

MODEL VQ_(L)

ANSI B16.5 RTJ Slip-on 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.

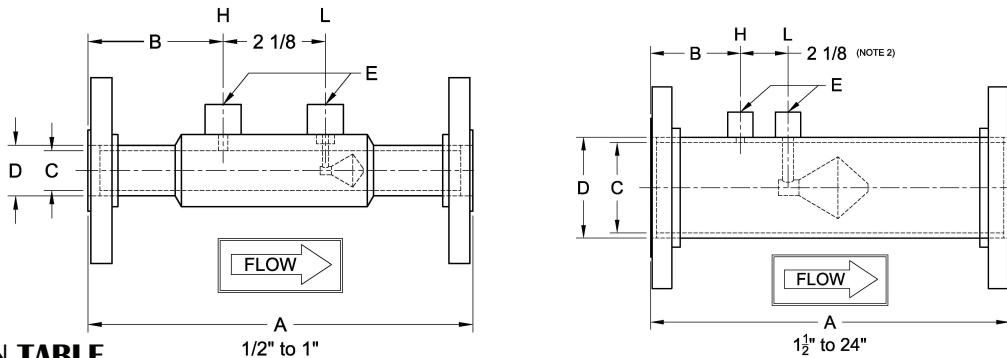
Model VQ Bulletins
RTJ Slip-on Flanges
24509-38 Class 150 or 300



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 VQ_(L) 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	10	254	3	76	1.645	41.78	-	-	1.9	48.3	1/4
2	12	305	3.5	89	2.104	53.44	-	-	2.375	60.3	1/2
2 1/2	12	305	3.5	89	2.504	63.60	-	-	2.875	73.0	1/2
3	14	356	3.5	89	3.104	78.84	-	-	3.5	88.9	1/2
4	16	406	4	102	4.090	103.8	-	-	4.5	114	1/2
6	22	559	4.25	108	6.065	154.1	6.065	154.1	6.625	168	1/2
8	26	660	5	127	7.981	202.7	7.981	202.7	8.625	219	1/2
10	28	711	5	127	10.02	254.5	10.02	254.5	10.75	273	1/2
12	30	762	5.25	133	12.00	304.8	11.94	303.3	12.75	323	1/2
14	30	762	6	152	13.25	336.6	13.13	333.5	14	355	1/2
16	30	762	6	152	15.25	387.4	15.00	381.0	16	406	1/2
18	32	813	6	152	17.25	438.2	17.25	438.2	18	457	1/2
20	36	914	6	152	19.25	489.0	19.25	489.0	20	508	1/2
24	48	1219	10	254	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 VQ(L)

Type	Size	Materials‡		Pipe Schedule	End Connections	Fittings
VQ						
0A	½"	Q	S304	A	10	N NPT S Socket
0B	¾"	L	S304L	B	20	
01	1"	A	S316L	D	Std	Several types of fittings
0C	1½"	N	S304 Tube, Cone, Support & Couplings	E	40	
02	2"	S	CS Steel Flanges	F	80	‡Other materials can include: HASTELLOY C-276 S321H DUPLEX 2205 INCONEL 625 CHROMOMOLY P22/P11 MONEL K400/K500 CARBON STEELS A350, A333, API5L, A106B
0D	2½"		Flanges painted	J	100	
03	3"	U	CS Tube & Flanges	K	120	
04	4"		S304 Cone, Support, & Couplings	L	140	
06	6"	CS Tube & Flanges	G	160		
08	8"	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: VQ06QE08N V-Cone 6 inch line size, S304, schedule 40 pipe, CL 150 RTJ 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		
SS	Stainless steel	RTJ	Ring Type Joint
CS	Carbon 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:

