DelVal Series 56/57 Wafer and Lug Butterfly Valve

Series 56 (wafer) and Series 57 (lug) are DelVal's resilient seated butterfly valves for higher pressures, rated 285 PSIG (PN 20) from 2" to 24" and 230 PSIG (PN 16) from 26" to 48".



Key data	
Size range	2" to 48" (DN 50 to 1200)
Pressure rating	2" to 24" – 285 PSIG (PN 20); 26" to 48" – 230 PSIG (PN 16)
Body style	Series 56 – Wafer; Series 57 – Lug
Seat	EPDM, Buna-N, FKM

Pressure and temperature ratings

Seat temperature limits

Seat type	Lower limit*	Upper limit*
EPDM	-20°F (-29°C)	302°F (150°C)
NBR (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)
^PTFE + EPDM	-20°F (-29°C)	266°F (130°C)

^PTFE + EPDM seat configuration is available up to NPS 12"/DN 300 and applicable rating up to PN16.
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*Temperature range shall be the lesser of the seat temperature or disc coating temperature.
#Silicone seat configuration applicable up to PN6 rating only.

Pressure rating

Size (inch)	DN	psig	barg
2" to 12"	50 to 300	175	12.0
2" to 24"	50 to 600	285	20.0
2" to 48"	50 to 1200	230	16.0
2" to 48"	50 to 1200	150	10.0
2" to 48"	50 to 1200	87	6.0
2" to 48"	50 to 1200	50	3.5

End-of-line service (lug body)

Item	Detail
End-of-Line Service	Lug body valves may be used in end-of-line service with downstream piping removed.
2" to 24" (DN 50 to DN 600) / 26" to 48" (DN 650 to DN 1200)	2" to 24" (DN 50 to DN 600) lug type butterfly valves are suitable for pressure up to PN10/150 Psi and 26" to 48" (DN 650 to DN 1200) up to PN16/230 Psi with downstream piping removed.

Standards and specifications

Design, testing and flange standards

Item	Detail
Design	API 609, BS EN593, MSS SP 67
Face to Face	API 609 Category-A, BS EN558 Series 20, ISO 5752 Series 20, MSS SP 67, ASME B16.10
Testing	API 598, BS EN 12266-1, MSS SP 67
Flange Standard	ASME B16.5 Class 150, ASME B16.47 Class 150 Series A & B, Other International Standards
Body Style	One-Piece
***Temp Range**	-29°C to 200°C -20°F to 390°F
Size Range	2" to 48"

Dimensions and weights

Key to dimension letters

Item	Detail
ØA	Body outside diameter
B	Face-to-face length
E	Valve centreline to top of top flange
L	Valve centreline to bottom of body
ØF	Top flange diameter
Sq. H	Stem square size (across flats)
ØG	Stem diameter (keyed stem, 14" and above)
J	Stem projection above top flange

Materials of construction

#Silicone seat configuration applicable up to PN6 rating only.
*Other materials may be available on request.
CI = Cast Iron, DI = Ductile Iron, CS = Carbon Steel, SS = Stainless Steel

Parts and materials, molded-cum-replaceable seat

Item	Description	Standard material* (CI/DI/CS)	Standard material* (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/CF8M/CF3M
2	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/CF3M; ASTM A995 4A/5A/6A; NAB ASTM B148 C95800	ASTM A351 CF8M/CF3M; ASTM A995 4A/5A/6A; NAB ASTM B148 C95800
****3**	Seat (Molded cum Replaceable)	EPDM; NBR (BUNA-N); Viton (FKM); #Silicone; ^PTFE+EPDM (up to 12")	EPDM; NBR (BUNA-N); Viton (FKM); #Silicone; ^PTFE+EPDM (up to 12")
4	Stem (Upper/ Lower)	ASTM A479 SS410-L2; ASTM A564 17-4 PH Type 630; ASTM A182 F51/F55; ASTM A479 SS316	ASTM A479 SS410-L2; ASTM A564 17-4 PH Type 630; ASTM A182 F51/F55; ASTM A479 SS316
****5**	Sleeve Bearing	Bear-G	Bear-G
****6**	Packing Support	RPTFE	RPTFE
****7**	Stem Seal (Double U-cup)	NBR (BUNA-N)	NBR (BUNA-N)
****8**	Stem Bushing	RPTFE	RPTFE
9	Stem Retainer	ASTM A240 SS304	ASTM A240 SS304
****10**	Retainer Circlip	ASTM A684 Gr. 1070	ASTM A313 SS302
****11**	O-Ring	NBR (BUNA-N)	NBR (BUNA-N)
****12**	Spring Dowel Pin	ASTM A684 Gr. 1074	ASTM A313 SS302

Item	Description	Standard material* (CI/DI/CS)	Standard material* (SS)
13	Key (14 to 24'')	BS 970 EN8	BS 970 EN8
14	Bottom Plate (24")	ASTM A516 Gr. 70	ASTM A240 SS304
15	Punch Washer (24")	ASTM A240 SS304	ASTM A240 SS304
16	Hex Hd. Screw (24")	ISO 3506 A2-70	ISO 3506 A2-70

**Recommended Spares.
^PTFE + EPDM seat configuration applicable up to PN16 rating only.

Parts and materials, in-situ molded seat

Item	Description	Standard material* (CI/DI/CS)	Standard material* (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/CF8M/CF3M
1a	Seat (In-Situ Molded)	EPDM; NBR (BUNA-N); Viton (FKM); #Silicone	EPDM; NBR (BUNA-N); Viton (FKM); #Silicone
2	Disc	ASTM A216 WCB +Nylon 12 Coated; ASTM A216 WCB+Aroxy Coated; ASTM A351 CF8M/CF3M; ASTM A995 4A/5A/6A; NAB ASTM B148 C95800	ASTM A351 CF8M/CF3M; ASTM A995 4A/5A/6A; NAB ASTM B148 C95800
3	Stem (Upper/ Lower)	ASTM A479 SS410-L2; ASTM A564 17-4 PH Type 630; ASTM A182 F51/F55; ASTM A479 SS316	ASTM A479 SS410-L2; ASTM A564 17-4 PH Type 630; ASTM A182 F51/F55; ASTM A479 SS316
4	Sleeve Bearing	Bear-G	Bear-G
5	Packing Support	RPTFE	RPTFE
6	Stem Seal (Double U-cup)	NBR (BUNA-N)	NBR (BUNA-N)
7	Stem Bushing	Phosphorous Bronze	Phosphorous Bronze
8	Retainer Circlip	ASTM A684 Gr. 1070	ASTM A313 SS302
9	Retaining Ring	ASTM A516 Gr. 70	ASTM A240 SS304
10	Soc. Hd. Screw	ISO 3506 A2-70	ISO 3506 A2-70
11	O-Ring	NBR (BUNA-N)	NBR (BUNA-N)
12	Bottom Plate	ASTM A516 Gr. 70	ASTM A240 SS304
13	Punch Washer	ASTM A240 SS304	ASTM A240 SS304
14	Hex Hd. Screw	ISO 3506 A2-70	ISO 3506 A2-70
15	Key	BS 970 EN8	BS 970 EN8
16	Hex Hd. Bolt	ISO 3506 A2-70	ISO 3506 A2-70
17	Plug	ISO 3506 A2-70	ISO 3506 A2-70

Dimensions and weights

Wafer and lug, Series 56/57 (mm) (columns 1 of 2)

Valve size (inch)	DN	ØA	*B	E	L	ØF	Top flange PCD	Top flange no. of holes	Top flange hole dia.	Sq. H	ØG	J
2	50	96	43	115	78	90	70	4	10	14	–	16
2.5	65	108	46	125	80	90	70	4	10	14	–	16
3	80	126	46	130	85	90	70	4	10	14	–	16
4	100	154	52	152	105	90	70	4	10	14	–	16
5	125	195	56	165	129	90	70	4	10	17	–	19
6	150	216	56	180	140	90	70	4	10	17	–	19
8	200	272	60	230	175	150	102/125	4	12/14	19	–	21
10	250	327	68	255	216	150	102/125	4	12/14	22	–	24
12	300	387	78	285	240	150	125	4	14	27	–	29
14	350	430	78	340	280	210	165	4	22	–	40.0	51
16	400	487	102	360	310	210	165	4	22	–	40.0	51
18	450	540	114	390	347	210	165	4	22	–	50.0	64
20	500	600	127	430	390	210	165	4	22	–	50.0	64
24	600	711	154	495	461	210	165	4	22	–	63.5	102
26	650	745	165	555	465	300	254	8	18	–	63.5	102
28	700	776	165	580	495	300	254	8	18	–	76.2	102
30	750	835	165	595	530	350	298	8	22	–	76.2	102
32	800	872	190	670	568	350	298	8	22	–	76.2	102
36	900	990	203	705	645	350	298	8	22	–	88.9	134
40	1000	1100	216	782	726	415	356	8	33	–	101.6	134
42	1050	1155	251	815	726	415	356	8	33	–	101.6	134
44	1100	1200	251	845	738	415	356	8	33	–	101.6	134
48	1200	on request	276	915	830	415	356	8	33	–	110.0	150

Wafer and lug, Series 56/57 (mm) (columns 2 of 2)

Valve size (inch)	DN	Key size	K	Lug bolting PCD	Lug bolting no. of holes	Lug bolting thread (UNC/UN-2B)	Approx. weight, wafer Series 56 (kg)	Approx. weight, lug Series 57 (kg)
2	50	–	32.6	120.6	4	5/8-11 UNC	2.5	3.5
2.5	65	–	48.2	139.7	4	5/8-11 UNC	3.3	3.8
3	80	–	63.0	152.4	4	5/8-11 UNC	3.6	4.0
4	100	–	84.2	190.5	8	5/8-11 UNC	6.0	8.0
5	125	–	117.3	215.9	8	3/4-10 UNC	7.0	11.0
6	150	–	135.9	241.3	8	3/4-10 UNC	12.0	14.0
8	200	–	186.1	298.4	8	3/4-10 UNC	22.5	24.0
10	250	–	236.4	362.0	12	7/8-9 UNC	24.0	30.0
12	300	–	282.6	431.8	12	7/8-9 UNC	37.0	45.0
14	350	12.00 x 8.00	315.7	476.2	12	1-8 UNC	60.0	69.5
16	400	12.00 x 8.00	367.3	539.8	16	1-8 UNC	75.0	97.0
18	450	12.00 x 10.00	421.6	577.8	16	1 1/8-8 UN	115.0	151.0
20	500	12.00 x 10.00	471.0	635.0	20	1 1/8-8 UN	156.0	178.0
24	600	15.88 x 15.88	572.7	749.3	20	1 1/4-8 UN	195.0	245.0
26	650	15.88 x 15.88	589.0	806.4	24	1 1/4-8 UN	272.0	377.0
28	700	19.05 x 19.05	651.0	863.6	28	1 1/4-8 UN	305.0	389.0
30	750	19.05 x 19.05	698.0	914.4	28	1 1/4-8 UN	373.0	493.0
32	800	19.05 x 19.05	on request	977.9	28	1 1/2-8 UN	403.0	597.0
36	900	22.23 x 15.88	870.0	1085.8	32	1 1/2-8 UN	607.0	956.0
40	1000	25.40 x 19.05	952.0	1200.2	36	1 1/2-8 UN	829.0	on request
42	1050	25.40 x 19.05	1020	1257.3	36	1 1/2-8 UN	860.0	1150.0
44	1100	25.40 x 19.05	1070	1314.4	40	1 1/2-8 UN	950.0	1270.0
48	1200	28.00 x 16.00	1120.0	1422.4	44	1 1/2-8 UN	1212.0	2053.0

Operating torque

Torque by disc type and differential pressure

Valve size (inch)	DN	Undercut disc, PN 3.5/50 psi (Nm)	Undercut disc, PN 3.5/50 psi (lbf-in)	Standard disc, PN 6/87 psi (Nm)	Standard disc, PN 6/87 psi (lbf-in)	Standard disc, PN 10/150 psi (Nm)	Standard disc, PN 10/150 psi (lbf-in)	Standard disc, PN 12/175 psi (Nm)	Standard disc, PN 12/175 psi (lbf-in)	Oversized disc, PN 16/230 psi (Nm)	Oversized disc, PN 16/230 psi (lbf-in)	Oversized disc, PN 20/285 psi (Nm)	Oversized disc, PN 20/285 psi (lbf-in)
2	50	–	–	8	72	9	80	10	91	17	150	31	275
2.5	65	–	–	14	124	16	142	17	150	22	195	40	355
3	80	–	–	16	142	20	177	22	197	32	283	58	514
4	100	15	133	29	256	31	271	32	279	45	398	81	717
5	125	21	187	44	393	48	426	50	443	65	575	117	1036
6	150	30	267	62	545	66	582	70	620	110	974	132	1168
8	200	70	623	110	977	122	1083	128	1133	210	1859	252	2231
10	250	87	771	179	1586	198	1756	208	1841	319	2823	383	3390
12	300	142	1259	302	2677	337	2987	355	3146	468	4142	562	4974
14	350	244	2159	398	3527	450	3980	–	–	690	6106	863	7639
16	400	297	2627	500	4428	585	5178	–	–	925	8187	1156	10231
18	450	412	3649	822	7273	989	8756	–	–	1192	10550	1490	13188
20	500	484	4285	954	8441	1144	10126	–	–	1506	13329	1883	16666
24	600	734	6500	1410	12482	1760	15576	–	–	3029	26809	3786	33509
26	650	1063	9408	2202	19488	2750	24338	–	–	4200	37173	–	–
28	700	1266	11204	2640	23364	3320	29382	–	–	6204	54910	–	–
30	750	1465	12965	3083	27285	3900	34515	–	–	7493	66318	–	–
32	800	1755	15532	3715	32878	4740	41949	–	–	8782	77728	–	–
36	900	2342	20727	4975	44029	6420	56817	–	–	12142	107465	–	–
40	1000	3085	27302	6175	54649	8165	72260	–	–	16122	142691	–	–
42	1050	4317	38208	8475	75010	11300	100013	–	–	18838	166730	–	–
44	1100	4995	44209	9797	86710	13368	118316	–	–	21553	190760	–	–
48	1200	6328	56007	12430	110014	16950	150020	–	–	26984	238828	–	–

Note: Above torques are for clean media and do not contain any safety factor for the actuator sizing of other condition exist, a service factor should be applied. Please consult UEC for specific service factor.

For a quotation, send the size, pressure rating, materials, operator and quantity to UEC by phone, WhatsApp or email. Inch and pound tables are on the product page at www.unitedengg.co.in/valves/delval/series-56-57-wafer-lug-butterfly-valve. Data as published by DelVal Flow Controls; DelVal and DelTorq are trademarks of DelVal Flow Controls.