

**MODEL VB**
**Beveled Ends**
**DESCRIPTION AND GENERAL PERFORMANCE SPECIFICATIONS**

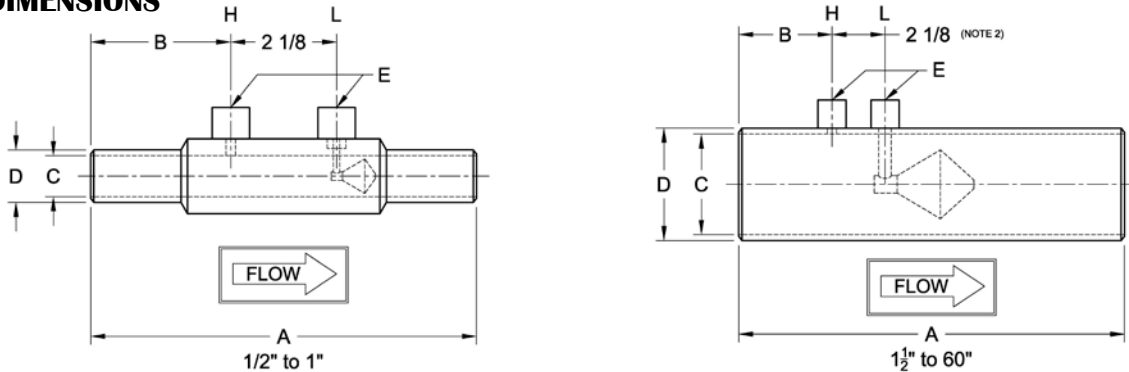
The V-Cone® flowmeter is a patented, differential pressure type flow measurement device. A cone is positioned in the center of the pipe to increase the velocity of the flowing fluid and create a differential pressure. This pressure difference can be measured and used to accurately interpret flowrate. 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 ±0.5% of rate
- Repeatability: ±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.



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

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

**MODEL VB 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	1550	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	83	2108	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" (±0.3mm); 1 1/2" to 4", ±0.06" (±2mm); 6" to 10", ±0.12" (±4mm); 12" to 24", ±0.19" (±6mm); 28" to 60", ±0.25" (±7mm).
2. Typical values shown.
3. Wall pressure ports are required for vertical up flow applications.



**MODEL NUMBER CONFIGURATION VB**

Type	Size	Materials‡		Pipe Schedule		End Connections		Fittings	
<b>VB</b>									
	0A ½"	Q	S304/L	D	Std	01	Beveled	N	NPT
	0B ¾"	A	S316/L	R	30			S	Socket
	01 1"	S	CS Tube S304 Cone, Support, & Couplings Epoxy Coated Blue (excluding cone)	E	40			F	Direct mount assembly
	0C 1½"			Q	60			<div style="border: 1px solid black; padding: 2px; width: fit-content;">Several types of fittings available.</div> <p>‡Other materials can include:            HASTELLOY C-276            DUPLEX 2205            CHROMEMOLY P22/P11            MONEL K400/K500            CARBON STEELS            A350, A333, API5L, A106B            S321H            INCONEL 625</p>	
	02 2"			F	80				
	0D 2½"	U	CS Tube S304 Cone, Support, & Couplings	J	100				
	03 3"			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"								

Example: VB48UD01N V-Cone 48 inch line size, CS, schedule std pipe, beveled ends, ½" NPT fittings, coated or painted as required

**STANDARD PIPE SCHEDULES**

Stainless Steel		Carbon Steel	
Size	Std.	Size	Std.
½" 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:

