Introduction
The operating efficiency of all Schenck Process systems relies upon the unique Dome Valve, currently installed in over 20,000 applications worldwide. The original Dome Valve was developed by Clyde Materials Handling* in 1974 for use with pneumatic conveying systems and as a stand alone product which incorporates a unique and highly reliable inflatable sealing arrangement. Simple in design and low in maintenance, this high performance valve is used throughout a wide range of industries. In action the Dome Valve is a pressure tight compressed air operated valve, capable of returning over three million maintenance-free cycles, even in abrasive, hazardous or toxic applications. The fast-closing cut-off valve incorporates a unique inflatable sealing mechanism. This provides the pressure tight seal, against the dome surface when in the closed position.

Industry Applications
The Dome Valve is suited to applications in a wide range of industries from food, pharmaceutical to mineral and plastics to metals. Capable of moving or static column cut off, the valve handles abrasive, cohesive, fine and dry products with equal ease.

Before opening the seal deflates and the dome turns 90°, providing full bore opening for unobstructed material flow.

Materials Handled
- Cohesive
- Toxic
- Friable
- Abrasive
- Powders
- Chemicals
- Hazardous
- Detergents
- Minerals
- Ores
- Ash
- Granules

Inflatable Sealing Mechanism Options
- **Actuator**: For Dome Valves with outlets up to 400mm in diameter vane actuators can be used which provide a neat, compact arrangement. For Dome Valves of 200mm and above pneumatic/hydraulic cylinder activators are available which use a torque arm to provide an increased closing torque pressure.
- **Customised Manufacture**: Dome Valves can be customised to meet the special requirements of most applications. Optional quality seals and internal coatings are available, applied to the Dome surface only or to the internal surfaces of the Clyde Dome Valve body or the adaptors.
- **Internal Coating Examples**: Tungsten carbide hard coating for abrasive products, hard chrome facing on dome surface for sticky and abrasive products and reinforced PTFE for food applications / sticky / wet products.
- **Materials of Manufacture**: SG Iron, Stainless Steel.
- **Temperature Ratings**: -20° to 200°C for the standard Dome Valve. Water cooled Dome Valves to 480°C. Up to 750°C manufactured to order.
- **Pressure Ratings**: 7 bar maximum pressure on the standard Dome Valve having 10 bar design. Up to 35bar manufactured to order.
- **Technical performance**: Where applicable the Dome Valves are manufactured in accordance with the European Pressure Vessel Directive 97/23/EC, BSEN 13445, BSEN 14460, BSEN 1127 and BSEN 12516.

---

*Clyde Materials Handling Ltd was purchased by Schenck Process in 2011 and the original Dome Valve is part of Schenck Process technologies.*
### Model reference codes

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>Size / Nominal Bore</th>
<th>Configuration</th>
<th>Activator</th>
<th>Special Features</th>
<th>Temperature Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV</td>
<td>(see selection guide)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Valve Type:**
- DV – Dome Valve
- DSV – Dome Switch Valve

**Size / Nominal Bore:**
(see selection guide)

**Configuration:**
- S – Bulkhead
- T – Top Adapter
- B – Bottom Adapter
- I – Inline

**Product Temperature Rating:**
- 0 – PHO -20°C to 100°C
- V – PHV 100°C to 200°C

**Actuator Type:**
- V – Vane
- C – Cylinder

**Special Features:**
- O – No Special Features
- S – Special Features

### Seal selection

Several inflatable seals are available, depending upon the application. The choice includes a white food quality seal as well as those specially formulated for high temperature or other hostile applications.

1. Neoprene: Most materials up to 100°C (212°F)
2/3. Viton or Silicone: Most materials up to 200°C (390°F)
4. EPDM: Chemicals
5. Food quality silicone for hygienic applications
| DV  | A  | B  | ØC | ØD | E  | ØF | ØG | ØH | ØI | ØJ | ØK | ØL | ØM | N  | ØN | ØP | ØQ | ØR | ØS | ØT | ØU | ØV | ØW | ØX | ØY | ØZ | AA | BB | CC | WT |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 50  | 74 | 51 | 165| 4  | M16| 125| 51 | 165| 4  | 18 | 125 | 373| 242| 50 | 165| 4  | 18 | 125 | 188| 18 | 18 | 17 | 130 | 130 |
| 80  | 60 | 78 | 200| 8  | M16| 125| 78 | 200| 8  | 18 | 125 | 441| 296| 78 | 200| 8  | 18 | 125 | 228| 23 | 23 | 23 | 160 | 160 |
| 100 | 97 | 106| 250| 4  | M12| 200| 240| 165| 4  | 18 | 125 | 608| 402| 103| 160| 8  | 18 | 125 | 272| 30 | 30 | 30 | 190 | 190 |
| 200 | 150| 206| 406| 8  | M12| 200| 360| 225| 8  | 22 | 160 | 870| 555| 203| 343| 8  | 22 | 160 | 388| 38 | 38 | 38 | 260 | 260 |
| 250 | 189| 260| 390| 6  | M12| 350| 400| 225| 8  | 22 | 160 | 921| 595| 253| 412| 8  | 22 | 160 | 423| 42 | 42 | 42 | 290 | 290 |
| 300 | 218| 306| 460| 6  | M16| 410| 551| 225| 12 | 26 | 320 | 1212| 763| 514| 305| 483| 12 | 22 | 160 | 534| 53 | 53 | 53 | 330 | 330 |
| 400 | 285| 410| 595| 16 | M16| 545| 739| 1212| 12 | 26 | 320 | 1613| 999| 765| 400| 580| 16 | 26 | 160 | 675| 67 | 67 | 67 | 480 | 480 |
| 500 | 378| 508| 745| 20 | M24| 620| 880| 1613| 12 | 38 | 870| 1613| 1378| 999| 765| 400| 580| 16 | 26 | 160 | 884| 88 | 88 | 88 | 580 | 580 |
| 600 | 484| 745| 1100|16 | M27| 725| 992| 1613| 12 | 38 | 870| 1613| 1378| 999| 765| 400| 580| 16 | 26 | 160 | 1107| 110 | 110 | 110 | 725 | 725 |
| 800 | 648| 800| 1160|24 | M30| 950| 1250| 2000| 1455| 32 | 39 | 1389| 2279| 1138| 800| 1015| 24 | 33 | 950| 1250| 1128| 1128| 1128 | 2400 |

Dimensions are for guidance only and certified drawings should be requested for manufacturing purposes.