

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

**ANSI B16.5 Weld Neck, Raised Face Flanges - Class 150 or 300**

**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.

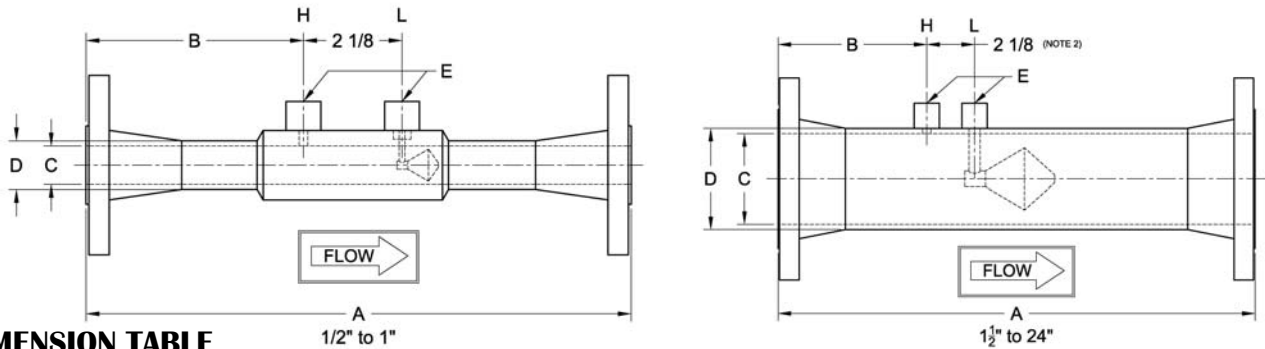
**Model VW Bulletins**  
ANSI B16.5 Weld Neck, RF Flanges  
24509-35 Class 150 or 300  
24509-36 Class 600 or 900  
24509-37 Class 125 or 250



The V-Cone is manufactured under a quality management system that is certified to ISO 9001:2008.

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

**MODEL VW<sub>(L)</sub> DIMENSIONS**



**DIMENSION TABLE**

Size	ANSI B16.5 Class 150				ANSI B16.5 Class 300				Stainless		Carbon		D	E (Note 2)	
	A (Note 1)		B		A (Note 1)		B		C (Note 2)		C (Note 2)				
inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	NPT
½	11.38	289.1	4.63	118	11.75	298.5	4.82	122	0.622	15.8	-	-	0.84	21.3	¼
¾	11.75	298.5	4.81	122	12.13	308.1	5.00	127	0.824	20.9	-	-	1.05	26.7	¼
1	12.00	304.8	4.94	125	12.50	317.5	5.19	132	1.049	26.64	-	-	1.31	33.4	¼
1½	14.38	365.3	5.19	132	14.88	378.0	5.44	138	1.645	41.78	-	-	1.9	48.3	¼
2	16.38	416.1	5.69	145	16.88	428.8	5.94	151	2.104	53.44	-	-	2.37	60.3	½
2½	16.75	425.5	5.88	149	17.25	438.2	6.13	156	2.504	63.60	-	-	2.87	73.0	½
3	18.75	476.3	5.88	149	19.50	495.3	6.25	159	3.104	78.84	-	-	3.5	88.9	½
4	21.25	539.8	6.63	168	22.00	558.8	7.00	178	4.090	103.8	-	-	4.5	114	½
6	28.25	717.6	7.38	187	29.00	736.6	7.75	197	6.065	154.1	6.065	154.1	6.62	168	½
8	33.00	838.2	8.51	216	33.75	857.3	8.88	226	7.981	202.7	7.981	202.7	8.62	219	½
10	35.00	889.0	8.51	216	36.25	920.8	9.13	232	10.02	254.5	10.02	254.5	10.7	273	½
12	38.00	965.2	9.26	235	39.25	997.0	9.88	251	12.00	304.8	11.94	303.3	12.7	323	½
14	38.75	984.3	10.38	264	40.00	1016	11.0	279	13.25	336.6	13.13	333.5	14	355	½
16	38.75	984.3	10.38	264	40.25	1022	11.1	283	15.25	387.4	15.00	381.0	16	406	½
18	41.75	1061	10.88	276	43.25	1099	11.6	295	17.25	438.2	17.25	438.2	18	457	½
20	46.13	1171	11.06	281	47.50	1207	11.7	298	19.25	489.0	19.25	489.0	20	508	½
24	58.75	1492	15.38	391	60.00	1524	16.0	406	23.25	590.6	23.25	590.6	24	609	½

1. Overall length (A) tolerance varies with line size: ½" to 1", ±1/8" (±4mm); 1½" 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(L)

Type	Size		Materials‡		Pipe Schedule		End Connections		Fittings	
<b>VW</b>										
	0A	½"	Q	S304	A	10	14	CL 150 RF WN	N	NPT
	0B	¾"	L	S304L	B	20	15	CL 300 RF WN	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: VW06QE14N V-Cone 6 inch line size, S304, schedule 40 pipe, ANSI CL 150 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:

