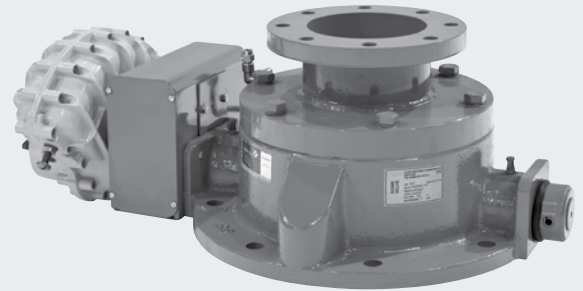
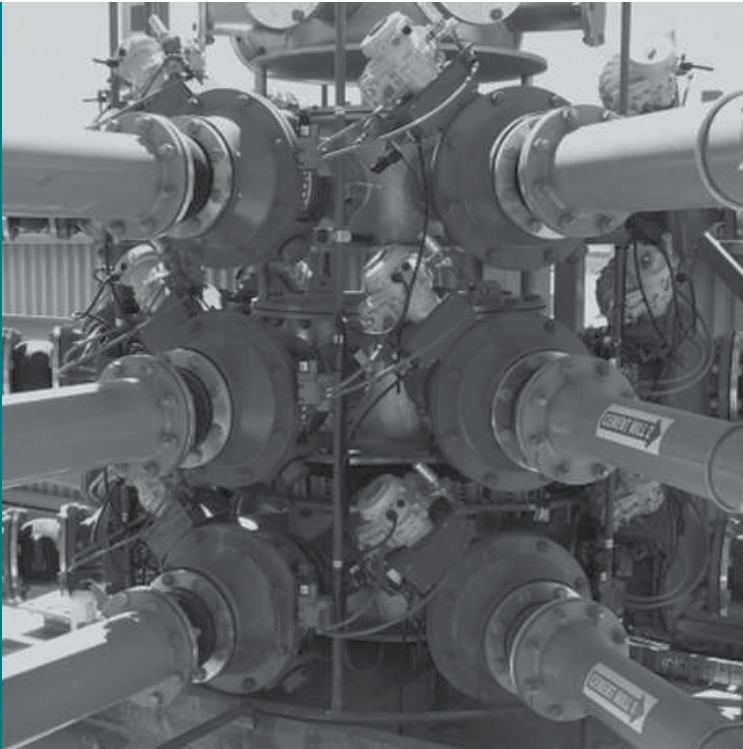


The original Dome Valve



Materials Handled

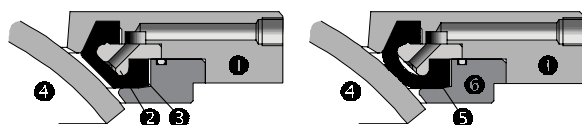
- Cohesive
- Toxic
- Friable
- Abrasive
- Powders
- Chemicals
- Hazardous
- Detergents
- Minerals
- Ores
- Ash
- Granules

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.



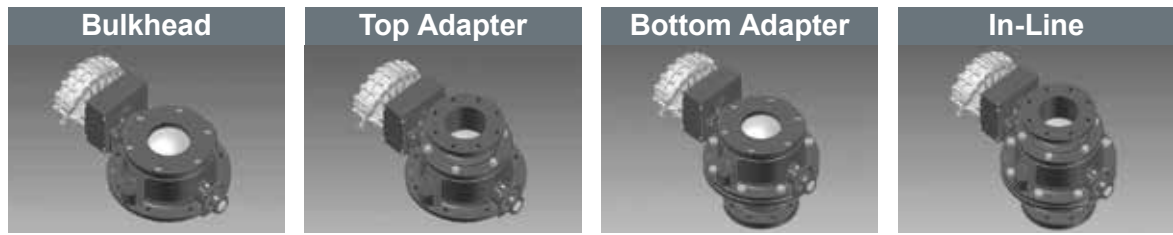
- 1 – Top Plate 2 – Insert Ring 3 – Deflated seal 4 – Dome
5 – Inflated Seal 6 – Seal Retaining Ring

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

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.

Standard product selection guide



PHO	PHV	PHO	PHV	PHO	PHV	PHO	PHV
-20°C to 100°C (-4°F to 212°F)	100°C to 200°C (212°F to 390°F)	-20°C to 100°C (-4°F to 212°F)	100°C to 200°C (212°F to 390°F)	-20°C to 100°C (-4°F to 212°F)	100°C to 200°C (212°F to 390°F)	-20°C to 100°C (-4°F to 212°F)	100°C to 200°C (212°F to 390°F)

Vane Actuator Models (shown above)

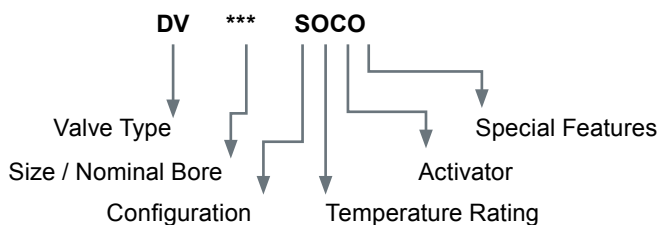
VALVE SIZES mm	Configuration		Temperature Rating		Actuator		Special Features	
	DV	Configuration	PHO	PHV	PHO	PHV	PHO	PHV
50					DV 50 BOVO	DV 50 BVVO		
80					DV 80 BOVO	DV 80 BVVO		
100	DV 100 SOVO	DV 100 SVVO	DV 100 TOVO	DV 100 TVVO	DV 100 BOVO	DV 100 BVVO	DV 100 IOVO	DV 100 IVVO
150	DV 150 SOVO	DV 150 SVVO	DV 150 TOVO	DV 150 TVVO	DV 150 BOVO	DV 150 BVVO	DV 150 IOVO	DV 150 IVVO
200	DV 200 SOVO	DV 200 SVVO	DV 200 TOVO	DV 200 TVVO	DV 200 BOVO	DV 200 BVVO	DV 200 IOVO	DV 200 IVVO
250	DV 250 SOVO	DV 250 SVVO	DV 250 TOVO	DV 250 TVVO	DV 250 BOVO	DV 250 BVVO	DV 250 IOVO	DV 250 IVVO
300	DV 300 SOVO	DV 300 SVVO	DV 300 TOVO	DV 300 TVVO	DV 300 BOVO	DV 300 BVVO	DV 300 IOVO	DV 300 IVVO
400	DV 400 SOVO	DV 400 SVVO	DV 400 TOVO	DV 400 TVVO	DV 400 BOVO	DV 400 BVVO	DV 400 IOVO	DV 400 IVVO

Cylinder Actuator Models

VALVE SIZES mm	Configuration		Temperature Rating		Actuator		Special Features	
	DV	Configuration	PHO	PHV	PHO	PHV	PHO	PHV
200	DV 200 SOCO	DV 200 SVCO	DV 200 TOCO	DV 200 TVCO	DV 200 BOCO	DV 200 BVCO	DV 200 IOCO	DV 200 IVCO
250	DV 250 SOCO	DV 250 SVCO	DV 250 TOCO	DV 250 TVCO	DV 250 BOCO	DV 250 BVCO	DV 250 IOCO	DV 250 IVCO
300	DV 300 SOCO	DV 300 SVCO	DV 300 TOCO	DV 300 TVCO	DV 300 BOCO	DV 300 BVCO	DV 300 IOCO	DV 300 IVCO
400	DV 400 SOCO	DV 400 SVCO	DV 400 TOCO	DV 400 TVCO	DV 400 BOCO	DV 400 BVCO	DV 400 IOCO	DV 400 IVCO
500	DV 500 SOCO	DV 500 SVCO	DV 500 TOCO	DV 500 TVCO	DV 500 BOCO	DV 500 BVCO	DV 500 IOCO	DV 500 IVCO

VALVES IN 600mm - 1000mm ARE AVAILABLE, DETAILS UPON REQUEST

Model reference codes



Valve Type:

DV – Dome Valve
DSV – Dome Switch Valve

Size / Nominal Bore:
(see selection guide)

Configuration:

S – Bulkhead
T – Top Adaptor
B – Bottom Adaptor
I – Inline

Product Temperature Rating:

O – PHO -20°C to 100°C
V – PHV 100°C to 200°C

Actuator Type:

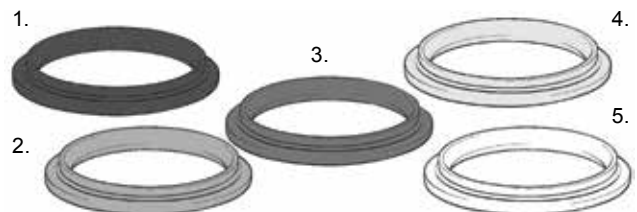
V – Vane
C – Cylinder

Special Features:

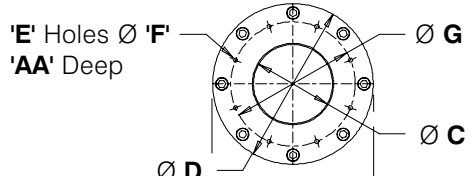
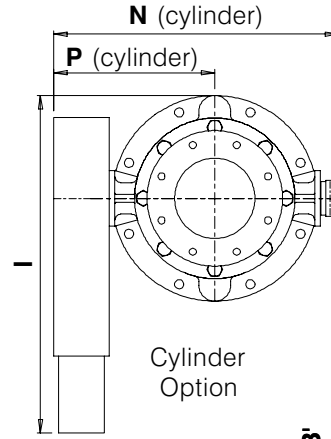
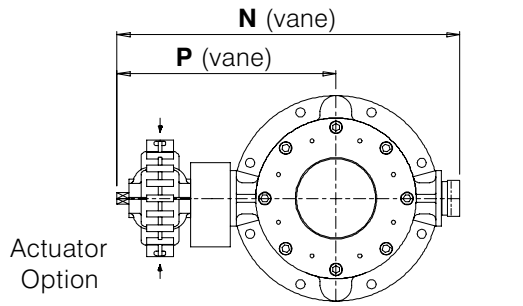
O – No Special Features
S – Special Features

Seal selection

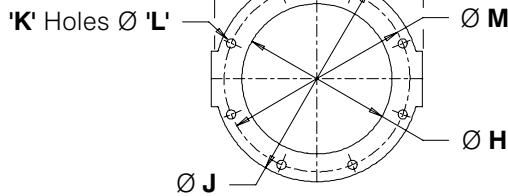
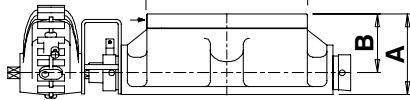
Several inflatable seals are available, depending upon the application. The choice includes a white food quality seal as well as those specially formulated for high temperature or other hostile applications.



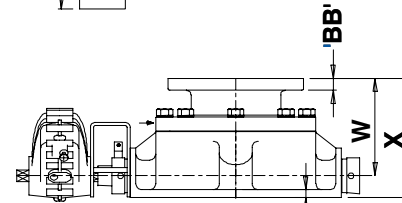
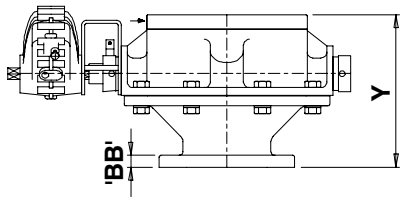
1. Neoprene : Most materials up to 100°C (212°F)
- 2/3. Viton or Silicone : Most materials up to 200°C (390°F)
4. EPDM : Chemicals
5. Food quality silicone for hygienic applications



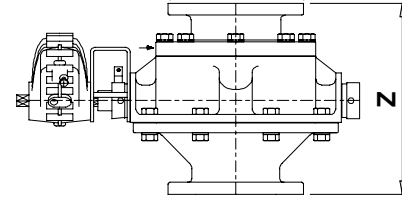
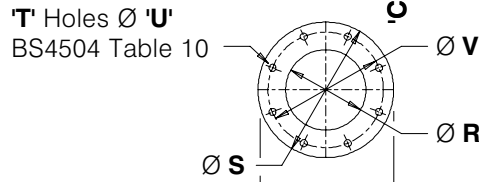
STANDARD BULKHEAD



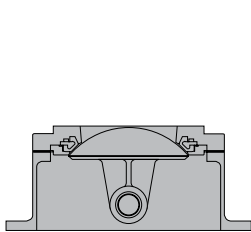
BOTTOM ADAPTOR



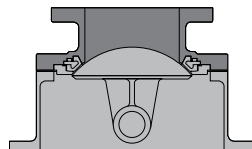
TOP ADAPTOR



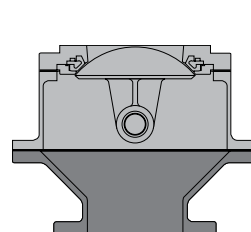
IN-LINE



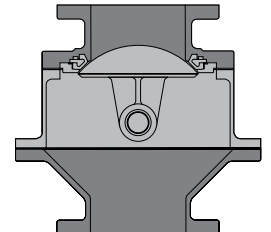
Bulkhead



Top Adapter



Bottom Adapter



In-line

DV	A	B	ØC	ØD	E	ØF	ØG	ØH	I	ØJ	K	ØL	ØM	N (kin)	N (cil)	P (kin)	P (cil)	ØR	ØS	T	ØU	ØV	W	X	Y	Z	AA	BB	CC	WT Kgs In-line
50		74	51	165	4	M16	125	51		165	4	18	125	373		242		50	165	4	18	125			188		23	18	17	
80		90	78	200	8	M16	160	78		200	8	18	160	441		296		78	200	8	18	160			228		23	20	23	
100	137	97	106	250	4	M12	200	240		340	6	18	300	608		402		103	229	8	18	180	173	213	272	348	13	26	20	60
150	169	124	157	320	6	M12	260	312		440	8	22	390	779		513		155	285	8	22	240	212	257	362	450	16	28	20	112
200	205	150	206	406	8	M12	315	390	928	520	8	22	470	870	683	555	368	203	343	8	22	295	247	302	388	485	16	30	20	197
250	249	189	260	390	6	M12	350	480	1212	620	8	26	560	1121	863	725	470	254	407	12	22	360	267	327	487	565	18	32	25	300
300	283	218	306	460	6	M16	410	551	1242	690	12	26	630	1212	963	763	514	305	483	12	22	400	339	404	558	680	18	35	28	392
400	370	285	410	595	16	M16	545	739	1508	1000	12	38	870	1613	1378	999	765	400	580	16	26	515	446	531	723	884	25	45	35	830
500	484	376	508	745	20	M24	620	880	1681	1110	16	39	1030		1740		958	508	745	20	26	620	541	850	857	1273	40	38	45	1300
600	650	425	600	820	20	M27	725	992	1619	1230	24	33	1120		1922		961	600	780	20	30	725	456	881	1127	1350	45	42	52	1920
800	648	529	800	1160	24	M30	950	1260	2000	1455	32	39	1380		2275		1138	800	1015	24	33	950	631	750	1126	1228	50	32	38	2400

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

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