

**MODEL VS<sub>(H)</sub>**

**ANSI B16.5 Slip-on, Raised Face Flanges - Class 600 or 900**

**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.

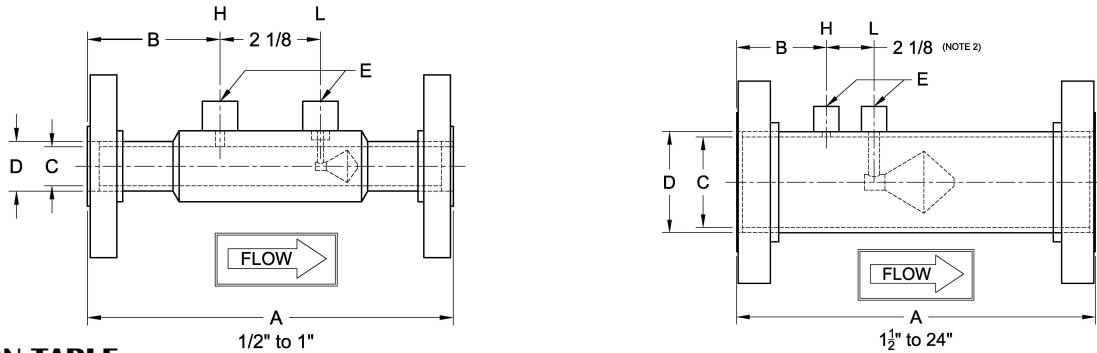
**Model VS Bulletins**  
ANSI B16.5 Slip-on, RF Flanges  
24509-32 Class 150 or 300  
24509-33 Class 600 or 900  
24509-34 Class 125 or 250



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 VS<sub>(H)</sub> DIMENSIONS**



**DIMENSION TABLE**

Size	A (Note 1)		B		C-Stainless (Note 2)		C-Carbon (Note 2)		D		E (Note 2)
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	NPT
1/2	8	203	2.9	75	0.622	15.8	-	-	0.84	21.3	1/4
3/4	8	203	2.9	75	0.824	20.9	-	-	1.05	26.7	1/4
1	8	203	2.9	75	1.049	26.64	-	-	1.315	33.4	1/4
1 1/2	12	305	4.88	124	1.645	41.78	-	-	1.9	48.3	1/4
2	14	356	5.31	135	2.104	53.44	-	-	2.375	60.3	1/2
2 1/2	14	356	5.25	133	2.504	63.60	-	-	2.875	73.0	1/2
3	16	406	5.25	133	3.104	78.84	-	-	3.5	88.9	1/2
4	18	457	5.75	146	4.090	103.8	-	-	4.5	114	1/2
6	26	660	8	203	6.065	154.1	6.065	154.1	6.625	168	1/2
8	30	762	8.63	219	7.981	202.7	7.981	202.7	8.625	219	1/2
10	34	864	8.63	219	10.02	254.5	10.02	254.5	10.75	273	1/2
12	36	914	8.88	226	12.00	304.8	11.94	303.3	12.75	323	1/2
14	34	864	9.5	241	13.25	336.6	13.13	333.5	14	355	1/2
16	34	864	9.5	241	15.25	387.4	15.00	381.0	16	406	1/2
18	36	914	9.5	241	17.25	438.2	17.25	438.2	18	457	1/2
20	40	1016	9.5	241	19.25	489.0	19.25	489.0	20	508	1/2
24	54	1372	15.5	394	23.25	590.6	23.25	590.6	24	609	1/2

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



# CONFIGURATION SHEET

## MODEL NUMBER CONFIGURATION VS(H)

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

Example: VS06QF07N V-Cone 6 inch line size, S304, schedule 80 pipe, ANSI CL 1500 RF slip on flanges, 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	RF	Raised Face
SS	Stainless steel	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:

