



Badger Meter

Industrial Meters

Oscillating Piston Model OP Sanitary, 3A Approved
Sizes 1/2", 1", 2"

DESCRIPTION

The Badger Meter positive displacement meter, Model OP, is one of the most cost effective methods for metering process fluids in the chemical, pharmaceutical and food industries. The simple but efficient design of the OP meter generates high accuracy and repeatability over the entire meter flow range. Magnetic, through-the-wall transmission prevents operator exposure to corrosive fluids and protects the fluid from external contamination.

Offered in three sizes, 1/2", 1" and 2", for flows up to 100 gpm, these meters are extremely rugged, reliable and need little maintenance and calibration. With only three internal moving parts, maintenance is seldom required. If necessary, it takes but a few minutes.

All parts are designed and built of materials recommended for your application, providing you with a long life, trouble-free, precision flow meter. The meter's compact design and mode of operation allows for installation in tight spaces and in any position.

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

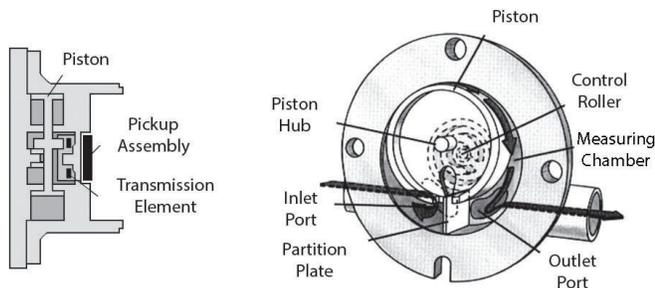
OPERATION

The meter function is based on the continuous filling and discharging of the measuring chamber (positive displacement). Controlled clearances between the piston and the chamber provide minimum gap leakage for precise measurement of each volume cycle. As the piston oscillates, its center hub rotates a magnet. The movement is sensed through the meter wall by electromagnetic sensors or by a follower magnet. 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.

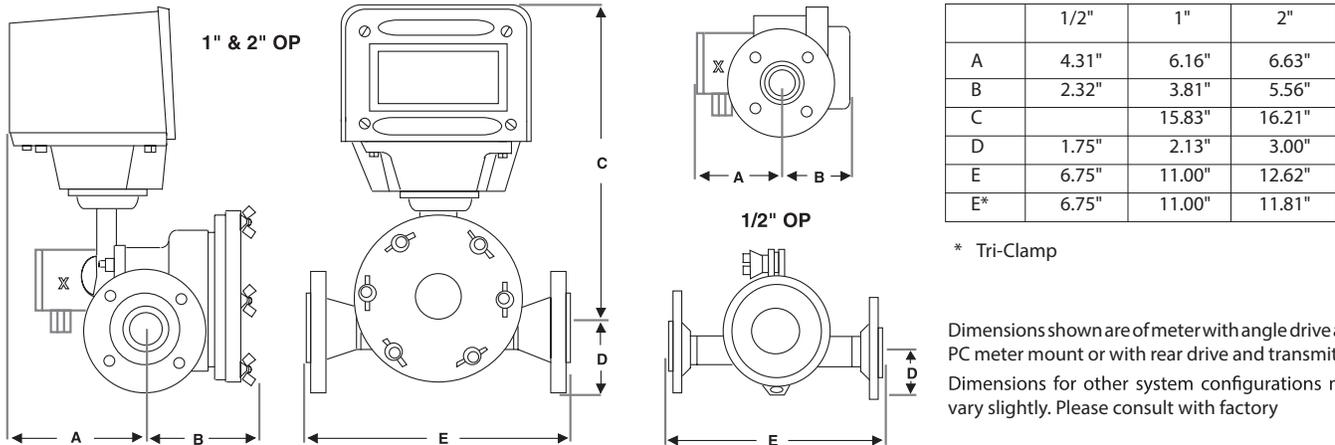


MATERIALS OF CONSTRUCTION

All Meter Sizes	Sanitary Model
Housing Materials	316 Stainless Steel
Piston Materials	Ultem
O-Ring Materials	Teflon
Bushing Material	Rulon (white)
Magnet Casing	Alloy 20
Control Roller	Alloy 20



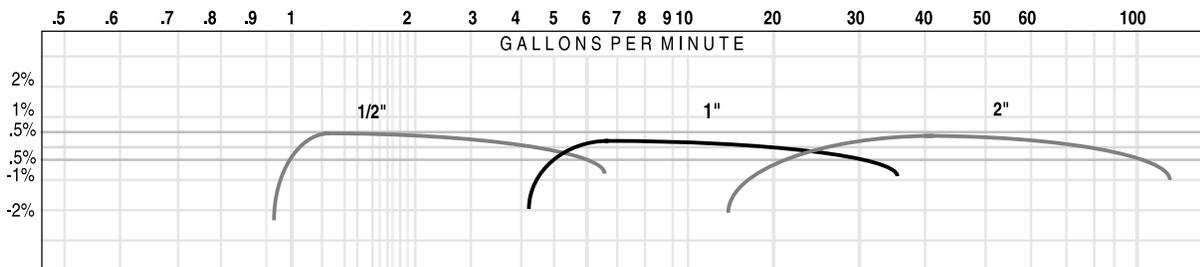
DIMENSIONS



SPECIFICATIONS

	1/2"	1"	2"
Minimum Flow Rate, Q Minimum	1.5 gpm	5.5 gpm	25 gpm
Continuous Operating Maximum Rate	4 gpm	20 gpm	65 gpm
Short Duration Maximum Flow, Q Maximum	6 gpm	30 gpm	100 gpm
Continuous operation is acceptable at these rates, but accelerated wear of the piston and/or bushings may occur.			
Standard Connections	Tri-Clamp	Tri-Clamp	Tri-Clamp
Pressure Drop at Maximum Continuous Operating Flow (@ viscosity & specific gravity of water)	1.8 psi	6.3 psi	10.6 psi
Maximum Viscosity Limit	Pressure loss increases with fluid viscosity 10,000 cps (flow range is decreased as viscosity increases). Contact factory for higher viscosities		
Maximum Operating Pressure	150 psi		
Maximum Operating Temperature	250 °F		
Minimum Operating Temperature** **Minimum temperature for stated accuracy.	40 °F		
Accuracy	± 0.5% over entire meter flow range		
Repeatability	± 0.2% or better under similar repeatable batch operations		

Metric Conversion: psi x 0.0703 = bars gpm x 3.785 = liters per minute °F - 32 x 0.555 = °C



ACCURACY CURVES: Accuracy tested in ambient temperature on water. Higher accuracy may be achieved with more viscous fluids.

Control. Manage. Optimize.

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