

evoQ₄ RB Electromagnetic Meter with Replaceable Battery

Size 2" to 12"



The evoQ₄ is a single meter that meets the needs of traditional turbine, compound, single jet and magnetic meters.

Performance	Inches mm	2 50	3 80	4 100	6 150	8 200	10 250	12 300
> 95% Accuracy	GPM	0.25	0.6	1.7	4	8	32	32
	m3/hr	0.06	0.14	0.4	0.9	1.8	7.3	7.3
98.5% - 101.5% Accuracy	GPM	1-220	2-550	4-880	8-1400	16-3500	50-5500	65-5500
	m3/hr	0.23-50	0.5-125	0.9-200	1.8-318	3.6-795	11.4-1249	14.8-1249
Maximum flow	GPM	220	550	880	1400	3500	5500	5500
	m3/hr	50	125	200	318	795	1249	1249
Max. operating pressure	psi	230	230	230	230	230	150	150
	Bar	16	16	16	16	16	10	10

Materials

Body	Stainless steel grade 304
Flow tube	Stainless steel grade 316
Liner	Modified polyethylene
Electrodes	Stainless steel grade 316
Flanges	Epoxy coated cast iron
Register	Stainless steel with glass lens
Register housing/lid	UV-resistant plastic
Environmental class	IP68 hermetically sealed unit waterproof to 30 ft depth

Features

- 3 cell battery pack
- No moving parts
- 0.5 second sampling rate
- Wide measuring range
- Simple installation
- Pulse or encoder connectivity
- AWWA lay lengths
- IP68 sealed
- NSF61 Annex G listed

Benefits

- Extends meter functional life
- Maintenance free
- Highest accuracy
- Suitable for commercial billing applications
- No programming required
- Pre-equipped or retrofitted for your AMR and telemetry needs
- Simple changeout
- Provides long, trouble-free life
- Zero lead contaminants

Operation

The evoQ₄ is a battery powered electromagnetic water meter that is suitable for a wide range of metering applications. Using Faraday's law of electromagnetic induction, two magnets provide a magnetic field within the pipe; two electrodes measure the induced voltage that is proportional to the flow of conductive water through the field in the pipe. Every 0.5 seconds the measurement is taken and the totalized volume is calculated and updated on the LCD display. The meter allows replacement battery pack exchanges.

Application

The meter is for use only with potable cold water up to 120°F. The meter will typically register at +/-0.75% accuracy at normal and high flows and better than 95% accuracy at extended low flows. The evoQ₄ product line is suited for metering utility customer services for potable water. With the addition of outputs described below, the meter can fulfill a number of distribution management roles as well.

Pulse or encoder output

The meter can be fitted with a pulse output device that can be attached to a radio transceiver module or a data logger. The pulse output can be programmed in the factory to meet the needs of the utility. For utilities preferring encoded output technologies, an encoder module is available for interface with AMR or AMI systems.



Remote display

The meter can be fitted with a remote display. A two channelled output can provide both forward and reverse pulses.

Connections

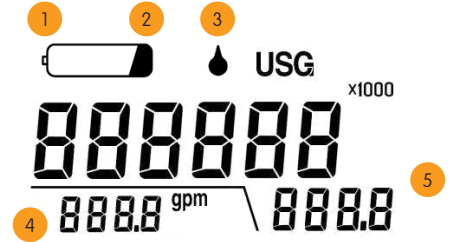
The evoQ₄ comes in AWWA C701 Class II Turbine meter lay lengths. The flanges are epoxy coated cast iron to reduce weight and prevent corrosion. The 2" comes with an oval flange and the 3"- 12" come with a round flange. All flanges conform to ANSI B16.1 Class 125 standards. Allow for 5 pipe diameters of straight pipe upstream and 3 pipe diameters of straight pipe downstream for optimum performance.

LCD

Bright, large and easy-to-read LCD incorporating totalized volume and a reference flow-rate indicator. Alarm functions provide in-situ status ensuring no loss in measuring continuity. An IP68 seal ensures the meter electronics are safely protected providing long term reliability.

Display functions

- 1 **Low-Battery** – The indicator will blink when the meter has approximately 3 months working life remaining.
- 2 **End of Battery Life** – Measurement stopped. The display will go blank. The last recorded value is retained in memory. When the battery is replaced, the meter and display will operate normally.
Typical life per replaceable battery pack:
2" to 4" - Ten years
6" - Seven years
8" to 12" - Five years.
- 3 **No-Water** – The indicator will blink when there is an empty pipe condition or no water in the meter.
- 4 **Flow Rate** – If water is flowing in the reverse direction a minus sign is displayed to the left of the value.
- 5 **Net Volume** – Any reverse flow will be subtracted from the volume display. The top line displays billable units with the multiplier shown in upper right corner. Measurement resolution is provided in the lower right for testing.



2" - 4" USG

2" - 4" Cuft



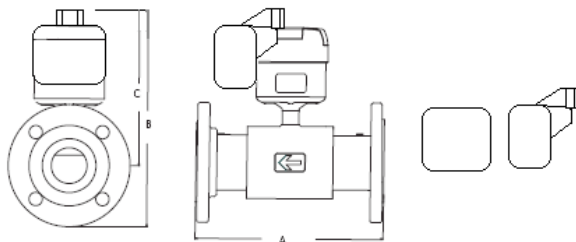
6" - 12" USG

6" - 12" Cuft



Dimensions and net weight

Meter Size	A		B		C		Weight	
	in	(mm)	in	(mm)	in	(mm)	lbs	(kg)
2"	10	(254.0)	11.07	(281.2)	9.07	(230.4)	11.5	(5.2)
3"	12	(301.6)	13.22	(335.7)	9.46	(240.4)	23.4	(10.6)
4"	14	(355.6)	14.16	(359.7)	9.66	(245.4)	36.6	(16.6)
6"	18	(457.2)	16.26	(413.1)	10.76	(273.4)	57.1	(25.9)
8"	20	(508.0)	18.11	(459.9)	11.35	(288.4)	83.6	(37.9)
10"	17.7	(450.0)	20.42	(518.6)	12.42	(315.4)	116.8	(52.9)
12"	19.7	(500.0)	21.92	(556.7)	12.42	(315.4)	155.4	(70.4)



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