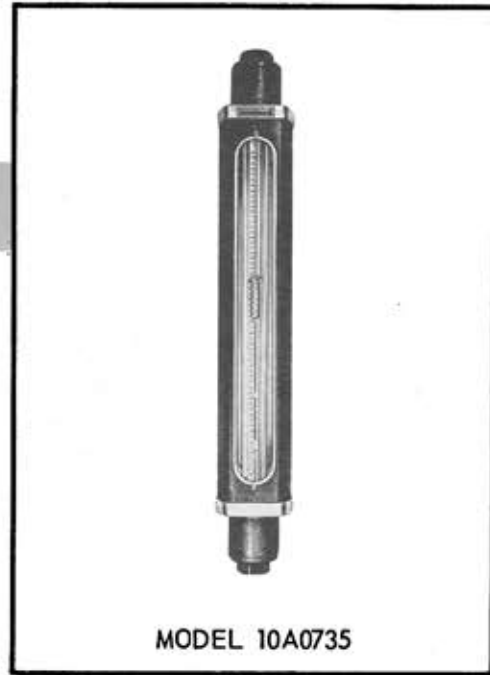


PRECISION ACCURACY INDICATING FLOWRATOR METER MODEL 10A0735



The Model 10A0735 Precision Accuracy Indicating Flowrator Meter is a glass tube variable-area flowmeter suitable for liquid or gas service. Through the use of a specially designed float this can become a direct Mass Flowmeter in certain liquid applications.

MATERIALS OF CONSTRUCTION

Floats: Plasm¹ (stainless steel and "Synthane C-8", 316 stainless steel or brass with stainless steel head.

Tubes: Borosilicate glass

Gaskets: Durabla, Teflon²

Packing: Neoprene or Teflon impregnated asbestos.

Fittings: Bronze, brass or stainless steel.

MOUNTING

Normally pipe line mounted. Panel mounting fittings are available.

SCALE

Direct reading on external metal scale - standard.

Direct reading on tube - optional.

CONNECTIONS

Horizontal only

ACCESSORIES

Explosion proof and non-explosion proof illumination.

Front and rear panel mounting fittings.

1. Plasm¹ is a trademark of Fischer & Porter Company.

2. Teflon is a trademark of E.I. DuPont de Nemours & Co., Inc.

PERFORMANCE

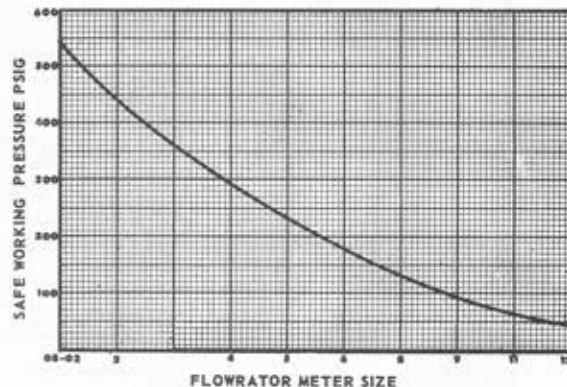
Accuracy: $\pm 1\%$ of instantaneous flow rate.
 $\pm 1/2\%$ of instantaneous flow rate (for liquid service only).

Rangeability: 10 to 1, with accuracy $\pm 1\%$ of instantaneous flow rate only.

5-1/2 to 1, with accuracy of $\pm 1/2$ or $\pm 1\%$ of instantaneous flow rate.

OPERATIONAL LIMITS

PRESSURE RATINGS



Glass tube pressure limitations. Under normal conditions, the pressures determined from this chart have a reasonable factor of safety. However, incorrect installation or faulty operating methods can cause tube breakage regardless of operating pressure. Glass tubes are not recommended for either hot or strong alkalis, fluorine, hydrofluoric acid, or steam.

CAPACITIES

LIQUID SERVICE - ALL-METAL FLOATS RANGE 5.5 TO 1									
CAPACITIES gpm H ₂ O			SPECIFICATIONS						
Guaranteed Accuracy Flow Range		Lowest Scale Reading	Tube	Float Number ($\rho_f = 8.02$ gms/cc)	Float Material	Viscosity Immunity Ceiling Factor K' (2)	Scale Increment gpm H ₂ O	$\Delta \rho$ "H ₂ O (3)	
Maximum	Minimum								
.10	.018	.015	B1-11-10 (CO 15-265)	BSX-12	316 S. S.	1.4	.001	2.5	
.175	.029	.021	F2-18-600	FSX-20		1.4	.001	2.7	
.24	.040	.029	F2-18-600	FSX-21		2.6	.001	2.9	
.35	.064	.054	F3-18-600 (CO 50-650)	FSX-30		3.1	.002	2.7	
.55	.100	.090	F3-18-600 (CO 50-650)	FSX-31		3.6	.002	3.1	
.75	.135	.100	B4-21-600	BSX-43		4.4	.005	3.4	
				Float Number ($\rho_f = 8.40$ gms/cc)			Pole Rod Diameter Inches	Scale Increment gpm H ₂ O	
0.98	0.18	0.12	4-26-600	SVP-480	Brass with 316 Stn. Stl. Head	4.8	.073	.005	4.1
1.15	0.21	0.14	4-26-600	SVP-481		4.0	.073	.005	5.6
1.35	0.25	0.16	4-35-600	SVP-480		4.8	.073	.01	5.3
1.55	0.28	0.19	4-35-600	SVP-481		4.0	.073	.01	6.8
1.80	0.33	0.25	4-26-600	SVP-482		7.4	.073	.01	13.7
2.05	0.37	0.35	4-26-600	SVP-483		8.7	.073	.01	18.0
2.50	0.46	0.31	4-35-600	SVP-482		7.4	.073	.01	17.3
2.90	0.54	0.40	4-35-600	SVP-483		8.7	.073	.02	23.4
3.20	0.58	0.42	5-25-600	SVP-580		8.8	.110	.02	9.5
3.80	0.69	0.50	5-25-600	SVP-581		10.4	.110	.02	13.5
4.64	0.84	0.62	5-25-600	SVP-582		12.8	.110	.02	20.0
5.70	1.04	0.80	5-25-600	SVP-583		15.3	.110	.02	29.0
6.80	1.25	0.95	5-35-600	SVP-582		12.8	.110	.05	25.0
8.25	1.50	1.15	5-35-600	SVP-583		15.3	.110	.05	35.7
9.60	1.75	1.35	6-35-600	SVP-680		14.4	.110	.05	25.7
11.40	2.10	1.55	6-35-600	SVP-681		17.6	.110	.05	36.7
13.20	2.40	1.90	6-35-600	SVP-682		20.0	.110	.10	46.0
15.50	2.80	1.70	8-27-600	SVP-880		20.8	.164	.10	10.3
18.00	3.30	2.20	8-27-600	SVP-881		24.8	.164	.10	14.2
20.5	3.70	2.50	8-27-600	SVP-882		28.4	.164	.10	18.3
23.2	4.30	3.80	8-27-600	SVP-883		32.0	.164	.10	24.0
27.4	5.00	3.80	8-35-600	SVP-882	28.4	.164	.20	23.8	
31.0	5.60	4.20	8-35-600	SVP-883	32.0	.164	.20	30.8	
37.0	6.70	5.20	9-35-600	SVP-980	28.8	.164	.20	18.8	
43.5	8.10	6.00	9-35-600	SVP-981	35.4	.164	.20	26.0	
51.5	9.50	7.00	9-35-600	SVP-982	40.0	.164	.50	36.1	
59.0	10.50	8.00	9-35-600	SVP-983	46	.164	.50	46.7	
66.0	12.00	12.00	11-A-600	SVP-11-20	66	.375	.50	18.5	
82.5	15.0	15.0	12-17-500	SVP-12-20	72	.375	.50	14.3	
103.0	19.0	18.5	12-17-500	SVP-12-21	88	.375	.50	22.1	

Notes: (1) Inlet and outlet cartridge construction is to be specified with the listed all-metal floats

(2) Viscosity Immunity Ceiling V.I.C. (in centipoises) = $K' \times \sqrt{\text{specific gravity}}$

(3) Pressure drop is total loss across the meter

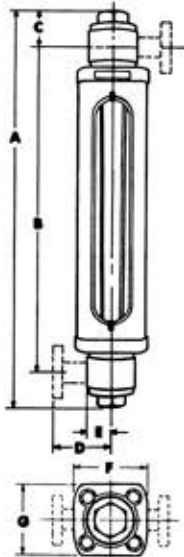
DENSITY COMPENSATING FLOATS RANGE 5.5 TO 1							
CAPACITIES pph liquid sp gr 0.72-0.82			SPECIFICATIONS				
Guaranteed Accuracy Flow Range		Lowest Scale Reading	Tube	Float Number ($\rho_f = 1.54$) gm/cc	Pole Rod Diameter Inches	Scale Increment pph	$\Delta \rho$ "H ₂ O
Maximum	Minimum						
12	2.2	1.8	B1-11-10 (c. o. 15-265)	BSXI-14	-	0.1	.7
20	3.6	2.5	F2-18-600	FSXI-21	-	0.1	.7
33	5.5	3.7	F2-18-600	FSXI-20	-	0.1	1.3
50	9.0	8.0	F3-18-600 (50-650)	FSXI-31	-	0.2	.8
80	15.0	13.0	F3-18-600 (50-650)	FSXI-30	-	0.5	1.8
130	24.0	16.0	B4-21-600	BSXI-41	-	0.5	1.2
180	33.0	22.0	B4-21-600	BSXI-40	-	1.0	2.2
240	44.0	34.0	4-26-600	SVIP-450	.073	1.0	1.2
280	50.0	40.0	4-26-600	SVIP-452	.073	1.0	1.5
320	58.0	45.0	4-26-600	SVIP-453	.073	1.0	1.8
360	65.0	50.0	4-35-600	SVIP-451	.073	1.0	1.5
400	72.0	55.0	4-35-600	SVIP-452	.073	2.0	1.8
440	80.0	65.0	4-35-600	SVIP-453	.073	2.0	2.0
500	90.0	75.0	5-25-600	SVIP-550	.073	2.0	1.2
600	110.0	90.0	5-25-600	SVIP-552	.073	2.0	1.6
700	126.0	110.0	5-25-600	SVIP-553	.073	2.0	2.0
850	150.0	120.0	5-35-600	SVIP-551	.073	5.0	1.7
1,000	180.0	150.0	5-35-600	SVIP-553	.073	5.0	2.2
1,200	210.0	180.0	6-24-600	SVIP-651	.073	5.0	2.5
1,400	250.0	250.0	6-24-600	SVIP-653	.073	5.0	2.2
1,600	290.0	220.0	6-35-600	SVIP-650	.073	5.0	3.0
1,800	320.0	240.0	6-35-600	SVIP-652	.073	5.0	3.8
2,000	360.0	300.0	6-35-600	SVIP-653	.073	10.0	4.5
2,200	400.0	340.0	6-35-600	SVIP-654	.073	10.0	4.6
2,500	450.0	380.0	8-27-600	SVIP-850	.110	10.0	2.4
3,000	550.0	440.0	8-27-600	SVIP-851	.110	10.0	3.3
3,600	650.0	550.0	8-27-600	SVIP-853	.110	10.0	4.5
4,200	760.0	560.0	8-35-600	SVIP-852	.110	20.0	5.1
5,000	900.0	700.0	8-35-600	SVIP-853	.110	20.0	7.1
6,000	1,100.0	900.0	9-35-600	SVIP-950	.164	20.0	3.5
7,000	1,260.0	1,000.0	9-35-600	SVIP-951	.164	20.0	4.8
8,000	1,450.0	1,150.0	9-35-600	SVIP-952	.164	50.0	6.1
9,000	1,600.0	1,300.0	9-35-600	SVIP-953	.164	50.0	8.0
10,000	1,800.0	1,500.0	9-35-600	SVIP-954	.164	50.0	9.6
11,000	2,000.0	2,000.0	9-35-600	SVIP-955	.164	50.0	11.5
13,000	2,300.0	2,300.0	11A600	SVIP-11-50	.250	50.0	2.8
15,500	2,800.0	2,800.0	11A600	SVIP-11-51	.250	50.0	4.0
18,000	3,200.0	3,000.0	12-17-500	SVIP-12-50	.250	50.0	2.4
22,000	4,000.0	3,800.0	12-17-500	SVIP-12-51	.250	100.0	3.3
25,000	4,500.0	4,200.0	12-17-500	SVIP-12-52	.250	100.0	4.2

1. For water-alcohol meters specify an ideal float density of 1.90 gm/cc and multiply the above capacities by a factor of 1.23 to obtain maximum and minimum flow ranges.
2. Not recommended for high viscosity and/or wide viscosity range applications – use all metal float capacity list.
3. Pressure drop is total loss across the meter.

CAPACITIES

PRECISION ACCURACY GAS SERVICE METERS RANGE 5.5 TO 1										
CAPACITIES scfm air metered @ 14.7 psia and 70 F		Lowest Scale Reading	Size	Tube	Float	Float Material	Pole Rod Diameter Inches	Scale Increment scfm air	Approximate Pressure Drop In H ₂ O	PSIA CRIT (1)
Guaranteed Accuracy Flow Range										
Maximum	Minimum									
0.15	0.027	0.023	1	B1-11-10 (CO 15-265)	BSXI-14	Plasmet ↓ Stn. Strl. Brass with 316 Stn. Stl. Head ↓	-	.001	0.7	14.7
0.27	0.045	0.032	2	F2-18-600	FSXI-21		-	.001	0.7	12.4
0.40	0.067	0.047		F2-18-600	FSXI-20		-	.001	1.3	14.7
0.64	0.110	0.098	3	F3-18-600 (CO 50-650)	FSXI-31		-	.002	0.8	11.8
1.00	0.180	0.170		F3-18-600 (CO 50-650)	FSXI-30		-	.002	1.8	14.7
1.60	0.290	0.200	4	B4-21-600	BSXI-41		-	.01	1.2	13.1
2.20	0.400	0.270		B4-21-600	BSXI-40		-	.01	2.2	14.7
3.40	0.620	0.340		B4-21-600	BSVT-44		-	.02	4.3	16.2
4.00	0.62	0.560		4-26-600	SVP-480		.073	.02	4.5	10.1
6.30	1.150	0.880		4-35-600	SVP-481		.073	.05	7.0	13.4
10.20	1.800	1.500		4-35-600	SVP-482		.073	.05	22.0	34.7
15.60	2.800	2.100	5	5-25-600	SVP-581		.110	.10	14.0	20.3
22.80	4.000	3.200		5-35-600	SVP-581	.110	.10	20.0	20.3	
39.00	7.000	6.000	6	6-35-600	SVP-680	.110	.20	45.0	24.6	
63.00	11.500	8.500	8	8-27-600	SVP-880	.164	.50	21.0	17.8	
98.00	18.000	14.000		8-35-600	SVP-881	.164	.50	42.0	23.8	
150.00	27.000	22.000	9	9-35-600	SVP-980	.164	1.50	42.0	15.4	
180.00	32.000	26.000		9-35-600	SVP-981	.164	1.00	62.0	21.0	
270.00	48.000	48.000	11	11-A-600	SVP-11-20	.375	2.00	30.0	28.7	
340.00	62.000	62.000	12	12-17-500	SVP-12-20	.375	2.00	18.0	36.2	

(1) Meter not recommended for gas service where pressure is below minimum shown.



DIMENSIONS

Weight lb	Meter Size	Connection		Scale Length mm	Meter Dimensions, Inches						
		Size, In.	Type		10A0735		10A0736			F	G
		A	B	C	D*	E					
4	1	1/4	Screwed	250	17-5/16	15-1/16	1-1/8	-	17/32	2-1/8	2-1/16
	1	1/2	Flanged	250	20	16-5/8	1-11/16	2-1/2	-	3-1/4	2-7/8
7	2	1/2	Screwed or Flanged	600	33-25/32	30-13/32	1-11/16	2-1/2	7/8	3-1/4	2-7/8
18	3 & 4	1/2	Screwed or Flanged	600	33-25/32	30-13/32	1-11/16	2-1/2	7/8	3-1/4	2-7/8
26	5 & 6	3/4	Screwed	600	34-7/8	31-1/4	1-13/16	-	1-1/4	4-1/8	3-5/8
	5 & 6	1	Flanged	600	34-7/8	31-1/4	1-13/16	3-7/8	-	4-1/8	3-5/8
40	8	1-1/2	Screwed or Flanged	600	37-5/16	32-9/16	2-3/8	4-1/8	-	5-7/16	4-3/4
62	9	1-1/2	Screwed or Flanged	600	39-3/4	34-3/8	2-11/16	4-3/8	2	7-1/8	6-1/8
75	11	3	Flanged	600	53-19/32	45-1/32	4-9/32	4-3/4	-	7-7/8	7-3/4
75	12	4	Flanged	500	53-9/32	42-19/32	5-11/32	5-3/4	-	10-1/8	10

*Horizontal flanged connections are available with side plate construction only.

STANDARD MODELS

Enclosed Design

Model	Connection	Type
10A0735	Horizontal	Screwed
10A0736	Horizontal	Flanged

Side Plate Design

Model	Connection	Type
10A0775	Horizontal	Screwed
10A0776	Horizontal	Flanged

ORDERING INFORMATION

- Model number
- Meter size
- Tube design
- Material of construction (float end fitting and packing)
- Type of scale
- Accuracy desired
- Accessories



FISCHER & PORTER COMPANY

GENERAL OFFICES: WARMINSTER, PENNSYLVANIA, U.S.A.

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