

Recordall® Compound Series Meter

Lead-Free Bronze Alloy, Sizes 2, 3, 4 & 6 inch
NSF/ANSI/CAN Standards 61 and 372 Certified

DESCRIPTION

The Recordall® Compound Series meters meet or exceed the most recent revision of AWWA Standard C702 and are available in a lead-free bronze alloy. The Compound Series meters comply with the lead-free provisions of the Safe Drinking Water Act, are certified to NSF/ANSI/CAN Standards 61 and 372 (Trade Designation: LL-NS) 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.

Badger Meter Recordall Compound Series meters combine two metering technologies in one innovative package. A positive displacement chamber measures low flow, while a turbine chamber records high flow.

Offered in four sizes, the Compound Series meter features:

- Patented design that eliminates the need for a trigger valve and maintains crossover accuracy
- Permanently sealed, tamper-resistant register or encoder
- Meters and encoders that are compatible with Badger Meter AMR/AMI systems and other approved reading technologies

Badger Meter ORION® and GALAXY® AMR/AMI meter reading systems are available for all Compound Series meters. Itron® ERT reading systems are also available. All register options are removable from the meter without disrupting water service.

TAMPER-PROOF FEATURES

Unauthorized removal of the register or encoder is inhibited by the use of an optional 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.

APPLICATIONS

Use the Recordall Compound meter for measuring potable cold water in commercial and industrial applications where flow is in one direction only. The meter is an ideal choice for facilities that experience rapid and wide fluctuations in water demand, such as hospitals, universities, residential complexes and manufacturing or processing facilities.

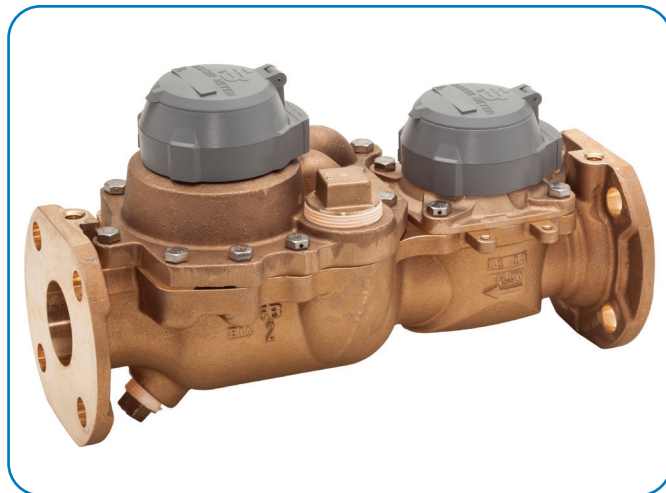
OPERATION

At low flow rates, the Compound Series meter diverts water up through a bypass to the disc chamber. Leaving the chamber's outlet port, water flows beyond the turbine element and main valve. As the flow rate increases, a pressure differential is created that opens the main valve. The water then flows straight through the turbine chamber. In addition, a portion still flows through the disc chamber before exiting the meter.



Badger Meter

RCS-DS-00078-EN-09 (March 2022)



Rotor and disc movements are transmitted by magnetic drive couplings to individual register odometers. The direct magnetic drive provides a positive, reliable and dependable register coupling for straight-reading or remote reading options. The self-lubricating thermoplastic register gearing is designed to minimize friction and provide long life.

OPERATING PERFORMANCE

The Recordall Compound Series meets or exceeds registration accuracy for low, normal operating, maximum continuous operation, and changeover flow rates as specified in AWWA Standard C702.

CONSTRUCTION

The Recordall Compound Series meter's construction complies with ANSI and AWWA C702 standards. It consists of three basic components: meter housing, interchangeable measuring elements, and sealed direct reading registers. The measuring element consists of the disc measuring chamber, turbine head assembly, and high flow valve assembly. To simplify maintenance, the registers and measuring elements can be removed without removing the meter housing from the line.

METER INSTALLATION

The meter is designed for installations where flow is in one direction only. A separate strainer is required to ensure optimum flow conditioning and protection of the measuring element. Companion flanges for installation of meters on various pipe types and sizes are available in cast iron or NL bronze as an option.

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).

Optional—Encoders for AMR/AMI Reading Solutions

AMR/AMI solutions are available for all Recordall Compound 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 www.badgermeter.com.

SPECIFICATIONS

Compound Series Model	2 in. (50 mm)	3 in. (80 mm)	4 in. (100 mm)	6 in. (150 mm)
Meter Flanges, Class 150	2 in. elliptical or round	3 in. round	4 in. round	6 in. round
	(50 mm)	(80 mm)	(100 mm)	(150 mm)
Typical Operating Range (100% ± 1.5%)	0.5...200 gpm (0.1...45 m ³ /h)	0.5...450 gpm (0.1...102 m ³ /h)	0.75...1000 gpm (0.17...227 m ³ /h)	0.75...2000 gpm (0.17...454.4 m ³ /h)
Low Flow Registration (95% minimum)	0.25 gpm (0.06 m ³ /h)	0.25 gpm (0.06 m ³ /h)	0.375 gpm (0.09 m ³ /h)	0.375 gpm (0.09 m ³ /h)
Maximum Continuous Flow	170 gpm (38.3 m ³ /h)	400 gpm (90.3 m ³ /h)	800 gpm (181.6 m ³ /h)	1500 gpm (340.5 m ³ /h)
Pressure Loss at Maximum Continuous Flow	5.4 psi at 170 gpm	6.0 psi at 400 gpm	11.0 psi at 800 gpm	9.3 psi at 1500 gpm
	(0.38 bar at 38.3 m ³ /h)	(0.41 bar at 90.3 m ³ /h)	(0.75 bar at 181.6 m ³ /h)	(0.64 bar at 340.5 m ³ /h)
Crossover Flow Rate, Typical	12 gpm (2.73 m ³ /h)	12 gpm (2.73 m ³ /h)	20 gpm (4.54 m ³ /h)	30 gpm (6.81 m ³ /h)
Pressure Loss at Crossover	3.5 psi (0.24 bar)	4.0 psi (0.28 bar)	4.0 psi (0.28 bar)	5.0 psi (0.35 bar)
Minimum Crossover Accuracy	97%	97%	97%	95%
Maximum Operating Pressure	150 psi (10 bar)			
Maximum Operating Temperature	105° F (41° C)			
NPT Test Port	1-1/2 in.		2 in.	

Materials

Meter Housing & Cover	Lead-free bronze alloy
Turbo Cast Head	Lead-free bronze alloy
Nose Cone & Straightening Vanes	Thermoplastic
Rotor	Thermoplastic
Rotor Radial Bearings	Lubricated thermoplastic
Rotor Thrust Bearing	Sapphire jewels
Rotor Bearing Pivots	Passivated 316 stainless steel
Calibration Mechanism	Stainless steel & thermoplastic
Measuring Chamber & Disc	Thermoplastic
High Flow Valve	Stainless steel & thermoplastic
Magnets	Ceramic
Register Lens	Glass
Register Housing & Cover	Thermoplastic or bronze
Trim	Stainless steel
Drain Plug (3/4 in.)	Stainless steel or lead-free bronze alloy
Test Plug	Stainless steel or lead-free bronze alloy

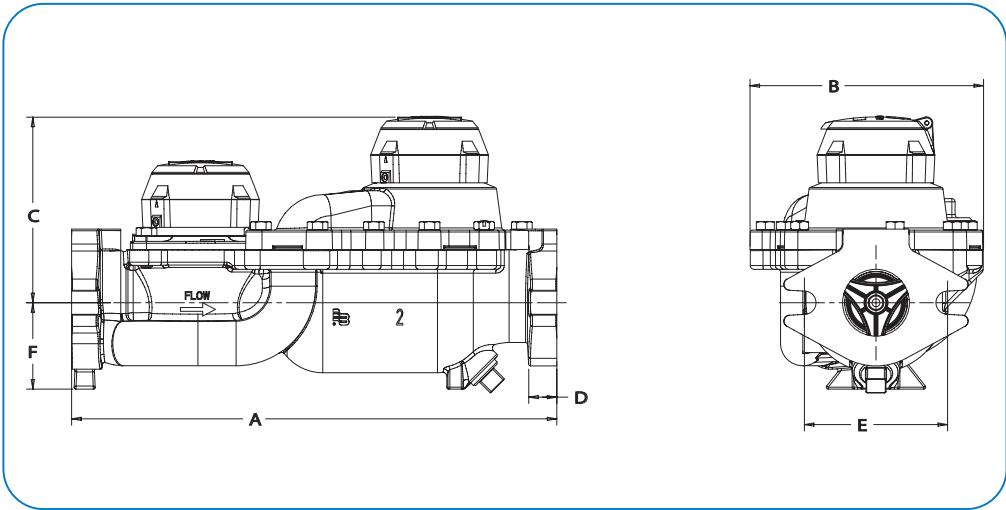
PHYSICAL DIMENSIONS

Compound Series Model	2 in. Elliptical (50 mm)	2 in. Round (50 mm)	3 in. (80 mm)	4 in. (100 mm)	6 in. (150 mm)
Meter & Pipe Size	2 in. (50 mm)		3 in. (80 mm)	4 in. (100 mm)	6 in. (150 mm)
Net Weight	45 lb (20 kg)		51 lb (23 kg)	85 lb (38 kg)	152 lb (69 kg)
Shipping Weight	63 lb (29 kg)		79 lb (36 kg)	120 lb (54 kg)	200 lb (90 kg)
Length (A)	15-1/4 in. * (387 mm)		17 in. (432 mm)	20 in. (508 mm)**	24 in. (610 mm)
Width (B)	7-3/8 in. (187 mm)		8-1/2 in. (216 mm)	9-1/8 in. (232 mm)	12-3/8 in. (314 mm)
Height (C)	5-7/8 in. (149 mm)		6-5/8 in. (168 mm)	7-1/4 in. (184 mm)	8-7/8 in. (225 mm)
Flange (D)	5/8 in. (16 mm)		3/4 in. (19 mm)	7/8 in. (22 mm)	15/16 in. (24 mm)
Bolt Circle (E)	4-1/2 in. (114 mm)	4-3/4 in. (121 mm)	6 in. (152 mm)	7-1/2 in. (191 mm)	9-1/2 in. (241 mm)
Centerline (C) to Base (F)	2-3/4 in. (70 mm)		3-5/8 in. (92 mm)	4-1/4 in. (108 mm)	5-3/8 in. (137 mm)
Number of Bolts	2	4	4	8	8

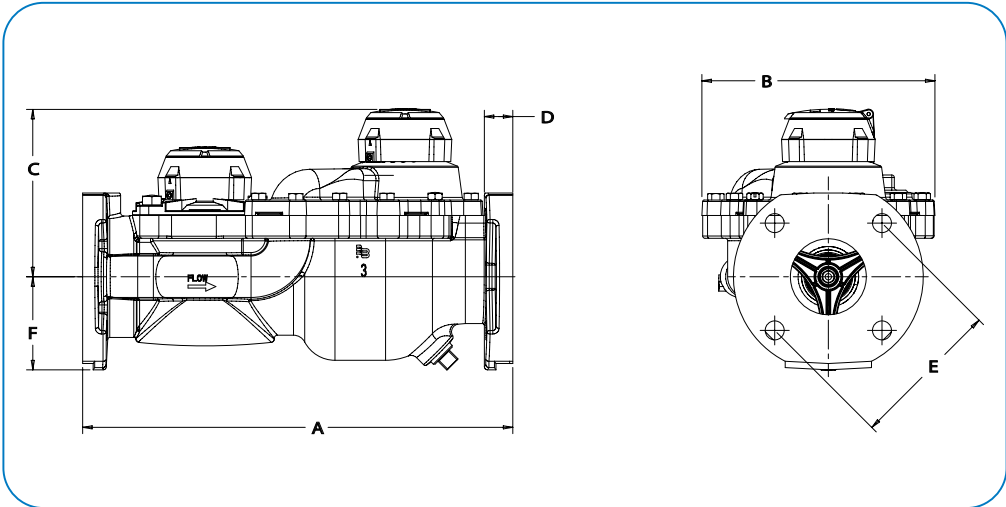
* Adapter available to increase total length to 17 in. (432 mm).

**Adapter available to increase total length to 24 in. (610 mm).

Elliptical Flange (2 in. Only)

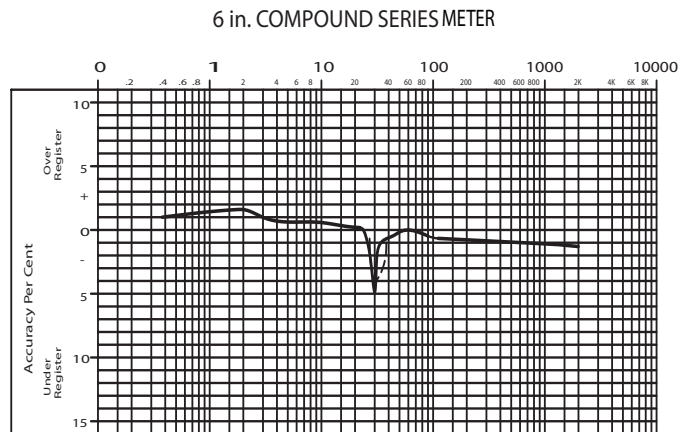
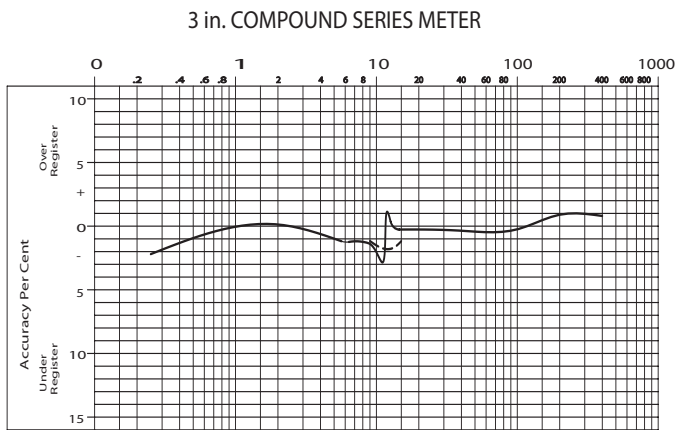
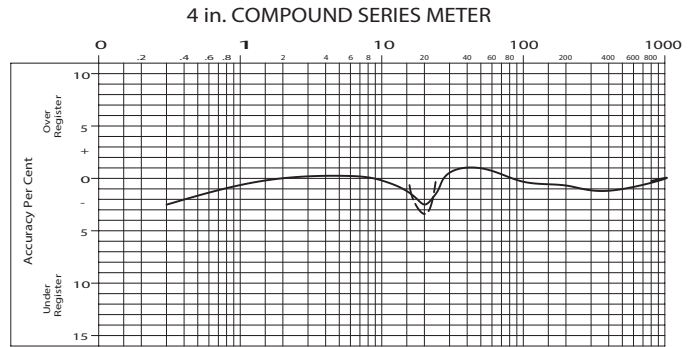
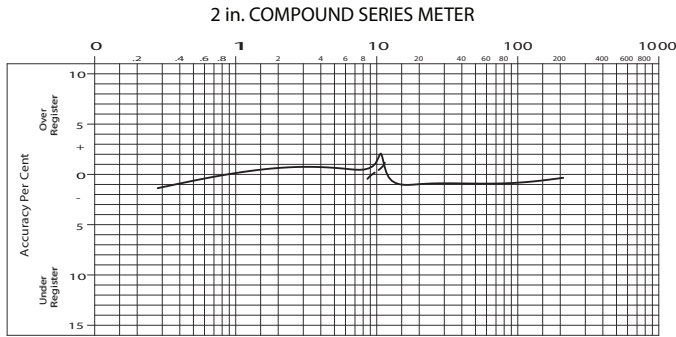


Round Flange



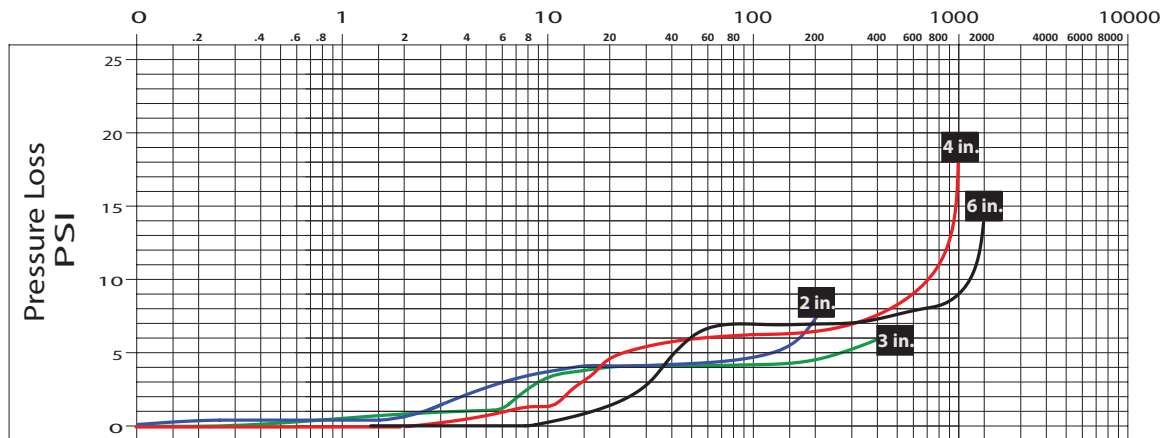
ACCURACY CHARTS

Rate of flow in gallons per minute (gpm). Dashed line on each chart (— — —) represents crossover flow accuracy.



PRESSURE LOSS CHART

Rate of flow in gallons per minute (gpm)



SMART WATER IS BADGER METER

GALAXY, 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. © 2022 Badger Meter, Inc. All rights reserved.