

DIN Slip-on, Flat Face Flanges

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:

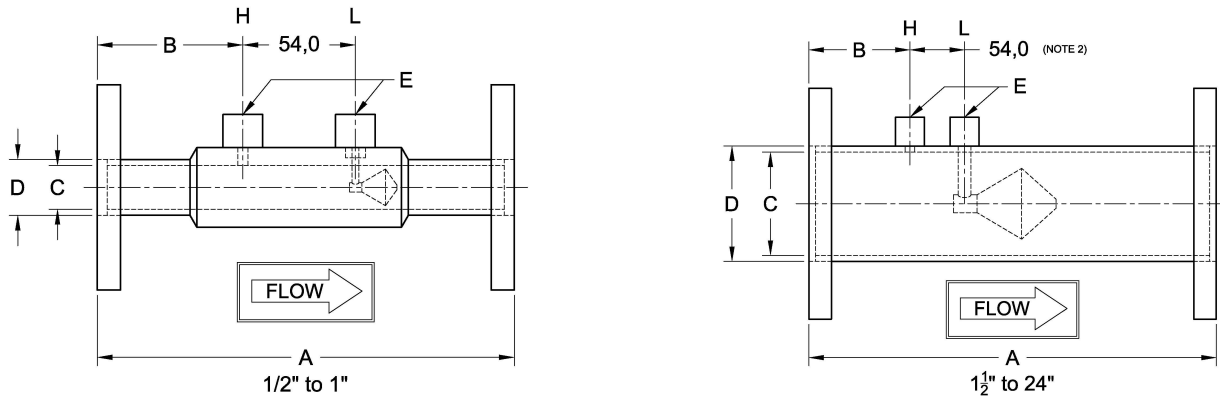
- Accuracy: up to $\pm 0.5\%$ of rate
- Repeatability: $\pm 0.1\%$
- Turndown: 10:1
- Standard Betas: 0.45 through 0.85
- Headloss: Percentage of differential pressure produced varies with beta ratio.
- Installation: Typically 0-3 diameters upstream and 0-1 diameters downstream.



The V-Cone is manufactured under a quality management system that is certified to ISO 9001:2000.

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

MODEL VC DIMENSIONS



DIMENSION TABLE

Size	A (Note 1)	B	C-Stainless (Note 2)	C-Carbon (Note 2)	D	E (Note 2)
inch	mm	mm	mm	mm	mm	NPT
1/2	203	75	15,8	-	21,3	1/4
3/4	203	75	20,9	-	26,7	1/4
1	203	75	26,64	-	33,4	1/4
1 1/2	254	76	41,78	-	48,3	1/4
2	305	89	53,44	-	60,3	1/2
2 1/2	305	89	63,60	-	73,0	1/2
3	356	89	78,84	-	88,9	1/2
4	406	102	103,8	-	114	1/2
6	559	108	154,1	154,1	168	1/2
8	660	127	202,7	202,7	219	1/2
10	711	127	254,5	254,5	273	1/2
12	762	133	304,8	303,3	323	1/2
14	762	152	336,6	333,5	355	1/2
16	762	152	387,4	381,0	406	1/2
18	813	152	438,2	438,2	457	1/2
20	914	152	489,0	489,0	508	1/2
24	1219	254	590,6	590,6	609	1/2

1. Overall length (A) tolerance varies with line size: 1/2" to 1", $\pm 1/16"$ ($\pm 2\text{mm}$); 1 1/2" to 10", $\pm 1/8"$ ($\pm 4\text{mm}$); 12" to 24", $\pm 3/16"$ ($\pm 6\text{mm}$)
2. Typical values shown.
3. Wall pressure ports are required for vertical up flow applications.



CONFIGURATION SHEET

MODEL NUMBER CONFIGURATION VC

Type	Size		Materials‡		Pipe Schedule		End Connections		Fittings	
VC										
	0A	½"	Q	S304	A	10	13	DIN 2576 PN 10 FF	N	NPT
	0B	¾"	L	S304L	B	20			S	Socket
	01	1"	A	S316L	D	Std				
	0C	1½"	P	CPVC	E	40				
	02	2"	N	S304 Tube, Cone, Support & Couplings	F	80				Several types of fittings
	0D	2½"		CS Steel Flanges	J	100				
	03	3"		Flanges painted	K	120				
	04	4"	S	CS Tube & Flanges	L	140				
	06	6"		S304 Cone, Support, & Couplings	G	160		‡Other materials can include:		
	08	8"		Epoxy Coated Blue (excluding cone)	H	XXS		HASTELLOY C-276		S321H
	10	10"	U	CS Tube & Flanges	M	10S		DUPLEX 2205		INCONEL 625
	12	12"		S304 Cone, Support, & Couplings	P	XS		CHROMEMOLY P22/P11		
	14	14"		Coating / Painting Per Customer Req.				MONEL K400/K500		PTFE
	16	16"						CARBON STEELS		
	18	18"						A350, A333, API5L, A106B		
	20	20"								
	24	24"								

Example: VC03AC13N V-Cone 3 inch line size, S316L, Bored to 78,84mm, DIN 2576 PN 10 FF SO, ½" NPT fittings

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	CS	Carbon steel
SS	Stainless steel	FF	Flat Face
DIN	European Standard	SO	Slip On

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:

