

# DOUBLE FLANGED RESILIENT SEAT BUTTERFLY VALVE MODEL - USSE 150-1200MM



## FEATURES AND BENEFITS

- This product is Bi-directional, ideal for throttling or bubble tight shut off at full rated pressure.
- The Phenolic backed seat is blow out proof and easily field replaceable.
- Triple shaft bushing located at the top, middle and bottom of the valve act as bearing lubricant, preventing shaft or disc deflection, provides precision disc positioning and allows easy operation while reducing component wear.
- Bushing provides secondary seal points to liner preventing ingress of media into the shaft cavity area.
- Shaft sealing: Rubber O-rings located at the top, middle and bottom of the valve protect against the ingress of foreign matter and media, in addition it also protects against corrosion. Moulded in O-rings on the seat seal against the shaft also protect against the ingress of foreign media and corrosion.
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- The entire wetted area of the valve body is rubber lined extending over the flanges, providing corrosion protection.
- Reliable one piece shaft ensures higher stability and greater disc control.
- Mounting flange complies with ISO5211 allowing for direct mounting.
- Installation can be made on any angle.
- Maintenance free design.
- Suitable for vacuum service (2 Bar).
- Precision taper pins ensure positive connection with the disc avoiding blow out under pressure and vibration, they are also easily replaceable.
- Polished disc edges reduce seating torque and scrubbing action. This increases valve performance and life cycle.
- 150mm - 300mm available with stainless steel lever handle. All sizes available with gearbox or actuation.



## TECHNICAL SPECIFICATION

**Construction:** U-Flanged concentric seal on body

**Design:** In accordance with AS4795 / EN593

**Size:** 150mm - 1200mm

**Face to Face:** ISO5752 Series 20 AS4795

**Pressure Rating:** PN16

**Pressure Testing:** EN12266.1/AS4795

**Flange Drilling:** : AS4087 PN16 (Table D), AS2129 Table E, ANSI B16.5 #150

**Coatings:** FBE Jotun Corro-coat

**Temperature Range:** -20°C to 110°C

## APPLICATIONS

Challenger Valves and Actuators are the **“Right Choice for Valves and Actuation”** when quality matters.

Servicing industries such as : Chemical, Textile, Paper, Engineering, Water and Waste Water.

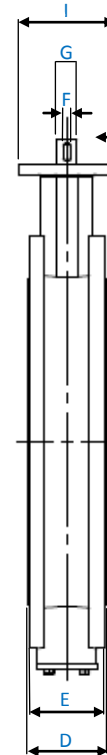
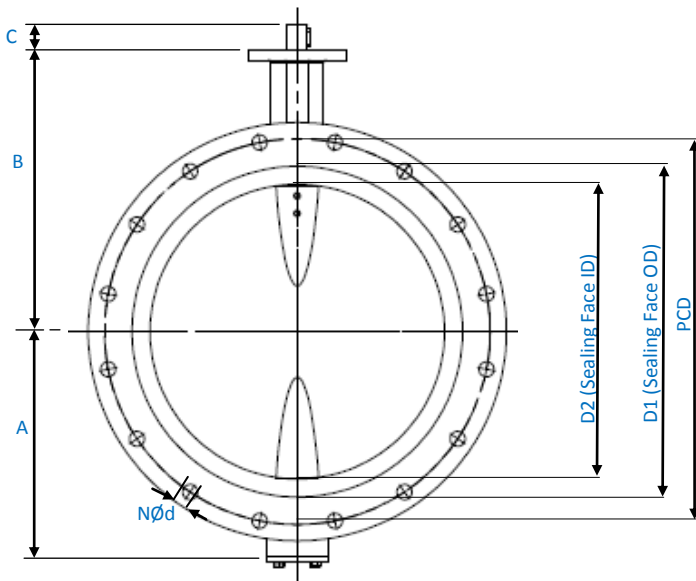
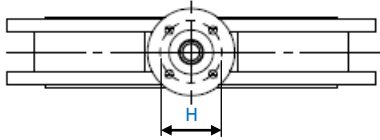
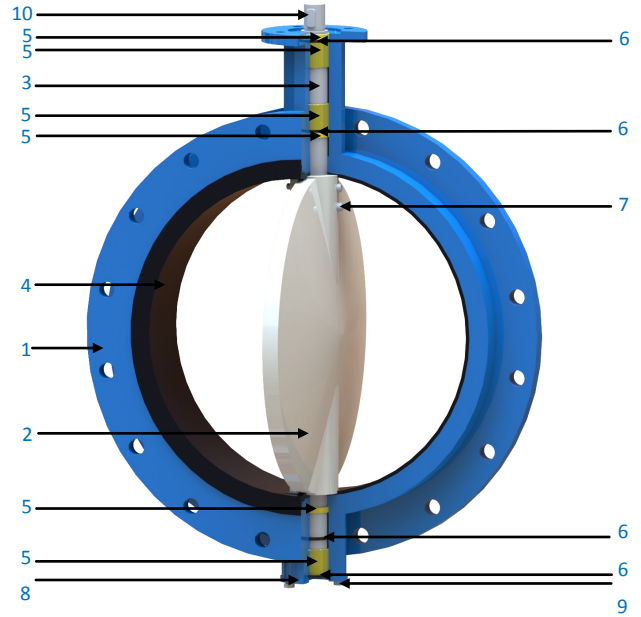
These valves are suitable for throttling or stopping the flow of corrosive or non-corrosive media such as gases, liquids, semiliquids and solid powder.

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## TECHNICAL : VALVE MATERIALS

ITEM	COMPONENT	MATERIAL	GRADE
1	Body	Ductile Iron	AS1831
2	Disc	Stainless Steel	ASTM A351 - CF8M
3	Stem	Stainless Steel	ASTM A276 - 431
4	Seat	EPDM Rubber	AS1646 - AS681.1
5	Bushing	Bronze	N/A
6	O-Ring	NBR (NITRILE) Rubber	AS1646 - AS681.1
7	Taper Pin	Stainless Steel	316/431
8	End Cap	Ductile Iron	AS1831
9	Fasteners	Stainless Steel	ASTM A 0276 - 316
10	Key	Tool Steel	



SIZE	A	B	C	D	D1	D2	E	F (Key)	G	H	I	Nød		PCD Table C/D	Disc Protrusion Ø	KGs LEVER	KGs GEARBOX
												Tapped	Through				
150MM	133	226	30	59	188.4	154.2	54	-	14*	70	92	8 x M16	-	235	144	15	21
200MM	175	260	34	64	238.2	200.9	60	-	17*	102	125	8 x M16	-	292	194	23	29
225MM	190	275	34	72	267	237	67	-	22*	102	125	8 x M16	-	324	216	32	38
250MM	203	292	34	72	292.4	248.9	67	-	22*	102	128	8 x M20	-	356	242	36	42
300MM	242	337	34	79	344.2	299.9	76	-	22*	102	140	12 x M20	-	406	292	53	59
350MM	267	368	40	79	375.1	331.7	76	1 x 8mm	31.7	102	140	12 x M24	-	470	325	-	70
375MM	313	375	52	106	414	377	102	1 x 10mm	33.1	140	197	12 x M24	-	495	351	-	102
400MM	309	400	52	106	439.2	387.5	102	1 x 10mm	33.1	140	197	12 x M24	-	521	388	-	107
450MM	337	422	52	119	490.1	438.4	114	1 x 10mm	38	140	197	12 x M24	-	584	425	-	137
500MM	368	480	64	132	535	489.6	127	1 x 10mm	41	140	197	16 x M24	-	641	475	-	215
600MM	459	562	70	156	654.2	590.1	151	2 x 16mm	50.6	165	276	4 x M27	12 x 30	756	573	-	291
700MM	527	626	95	169	744.1	692	165	2 x 18mm	63.35	254	300	4 x M27	16 x 30	845	675	-	470
750MM	554	660	95	172	791	749	167	2 x 18mm	63.35	254	300	4 x M30	16 x 33	927	723	-	505
800MM	605	666	95	195	849.9	792.6	190	2 x 18mm	63.35	254	300	4 x M33	16 x 36	984	772	-	608
900MM	668	720	130	211	947	861	203	2 x 20mm	75	254	300	4 x M33	20 x 36	1092	839	-	832
1000MM	728	806	130	224	1053	961	216	2 x 22mm	85	254	300	4 x M33	20 x 36	1175	943	-	960
1050MM	784	865	150	259	1124	1040	251	2 x 22mm	95	254	300	4 x M33	24 x 36	1251	1030	-	1145
1200MM	855	938	150	284	1264	1156.1	276	2 x 28mm	105	298	350	4 x M33	28 x 36	1410	1124	-	1485

Compensation ring may be required when mating valves against DI/CL pipe.

\* Denotes square shaft

Information shown may be subject to change in accordance with Challenger Valves and Actuators continuing development program. ©Challenger Valves and Actuators 2011

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## TECHNICAL DATA

### TORQUE DATA

Torque is the measure of the turning force on an object. For a butterfly valve the turning force is determined by the friction of the disc and the seat, bushing friction and fluid dynamic torque.

The torques listed are based on normal temperatures and applications at full 16 Bar (1600KPA) rated pressures

### OPTIONS

- Epoxy coating to AS4020.  
Jotun Tankgard 412.
- Hand wheel operation up to 300mm
- Gearbox operation
- Lockable gearbox
- Actuation:
  - Pneumatic
  - Electric
  - Hydraulic
- Torque limiting devices
- Buried service
- Submerged service
- Extension spindles
- Chain wheel operation
- Seat material: NBR (Nitrile)
- Disc material: Bronze, Duplex
- Shaft material: Monel
- Flange drillings: AS2129 Table E, ANSI B16.5 (ANSI#150), DIN
- Limit switches
- 316 Stainless Steel fasteners

TORQUE (Nm)	
SIZE (mm)	@ 16 BAR
150	128
200	240
225	394
250	404
300	613
350	782
375	1038
400	1056
450	1414
500	1789
600	2877
700	5312
750	6122
800	7000
900	8543
1000	14504
1200	20402

### TORQUE NOTES:

For conditions that vary from those noted, apply the following Application Factor Multipliers:

- Operated less than once per day x 1.2
- Dry Service with gas or air x 1.5
- Dry Service with abrasive powder x 1.7
- Lubricant oils x 0.5
- Temperature - lower than -4.5°C x 1.2
- higher than 93°C x 1.2
- For NBR (Nitrile) Seat Figures will be 1.1 times

\*These figures include 25% safety factors

USSE SIZING CHART				
SIZE	GEARBOX	DOUBLE ACTING PNEUMATIC ACTUATOR	SPRING RETURN PNEUMATIC ACTUATOR	ELECTRIC ACTUATORS
150	SBWG BF	HP-DA100	HP-SR125	HQ015
200	SBWG-0	HP-DA125	HP-SR160	HQ030
225	SBWG-0	HP-DA160	HP-SR200	HQ030
250	SBWG-0	HP-DA160	HP-SR200	HQ050
300	SBWG-0	HP-DA160	HP-SR212	HQ080
350	SBWG-00	HP-DA200*	HP-SR212*	HQ080
375	SBWG-1-1S	HP-DA-200*	HP-SR212*	HQ120
400	SBWG-1-1S	HP-DA200*	HP-SR212*	HQ120
450	SBWG-1-1S	HP-DA212*	ETS085SR300*	HQ200
500	SBWG-2-1S	HP-DA212*	ETS085SR300*	HQ200
600	SBWG-3-1S	HP-DA212*	ETS100SR385*	HQ300
700	SBWG-04-1S2B	ETS085DA 335*	ETS130SR435*	HQ600
750	SBWG-04-1S2B	ETS100DA 335	ETS130SR485*	HQ800
800	SBWG-04-1S2B	ETS100DA 385	ETS130SR535*	HQ800
900	SBWG-04-1S2B	ETS 100DA 385	ETS160SR535*	HQ900
1000	SBWG-05-1SD	ETS130DA 435*	ETS200SR635*	TBC
1200	SBWG-06-1SD	ETS 130DA 535*	ETS200SR635*	TBC

\*Bracket & drive piece required for mounting