

**MODEL VD**

**Weld Neck Flanges - DIN 2633 (PN16) or DIN 2635 (PN40)**

**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:

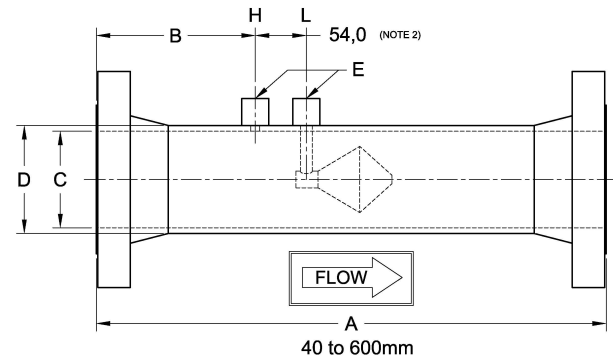
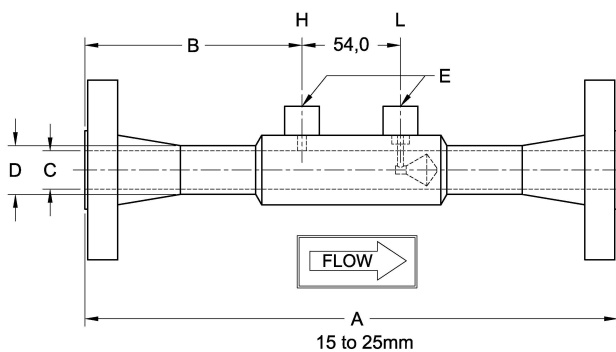
- Accuracy: up to ±0.5% of rate
- Repeatability: ±0.1%
- Turndown: 10:1
- Standard Betas: 0.45 through 0.85
- Headloss: Percentage of differential pressure produced varies with beta ratio.
- Installation: Typically 0-3 diameters upstream and 0-1 diameters downstream.



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 VD DIMENSIONS**



**DIMENSION TABLE**

Size		DIN 2633 (PN16)		DIN 2635 (PN40)		Stainless	Carbon	D	E (Note 2)
		A (Note 1)	B	A (Note 1)	B	C (Note 2)	C (Note 2)		
DN	inch	mm	mm	mm	mm	mm	mm	mm	NPT
15	½	263,7	104,9	269,7	107,9	15,8	-	21,3	¼
20	¾	269,7	107,9	273,6	109,9	20,9	-	26,7	¼
25	1	269,7	107,9	273,6	109,9	26,6	-	33,4	¼
40	1½	325,4	112,0	331,2	115,1	41,8	-	48,3	¼
50	2	379,0	126,0	385,1	128,8	53,4	-	60,3	½
65	2½	375,7	124,5	389,6	131,3	63,6	-	73,0	½
80	3	436,6	129,3	452,6	137,4	78,8	-	88,9	½
100	4	491,2	144,0	517,4	157,0	103,9	-	114,3	½
150	6	649,7	153,4	689,9	173,5	154,1	154,1	168,3	½
200	8	759,0	176,5	811,0	202,4	202,7	202,7	219,1	½
250	10	825,8	184,4	895,9	219,5	254,5	254,5	273,1	½
300	12	892,6	198,9	966,7	235,7	304,8	303,2	323,9	½
350	14	894,3	218,4	980,2	261,6	336,6	333,4	355,6	½
400	16	900,2	221,5	1000,3	271,5	387,4	381,0	406,4	½
500	20	1062,7	226,6	1162,6	276,6	489,0	489,0	508,0	½
600	24	1377,4	333,2			590,6	590,6	609,6	½

1. Overall length (A) tolerance varies with line size: 15 to 25mm, ±2mm; 40 to 250mm, ±4mm; 300 to 600mm, ±6mm.
2. Typical values shown.
3. Wall pressure ports are required for vertical up flow applications.



# CONFIGURATION SHEET

## MODEL NUMBER CONFIGURATION VD

Type	Size		Materials‡		Pipe Schedule		End Connections		Fittings	
<b>VD</b>										
	0A	15	Q	S304	A	10	24	DIN 2633 RF WN	N	NPT
	0B	20	L	S304L	B	20	25	DIN 2635 RF WN	S	Socket
	01	25	A	S316L	D	Std				
	0C	40	S	CS Tube & Flanges	E	40				Several types of fittings
	02	50		S304 Cone, Support, & Couplings	F	80				
	0D	65		Epoxy Coated Blue (excluding cone)	J	100				
	03	80	U	CS Tube & Flanges	K	120				
	04	100		S304 Cone, Support, & Couplings	L	140				
	06	150		Coating / Painting Per Customer Req.	G	160		‡Other materials can include:		
	08	200			H	XXS		HASTELLOY C-276		S321H
	10	250			M	10S		DUPLEX 2205		INCONEL 625
	12	300			P	XS		CHROMEMOLY P22/P11		PVC
	14	350						MONEL K400/K500		PTFE
	16	400						CARBON STEELS		
	20	500						A350, A333, API5L, A106B		
	24	600								

Example: VD06QE24N is a V-Cone 150mm line size, S304, schedule 40 pipe, DIN 2633 RF WN flanges, and ½" NPT fittings.

### STANDARD PIPE SCHEDULES

Stainless Steel		Carbon Steel	
Size (mm)	Std.	Size (mm)	Std.
15 to 250	E	150 to 400	E
300 and up	D	500 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:



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