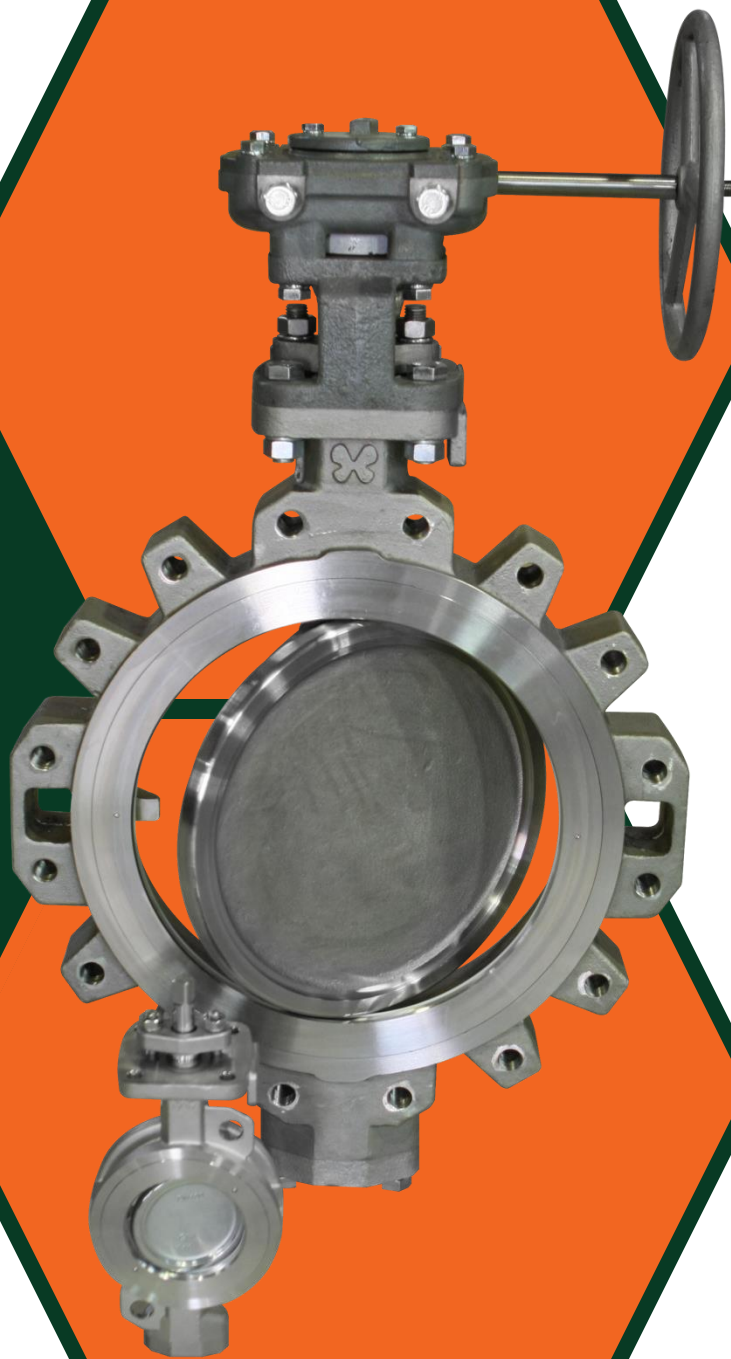




SABLE CONTROLS

ANSI 150 HIGH
PERFORMANCE
BUTTERFLY VALVE
FOR PRODUCED
WATER SERVICE



SBF SERIES

DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE



SABLE CONTROLS

ANSI 150 HIGH PERFORMANCE BUTTERFLY VALVE FOR PRODUCED WATER SERVICE

Sable Controls is a high-quality valve and actuator manufacturer with headquarters in Midland, TX. The company was created after decades of experience in valve and actuator distribution. Over the years, we've worked closely with many other manufacturers and know what works and what doesn't in oil and gas applications.

Our products are designed and selected specifically for the oil and gas market. We work closely with our factories to improve upon designs and source the best materials to ensure long life in the ever-demanding process requirements of the oil and gas industry.

When you choose Sable Controls, you're not just getting a manufacturer who knows their products, you're getting a partner who understands your project requirements who will ensure you get the right product that is selected for your specific purpose.



SBF SERIES

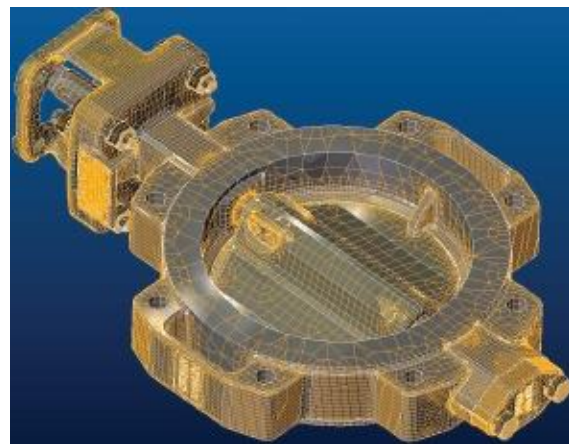
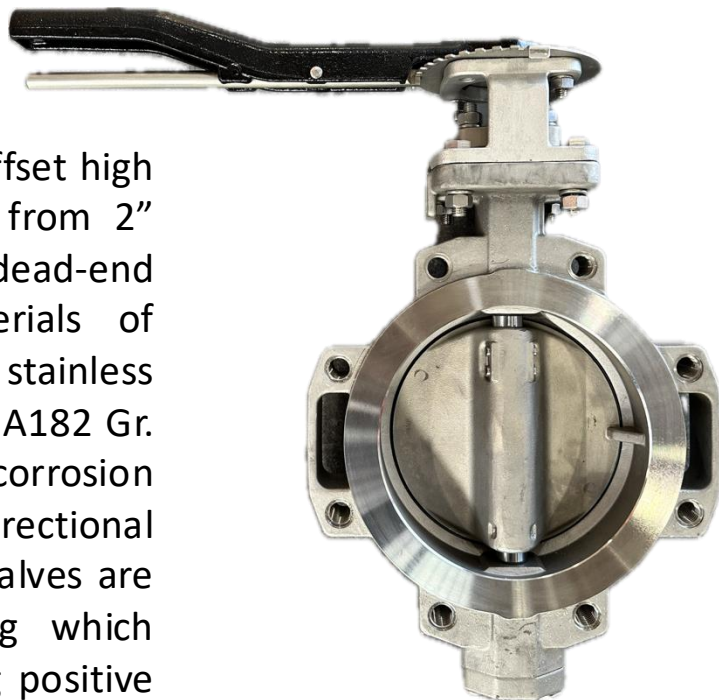
DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE



SABLE CONTROLS

The Sable Controls V1300 Series double offset high performance butterfly valve is available from 2" through 24" ANSI 150. For double dead-end service, we stock lug bodies. Materials of construction include A351 Gr. CF8M stainless bodies and discs. The shafts are made of A182 Gr. F316 SS for its torsional strength and corrosion resistance. The seats are RTFE and bi-directional and provide a bubble-tight shutoff. The valves are equipped with a floating retainer ring which eliminates cold flow of the seat providing positive tight shut off. The valves have an adjustable packing gland with RTFE packing. The mounting pads are ISO 5211 compliant for ease of automation.

The valves are tested in accordance to API 598 and designed to API 609 standards. They are NACE MR0175 compliant.



SBF SERIES

DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE



SABLE CONTROLS

SPECIFICATIONS

Testing: API 598, ISO 5208

Pressure/Temperature Rating: API 609

Valve Design: ASME B16.34, MSS-SP-68

Anti-Blow-Out Stem: API 609

Face to Face: API 609

Firesafe: API 607

Top Mounting: ISO 5211

Suitable Flange: ANSI 150

- Valves are 100% tested at factory
- Operating torques are validated 100%
- Material inspection is verified by PMI (Portable X-ray Material Inspector) and Optical Spectrometer



SBF SERIES

DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE

Gland Flange

Adjustable two-piece flange provides even packing load

Anti-Blow-Out Stem

Prevents stem blowout from pressure

Gland Bushing

Prevents uneven tightening pressure on packing gland

Gland Packing

RTFE packing. API 598 testing pressure compliant

Taper Pin

Tangentially positioned through stem and disc to prevent failure

Valve Seat

RTFE Bi-directional zero leakage design

Retainer Ring

Non-screw floating design to eliminate cold flow. Provides positive tight shut off.

Thrust Ring

316 SS positioned at bottom of stem to prevent shifting

Bottom Cover

Rigid and corrosion resistant 316 SS

Bottom Gasket

RTFE

Valve Stem

Rigid one-piece F316 SS with hard chrome overlay for increased strength. ISO 5211 compliant. Disc position noted on top of stem

Self-Lubricated Bushing

PTFE+316 SS lowers stem friction and torque

Valve Disc

CF8M SS with hard Chrome overlay for added corrosion resistance. Streamlined for lower noise and turbulence

Valve Body

CF8M SS. Designed in compliance with API 609 & ASME B16.34.

Lock Pin & Spring

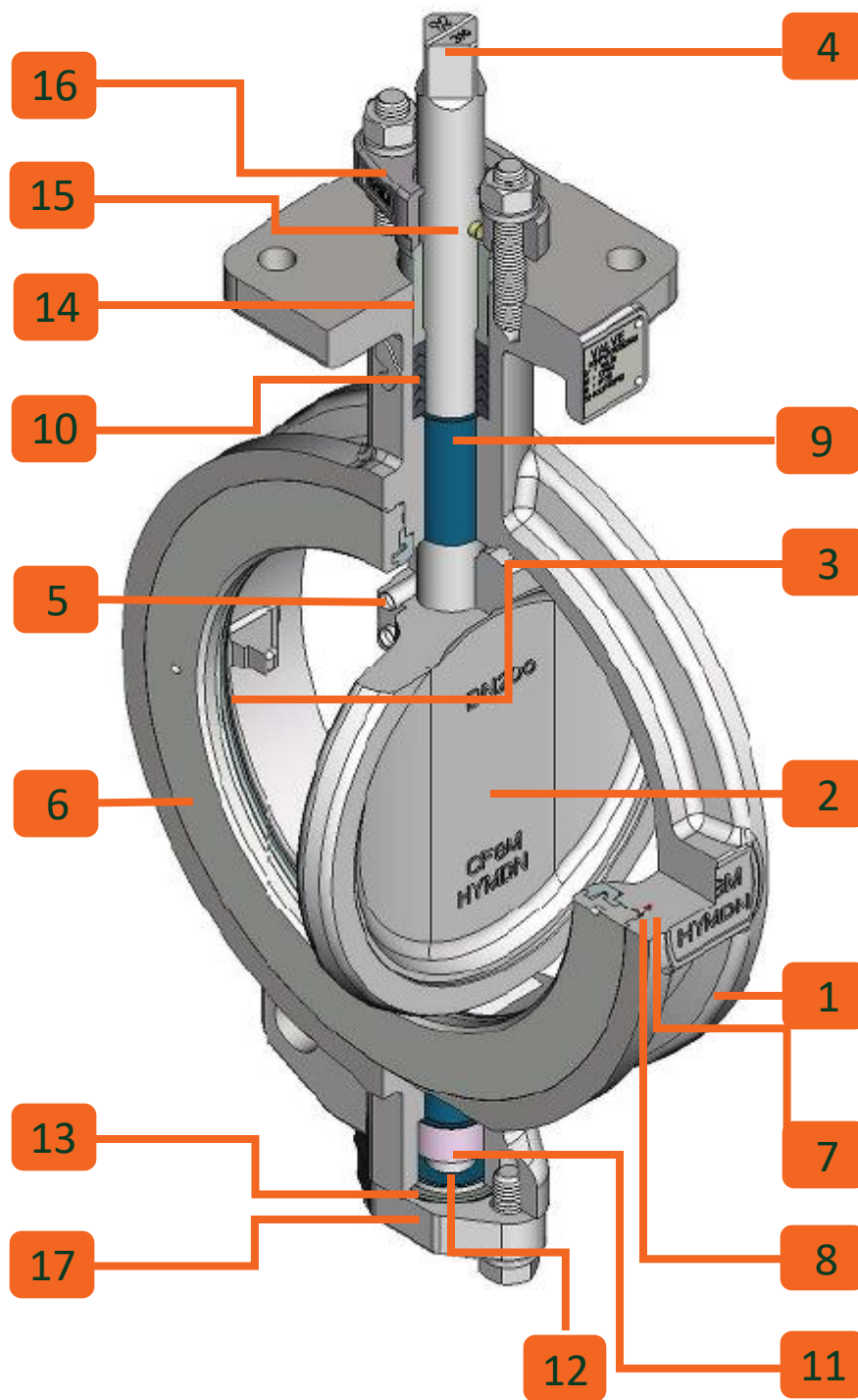
Spring ensures locking pin is secured when retainer ring rotates into place

Thrust Plate

316 SS + PTFE to reduce operating friction between stem and bottom cover

SBF SERIES

DOUBLE OFFSET HIGH PERFORMANCE BUTTERFLY VALVE



ITEM	NAME	QTY	MATERIAL
1	Body	1	A351 CF8M
2	Disc ***	1	A351 CF8M
3	Seat	1	RTFE
4	Stem ***	1	A182 Gr. F316
5	Taper Pin	2	A182 Gr. F316L
6	Retainer Ring	1	A351 CF8M
7	Spring	1	A182 Gr. F316
8	Lock Pin	1	PTFE
9	Stem Bushing	2	PTFE+316L SS

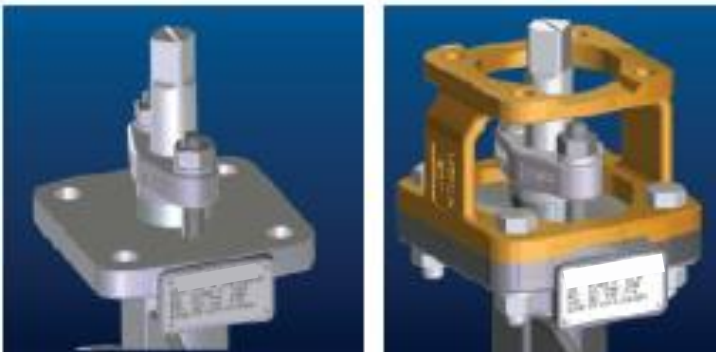
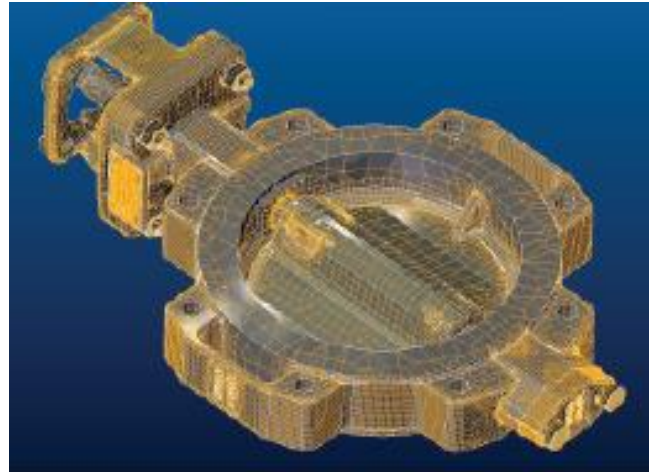
ITEM	NAME	QTY	MATERIAL
10	Gland Packing	1	RTFE
11	Thrust Ring	1	A351 CF8M
12	Thrust Plate	1	PTFE+316L SS
13	Gasket	1	RTFE
14	Gland Bushing	1	A351 CF8M
15	Anti-Blowout Pin	1	A182 Gr. F316
16	Gland Flange	1	A351 Gr. CF8
17	Bottom Cover	1	A351 Gr. CF8M

*** Surface is hard Chrome Plated
Temperature Rating: -20F to 450F

FEATURES

★ Valve Body

The Sable Controls SBF double offset high performance butterfly valves are designed in 100% compliance with API 609 and ASME B16.34. Utilizing PTC Creo-Parametric (Pro/E) computer aided design on every component provides the best reliability.

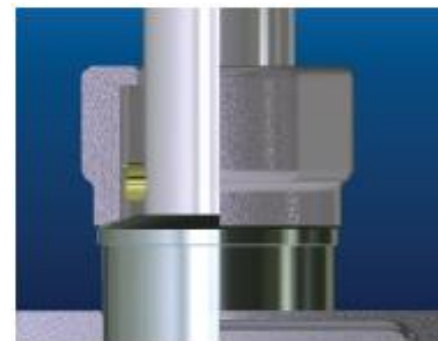


Top Mounting ★

Mounting pads are designed in compliance with ISO 5211 and include a draining system for outdoor service.

★ Anti-Blowout Stem and Anti-Electrostatic System

In compliance with API 609 and ATEX, our SBF series is equipped with an anti-blowout stem design and anti-electrostatic system.



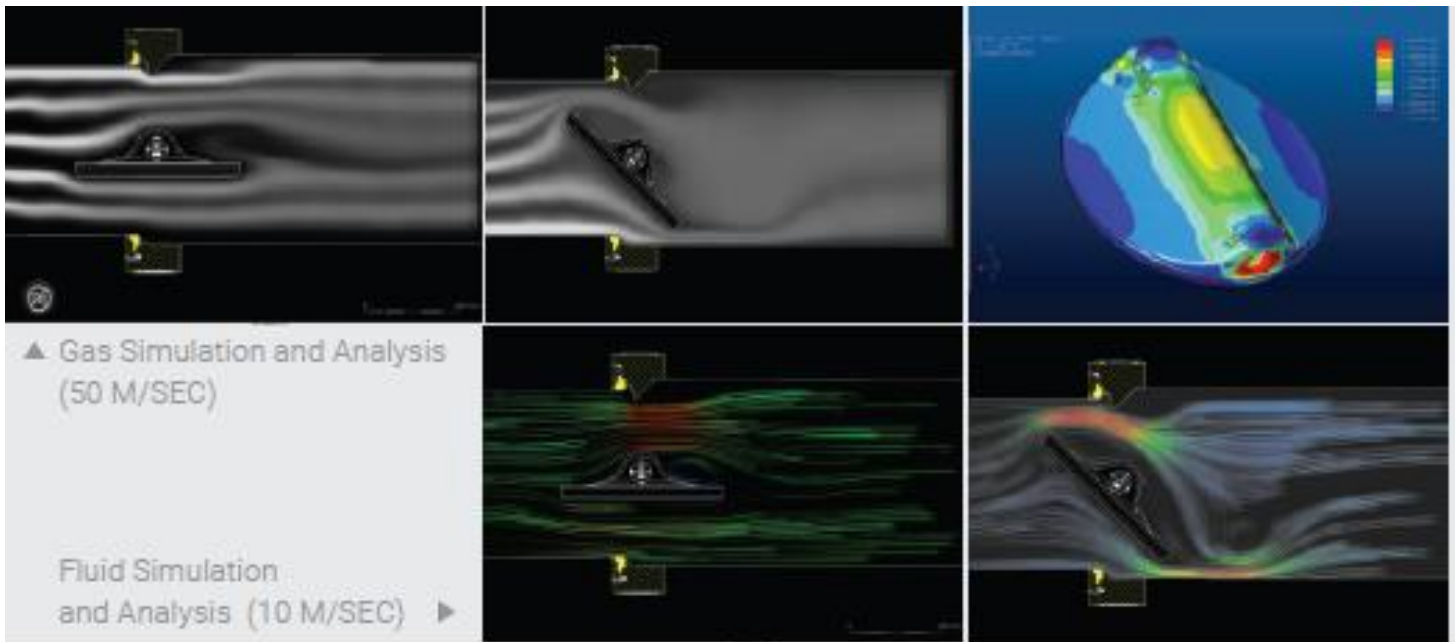
Name Plate ★

The Sable SBF butterfly valves have been designed with a larger name plate platform which provides for distinct information about valve details. It is compliant with MSS-SP-25 & API 609.

FEATURES

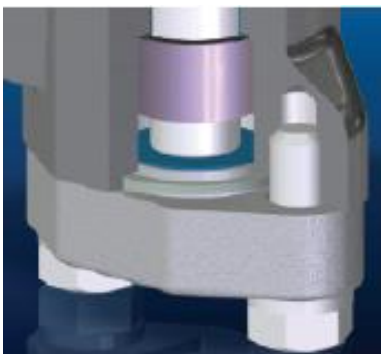
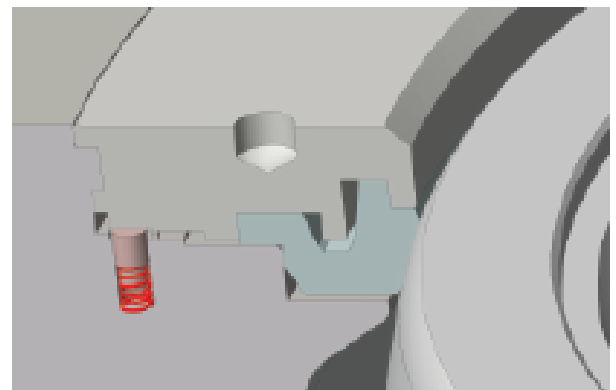
★ Valve Disc

The valve disc is made of A351 Gr CF8M stainless and is designed with PTC Creo Parametric software to analyze stress performance to achieve API 598. Based on advanced 3D CAD simulation, the valve's been developed with a streamlined disc with lower noise and turbulence. All disc and stem surfaces are hard-chrome plated which significantly enhances disc performance against friction and erosion thus lengthening the life span.



★ Patented Retainer Ring

The patented retainer ring is screwed into the internal tooth of the valve body then a stainless steel spring catch and PTFE pin will pop up to fix the retainer ring and valve body in the correct position. The design enlarges the flange to gasket touching surface which provides better tolerance against installation error.



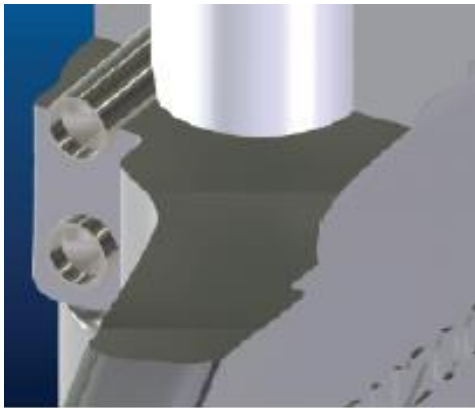
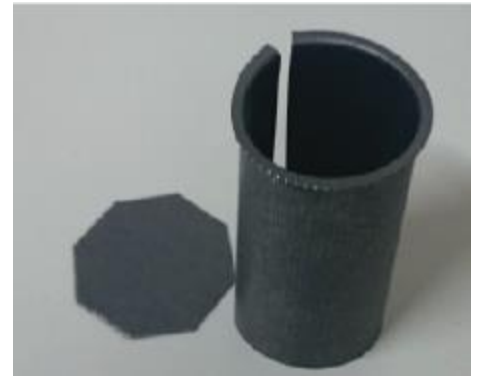
Thrust Ring for Positioning ★

A rigid thrust ring ensures that the stem is always in an accurate position leading to enhanced reliability.

FEATURES

★ Self-Lubricated Bushing

The valve stem channel utilizes a RTFE+316 stainless steel stem bushing providing excellent working temperature, strength rating, and low friction factor. The bushing maintains good sealing capability even after high cycle operations.



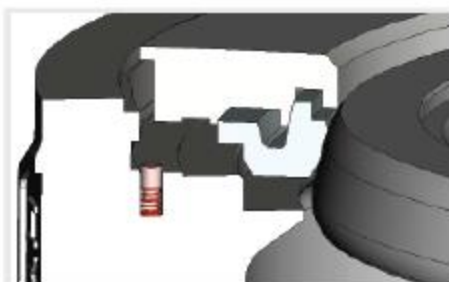
Taper Pin ★

Disc taper pins are tangentially positioned half in the disc and half in the stem placing them in compression rather than shear which eliminates failure potential. This method is three times stronger than the traditional shear way.

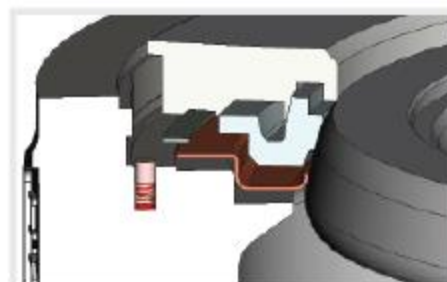
★ Valve Seat

Soft seats and firesafe seats are available. Pressure and temperature ratings are in compliance with API 609. A reliable section and corresponding floating seat enables bi-directional zero leakage closure throughout all pressure ranges as well as fully rated differential pressure. The design reduces rubbing and friction between the disc and seat which significantly lengthens life cycle. With Higa-PTFE, the SBF series can maintain 285 PSI bi-directional zero leakage even after 100,000 cycles.

Compared to general PTFE seats, the Higa-PTFE has a 2.5 times higher Load-Deformation rate.

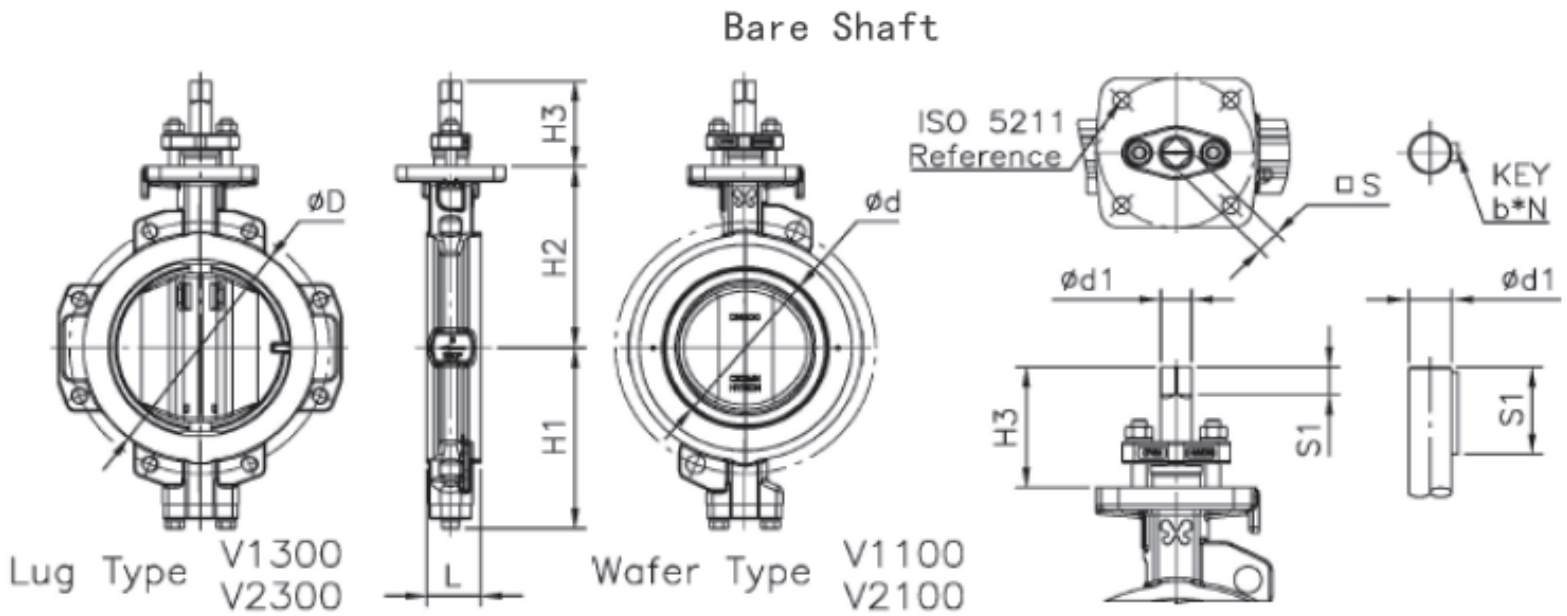


< Standard Type >



< Fire-Safe Type >

DIMENSIONS – BRACKET NOT INCLUDED



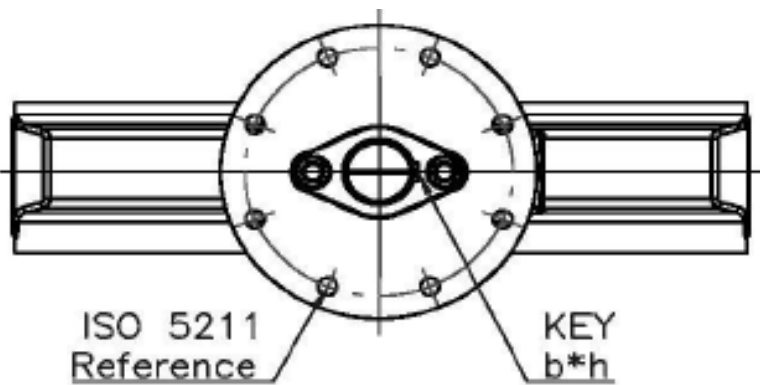
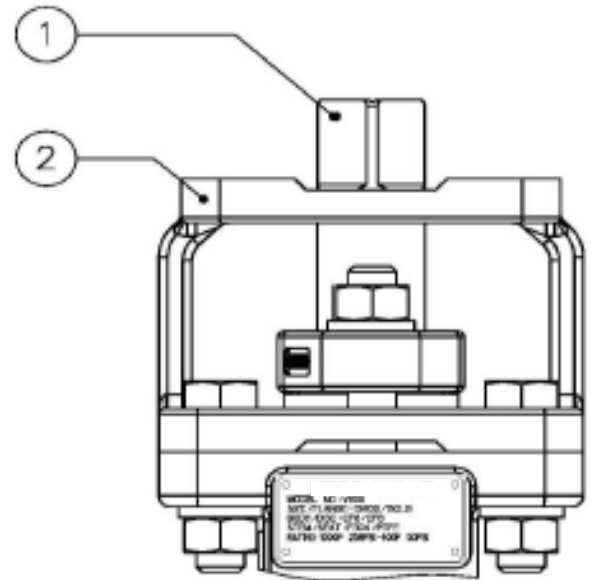
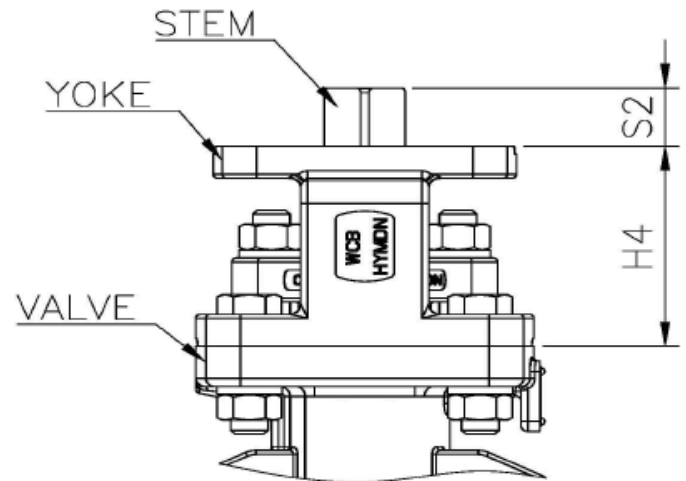
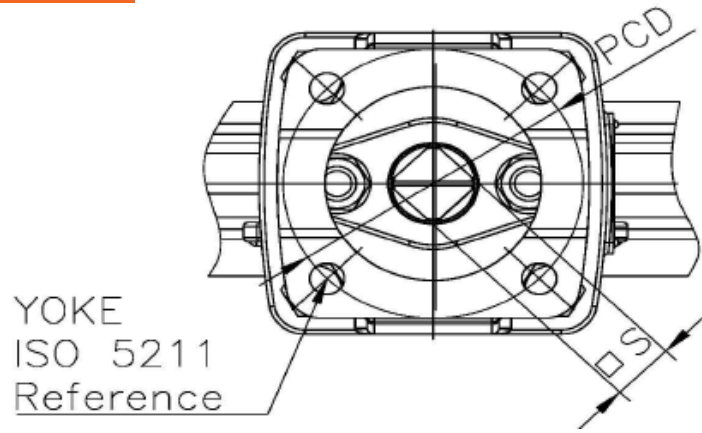
150LB

SIZE		L	D	d	H1	H2	H3	S1	d1	S (b*h)	ISO	Weight (kg)	
mm	in											Wafer	Lug
50	2	43	95	46	101	110	72	14	14	11	F07	3.5	-
65	2.5	46	112	61	110	120	72	14	14	11	F07	4	-
80	3	48	126	76	134	140	86	18	18	14	F10	7	9
100	4	54	155	96	144	150	86	18	18	14	F10	9	13
125	5	57	184	118	178	170	89	21	22	17	F10	12	-
150	6	57	215	143	190	185	89	21	22	17	F10	13	19
200	8	62	267	188	214	215	101	23	25	19	F12	21	28
250	10	70	326	236	254	260	104	26	28	22	F12	30	44
300	12	81	375	281	298	290	129	31	35	27	F14	46	66
350	14	92	416	320	328	320	134	36	42	32	F14	63	86
400	16	102	480	371	377	370	158	40	48	36	F16	95	130
450	18	114	534	420	402	395	158	40	48	36	F16	125	163
500	20	127	588	469	437	430	168	50	60	46	F16	160	227
600	24	154	692	549	492	480	198	50	60	46	F25	265	358
700	28	165	800	655	560	555	207	59	72	55	F25	360	490
750	30	190	855	698	610	595	320	130	90	25*14	F30	460	620
800	32	190	910	755	620	625	330	140	100	28*16	F30	610	800
900	36	203	1000	870	680	685	340	150	110	32*18	F30	820	1020

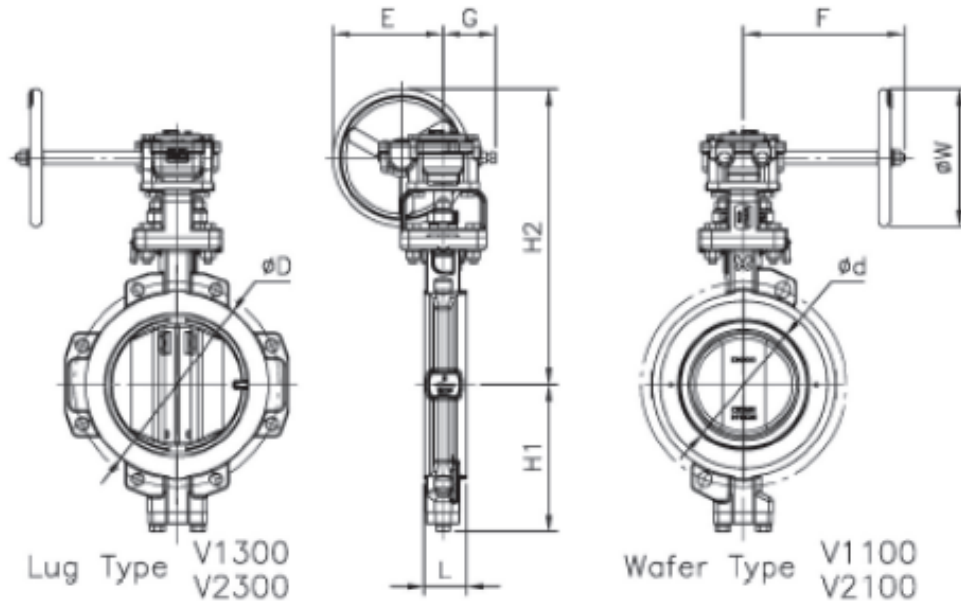
*****For mounting dimensions with bracket included, see page 11
"DIMENSIONS – BRACKET INCLUDED"**

DIMENSIONS – BRACKET INCLUDED

Model	Size (mm)	H4	□S	S2	YOKE	YOKE	VALVE
					ISO	PCD	ISO
V1	50	70	14	16	F07	70	F10
	65		14	16			
	80		14	16			
	100		14	16			
	125		17	19			
	150		17	19			
	200	80	19	21	F10	102	F12
	250		22	24			
	300	100	27	29	F12	125	F14
	350		32	34			
	400	120	36	38	F14	140	F16
	450		36	38			
	500		46	48			
	Size (mm)	H4	KEY b*h	S2	YOKE ISO	YOKE PCD	VALVE ISO
	600	150	18*12	90	F16	165	F25
700		20*12	95				
750	200	25*14	100	F25	254	F30	
800		25*14	110				
900		28*16	120				
V2	50	70	14	16	F07	70	F10
	65		14	16			
	80		14	16			
	100		14	16			
	125		17	19			
	150	80	17	21	F10	102	F12
	200		19	24			
	250	100	22	29	F12	125	F14
	300		27	34			
	350	120	32	38	F14	140	F16
Size (mm)	H4	KEY b*h	S2	YOKE ISO	YOKE PCD	VALVE ISO	
450	150	18*12	90	F16	165	F25	
500		20*12	95				
600	200	25*14	110	F25	254	F30	



DIMENSIONS – GEAR OPERATOR

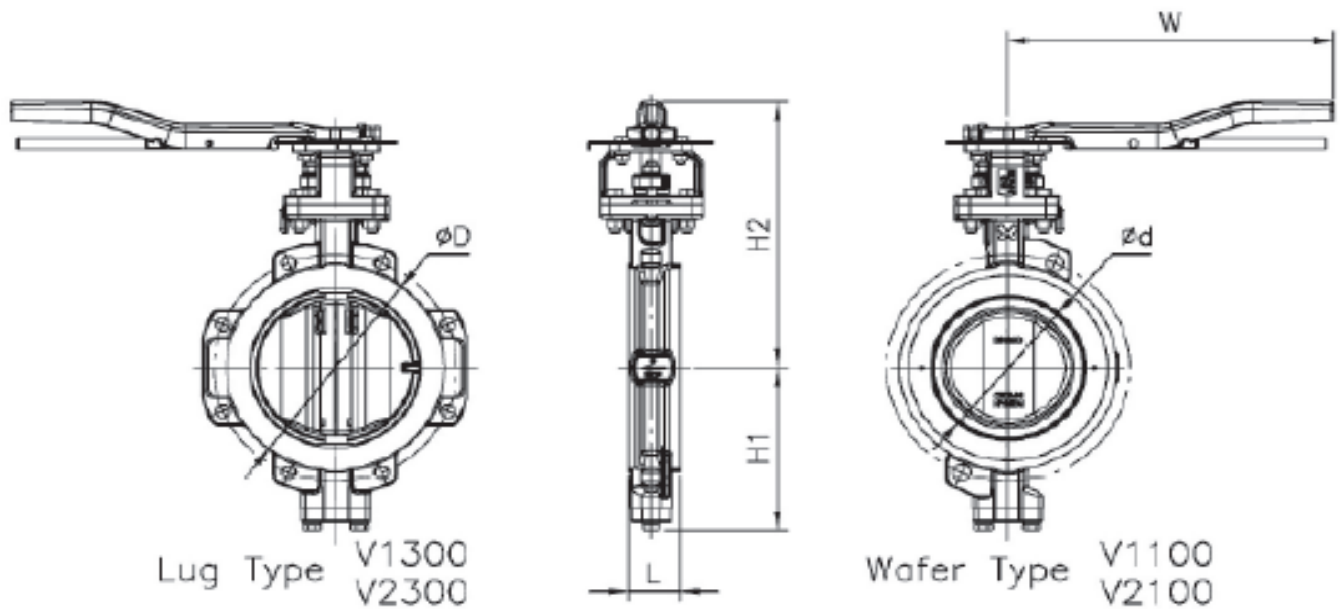


150LB

● Operator chosen is according to following condition: $\Delta 10$ Bar

SIZE		L	D	d	H1	H2	W	G	E	F	Weight (kg)		Gear Model	Gear Model
mm	in										Wafer	Lug		
50	2	43	95	46	101	254	100	66	97	133	7	-	G07	1:40
65	2.5	46	112	61	110	264	100	66	97	133	8	-	G07	1:40
80	3	48	126	76	134	294	100	66	97	133	11	12	G07	1:40
100	4	54	155	96	144	304	100	66	97	133	12	16	G07	1:40
125	5	57	184	118	178	324	100	66	97	133	15	-	G07	1:40
150	6	57	215	143	190	339	100	66	97	133	17	22	G07	1:40
200	8	62	267	188	214	431	200	77	161	236	28	35	G10	1:40
250	10	70	326	236	254	476	200	77	161	236	37	52	G10	1:40
300	12	81	375	281	298	529	200	94	183	236	58	78	G12	1:60
350	14	92	416	320	328	559	200	94	183	236	75	98	G12	1:60
400	16	102	480	371	377	690	300	120	257	324	118	153	G14	1:64
450	18	114	534	420	402	715	300	120	257	324	148	186	G14	1:64
500	20	127	588	469	437	750	300	120	257	324	183	250	G14	1:64
600	24	154	692	549	492	888	400	153	352	374	315	408	G16	1:96
700	28	165	800	655	560	963	400	153	352	374	410	540	G16	1:96
750	30	190	855	698	610	1110	600	200	509	470	555	715	G25	1:125
800	32	190	910	755	620	1140	600	200	509	470	705	895	G25	1:125
900	36	203	1000	870	680	1200	600	200	509	470	915	1115	G25	1:125

DIMENSIONS – LEVER OPERATOR



150LB

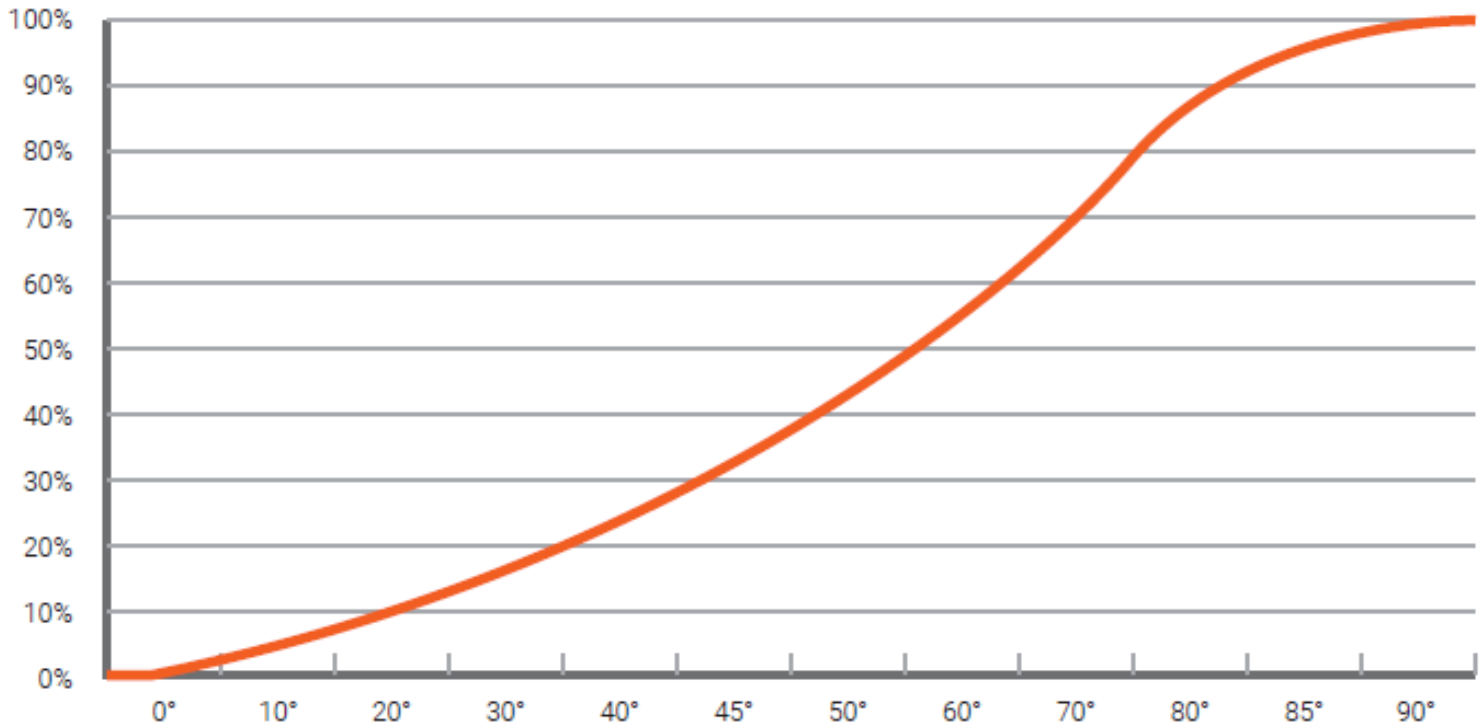
● Operator chosen is according to following condition: $\Delta 10$ Bar

SIZE		L	D	d	H1	H2	W	Weight (kg)		Lever Model
mm	in							Wafer	Lug	
50	2	43	95	46	101	220	220	5.5	-	L22
65	2.5	46	112	61	110	230	220	6	-	L22
80	3	48	126	76	134	260	220	8	11	L22
100	4	54	155	96	144	270	220	11	15	L22
125	5	57	184	118	178	290	300	14	-	L23
150	6	57	215	143	190	305	300	16	21	L23
200	8	62	267	188	214	350	400	25	32	L34

PERFORMANCE DATA

Cv FLOW COEFFICIENT

Cv curve %



150LB

SIZE		Cv Value										
mm	in	10°	20°	30°	40°	45°	50°	60°	70°	80°	85°	90°
50	2	0	8	22	36	44	51	60	69	72	70	70
65	2.5	2	16	38	61	71	83	109	135	146	152	150
80	3	6	33	62	94	108	118	143	176	208	230	227
100	4	16	58	106	155	178	213	274	349	433	465	473
125	5	20	94	167	230	263	310	391	488	561	604	605
150	6	40	147	242	335	382	422	560	729	925	975	1010
200	8	66	237	368	509	606	712	985	1296	1640	1715	2004
250	10	139	390	595	807	963	1168	1606	2134	2814	3180	3199
300	12	204	548	820	1138	1357	1591	2219	3067	4085	4484	4672
350	14	264	674	972	1386	1658	1994	2840	3925	5164	5828	5947
400	16	384	864	1196	1765	2155	2611	3755	5105	6975	7920	8182
450	18	508	1092	1551	2341	2881	3522	5125	7134	9511	10599	11548
500	20	626	1294	1792	2651	3304	4082	5919	8256	11429	13126	13813
600	24	1047	2251	3178	4563	5543	6568	9277	12932	17093	18328	19021

PERFORMANCE DATA

TORQUE CHART

ANSI 150				
SIZE	SOFT SEAT LBF/IN			
INCHES	87 PSI	145 PSI	232 PSI	285 PSI
2"	54	71	98	248
2.5"	80	107	160	CF
3"	133	186	257	399
4"	222	328	487	620
6"	487	744	1,116	1,284
8"	894	1,381	2,107	2,364
10"	1,408	2,195	3,373	3,771
12"	2,266	3,479	5,293	5,789
14"	3,408	5,160	7,789	CF
16"	5,000	7,550	11,374	11,860
18"	6,267	9,657	14,746	CF
20"	9,453	14,170	21,375	CF
24"	14,914	22,216	33,173	CF

Noted torques include 30% safety factor

PRESSURE-TEMPERATURE RATING

