



MODEL VP

SPECIFICATION SHEET PRECISION TUBE SERIES

Plain Ends

DESCRIPTION AND GENERAL PERFORMANCE SPECIFICATIONS

The V-Cone® flowmeter is a patented, differential pressure type flow measurement device. A cone is positioned in the center of the pipe to increase the velocity of the flowing fluid and create a differential pressure. This pressure difference can be measured and used to accurately interpret flowrate. Two taps are provided on every V-Cone to allow sensing of the high and low pressures. A typical V-Cone application can follow these general performance specifications:

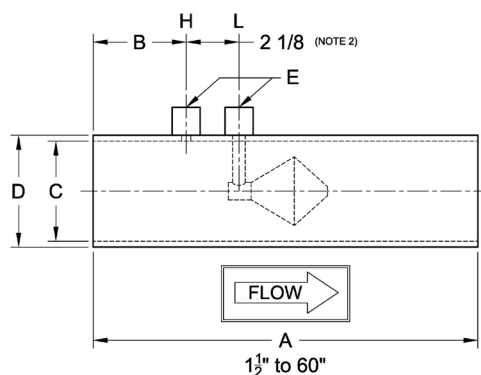
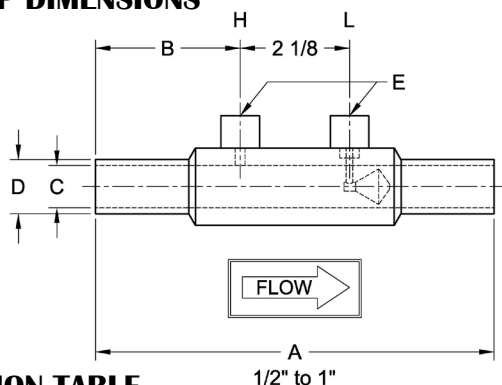
- Accuracy: up to $\pm 0.5\%$ of rate
- Repeatability: $\pm 0.1\%$
- Turndown: 10:1
- Standard Betas: 0.45 through 0.85
- Headloss: Percentage of differential pressure produced varies with beta ratio.
- Installation: Typically 0-3 diameters upstream and 0-1 diameters downstream.

* Each V-Cone is sized for the intended application. Specific performance ratings must be obtained through the sizing process.



The V-Cone is manufactured under a quality management system that is certified to ISO 9001:2015.

MODEL VP DIMENSIONS



DIMENSION TABLE

Size	A (Note 1)		B		C-Stainless (Note 2)		C-Carbon (Note 2)		D		E (Note 2)
inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	NPT
1/2	7.75	197	2.81	71.4	0.622	15.8	-	-	0.84	21.3	1/4
3/4	7.75	197	2.81	71.4	0.824	20.9	-	-	1.05	26.7	1/4
1	7.75	197	2.81	71.4	1.049	26.64	-	-	1.315	33.4	1/4
1 1/2	9.75	248	2.88	73.2	1.645	41.78	-	-	1.9	48.3	1/4
2	11.63	295	3.31	84.1	2.104	53.44	-	-	2.375	60.3	1/2
2 1/2	11.50	292	3.25	82.6	2.504	63.60	-	-	2.875	73.0	1/2
3	13.50	343	3.25	82.6	3.104	78.84	-	-	3.5	88.9	1/2
4	15.50	394	3.75	95.3	4.090	103.8	-	-	4.5	114	1/2
6	21.50	546	4.00	102	6.065	154.1	6.065	154.1	6.625	168	1/2
8	25.25	641	4.63	118	7.981	202.7	7.981	202.7	8.625	219	1/2
10	27.25	692	4.63	118	10.02	254.5	10.02	254.5	10.75	273	1/2
12	29.25	743	4.88	124	12.00	304.8	11.94	303.3	12.75	323	1/2
14	29	737	5.5	140	13.25	336.6	13.13	333.5	14	355	1/2
16	29	737	5.5	140	15.25	387.4	15.00	381.0	16	406	1/2
18	31	787	5.5	140	17.25	438.2	17.25	438.2	18	457	1/2
20	35	889	5.5	140	19.25	489.0	19.25	489.0	20	508	1/2
24	47	1194	9.5	241	23.25	590.6	23.25	590.6	24	609	1/2
30	59	1500	9.5	241	29.25	743.0	29.25	743.0	30	762	1/2
36	61	1549	9.5	241	35.25	895.4	35.25	895.4	36	914	1/2
48	77	1956	11.5	292	47.25	1200	47.25	1200	48	1219	1/2
60	95	2413	11.5	292	59.25	1505	59.25	1505	60	1524	1/2

1. Overall length (A) tolerance varies with line size: 1/2" to 1", ± 0.01 " (± 0.3 mm); 1 1/2" to 4", ± 0.06 " (± 2 mm); 6" to 10", ± 0.12 " (± 4 mm); 12" to 24", ± 0.19 " (± 6 mm); 28" to 60", ± 0.25 " (± 7 mm).

2. Typical values shown.

3. Wall pressure ports are required for vertical up flow applications.



3255 W. Stetson Ave., Hemet, CA 92545 USA -- Phone (951) 652-6811 / Fax (951) 652-3078

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SPECIFICATION SHEET

MODEL NUMBER CONFIGURATION VP

Type	Size	Materials‡	Pipe Schedule	End Connections	Fittings
VP					
0A	1/2"	Q S304/L	D Std	00 Plain	N NPT
0B	3/4"	A S316/L	R 30		S Socket
01	1"	S CS Tube	E 40		F Direct mount assembly
0C	1 1/2"	S304 Cone, Support, & Couplings	Q 60		
02	2"	Epoxy Coated Blue (excluding cone)	F 80		
0D	2 1/2"	U CS Tube	J 100		
03	3"	S304 Cone, Support, & Couplings	K 120		
04	4"	F CS Tube, Flanges, & Couplings, 316/L Cone & Supports	L 140		
06	6"		G 160		
08	8"	W CS Tube, Flanges, & Couplings, S304/L Cone & Supports	P XS		
10	10"		H XXS		
12	12"	G LTCS Tube, Flanges, & Couplings, S316/L Cone & Supports			
14	14"				
16	16"	N S304/L Tube, Cone, Support & Couplings CS Steel Flanges			
18	18"				
20	20"				
24	24"				
30	30"				
36	36"				
48	48"				
60	60"				

Several types of fittings available.

‡Other materials can include:
 HASTELLOY C-276
 DUPLEX 2205
 CHROMEMOLY P22/P11
 MONEL K400/K500
 CARBON STEELS
 A350, A333, API5L, A106B
 S321H
 INCONEL 625

Example: VP06QE00N V-Cone 6 inch line size, S304, schedule 40 pipe, plain ends, 1/2" NPT fittings

STANDARD PIPE SCHEDULES

Stainless Steel Size	Std.	Carbon Steel Size	Std.
1/2" to 10"	E	6" to 16"	E
12" and up	D	18" and up	D

Meters 6" and smaller utilize seamless pipe.
 Meters 8" and larger utilize welded pipe.

ABBREVIATIONS

ASME	American Society of Mechanical Engineers
NPT	National pipe taper
SS	Stainless steel
CS	Carbon steel

Technical questions can be answered through a local representative or through our application engineers.

MANUFACTURING STANDARDS

McCrometer's welders and welding procedures are qualified in accordance with ASME Section IX. All meters are visually inspected for weld defects. Specific customer requirements can be complied with upon request.

The welding can be in accordance with:

- ASME Section VIII
- ASME B31.1
- ASME B31.3

Non-destructive testing can include:

- Hydrostatic Pressure Testing
- Penetrant Examination
- Radiographic Examination
- Positive Material Inspection
- Magnetic Particle Examination

REPRESENTED BY:



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