

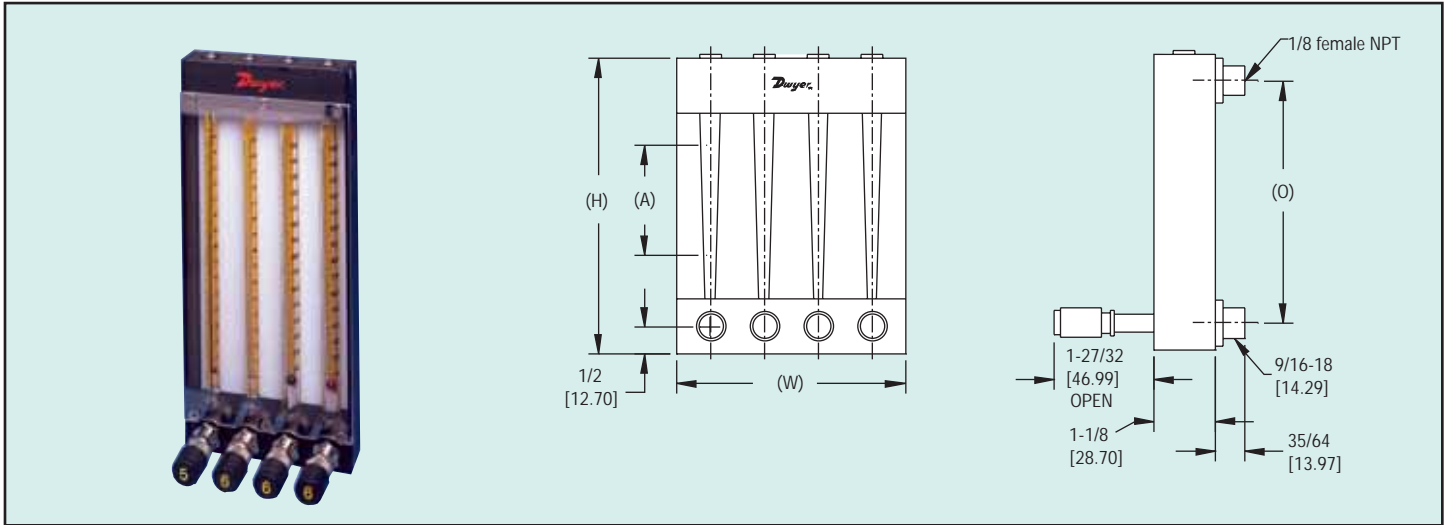


Series  
MTF

# Multitube Flow Systems

Customize to Fit Application, 65 mm or 150 mm Variable Area Flow Tubes

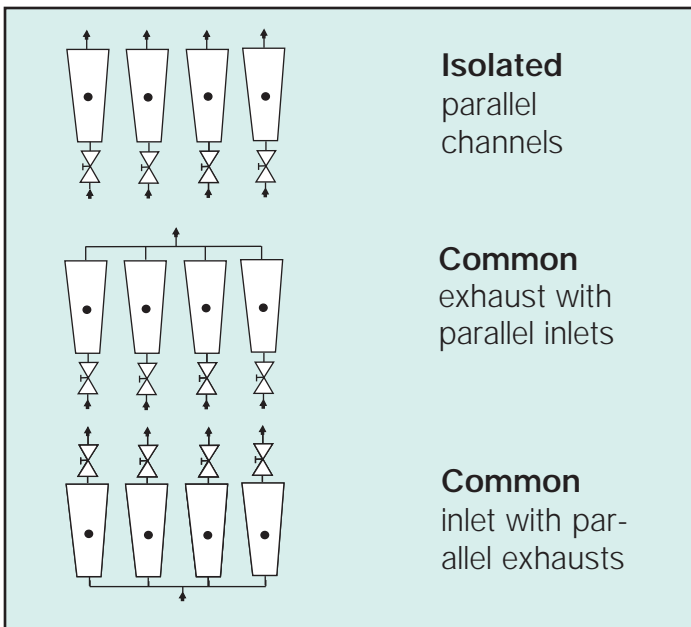
Flow



**Customize flow systems** to meet application requirements. Systems can be configured with up to six different flow tubes with various flow capacities and flow patterns. The Series MTF Multitube Flow Systems are ideal for multichannel metering, mixing, or monitoring applications.

### To customize your flow system:

- 1) Determine the flow pattern required for the application (see below).
- 2) Select a 65 mm or 150 mm frame (next page), along with the appropriate number of tubes required, flow pattern, and wetted parts. Choose a 150 mm Gas Proportioner Frame (Series MTP) to blend 2 or 3 gases at required concentrations. Gas proportioner frames are typically used at 50 psi.
- 3) Choose the appropriate 65 mm or 150 mm correlated flow tubes (next page), for air or water.
- 4) Select a valve cartridge if desired that matches the range of the flow tube (next page).



### DIMENSIONS

DIM "A" Scale Length	DIM "H"	DIM "O"	DIM "W"					
			1 tube	2 tubes	3 tubes	4 tubes	5 tubes	6 tubes
65 mm	5-1/2 [139.70]	4-1/2 [114.30]	1-1/4 [31.75]	2-1/4 [57.15]	3-1/4 [82.55]	4-1/4 [107.95]	5-1/4 [133.35]	6-1/4 [158.75]
150 mm	9-13/16 [249.25]	8-13/16 [223.85]	1-1/4 [31.75]	2-1/4 [57.15]	3-1/4 [82.55]	4-1/4 [107.95]	5-1/4 [133.35]	6-1/4 [158.75]

### SPECIFICATIONS

**Scales:** Universal 65 mm or 150 mm scales with correlation charts.

**Accuracy:** ±2% FS @ 70°F (21.1°C) and 14.7 psia (1 atm absolute).

**Repeatability:** ±0.25% of scale reading.

**Turn-down Ratio:** 10:1, 20:1 with combinations of two floats installed in meter.

**Maximum Operating Pressure:** 200 psig (13.8 bar).

**Maximum Operating Temperature:** 250°F (121°C).

**Mounting:** Vertical.

**Connection:** 1/8" female NPT.

**Flowtube:** Borosilicate glass.

**Float:** 316 SS or black glass as indicated.

**Float Stops:** PTFE.

**End Fittings:** Anodized Aluminum or 316 SS.

**Front Shield:** Polycarbonate.

**Side Panels:** Black, anodized aluminum.

**O-rings:** Buna-N on aluminum models and Fluoroelastomer on stainless steel models.

## 65 mm Frames

Model Number	Pattern	Tube Capacity	Wetted Parts
MTF-1621	Isolated	2	Aluminum
MTF-2621	Isolated	2	316 SS
MTF-1622	Common	2	Aluminum
MTF-2622	Common	2	316 SS
MTF-1631	Isolated	3	Aluminum
MTF-2631	Isolated	3	316 SS
MTF-1632	Common	3	Aluminum
MTF-2632	Common	3	316 SS
MTF-1641	Isolated	4	Aluminum
MTF-2641	Isolated	4	316 SS
MTF-1642	Common	4	Aluminum
MTF-2642	Common	4	316 SS
MTF-1651	Isolated	5	Aluminum
MTF-2651	Isolated	5	316 SS
MTF-1652	Common	5	Aluminum
MTF-2652	Common	5	316 SS
MTF-1661	Isolated	6	Aluminum
MTF-2661	Isolated	6	316 SS
MTF-1662	Common	6	Aluminum
MTF-2662	Common	6	316 SS

\*Flow rates are given for standard pressure and temperature 70°F (21°C) @ 760 mm Hg.

## 65 mm Direct Reading Flow Tubes

Model Number	Max. Flow Rate Air (scfh)	Float
FT-741	.60	Carboloy
FT-743	2.2	Glass
FT-746	6.0	Glass
FT-748	10.0	316 SS
FT-750	18.0	316 SS
FT-752	25.0	316 SS
FT-753	50.0	316 SS
FT-754	90.0	316 SS

## 65 mm Correlated Flow Tubes

Model Number	Max. Flow Rate (mL/min)*		Float
	Air	Water	
FT-61	6	0.07	Glass
FT-62	17	0.28	316 SS
FT-63	49	0.55	Glass
FT-64	145	2.38	316 SS
FT-67	202	2.60	Glass
FT-68	522	12.0	316 SS
FT-611	1249	27	Glass
FT-612	2520	71	316 SS
FT-613	2040	40	Glass
FT-614	3990	108	316 SS
FT-617	6318	147	Glass
FT-618	12058	364	316 SS
FT-621	23169	522	Glass
FT-622	42094	1261	316 SS

## 150 mm Frames

Model Number	Pattern	Tube Capacity	Wetted Parts
MTF-1121	Isolated	2	Aluminum
MTF-2121	Isolated	2	316 SS
MTF-1122	Common	2	Aluminum
MTF-2122	Common	2	316 SS
MTF-1131	Isolated	3	Aluminum
MTF-2131	Isolated	3	316 SS
MTF-1132	Common	3	Aluminum
MTF-2132	Common	3	316 SS
MTF-1141	Isolated	4	Aluminum
MTF-2141	Isolated	4	316 SS
MTF-1142	Common	4	Aluminum
MTF-2142	Common	4	316 SS
MTF-1151	Isolated	5	Aluminum
MTF-2151	Isolated	5	316 SS
MTF-1152	Common	5	Aluminum
MTF-2152	Common	5	316 SS
MTF-1161	Isolated	6	Aluminum
MTF-2161	Isolated	6	316 SS
MTF-1162	Common	6	Aluminum
MTF-2162	Common	6	316 SS

## 150 mm Direct Reading Flow Tubes

Model Number	Max. Flow Rate Air (scfh)	Float
FT-242	1.50	316 SS
FT-244	2.50	Carboloy
FT-245	5.00	Glass
FT-247	8.25	Glass
FT-248	10.0	316 SS
FT-249	16.5	316 SS
FT-251	23.0	Carboloy
FT-253	50.0	Glass
FT-254	90.0	316 SS
FT-255	94.0	316 SS

## 150 mm Correlated Flow Tubes

Model Number	Max. Flow Rate (mL/min)*		Float
	Air	Water	
FT-123	19	0.19	Glass
FT-124	61	0.94	316 SS
FT-125	49	0.53	Glass
FT-126	137	2.45	316 SS
FT-127	92	0.90	Glass
FT-128	264	4.70	316 SS
FT-129	374	5.50	Glass
FT-130	814	20.4	316 SS
FT-133	2313	54	Glass
FT-134	4562	130	316 SS
FT-137	8678	210	Glass
FT-138	16737	506	316 SS
FT-139	22536	541	Glass

## 150 mm Gas Proportioner Frames

Model Number	Tube Capacity	Wetted Parts
MTP-112	2	Aluminum
MTP-212	2	316 SS
MTP-113	3	Aluminum
MTP-213	3	316 SS

## Valve Cartridges

For metering or mixing applications, complete your multitube flow system by selecting a valve cartridge suitable for the flow range. Choose a standard 6-turn valve or high precision 16-turn valve.

## SPECIFICATIONS

**Wetted Parts 6-turn Valves:** For Aluminum frames: Aluminum body, 316 SS spindle, Delrin® orifice, Buna-N O-rings; for 316 SS frames: 316 SS body, 316 SS spindle, Kel-F® orifice, Viton® O-rings.

**Wetted Parts 16-turn Valves:** For Aluminum frames: Brass body, 316 SS spindle, Kel-F® orifice, Buna-N O-rings; for 316 SS frames: 316 SS body, 316 SS spindle, Kel-F® orifice, Viton® O-rings.

Model Number Standard Valve 6-turn			
Aluminum	SS	Flow Rate (Air) mL/min	Flow Rate (H <sub>2</sub> O) mL/min
FV-11	FV-21	0 to 5000	0 to 125
FV-12	FV-22	5001 to 10,000	126 to 325
FV-13	FV-23	10,001 and above	326 and above

Model Number High Precision Valve 16-turn			
Aluminum	SS	Flow Rate (Air) mL/min	Flow Rate (H <sub>2</sub> O) mL/min
FVH-11	VA81	0 to 200	0 to 6
FVH-12	VA82	201 to 400	7 to 12
FVH-13	VA83	401 to 1000	13 to 26
FVH-14	VA84	1001 to 2500	27 to 80
FVH-15	VA85	2501 to 6200	81 to 200
FVH-16	VA86	6201 and above	201 and above