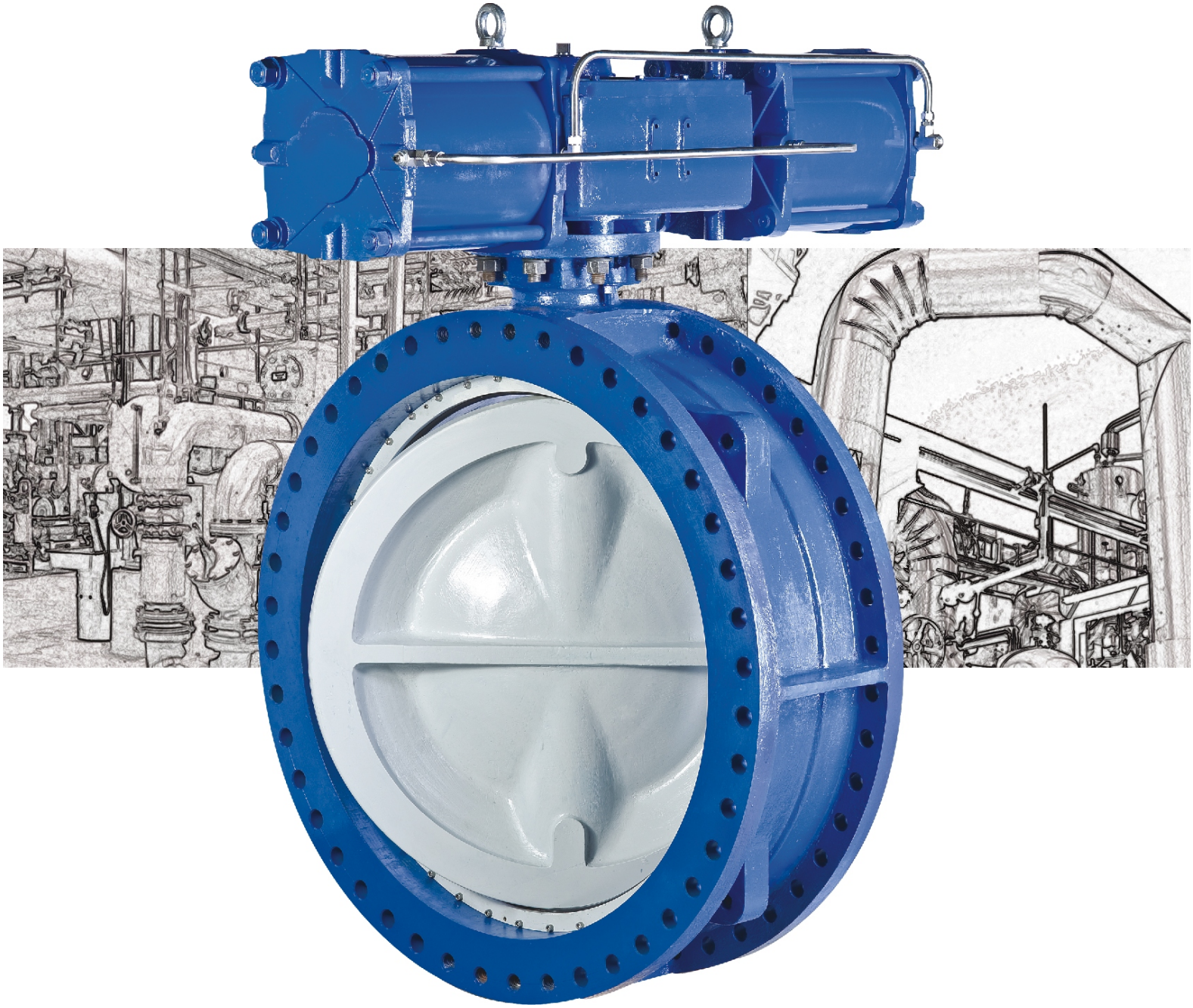
DelVal® SERIES 55

Double Eccentric Large Size Butterfly Valves
Double Flanged

Sizes 26"- 80"/ DN 650 - DN 2000

DelTech



Leading the Industry with Innovation by Design

Jamieson Equipment Company
www.jamiesonequipment.com
toll free 800.875.0280

DelTech Controls is pleased to offer top-of-the-line products in pipeline flow control. The DelVal Series 55 has been developed with extensive application, design and manufacturing expertise. These products are produced by employing modern manufacturing practices under a robust quality assurance system. These practices ensure consistent product quality and dependable performance. The DelVal Series 55 has been designed to include state-of-the-art features that are described in this bulletin.

Features

- **Design & Construction** - Robust design according to AWWA C504, API 609, EN 593, IS 13095 standard.

- **Double Eccentric Disc Design** - The offset disc produces a cam-like action, pulling the disc from the seat. This action reduces seat wear and eliminates seat deformation when the disc is in the open position. The disc does not contact the seat when the valve is in the open condition, therefore seat service life is extended and torques are reduced.

- **Body** - One piece cast double flanged body provides dead-end service with downstream piping to be removed while pressure is maintained on the upstream. Available in various flange standards (ASME /AWWA /MSS-SP /DIN /JIS /BS /IS)

- **Body in Seat Design** - Heavy duty 'T' cross sectional seat mechanically retained by seat retainer ring in to the body allows seat adjustment and repair without removing the valve or dewatering the pipe line.

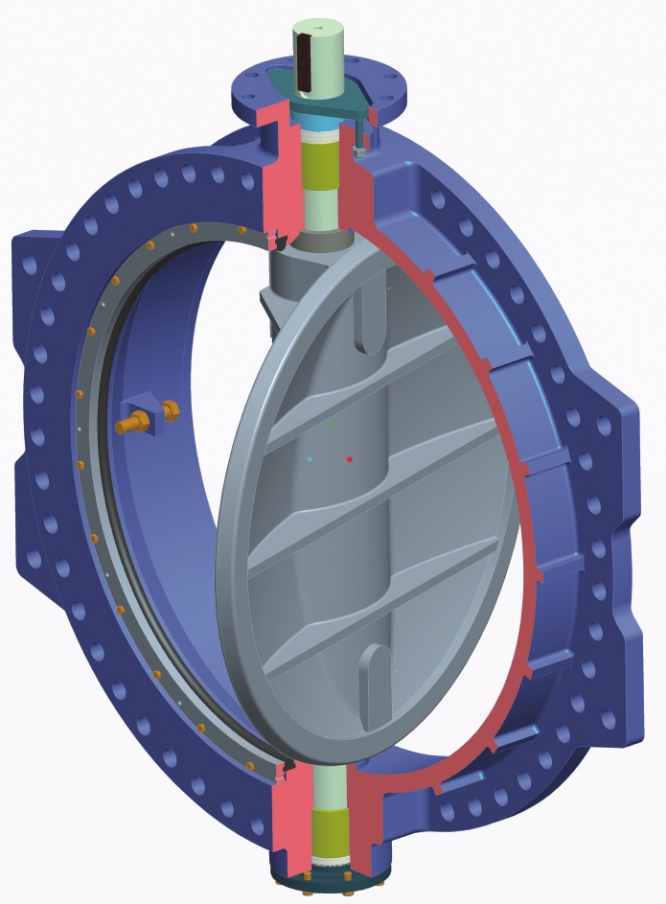
- **Seat** - Easily adjusted and replaced in the field. The 360° resilient seat is uninterrupted for positive sealing.

- **Shaft** - High strength stub shaft has minimum 1 ½ diameter penetration in to the disc- hubs with closed fit.

- **Bearing** - Self-lubricating, sleeve type bearing in both the trunnions of the body. Bearings support the shaft and provide minimum friction during shaft rotation.

- **Disc** - Disc is designed for high strength with concave surface for greater flow through valve opening and less pressure drop.

- **Rubber Lining** - Body internal diameters and disc can be supplied with 3mm rubber lining for sea water application and various corrosive applications.

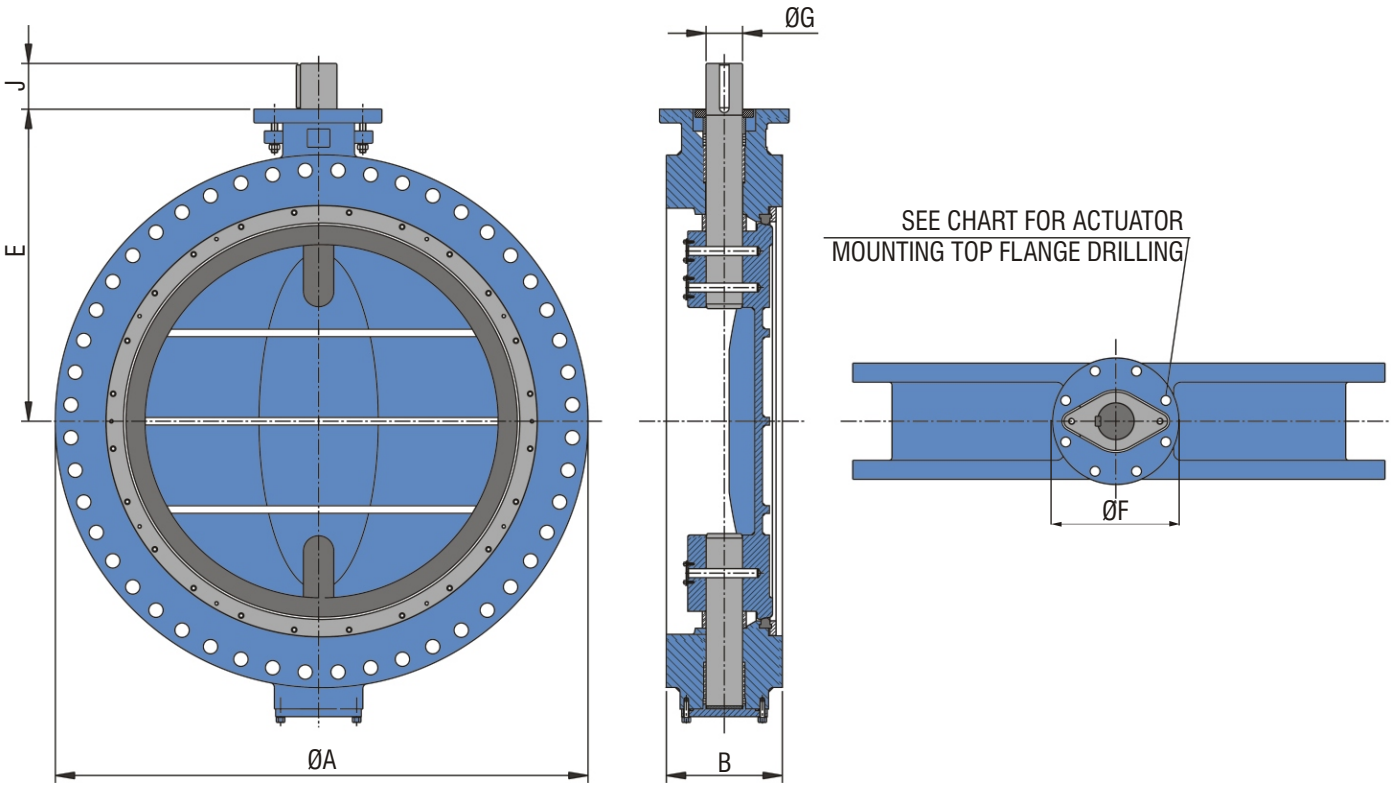


- **Disc Shaft Connection** - An inherently rigid design, the upper and lower shafts are secured to the disc by pins, totally enclosed within the disc.

- **Thrust Bearing** - Axial bottom shaft thrust bearing carrying the disc weight when valve is installed with shaft in vertical position and ensuring accurate centering of the disc assembly.

- **Stem Seal** - Self adjusted graphite rings provide 100% leakage prevention from stem. Packing is easily replaced without removal of the valve from the line.

Engineering



Dimensions (mm)

Valve Size			26"	28"	30"	32"	36"	40"	44"	48"	52"	56"	60"	72"	80"
			650	700	750	800	900	1000	1100	1200	1300	1400	1500	1800	2000
ØA			870	927	985	1060	1170	1290	1404	1512	1626	1750	1855	2115	2325
* B			305	305	305	305	305	305	381	381	381	381	381	457	457
E			560	585	640	670	705	810	845	915	975	1025	1090	1275	1350
STEM CONNECTION	PN6	ØG	63.5	63.5	63.5	63.5	76.2	76.2	88.9	88.9	101.6	120	120	140	140
		J	102	102	102	102	102	102	102	102	134	150	150	180	180
		Key	15.88x15.88	15.88x15.88	15.88x15.88	15.88x15.88	19.05x19.05	19.05x19.05	22.23x15.88	22.23x15.88	25.4x19.05	32x18	32x18	36x24	36x24
	PN10	ØG	63.5	63.5	76.2	76.2	88.9	101.6	120	120	120	140	140	175	175
		J	102	102	102	102	102	134	150	150	150	180	180	200	200
		Key	15.88x15.88	15.88x15.88	19.05x19.05	19.05x19.05	22.23x15.88	25.4x19.05	32x18	32x18	32x18	36x24	36x24	45x25	45x25
	PN16 & #150	ØG	88.9	88.9	88.9	101.6	101.6	120	120	120	-	-	-	-	
		J	102	102	102	134	134	150	150	150	-	-	-	-	
		Key	22.23x15.88	22.23x15.88	22.23x15.88	25.4x19.05	25.4x19.05	32 x 18	32 x 18	32 x 18	-	-	-	-	
TOP FLANGE DRILLING		ØF	300	300	350	350	350	415	415	415	475	475	475	560	560
		BC	254	254	298	298	298	356	356	356	406	406	406	483	483
		No. of holes	8	8	8	8	8	8	8	8	8	8	8	12	12
		HOLE Ø	18	18	21	21	21	33	33	33	39	39	39	39	39
Approx Weight		Kg.	575	660	750	850	1080	1340	1710	2038	2400	3125	3425	4465	5765

* Face to Face dimension "B", generally conforming to AWWA C504-06 Double Flange (Short Body)/ASME 16.10 / alternative face to face dim. as per API 609 Short Pattern on request.

All bolt holes adjacent to shaft 1 1/8" and larger have an 8-UN thread series as per API 609 / MSS SP 68.

Torque (Nm)

Differential Pressure	Valve Size												
	26"/650	28"/700	30"/750	32"/800	36"/900	40"/1000	44"/1100	48"/1200	52"/1300	56"/1400	60"/1500	72"/1800	80/2000
PN 6	1950	2150	2912	3762	4762	7601	8280	11900	15997	18575	24805	57200	74850
PN 10	2210	2490	3429	4529	5659	9100	10320	14770	18820	23005	30204	71500	93560
PN 16	2610	2830	4256	5456	7094	11499	13040	18806	--	--	--	--	--
Class 150	3170	3360	4825	6325	8081	13152	14910	21420	--	--	--	--	--

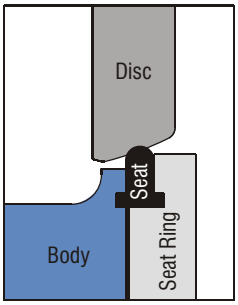
Note :- Above torque values are indicative and defined for flow in prefered direction i.e. Seat retainer upstream.
Torque valuse for flow in non preferred direction i.e. seat retainer downstream, multiply the above values by 1.4

Cv Values - Valve Sizing Coefficient

Disc Position (degrees)	Valve Size												
	26"/650	28"/700	30"/750	23"/800	36"/900	40"/1000	44"/1100	48"/1200	52"/1300	56"/1400	60"/1500	72"/1800	80"/2000
10	1103	1328	1530	1778	2497	3330	4230	4873	5625	6525	7155	11250	15750
20	2328	2803	3230	3753	5272	7030	8930	10288	11875	13775	15105	23750	33250
30	3430	4130	4760	5530	7770	10360	13160	15162	17500	20300	22260	35000	49000
40	5145	6195	7140	8295	11655	15540	19740	22743	26250	30450	33390	52500	73500
50	8575	10325	11910	13825	19425	25900	32900	37903	43750	50750	55650	87500	122500
60	13965	16815	19380	22515	31635	42180	53580	61731	71250	82650	90630	142500	199500
70	18375	22125	25500	29625	41625	55500	70500	81225	93750	108750	119250	187500	262500
80	21805	26255	30260	35155	49395	65850	83660	96387	111250	129050	141510	222500	311500
90	23520	28320	32640	37920	53280	71040	90240	103968	120000	139200	152640	240000	336000

Rated Cv = The volume of water in USgpm that will pass through a given valve at a pressure drop of 1 Psi.

Seat Design



The heavy 'T' section seal ring is designed to eliminate the potential extrusion due to high shut-off ΔP or high velocity.

Proof of design test

DelVal valves have successfully carried out proof of design test as per AWWA C-504.

Application

Suitable for variety of fluids and gaseous media in water works, power plants, sewage plants, process, chemicals and petrochemical industries.

Pressure Rating :

For bi-directional bubble tight shut off

Size	Pressure Rating
26" - 48"(DN650-DN1200)	PN16, Class 150
26" - 80"(DN650-DN2000)	PN6, PN10

Seat Temperature Range :

Seat Type	Temperature Range	
	Min	Max
EPDM	-13°F (-25°C)	302°F (150°C)
Buna - N (Nitrile / NBR)	-13°F (-25°C)	212°F (100°C)
Silicone	-58°F (-50°C)	356°F (180°C)
Viton	-23°F (-5°C)	392°F (200°C)

Codes and Standards

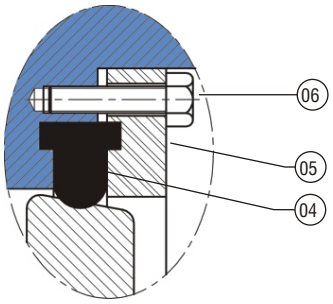
General design and manufacturing : AWWA C504 / API 609 Category B / EN 593 / IS 13095
Inspection and Testing : AWWA C504 / API 598 / EN 12266-1 / AISI/FCI 70-2
Pressure temperature rating : ASME B 16.34 / ASME B16.1 / BS-EN 12516 - 1
ISO Top : ISO 5211
Face To Face : AWWA C504-06 Double Flange (Short Body) / ASME 16.10 / API 609 (Optional)

Material of Construction

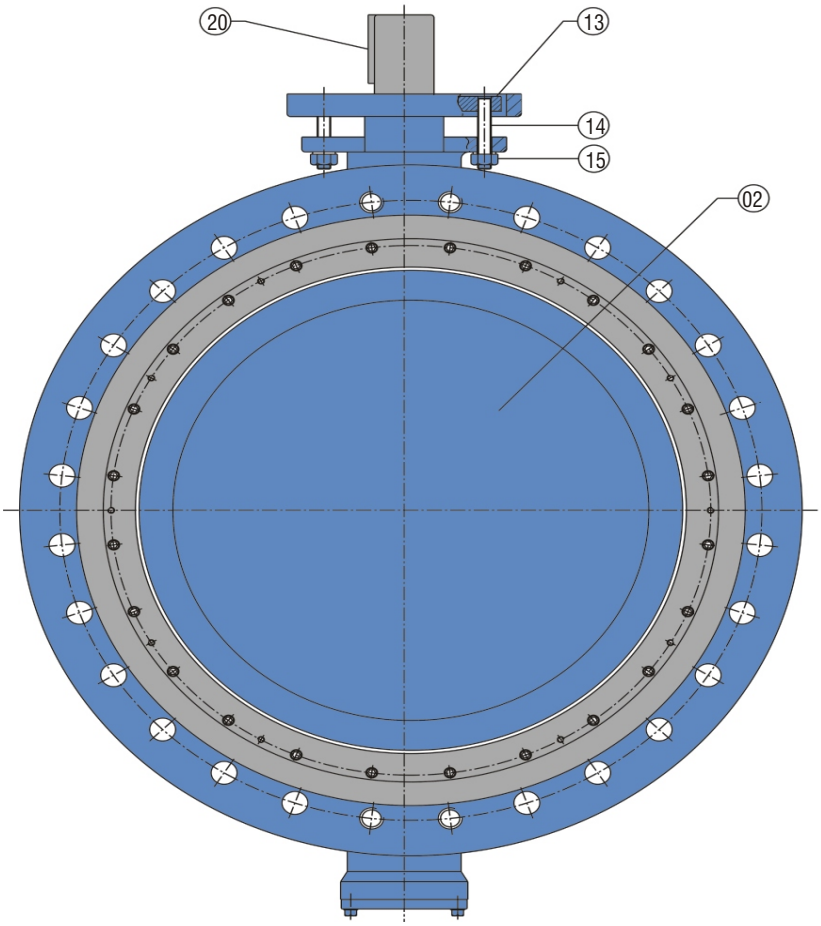
- **BODY -** C.I. ASTM A126 Gr-B. / IS 210 FG - 260
  D.I. ASTM A536 65-45-12, ASTM A 216 WCB.
  Carbon Steel Fabricated
- **DISC -** Stainless Steel, ASTM A 351 CF8M / CF8
  D.I. ASTM A536 65-45-12 Nylon Coated / Carbon Steel Fabricated
- **STEM -** ASTM A479 SS410 / ASTM A 564 17-4-PH TYPE 630
- **SEAT -** EPDM/BUNA/SILICONE/VITON
- **SEAT RING -** SS 304
- **STEM PACKING -** Flexible Graphite
- **BEARING -** PH. Bronze / Steel Backup PTFE

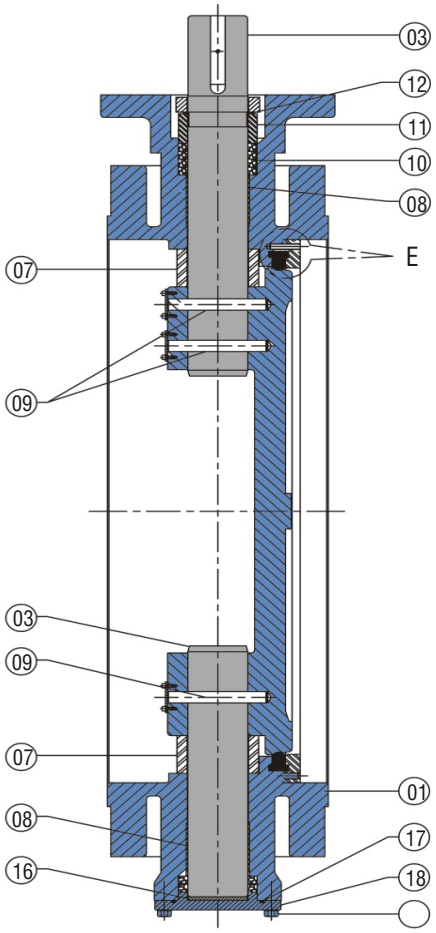
Other materials are available, please consult factory for specific application.

Sr. No.	DESCRIPTION
01	BODY
02	DISC
03	STEM
04	SEAT
05	SEAT RETAINER
06	HEX. BOLT
07	DISC SPACER
08	BEARING
09	DISC PIN
10	STEM PACKING
11	PACKING GLAND
12	STEM RETAINER CIRCLIP
13	GLAND FLANGE
14	STUD
15	HEX NUT
16	THRUST BEARING
17	BOTTOM GASKET
18	BOTTOM FLANGE
19	HEX BOLT
20	KEY



DETAIL VIEW AT 'E'





Operators

All valves can be direct mounted with pneumatic actuators or electric actuators and accessories for complete automation options such as fail open/close and positioner controlled. Valves can be mounted with manual overrides.

All valves can be direct mounted with gear operators for manual operation. Gear operators can also be attached with chain-wheel operators for opening or closing valves located on pipelines at high elevations.

How to order DelVal valves

Series	Size	Trim / Other Variables / Special						
☐ ☐	☐ ☐ ☐	☐	☐	☐	☐	☐	☐	☐
Valve Description	**Valve Description**	**Body**	**Disc**	**Stem**	**Seat**	**Rating**	**Operator**	**Special**
55 : Double Flanged	260 : 26" 520 : 52" 280 : 28" 560 : 56" 300 : 30" 600 : 60" 320 : 32" 720 : 72" 360 : 36" 800 : 80" 400 : 40" 440 : 44" 480 : 48"	1- C.I. 2- D.I. 3- WCB	1-D.I. 4- CF8M(SS316) 8- CF8(SS304)	1- SS410 6- 17-4-PH	E-EPDM B-BUNA-N S-SILICONE V-VITON	1 - PN6 2 - PN10 4 - PN16 5 - Class 150	B - BARE G - GEAR	0-NO SPECIAL REQUIREMENT S - SPECIAL REQUIREMENT AS SPECIFIED BY CUSTOMER

FOR Example :- To order 800/32" , Flange body valve, Body-C.I., Disc- CF8M, Stem-SS410, Seat-EPDM, Rating-PN10, Gear operated, with no special requirements.