

# TrickleMeter®

## Low Flow Flowmeters

### Description

The Flow Technology TrickleMeter® is ideal for measuring very low flows of low- to high-viscosity liquids. Its positive displacement design provides rugged, reliable operation for a variety of industrial applications. The SRP sensor is specially matched to the TrickleMeter® providing a reliable pulse output at the full range of flows.

### Features

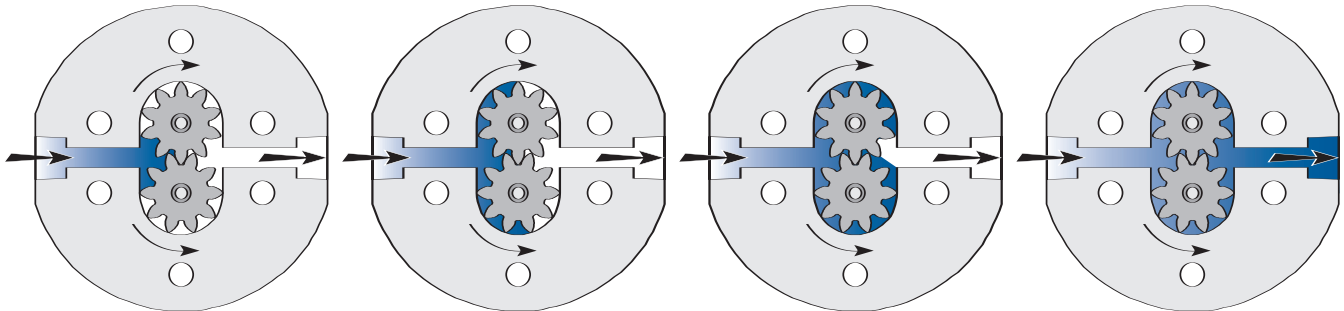
- Only two moving parts
- 1000 PSI
- Stainless steel case, carbide shafts
- Up to 100:1 turndown
- 3/8" NPT connections
- Non-intrusive sensor
- Easy installation and maintenance
- Wide range of applications
- Handles pulsating flow systems
- Ideal for additive injection



**TrickleMeter®**  
Low Flow Flowmeters

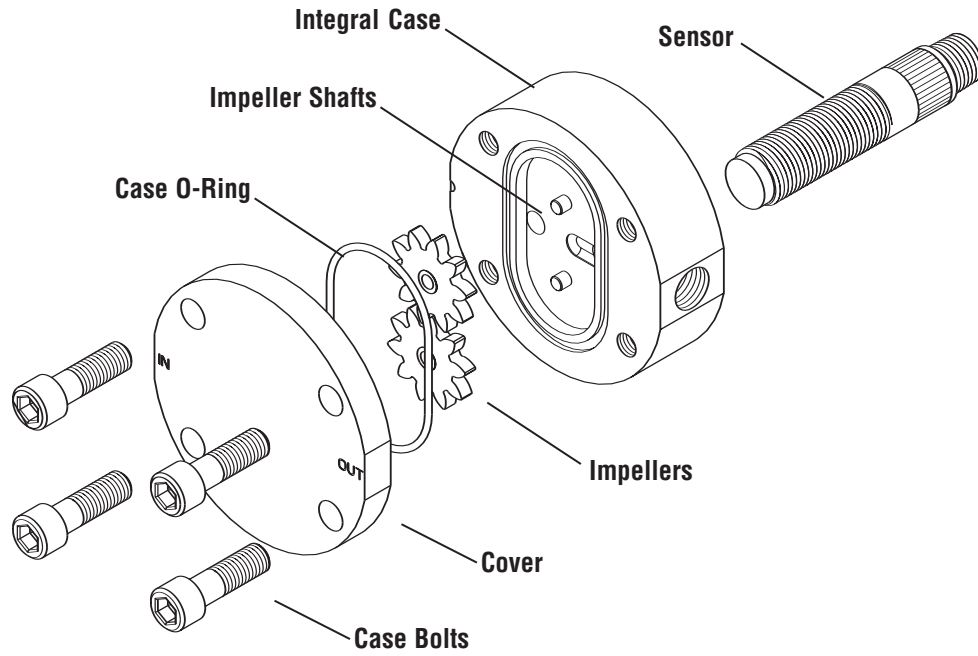
Protected by one or more U.S. Patents:  
4641522, 4815318, 4911010, 4996888, 5027653, 5325715

### Principle of Operation

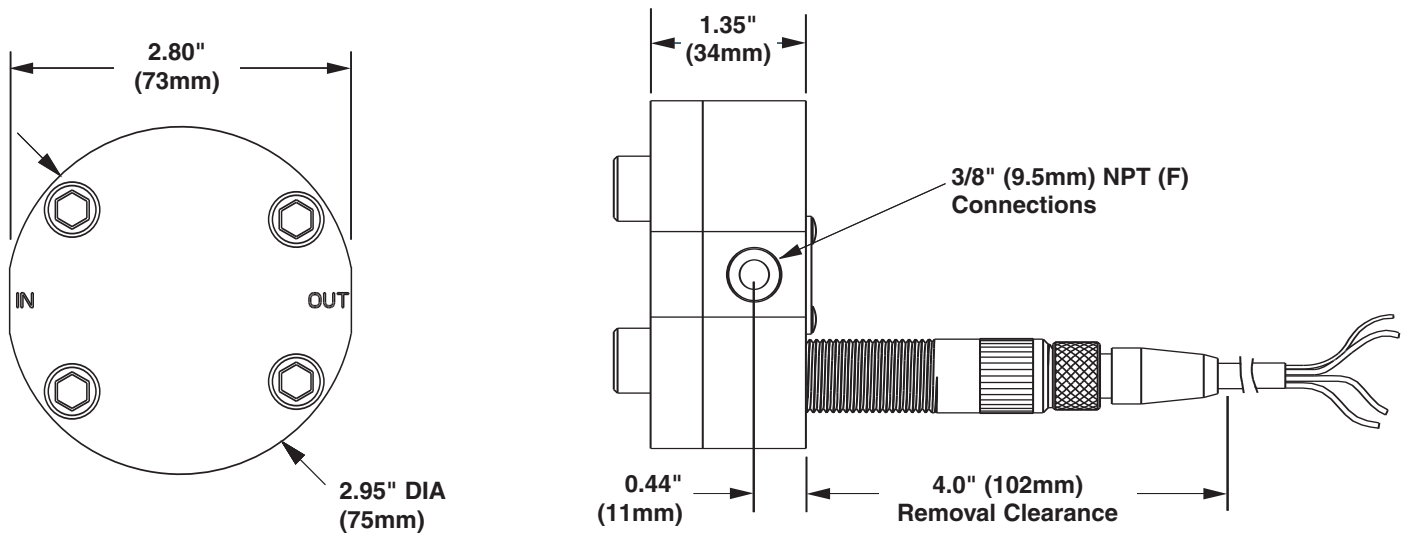


TrickleMeter® flowmeters use two rotating impellers driven by the flowing liquid. A non-intrusive sensor responds to the passing teeth on one impeller and generates a pulsed output signal. Each pulse represents a known volume of liquid that is captured between the teeth of the impellers. A K-factor converts the pulses into engineering units for remote data collection and digital display.

# Flowmeter Assembly Diagram

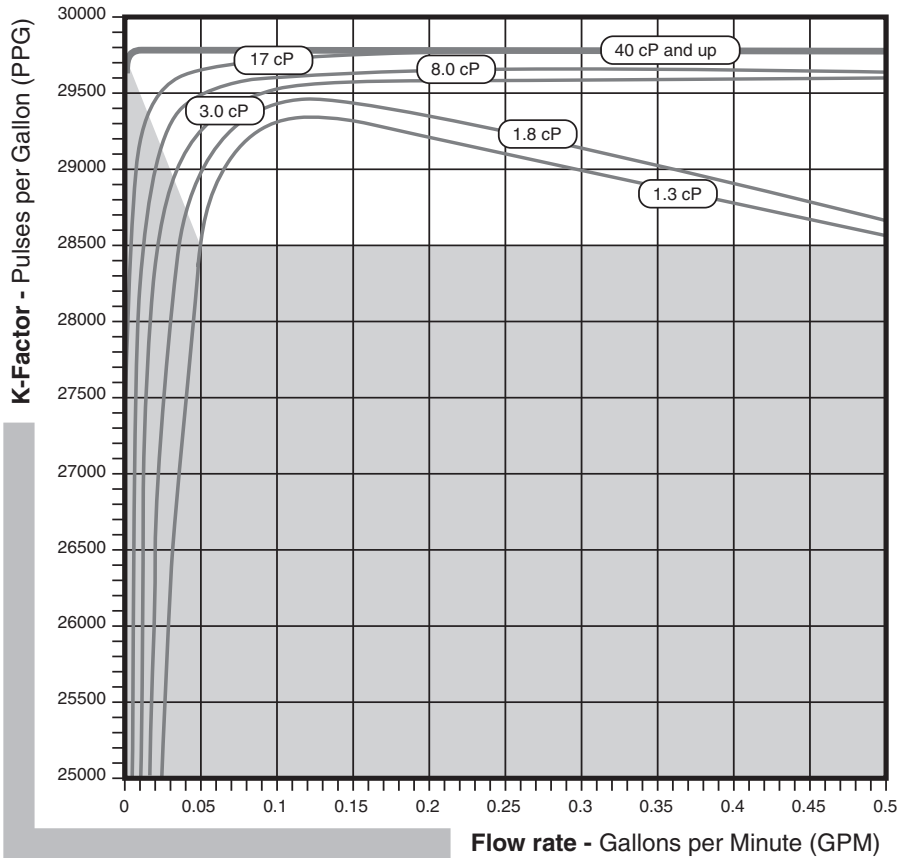


## Dimensions



**Caution:** Finger-tighten sensor into meter body.  
**WARNING:** Do not pressurize meter without sensor installed. Do not run for any period of time without media in meter. Severe damage will result.

## Typical Calibration Curves



## Pressure Drop Across Meter

$$\Delta P = e^{\left(\frac{\ln(\text{viscosity}) + b \ln(\text{flow}) + a}{c}\right)}$$

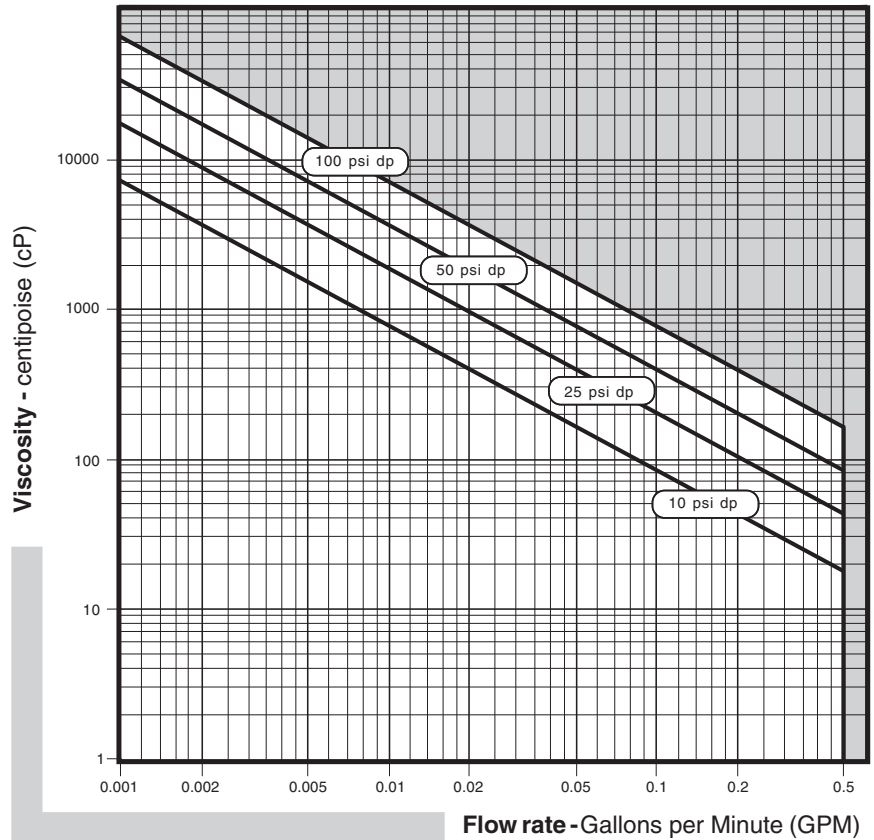
viscosity is in cP, flow is in GPM,  $\Delta P$  is in PSI

with:

$$a = 0.0082$$

$$b = 0.9642$$

$$c = 0.9659$$



## Specifications

<b>Operating Temperature</b>	-20° F to +450° F (-29° C to +232° C)
<b>Operating Pressure</b>	1,000 psig (6.89 MPa)
<b>Turndown Ratio</b> (ratios based on maximum rated flow rate)	
Low-viscosity fluids	10:1 standard (1.0 cP to 3.0 cP)
Medium-viscosity fluids	100:1 standard (>3.0 cP)
High-viscosity fluids	100:1 standard (>3.0 cP)

<b>Repeatability</b> (Reference Accuracy)	±0.05% of rate on medium/ high-viscosity fluids
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<b>Accuracy</b> (Linearity)	
Medium/high-viscosity fluids	±0.5% of rate over upper 80% of full span typical
With enhanced signal conditioning	Up to ±0.1% of rate over full turndown range

<b>Flow Rate</b>	
Minimum	0.005 GPM (0.019 L/min)*
Maximum	0.5 GPM (1.9 L/min)*

<b>Weight</b>	2.5 lbs (1.1 kg)
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\* See turndown ratio

**Output**  
(Refer to individual product sheets for complete specifications)

Sensors (1 required per meter)  
*Surface Reference Sensor:* 7–30 VDC square-wave pulse  
depending on supply  
voltage, 3-wire

Signal Conditioners,  
Transmitters  
Refer to individual product  
sheets available from  
Flow Technology

### Materials of Construction

Integral Body (Case), Cover(s)	316 stainless steel, standard
Shafts	Tungsten Carbide
Impellers	440C, Hardened
O-Rings	Viton® or Teflon® standard
Bolts	Black-Oxide Grade 8 standard

Note: High Strength Corrosion-Resistant A-286 Stainless  
Steel bolts are available.

### Recommended Filtration

Sieve No.	625
Micron	20

## Model Numbering System

L 0 0 [ ] - [ ] [ ] [ ] [ ] I 2 - [ ] [ ] [ ] [ ] [ ] [ ]

### Basic

#### Model No.

#### Nominal Size

00 = .005–.5 GPM

#### Meter Type

I = Intermediate Pressure  
(1,000 psi)

#### Case Material

6 = 316 SST with black-oxide  
steel Grade 8 bolts  
C = 316 SST with A-286 High  
Strength Grade 8 bolts

### Special Designator

000 = Standard Meter

### Connection Size

03 = 3/8"

### Connection Type

1 = NPT (Female)

### Impeller Material

T = 440C, Hardened

### O-Ring Material

1 = Viton®  
9 = Teflon®

### Shaft Material

C = C2 Tungsten Carbide

Specifications are for reference only and are subject to change without notice.

Local Representative:



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