

# BI-DIRECTIONAL VARIABLE AREA FLOW METER

Ideal for monitoring pump performance as well as measuring fluids in hydraulic circuits and cooling systems where flow is measured in both directions.



## TECHNICAL SPECIFICATIONS

### Measuring Accuracy

±4.0% of full scale

### Repeatability

±1% of full scale

### Flow Measuring Range

0.5-100 GPM (2-350 LPM)

### Maximum Operating Pressure

Aluminum and brass meters: 3500 PSIG (240 Bar)  
Stainless steel meters: 6000 PSIG (410 Bar)

### Maximum Operating Temperature

240°F (116°C) Note: for operation to 600°F (316°C), see our High Temperature Data sheet.

### Standard Calibration Fluids

Oil meters: DTE 25® @ 110°F (43°C), 0.873 sg  
Water meters: tap water @ 70°F (21°C), 1.0 sg

### Filtration Requirements

74 micron filter or 200 mesh screen minimum

### Viscosity

Viscosities up to 110 cSt

DTE 25 is a registered trademark of Exxon Mobil.

## BENEFITS

### Choice of Materials

Select from aluminum, brass or stainless steel to meet system and liquid requirements.

### Unrestricted Mounting

Allows for horizontal, vertical or inverted installation and does not require straight plumbing on inlet or outlet.

### Bi-Directional

Measures bi-directional flow measurement for liquids.

### Rugged and Reliable

These meters are constructed with all metal pressure vessels that allow safe & permanent installation.

### High Pressure Operation

The magnetically coupled follower design allows operation to 6000 PSIG.

### Multiple Ports Available

Standard selection of NPT, SAE and BSPP ports reduces the amount of adapters required for installation.

## MATERIALS OF CONSTRUCTION (NON-WETTED COMPONENTS)

	Aluminum	Brass	Stainless Steel
Window Tube	Polycarbonate	Polycarbonate	Polycarbonate
Window Seals	Buna-N® (STD), PTFE	Buna-N® (STD), PTFE	Buna-N® (STD), PTFE

## MATERIALS OF CONSTRUCTION (WETTED COMPONENTS)

	Aluminum	Brass	Stainless Steel
Casing & End Ports	Anodized Aluminum	Brass	Stainless Steel
Seals	Buna-N® (STD), EPR, FKM or FFKM	Buna-N® (STD), EPR, FKM or FFKM	FKM with PTFE backup (STD), Buna-N®, EPR or FFKM
Transfer Magnet	PTFE coated Alnico	PTFE coated Alnico	PTFE coated Alnico
All other internal parts	Stainless Steel	Stainless Steel	Stainless Steel

Buna-N is a registered trademark of Chemische Werke Huls.

# BI-DIRECTIONAL VARIABLE AREA FLOW METER

Ideal for monitoring pump performance as well as measuring fluids in hydraulic circuits and cooling systems where flow is measured in both directions.

## PART NUMBER GUIDE

B     —       —     B I —        

**BASIC**

**PORT SIZE RANGE**

1/4" - 1/2" = 3

3/4" - 1" = 4

1-1/4 - 2" = 5

**MATERIAL**

Aluminum = A

Brass = B

Stainless Steel = S

**MAX. PRESSURE RATING**

3500 psig (liquids, aluminum & brass) = 6

6000 psig (liquids, stainless steel) = 7

**FLUID MEDIA**

Oil @ 0.873 specific gravity = H

Water @ 1.0 specific gravity = W

Note: For special scales consult the factory.

**PORTING/THREAD TYPE**

(all female)

1/4" NPTF, dry seal	3 only =	<span style="border: 1px solid black; padding: 2px;">S</span>
3/8" NPTF, dry seal	3 only =	<span style="border: 1px solid black; padding: 2px;">A</span>
1/2" NPTF, dry seal	3 only =	<span style="border: 1px solid black; padding: 2px;">B</span>
3/4" NPTF, dry seal	4 only =	<span style="border: 1px solid black; padding: 2px;">C</span>
1" NPTF, dry seal	4 only =	<span style="border: 1px solid black; padding: 2px;">D</span>
#6 SAE, O-ring seal	3 only =	<span style="border: 1px solid black; padding: 2px;">E</span>
#8 SAE, O-ring seal	3 only =	<span style="border: 1px solid black; padding: 2px;">F</span>
#10 SAE, O-ring seal	3 only =	<span style="border: 1px solid black; padding: 2px;">G</span>
#12 SAE, O-ring seal	4 only =	<span style="border: 1px solid black; padding: 2px;">H</span>
#16 SAE, O-ring seal	4 only =	<span style="border: 1px solid black; padding: 2px;">J</span>
1-1/4" NPTF, dry seal	5 only =	<span style="border: 1px solid black; padding: 2px;">K</span>
1-1/2" NPTF, dry seal	5 only =	<span style="border: 1px solid black; padding: 2px;">L</span>
2" NPTF, dry seal	5 only =	<span style="border: 1px solid black; padding: 2px;">M</span>
#20 SAE, O-ring seal	5 only =	<span style="border: 1px solid black; padding: 2px;">N</span>
#24 SAE, O-ring seal	5 only =	<span style="border: 1px solid black; padding: 2px;">P</span>
#32 SAE, O-ring seal	5 only =	<span style="border: 1px solid black; padding: 2px;">Q</span>
1/4" BSPP	3 only =	<span style="border: 1px solid black; padding: 2px;">&amp;</span>
3/8" BSPP	3 only =	<span style="border: 1px solid black; padding: 2px;">R</span>
1/2" BSPP	3 only =	<span style="border: 1px solid black; padding: 2px;">T</span>
3/4" BSPP	4 only =	<span style="border: 1px solid black; padding: 2px;">U</span>
1" BSPP	4 only =	<span style="border: 1px solid black; padding: 2px;">V</span>
1-1/4" BSPP	5 only =	<span style="border: 1px solid black; padding: 2px;">W</span>
1-1/2" BSPP	5 only =	<span style="border: 1px solid black; padding: 2px;">Y</span>
2" BSPP	5 only =	<span style="border: 1px solid black; padding: 2px;">X</span>

Note: SAE porting not available in Brass. Consult factory for SAE brass meter requirements.

**CUSTOM PRODUCT**

**OPTIONAL FLOW DIRECTIONS**

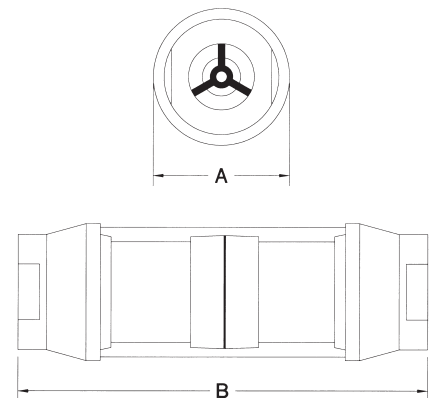
Bi-Directional Flow = B I

**FLOW RANGES**

<b>Liquid</b>		<b>Size</b>
0.5-5.0 GPM	2-19 LPM	3 only = <span style="border: 1px solid black; padding: 2px;">0</span> <span style="border: 1px solid black; padding: 2px;">5</span>
1-10 GPM	5-37.5 LPM	3 & 4 = <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;">0</span>
1-15 GPM	5-55 LPM	3 & 4 = <span style="border: 1px solid black; padding: 2px;">1</span> <span style="border: 1px solid black; padding: 2px;">5</span>
2-20 GPM	10-75 LPM	4 only = <span style="border: 1px solid black; padding: 2px;">2</span> <span style="border: 1px solid black; padding: 2px;">0</span>
4-30 GPM	15-115 LPM	4 only = <span style="border: 1px solid black; padding: 2px;">3</span> <span style="border: 1px solid black; padding: 2px;">0</span>
6-50 GPM	20-190 LPM	5 only = <span style="border: 1px solid black; padding: 2px;">5</span> <span style="border: 1px solid black; padding: 2px;">0</span>
6-75 GPM	30-280 LPM	5 only = <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">5</span>
10-100 GPM	50-375 LPM	5 only = <span style="border: 1px solid black; padding: 2px;">8</span> <span style="border: 1px solid black; padding: 2px;">8</span>

## MECHANICAL - SIZE CODE

DIM	Series 3	Series 4	Series 5	Series 5 (2" port only)
A	1-7/8" (48mm)	2-3/8" (60 mm)	3-1/2" (90mm)	3-1/2" (90mm)
B	6-9/16" (167mm)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)



Products may be subject to change without notice - Contact factory for the most up-to-date product information.