

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

**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.

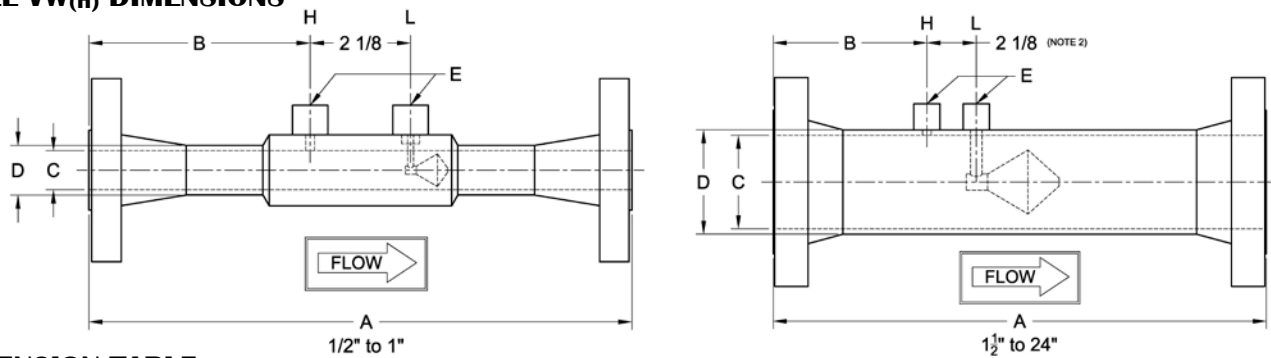
**Model VW Bulletins**  
ANSI B16.5 Weld Neck, RF Flanges  
24509-35 Class 150 or 300  
24509-36 Class 600 or 900  
24509-37 Class 125 or 250



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

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

**MODEL VW<sub>(H)</sub> 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.



# SPECIFICATION SHEET

## MODEL NUMBER CONFIGURATION VW(H)

Type	Size	Materials‡		Pipe Schedule		End Connections		Fittings	
<b>VW</b>									
	0A ½"	Q	S304/L	D	Std	16	CL 600 RF WN	N	NPT
	0B ¾"	A	S316/L	R	30	17	CL 900 RF WN	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				
	02 2"			F	80				
	0D 2½"			U	CS Tube				
	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"								

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: 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:

