

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

# ROTAMETERS

- 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

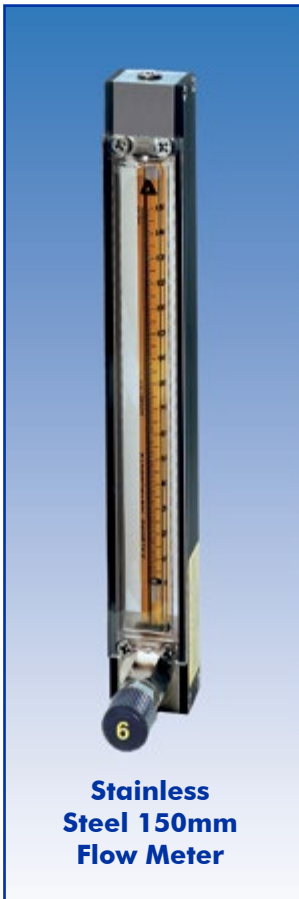
Designed for low flow rates, these single tube flow meters are precision instruments embodying the inherent simplicity, versatility and economy of the classical variable area meter. They are particularly suitable for metering carrier gases in chromatography, in manufacturing processes, liquid and gas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

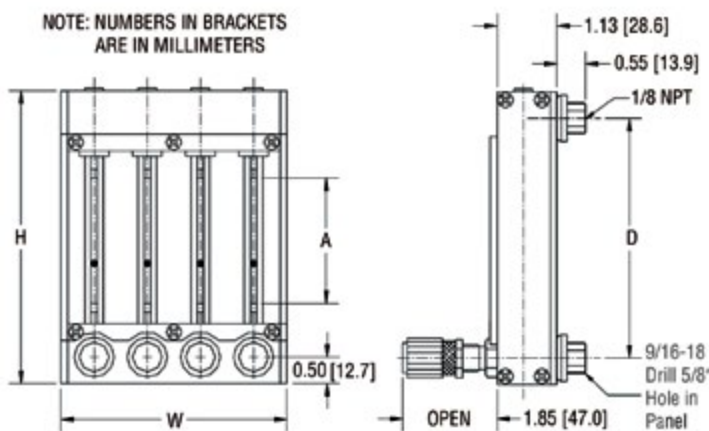
The unique design combines the rigidity of an aluminum structural frame with the desirable chemical inertness of PTFE components. Uses standard 65mm and 150mm flow tubes. Meters are equipped with built-in PTFE needle valves with Kel-F® valve spindles. Valves may be positioned either at inlet or outlet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



**Stainless Steel 150mm Flow Meter**



**65mm - 150mm PTFE Flow Meter**



### 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 Kalrez® 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.

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


# PTFE FLOW METERS

**Multi-tube Flow Meters  
also Available!**

**PTFE flow meters incorporate the principles of traditional variable area flow technology**


### MATERIALS OF CONSTRUCTION

**FLOW TUBES:** Heavy walled borosilicate glass.  
**FITTINGS IN CONTACT WITH FLUIDS:** Virgin PTFE PCTFE.  
**SIDE PANELS:** Aluminum, black anodized.  
**FRONT SHIELD AND BACK PLATE:** 1/8" thick clear polycarbonate and white acrylics.  
**O-RINGS:** PTFE.  
**CONNECTIONS:** 1/8" NPT female inlet and outlet connections.  
**OPTIONAL:** Glass hose or compression fittings.

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### SPECIFICATIONS FOR SINGLE TUBE PTFE GLASS FLOW METERS

**STANDARD ACCURACY:** ±2% FS (mm scales) except 042 and 032 flow tubes.  
 ±5% FS (direct reading scales) 042 and 032 mm.  
**REPEATABILITY:** ± 0.25%  
**USEFUL FLOW RANGES:** 10:1 minimum with one float.  
**MAXIMUM OPERATING PRESSURE:** 100 psig/6.7 bars.  
**MAXIMUM OPERATING TEMPERATURE:** 150 °F/ 65 °C.  
**LEAK INTEGRITY:** Individually pressure and leak tested and certified to a rating of 1 x 10<sup>-7</sup> scs Helium.

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Wetted inert components are surrounded by structurally rigid anodized aluminum.

**These rugged PTFE-Glass flow meters offer solutions to low to medium flow range measurements of highly corrosive or ultra-pure liquids and gases.**

The resultant design represents a unique combination of a rugged mechanically rigid frame and chemically inert wetted parts.



**65mm PTFE  
Flow Meter with  
cartridge valve**

**TABLE 23, 65MM PTFE FLOW METERS**

MAXIMUM FLOW RATE					VALVE OPTION		
AIR		WATER		FLOAT MATERIAL	NO VALVE	CARTRIDGE VALVE CVT	HIGH PRECISION VALVE (HRT)
mL/min	scfh	mL/min	gph		MODEL NO.	MODEL NO.	MODEL NO.
5.8	0.013	0.07	0.001	Glass	6AT3101N6	6AT3101C6	6AT3101M6
9	0.017	0.08	0.001	Sapphire	6AT3102N6	6AT3102C6	6AT3102M6
19	0.036	0.28	0.004	316 S.S.	6AT3103N6	6AT3103C6	6AT3103M6
33	0.070	0.62	0.009	Carboloy®	6AT3104N6	6AT3104C6	6AT3104M6
49	0.104	0.55	0.009	Glass	6AT3105N6	6AT3105C6	6AT3105M6
74	0.153	0.98	0.016	Sapphire	6AT3106N6	6AT3106C6	6AT3106M6
145	0.307	2.38	0.038	316 S.S.	6AT3107N6	6AT3107C6	6AT3107M6
246	0.528	4.60	0.073	Carboloy®	6AT3108N6	6AT3108C6	6AT3108M6
107	0.22	1.13	0.020	Glass	6AT3109N6	6AT3109C6	6AT3109M6
167	0.35	2.19	0.035	Sapphire	6AT3110N6	6AT3110C6	6AT3110M6
314	0.66	4.97	0.079	316 S.S.	6AT3111N6	6AT3111C6	6AT3111M6
517	1.09	9.23	0.146	Carboloy®	6AT3112N6	6AT3112C6	6AT3112M6
216	0.46	5.71	0.090	Glass	6AT3113N6	6AT3113C6	6AT3113M6
320	0.68	10.00	0.158	Sapphire	6AT3114N6	6AT3114C6	6AT3114M6
538	1.14	19.2	0.301	316 S.S.	6AT3115N6	6AT3115C6	6AT3115M6
826	1.75	31.6	0.500	Carboloy®	6AT3116N6	6AT3116C6	6AT3116M6
1056	2.23	20.8	0.329	Glass	6AT3117N6	6AT3117C6	6AT3117M6
1399	2.96	33.3	0.527	Sapphire	6AT3118N6	6AT3118C6	6AT3118M6
2125	4.50	58.7	0.930	316 S.S.	6AT3119N6	6AT3119C6	6AT3119M6
3059	6.48	90.0	1.426	Carboloy®	6AT3120N6	6AT3120C6	6AT3120M6
1249	2.65	25	0.396	Glass	6AT3121N6	6AT3121C6	6AT3121M6
1623	3.44	36.7	0.581	Sapphire	6AT3122N6	6AT3122C6	6AT3122M6
2520	5.34	70.7	1.121	316 S.S.	6AT3123N6	6AT3123C6	6AT3123M6
3680	7.80	103.5	1.641	Carboloy®	6AT3124N6	6AT3124C6	6AT3124M6
2030	4.3	39.5	0.61	Glass	6AT3125N6	6AT3125C6	6AT3125M6
2655	5.62	63.2	0.99	Sapphire	6AT3126N6	6AT3126C6	6AT3126M6
4041	8.56	111.7	1.75	316 S.S.	6AT3127N6	6AT3127C6	6AT3127M6
5769	12.22	172	2.72	Carboloy®	6AT3128N6	6AT3128C6	6AT3128M6
2522	5.35	54.7	0.86	Glass	6AT3129N6	6AT3129C6	6AT3129M6
4917	10.42	143	2.26	316 S.S.	6AT3130N6	6AT3130C6	6AT3130M6
6318	13.4	147	2.33	Glass	6AT3131N6	6AT3131C6	6AT3131M6
8145	17.3	217	3.44	Sapphire	6AT3132N6	6AT3132C6	6AT3132M6
12058	25.5	364	5.77	316 S.S.	6AT3133N6	6AT3133C6	6AT3133M6
16943	35.9	540	8.56	Carboloy®	6AT3134N6	6AT3134C6	6AT3134M6
12860	27.2	307	4.86	Glass	6AT3135N6	6AT3135C6	6AT3135M6
16617	35.2	449	7.11	Sapphire	6AT3136N6	6AT3136C6	6AT3136M6
24452	51.8	723	11.46	316 S.S.	6AT3137N6	6AT3137C6	6AT3137M6
34507	73.1	1049	16.63	Carboloy®	6AT3138N6	6AT3138C6	6AT3138M6
21969	46.5	550	8.71	Glass	6AT3139N6	6AT3139C6	6AT3139M6
28518	60.4	811	12.85	Sapphire	6AT3140N6	6AT3140C6	6AT3140M6
41289	87.4	1297	20.56	316 S.S.	6AT3141N6	6AT3141C6	6AT3141M6
58348	123.6	1895	30.04	Carboloy®	6AT3142N6	6AT3142C6	6AT3142M6

Carboloy® is only recommended for ultra pure fluids and is NOT recommended for corrosive fluids.