong read rate and capturing thousands of dollars of unrecognized revenue.

Reference 2: (Municipal Utility) Avra Water Company
Client Name: Avra Water Company
Client Project Name: Water Infrastructure Finance Authority Meter Replacement Project
Client Reference Name & Title: Cathy Kuefler – Administrative Manager
Client Phone Number: 520-780-8689
Client Email: cath@avrawater.com
Location of Work: Tucson, Arizona
Total Endpoints: 2,600
Initial Timeframe for Duration and Completion of Work: 1 year
Scope of Work / Description of Work Performed (including systems integrated): Metron supplied 1,400 Cellular enabled registers and meters to Avra Water co-op. Avra has been conducting their own installation of the product to combat a failing Sensus drive by system.
Comments: Avra has had a successful Time with the Metron product with a strong read rate and capturing Thousands of dollars of unrecognizes revenue.

Reference 3: (Rural Utility) BDM Rural Water, SD
Client Name: BDM Rural Water
Client Project Name: AMI Deployment
Client Reference Name & Title: Rodney Kappes – General Manager
Client Phone Number: 605-448-5417
Client Email: rodneyk@bdmruralwater.com
Location of Work: Day County, South Dakota
Total Endpoints: 2,300+
Initial Timeframe for Duration and Completion of Work: Completed
Scope of Work / Description of Work Performed (including systems integrated):
Metron supplied cellular AMI water meters for the district's service area. BDM handled all self-installation, supported by Metron's technical team for configuration and ongoing system support.
Comments: Successful deployment enabled reliable meter reads across a rural service territory with minimal field maintenance.

Reference 4: (Municipal Utility) Evergreen Metro District, CO
Client Name: Evergreen Metro District
Client Project Name: AMI Upgrade
Client Reference Name & Title: Kevin Rosemeyer – Water Director
Client Phone Number: 303-301-5500
Client Email: krosemeyer@evergreenmetro.org
Location of Work: Evergreen, Colorado
Total Endpoints: 4,500
Initial Timeframe for Duration and Completion of Work: One-year upgrade process
Scope of Work / Description of Work Performed (including systems integrated):
Metron performed a full upgrade from a previous drive-by AMR system to a cellular AMI network to improve meter reading efficiency and data visibility. Meters were supplied and installed by Metron, including those in indoor applications across hilly terrain.
Comments: The deployment improved operational efficiency and real-time data access, resulting in high customer satisfaction.

Reference 5: (Municipal Utility) Town of Erie, CO
Client Name: Town of Erie, Colorado
Client Project Name: AMI Upgrade
Client Reference Name & Title: Chris Biggs – Meter Supervisor
Client Phone Number: 303-243-2520
Client Email: cbiggs@erieco.gov
Location of Work: Erie, Colorado
Total Endpoints: 3,900+ and ongoing
Initial Timeframe for Duration and Completion of Work: 2023 to Present
Scope of Work / Description of Work Performed (including systems integrated):
The Town transitioned from a mix of non-Metron AMI and older meter types to a standardized deployment using Metron cellular AMI meters and endpoints across all meter sizes. Metron supplied the meters and supported installation efforts.
Comments: Ongoing project aimed at improving system visibility, data access, and customer engagement.

Each project highlights Metron's ability to deliver reliable smart water solutions in a range of topographies, including hilly and rural areas, and demonstrates our project management and technical expertise.

B. AMI INFORMATION REQUIREMENTS

a. Communication Propagation Study with a "Fixed Based" Communication system for the AMI system.

Metron Response:
Please see Prop Study in Appendices.

b. Explain if the AMI system will include any cellular network.

Metron Response:
Metron's AMI system is a fully cellular solution and utilizes existing cellular networks (Verizon and/or AT&T) for communication between endpoints and the headend system.

c. Explain if the AMI includes a free or paid customer engagement web portal.

Metron Response:
Metron's AMI solution includes WaterScope™, our customer engagement web portal, at no additional cost.

d. Explain if the AMI provides top-of-the-hour time-synchronized readings across the entire system with at least an update every hour.

Metron Response:
Meter readings from Metron endpoints are time-synchronized, with each endpoint synchronizing every time it communicates over the cellular network. The internal hardware-based real-time clock is set during these communications, ensuring all data transmitted by Metron endpoints is time-stamped to within 1 second of accuracy. All consumption intervals are synchronized to the minute, from midnight to midnight of the prior day. Transmissions occur once per day and include 1440 one-minute data intervals, rather than hourly updates.

Therefore, the system provides time-synchronized readings, but not top-of-the-hour updates every hour across the entire system.

e. Explain if the meters, endpoints, and AMI infrastructure is manufactured by the same company.
Metron Response:
Metron manufactures and develops all meters, endpoints, and AMI infrastructure—including the head end system and consumer portal. This approach ensures full compatibility and eliminates any cost differences among the components.

f. Explain if the current meters and endpoints will be able to integrate with the AMI system.
Metron Response:
Yes, current meters and endpoints can integrate with the AMI system. Metron offers a retrofittable endpoint that allows for migration of any existing meter—at the Town's discretion—onto Metron's cellular AMI solution, including recently purchased manual read meters. The water meters can be equipped with standard AMI outputs, and the output volume can be adjusted onsite.

g. Describe if the system can identify unauthorized usage on marketed accounts.
Metron Response:
The utility can upload a list of meters that have been shut-off for non-payment and WaterScope will alert to cases where the homeowner has turned the water back on.

h. Describe if the system can configure high or low usage parameters and identify accounts in violations.
Metron Response:
The system can be configured to set high or low usage parameters and identify accounts in violation.

i. Explain how many users the system can support at one time.
Metron Response:
There are not currently any limitations on the number of users the system can support at one time.

j. Explain if the software enhancements, upgrades, updates, and patches are included in the pricing structure or if it will be an annual cost for these items.
Metron Response:
All software enhancements, upgrades, updates, and patches are included in the pricing structure and there will be no additional annual cost for these items.

C. ENDPOINT INFORMATION AND REQUIREMENTS.

a. Describe the endpoint collection process and if it collects at the top of the hour and synchronized with 15-minute reads from the water meter.

Metron Response:

The endpoint collection process involves storing water usage data in 1-minute intervals throughout the day while the communications module remains in sleep mode. Once per day, the endpoint wakes and transmits the accumulated, time-synchronized midnight-to-midnight consumption data over the cellular network. Meter readings from MIUs are time-synchronized, with each endpoint synchronized during daily communications using a hardware-based real-time clock, achieving time-stamp accuracy within 1 second. Consumption intervals are synchronized to the minute, not specifically to the top of the hour or to 15-minute intervals by default. The system's default is 1-minute interval data, and while endpoints can be configured to deliver hourly or 15-minute interval reads.

b. Describe if the endpoint had two-way communication.

Metron Response:

The endpoint supports two-way communication. This functionality is provided via the existing cellular network and enables remote configuration, firmware upgrades, meter re-programming, time synchronization, and over-the-air (OTA) updates.

c. Describe the temperatures the endpoint can withstand storage and operating.

Metron Response:

The VN endpoint is fully submersible (IP68) and operates between -4 to 140 degrees Fahrenheit. Storage temperature range is between -20 to 140 degrees Fahrenheit. The endpoint meets compliance for functioning accurately and without damage at operating temperatures up to 140 degrees Fahrenheit, and is able to operate over a range of at least -30°F to 140°F as required.

d. Describe if the endpoint can be installed via pit or remote.

Metron Response:

The endpoint can be installed in a pit, and there is also a remote option available.

e. Describe the network firmware updates.

Metron Response:

Network firmware updates can be performed both locally and remotely. Locally, updates are executed via infrared communication using the Metron tablet communicator software. Remotely, firmware upgrades are supported over-the-air (OTA) through secure two-way communication via the cellular network and the AMI communications network. Updates may be initiated for individual endpoints or in bulk, with commands sent from the head-end system. Metron coordinates and controls the entire firmware update process, including communicating the need for upgrades to the Town of Jerome, AZ, collaborating on rollout plans, scheduling, and providing detailed reports on successful and failed updates. Firmware updates are completed with zero interruption to utility operations, and all network communication equipment supports remote software and firmware upgrades, including batch upgrades.

Rigorous QA processes, structured testing, and release management ensure all updates are validated, secure, and minimally disruptive.

i. Are they able to be done remotely, with infrared or local updates.
Metron Response:
Firmware updates can be performed both remotely via two-way communication over the cellular network and locally using infrared (IR) communication. This dual approach allows for flexible update options, enabling updates to be sent and received over-the-air as well as installed directly on the device using IR.

f. Explain the environments that the endpoints can withstand, including flooding or submerged pit application.
Metron Response:
The endpoint is IP-68 rated and can withstand flooding or submerged pit applications.

g. Describe the warranty for the endpoints and if it is included.
Metron Response:
The endpoints are covered by a 20-year warranty, which consists of a full replacement for the first 10 years and a prorated warranty for the following 10 years. The warranty is included in the original cost and begins at the time of shipment. See our Warranties in the Appendices.

D. CUSTOMER PORTAL INFORMATION AND REQUIREMENT

a. Explain if the customer portal is owned and developed by the AMI manufacturer.
Metron Response:
The customer portal is owned and developed by the AMI manufacturer, Metron.

b. Explain if the web portal will be accessible through a standard internet browser.
Metron Response:
The web portal is fully accessible through a standard internet browser with a valid username and password. It supports Chrome, Edge, Safari, Firefox, and other available browsers.

c. Explain if the customer portal will allow the customer to set up a leak notification through the portal and let the customer be notified via email.
Metron Response:
The customer portal allows customers to set up leak notifications through the portal or smartphone application. Customers may choose to be notified via email, text, or phone notifications.

d. Explain if the utility customer service representative will be able to see the same view as the customer or if the web portal will be different for the customer and the utility staff.

Metron Response:
Utility customer service representatives will be able to see the same view as the customer in the web portal. The web version provides identical visibility for both consumer and customer service staff, ensuring that all analytical customer screens are the same for CSRs and customers. While the utility portal offers extended access for system-wide consumption data and the ability to modify customer-facing screens, the customer-facing view remains consistent and identical for support purposes. This design allows utility staff to effectively assist customers by viewing exactly what the customer sees.

e. Explain if the customer will be able to export consumption data in Comma Separated Value (CSV) format.

Metron Response:
The customer will be able to export consumption data in Comma Separated Value (CSV) format and/or Excel.

E. TRAINING INFORMATION AND REQUIREMENT

a. Describe who will be providing the training. Example, Manufacturer Certified Trainers

Metron Response:
Metron will do all the training directly. The trainer may vary depending on the training (billing vs customer service vs field staff), but the trainer will be a Metron employee.

b. Describe if there will be web-based training for future head end system updates and upgrades and if there will be any cost that may be associated with the training.

Metron Response:
Unlimited training and support are included in the upfront cost. Training on future head end system updates and upgrades will be provided through web-based training at no additional cost.

c. Describe if training materials for end users will be available online or in electronic form.

Metron Response:
Training materials are incorporated into the online platform, allowing end users to access them electronically.

F. OTHER

a. Describe if you can replace a current meter in need of replacement with a non-AMI meter for an opt-out member and invoice separately from the project.

Metron Response:
Yes, we are able to replace a current meter in need of replacement with a non-AMI meter for an opt-out member.

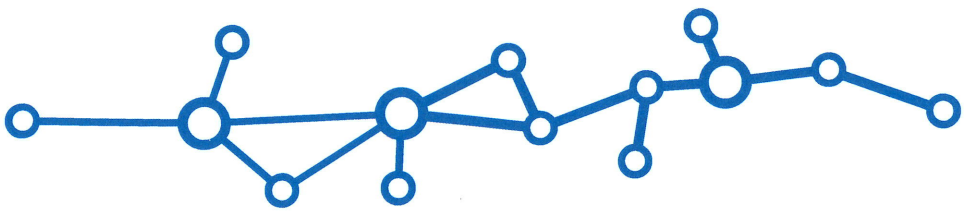
The Business of Water.
Simplified.

THE TOWN OF JEROME, ARIZONA ADVANCED METERING INFRASTRUCTURE (AMI) PROJECT

Metron-Farnier, LLC
5665 Airport Blvd,
Boulder, CO 80301

Alex Schechter
720-618.3435
alex.schechter@metron-us.com

11/5/2025







The Town of Jerome

Proposal for AMI Water Metering System

Submitted By:
Metron Farnier, LLC
Bidding for Advanced Metering Infrastructure (AMI) Project

Project Scope:
Replacement of existing water meters with AMI meters in the Town of Jerome's distribution system.

Prepared For:
The Town of Jerome

Sales Contact:
Alex Schechter
Metron-Farnier, LLC
Email: Alex.Schechter@metron-us.com
Phone: 720-618.3435

METRON

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LETTER OF INTENT

To: Honorable Mayor & Council
The Town of Jerome Water Resources Department
600 Clark St.
Jerome, AZ 86331

Subject: Statement of Qualifications – AMI Full-Service Implementation and Maintenance Program

Dear Selection Advisory Committee,

Metron Farnier, LLC. (Metron) is pleased to submit this Request of Proposal (RFP) in response to the Town of Jerome's request for a turnkey Advanced Metering Infrastructure (AMI) Full-Service Implementation and Maintenance Program. With over three decades of innovation and leadership in water intelligence and metering technologies, Metron is uniquely positioned to deliver a comprehensive solution that will modernize the Town of Jerome's water metering operations, enhance data visibility, and ensure long-term service reliability for decades to come.

We understand the Town's vision: to implement a system-wide AMI network that improves billing accuracy, elevates customer engagement, and enables proactive water management through data-driven insights. Metron's solution is designed to do just that — combining proven, field-tested hardware with a powerful software platform and a dedicated long-term asset management program.

Our proposal outlines a true turnkey approach. Metron will serve as the single point of responsibility for system design, meters, communications endpoints, software, data hosting, with full-service training, maintenance and support. To ensure seamless field execution, we will deploy full meter replacements for the Town. Together, our team will deliver a fully functional, standards-compliant AMI solution tailored to the Town's current and future needs.

Metron's WaterScope® platform will serve as the heart of the solution — providing secure, web-based access to high-resolution consumption data, integration with the Town's Caselle's current billing system, and customer-facing tools to improve transparency and engagement. Our solutions have consistently delivered read rates exceeding 99%, advanced analytics, and operational reliability for utilities large and small.

We appreciate the opportunity to present this bid proposal and look forward to partnering with the Town of Jerome to deliver a transformative AMI program that meets today's needs and tomorrow's challenges. Should you have any questions or require additional information, we would welcome the opportunity to discuss our proposal in greater detail.

Authorized Representatives
The following individuals are authorized to make representations on behalf of Metron for this project:

- **Alex Schechter, Metron Sales Account Manager**
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- **Matt Kosorok, Metron VP of Enterprise Solutions**
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This proposal has been signed by the undersigned, a corporate officer with the authority to bind Metron Farnier, LLC.

Sincerely,



Matt Kosorok
VP, Enterprise Solutions
Metron Farnier, LLC

1. COMPANY OVERVIEW & QUALIFICATIONS

ABOUT METRON FARNIER, INC.

Metron Farnier, Inc. (Metron) is a leading provider of advanced water metering and water intelligence solutions, with more than 30 years of experience supporting municipal and commercial utilities across the United States. Headquartered in Louisville, Colorado, Metron has been at the forefront of metering innovation — designing and manufacturing state-of-the-art water meters, communication endpoints, and data management platforms that empower utilities to manage water resources more effectively and sustainably.

Since our founding in 1991, Metron has remained focused on a single mission: **to deliver actionable water intelligence that transforms how communities monitor, manage, and conserve water.** Our technologies are deployed in more than 8,000 networks and over 500,000 metering points nationwide, providing utilities and their customers with high-resolution data that improves billing accuracy, reduces water loss, and enhances operational efficiency. To date, Metron solutions have helped clients save over **1.3 billion gallons of water** — a testament to our commitment to conservation and performance.

PROVEN EXPERIENCE IN THE MUNICIPAL WATER SECTOR

Metron's solutions are designed specifically for municipal water systems, and we bring deep experience working with water municipalities of all sizes. Our projects range from small utility deployments to large-scale citywide AMI rollouts involving hundreds of thousands of meters. We have implemented solutions in varied geographic and environmental conditions, from densely populated urban centers to challenging rural terrains, ensuring reliability and scalability in any setting.

Our approach is rooted in partnership. We work closely with utility stakeholders, engineering firms, and technology partners from planning through deployment and long-term operation. This collaborative model ensures each project meets technical specifications, regulatory requirements, and performance expectations while staying on schedule and within budget.

LICENSING, CERTIFICATION, AND TECHNICAL EXPERTISE

Metron maintains all required business licenses and complies with all relevant industry standards. Our meters meet or exceed **AWWA Standard C715-18, C700, and C712 (Single-Jet)** and are **NSF/ANSI 61 and 372** certified for drinking water applications. We leverage and build to **ISO 9001 standards** with a goal of obtaining certification in June 2026. We also utilized ISO certified suppliers for key components and asset management, ensuring that our products and services adhere to the highest standards of reliability and safety.

Our engineering teams provide full system design and support for metering equipment and our AMI data management platform, WaterScope®. This engineering depth allows Metron to take full ownership of system deployment and ensures seamless integration with the Town's water metering infrastructure.

PROXIMITY AND SUPPORT RESOURCES

Metron maintains a service and support center hub, located in Louisville, Colorado which includes field resources to support deployment and ongoing maintenance for the Town of Jerome. Our network of trained technicians, project managers, and engineers ensures rapid response times and support. As part of our commitment to long-term service excellence, we will also provide a dedicated project manager and field support team for the duration of the project.

PROVEN TRACK RECORD

Metron has an extensive history of delivering successful AMI deployments for public utilities. Our work consistently meets or exceeds performance targets, including read rates above 99%, seamless integration with existing billing systems, and measurable operational savings. We bring this same dedication and proven track record to the Town of Jerome, ensuring that your investment in AMI technology delivers maximum long-term value.

METRON'S UEI

SAM.gov Unique Entity ID number (UEI) as required by grant funding is DBJVLTWLZQV1.

2. PROJECT UNDERSTANDING & TURNKEY APPROACH

UNDERSTANDING THE TOWN OF JEROME'S VISION AND OBJECTIVES

The Town of Jerome is embarking on a transformative effort to modernize its water metering and data management capabilities through a full-service Advanced Metering Infrastructure (AMI) program. The vision is clear: replace or retrofit existing meters with state-of-the-art, cellular based AMI technology; ensure accurate, reliable data collection for billing and operations; and deliver long-term service improvements that enhance customer engagement and resource management.

Metron understands that this initiative is not just about upgrading infrastructure - it's about enabling **data-driven water management**. With over three decades of experience supporting utilities nationwide, we recognize that a successful AMI program must do more than transmit meter reads. It must:

- Deliver consistently high read rates and reliable data for billing accuracy.
- Provide actionable insights into consumption patterns, leaks, and anomalies.
- Integrate seamlessly with existing utility systems and workflows.
- Support proactive customer communication and engagement.
- Scale and evolve with future needs and technologies.

Our solution and approach are designed to achieve these outcomes — providing the Town of Jerome with a future-ready AMI system that enhances operational efficiency, reduces non-revenue water, and strengthens their customer trust.

FULL-SERVICE PROGRAM DELIVERY

Metron's proposed solution is a **true turnkey offering**, where we serve as the single point of responsibility for the design, deployment, integration, and long-term operation of the AMI system. This comprehensive approach minimizes complexity for the Town and ensures seamless accountability from start to finish. Our scope of services will include:

- **Project Planning & Management:** Comprehensive planning, coordination, and oversight from kickoff through final system commissioning.
- **Meter Replacement and New Installations:** Removal and replacement of existing meters and installation of new meters where required, ensuring full system coverage.
- **AMI Endpoint Deployment:** Installation of cellular LTE-M endpoints
- **Software Implementation:** Configuration and deployment of Metron's WaterScope® platform for data management, analytics, and integration with the Town of Jerome's Caselle billing system.
- **Training:** Comprehensive training for staff and ongoing support throughout the lifetime of the meters and software.
- **Long-Term Asset Management:** Daily system monitoring, proactive maintenance, and guaranteed system performance with 99%+ read rates.

To execute the physical deployment of meters and endpoints, Metron will engage if needed with a **certified installation partner** This partner will work under Metron's direction, adhering to all town, state, and federal requirements, including OSHA standards and safety protocols.

Key features of our AMI system include:

- **WaterScope® Platform**: A cloud-based platform that offers utilities comprehensive usage analytics and conservation tools. The platform is accessible to both utility managers and consumers, without incurring additional fees, empowering end users to track and manage water consumption efficiently.
- **1-Minute Data Analytics**: Metron's endpoints capture consumption data in 1-minute intervals, giving utilities unprecedented visibility into consumption patterns, enabling early leak detection, peak flow management, and more granular resource control.
- **Retrofitting Flexibility**: Our VN system endpoints (the Prism) retrofit onto existing mechanical meter bodies, ensuring compatibility with current infrastructure and reducing overall deployment costs.

SEAMLESS INTEGRATION WITH EXISTING SYSTEMS

We recognize the importance of a solution that not only collects accurate data but also integrates cleanly into existing operational workflows. Metron's WaterScope® platform is designed with open architecture and robust API capabilities, allowing for straightforward integration with the Town of Jerome's Caselle billing software and other utility systems. The platform supports standard, non-proprietary data formats and interfaces, ensuring that data flows reliably from field devices to billing and customer information systems.

Through this integration, the town will gain real-time access to metering data, daily system performance dashboards, and consumption analytics, empowering staff to respond quickly to anomalies, optimize system performance, and improve customer service.

ACCELERATED IMPLEMENTATION WITH MINIMAL DISRUPTION

Our deployment approach prioritizes speed, accuracy, and minimal disruption to customers. Metron will coordinate closely with the town to develop a phased installation schedule that ensures timely project completion while maintaining ongoing utility operations. Customer engagement is a key part of our plan. We will provide clear communication, flexible scheduling, and support throughout the deployment process.

Metron has refined a deployment methodology that emphasizes meticulous planning, field validation, and quality control. Our process ensures that each installation is performed correctly the first time, reducing rework and maximizing long-term system reliability.

COMMITMENT TO LONG-TERM PARTNERSHIP

Metron views this project as the beginning of a long-term partnership with the Town of Jerome. Our responsibility extends far beyond installation. We will proactively address issues and continuously improve the solution to meet evolving needs. Our dedicated support team will remain engaged throughout the life of the program, providing training, software updates, and responsive technical assistance, as needed.

3. FULL-SERVICE PROGRAM CAPABILITIES

Our program is built around four core pillars: **metering hardware, cellular communications, data management software, and long-term support**. Each component is designed to deliver exceptional performance on its own, and together they form a cohesive ecosystem that enables reliable data collection, actionable insights, and operational efficiency.

FIELD DEPLOYMENT & INSTALLATION

Metron will oversee all field activities associated with meter and endpoint installation. Together with the Town, the team will:

- Perform site surveys and gather detailed data for all meter locations.
- Replace existing meters and install new cellular smart meters.
- If retrofit meters are required, we will install our cellular LTE-M Prism™ register endpoints with two-way licensed communication.
- Mount remote antenna systems as needed to optimize network performance.
- Provide customer scheduling, notification, and installation times.

Safety is a top priority with Metron to maintain robust safety training and compliance programs.

ADVANCED METERING TECHNOLOGY

At the core of our solution are Metron's **Spectrum™ Single Jet series water meters** — high-accuracy metering ranging from 5/8" to 8" and prides itself on the low-flow capability of our meter line. With its simplistic design coupled with minimal accuracy degradation, revenue stays steady throughout the life of the meter and eliminates the testing and maintenance normally required for commercial meters that offer this type of performance. Set it and forget.

The **Spectrum™ Wave™ ultrasonic meter** is based on a "See Through" ultrasonic technology. With this concept, the two sensors, used alternatively for the transmission and the reception of the ultrasonic signal into the water pipe, are installed on each end of a straight section of the water pipe. With such a mechanical configuration, the water flow remains free of any mechanical structure that would increase the drop of pressure inside the meter. The meter provides a very wide range with low flow accuracy to 0.05 gpm, which will capture the highest levels of revenue.

Designed for long-term performance and reliability, these meters feature:

- **No moving parts** – reducing wear and extending service life.
- **IP68-rated construction** – ensuring reliable operation even in submerged conditions.
- **High accuracy across a wide flow range** – improving billing precision and revenue capture.
- **Integrated communication ports** – enabling seamless connection to AMI LTE endpoints.

Our meter portfolio includes models suitable for all meter sizes and service types, ranging from 5/8" residential meters to 8" commercial meters.

LTE-M CELLULAR NETWORK & COMMUNICATION ENDPOINTS

Metron's AMI communication endpoints are designed to meet and exceed the Town's requirements for performance, reliability, and flexibility. Key features include:

- **Multi-carrier LTE-M connectivity:** Each endpoint supports two national carriers, Verizon and AT&T, automatically connecting to the strongest available signal and switching networks if needed for redundancy without reprogramming or field visits.
- **Two-way licensed communication:** Operating in the 700 MHz band, endpoints enable scheduled and on-demand reads, over-the-air firmware updates, and remote shutoff valve operation.
- **No repeaters required:** Direct-to-cloud communication eliminates the need for repeaters and networks, reducing infrastructure and improving reliability.
- **20-year battery life:** Endpoints are powered to ensure consistent performance for two decades.

- **Rich data storage:** The default storage configuration retains 45 days of 1-minute interval data in the communication device. If required, the device can be configured to store 5-minute intervals, extending storage capacity to 225 days. This exceeds the requirement for retaining 120 days of hourly reading intervals in the event of backhaul loss or unavailability.
- **Tamper detection and diagnostics:** Endpoints continuously monitor connection integrity and report tamper alerts, battery voltage, and other diagnostic data.

WATERSCOPE® – DATA MANAGEMENT AND ANALYTICS PLATFORM

Metron's **WaterScope®** platform serves as the backbone of the AMI solution, providing utilities with secure, web-based access to consumption data, analytics, and system performance information. WaterScope® integrates directly with the Town's Caselle billing software and other utility systems through open, standards-based interfaces.

Key platform capabilities include:

- **Real-time data access:** Consumption data is available as frequently as every hour, enabling timely decision-making and rapid identification of anomalies.
- **Advanced analytics:** Automated detection of leaks, backflow, no-flow events, and continuous flow conditions.
- **Custom alerts and notifications:** Daily email alerts for critical consumption events, tamper conditions, and read failures.
- **Customer engagement:** A built-in customer portal allows users to view daily, monthly, and annual consumption, set budgets, and receive alerts for unusual usage or leaks.
- **Scalability and flexibility:** The platform supports multiple meter types, manufacturers, and service types, ensuring compatibility with future technology and expansion needs.
- **Secure cloud hosting:** All data is hosted in secure, redundant cloud environments with continuous monitoring, disaster recovery, and routine backups.

The Metron system delivers top-tier meter read performance, consistently exceeding industry standards.

System Notifications:

As the endpoint transmissions are delivered in the middle of the night, the **1-minute analytics** are analyzed for several unique defined conditions. The conditions are configurable and have optional auto generated notifications. Those conditions are:

- **Leak** – A leak flag is triggered if there were 1440 1-minute intervals that had consumption above 0. Metron feels that if the meter can't register 0 gallons for at least 1-minute in a 24-hour period there is no question there is a leak.
- **Threshold Leak** – The Metron residential meter is accurate below 1/50th of a gallon per minute. Because of this, the program detects a lot of trickle leaks. To not overwhelm utility personnel with leak notifications, we've established this condition so the utility can filter notifications by a true GPM flow. For example, if 0.25 gpm is considered an 'actionable' leak rate from a utility perspective, WaterScope® will only notify utility personnel of leaks greater than 0.25 gpm. The threshold can then be lowered or raised as needed.
- **Intermittent Leak** – The intermittent leak is designed to identify leaking toilets, or any other fixture in a home that runs intermittently for extended periods of time. The utility can configure the trigger as to not have irrigation events and/or constant leaks trigger the flag.
- **High Usage** – The high usage flag is a configurable daily consumption value. If usage exceeds the daily value, an alert is generated.
- **Backflow** – The backflow alert will trigger if a configurable amount of water runs in reverse over a specified period of time. It is also a useful flag for meters that were mistakenly installed backwards.
- **Zero Use** – The zero-use condition will trigger if NO water is used over a configurable period. This flag is useful for rental/vacant properties at the homeowner level, but for the utility can be used as a revenue protection alarm for the larger size meters. 30 days seems like a long period of time, especially for larger meters. The user can configure this alarm by meter size.

- **High Meter Flow** – This alert will notify the utility if flow rates exceed the high-end capacity of the meter. Can be helpful for right sizing an application.
- **High/Low Temperature** – The Metron Prism measures the daily high and low ambient temperature. The sensor is built into the register, so the temperature reflects the meter level as opposed to the temperature at the pit lid level. The ultrasonic Spectrum Wave will detect water temperature and send an instant alert if temperature thresholds are hit.
- **Unauthorized Use** – The utility can upload a list of meters that have been shut-off for non-payment and WaterScope® will alert to cases where the homeowner has turned the water back on.
- **Unexpected Use** – This condition is designed for the homeowner so they may receive alerts if water is used unexpectedly. Use cases would be rental/vacant properties, snowbirds, and vacations.
- **Watering Event** – If the town intends to implement watering restrictions now or in the future the Watering Event condition can help monitor those restrictions. Restrictions can be mandatory/voluntary, based on time of day, and the days in a week. The Metron VN system is the only one that offer this as the Prism is the only device that can identify indoor vs outdoor use based on the flow rate.
- **Emergency Transmit** – The emergency transmit feature is meant to catch real time leaks. The condition is configurable by meter, and triggers if a configurable amount of flow occurs over a configurable amount of time. In that event the VN will wake up in real time and send an emergency text to the homeowner.

SEAMLESS INTEGRATION & OPEN ARCHITECTURE

Metron's system is designed with open architecture to ensure compatibility with existing and future systems. Data can be transferred to the existing billing and customer information systems in standard, non-proprietary formats, and the platform's API allows for easy integration with GIS, asset management, and reporting tools.

WaterScope® Utility extends the WaterScope platform with integrated work order and asset management capabilities, enabling maintenance teams to execute field tasks, update asset records, and sync detailed service data back to WaterScope — providing the core functionality of a WOMS.

LONG-TERM MAINTENANCE AND SUPPORT

Metron's commitment extends beyond deployment. Our maintenance support includes:

- **Issue resolution and escalation**
- **Comprehensive repair and replacement**
- **Ongoing software upgrades**
- **Unlimited support and training**

4. TECHNOLOGY SOLUTION OVERVIEW

A FUTURE-READY AMI SYSTEM FOR THE TOWN OF JEROME

Metron proposed solution is centered on a **Cellular Long-Term Evolution Machine Type Communication (LTE-M)** AMI system built for reliability, scalability, and future growth. It combines best-in-class metering hardware, multi-carrier cellular connectivity, secure cloud-based software, and advanced analytics, all integrated into a single platform.

This solution has been field-proven in deployments nationwide and is designed to deliver **98.5%+ read success**, continuous data visibility, and actionable insights that empower utilities to operate more efficiently, engage customers proactively, and manage water resources responsibly.

CELLULAR LTE-M NETWORK ARCHITECTURE

Our LTE-M network architecture is designed from the ground up to meet the requirements for two-way communication, reliability, and performance. It operates without the need for repeaters, collectors, or proprietary networks — simplifying deployment and reducing infrastructure and maintenance costs.
Key design features include:

- **Two-Way Licensed Communication**: Endpoints transmit and receive data on a licensed frequency, ensuring secure and interference-free communication.
- **Multi-Carrier Redundancy:** Each endpoint connects automatically to the strongest available carrier, switching seamlessly if signal quality changes.
- **Future-Proof Design:** Additional carriers can be added to the network without field reprogramming or hardware changes, ensuring the system remains adaptable over the next 15+ years.

By leveraging existing cellular infrastructure, the Town of Jerome avoids the capital and maintenance costs associated with proprietary networks while gaining coverage and reliability.

WATERSCOPE® DATA PLATFORM

Metron's WaterScope® platform is the central hub for data collection, processing, visualization, and integration. Delivered as a secure, cloud-hosted service, WaterScope® provides real-time visibility into metering data and system performance while seamlessly integrating with the Town's existing systems.
Core Platform Capabilities:

- **Real-Time Monitoring:** Access 1-minute consumption data, endpoint performance, and system diagnostics via a web-based dashboard.
- **Data Processing and Storage:** Store and manage up to a minimum of 60 months of historical data, easily retrievable for analysis, reporting, and compliance.
- **Advanced Analytics:** Automated detection and alerting for leaks, no-flow, backflow, and high-usage events.
- **Customer Engagement Portal:** A pre-integrated web portal gives customers access to their usage data, estimated billing costs, and leak notifications. Users can set consumption budgets and receive alerts as they approach usage thresholds.
- **Integration Ready:** WaterScope® interfaces with billing, GIS, and asset management systems through open standards, ensuring data flow and compatibility with future applications.

SECURITY AND DATA INTEGRITY

Metron understands that data security is mission critical. Our information security program is built around industry best practices and aligned with **ISO** and **NIST** frameworks.
Security Features Include:

- **Secure Hosting:** All data is hosted in redundant, geographically dispersed data centers with enterprise-grade security controls.
- **Encryption:** All data is encrypted in transit and at rest using advanced protocols.
- **Access Controls:** Role-based access, multi-factor authentication, and detailed audit logging protect against unauthorized access.

- **Disaster Recovery and Backups:** Continuous backups and disaster recovery systems ensure data availability and integrity even in the event of system disruptions.

The Town of Jerome will retain full ownership of all data collected through the AMI system. Metron's role is to securely host, manage, and deliver this data back to the town in the format and frequency required.

SYSTEM DIAGNOSTICS AND MONITORING

The system continuously monitors its own performance at every level — from endpoint battery voltage to network connectivity and provides detailed diagnostic reports through the WaterScope® platform. This monitoring enables the Town and Metron support teams to quickly identify and resolve issues before they affect performance.

- **Read Verification:** The system verifies receipt of data from every meter daily.
- **Automated Alerts:** Any meter failing to report for five consecutive days automatically triggers a work order.
- **Network Health:** Cellular signal strength, endpoint connectivity, and backhaul performance are continuously monitored.
- **System-Wide Performance:** Daily read rate tracking ensures the system meets or exceeds the 98.5% threshold.

WORK ORDER AND ASSET MANAGEMENT

Metron's WaterScope® Utility app extends the functionality of WaterScope into the field, giving maintenance teams a powerful mobile tool to manage assets, execute work orders, and capture field data. Crews can view meters needing attention (leaks, high use, missed reads), navigate to locations, capture serial numbers and photos, update GPS data, and sync records automatically to WaterScope — even when offline. Maintenance managers can generate tasks directly within WaterScope, dispatching prioritized routes and work orders to field staff, who complete inspections, repairs, or replacements with full visibility into asset history. This seamless integration creates a secure, centralized record of field actions and provides the Town of Jerome with the core capabilities of a work order and asset management system without requiring a separate platform.

WATER METER PERFORMANCE AND CAPABILITIES

Metron's water meters are designed for accuracy, reliability, and longevity. Built from NSF/ANSI 61 certified materials and tested to AWWA C715-18, AWWA C712, and AWWA C710 standards, they deliver precise measurements across a wide range of flows and environmental conditions.

Meter Performance Features:

- **High-Resolution Measurement:** Our Spectrum™ Single Jet and Wave ultrasonic meters detect low-flow leaks and accurately measure over a wide dynamic range.
- **Durable Construction:** Our meters are constructed with either reinforced composite (polyamide 12) and/or ASTM C875 bronze. The Prism register is full encapsulated and contains a lithium D-cell battery, all to ensure strength and a long life.
- **Guaranteed Accuracy:** All meters are factory-tested and guaranteed for high accuracy.
- **Environmental Protection:** IP68-rated designs for meters and registers withstand submersion and environmental exposure.

Together with our LTE-M integrated endpoints and WaterScope® platform, Metron's meters form the foundation of a water intelligence network that will serve reliably for decades.

5. PROJECT TEAM QUALIFICATIONS

A TEAM BUILT FOR TURNKEY SUCCESS

Metron has assembled a highly qualified project team with the experience, technical expertise, and proven track record necessary to deliver a successful AMI implementation and long-term asset management program for the Town of Jerome. Our team brings together seasoned professionals in engineering, software development, field services, and customer support — all dedicated to delivering on the Town's objectives from planning through full-scale operation.

Our approach ensures that all project elements — from design and deployment to training and maintenance — are aligned, integrated, and executed seamlessly.

PROJECT LEADERSHIP AND MANAGEMENT

Metron will assign a dedicated **Project Manager** to oversee all aspects of the town's project. This individual will serve as the Town's primary point of contact and will be responsible for scope, schedule, quality, and communication.

Key responsibilities include:

- Developing and maintaining the overall project schedule and work plan.
- Coordinating all project activities across Metron teams, Town stakeholders, and subcontractors.
- Overseeing field deployment and ensuring adherence to safety and regulatory standards.
- Managing risk, change orders, and issue resolution proactively.

Metron's project managers are certified professionals with extensive experience leading complex AMI projects. They are supported by a team of specialists in metering technology, software integration, data security, and utility operations.

ENGINEERING AND TECHNICAL SUPPORT

Metron's engineering team will be responsible for system design, configuration, and integration. With decades of combined experience in water metering, communication systems, and software development, our engineers will ensure the solution is optimized for the Town's specific needs and infrastructure.

Engineering support will include:

- Network propagation studies.
- System design, including endpoint placement and communication planning.
- Configuration and integration of WaterScope® with the Town's Caselle billing system.
- Design of remote antenna and above-grade endpoint installations, if needed.
- Ongoing technical support for software, data analytics, and integration.

FIELD SERVICES AND INSTALLATION TEAM

Metron will manage and oversee all field deployment activities through a certified installation partner. This team will be responsible for meter replacement, endpoint installation, remote antenna deployment, and customer coordination.

All field technicians will receive project-specific training and will work under Metron's direct supervision.

SUPPORT, TRAINING, AND CUSTOMER ENGAGEMENT

Metron's customer support and training teams will ensure Town staff and end users are fully equipped to operate the new AMI system. We provide comprehensive training at project launch and refresher sessions as needed.

Training and support services include:

- **Utility staff training:** Hands-on instruction on WaterScope® functionality, system monitoring, and data analysis.
- **Field team training:** Proper installation procedures and system testing requirements.

Our dedicated support team remains available for ongoing assistance via phone, email, and remote sessions — ensuring Town staff have the help they need when they need it.

6. TRAINING, SUPPORT & CUSTOMER ENGAGEMENT

COMMITMENT TO LONG-TERM SUCCESS THROUGH EDUCATION AND SUPPORT

Metron believes that the success of any AMI program extends beyond the technology itself — it depends on the knowledge and readiness of the people who use and manage the system every day. Comprehensive training and ongoing support are integral components of our AMI solution for the Town of Jerome.

Our training programs are structured to empower staff, field personnel, and customers with the skills and information they need to fully leverage the capabilities of the AMI system.

UTILITY STAFF TRAINING

Metron provides comprehensive training for utility staff responsible for operating and managing the AMI system. These sessions are designed to ensure staff are fully proficient in system use, data interpretation, and troubleshooting.

Training includes:

- **WaterScope® Platform Training:** Detailed instruction on navigating the platform, accessing consumption data, creating alerts, generating reports, and integrating with other utility systems.
- **System Monitoring and Diagnostics:** Training on interpreting endpoint diagnostics, monitoring network health, and responding to alerts.
- **Data Analytics and Insights:** How to leverage WaterScope® analytics for leak detection, anomaly identification, and demand forecasting.
- **Reporting and Compliance:** Guidance on generating reports for internal use, regulatory compliance, and customer communication.

Training is delivered through a combination of on-site workshops, virtual sessions, and comprehensive user manuals.

FIELD TECHNICIAN TRAINING

Metron ensures that all field personnel — including those from our installation partner — receive thorough training on equipment installation, and endpoint configuration. This ensures every field activity is performed to the highest standards of quality, safety, and compliance.

Field training includes:

- **Installation Procedures:** Proper handling, installation, and commissioning of meters and endpoints.
- **Quality Assurance:** Verification steps to ensure all devices are installed correctly and reporting successfully before leaving the site.

ONGOING TECHNICAL SUPPORT

Metron's commitment to the Town of Jerome continues well beyond the initial deployment. Our dedicated support team is available to provide timely, expert assistance for any questions or issues that arise.

Our support services include:

- **Remote Support:** Assistance via phone, email, or web conferencing for troubleshooting, configuration, or data inquiries.
- **Software Updates and Training:** Training sessions aligned with major WaterScope® updates to ensure staff remain current on new features and capabilities.

CUSTOMER ENGAGEMENT AND EDUCATION

Customer engagement is a vital part of any AMI deployment, and Metron provides the tools and resources to help the Town of Jerome communicate effectively with water customers throughout the transition and beyond.

Our WaterScope® customer portal is a web-based platform that empowers customers to understand and manage their water usage. Features include:

- **Real-Time Consumption Data:** Customers can view hourly, daily, and monthly water use.
- **Budget and Usage Alerts:** Customers can set consumption budgets and receive notifications when usage approaches or exceeds targets.
- **Leak Detection Alerts:** Automatic alerts notify customers of potential leaks, helping them address issues early and reduce water loss.
- **Billing Transparency:** Customers gain insight into how usage affects billing, improving trust and satisfaction.

Metron also supports Town-led outreach campaigns, providing communication templates, educational materials, and customer FAQ documents to help explain the benefits of AMI technology and encourage portal adoption.

CONTINUOUS IMPROVEMENT AND KNOWLEDGE TRANSFER

Our partnership approach ensures that Town staff are always equipped with the latest tools and information. Through continuous education and support, Metron ensures the Town of Jerome's team is capable and prepared to maximize the value of its AMI investment, both on day one and throughout the life of the program.

7. COMPLIANCE, SAFETY, & RISK MANAGEMENT

COMMITMENT TO SAFETY AND REGULATORY COMPLIANCE

Metron is committed to the highest standards of safety, quality, and regulatory compliance in every aspect of project delivery. Metron ensures that the Town's AMI program is implemented safely, efficiently, and in full accordance with all applicable regulations.

All field activities performed by Metron and our installation partner will comply with **Occupational Safety and Health Administration (OSHA)** standards, **Davis-Bacon Act** wage requirements, and all state and municipal regulations governing water utility infrastructure projects. Safety is integrated into every stage of our work from planning and design through deployment, commissioning, and maintenance.

HEALTH AND SAFETY INSTALLATION PROGRAM

Metron maintains a comprehensive safety and health program that governs all field operations. This program includes:

- **Job Hazard Analysis:** Conducted prior to the start of each task to identify potential hazards and define mitigation measures.
- **Safety Meetings:** Daily safety briefings conducted before work begins on site.
- **Training and Certification:** All field personnel receive OSHA training and are certified in confined space entry, trench safety, and other required competencies.
- **Personal Protective Equipment (PPE):** Strict PPE policies ensure field teams are properly equipped for all tasks.
- **Incident Reporting and Investigation:** All incidents and near-misses are documented and reviewed to prevent recurrence.

Our installation partner will be required to adhere to the same safety policies and procedures and will receive project-specific safety orientation and training before beginning work in the field.

REGULATORY AND CONTRACTUAL COMPLIANCE

Metron ensures full compliance with all contractual and regulatory obligations associated with the AMI program. Our processes include regular compliance checks and documentation reviews to confirm adherence to applicable standards and reporting requirements.

We also coordinate closely with Town staff and regulatory agencies to ensure all required permits, inspections, and approvals are secured in a timely manner. All equipment supplied as part of the project will meet or exceed applicable AWWA, NSF/ANSI, and FCC standards.

SUPPLY CHAIN RISK MITIGATION AND DELIVERY ASSURANCE

Metron understands that reliable delivery of equipment and materials is critical to the success of any AMI deployment. In an era of global supply chain disruptions, we have implemented proactive strategies to mitigate risks and ensure timely delivery of all project components.

Our approach includes:

- **Strategic Inventory Planning:** Core components — including meters, endpoints, and installation kits — are incorporated into standard inventory cycles, allowing Metron to maintain buffer stock for immediate deployment.
- **Multiple Sourcing Options:** Key materials are sourced from multiple suppliers to minimize dependency on any single source, if needed.
- **Close Supplier Partnerships:** Metron maintains strong relationships with logistics partners to secure priority production and shipping schedules.
- **Advanced Forecasting:** We use demand forecasting tools and historical data to anticipate material needs and plan procurement schedules well in advance.

While unforeseen disruptions can impact lead times, these measures significantly reduce risk and allow Metron to remain agile and responsive to changing conditions. Our proven supply chain resilience ensures that the Town's project will remain on schedule from procurement through final commissioning.

INSURANCE AND LIABILITY COVERAGE

Metron carries comprehensive insurance coverage that meets or exceeds all requirements for municipal infrastructure projects. Certificates of insurance are provided to the Town prior to the start of work, demonstrating compliance with all contractual and regulatory requirements. Our installation partner will also be required to provide proof of insurance and maintain coverage throughout the project duration.

RISK MANAGEMENT AND QUALITY ASSURANCE

Metron employs a structured risk management framework throughout the project lifecycle. Risks are identified, assessed, and mitigated through proactive planning, ongoing monitoring, and responsive corrective actions. This approach minimizes the likelihood of schedule delays, cost overruns, and performance issues. Quality assurance is built into every stage of the project. Our processes ensure that materials, workmanship, and system performance meet stringent quality standards. Each meter, endpoint, and software component undergoes rigorous testing and validation before deployment, and system performance is verified through acceptance testing before final handoff.

8. REFERENCES & PAST PERFORMANCES

PROVEN SUCCESS ACROSS MUNICIPAL AMI PROJECTS

Metron has successfully delivered advanced water metering and AMI solutions to municipal utilities across the United States. Our decades of experience and deep understanding of water utility operations allow us to design, deploy, and maintain solutions that consistently meet or exceed performance expectations.
Our deployments range from small pilot programs to full-scale system-wide implementations serving thousands of endpoints. In each case, we focus on accuracy, reliability, integration, and long-term partnership — the same priorities we bring the Town of Jerome's AMI project.

PAST PROJECTS & REFERENCES

Reference 1: (Municipal Utility) Town of Camp Verde, AZ
Client Name: Town of Camp Verde
Client Project Name: Meter Changeout Project
Client Reference Name & Title: Jeff Low – Utilities Director
Client Phone Number: 928-469-9063
Client Email: jeff.low@campverde.az.gov
Location of Work: Camp Verde, Arizona
Total Endpoints: 2,200
Initial Timeframe for Duration and Completion of Work: 1 year to complete all work including installation and billing
Scope of Work / Description of Work Performed (including systems integrated): Metron supplied cellular AMI water meters for the district's service area. The Town of Camp Verde handled all self-installation, supported by Metron's technical team for configuration and ongoing system support.
Comments: The Town of Camp Verde has had a successful time with the Metron product with a strong read rate and capturing thousands of dollars of unrecognized revenue.

Reference 2: (Municipal Utility) Avra Water Company
Client Name: Avra Water Company
Client Project Name: Water Infrastructure Finance Authority Meter Replacement Project
Client Reference Name & Title: Cathy Kuefler – Administrative Manager
Client Phone Number: 520-780-8689
Client Email: cath@avrawater.com
Location of Work: Tucson, Arizona
Total Endpoints: 2,600
Initial Timeframe for Duration and Completion of Work: 1 year
Scope of Work / Description of Work Performed (including systems integrated): Metron supplied 1,400 Cellular enabled registers and meters to Avra Water co-op. Avra has been conducting their own installation of the product to combat a failing Sensus drive by system.
Comments: Avra has had a successful Time with the Metron product with a strong read rate and capturing Thousands of dollars of unrecognizes revenue.

Reference 3: (Rural Utility) BDM Rural Water, SD
Client Name: BDM Rural Water
Client Project Name: AMI Deployment
Client Reference Name & Title: Rodney Kappes – General Manager
Client Phone Number: 605-448-5417
Client Email: rodneyk@bdmruralwater.com
Location of Work: Day County, South Dakota
Total Endpoints: 2,300+
Initial Timeframe for Duration and Completion of Work: Completed
Scope of Work / Description of Work Performed (including systems integrated):
Metron supplied cellular AMI water meters for the district's service area. BDM handled all self-installation, supported by Metron's technical team for configuration and ongoing system support.
Comments: Successful deployment enabled reliable meter reads across a rural service territory with minimal field maintenance.

Reference 4: (Municipal Utility) Evergreen Metro District, CO
Client Name: Evergreen Metro District
Client Project Name: AMI Upgrade
Client Reference Name & Title: Kevin Rosemeyer – Water Director
Client Phone Number: 303-301-5500
Client Email: krosemeyer@evergreenmetro.org
Location of Work: Evergreen, Colorado
Total Endpoints: 4,500
Initial Timeframe for Duration and Completion of Work: One-year upgrade process
Scope of Work / Description of Work Performed (including systems integrated):
Metron performed a full upgrade from a previous drive-by AMR system to a cellular AMI network to improve meter reading efficiency and data visibility. Meters were supplied and installed by Metron, including those in indoor applications across hilly terrain.
Comments: The deployment improved operational efficiency and real-time data access, resulting in high customer satisfaction.

Reference 5: (Municipal Utility) Town of Erie, CO
Client Name: Town of Erie, Colorado
Client Project Name: AMI Upgrade
Client Reference Name & Title: Chris Biggs – Meter Supervisor
Client Phone Number: 303-243-2520
Client Email: cbiggs@erieco.gov
Location of Work: Erie, Colorado
Total Endpoints: 3,900+ and ongoing
Initial Timeframe for Duration and Completion of Work: 2023 to Present
Scope of Work / Description of Work Performed (including systems integrated):
The Town transitioned from a mix of non-Metron AMI and older meter types to a standardized deployment using Metron cellular AMI meters and endpoints across all meter sizes. Metron supplied the meters and supported installation efforts.
Comments: Ongoing project aimed at improving system visibility, data access, and customer engagement.

CONSISTENT RESULTS AND LASTING PARTNERSHIPS

Metron's AMI solutions consistently deliver measurable benefits for our clients, including:

- **High Read Success:** Sustained read rates above 98.5%, even in challenging environments.
- **Improved Revenue Recovery:** Enhanced meter accuracy and real-time leak detection reduce non-revenue water.
- **Operational Efficiency:** Direct-to-cloud connectivity and automated analytics reduce manual labor and streamline operations.
- **Customer Engagement:** Customer-facing tools improve transparency, satisfaction, and trust.
- **Long-Term Reliability:** Systems are designed for 20+ years of service life with minimal field maintenance.

Our approach is focused on partnership. We collaborate closely with clients before, during, and after deployment to ensure their unique needs are met and we remain engaged long after installation to ensure continued system performance and customer satisfaction.

9. APPENDICES & SUPPORTING DOCUMENTATION

9.1. METRON ADVANCED METERING INFRASTRUCTURE (AMI) OVERVIEW

Metron's Advanced Metering Infrastructure (AMI) solution leverages existing cellular networks (Verizon/AT&T) to provide 1-minute, time-synchronized consumption data—without the need for additional infrastructure costs. This cellular-based architecture ensures ease of deployment and scalability across both rural and urban environments. Whether serving 200 endpoints or 100,000+, the outcome is consistent: immediate AMI capability with no additional infrastructure required.

Municipalities benefit by avoiding propagation studies, property lease negotiations, or the maintenance burdens of fixed-network equipment. There is no need to install or maintain costly reading infrastructure. Simply install a Prism® register or meter today and begin accessing real-time consumption data through our WaterScope® portal tomorrow.

CLOUD STORAGE & SYSTEM EFFICIENCY

All consumption data is securely stored within Microsoft Azure, removing the need for on-site servers while offering virtually unlimited scalability. Endpoint transmissions are randomized throughout the day to avoid network congestion, ensuring reliable data delivery.

WATERSCOPE® WEB PORTAL

Our high-resolution data is accessed through Metron's WaterScope platform—nominated as a finalist for the 2022 IoT "Best Utility and Energy Solution" worldwide. WaterScope provides utilities, business owners, and homeowners with web-based and mobile access to consumption data at no added cost. We also provide mobile applications for both utility and consumer use, ensuring full transparency and accessibility.
Metron offers an all-in pricing model—unlimited software access, cellular coverage, and support are bundled into the cost of the meter. This approach eliminates recurring fees and simplifies budgeting. Every component of the AMI ecosystem, from endpoint to portal, is developed and supported in-house. Customers have one point of contact for service and support, eliminating third-party complexity.

METRON'S AMI TECHNOLOGY AND SUPPORT FRAMEWORK

- **WaterScope® Platform**: Real-time analytics and alerting for leak detection, high usage, and more. Hosted on Microsoft Azure for high availability, security, and scalability.
- **Universal Endpoints**: Prism™ and Prism R registers retrofit to most existing meters and offer over 20 years of battery life. Endpoints transmit during off-peak hours to optimize network use.
- **Consumer and Utility Portals**: Robust tools for understanding usage trends, budgeting water consumption, and detecting leaks. Both portals are accessible via web and mobile applications.
- **Integration Capabilities**: Supports flat file transfers, API, FTP, and VPN—ensuring easy alignment with existing billing or customer systems.
- **Project Management**: A structured methodology with dedicated teams, comprehensive training, and proactive support throughout the life of the deployment.
- **Innovative Features**: Metron was first to market with cellular AMI and delivers 1-minute interval data, enabling granular analytics such as fixture-level consumption and peak flow reporting.

METRON SYSTEM ARCHITECTURE AND AMI HARDWARE OVERVIEW

Metron's AMI architecture uses a radically different design philosophy. The Prism® register contains its own integrated cellular communication module, eliminating the need for a separate endpoint device. This configuration drastically reduces battery usage by removing frequent wake-ups for internal polling.
The result: unmatched data resolution and battery longevity.

- **Ultrasonic Meters**: Highly accurate, with no moving parts—ideal for long-term, maintenance-free service.
- **Single-Jet Meters**: Cost-effective and reliable for residential and light commercial use.
- **Hybrid Meters**: Combine mechanical and ultrasonic technology for specific or challenging applications.

The Prism™ register can be retrofitted to most existing mechanical meters, providing full AMI capability without meter replacement. The register stores 1-minute intervals over a rolling 45-day period (227 days for 5-minute commercial applications). If a daily transmission fails, the data is backfilled upon reconnection or can be retrieved locally via IrDA.

Prism™ Register Functionality and Design

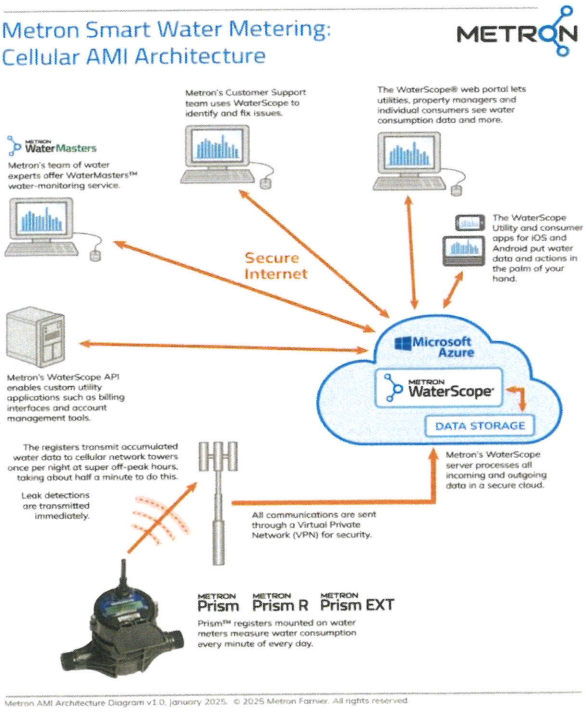
- **Data Transmission**: Each register sends a single, daily, time-synchronized transmission containing all usage data for the previous 24 hours. This allows utilities to perform system-wide analytics such as peak demand or non-revenue water loss with consistent, aligned data.
- **Two-Way Communication**: Supports remote firmware updates and programming.
- **Installation Flexibility**: Available antenna types include pit mount and paddle, with 5', 12', or 20' cable options. Our two-part design allows damaged cables to be repaired independently, saving cost.
- **Durability**: Fully submersible (IP68) and functional in temperatures from -0°F to 140°F. The standard warranty includes 10 years full, and 10 years prorated coverage.

Future-Readiness: Our solution is designed with scalability in mind, accommodating the utility's growth and future technological advancements. This future-readiness ensures a long-term, sustainable investment. Metron is continually enhancing the functionality and efficiency of our platform and welcomes the opportunity to collaborate on future features and custom integrations. We are happy to discuss these opportunities further once a mutual NDA is in place.

Over the next three years, Metron will continue to:

- Expand **WaterScope** analytics and reporting tools, including our latest addition of **WaterMasters™** a subscription-based monitoring service that provides continuous oversight of your water system.
- Integrate **AI-driven leak prediction and water usage forecasting**
- Enhance **mobile application** features for utilities and consumers

METRON SYSTEM ARCHITECTURE DIAGRAM



9.2. PROPAGATION STUDY

DUAL TELECOM PROVIDER STRATEGY:

Metron maintains active partnerships with both **Verizon** and **AT&T**, ensuring broad and resilient network coverage across all deployment environments. Our metering devices operate on the **LTE-M (Long-Term Evolution for Machines)** cellular band—**a low-power, wide-area network specifically designed for IoT devices**, including smart meters. LTE-M runs in parallel to the 5G network but remains independent of it, ensuring reliable performance today while staying future-ready.

As cellular providers expand their capabilities to **5G, 6G, and beyond**, Metron's solution will continue to operate seamlessly on the LTE-M network. We are committed to evolving alongside our technology partners, ensuring the long-term viability of every device we install. This guarantees that meters deployed today will remain compatible and functional for **20+ years** into the future, protecting utility investments over time. We leverage a **multi-carrier setup** to enhance network reliability. **Verizon** serves as our primary provider, offering robust nationwide coverage. **AT&T** provides automatic failover support, stepping in to maintain uninterrupted service in the rare event of a Verizon disruption. This dual-carrier approach ensures **constant connectivity and operational continuity**, regardless of local conditions or carrier-specific issues.

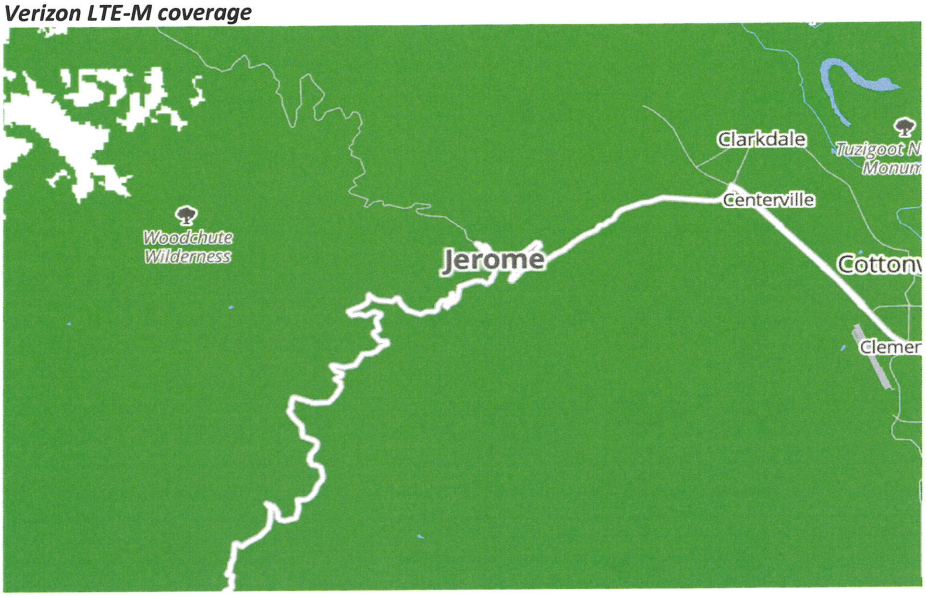
One of the key advantages of Metron's **cellular-based AMI solution** is its **elimination of costly and complex infrastructure**. Our system requires **no repeaters, no towers, and no proprietary mesh networks**—dramatically reducing deployment time, maintenance costs, and operational overhead. This not only simplifies installation but also removes long-term risks associated with managing and maintaining dedicated communications hardware.

The result is a highly **scalable, low-maintenance, and future-proof AMI network** that delivers reliable performance in both urban and rural settings, including hard-to-reach areas with challenging terrain. Cellular metering allows utilities to **focus on data-driven decision-making** rather than infrastructure management, accelerating the path to smarter water systems and improved customer engagement.

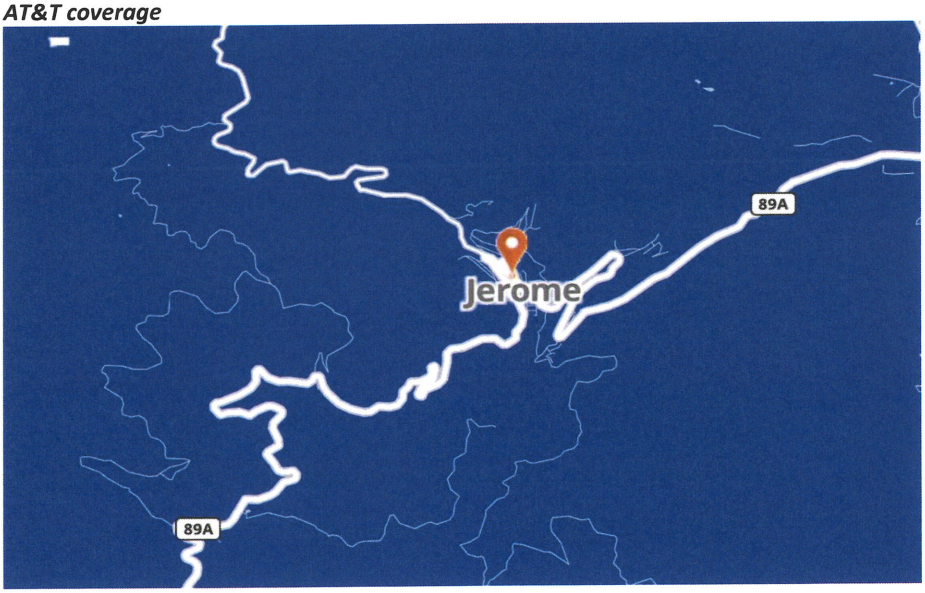
System testing is a continuous process that takes place from the start of the project until final completion to ensure read reliability as well as customer satisfaction. While Verizon has provided a propagation study ensuring 100% coverage of the Town's cellular network and communication to proposed endpoints, Metron also recommends, if needed, the use of interchangeable antennas to optimize signal. Should the need arise at the time of installation when the field installer is verifying the Received Signal Strength Indicator (RSSI), installers will be equipped with antennas to ensure a continuous reliable cellular connection.

In addition to paddle antennas and RSSI being checked at the time of installation, Metron is continuously monitoring system health reports to identify any anomalies or missed readings immediately after the time of installation. This ensures that each account is positioned to perform from project inception through the life of the system.

Verizon LTE-M coverage



AT&T coverage



9.3. METRON ENDPOINTS – THE PRISM REGISTER

The Metron system is constructed in a very different way than other AMI systems. The Metron Prism register endpoint has the communications built into the register. There are several advantages to this design, with battery life (20+ years) and data resolution being the most significant. Typical AMI systems have an endpoint that wakes up every hour, or sometimes 15-minutes, to communicate with the meter to obtain updated usage information. That is a very battery intensive operation and is the limiting factor in data resolution. Because the Metron Prism register has eliminated that constant communication (i.e. battery drain), we can capture and store the usage intervals down to a single minute. This gives the utility true GPM calculation and unrivaled water usage analytics never before available. The most unique design feature of the Prism cellular register is its universal compatibility. The Prism register can be retrofitted to the utility's existing mechanical meters. No need to replace your meter to gain access to what the Prism cellular register offers.

PRISM REGISTER OPERATION

The register stores the 1-minute intervals throughout the course of the day while the communications aspect is essentially in sleep mode. Then, one time per day, the register will wake up and send the equivalent of a text message over the existing cellular network with time-synchronized midnight-to-midnight consumption data. The data is time-synced so the utility can do macro level analytics such as water loss, time of use, peak flow, etc. on a system wide basis. No more apples to oranges comparison.

The Prism register stores up to 45 days of 1-minute interval data for residential applications and 227 days of 5-minute interval for commercial applications. Should a daily transmission fail, the actual missing data will be backfilled upon the next successful connection. This data may also be retrieved locally via an IrDA communication. The Prism offers full two-way functionality, which allows for over-the-air programming and over-the-air firmware updates. (IrDA as well)

The Prism can be installed in pits or indoors and there are multiple antenna options to ensure connectivity. The pit mount antenna secures through a pre-drilled 2 ¼" hole for deeper meter sets. The paddle antenna (recommended) can be mounted to the underside of the lid. Each option comes in 5', 12', or 20' cable lengths. Our 2-part design allows for cut cables to be remedied without having to replace the entire register, saving the utility in cost/repair.

The Prism is fully submersible (IP68) and operates between -0 to 140 degrees Fahrenheit. Storage is between -20 to 140 degrees. The industry standard warranty is for 20yrs; a full 10-year, as well as an additional 10 years prorated.



WaterScope Dashboard 1-minute

9.4. METRON'S HEADEND SYSTEM – WATERSCOPE®

The Metron head end system, WaterScope, is a web-based platform that is accessed via an internet connection, username, and password. WaterScope is maintained by a group of internal software engineers which means there are no third-party licensing requirements. Metron gladly takes customer feedback and suggestions to continue to make WaterScope as useful to a water utility as possible. The platform is constantly improving but the improvements occur without any interruption of day-to-day operations and at no cost to the utility. There are also no recurring charges for the first ten years incurred by the utility for access and no limitations to the number of users. Anybody and everybody within the City can have login access and all users can be logged in simultaneously.

CONDITIONS - NOTIFICATIONS

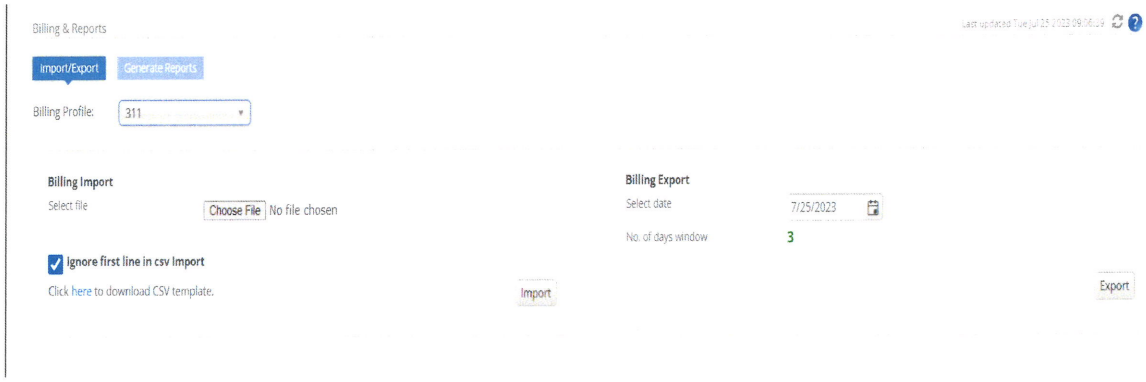
As the endpoint transmissions are delivered in the middle of the night the 1-minute analytics are analyzed for several different utility defined conditions. The conditions are configurable, and the utility has the option to opt in for auto generated notifications. Those conditions are:

- **Leak** – A leak flag is triggered if there were 1440 1-minute intervals that had consumption above 0. Metron feels that if the meter can't register 0 gallons for at least 1-minute in a 24-hour period there is no question there is a leak.
- **Threshold Leak** – The Metron residential meter is accurate below 1/50th of a gallon per minute. Due to this, the program detects a lot of trickle leaks. In an effort to not overwhelm utility personnel with leak notifications, we've established this condition so the utility can filter notifications by a true GPM flow. For example, if 0.25 gpm is considered an 'actionable' leak rate from a utility perspective, WaterScope will only notify utility personnel of leaks greater than 0.25 gpm. The threshold can then be lowered or raised as needed.
- **Intermittent Leak** – The intermittent leak is designed to identify leaking toilets, or any other fixture in a home that runs intermittently for extended periods of time. The utility can configure the trigger as to not have irrigation events and/or constant leaks trigger the flag.
- **High Usage** – The high usage flag is a configurable daily consumption value. If usage exceeds the daily value, an alert is generated.
- **Backflow** – The backflow alert will trigger if a configurable amount of water runs in reverse over a specified period of time. It is also a useful flag for meters that were mistakenly installed backwards.
- **Zero Use** – The zero-use condition will trigger if NO water is used over a configurable period of time. This flag is useful for rental/vacant properties at the homeowner level, but for the utility can be used as a revenue protection alarm for the larger size meters. 30 days seems like a long period of time, especially for larger meters. The user can configure this alarm by meter size.
- **High Meter Flow** – This alert will notify the utility if flow rates exceed the high-end capacity of the meter. Can be helpful for right sizing an application.
- **High/Low Temperature** – The Spectrum Wave will detect water temperature and send an instant alert if temperature thresholds are hit. The Metron Prism measures the daily high and low ambient temperature. The sensor is built into the register, so the temperature reflects the meter level as opposed to the temperature at the pit lid level.
- **Unauthorized Use** – The utility can upload a list of meters that have been shut-off for non-payment and WaterScope will alert to cases where the homeowner has turned the water back on.
- **Unexpected Use** – This condition is designed for the homeowner so they may receive alerts if water is used unexpectedly. Use cases would be rental/vacant properties, snowbirds, and vacations.
- **Watering Event** – If the City intends to implement watering restrictions now or in the future the Watering Event condition can help monitor those restrictions. Restrictions can be mandatory/voluntary, based on time of day, and the days in a week. The Metron VN system is the only one that offer this as the Prism is the only device that can identify indoor vs outdoor use based on the flow rate.
- **Emergency Transmit** – The emergency transmit feature is meant to catch real time leaks. The condition is configurable by meter, and triggers if a configurable amount of flow occurs over a configurable amount of time. In that event the Prism will wake up off schedule and send an emergency text to the homeowner.

NOTE – Some insurance companies are willing to provide a rebate to the homeowner if they opt in for the emergency leak option. This only occurs because of the 1-minute data intervals Metron provides and the real time call in.

BILLING INTEGRATION & REPORTS

The WaterScope program is very flexible with regard to integrating with utility billing vendors. Typically, the integration occurs without the utility having to make any changes. There are also no resolution or multiplier requirements that need to be sent to the WaterScope program.
The most common integration method is a file transfer (text or csv). This file is used to populate the WaterScope site with pertinent information such as the Account Number, Customer Name, and Customer Address. Below is a screenshot of the file transfer screen within WaterScope.



WaterScope supports API integrations as well as FTP and VPN file transfers. For more see *webapi.waterscope.us/HelP*

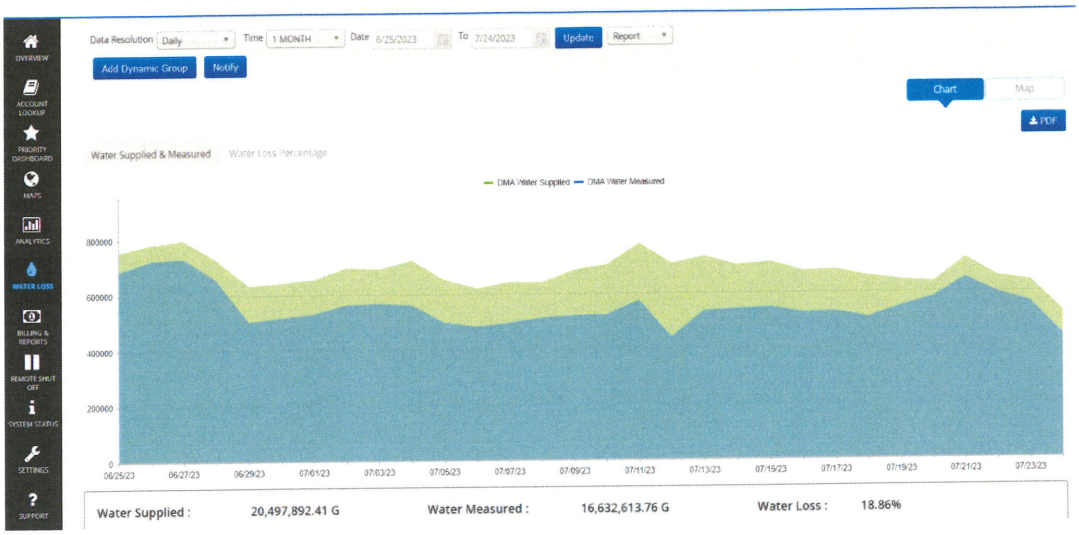
WaterScope offers several integrated reports. There are no third-party requirements to generate the reports, and the user may export unlimited numbers of them. The following outlines currently available reports:

- **Billing Usage** – This report returns a consumption value between a configurable date range.
- **Read Report** – Provides the current read on selected meters. The user has the option to view the full LCD read, or the scaled billing read.
- **Consumption by Meter Size** – Returns a report for aggregated consumption by meter size for the selected range of meters.
- **Comparative Report** – Returns comparative usage for a single meter, group of meters, or all meters for a configurable number of years.
- **Single Meter Consumption** – Returns interval data for a single meter over a configurable date range. The intervals can also be configured by the minute, hourly, daily, or monthly. This same report can be generated by the homeowner per consumer user access.
- **Historic Read Report** – Allows the user to view either the full LCD read or scaled billing read for a configurable date range. The report can be generated by a single meter, group of meters, or all meters.
- **Endpoint Configuration Report** – Displays current programming values of the Prism for a single meter, group of meters, or all meters.
- **Account Daily Consumption** – Returns daily consumption values for a single meter, group of meters, or all meters over a configurable date range.
- **Consumption Report** – Similar to the account daily report, but this one lets the user view consumption in interval data. Intervals can view hourly, daily, or monthly for a single meter, group of meters, or all meters for a specified date range.

MACRO LEVEL ANALYTICS

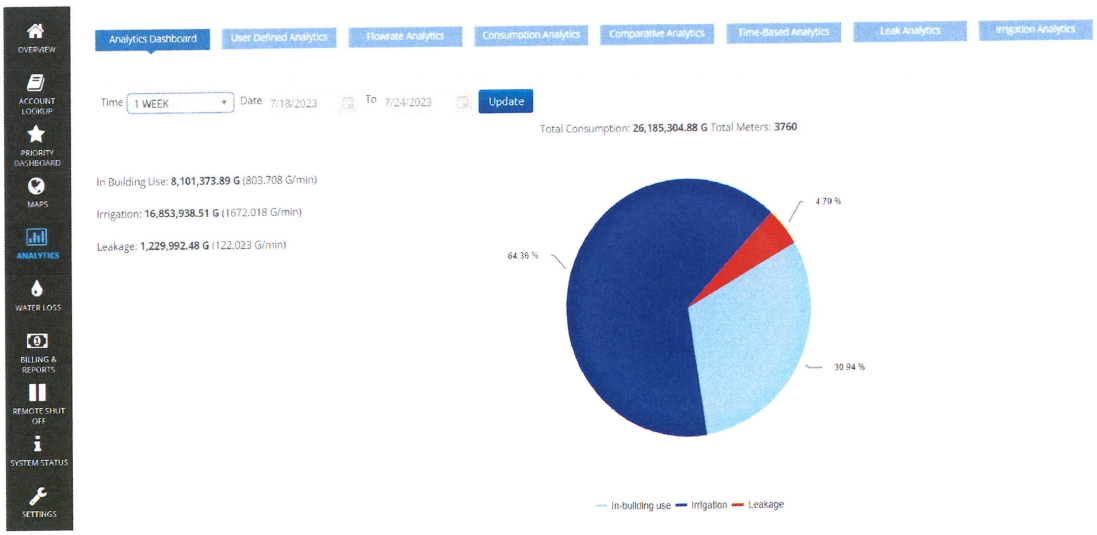
WaterScope offers a number of different macro level analytics. The more prominent ones being District Metering, time of use, flow rate analytics, and comparative analytics.

District Metering – The district metering groups can be configured regionally as well as system wide. The utility can easily identify the supply meter(s) and then subsequently assign the demand meters downstream. Adding/removing meters from a DMA group is also very user friendly. Below is a screenshot of the analytic



NOTE: *WaterScope also has the ability to monitor cooling towers. Should the City have any downstream cooling towers the building maintenance group could have the ability to monitor for cycles of concentration, faulty valves, etc.*

Analytics Dashboard – The analytics dashboard gives the utility a customized view of how the water is being consumed within the utility. The breakdown is indoor vs outdoor vs leak. This is a system wide total. The timeframe can easily be edited to reflect a month or a past week's usage:



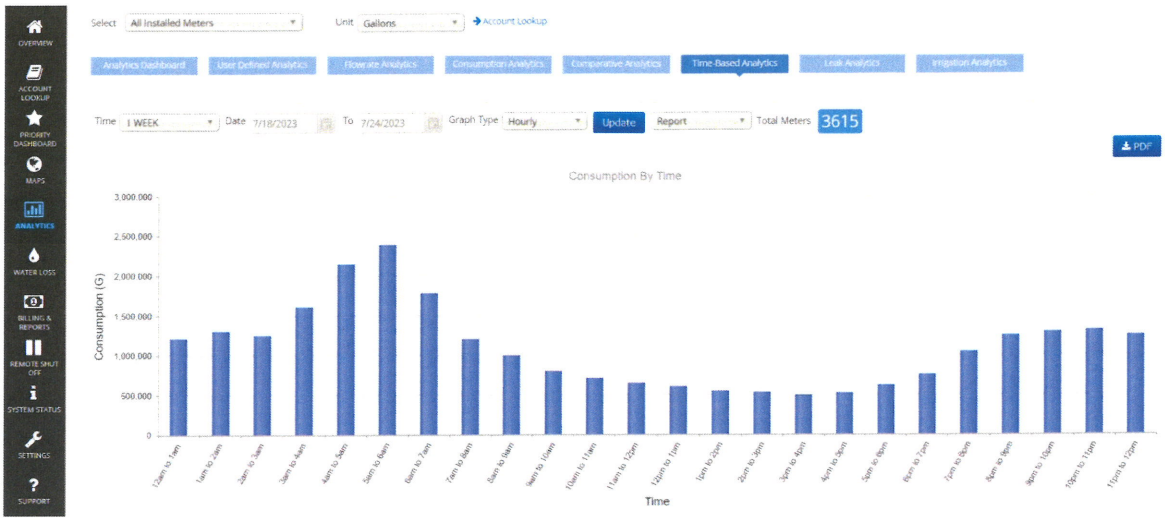
Flowrate Analytics – The flowrate analytics page allows the utility to view total consumption by flow rate, either system wide, by a group of meters (i.e., irrigation meters), by meter size, meter type, etc.



Comparative Analytics – View consumption differences from week to week, month to month, or by a custom date range for system wide consumption or by a utility defined group.



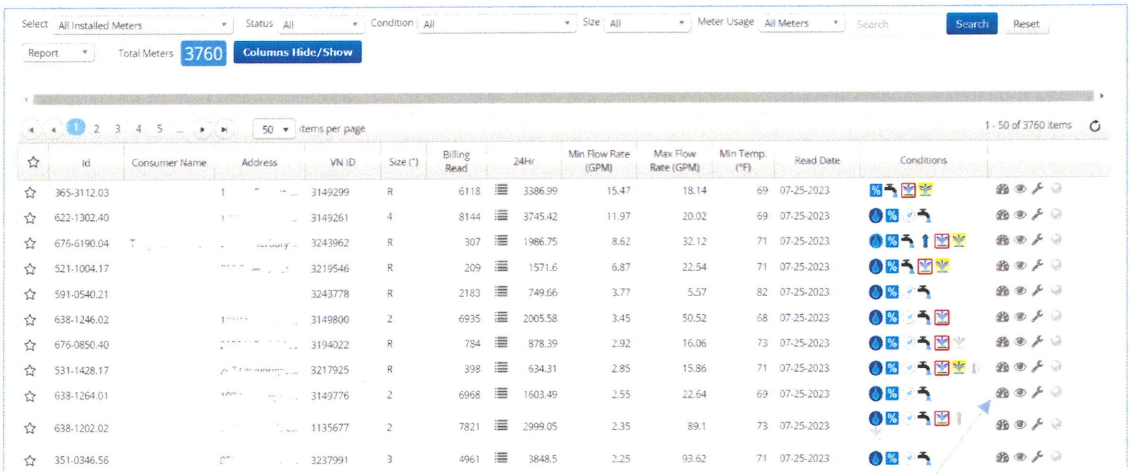
Time Based Analytics – The utility can utilize time-based analytics to see at what times per day the majority of water is being used. This could be especially useful during summer months to ensure that water supplied is keeping up with demand during irrigation.



MICRO LEVEL ANALYTICS

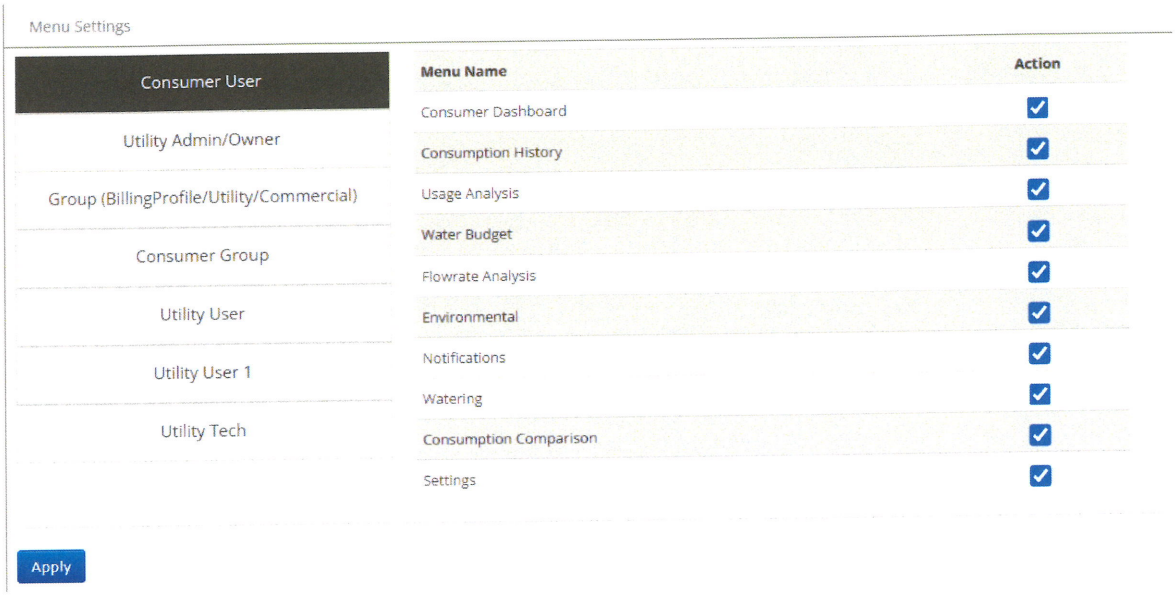
Aside from the different flag conditions mentioned prior, there are a number of consumption-based analytical options for the single meter. The Account Lookup screen is the utility bridge to each individual meter. On the account lookup screen, the utility can view the Account Number, Name, Address, Size, 24-Hour consumption, minimum leak rate, maximum leak rate, and low temperature. The user has the option to configure this screen to only display columns of importance to that user.

Users can easily filter by condition, size, type, group, etc. It is also very easy to lookup a particular meter via the Search option. Users can also view single meter configuration, signal strength values, current read, as well as enter notes for specific accounts. Notes are accessible to all users within the utility.



To access the consumption details for an individual meter, click the dashboard icon.

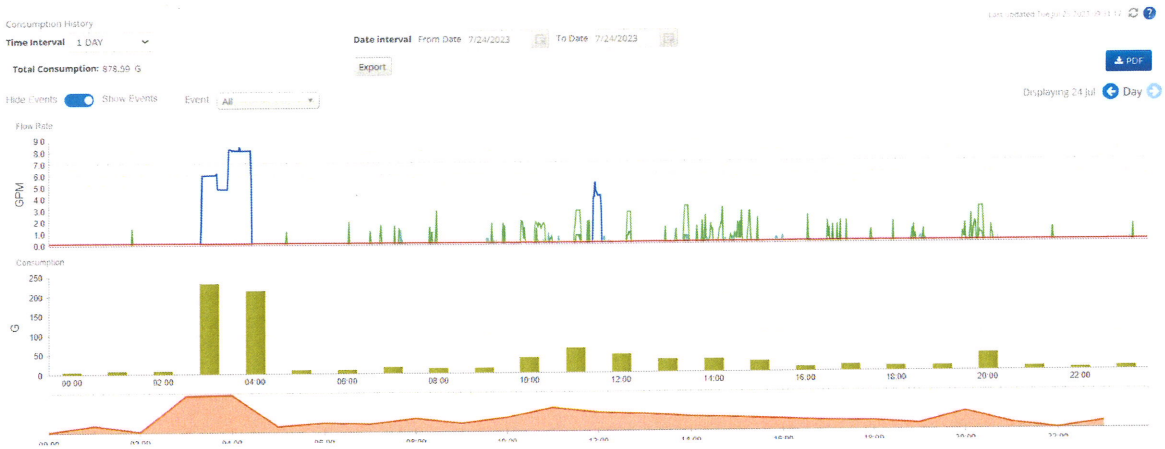
There are a number of different single meter analytics pages available to both the utility and the end user. The utility can ultimately determine what access and what analytical screens are made available to the end users by a simple configuration:



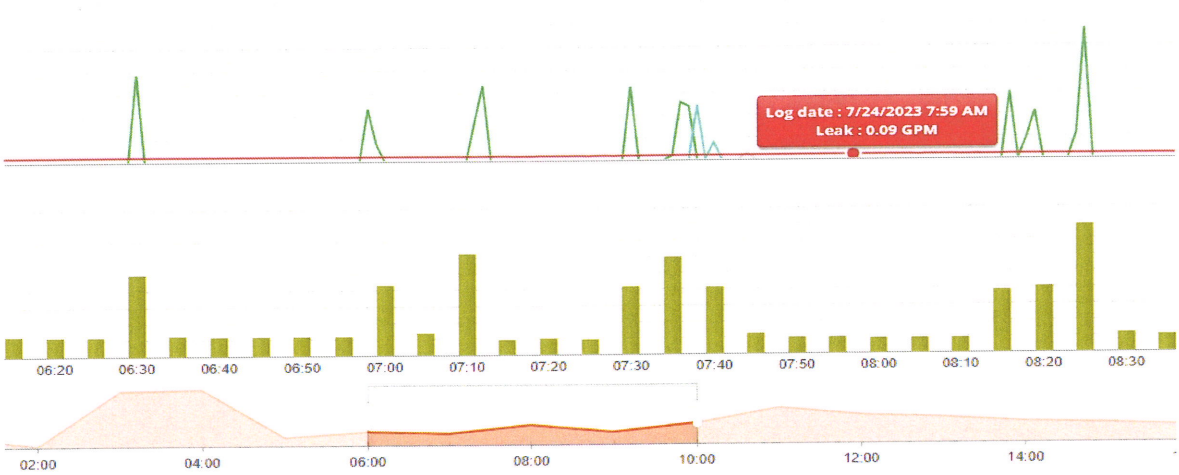
Consumer Dashboard – The consumer dashboard gives a quick summary of things like the current billing read, the past 24 hours consumption, month to date consumption, daily average, as well as a graphical representation of the past 24 hours consumption.



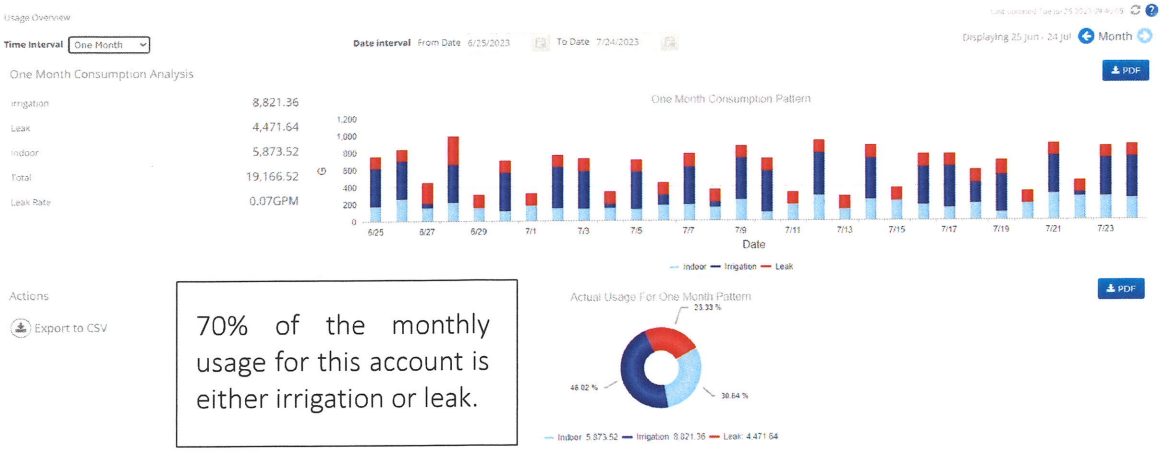
Consumption History – The consumption history allows the user to view the past day, week, month, year, or a custom time period (i.e., start-stop actual billing dates). The WaterScope program analyzes the data in 1-minute intervals and based on the flow rate and duration of time, designates the usage for things such as irrigation, toilet flushes, sink use, etc.



This page is very useful to the utility and end user to view leaks. In the example below the red line outlines a leak running at 0.09 gpm.



Usage Overview – The usage overview page presents the different types of consumption (indoor, outdoor, leak) so both the utility and end user can see how much water is being used in the different categories. When an end user can quantify how much water is potentially being wasted on a leak, or potential over-irrigating, it helps them understand the bill and adjust as necessary.



Water Budget – The water budget feature allows the end user to track monthly usage compared to a goal they have set themselves, or that has been set by the utility. That
monthly usage goal can reflect billing tiers, average use within the utility, or seasonal expectations. The tiers within the budget are ultimately controlled by the utility. The screen displays total use per day, indoor vs outdoor, as well as a trend graph for month to date. The data is displayed statistically and graphically.

Statistically:

Daily Budget	225.81 G
Cycle Daily Average	351.77 G
Last 24 Hr	375.14 G
Cycle Budget	7000 G

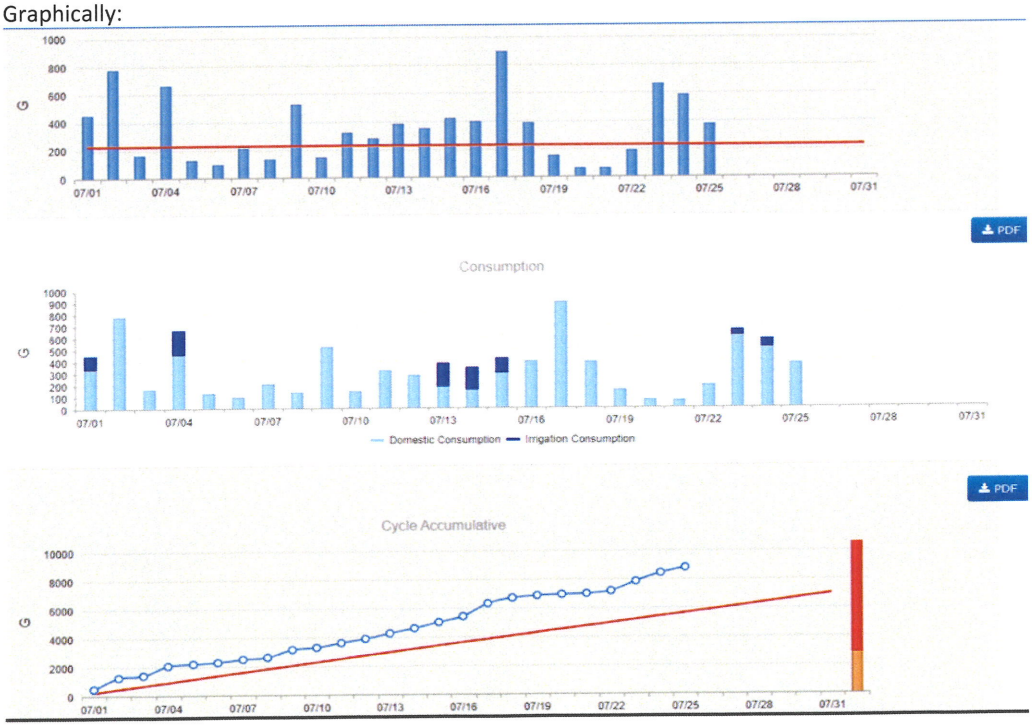
You are 25 days into this cycle
which is 80.65% into the month

You have used 909.56 G for Irrigation

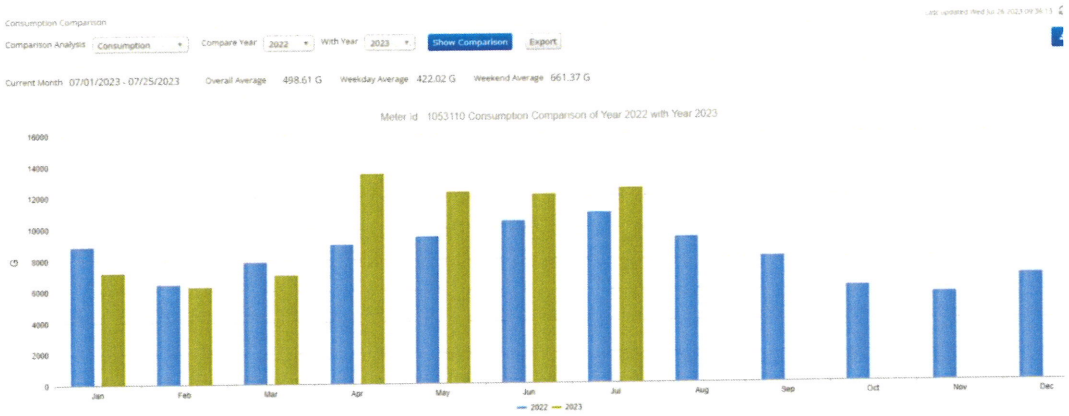
You have used 8794.21 G so far this cycle
which is 125.63% of your water budget

Your Water Budget is
Wasteful

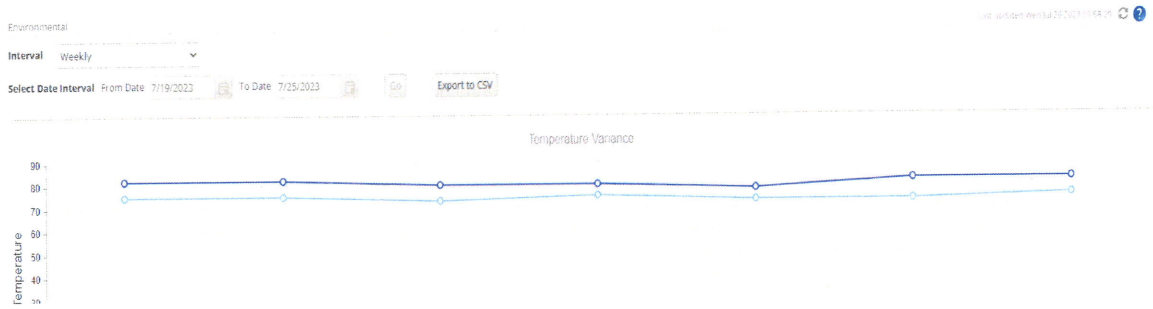
Graphically:



Consumption Comparison – The user may view comparative consumptions year over year either by a total monthly volume, or average usage per day over a given month for a single meter.



Environmental – The user can view daily maximum ambient temperature, as well as daily minimum ambient temperature. Alerts may be setup for both. Monitoring this is particularly beneficial in the winter months.



Watering – Should the City decide to implement Watering Restrictions, the Watering calendar lets the homeowner know what days are available for them to irrigate.

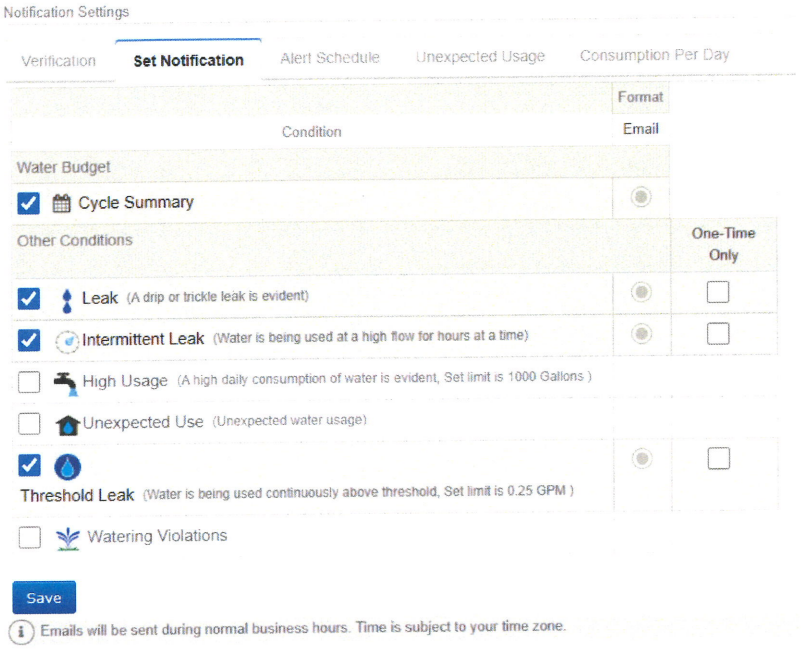


CONSUMER CONFIGURATION

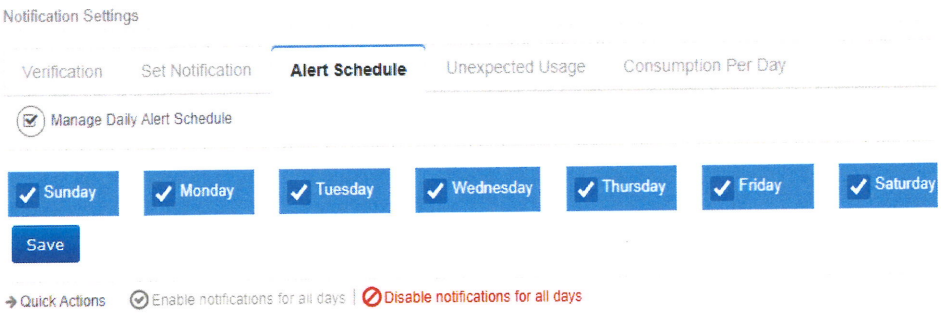
Verification – The consumer can opt in for email, text, or both to receive alerts. They may also add additional emails and phone numbers to the account.



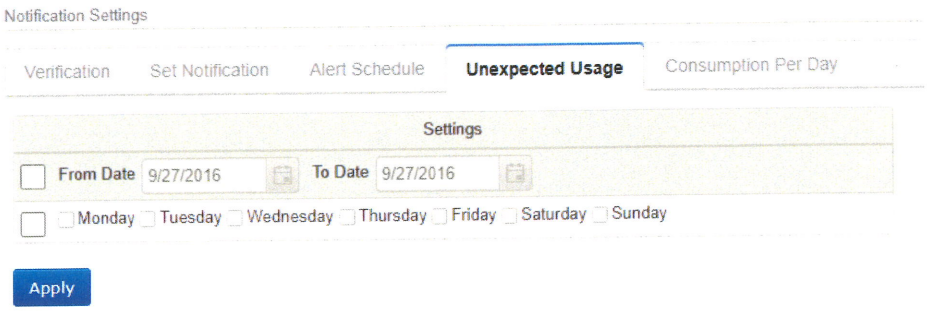
Set Notifications – Allows the homeowner to choose which flag conditions to receive notifications for. There is a brief explanation to the homeowner on what will trigger each condition.



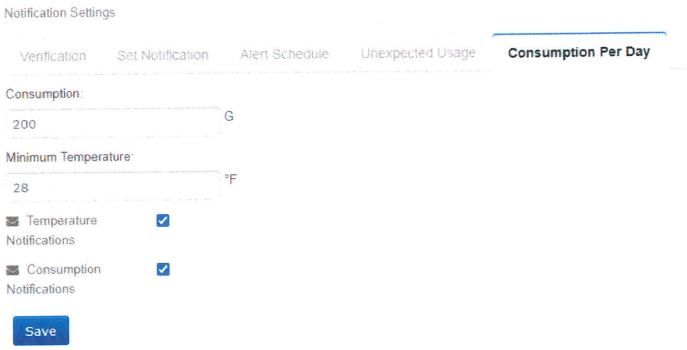
Alert Schedule – The consumer can define what days alerts will come in. 7 days a week is the default.



Unexpected Usage – The consumer can set an unexpected usage date range, or per the days of the week. This is designed to detect unexpected usage for things like rental properties, snowbirds, or when a consumer goes on vacation. It is also beneficial for businesses that may be closed certain days of the week.



Consumption Per Day – The consumer can set daily consumption alerts, as well as low temperature alerts. The notification is only sent if daily usage exceeds the consumer defined threshold, or the temperature falls below the consumer defined value.



HEAD END SYSTEM IN SUMMARY

The WaterScope® web portal seems to not only meet but exceed the expectations of what the County expects in a head end system. With numerous different conservation tools both at a micro and macro level, WaterScope will provide the tools to the County to help manage the system efficiently, effectively, and transparently.

9.5. CONSUMER PORTAL OVERVIEW

The WaterScope package includes a fully incorporated consumer portal. The consumers can access their usage information either via the web portal or the mobile app. The mobile app is available for both Apple (iOS) and Android. Both the app and the web portal are maintained by Metron so there will be interruption to either the City or the homeowner when enhancements and patches are made to the program.

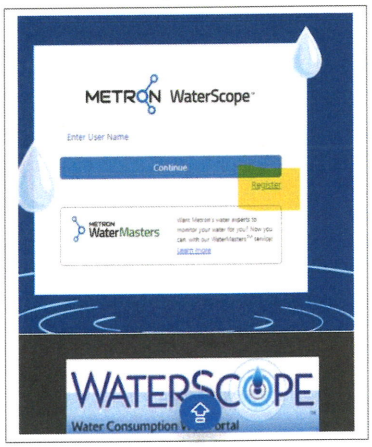
Signup for the consumer portal is very simple. The homeowner simply enters their Prism serial number along with the matching account number and as long as the two match WaterScope will allow the signup. The authentication between the Prism and account number is to prevent a homeowner from inadvertently signing up for another meter.

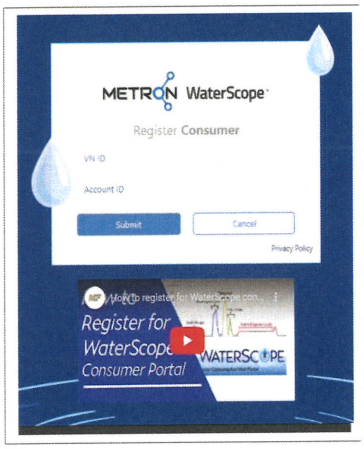
CONSUMER PORTAL WEB VERSION

The web version of the consumer portal reflects the exact same screens that were discussed on the Micro level of the head end system. This is very beneficial when the City customer support staff engages with a homeowner as it allows both sides to view the same exact information. The City has the ability to customize what screens the consumer has access to. The homeowner then has the option to decide which alerts they would like to receive. The following will cover the consumer web version with signup process and available analytics.

SIGN-UP

To signup, a consumer user must have the Prism's VN ID as well as the account number. The account number will be the City account number maintained within the billing software. They will begin by clicking 'Register', the next screen will prompt for the VN ID and Account number:

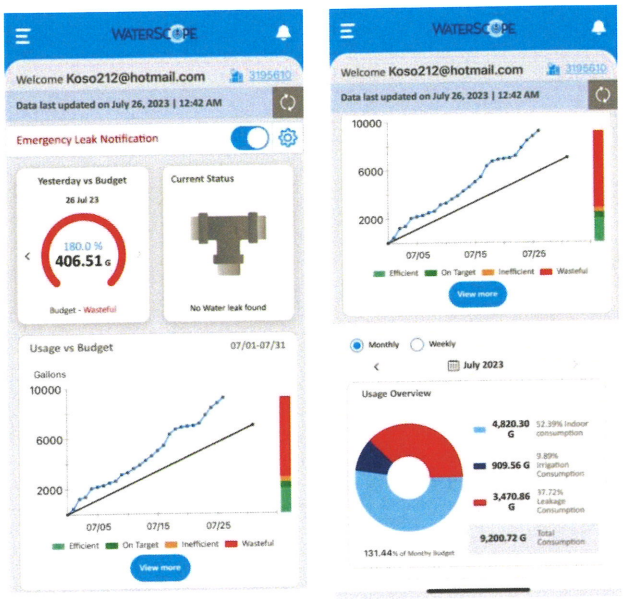




CONSUMER PORTAL MOBILE VERSION

WaterScope offers many of the same benefits in the web version in both an iOS and Android app version. The signup process is the same, enter a VN ID with matching account number and the consumer may continue along the registration process. Upon registration completion, the user will access to the following:

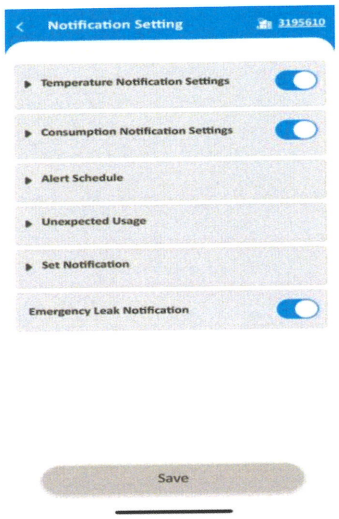
Dashboard – The dashboard screen will show the consumer the prior day's usage, current leak status, an up-to-date water budget, and the usage breakdown.

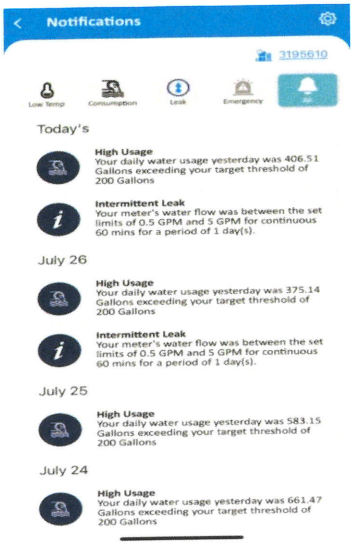


Usage Overview – The usage overview slide allows the consumer to view more granular data. They have the ability to analyze the usage monthly, weekly, daily, and hourly (1-minute view). The consumer can also view the same time intervals but for indoor, outdoor, and leak, respectively.



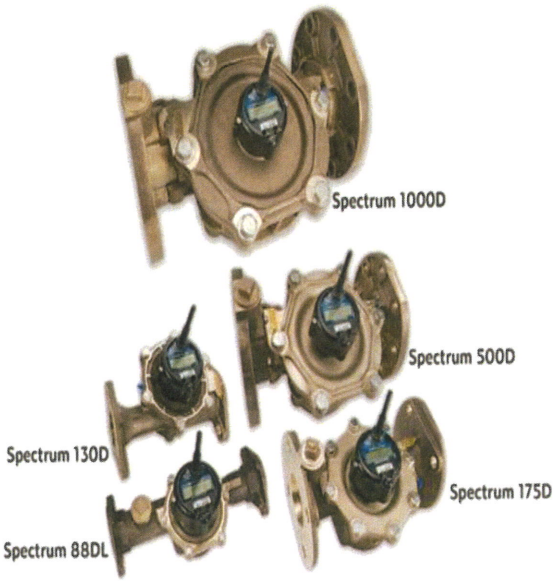
Notifications – The consumer can choose which notifications to opt in for, much like in the web version. They may also view a notification history.





9.6. WATER METERS

Metron offers a full line of water meters ranging from 5/8" to 8" and prides itself on the low-flow capability of our meter line. The Spectrum Jet single-jet family is the widest ranged, single-measuring element meter available to U.S. utilities. With its simplistic design coupled with minimal accuracy degradation, revenue stays steady throughout the life of the meter and eliminates the testing and maintenance normally required for commercial meters that offer this type of performance. Set it and forget.

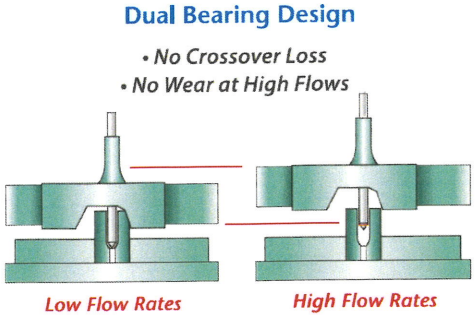




SINGLE-JET OPERATION

The Spectrum Jet meters are velocity-type meters that incorporate a single tangential jet which flows across the impeller. The impeller is offset from the water flowing through the tangential jet such that the water travels perpendicular to the rotational axis of the impeller. Using an exclusive twin pivot design the meter combines excellent sensitivity at low flow rates and friction free operation at high flow.

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



LOW FLOW ACCURACY

For comparative context, a typical 1.5"-2" PD meter has a new meter accuracy low flow listed as 1-1.5 gpm. The Metron 1.5" and 2" Single-Jets offer a low flow accuracy of ¼ gpm. The difference in captured usage between ¼ gpm to 1.5gpm generates a rapid ROI, additional revenue and higher accountability for the customer. Please refer to product spec sheets for specifics on all meter sizes.

Our Spectrum PD 5/8x3/4" rotary piston PD meter provides high level accuracy down to 1/50th+ of a gpm making it the most accurate mechanical residential meter in the industry and matches or surpasses most solid-state meters. The same holds true for the larger Spectrum Jet commercial meters.

Note: Unlike most static meters, the top-load design allows for quick in line OEM chamber replacement for end of life or repair which restores low flow accuracy back to new meter specification and can be done at considerably less cost than having to buy a new meter. This is *not* a "throw away" meter and can provide the utility *decades* of reliable and accurate consumption data.

Metron's single-jet meter line paired with high resolution 1-minute or 5-minute data analytics, and the WaterScope web portal gives water utilities a system with the unrivalled ability to not only monitor and manage a distribution system from a supply aspect but also provide transparency and extensive customer service analytics previously unavailable to the U.S. water utility industry. A win-win for both the customer and utility.

SPECTRUM WAVE ULTRASONIC METER

The Spectrum Wave ultrasonic meter is an advanced water metering instrument. Its measuring unit is based on a "See Through" ultrasonic technology. With this concept, the two sensors, used alternatively for the transmission and the reception of the ultrasonic signal into the water pipe, are installed on each end of a straight section of the water pipe. With such a mechanical configuration, the water flow remains free of any mechanical structure that would increase the drop of pressure inside the meter. The meter provides a very wide range with low flow accuracy to 0.05 gpm which will capture the highest levels of revenue.

The Spectrum Wave meter is equipped with a built-in cellular module and internal antenna which provides seamless integration into the WaterScope water management system. The meter does have an external antenna port for challenging environments, but in most residential applications, the utility will not need to deal with any external cables. An industry standard 3-wire encoder output can also be optionally ordered.



Spectrum Wave Ultrasonic Meter

*For more in-depth information, please refer to **Metron Meter Datasheets**.

9.7. TRAINING INFORMATON

We are committed to providing as much training as the utility needs/wants. Trying to learn a new system in just a day or two can be overwhelming so we typically phase in the training from the simplest form to the more advanced over time.

ONGOING TRAINING AND SUPPORT

The entire training and support costs are included in the up-front bundle so there will be no additional fees for training current users on new features, or for new utility staff that start employment after the project is completed.

Training documents are online and can be easily downloaded and printed into paper form.
Metron prioritizes comprehensive training sessions tailored to different groups within the utility, including field personnel, administration staff, and customer service representatives. While these are the standard groups, additional training can be arranged upon the utility's request.
At the project's outset, a brief training session is conducted to provide utility personnel with a fundamental understanding of Metron's meters and systems:

- **Field Training**: Covers topics such as Meters, Registers, Antennas, Local Communication, and Configuration.
- **Administration Training**: Introduces users to the WaterScope platform, providing initial login credentials and familiarizing them with essential functionalities.
- **Customer Service Training**: Like administration training, it includes an introduction to the WaterScope platform, initial login credentials, and focuses on customer service-related functionalities.
- **Billing Training**: Includes WaterScope platform introduction, initial login credentials, and discussions on system interface for billing purposes.

As the project nears completion, Metron collaborates with the utility to schedule comprehensive training sessions tailored to each category mentioned above. These sessions delve deeper into meter functionalities and system operations, ensuring utility personnel are proficient in utilizing Metron's technology to its fullest extent. Additionally, the training schedule and content are customized to meet the specific needs and preferences of the utility, ensuring optimal knowledge transfer and skill acquisition.

TRAINING SUMMARY

- Continuous access to training for all current and future utility staff.
- Live support and refresher courses available on request.
- No additional cost for new employees.

9.8. PRODUCT DATASHEETS

METRON Spectrum JET

METRON

Residential Spectrum Jet Meters

Product Datasheet

Applications

The Spectrum Jet single-jet meter is the widest range single measuring element meter available to North American utilities. Spectrum Jet residential meters are designed for extremely wide range and long-term accuracy. The single-jet technology is highly impervious to dirt, sand or grit in the water system. The combination of design simplicity, superior grade materials, and high quality manufacturing standards allows for years of virtually new meter performance with no maintenance.

Spectrum Jet residential meters are available in composite (reinforced plastic) and lead-free bronze models across all common residential sizes.

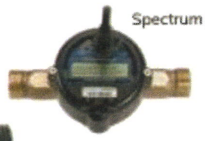
Coupled with the advanced Prism cellular registers, Spectrum Jet single-jets are the meters of choice for your revenue assurance and water loss programs.



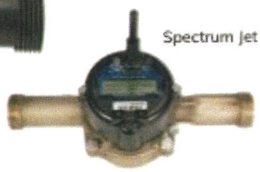
Spectrum Jet 15D, 25D and 30D



Spectrum Jet 30DL

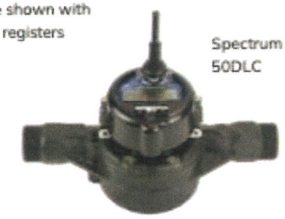


Spectrum Jet 30DB



Spectrum Jet 50DL

All meters are shown with Prism cellular registers installed



Spectrum Jet 50DLC

Operations

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.

To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow.

All Spectrum Jet Model D meters utilize Prism registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

Materials

All residential Spectrum Jet Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All models are maintained with NSF-61G lead-free certifications.

Standards

AWWA C712 – Single-jet meters

NSF-61G – Drinking water system components health effects

Design Features

- High accuracy – exceeding high and low range of AWWA residential standards
- Starting flow below 1/16 gpm
- Excellent performance in adverse water conditions
- Advanced materials for long-term durability
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or downstream of meter
- High resistance to freezing
- Lightweight, compact design for simple installations
- No strainer requirement
- Compatible with all Metron Prism registers and associated AMR/AMI capabilities

Mechanical Specifications

Spectrum Jet 15D - AWWA ⅝ x ½" (15mm) Short

Construction	Threads	Lay Length
Composite	¾" NPSM	3.9" (100mm)

Spectrum Jet 25D - AWWA ⅝ x ½" (15mm)

Construction	Threads	Lay Length
Composite	¾" NPSM	7.5" (190mm)

Spectrum Jet 30D - AWWA ⅝ x ¾" (15x20mm)

Construction	Threads	Lay Length
Composite	1" NPSM	7.5" (190mm)

Spectrum Jet 30DB - AWWA ⅝ x ¾" (15x20mm)

Construction	Threads	Lay Length
Lead-free brass body + Composite plates	1" NPSM	7.5" (190mm)

Spectrum Jet 30DL - AWWA ¾ x ¾" (20mm)

Construction	Threads	Lay Length
Composite	1" NPSM	9.0" (230mm)

Spectrum Jet 50DL - AWWA 1" (25mm)

Construction	Threads	Lay Length
Lead-free brass	1.25" NPSM	10.75" (273mm)

Spectrum Jet 50DLC - AWWA 1" (25mm)

Construction	Threads	Lay Length
Lead-free brass	1.25" NPSM	10.75" (273mm)

Materials

Spectrum Jet 25/30Dx Models

Composite Body & Top-plate	Brass Body & Top-plate	Impeller	Impeller Bearing	Impeller Pivot	Impeller Shaft
Reinforced Nylon (Polyamide 12)	EcoBrass™ - Lead Free Brass	Polypropylene	Nivaflex	Sapphire	Tungsten Carbide

Spectrum Jet 50DL/50DLC Models

Body	Impeller	Impeller Bearings	Impeller Shaft
Low-lead Bronze: ASTM C875	Polypropylene	Tungsten Carbide	AISI 303 Tungsten Carbide Tip

Register Housing: Thermoplastic

Markings

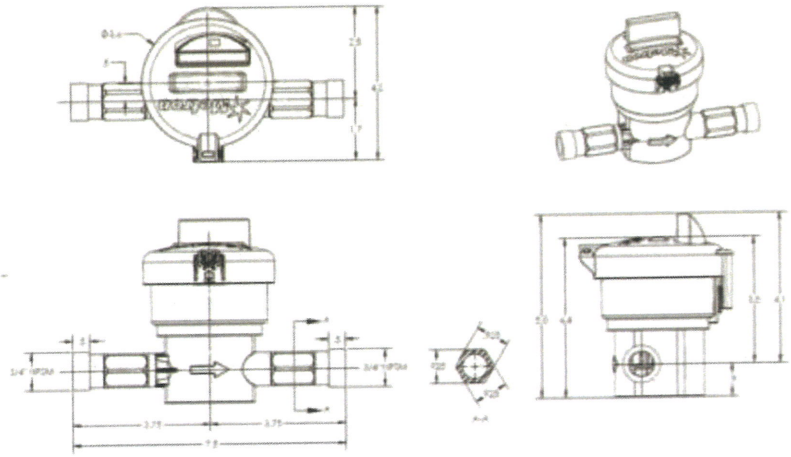
Engraved on Meter Body:

- Model
- Serial Number
- Date of Manufacture
- NSF-6
- Direction of Flow

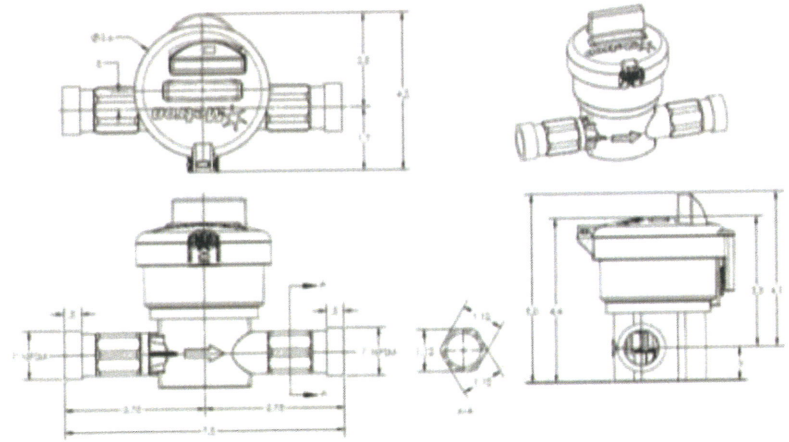
Dimensions

Spectrum Jet 15D - ⅝" Short: Contact Metron

Spectrum Jet 25D - ⅝"

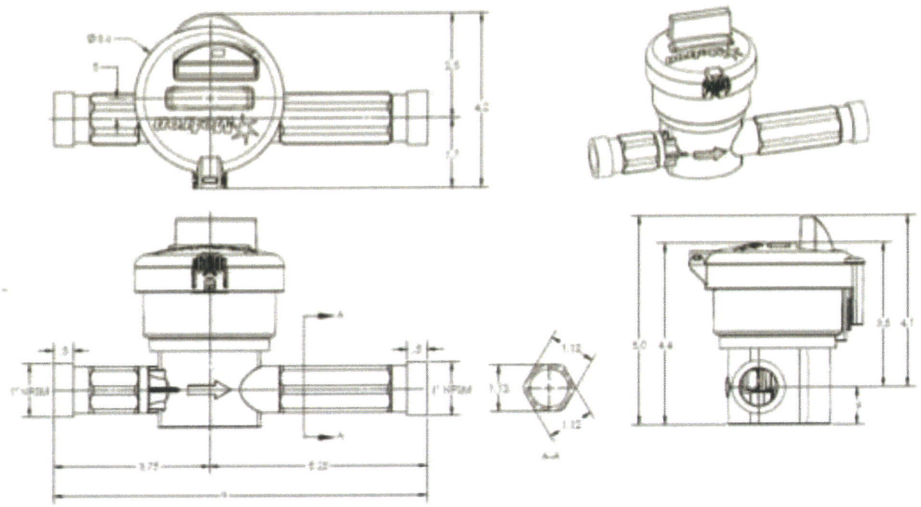


Spectrum Jet 30D and 30DB - ⅝ x ¾"

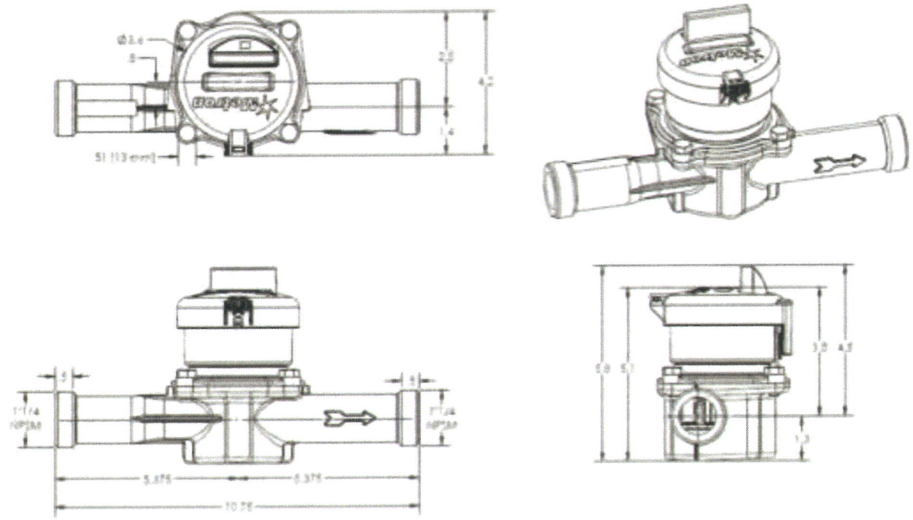


Dimensions

Spectrum Jet 30DL - ¾"

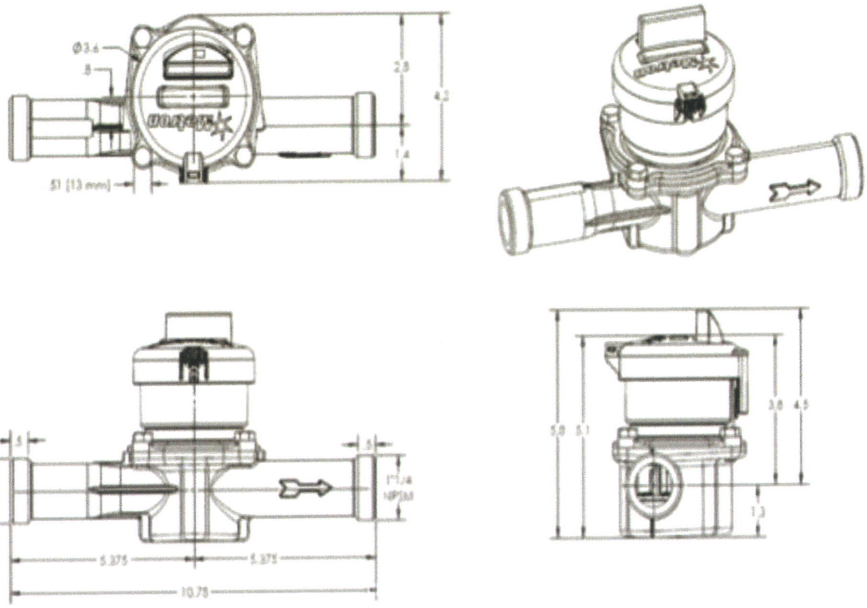


Spectrum Jet 50DL - 1"



Dimensions

Spectrum Jet 50DLC - 1"



Flow & Pressure Specifications

Spectrum Jet 15D - ⅝ Short Model

Operating Range (98.5 to 101.5%)	0.088 to 15 gpm	0.02 to 3.4 m³/hr
Low Flow (95% min)	0.06 gpm	0.014 m³/hr
Max Continuous Duty[1]	15 gpm	3.4 m³/hr
Max Intermittent[2]	20 gpm	4.5 m³/hr
Pressure Loss at Max Continuous	10 psi	0.69 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	140° F	60° C

Notes:

1. Starting flow rate for reference only
2. Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
3. Max Intermittent defined as flow rate which can be maintained 1 hr/day average

Flow & Pressure Specifications

Spectrum Jet 25D - ⅝" Model

Operating Range (98.5 to 101.5%)	0.125 to 20 gpm	0.028 to 4.5 m³/hr
Low Flow (95% min)	0.0625 gpm	0.0142 m³/hr
Max Continuous Duty[1]	20 gpm	4.5 m³/hr
Max Intermittent[2]	30 gpm	6.8 m³/hr
Pressure Loss at Max Continuous	22 psi	1.51 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	140° F	60° C

Spectrum Jet 30D/30DB - ⅝ x ¾" Model

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	0.028 to 6.8 m³/hr
Low Flow (95% min)	0.0625 gpm	0.0142 m³/hr
Max Continuous Duty[1]	30 gpm	6.8 m³/hr
Max Intermittent[2]	40 gpm	9.1 m³/hr
Pressure Loss at Max Continuous	13 psi	0.9 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	140° F	60° C

Spectrum Jet 30DL - ¾" Model

Operating Range (98.5 to 101.5%)	0.125 to 30 gpm	0.028 to 6.8 m³/hr
Low Flow (95% min)	0.0625 gpm	0.0142 m³/hr
Max Continuous Duty[1]	30 gpm	6.8 m³/hr
Max Intermittent[2]	40 gpm	9.1 m³/hr
Pressure Loss at Max Continuous	13 psi	0.9 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	140° F	60° C

Notes:

1. Starting flow rate for reference only
2. Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
3. Max Intermittent defined as flow rate which can be maintained 1 hr/day average

METRON

METRON Spectrum JET

METRON

Small Commercial Spectrum Jet Meters

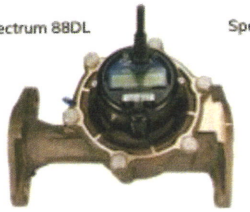
Product Datasheet



Spectrum 88DL



Spectrum 88DLT



Spectrum 130D

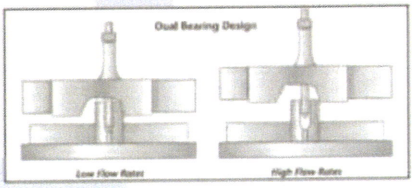
Applications

The Spectrum Jet single-jet meter is the widest ranged, single-measuring element meter available to U.S. utilities. The operation of the single jet element allows the meter to be applied in the vast majority of potable cold water, small commercial applications. These meters are designed with a very high range, including low flow performance equaling or exceeded all other metering technologies. Coupled with the advanced Prism registers, the Spectrum Jet single-jets are the meter of choice for your revenue assurance and water loss programs.

The Spectrum Jet Model-D meters are top-loading, chamber designs which allow for field maintenance and repairs.

Operations

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. The Spectrum Jet 88DL and 88 DLT come with an integral test port on the outlet. Although regular maintenance is not required, the Spectrum Jet Model D meters have a top-loading measurement chamber for simple access without removing the meter from service. The chamber is bolted to the meter body and secured with a tamper seal.

All Spectrum Jet Model D meters utilize Prism registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

Design Features

- High accuracy below AWWA standards
- Wide range—1000:1 turndown
- Superior low flow registration
- Compact and light
- Convenient options for various lengths and connections
- Low pressure drop
- No regular maintenance
- Excellent performance in adverse water conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements – upstream or downstream
- No strainer requirement
- 5-year flange-to-flange warranty
- 20-year warranty on meter body
- Compatible with all Prism registers and associated AMR/AMI capabilities.

Materials

All Spectrum Jet Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All models are maintained with NSF-61G lead-free certifications.

Standards

AWWA C712 – Single-Jet Meters

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

Spectrum Jet 88DL - 1 ½" (40mm)

Flanges	Lay Length	Dimensions	Weight	Test Plug	Test Port
Oval 2-bolt	13" (330mm)	See Drawing	9.95lb (4.5kg)	1" Integral	Integral 1" NPT Threads

Spectrum Jet 88DLT - 1 ½" (40mm)

Connection	Lay Length	Dimensions	Weight
Female 1 ½" / 11 ½ NPT Integral Threads	12 ⅝" (319mm)	See Drawing	8.15lb (3.69kg)

Spectrum Jet 130D - 2" (50mm)

Flanges	Lay Length	Dimensions	Weight	Test Plug	Test Port
Oval 2-bolt	9¼" (300mm)	See Drawing	13lb (5.8kg)	Available on Spool	Lead-free Flanged Spools for 15 ¼" & 17" LL

*Contact Metron for information on brass spools and couplers.

Materials

Body & Top-plate	Impeller	Impeller Bearings	Impeller Shaft	Register Housing
ASTM C874 - Lead Free Bronze	Polypropylene	Nylon with Carbon Fiber	AISI 303, Tungsten Carbide Tip	Thermoplastic

Tamper Features

Meter Body	Register
Wire + Lead Seal Between Meter Body and Top-Plate	Tamper-resistant Screw

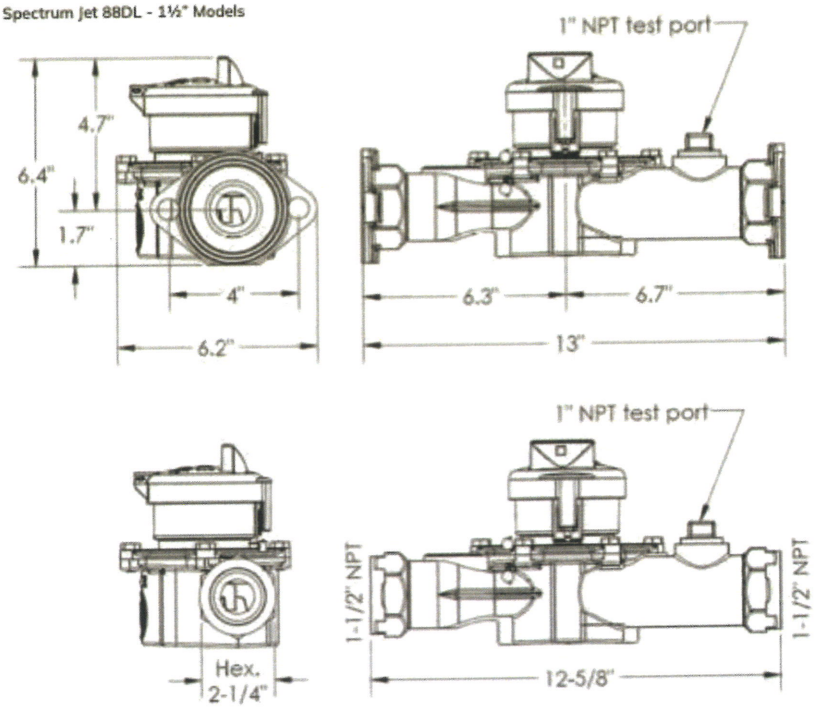
Markings

Engraved on Meter Body:

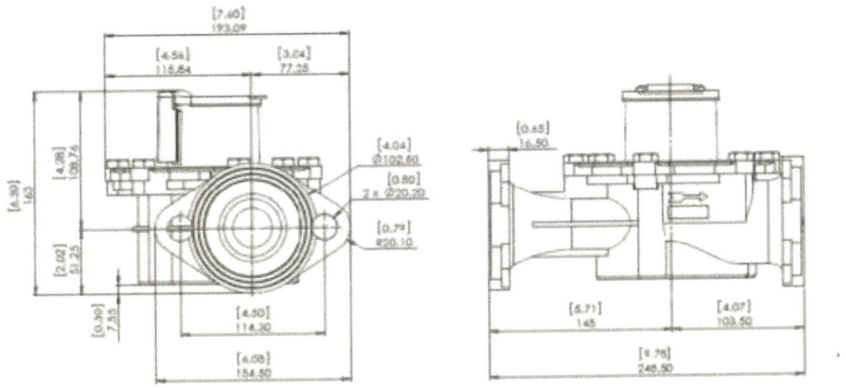
- Model
- Serial Number
- Date of Manufacture
- NSF-6
- Direction of Flow

Dimensions

Spectrum Jet 88DL - 1½" Models



Spectrum Jet 130D - 2" Model



Flow & Pressure Specifications

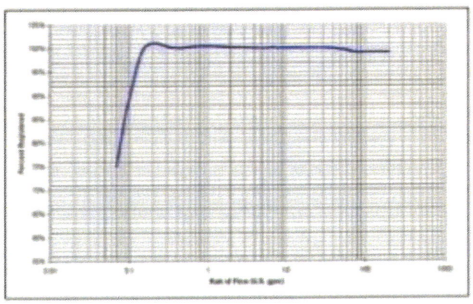
Spectrum Jet 88DL / 88DLT - 1 ½" Models

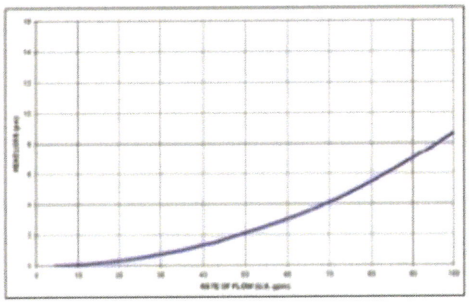
Operating Range (98.5 to 101.5%)	0.5 to 105 gpm	0.11 to 24 m³/hr
Low Flow (95% min)	0.25 gpm	0.057 m³/hr
Max Continuous Flow[1]	88 gpm	20 m³/hr
Max Intermittent Flow[2]	105 gpm	24 m³/hr
Pressure Loss at Max Continuous	7.25 psi	0.5 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	120° F	48.9° C

Spectrum Jet 130D - 2" Model

Operating Range (98.5 to 101.5%)	0.75 to 165 gpm	0.17 to 37.5 m³/hr
Low Flow (95% min)	0.25 gpm	0.057 m³/hr
Max Continuous Flow[1]	130 gpm	29.5 m³/hr
Max Intermittent Flow[2]	165 gpm	37.5 m³/hr
Pressure Loss at Max Continuous	7.25 psi	0.5 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	120° F	48.9° C

Spectrum Jet 88DL / 88 DLT



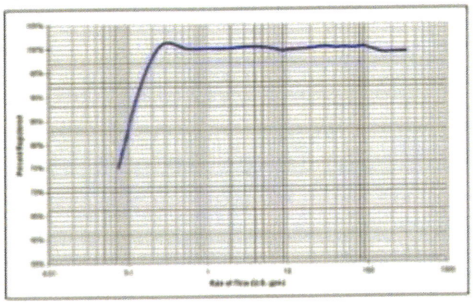


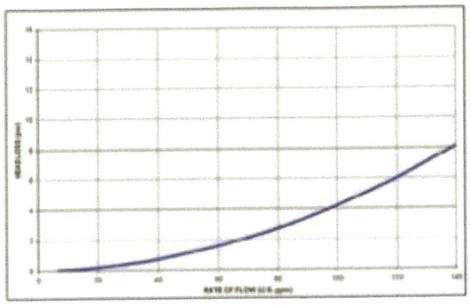
Notes:

1. Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
2. Max Intermittent defined as flow rate which can be maintained 1 hr/day average

Flow & Pressure Specifications

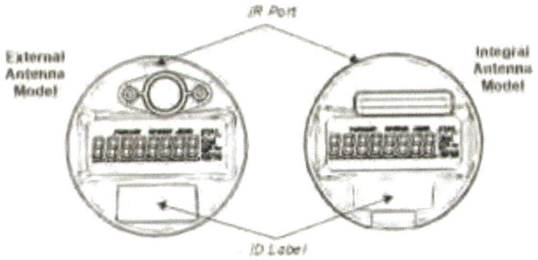
Spectrum Jet 130D

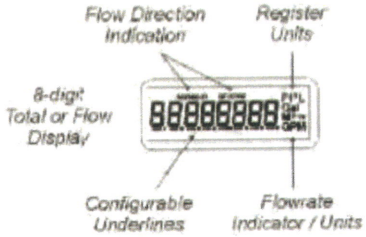




Registers

The Prism electronic register is the water industry's new standard for register performance. The Prism offers maximum resolution, a multitude of standard features, on-board datalogging and a variety of cellular, AMI, AMR and SCADA output options. The Prism is designed for all environments and incorporates the largest battery available for utility applications. The Prism can be deployed on any Metron Spectrum Jet water meter.





USG Configuration
1 Gallon Resolution

USG - Commercial Meters (x 1)

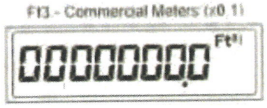


USG Flowrate - All Meters (x0.01)

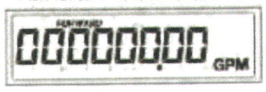


Ft3 Configuration
0.1 Ft3 Resolution

Ft3 - Commercial Meters (x0.1)

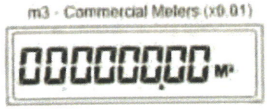


Ft3 Flowrate - All Meters (x0.01)

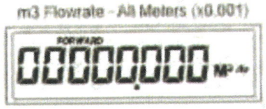


m3 Configuration
0.01 m3 Resolution

m3 - Commercial Meters (x0.01)



m3 Flowrate - All Meters (x0.001)



Warranty

Please contact your Metron representative for formal warranty certificates.

Legal

Due to updated regulations and product improvements, Metron-Farnier reserves the right to change the product specifications without notice.

METRON

METRON Spectrum JET

METRON

Large Commercial Jet Spectrum Meters

Product Datasheet

Spectrum Jet 175D





Spectrum Jet 500D

Spectrum Jet 1000D



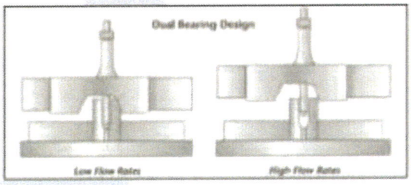
Applications

The Spectrum Jet single-jet meter is the widest ranged, single measuring element meter available to U.S. utilities. The operation of the single jet element allows the meter to be applied in the vast majority of potable cold water, reclaim water and well applications. Coupled with the advanced Prism registers, the Spectrum Jet single-jets are the meter of choice for your revenue assurance and water loss programs.

The large Spectrum Jet meters come in a selection of configurations for 3-inch, 4-inch and 6-inch applications. The meter has a very wide range so there is no compromise at either low or high flows. All Spectrum Jet Model-D meters are top-loading, chamber designs which allow for field maintenance and repairs.

Operations

Incoming water rotates a suspended impeller that is magnetically linked to the register. A low friction tungsten carbide bearing supports the impeller at low flow rates while a tungsten carbide thrust bearing provides the support at high flow rates. This unique "dual bearing" design provides unparalleled accuracy and durability at both high and low flows.



To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. Each of the meters come with an integral test port on the outlet flange. Although regular maintenance is not required, the Spectrum Jet Model D meters have a top-loading measurement chamber for simple access without removing the meter from service. The chamber is bolted to the meter body and secured with a tamper seal.

All Spectrum Jet Model D meters utilize Prism registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple cellular, AMR, AMI and SCADA outputs. All registers are attached with a robust tamper-resistant housing.

Design Features

- High accuracy below AWWA standards
- Wide range—1000:1 turndown
- Superior low flow registration
- Compact and light
- Convenient options for various lengths and connections
- Low pressure drop
- No regular maintenance
- Excellent performance in adverse water conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements – upstream or downstream
- No strainer requirement
- 5-year flange-to-flange warranty
- 20-year warranty on meter body
- Compatible with all Prism registers and associated AMR/AMI capabilities.

Materials

All Spectrum Jet Model-D meters are designed and manufactured to meet or exceed AWWA C712 standard design and performance specifications. All Models are maintained with NSF-61G lead-free certifications.

Standards

AWWA C712 – Single-Jet Meters

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

Spectrum Jet 175D - 3" (80mm)

Flanges	Lay Length	Dimensions	Weight	Z-Plate Strainer*	SS Spacer Spools	Test Port
Round 4-bolt	11.8" (300mm)	See Drawing	32lb (14.5kg)	Available (6" LL)	Hard-flanged or adjustable	Integral 1" NPT Threads

Spectrum Jet 500D - 3" (80mm)

Flanges	Lay Length	Dimensions	Weight	Z-Plate Strainer*	SS Spacer Spools	Test Port
Round 4-bolt	13.75" (349mm)	See Drawing	41lb (18.6kg)	Available (6" LL)	Hard-flanged or adjustable	Integral 1" NPT Threads

Spectrum Jet 500D - 4" (80mm)

Flanges	Lay Length	Dimensions	Weight	Z-Plate Strainer*	SS Spacer Spools	Test Port
Round 8-bolt	13.75" (349mm)	See Drawing	48lb (21.7kg)	Available (7.5" LL)	Hard-flanged or adjustable	Integral 1" NPT Threads

Spectrum Jet 1000D - 4" (100mm)

Flanges	Lay Length	Dimensions	Weight	Z-Plate Strainer*	SS Spacer Spools	Test Port
Round 8-bolt	17.75" (349mm)	See Drawing	78lb (35.4kg)	Available (7.5" LL)	Hard-flanged or adjustable	Integral 1" NPT Threads

Spectrum Jet 1000D - 6" (150mm)

Flanges	Lay Length	Dimensions	Weight	Z-Plate Strainer*	SS Spacer Spools	Test Port
Round 8-bolt	17.75" (349mm)	See Drawing	89 lb (40.4kg)	Available (8.9" LL)	Hard-flanged or adjustable	Integral 1" NPT Threads

*Contact Metron for information on brass spools and couplers.

Materials

Body & Top-plate	Impeller	Impeller Bearings	Impeller Shaft	Register Housing
ASTM C875 - Lead Free Bronze	Polypropylene	Tungsten Carbide	AISI 303, Tungsten Carbide Tip	Thermoplastic

Tamper Features

Meter Body	Register
Wire + Lead Seal Between Meter Body and Top-Plate	Tamper-resistant Screw

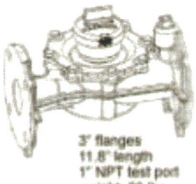
Markings

Engraved on Meter Body:

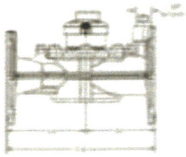
- Model
- Serial Number
- Date of Manufacture
- NSF-61G
- Direction of Flow

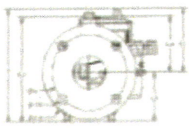
Dimensions

Spectrum Jet 175D - 3" Model



3" flanges
11.8" length
1" NPT test port
weight: 32 lbs

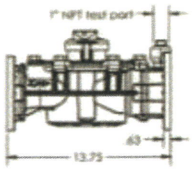


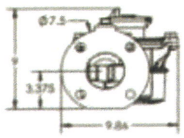


Spectrum Jet 500D - 3" Model



3" flanges
13.75" length
1" NPT test port
weight: 41.1 lbs
static volume: 2.9 l

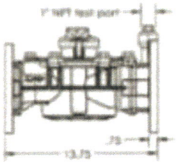


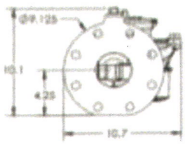


Spectrum Jet 500D - 4" Model



4" flanges
13.75" length
1" NPT test port
weight: 47.8 lbs
static volume: 2.9 l

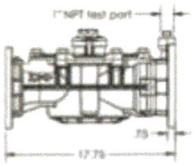


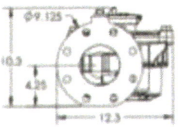


Spectrum Jet 1000D - 4" Model



4" flanges
17.75" length
1" NPT test port
weight: 77.8 lbs
static volume: 5.9 l

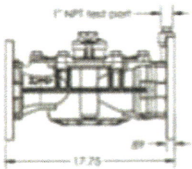


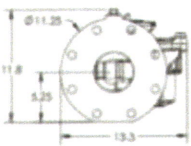


Spectrum Jet 1000D - 6" Model



6" flanges
17.75" length
1" NPT test port
weight: 88.9 lbs
static volume: 5.9 l





Flow & Pressure Specifications

Spectrum Jet 175D - 3" Models

Operating Range (98.5 to 101.5%)	0.75 to 350 gpm	0.34 to 113.5 m³/hr
Low Flow (95% min)	0.5 gpm	0.17 m³/hr
Max Continuous Flow[1]	175 gpm	79.5 m³/hr
Max Intermittent Flow[2]	245 gpm	113.5 m³/hr
Peak Test Flow[3]	350 gpm	136 m³/hr
Pressure Loss at Max Continuous	7.25 psi	0.5 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	120° F	48.9° C

Spectrum Jet 500D - 3" and 4" Models

Operating Range (98.5 to 101.5%)	1.5 to 500 gpm	0.34 to 113.5 m³/hr
Low Flow (95% min)	0.75 gpm	0.17 m³/hr
Max Continuous Flow[1]	350 gpm	79.5 m³/hr
Max Intermittent Flow[2]	500 gpm	113.5 m³/hr
Peak Test Flow[3]	600 gpm	136 m³/hr
Pressure Loss at Max Continuous	7.25 psi	0.5 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	120° F	48.9° C

Spectrum Jet 1000D - 4" and 6" Models

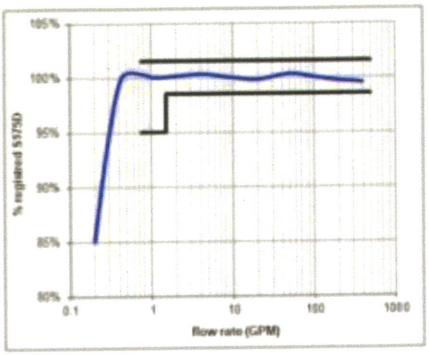
Operating Range (98.5 to 101.5%)	2.0 to 1000 gpm	0.34 to 113.5 m³/hr
Low Flow (95% min)	1.0 gpm	0.17 m³/hr
Max Continuous Flow[1]	600 gpm	79.5 m³/hr
Max Intermittent Flow[2]	1000 gpm	113.5 m³/hr
Peak Test Flow[3]	1100 gpm	136 m³/hr
Pressure Loss at Max Continuous	7.25 psi	0.5 bar
Max Operating Pressure	230 psi	15.9 bar
Max Operating Temperature	120° F	48.9° C

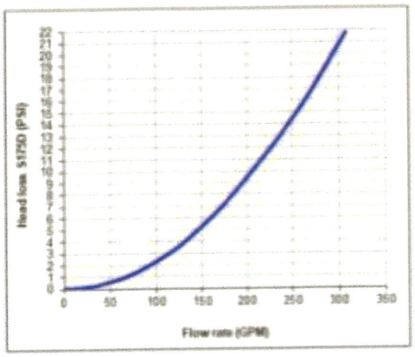
Notes:

1. Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week
2. Max Intermittent defined as flow rate which can be maintained 1 hr/day average
3. Peak Test flow defined as absolute max flow rate which can be maintained for brief periods under stable conditions while maintaining a minimum of 20 psi downstream of the meter.

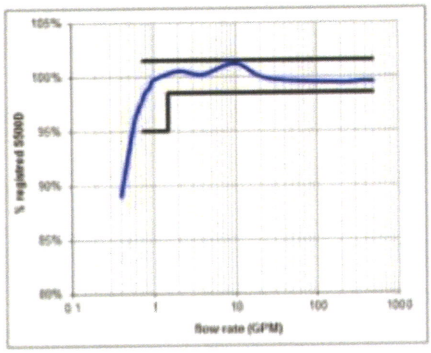
Flow & Pressure Specifications

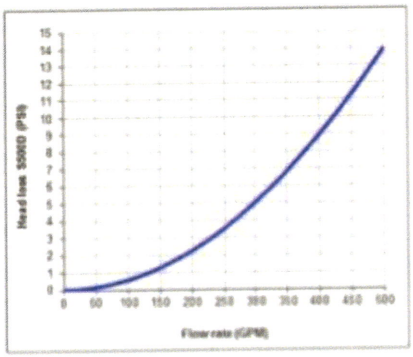
Spectrum Jet 175D



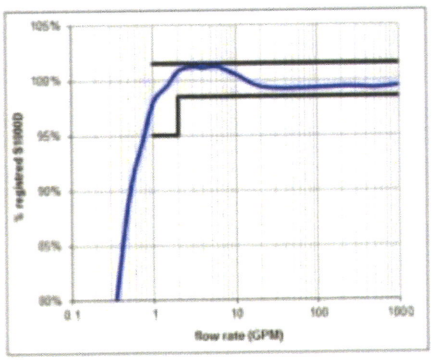


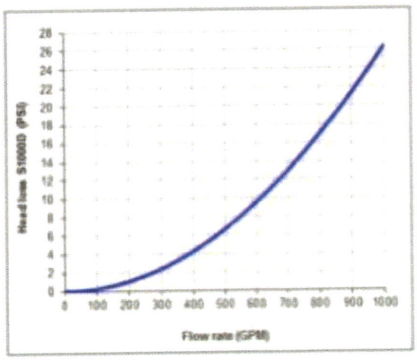
Spectrum Jet 500D





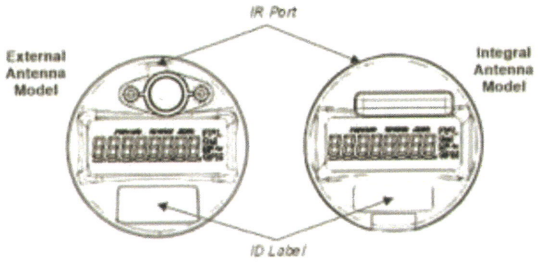
Spectrum Jet 1000D

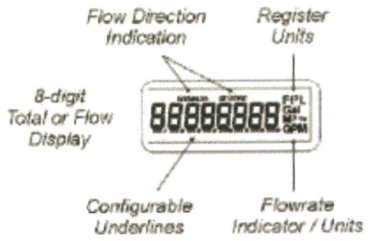




Registers

The Prism electronic register is the water industry's new standard for register performance. The Prism offers maximum resolution, a multitude of standard features, on-board datalogging and a variety of cellular, AMI, AMR and SCADA output options. The Prism is designed for all environments and incorporates the largest battery available for utility applications. The Prism can be deployed on any Metron Spectrum Jet water meter.



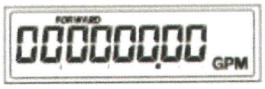


USG Configuration
1 Gallon Resolution

USG - Commercial Meters (x1)



USG Flowrate - All Meters (x0.01)



Ft3 Configuration
0.1 Ft3 Resolution

Ft3 - Commercial Meters (x0.1)

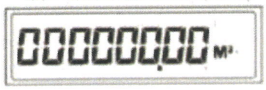


Ft3 Flowrate - All Meters (x0.01)



m3 Configuration
0.01 m3 Resolution

m3 - Commercial Meters (x0.01)



m3 Flowrate - All Meters (x0.001)



Warranty

Please contact your Metron representative for formal warranty certificates.

Legal

Due to updated regulations and product improvements, Metron-Farnier reserves the right to change the product specifications without notice.

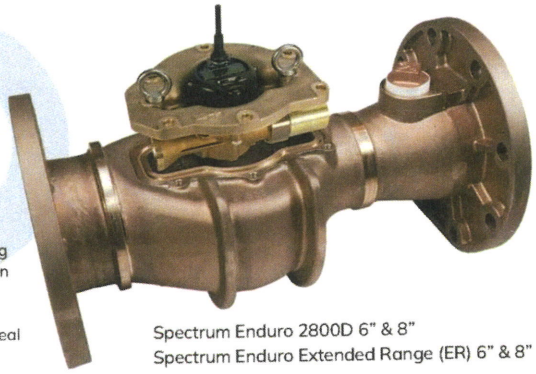
METRON

METRON Spectrum ENDURO

METRON

Spectrum Enduro Meters

Product Datasheet



Spectrum Enduro 2800D 6" & 8"
Spectrum Enduro Extended Range (ER) 6" & 8"

Applications

The Spectrum Enduro 6" and 8" water meters are single element, wide range industrial meters. They utilize a top-loading chamber to insert a small diameter Spectrum Jet meter within the flow stream. This unique system allows for unparalleled accuracy and durability at both high and low flows within a compact meter body. The Spectrum Enduro meters are an ideal solution for most industrial metering applications.

Operations

Water enters the meter passing over an in-line water conditioner that directs the water through a small diameter Spectrum Jet meter that proportionally measures the total water flow. This incoming water rotates a suspended impeller in the measuring chamber. A low friction pivot bearing supports the impeller at low flow rates while an upper thrust bearing provides the support at high flow rates. The impeller has an attached magnet at its top for the register interface.



All bearing materials are fortified for minimal wear during high-flow stress. The impeller shaft utilizes tungsten tips to minimize wear and ensure long-term accuracy. The Spectrum Enduro meters come with integral flanges (either 6" or 8").

To maintain accuracy, the meter must be installed horizontally (±10°) in the direction of water flow. Spectrum Enduro meters come with an integral test port on the outlet. Although regular maintenance is not required, the meters have a top-loading measurement chamber for simple access without removing the meter from service.

All Spectrum Enduro meters utilize Prism registers. These sealed electronic registers provide a high resolution interface to the meter and have multiple output options. All registers are attached with a robust tamper-resistant housing.

Design Features

- High accuracy
- Wide range – 1000:1 turndown
- Superior low flow registration
- Minimal pressure loss
- Long-term durability
- Low and high flow models to accommodate variety of industrial applications
- No regular maintenance
- Small, compact design for simple installations
- Excellent performance in adverse conditions
- Unaffected by sand or small debris in line
- No straight pipe requirements upstream or downstream of meter
- Strainers available for FM Fire Service
- 5-year flange-to-flange warranty

Materials

All Spectrum Enduro meters are designed and manufactured to meet or exceed AWWA C712 standards design specifications. They also meet or exceed AWWA C701 standards Class II turbine meter performance.

Standards

AWWA C712 – Single-Jet Meters

NSF-61G – Drinking Water System Components Health Effects

Mechanical Specifications

Spectrum Enduro 2800	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port	Integral 2" NPT threads	Integral 2" NPT threads

Spectrum Enduro 3600	6-inch (150mm)	8-inch (200 mm)
Flanges	Round 8-bolt	Round 8-bolt
Lay Length	24" (610 mm)	24" (610 mm)
Dimensions	See drawing	See drawing
Weight	121 lb (54.88 kg)	142 lb (64.4 kg)
Test Port Integral	2" NPT threads Integral	2" NPT threads

Strainers: Fireflow-rated strainers available. Contact Metron for additional information

MATERIALS

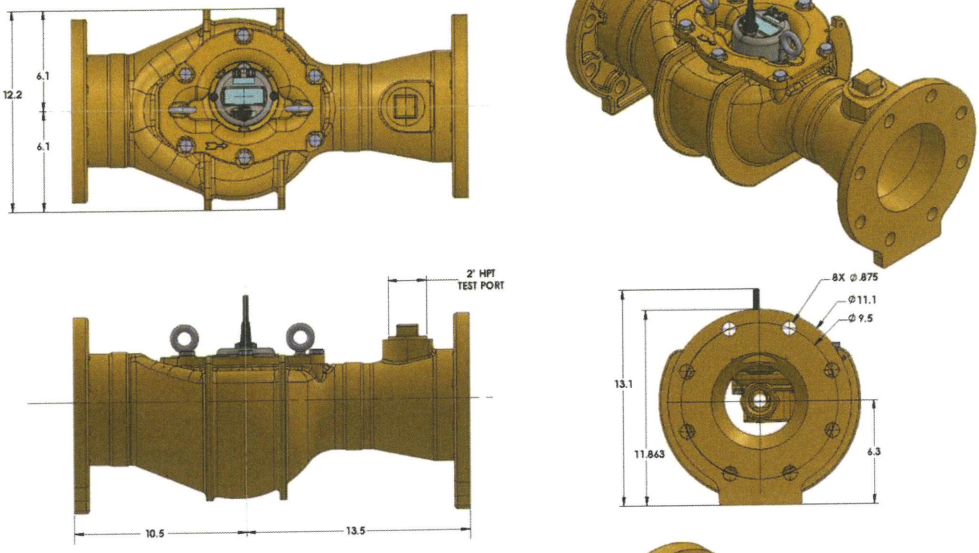
Body & Top-plate:	ASTM C917 - Lead Free Brass
Impeller:	Polypropylene
Impeller Bearings:	Tungsten Carbide
Impeller Shaft:	AISI 303, Nivaflex tip
Register Housing:	Thermoplastic

MARKINGS

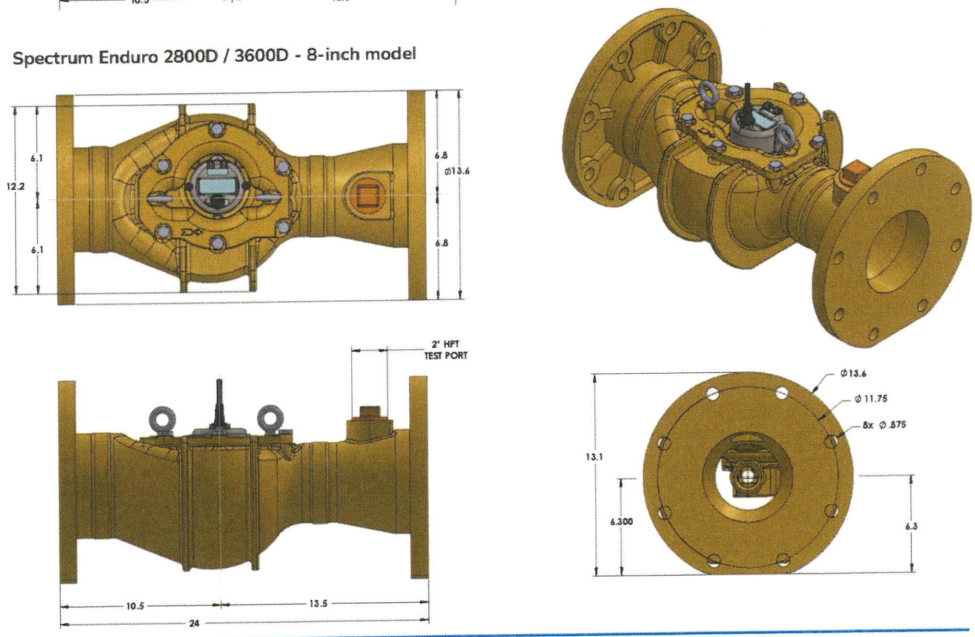
Engraved on meter body: Model, Serial Number, Date of Manufacture, NSF-61G, Direction of Flow arrow

DIMENSIONS

Spectrum Enduro 2800D / 3600D - 6-inch model



Spectrum Enduro 2800D / 3600D - 8-inch model



Flow & Pressure Specifications

Spectrum Enduro 2800D – 6" and 8" Model		
Operating Range (98.5 to 101.5%)	6 to 2800 gpm	(1.38 to 636 m3/hr)
Low Flow (95% min)	4.4 gpm	(1 m3/hr)
Max Continuous Flow[2]	2400 gpm	(545 m3/hr)
Max Intermittent Flow[3]	2800 gpm	(636 m3/hr)
Pressure Loss at Max Continuous	6.40 psi	(0.44 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Spectrum Enduro 3600D – 6" and 8" Model		
Operating Range (98.5 to 101.5%)	14 to 3600 gpm	(3.2 to 818 m3/hr)
Low Flow (95% min)	8 gpm	(1.82 m3/hr)
Max Continuous Flow[2]	2800 gpm	(636 m3/hr)
Max Intermittent Flow[3]	3600 gpm	(818 m3/hr)
Pressure Loss at Max Continuous	11 psi	(0.76 bar)
Max Operating Pressure	230 psi	(15.9 bar)
Max Operating Temperature	120 °F	(48.9 °C)

Notes

1 Starting flow rate for reference only

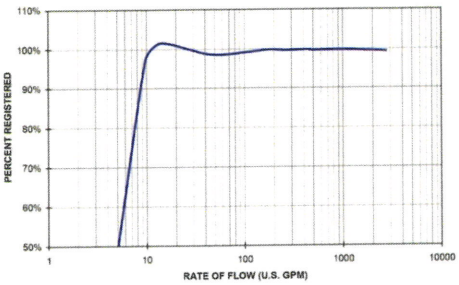
2 Max Continuous defined by AWWA as flow rate which can be maintained 24 hrs/day x 7 days/week

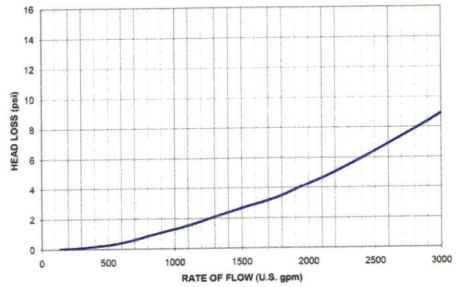
3 Max Intermittent defined as flow rate which can be maintained 1 hr/day average

Flow Accuracy

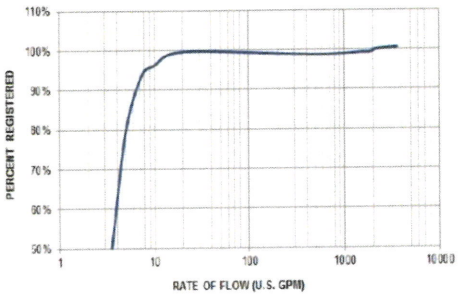
Pressure Drop

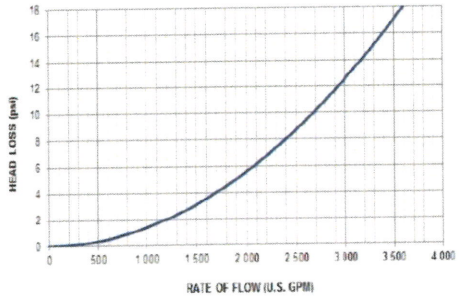
Spectrum Enduro 2800D





Spectrum Enduro 3600D





Registers

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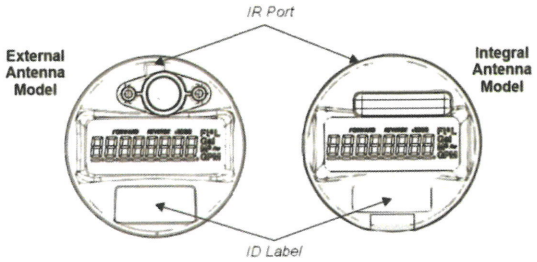
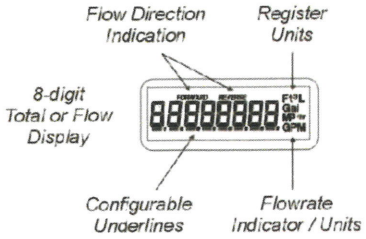
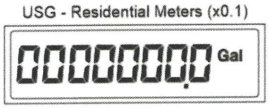




USG Configuration
0.1 Gallon Resolution

USG - Residential Meters (x0.1)

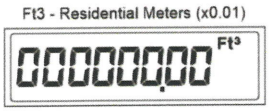


USG Flowrate - All Meters (x0.01)

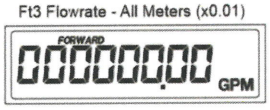


Ft3 Configuration
0.01 Ft3 Resolution

Ft3 - Residential Meters (x0.01)

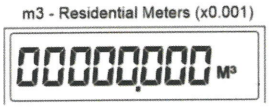


Ft3 Flowrate - All Meters (x0.01)

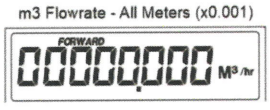


m3 Configuration
0.001 m3 Resolution

m3 - Residential Meters (x0.001)



m3 Flowrate - All Meters (x0.001)



Warranty

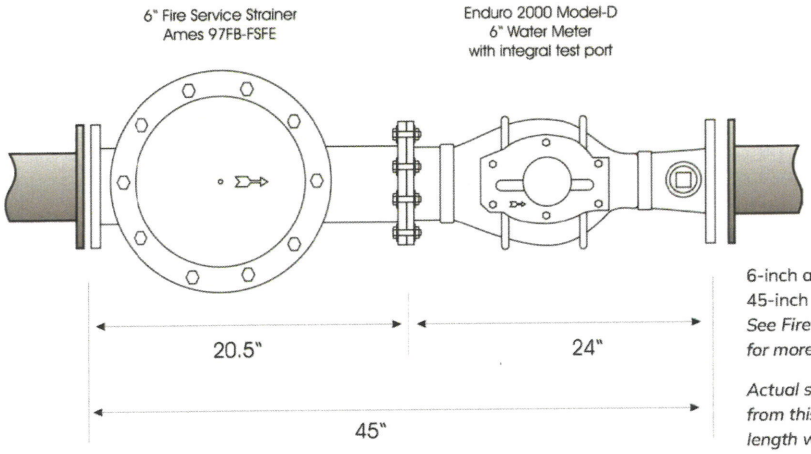
Please contact your Metron representative for formal warranty certificates.

Legal

Due to updated regulations and product improvements, Metron reserves the right to change the product specifications without notice.

Fire Service Configurations

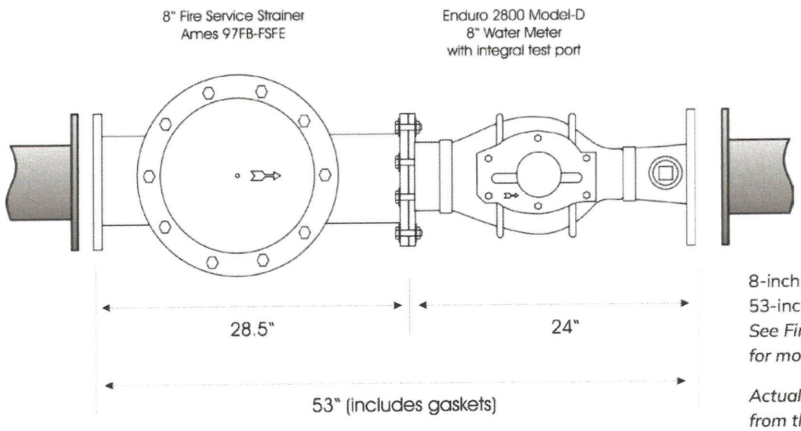
FSA6



6-inch assembly
45-inch LL
See Fire Service Brochure for more information.

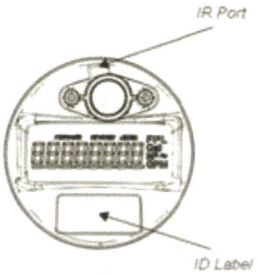
Actual strainer may differ from this drawing, but its length will be as shown.

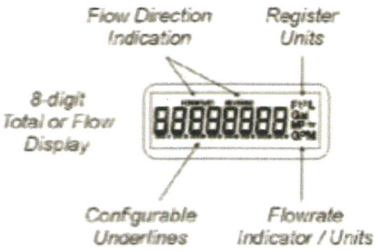
FSA8



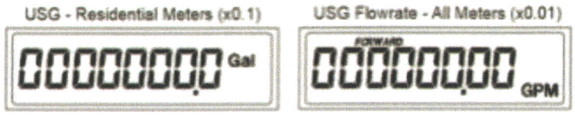
8-inch assembly
53-inch LL
See Fire Service Brochure for more information.

Actual strainer may differ from this drawing, but its length will be as shown.

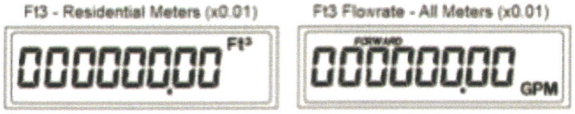




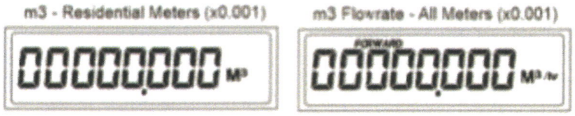
USG Configuration
0.1 Gallon Resolution



Ft3 Configuration
0.01 Ft3 Resolution



m3 Configuration
0.001 m3 Resolution



METRON

METRON
Prism



Prism Cellular Register

Product Datasheet

The Prism is a cellular digital register which mounts on all Metron Spectrum water meters[1]. It can also be adapted to many other traditional water meters providing instant AMI upgrades to deployed meters.

The Prism register senses the meter's magnetic element down to ¼ turn resolution, and stores data at 1-minute intervals, thereby enabling the most advanced water usage data and analytics in the industry. It utilizes the Verizon Wireless™ network to securely and reliably deliver readings, high resolution interval data and diagnostic data to WaterScope®, Metron's cloud-based meter data management system (MDMS). Utilities and consumers can access water usage data via the powerful WaterScope web portal and via email and text notifications.

Design

Construction: The Prism register is a compact, fully encapsulated package designed for all environments.

Meter Attachment: A standard plastic meter housing provides a robust and tamper-resistant attachment to all Metron water meters. Metron can also provide attachment housings for many other meter types.

Outputs: The Prism register can be supplied with a 3-wire standard AMR output. The output cable can be ordered in different lengths and with Itron or Nicor waterproof connectors.

Antennas: The Prism register has an antenna port which can accommodate either a local antenna or a remote antenna for extension through walls or outside pits/vaults.

Activation: All Prism units come from the factory activated and provisioned on the Verizon Wireless network. Consumption data on the WaterScope web portal can be accessed within 24 hours of installation.

Operation

The Prism register has an internal sensor which tracks the meter's measuring element and stores consumption every log interval. The unit will also perform on-board measurement diagnostics regularly. Once per day during super off-peak hours (1am to 6am local time), the unit will negotiate a secure channel with the Verizon Wireless tower and transmit a daily packet with the current meter read, the daily interval logs and other diagnostic data. Following the transmission, the unit waits for any commands from the cloud server (such as configuration or data backfill) prior to returning to normal operational mode.

1 Except Spectrum Wave, which has an integrated register

Specifications

Operational

Cellular channel carrier:	Verizon Wireless
Method:	LTE Cat-M
FCC/IC:	License exempt
Secondary comms:	Proprietary InfraRed port
Onboard Storage:	5 min intervals: 227 days 1 min intervals: 45 days
LCD:	8 digits
Display:	Duplicates meter/register Configurable digit underlines
Units:	gallons (US), ft^3 or m^3
Battery: Type: Lifetime:	One 19Ahr non-replaceable Lithium Thionyl Chloride 10 years nominal

Physical

Dimensions: (w/o antenna)	3.6W x 3.6H x 2.5D inches (91W x 91W x 63.5D mm)
Weight:	0.70 lb (0.31 kg)
Storage temperature:	-20° to 140° F (-6° to 60° C)
Operating temperature:	-0° to 140° F (-18° to 60° C)
Humidity:	0 to 100% RH condensing

Fully submersible (IP-68)

Compatibility

The Prism is compatible with a wide range of industry registers and electronic meters.

Metron: Spectum Jet, Spectrum PD, Spectrum Enduro, Spectum Hydrant, Challenger

Metron has tested meters from other meter manufacturers and offers compatibility with many meters with magnetic measuring elements. The following shows a sample of the types of meters. Consult with your Metron representative for questions on compatibility or testing.

Badger, **Sensus**, **Neptune**, **Mueller**: PD meters, turbine meters

Master Meter, **Elster**, **Zenner**, **RG3**, **Hendey**: PD meters

Warranty

Please contact your Metron representative for formal warranty certifications.

Functionality

Configuration: Configuration can be performed via the local InfraRed (IR) port with Metron's IR bridge. The IR bridge can be coupled via USB to a Win10 computer with the Communicator software or be operated in a standalone mode.

Configuration Options
- Index Ratio (meter calibration)
- LCD Configuration
- Measurement units
- Log Interval
- 3-wire output digits

Data resolution:	per Index Ratio
Data intervals:	5-minute or 1-minute
Data backfill:	Automatic from MDMS
OTA updates:	Available
Onboard time:	Synced with Verizon
Security:	VPN and encryption (contact Metron for info)

Flags/Alerts:

Consumption
- Leak / Threshold Leak / Intermittent Leak
- High Usage / Zero Usage
- Backflow
- Unexpected / Unauthorized Usage
- High/Low Temp
- Watering Event

Diagnostic
- Low Signal Strength

Disclaimers

Transportation: The Prism Register contains a lithium battery and thus is prohibited from shipment by AIR. Please conform with all shipping regulations for lithium batteries.

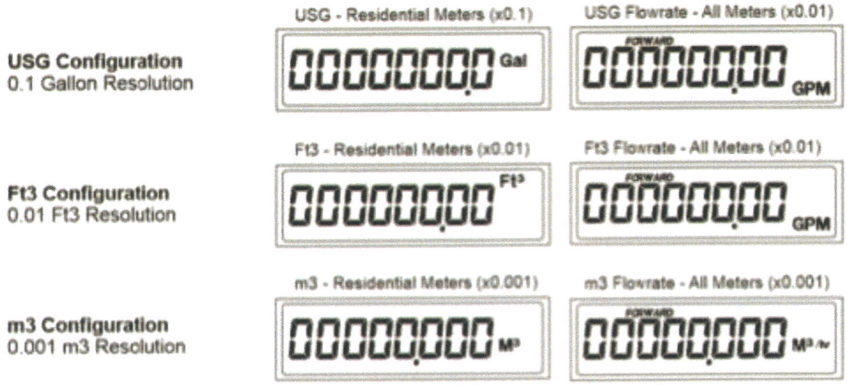
Safety: The Prism operates with radio frequency (RF) during its cellular communications. Metron can provide a whitepaper covering the potential health effects of smart meters.

Disposal: The battery inside the Prism is not replaceable and removal should never be attempted. The Prism units should be disposed of in accordance with local regulations.

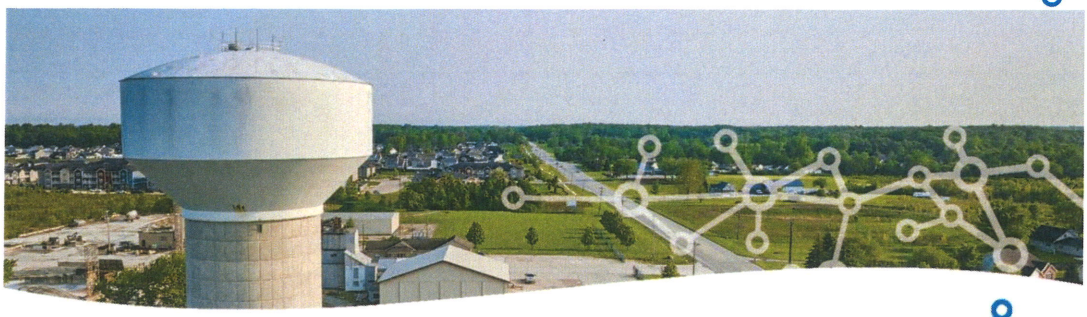
Legal

Waterscope is a registered trademark of Metron-Farnier, LLC. All other trademarks and company names listed in this document are the property of the associated companies.


IR Port
ID Label
Flow Direction Indication
Register Units
8-digit Total or Flow Display
Configurable Underlines
Flowrate Indicator / Units


USG - Residential Meters (x0.1)
USG Flowrate - All Meters (x0.01)
USG Configuration
0.1 Gallon Resolution
Gal
GPM
Ft3 - Residential Meters (x0.01)
Ft3 Flowrate - All Meters (x0.01)
Ft3 Configuration
0.01 Ft3 Resolution
GPM
m3 - Residential Meters (x0.001)
m3 Flowrate - All Meters (x0.001)
m3 Configuration
0.001 m3 Resolution

METRON



METRON

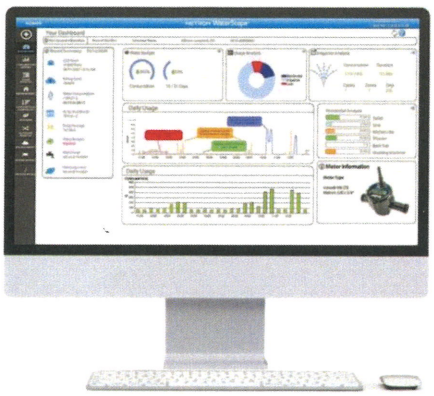
WaterScope® for Water Utilities

Water Usage Reporting, Analytics and Billing

With Metron's smart meters deployed across your district in residential, commercial, industrial and educational applications, the WaterScope Suite is your set of tools for understanding and acting on your customers' water usage.

Get accurate and detailed daily reports on leaks, high usage, zero usage, unauthorized usage, infrastructure losses, freeze alerts, and more. Easy integration with any billing system means on-time billing that reflects actual water use.

WaterScope turns information into action, simplifying the business of water.



The WaterScope Suite

METRON WaterScope CLASSIC

Designed for meter management, system status and billing integration, the industry favorite WaterScope Classic offers a deep dive into the usage data of every Metron meter and monitor in your district.

METRON WaterScope PLUS

Water data turned into business intelligence. WaterScope PLUS is a sophisticated dashboard for property and portfolio managers, providing intuitive data on financial and operational performance.

METRON WaterScope UTILITY

Designed to make field techs more productive, the WaterScope Utility app for iOS and Android allows them to identify meters with issues, see a route map, capture serial numbers when repairing or replacing meters, update GPS coordinates, and much more.

METRON WaterScope DATALINK

We've built an API to allow application developers to access the power of WaterScope's database and analytic tools. With deep integration like this, the sky's the limit for billing, property management and ESG applications.

Water Utilities

Powered by Microsoft® Azure, WaterScope is reliable, highly-available and scalable. **WaterScope Classic's** powerful analytics and reporting features give you the tools to run your water business efficiently, with as much insight into where the water goes as you need.

Here are a few examples of what WaterScope can do for you:

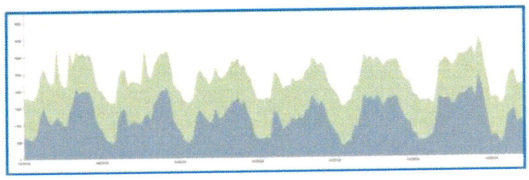
- Capture accurate usage data for every customer
- Generate billing data easily
- Identify leaks in your infrastructure
- Identify meters that aren't reading over cellular
- Find water being used at properties marked as unoccupied
- Identify residents flouting watering restrictions
- Identify residents with the most serious leaks
- Analyze usage trends, such as seasonal



WaterScope PLUS turns water data into business intelligence.

Installation and Maintenance Teams

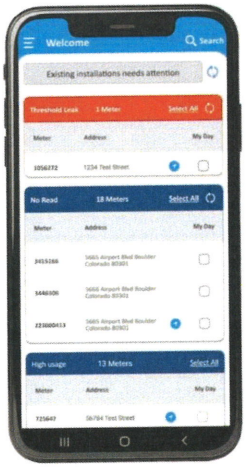
Our **WaterScope Utility** app for iOS and Android streamlines your field teams' activities by allowing you to easily create and assign work orders directly from reports of, for example, leaks or missed reads. Out in the field, technicians can use WaterScope Utility when installing and repairing Metron meters, with step-by-step procedures, including taking photographs and capturing GPS locations. Replaced meters or registers are updated instantly in WaterScope, eliminating paperwork.



Analyzing infrastructure water losses in **WaterScope Classic**

Benefits are:

- Easy assigment and management of work orders
- Efficient use of technicians' time
- Instant updating of meters IDs in WaterScope
- Reduction in human errors



WaterScope Utility streamlines installation and maintenance tasks.

Customers

Utilities can provide customers with individual logins to WaterScope Classic or WaterScope PLUS, allowing them to track their own water usage.

Benefits are:

- Empowering customers to conserve water
- Improved customer relations
- Leak alerts

Learn more on our website: metron-us.com

Call 303.449.8833 to speak to a member of our sales team, or email us at: hello@metron-us.com

WaterScope for Utilities – April 2025 v1.0. Information is subject to change without notice.

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WaterScope® Utility app

Productivity in the Palm of your Hand

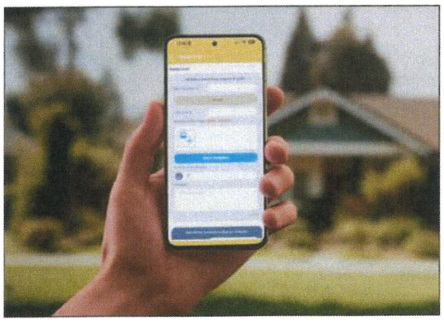
WaterScope Utility is an innovative iOS and Android app tailored to the unique needs of water utilities' maintenance teams. Drawing on Metron's decades of experience partnering with hundreds of municipal and rural utilities across North America, WaterScope Utility efficiently digitizes frontline operations, enabling teams to seamlessly record, share, and access geo-tagged data and insights, communicate with their office, and streamline workflows with intelligent alerts.

With all data dependably stored on the worker's device and automatically uploaded to Metron's central WaterScope servers, WaterScope Utility provides seamless connectivity for field teams operating in all locations, whether urban or remote. Maintenance managers can create work orders in WaterScope — such as a list of all the Metron meters in a city section that haven't transmitted their reads for a few days — allowing the maintenance crew to follow efficient routes to get those meters inspected and repaired.

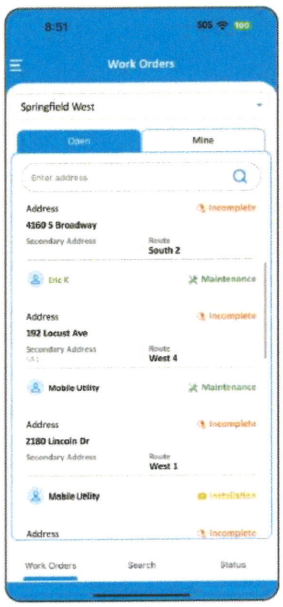
Managers can determine how data is shared across workers' devices, creating a powerful on-the-go knowledge repository — complete with smart-meter data, notes, maps, and photos taken by field teams — while also ensuring that sensitive customer information is kept fully secure.

Using WaterScope Utility, field team members can identify meters with issues, see a route map, capture serial numbers when repairing or replacing meters, update GPS coordinates if not accurate, and plan their activities for the day.

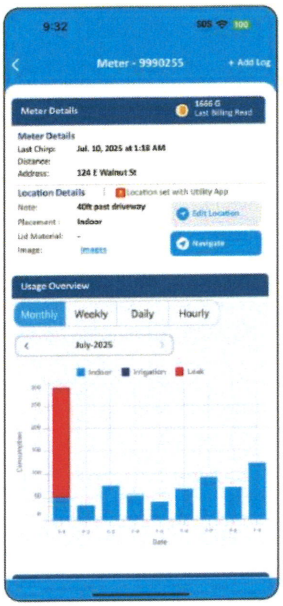
- See which meters require attention for leaks, high use, irrigation violations, etc.
- View meter details: address and location, recent consumption, map-based navigation to meter.
- Schedule work orders from WaterScope. Tasks will show up in the app.
- Install / replace, maintenance, manual meter read, record location, fix leaks, missing reads etc.
- Save detailed records of field actions.
- Send manual meter reads to WaterScope instantly.
- View status of scheduled work in WaterScope.
- View recorded data in WaterScope, such as before/after photographs.



WaterScope Utility features a rich set of workflows which make your field teams productive and efficient, from route planning to logging activities and capturing photos of issues and work done.



Work orders are managed centrally and appear on technicians' phones for execution.



The status and recent usage of a meter can be easily viewed in the app.

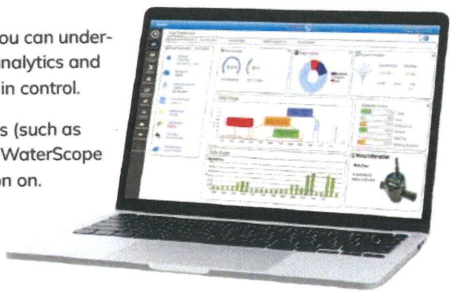


Photographs of installations and repairs can be taken in-app, going straight into WaterScope.

WaterScope®

Accurate, 1-minute water consumption data isn't useful unless you can understand it. That's where WaterScope comes in. With AI-powered analytics and actionable reporting, WaterScope puts utilities – and residents – in control.

Offering leak alerts, usage summaries and details, violation alerts (such as irrigating on off-days) and easy integration with billing systems, WaterScope turns water consumption data into something you can take action on.



METRON WaterScope

Learn more on our website: metron-us.com

Call 303.449.8833 to speak to a member of our sales team, or email us at: hello@metron-us.com

METRON

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9.9. WARRANTY DOCUMENTATION

METRON LIMITED WARRANTIES

WARRANTY (10/1/2025)

Metron Farnier, LLC ("Metron") provides the limited warranties described in this document only to the original purchaser of Metron products directly from Metron or from an authorized Metron distributor ("Client").

Metron warrants its products from the date of shipment for the length of time shown below (the "Warranty Period") to (i) function in accordance with Metron's published specifications and functionality (which Metron may change from time to time to keep current), (ii) be free from defects in material and workmanship and (iii) to the best of Metron's knowledge, to be in compliance with all applicable laws, rules and regulations. To make a warranty claim, Client must notify Metron in writing (including email), obtain a Return Material Authorization (RMA), and return the nonconforming product to a Metron service center. Upon inspection and confirmation of the warranty claim, Metron will either repair, replace the nonconforming product or credit the customer at no cost to Client (except Client's shipping cost to return the products to Metron). Metron's standard warranty for any products shown below is twelve months from date of shipment.

WARRANTY EXCLUSIONS

THE WARRANTIES AND REMEDIES ARE EXCLUSIVE TO THE ORIGINAL PURCHASER AND ARE NOT TRANSFERRABLE. OTHER THAN METRON'S EXPRESS WARRANTIES DESCRIBED IN THIS DOCUMENT, METRON MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. METRON MAY REDUCE THE WARRANTY PERIOD FOR SPECIFIC PRODUCTS IN AREAS OF HIGH RISK. (Contact your Metron representative for specifications on areas of high risk.)

Metron's warranties shall not apply (a) to products exposed to conditions outside the normal working conditions of a typical water distribution system including, but not limited to, extreme weather (such as freezing) or unusually harsh or uncommon installation environments; (b) if the products are operated outside of Metron's operating environment specifications; (c) to damage caused by circumstances beyond Metron's control including, but not limited to acts of God, vandalism, negligence, misuse or misapplication, product tampering/alteration, careless or improper handling/installation/repair, excessive operating conditions (pressure or flow) outside the product specifications, foreign particles in the water or aggressive/poor water quality conditions; (d) if Client self-installed or altered the product in a manner not approved by Metron in writing in advance or (e) if Client improperly repaired the product. In addition, Metron makes no warranty that the products will operate in an uninterrupted or error-free fashion at all times. Metron has no control over the performance, reliability, or availability of cellular or Internet communications.

WARRANTY LIABILITY LIMITATION

METRON'S TOTAL LIABILITY FOR ANY CLAIMS ARISING OUT OF OR RELATED TO THESE WARRANTIES ("CLAIMS") SHALL BE LIMITED TO DIRECT DAMAGES. METRON SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, OR CONTINGENT DAMAGES INCLUDING WITHOUT LIMITATION, ANY REVENUE OR PROFITS LOST BY CLIENT OR ITS AFFILIATES FROM ANY END USER(S), (EVEN IF THEY ATTEMPT TO CATEGORIZE LOST REVENUE OR PROFITS AS DIRECT DAMAGES) OR DAMAGES RESULTING FROM DELAY OR LOSS OF USE OF THE METRON PRODUCT(S) OR RESULTING FROM MISCALCULATION OF WATER USAGE OR THE COSTS OF FIELD LABOR FOR AUDITING OR

REPLACEMENT. METRON'S TOTAL LIABILITY FOR DIRECT DAMAGES CLAIMS SHALL NOT EXCEED THE TOTAL AMOUNT PAID OR PAYABLE BY CUSTOMER TO METRON FOR THE PRODUCT GIVING RISE TO THE CLAIM, REGARDLESS OF WHETHER THE CLAIM IS IN TORT, NEGLIGENCE, STRICT LIABILITY, CONTRACT, STATUTE OR OTHERWISE AND EVEN IF THE DAMAGES WERE NOT FORESEEABLE.

METRON'S EXPRESS PRODUCT WARRANTIES

Spectrum™ Jet Meters (formerly Spectrum meters)

Performance Guarantee (Based on AWWA Standard C712).
Metron warrants the Spectrum Jet meter components for the applicable period or registration listed below, whichever occurs first.
In addition, Metron warrants the meter body against failure for twenty (20) years.

Residential Spectrum Jet single-jet meters

Meter Size	Model	Meter Warranty
5/8"	Spectrum Jet 25D / 25DB	10 Years
5/8"x3/4"	Spectrum Jet 30D / 30DB	10 Years
3/4"	Spectrum Jet S30DL	10 Years
1"	Spectrum Jet 50DL / 50DLC	10 Years

Small commercial Spectrum Jet single-jet meters

Meter Size	Model	Meter Warranty
1.5"	Spectrum Jet 88DL / 88DLT	5 Years
2"	Spectrum Jet 130D	5 Years

Large commercial Spectrum Jet single-jet meters

Meter Size	Model	Meter Warranty
3"	Spectrum Jet 175D	5 years
3"	Spectrum Jet 500D	5 years
4"	Spectrum Jet 500D	5 years
4"	Spectrum Jet 1000D	5 years
6"	Spectrum Jet 1000D	5 years

Spectrum PD 5/8" x 3/4" positive displacement residential meter (formerly Altair meter)

Performance Guarantee (Based on AWWA Standard C710).
Metron warrants the residential Spectrum PD meter components for ten (10) years.
In addition, Metron warrants the meter body against failure for twenty (20) years.

Spectrum Wave 5/8" x 3/4" ultrasonic residential meters (formerly Astria meter)

Performance Guarantee (Based on AWWA Standard C715)
Metron warrants the residential Spectrum Wave meter components for ten (10) years.

Materials & Workmanship

From the date of original shipment from Metron or an authorized distributor of Metron, this Warranty covers the residential Spectrum Wave meters from defects in materials and workmanship (separate from the battery) as follows:

Manufacturer's Defects: Twenty (20) years after shipment, as follows:
Metron will repair or replace, at its discretion, a non-performing Product at no cost during the first ten (10) years of the warranty and at prorated price discounts during the last ten (10) years of the warranty. Metron will apply these prorated price discounts to the Product list prices in effect at the time of Product return and according to the following prorated price discount schedule:

Warranty Period (years)	Replacement Credit (% of current list price)
1-10	100%
11-12	75%
13-15	50%
16	40%
17	30%
18	20%
19-20	10%

The warranty does not include the communication via the embedded radio. The Spectrum Wave meter with embedded radio capabilities is running a firmware able to adapt the usage of radio to the level of power in battery, a first threshold will decrease the frequency of emission, a second one will stop it in order to dedicate power supply to metrology.

Spectrum Enduro 2800D & 3600D water meters (formerly Enduro meters)

Performance Guarantee (Based on AWWA Standard C701)
Metron warrants that new industrial Spectrum Enduro 6" 2800D and 8" 3600D meters from the date of original shipment for five (5) years.

Spectrum Hydrant 3" hydrant water meters (formerly Voyager meters)

Performance Guarantee (Based on AWWA Manual M-6 Chapter 5 Table 5.3)
Metron warrants that new Spectrum Hydrant meter (listed below) from the date of original shipment for a period of one (1) year.

Warranty Exclusion
Warranty coverage does not include physical damage to the hydrant meters due to misuse or negligent handling.

Prism LTE Electronic Register (formerly Innov8-VN LTE register)

Metron warrants the Prism LTE register for twenty (20) years as shown below.

Warranty Period (years)	Replacement Credit (% of current list price)
0-10	100%
11-13	40%
14-16	30%
17-18	20%

19-20	10%

Warranty Exclusions

- *Cabled Outputs.* The Prism register is available with encoder and pulse output options which apply additional and unspecified loads on the batteries. For these register options, the Prism's Warranty Period is limited to five (5) years from the original date of shipment.
- High Risk Areas. Please contact your Metron representative to confirm whether your intended installation is in a high-risk area which will reduce the standard Warranty Period and for availability and cost of a High Risk Premium Warranty Extension.
- Cellular/Internet Service. Metron has no control over the performance, reliability, availability or security of cellular or Internet service.

Prism R LTE Electronic Remote (formerly Innov8-VNr)

Metron warrants the current (single battery) Prism R LTE Electronic Remote for fifteen (15) years as shown below.

Warranty Period (years)	Replacement Credit (% of current list price)
0-5	100%
6-7	40%
8-9	30%
10	20%

Warranty Exclusions

- *Cabled Outputs.* The Prism R register is available with encoder and pulse output options which apply additional and unspecified loads on the batteries. For these register options, the Prism R's Warranty Period is limited to five (5) years from the original date of shipment.
- High Risk Areas. Please contact your Metron representative to confirm whether your intended installation is in a high-risk area which will reduce the standard Warranty Period and for availability and cost of a High Risk Premium Warranty Extension.
- Cellular/Internet Service. Metron has no control over the performance, reliability, availability or security of cellular or Internet service.

Prism EXT Monitors (formerly WaterSignal®-VN)

Metron warrants the Prism EXT monitor for a period of seven (7) years.

Warranty Exclusions

- *Cabled Outputs.* The Prism EXT Monitor is available with encoder and pulse output options which apply additional and unspecified loads on the batteries. For these register options, the Prism EXT Monitor's Warranty Period is limited to five (5) years from the original date of shipment.
- High Risk Areas. Please contact your Metron representative to confirm whether your intended installation is in a high-risk area which will reduce the standard Warranty Period and for availability and cost of a High Risk Premium Warranty Extension.
- Cellular/Internet Service. Metron has no control over the performance, reliability, availability or security of cellular or Internet service.





Bidder: Metron Farnier, LLC and affiliates controlled by or under common control with Metron.

Metron Sensors and Data Services.

Metron sells the metering, monitoring and data transmission equipment ("Sensors") to utility customers ("Utility") for installation on Utility property or in Utility buildings or residences. Information from the Sensors is monitored, processed and analyzed through Metron's proprietary data monitoring and analytics services ("Data Services") including consumption information (for billing), usage analysis, and leak detection and made available to the Utility by subscription to a user-addressable dashboard and through notifications. Metron provides Sensors and licenses the Metron Data Services software through subscriptions for each site owned or managed by the Utility specified in the Request for Proposal.

Ownership and Data Use/Management.

A. Utility owns all rights to the proprietary information it provides, including property types and addresses, and administrator and end-user personal information ("Utility Data"). Utility is responsible for obtaining any necessary consents for disclosure and transmission of any personal information in the Utility Data and any consequences or results of any transmission or publication of any private information that is not intended for public availability. Within thirty (30) days after termination or expiration of this Agreement, Utility may request that Metron provide a file of Utility Data. Utility grants Metron the right to access, copy, transmit, reformat, and display Utility Data to create and provide the Metron Data Services which may include personal information as necessary for Utility to bill its end-users. Utility agrees that Metron may analyze Utility Data for the purpose of improving Metron Data Services, or to provide generalized data on the use or attributes of content types and may provide additional Service analytics. Utility also agrees that Metron may also create generalized examples of types of Utility Data to demonstrate the Metron Data Services analytics capabilities. Utility's subscription to access and use the Metron Data Services through Metron software does not include ownership rights to any Metron Data Services. Metron will utilize reasonable, currently available measures to remove end-user personal information from the generalized data.

B. Metron owns all design rights to the Sensors and Metron Data Services, and to any modifications or improvements and all related intellectual property rights. Metron also owns the metrics and analytics data related to Utility Data or Utility's use of the Metron Data Services. Metron's Data Services ownership includes all (a) pre-existing works and materials or works, (b) works of general applicability to the data analytics and software development industries, and (c) any concepts, approaches, knowledge, experience, skills, techniques, methodologies, designs, processes, tools, know-how or ideas already

Metron
5665 Airport Blvd, Boulder, CO 80301, USA
Phone: 303.449.8833
Fax: 303.449.1464





possessed by Metron prior to the Agreement or resulting from Metron's work under the Agreement or which may be used by Metron to improve Metron's business offerings for other Utilities, provided that it does not contain any Utility confidential information or Utility Data. Metron may use any suggestions, ideas, enhancement requests, feedback, recommendations, or other non-proprietary information ("Feedback") to improve the Data Services without charge, royalties, or other obligation to the source, and Metron's use of Feedback does not give Utility or its end-users any property rights to the Metron Data Services. To the extent that Metron's transformative formatting, reorganization, and analytics of Utility Data may be considered copyrightable by Metron (excluding Utility Data itself), Utility and Metron agree to cross-license Utility's rights to Utility Data and Metron's rights to its transformations and analytics to each other to provide the Metron Data Services for the duration of the Agreement. Upon termination of this Agreement the cross-license shall expire and Metron can no longer use Utility Data and Utility can no longer use Metron's analytics and Data Services.

C. Restrictions. Utility may not modify or create derivative works from the Metron Data Services, reverse engineer, decompile, or disassemble the Sensors or Metron Data Services; or otherwise use the Metron Data Services except as expressly described in the Agreement.

D. Metron and Utility may correspond and convey information and documentation, including intellectual property such as Utility Data and Metron Data Services via cellular data transmission and the Internet. Neither party has control over the performance, reliability, availability or security of cellular or Internet communications and therefore neither party shall be liable for any loss, damage, expense, harm or inconvenience resulting from the loss, delay, interception, corruption, or alteration of any Internet data transmissions due to any reason beyond that party's reasonable control.

Sensor Warranty.

A. Metron warrants to Utility that (i) the Sensors will be free from material defects in materials and workmanship and will perform substantially in accordance with the applicable warranties described in the proposal and (ii) the Data Services will materially perform as described in the proposal. For nonconforming Sensors or Data Services reported by Utility during the applicable Warranty Period and not subject to a warranty exclusion, Utility's sole and exclusive remedy will be for Metron to promptly repair or replace nonconforming Sensors and/or re-perform nonconforming Data Services at no additional cost to Utility.

Metron
5665 Airport Blvd, Boulder, CO 80301, USA
Phone: 303.449.8833
Fax: 303.449.1464

9.10. CERTIFICATE OF INSURANCE (COI)

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/2/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: John Munson
Securance Corporation Agency 10205 Westheimer Rd., Ste. 1100 Houston TX 77042	PHONE (A/C, No, Ext): 312-420-0747 FAX (A/C, No): 713-785-6722 E-MAIL ADDRESS: jmunson@securancecorp.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hartford Fire Insurance Co.	19682
INSURER B : Trumbull Insurance Company	27120
INSURER C : Hartford Casualty Ins. Co.	29424
INSURER D : Obsidian Specialty Insurance Company	16871
INSURER E :	
INSURER F :	

INSURED: METRON0-01
Metron Farnier LLC
Metron Sustainable Services, Inc.
WaterSignal LLC, Transparent Technologies, Inc.
5665 Airport Blvd, Suite 105
Boulder CO 80301

COVERAGES **CERTIFICATE NUMBER:** 1647431297 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:	Y	Y	61UUNBC5FFG	7/1/2025	7/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 300,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY	Y	Y	61UENBC5FU8	7/1/2025	7/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000	Y	Y	61RHUBE3SU4	7/1/2025	7/1/2026	EACH OCCURRENCE AGGREGATE $	$ 5,000,000 $ 5,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	61WEAY0M8P	7/1/2025	7/1/2026	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	Technology E&O & Cyber Liability	Y		OBD-PT-SFRG4TEEA	1/24/2025	1/24/2026	Each claim/aggregate	$3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Certificate holder is Additional Insured per written agreement. Policies are Primary and Non-Contributory in favor of certificate holders per written agreement. Policies include Waiver of Subrogation per written agreement. Referenced forms: HG00010916, HA99161221.

CERTIFICATE HOLDER

Portage County Water Resources Department
Shannon Kautzman, Director of Internal Services
Portage County Internal Services Director
Portage County Administration Bldg
449 S. Meridian St.
Ravenna OH 44266

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Deborah D Hubbard

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Visit us at **www.metron-us.com** for more information.

Town of Jerome, AZ
Request for Proposals (RFP)

METER REPLACEMENT PROJECT, CELLULAR AMI PROPOSAL

TECHNICAL OVERVIEW

PREPARED BY: MASTER METER, INC. & PUREOPS

SUBMISSION DUE DATE: WEDNSDAY, NOVEMBER 5, 2025

SECTION 1

INTRODUCTION

SECTION 1 | INTRODUCTION

Master Meter, Inc. and PureOps appreciate the opportunity to submit the accompanying technology proposal for Town of Jerome. With over four decades of experience in providing utilities with specialized flow measurement and data technologies, we are intimately familiar with Jerome's unique challenges. Master Meter is well-positioned to help Jerome achieve its short and long-term goals. Our commitment to partnership is a key reason why water utilities across the country choose Master Meter as their water measurement technology provider. Every day, we strive to deliver exceptional service and a customer-centric approach, ensuring top-notch response times, product quality, and accuracy in order fulfillment.

Based on the service area for Jerome, AZ Master Meter and PureOps are proposing the Master Meter's **Allegro Cellular Advanced Metering Infrastructure (AMI) System.**

The Master Meter **Allegro Cellular AMI System** is a cutting-edge solution that leverages IoT and existing cellular networks to streamline water management. This secure, cost-effective platform simplifies meter data collection and transmission, accelerating digital transformation without the need for extensive infrastructure. Allegro Cellular is designed with unparalleled flexibility. It can operate as a standalone Network-as-a-Service (NaaS)and seamlessly integrate with Allegro Licensed AMI infrastructure. With rapid deployment and instant network connectivity, Allegro Cellular delivers all the advantages of traditional fixed network solutions without the significant investment in network infrastructure.

Partnering with Master Meter and PureOps guarantees exceptional service responsiveness and personalized attention from our dedicated sales and customer focus team. We believe that a "vendor partnership" extends well beyond the initial project, encompassing the entire customer journey. We view the purchase of our water measurement technology as the beginning of a long-term partnership with Jerome, and we are eager to embark on this journey together.

We appreciate the opportunity to submit our qualifications for the Town of Jerome, AZ Meter Replacement Project. Should you have any questions or require further information regarding this RFP or our qualifications, please feel free to contact us at your convenience.

Sincerely,

Brandon Foster
Regional Vice President of Sales – Southern Region - Master Meter, Inc.

Master Meter, Inc. • 101 Regency Pkwy, Mansfield, TX 76063 • T: 817-842-8000 • innovate@MasterMeter.com • MasterMeter.com

SECTION 2

SUBMITTER HISTORY

SECTION 2 | SUBMITTER HISTORY

ABOUT MASTER METER, INC.



Our journey began 40 years ago in the City of Longview, Texas. We initially focus on bringing our measurement technologies to the communities of Texas and neighboring states. But for the last few decades, we've become a principal smart water technology provider to water utilities of all sizes across fifty states.

Incredibly, for a relatively young company, Master Meter's management team represents nearly 250 years of utility market experience. The installation of over 150,000 Octave ultrasonic large commercial meters has fueled the adoption of solid-state measurement across the North American waterworks industry. We now provide data services for 1.5 million meter reads in our Microsoft Azure cloud. Our AMI/AMR endpoint technology is present in more than seven million installations.

Master Meter is a high-service provider of water management solutions specializing in advanced digital water metering, data delivery, and utility intelligence software. We continually expand our portfolio of intelligent, innovative smart water technologies to support the dynamic water utility business environment in municipalities like Valle Verde and its evolving role within Smart City and IoT strategic planning.

Engineering and design firms like Frost & Sullivan have bestowed Master Meter with prestigious awards in addition to those previously mentioned peer-based Smart water Summit awards in our introductory letter. We consistently innovate and create lasting value for our industry and the utilities served within it.

SOLVING CHALLENGES

Water utilities partner with Master Meter to solve their most challenging water stewardship challenges and harness our innovative technologies to up their smart water tech game. Utilities of all sizes across North America trust our products in millions of homes and businesses.

WATER LOSS | NRW

Non-Revenue Water (NRW) is a financial burden. Chemicals, electricity, and inefficiencies all cost money and drain resources. Address NRW with our superior measurement and reporting technology.

MANAGING DEMAND

Growing populations only magnify the challenges of managing water demand and funding necessary infrastructure investment. Our reliable measurement and systems technologies help utilities do more with less resources.

IMPROVE REVENUE

Stop losing revenue from inaccurate meters. Utilities everywhere are quickly adopting our Octave and Sonata Ultrasonic technologies because there's no wear, and they add to the bottom line.

ABOUT PUREOPS



PureOps is a trusted provider of comprehensive water system management solutions, with a specialized focus on underserved communities and a diverse portfolio of clients ranging from small, rural utilities to major corporate enterprises, historic towns, and even the world's first purpose-built commercial spaceport. Initially founded as an Operator of Record for small water utilities, PureOps has expanded its capabilities to offer a wide range of services, including expert consulting, project management, and ongoing operator support for water systems with in-house management.

With a particular expertise in all aspects of metering—from audits and calibration to repairs and installations—PureOps is recognized for its unparalleled efficiency and accuracy in the Southwest. Our meter services are essential for reliable water accounting, utility revenue, and customer equity, and we deliver them with precision and trustworthiness, saving time and costs for utilities.

In addition to our meter services, PureOps also offers state-of-the-art leak detection services, developed in response to client needs and built on years of experience and cutting-edge technology. Whether providing proactive seasonal verification or addressing specific issues at large and small utilities, PureOps is committed to delivering timely, effective solutions to safeguard water infrastructure and optimize system performance.

At PureOps, we pride ourselves on being a reliable partner to utilities of all sizes, providing tailored solutions that ensure operational excellence and long-term success.

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SECTION 3

PROPOSED TECHNOLOGY

SECTION 3 | **PROPOSED TECHNOLOGY**

SYSTEM

MASTER METER'S ALLEGRO CELLULAR (LTE-M) AMI - SYSTEM OVERVIEW



Allegro Cellular (LTE-M) AMI system is a state-of-the-art networking solution for smart metering that utilizes existing cellular infrastructure and IoT protocols (LTE-M) for establishing connectivity between the Allegro Cellular AMI Endpoints and backend data management systems. These cellular AMI endpoints may be connected to most any major make /model encoded register providing immediate network connectivity all the benefits of traditional two-way fixed solutions without the need to install or maintain data collectors or the infrastructure to support them. The system would provide the city with the tools to manage their utility, while Master Meter manages the solution through cellular-based, future-proof technology that will be viable for decades to come.

Benefits of the Allegro Cellular AMI System Includes:

Minimal Infrastructure – One of the primary advantages of Allegro Cellular is that it uses a network that has already been set up for other purposes. This means the city does not need to construct and maintain new infrastructure for communication purposes. This is particularly beneficial for small systems who want to move directly to AMI by reducing the costs of deployment.

- **Reliability** – Because LTE cellular networks are used for other purposes outside of smart metering they are closely monitored and maintained by both the FCC and LTE cellular network provider, resulting in extremely reliable coverage of the system and high levels of QoS (Quality of Service)

- **Network Coverage and Redundancy** – LTE Cellular Networks cover 98% of the United States and typically provides built-in redundant network coverage.

- **Robust Technology** – Cellular endpoints are not "new technology." Cellular technology has been a part of our everyday lives for decades. Cellular networks are robust and proven technology that is being used by thousands of different IoT applications across countless industries.

- **Deployment Flexibility** – Because it does not require large infrastructure investments, Allegro Cellular can be implemented with any number of meters, large or small, while still providing a strong business case for upgrading to AMI for those City's with budget limitations. The simplicity of Allegro Cellular deployments makes it easy for the city to move directly from an existing manual/mobile reading system to Allegro Cellular AMI or operate a blended hybrid system depending on the specific needs of the utility.

- **Security** – Allegro Cellular AMI Endpoints connect to Master Meter's cloud-hosted servers through a secure VPN (Virtual Private Network) tunnel so that no data is exposed through the public internet and data is communicated over FCC-licensed radio frequencies that are owned and monitored by LTE cellular network carriers.

- Customized Reporting Options give the city the ability to set threshold levels for analysis reports, meter reading management reports, tamper detection, leak detection, on-demand reads, and many more capabilities.

- **Data Access** – Allegro Cellular data can be quickly and easily accessed by authorized utility personnel from wherever that data is needed, not just in the office, using Master Meter' web-based Meter Data Management solutions and native Android applications.

- Online Customer Portals and Smartphone Apps enable a "Self-Service" model to the end customer and empower the utility to enforce restrictions and water efficiency programs.

- System wide Time Synchronized Reads (every 15 minutes) allowing highly advanced Non-Revenue Water (NRW) calculations and analytics.

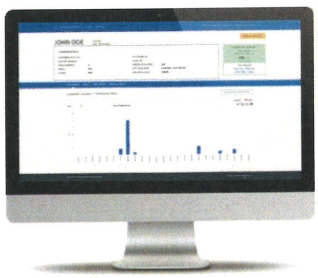
MASTER METER'S ALLEGRO AMI – COMMUNICATION (FREQUENCY) DISTINCTION

Allegro Cellular LTE-M is a low-power cellular technology developed for the Internet of Things (IoT) and machine-to-machine (M2M) communications. It operates using existing LTE networks and does not have any specific LTE Frequency bands assigned to it.

ANALYTICS SOFTWARE

HOST SOFTWARE – HARMONY ENCORE MDM (METER DATA MANAGEMENT)

As the bridge between physical meters, registers, or water entity endpoints to the water utility's back office (e.g., billing/finance, CSR and engineering departments). Harmony Encore MDM becomes the nucleus of meter management operations. It has the distinction of dissecting through the field/meter data so that any water utility is better equipped to not only prioritize ongoing issues, but also predict when or what issues might occur in the future.



Harmony Encore MDM has successfully been integrated with over 100 different billing applications; these integration success stories have occurred throughout N. American and Canadian water utilities over the last 6+ years.

Master Meter has partnered with Microsoft Azure Cloud Services to provide Harmony Encore MDM as a SaaS (Software as a Service). As such, Harmony Encore MDM can provide water utilities with scalability, performance, high availability, and enterprise grade security.

The following key modules/functionalities are included in Master Meter's software solution:

1. Integration
   - Delivers predictable, low-latency performance for Harmony Encore MDM application as the traffic stays on the Microsoft global network by default.

2. 360 Degrees Network-As-A-Service Protection
   - Protects Harmony Encore MDM application, the included virtual networks, and workloads with services that support the Zero Trust approach to security.

     i. Secure virtual network infrastructure using segmentation.
     ii. Protect application connections with Azure WAF (Web Application Firewall).
     iii. Get intelligent threat detection with Azure DDoS Protection - protects all Azure resources & applications from Distributed Denial of Service (DDoS) attacks.
     iv. Get private connectivity with Azure Private Link – allows private access to Harmony Encore MDM services hosted on the Azure platform, keeping all data on the Microsoft network.

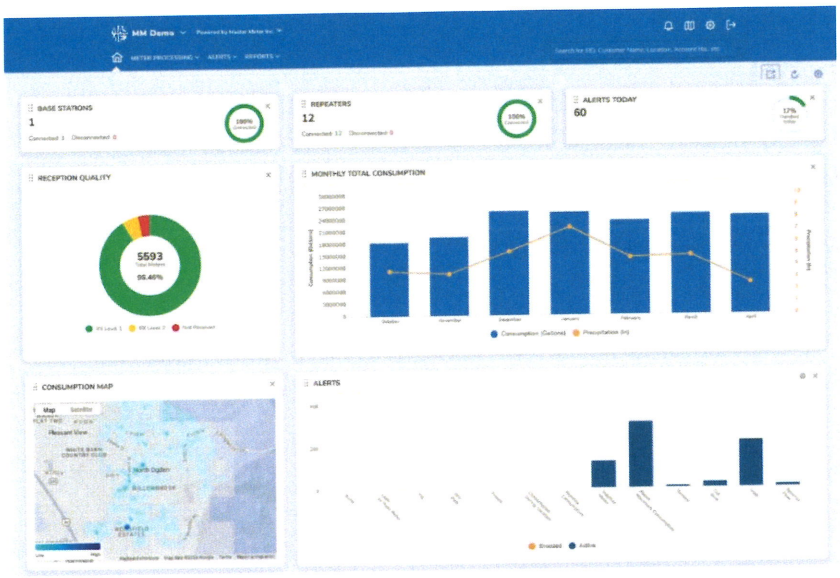
3. Load Balancer
   - Delivers high availability and network performance to Harmony Encore MDM application

4. Disaster Recovery
   - Seamlessly backs up water utilities metering data
     i. The centralized management interface for Azure Backup and Azure Site Recovery makes it simple to define/manage policies to natively protect, monitor, and manage enterprise workloads across hybrid and cloud.

Using Harmony Encore MDM, the utility employees can create & manage consumption reports and related meter data analytics. While the default reports are enumerated below, some customization reporting can also be implemented by each utility user.
The default queries (or reports) are:

- Consumption
- Meter Reading
- Unread or Zero Consumption
- Hi/Low (i.e., unexpected readings)
- Duplicate Meters
- Meter Change-outs
- Data-log
- On Demand Reading

The screenshots below exemplify these capabilities as well as the modernized workflow approach.



Harmony Encore MDM: Dashboard

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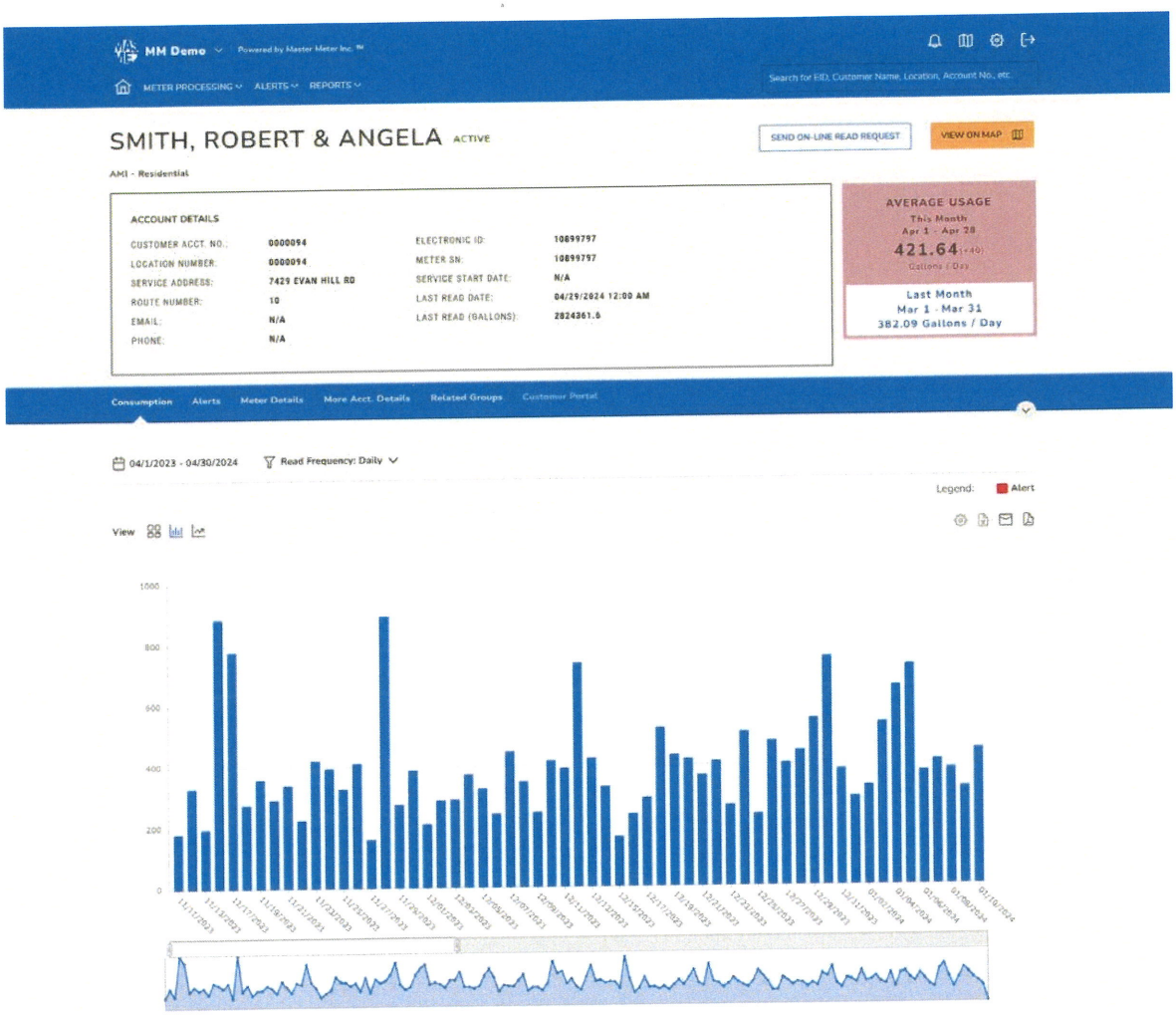
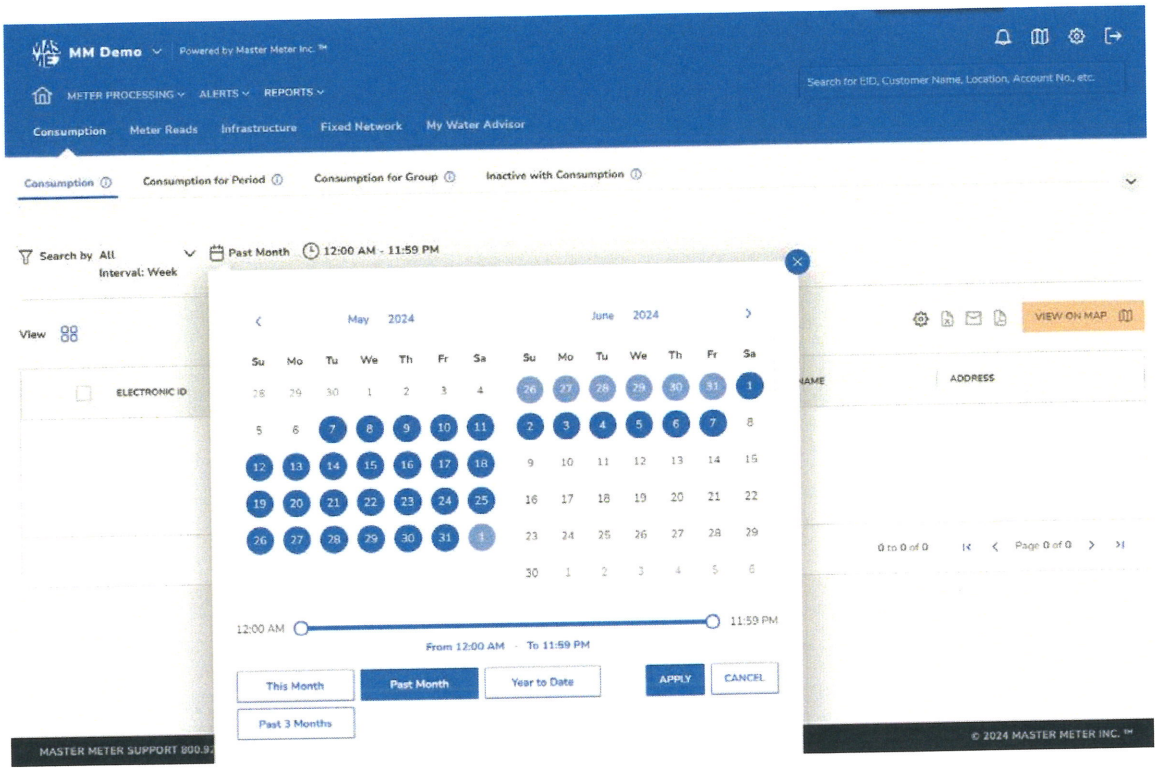
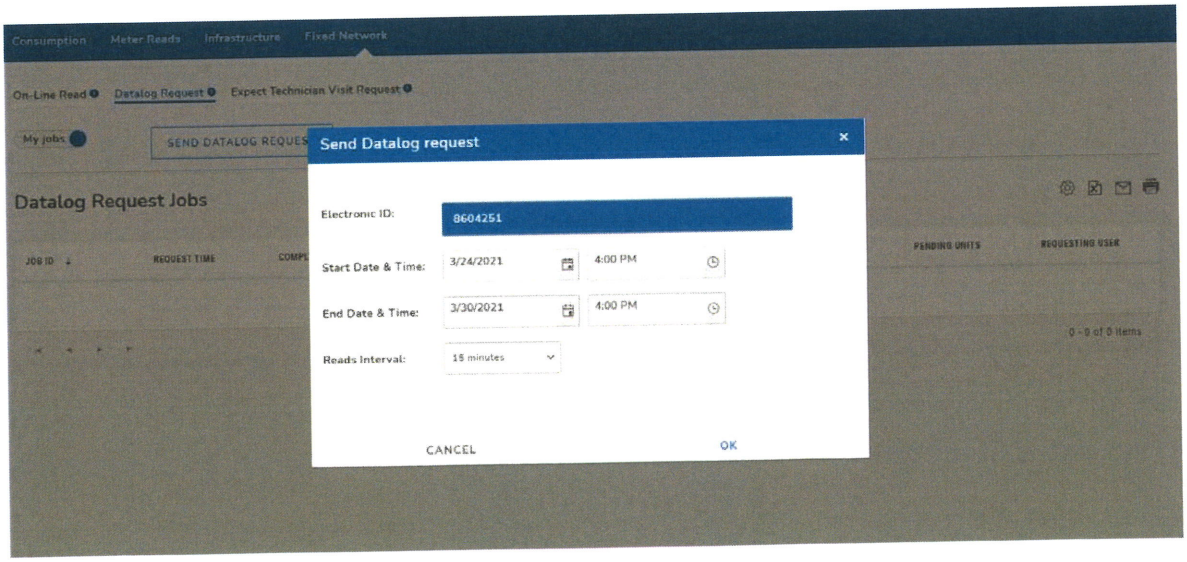


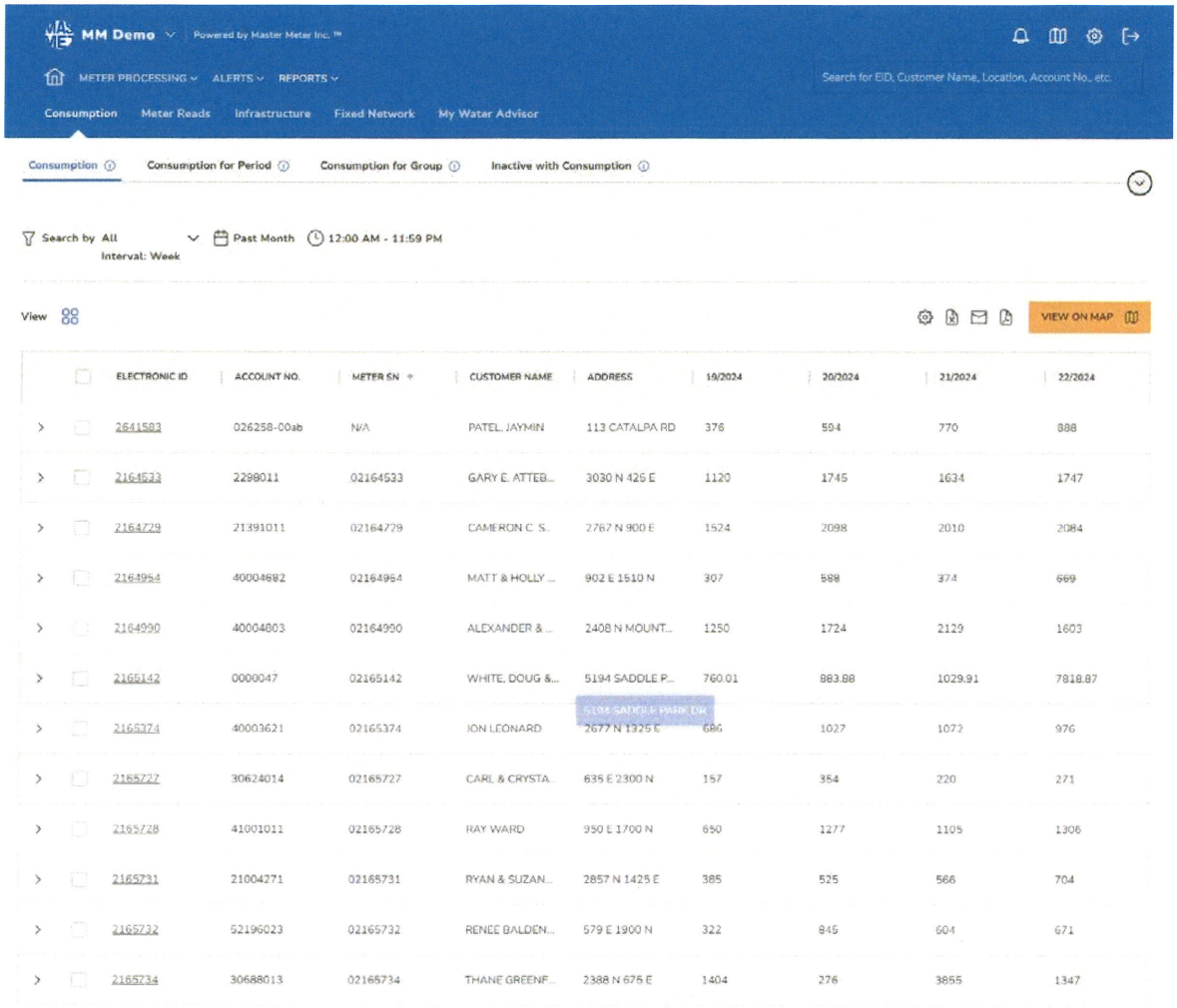
Harmony Encore MDM: Meter Card



Workflow: Consumption Report in Harmony Encore MDM

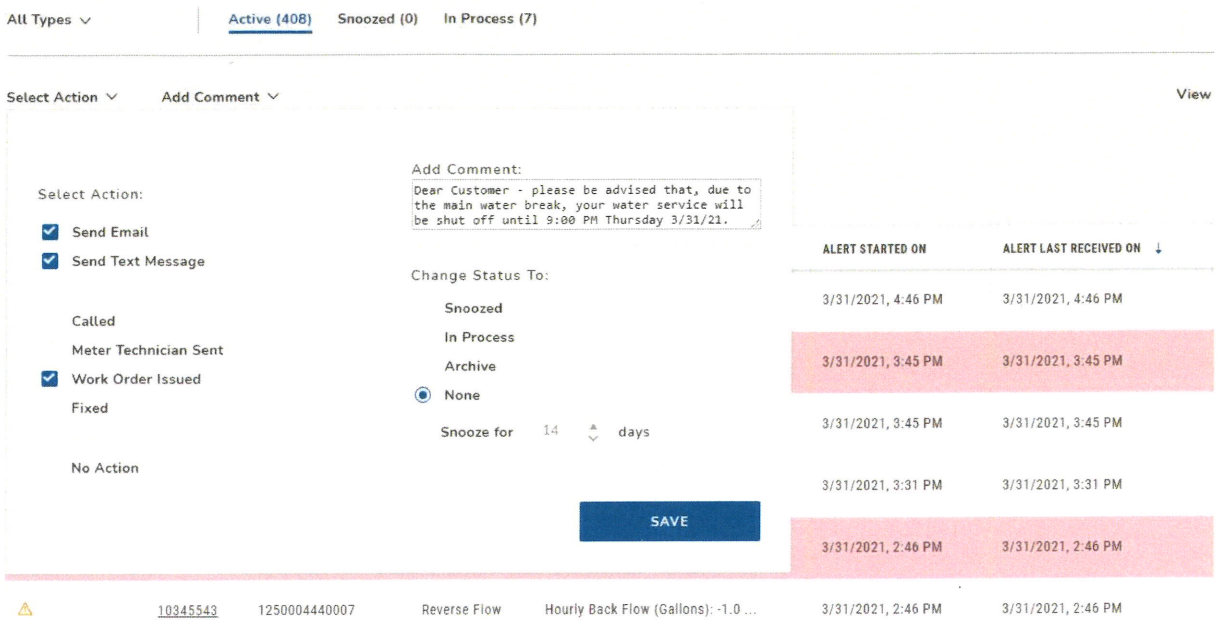


Harmony Encore MDM: Sending a Data Log Request

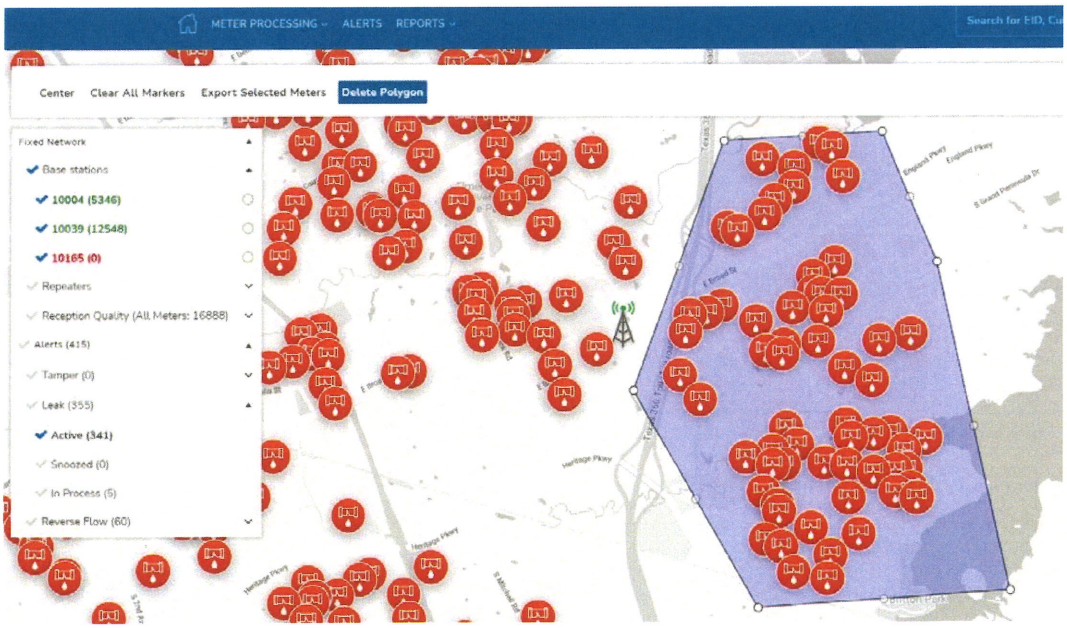


ELECTRONIC ID	ACCOUNT NO.	METER SN	CUSTOMER NAME	ADDRESS	19/2024	20/2024	21/2024	22/2024
2641583	026258-00ab	N/A	PATEL, JAYMIN	113 CATALPA RD	376	594	770	888
2164533	2298011	02164533	GARY E. ATTEB...	3030 N 425 E	1120	1745	1634	1747
2164729	21391011	02164729	CAMERON C. S...	2767 N 900 E	1524	2098	2010	2084
2164954	40004682	02164954	MATT & HOLLY ...	902 E 1510 N	307	588	374	669
2164990	40004803	02164990	ALEXANDER & ...	2408 N MOUNT...	1250	1724	2129	1603
2165142	0000047	02165142	WHITE, DOUG &...	5194 SADDLE P...	760.01	983.88	1029.91	7818.87
2165374	40003621	02165374	ION LEONARD	2677 N 1325 E	686	1027	1072	976
2165727	30624014	02165727	CARL & CRYSTA...	635 E 2300 N	157	354	220	271
2165728	41001011	02165728	RAY WARD	950 E 1700 N	650	1277	1105	1306
2165731	21004271	02165731	RYAN & SUZAN...	2857 N 1425 E	385	525	566	704
2165732	52196023	02165732	RENEE BALDEN...	579 E 1900 N	322	845	604	671
2165734	30688013	02165734	THANE GREENF...	2388 N 675 E	1404	276	3855	1347

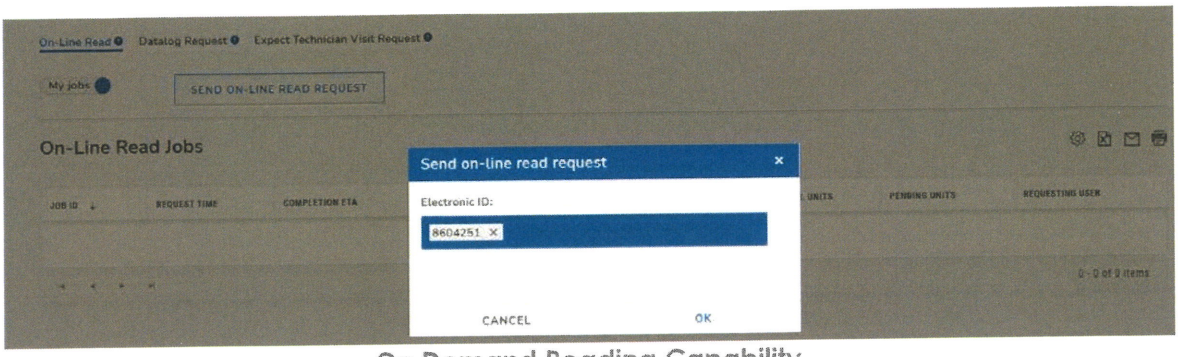
Harmony Encore MDM: Consumption Report



Harmony Encore MDM: Handling Alerts and Customer Digitization

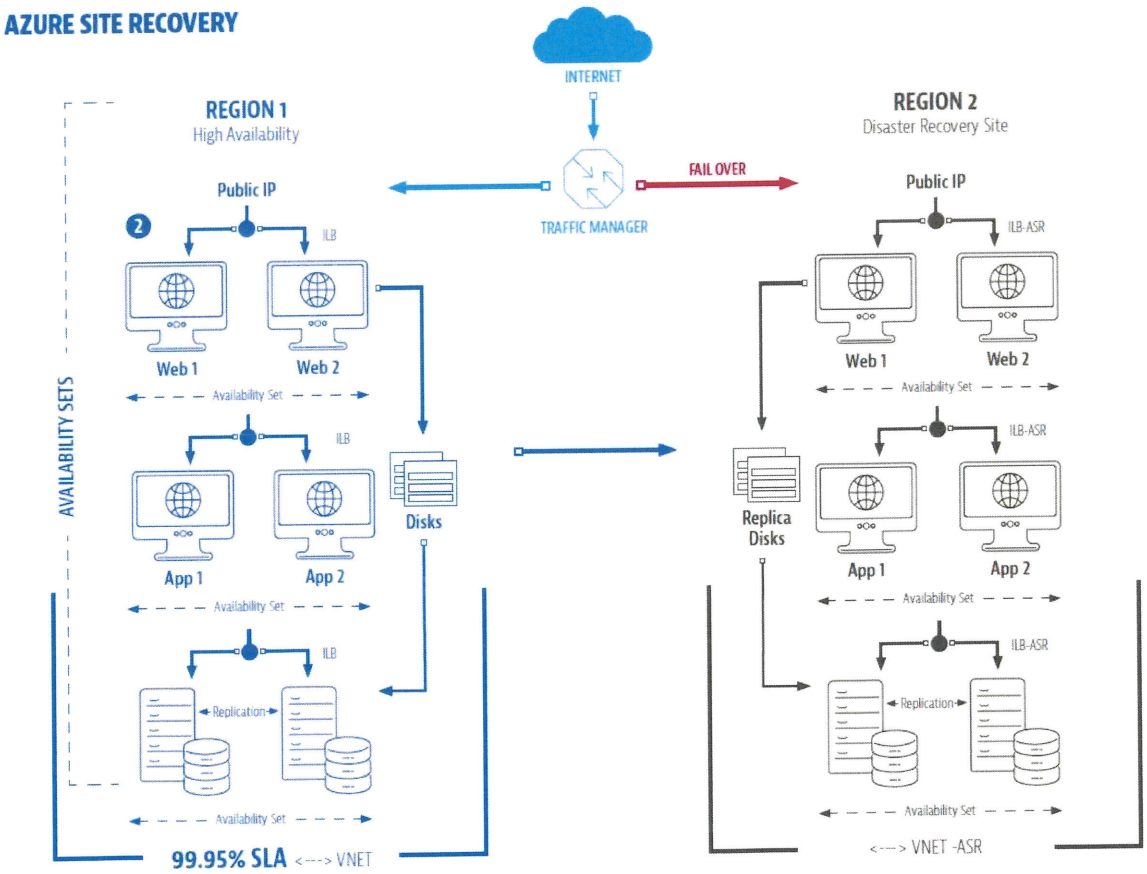


Harmony Encore MDM: Google GIS Built-in



On Demand Reading Capability

DATA & SECURITY



Disaster Recovery: Harmony Encore MDM/HE (Head End Server)

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No Limit:
Master Meter does not limit its customers to a pre-set amount of storage; any metering activity, such as readings, consumption, alerts, are automatically stored in a dedicated cloud server (provided and hosted by Microsoft Azure Cloud Services)

No Time Restriction:
After the default 24-months data storage, data is automatically archived (moved to a separate data table/server) in perpetuity; Master Meter never deletes any of its customer meter data. The Owners can access, export, and save any metering data at any point in time.

Unlimited Data Access:
The user does not directly interact with Microsoft Azure Cloud – the interface is Harmony Encore MDM itself.

Automatic Data Backups:
The user does not directly interact with Microsoft Azure Cloud – the interface is Harmony Encore MDM itself.

In partnership with Microsoft **Azure' MONITOR' services**, Harmony Encore MDM 's monitoring infrastructure automatically detects and diagnoses network issues in real time and then correlates any active infrastructure issues to possible causes for swift resolution. All metrics and logs, such as applications, diagnostics, virtual/cloud uptimes, network security and resource logs, are perpetually stored in data stores for traceability.

Also leveraging Microsoft Azure cloud infrastructure, all Harmony Encore MDM services are protected from loss with an automated backup system to the cloud. **Full backups are taken every week, differential backups every day, and log backups every 5 minutes.**

Master Meter, Inc. achieved ISO 27001 certificate in 2017 and has followed this standard since then. The company is strictly adhering to the technical guidelines as set forth, including the following internal ISMS (Information Security Management System) activities:

- Internal Audit Plans,
- Management Reviews,
- Information Security Risk Objectives,
- Information Security Assessments & Treatment Plans,
- Monitoring, Measurement, Analysis and Evaluation of Existing Documents and Record Controls,
- Organizational Roles & Responsibilities,
- Corrective Actions & Communication Plans,
- Steering Committee Commitments

Furthermore, **Master Meter, Inc. has also achieved SOC Type I and II compliance**; the company will be happy to provide any additional information provided that the suitable NDAs and contract obligations have been met.

MY WATER ADVISOR (MWA)



My Water Advisor is your personal portal for monitoring water consumption, advancing conservation and the stewardship of earth's most precious resource.

My Water Advisor puts the power behind Harmony Encore MDM into the hands of the utility's customer. Ratepayers can quickly jump online using the web-enabled portal or use the My Water Advisor app to access up-to-date hourly usage information, gain insight into their own water usage, and perform comparative usage analysis. MWA empowers a self-serve customer service model for utility customers and helps everyone be their own water manager. My Water Advisor helps stop the endless unexpectedly high month-end bill complaints to City Hall.

Customers can set usage threshold alarms and receive timely leak alerts in the palm of their hands. Conservation begins with information and empowerment. It begins with Master Meter's My Water Advisor Portal and App.

TRAINING AND SUPPORT

TYPICAL CURRICULUM

Master Meter has developed a thorough training process for water utilities. At a glance, a Training Plan specifically created given each water utility's unique requirements will be created. As a minimum, they will cover the following:

I. **INSTALLATION APPROACH**
II. **INSTALLATION TOOLS**
    a. Instructional Analysis & Methods
III. **TRAINING METHODOLOGY**
    a. Training Resources
    b. Training Length
    c. Training database
    d. Training material list
    e. Detailed training curriculum
    f. Categories
        I. Meters
        II. Communications Systems
        III. Software
IV. **TESTING & EVALUATION TRACEABILITY MATRIX**

A Training Plan following the above categories will be created and submitted for the city's review and approval.

SUPPORT



Following the physical installation and set-up of the system, Master Meter technical team will train the water utility employees on their own computers. The trainer(s) will conduct numerous hands-on guidance sessions for the staff, targeting to demonstrate how to operate Master Meter's reading and meter management software applications using actual reads from the installed meters; this will maximize the training objectives as it will demonstrate the system's overall capability to the city personnel using real-word data. Should any errors or problems occur, Master Meter's dedicated training staff will use them as an example for the key personnel during training and report them back to Master Meter engineering team for further support and product enhancements.

STS department has a reactive reporting system to isolate, document, and solve reported hardware/software defects by responding to service requests and product changes and address customer inquiries with printed or electronic documentation, examples, or additional explanation/clarification.

Master Meter is also capable of monitoring and remotely diagnosing any problem in Harmony MDM. Being a SaaS (Software-as-a-Service), a remote connection to the city's computers is almost never necessary. However, in rare cases that such connections are required, Master Meter can remotely connect using a remote access solution (such as built in windows RDP, Team Viewer, VNC, etc.) of the city's choice.

Occasionally on-site troubleshooting/analysis may be required; in this, Master Meter invites the customer's assistance with easy, low time–consuming activities to troubleshoot. Lastly, where required to fulfill a contractual commitment and to minimize the city's business downtime, in addition to any Master Meter Systems Technical support or contracted personnel, a local distributor is also available to assist in resolving any pending system or software concerns.

Master Meter's **SYSTEM TECHNICAL SUPPORT** (STS) has Standard Support hours via:
Toll-free telephone support **1-800-928-6388**, which is available Monday through Friday from 7:00AM to 5:00PM CST

1. Remote hands-on troubleshooting
2. Assist sessions in refresher trainings

This ongoing support will be available to the water utility as part of the annual hosting/support fee; additionally, it will remain available to the City during the contract period so long as these fees are kept current and the technical support for the system remains feasible.

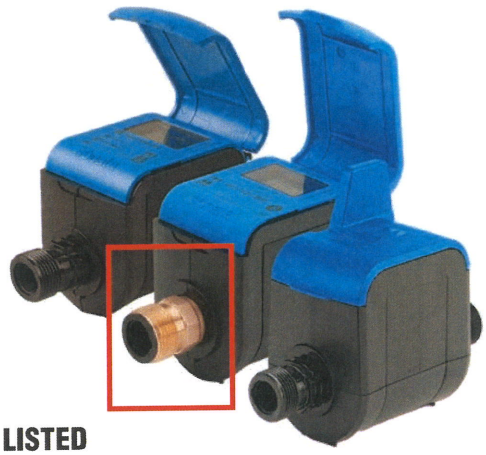
As a universal guide, Systems Technical Support normally provides support for:

1. General questions regarding functionality,
2. Use of product,
3. Instructional how-to's, and
4. Requests for assistance on Master Meter AMR/AMI Network Equipment, Software and Metering Products
5. On-site support to troubleshoot most incurred field issues:
    a. new endpoint registration
    b. endpoint communication problems
    c. base station connections
    d. software how-to's
    e. manual readings of meters, if required

SECTION 4

APPENDICES

SONATA ULTRASONIC METER



NSF UL LISTED

The Sonata Residential Ultrasonic water meter is Master Meter s next step in unifying our ultrasonic solid-state measurement proti e. Utilizing advanced ultrasonic flow measurement, the Sonata greatly improves low fi w measurement compared to residential mechanical meters, making it an ideal solution for addressing Non-Revenue Water (NRW). The Sonata is fully Internet of Things (IoT) ready and capable of meeting the challenges of tomorrow s smart water networks.

Technical Specifications:

AWWA Standard: Meets ANSI/AWWA Standard C715-18 and ISO 4064 rev. 2014

NSF / ANSI Standard: Compliant with NSF/ANSI 372, NSF/ANSI 61, and SDWA.

Residential Fire: Installations in accordance with NFPA 13D. Listed to UL Subject 327B for 3/4" and 1". 5/8" and 5/8"x3/4" excluded from UL Listing.

Working Pressure: 175 PSI

Liquid Temperature: 33 F 122 F

Ambient Temperature: -13 F 131 F for the display

Power Source: Sonata with Integrated Allegro operates on one D Cell Lithium Thionyl Chloride battery. All other Sonata congu rations operate with two C Cell Lithium Thionyl Chloride batteries.

Environmental Protection: Factory potted design provides NEMA 6P (IP68) for meter pit submersion.

Features & Benefits:

- Powerful solution to reduce non-revenue water.
- Compliant with Safe Drinking Water Act (SDWA).
- No moving parts for lifetime accuracy.
- 20 year warranty (10 years full / 10 years prorated).
- Patented obstruction free flow tube minimizes head loss and risk of damage to sonic reflectors.
- Detailed LCD features totalized flow, rate of flow, battery alarm, leak alarm, burst pipe alarm, and tamper alarm.
- Fully submersible; IP68 design.
- Optional Internal RF module for Master Meter Allegro AMI or Master Meter 3G AMR Systems.
- Optional encoder output cable with wired pigtail, Nicor compatible connector, Itron (ILC) compatible connector, or magnetic induction coil, allowing connectivity to third-party AMI or AMR systems.
- Install in a wide variety of positions; horizontal, vertical, or inclined.
- IoT ready for connectivity to Smart City Networks.
- Optional official Reclaim water Pantone color available for all Sonata sizes and models.

SONATA ULTRASONIC METER

Technical Specs (Cont d):

Display Units: Multi line 9 digit LCD (Programmable flow measurement in USG, Cubic Feet, or Cubic Meters. Rate of Flow available in GPM, Lt/s, M^3/h).

Output Configuration: Integrated Allegro RF module, Integrated 3G RF module, or encoder output cable with wired pigtail, Nicor compatible connector, Itron (ILC) compatible connector, or magnetic induction coil, allowing connectivity to third-party AMI or AMR systems.

Data Logging: Internal data logger with consumption reports and alarms.

Construction Material: Lead-free construction available in HP Glass Reinforced Polymer or Brass alloy with Polymer Liner.

Flow Tube: Patented flow tube design utilizes a "Z" shape sonic beam flight pattern. Sound waves are directed along the wider axis of the flow tube and aligned with the majority of the fluid flow. This oblong design of the flow tube minimizes flow disruptions near the transducers, such as cavitation, swirls, and eddies to ensure a wider range of meter accuracy. Moving the transducers to the side walls of the flow tube, rather than on the top of the flow tube, places wide beam ultrasonic soundwaves out of the general path of entrained air bubbles, which typically move to the top of an internal surface.

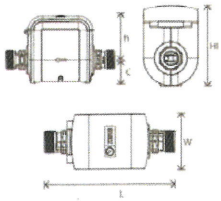
Operating Characteristics and Dimensions:

Sonata Operating Characteristics and Dimensions	5/8" x 1/2" (15 x 13 mm)	5/8" x 3/4" (15 x 20 mm)	3/4" Short (20 mm)	1" (25 mm)
Safe Maximum Operating Capacity	25 GPM (5.7 m^3/h)	35 GPM (7.9 m^3/h)	35 GPM (7.9 m^3/h)	55 GPM (12.5 m^3/h)
UL Operating Range (98.5% - 101.5% Accuracy)*	- -	- -	2 – 30 GPM (0.45 – 6.8 m^3/h)	2 – 50 GPM (0.45 – 11.3 m^3/h)
Normal Operating Range (98.5% - 101.5% Accuracy)*	0.10 – 25 GPM (0.023 – 5.7 m^3/h)	0.10 – 35 GPM (0.023 – 7.9 m3/h)	0.10 – 35 GPM (0.023 – 7.9 m^3/h)	0.38 – 55 GPM (0.09 – 12.5 m^3/h)
Extended Low Flow (97% - 103% Accuracy)	0.03 GPM (0.007 m^3/h)	0.05 GPM (0.01 m^3/h)	0.05 GPM (0.01 m^3/h)	0.11 GPM (0.025 m3/h)
Length	7-1/2" (190 mm)	7-1/2" (190 mm)	7-1/2" (190 mm)	10-3/4" (273 mm)
Width	3" (80 mm)	3" (80 mm)	3" (80 mm)	3" (82 mm)
Height (Integrated Allegro)	4-1/2" (117 mm)	4-1/2" (117 mm)	4-1/2" (117 mm)	4-3/4" (121 mm)
Height from Center Pipe (Integrated Allegro)	3" (80 mm)	3" (80 mm)	3" (80 mm)	3-1/4" (82 mm)
Height (Encoder and Integrated 3G)	4-1/2" (117 mm)	4-1/2" (117 mm)	4-1/2" (117 mm)	4-3/4" (121 mm)
Height from Center Pipe (Encoder and Integrated 3G)	3" (80 mm)	3" (80 mm)	3" (80 mm)	3-1/4" (82 mm)
Weight (Brass)	2.43 lbs (1.1 kg)	2.87 lbs (1.3 kg)	2.87 lbs (1.3 kg)	3.96 lbs (1.8 kg)
Weight (Polymer)	1.76 lbs (0.8 kg)	1.98 lbs (0.9 kg)	1.98 lbs (0.9 kg)	2.20 lbs (1 kg)

* In the water temperature of 45 to 85 F (7 to 30 C), meter consumption is accurately measured at:

+/- 1.5% in the Normal Operating Range

+/- 3% in the Extended Low Flow

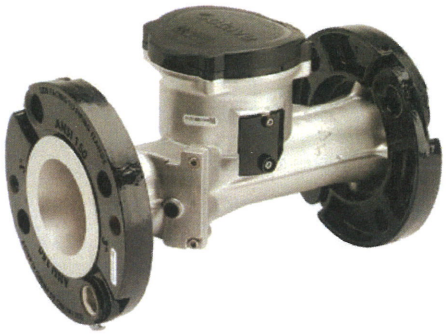




Actual reclaim meter color may vary slightly from the picture shown above.

v0305.25F

OCTAVE ULTRASONIC METER



Available in sizes 1.5", 2", 3", 4", 6", 8", 10", and 12"

UL Certification is available on 1.5" through 8" only.
FM Approval is available on all sizes.

Octave brings the latest in ultrasonic metering technology to Commercial/Industrial (C&I) water meters and puts precise measurement where the real flows exist. An excellent alternative to mechanical compound, single-jet, floating ball, fire-service type and turbine meters, Octave excels at maintaining sustained accuracy for the life of the meter while providing smart AMR capabilities.

Technical Specifications:

Working Pressure - 175 PSI

Liquid Temperature - 33° - 122 °F

Metrological Characteristics - Meets ANSI/AWWA Standards C715-18, C750-19, ISO 4064 rev. 2014

Configuration - Compact-Display built into unit

Power Source - 2 x D Size Lithium Thionyl Chloride batteries - 10 year warranted life time

Environmental Protection - NEMA 6P+ (IP68+), Ambient operation temp. -13 °F / +131 °F for the display

Display Units - Multi line 12 digit LCD (Programmable USG, Cubic Feet, Cubic Meters, Acre Feet for volume and GPM, Lt/s, or M^3/h for rate of flow)

Output - Programmable Encoder, Pulse, 4-20, or Modbus; Optional dual output available in encoder + pulse

Features & Benefits:

- Grade 316 Stainless Steel (2"-8") or Epoxy Coated Ductile Iron (10"-12") body design provides full compliance with ANSI/NSF 372 (AB1953 or NSF61G).
- No moving parts. Minimal flow intrusion. Enduring accuracy.
- Easy to install Floating Flanges on 2"-8" and Integrated Flanges on 10"-12".
- No required strainer.
- Wide beam ultrasonic measurement sensors for high accuracy and reliable operation.
- Industry standard communication protocol for integration with most third-party AMR/AMI systems.
- Active leak, burst, reverse flow, empty pipe, measurement failure, and low battery. LCD also displays rate of flow and water temperature.
- Ruggedized NEMA 6P/IP-68+ construction; fully submersible design.
- Designed to meet standards for both North American and International C&I water meters.
- Optional flow measurements; Forward Only, Net Volume or Alternating Display (Forward and Reverse Consumption displayed separately).

OCTAVE® ULTRASONIC METER

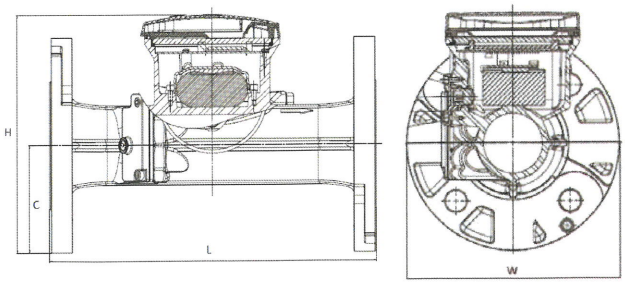
Performance Data & Dimensions

Octave Operating Characteristics and Dimensions	1.5"x13" (40 mm)	2"x10" (50 mm)	2"x15.25" (50 mm)	2"x17" (50 mm)
Safe Maximum Operating Capacity	250 GPM ($57\ m^3/h$)	250 GPM ($57\ m^3/h$)	250 GPM ($57\ m^3/h$)	250 GPM ($57\ m^3/h$)
Normal Operating Range (98.5% - 101.5% Accuracy)*	0.50 – 250 GPM ($0.11 – 57\ m^3/h$)	0.50 – 250 GPM ($0.11 – 57\ m^3/h$)	0.50 – 250 GPM ($0.11 – 57\ m^3/h$)	0.50 – 250 GPM ($0.11 – 57\ m^3/h$)
Extended Low Flow (95% - 105% Accuracy)	0.25 GPM ($0.06\ m^3/h$)	0.25 GPM ($0.06\ m^3/h$)	0.25 GPM ($0.06\ m^3/h$)	0.25 GPM ($0.06\ m^3/h$)
Length	13" (330 mm)	10" (250 mm)	15.25" (390 mm)	17" (432 mm)
Width	5-3/4" (146 mm)	5-3/4" (146 mm)	5-3/4" (146 mm)	5-3/4" (146 mm)
Height	6-3/4" (172 mm)	6-3/4" (172 mm)	6-3/4" (172 mm)	6-3/4" (172 mm)
Height from Center Pipe	2-1/8" (54 mm)	2-1/8" (54 mm)	2-1/8" (54 mm)	2-1/8" (54 mm)
Weight	20 lbs (9 kg)	15 lbs (7 kg)	22 lbs (10 kg)	24 lbs (11 kg)

* In the water temperature of 45° to 85° F (7° to 30° C), meter consumption is accurately measured at:
- +/- 1.5% in the Normal Operating Range
- +/- 5% in the Extended Low Flow

Octave Operating Characteristics and Dimensions	3" (80 mm)	4" (100 mm)	6" (150 mm)	8" (200 mm)	10" (250 mm)	12" (300 mm)
Safe Maximum Operating Capacity	500 GPM ($114\ m^3/h$)	1,000 GPM ($227\ m^3/h$)	1,600 GPM ($363\ m^3/h$)	2,800 GPM ($636\ m^3/h$)	5,500 GPM ($1,250\ m^3/h$)	5,500 GPM ($1,250\ m^3/h$)
Normal Operating Range (98.5% - 101.5% Accuracy)*	1 – 500 GPM ($0.23 – 114$ m3/h)	1.5 – 1,000 GPM ($0.34 – 227\ m^3/h$)	3 – 1,600 GPM ($0.68 – 363\ m^3/h$)	5 – 2,800 GPM ($1.5 – 636\ m^3/h$)	14 – 5,500 GPM ($3.2 – 1,250\ m^3/h$)	14 – 5,500 GPM ($3.2 – 1,250\ m^3/h$)
Extended Low Flow (95% - 105% Accuracy)	0.5 GPM ($0.11\ m^3/h$)	0.75 GPM ($0.17\ m^3/h$)	2 GPM ($0.45\ m^3/h$)	4 GPM (0.9 m3/h)	8 GPM (1.8 m3/h)	8 GPM (1.8 m3/h)
Length	12" (305 mm)	14" (356 mm)	18" (457 mm)	20" (508 mm)	17-3/4" (451 mm)	19-3/4" (502 mm)
Width	7-1/2" (190 mm)	9" (229 mm)	11" (280 mm)	13-1/2" (343 mm)	16" (406 mm)	19-3/4" (502 mm)
Height	8-1/2" (216 mm)	9-7/8" (250 mm)	10-7/8" (276 mm)	12-7/8" (327 mm)	16-1/2" (419 mm)	19-3/4" (502 mm)
Height from Center Pipe	3-1/2" (90 mm)	4-1/2" (115 mm)	5-1/8" (130 mm)	6-3/8" (162 mm)	8" (203 mm)	9-7/8" (251 mm)
Weight	23 lbs (10.5 kg)	35 lbs (16 kg)	51 lbs (23 kg)	78 lbs (35 kg)	150 lbs (68 kg)	210 lbs (96 kg)

* In the water temperature of 45° to 85° F (7° to 30° C), meter consumption is accurately measured at:
- +/- 1.5% in the Normal Operating Range
- +/- 5% in the Extended Low Flow



NOTE — For Performance charts please see **Engineering Document - Octave | Version 10.17.**

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ALLEGRO® CELLULAR



Allegro Cellular is Master Meter's cutting-edge AMI solution that harnesses the power of IoT to revolutionize water management. By leveraging existing cellular networks, we deliver a robust, secure, and cost-effective platform for collecting and transmitting meter data. Experience accelerated digital transformation without the complexities of infrastructure deployment.

Designed with unparalleled flexibility, Allegro Cellular can operate as a standalone Network-as-a-Service (NaaS) or seamlessly integrate with your existing AMI infrastructure. Our versatile endpoints are compatible with virtually any meter model, simplifying the transition to smart water management. Rapid deployment and immediate network connectivity provide the full spectrum of benefits associated with traditional fixed solutions, minus the hefty investment in network infrastructure.

Features & Benefits:

- **No Infrastructure Required** - Allegro Cellular utilizes existing cellular networks to transmit meter consumption data, eliminating the need for the City to construct and maintain new communication infrastructure. This translates to significant cost savings, particularly for smaller systems or low-density rural environments looking to implement AMI quickly with minimal upfront investment. Yearly fees apply for cellular network usage.
- **Secure Data Transmission:** Utilizes secure cellular protocols (3GPP), VPN tunnels, and encrypted radio transmissions for complete data protection.
- **Reliable Network Coverage** - Leverages existing cellular network infrastructure with close to 100% coverage and uptime, providing highly reliable system operation and strong Quality of Service (QoS). Additionally, Cat-M LTE cellular networks boast nationwide coverage (98% of the US) with built-in redundancy for even greater reliability.
- **Robust Technology** - Cellular endpoints are not "new technology" as cellular technology has been a part of our everyday lives for decades. Cellular networks are built around incredibly robust, proven technology that used by thousands of different IoT applications across countless industries.

ALLEGRO® CELLULAR

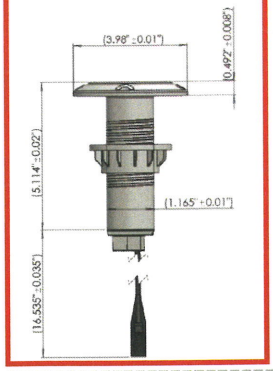
Technical Specifications:

- **Technical Parameters** - With a radiated optimal transmitted power and a frequency range spanning from 2.402 GHz to 2.48 GHz, Allegro Cellular ensures optimal performance across various applications. Specifically engineered to operate seamlessly within AT&T Cat-M LTE Bands 12, 4, and 2, Allegro Cellular guarantees reliable connectivity and an exceptional user experience
- **Housing** - Both pit and wall mount units utilize high-density ABS polymer enclosures, offering a weatherproof seal to protect internal electronics, power, and radio components from harsh or damp environments. Wall mounts include molded brackets for secure installation on masonry, wood, or any permanent building material.
- **Environmental Protection** - The wall-mount cellular endpoint is IP66-rated for non-submersible, outdoor installations. The pit-mount cellular endpoint is IP68-rated for installation and operation in a submersed environment, to provide protection against moisture intrusion and other environmental hazards common in a meter pit installation setting. Electronics are coated for added environmental protection.
- **Antenna** - Both the pit-mount and wall-mount cellular endpoints have an integrated antenna, 3.98" or less in diameter. The pit-mount antenna neck will fit within an industry-standard 1.75" hole in the meter lid with a locking mechanism underneath to secure the device.
- **Power Source** - The wired cellular endpoints are battery operated using a non-replaceable single C-cell Lithium Thionyl Chloride battery designed for a long operational life and is fully warranted for 20 years based on one (1) transmission per day. Please refer to Master Meter's Consolidated Warranty.
- **Intelligent Encoder Detection** - The cellular endpoint can automatically detect and communicate with industry-standard 3-wire encoded meters (manufactured within the past 10 years), requiring no additional programming. The unit will determine the appropriate protocol based on meter interrogation.*
- **Data Logs and Alarms** - Allegro cellular endpoint offer advanced data logging capabilities, storing a maximum of 5,760 data points (60 days of 15-minute reads) and providing on-demand access to this data, including logged events for alarms like Cut Wire, Low Battery, Leak, CCW, and Burst, via MDM user command or compatible Bluetooth-enabled field applications.
- **Activation** - The cellular endpoint arrives in storage mode and activates during installation using a magnet. After activation, the cellular endpoint connects to the cellular network once a day (by default).

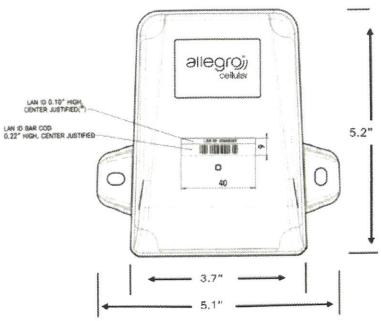
* Approved encoded registers include Master Meter (Elinx, Accuinx, Sonata, Octave), Badger (HRE, ADE, E Series), Sensus (ECR II, ICE, IPerl, Electronic Register, Omni), Hersey/Mueller Translator, and 420 Solid State Registers.

Dimensions

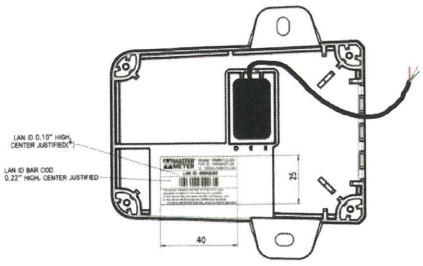
Pit Unit - Sideview



Wall Unit - Front



Wall Unit - Back



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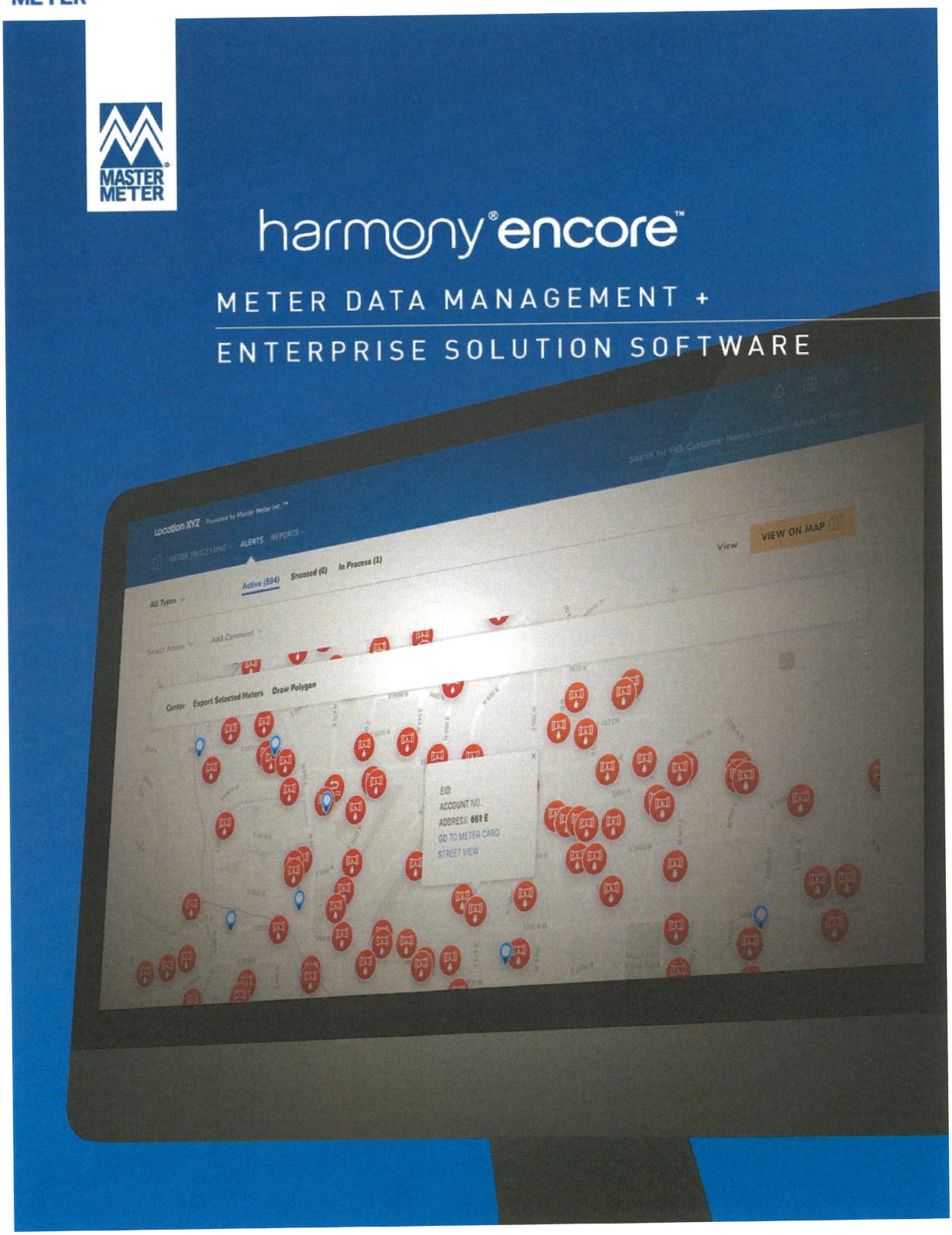

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harmony® encore™

METER DATA MANAGEMENT + ENTERPRISE SOLUTION SOFTWARE

Master Meter took our best-in-class Harmony MDM software and completely re-envisioned every aspect including its design, interoperability, user experience (UX), and speed to bring North American utilities an entirely new software experience to be more intuitive, natural, with key information that is a single click away. Harmony Encore makes sense of consumption information, empowers customer service, and simplifies meter operations that solve today's most pressing utility challenges and those of tomorrow.

The Harmony Encore Suite is an open platform designed to be universally compatible with every Mobile AMR or AMI Network on the market today. How the data arrives isn't important because Harmony Encore is system agnostic. Its integrated Google® Mapping Tools and advanced Meter Data Management (MDM) features provide an exceptional environment for managing, reporting, and analyzing advanced metering infrastructure and mobile drive-by AMR information. Leveraging the Microsoft® Azure™ cloud, Harmony Encore delivers super-fast performance bringing the Internet of Things (IoT) into any sized water utility.



* To the best of our knowledge at the time of publishing.

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HARMONY ENCORE SOFTWARE

METER DATA MANAGEMENT + ANALYTICS

INFORMATION STUNNINGLY PRESENTED

Harmony Encore represents much more than a face lift to our award-winning Harmony MDM software. We've completely reimagined our software with faster performance, a refined, more intuitive user experience, and improved functionality.

Harmony Encore is the direct result of ideas and input from collaboration with water utilities during early design. Data is made more useful through enhanced clarity and design simplicity. Easily review system-wide consumption and make sense of it with a wide array of chart and map views. Analyze consumption trends relative to precipitation with Harmony Encore's "Consumption Cluster" mapping tool for a graphical model of high-and-low consumption regions.

VISIBILITY SNAPSHOT

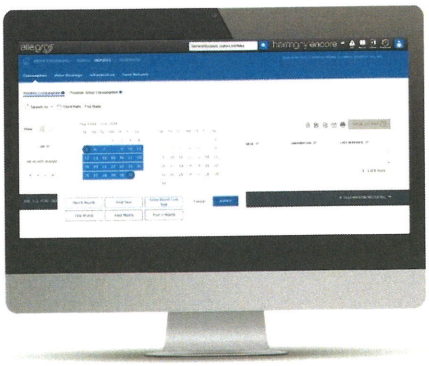
- Technology platform agnostic - Harmony Encore loves 3rd party data
- Simple, scalable HANDHELD → AMR → AMI technology migration
- Dynamic 2-way communication with endpoints and field assets
- Scalable, Microsoft® Azure™ Cloud hosted software supports any account size
- Cross platform SaaS works seamlessly with Windows and Apple environments
- Multiple GIS data layers including Google Streetview™ for quick service location inspection prior to truck roll
- Easily create District Metered Areas (DMA) with Harmony Encore's Polygon + Tool™ to analyze water loss and flow

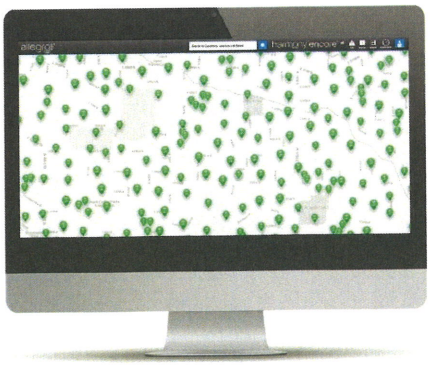
CUSTOMIZABLE REPORTS

Leveraging the Microsoft® Azure™ cloud, Harmony Encore creates an exceptionally intuitive user experience for displaying and analyzing important data in a multitude of ways such as customizable reports, charts, graphs, and analyzing data from AMI and mobile data acquisition systems and providing insights. Harmony Encore also offers end-to-end data security and deep encryption to protect your customer's information and network access.

24/7 MONITORING

Harmony Encore monitors both water loss and network performance in real time using Allegro Licensed AMI. Critical alerts such as leak, tamper or reverse flow trigger timely notifications to utility personnel. Leverage an AMI network's two-way communication capabilities using On-Demand Reads and Data Logging directly from within Harmony Encore. Quickly scroll and zoom to view RF performance and network health to preemptively manage issues before they become serious.





HARMONY ENCORE GETS ALONG WITH EVERY METER DATA SOURCE

HARMONY ENCORE'S FLEXIBLE DATA MANAGEMENT

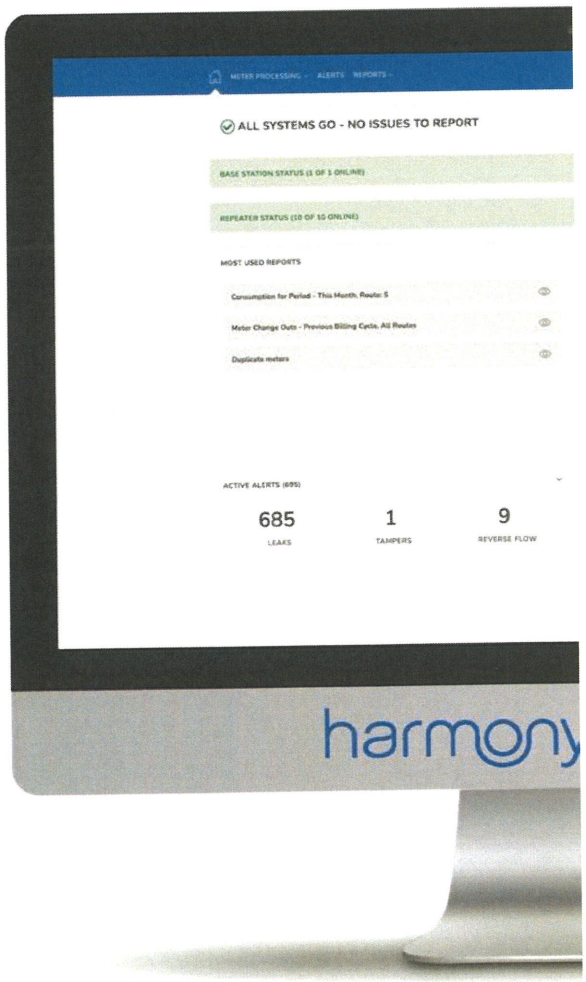
Harmony Encore simply loves data and it's incredibly accommodating regardless of which manufacturer's brand it comes from or the technology type used to provide it. Broad interoperability is a cornerstone in Harmony Encore's development. All Allegro Licensed, Allegro Cellular, and Allegro IoT Advanced Meter Infrastructure (AMI) technologies innately integrate with Harmony Encore - it's even backwards compatible with Master Meter's 3G Mobile AMR meter reading system and earlier hand-held data systems.

The GPS-based Mapping software means that vehicles and personnel are always connected for asset management and inventory controls. Leverage the Microsoft® Azure™ Cloud Platform for seamless data integration between Harmony Enterprise Platform and Harmony Mobile™.

allegro® licensed

allegro® cellular

allegro® iot



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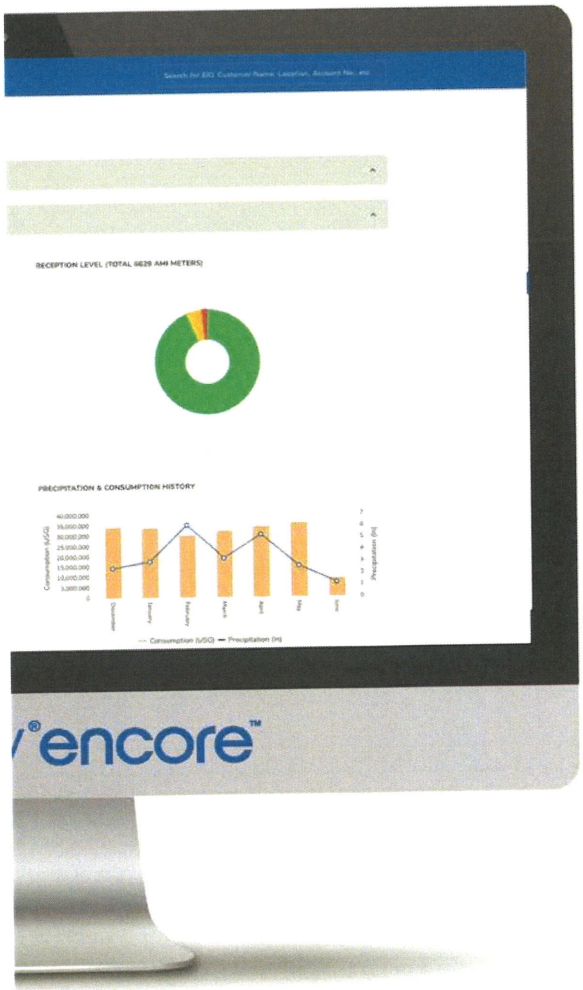
REVENUE IMPACT ALERTS™

Leak Alerts and Flow Monitoring assist in reclaiming lost revenue from unaccounted for water and right-sizing of meters. In addition, notifications for theft and tamper are relayed back to the Cloud for analysis and action. Inactive meters are also identified and queued for inspection.



ANY METER. ANYWHERE.

Harmony Encore's integrated API capabilities will eliminate 3rd party software incompatibility challenges and foster seamless integration and system future proofing. This new level of software flexibility makes possible the integration of nearly every meter data source for every meter. The utility receives a robust, multifaceted data platform that supports two-way communication and provides consumption analysis down to 15 minutes. Remote programming of Meters and Remote Firmware Upgrades are also available through Harmony Encore's Enterprise platform while using the Allegro AMI system.

FEATURES FOCUS:

- MDM is agnostic towards the chosen meter and AMI tech
- Flexible, modular software is forward-ready to support future growth in functionality
- Secure offsite cloud-based data redundancy and remote storage
- Designed for utilities by utilities with continually enhanced features and modules
- Integration of external data: GIS, CIS and other applications via APIs

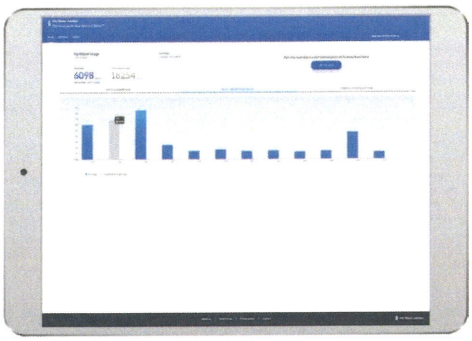
CUSTOMER ENGAGEMENT

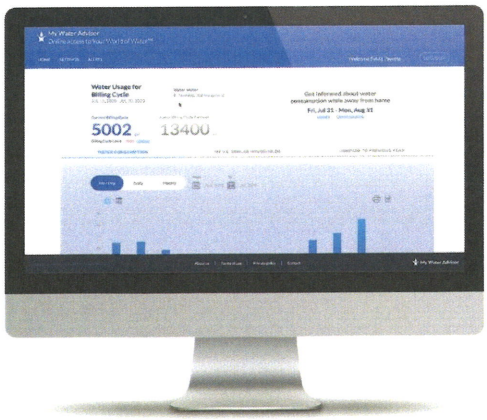
MY WATER ADVISOR™

CUSTOMER ENGAGEMENT SUITE

CUSTOMER WEB PORTAL + SMART PHONE INTEGRATION

Place the power of Harmony Encore in the hands of your utility customer, with the My Water Advisor™ customer engagement web portal. The online application allows for convenient access to up-to-date hourly usage information. The chart view allows for daily, monthly, and yearly review of water usage and also shows a comparison to the user for real accountability. This full-featured water portal allows the user to set up alerts for on-premises leak detection, over-budget notifications, and gives the ability to set vacation periods to be notified of unusual, unauthorized usage while a customer is away.





Both iOS and Android can easily display My Water Advisor™. This water management software for the consumer puts the power of the online portal in the rate-payer's hands allowing for simple management of their usage via a smart phone.



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Consolidated Measurement and Systems Products & Meter Accuracy Warranty

Multi-Jet 5/8" –2" and Positive Displacement 5/8" – 1"

Scope of Integrity

This warranty applies exclusively to Master Meter Multi-jet 5/8", 3/4", 1", 1.5", and 2" meters and Positive Displacement 5/8", ¾", and 1" meters when used for clean cold potable water (per applicable AWWA Standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

Materials and Workmanship

If used and installed as described above, Master Meter warrants all Multi-jet (5/8", 3/4", 1", 1.5" and 2") and Positive Displacement (5/8", ¾", and 1") to be free from defects in materials and workmanship for a **period of 24 months.**

Case Integrity

If used and installed as described above, Master Meter, Inc. warrants that the low lead bronze cases of the 5/8", 3/4", 1", 1.5" and 2" Multi-Jet Meters and the 5/8", ¾", and 1" Positive Displacement Meters will retain their structural integrity **for a period of 25 years** from the date of Master Meter shipment.

The Master Meter Positive Displacement meets or exceeds the AWWA's most recent revision of C700 Standard for Accuracy
The Master Meter Multi-jet meets or exceeds the AWWA's most recent revision of C708 Standard for Accuracy.

20 YEAR TOTAL ACCURACY GUARANTEE					
5 YEARS NEW	15 YEARS REPAIRED				
	5/8" x 3/4"	3/4"	1"	1.5"	2"
NEW Meter Accuracy	5 Years or 750,000 USG	5 Years or 750,000 USG	5 Years or 1,100,000 USG	5 Years or 1,600,000 USG	5 Years or 2,100,000 USG
REPAIRED Meter Accuracy	15 Years or 2,500,000 USG	15 Years or 2,500,000 USG	15 Years or 3,250,000 USG	15 Years or 5,600,000 USG	15 Years or 10,400,000 USG

Ultrasonic Smart Measurement

SONATA Ultrasonic for Residential Applications

Scope of Integrity

This warranty applies exclusively to Master Meter Sonata 5/8", 3/4" and 1" meters when used for clean cold potable water (per applicable AWWA standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

Case Integrity

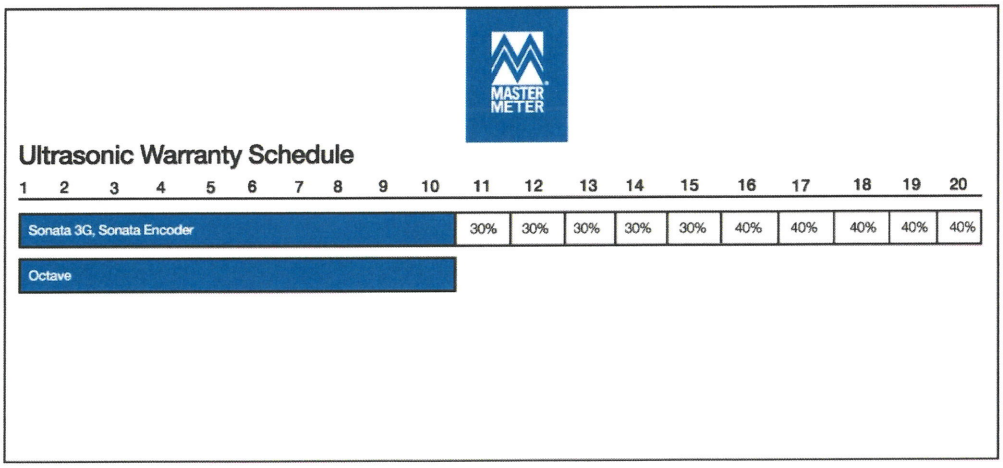
If used and installed as described above, Master Meter warrants all Sonata meters (5/8", 3/4" and 1") will retain their structural integrity for a **period of 20 years.**

Electronics

If used and installed as described above, Master Meter warrants all Sonata meters (5/8", 3/4" and 1") batteries, transducers, LCD, and communications output (encoder, or integrated 3G Radio) will be warranted for a **period of 20 years**. Master Meter will repair or replace the meter at no cost for the first ten (10) years and prorated in Years 11 – 20 as listed below.

Accuracy

Master Meter warrants all Sonata meters (5/8", 3/4" and 1") will meet or exceed +/- 1.5% accuracy in the Normal Operating Range of the meter, as defined in the latest revision of the Sonata Product Data Sheet for a **period of 20 years**. Master Meter will repair or replace the meter at no cost for the first ten (10) years and prorated in Years 11-20 as listed below.



OCTAVE Ultrasonic for Commercial and Industrial (C&I) Applications

Scope of Integrity

This warranty applies exclusively to Master Meter Octave 1.5" - 12" meters when used for clean cold potable water (per applicable AWWA standard) and installed in accordance with Master Meter published installation instructions in effect as of the date of Master Meter's shipment. This warranty applies exclusively to the original utility purchaser when product is purchased from either Master Meter or an authorized Master Meter distributor. Coverage in both terms of time and registered usage is from date of shipment by Master Meter.

Case Integrity

If used and installed as described above, Master Meter warrants all Octave meters (1.5" – 12") will retain their structural integrity for a **period of 10 years.**

Electronics

If used and installed as described above, Master Meter warrants all Octave meters (1.5" - 12") main board, batteries, transducers and LCD will be warranted for a **period of 10 years**. Externally attached communication output modules (encoder, pulse, 4-20, dual output and Modbus) will be warranted for a **period of 1 year.**

Accuracy

Master Meter warrants all Octave meters (1.5" - 12") will meet or exceed +/- 1.5% accuracy in the Normal Operating Range of the meter, as defined in the latest revision of the Octave Product Data Sheet for a **period of 10 years**.

C&I Products – Turbines, Fire Hydrant Meters

Turbine Meters and **Fire Hydrant Meters**

Master Meter 2" – 8" bronze body and 10" and 12" cast iron body **Turbine Meters** and **Fire Hydrant Meters** are warranted to perform to all applicable AWWA accuracy standards. Turbine and Fire Hydrant Meters are warranted be free from **material and workmanship** defects for **two years (24 months)** as of the date of Master Meter's shipment. Master Meter Turbine and Fire Hydrant Meters are warranted for accuracy for **one (1) year** from the date of Master Meter shipment.

Allegro Infrastructure & Equipment Warranty

Base Station	One (1) year[2]
Repeater[1]	One (1) year[2]
Mobile Receiver	One (1) year

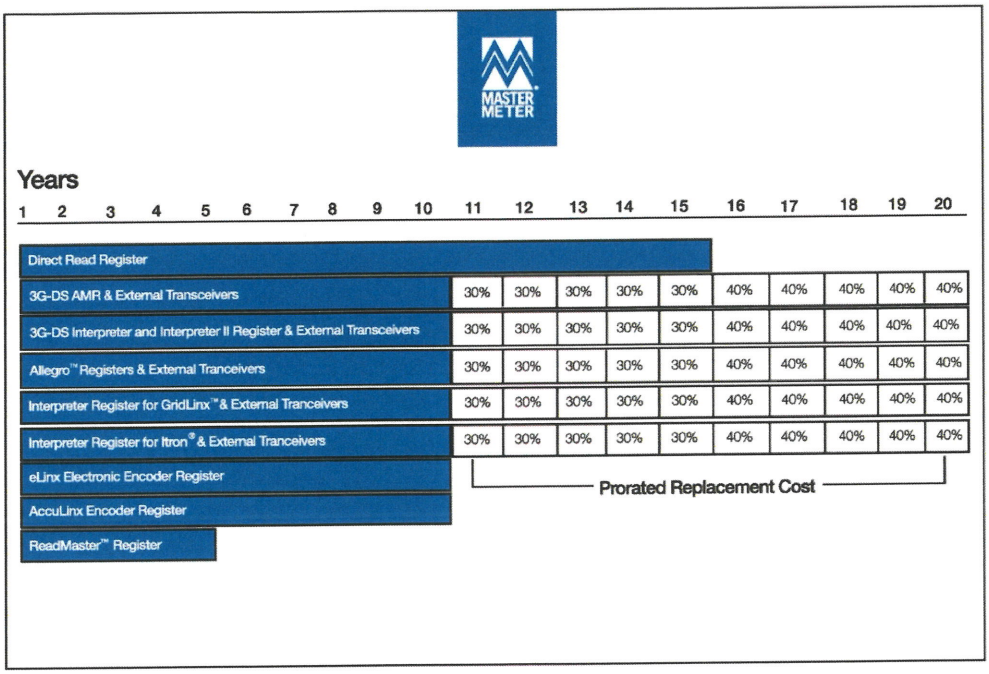
1. **Repeater**. This covers all versions of repeaters, including but not limited to: Standard Repeater, Photocell Repeater, and Solar Repeater

2. **Extended Warranty.** Additional warranty for Allegro Infrastructure Equipment can be purchased on a per unit basis. Master Meter's Extended Warranty must be purchased within 12 months of the original shipment date of equipment. Eligibility is based on continuous annual enrollment.

Escalation for Services: five percent (5%). Services. Invoices for Ongoing Fees and services shall be delivered annually or monthly, as applicable, in advance. Invoices for other services shall be delivered upon completion of the applicable service.

ALL MASTER METER PRODUCTS NOT SPECIFICALLY IDENTIFIED ABOVE, OR ANY METER USED FOR NON-POTABLE WATER, ARE WARRANTED TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE (1) YEAR AS OF THE DATE OF MASTER METER'S SHIPMENT.

Register & Electronics – General Limited Warranty



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I. Master Meter, Inc. ("Master Meter") warrants its products and parts to be free from defects in material and workmanship for **one (1) year** from the date of Master Meter's shipment, if not otherwise specified or as set forth in this document.

II. **Allegro™** Integrated registers and **Allegro™ External Transceiver Modules** are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above (configured to the original factory settings of twice daily transmissions of 12 hourly interval reads, allowing for no more than 2 customer requested firmware upgrades for the life of the product, and no more than 4 data logs per year.) All other Allegro System Components are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

III. **Allegro™** Cellular AMI Endpoints are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter, and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above (configured to the original factory settings). All other Allegro Cellular System Components are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

Allegro Cellular Network Availability:

In the event that the Communication Network ("Network") utilized by Customer's Allegro Cellular AMI Endpoints ("Endpoints") is explicitly and publicly discontinued by the Network Operator, rendering the Endpoints unusable, Master Meter will supply Customer with replacement Endpoints supported by the most current readily available full-scale technology at no charge to the Customer during years one (1) through ten (10) of the Endpoints written warranty. Any Endpoint replaced during years one (1) through ten (10) will carry the balance of its original warranty based on shipment date. Any Endpoint in the pro-rated portion of the written warranty will be replaced according to the pro-rated cost schedule included in this Warranty. Customer shall be solely responsible for all costs, both direct and indirect, associated with the replacement of such Endpoints.

IV. **DIALOG 3G™ DS, DIALOG 3G™ DS Interpreter / Interpreter II** registers, and **DIALOG 3G™ External Transceiver Modules** are

warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above *(configured to the original factory settings with a typical usage of no more than 4 data logs per year.)* All other DIALOG 3G DS System components and features are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

V. **Interpreter™ Register with GridLinx™ Protocol, Interpreter™ Register with Itron® (formerly Silver Spring Networks) Protocol**, and all **GridLinx or Itron External Transceiver Modules** operating on the GridLinx and Itron Network are warranted to be free from defects in materials and workmanship for **Ten (10) years** from date of shipment by Master Meter and at a prorated replacement cost of current list price during the following **Ten (10) years** based on the discounted rate value listing above (configured to the original factory settings.) All other System Components for Registers based on GridLinx and Itron Network are warranted to be free from defects in materials and workmanship for **One (1) year** from date of shipment by Master Meter.

VI. **AccuLinx™, eLinx™**, and **DIRECT READ** registers are warranted to be free from material and workmanship defects for **ten (10) years**, and **DIRECT READ** registers for **fifteen (15) years**, from date of Master Meter shipment. All other Master Meter products not specifically identified above are warranted to be free of defects in materials and workmanship for **one (1) year** from date of Master Meter shipment.

VII. **ReadMaster™** registers are warranted to be free from material and workmanship defects for **five (5) years** from date of shipment by Master Meter *(configured to the original factory settings four (4) transmissions daily)*. All other ReadMaster system components not specifically identified above are warranted to be free of defects in materials and workmanship for **one (1) year** from date of shipment by Master Meter.

VIII. **DIALOG 3G™ Gas Modules and DIALOG 3G™ Electric Modules** are warranted to be free from defects in material and workmanship for **one (1) year** from date of shipment by Master Meter.

IX. RETURNS: Master Meter's obligation, and Customer's exclusive remedy, under this Limited Warranty is, at Master Meter's option, to repair or replace the product, provided the Customer (a) returns the product to the location designated by Master Meter within the warranty period; and (b) prepays the freight costs to such location.

Warranty & Limits of Liability

This warranty does not apply to meters or registers determined by Master Meter, at its sole discretion, to have been damaged by aggressive water conditions, foreign matter in water, vandalism, negligence, installation not in accordance with Master Meter, Inc. installation instructions, misapplication or other use not as described on this document, acts of God or other conditions beyond the control of Master Meter, Inc. This warranty is null and void if it is determined by Master Meter that a meter is altered by the addition of any register not manufactured by or on behalf of Master Meter, Inc. for its specific model and size. If a meter is claimed to breach the accuracy guarantees as stated herein, the customer shall submit a certified copy of the test results at the time the meter is returned to Master Meter, Inc. The accuracy warranty shall be void if an examination of the customer's water system shows poor water quality causing an unusually adverse effect on metering equipment.

Master Meter's liability under this warranty is expressly limited to repair or replacement of the product, or similar product and/or component, at Master Meter's sole discretion, at Master Meter's option. The repaired or replacement product will maintain the original meter's warranty based on the original purchase date. The customer must pay for freight cost of the returned product or products to the factory or service center designated by Master Meter. The product returned becomes the property of Master Meter.

If product is not determined to be under warranty, customer will pay freight for return of the original product. If the product is determined to be under warranty, the product will be repaired and returned to the customer, replaced, or Master Meter will determine a suitable substitute (at Master Meter's sole option), with freight paid by Master Meter. The original product returned becomes the property of Master Meter. Master Meter shall not be liable for special, incidental, in-direct or consequential damages of any kind.

The return of products for warranty claims must follow Master Meter's Returned Materials Authorization (RMA) procedures. All Master Meter Products returned must be affixed with an approved Return Authorization form. For all returns, Master Meter reserves the right to request meter reading records by serial number to validate warranty claims.

For products that have become discontinued or obsolete ("Obsolete Product"), Master Meter may, at its discretion, replace such Obsolete Product with a different product model ("Replacement Product"), provided that the Replacement Product has substantially similar features as the Obsolete Product.

Any description of product, whether in writing or made orally by Master Meter, Inc or its agents, specifications, samples, literature, models, bulletins, drawings, diagrams, data sheets or similar materials used in connection with any customer's order are for the sole purpose of identifying product and shall not be construed as an express or implied warranty. Any suggestions by Master Meter, Inc. or its agents regarding use, application, or suitability of product shall not be construed as an express or implied warranty unless confirmed to be such in writing by Master Meter, Inc.

If any provision hereof, partly or completely, shall be held invalid or unenforceable, such invalidity shall not affect any other provision or portion hereof and these terms shall be construed as if such invalid or unenforceable provision or portion thereof had never existed.

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Governing Law and Venue. ALL DISPUTES ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE GOVERNED BY TEXAS LAW, EXCLUDING ITS CHOICE OF LAW RULES, WITH JURISDICTION AND VENUE IN THE STATE OR FEDERAL COURTS OF TARRANT COUNTY, TEXAS. THE PARTIES CONSENT TO THE PERSONAL JURISDICTION OF, AND VENUE IN, SUCH COURTS AND AGREE THAT NO SUCH COURT IS AN INCONVENIENT FORUM.

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PHOENIX
WATER SOLUTIONS

Town of Jerome

Advanced Metering Infrastructure (AMI) System – Implementation Project

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Phoenix Water Solutions RFP Installation Overview

Town of Jerome – Advanced Metering Infrastructure (AMI) System Implementation Project

Phoenix Water Solutions (PWS) has prepared this installation proposal in support of the Town of Jerome's Advanced Metering Infrastructure (AMI) System Implementation Project.

Our team is prepared to perform all installations and related work to successfully replace 332 existing water meters with new AMI-enabled meters, as outlined in the Town's RFP. The scope includes pit box excavation, meter removal, installation, endpoint mounting, programming, all data points captured in the field and provided to the TOJ.

We recognize the unique conditions of Jerome's hillside topography and aging infrastructure and bring to this project a highly qualified installation workforce with proven experience in municipal AMI deployments across Arizona and California.

Field Capabilities

Our experienced field technicians are proficient in residential and commercial meter installation and have been specifically prepared for the scope and conditions of the TOJ meter upgrade project. Core capabilities include:

- Installation of ¾" through 4" water meters
- Debris cleanout and pit box restoration
- Endpoint and antenna integration (through lid or bottom mount)
- Meter programming
- Meter box adjustments for accessibility
- Plumbing reconnections and adjustments (e.g., valve access, service line positioning)
- Real-time field documentation, including GPS location, time stamps, and before/after photos

All installations are completed in accordance with manufacturer specifications, TOJ technical standards, and internal quality control protocols. PWS will support in ensuring full data integrity and compliance for project reporting, inspections, and federal funding guidelines (including WIFA funded requirements).

Site Familiarity & Pre-Bid Understanding

Phoenix Water Solutions (PWS) has thoroughly reviewed the Town of Jerome Advanced Metering Infrastructure (AMI) System RFP, including all technical specifications, and compliance requirements.

Our team has extensive experience performing meter upgrade projects in rural communities with similar characteristics—rocky terrain, historic infrastructure, and varying conditions of service lines. Based on our precon assessment with Town of Jerome field staff we understand and anticipate the following field conditions throughout the project duration:

- Varying types of meter boxes and sizes
- Legacy service line materials
- Metered locations vary throughout the town with pit boxes on hillsides and areas requiring coordinated access
- Excavation and restoration requirements across certain residential & commercial service locations

We are fully prepared to adapt in the field and escalate concerns as needed through the proper communication channels defined by the Town of Jerome.

Full-Scope Installation Delivery

Phoenix Water Solutions delivers a turnkey field operation for this scope.

- No subcontracted labor – all crews are in-house & trained with varying years of experience
- Designated field supervisors are assigned to oversee all activities
- Quality Assurance is built into our bid and install process
- Our backend administrative team tracks production, submits reporting, and assists in daily recordkeeping

We are fully equipped to support Change Order procedures if needed for additional repairs or work outside the defined bid items when pre-approved by the Town of Jerome.

Service Agency & Service Agents

As a fully registered and licensed contractor in the state of Arizona, Phoenix Water Solutions is uniquely positioned to deliver high-quality, fully compliant utility infrastructure services for municipal, district, and public agency clients across the state. Our qualifications, certifications, and in-house capabilities not only meet—but exceed—the expectations set forth for public works contractors in Arizona.

Regulatory Compliance & Licensing

PWS holds a valid Arizona Registrar of Contractors license for CR-37 (Plumbing) under license number ROC #339119. We are fully registered with the Arizona Corporation Commission and maintain active status with all required state and municipal licensing authorities.

PWS is a Registered Service Agency with the Arizona Department of Weights and Measures (AZDWM), ensuring that all metering services we perform—including removal, installation, calibration, and testing—are legally authorized, traceable, and compliant with Arizona state standards.

These credentials reflect our unwavering commitment to regulatory adherence, technical accuracy, and public accountability.

Certified Service Agents & Metering Expertise

PWS employs certified service agents and technicians trained in the installation, replacement, and maintenance of water, BTU, and electric meters. Our staff are familiar with a wide variety of AMI and AMR technologies, endpoint integrations, and service line plumbing repairs.

Our technicians undergo routine field and safety training to ensure alignment with:

- ADOSH (Arizona Division of Occupational Safety and Health) safety and confined space standards
- Equipment-specific manufacturer specifications
- Local utility and water agency protocols, GIS documentation, and meter data formats

In-House Workforce Model

PWS performs all installations using in-house, full-time employees—not subcontractors. This model allows for:

- Greater control over quality, schedule, and documentation

- Professionalism and consistency across job sites
- Streamlined issue resolution and reduced delays

Our crews are uniformed, background-checked, and trained to uphold strict jobsite standards with minimal disruption to customers.

Integrated Turnkey Delivery

With a deep understanding of metering infrastructure, PWS offers a turnkey service model that includes:

- Project mobilization and workforce deployment
- Field data capture (serial numbers, photos, GPS, and field notes)
- Component replacement (boxes, lids, valves)
- Quality control and warranty-backed labor
- Digital transmittals and reporting in agency-requested formats

Whether performing 500 meter retrofits or replacing tens of thousands of meters under an AMI upgrade, PWS delivers clean, consistent, and fully documented work across all phases of the project.

Trusted by Utilities & Districts Across Arizona

With a focus on quality, reliability, and long-term infrastructure outcomes, PWS has become a trusted partner for metering projects statewide. Our licensing, internal systems, and field-tested workforce make us a strong fit for any public agency or utility seeking a contractor who understands the regulatory, logistical, and technical demands of utility service installation work.

Process to Complete Work

Proposed Work Plan and Approach

Phoenix Water Solutions (PWS) will provide professional services for the replacement of all water meters and transmitters in support of the Town of Jerome AMI System Upgrade Project.
This involves the replacement and activation of approximately 332 existing water meters ranging in size from ⅝"×¾" to 4".
PWS will carry out all field installation activities well within the 180 calendar days required from Notice to Proceed (NTP), adhering to typical project working hours of 7:00 AM to 5:00 PM, Monday through Friday, excluding Town-observed & Federal holidays. Our team will work directly with the selected AMI vendor to ensure accurate installation, data verification, and seamless transition of data into the Town's Caselle billing software.

Timeline, Rate of Production & Staffing Plan

Based on the Town of Jerome's system size, variances in meter locations, and project requirements, PWS anticipates the following staffing plan & installation timeline:
Deployment Timeline

- Total Working Days: ~15-25
- Total Calendar Days: ~30-45 days from Notice to Proceed
- Estimated Daily Output: 11–16 meters installed per technician per day (depending on access, topography, and meter size)

This timeline accounts for the total of 332 meter replacements, with additional time allotted for cleanouts, service line repairs, or extended scopes of work.

Estimated Production Rates

- Production will vary slightly based on terrain, meter box accessibility, and property types (residential vs. commercial)
- Installations will be executed in logical route phases to minimize disruption, ensure efficient crew movement, and support coordination with the Town's staff.
- Each meter will be activated and verified for data transmission prior to completion.

Project Completion Accounts For

- Locating and access due to Jerome's hillside topography
- Cleanout and/or pit box adjustments for accessibility to valve and meter unions
- Restoration of ground surfaces
- GPS and photo documentation for each data point collected
- Final QC checks and weekly close out reviews coordinated with AMI Vendor and TOJ

All records will be compiled into daily and weekly progress reports shared with project manager. PWS will also support final punch list completion and assist with warranty documentation handoff at project close-out.

Deployment Team

Project Manager – Oversees overall planning, scheduling, and reporting of field activities. The Project Manager ensures proper documentation, monitors productivity metrics, coordinates any field change requests, and maintains close communication with TOJ and the AMI contractors' management team to ensure compliance throughout our execution.

Field Supervisor – Provides daily leadership in the field and technical oversight, ensuring safety procedures, meter install specs, and data capture standards are met. The supervisor verifies proper meter installation, endpoint activation, and documentation, while coordinating any issue resolution with the Town of Jerome.

2–3 Field Technicians per Crew – Responsible for meter installations, endpoint activation, and data collected for each location. Crews are trained to handle minor plumbing repairs, cleanouts, and site restoration. Technicians are trained in confined-space safety and public interaction to ensure minimal disruption to residents and businesses.

Support Technicians (as needed) – Deployed to assist with specialized field tasks, rework, or punch list completion, and to maintain schedule adherence.

PWS's deployment model includes flexibility for scaling manpower to match project pacing and to accommodate factors such as terrain challenges, weather, or unforeseen conditions—ensuring consistent productivity and quality-driven outcomes from start to finish.

Installation Protocol

1. Pre-Inspection & Documentation
    - Conduct a visual inspection of the meter box and surrounding infrastructure
    - Photograph and log conditions of piping, valves, fittings, boxes, and meter reads
    - Note any discrepancies or variances at each location
2. Meter Changeout
    - Remove existing meter and return to Town per requirements
    - Install new meter level and aligned
    - Mount endpoint and verify data transmission
    - Backfill and clean site; confirm box is flush with grade
3. Post-Installation Verification
    - Record and submit the following at each location:
        - Address
        - Old and new serial numbers
        - Old final meter read
        - New IMR

- Date/time of installation
- Arrival and departure photos
- Valve position

4. RTU & Damage Handling
    - Document and report inaccessible or unsafe sites
    - Notify Town of Jerome of any property damage and coordinate repairs immediately

All removed materials will be returned to Town of Jerome at the designated location. Any supplemental scopes such as curb stop replacement, pit box resets, storage & staging will be handled by PWS on a case-by-case basis and priced separately, as they are excluded from our base bid. These items will be coordinated directly with the Town of Jerome well in advance of their occurrence.

Quality Control & Project Oversight

PWS integrates quality assurance into every stage of field execution to ensure full compliance with contract standards and expectations:

- **Daily Supervisor Checks**: Field supervisors will validate install quality, safety protocols, and documentation completion
- **Weekly QA Reviews**: Completed installs will be audited for compliance and data accuracy
- **Photo Validation**: All meter reads and endpoint/transmitter pairings must be verified against digital photos
- **Issue Escalation & Rework**: Any site failing inspection or data transfer will be flagged for rework
- **Endpoint Verification**: Units that fail to transmit properly to the AMI network will be reprogrammed, repositioned, or replaced as directed

Work Order Management & Data Handling

Phoenix Water Solutions (PWS) utilizes a cloud-based digital system to collect, organize, and submit all installation data in real time. This ensures compliance with the Town of Jerome's documentation standards while supporting efficient communication, progress tracking, and project oversight.

Key capabilities include:

- Daily uploads of installation data from the field
- Dashboards showing installation status, exceptions, and photos
- Data export in approved formats for import into Caselle
- Long-term storage of installation data (photos, GPS, meter reads) for at least 12 months post-completion
- Meter and endpoint installation logs
- Before-and-after photo documentation
- GPS coordinates and timestamps
- Serial numbers and field notes linked to each service address

- Endpoint signal verification reports
- Compatibility with the AMI vendor's digital record-keeping system and the Town's Caselle billing software for seamless work order processing and audit tracking

This digital documentation process ensures accuracy, transparency, and efficiency from field installation to project closeout, allowing the Town of Jerome to monitor installation performance in real time.

Exception & Damage Reporting

All inaccessible or obstructed sites, as well as discovered damaged or corroded valves, meter boxes, or service lines, will be thoroughly documented with photographic evidence and promptly reported to Town representatives.

PWS will not independently perform corrective actions outside the approved scope without direction from the Town.

This process protects the Town's liability and ensures alignment with established procedures.

All reported exceptions will include:

- Description of issue and location
- Supporting photo documentation
- GPS coordinates and timestamp
- Recommended next steps or required approvals

Inventory Tracking & Management

PWS will maintain detailed inventory control of all supplied materials (meters, gaskets, washers, valves, lids, boxes, and related components) from the time of checkout at the designated staging area until successful installation or approved return.

Daily inventory documentation will include:

- Detailed logs of materials used, returned, or remaining in possession
- Notification and return of damaged, defective, or excess materials
- Daily reconciliation reports submitted to support transparency and accuracy
- Secure storage and tracking of all provided materials to prevent loss or misallocation

Warranty & Customer Satisfaction

All workmanship performed by Phoenix Water Solutions (PWS) is backed by a 12-month warranty from the date of installation.

Covered at no charge:

- Installation related leaks, data transmission issues, or faulty fittings/gaskets

Response time:

- All end-user or Town-reported concerns will be acknowledged same business day
- A field technician will be dispatched within 24 hours to assess and resolve the issue

Escalations:

- Issues beyond the defined scope will be elevated through the project manager and coordinated with the Town under standard utility procedures

Documentation:

- All warranty visits will be logged with photographs, corrective actions, and confirmation of completion for recordkeeping

Post-warranty support:

- PWS remains available to assist with ongoing service or maintenance needs beyond the warranty period

Communication & Management Process

As a key subcontractor, PWS will align its communication strategy with all Town of Jerome requirements regarding documentation, scheduling, reporting, and field visibility.
Our approach ensures clear, timely, and accurate communication; seamless coordination with project management team; and real-time visibility into field progress and installation quality. This plan defines our strategies for documentation, meetings, and reporting to maintain a strong working relationship and keep the project on schedule.

Customizable Dashboards

Pre-Construction Coordination

- PWS will participate in the pre-construction meeting with AMI vendor and the Town of Jerome to review project requirements, safety expectations, and coordination protocols.
- All required submittals, safety plans, and work schedules will be submitted for review and approval prior to field mobilization.
- Property access coordination will be managed in collaboration with the Town, ensuring all service locations are verified before installation begins.

Daily Updates

- Number of meters installed (by size and location)
- RTUs, communication issues, or exceptions encountered (with supporting photos)
- Site-specific conditions affecting installation or scheduling
- Inventory usage and field material status
- Any safety or customer-related incidents encountered in the field

Weekly Reporting

- Installation summary and progress status
- RTU and exception reports
- QA/QC verification records
- Inventory reconciliation and material usage logs
- Summary of completed vs. pending service locations

Progress Meetings

- PWS will attend weekly progress meetings with the Town of Jerome to review ongoing activities and resolve open issues.

- Discussion topics will include:
  - Weekly lookahead schedules
  - Site-specific challenges or access limitations
  - Material tracking and inventory review
  - QC review and resolution of flagged items
  - Coordination of public notifications or traffic control

Daily Check-Ins

PWS On-Site Supervisors will conduct daily field briefings with the installation crews to confirm:

- Installation goals and planned routes for the day
- Utility or customer-related concerns raised by field staff
- Updates on defective legacy materials at service locations
- Adjustments to crew assignments or schedules as needed

Customer & Property Owner Notification

Phoenix Water Solutions (PWS) understands that property owner notifications—such as door hangers, call centers, or access permission forms—are not currently part of the base installation scope. However, should the Town of Jerome require this support, PWS is fully capable of assisting with notification efforts upon request and will price these services accordingly.

This includes, but is not limited to:

- Distribution of door hangers prior to and after meter replacement
- Delivery of 48-hour advance notices to affected residents and businesses
- Collection of signed access permission forms for meters located outside public rights-of-way

All notices and templates will be coordinated with and approved by the Town of Jerome before use if this responsibility is assigned to PWS during the course of the project.

Adherence to Project Standards & Practices

- **Materials Handling:**
  All materials provided by the Town of Jerome will be handled and installed per manufacturer specifications and Town requirements. Any discrepancies, damage, or shortages will be immediately documented and reported for direction.
- **Professional Execution:**
  All installation work will be performed efficiently, safely, and respectfully, with full attention to

site preservation and community impact. Ground disturbances, meter box adjustments, and restoration areas will be restored to their original or improved condition, maintaining property appearance and public safety.

Tailored Metrics & Delivery

- If additional data fields or reporting formats are required by the Town of Jerome, PWS can promptly adjust field documentation and reporting templates to meet specific project needs.
- PWS's digital workflow system allows for on-demand customization of installation logs, photo reports, and progress dashboards for greater transparency.

Client-Specific Goals

- Regular communication ensures that PWS's field performance, documentation standards, and reporting schedules stay fully aligned with project oversight and the Town's operational priorities.
- Adjustments to production pacing, data formatting, or field scheduling can be made to address unique site conditions or Town preferences.

Installation Pricing

Town of Jerome

Advanced Metering Infrastructure (AMI) System

– Implementation Project

Phoenix Water Solutions, LLC
1606 E University Dr Ste 109
Phoenix, AZ 85034
(602) 962-9348

Service Address
Town of Jerome
600 Clark St
Jerome, Arizona 86331

Description

3/4" Meter & Endpoint Installation

Pre- and post-install visual inspection of meter box, piping, and fittings
Removal of existing meter and return to Town-designated location
Installation of new Endpoint & meter, level and aligned per spec
Documentation of:
Old meter read and serial number
Endpoint/transmitter/MTU number
New meter serial number and install timestamp
Address, GPS, & Route
Photo documentation of install and surrounding condition
Site cleanup, backfill, and restoration to pre-construction condition

1" Meter & Endpoint Installation

Pre- and post-install visual inspection of meter box, piping, and fittings
Removal of existing meter and return to Town-designated location
Installation of new Endpoint & AMI meter, level and aligned per spec
Documentation of:
Old meter read and serial number
Endpoint/transmitter/MTU number
New meter serial number and install timestamp
Address, GPS, & Route
Photo documentation of install and surrounding condition
Site cleanup, backfill, and restoration to pre-construction condition

1.5" Meter & Endpoint Installation

Pre- and post-install visual inspection of meter box, piping, and fittings
Removal of existing meter and return to Town-designated location
Installation of new Endpoint & AMI meter, level and aligned per spec
Documentation of:
Old meter read and serial number
Endpoint/transmitter/MTU number
New meter serial number and install timestamp
Address, GPS, & Route
Photo documentation of install and surrounding condition
Site cleanup, backfill, and restoration to pre-construction condition
Flange Kits, Nuts, Bolts, etc. excluded

2" Meter & Endpoint Installation

Pre- and post-install visual inspection of meter box, piping, and fittings
Removal of existing meter and return to Town-designated location
Installation of new Endpoint & AMI meter, level and aligned per spec
Documentation of:
Old meter read and serial number
Endpoint/transmitter/MTU number
New meter serial number and install timestamp
Address, GPS, & Route
Photo documentation of install and surrounding condition
Site cleanup, backfill, and restoration to pre-construction condition
Flange Kits, Nuts, Bolts, etc. excluded

4" Meter & Endpoint Installation

Pre- and post-install visual inspection of meter box, piping, and fittings
Removal of existing meter and return to Town-designated location
Installation of new Endpoint & AMI meter, level and aligned per spec
Documentation of:
Old meter read and serial number
Endpoint/transmitter/MTU number
New meter serial number and install timestamp
Address, GPS, & Route
Photo documentation of install and surrounding condition
Site cleanup, backfill, and restoration to pre-construction condition
Flange Kits, Nuts, Bolts, etc. excluded

Appendix A – Installation Scope Summary

Phoenix Water Solutions | Town of Jerome AMI Project

Phoenix Water Solutions has been actively engaged with the Town of Jerome project since early 2025, conducting a preliminary field review and coordination with the Town's water operator to assess existing conditions and meter configurations throughout the system. This early involvement has allowed PWS to develop a strong understanding of the Town's infrastructure, terrain, and site access considerations, ensuring that our installation pricing and schedule are grounded in real field data rather than assumptions.

Our team has completed thousands of meter retrofits and replacements for municipalities, utilities, and national REITs. PWS specializes in turnkey meter installation and deployment. Our team has worked with all major metering models and capable of installing and commissioning all major AMI platforms

Primary Scope of Work

- Removal of existing meters at designated service locations.
- Installation and alignment of new AMI meters and endpoints per manufacturer requirements.
- Endpoint programming and data entry into head-end system or handheld device as applicable
- Comprehensive Field documentation
- QC inspection and turnover package at each service (photos, install sheets, exception logs).
- Coordination with the selected system provider for testing, verification, and system integration

Ancillary & Variable Scope Items

Based on our field experience and familiarity with existing site conditions in Jerome, and in keeping with our commitment to transparency PWS has identified the following as a potential variable to the base installation scope:

- Pit Box Removal & Reset:
  If access to valve/curb stop or meter unions are obstructed due to buried, deteriorated, or misaligned boxes, PWS will excavate, remove, and re-install pit boxes as needed to complete the meter changeout.

- This would be billed on a unit rate basis and only performed with prior written approval from the distributor and/or Town of Jerome project lead.

Variable Item	Price
3/4" & 1" Pitbox Excavation, Removal & Reset Excavation for pit boxes with obstructive debris and soil, to create a clean, accessible environment for meter installation. Required for meter installations exceeding one pit box or reachable depth or pit boxes set on top of water meter connection fittings	$99.57

Additional Support Services Available

The following optional services can be provided by PWS upon request:

- Meter box and lid replacements
- Lid drilling
- Temporary bypass connections
- Curb & angle stop replacement
- Service line repair or replacement
- Sawcut asphalt/concrete
- Call center services
- Resident notifications

PWS Commitment to Safety & Quality

At Phoenix Water Solutions (PWS), safety, quality, and professionalism are the cornerstones of our field operations. Every project—regardless of size or scope—is executed in strict compliance with Arizona Division of Occupational Safety and Health (ADOSH) standards, best practices in environmental management, and rigorous internal quality control protocols.

ADOSH Compliance & Field Safety

PWS prioritizes full compliance with Arizona's Division of Occupational Safety and Health (ADOSH) for all jobsite activities. Our team members receive ongoing training and certification in:

- Confined space entry and ventilation protocols
- Hazardous material awareness and environmental protections
- Personal protective equipment (PPE) usage and safety protocol adherence
- Lockout/tagout procedures and emergency response

Confined Space Safety

Large meter work, vault access, and enclosed spaces are handled by three-person crews trained in confined space entry.

- Required safety equipment includes tripods, air quality monitors, confined space ladders, and ventilation tools.
- Respiratory protection and rescue protocols are followed per ADOSH confined space requirements.

Comprehensive Employee Safety Training

PWS enforces a documented health and safety policy led by a dedicated Safety Coordinator. Our employee training program includes:

- Basic Safety Training: Hazard recognition, emergency action plans, bloodborne pathogens, and fire prevention
- Field Safety: Ladder safety, power tool operation, mobile equipment use, and heat stress prevention
- Ongoing ADOSH Certification & Refreshers: Updated training on confined space entry, traffic control, and PPE

Quality Control & Installation Best Practices

PWS follows a standardized and documented installation process that ensures high-quality work and strict adherence to project specifications.

Pre-Installation Assessment

- Identify and document landscaping, traffic, meter box conditions, and service line material before beginning work.
- Proactively address potential obstacles to prevent unnecessary delays or service disruptions.

Installation & Quality Assurance

- Technicians follow a step-by-step documented procedure to ensure all meters are installed correctly.
- Leak-checks, AMI/AMR endpoint verification, and field site cleanup are conducted at every installation site.
- Experienced in working with various service line materials including copper, galvanized steel, ductile iron, and PVC.

Post-Installation Verification

- Before-and-after photo documentation
- Meter readings and serial number confirmation
- Before-and-after site documentation, including photographs and GPS data for complete tracking and accountability.

Project & Data Management

PWS ensures seamless integration between installation crews, project oversight teams, and utility systems through advanced project and data management tools.

- On-Site Project Management: PWS will assign an on-site manager(s) responsible for project staffing & installation oversight, customer complaint resolution & emergency response, appointment scheduling & inventory control, and daily quality control audits & compliance reporting.
- PWS-ITS Work Order Management System: PWS utilizes its Installation Tracking System (PWS-ITS) to manage and track all meter change-out programs.

  Key Features of PWS-ITS:

  - Centralized Data Management: Tracks meter locations, make, model, serial number, and installation status.
  - Real-Time Quality Control: Captures installation data, including accuracy test results and leak detection logs.

- Photo & Document Storage: Logs images for quality assurance and work validation.
- Seamless Data Integration: Automatically transfers data to the Utility's billing software and GIS mapping system.

Customer Service Commitment

PWS prioritizes professional, ethical, and customer-focused service in all installation projects.

- Customer Communication & Scheduling: Flexible scheduling for commercial and multi-family properties, minimizing service disruptions. Coordination with municipality & customers for complex meter replacements requiring extended service shutdowns. 24/7 emergency response availability and after-hours contact support.
- Professionalism & Trust: Technicians wear PWS-branded uniforms and carry photo ID badges. Vehicles clearly marked with company name and contact information. PWS enforces a documented Code of Conduct across all employees. Comprehensive background checks and drug testing for all employees.

Installation Warranty & Follow-Up

- All labor is covered under a 12-month workmanship warranty
- Any post-installation issues caused by meter replacement will be corrected at no cost
- PWS provides 24/7 contact availability for urgent follow-ups during the project

Equipment & Resource Readiness

PWS equips all employees with specialized tools and safety equipment necessary to complete meter installations efficiently and safely.

Standard Equipment & Tools

- Fleet vehicles equipped with lifts, safety lights, and company branding
- Personal Protective Equipment (PPE), confined-space safety tools, and traffic safety gear
- Portable meter testing benches
- Hand and power tools for cleaning meter boxes, removing stubborn fittings, and securing new installations
- Vacuum pumps and air blowers for flooded meter boxes
- Valve keys, lid lifters, and generators

Hiring & Employment

PWS is committed to maintaining a workforce that meets all legal, regulatory, and safety requirements.

- E-Verify & Legal Compliance: PWS participates in E-Verify to ensure all employees are legally authorized to work in the United States. Employees adhere to City-mandated badge requirements and uniform policies.
- Employee & OSHA Training: All field technicians receive ADOSH safety training and confined space certification. Continuous training programs ensure employees remain up to date on all confined space, hazardous work, and environmental protection protocols.

Environmental Management

PWS complies with Arizona Department of Environmental Quality (ADEQ) and local environmental regulations during all phases of work.

- Environmental Standards & Waste Management: Follows EPA & ADEQ standards for hazardous waste disposal and lead-free material usage. Recycling and water conservation programs integrated into our installation approach. Where applicable, meter boxes, lids, and related materials are recycled or repurposed.

Exclusions List

The purpose of this Exclusion List is to clearly outline the scope of work that is not covered by Phoenix Water Solutions (PWS). This document is a key part of the overall bid and aims to provide transparency, manage expectations, and ensure clear communication between all parties. By explicitly stating what is excluded from the scope, PWS can allocate resources effectively and avoid misunderstandings.

It is essential to review this Exclusion List alongside the main proposal to understand the limitations of the services provided.

Note: This list is illustrative and may not include every potential exclusion. Any concerns should be discussed and resolved prior to bid submission. Items listed here may be performed as additional services if authorized.

Labor Exclusions

1. **Overtime, Off-Hours, and Weekend Work** – Not covered unless explicitly approved in writing.
2. **Non-Specialized Labor** – Tasks outside PWS's standard water meter installation, box lid, piping, and trenching are excluded.
3. **Management of Other Subcontractors** – PWS is not responsible for managing subcontractors outside its direct hire.

Material Exclusions

1. **Material Price Fluctuations** – Price increases after contract execution are not included.
2. **Owner-Supplied Materials** – PWS assumes no liability for issues involving provided meters or parts.
3. **Specialty or High-End Materials** – Not included unless specifically listed in the bid pricing schedule.

Work Scope Exclusions

1. **Design Changes** – Any revisions to scope, location, or materials not defined in the RFP or bid documents are excluded.
2. **Archaeological or Environmental Discovery** – Not responsible for handling buried historical or environmental finds.
3. **Soil and Environmental Testing** – Not included unless specifically noted.
4. **Landscaping and Water Table Issues** – Restoration beyond typical backfill (e.g., turf, landscaping, or high water table mitigation) is excluded.
5. **Utility Connections** – System-side utility service or mainline connections are not included unless specified.
6. **Permit and Licensing Fees** – PWS assumes the prime contractor will obtain permits unless otherwise agreed.
7. **Code Compliance** – Any changes made to meet new or updated codes after bid submission are excluded.
8. **Pitbox Lids** – Endpoint lid drilling or lid replacement is not included in this line item. PWS can mount endpoints through existing pre-drilled lids or utilize slotted lids that allow a no-drill slip-in installation. Final endpoint mounting approach and lid compatibility should be confirmed based on the selected meter system and endpoint hardware.

Safety and Compliance

1. **Asbestos and Hazardous Material Removal** – Not included unless discovered and approved by Change Order.
2. **Specialized Safety Gear** – Not included unless specified in the contract or required by regulation.

Financial Exclusions

1. **Contingency Costs** – Any unforeseen conditions not described in the contract documents will require a Change Order.
2. **Interest on Late Payments** – Not included unless previously defined in the agreement.
3. **Third-Party Inspections or Consultant Costs** – These are excluded unless expressly stated.

Project Management and Timelines

1. **Delays Caused by Others** – PWS is not responsible for delays caused by the District, vendors, weather, permitting, or external contractors.
2. **Dispute Mediation or Legal Representation** – Legal costs arising from third-party disputes are excluded.

Miscellaneous Exclusions

1. **Force Majeure** – PWS is excluded from liability for delays or damages resulting from events beyond reasonable control, including natural disasters, severe weather, pandemics, strikes, or governmental actions.
2. **Public Relations and Marketing** – Costs, labor, or materials related to promotional, outreach, or public information campaigns are not included unless specifically requested and quoted.
3. **Dispute Resolution and Legal Fees** – Legal costs, mediation, or arbitration involving third parties (e.g., homeowners, subcontractors, vendors) are not included unless specifically approved by the District.

Leak and Infrastructure Exclusions

1. **Leaks on Incorrect Side of Meters** – PWS is not responsible for leaks on the service/customer side of the meter or due to incorrect labeling of water service lines. Any post-installation issue outside the defined work zone is excluded.
2. **Old Infrastructure Failures** – Failures due to deteriorated, improperly marked, or undocumented legacy infrastructure (including brittle lines, shallow depths, or corroded valves) are not covered under base contract terms and must be reviewed for additional scope via Change Order.

Large Meter Exclusions

1. **External Valve Locations** – Excludes additional work for meter vaults that do not have both supply and return valves located outside the vault. Any added requirement to install or relocate valves is not included.
2. **Permit Acquisition (PWS)** – PWS is not responsible for obtaining permits. Any permitting requirements must be coordinated and managed by the prime contractor or owner.
3. **Meter Start-up Responsibility** – The process of initializing, activating, or calibrating meters after installation is excluded unless explicitly included in the agreed scope.
4. **Installation Requirements** – Any unique or project-specific installation requirements not defined in the contract or bid documents are excluded and subject to additional review and pricing.
5. **Documentation Requirements** – Additional documentation requests (e.g., detailed reports, special data formatting) not specified during the bid process are not included.
6. **Meter Delivery Responsibilities** – PWS excludes responsibility for delivering large meters to the job site unless clearly defined in the contract. Clarification is needed on whether the responsibility lies with the prime contractor, the District, or PWS.
7. **Heavy Meters Consideration** – The handling, transportation, and installation of heavy meters requiring special equipment, coordination, or additional labor are excluded unless previously discussed and priced.
8. **Weights and Measures** – The calibration and certification of meters through a Weights and Measures process is excluded from the scope and pricing unless otherwise stated.

Note: The exclusions outlined above reflect tasks, resources, and responsibilities outside the original scope and pricing. If any of these items are requested during the course of the project, PWS will prepare a formal estimate for approval prior to execution. This approach supports transparency, scope alignment, and successful project delivery.

PHOENIX
WATER SOLUTIONS

YOUR GUIDE TO OUR

METER SERVICING



Elevate Your Property's Efficiency and Reliability With Our Tailored Meter Servicing Solution

OUR METER SERVICING EXPERTISE

We are dedicated to providing exceptional meter servicing that aligns with our core values of water conservation, client return on investment (ROI), and seamless service integration. With us, we know how key it is to have water meters that work right and give you the information you need.

NATIONWIDE REACH

Full time Technicians covering 25 States

We have offices in Florida, Arizona, California, Michigan, and Texas.

BRAND PROMISE

- Turnkey Solutions
- Quantified ROI
- Proactive Solutions
- Water Utility Experts
- Data-Driven Services
- Simplified Payment Solutions
- Commitment to Relationships
- Water Conservation Leadership

WHERE NEED MEETS EXPERTISE

Versatile System Knowledge: Proficient with a wide range of metering systems.
Custom Pricing Models: Flexible pricing to meet unique customer requirements.



Who We Are

We were founded in 2015 with a mission to elevate the country's water conservation standards through technology and service. We build and support solutions that reduce waste and address our partner's and customer needs.

Our Mission

Phoenix Water Solutions strives to conserve our most precious resource by installing data-driven technologies and sustainable infrastructure. Through our services, we reduce waste and make communities proactive with their water management turning their expense into an asset.

Detailed Documentation Process

- GPS Coordinates: Precise location tracking.
- Serial Numbers: Ensuring accurate identification.
- Time Stamps: Verifiable service times.
- Photos: Visual proof of condition and service.
- Field Notes: Comprehensive records of visit.

Customized Service Approach

- Tailored systems for seamless data integration.
- Strategic use of specialized tools for enhanced partnership support.

Professionalism in Action

- Technicians provide live updates.
- Company-branded uniforms and vehicles for easy recognition.
- Thorough final checks to guarantee perfect functioning.

SERVICES OFFERED

VAULT METER INSTALLS
Our Technicians are Confined Space Certified for vault meter installations.

LARGE METER CAPABILITY
We also specialize in servicing large meters, including those in vaults or wells, ranging from 3 to 10 inches.

MONTHLY READING SERVICE
Our monthly water meter reading service ensures accuracy and timeliness for billing cycles.

MUNICIPAL & PRIVATE SECTOR COLLABORATION
We are equipped to handle the needs of both private companies and public entities, offering contracted services for comprehensive water meter management.

GENERAL METER SERVICING
We install comprehensive ¾-inch and 1-inch metering systems, suitable for both indoor and outdoor applications.

GET IN TOUCH WITH US

602-962-9348
www.phoenixwatersolutions.com
info@phoenixwatersolutions.com

WE STAND OUT WITH OUR EXTENSIVE KNOWLEDGE IN SERVICING A VAST ARRAY OF METER SYSTEMS:

DIEHL Metering · Metron-Farnier Smart Water Meters & Systems · ZENNER USA · Itron · NextCentury Submetering Systems · WATER SCOPE · MASTER METER · Aclara · inovonics · NEPTUNE Technology Group · Badger Meter · TAPWATCH · ZERENTI · kamstrup · MUELLER Mueller Water Products · SENSUS a xylem brand

SECTION 5

PRICING PROPOSAL

PureOps of Arizona
748 West Palms
Las Cruces, NM 88007 US
www.pureops.com

ADDRESS
Office of the Town Clerk
Town of Jerome
600 Clark St.
PO Box 335
Jerome, AZ 86331

SHIP TO
Office of the Town Clerk
Town of Jerome
600 Clark St.
PO Box 335
Jerome, AZ 86331

Quote AQ250476

DATE 11/05/2025

EXPIRATION DATE 12/31/2025

SHIP VIA	PROJECT	LEAD TIME	POC EMAIL
Best Way	Turn-Key Cellular AMI Meters	10-12 Weeks	mike@pureops.com

Includes Installation Services By Phoenix Water Solutions

DESCRIPTION	QTY	RATE	AMOUNT
Master Meter 5/8" x 3/4" Sonata Meter BRASS Flow Tube w/Nicor (Encoder Output) P/N: S112-A00-A05	299	347.95	104,037.05
Master Meter 1" Sonata Meter BRASS Flow Tube w/Nicor (Encoder Output) P/N: S116-A00-A05	17	469.65	7,984.05
Master Meter 1-1/2" Stainless Steel Octave Meter w/Encoder module, 5' Nicor & Allegro Cellular Pit Antenna w/2' Nicor-Cellular, 13" Length P/N: O316-M1-A10-C*	13	1,846.98	24,010.74
Master Meter 2" Stainless Steel Octave Meter w/Encoder module, 5' Nicor & Allegro Cellular Pit Antenna w/2' Nicor-Cellular, 17" Length P/N: O301-M4-A10-C*	2	2,110.98	4,221.96
Master Meter 4" Stainless Steel Octave Meter w/Encoder module, 5' Nicor & Allegro Cellular Pit Antenna w/2' Nicor-Cellular, 17" Length P/N: O304-M1-A10-C*	1	3,458.22	3,458.22
Master Meter Cat-M Pit Booster Cellular AMI Endpoint w/ 2' Nicor Connector (To Be Used With All Sonata Residential Meters) P/N: 199-181-17	316	170.11	53,754.76
Master Meter Harmony Encore Enterprise Management Software (MDM) Includes first year Annual Hosting and Support for Harmony Fixed Base P/N: RSS-HAR-A-MDM	1	6,000.00	6,000.00
Harmony Encore Billing System Integration ~Required for New Allegro AMI Licensed (Fixed Base) and Allegro Cellular customers P/N: RSS-HAR-A-BSI	1	600.00	600.00
Master Meter Harmony Encore Software System Training (Up to 2 days) P/N: RSS-HAR-A-TR2	1	6,870.00	6,870.00

SUBTOTAL	210,936.78
TAX	0.00
TOTAL	**$210,936.78**

REMIT PAYMENT TO: 748 West Palms, Las Cruces, NM 88007

Town of Jerome

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

NONE

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by PureOps of Arizona, LLC, a corporation organized under the laws of the State of Arizona, a partnership consisting of Manufacturers representatives and authorized distributor of the City of Tucson, AZ, and holder of Arizona State Contractor's License(s):

Classification(s) CR-37 (Plumbing)

No.(s) ROC #339119 (Phoenix Water Solutions)

Respectfully Submitted,

Respondent

3430 E Sunrise Drive Suite 180
Tucson AZ 85718
Address

Brandon Garcia, Sales Director & Technical Lead
By (Officer & Title)

11/5/2025
Date

ATTEST:

Mario Gonzales, Owner & CEO
(Officer and Title)

Rebecca Gonzales, VP Operations
Witness (if respondent is an individual)

Town of Jerome

Proposal Document B – Fee Proposal

Respondent PureOps of Arizona, LLC

Mailing Address 748 West Palms

City Las Cruces State NM Zip 88007

Telephone (575) 644-0571

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299	299	$347.95	$104,037.05
2	1" threaded AMI Meter	17	17	$469.65	$7,984.05
3	1 ½" flanged AMI Meter	13	13	$1,846.98	$24,040.74
4	2" AMI Meter	2	2	$2,110.98	$4,221.96
5	4" AMI Meter	1	1	$3,458.22	$3,458.22
6	AMI System Software	1	1	$6,600.00	$6,600.00
7	AMI System Training	1	1	$6,870.00	$6,870.00
8	AMI Data Collection Hardware/Software	1	316	$170.11	$53,754.76
9	FCC Registration	1	1	$0.00	$0.00
SUBTOTAL COSTS – BASE PROPOSAL					
GRAND TOTAL, BASE PROPOSAL				$210,936.78 + Taxes as Applicable	

GRAND TOTAL – BASE PROPOSAL (in words): Two Hundred and Ten Thousand, Nine-Hundred and Thirty-Six Dollars and Seventy Eight Cents

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: PureOps of Arizona, LLC

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 5th day of November 2025.

Signature

(575) 644-0571
Phone Number

Brandon Garcia
Written Name

brandon@pureops.com
Email Address

REQUIRED FOR SUBMITTAL

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: PureOps of Arizona, LLC

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 5th day of November 2025.

Signature

(575) 644-0571
Phone Number

Brandon Garcia
Written Name

brandon@pureops.com
Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: PureOps of Arizona, LLC

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 5th day of November 2025.

Signature

Brandon Garcia
Written Name

(575) 644-0571
Phone Number

brandon@pureops.com
Email Address

Town of Jerome

Western Environmental Utility Co.

Proposal Document A – Proposal

To: Honorable Mayor & Council
600 Clark St.
Jerome, AZ 86331

In compliance with the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System and the Notice to Respondents by the Town Manager, the undersigned respondent:

Having carefully examined the proposal documents and being familiar with the conditions to be met, hereby submits the following proposal for furnishing the material, equipment, labor and everything necessary for the completion of the work listed and agrees to execute contract documents and furnish the required Bonds and Certificates of Insurance for the completion of said work, at the locations and for the prices set forth on the Fee Proposal.

Understands that procurement of this project shall be in accordance with all applicable Standard Specifications and as otherwise required by the General Provisions and Special Provisions.

Understands that this proposal shall be submitted with a proposal guarantee of cash, certified check, cashier's check, or surety bond (in accordance with Title 34, A.R.S.) for an amount not less than ten percent of the total amount proposal.

Agrees that upon receipt of Notice of Award from the Town of Jerome, they will enter into contract negotiations and execute the contract documents.

Work shall commence no later than 30 days, after the Notice to Proceed and shall be completed within 180 calendar days, beginning with the day following the starting date specified in the Notice to Proceed. The time allowed for completing the work includes lead time for obtaining the necessary materials and/or equipment. Respondent agrees to pay, as liquidated damages, two times the sum as stated in the latest revision of the MAG Specifications. Liquidated Damages shall be based upon the final contract amount.

The respondent hereby acknowledges receipt of and agrees that this proposal is based on the following Addenda (if there are no addenda, write NONE below).

NONE

The Town of Jerome retains the right to reject any or all proposals and to waive minor defects and technicalities or withhold the award, as may be deemed best for the interest of the Town.

This proposal shall be valid for a period of 30 days after the proposal deadline.

THIS PROPOSAL is submitted by Western Environmental Utility Company

_____, a corporation organized under the laws of the State of Arizona, a partnership consisting of _____, or an individual trading as _____ _____ of the City of TEMPE, and holder of Arizona State Contractor's License(s):

Classification(s) _____

No.(s) _____

Respectfully Submitted,

_____
Respondent

8240 S. Kyrene Road Suite 111, Tempe AZ 85284
Address

Amy Gamache, President
By (Officer & Title)

11/24/25
Date

ATTEST:

_____, OWNER.
(Officer and Title)

_____ Witness (if respondent is an individual)

Town of Jerome

Proposal Document B – Fee Proposal

Respondent Western Environmental Utility Company

Mailing Address 8240 S. Kyrene Road Suite 111

City Tempe State AZ Zip 85284

Telephone 480.607.2884

PURSUANT to, and in compliance with, the Town of Jerome's Request for Proposals for an Advanced Metering Infrastructure System, the Notice to Respondents, Instructions to Respondents, and the Proposal Documents relating to the:

TOWN OF JEROME
ADVANCED METERING INFRASTRUCTURE SYSTEM

This is to certify that the above documents, as well as the site upon which work is to be performed and any and all conditions affecting the work, have been carefully examined, that the amount and nature of work to be accomplished is thoroughly understood and that at no time will misunderstanding of the drawings, specifications or conditions to be overcome be alleged or pled as a basis for change orders, damages or non-performances.

I (We) acknowledge that the following Fee Proposal and table are for the convenience of the Town of Jerome to analyze the individual components of the proposal and to provide a means for partial payments during the project. The sum of the extended unit prices shall be the final price for the product procurement in accordance with the technical specifications. The total price listed on the Fee Proposal shall be the same as listed on the proposal to the Town of Jerome.

FEE PROPOSAL INSTRUCTIONS:

1. All items will be paid for as lump sums. The Fee Proposal's estimated quantity and unit price will be used as a means of computing progress payments and as a basis for any Change Orders incurred.

2. The owner reserves the right to recalculate the following Fee Proposal if they appear malapportioned.

3. The lump sum amounts indicated below are to include the respondent's cost of administration, mobilization, bonds, insurance, and any other miscellaneous items required for the project.

FEE PROPOSAL Town of Jerome Advanced Metering Infrastructure System					
		Est. Qty.	**Units**	**Unit Price**	**Total Price**
CIVIL BASE PROPOSAL					
1	¾ x 5/8" AMI Meter	299	Each	311.53	93,147.47
2	1" threaded AMI Meter	17	Each	418.63	7,116.71
3	1 ½" flanged AMI Meter	13	Each	731.00	9,503.00
4	2" AMI Meter	2	Each	964.75	1929.50
5	4" AMI Meter	1	Each	3145.43	3,145.43
6	AMI System Software/Billing Interface	1	Each	5739.00	5,739.00
7	AMI System Training	1	Each	3500.00	3,500.00
8	AMI Data Collection Hardware/Software	1	Each	10,150.00	10,150.00
9	Connectors, gaskets, lids, HLFX (20).	1	Set	25,880.00	25,880.00
SUBTOTAL COSTS – BASE PROPOSAL					160,110.64
GRAND TOTAL, BASE PROPOSAL – Including freight, taxes, installation (by others).				**$279,849.73**	

GRAND TOTAL – BASE PROPOSAL (in words): Two Hundred Seventy Nine Thousand Eight Hundred Forty Nine Dollars and Seventy Three Cents.

NOTE: All Quantities Shown are approximate and are furnished solely for the contractor's convenience. The quantities provided will be the lump sum that payment will be made on. The individual items are for use by the Town to analyze proposals, use as a basis for any supplemental agreements, and for partial progress payments.

Proposal Document C – Non-Collusion Certificate

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Western Environmental Utility Company

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive pricing in the preparation and submission of a proposal to the Town of Jerome for consideration in the award of this solicitation.

Dated this 24th day of November 2025.

Signature

480.607.2884
Phone Number

Amy Gamache
Written Name

argmache@weeci.com
Email Address

Proposal Document D – Certificate of Ownership

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Western Environmental Utility Company

The undersigned respondent hereby certifies as follows:

To the best of his/her knowledge, the person, vendor, association, partnership, or corporation herein, are the only person, vendors, corporations, partnerships, or other associations having any direct or indirect financial interest in the respondent's business as legal or equitable owner, creditor (except current bills for operating expenses), or holder of any security or other evidence of indebtedness.

Dated this 24th day of November 2025.

Signature

480.607.2884
Phone Number

Amy Gamache
Written Name

argmache@weeci.com
Email Address

Proposal Document E – Respondent Qualifications, Representations, and Warranties

ADVANCED METERING INFRASTRUCTURE SYSTEM

Respondent: Western Environmental Utility Company

The undersigned respondent hereby certifies as follows:

X1 Taxes and Leins – Respondent has no unsatisfied tax or judgment lien on record.

X2 Respondent's Examination – Respondent has made its own examination, investigation, and research regarding the requirements of the solicitation, including but not limited to the work to be done, services to be performed, any conditions affecting the work and services, the type and quantity of labor, equipment, and facilities necessary to perform. Respondent fully understands the character of the work and services, the manner in which payment is to be made, and the terms and conditions of the solicitation. Respondent acknowledges and agrees that it has satisfied itself by its own examination, investigation, and research, and that it will make no claim against the Town because of erroneous estimates, statements, or interpretations made by the Town. Respondent hereby proposes to furnish all materials, equipment, and facilities and to perform all labor which may be required to do the work within the time required and upon the terms and conditions provided in the solicitation, and at the prices as proposed.

Dated this 24th day of November 2025.

Signature

Amy Gamache

Written Name

480.607.2884

Phone Number

argamache@weeci.com

Email Address

Please see enclosed cover letter, technical briefs, and warranties.

Western Environmental Utilities Co.
8240 S Kyrene Rd, Suite 111
Tempe, AZ 85284

November 24, 2025

Town of Jerome

Attention: Town Clerk

600 Clark Street

Jerome, AZ 86331

Dear Town Clerk:

Please find enclosed our response to the RFP for Advanced Metering Infrastructure System, due December 1, 2025.

You will see that we, Western Environmental Utility Company (WEUC), are quoting the Badger Meter water meters, both mechanical and electronic, and the Beacon Orion cellular AMI system. Tech briefs are enclosed along with warranty information. Please note that Badger Meter Inc. was founded in 1905 and is traded on the NYSE: symbol BMI.

Badger Meter cellular endpoints are compatible with the town's existing Sensus meters with encoders. Also, we have enclosed a quotation from Metering Services Inc. with whom we have partnered on many meter projects. They are an experienced and solid meter installation contractor and will contract directly with the town.

Our RFP quote meets all requirements outlined on Pages 3 and 4, except for item #7 – "provides real-time meter leak detection". Our Beacon Orion system reports to the cloud

every six hours, or four times daily, with the meter read and potential alarms including leaks. Data is provided in fifteen (15) minute increments. Alarm leak thresholds may be set by the town, and individually by the customer, that will notify both when those water volume levels are reached. We provide an app called Eye-On-Water for consumer use that is included in the monthly service fee*.

Interface billing work with Caselle software is included in our proposal.

Pricing is good for six months. Badger Meter has occasional price increases, primarily based upon the PPI, at least once per year.

Batteries for the cellular endpoint are warranted for 20 years. They are potted within the housing and are non-replaceable. Electronic meter batteries likewise are potted and non-replaceable.

Beacon Orion system customers may be added at any time by simply installing a cellular endpoint, plus the monthly service unit fee ($1.03**). No other charges apply.** The town will own the Beacon website and all the data which is stored on AWS. Badger Meter covers three years of data storage, also included in the monthly service fee. There are NO annual software fees or licenses.

References:

1. Town of Clarkdale – Virginia Smith O: 928.639.2550
2. Les Springs HOA (Sedona AZ) – Russ Colbath C: 704.226.6080
3. City of Prescott – Nathan Graham O: 928.777.1617

Western Environmental Utility Company has been in business since 1994, with vast experience in water quality, wastewater treatment, industrial process control, and electronic communication equipment including cellular. WEUC has two technical support employees, in addition to Badger Meter's three in-state technical advisors. Helpdesk support, 24/7, is also included through Badger Meter.

WEUC's SAM.gov UEI # VH3GLXA5SWE5/3ZHD9

Propagation Study (attached) shows excellent cell coverage. Beacon Orion system is 100% cellular based. No collectors or repeaters required. Maintaining the cellular system is provided by Verizon and included in the monthly service fee.

Customer facing portal is also included, plus the Eye-On-Water app. This portal and related Beacon products and software are developed and produced by Badger Meter Inc. The

customer portal is also visible to the utility's customer service reps, enabling for quick and efficient problem resolution. All data is available in CSV format for emailing purposes.

Beacon Orion website will accommodate thousands of users, as there are over 10 million cellular customers in the USA right now. We have very small utilities to very large (Chicago) installing Orion cellular endpoints at this time.

Once the town's website is created and the billing interface work completed, there are no ongoing fees or licenses. **Only the monthly service user fee of $1.03 per meter.**

Endpoints can be installed in pit environments or remotely, up to 75' from the meter. The units operate in a two-way mode, enabling software updates and interrogation to be handled by cellular communications. Product is designed to handle submersion in meter pits for long periods of time. It may affect communication, but the endpoint will remain intact and operational. As a backup for the endpoints, the units can be read with a drive-by meter reading device, which is included in our quotation should the cellular system be unavailable.

Two days of onsite training are included in the proposal by a factory-certified trainer. In addition, there are web-based FAQ's on the Beacon homepage and software updates are announced by banner.

Should a customer "opt out" of the AMI system, a meter without the endpoint will be made available.



Amy Gamache

Owner

Western Environmental Utility Company

Metering Services, Inc.

Metering Services Inc.

Quote for Meter Replacement Project

Submitted to: Western Environmental Utilities

Project Location: Town of Jerome, Arizona

Date: 11/22/2025

Project Overview

Metering Services Inc. (MSI) is pleased to present this quote for water meter replacement services for the Town of Jerome. This proposal includes a full pre-installation survey for each meter, lid drilling for endpoint installation, and labor-only replacement of all identified meters. All labor is assuming normal business hours (7 am – 3 pm).

1. Pre-Installation Survey – Includes:

- Locating the meter and verifying the meter number and size and material of the lid.
- Cleaning the meter box
- Inspecting pipe integrity
- Verifying meter size

Cost: $80.00 per meter

Total Meters: 332

Survey Total: $26,560.00

2. Lid Drilling for Endpoint Installation

Cost: $40.00 per lid drilled

Total Lids: 332

Lid Drilling Total: $13,280.00

3. Meter Replacement – Labor Only

5/8" × 3/4" & 3/4": 299 @ $150.00 = $44,850.00

1": 17 @ $175.00 = $2,975.00

1 ½" & 2": 15 @ $650.00 = $9,750.00

4": 1 @ $6,500.00 = $6,500.00

Meter Replacement Labor Total: $64,075.00

Combined Project Cost Summary

Pre-Installation Surveys: $26,560.00

Lid Drilling: $13,280.00

Meter Replacement Labor: $64,075.00

Grand Total Project Cost: $103,915.00

Responsibilities & Exclusions

Town of Jerome: MSI is not responsible for upstream/downstream line breaks. Town of Jerome can repair line breaks or hire an outside contractor.

Western Environmental Utilities: Must supply all gaskets, fittings, lids, and materials.

Data Management

MSI will utilize its work order management system. A final Excel data export is required.

This quote is valid for 60 days from the date of issuance.

We appreciate the opportunity to support Western Environmental Utilities and the Town of Jerome.

Thank you,

Chase Frampton

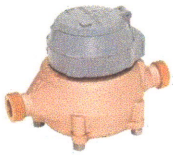
Recordall®
RCDL | Mechanical Flow Meters

Recordall® Disc Meters

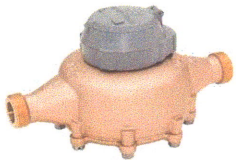
Lead-Free Bronze Alloy, Sizes 5/8, 5/8 x 3/4, 3/4 & 1 inch
NSF/ANSI/CAN Standards 61 and 372 Certified



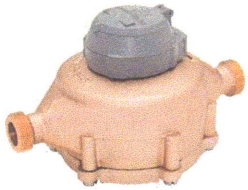
Model 25—5/8 in., 5/8 × 3/4 in.



Model 35—3/4 in.



Model 55—1 in.



Model 70—1 in.

DESCRIPTION

The Recordall Disc Series meters meet or exceed the most recent revision of AWWA Standard C700 and are available in a lead-free bronze alloy. The meters comply with the lead-free provisions of the Safe Drinking Water Act, are certified to NSF/ANSI/CAN Standards 61 and 372 (Trade Designations: M25-LL, M35-LL, M55-LL, M70-LL) and carry the NSF-61 mark on the housing. All components of the lead-free bronze alloy meter (housing, measuring element, seals, and so on) comprise the certified system.

Applications: For use in measurement of potable cold water in residential, commercial and industrial services where flow is in one direction only.

Operation: Water flows through the meter's strainer and into the measuring chamber where it causes the disc to nutate. The disc, which moves freely, nutates on its own ball, guided by a thrust roller. A drive magnet transmits the motion of the disc to a follower magnet located within the permanently sealed register. The follower magnet is connected to the register gear train. The gear train reduces the disc nutations into volume totalization units displayed on the register or encoder face.

Operating Performance: The Recordall Disc Series meters meet or exceed registration accuracy for the low flow rates (95%), normal operating flow rates (100 ±1.5%), and maximum continuous operation flow rates as specifically stated in AWWA Standard C700.

Tamper-Proof Features: Unauthorized removal of the register or encoder is inhibited by the option of a tamper detection seal wire screw, TORX® tamper-resistant seal screw or the proprietary tamper-resistant keyed seal screw. Each can be installed at the meter site or at the factory.

Maintenance: Badger Meter Recordall Disc Series meters are designed and manufactured to provide long-term service with minimal maintenance. When maintenance is required, it can be performed easily either at the meter installation or at any other convenient location.

To simplify maintenance, the register, measuring chamber, and strainer can be replaced without removing the meter housing from the installation. No change gears are required for accuracy calibration. Interchangeability of parts among like-sized meters and meter models also minimizes spare parts inventory investment. The built-in strainer has an effective straining area of twice the inlet size.

Connections: Tailpieces/Unions for installations of meters on various pipe types and sizes, including misaligned pipes, are available as an option.

Meter Spud and Connection Sizes

Model	Size Designation ×	"L" Laying Length	"B" Bore Dia.	Coupling Nut and Spud Thread	Tailpiece Pipe Thread

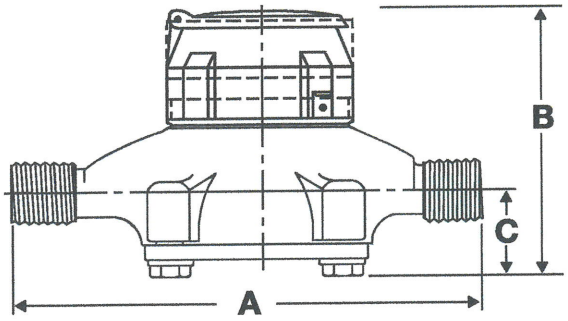
SPECIFICATIONS

	Model 25 (5/8 in. & 5/8 × 3/4 in.)	Model 35 (3/4 in.)	Model 55 (1 in.)	Model 70 (1 in.)
Typical Operating Range (100% ±1.5%)	0.5…25 gpm (0.11…5.7 m^3/hr)	0.75…35 gpm (0.17…7.9 m^3/hr)	1…55 gpm (0.23…12.5 m^3/hr)	1.25…70 gpm (0.28…16 m^3/hr)
Low Flow	0.25 gpm (0.057 m^3/hr) Min. 98.5%	0.375 gpm (0.085 m^3/hr) Min. 97%	0.5 gpm (0.11 m^3/hr) Min. 95%	0.75 gpm (0.17 m^3/hr) Min. 95%
Maximum Continuous Operation	15 gpm (3.4 m^3/hr)	25 gpm (5.7 m^3/hr)	40 gpm (9.1 m^3/hr)	50 gpm (11.3 m^3/hr)
Pressure Loss at Maximum Continuous Operation	**5/8 in. size:** 3.5 psi @ 15 gpm (0.24 bar @ 3.4 m^3/hr) **5/8 × 3/4 in. size:** 2.8 psi @ 15 gpm (0.19 bar @ 3.4 m^3/hr)	5 psi @ 25 gpm (0.37 bar @ 5.7 m^3/hr)	3.4 psi @ 40 gpm (0.23 bar @ 9.1 m^3/hr)	6.5 psi @ 50 gpm (0.45 bar @ 11.3 m^3/hr)
Maximum Operating Temperature	80° F (26° C)			
Maximum Operating Pressure	150 psi (10 bar)			
Measuring Element	Nutating disc, positive displacement			
Meter Connections	*Available in NL bronze and engineered polymer to fit spud thread bore diameter sizes:*			
	5/8 in. size: 5/8 in. (DN 15 mm) **5/8 × 3/4 in. size:** 3/4 in. (DN 15 mm)	3/4 in. (DN 20 mm)	1 in. (DN 25 mm)	1 in. (DN 25 mm)

MATERIALS

	Model 25 (5/8 in. & 5/8 × 3/4 in.)	Model 35 (3/4 in.)	Model 55 (1 in.)	Model 70 (1 in.)
Meter Housing	Lead-free bronze alloy			
Housing Bottom Plates	Cast iron, lead-free bronze alloy, engineered polymer	Cast iron, lead-free bronze alloy		
Measuring Chamber	Engineered polymer			
Disc	Engineered polymer			
Trim	Stainless steel			
Strainer	Engineered polymer			
Disc Spindle	Stainless steel	Stainless steel	Engineered polymer	Stainless steel
Magnet	Ceramic	Ceramic	Ceramic	Ceramic
Magnet Spindle	Engineered polymer	Engineered polymer	Engineered polymer	Stainless steel
Register Lid and Shroud	Engineered polymer, bronze			

DIMENSIONS



Meter Size	Model	A Laying Length	B Height Reg.	C Centerline Base	Width	Approx. Shipping Weight
5/8 in. (15 mm)	25	7-1/2 in. (190 mm)	4-15/16 in. (125 mm)	1-11/16 in. (42 mm)	4-1/4 in. (108 mm)	4-1/2 lb (2 kg)
5/8 in. × 3/4 in. (15 mm)		7-1/2 in. (190 mm)	4-15/16 in. (125 mm)	1-11/16 in. (42 mm)	4-1/4 in. (108 mm)	4-1/2 lb (2 kg)
3/4 in. (20 mm)	35	7-1/2 in. (190 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	5-1/2 lb (2.5 kg)
3/4 in. (20 mm)		9 in. (229 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	5-3/4 lb (2.6 kg)
3/4 in. × 1 in. (20 mm)		9 in. (229 mm)	5-1/4 in. (133 mm)	1-5/8 in. (41 mm)	5 in. (127 mm)	6 lb (2.7 kg)
1 in. (25 mm)	55	10-3/4 in. (273 mm)	6 in. (152 mm)	2-1/32 in. (52 mm)	6-1/4 in. (159 mm)	8-3/4 lb (3.9 kg)
1 in. (25 mm)	70	10-3/4 in. (273 mm)	6-1/2 in. (165 mm)	2-5/16 in. (59 mm)	7-3/4 in. (197 mm)	11-1/2 lb (5.2 kg)

ENCODER / REGISTER

High Resolution Encoders (HR-E®, HR-E® LCD) for AMR/AMI Reading Solutions

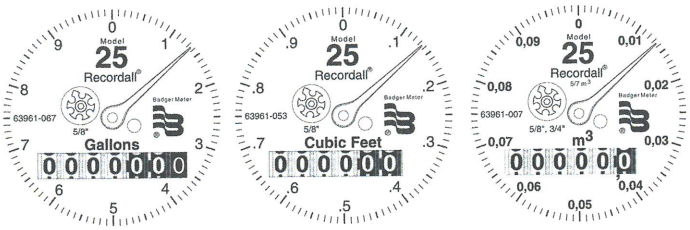
High resolution encoder solutions are available for all Recordall Disc Series meters. Badger Meter high resolution encoders provide years of reliable, accurate readings for a variety of applications. See details at ***badgermeter.com***.

Local Register—Mechanical Sweep-Hand Registration

The local register is a straight-reading, permanently sealed magnetic drive register. The register is permanently sealed to eliminate the intrusion of moisture, dirt or other contaminants. The register achieves true water resistance due the unique adhesive technology used to seal the glass dome to the corrosion-resistant metal bottom. Due to this sealing process, the register exceeds all applicable requirements of AWWA Standard C707 and is suitable for installation in all environments, including meter pits subject to continuous submergence.

The local register has a six-odometer wheel totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Register gearing is made of self-lubricating engineered polymer, which minimizes friction and provides long life. The multi-position register simplifies meter installation and reading. The register capacity is 10,000,000 gallons (1,000,000 ft^3, 100,000 m^3).

A Model 25 register is used in the following example:

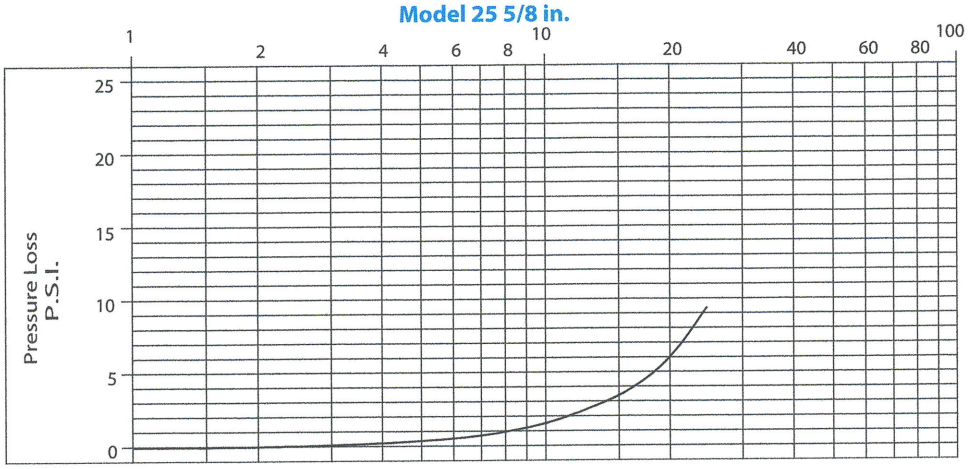


Model	Gallon	Cubic Feet	Cubic Meter
25 (5/8 in.)	10	1	0.1/0.01
25 (5/8 × 3/4 in.)	10	1	0.1/0.01
35	10	1	0.1
55	10	1	0.1
70	10	1	0.1

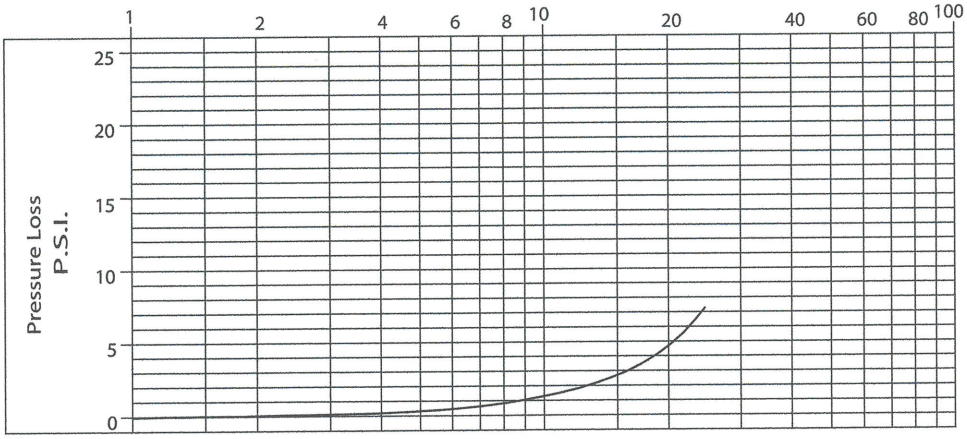
PRESSURE LOSS CHARTS

ate of Flow in Gallons per Minute

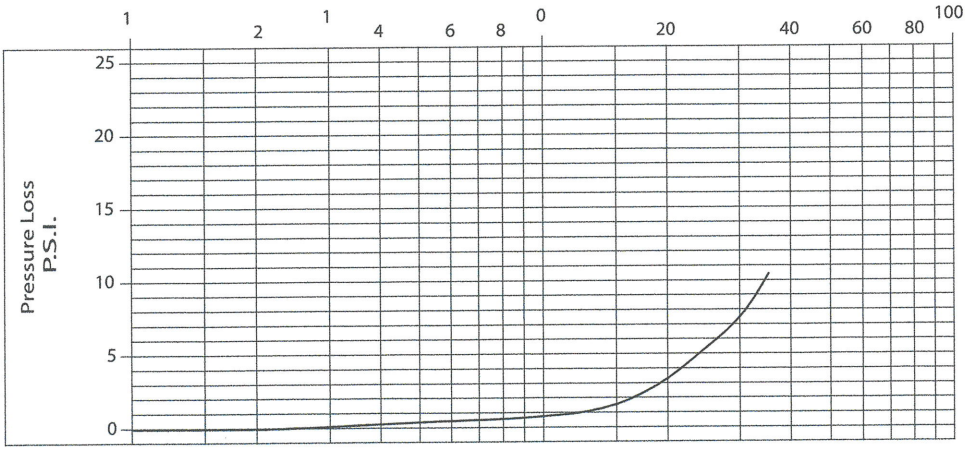
Model 25 5/8 in.



Model 25 5/8 × 3/4 in.



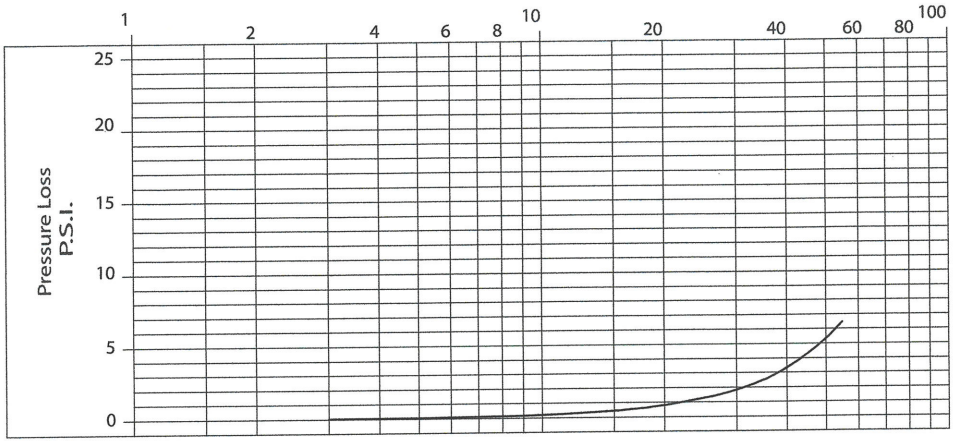
Model 35 3/4 in.



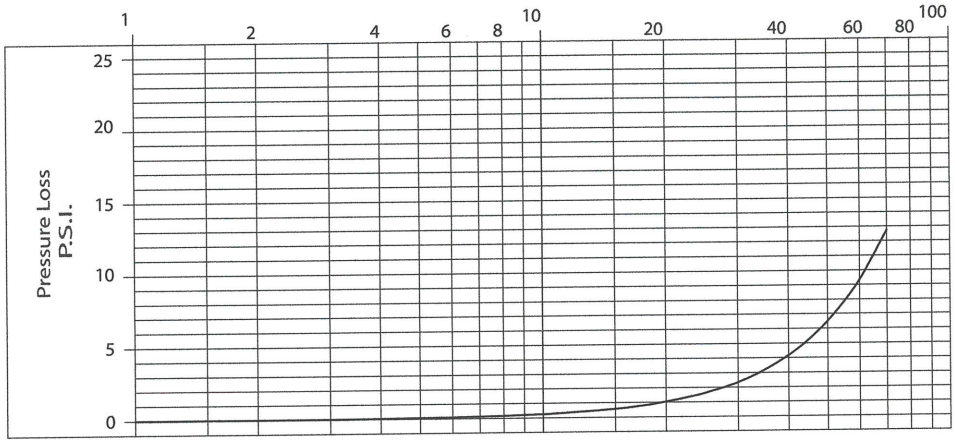
PRESSURE LOSS CHARTS (CONTINUED)

Rate of Flow in Gallons per Minute

Model 55 1 in.

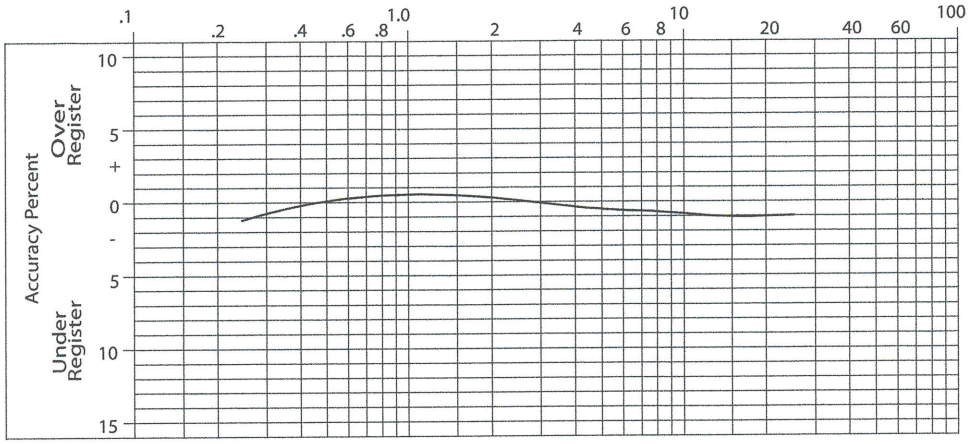


Model 70 1 in.

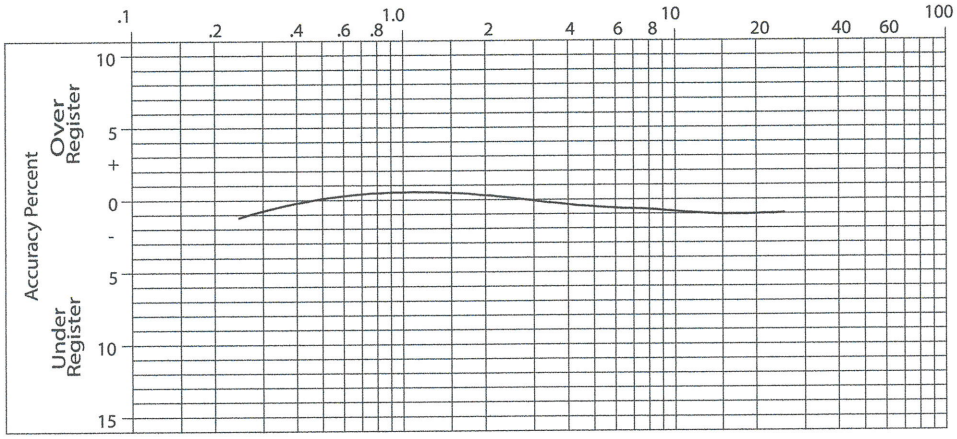


ACCURACY CHARTS

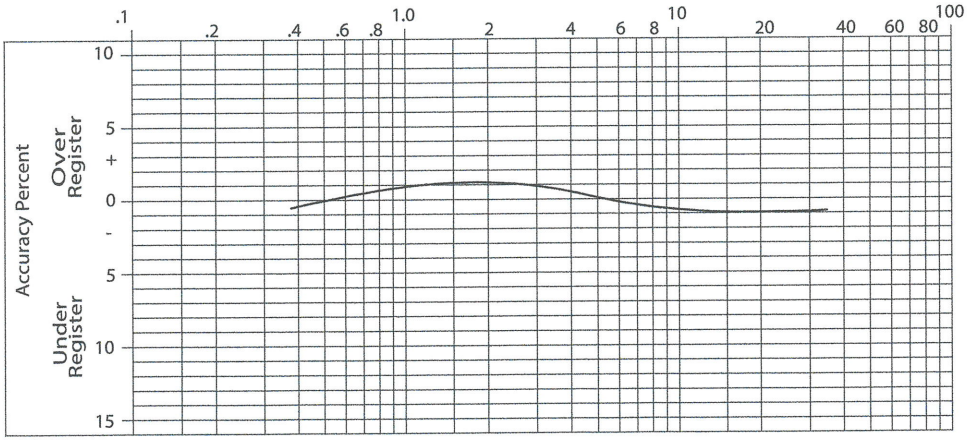
Model 25 5/8 in.



Model 25 5/8 x 3/4 in.

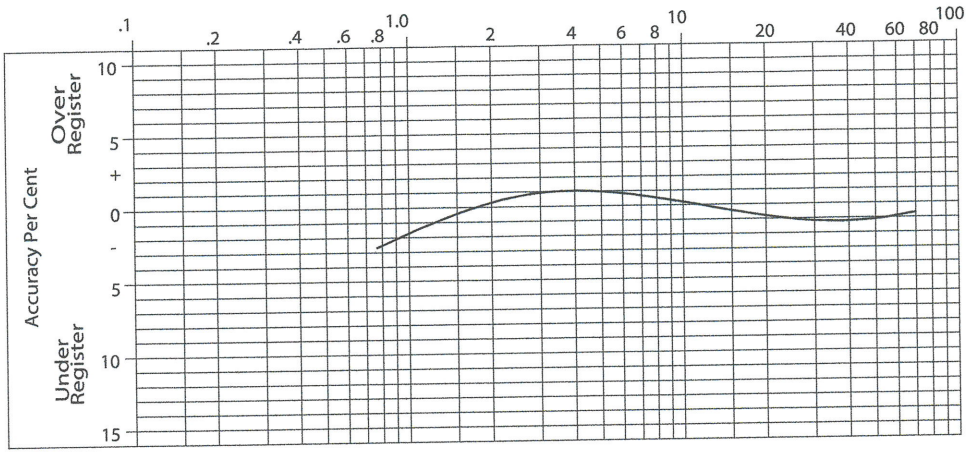


Model 35 3/4 in.

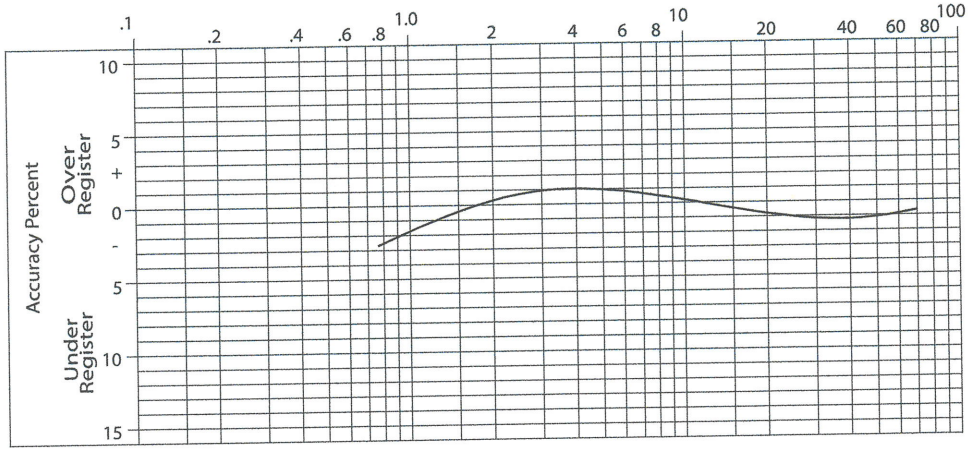


ACCURACY CHARTS (CONTINUED)

Model 55 1 in.



Model 70 1 in.



Recordall is a registered trademark of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2025 Badger Meter, Inc. All rights reserved.

Recordall®
RCDL | Mechanical Flow Meters

Recordall® Disc Meters

Lead-Free Bronze Alloy 120 & 170, Sizes 1-1/2 in. (40 mm) & 2 in. (50 mm), NSF/ANSI/CAN Standards 61 and 372 Certified

DESCRIPTION

Recordall Models 120 and 170 Disc Series meters meet or exceed the most recent revision of AWWA Standard C700 and are available in a lead-free bronze alloy. Both meters comply with the lead-free provisions of the Safe Drinking Water Act, are certified to NSF/ANSI/CAN Standards 61 and 372 (Trade Designations: M120-LL and M170LL) and carry the NSF-61 mark on the housing. All components of the lead-free bronze alloy meter (housing, measuring element, seals, and so on) comprise the certified system.

Applications: For use in measurement of potable cold water in residential, commercial and industrial services where flow is in one direction only.

Operation: Water flows through the meter's strainer and into the measuring chamber where it causes the disc to nutate. The disc, which moves freely, nutates on its own ball, guided by a thrust roller. A drive magnet transmits the motion of the disc to a follower magnet located within the permanently sealed register. The follower magnet is connected to the register gear train. The gear train reduces the disc nutations into volume totalization units displayed on the register or encoder face.

Operating Performance: The Recordall Disc Series meters meet or exceed registration accuracy for the low flow rates (95%), normal operating flow rates (100 ± 1.5%), and maximum continuous operation flow rates as specifically stated in AWWA Standard C700.

Construction: Recordall Disc meter construction, which complies with ANSI/AWWA standard C700, consists of three basic components: meter housing, measuring chamber, and permanently sealed register or encoder. The water meter is available in a lead-free bronze alloy. A corrosion-resistant engineered polymer material is used for the measuring chamber.

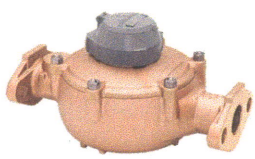
Magnetic Drive: Direct magnetic drive, through the use of high-strength magnets, provides positive, reliable and dependable register coupling for straight-reading or AMR/AMI meter reading options.

Tamper-Proof Features: Unauthorized removal of the register or encoder is inhibited by the option of a tamper detection seal wire screw, TORX® tamper-resistant seal screw or the proprietary tamper-resistant keyed seal screw. Each can be installed at the meter site or at the factory.

Maintenance: Badger Meter Recordall Disc Series meters are designed and manufactured to provide long-term service with minimal maintenance. When maintenance is required, it can be performed easily either at the meter installation or at any other convenient location.

To simplify maintenance, the register, measuring chamber, and strainer can be replaced without removing the meter housing from the installation. No change gears are required for accuracy calibration. Interchangeability of parts among like-sized meters minimizes spare parts inventory investment. The built-in strainer has an effective straining area of twice the inlet size.

Connections: Companion flanges in cast iron or NL bronze are available as options. Straight connection sets are available in NL bronze.



M120



M170

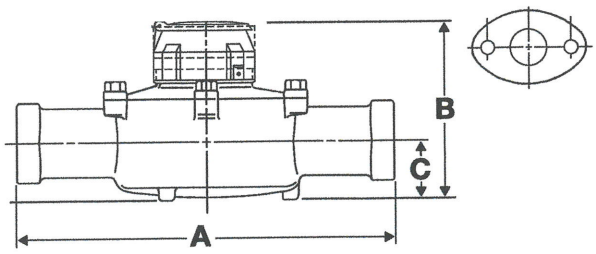
SPECIFICATIONS

Meter Model	M120	M170
Typical Operating Range (100% ± 1.5%)	2.5…120 gpm (0.57…27 m³/hr)	2.5…170 gpm (0.57…39 m³/hr)
Low Flow (Min. 95%)	1.25 gpm (0.28 m³/hr)	1.5 gpm (0.34 m³/hr)
Maximum Continuous Operation	80 gpm (18 m³/hr)	100 gpm (23 m³/hr)
Pressure Loss at Maximum Continuous Operation	4.8 psi at 80 gpm (0.33 bar at 18 m³/hr)	3.3 psi at 100 gpm (0.23 bar at 23 m³/hr)
Maximum Operating Temperature	80° F (26° C)	80° F (26° C)
Maximum Operating Pressure	150 psi (10 bar)	150 psi (10 bar)
Measuring Element	Nutating disc, positive displacement	Nutating disc, positive displacement
Meter Connections	1-1/2 in. AWWA two-bolt elliptical flange, drilled or 1-1/2…11-1/2 NPT internal pipe threads	2 in. AWWA two-bolt elliptical flange, drilled or 2…11-1/2 NPT internal pipe threads
Test Plugs	Optional 1 in. NPT test plug (TP)	Optional 1 in. NPT test plug (TP)

Materials

Meter Housing	Lead-free bronze alloy
Housing Top Plates	Lead-free bronze alloy
Measuring Chamber	Engineered polymer
Disc	Engineered polymer
Trim	Stainless steel
Strainer	Engineered polymer
Disc Spindle	Stainless steel
Magnet	Ceramic
Magnet Spindle	Stainless steel
Register Lid and Shroud	Engineered polymer, bronze

DIMENSIONS



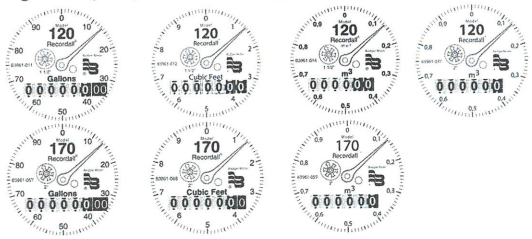
Meter Size	Meter Model	A Laying Length	B Height Reg./RTR	C Centerline Base	Width	Approx. Shipping Weight
1-1/2 in. (40 mm)	120 EL, Hex 120 EL, TP	12-5/8 in. (321 mm)	7 in. (178 mm)	2-3/8 in. (60 mm)	8-3/4 in. (222 mm)	19 lb (8.6 kg)
1-1/2 in. (40 mm)	120 ELL 120 ELL, TP	13 in. (330 mm)	7 in. (178 mm)	2-3/8 in. (60 mm)	8-3/4 in. (222 mm)	19 lb (8.6 kg)
2 in. (50 mm)	170 EL, Hex 170 EL, TP	15-1/4 in. (387 mm)	8 in. (203 mm)	2-7/8 in. (73 mm)	9-1/2 in. (241 mm)	30 lb (13.6 kg)
2 in. (50 mm)	170 ELL 170 ELL, TP	17 in. (432 mm)	8 in. (203 mm)	2-7/8 in. (73 mm)	9-1/2 in. (241 mm)	30 lb (13.6 kg)

EL = Elliptical ELL = Elliptical Long Hex = Hexagon, 1-1/2…11-1/2 in. NPT Thread TP=Test Plug 1 in.

REGISTERS / ENCODERS

Standard—Sweep-Hand Registration

The standard register is a straight-reading, permanently sealed magnetic drive register. Dirt, moisture, tampering and lens fogging problems are eliminated. The register has a six-odometer wheel totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Register gearing is made of self-lubricating engineered polymer, which minimizes friction and provides long life. The multi-position register simplifies meter installation and reading. The register capacity is 100,000,000 gallons (10,000,000 ft³, 1,000,000 m³).



Meter Model	Gallon	Cubic Feet	Cubic Meter
120	100	10	1/0.1
170	100	10	1

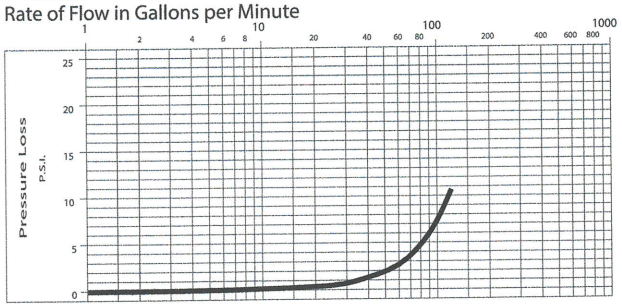
Optional—Encoders for AMR/AMI Reading Solutions

AMR/AMI solutions are available for all Recordall Disc Series meters. All reading options can be removed from the meter without disrupting water service. Badger Meter encoders provide years of reliable, accurate readings for a variety of applications and are also available pre-wired to Badger Meter approved AMR/AMI solutions. See details at *badgermeter.com*.

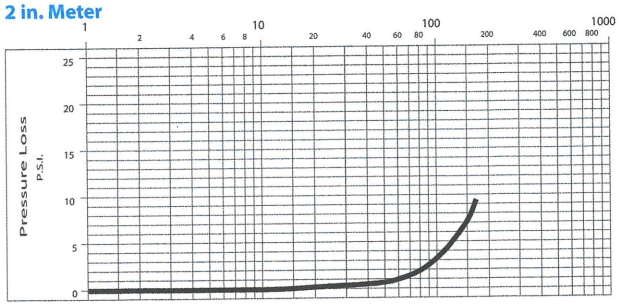
PRESSURE LOSS CHARTS

1-1/2 in. Meter

Rate of Flow in Gallons per Minute



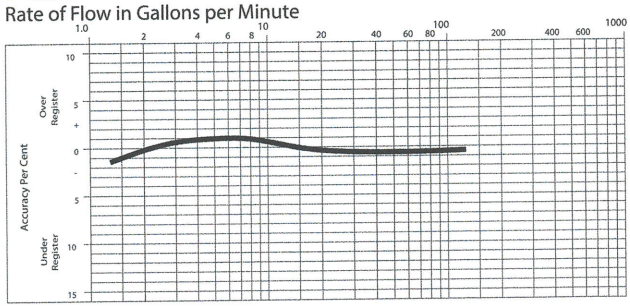
2 in. Meter



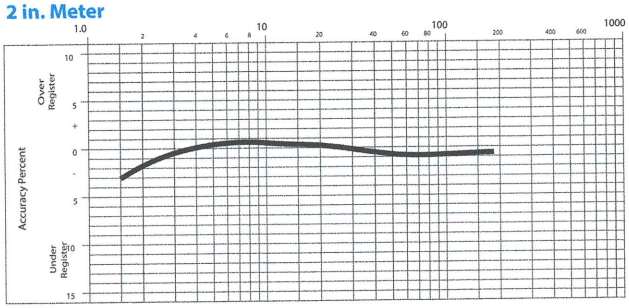
ACCURACY CHARTS

1-1/2 in. Meter

Rate of Flow in Gallons per Minute



2 in. Meter



SMART WATER IS *BADGER METER*

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Legacy Document Numbers: RDM-DS-00071-EN and RDM-DS-00072-EN

Badger Meter | Lead-Free Bronze Disc Meters

PRODUCTS COVERED

This warranty shall apply to all Recordall® Lead-Free Bronze Disc Meters, models 25 through 170, when used to measure potable water, including the registers used with these meters (collectively "Product") sold on or after January 25, 2019. This warranty is extended only to utilities, municipalities, other commercial users and authorized Badger Meter, Inc. distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within the following time frames and those listed in the table below:

Housings
Twenty-five (25) years and six (6) months after shipment from Badger Meter.

Local Registers Supplied with the Meters Listed Herein
Twenty-five (25) years and six (6) months after shipment from Badger Meter.

	AWWA New Meter Accuracy	AWWA Repaired Meter Accuracy (AWWA M6 Manual)	Badger Meter Extended Low Flow Meter Accuracy
Recordall Meter Model, Size	*The meter product will meet or exceed new meter accuracy standards set forth in AWWA Standard C700 for the following periods:*	*The meter product will meet or exceed repaired meter accuracy standards set forth in AWWA Manual M-6, Chapter 5, Table 5.3 for the following periods:*	*Badger Meter further warrants the meter product to meet or exceed the following extended low flow accuracies in excess of AWWA standard:*
Model 25, 5/8 in. and 5/8 x 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 25 gpm safe maximum operating capacity and a 15 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 98.5% at a rate of 1/4 gpm and low flow accuracy of 95.0% at a rate of 1/8 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.
Model 35, 3/4 in.	Five (5) years from date of shipment or registration of 750,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 2,500,000 gallons, whichever occurs first, with a 35 gpm safe maximum operating capacity and a 25 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 97% at a rate of 3/8 gpm for five (5) years from date of shipment or registration of 675,000 gallons, whichever occurs first.
Model 55, 1 in.	Five (5) years from date of shipment or registration of 1,000,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 3,000,000 gallons, whichever occurs first, with a 55 gpm safe maximum operating capacity and a 40 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1/2 gpm for three (3) years from date of shipment or registration of 575,000 gallons, whichever occurs first.
Model 70, 1 in.	Five (5) years from date of shipment or registration of 1,100,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 3,250,000 gallons, whichever occurs first, with a 70 gpm safe maximum operating capacity and a 50 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 3/4 gpm for three (3) years from date of shipment or registration of 1,100,000 gallons, whichever occurs first.
Model 120, 1-1/2 in.	Two (2) years from date of shipment or registration of 1,600,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 5,600,000 gallons, whichever occurs first, with a 120 gpm safe maximum operating capacity and a 80 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1-1/4 gpm for two (2) years from date of shipment or registration of 1,440,000 gallons, whichever occurs first.
Model 170, 2 in.	Two (2) years from date of shipment or registration of 2,100,000 gallons, whichever occurs first.	Fifteen (15) years from date of shipment or registration of 10,400,000 gallons, whichever occurs first, with a 170 gpm safe maximum operating capacity and a 100 gpm maximum rate for continuous operation.	Badger Meter warrants Product low flow accuracy of 95% at a rate of 1-1/2 gpm for two (2) years from date of shipment or registration of 1,890,000 gallons, whichever occurs first.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. Any eligible Product repaired or replaced by Badger Meter will retain the original Product's warranty based on the original Product purchase date, at Badger Meter's sole discretion. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by parties other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C700 and AWWA M6 Manual, as applicable. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical and/or operational literature, or which have been exposed to adverse installation conditions, damaged by any water conditions and/or water quality, including but not limited to foreign matter in the water such as dirt, sand, minerals, debris, deposits, biofilms, extreme corrosivity, or other impurities, or which have been subject to passage of high-speed air slugs, vandalism, negligence, accident, acts of God, alteration, improper installation, operation or repair, or other circumstances which are beyond the reasonable control of Badger Meter. With respect to Product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Any description of Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets, or similar materials used in connection with any Customer's order are for the sole purpose of identifying Product and shall not be construed as an express warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of Product shall not be construed as an express warranty unless confirmed to be such in writing by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated therein. Badger Meter liability shall in no event exceed the contract price.
BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

Making Water Visible®

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Legacy Document Number: RD-W-4-AWWA-EN

E-Series®
Ultrasonic Flow Meters

E-Series G2® Ultrasonic Meter

Lead-Free Bronze Alloy, 3, 4, 6 and 8 inch

DESCRIPTION

The next generation E-Series G2® Ultrasonic meter uses solid-state technology in a compact, tamper protected, weatherproof and UV-resistant housing, suitable for commercial applications. Electronic metering provides information—such as rate of flow and status and alarm indication—and data not typically available through traditional, mechanical meters and registers. Electronic metering minimizes measurement errors due to sand, suspended particles and pressure fluctuations.

Ultrasonic 3, 4, 6 and 8 inch Meter Features

- Open flow tube design prevents flow obstruction to reduce pressure loss
- Greater turn-down ratio for extended flow ranges and increased revenue
- Easy-to-read, 9-digit LCD display, which presents consumption, rate of flow, unit of measure, pressure, temperature, alarm conditions and firmware version
- Pressure alarm and pressure and temperature data reported through ORION Cellular endpoints and BEACON®
- Field programmable registration and maintains an hourly internal logging capacity of 160 days of data
- Single and dual outputs include high resolution industry standard ASCII encoder protocol, scaled/unscaled and 4-20 mA

The meter is available with an inline connector for easy connection and installation to ORION endpoints. It is also available with a flying lead for field splice connection.

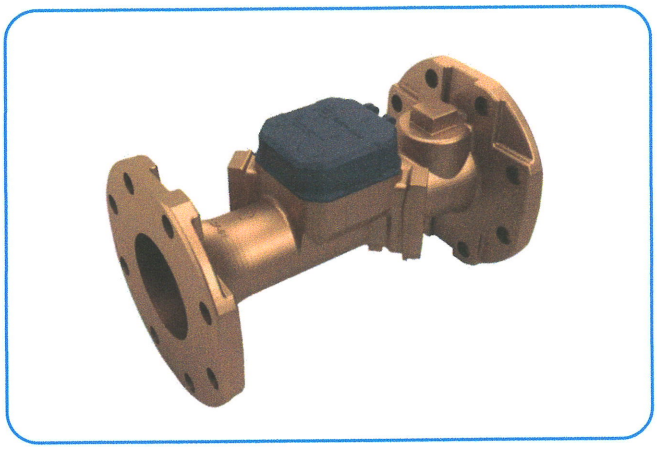
APPLICATIONS

Use the E-Series Ultrasonic meter for measuring potable cold water in commercial and industrial services. The meter is also ideal for non-potable, reclaimed irrigation water applications or less than optimum water conditions where small particles exist. Additionally, the meters are available for commercial fire-service applications. The intended water application must be specified at time of order.

E-Series Ultrasonic meters meet and exceed the most recent version of AWWA C715 Standards. The lead-free bronze alloy meters comply with the lead-free provisions of the Safe Drinking Water Act and NSF/ANSI/CAN Standards 61 and 372. E-Series Ultrasonic meters also conform to UL 327B and FM 1044 for fire service applications.

OPERATION & PERFORMANCE

As water flows into the measuring tube, ultrasonic signals are sent consecutively in forward and reverse directions of flow. Velocity is then determined by measuring the time difference between the measurement in the forward and reverse directions. Total volume is calculated from the measured flow velocity using water temperature and pipe diameter. The LCD shows total volume, unit of measure, rate of flow, pressure, temperature, firmware and alarm conditions (reverse-flow, no usage, empty pipe, exceeding max flow, suspected leak, pressure, temperature, end of life and measurement error).



In normal temperature range of 45…122° F (7…50° C), the Ultrasonic "new meter" consumption measurement is accurate to:

- ±1.5% over the normal flow range
- ±3.0% from the extended low flow range to the minimum flow value

CONSTRUCTION

The E-Series Ultrasonic meter features lead-free bronze alloy meter housing, ultrasonic transducers, a meter-control circuit board with associated wiring, LCD and battery. Wetted elements are limited to the pressure vessel and transducers. The electronic components are housed and fully potted within a molded, engineered polymer enclosure, which is attached to the meter housing. The transducers extend through the housing and are sealed by O-rings, enabling turbulence-free water flow through the tube. The open flow tube design prevents obstruction of flow to reduce pressure loss and provide long-term accuracy.

METER INSTALLATION

For long-term performance the meter is weatherproof, UV-resistant, fully submersible and can be installed using horizontal or vertical piping. The registration electronics and battery are encapsulated to withstand harsh environments and protect the electronics in flooded or submerged pit applications. The meter will not measure flow when an "empty pipe" condition is experienced. An empty pipe is defined as a condition that occurs when the flow sensors are not fully submerged.

FM APPROVED

UL LISTED

Badger Meter

ESM-DS-02781-EN-21 (September 2025)

Product Data Sheet

SPECIFICATIONS

E-Series G2 Ultrasonic Meter Size	3 in.		4 in.		6 in.		8 in.
	3 × 12 in. (76 × 305 mm)	3 × 17 in. (76 × 432 mm)	4 × 14 in. (102 × 356 mm)	4 × 20 in. (102 × 508 mm)	6 × 18 in. (152 × 457 mm)	6 × 24 in. (152 × 610 mm)	8 × 20 in. (203 × 508 mm)
Normal Test Flow Limits	0.75…560 gpm		1.5…1100 gpm		2.2…2000 gpm		4…3500 gpm
Minimum Test Flow Limits	0.37 gpm		0.75 gpm		1.1 gpm		2.0 gpm
Safe Maximum Operating Condition (SMOC)	560 gpm		1100 gpm		2000 gpm		3500 gpm
Typical Pressure Loss	2.6 psi @ 350 gpm		2.1 psi @ 630 gpm		1.5 psi @ 1400 gpm	1.8 psi @ 1400 gpm	2.4 psi @ 2800 gpm
Totalization Display Resolution	*3 inch and 4 inch meters* • Gallons: 0.1 • Cubic feet: 0.01 • Cubic meters: 0.001				*6 inch and 8 inch meters* • Gallons: 1.0 • Cubic feet: 0.1 • Cubic meters: 0.01		
Operating Performance	In normal temperature range of 45…122° F (7…50° C), new meter consumption measurement is accurate to: • 100% ±1.5% over the normal test flow limits • 100% ±3.0% for the minimum test flow limits						
Storage Temperature	– 40…140° F (– 40…60° C)						
Maximum Ambient Storage (Storage for One Hour)	150° F (66° C)						
Measured Fluid Temperature Range	34…140° F (1…60° C) .						
Humidity	0…100% condensing; meter is capable of operating in fully submerged environments						
Maximum Working Pressure of Meter Housing	175 psi (12 bar)						
Maximum Operating Pressure of Pressure Sensor	175 psi (12 bar)						
Pressure Sensor Accuracy	±2% of full scale pressure, up to 175 psi (12 bar)						
Register Type	Straight reading, permanently sealed electronic LCD; digits are 0.28 in. (7 mm) high						
Register Display	• Consumption (up to nine digits) • Rate of flow • Alarms • Pressure				• Temperature • Firmware version • Unit of measure factory programmed for gallons, cubic feet and cubic meters		
Scaled/Unscaled Output*	Solid-state relay with 4-20mA output; open drain MOSFET with encoder output						
Max. Voltage	30V DC						
Current	100 mA						
Pulse Width	50 ms (programmable 25…100 ms)						
Analog 4-20 mA Output*	Two-wire/passive						
Input Voltage Range	9…50V DC supply						
Current	4…20 mA						
Max. Load Resistance (Ohms)	50 Ohms + 50 Ohms (supply voltage - 9V)						
Battery	3.6-volt lithium thionyl chloride battery is fully encapsulated within the register housing and is not replaceable. 20-year battery life; 15-year battery life for dual output meters						

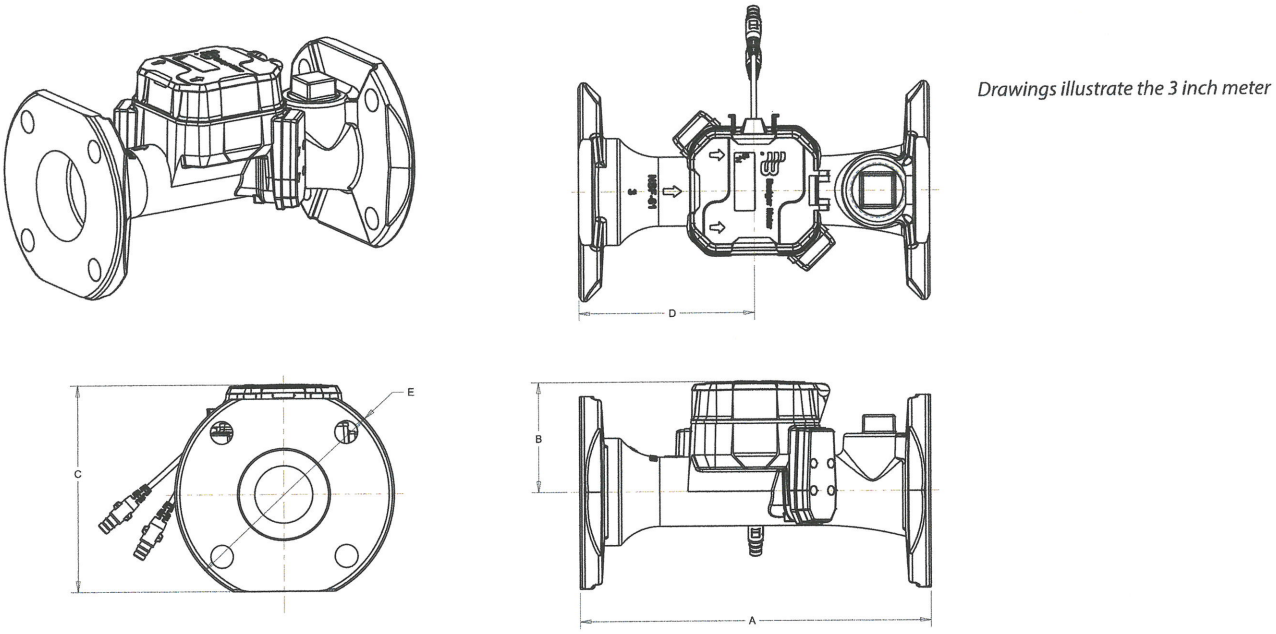
NOTE: See Pressure Loss Chart on *page 4* for typical pressure loss over complete UL 327B flow range.

* Applicable to meters with dual output options

PHYSICAL DIMENSIONS

E-Series G2 Ultrasonic Meter Size	3 in.		4 in.		6 in.		8 in.
Housing	Round	Round	Round	Round	Round	Round	Round
Size Designation X Lay Length	3 × 12 in. (76 × 305 mm)	3 × 17 in. (76 × 432 mm)	4 × 14 in. (102 × 356 mm)	4 × 20 in. (102 × 508 mm)	6 × 18 in. (152 × 457 mm)	6 × 24 in. (152 × 610 mm)	8 × 20 in. (203 × 508 mm)
Weight (without AMR)	26 lb (11.8 kg)	28.5 lb (12.9 kg)	38 lb (17.2 kg)	42 lb (19.1 kg)	59 lb (26.8 kg)	66 lb (29.9 kg)	96 lb (43.5 kg)
See illustration below for Measurement Designations							
Length (A)	12 in. (305 mm)	17 in. (432 mm)	14 in. (356 mm)	20 in. (508 mm)	18 in. (457 mm)	24 in. (610 mm)	20 in. (508 mm)
Height (B)	3.76 in. (95 mm)	3.76 in. (95 mm)	3.99 in. (101 mm)	3.99 in. (101 mm)	5.15 in. (131 mm)	5.15 in. (131 mm)	6.49 in. (165 mm)
Height (C)	7.08 in. (180 mm)	7.08 in. (180 mm)	8.5 in. (216 mm)	8.5 in. (216 mm)	10.36 in. (263 mm)	10.36 in. (263 mm)	13.05 in. (331 mm)
Height with Lifting Ring	NA	NA	NA	NA	12.96 in. (329 mm)	12.96 in. (329 mm)	15.65 in. (398 mm)
Length (D)	6 in. (152 mm)	8.5 in. (216 mm)	7 in. (178 mm)	10 in. (254 mm)	8 in. (203 mm)	8 in. (203 mm)	9 in. (229 mm)
Width (E)	7.5 in. (191 mm)	7.5 in. (191 mm)	9 in. (229 mm)	9 in. (229 mm)	11 in. (279 mm)	11 in. (279 mm)	13.50 in. (343 mm)
Number of Bolts	4	4	8	8	8	8	8
Bolt Hole Diameter	0.781 in. (19.84 mm)						
Companion Flange	3 in. (76 mm)	3 in. (76 mm)	4 in. (102 mm)	4 in. (102 mm)	6 in. (152 mm)	6 in. (152 mm)	8 in. (203 mm)
NPT Test Port	1.5 in. (38 mm)	1.5 in. (38 mm)	2 in. (51 mm)	2 in. (51 mm)	2 in. (51 mm)	2 in. (51 mm)	2 in. (51 mm)

Measurement Designations



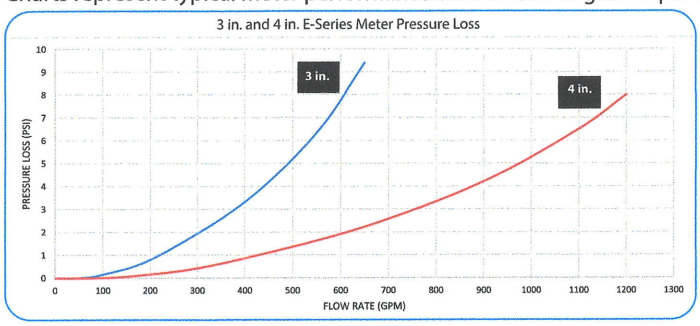
Drawings illustrate the 3 inch meter

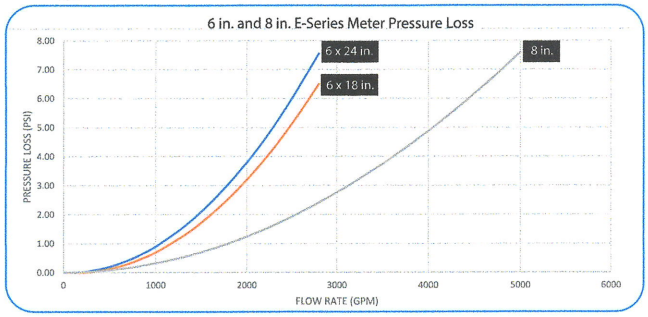
MATERIALS

Meter Housing	Lead-free bronze alloy
Measuring Section	Ultrasonic sensors located in the flow tube
Register Housing & Lid	Engineered polymer
Transducer Port Covers 3 in., 4 in.	Lead-free bronze alloy
Transducer Port Covers 6 in., 8 in.	Engineered polymer

PRESSURE LOSS CHARTS

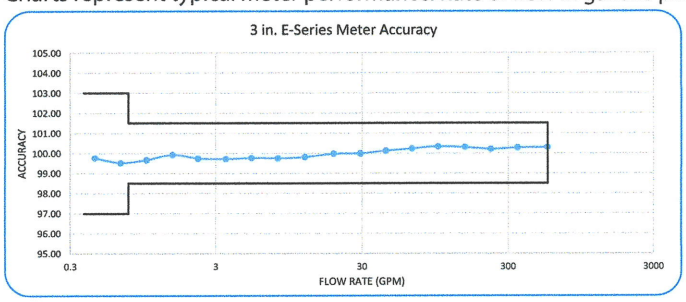
Charts represent typical meter performance. Rate of flow in gallons per minute (gpm).

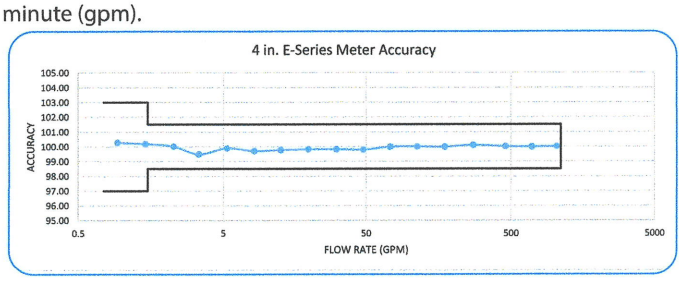


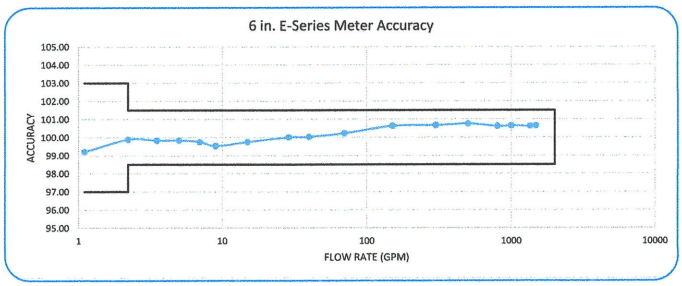


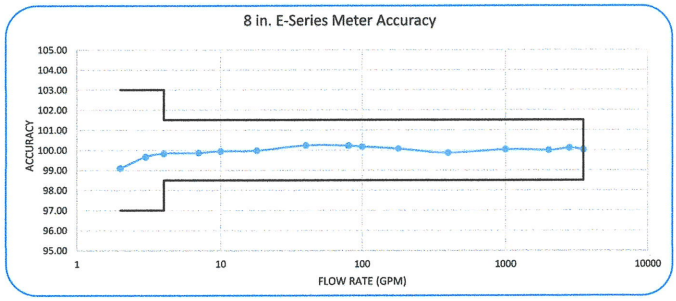
ACCURACY CHARTS

Charts represent typical meter performance. Rate of flow in gallons per minute (gpm).









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www.badgermeter.com

Badger Meter

E-Series® Ultrasonic Meter

Cold Water Meters in Raw and Reclaimed Water Applications

PRODUCTS

This warranty shall apply to all Badger Meter E-Series® Ultrasonic lead-free meters (bronze or stainless steel) and meter components when used to measure raw water (sizes 3/4 and 1 inch) and reclaimed water (sizes 5/8, 5/8 x 3/4, 3/4, 1, 1-1/2, 2, 3, 4, 6, 8 inch), and the internal register/encoder and battery used with these meters (collectively "Product"), sold on or after September 9, 2024.

This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer," and does NOT apply to consumers or any person or entity who is not an original customer of Badger Meter or its authorized distributors.

MATERIALS AND WORKMANSHIP

Badger Meter warrants Product to be free from defects in materials and workmanship appearing within one (1) year and six (6) months after shipment from Badger Meter.

PRODUCT RETURNS

Any Product proved to the satisfaction of Badger Meter to have failed the foregoing warranties will, at the option of Badger Meter, be repaired or replaced without charge to the Customer. Any eligible Product repaired or replaced by Badger Meter will retain the original Product's warranty based on the original Product purchase date, at Badger Meter's sole discretion. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any alleged defect within ten (10) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace defective products or issue a credit to purchaser within a reasonable time of proof to Badger Meter that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the original Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to Product repaired or altered by parties other than Badger Meter, or read by equipment not explicitly approved or licensed by Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with AWWA Standard C715 and AWWA M6 Manual, as applicable. The warranty shall not apply and shall be void with respect to Product exposed to conditions other than those detailed in the Badger Meter Product technical and/or operational literature, or which, as determined at Badger Meter's sole discretion, have affected the ability of the Product to perform, including, but not limited to: exposure to adverse installation conditions; misuse; vandalism; negligence; accident; acts of God; alteration; improper installation, operation or repair; damage from passage of high-speed air slugs; damage by water quality conditions, including but not limited to: aggressive water, foreign matter, biofilms, or extreme corrosivity; damage caused by actions not in accordance with the intended use; or other circumstances which are beyond the reasonable control of Badger Meter, as determined at Badger Meter's sole discretion. Additionally, for raw water applications, these quality conditions must be met: the meters shall be used for raw water as source from ground or surface bodies of water not to exceed the following limits: Average Total Suspended Solids, 30 mg/L but not to exceed 45 mg/L; Average Iron, 0.5 mg/L; Average Manganese, 0.055 mg/L; Langelier Index, +/–1.0; Synthetic Organic Chemicals and Volatile Organic Compounds, MCL limits as defined by national primary drinking water standards. Water to be tested and from a representative number of samples with respect to the sources on a monthly basis. Badger Meter reserves the right to conduct sampling of its own when a meter is returned under a warranty claim. In the event the above conditions are not met or prior water tests or other documentation show improper conditions, the warranty is voided and Badger Meter is not responsible for replacement. With respect to product not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier of product.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Any description of Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets, or similar materials used in connection with any Customer's order are for the sole purpose of identifying Product and shall not be construed as an express warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of Product shall not be construed as an express warranty unless confirmed to be such in writing by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

Badger Meter liability with respect to breaches of the foregoing warranty shall be limited as stated therein. Badger Meter liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

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ORION®
Cellular/Fixed Network Solutions

ORION® Cellular Water Endpoints

DESCRIPTION

ORION® Cellular water endpoints are innovative, two-way endpoints for smart water applications. The endpoints utilize existing IoT (Internet of Things) cellular infrastructure to efficiently and securely deliver meter reading data to the utility in a Network as a Service (NaaS) approach. Leveraging existing cellular infrastructure, the NaaS solution offers all the performance benefits of AMI, while eliminating network-related maintenance and technology concerns and enhancing deployment flexibility.

Cellular endpoints are members of the time-tested ORION family of products from Badger Meter, designed for maximum flexibility. Since 2002, the ORION product family has provided comprehensive Advanced Metering Analytics (AMA) for interval meter reading and data capture using both one-way and two-way communications.

FUNCTIONALITY

Operation: ORION Cellular water endpoints communicate with the encoder and capture 15-minute interval read data and meter status information. The endpoints then automatically broadcast the information, including endpoint status information, via the cellular network to BEACON® Software as a Service (SaaS). ORION NaaS is powered by the proven ORION system for interval data capture and two-way communication. The solution employs cellular endpoints which, as they leverage the public cellular network and require no proprietary gateways to operate, dramatically reduce infrastructure requirements compared to a traditional fixed network. This speeds installations and simplifies expansion as a system evolves.

The endpoints are designed to call in four times each workday and feature a configurable schedule that enables utility customers to select call-in times that best support their processes.

Activation: ORION Cellular water endpoints are shipped in an inactive, non-transmitting state. The Badger Meter IR Communication Device can be used to activate the endpoints and verify the encoder connection. Successful endpoint function can be confirmed through a web app demonstrating that communication has been verified to both the encoder and the network.

Alternatively, the endpoints offer a Smart Activation feature. After installation, the endpoints begin broadcasting data when the encoder senses the first usage of water. No field programming or special tools are required.

Broadcast Mode: ORION Cellular water endpoints broadcast fixed network reading data through the secure cellular network within the service area.

Specific configurations also transmit a radio frequency (RF) message to facilitate troubleshooting in the field. See *"Configurations" on page 2.*

Data Storage: The endpoints store 42 days of 15-minute data.



ORION Cellular HLD endpoint (pictured)

Output Message: ORION Cellular water endpoints broadcast a unique serial number, meter reading data, and applicable status indicators. As an advanced data security measure, each message is securely transported to BEACON SaaS only via private network and never over the public internet.

APPLICATION

Configurations: ORION Cellular water endpoints are multi-purpose endpoints that can be deployed in indoor, outdoor and pit (non-metal pit lid) applications. The electronics and battery assembly are fully encapsulated in epoxy for environmental integrity. The endpoint is available with a connector assembly for ease of installation.

Meter Compatibility: When attached to a Badger Meter High Resolution Encoder, the ORION Cellular water endpoint is compatible with all current Badger Meter Recordall® Disc, Turbo Series, Compound Series, Combo Series and Fire Service meters and assemblies, and with E-Series G2® Ultrasonic, E-Series® Ultrasonic, E-Series® Ultrasonic Plus, and ModMAG® electromagnetic flow meters.

Encoder Compatibility: The ORION Cellular water endpoint is suitable for use with a Badger Meter High Resolution Encoder as well as the following Badger Meter approved three-wire encoder registers that have a manufacture date within 10 years of the current date as long as the encoder has three wires connected to it and is programmed into the three-wire output mode for AMR/AMI: Honeywell® (Elster/ABB) ScanCoder, evoQ4 meter with Sensus® protocol module; Master Meter® Octave® Ultrasonic meter encoder output; Metron-Farnier Hawkeye; Mueller Systems 420 Solid State Register (SSR) LCD; Neptune® ProRead, E-Coder®, ARB-V®, and ProCoder; and Sensus iPerl®.

Badger Meter

ORI-DS-02957-EN-13 (June 2025)

Product Data Sheet

SPECIFICATIONS

Dimensions	5.125 in. (130 mm) (H) 1.75 in. (44 mm) Diameter at top 2.625 in. (W) x 2.875 in. (D) at base (67 mm (W) x 73 mm (D) at base)
Broadcast Network	LTE-M cellular network (primary communication technology)
	NB-IoT (secondary communication technology for certain variants)
RF Message for Troubleshooting	Where available (see table below) frequency is FCC-regulated 902…928 MHz frequency hopping modulation
Operating Temperature Range • Storage, Meter Reading and RF Message (for troubleshooting) • Cellular Communications	 –40…60° C (–40…140° F) –20…60° C (–4…140° F)
Humidity	0%…100% condensing
Battery	One (1) lithium thionyl chloride D cell (nonreplaceable)

Construction: All ORION Cellular water endpoints are housed in an engineered polymer enclosure with an ORION RF board, battery and antenna. For long-term performance, the enclosure is fully potted to withstand harsh environments and to protect the electronics in flooded or submerged pit applications.

Wire Connections: ORION Cellular water endpoints are available with inline connectors (Twist Tight® or Nicor®) for easy installation and connection to compatible encoders/meters. The endpoints are also available with flying leads for field splice connections. Other wire connection configurations may be available upon request.

FEATURES

Smart City Ready	Future-proof technology
Communication Type	Two-way
Application Type	Control/Monitor
Endpoint Communication	Configurable call-in schedule, up to four times each workday
Reading Interval Type	15-minute
Encoder Compatibility	Absolute
Fixed Network Reading	✓
Cut-Wire Indication	✓
Encoder Error	✓
Low Battery Indication	✓
Remote Clock Synchronization	✓
Firmware Upgrades	✓

CONFIGURATIONS

Endpoint	Notes
ORION Cellular C	Includes RF and IR messages for troubleshooting
ORION Cellular HLD	Includes RF and IR messages for troubleshooting
ORION Cellular LTE-M	Includes RF and IR messages for troubleshooting

NOTE: For the ORION Cellular LTE-MP endpoint, see the *ORION Cellular LTE-MP Endpoint product data sheet*, available at www.badgermeter.com.

ORION® Cellular endpoints are IoT Network Certified for Smart Connected Infrastructure™ by CTIA, an association representing the U.S. wireless communications industry and companies throughout the mobile ecosystem. The certification signifies that the endpoints meet global 4G and 5G, 3GPP, NIST, and CTIA certification standards for cybersecurity and network performance, and are suitable to support critical infrastructure operations.

License Requirements: ORION Cellular water endpoints comply with Part 15, Part 22, Part 24, and Part 27 of the FCC Rules. No license is required by the utility to operate an ORION meter reading system. This device complies with Industry Canada license-exempt RSS standard(s). The device shall be used in such a manner that the potential for human contact in normal operation is minimized. This equipment complies with RSS-102 radiation exposure limits. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Transportation: **WARNING**: The operation of transmitters and receivers on airlines is strictly prohibited by the Federal Aviation Administration. As such, the shipping of radios and endpoints via air is prohibited. Please follow all Badger Meter return and/or shipping procedures to prevent exposure to liability.

Warning: To reduce the possibility of electrical fire and shock hazards, never connect the cable from the endpoint to any electrical supply source. The endpoint cable provides SELV low voltage limited energy power to the load and should only be connected to passive elements of a water meter register.

Caution: Endpoint batteries are *not* replaceable. Users should make no attempt to replace the batteries.
Changes or modifications to the equipment that are not expressly approved by Badger Meter could void the user's authority to operate the equipment.

E-Series G2, E-Series, ModMAG, ORION and Recordall are registered trademarks of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2025 Badger Meter, Inc. All rights reserved.

ORION®
Cellular/Fixed Network Solutions

ORION® Cellular Lens Endpoints

DESCRIPTION

For deployment in meter pits, Badger Meter recommends installing standard ORION® Cellular endpoints through non-metallic pit lids. If metal lids must be used, ORION Cellular Lens endpoints may be installed **through** the lid to improve cellular signal and endpoint performance.

ORION Cellular Lens endpoints are innovative, two-way endpoints for smart water applications. The endpoints utilize existing IoT (Internet of Things) cellular infrastructure to efficiently and securely deliver meter reading data to the utility in a Network as a Service (NaaS) approach. Leveraging existing cellular infrastructure, the NaaS solution offers all the performance benefits of AMI, while eliminating network-related maintenance and technology concerns and enhancing deployment flexibility. These improvements maximize utility investment and reduce premature hardware replacements.

FUNCTIONALITY

Operation: ORION Cellular Lens endpoints communicate with the encoder and capture 15-minute interval read data and meter status information. The endpoints then broadcast a unique serial number, meter reading data, and applicable status indicators via the cellular network to BEACON® Software as a Service (SaaS). As an advanced data security measure, each message is securely transported to BEACON SaaS via private network only and never over the public internet. The ORION Cellular NaaS solution requires no proprietary gateways to operate, dramatically reducing infrastructure requirements compared to a traditional fixed network. This speeds installations and simplifies expansion as a system evolves.

The endpoints are designed to call in multiple times each workday and feature a configurable schedule that enables utility customers to select call-in times that best support their processes.

Activation: ORION Cellular Lens endpoints are shipped in an inactive, non-transmitting state. The Badger Meter IR Communication Device **must** be used to activate the endpoints and verify the encoder connection. (Smart Activation via wake on consumption is not supported.) Successful endpoint function can be confirmed through a web app demonstrating that communication has been verified to both the encoder and the network. Full installation and activation steps are available in the *ORION Cellular Lens Endpoint Quick Start Guide* (*ORI-QS-04841-EN*) at *badgermeter.com*.

Data Storage: The endpoints store 42 days of 15-minute data.

Dynamic RF Messaging: Specific configurations transmit a backup RF message to facilitate Quick Reads or help troubleshoot in the field in the rare event of a network communication outage. The endpoint begins to transmit this additional RF message when it has been unsuccessful at communicating with BEACON via the cellular network for a defined period of time.



APPLICATION

Form Factor: ORION Cellular Lens endpoints accommodate a larger antenna, the electronics to support the antenna, and a D cell battery pack. The electronics and battery assembly are fully encapsulated in epoxy for environmental integrity.

Meter Compatibility: When attached to a Badger Meter High Resolution Encoder, the ORION Cellular water endpoint is compatible with all current Badger Meter Recordall® Disc, Turbo Series, Compound Series, Combo Series and Fire Service meters and assemblies, and with E-Series G2® Ultrasonic, E-Series® Ultrasonic, E-Series® Ultrasonic Plus, and ModMAG® electromagnetic flow meters.

Encoder Compatibility: The ORION Cellular water endpoint is suitable for use with a Badger Meter High Resolution Encoder as well as the following Badger Meter approved three-wire encoder registers that have a manufacture date within 10 years of the current date as long as the encoder has three wires connected to it and is programmed into the three-wire output mode for AMR/AMI: Honeywell® (Elster/ABB) ScanCoder; evoQ4 meter with Sensus® protocol module; Master Meter® Octave® Ultrasonic meter encoder output; Metron-Farnier Hawkeye; Mueller Systems 420 Solid State Register (SSR) LCD; Neptune® ProRead, E-Coder®, ARB-V®, and ProCoder; and Sensus iPerl®.

SPECIFICATIONS

Dimensions	4.97 in. (126 mm) (H) 0.47 in. (12 mm) (H) above lid 6.00 in. (152 mm) (diameter) top 1.65 in. (42 mm) (D) bottom
Broadcast Network	LTE-M cellular network (primary communication technology)
	NB-IoT (secondary communication technology)
RF Message for Troubleshooting	FCC-regulated 902…928 MHz frequency hopping modulation
Operating Temperature Range • Cellular Communications • Storage, Meter Reading and RF Message	 –4…140° F (–20…60° C) –22…158° F (–30…70° C)
Humidity	0%…100% condensing
Battery	One (1) lithium thionyl chloride D cell (nonreplaceable)

Construction: All ORION Cellular water endpoints are housed in an engineered polymer enclosure with an ORION RF board, battery and antenna. For long-term performance, the enclosure is fully potted to withstand harsh environments and to protect the electronics in flooded or submerged pit applications.

Wire Connections: ORION Cellular Lens endpoints are available with inline connectors (Twist Tight® or Nicor®) for easy installation and connection to compatible encoders/meters. The endpoints are also available with flying leads for field splice connections. Standard ORION Cellular endpoints can support up to 25 foot lengths, and Lens endpoints can support up to 6 foot lengths. Other wire connection configurations may be available upon request.

FEATURES

Smart City Ready	Future-proof technology
Communication Type	Two-way
Endpoint Communication	Configurable call-in schedule
Reading Interval Type	15-minute
Encoder Compatibility	Absolute
Fixed Network Reading	✓
Cut-Wire Indication	✓
Encoder Error	✓
Low Battery Indication	✓
Remote Clock Synchronization	✓
Firmware Upgrades	✓

CONFIGURATIONS

Endpoint	Notes
ORION Cellular HLFX	Lens form factor

ORION Cellular endpoints are IoT Network Certified by CTIA, an association representing the U.S. wireless communications industry and companies throughout the mobile ecosystem. The certification signifies that the endpoints meet global 4G and 5G standards and are ready for use on wireless IoT networks.

License Requirements: ORION Cellular water endpoints comply with Part 15, Part 22, Part 24, and Part 27 of the FCC Rules. No license is required by the utility to operate an ORION meter reading system. This device complies with Industry Canada license-exempt RSS standard(s). The device shall be used in such a manner that the potential for human contact in normal operation is minimized. This equipment complies with RSS-102 radiation exposure limits. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Transportation: **WARNING**: The operation of transmitters and receivers on airlines is strictly prohibited by the Federal Aviation Administration. As such, the shipping of radios and endpoints via air is prohibited. Please follow all Badger Meter return and/or shipping procedures to prevent exposure to liability.

Warning: To reduce the possibility of electrical fire and shock hazards, never connect the cable from the endpoint to any electrical supply source. The endpoint cable provides SELV low voltage limited energy power to the load and should only be connected to passive elements of a water meter register.

Caution: Endpoint batteries are *not* replaceable. Users should make no attempt to replace the batteries.
Changes or modifications to the equipment that are not expressly approved by Badger Meter could void the user's authority to operate the equipment.

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Badger Meter

ORION® Water Products

with BEACON® Software as a Service (SaaS)

PRODUCTS

This warranty shall apply to Badger Meter ORION® series AMR/AMI Water Endpoints, reading hardware and software for a BEACON® system, sold on or after April 11, 2024.

ORION series AMR/AMI Water Endpoints include Fixed Network (SE), ME and Mobile M endpoints.

This warranty is not transferable and is extended only to utilities, municipalities, other commercial users and authorized distributors, hereafter referred to as "Customer" and does NOT apply to consumers or any person or entity who is not an original Customer of Badger Meter or its authorized distributors.

MATERIAL AND WORKMANSHIP

Badger Meter warrants all ORION series AMR/AMI Water Endpoints including battery, reading hardware and software, hereafter referred to as "Product(s)" as listed below, to be free from defects in material and workmanship for the time period stated.

ORION SE, ORION ME[3] and ORION Mobile M Water Endpoints[1]	20 years and 6 months after shipment
ORION Cellular LTE-MP Endpoints	10 years and 6 months after shipment
Trimble® T10 Tablet[2]	3 years after shipment
Dell® Latitude 5430 Laptop[2] and Latitude 7230 Tablet[2]	3 years after shipment
Panasonic Toughbook® Laptop for BEACON Mobile Solution[2]	3 years after shipment
Trimble® Ranger 7 Handheld[2]	3 years after shipment
Trimble Yuma 7 Tablet[2]	3 years after shipment
ORION ME Modules[2] for Trimble Yuma 7 Tablet and Trimble Ranger 7 Handheld	3 years after shipment
Microsoft® Surface Go 3 Tablet[2]	1 year after shipment
ORION Mobile (ME) Transceiver[2]	3 years after shipment
ORION Mobile Integrated Receiver[2]	1 year after shipment
ORION Fixed Network (SE) Gateway Transceiver	1 year after shipment

[1] Water Endpoints and Endpoint batteries—collectively ORION Water Endpoint Products—are warranted to be free from defects in material and workmanship for twenty (20) years and six (6) months after shipment from Badger Meter. Badger Meter will repair or replace, at its discretion, a non-performing ORION Water Endpoint Product at no cost during the first ten (10) years, and at a prorated price during the last ten (10) years of the warranty. Badger Meter will apply these prorated price discounts to the ORION Water Endpoint Product list prices at the time of ORION Water Endpoint Product return and according to the following prorated price discount schedule: Years 11 through 12 - 75% discount; Years 13 through 15 - 50% discount; Year 16 - 40% discount; Year 17 - 30% discount; Year 18 - 20% discount; and Years 19 through 20 - 10% discount. Replacement Products are warranted for and under the balance of the original.

[2] Batteries, antennas, cables and accessories warranty is limited to 12 months from the date of shipment.

[3] Mobile solutions deployed prior to February 1, 2023 include ORION ME endpoints that are migratable to fixed network. BEACON SaaS mobile solutions deployed on or after February 1, 2023 include ORION ME endpoints that operate in mobile mode only.

PRODUCT RETURNS

Product failures must be proven and verified to the satisfaction of Badger Meter. The Badger Meter obligation hereunder shall be limited to such repair and replacement and shall be conditioned upon Badger Meter receiving written notice of any asserted defect within 10 (ten) days after its discovery. This exclusive remedy shall not be deemed to have failed its essential purpose so long as Badger Meter is willing and able to replace the defective Product for the Customer within a reasonable time, after receipt of proof that a defect is involved. Product returns must be shipped by the Customer prepaid F.O.B. to the nearest Badger Meter factory or distribution center. The Customer shall be responsible for all direct and indirect costs associated with removing the Product and reinstalling the repaired or replacement Product.

LIMITS OF LIABILITY

This warranty shall not apply to any Product repaired or altered by any Party other than Badger Meter. The foregoing warranty applies only to the extent that the Product is installed, serviced and operated strictly in accordance with Badger Meter instructions. The warranty shall not apply and shall be void with respect to Products exposed to conditions other than those detailed in Product technical literature or which have been subject to vandalism, negligence, accident, acts of God, improper installation, operation or repair, alteration or other circumstances which are beyond the reasonable control of Badger Meter. With respect to products not manufactured by Badger Meter, the warranty obligations of Badger Meter shall in all respects conform and be limited to the warranty extended to Badger Meter by the supplier.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (except warranties of Title).

Any description of the Product, whether in writing or made orally by Badger Meter or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets or similar materials used in connection with any Customer's order are for the sole purpose of identifying the Product and shall not be construed as an express warranty. Any suggestions by Badger Meter or its agents regarding use, application or suitability of the Product shall not be construed as an express warranty unless confirmed to be such, in writing, by Badger Meter.

Exclusion of Consequential Damages and Disclaimer of Other Liability

The liability of Badger Meter with respect to breaches of the foregoing warranty shall be limited as stated herein. Badger Meter's liability shall in no event exceed the contract price. BADGER METER SHALL NOT BE SUBJECT TO AND DISCLAIMS: (1) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY, (2) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER OTHER THEORIES OF LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY BADGER METER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND (3) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

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BEACON®
Advanced Metering Analytics

BEACON® Software as a Service (SaaS)

With ORION® Network as a Service (NaaS)

OVERVIEW

The BEACON® solution with ORION® Network as a Service (NaaS) presents a simple, yet powerful solution to bring a new level of utility optimizing information to light.

The solution combines our intuitive BEACON Software as a Service (SaaS) with a NaaS approach using proven ORION Cellular endpoints to deliver greater visibility and control over utility management.

Built-in infrastructure management services and a system design that keeps you in step with technology advancements, allows you to do what you do best—manage your water utility. Plus, built-in consumer engagement tools help enhance customer service, increase satisfaction and reduce costs.



SOFTWARE APPLICATIONS

BEACON SaaS

With tools beyond meter reading and network management, BEACON SaaS offers targeted advanced metering analytics. BEACON puts interval meter data to work to increase efficiency in day-to-day utility operations and address demands for actionable intelligence.

- **Problem solver** – User intuitive data tools place the power of water consumption data at your fingertips, allowing you to rapidly respond to customer inquiries and quickly resolve—and even eliminate—many billing issues.
- **Customized design** – A customizable dashboard delivers information configured to user security access level in a format matched to the utility's individual requirements, providing data management integrity, security and control.
- **Works with you** – Integration with utility systems—billing, work order, inventory, Customer Relationship Management (CRM) and Geographic Information Systems (GIS)—streamlines and improves utility operations without disrupting the current utility billing interface file transfer process.
- **Find out fast** – Alert conditions can be set to monitor and notify users of system exceptions, including continuous flow, for faster leak detection.
- **Innovation at your service** – Secure, hosted platform with automatic software upgrades ensures the latest technology and features are always available.

EyeOnWater®

The BEACON software suite includes informative consumer outreach tools to improve customer service consisting of the EyeOnWater consumer engagement website, smartphone mobile apps, and email or SMS text alerts, providing easy access to personal consumption data and alerts to potential leaks.

With these tools, water consumers are able to view their usage activity, and gain greater understanding and control of what they use and the value you provide.

HARDWARE

ORION NaaS is powered by the proven ORION system for interval data capture and two-way communication. The solution employs cellular endpoints which, as they leverage the public cellular network and require no proprietary gateways to operate, dramatically reduce infrastructure requirements compared to a traditional fixed network. This speeds installations and simplifies expansion as a system evolves.

- **High resolution data** – ORION Cellular endpoints are programmed to automatically broadcast 15-minute meter reading and event data to the BEACON software up to four (4) times per day. The high resolution data helps identify potential customer-side leaks and other anomalies in water use, and provides the utility with a potent tool to enhance its customer service.
- **Two-way communication** – BEACON software communicates with ORION Cellular endpoints to accomplish a number of system tasks, including requesting additional information from the endpoint and synchronizing the internal endpoint clock. If needed, the ORION two-way system architecture sends upgrades to the endpoint firmware over the air via the network, utilizing the powerful BEACON software suite.
- **Data integrity** – Each message from the ORION Cellular endpoint is securely transported to the BEACON software only via private network and never over the public internet.

SECURITY

BEACON is ISO 27001 certified and SOC 2 examined for security, availability and confidentiality.

Badger Meter

BEA-DS-00554-EN-11 (January 2025)

Product Data Sheet

TECHNICAL SUPPORT AND TRAINING

Configured for the utility, safe and secure BEACON SaaS provides utilities with regular software updates, long-term support and maintenance. Comprehensive BEACON training courses are available for online or on-site delivery at the time of system deployment. To maintain best practices, a library of online resources and options for group web-based training and support are also available. Once deployed, our technical support specialists can be contacted by phone, email and web to provide ongoing, customer-friendly support. Customized one-on-one training is available (fee applies) to further enhance user expertise.

Additionally, Badger Meter offers extended customized training to further enhance user expertise.

TECHNICAL REQUIREMENTS

BEACON

Developed as a hosted software platform, BEACON is a cloud-based application accessed through a standard web browser. Internet access is required. User logins provide secure access.

BEACON supported web browsers include the latest and next previous major releases of Google® Chrome, Microsoft® Edge, Mozilla® Firefox®, Microsoft® Internet Explorer® (IE 11 only); and Apple® Safari®.

EyeOnWater Consumer Engagement

The EyeOnWater consumer engagement website is a cloud-based application accessed through a standard web browser. Internet access is required. Water consumer user logins provide secure access to their information.

Supported web browsers include the latest and next previous major releases of Google® Chrome, Microsoft® Edge, Mozilla® Firefox®, Microsoft® Internet Explorer® (IE 11 only); and Apple® Safari®.

Smartphone applications require the following operating systems that can be downloaded from Google Play or the Apple Store:

- Android 7.0 or later
- iPhone, iPad iOS 16.0 or later

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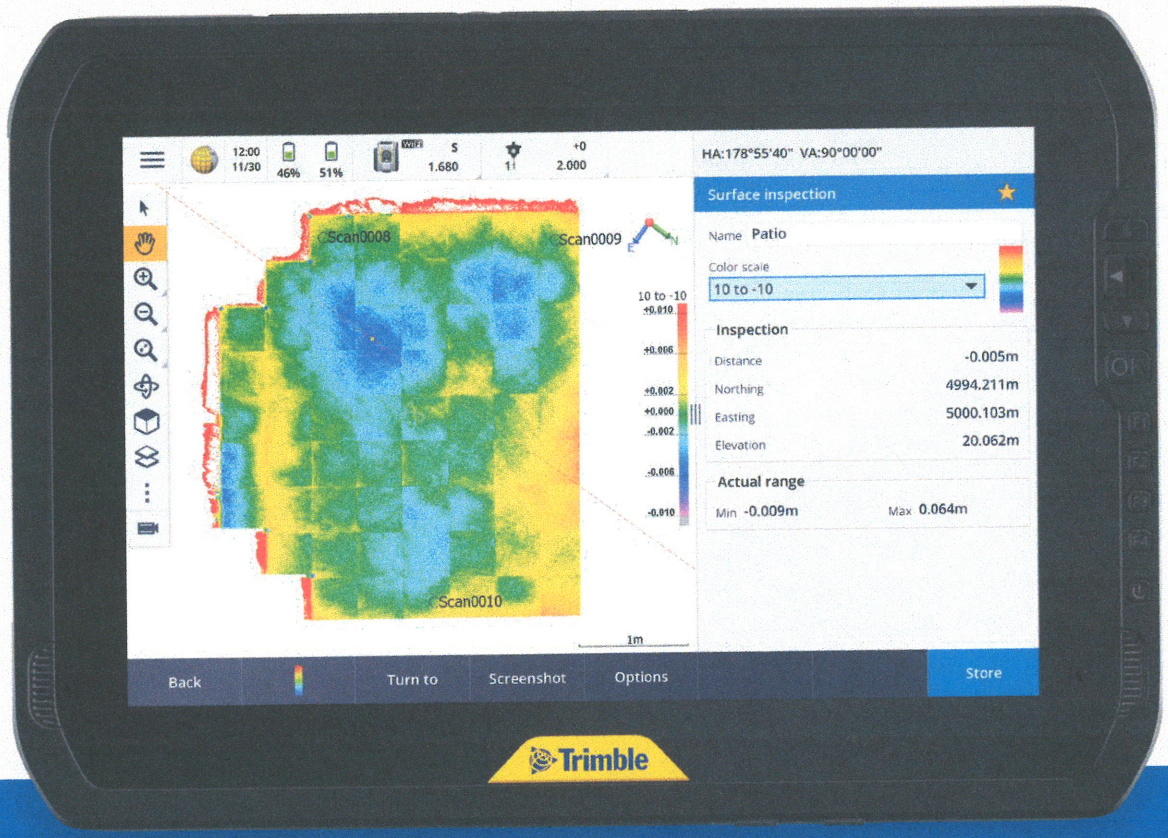
Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2025 Badger Meter, Inc. All rights reserved.

Trimble T100

TABLET



Depend on it.

KEY FEATURES

- Fast and powerful processor, for efficient data collection and data processing
- Windows® 11 brings the office to the field
- Large 10.1-inch touchscreen, sunlight readable and wet weather efficient with a high resolution display
- Ergonomic design that's comfortable and portable on long demanding days in the field
- Expandable Trimble® Empower modules, provide flexibility for user configurations

Learn more: geospatial.trimble.com/trimble-t100-tablet

Trimble T100 TABL

Item D.

Product Models	T100 (Wi-Fi)	T100 (4G LTE)
WLAN (Wi-Fi)	Yes	Yes
4G Data	No	Yes
Memory storage (SSD)	512 GB	512 GB
Internal GNSS	Included	Included

STANDARD FEATURES

System
- Intel® 8th Generation Core™ i5 Processor
- Intel HD Graphics 620
- 16 GB RAM
- 512 GB Storage[1]
- 10.1" 800 nits 1920 x 1200 (16:10) LED-backlight screen with capacitive multi-touch
- Wacom Digitizer for EMR Pen Support
- 8 Megapixel with LED Flash rear camera
- Wi-Fi 802.11ac
- Bluetooth® v 5.1
- 4G LTE WWAN EM7565
- Internal battery 92 Wh non removable
- Integrated speaker and microphone
- IP65 Dust and Moisture Ingress Protection

Operating System
- Microsoft® Windows® 11 Professional

Communications
- Cellular: 4G LTE worldwide coverage, certified on Verizon and AT&T, data only
- Wi-Fi 802.11ac
- Bluetooth v 5.1
- USB 3.1 Type C x 2
- Supports USB C DisplayPort Alt Mode

Standard Accessories
- EMR Stylus with replacement tips and removal tool
- AC-DC power adapter with power cord
- Screen protector
- USB A to USB C adapter

Optional Accessories
- EMR Stylus and replacement tips and removal tool
- Handstrap
- Vehicle Power Supply
- Office stand
- Pole mount (Short and long versions)

TECHNICAL SPECIFICATIONS

Physical
Size: 279 mm x 200 mm x 18.5 mm (11 in x 7.9 in x 0.7 in)
Weight: 1.65 kg (3.6 lbs.)
Processor: Intel® Core™ i5
Memory: 16 GB SDRAM
Storage: 512 GB SSD
User Interface: Power button, directional pad, programmable function keys
Power / Battery Status LED, On screen keyboard
Battery: 92 Wh internal non removable
Battery life: 10 hours @ 20 °C with GPS on
Charging time: 1:15 to 50% 3 hours to 100%[2]

Environmental
Temperature
Operating: –20 °C to +55 °C (–4 °F to 131 °F)[3]
MIL STD 810H Method 501.7, 502.7 Procedure II
Storage: –40 °C to +70 °C (–40 °F to 158 °F)
MIL STD 810H Method 501.7, 502.7 Procedure I
Thermal Shock: –20 °C and 60 °C non-operating
MIL STD 810H Method 503.7 Procedure I-C
Humidity: 0% – 95% non-condensing
MIL STD 810H Method 507.6 Procedure II - Aggravated Cycle
Water & dust proof: IEC 60629 Edition 2 - IP65
Vibration / Shock resistance: MIL STD 810H Method 514.8 Procedure I - Random Vibration
MIL STD 810H Method 514.8 Procedure II - Loose Cargo Transportation
Drop: Tests include room temperature, –20 °C, +60 °C
MIL STD 810H Method 516.8 Procedure IV - Transit Drop
Chemical Exposure: Contamination by Fluids
MIL STD 810H Method 504.3 Procedure II
Non Operating Altitude: –30 °C and 12,192 m (40,000 Feet)
MIL STD 810H Method 500.6 Procedure I
Operating Altitude: 5 °C and 9,144 m (30,000 Feet)
MIL STD 810H Method 500.6 Procedure II

Input/Output
Display: LED backlight scratch-resistant, auto rotate
Size: 10.1" capacitive multi-touch with EMR
Resolution: 1920 x 1200 px
Brightness: 800 nits
Audio: Built-in microphone and speaker
I/O: USB 3.1 type c x 2
Trimble EMPOWER Module Bays x 2
AC / DC Adapter: AC 100~240 V, 50~60 Hz,
DC 5 V, 9 V, 15 V, 20 V, 65 W
USB C PD 65W
Digital camera (rear facing): 8 MP with flash
Sensors: E-Compass, Accelerometer, gyroscope, ambient light sensor, proximity sensor

GNSS
Internal antenna: Beidou, Galileo, GLONASS, GPS L1 C/A, QZSS

1 Total usable memory will be less depending upon actual system configuration.
2 Battery operation and recharge times will vary based on many factors, including screen brightness, applications, features, power management, battery conditioning and other settings or preferences.
3 Tested under MIL-STD-810H method 501.6, Procedure II, and method 502.6, Procedure II. Battery capacity is reduced at lower temperatures or extremely high temperatures. Batteries should neither be charged at temperatures below 32 °F (0 °C) nor temperatures above 113 °F (+45 °C) to avoid impacting battery longevity and performance.
4 SBAS (Satellite Based Augmentation System), where available.

Caution: Do not expose bare skin to this product when handling this unit in extreme hot or cold environments. Do not charge batteries in extreme hot environments

Specifications subject to change without notice.

CE Bluetooth®

Contact your local Trimble Authorized Distribution Partner for more information

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Westminster CO 80021
USA

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Trimble Germany GmbH
Am Prime Parc 11
65479 Raunheim
GERMANY

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Singapore PTE Limited
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Badger Meter

BEACON® AMA Solution

ORION® Cellular Coverage Analysis (CCA)

Customer: Distributor - Western Environment Utilities CO

Date Issued: 10/17/2025

Project: Town of Jerome, AZ

Revision: 1.0

SUMMARY INFORMATION

Endpoint Type: ORION Cellular Endpoint with connectivity to M2M cellular networks

Service Area (square miles): 15

Total Endpoints: 332

REQUEST INFORMATION

Solution Architect: Bill Batchelor

Badger Meter Account Manager: Dominick Fenton

Distributor Account Manager: John Bjorklund

INFORMATION PROVIDED

	FILE NAME	DATE RECEIVED
Coverage Request Form:	JeromeAZCCA.pdf	10/9/2025
Endpoint Locations:	Town of Jerome Meter Location_Numbers_Size.csv	10/9/2025

ANALYSIS COVERAGE AREA

Analysis is based on service location addresses provided by the Town of Jeorme, AZ, with 332 out of 332 (100%) successfully geocoded. A map of the geocoded endpoint locations is shown below.

Badger Meter

BEACON® AMA Solution

ORION® Cellular Coverage Analysis (CCA)

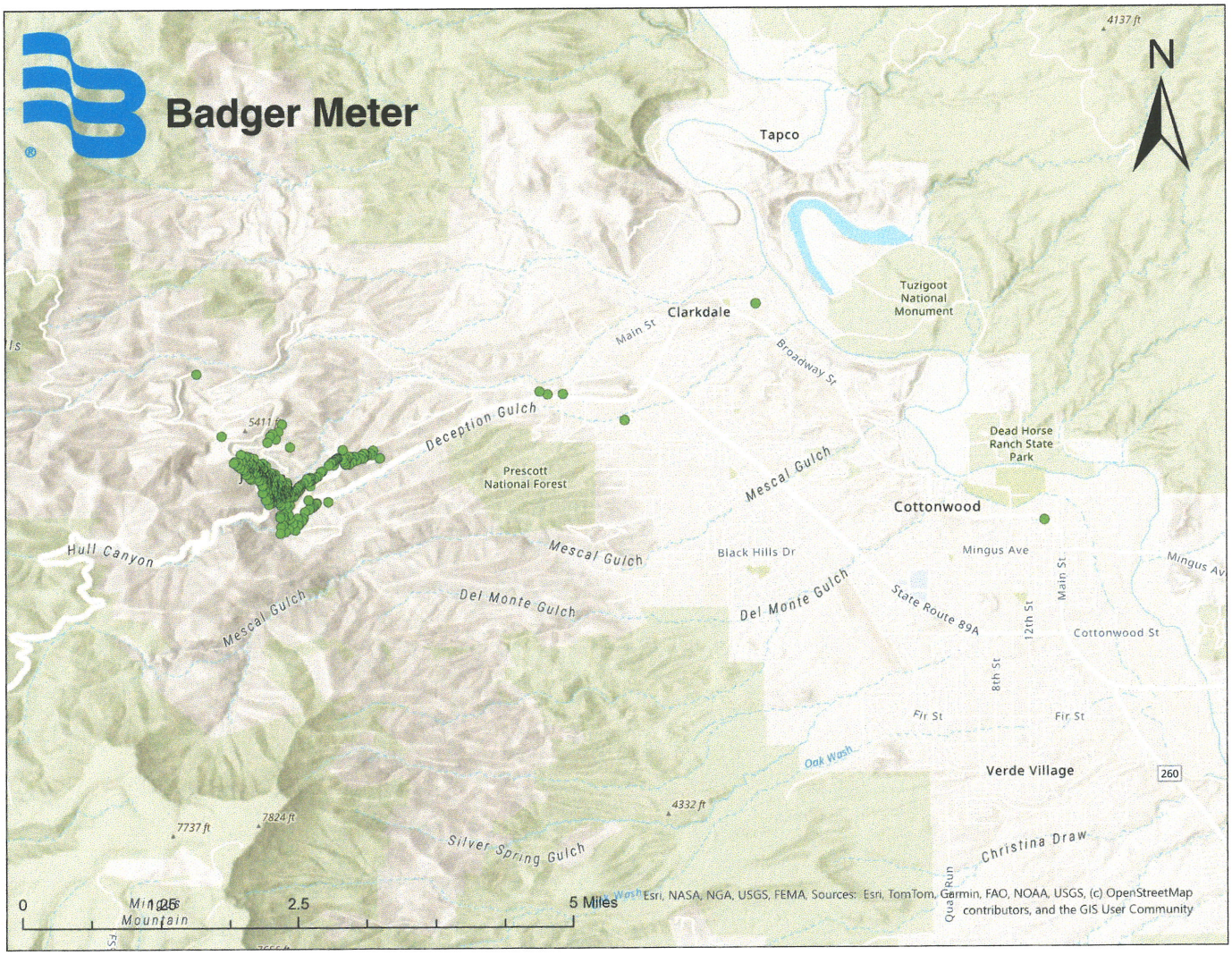
Customer: Distributor - Western Environment Utilities CO

Date Issued: 10/17/2025

Project: Town of Jerome, AZ

Revision: 1.0

ENDPOINT LOCATIONS MAP



Badger Meter

BEACON® AMA Solution

ORION® Cellular Coverage Analysis (CCA)

Customer: Distributor - Western Environment Utilities CO

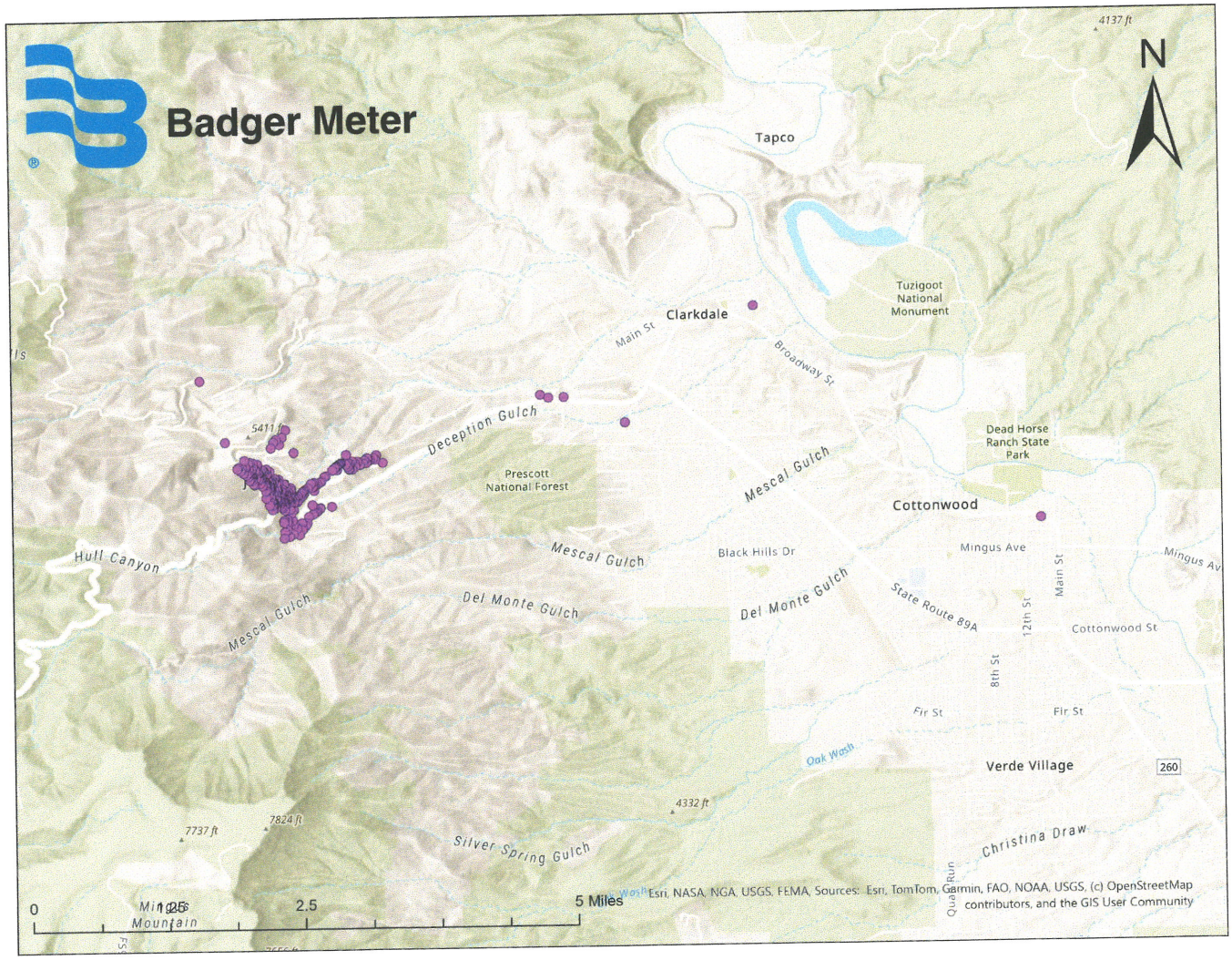
Date Issued: 10/17/2025

Project: Town of Jerome, AZ

Revision: 1.0

CELLULAR COVERAGE ANALYSIS

- This cellular coverage analysis has been run to determine connectivity of our providers M2M solutions which include both LTE-M and NB IoT networks. ORION Cellular Endpoints provide connectivity to both LTE-M and NB IoT networks.
- Using information provided from our carrier partners, this service area has M2M network coverage that will support our ORION Cellular endpoints.
- The map below provides an illustration of that coverage. Further guidance as to the placement of endpoints by type will be provided as deployment plans are refined



Badger Meter

BEACON® AMA Solution

ORION® Cellular Coverage Analysis (CCA)

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Project: Town of Jerome, AZ

Revision: 1.0

ASSUMPTIONS MADE

- Submitted information including but not limited to street addresses, service area, GPS coordinates, and meter locations are accurate.
- If GPS coordinates or a GIS shapefile are not provided for endpoint locations, street addresses are geocoded into decimal-degree latitude and longitude using ESRI's StreetMap Premium for ArcGIS North America HERE address locaters.
- Data from third party providers such as USGS National Elevation Dataset (NED), USGS National Land Cover Database (NLCD), Tele-Atlas municipal boundaries, cellular providers, and the RF propagation software used by Badger Meter is accurate.
- ORION endpoints are installed and maintained according to "ORI-UM-00025 ORION Water Endpoint Installation Manual" using a Badger Meter approved endpoint installation kit in a location that allows two-way communication between the endpoint and the cellular network.
    - Pit or vault installations are through a non-metal pit lid and the pit or vault lid is at or above grade
    - Indoor installations are mounted as high as possible in the floor joists above grade on an exterior wall

CLARIFICATIONS

- The ORION cellular coverage analysis is subject to change for reasons which may include but are not limited to; consultation with the customer, site visit by Badger Meter authorized personnel, and the availability of new or updated information.
- Cellular coverage within the utility service area is required to deploy ORION cellular endpoints.
- Review the cellular coverage analysis with your Badger Meter representative in order to understand how it may be used by the utility as a tool to deploy the system.
- All endpoints are to be installed in compliance with the published ORION installation guidelines which can be found at www.badgermeter.com
- Cellular endpoint type recommended is specific to the latitude and longitude for each location.

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