

MODEL VW_(H)

ANSI B16.5 Weld Neck, 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.

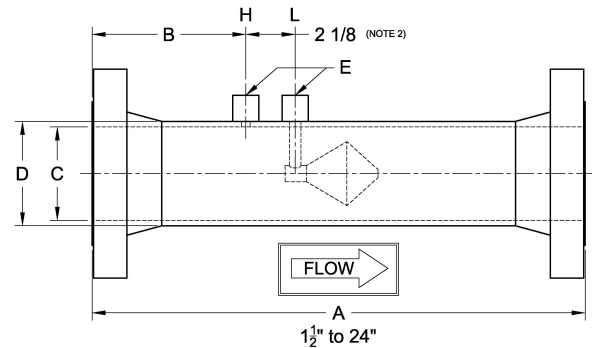
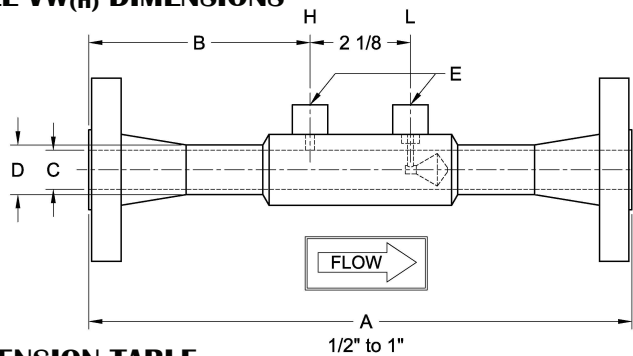
Model VW Bulletins
ANSI B16.5 Weld Neck, RF Flanges
24509-35 Class 150 or 300
24509-36 Class 600 or 900
24509-37 Class 125 or 250



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 VW_(H) DIMENSIONS



DIMENSION TABLE

Size	ANSI B16.5 Class 600				ANSI B16.5 Class 900				Stainless		Carbon		D		E (Note 2)
	A (Note 1)		B		A (Note 2)		B		C (Note 2)		C (Note 2)				
inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	NPT
1/2	12.25	311.2	5.06	128.5	12.88	327.2	5.38	136.6	0.622	15.8	-	-	0.84	21.3	1/4
3/4	12.63	320.8	5.25	133.4	13.63	346.2	5.75	146.1	0.824	20.9	-	-	1.05	26.7	1/4
1	13.00	330.2	5.44	138.2	13.88	352.6	5.88	149.3	1.049	26.64	-	-	1.315	33.4	1/4
1 1/2	15.50	393.7	5.76	146.3	16.50	419.1	6.26	159.0	1.645	41.78	-	-	1.9	48.3	1/4
2	17.63	447.8	6.31	160.3	19.88	505.0	7.44	189.0	2.104	53.44	-	-	2.375	60.3	1/2
2 1/2	18.00	457.2	6.50	165.1	20.00	508.0	7.50	190.5	2.504	63.60	-	-	2.875	73.0	1/2
3	20.25	514.4	6.63	168.4	21.75	552.5	7.38	187.5	3.104	78.84	-	-	3.5	88.9	1/2
4	23.75	603.3	7.88	200.2	24.75	628.7	8.38	212.9	4.090	103.8	-	-	4.5	114	1/2
6	31.00	787.4	8.75	222.3	32.75	831.9	9.63	244.6	6.065	154.1	6.065	154.1	6.625	168	1/2
8	36.00	914.4	10.01	254.3	38.25	971.6	11.13	282.7	7.981	202.7	7.981	202.7	8.625	219	1/2
10	39.50	1003	10.76	273.3	42.00	1067	12.01	305.1	10.02	254.5	10.02	254.5	10.75	273	1/2
12	41.75	1060	11.13	282.7	45.25	1149	12.88	327.2	12.00	304.8	11.94	303.3	12.75	323	1/2
14	42.25	1073	12.13	308.1	46.00	1168	14.00	355.6	13.25	336.6	13.13	333.5	14	355	1/2
16	43.25	1099	12.63	320.8	46.25	1175	14.13	358.9	15.25	387.4	15.00	381.0	16	406	1/2
18	45.75	1162	12.88	327.2	49.25	1251	14.63	371.6	17.25	438.2	17.25	438.2	18	457	1/2
20	50.25	1276	13.13	333.5	54.75	1391	15.38	390.7	19.25	489.0	19.25	489.0	20	508	1/2
24	63.25	1607	17.63	447.8	70.25	1784	21.13	536.7	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", ±1/8" (±4mm); 1 1/2" to 10", ±3/16" (±6mm); 12" to 24", ±1/4" (±7mm).
2. Typical values shown.
3. Wall pressure ports are required for vertical up flow applications.



CONFIGURATION SHEET

MODEL NUMBER CONFIGURATION VW(H)

Type	Size	Materials‡		Pipe Schedule	End Connections	Fittings	
VW							
0A	½"	Q	S304	A	10	N	NPT
0B	¾"	L	S304L	B	20	S	Socket
01	1"	A	S316L	D	Std		
0C	1½"	S	CS Tube & Flanges	E	40		Several types of fittings
02	2"		S304 Cone, Support, & Couplings	F	80		
0D	2½"		Epoxy Coated Blue (excluding cone)	J	100		
03	3"	U	CS Tube & Flanges	K	120		
04	4"		S304 Cone, Support, & Couplings	L	140		
06	6"		Coating / Painting Per Customer Req.	G	160		
08	8"			H	XXS		
10	10"			M	10S		
12	12"			P	XS		
14	14"						
16	16"						
18	18"						
20	20"						
24	24"						

‡Other materials can include:

HASTELLOY C-276	S321H
DUPLEX 2205	INCONEL 625
CHROMEMOLY P22/P11	
MONEL K400/K500	
CARBON STEELS	
A350, A333, API5L, A106B	

Example: VW10AE16N V-Cone 10 inch line size, S316L, schedule 40 pipe, ANSI CL 600 RF WN 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		
SS	Stainless steel	RF	Raised Face
CS	Carbon steel	WN	Weld Neck

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:

