DelVal Series 5C/5D Split Body Butterfly Valve

Series 5C (wafer) and 5D (lug) are DelVal's split body, resilient seated butterfly valves, pairing a one-piece disc and stem with elastomer seats, from 2" to 24" (DN 50 to 600) at 150 PSIG (PN 10).



Key data	
Size range	2" to 24" (DN 50 to 600)
Pressure rating	150 PSIG (PN 10)
Disc/stem	316 SS, Duplex SS, Elastomer (EPDM, NBR) Lined, Halar® Coated
Body style	Series 5C – Wafer; Series 5D – Lug

Pressure and temperature ratings

Seat temperature limits

Seat type	Lower limit*	Upper limit*
EPDM / WHITE EPDM	-20°F (-29°C)	302°F (150°C)
NBR (BUNA-N) / WHITE 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)

#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

Size (inch)	DN	psig	barg
2”to 24”	50 to 600	150	10

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)	2” to 24” (DN 50 to DN 600) 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.

Standards and specifications

Design, testing and flange standards

Item	Detail
Design	Full compliance to BS EN 593, general compliance to API 609, MSS SP 67
Face to Face	BS EN 558 Series 20, API 609 Category-A, ISO 5752 Series 20, MSS SP 67
Testing	BS EN 12266-1, API 598, MSS SP 67
Flange Standard	ASME B16.5 Class 150, Other International Standards
Body Style	Two-Piece
***Temp Range**	-29°C to 200°C -20°F to 390°F
Size Range	2" to 24"

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
Sq. F	Top flange square size
ØG	Stem diameter
H	Stem width across flats
J	Stem projection above top flange

Operating torque

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 UEC for specific service factor.

Torque by valve size (Nm)

Item	Value
Valve size	Pressure ΔP, Bar
	10
2"	9
2.5"	16
3"	20
4"	31
5"	48
6"	66
8"	122
10"	198
12"	337
14"	450
16"	585
18"	989
20"	1144
24"	1760

Materials of construction

Parts and materials

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 CF8M/CF8
****2**	Seat	EPDM/WHITE EPDM NBR (BUNA-N)/WHITE NBR (BUNA-N) Viton®(FKM) #Silicone	EPDM/WHITE EPDM NBR (BUNA-N)/WHITE NBR (BUNA-N) Viton®(FKM) #Silicone

Item	Description	Standard material* (CI/DI/CS)	Standard material* (SS)
3	Disc + Stem	ASTM A351 CF8M/CF8 (One-piece investment cast disc-stem 2” to 12”) ASTM A995 GR 4A/5A/6A (One-piece investment cast disc-stem 2” to 12”) Halar coated ASTM A351 CF8M/CF8 (One-piece investment cast disc-stem 2” to 12”) ASTM A351 CF8M/CF8 + ASTM A479 SS410/SS316 SH (One-piece disc-stem 14” to 24”) Halar coated ASTM A351 CF8M/CF8 + ASTM A479 SS410/SS316 SH (One-piece disc-stem 14” to 24”) High Polished ASTM A240 SS316 + ASTM A479 SS316 SH (One-piece disc-stem 2” to 24”) **Elastomer (EPDM/NBR) Lined over Carbon Steel IS 2062 Gr-B + A479 SS410 (One- piece disc-stem 2” to 24”)	ASTM A351 CF8M/CF8 (One-piece investment cast disc-stem 2” to 12”) ASTM A995 GR 4A/5A/6A (One-piece investment cast disc-stem 2” to 12”) ASTM A351 CF8M/CF8 + ASTM A479 SS410/SS316 SH (One-piece disc-stem 14” to 24”) High Polished ASTM A240 SS316 + ASTM A479 SS316 SH (One-piece disc-stem 2” to 24”)
**4	Sleeve Bearing	Bear-G	Bear-G
**5	Pack Support	Polyacetal (Delrin)	Polyacetal (Delrin)
**6	U-Cup Seal	NBR (BUNA-N)	NBR (BUNA-N)
**7	Stem Bushing	Polyacetal (Delrin)	Polyacetal (Delrin)
8	Socket Head Cap Screw	ISO 3506 A2-70	ISO 3506 A2-70
9	Dowel Pin	BS970 EN8	BS970 EN8
**10	Thrust Bearing (24”)	Phosphor Bronze BS1400 PB4	Phosphor Bronze BS1400 PB4
**11	‘O’ Ring (from 8'' and above)	NBR (BUNA-N)	NBR (BUNA-N)
12	Bottom Cover (from 8'' and above)	ASTM A479 SS410 ASTM A240 SS304	ASTM A479 SS316 ASTM A240 SS316
13	Hex Head Bolt (from 8'' and above)	ISO 3506 A2-70	ISO 3506 A2-70
14	Key (14” to 24”)	BS970 EN8	BS970 EN8

#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

Dimensions and weights

Wafer and lug, Series 5C/5D (mm) (columns 1 of 2)

Valve size (inch)	DN	ØA	*B	ØD	E	Sq. F	Top flange PCD	Top flange no. of holes	Top flange hole dia.	ØG	H	J
2	50	91	43	72	140	80	70	4	10	14.0	10	32
2½	65	106	46	88	152	80	70	4	10	14.0	10	32
3	80	122	46	104	160	80	70	4	10	14.0	10	32
4	100	152	52	130	180	80	70	4	10	16.0	11	32
5	125	176	56	158	192	100	70/102	4	10/12	19.0	13	32
6	150	205	56	185	205	100	70/102	4	10/12	19.0	13	32
8	200	264	60	238	241	120	102/125	4	12/14	22.0	16	32
10	250	315	68	289	273	120	102/125	4	12/14	30.0	22	51
12	300	370	78	342	311	120	125	4	14	30.0	22	51
14	350	415	78	388	346	120	125	4	14	35.0	–	51
16	400	472	102	442	375	120	125	4	14	35.0	–	51
18	450	525	114	495	406	170	165	4	21	50.0	–	64
20	500	580	127	548	438	170	165	4	21	50.0	–	64
24	600	692	154	654	495	ϕ210	165	4	21	63.5	–	102

*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.

Wafer and lug, Series 5C/5D (mm) (columns 2 of 2)

Valve size (inch)	DN	Key size	K	Lug bolting PCD	Lug bolting no. of holes	Lug bolting thread (UNC-2B)	Approx. weight, wafer Series 5C (kg)	Approx. weight, lug Series 5D (kg)
2	50	–	33.5	120.7	4	⅝ - 11	3.5	4.1
2½	65	–	52.1	139.7	4	⅝ - 11	3.5	4.7
3	80	–	68.5	152.4	4	⅝ - 11	3.8	4.8
4	100	–	91.7	190.5	8	⅝ - 11	5.6	8.8
5	125	–	117.3	215.9	8	¾ - 10	8.2	13.0
6	150	–	139.7	241.3	8	¾ - 10	9.6	19.6
8	200	–	187.6	298.5	8	¾ - 10	16.5	29.8
10	250	–	236.4	362.0	12	⅞ - 9	24.8	37.4
12	300	–	282.4	431.8	12	⅞ - 9	35.6	54.6
14	350	10.00 x 10.00	328.3	476.2	12	1 - 8	39.9	55.7
16	400	10.00 x 10.00	375.8	539.7	16	1 - 8	59.2	83.6

Valve size (inch)	DN	Key size	K	Lug bolting PCD	Lug bolting no. of holes	Lug bolting thread (UNC-2B)	Approx. weight, wafer Series 5C (kg)	Approx. weight, lug Series 5D (kg)
18	450	10.00 x 12.00	421.4	577.8	16	1⅛ - 7	88.2	108.6
20	500	10.00 x 12.00	472.6	635.0	20	1⅛ - 7	107.4	139.2
24	600	15.88 x 15.88	572.7	749.3	20	1¼ - 7	175.0	216.4

*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.

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-5c-5d-split-body-butterfly-valve. Data as published by DelVal Flow Controls; DelVal and DelTorq are trademarks of DelVal Flow Controls.