



**CLEARANCE TYPE
BUTTERFLY VALVE**

SERIES - 7100



Series 7100 Butterfly Valve

Series 7100 are basically seatless butterfly Valves. The valves are used for applications where leakage is acceptable. They require substantially reduced operating torques due to absence of seat and therefore remain very effective for control applications. These valves are well suited for High Temperature and Low Pressure applications. They are even suitable for regulating services in High Temperature Gas Lines up to +800°C

Features

- Light and Sleek construction
- Large flow capacities
- Easy maintenance
- Field proven design
- Variety of material selection
- High temperature capability up to +800° C
- Large range of sizes
- Wide range of Actuators

Specifications

Sizes	: DN 500 Thru DN 3000 20" Thru 120"
Design & Manufacturing	: EN 593, API 609
Pressure Class	: PN2.5, PN6, PN10, PN16, 150#
Working Temperature	: -20° C to +800°C
End Connection	: Wafer, Flanged
Face to Face	: EN 558-1, API 609
Flange Dimension	: DIN EN 1092-1, ANSI B16.5 ANSI B16.47
Testing Standard	: ANSI / FCI 70.2 Class II.
Actuators	: Pneumatic Actuators Manual Gear Operators Electrical Actuators

Design Details

Body Construction

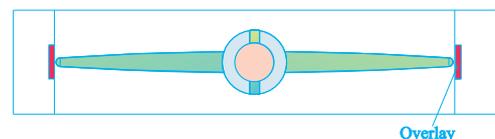
Bodies are available in Double Flanged Construction with face to face dimensions as per EN558-1/ API 609. Flange drilling can be provided per DIN EN 1092-1 or ANSI B16.5 or B16.47 Standards. Flanges are Raised Face type, Groove on Flanges can be provided on request.

Valve Shaft

Shafts are constructed to Corrosion Resistant Metals A479 type 410 , 304 or 316 materials. Shafts are ground and Hard chrome plated for perfect gland tightness. Shaft design consists of a two piece hub type shaft with square or key connection for actuator. The out board end of the shafts are permanently marked to indicate the disc position.

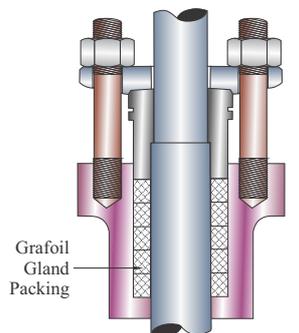
Body / Disc Overlay (Optional)

Body / Disc are provided with Metal overlay (optional). In case if disc material is carbon steel, the overlay materials may be stainless steel 304/316 or Stellite providing the corrosion and abrasion resistance.

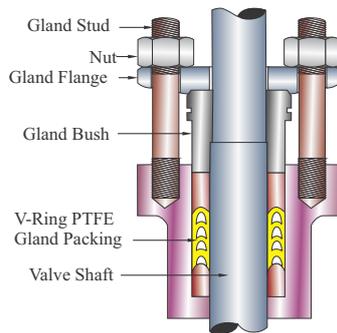


Field Adjustable Gland Packing

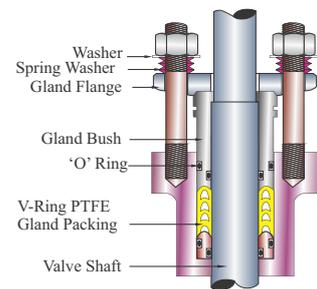
Gland arrangement is consisting of V shaped PTFE Rings for temperature (<200°C) or Grafoil ring for temperature above 200°C upto 800°C. Low fugitive emission gland packings are available on request.



Grafoil Gland Packing



V-PTFE Gland Packing

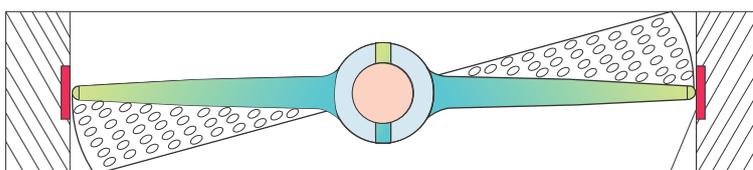


Low Fugitive emission Gland Packing

Multi Hole Disc

Conventional Butterfly Valve in the throttling application produce cavitation effect at low differential pressure. This cavitation & differential pressure with high noise emission result into rapid mechanical wear and early failures of the valve components. To reduce these effects these butterfly valves are offered with multi holed disc. The multi hole disc has two semi spherical contours with number of holes drilled. These two contours cover one

third of the 90° travel. It is used to split the flow and create high pressure drop. It also reduces noise level. Multi hole disc provides smooth valve opening (0° to 90°)



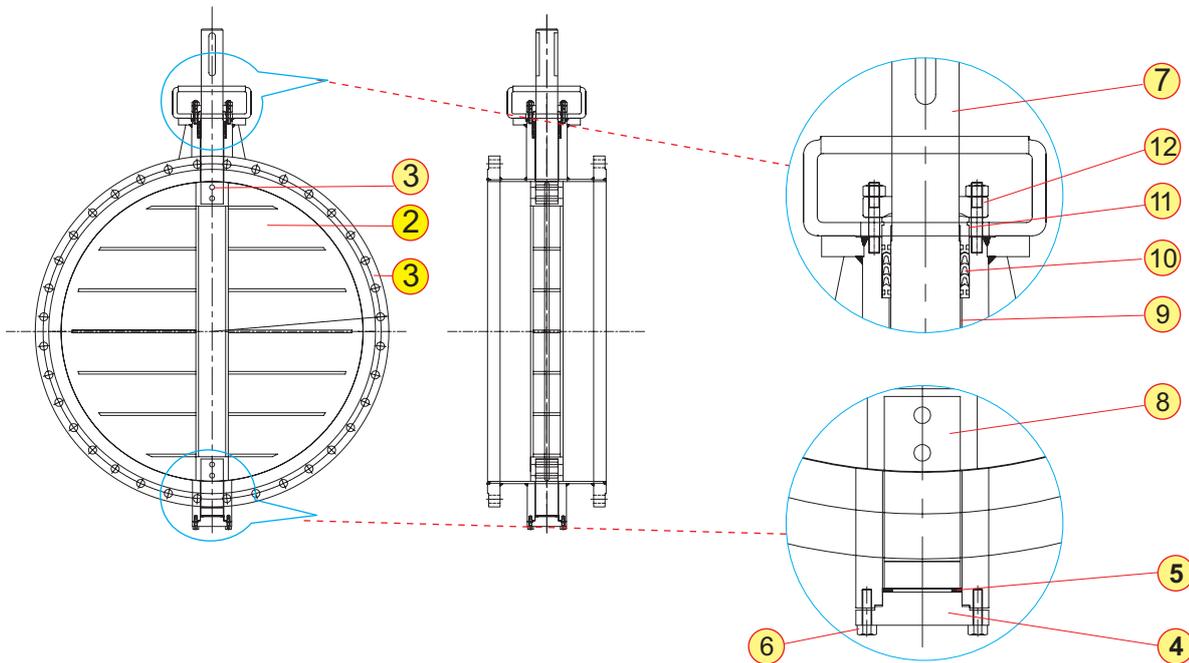
Overlay

Cv Values (usgpm)

VALVE SIZE NB	DN	Cv at 60° (USGPM)	Cv at 90° (USGPM)
2	50	55	110
2.1/2	65	90	180
3	80	140	280
4	100	220	440
6	150	600	1200
8	200	1000	2000
10	250	1700	3400
12	300	2400	4800
14	350	3300	6600
16	400	4200	8400
18	450	5200	10400
20	500	7700	15400
24	600	11880	23760

VALVE SIZE NB	DN	Cv at 60° (USGPM)	Cv at 90° (USGPM)
28	700	16170	32340
30	750	18700	37400
32	800	22643	45286
36	900	30525	61050
40	1000	15757	90915
44	1100	50405	100810
48	1200	59565	119130
54	1350	73425	146850
56	1400	78965	157930
60	1500	87450	174900
64	1600	101376	202752
68	1700	114444	228888
72	1800	117720	235440
80	2000	145280	290560
120	3000	326880	653760
124	3100	349035	698070

Valve Components



Part No.	Part Name
①	Valve Body
②	Disc
③	Disc Pin
④	End Cover
⑤	End Cover Gasket
⑥	End Cover Bolts

Part No.	Part Name
⑦	Valve Shaft - Front
⑧	Valve Shaft - Rear
⑨	Bearing (Guide Bush)
⑩	Gland Packing
⑪	Gland Bush
⑫	Gland Flange

Actuators for Series 7100

Piston Actuators

Series 'E' and Series 'P' actuators are powerful, compact and durable units for use on quarter turn applications. These are available in Double acting and spring return versions. Various models are available to suit a large range of torque requirements. All actuators have mounting flanges and drives to ISO 5211.



Manual Gear Operators

Dembla offers a wide range of Manual Gear Operator models to suit exact Torque requirements. These operators are available with Hand wheel as standard and with chain wheel & 2" Square Nut



Diaphragm Actuators

Series 'Ldp' actuators are Diaphragm operated rotary actuators using linkage arrangement for motion transfer from linear to rotary. These actuators are exclusively designed for Butterfly Valves and are suitable for regulating and on-off applications. The actuators provide accurate, safe and reliable valve operation at low supply pressures. Heavy-duty lever arrangement offers great stability under high torque and shock conditions. Low friction operation allows more accurate



Electric Motor Operators

Dembla provides valves with electric motor actuators produced by leading manufacturers. A wide range of electrical actuators are available.

Rotary Piston Actuators

Series 'LPD' / 'LPS' Actuators are piston operated double acting / single acting actuators using lever arrangement. These actuators are designed for higher leverage and higher torque range which is not available with conventional rack and pinion type piston actuators. These actuators are available with manual override also.



Accessories Options

Following Accessories are offered as per customers requirements

- Pneumatic Valve Positioners
- Electro Pneumatic Valve Positioners
- Air Filter Regulators
- Air Lock Relays
- Limit Switches
- Volume Boosters
- Proximity Switches
- Solenoid Valves
- Position Feedback Transmitters
- Quick Exhaust Valves
- I/P Converters



Limit Switch

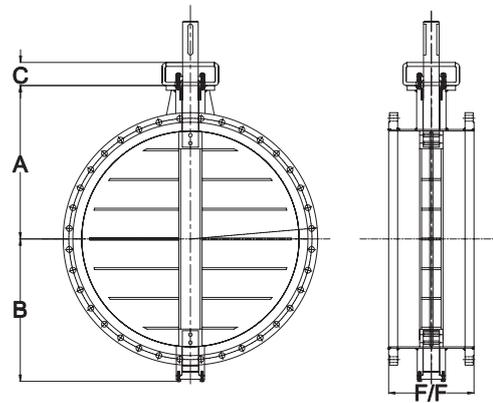
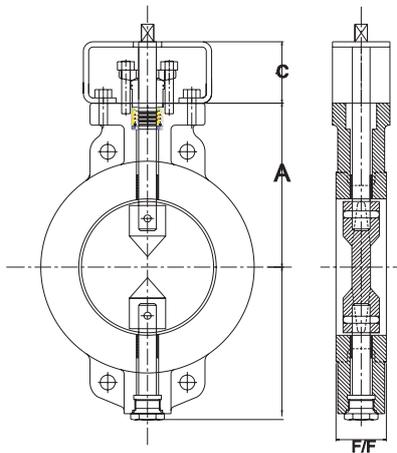


Electro Pneumatic Positioner



Smart Positioner

Overall Dimensions (mm)



Flange Type

NB	DN	F/F	A	B	C
2	50	43	100	85	55
2.1/2	65	46	110	85	55
3	80	48	131	92	70
4	100	54	153	112	70
6	150	57	187	174	70
8	200	64	217	208	80
10	250	165	250	240	135
12	300	216	340	344	145
14	350	267	510	520	165
16	400	292	520	520	165
18	450	114	375	382	100
20	500	127	406	398	100
24	600	154	510	460	110

Flange Type

NB	DN	F/F	A	B	C
28	700	292	525	509	165
30	750	305	600	582	165
32	800	318	600	525	165
36	900	330	200	671	165
40	1000	410	710	685	165
48	1200	470	840	836	165
56	1400	530	990	965	198
64	1600	600	1036	1029	190
68	1700	635	1175	1120	275
72	1800	670	1273	1221	275
80	2000	760	1270	1280	275
124	3100	1140	2000	1970	275



Dembla

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