

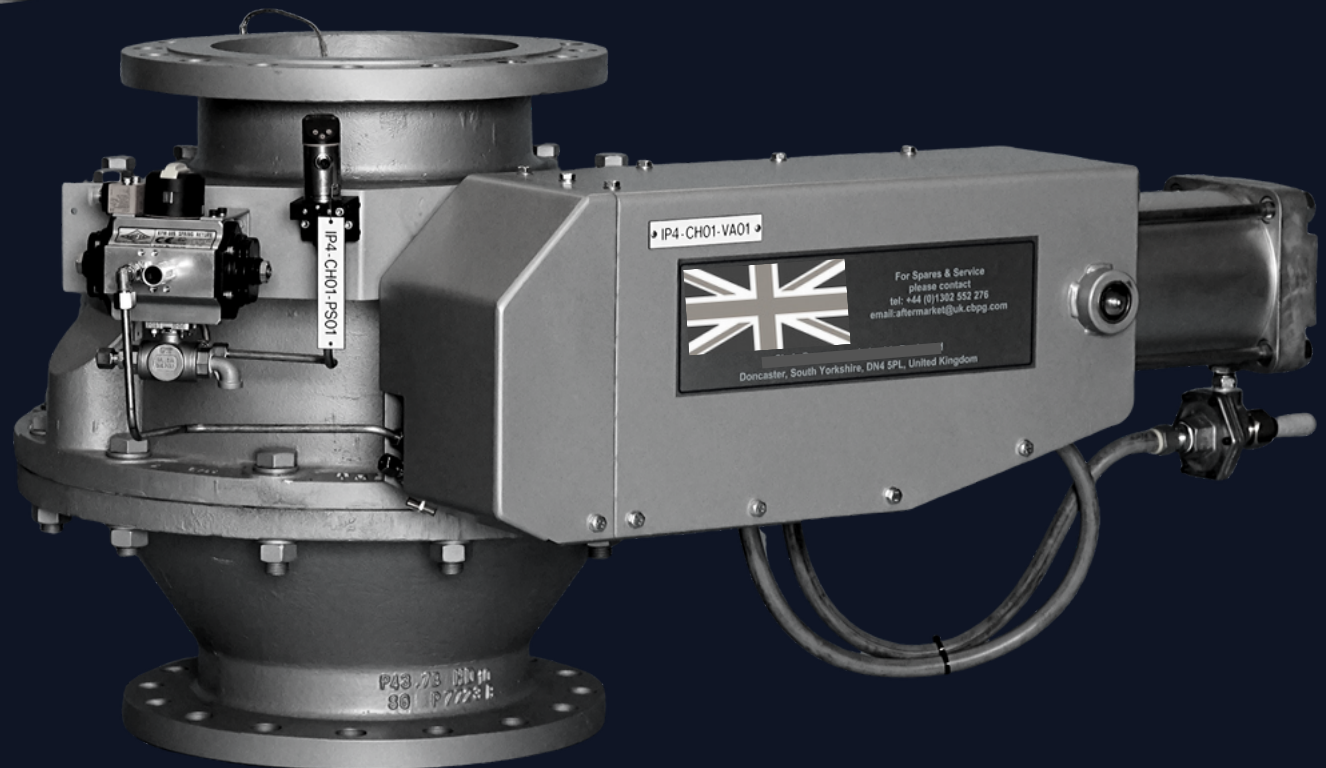

CLYDE
 Pneumatic Conveying


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your pneumatic conveying and service partners

THE ORIGINAL DOME VALVE

Heavy duty pneumatic
bulk solids cut-off valve



often imitated, never duplicated...

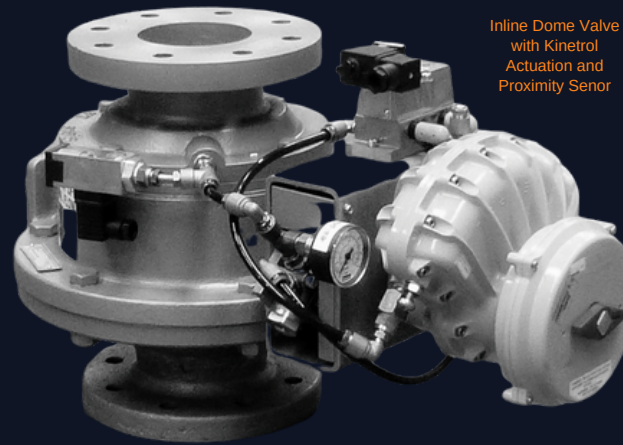
World-wide reputation for reliability with over 100,000 installations globally.

This pressure tight actuated bulk materials cut-off valve is simple in design and construction resulting in extremely sustainable process reliability even in the most difficult of applications.

Proven in industry to be one of the toughest valves on the market to date.



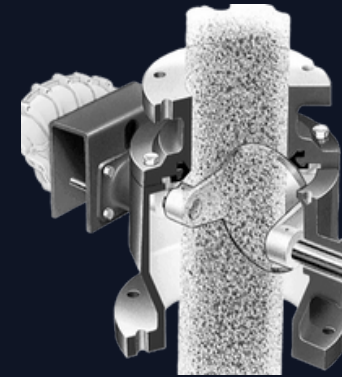
18 barg high pressure inline Dome Valve with heavy duty pneumatic cylinder



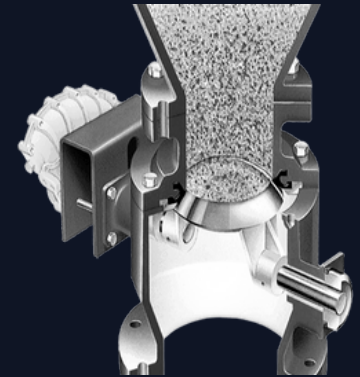
Inline Dome Valve with Kinetrol Actuation and Proximity Sensor



- full bore unobstructed material flow
- simple, fully proven design
- can cut through moving or static columns of material
- wide range of valve sizes 50 - 400mm
- forms a pressure tight seal when closed
- standard valves designed for 7.0 barg but can deal with pressures up to 30 barg
- can handle temperatures from -20 to 480degC
- over 3,000,000 cycles between major maintenance
- normal inflatable seal life 1,000,000 cycles
- fast acting cylinder or vane actuation
- low operational expenditure



Valve Fully Open Position



Valve Fully Closed Position

A pair of inline Dome Valves used to divert material in a pneumatic conveying pipeline, also known as a Dome type Switching Valve



User options extend to the type of Dome both in terms of raw material and surface coating. The Dome is normally produced from SG Iron but other material and designs can be considered on application.

A common design is to adopt a 'flat-top' Dome configuration to help reduce build up seen with cohesive and sticky materials.

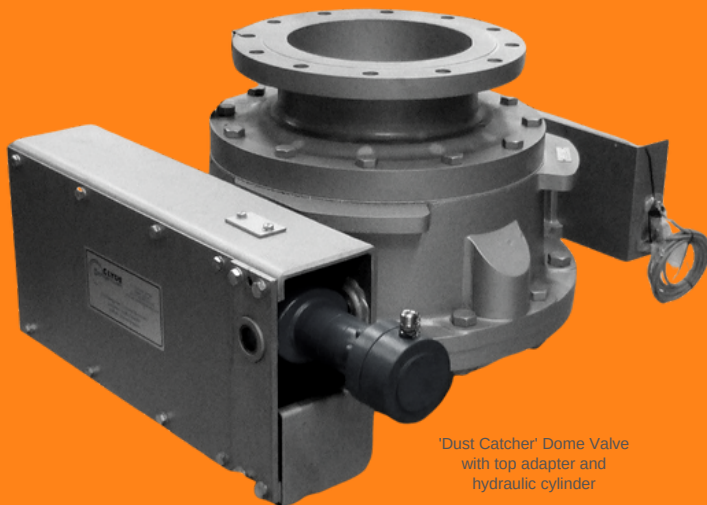
Dome surface coatings include:

1. Chrome - for sticky or abrasive materials
2. ENP or Tungsten Carbide - for abrasive materials
3. Epoxy Resin - for corrosive materials

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

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

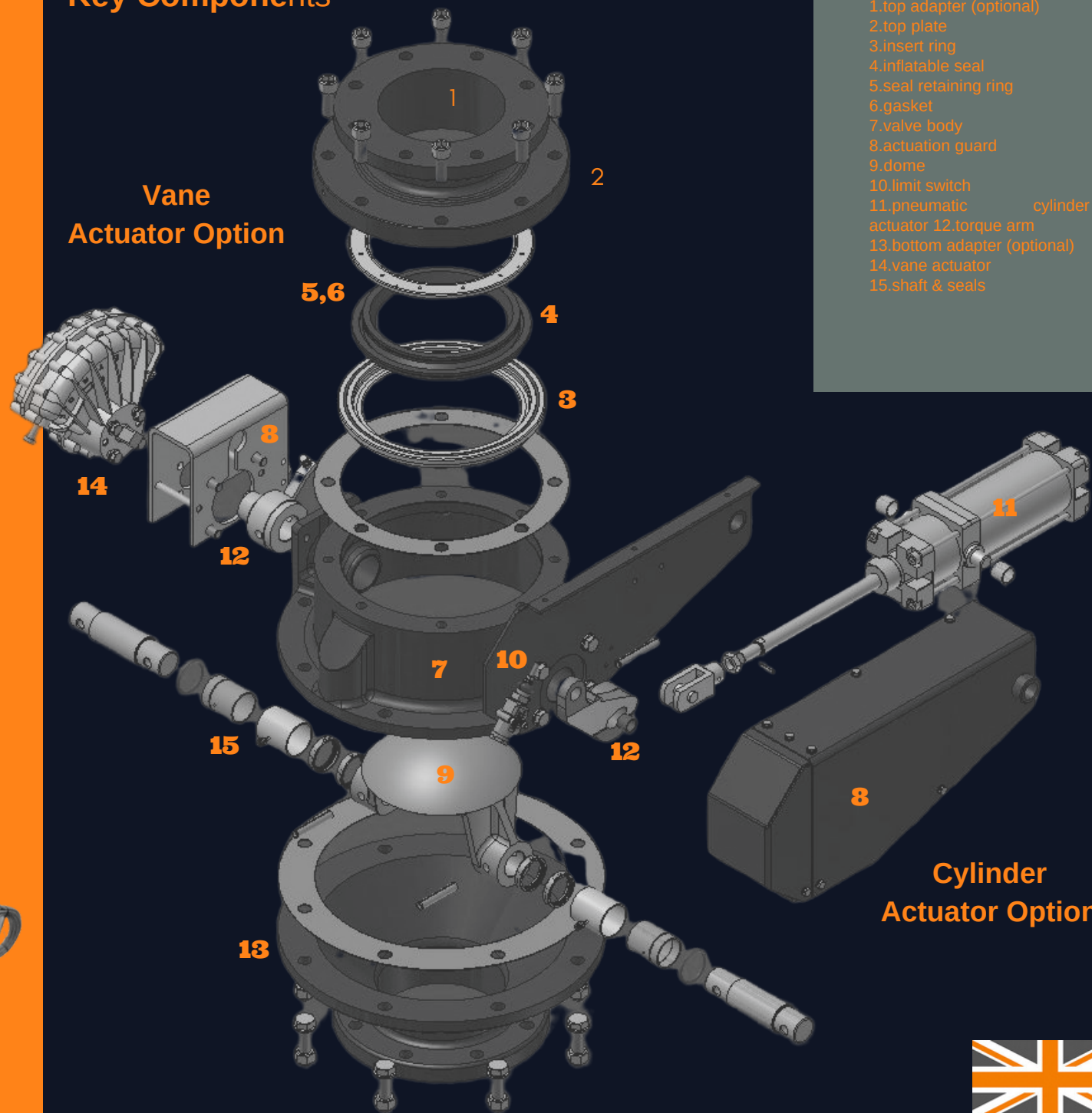
General Vane actuator models are used for materials with a grain size below 2mm. Cylinder actuated valves are used for materials with grain size above 2mm.



'Dust Catcher' Dome Valve
with top adapter and
hydraulic cylinder

Key Components

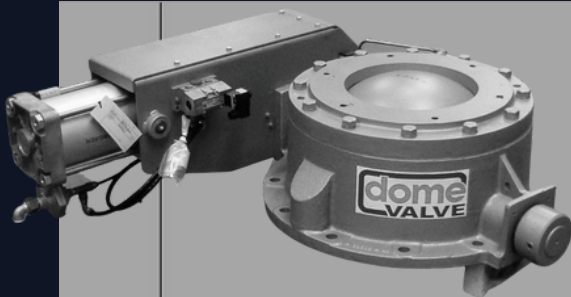
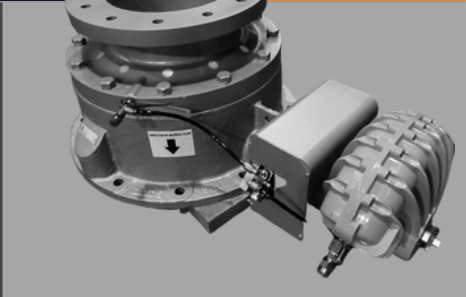

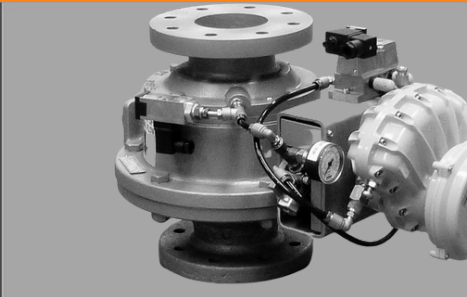
Vane Actuator Option



- Component Key:
- 1.top adapter (optional)
 - 2.top plate
 - 3.insert ring
 - 4.inflatable seal
 - 5.seal retaining ring
 - 6.gasket
 - 7.valve body
 - 8.actuation guard
 - 9.dome
 - 10.limit switch
 - 11.pneumatic cylinder
 - 12.torque arm
 - 13.bottom adapter (optional)
 - 14.vane actuator
 - 15.shaft & seals

Cylinder Actuator Option

Dome Valve Selection Chart

			
DVS Dome Valve	DVT Dome Valve	DVB Dome Valve	DVI Dome Valve
STANDARD BULKHEAD	TOP INLET ADAPTER	BOTTOM OUTLET ADAPTER	INLINE
Inlet side pressure tight up to 0.5 bar(g)	Inlet and outlet sides pressure tight	Inlet side pressure tight up to 0.5 bar(g)	Inlet and outlet sides pressure tight
Outlet side pressure tight up to 7 bar(g)	up to 7 bar(g)	Outlet side pressure tight up to 7 bar(g)	up to 7 bar(g)
PFA	PHV	PFA	PHV
-20°C to 135°C	135°C to 220°C	-20°C to 135°C	135°C to 220°C

SIZES (mm) KINETROL ACTUATOR MODELS

50							DV 50 IFVO	DV 50 IVVO
80							DV 80 IFVO	DV 80 IVVO
100	DV 100 SFVO	DV 100 SVVO	DV 100 TFVO	DV 100 TVVO	DV 100 BFVO	DV 100 BVVO	DV 100 IFVO	DV 100 IVVO
150	DV 150 SFVO	DV 150 SVVO	DV 150 TFVO	DV 150 TVVO	DV 150 BFVO	DV 150 BVVO	DV 150 IFVO	DV 150 IVVO
200	DV 200 SFVO	DV 200 SVVO	DV 200 TFVO	DV 200 TVVO	DV 200 BFVO	DV 200 BVVO	DV 200 IFVO	DV 200 IVVO
250	DV 250 SFVO	DV 250 SVVO	DV 250 TFVO	DV 250 TVVO	DV 250 BFVO	DV 250 BVVO	DV 250 IFVO	DV 250 IVVO
300	DV 300 SFVO	DV 300 SVVO	DV 300 TFVO	DV 300 TVVO	DV 300 BFVO	DV 300 BVVO	DV 300 IFVO	DV 300 IVVO

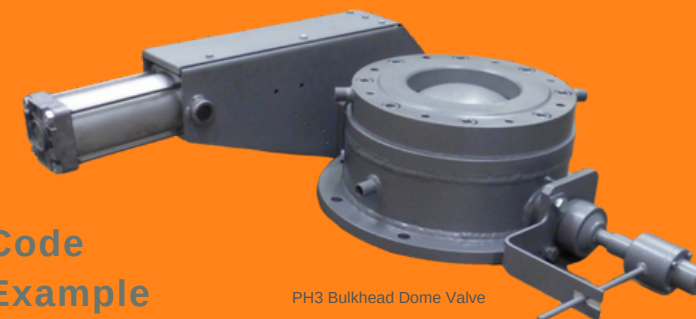
SIZES (mm) CYLINDER ACTUATOR MODELS

200	DV 200 SFCO	DV 200 SVCO	DV 200 TFCO	DV 200 TVCO	DV 200 BFCO	DV 200 BVCO	DV 200 IFCO	DV 200 IVCO
250	DV 250 SFCO	DV 250 SVCO	DV 250 TFCO	DV 250 TVCO	DV 250 BFCO	DV 250 BVCO	DV 250 IFCO	DV 250 IVCO
300	DV 300 SFCO	DV 300 SVCO	DV 300 TFCO	DV 300 TVCO	DV 300 BFCO	DV 300 BVCO	DV 300 IFCO	DV 300 IVCO
350	DV 350 SFCO	DV 350 SVCO	DV 350 TFCO	DV 350 TVCO	DV 350 BFCO	DV 350 BVCO	DV 350 IFCO	DV 350 IVCO
400	DV 400 SFCO	DV 400 SVCO	DV 400 TFCO	DV 400 TVCO	DV 400 BFCO	DV 400 BVCO	DV 400 IFCO	DV 400 IVCO
450	DV 450 SFCO	DV 450 SVCO	DV 450 TFCO	DV 450 TVCO	DV 450 BFCO	DV 450 BVCO	DV 450 IFCO	DV 450 IVCO
500	DV 500 SFCO	DV 500 SVCO	DV 500 TFCO	DV 500 TVCO	DV 500 BFCO	DV 500 BVCO	DV 500 IFCO	DV 500 IVCO

DV	DOME VALVE Model Code References	
100	SIZE (mm)	
S	CONFIGURATION	
	S=BULKHEAD	T=TOP ADAPTER
	B=BOTTOM ADAPTER	I=INLINE
F	TEMPERATURE	
	F= -20°C to 135°C	V= 135°C to 220°C
V	ACTUATOR TYPE	
	V=DOUBLE ACTING VANE	C=CYLINDER
O	SPECIAL FEATURES	
	O=NO SPECIAL FEATURES	S=SPECIAL FEATURE REQUIRED

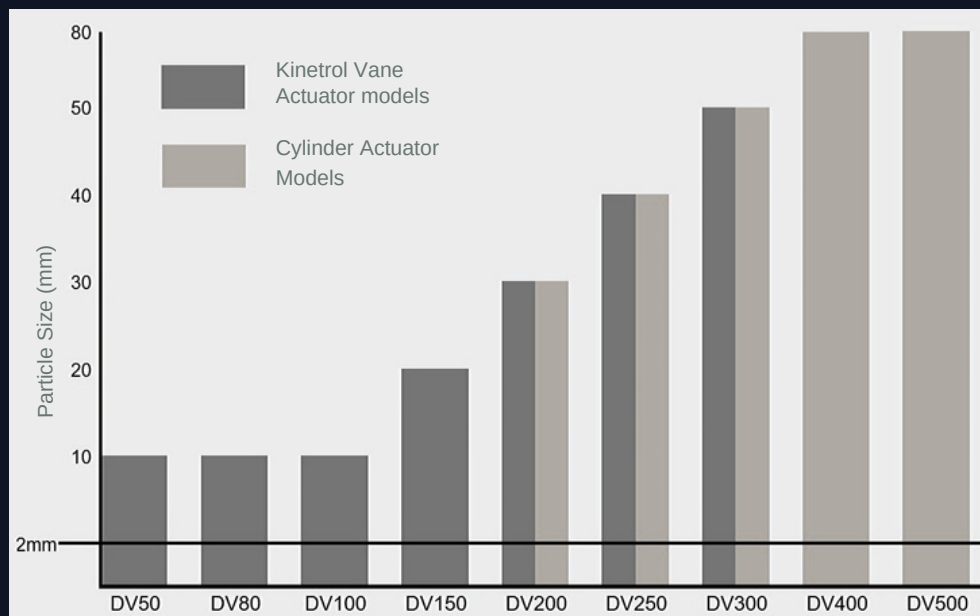
DV	200	I	V	C	O
DOME VALVE	200mm	INLINE	135oC to 220oC	CYLINDER	NO SPECIAL FEATURES

Code
Example



PH3 Bulkhead Dome Valve

Moving & static column cut-off

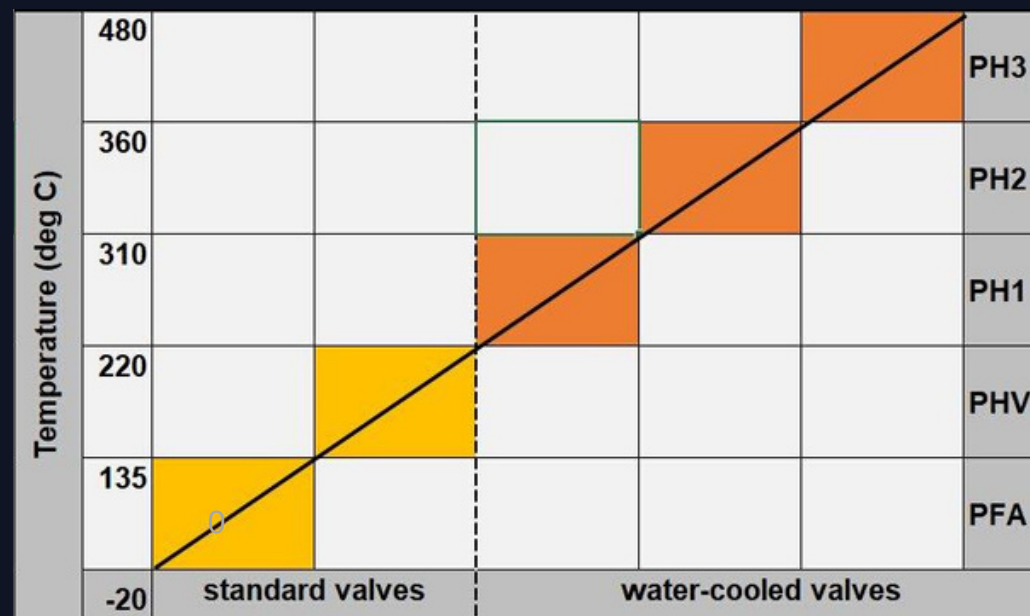


All Dome Valves are capable of handling fine materials and hard abrasive products.

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

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

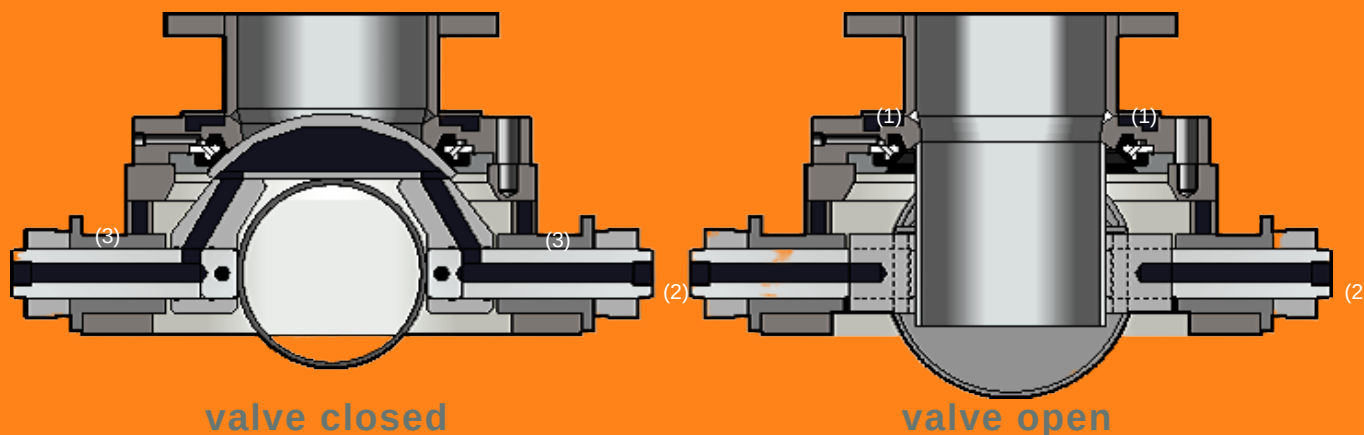
Dome Valve Temperature Ratings



PFA standard	-20 --- 135 deg C
PHV standard	-20 --- 220 deg C
PH1 water-cooled	-20 --- 310 deg C
PH2 water-cooled	-20 --- 360 deg C
PH3 water-cooled	-20 --- 480 deg C



Water Cooled Dome Valve cross section



- (1) PH1 water-cooled top plate
- (2) PH2 as PH1 with additional water cooled Dome
- (3) PH3 as PH2 with additional water cooled body

Valve Size	PH1 Litres/min	PH2 Litres/min	PH3 Litres/min
50mm	2	-	4
80mm	2	-	6
100mm	3	6	10
125mm	5	11	17
150mm	5	11	17
200mm	6	13	20
250mm	8	18	27
300mm	10	22	33
400mm	-	-	-
500mm	-	-	-




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