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.

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

MODEL VD DIMENSIONS

<table>
<thead>
<tr>
<th>Size</th>
<th>DN</th>
<th>inch</th>
<th>A (Note 1)</th>
<th>mm</th>
<th>B (Note 1)</th>
<th>mm</th>
<th>B (Note 1)</th>
<th>mm</th>
<th>C (Note 2)</th>
<th>mm</th>
<th>C (Note 2)</th>
<th>mm</th>
<th>D</th>
<th>mm</th>
<th>E (Note 2)</th>
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</table>

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.
### MODEL NUMBER CONFIGURATION VD

<table>
<thead>
<tr>
<th>Type</th>
<th>Size</th>
<th>Materials‡</th>
<th>Pipe Schedule</th>
<th>End Connections</th>
<th>Fittings</th>
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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

<table>
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<th>Stainless Steel Size (mm)</th>
<th>Carbon Steel Size (mm)</th>
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<td>Std.</td>
<td>Std.</td>
</tr>
<tr>
<td>15 to 250 E</td>
<td>150 to 400 E</td>
</tr>
<tr>
<td>300 and up D</td>
<td>500 and up D</td>
</tr>
</tbody>
</table>

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                           |
| WN   | Weld Neck                              |

### 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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