



Badger Meter

Recordall® Industrial Meters

Nutating Disc Meter, Bronze and Thermoplastic

DESCRIPTION

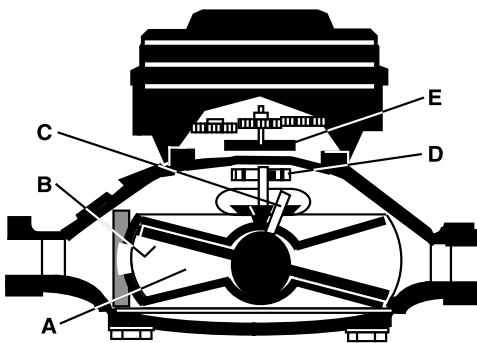
The Badger Meter Recordall (RCDL) positive displacement meters are one of the most cost effective methods in metering industrial fluids. The RCDL meter has a simple, efficient design for high accuracy and repeatability over the entire meter flow range.

Available in five sizes, 1/2...2 in. for flows up to 170 gpm, these meters are extremely rugged and reliable. Maintenance is seldom required, but if necessary, takes only a few minutes. All parts are designed and built of materials that meet your application requirements and provide an enduring and a trouble-free, precision flow meter.

To complement the RCDL meter line, Badger Meter offers a complete line of accessories that includes totalizers, electromechanical and electronic transmitters, rate of flow indicators and batch/process controllers.

OPERATION

The metering principle, known as positive displacement, is based on the continuous filling and discharging of the measuring chamber. Controlled clearances between the disc and the chamber provide precise measurement of each volume cycle. As the disc nutates, the center spindle rotates a magnet. The movement of the magnet is sensed through the meter wall by a follower magnet or by various sensors. Each revolution of the magnet is equivalent to a fixed volume of fluid, which is converted to any engineering unit of measure for totalization, indication or process control.



Liquid flowing through the meter chamber (A) causes a disc (B) to nutate or wobble. This motion, in turn, results in the rotation of a spindle (C) and drive magnet (D). Rotation is transmitted through the wall of the meter to a second magnet (E) or varied style of sensor pickup.

LEAD-FREE MODELS AVAILABLE

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 Standards 61 and 372 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.



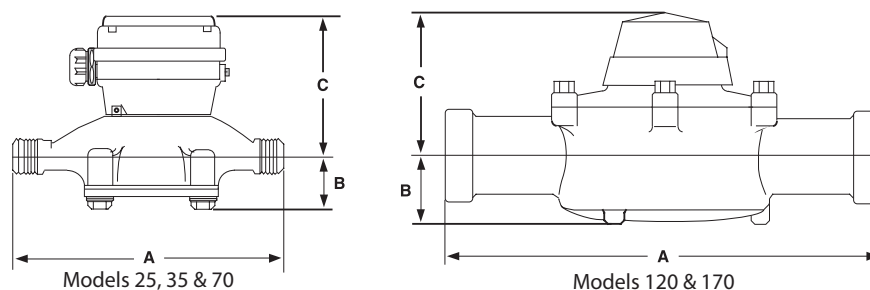
FEATURES

- Wide flow range
- Rugged bronze or thermoplastic housing
- Models 25 and 70—Bronze: 250° F option
- Easily maintained without removing from line
- Durable components for minimal maintenance
- Wide range of compatible accessories

PERFORMANCE

- Accuracy: $\pm 1.5\%$
- Repeatability: $\pm 0.5\%$
- Max. Operating Pressure: 150 psi
- Maximum Operating Temperature:
Plastic housing: 100° F
Bronze housing: 120° F

SPECIFICATIONS



Dimensions in Inches without Register						Flow Rate in Gallons		
Meter Model	Meter Size	Housing Material	A Meter Length	B Centerline to Base	Meter Length with Conn.	Cold Liquids 32...120° F	Chemicals & Oils 32...250° F (BZ) 32...100° F (PL)	Approx. Weight
M25	5/8 in.	BZ or PL	7-1/2 in.	1-3/8 in.	12-7/16 in.	1/2...25 gpm	1...25 gpm	5 lb
M25	3/4 in.	BZ or PL	7-1/2 in.	1-3/8 in.	12-5/8 in.	1/2...30 gpm	1...30 gpm	5 lb
M35	3/4 in.	BZ	9 in.	1-3/4 in.	14-1/8 in.	3/4...35 gpm	N/A	6 lb
M40	1 in.	PL	10-3/4 in.	2-1/4 in.	16-3/16 in.	3/4...50 gpm	N/A	5 lb
M70	1 in.	BZ	10-3/4 in.	2-1/4 in.	16-5/8 in.	1...70 gpm	5...70 gpm	12 lb
M120	1-1/2 in.	BZ	12-5/8 in.	2-5/8 in.	19-3/4 in.	2...120 gpm	*See Note	20 lb
M170	2 in.	BZ	15-1/4 in.	3-3/8 in.	22-7/8 in.	2...170 gpm	N/A	30 lb

BZ = Bronze; PL = Plastic
NPT connection set assemblies available.

N/A = Not available in high temperature/chemical option.
*Note: Available for chemicals or fluids not to exceed 110° F (43° C)

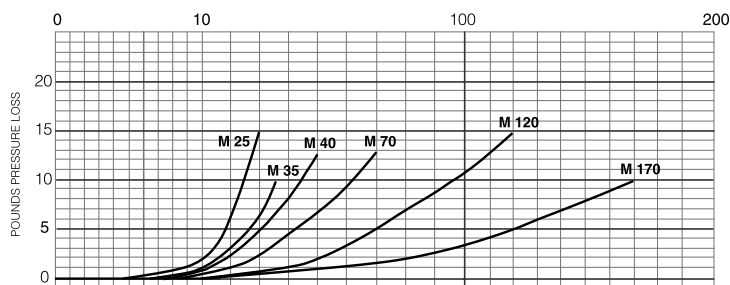
Height Dimensions in Inches with Register and Accessories						
Meter Size	With Non Resettable Register	With Transmitter	With MS-ER1 Transmitter	With ECA Transmitter	With 258 Register	With Series 76 Register
5/8 in. & 5/8 x 3/4 in.	5-3/4 in.	7-3/8 in.	11-1/4 in.	9-3/8 in.	8 in.	15-1/4 in.
3/4 in.	6-1/8 in.	7-3/4 in.	11-5/8 in.	9-3/8 in.	8-3/8 in.	15-5/8 in.
1 in.	7-1/2 in.	9-1/8 in.	13 in.	11-3/16 in.	9-3/4 in.	17 in.
1-1/2 in.	9-1/8 in.	10-3/8 in.	14-1/4 in.	12-3/4 in.	11 in.	18-1/4 in.
2 in.	10-3/4 in.	12-1/4 in.	16-1/8 in.	14-3/8 in.	12-7/8 in.	20-1/8 in.

MATERIALS OF CONSTRUCTION

	Cold Liquid Units	High Temp. and/or Chemical Units Models 25 & 70
Housing	BZ or PL	BZ: 250° F, PL: 100° F
Chamber	Noryl	LCP
Disc	SAN	LCP
Crossbar	Nylon	Ultem
Magnetic Assembly	Nylon	Ultem
Chamber Retainer	Polyethylene	Metal Clip
Screen	Polypropylene	None

PRESSURE LOSS CHART

Rate of Flow in Gallons Per Minute



Control. Manage. Optimize.

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Badger Meter

Mechanical Register non-Resettable

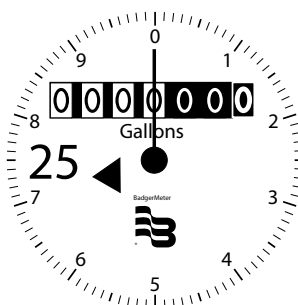
Model RCDL

DESCRIPTION

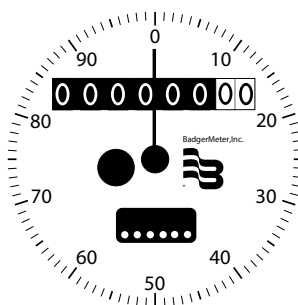
The Recordall® (RCDL) non-resettable mechanical register is a basic totalizer used for inventory and process control where totalization is the only functional need of the product.

OPERATION

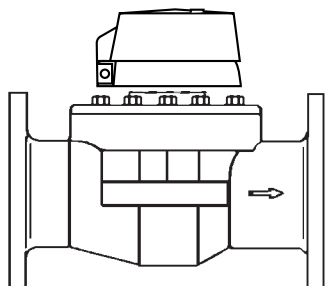
The model RCDL register is available on RCDL disc meters and Industrial Turbo meters. The standard RCDL register for the RCDL disc meters is designed for metering liquids up to 120° F and is available in several units of measure. On the Industrial Turbo meters, the register is designed to meter liquids up to 250° F. These higher temperature units are available in U.S. gallons for both styles of meters, in liters for disc meters, and in cubic meters for Industrial Turbo meters. If the higher temperature register is selected for use on the RCDL disc meter, the appropriate higher temperature rated disc meter option must be used.



Model 25 nutating disc meter with standard dial face in U.S. gallons



2" Industrial Turbo meter dial face in U.S. gallons

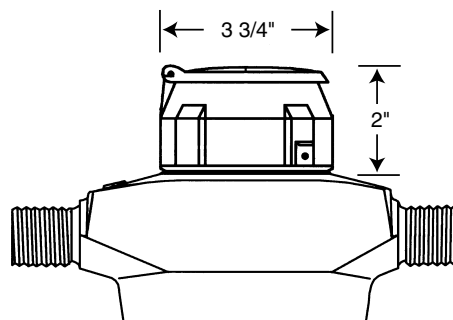


RCDL (Register) shown on Turbo meter



FEATURES

- Register Temperature Ratings:
 - RCDL Disc: Standard 120° F
 - Optional 250° F
 - Industrial Turbo: 250° F
- 6 digit non-resettable totalizer
- Weight: 3 lbs



RCDL (Register) shown on Disc meter

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