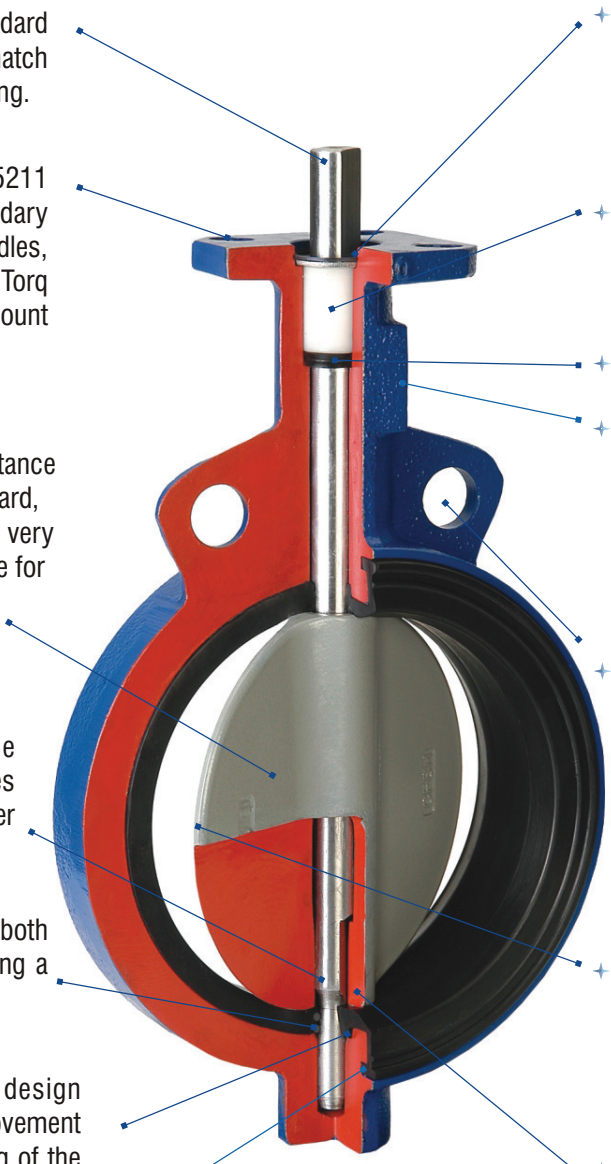
DelTech Controls is pleased to offer top-of-the-line products in pipeline flow control. The DelVal Series 50 (wafer body) and Series 52 (lug body) Butterfly Valves have been developed with extensive application, design and manufacturing expertise. These products are produced by employing modern manufacturing practices under a robust quality assurance system. These practices ensure consistent product quality and dependable performance. The DelVal Series 50/52 Butterfly Valves have been designed to include state-of-the-art features that are described in this bulletin.

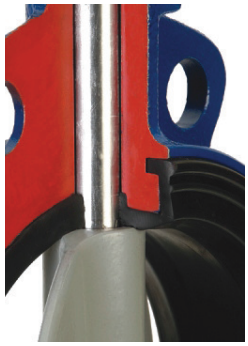
Features

- Stem connection available in standard DelVal sizes or optional sizes to match standard secondary top plate drilling.
- 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 Valves.
- 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 foodstuffs.
- One piece stem with close tolerance double D drive eliminates the need for disc screws or taper pins.
- Double O-rings are molded in both upper and lower journals providing a superior secondary seal.
- Unique "Center-Lock" seat design virtually eliminates any seat movement during the seating and un-seating of the disc.
- Heavy duty square-grooved seat design with molded O-ring seals to serve as flange gaskets. EPDM seats are peroxide cured to yield the best elastic properties of the elastomer.

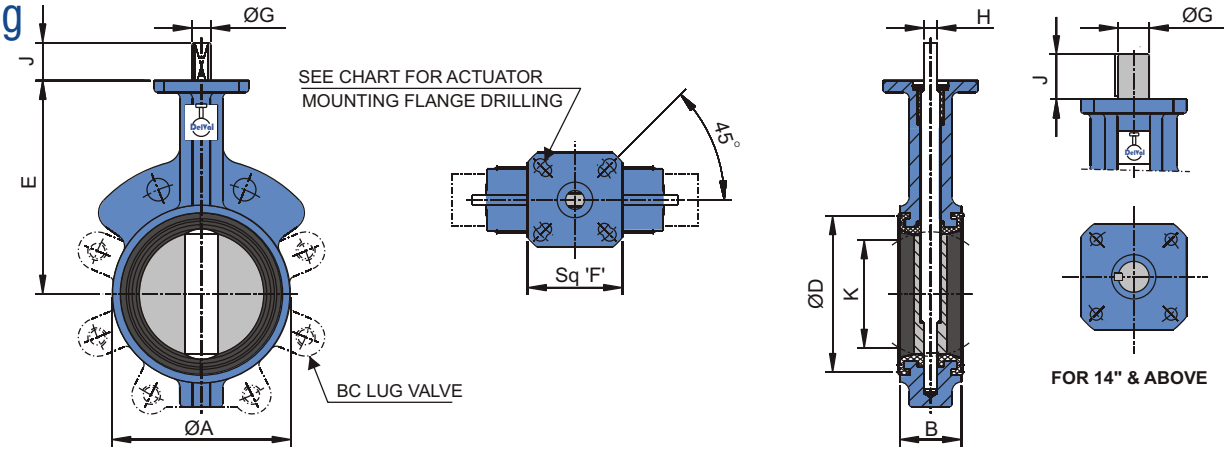


- Unique stem retention system to provide blow-out proof stem and easy assembly and disassembly of valve.
- Heavy duty acetal bushing absorbs the forces acting on the stem/disc assembly due to line pressure.
- Bi-directional 'U' cup stem seal.
- Heavy duty one-piece body with extended neck for 2" piping insulation. Standard coating is two coats of hard, Zinc-rich epoxy for excellent corrosion resistance.
- Two flange locating holes for sizes up to 12" and four flange locating holes from size 14" to 24" for easy alignment of valve during installation. They meet ANSI #125 /150 or other world drilling standards.
- High strength disc with hand polished disc edge and hubs.
- Precision machined radius on the upper and lower disc hubs is pressed against upper and lower seat sealing faces for achieving primary sealing between disc and seat.

- "Center-Lock" seat design



Engineering



DIMENSIONS (Inch)

Valve Size		ØA	*B	ØD	E	Sq'F'	Top Plate Drilling			ØG	H	J	Key Size	K	Lug Bolting Data			Weight in Lbs.	
Inch	DN						BC	No. of Holes	Hole Dia						BC	No.of Holes	Threads UNC-2B	Wafer (Series 50)	Lug (Series 52)
2	**50**	3.58	1.62	2.99	5.51	3.15	2.76 / 3.25	4	0.39/0.438	0.55	0.39	1.25	---	1.32	4.75	4	5/8-11	5.07	6.79
2 ½	**65**	4.13	1.75	3.54	5.98	3.15	2.76 / 3.25	4	0.39/0.438	0.55	0.39	1.25	---	2.05	5.50	4	5/8-11	5.80	7.91
3	**80**	4.72	1.75	4.17	6.30	3.15	2.76 / 3.25	4	0.39/0.438	0.55	0.39	1.25	---	2.70	6.00	4	5/8-11	6.83	8.92
4	**100**	5.91	2.00	5.20	7.09	3.15	2.76 / 3.25	4	0.39/0.438	0.63	0.43	1.25	---	3.61	7.50	8	5/8-11	10.87	16.37
5	**125**	6.89	2.12	6.30	7.56	3.15	2.76 / 3.25	4	0.39/0.438	0.75	0.51	1.25	---	4.62	8.50	8	3/4-10	13.91	21.56
6	**150**	8.07	2.12	7.36	8.07	3.15	2.76 / 3.25	4	0.39/0.438	0.75	0.51	1.25	---	5.50	9.50	8	3/4-10	16.31	25.35
8	**200**	10.20	2.50	9.45	9.49	4.72	2.76/4.92/5.00	4	0.39/0.55/0.563	0.87	0.63	1.25	---	7.39	11.75	8	3/4-10	28.00	37.92
10	**250**	12.21	2.50	11.50	10.75	4.72	4.92 / 5.00	4	0.55/0.563	1.18	0.87	2.00	---	9.31	14.25	12	7/8- 9	44.09	61.73
12	**300**	14.33	3.00	13.58	12.24	4.72	4.92 / 5.00	4	0.55/0.563	1.18	0.87	2.00	---	11.12	17.00	12	7/8- 9	60.85	92.26
14	**350**	16.34	3.00	15.28	13.62	4.72	4.92 / 5.00	4	0.55/0.563	1.38	---	2.00	0.39x0.39	12.92	18.75	12	1- 8	87.96	122.80
16	**400**	18.58	4.00	17.40	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	4.25	19.49	15.98	6.70	6.50	4	0.83	1.97	---	2.50	0.39x0.47	16.59	22.75	16	11/8 -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	0.39x0.47	18.61	25.00	20	11/8 -7	236.78	306.88
24	**600**	27.24	5.94	25.75	19.49	Ø8.27	6.50	4	0.83	2.50	---	4.00	0.62x0.62	22.55	29.50	20	11/4 -7	385.81	477.08

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

DIMENSIONS (mm)

Valve Size		ØA	**B	ØD	E	Sq'F'	Top Plate Drilling			ØG	H	J	Key Size	K	Lug Bolting Data			Weight in Kg.	
Inch	DN						BC	No. of Holes	Hole Dia						BC	No.of Holes	Threads UNC-2B	Wafer (Series 50)	Lug (Series 52)
2	**50**	91	43	76	140	80	70/82.5	4	10/11	14	10	32	---	33.5	120.7	4	5/8-11	2.30	3.08
2 ½	**65**	105	46	90	152	80	70/82.5	4	10/11	14	10	32	---	52.1	139.7	4	5/8-11	2.63	3.59
3	**80**	120	46	106	160	80	70/82.5	4	10/11	14	10	32	---	68.5	152.4	4	5/8-11	3.10	4.05
4	**100**	150	52	132	180	80	70/82.5	4	10/11	16	11	32	---	91.7	190.5	8	5/8-11	4.93	7.42
5	**125**	175	56	160	192	80	70/82.5	4	10/11	19	13	32	---	117.3	215.9	8	3/4-10	6.31	9.78
6	**150**	205	56	187	205	80	70/82.5	4	10/11	19	13	32	---	139.7	241.3	8	3/4-10	7.40	11.50
8	**200**	259	60	240	241	120	70/125/127	4	10/14/14.3	22	16	32	---	187.6	298.5	8	3/4-10	12.70	17.20
10	**250**	310	68	292	273	120	125/127	4	14/14.3	30	22	51	---	236.4	362.0	12	7/8-9	20.00	28.00
12	**300**	364	78	345	311	120	125/127	4	14/14.3	30	22	51	---	282.4	431.8	12	7/8-9	27.60	41.85
14	**350**	415	78	388	346	120	125/127	4	14/14.3	35	---	51	10x10	328.3	476.2	12	1-8	39.90	55.70
16	**400**	472	102	442	375	120	125	4	14	35	---	51	10x10	375.8	539.7	16	1-8	59.20	83.60
18	**450**	525	114	495	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	548	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	654	495	Ø210	165	4	21	63.5	---	102	15.88x15.88	572.7	749.3	20	1 1/4-7	175.00	216.40

** Metric valve 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 B 16.10

TORQUE (Lbf-Inch)

Valve Size		2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
Full Rated Pressure Valve △P, PSI	**50**	62	106	115	241	360	484	878	1409	2366	3064	3684	5795	6741	9601
	100	72	124	142	256	393	545	977	1586	2677	3527	4428	7273	8441	12482
	150	80	142	177	271	426	582	1083	1756	2987	3980	5178	8756	10126	15576
	175	91	150	197	279	443	620	1133	1841	3146	---	---	---	---	---
Reduced Disc Dia. △P, PSI	**50**	---	---	---	133	187	267	623	771	1259	2159	2627	3649	4285	6500

TORQUE (Nm)

Full Rated Pressure Valve △P, Bar	**3.5**	7	12	13	27	41	55	99	159	267	346	416	655	762	1085
	7	8	14	16	29	44	62	110	179	302	398	500	822	954	1410
	10	9	16	20	31	48	66	122	198	337	450	585	989	1144	1760
	12	10	17	22	32	50	70	128	208	355	---	---	---	---	---
Reduced Disc Dia. △P, Bar	**3.5**	---	---	---	15	21	30	70	87	142	244	297	412	484	734

EL-O-MATIC (INDIA) PVT. LTD.

(IN COLLABORATION WITH EL-O-MATIC B.V. OF HOLLAND)

PNEUMATIC ACTUATORS:

El-O-Matic Pneumatic actuators are powerful and compact double rack and pinion units for use with ball, butterfly and plug valves and any device requiring accurate and dependable quarter turn rotary motion.

The use of high grade steel and aluminium components together with El-O-Matic's patented 3 point piston support provides a tough reliable unit for the automation of today's high performance industrial valves. Modern synthetic bearings ensure no metallic contact between moving components.

Spring return actuators incorporate the multiple spring concept for maximum flexibility, they are also “field reverseable”. Safety features include an anti- blow out spindle and a spring retaining system which ensures no spring tension on disassembly.

A wide range of control options are available to cover each and every industrial application.

'E' Series actuators incorporate a body of cast aluminium and have pistons where the rack teeth are precision machined onto the aluminium casting. Spring return versions have a maximum of 6 springs, 3 in each end cap assembled as a concentric stack.

'P' Series actuators cover the large end of the torque range. These all incorporate a body of cast aluminium and have steel for the rack on pinion drive. Spring return versions have a maximum of 14 springs 7 in each end cap assembled within a hexagon pattern.

All actuators have mounting flanges and drives to ISO 5211. Mounting kits can be provided for most of the worlds quarter turn valves.

OPTIONS

- Double Acting Actuator
- Single Acting Actuator
- Actuator with steel housing
- Actuator with 180° rotation
- Three position Actuator
- Limit stops in the end caps
- Limit stop with Limit stop plate
- Actuator with ± 3° extra travel

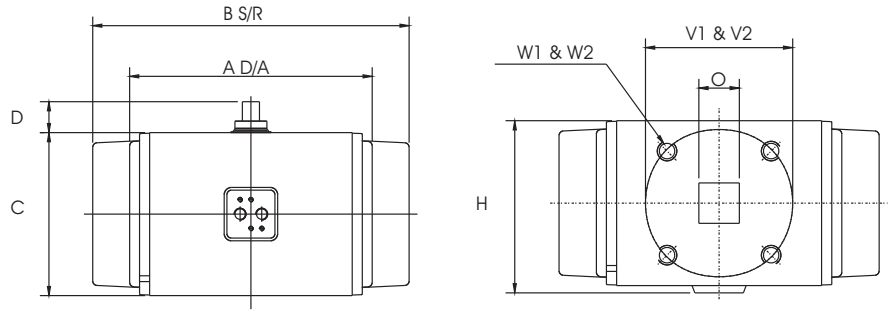
SPECIFICATIONS:

Pressure	:	Upto 8 bar
Temperature	:	- 20° to 80° C
Media	:	Air (dry or lubricated) Non-corrosive gas or light hydraulic oil
Construction	:	Suitable for indoor or outdoor installation
Material	:	Housing - Aluminium Alloy
Drive Shaft	:	Carbon Steel
Finish	:	Two coat polyurethane
Rotation (Standard)	:	Counter clockwise to open with port 'A' pressurised
	:	Spring return Actuators air fail to close clockwise
Movement (Standard)	:	91.5° from -0.5° to 91° counter-clockwise
Lubrication	:	Factory lubricated for the normal life of Actuators
Life	:	5,00,000 operations minimum

ACTUATOR TORQUE - AT 6 BAR

Model			E12	E25	E40	E100	E200	E350	E600	E950	E1600	P60	P150	P280	P500	P750	P1100	P2500	P4000
DA Torque (Nm)			14.6	27	51	115	251	436	741	1107	1829	69	174	329	581	864	1274	2935	4955
SR Torque (Nm)	Air Stroke	Start	10.3	13	25	58	125	206	364	554	907	42	109	195	382	582	834	2086	3240
		End	7.5	4	8	21	41	63	114	174	305	22	65	76	102	217	429	1338	1660
	Spring Stroke	Start	7.2	21	40	88	196	347	584	869	1421	44	102	236	448	605	791	1495	3084
		End	4.6	13	25	55	123	223	367	538	897	25	59	120	179	253	396	764	1544

ACTUATOR DIMENSIONS (mm)



Model	A	B	C	D	H	O	V1	V2	W1	W2
E12	103	118	60	20	60	9	42	-	M6x8	-
E25	135	178	81	20	83	11	50	-	M6x9	-
E40	147	204	95	20	97	14	50	70	M6x9	M8x10
E100	176	267	118	20	117	19	50	70	M6x9	M8x10
E200	237	360	143	20	137	22	70	102	M8x10	M10x12
E350	305	387	181	20	182	27	70	102	M8x10	M10x12
E600	387	477	220	30	217	27	102	125	M10x12	M12x15
E950	424	517	259	30	242	36	102	140	M10x12	M16x20
E1600	516	570	297	30	275	46	165	-	M20x25	-
P60	155	184	101	20	110	14	50	70	M6x9	M8x10
P150	186	217	135	20	144	19	70	102	M8x10	M10x12
P280	232	312	160	20	173	22	70	102	M8x10	M10x12
P500	271	352	190	30	206	27	102	125	M10x12	M12x15
P750	285	388	234	30	255	27	102	125	M10x12	M12x15
P1100	340	478	247	30	261	36	140	-	M16x20	-
P2500	380	568	360	30	360	46	165	-	M20x25	-
P4000	498	835	380	30	390	55	254	-	M16x20x8	-