SERIES 50 / 52

Resilient Seated Butterfly Valves

Wafer, Lug Body

DelVal®
Flow Controls

W.T. Maye, Inc. (WTMI)
1-877-705-9864
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www.wtmi-usa.com

3-YEAR WARRANTY
3
ON DELVAL PRODUCTS

STANDARD FEATURES

Quality & Performance

DelVal Flow Controls provides a wide range of quality products with the reliability you can count on. All Series 50/52 valves are manufactured in ISO 9001 certified facilities with a robust quality management system and according to BS EN 593 standard.

Design Construction and Features

1. Stem Connection
Stem connection available in standard DelVal sizes or optional sizes to match secondary top plate drilling.

2. Top Plate Drilling
Top plate double drilled to fit DIN EN ISO 5211 dimensions and secondary bolt circle dimensions. All handles, gear operators and pneumatic DelTorq actuators are designed to mount directly to DelVal Valves.

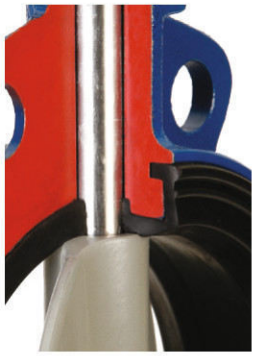
3. Heavy Duty Body
Heavy duty one-piece body has extended neck for 2" piping insulation. Standard coating is two layers of epoxy polyester powder coating with semi-gloss finish for excellent corrosion resistance.

4. Locating Lug
Two flange locating holes for sizes up to 12" and four flange locating holes from size 14" to 24" ensure easy alignment of valve during installation. They meet ASME CL125/150 or other international drilling standards.

5. Disc
High strength disc with polished edge and hubs. Nylon PA 12 coated disc option ensures excellent corrosion resistance to several chemical media. The hard, non-porous sintered polymer has very low hygroscopicity and is suitable for use in drinking water and non-alcoholic food safe applications.

6. Seat
Heavy duty square-grooved seat design has molded O-ring seals to serve as flange gaskets. EPDM/NBR (BUNA-N) seats are peroxide cured to yield superior thermal and chemical resistance.

6a
Center-LOK® Seat Design



6a. Seat Design
Unique Center-LOK® seat design virtually eliminates any seat movement during the seating and un-seating of the disc, and isolates the body and stem from process media.

7. Disc - Seat Sealing
Precision machined radius on the upper and lower disc hubs presses against upper and lower seat sealing faces to achieve primary sealing between disc and seat.

8. Secondary Seal
Double O-rings are molded in both upper and lower journals, providing a superior secondary seal.

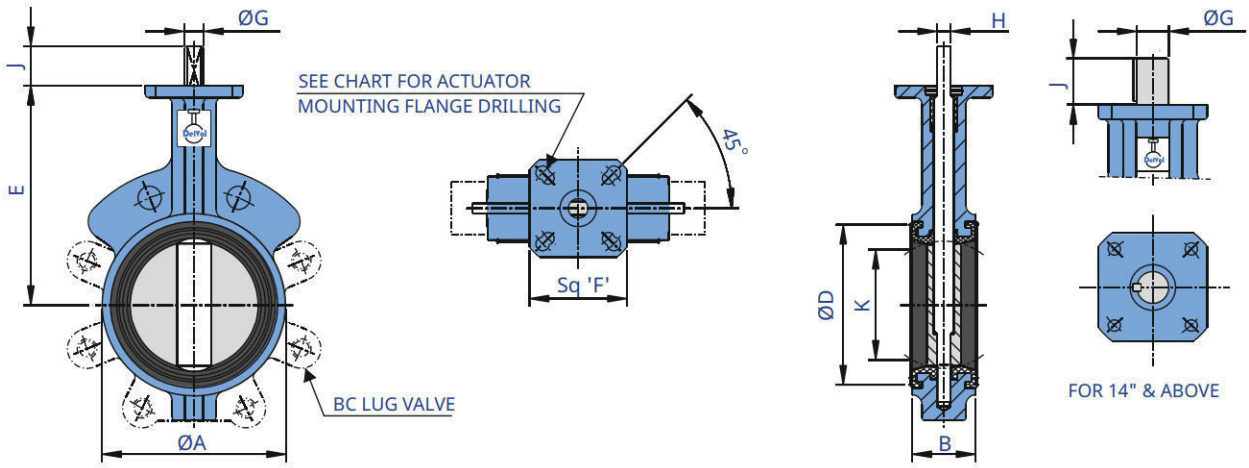
9. Stem
One piece stem with close tolerance double D drive eliminates the need for disc screws or taper pins.

10. Stem Retention System
Unique stem retention system provides blow-out proof stem and easy assembly and disassembly of valve.

11. Bushing
Heavy duty bushing absorbs the forces acting on the disc-stem assembly due to line pressure.

12. Stem Seal
Bi-directional 'U' cup stem seal.

DIMENSIONS AND WEIGHTS (WAFER/LUG)



Dimensions (mm)

Valve Size		ØA	*B	ØD	E	Sq.'F'	Top Flange Drilling			ØG	H	J	Key Size	K	Lug Bolting Data			App. Weight (kg)	
Inch	DN						PCD	No. of Holes	Hole Dia.						PCD	No. of Holes	Threads UNC- 2B	Wafer (Series 50)	Lug (Series 52)
2	50	91	43	72	140	80	70/82.5	4	10/11	14.0	10	32	---	33.5	120.70	4	5/8-11	2.30	3.08
2.5	65	105	46	88	152	80	70/82.5	4	10/11	14.0	10	32	---	52.1	139.70	4	5/8-11	2.63	3.59
3	80	120	46	104	160	80	70/82.5	4	10/11	14.0	10	32	---	68.5	152.40	4	5/8-11	3.10	4.05
4	100	150	52	130	180	80	70/82.5	4	10/11	16.0	11	32	---	91.7	190.50	8	5/8-11	4.93	7.42
5	125	175	56	158	192	80	70/82.5	4	10/11	19.0	13	32	---	117.3	215.90	8	3/4-10	6.31	9.78
6	150	205	56	185	205	80	70/82.5	4	10/11	19.0	13	32	---	139.7	241.30	8	3/4-10	7.40	11.50
8	200	259	60	238	241	120	70/102/125/127	4	10/11/14/14.3	22.0	16	32	---	187.6	298.50	8	3/4-10	12.70	17.20
10	250	310	68	289	273	120	102/125/127	4	11/14/14.3	30.0	22	51	---	236.4	362.00	12	7/8- 9	20.00	28.00
12	300	364	78	342	311	120	102/125/127	4	11/14/14.3	30.0	22	51	---	282.4	431.80	12	7/8- 9	27.60	41.85
14	350	415	78	388	346	120	125/127	4	14/14.3	35.0	---	51	10.00 x 10.00	328.3	476.20	12	1- 8	39.90	55.70
16	400	472	102	442	375	120	125	4	14	35.0	---	51	10.00 x 10.00	375.8	539.70	16	1- 8	59.20	83.60
18	450	525	114	495	406	170	165	4	21	50.0	---	64	10.00 x 12.00	421.4	577.80	16	1 1/8- 7	88.20	108.60
20	500	580	127	548	438	170	165	4	21	50.0	---	64	10.00 x 12.00	472.6	635.00	20	1 1/8- 7	107.40	139.20
24	600	692	154	654	495	Ø210	165	4	21	63.5	---	102	15.88 x 15.88	572.7	749.30	20	1 1/4- 7	175.00	216.40
26	650	745	165	706	555	Ø300	254	8	18	63.5	---	102	15.88 x 15.88	598.0	806.45	24	1 1/4- 7	---	292.00
28	700	795	165	756	580	Ø300	254	8	18	63.5	---	102	15.88 x 15.88	651.0	863.60	28	1 1/4- 7	---	340.00
30	750	860	165	815	595	Ø300	254	8	18	76.2	---	102	19.05 x 19.05	717.0	914.40	28	1 1/4- 7	---	405.00
32	800	900	190	859	670	Ø300	254	8	18	76.2	---	102	19.05 x 19.05	756.0	977.90	28	1 1/2- 6	---	512.00
36	900	1025	203	976	705	Ø350	298	8	21	88.9	---	134	22.23 x 15.88	870.0	1085.85	32	1 1/2- 6	---	655.00
40	1000	1120	216	1065	782	Ø350	298	8	21	101.6	---	134	25.40 x 19.05	952.0	1200.15	36	1 1/2- 6	---	925.00

*Metric value face to face dimension 'B' conforms to API 609 category A/BS EN 558-1 Series 20/ISO 5752 Series 20/MSS SP 67/ASME B16.10.

Dimensions (Inch)

Valve Size		ØA	**B	ØD	E	Sq.'F'	Top Flange Drilling			ØG	H	J	Key Size	K	Lug Bolting Data			App. Weight (lbs)	
Inch	DN						PCD	No. of Holes	Hole Dia.						PCD	No. of Holes	Threads UNC- 2B	Wafer (Series 50)	Lug (Series 52)
2	50	3.58	1.62	2.83	5.51	3.15	2.76/3.25	4	0.39/0.43	0.55	0.39	1.25	---	1.32	4.75	4	5/8-11	5.07	6.79
2.5	65	4.13	1.75	3.46	5.98	3.15	2.76/3.25	4	0.39/0.43	0.55	0.39	1.25	---	2.05	5.50	4	5/8-11	5.80	7.91
3	80	4.72	1.75	4.09	6.30	3.15	2.76/3.25	4	0.39/0.43	0.55	0.39	1.25	---	2.70	6.00	4	5/8-11	6.83	8.92
4	100	5.91	2.00	5.12	7.09	3.15	2.76/3.25	4	0.39/0.43	0.63	0.43	1.25	---	3.61	7.50	8	5/8-11	10.87	16.37
5	125	6.89	2.12	6.22	7.56	3.15	2.76/3.25	4	0.39/0.43	0.75	0.51	1.25	---	4.62	8.50	8	3/4-10	13.91	21.56
6	150	8.07	2.12	7.28	8.07	3.15	2.76/3.25	4	0.39/0.43	0.75	0.51	1.25	---	5.50	9.50	8	3/4-10	16.31	25.35
8	200	10.20	2.50	9.37	9.49	4.72	2.76/4.01/4.92/5.00	4	0.39/0.43/0.55/0.56	0.87	0.63	1.25	---	7.39	11.75	8	3/4-10	28.00	37.92
10	250	12.21	2.50	11.38	10.75	4.72	4.01/4.92/5.00	4	0.43/0.55/0.56	1.18	0.87	2.00	---	9.31	14.25	12	7/8- 9	44.09	61.73
12	300	14.33	3.00	13.46	12.24	4.72	4.01/4.92/5.00	4	0.43/0.55/0.56	1.18	0.87	2.00	---	11.12	17.00	12	7/8- 9	60.85	92.26
14	350	16.34	3.07	15.28	13.62	4.72	4.92/5.00	4	0.55/0.56	1.38	---	2.00	0.39 x 0.39	12.92	18.75	12	1- 8	87.96	122.80
16	400	18.58	4.02	17.40	14.76	4.72	4.92	4	0.55	1.38	---	2.00	0.39 x 0.39	14.80	21.25	16	1- 8	130.51	184.31
18	450	20.67	4.49	19.49	15.98	6.70	6.50	4	0.83	1.97	---	2.50	0.39 x 0.47	16.59	22.75	16	1 1/8-7	194.45	239.42
20	500	22.83	5.00	21.57	17.24	6.70	6.50	4	0.83	1.97	---	2.50	0.39 x 0.47	18.61	25.00	20	1 1/8-7	236.78	306.88
24	600	27.24	6.06	25.75	19.49	Ø8.27	6.50	4	0.83	2.50	---	4.00	0.62 x 0.62	22.55	29.50	20	1 1/4- 7	385.81	477.08
26	650	29.33	6.50	27.80	21.85	Ø11.81	10.00	8	0.71	2.50	---	4.00	0.62 x 0.62	23.54	31.75	24	1 1/4- 7	---	644.00
28	700	31.30	6.50	29.76	22.83	Ø11.81	10.00	8	0.71	2.50	---	4.00	0.62 x 0.62	25.69	34.00	28	1 1/4- 7	---	750.00
30	750	33.86	6.50	32.09	23.43	Ø11.81	10.00	8	0.71	3.00	---	4.00	0.75 x 0.75	28.23	36.00	28	1 1/4- 7	---	893.00
32	800	35.43	7.48	33.82	26.38	Ø11.81	10.00	8	0.71	3.00	---	4.00	0.75 x 0.75	29.76	38.50	28	1 1/2- 6	---	1129.00
36	900	40.35	7.99	38.43	27.76	Ø13.78	11.73	8	0.82	3.50	---	5.25	0.88 x 0.62	34.25	42.75	32	1 1/2- 6	---	1444.00
40	1000	44.09	8.50	41.93	30.79	Ø13.78	11.73	8	0.82	4.00	---	5.25	1.00 x 0.75	37.48	47.25	36	1 1/2- 6	---	2039.00

**Face to face dimension 'B' generally conforms to API 609 category A/BS EN 558-1 Series 20/ISO 5752 Series 20/MSS SP 67/ASME B16.10.

Valve sizes from 26'' to 40'' in wafer body construction, please refer to Series 51.

For 22" valve size please consult factory.

DelVal reserves rights to change the contents without notice.

TORQUE DATA (Nm/Lbf-Inch)

Inch	DN	Differential Pressure (ΔP)									
		Undercut Disc		Standard Disc						Oversized Disc	
		PN 3.5/50 Psi		PN 6/87 Psi		PN 10/150 Psi		PN 12/175 Psi		PN 14/200 Psi PN 16/230 Psi	
		Nm	Lbf-Inch	Nm	Lbf-Inch	Nm	Lbf-Inch	Nm	Lbf-Inch	Nm	Lbf-Inch
2	**50**	7	62	8	72	9	80	10	91	17	150
2.5	**65**	12	106	14	124	16	142	17	150	22	195
3	**80**	13	115	16	142	20	177	22	197	32	283
4	**100**	15	133	29	256	31	271	32	279	45	398
5	**125**	21	187	44	393	48	426	50	443	65	575
6	**150**	30	267	62	545	66	582	70	620	110	974
8	**200**	70	623	110	977	122	1083	128	1133	210	1859
10	**250**	87	771	179	1586	198	1756	208	1841	319	2823
12	**300**	142	1259	302	2677	337	2987	355	3146	468	4142
14	**350**	244	2159	398	3527	450	3980	---	---	690	6106
16	**400**	297	2627	500	4428	585	5178	---	---	925	8187
18	**450**	412	3649	822	7273	989	8756	---	---	1192	10550
20	**500**	484	4285	954	8441	1144	10126	---	---	1506	13329
24	**600**	734	6500	1410	12482	1760	15576	---	---	3029	26809
26	**650**	1063	9408	2202	19488	2750	24338	---	---	---	---
28	**700**	1266	11204	2640	23364	3320	29382	---	---	---	---
30	**750**	1465	12965	3083	27285	3900	34515	---	---	---	---
32	**800**	1755	15532	3715	32878	4740	41949	---	---	---	---
36	**900**	2342	20727	4975	44029	6420	56817	---	---	---	---
40	**1000**	3085	27302	6175	54649	8165	72260	---	---	---	---

Note: Above torques are for clean media and do not contain any safety factors for actuator sizing. If other conditions exist, a service factor should be applied. Please consult DelVal for specific service factor.

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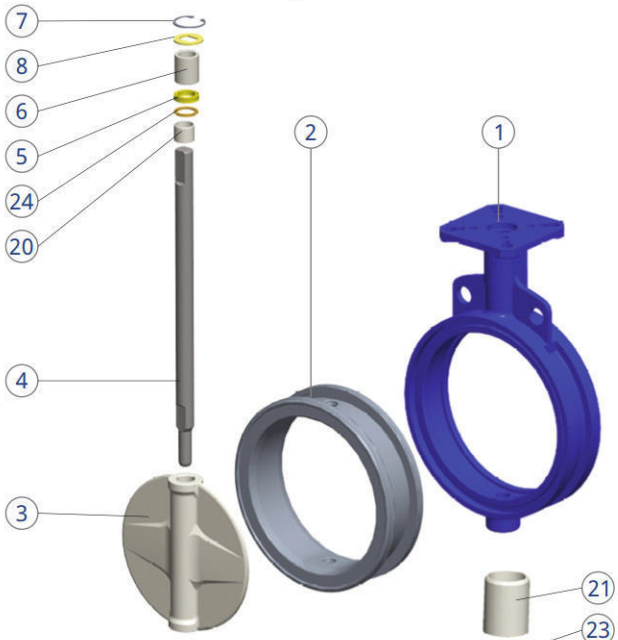
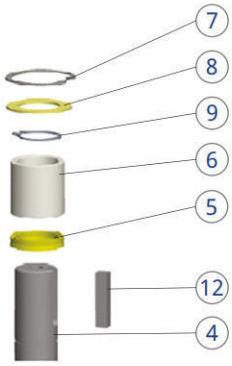
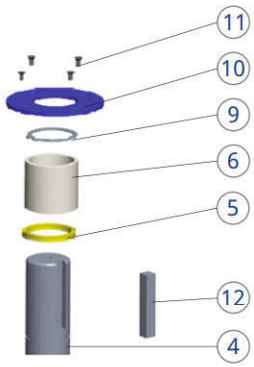
STANDARD MATERIALS OF CONSTRUCTION

(2" to 24") Wafer & Lug



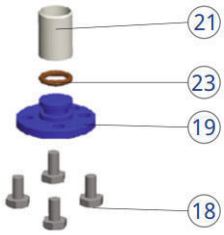


View for 14" to 20"



View for 24"

View for 2" to 3"



View for 4" to 20"

View for 24"

Part List

Item	Description	*Standard Material	
		CI/DI	CS/SS
1	Body	CI ASTM A126 CLASS B CI IS 210 FG 260 DI ASTM A395 60-40-18	ASTM A216 WCB ASTM A351 CF8/C8M/CF3M
**2	Seat	EPDM/WHITE EPDM NBR (BUNA-N) WHITE NBR (White BUNA-N) Viton®(FKM) Silicone#	
3	Disc	ASTM A536 65-45-12+Nylon 12 coated ASTM A536 65-45-12+Aroxy coated ASTM A216 WCB+Nylon 12 coated ASTM A216 WCB+Aroxy coated ASTM A351 CF8M/CF8/CF3M ASTM A995 4A/5A/6A NAB ASTM B148 C95800	
4	Stem	ASTM A479 SS410-L2 ASTM A479 SS316 SH ASTM A564 17-4 PH Type 630 ASTM A182 F51/F53	
**5	U-Cup Seal	NBR (BUNA-N)	
**6	Stem Bushing	POLYACETAL (Delrin)	
**7	Internal Circlip (2" – 20")	Spring steel IS 2507 70C6	
**8	Stem Retainer (2" – 20")	ASTM A240 SS304	
**9	External Circlip (14" – 24")	Spring steel IS 2507 70C6	

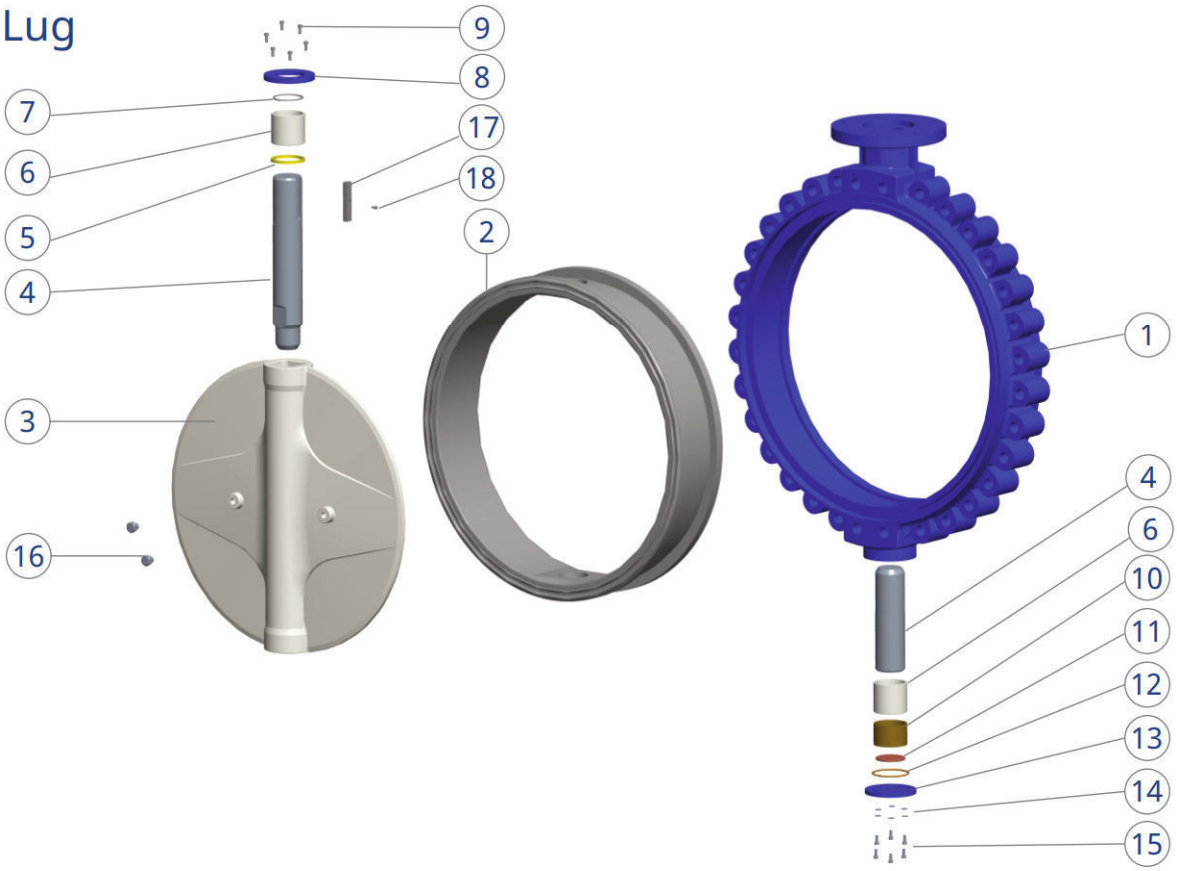
Item	Description	*Standard Material	
		CI/DI	CS/SS
**10	Retainer Ring (24")	Carbon Steel IS 2062 Gr-B	Carbon Steel IS 2062 Gr-B ASTM A240 SS304/SS316
11	Socket Head Cap Screw (24")	IS 1367 HTS 12.9	IS 1367 HTS 12.9 ISO 3506 A2-70
12	Key (14" – 24")	BS 970 En8	
**13	Thrust Bearing (24")	Phosphor Bronze BS 1400 PB4	
14	Bearing Spacer (24")	Carbon Steel IS 2062 Gr-B	Carbon Steel IS 2062 Gr-B ASTM A240 SS304/SS316
**15	O-ring (24")	NBR (BUNA-N)	
16	Bottom Plate (18" - 24")	Carbon steel IS 2062 Gr. B	Carbon steel IS 2062 Gr. B ASTM A240 SS304/SS316
17	Plain Washer (24")	Carbon steel IS 2062 Gr. B	Carbon steel IS 2062 Gr. B ASTM A240 SS304/SS316
18	Hex Head Bolt (4" - 20")	-	ISO 3506 A2-70
18a	Hex head Bolt (24'')	IS 1367 HTS 12.9	IS 1367 HTS 12.9 ISO 3506 A2-70
19	Bottom Plug (2" - 16")	-	ASTM A479 SS410
**20	Top Bearing	-	Bear-G
**21	Bottom Bearing	-	Bear-G
**22	Internal Circlip	-	Spring steel IS 2507 70C6
**23	O-ring	-	NBR (BUNA-N)
**24	Pack Support	-	POLYACETAL (Delrin)

#Silicone seat configuration applicable up to PN6 rating only.
*Other materials may be available on request.

**Recommended spares.
CI = Cast Iron, DI = Ductile Iron, CS = Carbon Steel, SS = Stainless Steel.

STANDARD MATERIALS OF CONSTRUCTION

(26" to 40") Lug



Part List

Item	Description	*Standard Material	
		CI/DI/CS	SS
1	Body	CI ASTM A126 CLASS B CI IS 210 FG 260 DI ASTM A395 60-40-18 ASTM A216 WCB	ASTM A351 CF8/C8M/CF3M
**2	Seat	EPDM/WHITE EPDM NBR (BUNA-N)/WHITE NBR (WHITE BUNA-N) Viton®(FKM) #Silicone	
3	Disc	ASTM A536 65-45-12+Nylon 12 coated ASTM A536 65-45-12+Aroxy coated ASTM A216 WCB+Nylon 12 coated ASTM A216 WCB+Aroxy coated ASTM A351 CF8M/CF8/CF3M ASTM A995 4A/5A/6A NAB ASTM B148 C95800	ASTM A351 CF8M/CF8/CF3M ASTM A995 4A/5A/6A NAB ASTM B148 C95800
4	Stem	ASTM A479 SS410-L2/ SS316 SH ASTM A564 17-4 PH Type 630 ASTM A182 F51/F53	ASTM A479 SS316 SH ASTM A564 17-4 PH Type 630 ASTM A182 F51/F53
**5	U-Cup Seal	NBR (BUNA-N)	
**6	Stem Bushing	Phosphor Bronze BS 1400 PB4	
**7	External Circlip	Spring Steel IS 2507 70C6	

Item	Description	*Standard Material	
		CI/DI/CS	SS
8	Top Cover	Carbon Steel IS 2062 Gr.B	ASTM A240 SS304/ SS316
9	Socket Head Cap Screw	IS 1367 HTS 12.9	ISO 3506 A2-70
**10	Bearing Spacer	Carbon Steel IS 2062 Gr.B	ASTM A240 SS304
11	Thrust Bearing	Phosphor Bronze BS 1400 PB4	
**12	'O' Ring	NBR (BUNA-N)	
13	Bottom Plate	Carbon Steel IS 2062 Gr.B	ASTM A240 SS304/ SS316
14	Plain Washer	Carbon Steel IS 2062 Gr-B	ASTM A240 SS304
15	Hex Head Bolt	IS 1367 HTS 12.9	ISO 3506 A2-70
16	Plug	ISO 3506 A2-70	
17	Key	BS 970 En8	
18	Socket Head Cap Screw	ISO 3506 A2-70	

#Silicone seat configuration applicable up to PN6 rating only.
*Other materials may be available on request.

**Recommended spares.
CI = Cast Iron, DI = Ductile Iron, CS = Carbon Steel, SS = Stainless Steel.

Standards and Specifications

DelVal Series 50/52 Butterfly Valves are designed and manufactured to meet the requirements of the following general industry standards:

Design: Full compliance to BS EN 593, general compliance to API 609 & MSS SP 67

Face to Face: BS EN 558-1 Series 20, API 609 Category A, ISO 5752 Series 20, MSS SP 67, ASME B16.10

Testing: BS EN 12266-1, API 598, MSS SP 67

Flange Standard: ASME B16.5 Class 150, ASME B16.47 Class 150 Series A, Other International Standards

Body Style: One-Piece

***Temp Range:** -29°C to 200°C, -20°F to 390°F

Size Range: 2" to 40"

Seat Temperature Limits

Seat Type	*Temperature Limits	
	Lower Limit	Upper Limit
EPDM/WHITE EPDM	-20°F (-29°C)	302°F (150°C)
NBR (BUNA-N)/WHITE NBR (WHITE BUNA-N)	0°F (-18°C)	212°F (100°C)
Viton® (FKM)	0°F (-18°C)	390°F (200°C)
#Silicone	-58°F (-50°C)	390°F (200°C)

#Maximum pressure rating limited to 6 Bar.

Viton® is registered trademark of E.I. DuPont.

*Temperature range shall be the lesser of the seat temperature or disc coating temperature.

Pressure Rating

Inch	DN	PSIG	BARG
**2" to 24"	50-600	230	16
2" to 24"	50-600	200	14
2" to 12"	50-300	175	12
2" to 40"	50-1000	150	10
2" to 40"	50-1000	87	6
2" to 40"	50-1000	50	3.5

**Optional, consult factory for details.

End-of-Line Service

Lug body valves may be used in end-of-line service with downstream piping removed.

2" to 40" (DN 50 to DN 1000) lug type butterfly valves are suitable for operation without a downstream flange installed, the dead-end pressure ratings are equal to the values stated above.

Operator Information

Valves up to size 12" can be supplied with lever handles for manual operation. Optional accessories for hand-lever operation can be provided for various flow control requirements. Pad-lock can also be provided to prevent unauthorized operation.

Valves of all sizes can be direct mounted with gear operators for manual operation. Gear operators can also be attached with chain-wheel operators to open or close valves located on pipelines at high elevations.

All valves can be direct mounted with pneumatic actuators or electric actuators and accessories for complete on-off automation or modulating control. Valves can be mounted with manual overrides.

100% TESTING
100% SERIALIZATION

3-YEAR WARRANTY ON DELVAL PRODUCTS

CERTIFICATES

QUALITY ASSURANCE MANAGEMENT ISO 9001
ENVIROMENTAL MANAGEMENT ISO 14001
OCCUPATIONAL HEALTH & SAFETY ISO 45001
DIRECTIVE 2014/68/EU ANNEX III MODULE B PED CERTIFIED
DRINKING WATER SYSTEM UL NSF/ANSI 61
DRINKING WATER - LEAD CONTENT UL NSF/ANSI 372
SHIPS PT.4 CH.6/DNVGL-CP-0186 DNV GL

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