

ROTAMETERS

Please see the following pages for more information on Variable Area Flow Meters

- Rib-guided or fluted metering tubes facilitate stable, accurate readings.
- Magnifier lens in front shield enhances reading resolution.
- Easy-to-install flow tubes.
- “Non-rotating” adapter feature glass flow tubes are prevented from turning during the tightening phase of the assembly procedure.

Single Tube Glass Flow Meters

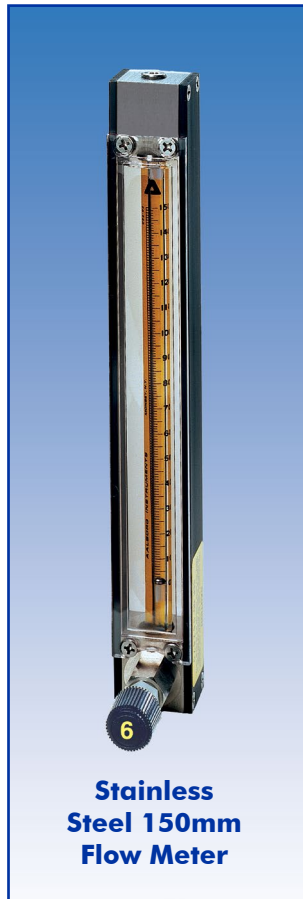
Designed for low flow rates, these single tube flow meters are precision instruments embodying the inherent simplicity, versatility and economy of the classical variable area meter. They are particularly suitable for metering carrier gases in chromatography, in manufacturing processes, liquid and gas measurements in laboratories, pilot plants, flow and level indicating and controlling gases.

Shipped completely assembled, flow meters include standard mounting fittings in a choice of materials, side plates, thick protective front shield and back plate, with or without control valves.

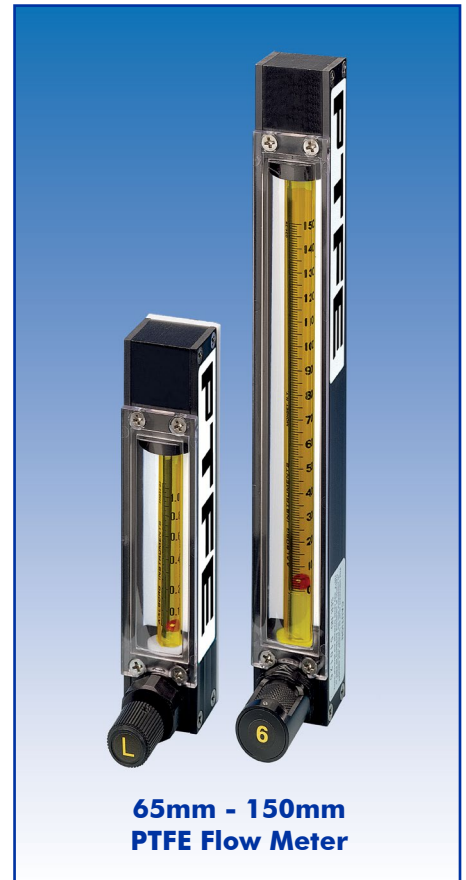
Single Tube PTFE Glass Flow Meters

The PTFE glass flow meter is designed for use with corrosive gases and liquids and for applications where contamination free flow passages are required. Fluids contact only PTFE, PCTFE and borosilicate glass.

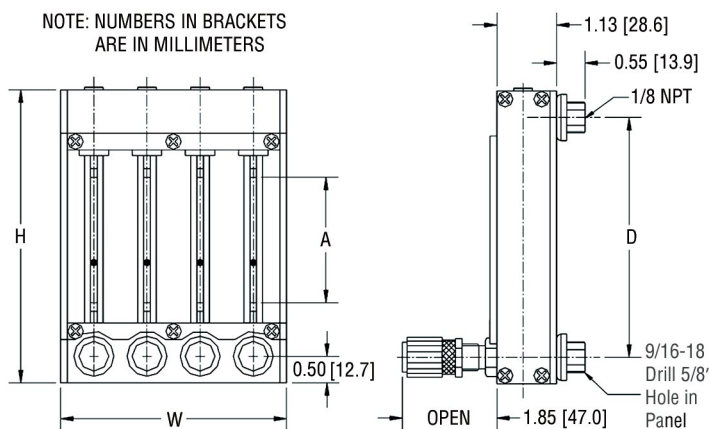
The unique design combines the rigidity of an aluminum structural frame with the desirable chemical inertness of PTFE components. Uses standard 65mm and 150mm flow tubes. Meters are equipped with built-in PTFE needle valves with Kel-F® valve spindles. Valves may be positioned either at inlet or outlet side of flow meter.



Stainless Steel 150mm Flow Meter



65mm - 150mm PTFE Flow Meter



DIMENSIONS FOR P STYLE METERS								
SCALE LENGTH (A)	ALL P METERS		WIDTH (W)					
	HEIGHT (H)	CENTER TO CENTER (D)	1 TUBE	2 TUBE	3 TUBE	4 TUBE	5 TUBE	6 TUBE
65mm	5.500	4.500	1.250	2.250	3.250	4.250	5.250	6.250
150mm	9.813	8.813	1.250	2.250	3.250	4.250	5.250	6.250

SPECIFICATIONS FOR SINGLE TUBE FLOW METERS

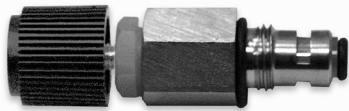
- USEFUL FLOW RANGE:** 10:1 minimum with one float and better than 20:1 with combination of two floats installed in meters.
- STANDARD ACCURACY:** ±2% of full scale (mm), 5% of full scale (direct reading).
- CALIBRATED ACCURACY:** ±1% of full scale.
- REPEATABILITY:** ±0.25%.
- MAX. OPERATION PRESSURE:** 200 psig/13.8 bars (PTFE 60 psig/4.13 bars).
- MAX. OPERATION TEMPERATURE:** 250 °F/121 °C (PTFE 150 °F/66 °C).
- FLOW TUBES:** Heavy walled borosilicate glass.
- FLOATS:** Glass, Sapphire, 316 Stainless Steel, Carboloy® and Tantalum.
- CHOICE OF MOUNTING FITTINGS IN CONTACT WITH FLUIDS:**
- A) Aluminum, black anodized.
 - B) Brass, chrome plated.
 - C) 316 Stainless Steel.
- SIDE PANELS:** Aluminum, black anodized.
- FRONT SHIELD:** Lexan® with longitudinal magnifier lens for enhanced reading resolution.
- BACK PLATE:** 1/8" thick white acrylics.
- O-RINGS AND PACKING:** Buna-N® O-rings in aluminum/ brass model. FKM O-rings in stainless steel meters. **OPTIONAL:** FKM PTFE FFKM and EPR.
- CONNECTIONS** 1/8" NPT female inlet and outlet connections. **OPTIONAL:** 1/4" FNPT, hose and compression fittings are available.



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

ROTAMETERS

The simple construction of CV™ valves incorporate a Valve Spindle with conical ends and compound angles for optimal resolution.



CV™ Valve Cartridge

CV™ Valve Cartridges are designed for adjusting flow rates in applications where high resolution metering regulation is not essential.

The VALVE NEEDLE turns as it travels into or out of the VALVE ORIFICE. In conjunction with the cylindrical cross section, the conical front tip of the VALVE SPINDLE increases or decreases the annular flow area. The cartridge serves as a bubble-tight “shut-off” valve when the tip of the VALVE SPINDLE comes into a stop position against the VALVE ORIFICE.

Multi-tube Flow Meters also Available!

TABLE 17, CV™ VALVE FLOW CAPACITIES 10 PSIG (69KPA) INLET PRESSURE, ATMOSPHERIC EXHAUST

MODEL NO.	AIR	WATER	ORIFICE [IN]	CV
	std. mL/min	std. mL/min		
CVL	5000	350	0.052	0.03
CVM	20000	1200	0.082	0.10
CVH	60000	3500	0.120	0.30

For Materials of Construction see page 15

Available in three ranges, CV™ valves represent a relatively inexpensive option.

Tripod Base Available! See Bottom of Page 16 & 19

Calibrations for other gases available.



Aluminum 65mm Flow Meter with CV™ Valve

TABLE 17-1, STANDARD 65MM FLOW METERS WITH CARTRIDGE VALVE [CV™]

MAXIMUM FLOW RATE					FRAME MATERIAL		
AIR		WATER		FLOAT MATERIAL	ALUMINUM	BRASS	STAINLESS STEEL
mL/min	scfh	mL/min	gph		MODEL NO.	MODEL NO.	MODEL NO.
5.8	0.013	N/A		Glass	6AP0101C6	6AP1101C6	6AP2101C6
9	0.017			Sapphire	6AP0102C6	6AP1102C6	6AP2102C6
19	0.036			316 S.S.	6AP0103C6	6AP1103C6	6AP2103C6
33	0.070			Carboloy®	6AP0104C6	6AP1104C6	6AP2104C6
49	0.104	0.55	0.009	Glass	6AP0105C6	6AP1105C6	6AP2105C6
74	0.153	0.98	0.016	Sapphire	6AP0106C6	6AP1106C6	6AP2106C6
145	0.307	2.38	0.038	316 S.S.	6AP0107C6	6AP1107C6	6AP2107C6
246	0.528	4.60	0.073	Carboloy®	6AP0108C6	6AP1108C6	6AP2108C6
107	0.22	1.24	0.019	Glass	6AP0109C6	6AP1109C6	6AP2109C6
167	0.35	2.47	0.039	Sapphire	6AP0110C6	6AP1110C6	6AP2110C6
314	0.66	5.75	0.091	316 S.S.	6AP0111C6	6AP1111C6	6AP2111C6
517	1.09	10.58	0.160	Carboloy®	6AP0112C6	6AP1112C6	6AP2112C6
216	0.46	2.8	0.045	Glass	6AP0113C6	6AP1113C6	6AP2113C6
320	0.68	5.3	0.079	Sapphire	6AP0114C6	6AP1114C6	6AP2114C6
538	1.14	11.2	0.170	316 S.S.	6AP0115C6	6AP1115C6	6AP2115C6
826	1.75	19.5	0.302	Carboloy®	6AP0116C6	6AP1116C6	6AP2116C6
1036	2.20	20	0.327	Glass	6AP0117C6	6AP1117C6	6AP2117C6
1383	2.93	33	0.523	Sapphire	6AP0118C6	6AP1118C6	6AP2118C6
2088	4.42	57	0.903	316 S.S.	6AP0119C6	6AP1119C6	6AP2119C6
3007	6.37	89	1.410	Carboloy®	6AP0120C6	6AP1120C6	6AP2120C6
1249	2.65	25	0.396	Glass	6AP0121C6	6AP1121C6	6AP2121C6
1623	3.44	36.7	0.581	Sapphire	6AP0122C6	6AP1122C6	6AP2122C6
2520	5.34	70.7	1.121	316 S.S.	6AP0123C6	6AP1123C6	6AP2123C6
3680	7.80	103.5	1.641	Carboloy®	6AP0124C6	6AP1124C6	6AP2124C6
2030	4.3	39.5	0.61	Glass	6AP0125C6	6AP1125C6	6AP2125C6
2655	5.62	63.2	0.99	Sapphire	6AP0126C6	6AP1126C6	6AP2126C6
4041	8.56	111.7	1.75	316 S.S.	6AP0127C6	6AP1127C6	6AP2127C6
5769	12.22	172	2.72	Carboloy®	6AP0128C6	6AP1128C6	6AP2128C6
2522	5.35	54.7	0.86	Glass	6AP0129C6	6AP1129C6	6AP2129C6
4917	10.42	143	2.26	316 S.S.	6AP0130C6	6AP1130C6	6AP2130C6
6318	13.4	147	2.33	Glass	6AP0131C6	6AP1131C6	6AP2131C6
8145	17.3	217	3.44	Sapphire	6AP0132C6	6AP1132C6	6AP2132C6
12058	25.5	364	5.77	316 S.S.	6AP0133C6	6AP1133C6	6AP2133C6
16943	35.9	540	8.56	Carboloy®	6AP0134C6	6AP1134C6	6AP2134C6
12860	27.2	307	4.86	Glass	6AP0135C6	6AP1135C6	6AP2135C6
16617	35.2	449	7.11	Sapphire	6AP0136C6	6AP1136C6	6AP2136C6
24452	51.8	723	11.46	316 S.S.	6AP0137C6	6AP1137C6	6AP2137C6
34507	73.1	1049	16.63	Carboloy®	6AP0138C6	6AP1138C6	6AP2138C6
21969	46.5	550	8.71	Glass	6AP0139C6	6AP1139C6	6AP2139C6
28518	60.4	811	12.85	Sapphire	6AP0140C6	6AP1140C6	6AP2140C6
41289	87.4	1297	20.56	316 S.S.	6AP0141C6	6AP1141C6	6AP2141C6
58348	123.6	1895	30.04	Carboloy®	6AP0142C6	6AP1142C6	6AP2142C6