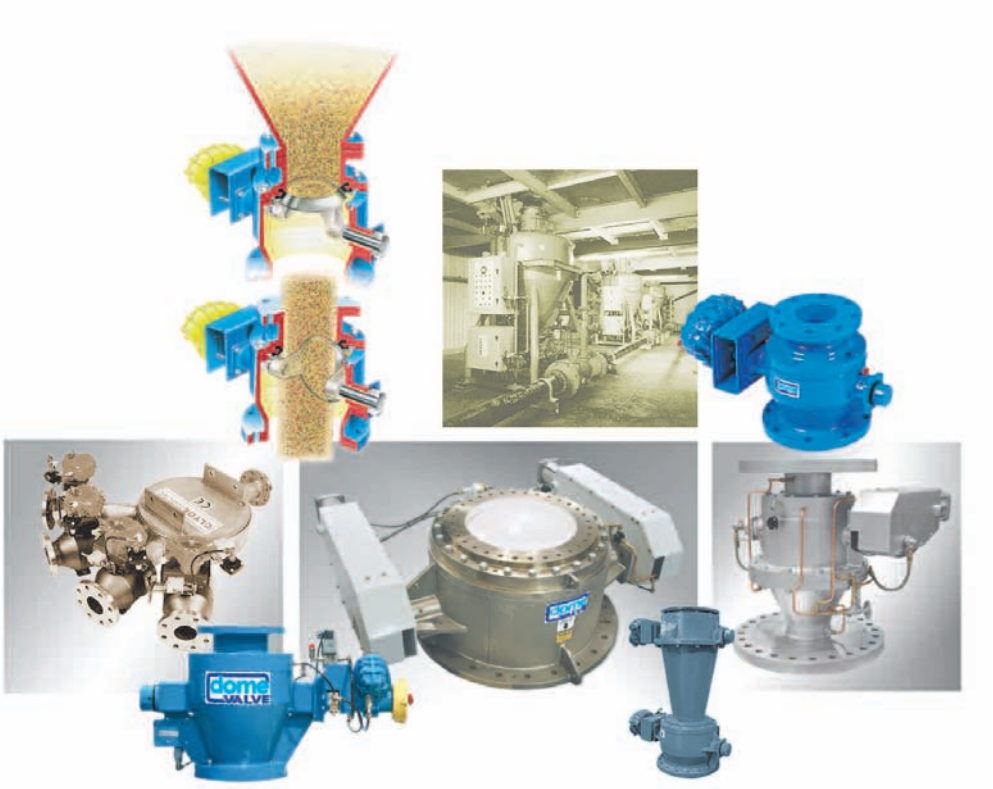
The number one valve for bulk material handling applications

www.originaldomevalve.com



Dome Valve

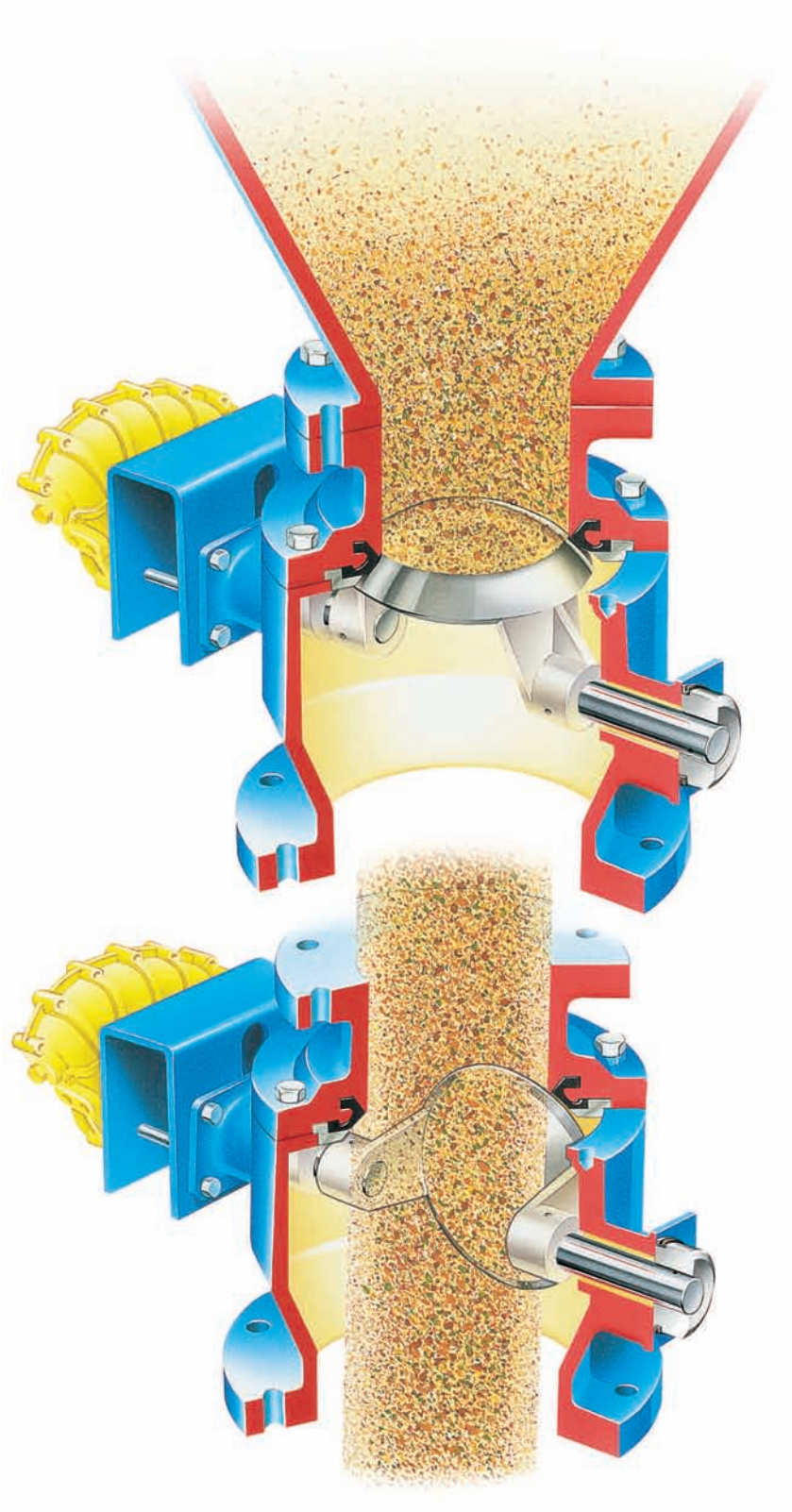
Line and Vessel

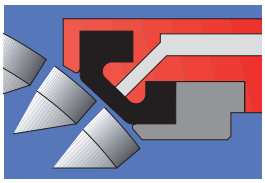
Isolation Valve

Clyde Materials Handling

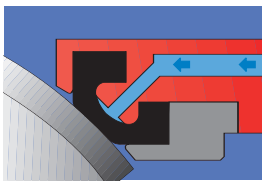
TRANSFORMING PROCESSES ► NO LIMITS ► INFINITE POSSIBILITIES

The ‘Original’ Dome Valve®





The seal automatically deflates during opening and closing, thereby avoiding contact with the dome and eliminating unnecessary wear.



The seal automatically inflates only when the dome is fully closed.

The Dome Valve® has a world-wide reputation for reliability. This results from its simple, cavity-free construction which is designed to minimise the possibility of material build-up within the valve body. The same, simple design philosophy also eases the task of preventative routine maintenance and makes any parts replacement a quick and simple task.

Inline Dome Valve®

Always in Control

This highly innovative and well proven product from Clyde Materials Handling is probably the most effective, fast closing, bulk material handling valve in the world.

It was developed by Clyde Materials Handling in 1974 for use within the company's own advanced range of pneumatic conveying systems. Soon afterwards the valve's much broader application capabilities were realised and it was offered as a stand-alone product.

To date, more than 20,000 Dome Valves® have been sold world-wide, for applications across a range of industries including:- food, pharmaceuticals, chemicals, plastics, minerals, power, iron and steel.

Stainless Steel Valve

High Pressure Valve

High Temperature Valve

User Benefits

- Full bore unobstructed material flow.
- Simple, fully proven design.
- Can cut through moving or static columns of material.
- Wide range of valve sizes: 50mm (2") to 650mm (26").
- Forms pressure tight seal when closed.
- Can cope with pressures up to 35 bar (507 psi).
- Can handle material temperatures from –20°C to +750°C (-4°F to 1382°F).
- Long operating life.
- Up to 1,000,000 cycles between major overhauls with most materials.
- Low maintenance.
- Ready availability of spare parts.

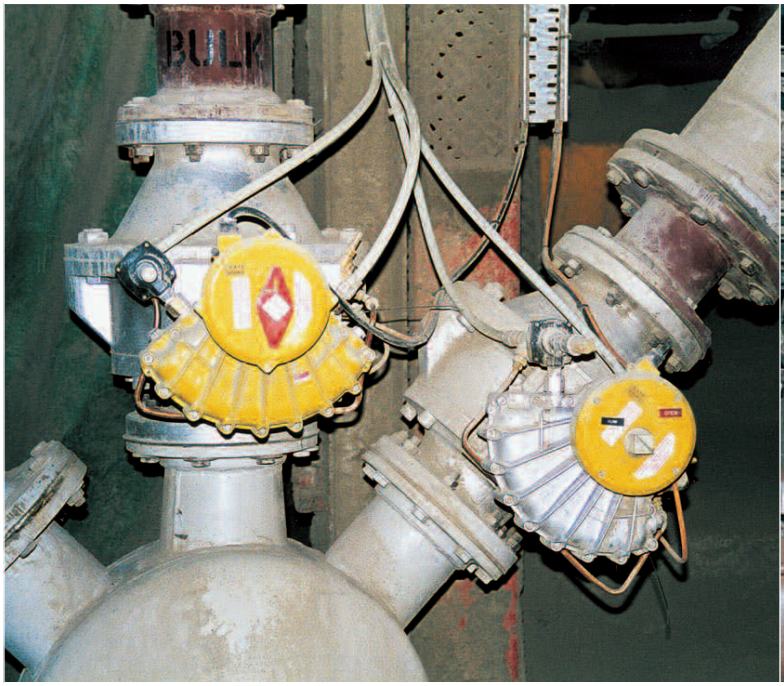
Full Bore Material Flow

Totally unrestricted full bore material flow is assured through the unique design of the 'dome' assembly. A mere quarter turn is sufficient to move from the fully closed to the fully open position. This action positions the dome completely clear of the material flow path.

Materials Handled

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

"the most effective bulk material handling valve in the world."

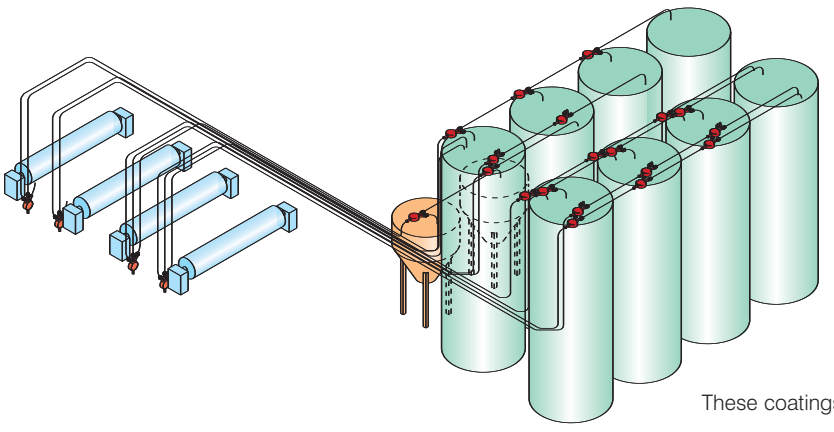


Dome Valve® Succeeds Where Others Fail at Lafarge

At Lafarge's Westbury Works in the UK, a complex arrangement of diverter valves is used to route highly abrasive cement powder to any of 10 storage silos. The life of the original valves was between 3 and 6 months.

A 12 month trial conducted by Lafarge indicated that Clyde Dome Valves® would last for approximately 2 years – in fact, the valves were still operating after four years – dramatically exceeding even the most optimistic of forecasts.

Dome Valves® have now been installed at other Lafarge plants around the world.



From Fine Abrasive Powders to Cohesive Materials

User options extend to the choice of 'dome', both in terms of raw material and any surface coatings required. The dome is usually produced from Cast Iron, S G Iron or Stainless Steel, but other materials and designs will be considered on application.

Surface coating options for the dome include:

1. Chrome or ENP – For sticky and abrasive materials

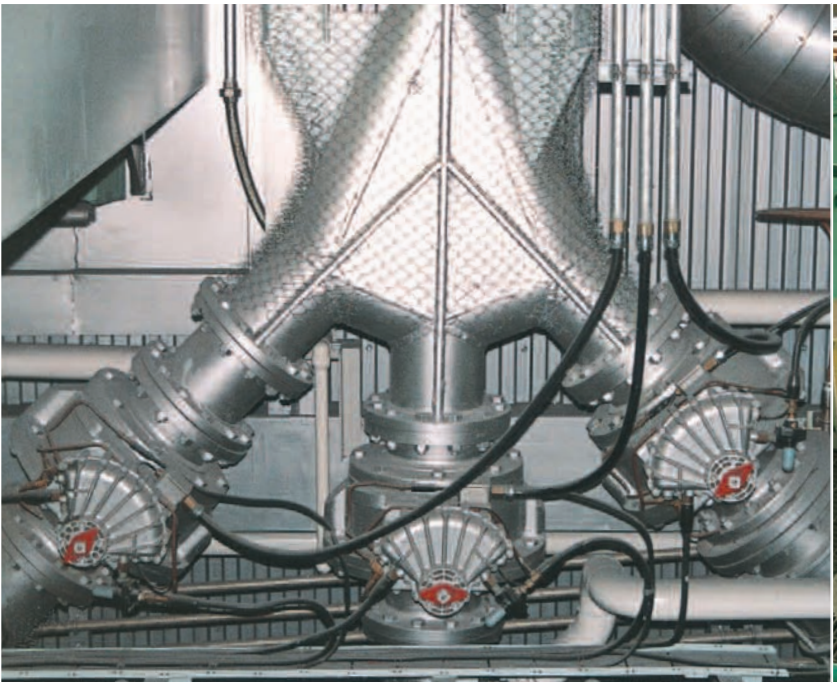
2. ENP or Tungsten Carbide – For abrasive materials

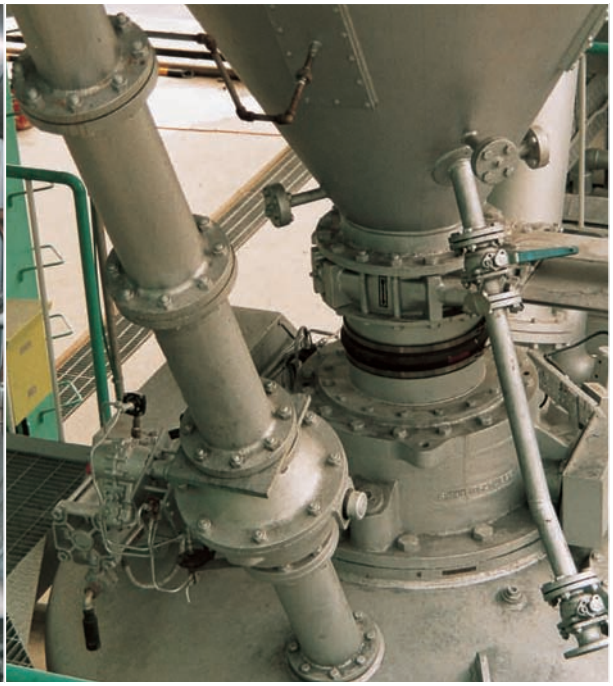
3. Epoxy Resin – For corrosive materials

4. Reinforced PTFE – For food, sticky or wet materials

These coatings can also be extended to the internal surfaces of the valve body and the adaptors.

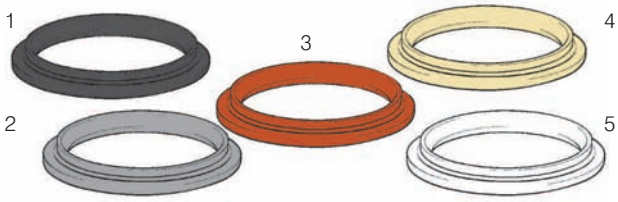
Customised Solutions





From Foodstuffs to High Temperature Ash

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 for hygienic applications

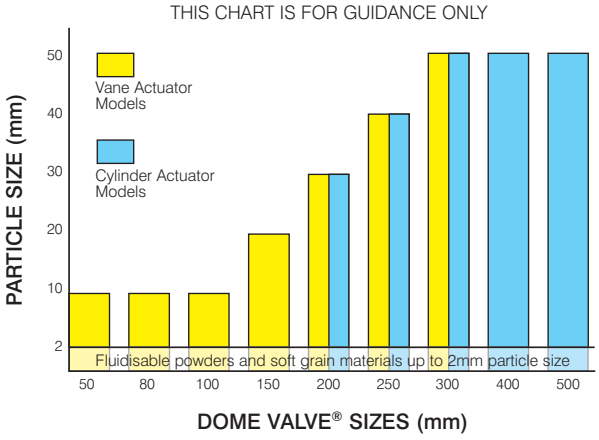
"trial units available for customer evaluation."

Moving and Static Column Cut Off

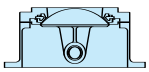
All Dome Valves® are capable of handling fine grain materials and hard abrasive products.

Vane Actuator models can cut through static columns of material up to 2mm particle size. They can also cut through moving columns of powders, pastes and granular products similar to coal above 2mm.

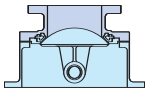
Cylinder Actuator models have the added capability of being able to cut through static columns of material above 2mm.



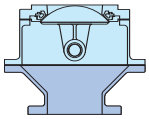
Selection Guide



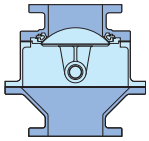
DVS Dome Valve®
STANDARD BULKHEAD
Inlet side pressure tight up to 0.5 bar(g)
Outlet side pressure tight up to 7 bar(g)



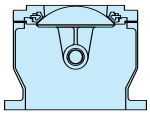
DVT Dome Valve®
TOP OUTLET ADAPTOR
Inlet and outlet sides pressure tight up to 7 bar(g)



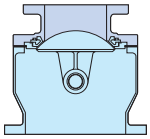
DVB Dome Valve®
BOTTOM OUTLET ADAPTOR
Inlet side pressure tight up to 0.5 bar(g)
Outlet side pressure tight up to 7 bar(g)



DVI Dome Valve®
IN-LINE
Inlet and outlet sides pressure tight up to 7 bar(g)



DVES Dome Valve®
STANDARD BULKHEAD
Inlet side pressure tight up to 0.5 bar(g)
Outlet side pressure tight up to 7 bar(g)



DVET Dome Valve®
TOP INLET ADAPTOR
Inlet and outlet sides pressure tight up to 7 bar(g)

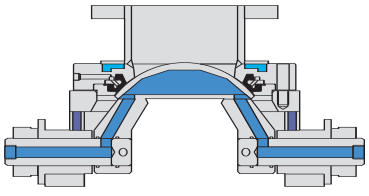
Valve sizes (mm)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)	PHO -20°C to 100°C (-4°F to 212°F)	PHV 100°C to 200°C (212°F to 390°F)
Vane Actuator Models												
50							DV 50 IOVO	DV 50 IVVO				
80							DV 80 IOVO	DV 80 IVVO				
100	DV 100 SOVO	DV 100 SWO	DV 100 TOVO	DV 100 TWO	DV 100 BOVO	DV 100 BWO	DV 100 IOVO	DV 100 IVVO	DVE 100 SOVO	DVE 100 SWO	DVE 100 TOVO	DVE 100 TWO
150	DV 150 SOVO	DV 150 SWO	DV 150 TOVO	DV 150 TWO	DV 150 BOVO	DV 150 BWO	DV 150 IOVO	DV 150 IVVO	DVE 150 SOVO	DVE 150 SWO	DVE 150 TOVO	DVE 150 TWO
200	DV 200 SOVO	DV 200 SWO	DV 200 TOVO	DV 200 TWO	DV 200 BOVO	DV 200 BWO	DV 200 IOVO	DV 200 IVVO	DVE 200 SOVO	DVE 200 SWO	DVE 200 TOVO	DVE 200 TWO
250	DV 250 SOVO	DV 250 SWO	DV 250 TOVO	DV 250 TWO	DV 250 BOVO	DV 250 BWO	DV 250 IOVO	DV 250 IVVO	DVE 250 SOVO	DVE 250 SWO	DVE 250 TOVO	DVE 250 TWO
300	DV 300 SOVO	DV 300 SWO	DV 300 TOVO	DV 300 TWO	DV 300 BOVO	DV 300 BWO	DV 300 IOVO	DV 300 IVVO	DVE 300 SOVO	DVE 300 SWO	DVE 300 TOVO	DVE 300 TWO
Cylinder Actuator Models												
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	DVE 200 SOCO	DVE 200 SVCO	DVE 200 TOCO	DVE 200 TVCO
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	DVE 250 SOCO	DVE 250 SVCO	DVE 250 TOCO	DVE 250 TVCO
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	DVE 300 SOCO	DVE 300 SVCO	DVE 300 TOCO	DVE 300 TVCO
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	DVE 400 SOCO	DVE 400 SVCO	DVE 400 TOCO	DVE 400 TVCO
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	DVE 500 SOCO	DVE 500 SVCO	DVE 500 TOCO	DVE 500 TVCO

Water Cooled Options

Water cooling is recommended for applications involving temperatures in excess of 200°C.

Water cooled valves are available in three options in selective sizes throughout the range.

- * PH1 Water cooled top plate only
- * PH2 As PH1 but including a water cooled dome
- * PH3 As PH2 but including a water cooled body



Model Code References

DV or DVE Dome Valve®

100 SIZE (mm)

S CONFIGURATION
S = Standard Bulkhead
T = Top Inlet
B = Bottom Outlet
I = Inline

O TEMPERATURE
O = –20°C to 100°C
V = 100°C to 200°C

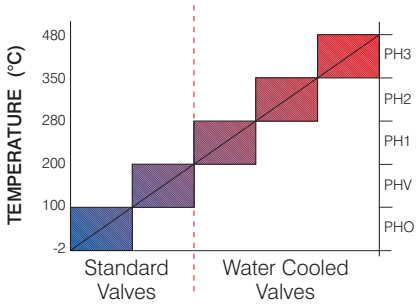
V ACTUATOR TYPE
V = Vane
C = Cylinder

O SPECIAL FEATURES
O = No Special Features
S = Special Features Required

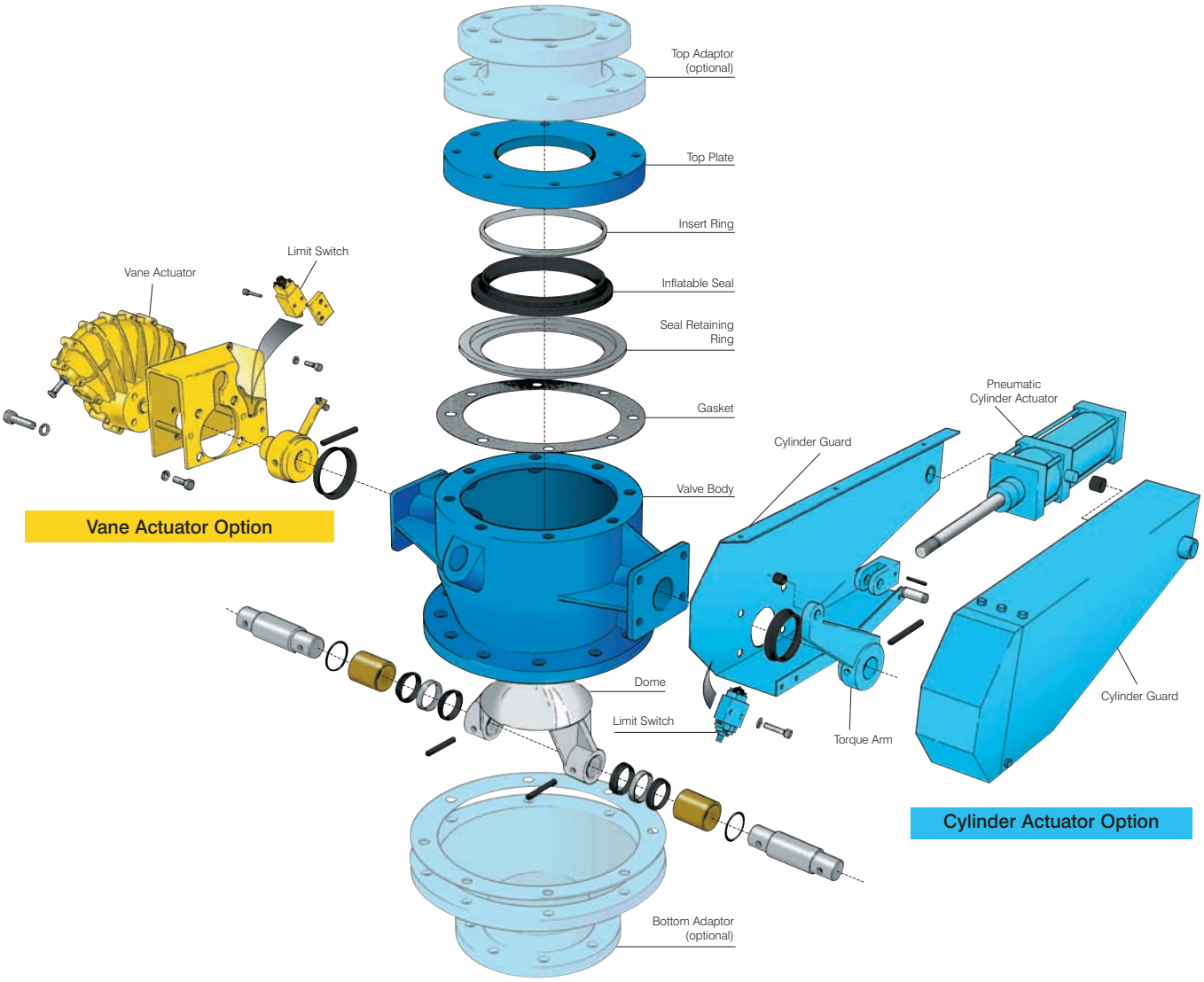
Optional Special Features

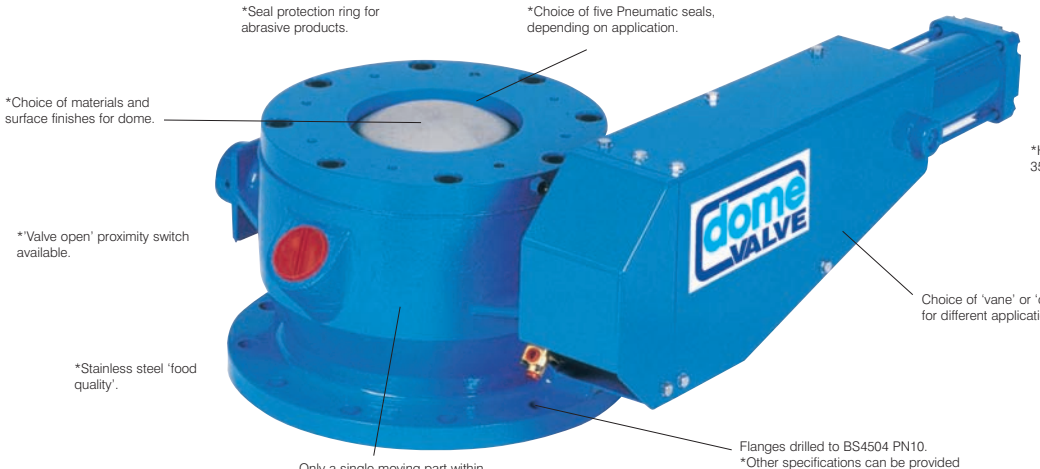
- Proximity Switch
- Seal Pressure Switch
- Solenoid Valve and Timer
- Quick Exhaust Valve

Temperature Ratings



Key Components





*SPECIAL FEATURE NOT OFFERED AS STANDARD
Please consult
Clyde Materials Handling.

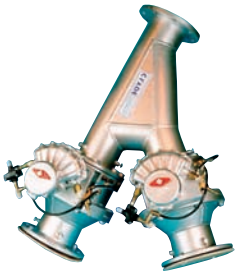
Dome Valve® sold in the United States under the trade name 'Spheri Valve'

www.originaldomevalve.com

Other Bulk Material Handling Valves

Dump Valves and Terminal Boxes

Dump Valves are used where a number of hoppers positioned in series require selective feeding. They have two operating conditions, 'straight through' and 'dump'. In the straight through condition, a self-inflating easily replaceable seal closes off the respective hopper inlet, allowing the material to be conveyed 'straight through' to the next available reception point.



Switch Valves

These types of valves are used for diverting flow in any pneumatic conveying lines or hopper discharge applications and are particularly suitable for abrasive materials. They can also be supplied if operating pressures and temperatures are high. Switch Valves are fitted with two in-line Dome Valves® for line isolation and can be provided with multiple discharges or inlets.

Constant Discharge Lock Hoppers

Lock hoppers provide constant discharge from collection vessels. They are mainly used if the product is abrasive or when operating temperatures and pressures are high. Since the assembly is normally pressure balanced with the up and downstream equipment, valve wear is negligible.

Clyde Materials Handling
TRANSFORMING PROCESSES ► NO LIMITS ► INFINITE POSSIBILITIES

SYSTEM CERTIFICATION ISO 9001:2000 SGS

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Dome Valve® sold in the United States under the trade name 'Spheri Valve'

dome VALVE TM