Model M stainless industrial flow meters



Glass-tube flow meters in a stainless steel case for water and air, 22 ranges, in-line or flanged

The Model M is a heavy-duty variable area flow meter for industrial water and air service. The glass tube sits in a brushed stainless steel case behind a polycarbonate shield. Each meter has direct-reading scales for water and for air, in metric and English units.

440 L/min	7000 L/min	±3 % FS	±0.5 % FS	93 °C
Largest water range; smallest 0.95 L/min	Largest air range; smallest 35 L/min	Accuracy	Repeatability	Maximum operating temperature

Performance

Air ranges	Standard flow at 21.11 °C, 1013.25 mbar
Accuracy [1]	±3 % of full scale
Repeatability	±0.5 % of full scale
Minimum flow rate	Approximately 10 % of the maximum flow rate
Maximum flow rates	Water: up to 440 L/min (116 gpm) Air: up to 7000 L/min (250 scfm)
Scales	Direct reading for water and air, metric and English units
Flow tube	Fluted or plain tapered glass tube

Operating conditions

Maximum temperature	93 °C (200 °F)
Maximum pressure at 93 °C	Tube sizes 3–6: 200 psig Tube sizes 8 and 9: 125 psig
Media	Liquids (water) and gases (air)

Mechanical

Flow tube	Heavy-walled borosilicate glass
Fittings, guide rods, floats, float stops [2]	316 stainless steel
Case	Brushed stainless steel, fully enclosed
Front shield	Thick clear polycarbonate and white acrylic
O-rings	FKM; optional PTFE/FFKM or EPR
In-line, female NPT	1/2": M01–M06 1": M07–M14 and M16 2": M15 and M17–M22
Flanged, 150 ANSI	3/4": M01–M06 1 1/2": M07–M14 and M16 2 1/2": M15 and M17–M22

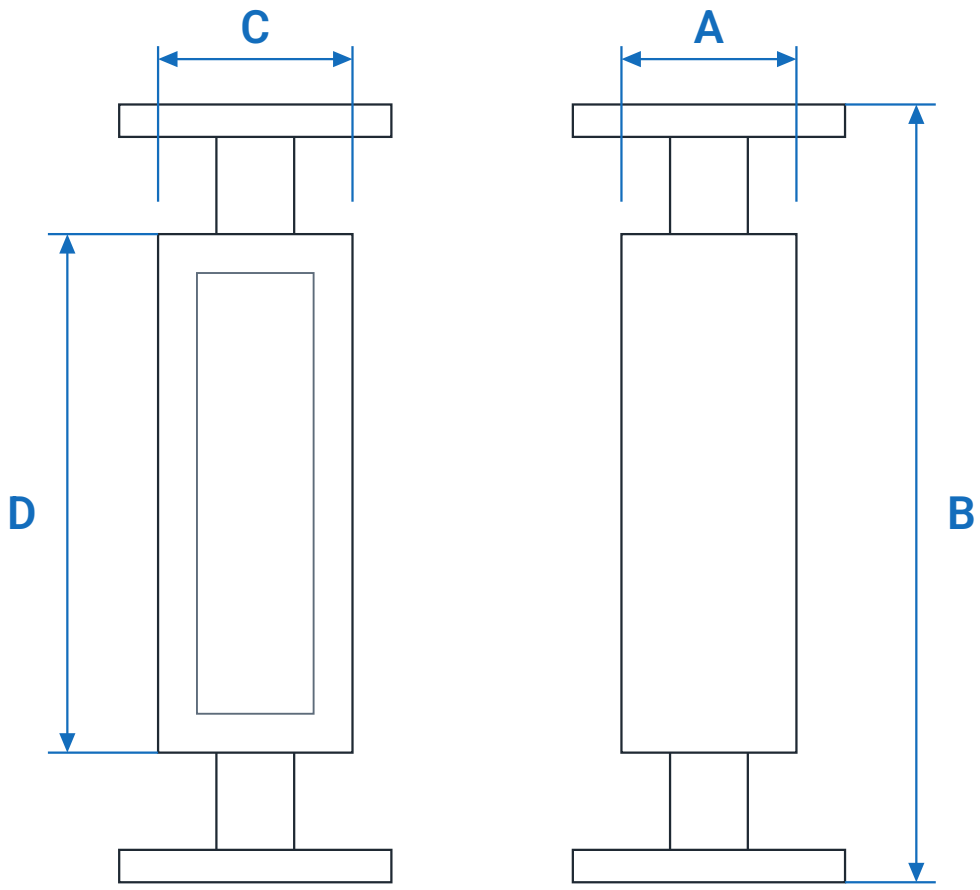
Maximum flows; air at 21.11 °C, 1013.25 mbar

Model	Water, L/min	Water, gpm	Air, L/min	Air, scfm	Model	Water, L/min	Water, gpm	Air, L/min	Air, scfm
M01	0.95	0.25	35	1.2	M12	42	11	1400	47.5
M02	1.3	0.36	54	1.9	M13	52.5	15	1800	62.5
M03	3.0	0.76	90	3.3	M14	80	20	2600	90
M04	3.8	1.0	120	4.2	M15	85	22	2550	90
M05	5.6	1.5	180	6.5	M16	95	25	–	–
M06	8.2	2.2	250	8.5	M17	155	41	4600	170
M07	14	3.8	480	16	M18	165	44	5000	180
M08	18	5.0	650	22	M19	230	60	7000	250
M09	22	6.0	725	25	M20	230	62	7000	250
M10	27.5	7.4	950	34	M21	320	86	–	–
M11	36	9.6	1200	40	M22	440	116	–	–

A dash: no air range for this model. In-line and flanged meters have the same ranges.

Model data

Model	Tube size	Pressure drop, in H_2O	Model	Tube size	Pressure drop, in H_2O
M01	3	3	M12	6	18
M02	3	3	M13	6	34
M03	3	7	M14	6	55
M04	4	8	M15	8	23
M05	4	11	M16	6	99
M06	4	14	M17	9	7
M07	5	14	M18	8	42
M08	5	20	M19	9	23
M09	6	7	M20	8	70
M10	6	8	M21	9	35
M11	6	14	M22	9	56



Flanged meter, front and side view. A and C: case widths; B: overall length; D: case height. In-line meters: A is the front width, C the side width.

In-line meters, dimensions in inches

Connection	A	B	C	D
1/2" FNPT	2	9.54	2.25	8.04
1" FNPT	3.5	13.69	3.75	10.50
2" FNPT	5	15.59	5.25	11.55

Flanged meters, dimensions in inches

Flange size	A	B (nominal)	C	D
3/4"	2	9.58	2.25	8.04
1 1/2"	3.5	14.15	3.75	10.50
2 1/2"	5	17.98	5.25	11.55

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

Order codes, M01 to M11

Model	Water, L/min	In-line, order code	Flanged, order code
M01	0.95	MS-VJ-M01-02-ST	MS-VR-M01-02-ST
M02	1.3	MS-VJ-M02-02-ST	MS-VR-M02-02-ST
M03	3.0	MS-VJ-M03-02-ST	MS-VR-M03-02-ST
M04	3.8	MS-VJ-M04-02-ST	MS-VR-M04-02-ST
M05	5.6	MS-VJ-M05-02-ST	MS-VR-M05-02-ST
M06	8.2	MS-VJ-M06-02-ST	MS-VR-M06-02-ST
M07	14	MS-VK-M07-02-ST	MS-VS-M07-02-ST
M08	18	MS-VK-M08-02-ST	MS-VS-M08-02-ST
M09	22	MS-VK-M09-02-ST	MS-VS-M09-02-ST
M10	27.5	MS-VK-M10-02-ST	MS-VS-M10-02-ST
M11	36	MS-VK-M11-02-ST	MS-VS-M11-02-ST

Order from Analyt-MTC with the order code.

Order codes, M12 to M22

Model	Water, L/min	In-line, order code	Flanged, order code
M12	42	MS-VK-M12-02-ST	MS-VS-M12-02-ST
M13	52.5	MS-VK-M13-02-ST	MS-VS-M13-02-ST
M14	80	MS-VK-M14-02-ST	MS-VS-M14-02-ST
M15	85	MS-VL-M15-02-ST	MS-VT-M15-02-ST
M16	95	MS-VK-M16-02-ST	MS-VS-M16-02-ST
M17	155	MS-VQ-M17-02-ST	MS-VU-M17-02-ST
M18	165	MS-VL-M18-02-ST	MS-VT-M18-02-ST
M19	230	MS-VQ-M19-02-ST	MS-VU-M19-02-ST
M20	230	MS-VL-M20-02-ST	MS-VT-M20-02-ST
M21	320	MS-VQ-M21-02-ST	MS-VU-M21-02-ST
M22	440	MS-VQ-M22-02-ST	MS-VU-M22-02-ST

With PTFE/FFKM or EPR O-rings, or for any other version, contact Analyt-MTC.

Options

O-rings in PTFE/FFKM instead of FKM
O-rings in EPR instead of FKM

Notes

1. FS = of full scale. Flow rates are maximum flows; the air values are standard flows. Pressure drop is in inches of water column.
2. Check that the wetted materials suit your fluid before ordering; Analyt-MTC will advise.

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