

**GENERAL**

Badger's RCDL positive displacement meters are one of the most cost effective methods in metering industrial fluids. The RCDL meter's simple but efficient design assures high accuracy and repeatability over the entire meter flow range.

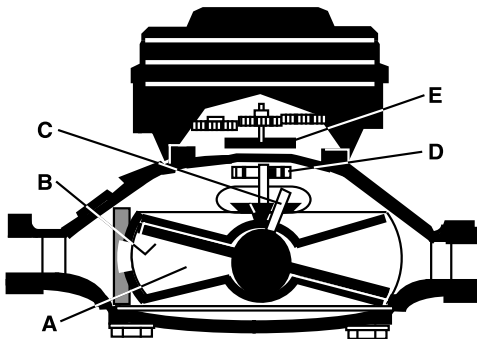
Available in sizes, 1/2" through 2" for flows up to 170 GPM, these meters are extremely rugged and reliable. Maintenance is seldom required, but if necessary, takes but a few minutes. All parts are designed and built of materials to meet your application, providing you with long life and a trouble-free, precision flow meter.

To complement the RCDL meter line, Badger 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 insure minimum leakage for precise measurement of each volume cycle. As the disc nutates, the center spindle rotates a magnet, whose movement is sensed through the meter wall by a follower magnet or an electronic sensor. Each revolution of the magnet is equivalent to a fixed volume of fluid, which is converted to an engineering unit of measure for totalization, indication or process control.

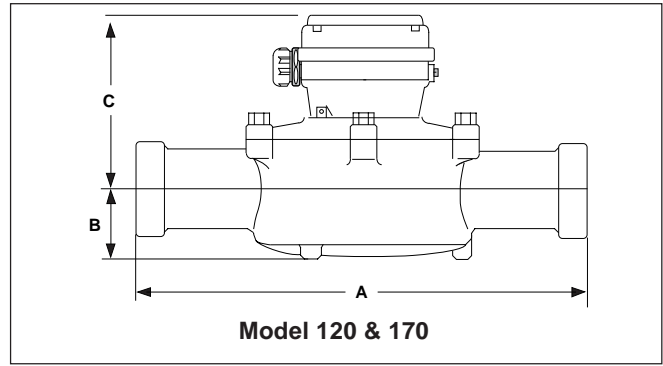
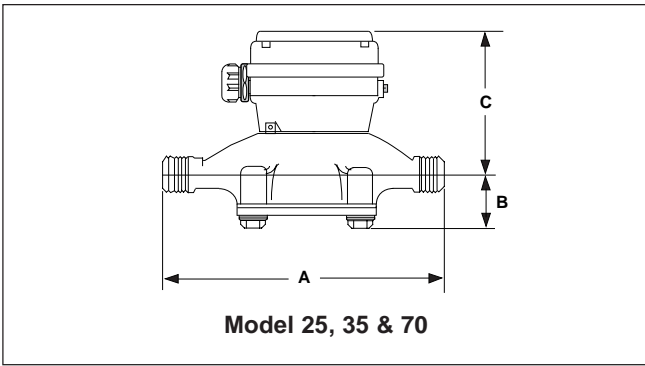


Liquid flowing through the meter chamber (A) causes a disc (B) to nutate or wobble. This motion, in turn, results in the rotation of a spindle (C) and drive magnet (D). Rotation is transmitted through the wall of the meter to a follower magnet or electronic sensor (E) which operates the transmitter.

**FEATURES**

- Accuracy:  $\pm 1.5\%$  over full range
- Repeatability:  $\pm 0.5\%$
- Wide flow range
- Rugged bronze or thermoplastic housing
- Maximum Operating Temperature  
Standard Chamber Assembly:  
Plastic Housing: 100° F  
Bronze Housing: 120° F  
LCP Chamber Assembly Option:  
Available in Models 25, 70 and 120  
Bronze Housing: 250° F
- Maximum Operating Pressure: 150 PSI
- Easily maintained without removing from line
- Durable components for minimal maintenance
- Direct replacement for SC-ER Model
- Electronic scaleable
- Gear driven (most pulse rates including 1 ounce per pulse)





### SPECIFICATIONS

Dimensions in inches (Without Transmitter)

Meter Model	Meter Size Inches	Housing Material	A Meter Length	Meter Length w/Conn.	B Center Line To Base	Flow Rates - Gallons		Approx. Weight Pounds
						Standard Internals 32° F to 120° F	High Temperature Corrosion Resistant Internals (LCP) 32° F to 250° F (BZ) 32° F to 100° F (PL)	
M25	5/8	BZ or PL	7-1/2	12-7/16	1-3/8	1/2 - 25	1 - 25	5
M25	3/4	BZ or PL	7-1/2	12-5/8	1-3/8	1/2 - 30	1 - 30	5
M35	3/4	BZ	9	14-1/8	1-3/4	3/4 - 35	N/A	6
M40	1	PL	10-3/4	16-3/16	2-1/4	3/4 - 50	N/A	5
M70	1	BZ	10-3/4	16-5/8	2-1/4	1 - 70	5 - 70	12
M120	1-1/2	BZ	12-5/8	19-3/4	2-5/8	2 - 120	10 - 120	20
M170	2	BZ	15-1/4	22-7/8	3-3/8	2 - 170	N/A	30

BZ = Bronze; PL = Plastic  
Connection set assemblies available, all having NPT threads.

N/A = Not available with High Temperature / Corrosion Resistant (LCP) option.

### HEIGHT DIMENSIONS (INCHES) (C) with plastic housed transmitter

Meter Size	Transmitter
5/8 & 5/8 x 3/4	4.4
3/4	4.4
1	5.6
1-1/2	6.0
2	6.5

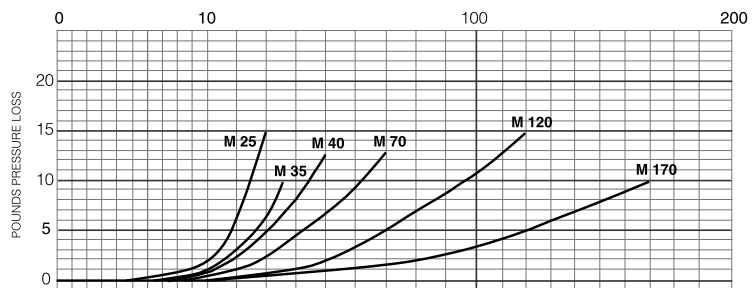
### MATERIALS OF CONSTRUCTION

	Standard Chamber Assy Units	Models 25, 70 & 120 with LCP Internals
<b>Housing:</b>	BZ or PL 120° F / 100° F	BZ - 250° F PL - 100° F
<b>Chamber:</b>	Noryl	LCP
<b>Disc:</b>	SAN	LCP
<b>Crossbar:</b>	Nylon	Ultem
<b>Magnetic Assembly:</b>	Nylon	Ultem
<b>Chamber Retainer:</b>	Polyethylene	Metal Clip
<b>Screen:</b>	Polypropylene	None

### PERFORMANCE

**Accuracy:** ± 1.5%  
**Repeatability:** ± 0.5%  
**Max. Operating Pressure:** 150 PSI

**PRESSURE LOSS CHART**  
**Industrial Disc Meters**  
Rate of Flow in Gallons Per Minute



Please see our website at  
[www.badgermeter.com](http://www.badgermeter.com)  
for specific regions and contacts.

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 bid obligation exists.



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