Model L PTFE flow meters

Rotameters for corrosive and ultra-pure liquids, from 75 mL/min to 45 L/min of water



Model L meters measure low to medium flows of highly corrosive or ultra-pure liquids. They are built from the inert fluoropolymers PTFE, FEP and PCTFE, resist external corrosives, and are individually pressure and leak tested. A float rises in a tapered flow tube to a graduation on a direct-reading scale. A safety shield is supplied; panel mounting is possible.

75 mL/min	45 L/min	±5 % FS	121 °C	100 psig
Smallest range (water)	Largest range (water)	Accuracy	Maximum temperature	Maximum pressure

Performance

Measuring principle	Variable area; float in a tapered flow tube, installed vertically in line
Scales [1]	Direct reading, for liquids of specific gravity 1.0 and for air
Accuracy	±5 % of full scale
Flow ranges [1]	Liquid meters, sizes C to F: 75 mL/min–45 L/min of water Gas meters, sizes M to Q: 4–1000 L/min of air
Scale length	Sizes C, D, M and N: 75 mm Sizes E, F, P and Q: 125 mm
Valve	Built-in needle valve, at the top for liquids and at the bottom for gases, or no valve

Operating conditions

Temperature	Up to 250 °F (121 °C)
Pressure	Up to 100 psig

Mechanical

Flow tubes[2]	FEP
Fittings	PTFE
Floats	PTFE; sapphire on the 75 mL/min meter
Guide rods	PCTFE
Personnel protection	Safety shield supplied with every meter
Connections[3]	Sizes C and M: 1/4" FNPT Sizes D and N: 3/8" FNPT Sizes E and P: 1/2" FNPT Sizes F and Q: 3/4" FNPT
Mounting	Panel mountable
Leak integrity	Each meter pressure and leak tested; helium leak rate 1 × 10⁻⁷ std cm³/s or better

Gas meters

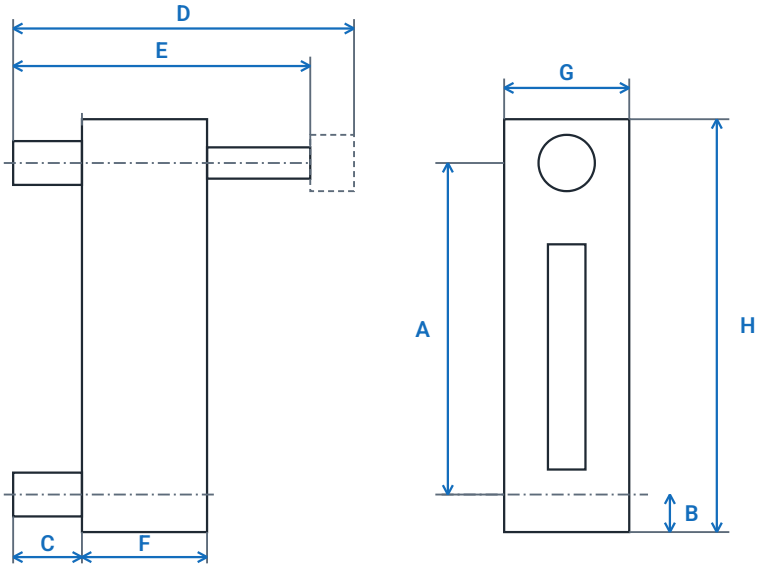
Reference conditions	scfh and scfm at 21.11 °C, 1013.25 mbar
Size M	4, 18 or 50 L/min of air (8.5, 38 or 105 scfh)
Size N	100, 200 or 250 L/min of air (3.5, 7 or 8.8 scfm)
Size P	500 L/min of air (17.5 scfm)
Size Q	1000 L/min of air (35 scfm)

Liquid meters, flow ranges (water)

Size	Maximum flow	Maximum flow, US units
C	75 mL/min	1.20 gph
C	250 mL/min	4.0 gph
C	400 mL/min	6.5 gph
C	500 mL/min	8.0 gph
C	1000 mL/min	16.0 gph
D	2.0 L/min	31.0 gph
D	2.5 L/min	40.0 gph

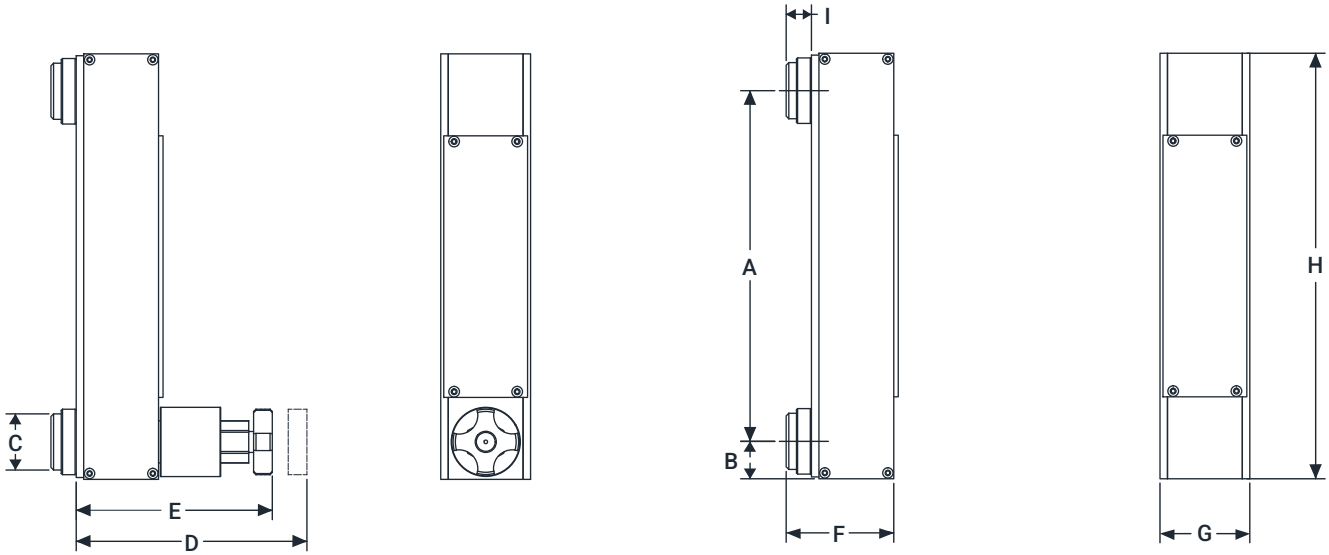
Size	Maximum flow	Maximum flow, US units
D	3.0 L/min	47.5 gph
D	5.0 L/min	80.0 gph
E	13 L/min	3.4 gpm
E	20 L/min	5.25 gpm
F	30 L/min	8.0 gpm
F	40 L/min	10.5 gpm
F	45 L/min	12.0 gpm

Liquid meters, sizes C to F



Liquid meter with valve, side and front views, schematic. Valve at the top; the meter without valve has the same letters.

Gas meters, sizes M to Q



Gas meter with valve (left: side and front views) and without valve (right: side and front views). Valve at the bottom.

Liquid meters, dimensions in inches

Size	A	B	C	D	E	F	G	H	Scale length
C	4.97	0.56	0.812	3.42	3.22	1.65	1.50	6.16	75 mm
D	4.97	0.56	1.00	4.72	4.32	1.95	1.75	6.16	75 mm
E	8.72	0.88	1.50	4.64	4.14	2.25	2.25	10.47	125 mm
F	8.47	1.00	1.50	6.00	5.06	2.80	2.50	10.47	125 mm

Gas meters, dimensions in inches

Size	A	B	C	D	E	F	G	H	I	Scale length
M	4.6	0.63	0.81	3.66	3.36	2.25	1.65	5.85	0.68	75 mm
N	4.6	0.63	1	3.09	3.43	2.25	1.65	5.85	0.68	75 mm
P	9.37	1	1.5	6.09	5.24	2.88	2.4	11.37	0.68	125 mm
Q	9.37	1	1.5	6.16	5.24	2.88	2.4	11.37	0.68	125 mm

Designs and dimensions can change without notice; ask Analyt-MTC for certified drawings.

Liquid meters, order codes

Maximum flow, water	Size	With valve, order code	Without valve, order code
75 mL/min	C	L6C-L01-01-SA	L3C-L01-01-SA
250 mL/min	C	L6C-L02-01-TF	L3C-L02-01-TF
400 mL/min	C	L6C-L03-01-TF	L3C-L03-01-TF
500 mL/min	C	L6C-L04-01-TF	L3C-L04-01-TF
1000 mL/min	C	L6C-L05-01-TF	L3C-L05-01-TF
2.0 L/min	D	L6D-L06-01-TF	L3D-L06-01-TF
2.5 L/min	D	L6D-L07-01-TF	L3D-L07-01-TF
3.0 L/min	D	L6D-L08-01-TF	L3D-L08-01-TF
5.0 L/min	D	L6D-L09-01-TF	L3D-L09-01-TF
13 L/min	E	L6E-L10-01-TF	L3E-L10-01-TF
20 L/min	E	L6E-L11-01-TF	L3E-L11-01-TF
30 L/min	F	L6F-L12-01-TF	L3F-L12-01-TF
40 L/min	F	L6F-L13-01-TF	L3F-L13-01-TF
45 L/min	F	L6F-L14-01-TF	L3F-L14-01-TF

Order from Analyt-MTC with the order codes. Gas meters, sizes M to Q, with or without valve: ask Analyt-MTC.

Notes

1. FS = of full scale. Flow ranges are maximum flows with water or air; the scales read directly for liquids of specific gravity 1.0 and for air.
2. Check that the wetted materials suit your medium before ordering; Analyt-MTC will advise.
3. FNPT = female NPT pipe thread.

ANALYT-MTC Messtechnik GmbH
Sales, service and calibration

www.analyt-mtc.com

German Headquarters
Klosterrunsstraße 18, 79379 Müllheim
+49 7631 5545
info@analyt-mtc.de

French Subsidiary
175 Avenue d'Alsace, 68000 Colmar
+33 3 89 41 47 78
info@analyt-mtc.fr

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