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INDUSTRIAL SPLIT BODY BUTTERFLY VALVES

SERIES 1100



WAFER & LUG DESIGN
SIZES: 2" - 24"

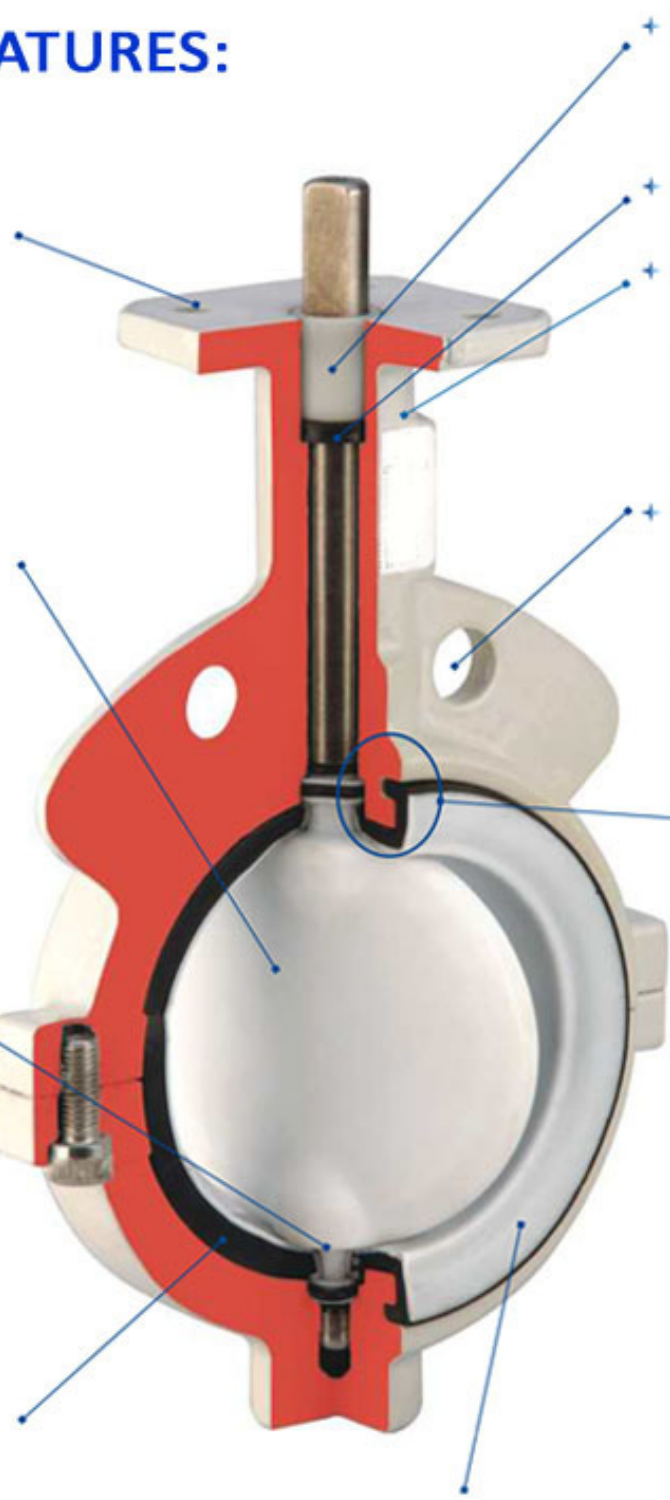
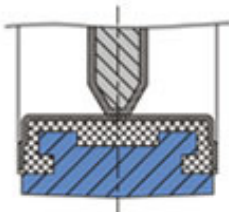
SERIES 1100 FEATURES:

+ Top plate drilled to fit ISO 5211 bolt circle dimensions. All handles, gear operators and VALTORC pneumatic actuators are designed to mount directly to VALTORC Valves.

+ One-piece disc/stem in high strength design. Available in options such as 316 stainless steel (thin profile, with hand polished edge and hubs), PTFE, Nylon 12 Coated 316 SS or rubber covered with the covering extending on the stem in the sealing area.

+ 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 stem.

+ Unique heavy-duty, square grooved "Center Lock" seat design virtually eliminates any seat movement during the seating and unseating of the disc.



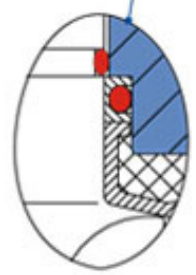
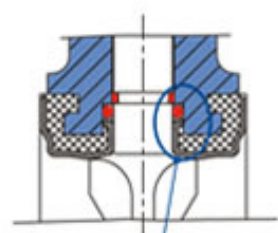
+ Heavy-duty acetal bushing absorbs the forces acting on the stem/disc assembly due to line pressure.

+ Bi-directional "U" cup stem seal.

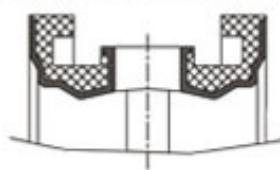
+ Heavy-duty, two-piece body with extended neck for 2" piping insulation. Standard coating is Nylon 12. Two coats of hard, zinc-rich epoxy for excellent corrosion resistance is optional.

+ Two flange locating holes for sizes up to 12" for easy alignment of valve during installation. They meet ANSI#125/150 or other world drilling standards.

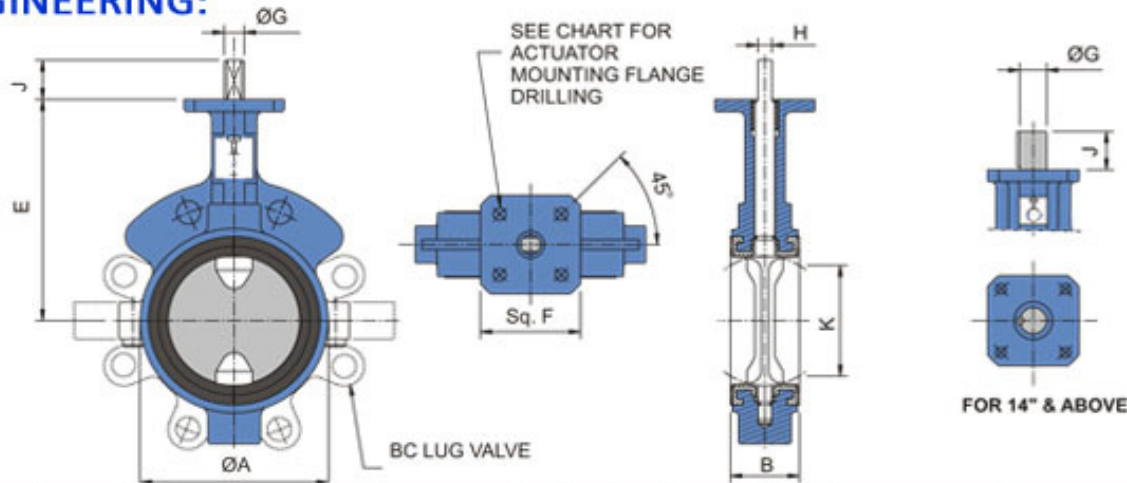
+ Unique triple seal stem sealing system has a "U" cup Teflon® seal energized by an O-ring to provide a positive seal at the Teflon® flange and around the stem. Another O-ring around the stem provides the third seal, on PTFE disc only.



+ Unique Teflon® seat design has continuous homogeneous Teflon® that extends through the stem area and is flanged on the back of the seat.



SERIES 1100 ENGINEERING:



DIMENSIONS (inch)

Valve Size		ØA	*B	E	Sq.F	Top Flange 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-28	Wafer (Series 40)	Lug (Series 41)
2	50	3.46	1.62	5.51	3.15	2.76	4	0.39	0.55	0.39	1.25	---	1.32	4.75	4	5/8-11	5.07	6.79
2 1/2	65	4.02	1.75	5.98	3.15	2.76	4	0.39	0.55	0.39	1.25	---	2.05	5.50	4	5/8-11	5.80	7.91
3	80	4.72	1.75	6.30	3.15	2.76	4	0.39	0.55	0.39	1.25	---	2.70	6.00	4	5/8-11	6.83	8.92
4	100	5.91	2.00	7.09	3.15	2.76	4	0.39	0.63	0.43	1.25	---	3.61	7.50	8	5/8-11	10.87	16.37
5	125	6.89	2.12	7.56	3.15	2.76	4	0.39	0.75	0.51	1.25	---	4.62	8.50	8	3/4-10	13.91	21.56
6	150	7.87	2.12	8.07	3.15	2.76	4	0.39	0.75	0.51	1.25	---	5.50	9.50	8	3/4-10	16.31	25.35
8	200	10.04	2.50	9.49	4.72	4.92	4	0.55	0.87	0.63	1.25	---	7.39	11.75	8	3/4-10	28.00	37.92
10	250	12.21	2.50	10.75	4.72	4.92	4	0.55	1.18	0.87	2.00	---	9.31	14.25	12	7/8-9	49.09	61.73
12	300	14.17	3.00	12.24	4.72	4.92	4	0.55	1.18	0.87	2.00	---	11.12	17.00	12	7/8-9	60.85	92.26
14	350	16.34	3.00	13.62	4.72	4.92	4	0.55	1.38	---	2.00	0.39x0.39	12.92	18.75	12	1-8	87.96	122.80
16	400	18.58	4.00	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	15.98	6.70	6.50	4	0.83	1.97	---	2.50	0.39x0.47	16.59	22.75	16	1 1/8-7	194.45	239.42
20	500	22.83	5.00	17.24	6.70	6.50	4	0.83	1.97	---	2.50	0.39x0.47	18.61	25.00	20	1 1/8-7	236.78	306.88
24	600	27.24	5.94	19.49	Ø8.27	6.50	4	0.83	2.50	---	4.00	0.62x0.62	22.55	29.50	20	1 1/4-7	385.81	477.08

DIMENSIONS (mm)

Valve Size		ØA	*B	E	Sq.F	Top Flange 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-28	Wafer (Series 40)	Lug (Series 41)
2	50	91	41	140	80	70	4	10	14	10	32	---	33.5	120.7	4	5/8-11	2.30	3.08
2 1/2	65	105	44	152	80	70	4	10	14	10	32	---	52.1	139.7	4	5/8-11	2.63	3.59
3	80	120	44	160	80	70	4	10	14	10	32	---	68.5	152.4	4	5/8-11	3.10	4.05
4	100	150	51	180	80	70	4	10	16	11	32	---	91.7	190.5	8	5/8-11	4.93	7.42
5	125	175	54	192	80	70	4	10	19	13	32	---	117.3	215.9	8	3/4-10	6.31	9.78
6	150	205	54	205	80	70	4	10	19	13	32	---	139.7	241.3	8	3/4-10	7.40	11.50
8	200	259	64	241	120	125	4	14	22	16	32	---	187.6	298.5	8	3/4-10	12.70	17.20
10	250	310	64	273	120	125	4	14	30	22	51	---	236.4	362.0	12	7/8-9	20.00	28.00
12	300	364	76	311	120	125	4	14	30	22	51	---	282.4	431.8	12	7/8-9	27.60	41.85
14	350	415	76	346	120	125	4	14	35	---	51	10x10	328.3	476.2	12	1-8	39.90	55.70
16	400	472	102	375	120	125	4	14	35	---	51	10x10	375.8	539.7	16	1-8	59.20	83.60
18	450	525	108	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	438	170	165	4	21	50	---	64	10x12	472.6	635.0	20	1 1/8-7	107.40	139.20
24	600	692	151	495	Ø210	165	4	21	63.5	---	102	15.88x15.88	572.7	749.3	20	1 1/4-7	175.00	216.40

TORQUE (Nm)

Valve Size		2"	2.5"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
Full Rated Pressure Valve Δ P, PSI	50	151	183	293	377	502	680	1257	2009	3040	4185	5754	8108	10096	15955
	100	188	229	366	471	628	850	1571	2511	3800	5231	7193	10135	12620	19944
	150	222	269	431	554	739	1000	1848	2954	4471	6154	8462	11924	14847	23464
Full Rated Pressure Valve Δ P, Bar	3.5	17	21	33	43	57	77	142	227	344	473	650	916	1141	1803
	7	21	26	41	53	71	96	177	284	429	591	813	1145	1426	2253
	10	25	30	49	63	83	113	209	334	505	695	956	1347	1678	2651

TORQUE (Lbf-Inch)

SPECIFICATIONS:

The series 1100 valve has a two-piece (split body) cast iron body available in wafer and full lug construction. All wafer valves have a flange with locating holes that meet ANSI Class 125/150 (or BS 10 Table D and E, BS 4504 PN10/16, DIN PN 10/16, AS 2129 and JIS 10) drilling. The disc/stem is a one-piece design having a thin profile, high flow capacity disc. If PTFE or rubber covered is required, the entire disc material is encapsulated and the encapsulating material is homogeneous up and down a portion of the stem so as not to expose any part of the stem or disc to the line media. The seat is of the heavy-duty, square groove "center lock" seat design with primary hub seal and molded O-ring suitable for weld neck and slip on flanges. The seat has two molded O-rings around the stem in the hub area which totally encapsulates the body without the use of flange gaskets. The 316 SS disc has spherically machined and hand polished disc edge and hubs for minimum torque and maximum sealing capacity. Stem sealing incorporates the unique "tri seal" sealing method. The PTFE seat has the Teflon® material continuous through the stem hole and flanged on the backside of the seat. The valve has a non-corrosive bushing and a self-adjusting stem seal.

Pressure Rating : Valve is bi-directional and tested to 110% of full rating. EPDM or Buna N molded disc/stem with resilient seat are rated at 150 psi. PTFE molded disc/stem with PTFE seat are rated at 150 psi.

Dead-End Service : Lug bodies for use in dead end services with no downstream flanges are equal to bi-directional ratings as stated above. The valve design permits optimum performance without any field adjustment.

PTFE Advantages and Applications :

PTFE is a superior material for use in highly corrosive applications. It is inert to most chemicals at high temperatures and pressures. It also has a low coefficient of friction. PTFE is ideal for use in the chemical industry, in processes with hazardous fluids, in the food and beverage industry, pharmaceutical facilities, electronics production plants and other industries where the media must not come in contact with any organic or metallic materials.

MATERIALS:

BODY :

- ◆ Nylon 12 Coated Cast Iron ASTM 126 Class B
- ◆ Epoxy Coated Cast Iron ASTM A126 Class B
- ◆ Ductile Iron ASTM A 536 65-45-12
- ◆ 316 Stainless steel ASTM A 351 CF8M
- ◆ Carbon Steel ASTM A 216 WCB

SEAT :

- ◆ Buna-N - Food Grade
- ◆ EPDM - Food Grade
- ◆ VITON® / FKM
- ◆ White Buna-N - Food Grade
- ◆ PTFE - Lined EPDM
- ◆ PTFE - Lined Buna - N

DISC / STEM :

- ◆ Stainless Steel:
- ◆ 2"-24" (DN50-DN600) SS316 Disc/Stem
- ◆ 2"-12" Investment Cast
- ◆ 14"-24" Fabricated

Rubber Molded :

- ◆ 2"-24" (DN50-DN600) with EPDM, Buna-N rubber molded over One-piece Carbon Steel Disc and 17-4-PH Stem.

PTFE Molded :

- ◆ 2"-24" (DN 50-DN 600) with PTFE material molded over one-piece SS 316 Disc and 17-4-PH Stem

Nylon 12 Coated :

- ◆ 2"-24" (DN50-DN600) with Nylon 12 Coating over one-piece SS316 Disc and SS410 Stem

General Design and Manufacturing Standards : API 609 / BS EN 593 / MSS SP-67

Testing Standards : API 598 / BS EN 12266-1 / MSS SP-67

Seat Temperature Range:

Seat Type	Temperature Range	
	Min.	Max.
EPDM	-13° F (-25°C)	302° F (150°C)
BUNA-N	-13° F (-25°C)	212° F (100°C)
Viton® / FKM	23° F (-5°C)	392° F (200°C)
White BUNA-N	-13° F (-25°C)	212° F (100°C)
PTFE-Lined EPDM	-20° F (-29°C)	302° F (150°C)
PTFE-Lined-Buna-N	-13° F (-25°C)	212° F (100°C)

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