

**PTFE-PFA FLOW METERS**



Incorporating the principles of traditional rotameter flow technology, these rugged PTFE-PFA flow meters offer solutions to low to medium flow range measurements of highly corrosive or ultra-pure liquids.

Wetted inert components are surrounded by structurally rigid materials such as polypropylene and Kynar®. The resultant design represents a unique combination of a rugged mechanically rigid frame and the chemically inert wetted parts. *Model L* Meters are constructed of inert materials such as PFA, PTFE and PCTFE.

**Flow meters are also resistant to external, ambient corrosives.**

For the protection of personnel each flow meter is supplied with a safety shield.

Flow meters are supplied with or without built-in needle valves and they are panel mountable, by means of Kynar® panel nuts.

**design features**

- ✓ Chemically inert wetted components constructed from PFA PTFE and PCTFE.
- ✓ Non-fluid contacting structurally rigid frame constructed from polypropylene and Kynar®.
- ✓ Overlapping flow ranges are available for water from 5 mL/min (0.00132 GPM) to 45 L/min (12 GPM).
- ✓ Individually leak tested.

High Range PTFE meter with Valve



Low Range PTFE meter without Valve

**LEAK INTEGRITY**

Flow meters are individually tested on a Mass Spectrometer Leak Detector and certified to a leak integrity rating of  $1 \times 10^{-7}$  sccs Helium or better.

# L PTFE - PTFA FLOW METERS

## PRINCIPLES OF OPERATION

A cylindrical float freely moving inside a tapered flow tube comprises the flow measurement element of PTFE - PFA flow meters. The translucent PFA flow tube is installed vertically in-line in the liquid stream.

As flow takes place the float is propelled up inside the flow tube. The area between the float and the inside diameter of the flow tube gradually increases with increasing flow and correspondingly the pressure lifting the float decreases until the weight of the float and its buoyant force come to equilibrium. At equilibrium the top of the float is lined up with a scale graduation on the flow tube denoting a discrete rate of flow.

SPECIFICATIONS	
<b>SCALES</b>	Direct reading scales for liquids with 1.0 specific gravity.
<b>ACCURACY</b>	±5% of full scale.
<b>MAXIMUM TEMPERATURE</b>	250 ° F (121 °C).
<b>MAXIMUM PRESSURE</b>	100 psig (6.7 bars).
<b>LEAK INTEGRITY</b>	Individually pressure and leak tested and certified to a rating of 1 x 10 <sup>-5</sup> ccs of Helium.

**MATERIALS OF CONSTRUCTION	
<b>FLOW TUBES</b>	PFA.
<b>FLOATS</b>	PTFE (Sapphire Size #1 L01).
<b>WETTED PARTS</b>	PFA (flow tubes) and PTFE (end fittings and floats) and PCTFE (guide rods).

\*\*The selection of materials of construction, is the responsibility of the customer. The company accepts no liability.

DIMENSIONS FOR L STYLE METERS									
METER SIZE	A	B	C	D	E	F	G	H	SCALE LENGTH
C	4.97	0.56	1.06	3.42	3.22	1.65	1.50	6.16	75mm
D	4.97	0.56	1.25	4.72	4.32	1.95	1.75	6.16	75mm
E	8.72	0.88	1.75	4.64	4.14	2.25	2.25	10.47	125mm
F	8.47	1.00	1.75	6.00	5.06	2.80	2.50	10.47	125mm

ORDERING INFORMATION					
L STYLE LOW RANGE METERS					
METER SIZE	MODEL NUMBER		CONNECTION	MAXIMUM FLOW	
	BUILT IN VALVE	NO VALVE		[mL/min] WATER	[gph] WATER
C	L6C-L01-01-SA	L3C-L01-01-SA	1/4" FNPT	75	1.19
	L6C-L02-01-TF	L3C-L02-01-TF	1/4" FNPT	250	3.96
	L6C-L03-01-TF	L3C-L03-01-TF	1/4" FNPT	400	6.34
	L6C-L04-01-TF	L3C-L04-01-TF	1/4" FNPT	500	7.92
	L6C-L05-01-TF	L3C-L05-01-TF	1/4" FNPT	1000	15.85
D	L6D-L06-01-TF	L3D-L06-01-TF	3/8" FNPT	2000	31.69
	L6D-L07-01-TF	L3D-L07-01-TF	3/8" FNPT	2500	39.62
	L6D-L08-01-TF	L3D-L08-01-TF	3/8" FNPT	3000	47.54
	L6D-L09-01-TF	L3D-L09-01-TF	3/8" FNPT	5000	79.23
L STYLE HIGH RANGE METERS					
METER SIZE	MODEL NUMBER		CONNECTION	MAXIMUM FLOW	
	BUILT IN VALVE	NO VALVE		[L/min] WATER	[gpm] WATER
E	L6E-L10-01-TF	L3E-L10-01-TF	1/2" FNPT	13	3.43
	L6E-L11-01-TF	L3E-L11-01-TF	1/2" FNPT	20	5.28
F	L6F-L12-01-TF	L3F-L12-01-TF	3/4" FNPT	30	7.93
	L6F-L13-01-TF	L3F-L13-01-TF	3/4" FNPT	40	10.57
	L6F-L14-01-TF	L3F-L14-01-TF	3/4" FNPT	45	11.89

