



Badger Meter

Recordall® Compound Series Meter

Cold Water Bronze & Lead-Free Alloy Meter
NSF/ANSI Standard 61 Certified, Annex G

DESCRIPTION

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.
- Sealed, multi-position register that protects against dirt, moisture and tampering—and eases installation and reading.
- Straight-reading odometer-type totalization display, 360° test circle with center sweep hand and flow finder to detect leaks.
- Compatibility with a range of automatic meter reading systems.

Badger Meter ORION® and GALAXY® AMR/AMI meter reading systems are available for all Compound Series meters. Itron® ERT reading systems are also available. An optional summator can be provided as an integral part of the register assembly. All register options are removable from the meter without disrupting water service.

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.

Compound Series meters are available in cast bronze or a lead-free alloy and comply with NSF/ANSI Standard 61, Annex G. The meters carry the NSF-61 Mark, Trade Designation: Compound Series LL-NS.

OPERATION & PERFORMANCE

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.

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. And the self-lubricating thermoplastic register gearing is designed to minimize friction and provide long life.



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 bronze as an option.



SPECIFICATIONS

Compound Series Model	2" (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)
Meter Flanges, Class 150	2" elliptical or round	3" round	4" round	6" 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 (97% 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 (0.38 bar at 38.3 m ³ /h)	6.0 psi at 400 gpm (0.41 bar at 90.3 m ³ /h)	11.0 psi at 800 gpm (0.75 bar at 181.6 m ³ /h)	9.3 psi at 1500 gpm (0.64 bar at 340.5 m ³ /h)
Crossover Flow Rate, Typical	12 gpm	12 gpm	20 gpm	30 gpm
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)			
Register Type	Odometer-type, straight reading, permanently sealed magnetic drive standard. Automatic meter reading systems are optional.			
High Flow Registration	100,000,000 100 gal/sweep hand revolution			1,000,000,000 1000 gal/sweep hand revolution
	10,000,000 10 ft ³ /sweep hand revolution			100,000,000 100 ft ³ /sweep hand revolution
	1,000,000 1m ³ /sweep hand revolution			10,000,000 10 m ³ /sweep hand revolution
Low Flow Registration	10,000,000 10 gal/sweep hand revolution			
	1,000,000 1 ft ³ /sweep hand revolution			
	100,000 0.1m ³ /sweep hand revolution			

Materials

Meter Housing & Cover	Cast bronze (B81) or lead-free alloy
Turbo Cast Head	Cast bronze (B81) or lead-free 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")	Stainless steel or lead-free alloy

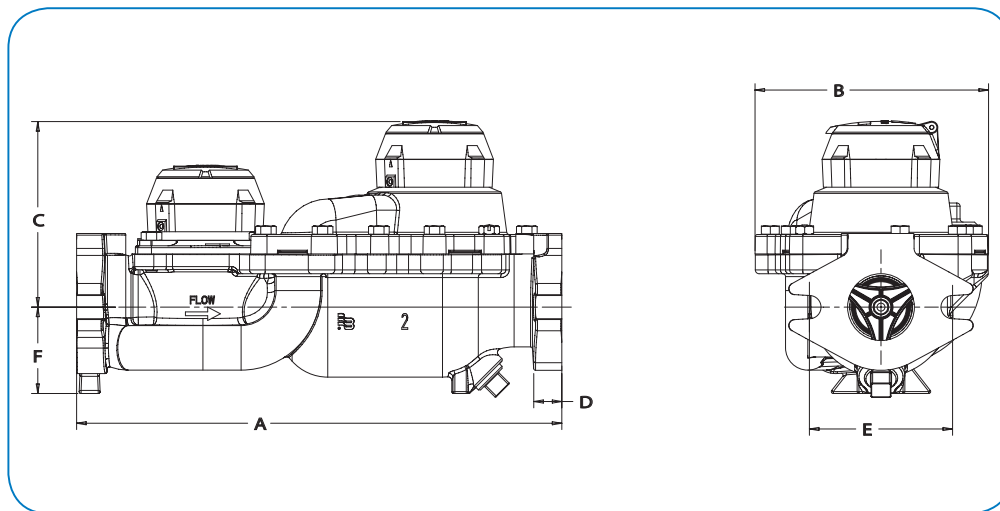
PHYSICAL DIMENSIONS

Compound Series Model	2" Elliptical (50 mm)	2" Round (50 mm)	3" (80 mm)	4" (100 mm)	6" (150 mm)
Meter & Pipe Size	2" (50 mm)		3" (80 mm)	4" (100 mm)	6" (150 mm)
Net Weight	45 lb (20.4 kg)		71.5 lb (32.4 kg)	85 lb (38.4 kg)	152 lb (68.7 kg)
Shipping Weight	63 lb (28.5 kg)		99.5 lb (45 kg)	120 lb (53.8 kg)	200 lb (90.4 kg)
Length (A)	15-1/4" * (387 mm)		17" (432 mm)	20" (508 mm)**	24" (610 mm)
Width (B)	7-3/8" (187 mm)		9-1/4" (235 mm)	9-1/8" (232 mm)	12-3/8" (314 mm)
Height (C)	5-7/8" (149 mm)		6-5/8" (168 mm)	7-1/4" (184 mm)	8-7/8" (225 mm)
Flange (D)	5/8" (16 mm)		3/4" (19 mm)	7/8" (22 mm)	15/16" (24 mm)
Bolt Circle (E)	4-1/2" (114 mm)	4-3/4" (121 mm)	6" (152 mm)	7-1/2" (190.5 mm)	9-1/2" (241 mm)
Centerline (C) to Base (F)	2-3/4" (70 mm)		3-5/8" (92 mm)	4-1/4" (108 mm)	5-3/8" (137 mm)
Number of Bolts	2	4	4	8	8

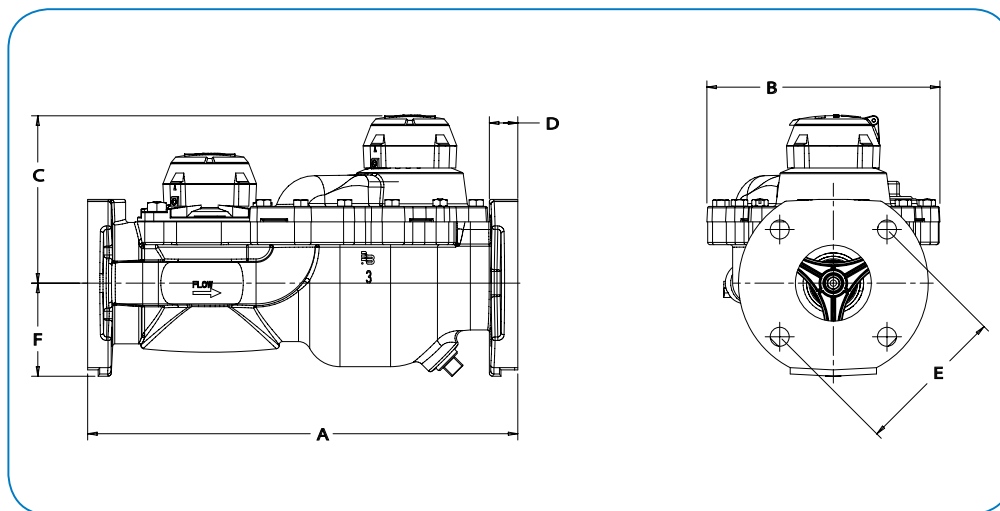
* Adapter available to increase total length to 17" (432 mm).

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

Elliptical Flange (2" Only)

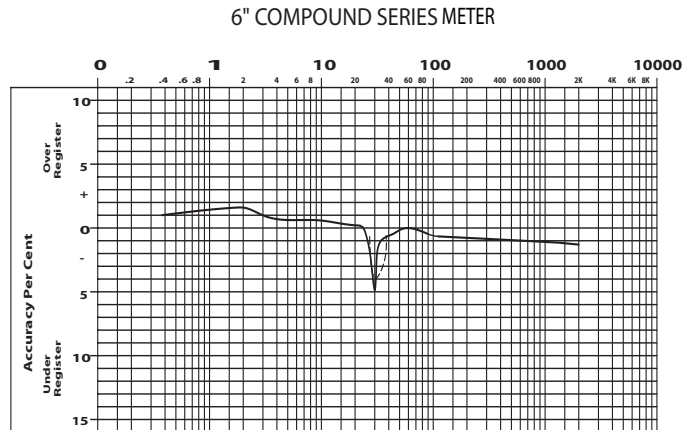
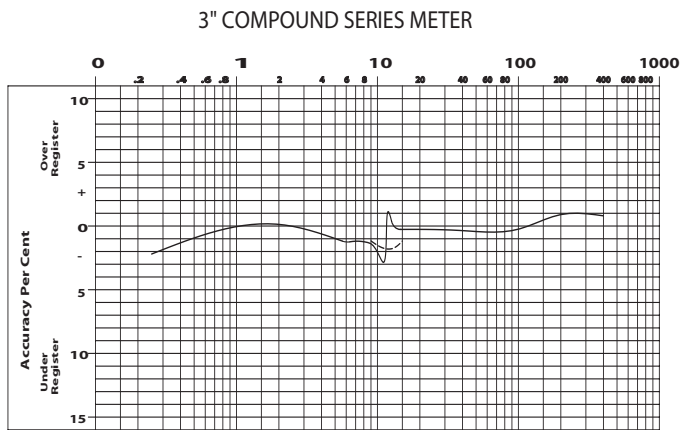
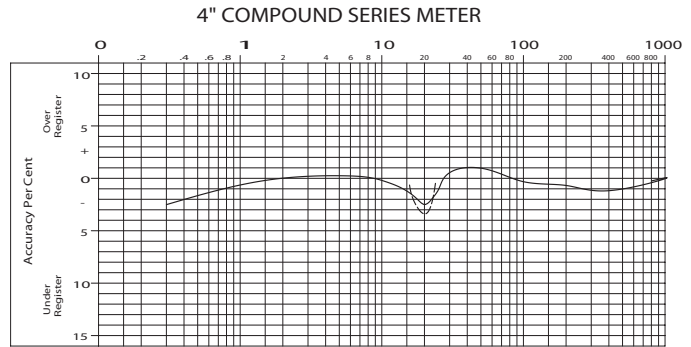
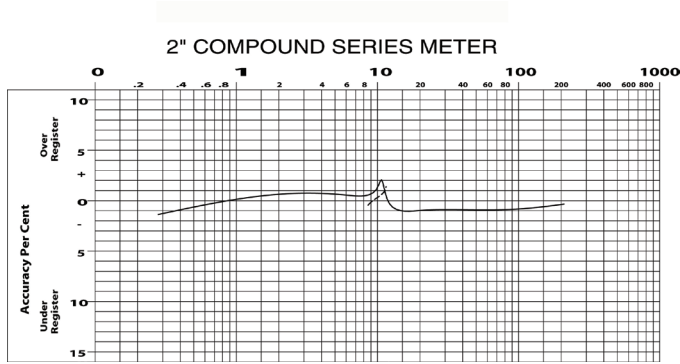


Round Flange



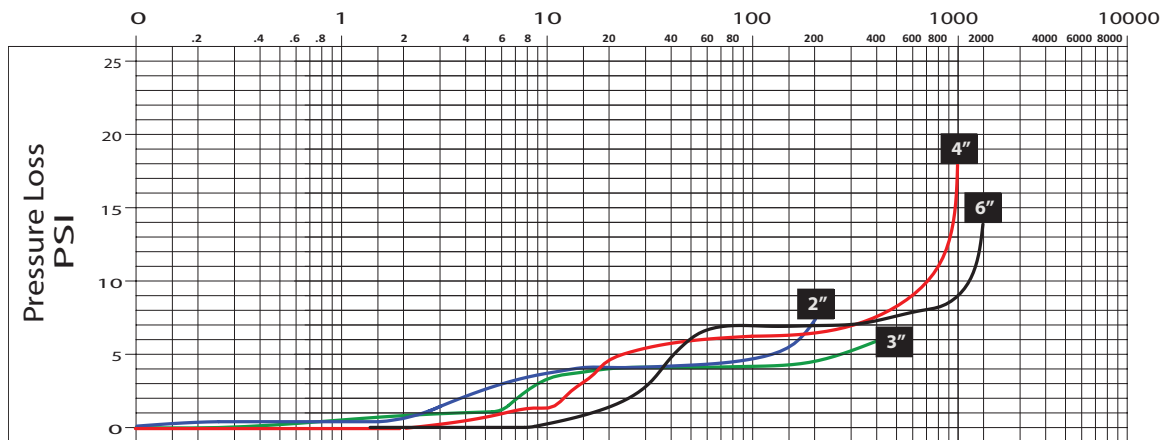
ACCURACY CHARTS

Rate of flow in gallons per minute (gpm)



PRESSURE LOSS CHART

Rate of flow in gallons per minute (gpm)



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www.badgermeter.com

The Americas | Badger Meter | 4545 West Brown Deer Rd | PO Box 245036 | Milwaukee, WI 53224-9536 | 800-876-3837 | 414-355-0400
 México | Badger Meter de las Américas, S.A. de C.V. | Pedro Luis Ogazón N°32 | Esq. Angelina N°24 | Colonia Guadalupe Inn | CP 01050 | México, DF | México | +52-55-5662-0882
 Europe, Middle East and Africa | Badger Meter Europa GmbH | Nurtinger Str 76 | 72639 Neuffen | Germany | +49-7025-9208-0
 Czech Republic | Badger Meter Czech Republic s.r.o. | Mařikova 2082/26 | 621 00 Brno, Czech Republic | +420-5-41420411
 Slovakia | Badger Meter Slovakia s.r.o. | Racianska 109/B | 831 02 Bratislava, Slovakia | +421-2-44 63 83 01
 Asia Pacific | Badger Meter | 80 Marine Parade Rd | 21-04 Parkway Parade | Singapore 449269 | +65-63464836
 China | Badger Meter | Rm 501, N° 11 Longyue Apartment | N° 180 Longjin Rd, Jiuting Songjiang District | Shanghai, China | 201615 | +86-21-5763 5412

| sales@mvandc.com | Phone: 877.566.3837 | Fax: 925.407.2903