

Spheri® Valve



- “Fit and forget” reliable – up to 1,000,000 cycles between major overhauls with most materials
- One moving part ensures quick and easy maintenance
- Simple, fully proven design – no components in material low to wear
- Can cut through moving or static columns of material
- Can handle pressures to 500 psig and material temperatures from -4 °F to 1,382 °F (-20 °C to +750 °C)
- Standard unit rated for 150 psig (10 Barg) design
- Forms pressure-tight seal when closed

Application

More than 20,000 Spheri Valves have been sold worldwide for applications across a wide range of industries, including food, pharmaceuticals, chemicals, plastics, minerals, power, iron and steel. With a global reputation for reliability, the Spheri Valve has a simple robust design and only one moving part.

Common materials handled:

- | | |
|-----------------------|-------------|
| ■ Abrasive | ■ Fly Ash |
| ■ Ash | ■ Friable |
| ■ Blast Furnace Grits | ■ Hazardous |
| ■ Cement | ■ Limestone |
| ■ Chemicals | ■ Minerals |
| ■ Cohesive | ■ Ores |
| ■ Copper Concentrate | ■ Powders |
| ■ Detergents | ■ Toxic |

Appropriate uses for a Spheri Valve:

- Whenever more common valves such as knife gate, pinch, ball and butterfly valves fail when handling abrasive materials
- At pressure and where high temperatures are present

- Hopper discharge valve
- Pressure vessel inlet, outlet and vent
- Blast furnace dustcatchers vessel outlets
- High frequency duties
- Pipework isolation and routing
- Screw feeder inlet/outlet and isolation valves
- Abrasive products and differential pressures
- Reactor, dryer, and lock hoppers

Features of the Spheri Valve:

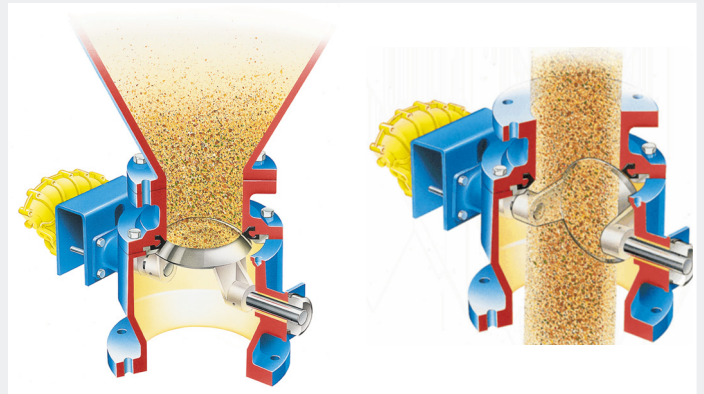
- Choice of materials and surface finishes
- Valve open proximity switch available
- Only a single moving part within main valve body
- Seal protection ring for abrasive products
- Choice of five pneumatic seals, depending on application.

Operating principles

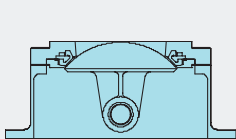
Totally unrestricted full bore material flow is assured through the unique design of the ‘dome’ assembly. With one quarter turn, the valve moves from the fully closed to the fully open position. This action positions the dome completely clear of the material flow path.

The fast closing cutoff valve incorporates a unique inflatable sealing mechanism, which delivers a pressure-tight seal against the dome surface when in the closed position.

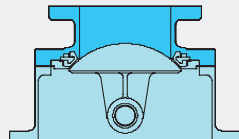
Typically pneumatically operated using vane or cylinder actuators, the Spheri Valve can also be operated hydraulically to suit the needs of your application. All Spheri Valves are capable of closing and sealing through moving or static columns of material.



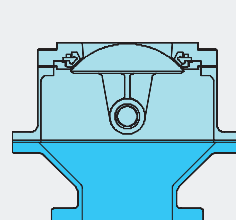
The Spheri Valve is available in four configurations to meet your operational requirements.



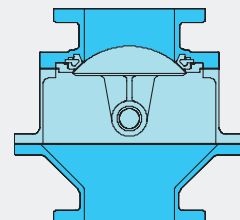
Standard Bulkhead



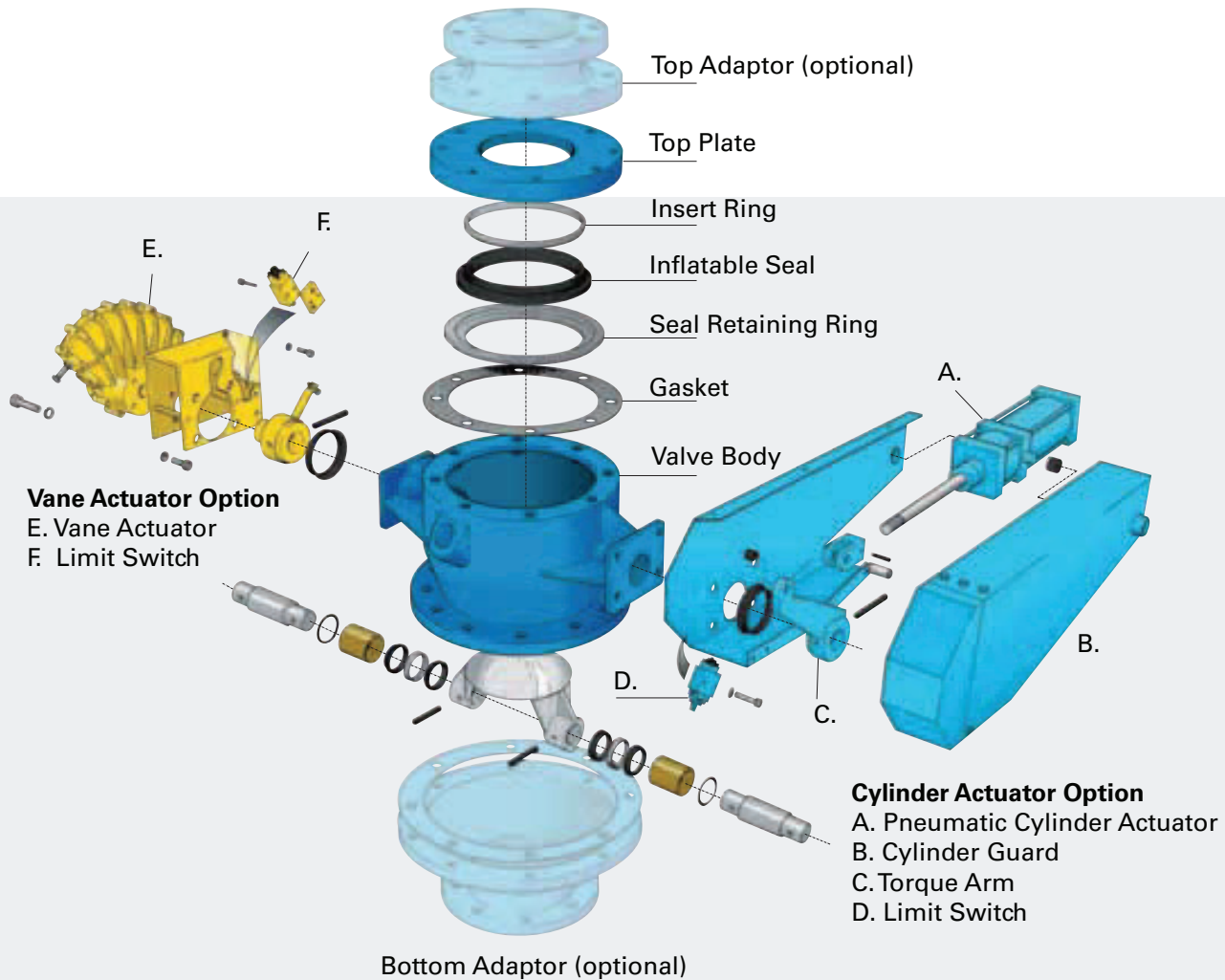
Top Adaptor



Bottom Adaptor



In-Line



Options

Customized Manufacture

Spheri Valves can be customized to meet the special requirements of most applications. Optional quality seals and internal coatings are available. They are applied to the dome surface only or to the internal surfaces of the Spheri Valve body or the adaptors.

Internal Coatings

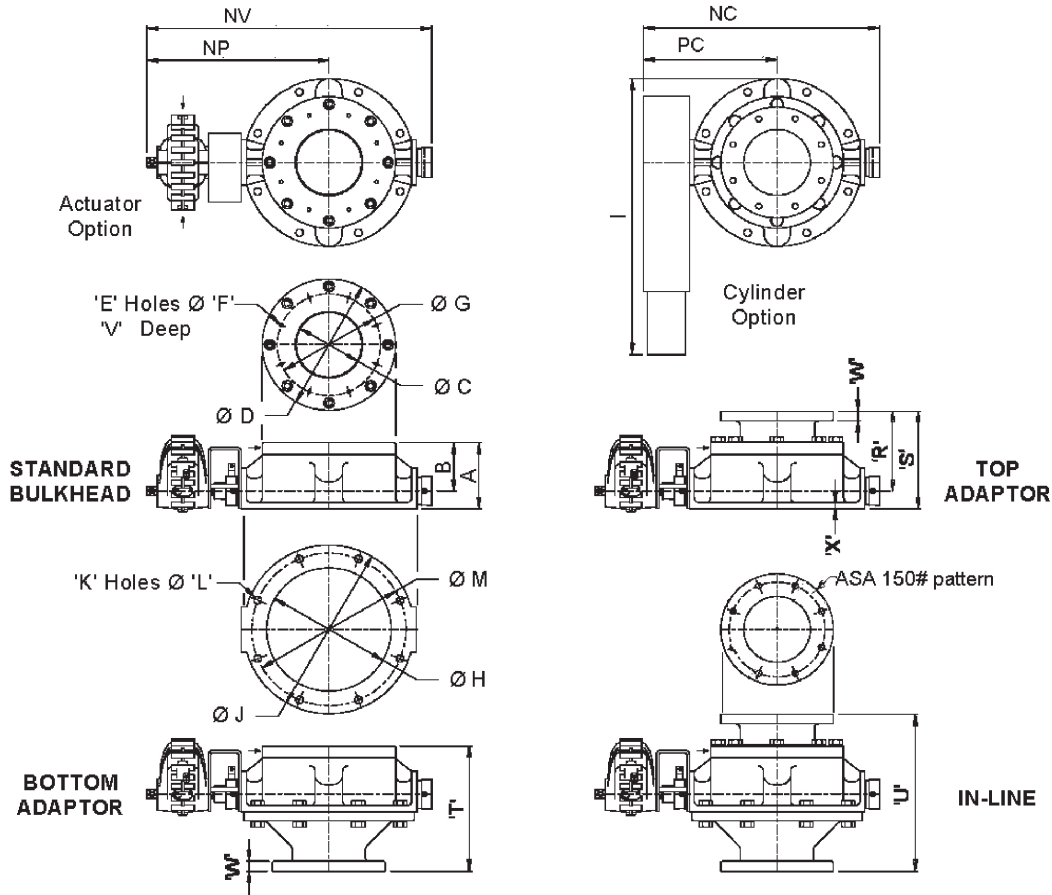
Tungsten carbide hard coating for abrasive products, ENP coating on dome surface for sticky & abrasive products and reinforced PTFE for food applications/sticky/wet products.

Materials of Manufacture

SG Iron, stainless steel available on application. Temperature ratings: -4 °F to 1,382 °F.

Pressure Ratings

150 psi maximum pressure on the standard Spheri Valve. Up to 500 psig manufactured to order.



	A	B	C	D	E	F	G	H	I	J	K	L	M	NV	NC	PV	PC	R	S	T	U	V	W	X
2"	7.4	3	2	6.5	4	5/8" UNC	4.75	2		6.5	4	0.69	4.75	15		10						0.9		0.7
3"	9	3.54	3	7.78	8	5/8" UNC	6	3		7.87	8	0.69	6	18		12						0.9		0.8
4"	5.4	3.82	4	9.84	4	1/2" UNC	7.78	9.45		13.4	6	0.69	11.8	24		16		6.8	8.4	10.7	13.7	0.5	1	0.8
6"	6.7	4.9	6	12.6	6	1/2" UNC	10.2	12.3		17.3	8	0.88	15.4	31		20		8.4	10.1	14.3	17.7	0.6	1.1	0.8
8"	8	5.9	8	16	8	1/2" UNC	12.4	15.4	36.5	20.5	8	0.88	18.5	34	27	22	15	9.7	11.9	15.3	19.1	0.6	1.2	0.8
10"	9.8	7.44	10	15.4	6	1/2" UNC	13.8	18.9	47.7	24.4	8	1.06	22	44	34	29	19	10.5	12.9	19.2	22.3	0.7	1.3	1
12"	11.1	8.58	12	18	6	5/8" UNC	16.1	21.7	48.9	27.2	12	1.06	24.8	48	38	30	20	13.4	15.9	22	26.8	0.7	1.4	1.1
16"	14.6	11.3	16	23.4	16	5/8" UNC	21.5	29.1	59.4	39.4	12	1.5	34.3	64	54	40	30	17.6	20.9	28.5	34.8	1	1.8	1.4
20"	19	14.8	20	29.3	24	1" UNC	27	34.7	66.2	43.7	12	1.5	40.6		69		38			33.8		1.6	1.5	1.8

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