

# SERIES 59

## Resilient Seated Butterfly Valves

Wafer Style, Short Neck, Notched Body

Fit and Forget Valve



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# STANDARD FEATURES

## Quality & Performance

**DelVal Flow Controls** provides a wide range of quality products with the reliability you can count on. All Series 59 butterfly valves are manufactured in ISO 9001 certified facilities with a robust quality management system.

## Design Construction and Features

### 1. Double Drilled Top Flange

Top plate double drilled to fit ISO 5211 dimensions and standard secondary bolt circle dimensions. All handles, gear operators and pneumatic DelTorq actuators are designed to mount directly to DelVal Series 59 valves.

### 2. Disc

High strength disc with hand polished edge and hubs. Nylon PA 12 ensures excellent 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.

### 3. Disc-Stem Connection

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

### 4. Secondary Seal

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

### 5. Seat

In-situ molded body seat design provides complete isolation of flowing media from the body. The seat also features face molded O-ring which eliminates the use of flange gaskets.

### 6. Stem Retention System

Unique stem retention design ensures blow out proof stem, easy assembly and disassembly of valve.

### 7. Bushing

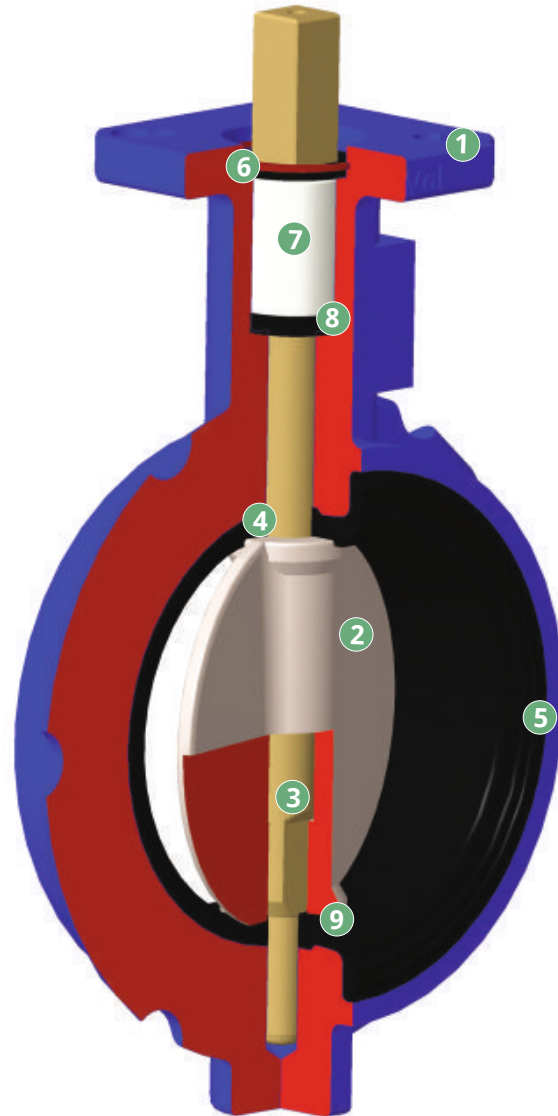
Heavy duty acetal bushing absorbs the forces acting on the stem-disc assembly due to line pressure.

### 8. Stem Seal

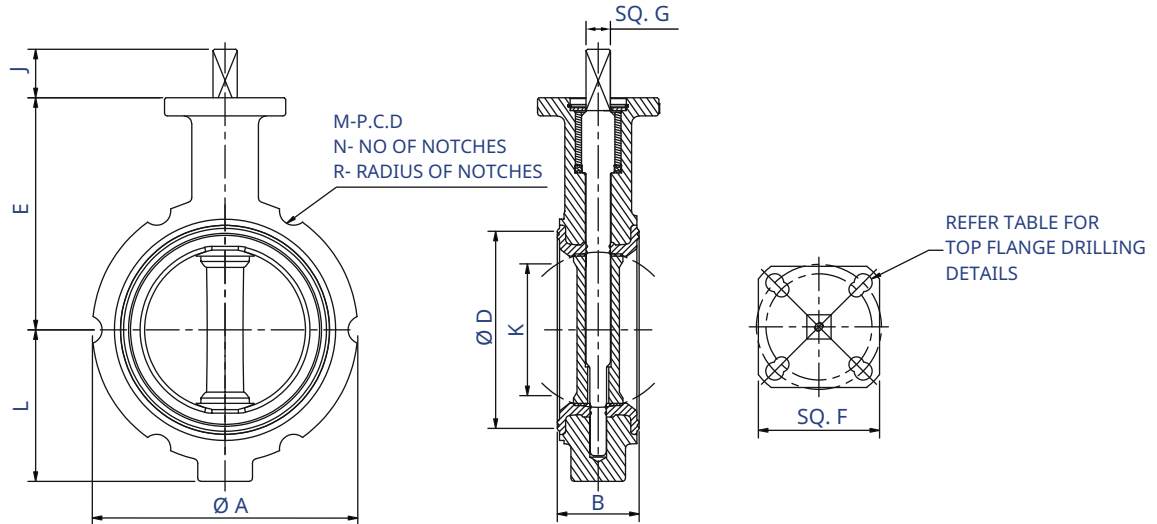
Bi-directional 'U' cup stem seal.

### 9. Disc-Stem Sealing

Precision machined radius on the upper and lower disc hubs is pressed against upper and lower seat sealing faces to achieve primary sealing between disc and seat.



# DIMENSIONS, WEIGHTS AND TORQUE DATA



## Dimensions (mm)

Valve Size		ØA	*B	ØD	E	Sq. F	Top Flange Drilling			Sq. G	J	K	L	M	N	R	App. Weight (kg)
Inch	DN						BC	No. of Holes	Hole Dia								
2	50	101	43	72	100	80	70/82.5	4	10/11	15.9	26	33.5	76	108	4	8	2.3
3	80	133	46	104	124	80	70/82.5	4	10/11	15.9	26	68.5	92	125	6	8	3.2
4	100	171	52	130	153	80	70/82.5	4	10/11	15.9	32	91.7	108	179	6	9.5	4.5
5	125	193	56	158	153	80	70/82.5	4	10/11	15.9	32	117.3	122	192	6	9.5	6.1
6	150	218	56	185	166	80	70/82.5	4	10/11	15.9	32	139.7	135	233	8	9.5	7.3
8	200	275	60	238	207	120	102/125/127	4	11/14/14.3	22.2	32	187.6	178	298	8	11	12.7
10	250	336	68	289	239	120	102/125/127	4	11/14/14.3	22.2	32	236.4	210	348	8	11	20.0
12	300	406	78	342	277	120	125/127	4	14/14.3	28.6	32	282.4	248	422	12	9.5	29.9

## Dimensions (Inch)

Valve Size		ØA	*B	ØD	E	Sq. F	Top Flange Drilling			Sq. G	J	K	L	M	N	R	App. Weight (lbs.)
Inch	DN						BC	No. of Holes	Hole Dia								
2	50	3.98	1.69	2.83	3.94	3.15	2.76/3.25	4	0.39/0.44	5/8	1.02	1.32	2.99	4.25	4	0.31	5
3	80	5.24	1.81	4.09	4.88	3.15	2.76/3.25	4	0.39/0.44	5/8	1.02	2.70	3.62	4.92	6	0.31	7
4	100	6.73	2.06	5.12	6.02	3.15	2.76/3.25	4	0.39/0.44	5/8	1.26	3.61	4.25	7.05	6	0.37	10
5	125	7.60	2.19	6.22	6.02	3.15	2.76/3.25	4	0.39/0.44	5/8	1.26	4.62	4.80	7.56	6	0.37	14
6	150	8.58	2.19	7.28	6.54	3.15	2.76/3.25	4	0.39/0.44	5/8	1.26	5.50	5.31	9.17	8	0.37	16
8	200	10.83	2.38	9.37	8.15	4.72	4.01/4.92/5.0	4	0.43/0.55/0.56	7/8	1.26	7.39	7.01	11.73	8	0.43	28
10	250	13.23	2.69	11.38	9.41	4.72	4.01/4.92/5.0	4	0.43/0.55/0.56	7/8	1.26	9.31	8.27	13.70	8	0.43	44
12	300	15.98	3.06	13.46	10.91	4.72	4.92/5.0	4	0.55/0.56	1-1/8	1.26	11.12	9.76	16.61	12	0.37	66

\* Face to Face dimension 'B' conforming to API 609 category A / BS EN-558 series 20 / ISO 5752 series 20 / MSS SP 67 / ASME B16.10

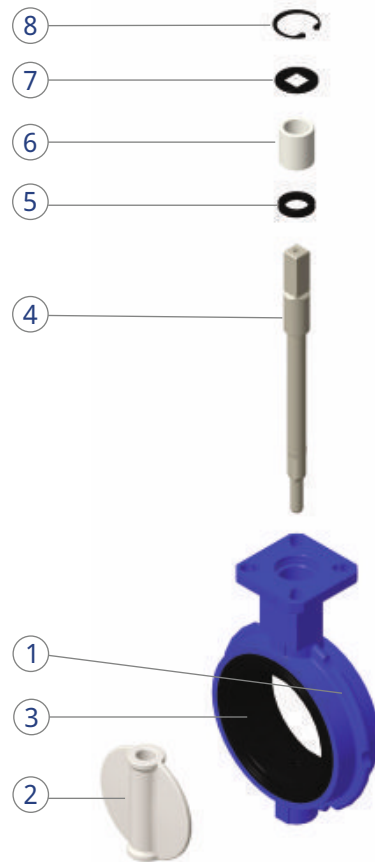
## Torque (Nm)

Valve Size	2"	3"	4"	5"	6"	8"	10"	12"
ΔP, bar	3.5	7	13	27	41	55	99	267
	7	8	16	29	44	62	110	302
	10	9	20	31	48	66	122	337
	12	10	22	32	50	70	128	355

## Torque (Lbf-Inch)

Valve Size	2"	3"	4"	5"	6"	8"	10"	12"
ΔP, psi	50	62	115	241	360	484	878	2366
	100	72	142	256	393	545	977	2677
	150	80	177	271	426	582	1083	2987
	175	91	197	279	443	620	1133	3146

# STANDARD MATERIALS OF CONSTRUCTION



## Part List

Item	Description	Standard Material*
1	Body	CI ASTM A126 CLASS-B / IS210 FG260 DI ASTM A395 60-40-18
2	Disc	DI ASTM A536 65-45-12 + Nylon coated DI ASTM A536 65-45-12 + Aroxy coated ASTM A351 CF8 / CF8M
3	Seat (in-situ molded)	EPDM / NBR (Buna-N) / Viton® (FKM)
4	Stem	ASTM A479 SS410
5	Stem Seal	NBR
6	Stem Bushing	Polyacetal
7	Stem Retainer	ASTM A240 SS304
8	Internal Circlip	Spring steel

\*Other materials may be available on request.

## Standards and Specifications

DelVal Series 59 Butterfly Valves are designed and manufactured to meet the requirements of the following industry standards:

**Design:** BS EN 593, MSS SP-67

**Face to Face:** API 609 Category-A, BS EN 558 Series 20,  
ISO 5752 Series 20, MSS SP-67

**Testing:** API 598, BS EN 12266-1

**Flange Standard:** Light weight industrial flanges (TTMA),  
ASME B16.5 Class 150, ASME B 16.1 Class 125

**Body Style:** One-Piece

**Rating:** 175 psi

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

**Size Range:** 2" to 12"

## Seat Temperature Limits

Seat Type	Temperature Limits*	
	Lower Limits	Upper Limits
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)

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

## Recommended Service

General on-off and throttling services from 1 mm Hg absolute vacuum to full working pressure. Valves are notched to fit between light weight flanges (TTMA).

## 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 for preventing 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

## CERTIFICATES



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