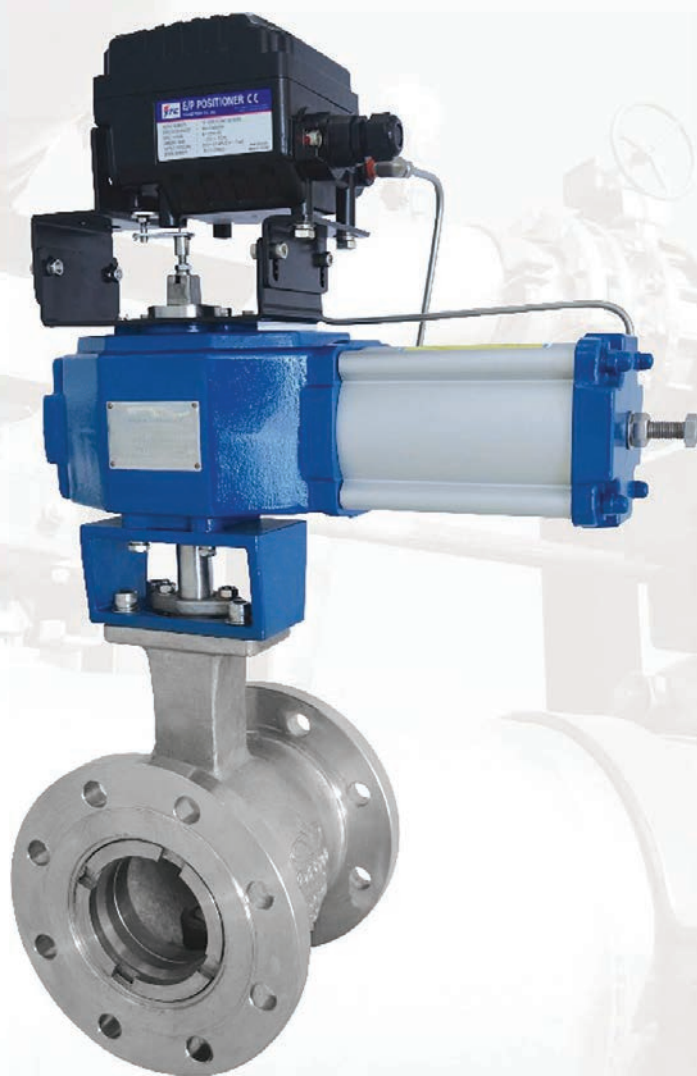




L FLOW CONTROL

Eccentric Ball Valve



SUMMARY

Eccentric control valve is a kind of eccentric angle stroke control valve. The main body of the valve is composed of a small flow resistance through valve body, a guide eccentric valve shaft and some spherical valve plates. It has the characteristics of small volume, light weight, large flow capacity and high adjustable ratio. This kind of structure is especially suitable for working conditions with heavy polluted media, such as pulp, limestone, solid granular media, viscous media and cavitation and erosion.

Product Features

1. Integral body structure (casting of valve body and cover as one body) has no static and dynamic seals except shaft seals.
2. The design of single seat eliminates the problem that the medium in the valve chamber will affect the safety of operation due to abnormal boosting.
3. Low-torque design, open and close without friction. When the spool shaft is switched off from the closed position, eccentric design can make the spool sealing surface quickly and smoothly detach from the seat without minimum starting torque. The control valve opens smoothly and has a stable and good control response even at a small opening.
4. Self-cleaning structure. When the sphere tilts away from the valve seat, the fluid in the pipeline is sealed along the sphere to 360 degrees, which not only eliminates the local erosion of high-speed fluid to the valve seat, but also washes away the accumulation on the sealing surface to achieve the purpose of self-cleaning.
5. Seat cover connection between seat and body can make valve maintenance more convenient.
6. Special design: with thermal insulation jacket, erosion resistant design, suitable for easy crystallization medium



Technical Parameters

- 1、Nominal Size : DN25mm~300mm
- 2 Pressure Rating : PN10;PN16;PN25,Class150 , PN40,class150,class300。
- 3、Connection Type : Flange
- 4、Length : ASMEISAS75.04
- 5、Tightness :
Standard Class IV according ANSI/FCI70-2-2006
Bubble Class VI~ according ANSI/FCI70-2-2006
- 6、Temperature : -40~+400°C
- 7、Fluid Characteristic : Approx Linear
- 8、adjustable ratio : 100:1
- 9、Flow Direction :
Medium Flow Direction(Opening): Flow through the seat ring to the spool direction。
Medium Flow Direction(flow gate): Flow through the spool to the seat ring direction
- 10、Disc rotation:Clockwise closure
- 11、Packing :
PTFE (Temperature : -40~ +150 ° C)
Flexible Graphite(Temperature : -40~ +400 ° C)



Part List

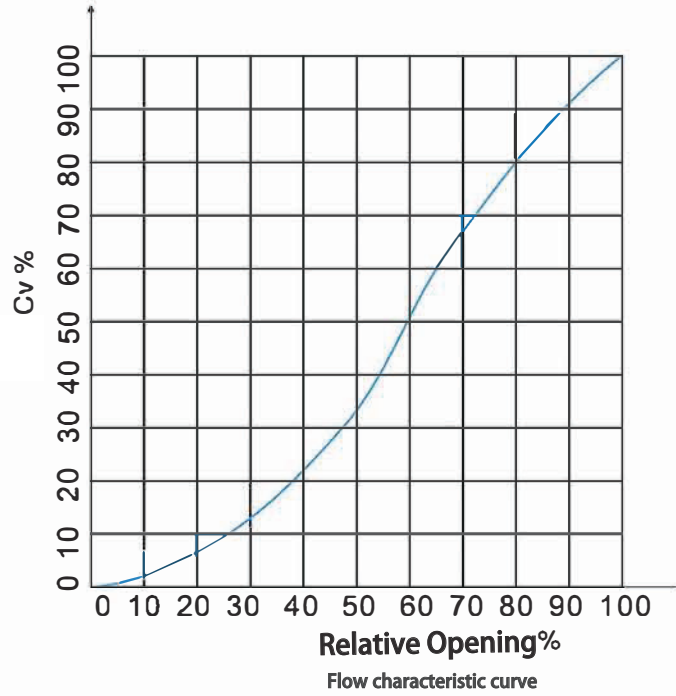
No	Name
	Body
2	Disc
3	Graphite Gasket
4	Seat
5	Ring
6	Soket head cap screw
7	Lower Stem
8	Lower shaft sleeve
9	Middle shaft sleeve
10	Upper shaft sleeve

Part List

No	Name
11	Packing
12	Upper Stem
13	Packing Cap
14	Double-headed stud
15	Nut
16	Flat Key
17	Adjusting Gasket
18	Spiral wound Gasket
19	Lower Cap
20	Hex head Bolt

Inherent Flow Characteristic

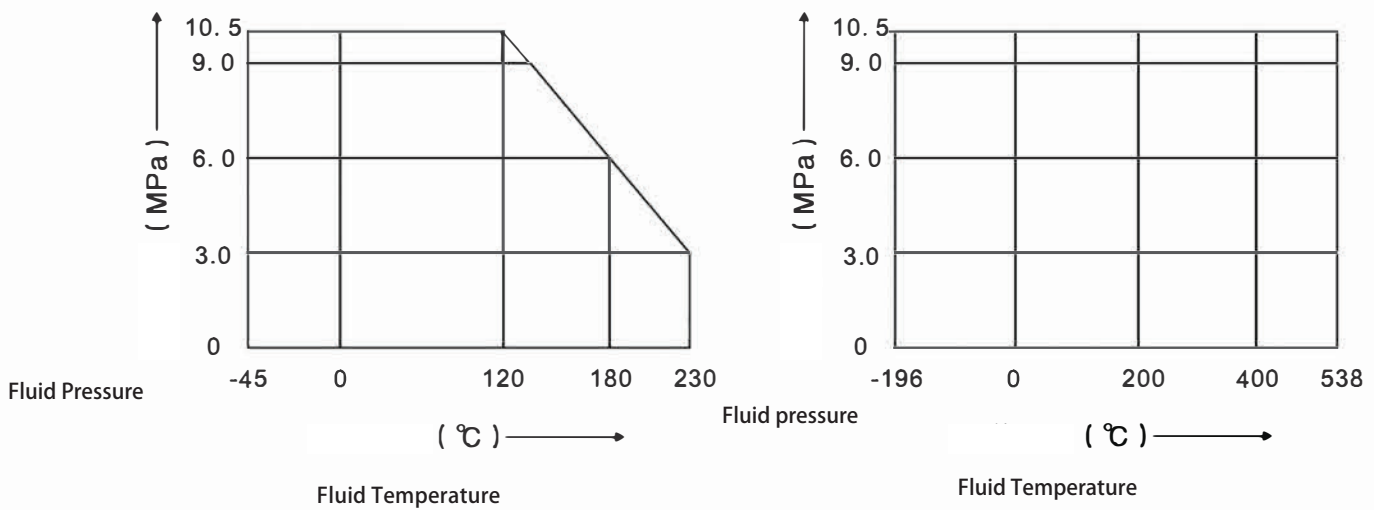
Inherent flow characteristic: approximately linear
 Inherent adjustable ratio R 100:1



RATED FLOW CV

Nominal Size	Nominal Size	Rated CV	Rated CV
DN	inch	Metal Seated	Soft Seated
50	2	50	50
65	2-1/2	100	85
80	3	150	120
100	4	240	195
125	5	320	290
150	6	500	480
200	8	800	800
250	10	1250	1150
300	12	1800	1550

Diagram of working temperature and pressure range of packing



Standard Material Combination

Material of Body	WCB	CF8	CF8M
Disc Material	CF8,CF8/HCr,CF8/STL,CF8M,CF8M/HCr, CF8M/STL		CF8M,CF8M/HCr,CF8M/STL
Ring Material	SS304,SS316		Ss316
Seat Material and Surface Treatment	Metal Seated	SS304/STL,SS316/STL	
	Soft Seated	SS304/PTFE,SS316/PTFE	
Packing Material	PTFE,Graphite		PTFE,Graphite
Stem Material and Surface Treatment	2Cr13,SS304 SS316, 17-4PH		SS316
Bearing Material and Surface Treatment	SS316/Nitriding		

Note: The material number in the table above is ASTM standard, which can be used equally with other standard materials. The temperature and pressure of all kinds of materials are not allowed to exceed the rated value specified in ASTM 816,34. If you need any materials not listed in the table, please contact the Sales Department of the company.

Allowable Working Pressure of Body Material at Different Temperatures

WCB (GB/T12229,ASTM A216)									
PN/CL	Standard	Normal Temperature	Temperature/°C						
			100	150	200	250	300	350	400
Allowable maximum working pressure/MPa									
PN10	GB/T9113	1.00	0.92	0.88	0.83	0.76	0.69	0.64	0.59
PN16	GB/T9113	1.60	1.48	1.40	1.33	1.21	1.10	1.02	0.95
CL150	ASTM B16.5	1.92	1.77	1.58	1.38	1.21	1.02	0.84	0.65
PN25	GB/T9113	2.50	2.32	2.20	2.08	1.90	1.72	1.60	1.48

Allowable Working Pressure of Body Material at Different Temperatures

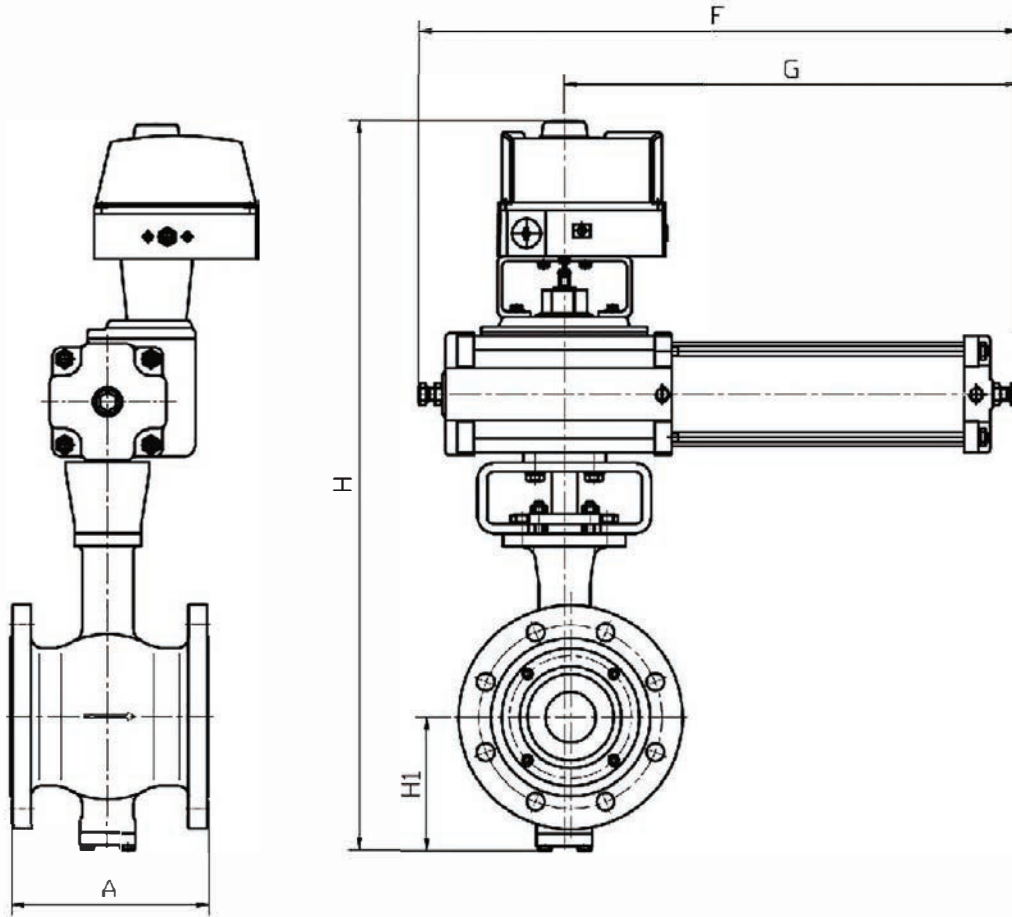
CF8 (GB/T12230,ASTM A351)									
PN/CL	Standard	Normal Temperature	Temperature/°C						
			100	150	200	250	300	350	400
Allowable maximum working pressure/MPa									
PN10	GB/T9113	1.00	0.90	0.81	0.74	0.69	0.64	0.61	0.59
PN16	GB/T9113	1.60	1.45	1.31	1.19	1.10	1.02	0.98	0.95
CL150	ASTM B16.5	1.83	1.57	1.42	1.32	1.21	1.02	0.84	0.65
PN25	GB/T9113	2.50	2.27	2.04	1.86	1.72	1.60	1.53	1.48

Allowable Working Pressure of Body Material at Different Temperatures

CF8M (GB/T12230,ASTM A351)									
PN/CL	Standard	Normal Temperature	Temperature/°C						
			100	150	200	250	300	350	400
Allowable maximum working pressure/MPa									
PN10	GB/T9113	1.00	1.00	0.90	0.84	0.79	0.74	0.71	0.68
PN16	GB/T9113	1.60	1.60	1.45	1.34	1.27	1.18	1.14	1.09
CL150	ASTM B16.5	1.84	1.62	1.48	1.37	1.21	1.02	0.84	0.65
PN25	GB/T9113	2.50	2.50	2.27	2.10	1.98	1.85	1.78	1.71

Note:1、The lowest working temperature of carbon steel and stainless steel is -29°C and -196°C respectively. The data of working pressure are gradually reduced. Valve pressure is measured when the valve working.

2、The working pressure value of the intermediate temperature can be calculated.

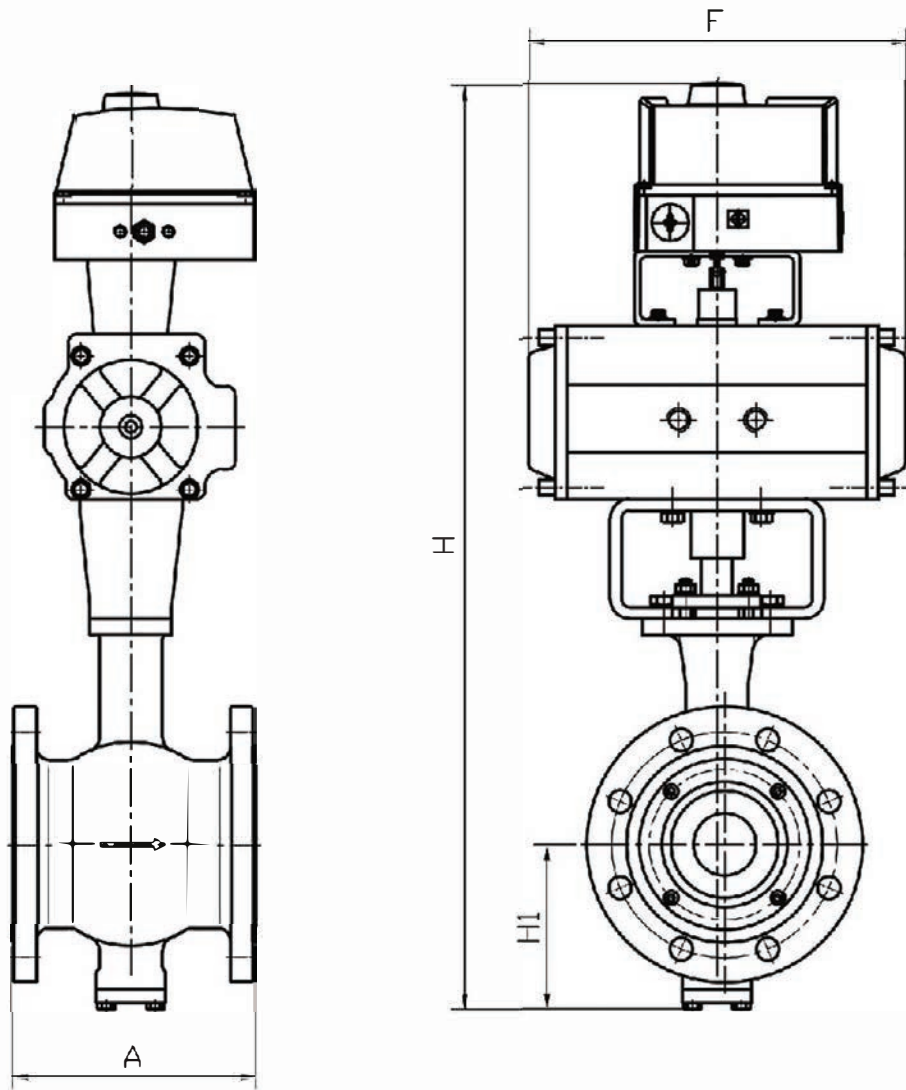


Dimension Diagram of Pneumatic Eccentric Control Valve

DN	A	H1	H	G	F	DN	A	H1	H	G	F
50	124	90	585	300	422	50	124	90	585	550	720
65	145	105	600	315	440	65	145	105	600	550	720
80	165	118	655	328	474	80	165	118	655	620	770
100	194	133	700	328	474	100	194	133	700	640	810
125	213	150	750	380	560	125	213	150	750	660	830
150	229	170	786	396	570	150	229	170	786	680	870
200	243	200	900	422	600	200	243	200	700	875	1170
250	297	242	1070	500	700	250	297	242	1070	970	1260
300	338	275	1160	500	700	300	338	275	1160	1200	1600

Note: Above size is pressure PN16 with double acting and ZSQ actuators

Note: Above size is pressure PN16 with single acting and ZSQ actuators

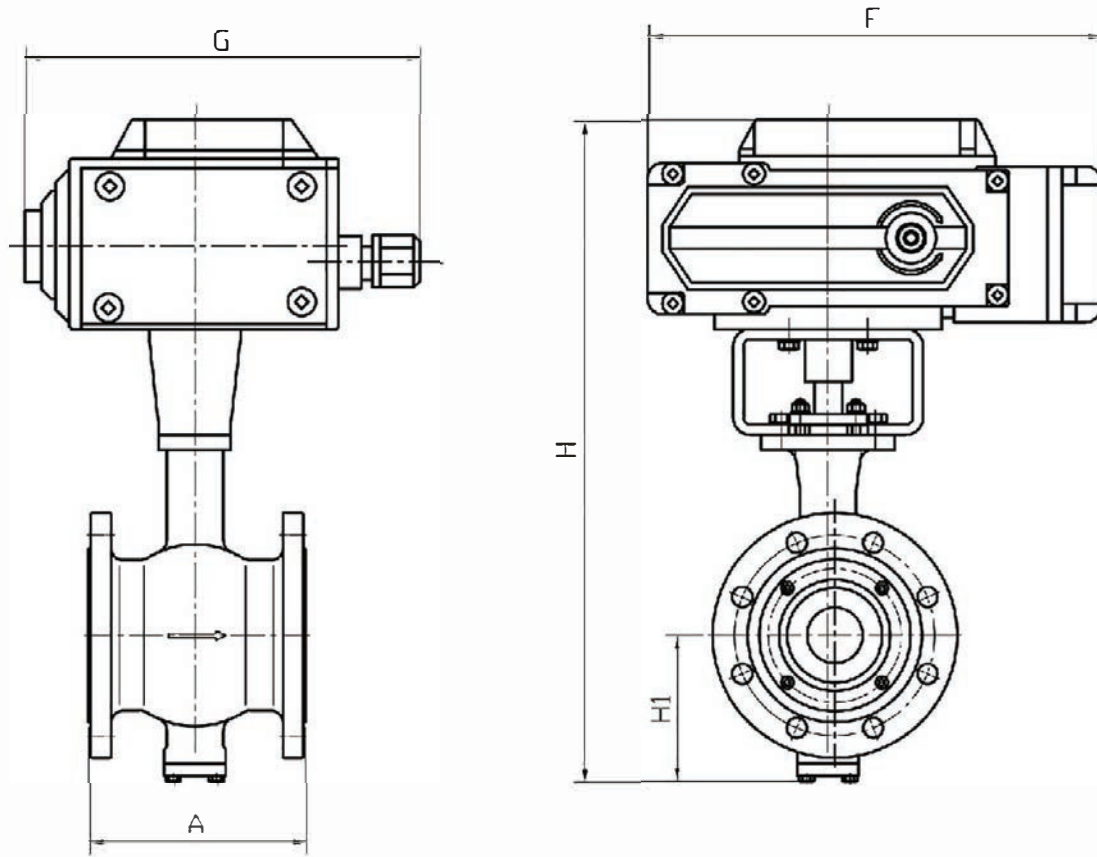


Dimension Diagram of Pneumatic Eccentric Control Valve

DN	A	H1	H	F	DN	A	H1	H	F
50	124	90	620	229	50	124	90	646	266
65	145	105	655	264	65	145	105	692	337
80	165	118	705	266	80	165	118	745	346
100	194	133	772	337	100	194	133	815	412
125	213	150	820	346	125	213	150	876	488
150	229	170	910	412	150	229	170	966	550
200	243	200	1028	488	200	243	200	1088	602
250	297	242	1130	550	250	297	242	1210	672
300	338	275	1255	602	300	338	275	1315	784

Note: Above size is pressure PN16 with double acting and small actuators

Note: Above size is pressure PN16 with single acting and small actuators



Dimension Diagram of Pneumatic Eccentric Control Valve

DN	A	H1	H	G	F
50	124	90	620	147	207
65	145	105	655	147	207
80	165	118	705	182	256
100	194	133	772	182	256
125	213	150	820	182	256
150	229	170	910	182	256
200	243	200	1028	240	380
250	297	242	1130	240	380
300	338	275	1255	240	380

PS: Above size is PN16 with electric actuators



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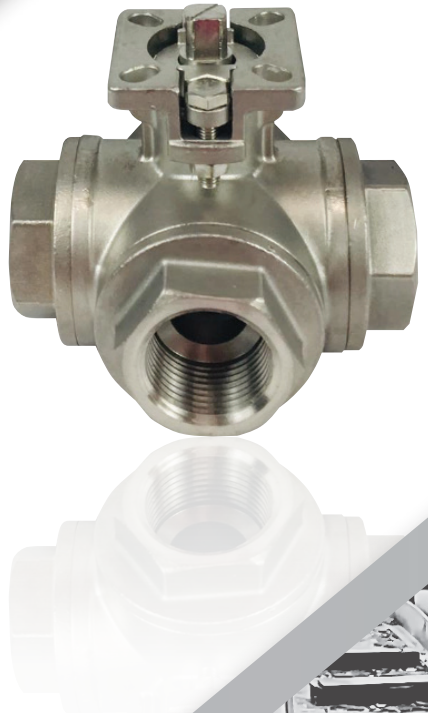
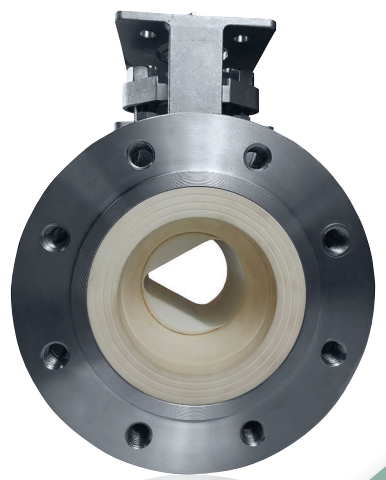
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