



## SOFT SEAL BUTTERFLY VALVE



**TIANJIN FREYA AUTOMATION  
TECHNOLOGY CO., LTD.**

Tell: 022-27901003

Mail: [tjfreya@tj-bnd.com](mailto:tjfreya@tj-bnd.com)

Web: [www.tj-bnd.com](http://www.tj-bnd.com)

Add: Industrial Park, Zhongbei Town, Xiqing District, Tianjin

**TIANJIN FREYA AUTOMATION  
TECHNOLOGY CO., LTD.**

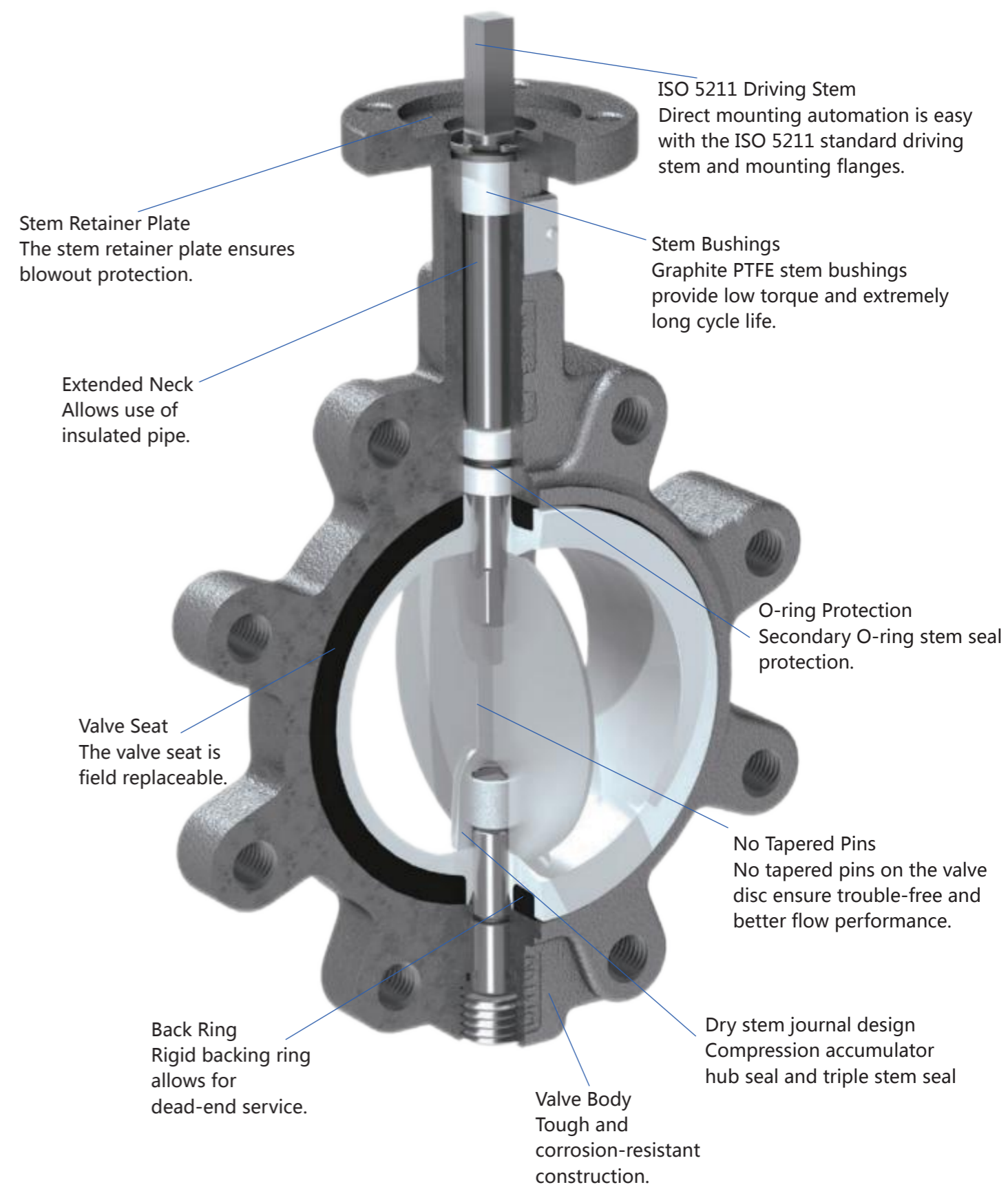
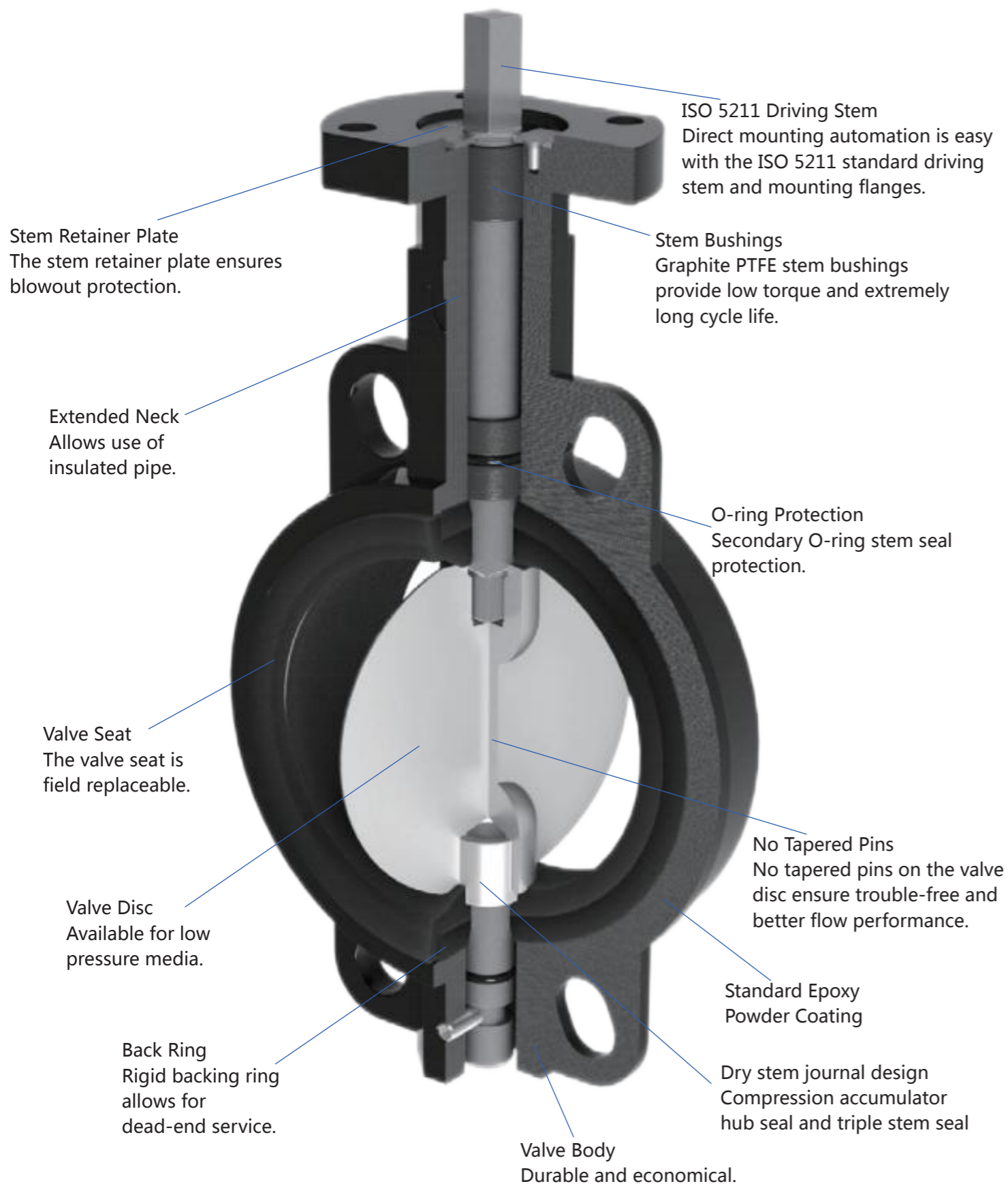
Company profile-----1/1  
 Qualifications-----2/2  
 Product structures-----3/4  
 Lug & wafer butterfly valve-----5/6  
 Exploded views-----7/10  
 Pinless wafer butterfly valve-----11/11  
 Pinless PTFE wafer butterfly valve-----12/12  
 Aluminum butterfly valve-----13/13  
 UPVC butterfly valve-----14/14  
 Flange butterfly valve-----15/15  
 U type flange butterfly valve-----16/16

# SOFT SEAL BUTTERFLY VALVE

Founded in 2014, Freya specializes in fluid control products and services such as valves, actuators, electric valve actuators, and electric valves. It focuses on the process industry and has long been committed to providing services to process industries such as power, steel, building materials, and water treatment to provide professional fluid control solutions. Based on the actual working conditions, through necessary on-site surveying and technical explanations, we provide customers with safe, economical and environmental-friendly selection and design, supply in strict accordance with contract requirements and guide installation and debugging, and hand over for use if standards are met. Thanks to the trust of the vast number of users, through long-term and large-scale on-site services, and the effective accumulation of technical experience, the company has an accurate understanding of the real needs and pain points of users and the market, as well as expectations for equipment manufacturers.

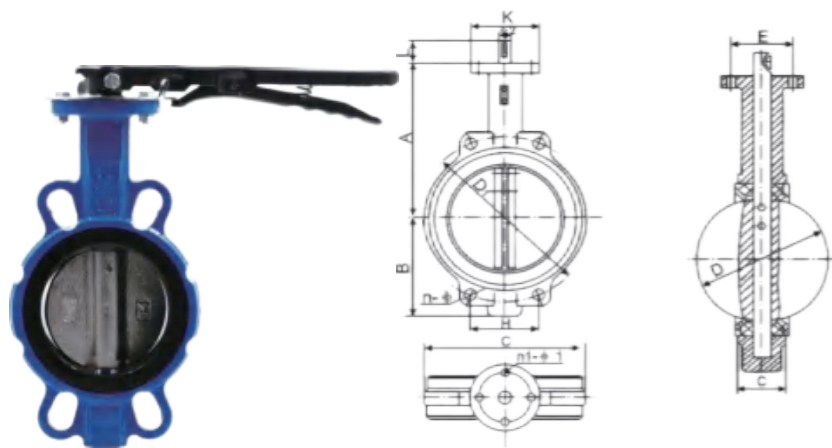
The company based on its own patent R & D and production of intelligent electric actuators, reliable, durable, easy to use, cost-effective and guaranteed service. Being close to users, providing full-process services, cover-all services, repair and maintenance value-added services, and escorting users' production are our differentiating advantages. Freya intelligent electric actuator and electric valve actuator provide a two-year warranty and lifetime free after-sales service after installation and commissioning. Technical quality and commercial credit are the two foundations on which the company relies to survive and drive the development of the company. Users feel reassured, worry-free and happy, which are the only criteria to evaluate the effectiveness of our work and demonstrate the value of our existence.



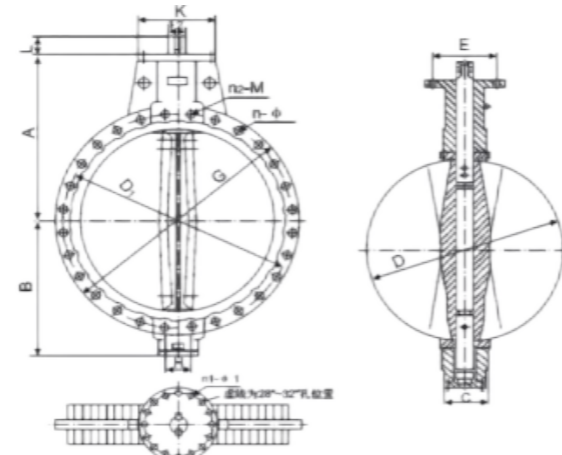


# LUG & WAFER BUTTERFLY VALVE

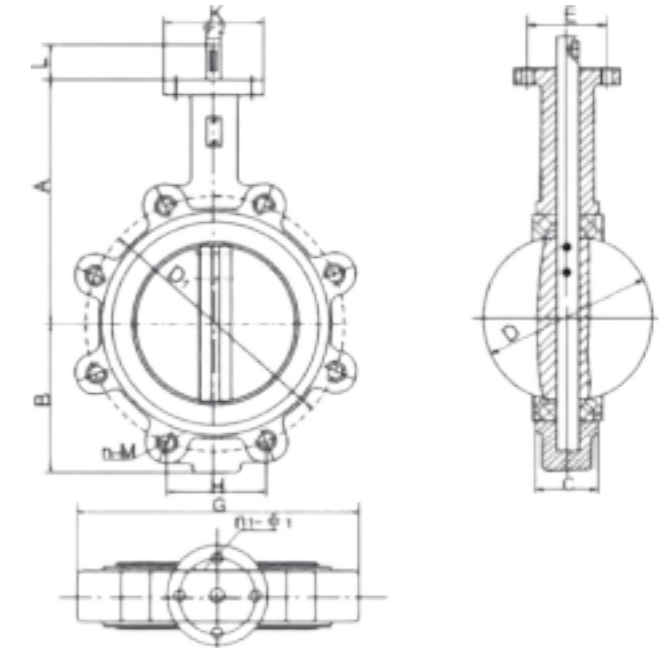
# LUG & WAFER BUTTERFLY VALVE



DN50(2" )-DN600(24" )



DN700(28" )-DN1000(40" )



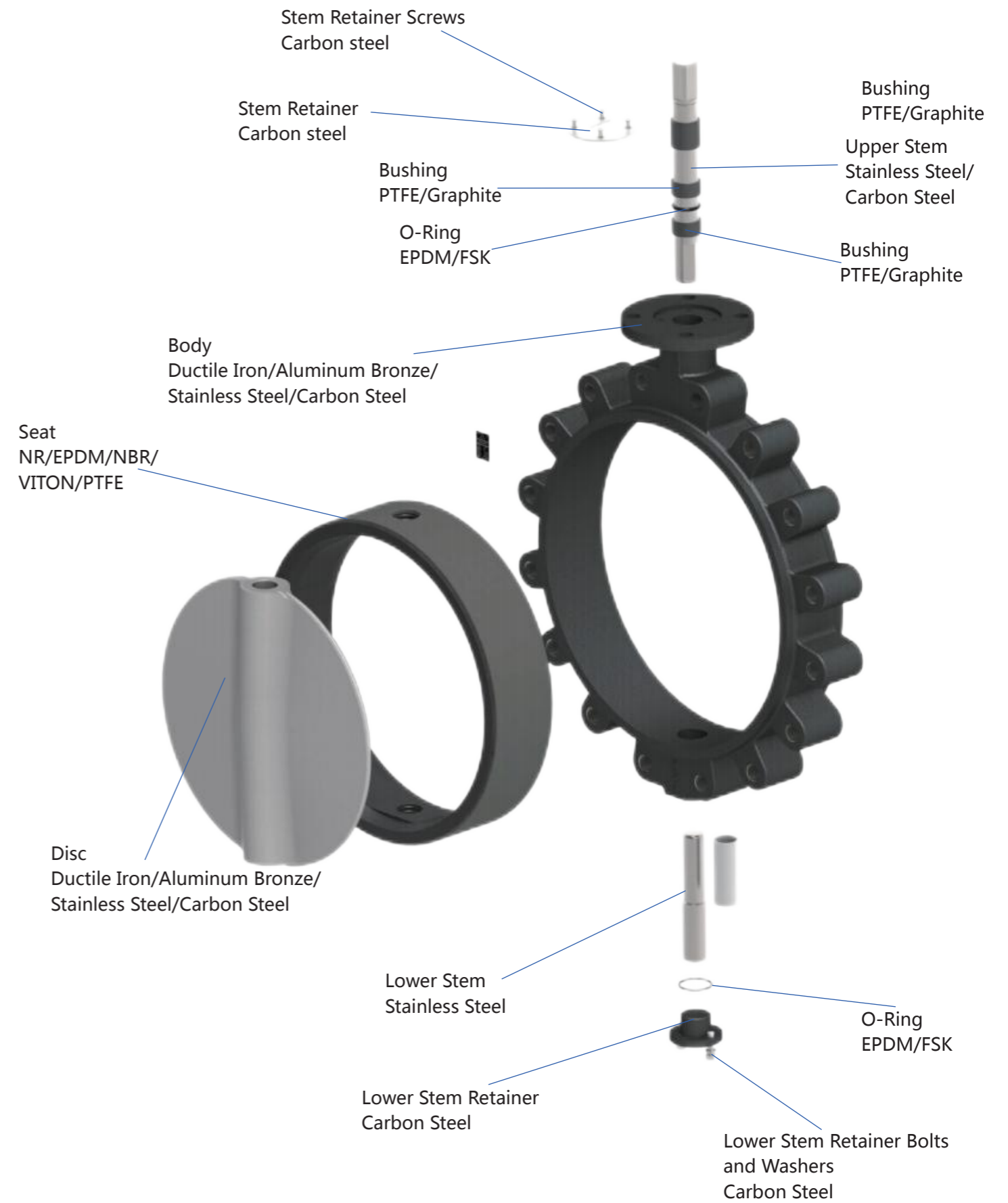
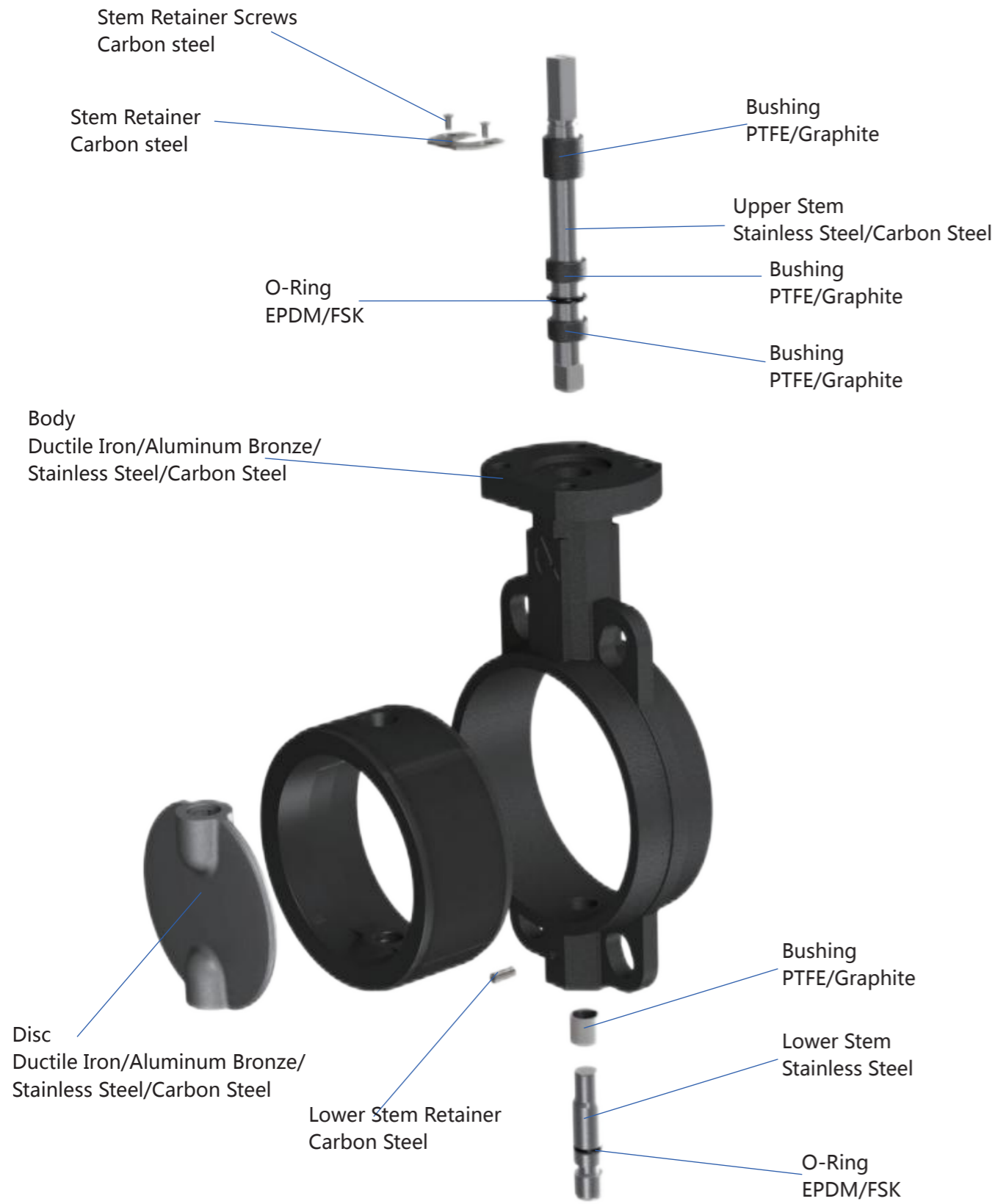
DN50(2" )-DN600(24" )

Nominal diameter: DN50(2" )-DN1000(40" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Testing pressure: Shell-1.5MPa, 2.4MPa  
 Testing pressure: Sealing- 1.1MPa, 1.76MPa  
 Working temperature: -15~150°C  
 Suitable media: Water, gas, steam, oil, acid etc.

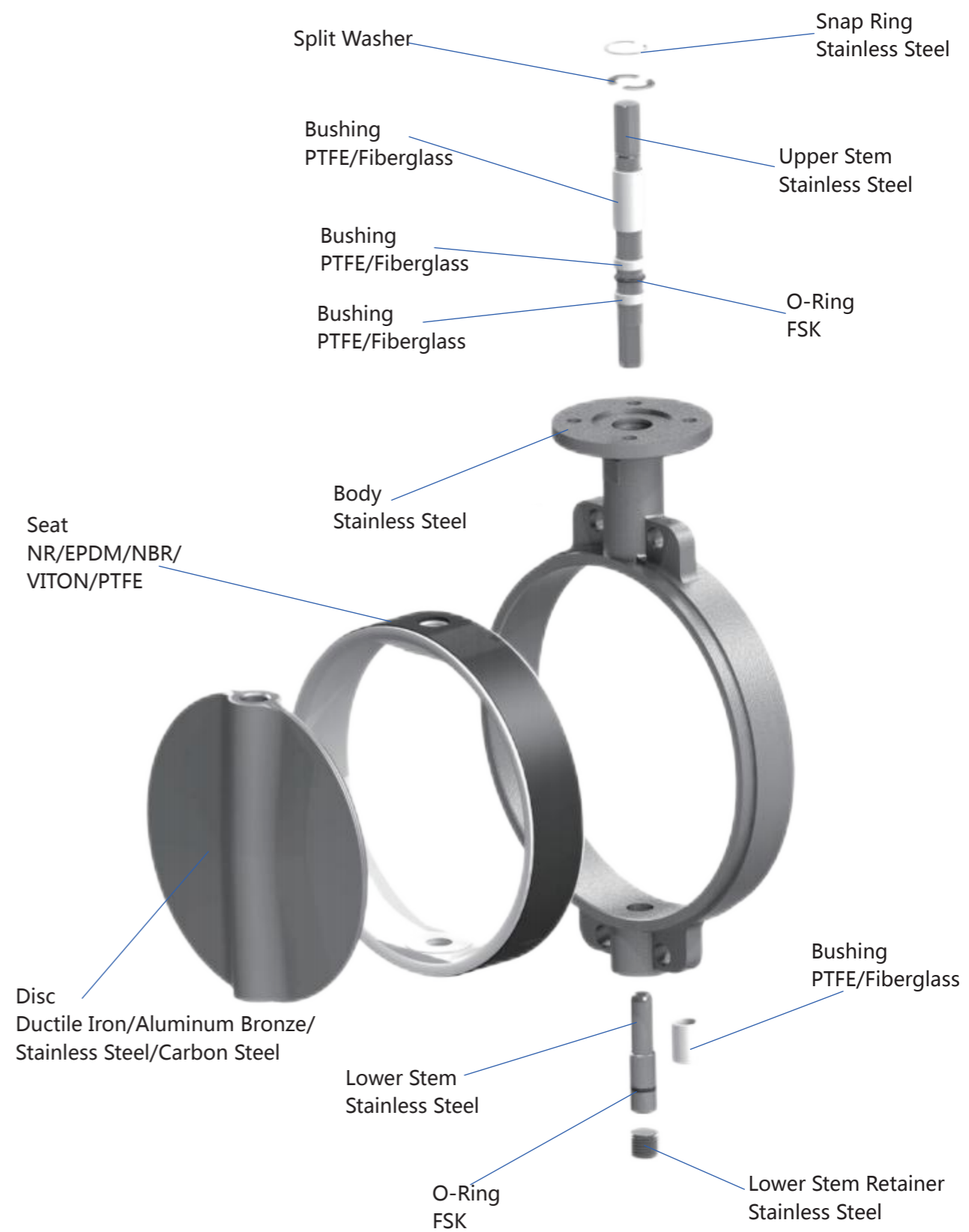
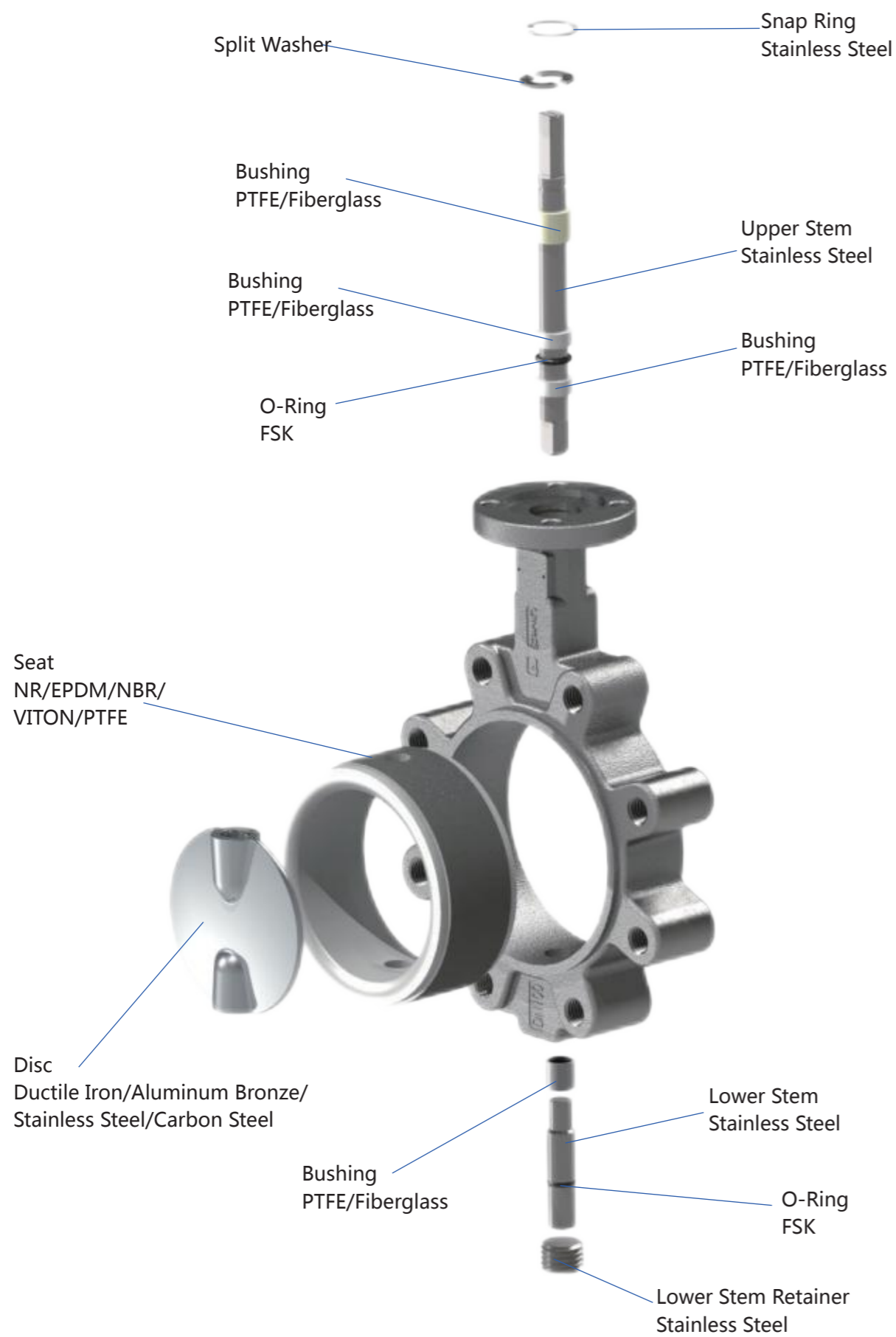
DN		A	B	C	D	L	H	D1	n-φ	K	E	n1-φ1	φ2	G	n2-M	Weight Kg
mm	inch															
50	2"	161	60	42	52.9	32	84.84	120	4-φ23	77	57.15	4-φ6.7	12.6	118	-	2.5
65	2.5"	175	69	44.7	64.5	32	96.2	136.2	4-φ26.5	77	57.15	4-φ6.7	12.6	137	-	3.2
80	3"	181	95	45.2	78.8	32	61.23	160	8-φ18	77	57.15	4-φ6.7	12.6	143	-	3.6
100	4"	200	114	52.1	104	32	70.80	185	4-φ24.5	92	69.85	4-φ10.3	15.77	156	-	4.9
125	5"	213	127	54.4	123.3	32	82.28	215	4-φ23	92	69.85	4-φ10.3	18.92	190	-	7
150	6"	226	139	55.8	155.6	32	91.08	238	4-φ25	92	69.85	4-φ10.3	18.92	212	-	7.8
200	8"	260	175	60.6	202.5	45	112.89/76.35	295	4-φ25/4-φ23	115	88.9	4-φ14.3	22.1	268	-	13.2
250	10"	292	203	65.6	250.5	45	92.40	357	4-φ29	115	88.9	4-φ14.3	28.45	325	-	19.2
300	12"	337	242	76.9	301.6	45	105.34	407	4-φ29	140	107.95	4-φ14.3	31.6	403	-	32.5
350	14"	368	267	76.5	333.3	45	91.11	467	4-φ30	140	107.95	4-φ14.3	31.6	436	-	41.3
400	16"	400	309	86.5	389.6	51.2/72	100.47/102.42	515/525	4-φ26/4-φ30	197	158.75	4-φ20.6	33.15	488	-	61
450	18"	422	328	105.6	440.51	51.2/72	88.39/91.51	565/585	4-φ26/4-φ30	197	158.75	4-φ20.6	38	539	-	79
500	20"	480	361	131.8	491.6	64.2/82	96.99/101.68	620/650	4-φ26/4-φ33	197	158.75	4-φ20.6	41.15	593	-	128
600	24"	562	459	152	592.5	70.2/82	113.42/120.46	725/770	20-φ30/20-φ36	276	215.9	4-φ22.2	50.65	816	-	188
700	28"	624	520	163	695	66/82	109.55	840	24-φ30/20-φ36	300	254	8-φ18	55/63.35	895	4-M33	284
800	32"	672	591	188	794.7	66/82	124	950	24-φ33/24-φ39	300	254	8-φ18	55/63.35	1015	-	368
900	36"	720	656	203	864.7	118	117.57	1050	24-φ33	300	254	8-φ18	75	1115	4-M30	713
1000	40"	800	721	216	965	142	129.89	1160	24-φ36	300	254	8-φ18	85	1230	4-M33	864

DN		A	B	C	D	L	H	D1	n-φ	K	E	n1-φ1	φ2	G	Weight Kg
mm	inch														
50	2"	161	60	42	52.9	32	88.38	125	4-M16	77	57.15	4-φ6.7	12.6	118	3.8
65	2.5"	175	69	44.7	64.5	32	102.54	145	4-M16	77	57.15	4-φ6.7	12.6	137	4.2
80	3"	181	95	45.2	78.8	32	61.23	160	8-M16	77	57.15	4-φ6.7	12.6	178	4.7
100	4"	200	114	52.1	104	32	68.88	180	8-M16	92	69.85	4-φ10.3	15.77	206	9.0
125	5"	213	127	54.4	123.3	32	80.36	210	8-M16	92	69.85	4-φ10.3	18.92	238	10.9
150	6"	226	139	55.8	155.6	32	91.84	240	8-M20	92	69.85	4-φ10.3	18.92	266	14.2
200	8"	260	175	60.6	202.5	45	112.89/76.35	295	8-M20/12-M24	115	88.9	4-φ14.3	22.1	329	18.2
250	10"	292	203	65.6	250.5	45	90.59/91.88	350/355	12-M20/12-M24	115	88.9	4-φ14.3	28.45	393	26.8
300	12"	337	242	76.9	301.6	45	103.52/106.12	400	12-M20/12-M24	140	107.95	4-φ14.3	31.6	462	40
350	14"	368	267	76.5	333.3	45	89.74/91.69	460	16-M20/16-M24	140	107.95	4-φ14.3	31.6	515	56
400	16"	400	309	86.5	389.6	51.2/72	100.84/102.42	515	16-M24/16-M27	197	158.75	4-φ20.6	33.15	579	96
450	18"	422	328	105.6	440.51	51.2/72	88.38/91.51	565	20-M24/20-M27	197	158.75	4-φ20.6	38	627	122
500	20"	480	361	131.8	491.6	64.2/82	96.99/101.68	620	20-M24/20-M30	197	158.75	4-φ20.6	41.15	696	202
600	24"	562	459	152	592.5	70.2/82	113.42/120.46	725	20-M27/20-M33	276	215.9	4-φ22.2	50.65	821	270

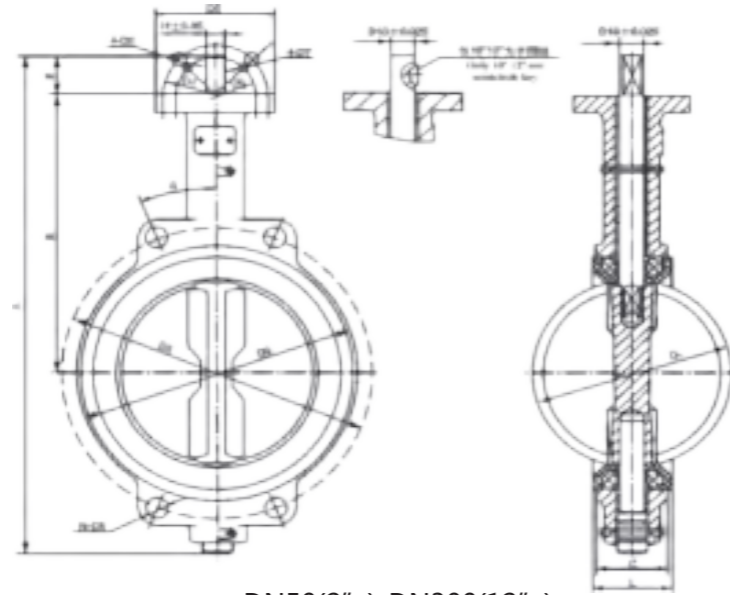
# EXPLODED VIEWS OF DUCTILE ION LUG & WAFER BUTTERFLY VALVE



# EXPLODED VIEWS OF STAINLESS STEEL LUG & WAFER BUTTERFLY VALVE



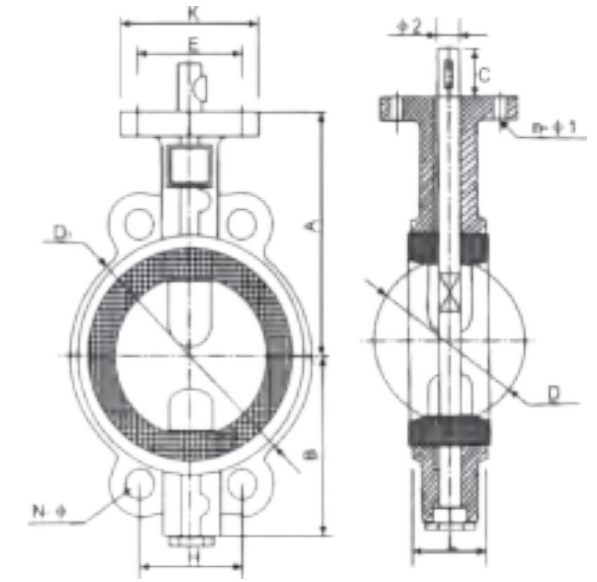
# PINLESS WAFER BUTTERFLY VALVE



DN50(2" )-DN300(12" )

Nominal diameter: DN50(2" )-DN300(12" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Testing pressure: Shell-1.1MPa, 1.76MPa  
 Testing pressure: Sealing- 1.5MPa, 2.4MPa  
 Working temperature: -15~150°C  
 Suitable media: Water, gas, steam, oil, acid etc.

# PINLESS PTFE WAFER BUTTERFLY VALVE

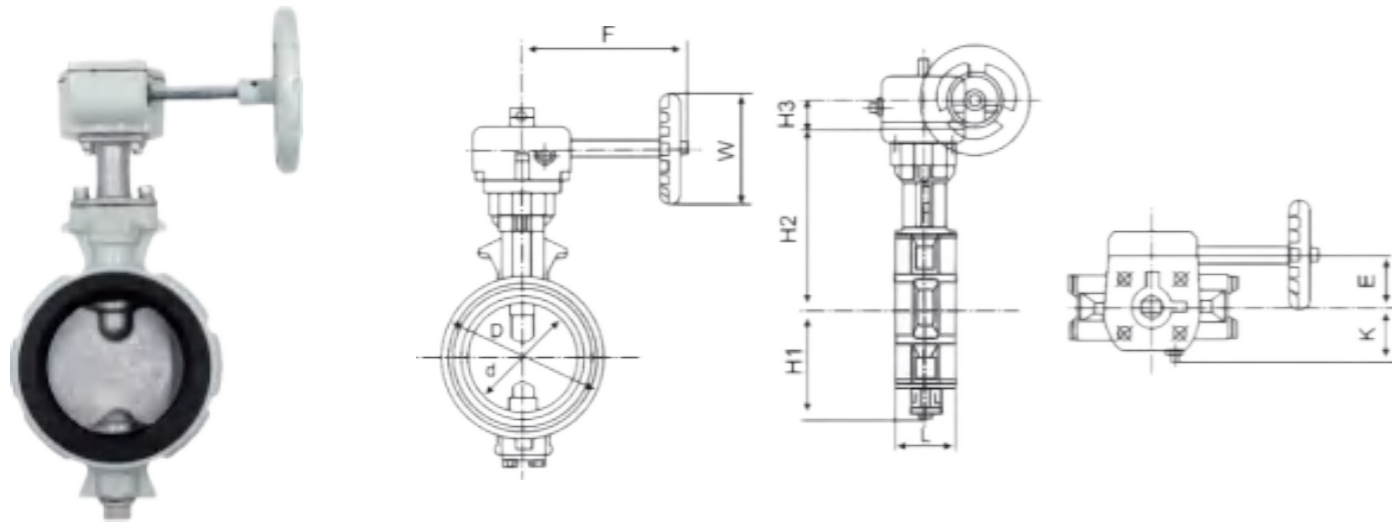


Nominal diameter: DN40(1.5" )-DN600(24" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Suitable media: Water, gas, steam, oil, acid etc.  
 Valve body: Cast steel, stainless steel  
 Valve disc: Ductile iron, stainless steel  
 Valve stem: 2Cr13, stainless steel  
 Valve seat: PTFE  
 Sealing: O-ring

DN		A	B	C	E	L	H	α	D1	D2	D3	D4	N-D5	D6	D7	D8	D9	D10
mm	inch																	
50	2"	280	161	42	32	45	9.52	45°	83	11	52.6	120	4-23	4-φ6.7	70	102	100	12.6
65	2.5"	303	175	44.7	32	47.6	9.52	45°	83	11	64.3	136.13	4-26.6	4-φ6.7	70	102	120	12.6
80	3"	315	181	45.2	32	49	9.52	45°/22.5°	83	11	78.8	152.4/ 160	4-25/ 4-18	4-φ6.7	70	102	127	12.6
100	4"	353	200	52.1	32	54.7	11.11	45°/22.5°	83	11	104	177.8/ 185.16	4-17.5/ 4-25.8	4-φ10.3	70	102	156	15.77
125	5"	379	213	54.4	32	58	12.7	22.5°	83	11	123.3	215.01	4-23	4-φ10.3	70	102	190	18.92
150	6"	404	226	55.8	32	58.6	12.7	22.5°	83	11	155.7	238.12	4-25	4-φ10.3	70	102	212	18.92
200	8"	487	260	60.6	45	63.4	15.87	15°/22.5°	127	14	202.4	296.07	4-23/ 4-26	4-φ14.3	102	152	268	22.1
250	10"	547	292	65.6	51	70	-	22.5°/15°	127	14	250.4	357	4-22/ 4-29	4-φ14.3	102	152	325	28.45
300	12"	631	337	76.9	51	70	-	15°	127	14	301.5	406.4/ 431.8	4-30.2/ 4-25.4	4-φ14.3	102	152	403	28.45

DN		A	B	L	D	C	H	D1	n-φ	K	E	n-φ1	φ2	Weight Kg
mm	inch													
40	1.5"	130	73	42	52.7	28	77.8	110	4-φ18	77	57	4-φ7	12.7	3.8
50	2"	130	73	44.7	52.7	28	88.38	125	4-φ18	77	57	4-φ7	12.7	3.8
65	2.5"	142	80	45.2	64.4	28	120.54/ 113.13	145	4-φ18	77	57	4-φ7	12.7	4.2
80	3"	155	96	52.1	78.8	28	61.23	160	4-φ18	77	57	4-φ7	12.7	4.7
100	4"	170	123	54.4	104.2	28	68.88	180	8-φ18	92	69	4-φ10.5	15.8	9.0
125	5"	173	125	55.8	123.3	29	80.36	210	8-φ18	92	69	4-φ10.5	19.05	10.9
150	6"	204	140	60.6	157	29	91.84/ 112.89	240	8-φ18	92	69.85	4-φ10.5	19.05	14.2
200	8"	239	173	65.6	202.5	32	76.35	295	8-φ22/ 8-φ23	114	89	4-φ14.3	22.2	18.2
250	10"	275	200	76.9	250.5	40	90.59/ 91.88	350/355	12-φ23	115	89	4-φ14.3	28.6	26.8
300	12"	320	230	76.5	301.6	40	103.52/ 106.12	400/410	12-φ23/ 12-φ26	140	108	4-φ14.3	31.8	40
350	14"	368	267	86.5	333.3	40	89.74/ 91.69	460/470	16-φ23/ 16-φ26	140	108	4-φ14.3	31.8	56
400	16"	400	309	105.6	389.6	51.2/72	100.48/ 102.42	515/525	16-φ23/ 16-φ26	197	159	4-φ20.5	33.3	96
450	18"	422	328	131.8	440.51	51.2/72	88.38/ 91.51	565/585	16-φ26/ 16-φ30	197	159	4-φ20.5	38	122
500	20"	480	361	152	491.6	64.2/82	96.99/ 101.68	620/650	20-φ26/ 20-φ33	197	159	4-φ20.5	41.15	202
600	24"	562	459	163	592.5	70.2/82	113.42/ 120.46	725/770	20-φ30/ 20-φ36	276	216	4-φ22.2	50.65	270

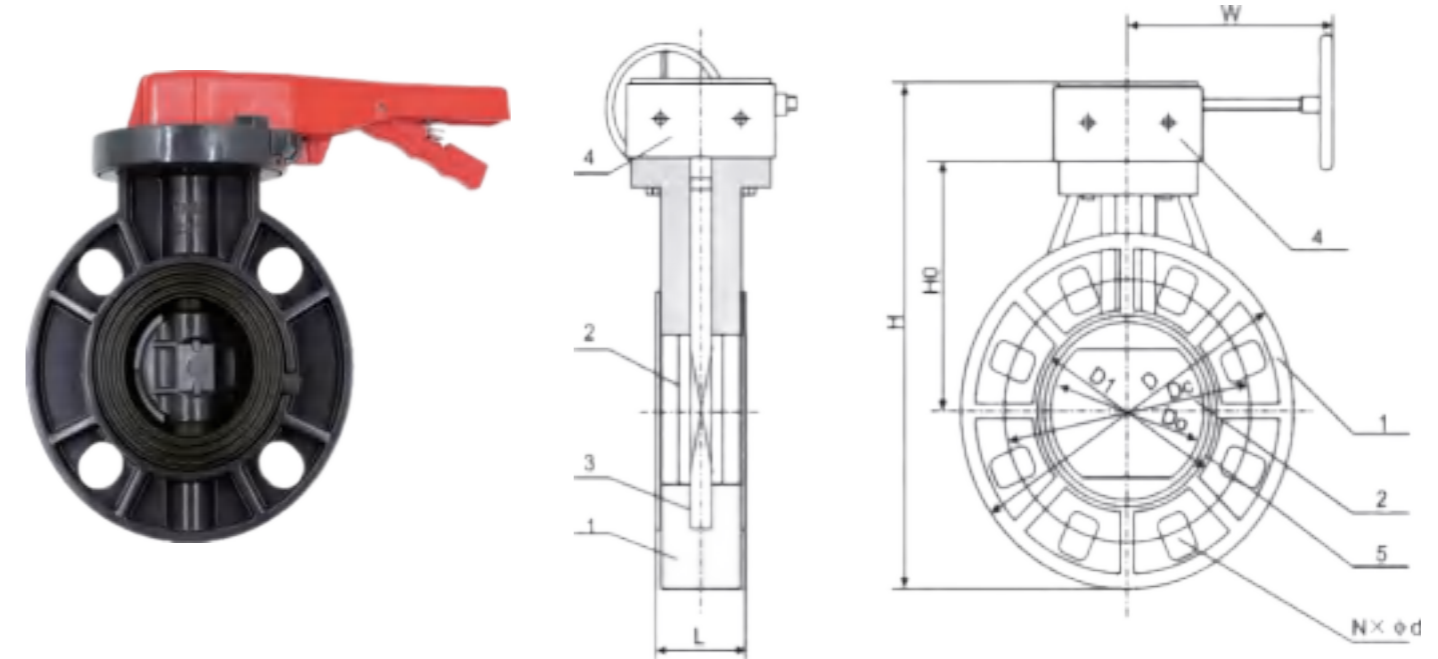
# ALUMINUM BUTTERFLY VALVE



Nominal diameter: DN40(1.5" )-DN300(12" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Testing pressure: Shell-1.5MPa, 2.4MPa  
 Testing pressure: Sealing- 1.1MPa, 1.76MPa  
 Working temperature: -45~135°C EPDM, -12~82°C NBR  
 Suitable media: Water, gas, steam, oil, acid etc.

DN		d	L	D	H1	H2	H3	E	F	K	W	Weight Kg
mm	inch											
40	1.5"	45	35	80	61	132	24	28	83	35	70	2
50	2"	56	43	90	68	138	24	28	83	77	70	2.3
65	2.5"	69	46	115	79	151	24	28	83	77	70	2.7
80	3"	84	46	126	86	156	35.5	46	145	77	100	2.9
100	4"	104	52	148	103	167	35.5	46	145	92	100	3.4
125	5"	130	56	181	118	191	36	53	160	92	125	5.8
150	6"	153.5	56	211	135	202	36	53	160	92	125	7.4
200	8"	199	60	256	177	227	36	71	208	114	200	9.6
250	10"	253	68	322	215	280	38.5	71	293	115	200	21.5
300	12"	302	78	367	253	312	38.5	71	293	140	200	31

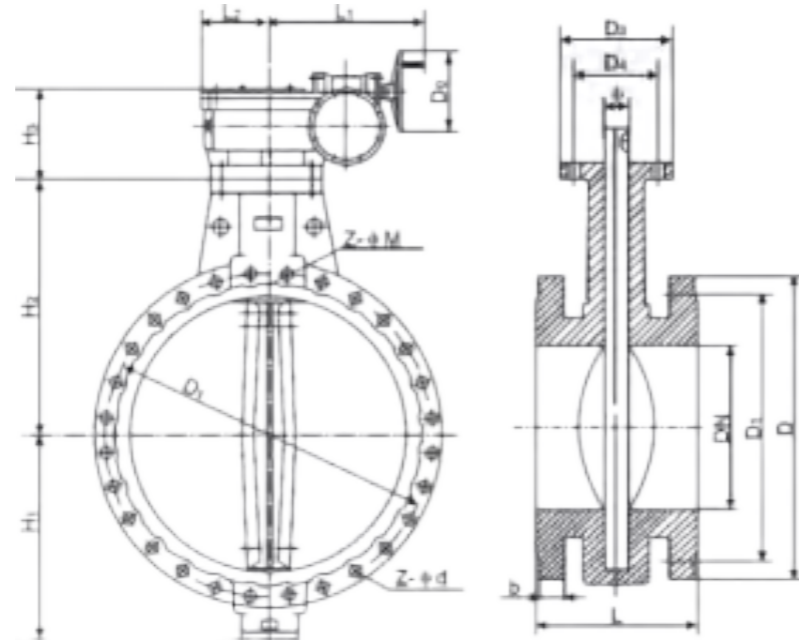
# UPVC BUTTERFLY VALVE



Nominal diameter: DN80(3" )-DN500(20" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Valve body: UPVC, ABS, FR, PP  
 Valve disc: UPVC, ABS, FR, PP  
 Valve stem: 2Cr13, 45#steel  
 Valve seat: NBR, EPDM, TPE  
 Suitable media: Water, gas, steam, oil, acid etc.

DN		D0	D1	DC	D	W	H0	H	L	N x ød
mm	inch									
80	3"	80	125	160	195	140	125	300	49	8xø22
100	4"	100	150	180	225	140	140	340	55	8xø22
125	5"	125	181	210	250	200	154	370	65	8xø26
150	6"	150	204	240	280	200	165	395	70	8xø26
200	8"	200	260	295	345	200	228	470	88	8xø26
250	10"	250	300	350	400	210	258	535	101	12xø28
300	12"	300	360	400	460	210	305	590	106	12xø28
400	16"	400	465	515	575	270	356	740	120	16xø28
500	20"	500	585	620	680	300	395	880	145	20xø26

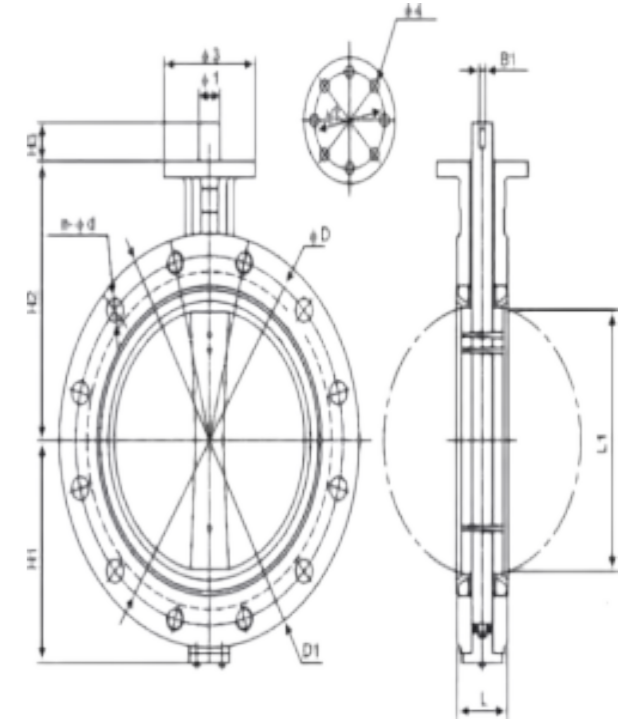
# FLANGE BUTTERFLY VALVE



Nominal diameter: DN50(2" )-DN1000(40" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Working temperature: -23~121°C  
 Suitable media: Water, gas, steam, oil etc.  
 Valve body: Ductile iron, stainless steel, cast iron  
 Valve disc: Ductile iron, stainless steel, aluminum alloy  
 Valve stem: Carbon steel, stainless steel  
 Valve seat: Rubber  
 Sealing: O-ring

DN	L	L1	D		D1		D3	D4	H1	H2	H3	b	Z-φD	
			1.0	1.6	1.0	1.6							1.0	1.6
50	108	160	165	165	125	125	77	57	83	130	60	18	4-φ18	4-φ18
65	112	160	185	185	145	145	77	57	93	140	60	18	4-φ18	4-φ18
80	114	160	200	200	180	160	77	57	100	150	60	20	8-φ18	8-φ18
100	127	160	220	220	180	180	92	70	110	165	60	20	8-φ18	8-φ18
125	140	160	250	250	210	210	92	70	123	180	60	22	8-φ18	8-φ18
150	140	160	285	285	240	240	92	70	143	200	60	22	8-φ22	8-φ22
200	152	210	340	340	295	295	115	89	171	230	72	24	8-φ22	12-φ22
250	165	210	390	405	350	355	115	89	203	270	72	24	12-φ22	12-φ26
300	178	210	440	460	400	410	140	108	230	320	75	26	12-φ22	12-φ26
350	190	210	500	520	450	470	140	108	260	350	75	26	16-φ22	16-φ26
400	216	320	565	580	515	525	197	159	300	390	126	28	16-φ26	16-φ30
450	222	320	615	640	565	585	197	159	335	428	126	30	20-φ26	20-φ30
500	229	320	670	715	620	650	197	159	373	450	126	32	20-φ26	20-φ33
600	267	340	780	840	725	770	276	216	430	520	127	34	20-φ30	20-φ36
700	292	380	895	910	840	840	300	254	470	600	167	36	24-φ30	24-φ36
800	318	380	1015	1025	950	950	300	254	523	662	167	36	24-φ30	24-φ39
900	330	400	1115	1125	1050	1050	300	254	589	710	193	40	28-φ33	28-φ39
1000	410	400	1230	1225	1160	1170	300	254	656	780	193	42	28-φ36	28-φ42

# U TYPE FALNGE BUTTERFLY VALVE



Nominal diameter: DN200(8" )-DN1000(12" )  
 Nominal pressure: 1.0MPa, 1.6MPa  
 Working temperature: -40~200°C  
 Suitable media: Water, acid, alkali etc.  
 Valve body: Cast steel, stainless steel, cast iron  
 Valve disc: Ductile iron, stainless steel  
 Valve stem: 2Cr13, stainless steel, 45#nickel plated  
 Valve seat: Rubber  
 Sealing: O-ring  
 Packing: Rubber

DN		H1	H2	H3	φD	φD1	φ1	φ2	φ3	φ4	n-φd	L	L1	B1
mm	inch													
200	8"	175	243	45	295	343	22.10	102	125	12	8-φ25	60.6	194	5
200	8"	175	243	45	295	343	22.10	102	125	12	12-φ23	60.6	194	5
250	10"	203	282	45	355	405	27.45	102	125	12	12-φ29	65.6	242	8
300	12"	245	310	45	410	480	31.60	102	125	12	12-φ29	76.9	292	8
350	14"	267	368	45	470	533	31.60	102	125	12	16-φ30	76.5	325	8
400	16"	309	400	51.2	515	597	33.15	140	175	18	16-φ26	86.5	380	10
400	16"	309	400	72	525	597	33.15	140	175	18	16-φ30	86.5	380	10
450	18"	328	422	51.2	565	640	38	140	175	18	20-φ26	105.6	428	10
450	18"	328	422	72	585	640	38	140	175	18	20-φ30	105.6	428	10
500	20"	361	480	64.2	620	715	41.15	140	175	18	20-φ26	131.8	474	12
500	20"	361	480	82	650	715	41.15	140	175	18	20-φ33	131.8	474	12
600	24"	459	562	70.2	725	845	50.65	165	210	22	20-φ30	152	573	16
600	24"	459	562	82	770	845	50.65	165	210	22	20-φ36	152	573	16
700	28"	520	624	66	840	960	55	254	300	18	24-φ30	163	676	16
700	28"	520	624	82	840	960	63.35	254	300	18	24-φ36	163	676	16
800	32"	591	672	66	950	1060	55	254	300	18	24-φ33	188	773	16
800	32"	591	672	82	950	1060	63.35	254	300	18	24-φ39	188	773	16
900	36"	656	720	118	1050	1168	75	254	300	18	24-φ33	203	841	20
1000	40"	721	800	142	1160	1235	85	254	300	18	24-φ36	216	941	20