DelVal® SERIES 42/43

High Performance Lined Butterfly Valves

Sizes 2"-24" / DN 50 - DN 600

Wafer & Lug Design

DelVal®
Flow Controls

Leading the Industry with Innovation by Design

DelVal Flow Controls is pleased to offer top-of-the-line products in pipeline flow control. The DelVal® Series 42 (wafer body) and Series 43 (lug body) High Performance Lined Butterfly Valves have 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 42/43 High Performance Lined Butterfly Valves have been designed to include state-of-the-art features that are described in this bulletin.

Features

1. Stem connections available in standard DelVal sizes.

2. Top plate drilled to fit ISO 5211 bolt circle dimensions. All handles, gear operators and DelTorq pneumatic actuators are designed to mount directly to DelVal® Valves.

3. Heavy-duty acetal bushing absorbs the forces acting on the stem/disc assembly due to line pressure.

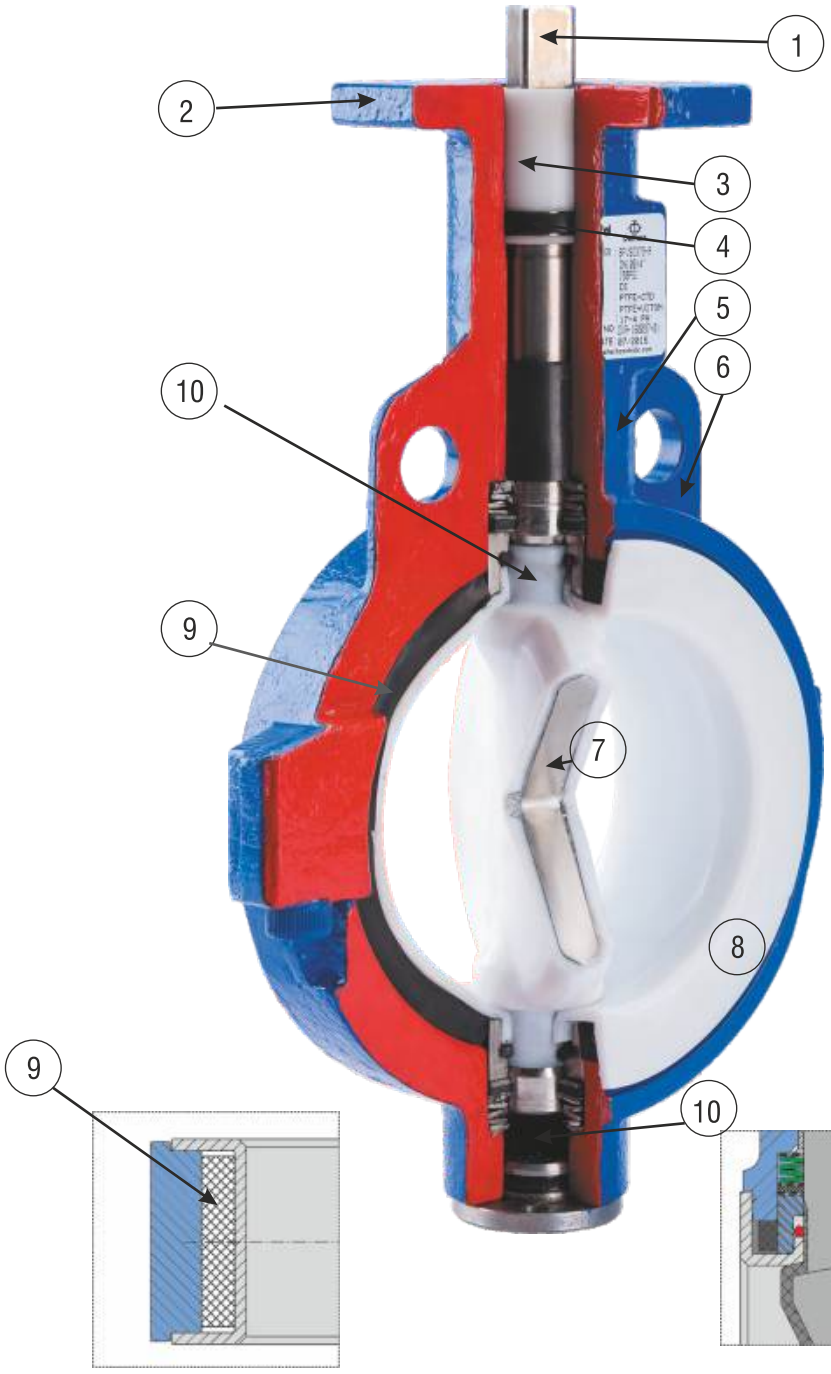
4. Bi-directional "U" cup stem seal.

5. Heavy-duty, two-piece body with extended neck for 2" piping insulation. Standard coating is two coats of hard, zinc-rich epoxy for excellent corrosion resistance.

6. Two flange locating holes for sizes up to 12" and four flange locating holes from size 14" to 24"on wafer type valves for easy alignment of valve during installation. They meet ANSI#125/150 or other world drilling standards.

7. One-piece disc/stem in high strength design. Available in options such as SS316 stainless steel (thin profile, with hand polished edge and hubs) and PTFE/PFA (minimum 3 mm thick) encapsulated one piece disc-stem.

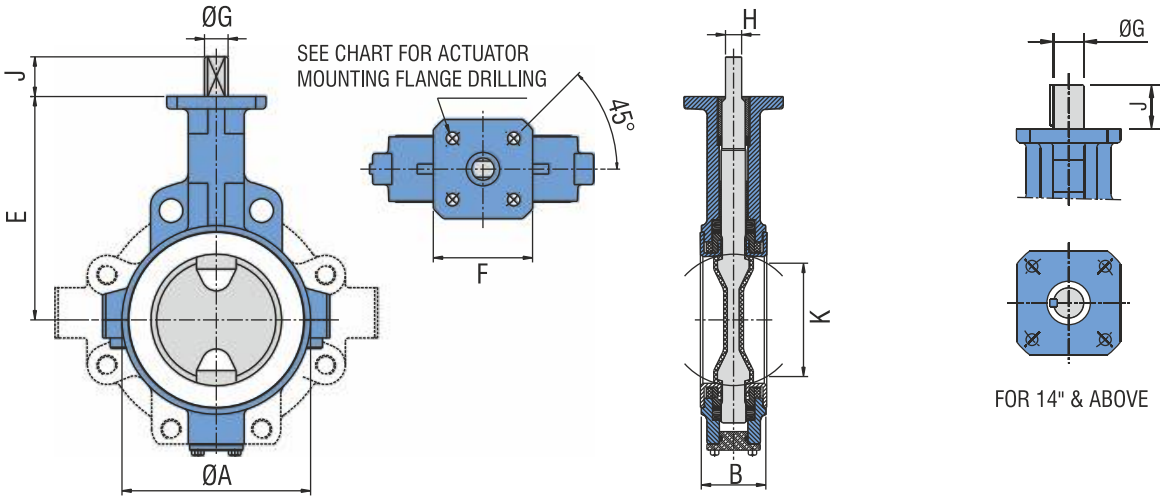
8. Precision machined PTFE / PFA (minimum 3 mm thick) seat provides maximum resistance to the permeation of the application media. The wide sealing face guarantees a leak free face sealing.



9. A resilient seat energizer extends completely around the seat, including the disc hub area. This provides uniform pressure onto the circumference of the disc ensuring a bubble tight valve under all operating conditions. The energizer material is Silicone, Viton (FKM) or EPDM.

10. The live loaded stem seal system is uniformly loaded by a set of Belleville spring washers on the upper and lower stem. This system maintains an active sealing force on the disc hub which remains tight under the most extreme cyclic conditions.

Engineering



Dimensions (inch)

Valve Size		ØA	✱B	E	Sq'F'	TOP FLANGE DRILLING			ØG	H	J	Key Size	K	Lug Bolting Data			Weights In Lbs	
Inches	DN					BC	No. of Holes	Hole Dia.						BC	No. of Holes	Threads UNC-2B	Wafer (Series 42)	Lug (Series 43)
2	50	3.58	1.69	5.51	3.15	2.76	4	0.39	0.55	0.43	1.25	-	1.32	4.75	4	5/8-11	7.72	9.04
2 1/2	65	4.17	1.81	5.98	3.15	2.76	4	0.39	0.55	0.39	1.25	-	2.05	5.50	4	5/8-11	7.72	10.36
3	80	4.80	1.81	6.30	3.15	2.76	4	0.39	0.55	0.39	1.25	-	2.70	6.00	4	5/8-11	8.38	11.00
4	100	5.98	2.06	7.09	3.15	2.76	4	0.39	0.75	0.51	1.25	-	3.61	7.50	8	5/8-11	12.34	19.80
5	125	6.93	2.19	7.56	4.93	2.76/4.01	4	0.39/0.47	0.87	0.63	1.25	-	4.62	8.50	8	3/4-10	18.08	28.66
6	150	8.07	2.19	8.07	4.93	2.76/4.01	4	0.39/0.47	0.87	0.63	1.25	-	5.50	9.50	8	3/4-10	21.16	35.86
8	200	10.39	2.38	9.49	4.72	4.01/4.92	4	0.47/0.55	0.94	0.75	1.25	-	7.39	11.75	8	3/4-10	46.73	65.69
10	250	12.40	2.69	10.75	4.72	4.01/4.92	4	0.47/0.55	1.18	0.87	2.00	-	9.31	14.25	12	7/8-9	54.67	84.48
12	300	14.57	3.06	12.24	4.72	4.92	4	0.55	1.38	0.94	2.00	-	11.12	17.00	12	7/8-9	78.47	127.60
14	350	16.34	3.06	13.62	4.72	4.92	4	0.55	1.38	-	2.00	0.39x0.39	12.92	18.75	12	1-8	87.96	122.80
16	400	18.58	4.00	14.76	4.72	4.92	4	0.55	1.38	-	2.00	0.39x0.39	14.80	21.25	16	1-8	130.51	184.31
18	450	20.67	4.48	15.98	6.70	6.50	4	0.83	1.97	-	2.50	0.39x0.47	16.59	22.75	16	1 1/8-7	194.45	239.42
20	500	22.83	5.00	17.24	6.70	6.50	4	0.83	1.97	-	2.50	0.39x0.47	18.61	25.00	20	1 1/8-7	236.78	306.88
24	600	27.24	6.06	19.49	Ø8.27	6.50	4	0.83	2.50	-	4.00	0.62x0.62	22.55	29.50	20	1 1/4-7	385.81	477.08

Dimensions (mm)

Valve Size		ØA	✱B	E	Sq 'F'	TOP FLANGE DRILLING			ØG	H	J	Key Size	K	Lug Bolting Data			Weights In Kg.	
Inches	DN					BC	No. of Holes	Hole Dia.						BC	No. of Holes	Threads UNC-2B	Wafer (Series 42)	Lug (Series 43)
2	50	91	43	140	80	70	4	10	14	10	32	-	33.5	120.7	4	5/8-11	3.5	4.1
2.5	65	106	46	152	80	70	4	10	14	10	32	-	52.1	139.7	4	5/8-11	3.5	4.7
3	80	122	46	160	80	70	4	10	14	10	32	-	68.5	152.4	4	5/8-11	3.8	5.0
4	100	152	52	180	80	70	4	10	19	13	32	-	91.7	190.5	8	5/8-11	5.6	9.0
5	125	176	56	192	100	70/102	4	10/12	22	16	32	-	117.3	215.9	8	3/4-10	8.2	13
6	150	205	56	205	100	70/102	4	10/12	22	16	32	-	139.7	241.3	8	3/4-10	9.6	16.3
8	200	264	60	241	120	102/125	4	12/14	24	19	32	-	187.6	298.5	8	3/4-10	21.2	29.8
10	250	315	68	273	120	102/125	4	12/14	30	22	51	-	236.4	362.0	12	7/8-9	24.8	38.4
12	300	370	78	311	120	125	4	14	35	24	51	-	282.4	431.8	12	7/8-9	35.6	58.0
14	350	415	78	346	120	125	4	14	35	-	51	10x10	328.3	476.2	12	1-8	39.90	55.70
16	400	472	102	375	120	125	4	14	35	-	51	10x10	375.8	539.7	16	1-8	59.20	83.60
18	450	525	114	406	170	165	4	21	50	-	64	10x12	421.4	577.8	16	1 1/8-7	88.20	108.60
20	500	580	127	438	170	165	4	21	50	-	64	10x12	472.6	635.0	20	1 1/8-7	107.40	139.20
24	600	692	154	495	Ø210	165	4	21	63.5	-	102	15.88 x 15.88	572.7	749.3	20	1 1/4-7	175.00	216.40

* Face to Face dimension "B", conforming to API 609 Category A/BS EN 558-1 Series 20/ISO 5752 Series 20 / MSS SP 67 / ASTME B 16.10

TORQUE (Lb-Inch)

Valve Size		2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
Full Rated Pressure Valve △P, PSI	150	212	257	416	540	708	965	1779	2850	4292	5620	7726	10886	13585	21647

TORQUE (Nm)

Valve Size		2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
Full Rated Pressure Valve △P, Bar	10	24	29	47	61	80	109	201	322	485	635	873	1230	1535	2446

Torque values are based on standard values utilizing lined or unlined stainless steel disc / shaft.

Materials of Construction:

BODY :

- Ductile Iron ASTM A395 60-40-18
- Carbon Steel ASTM A 216 WCB
- SS316 Stainless steel ASTM A 351 CF8M

DISC / STEM :

Stainless Steel / Duplex Stainless
2"-12" (DN50-DN300)One Piece Investment Cast
14"-24" (DN350-DN600)Fabricated

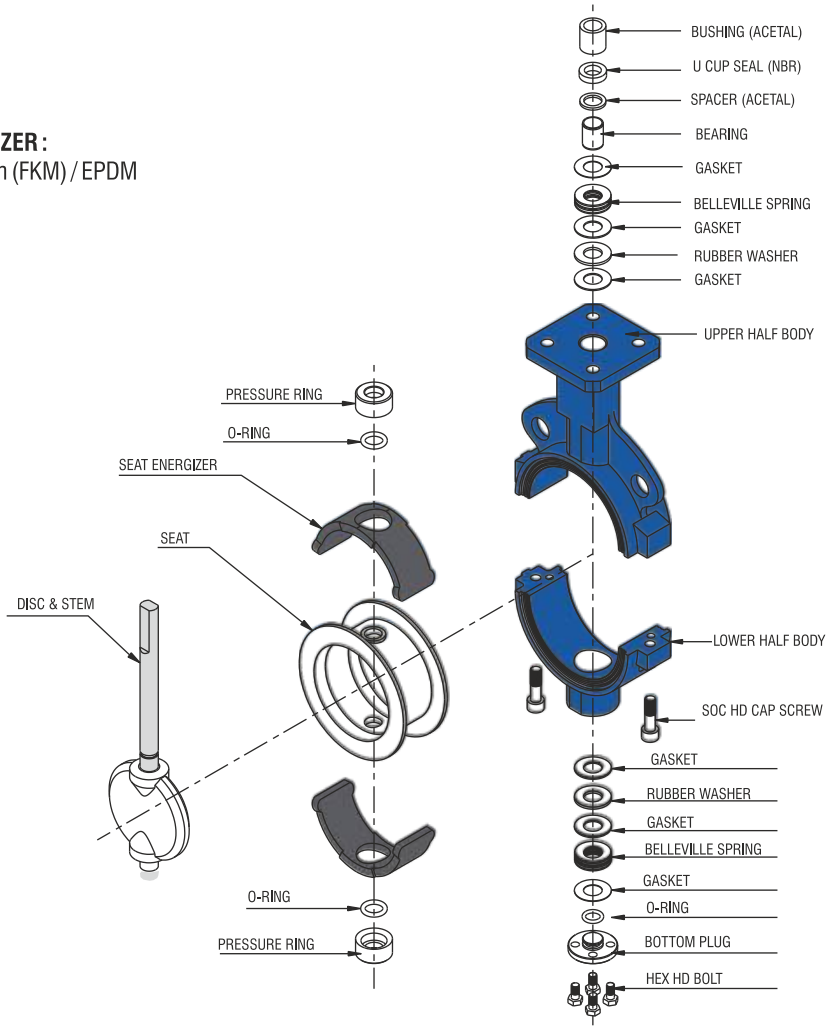
- PTFE / PFA
  2"-12"(DN50-DN300) with PTFE / PFA material molded over CB7CU-1(17-4-PH) One Piece Disc / Stem.
  14"-24"(DN350-DN600) with PTFE / PFA material molded over SS304 +17-4-PH One Piece Disc / Stem (Fabricated).
- Halar®
  2"-12"(DN50-DN300) Halar® coated over CB7CU-1(17-4-PH) One Piece Disc / Stem.
  14"-24"(DN350-DN600) Halar® coated over SS304 +17-4-PH One Piece Disc / Stem.

SEAT :

- PTFE / PFA

SEAT ENERGIZER :

- Silicone / Viton (FKM) / EPDM



Seat Temperature Range:

Seat	Energizer	Temperature Range	
		Min.	Max.
PTFE	Silicone	-58 °F (-50 °C)	392 °F (200 °C)
	Viton®/ FKM	0 °F (-18 °C)	392 °F (200 °C)
	EPDM	-20 °F (-29 °C)	302 °F (150 °C)
PFA	Silicone	-58 °F (-50 °C)	392 °F (200 °C)
	Viton®/ FKM	0 °F (-18 °C)	392 °F (200 °C)
	EPDM	-20 °F (-29 °C)	302 °F (150 °C)

Codes and Standards:

General Design and Manufacturing : API 609 / BS EN 593
Inspection & Testing : API 598 / BS EN 12266-1

Pressure Rating:

Valve is bi-directional and max pressure is 150 psi / PN10.
Lug Valve can be installed at the end service for the same rating.

Valves up to size 6" can be supplied with lever handles for manual operation. Optional accessories for hand-lever operation can be provided for various flow control requirements. Pad locking can also be provided for preventing unauthorized operation.

Valves up to size 24" 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.

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

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