



TIANJIN WORLDS VALVE CO.,LTD.

天津沃得斯阀门有限公司

TIANJIN WORLDS VALVE LTD. is located at TIAN JIN BIN HAI where is only 3 kilometers away from Tianjin Xingang Port, TIANJIN WORLDS VALVE LTD. is a specialized manufacture enterprise that focuses producing, installing, sale and service. The main products include Center Line Butterfly Valve, Flanged Butterfly Valve, Metal Butterfly Valve, Check Valve, Gate Valve, Waterpower Control Valve, Microresistance Slow Close Check Valve, Multi-function Pump Control Valve and their series products. Moreover, we can produce control valve and pressure reducing valve that are different materials, pressures, specifications actuation ways. Our products include more than 50 serials and 1200 species, and the annual production output is more than 8.000 metric tons. WORLDS valves have been selling well all over China and exporting to Europe, America and other countries and areas, which are used widely in water supply and drainage, electric power, petrol chemical industry, metallurgy and other trades. Our products are quite creative, good quality, good price and excellent credit, so customers trust our products.

WORLDS has advanced technicians and engineers and has a lot of large and middle machines including 178 sets of manufacturing equipments and 32 sets of performance testing equipments importing from overseas. Our products have original design, exquisite technique, perfect manufacture and complete testing ways. It has passed ISO 9001 international quality system certification of DNV. WORLDS must supply best products and service for all customers.



Certificates And Patents



WORLDS has advanced technicians and engineers and has a lot of large and middle machines including 178 sets of manufacturing equipments and 32 sets of performance testing equipments importing from overseas. Our products have original design, exquisite technique, perfect manufacture and complete testing ways. It has made special equipment license TS, ISO9001 quality system certification and the European Pressure Equipment CE certification, the American Petroleum Institute API certification and a series of international certification authority, over the years, with its first class enterprise management and product quality consistent valve industry. In order to ensure product quality, the company's main production equipment and testing instruments all use well-known brand, all products are in strict accordance with international standards, whether it is production management, and quality assurance system are comprehensive use of international advanced mode.



Measuring And Packaging



CE 0038 ISO9000



Production System

The perfect process not only because of our advanced manufacturing technique equipment and complete tests but also for worlds multi department teams.

The technicians participation make our products be equipped with excellent quality and potential value during they being well manufactured



Introduction of the valve



The two pieces of body wafer type butterfly valve and a concentric disc and seat with PTFE . The painting thickness can reach up to 3~4mm .Heavy duty top plate is drilled and slotted to ISO 5211 and other existing valve drillings, thus allowing ease of automation and interchangeability. Discs have a streamlined design, providing higher Cv and lower pressure drop.The Flow Line shaft seal is achieved through a continuous pressure exerted from the flatted area of the seat to the machined flatted area of the disc.The raised flatted area of the seat corresponds precisely with the machined flatted hub area of the disc.These matching flatted surfaces provide a wide sealing area for the elastomer backed PTFE seat to exert pressure against, forming the primary seal. Secondary sealing is provided by a 360° machined radius on the flatted hub.

Features

- The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- PTFE liner seated prevents corrosion and guarantees long service life
- Splitted body design
- Can be installed in any desired position
- Maintenance-free
- Can be disassembled, material-specific recycling possible

General Applications



- Chemical and petrochemical industries
- Water & Wastewater Treatment
- Pneumatic materials handling technology
- Shipbuilding
- Food Processing
- Petroleum Refining & Oilfield
- Power generation industry
- Mining
- Irrigation
- Textile
- Desalination
- Steel Production
- Sugar/Ethanol
- HVAC

Parts of name and purpose (DN50-DN300)



NECK: An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access for mounting actuators.

FLANGE LOCATING HOLES: Locating holes in the wafer version provide quick and precise alignment during valve installation eliminating disc interference with adjacent pipe I.D.

DISC: The PTFE disc has 1/8" (3 mm) minimum thickness of pure, virgin PTFE encapsulated over Stainless Steel.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.

TOP STEM BUSHING: A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option

BODY: Bodies are two piece wafer style and are epoxy coated. All bodies meet full ASME Class 150 and DIN 3840 pressure ratings for hydrostatic requirements.

Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.

Parts of name and purpose (DN50-DN200)



TOP STEM BUSHING: A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option

NECK: An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access for mounting actuators.

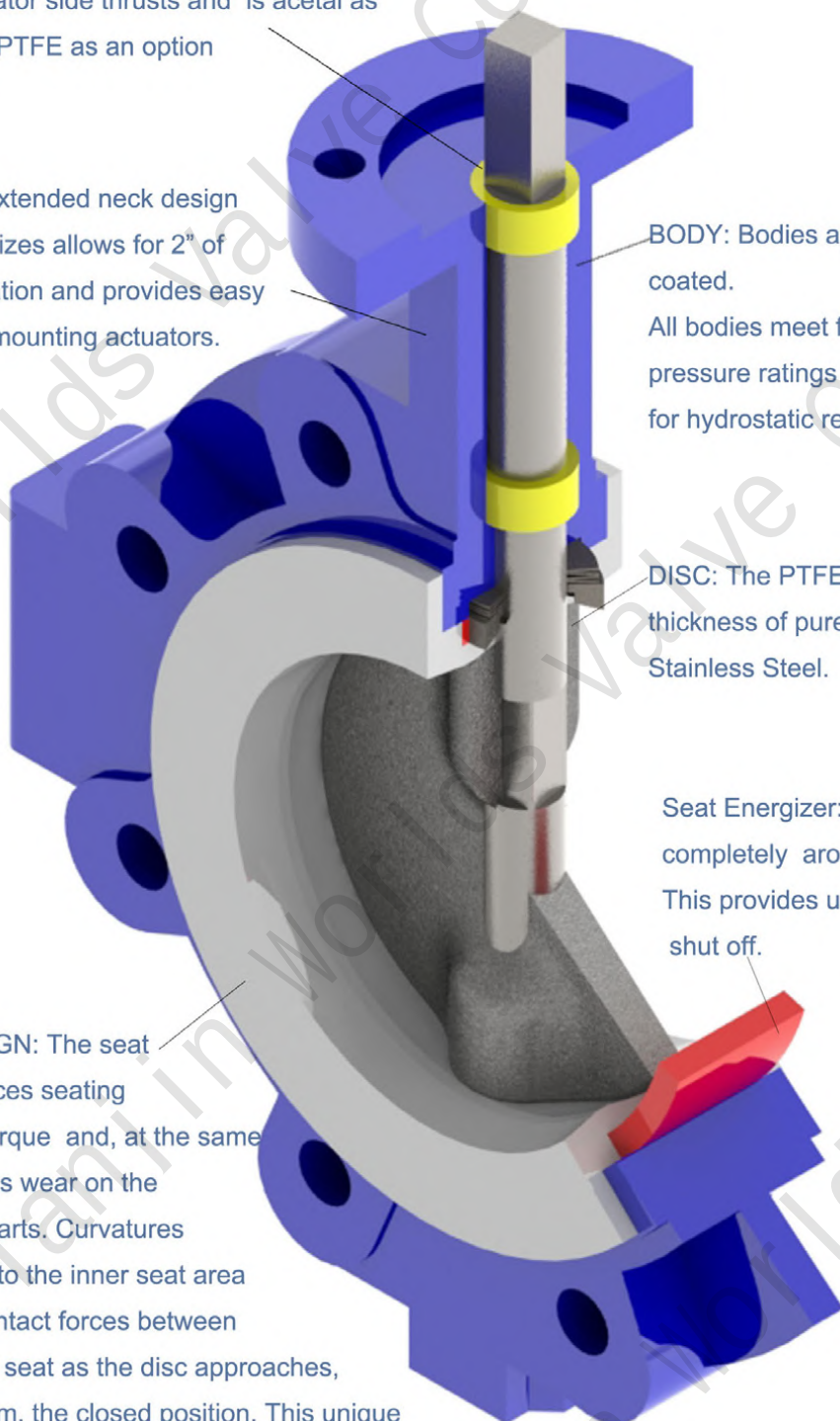
BODY: Bodies are two piece lug style and are epoxy coated.

All bodies meet full ASME Class 150 and DIN 3840 pressure ratings for hydrostatic requirements.

DISC: The PTFE disc has 1/8" (3 mm) minimum thickness of pure, virgin PTFE encapsulated over Stainless Steel.

Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.



Parts of name and purpose (DN350-DN1200)



NECK: An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access for mounting actuators.

FLANGE LOCATING HOLES:
Locating holes in the wafer version provide quick and precise alignment during valve installation eliminating disc interference with adjacent pipe I.D.

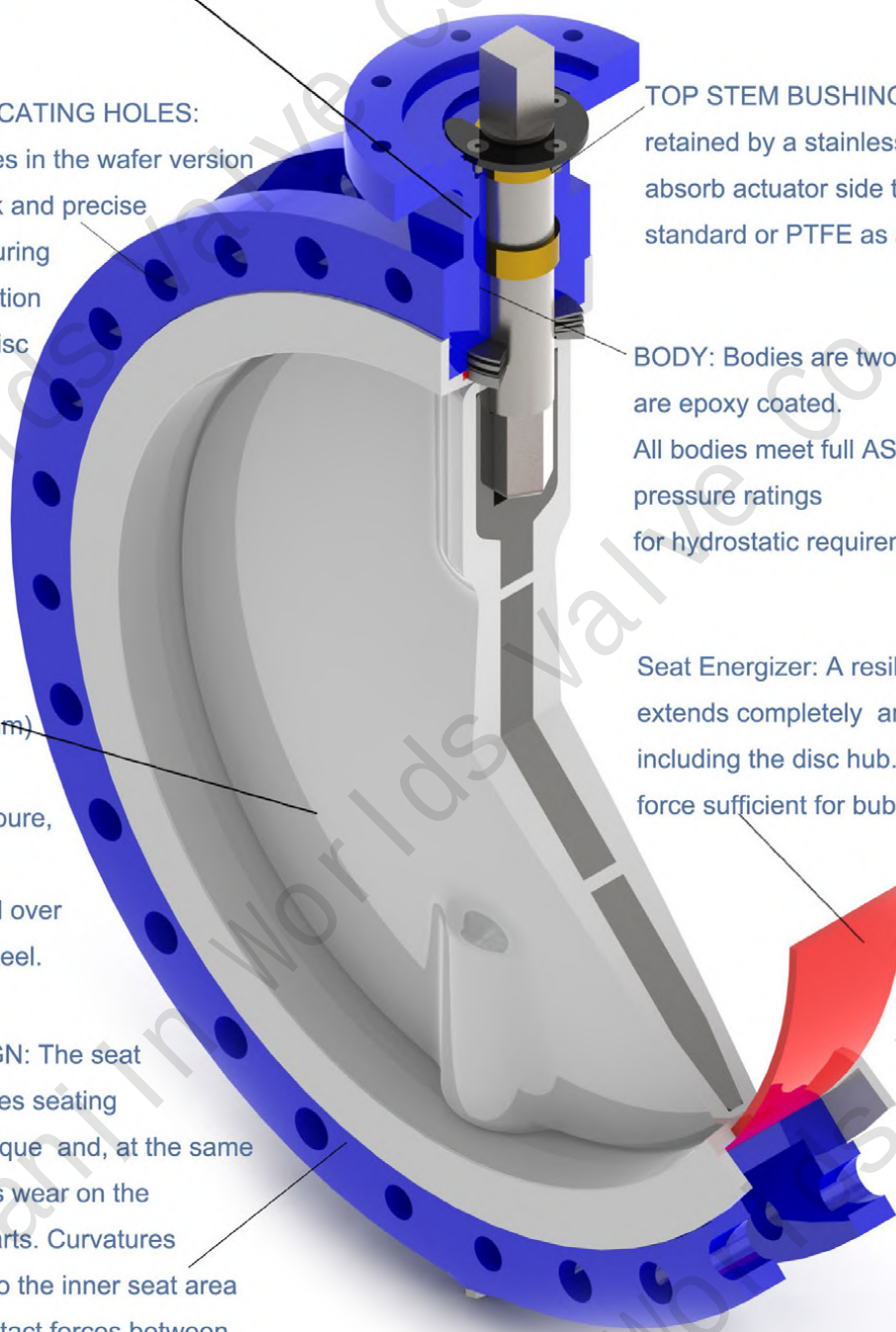
DISC: The PTFE disc has 1/8" (3 mm) minimum thickness of pure, virgin PTFE encapsulated over Stainless Steel.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.

TOP STEM BUSHING: A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option.

BODY: Bodies are two piece wafer or lug style and are epoxy coated. All bodies meet full ASME Class 150 and DIN 3840 pressure ratings for hydrostatic requirements.

Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble tight shut off.



Key Design



CE 0038

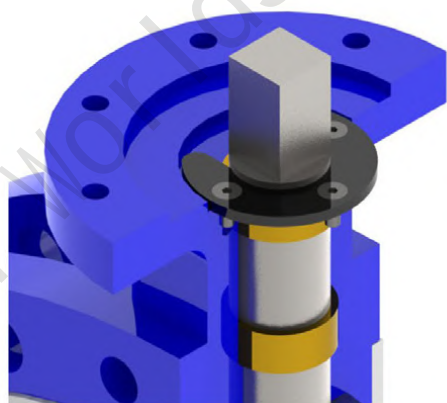
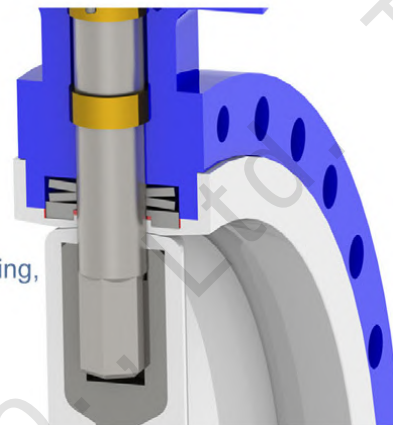


ISO9000



Disc spring, two sets for a group, is a state of compressive deformation in the body. It will impose elastic force on the press sleeve, compact the O ring and seat, improve axial sealing, then provided the bearing stress for the seat and disc, to cover the shortage of elasticity about PTFE seat.

The seat is designed as shown in the figure, the advantage of this design is better sealing, effectively preventing the media leakage from the valve cavity.



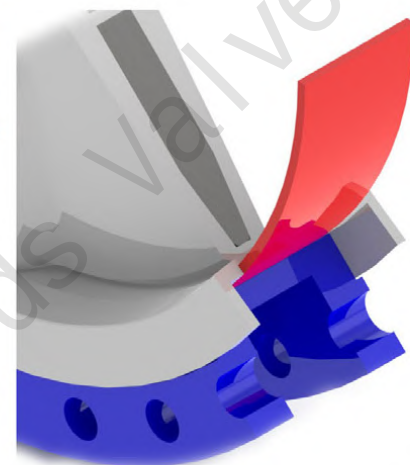
TOP STEM BUSHING:

The bushing can assure the correct interaction between the upper shaft and the lower shaft, at the same time, it can make sure the smooth running of the shaft.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.

Seat Energizer:

A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.



CBF05E-TA(L)01



Extensive field research and engineering have developed this state of the art design which provides excellent shut off protection (bubbletight shut off) and high C_v values. The Series CBF05E-TA01 is crafted in a variety of materials such as PTFE, tainless Steel, UHMWPE and special alloys to fit a wide range of customer requirements. As with all WORLDS's products, precision manufacturing and exceptional quality remain the keys to a proven record of long service life.

Technical Data(DN50-DN1200)

Design Standard

EN593 API 609 BS5155 MSS SP-67

Face to Face

DIN558-1 API609 DIN3202 K1 ISO5752 BS5155

Testing Inspection

EN 12266-1 ISO5208 API598

Flange Accommodation

ASME B 16.1 125LB

ASME B 16.5 150LB

BS4504 PN10/16

DIN2501 PN10/16

ISO7005 PN10/16

EN1092 PN10/16

Top Flange

ISO 5211(accroding to the customer need)

Temperature Range

- 35 to +200(depending on pressure,medium and material)

Suitable Medium

flesh water, waste water,sewage,seawater,air,vapor,food,oils,medicine

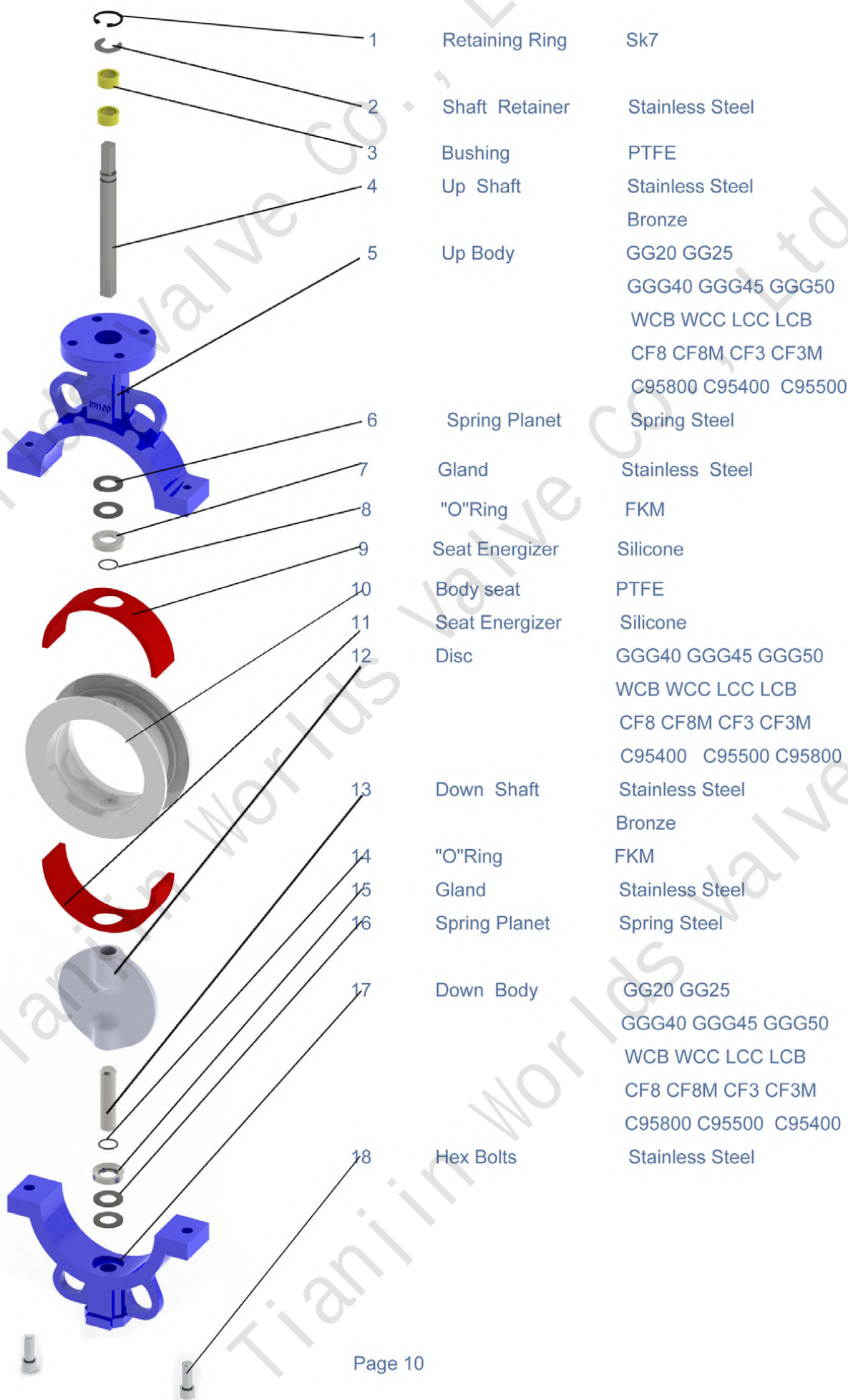
alkailis, salt, ect

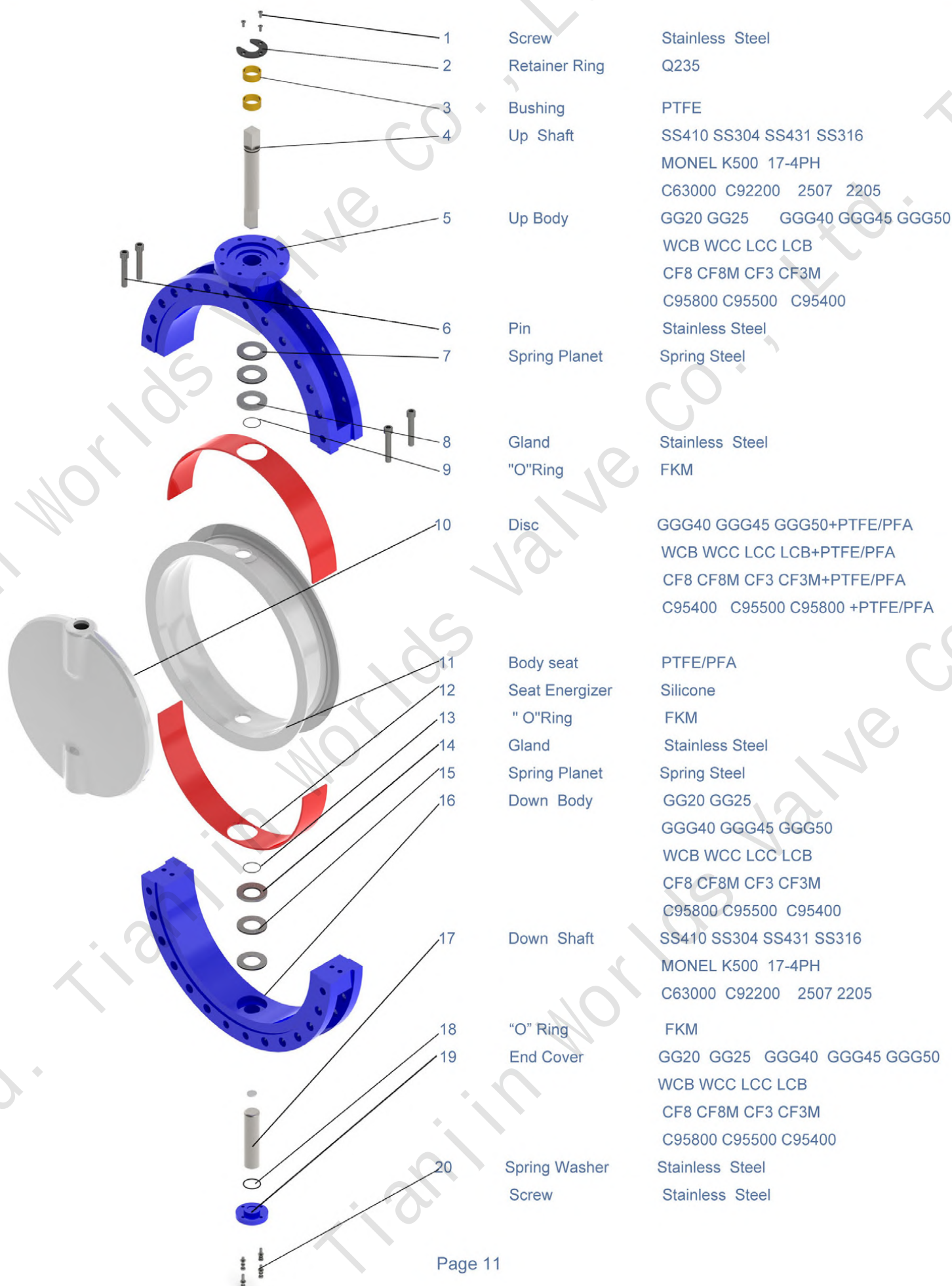
Max Working Pressure

DN50-DN250 16Bar

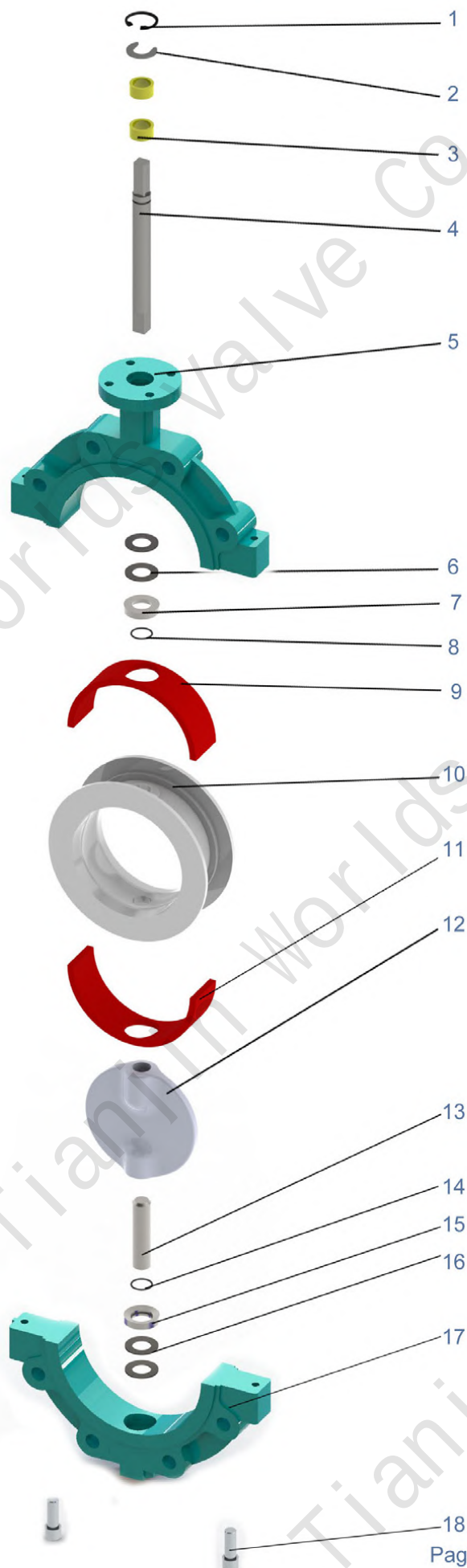
DN300-DN1200 10Bar

Main Spare Part Material Quality (DN50-DN300)



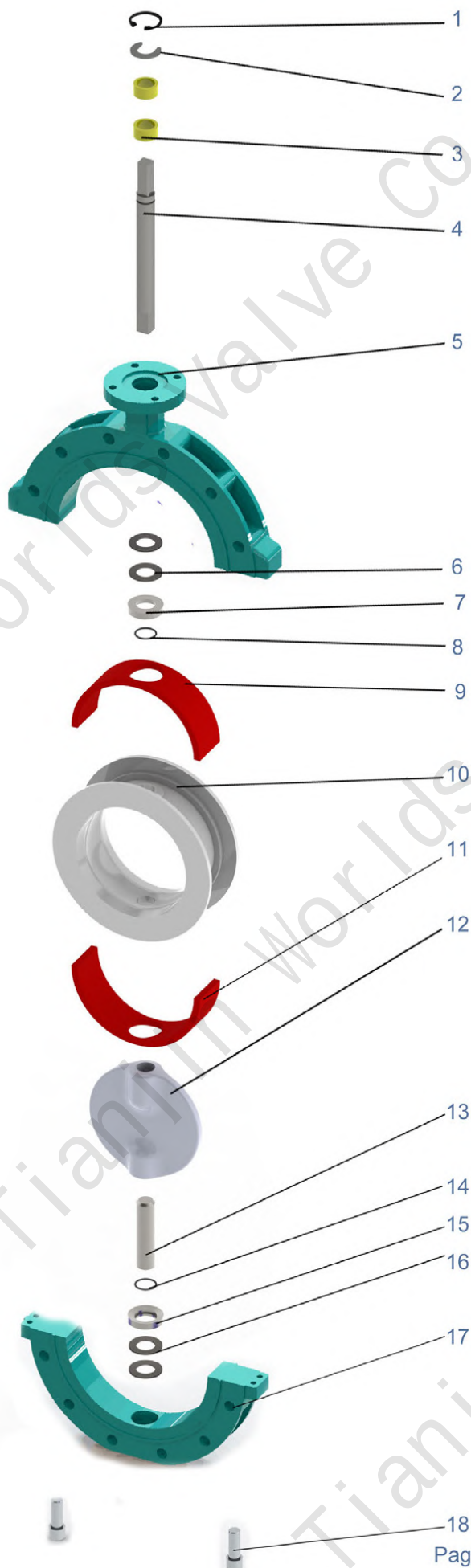


Main Spare Part Material Quality (DN50-DN200)

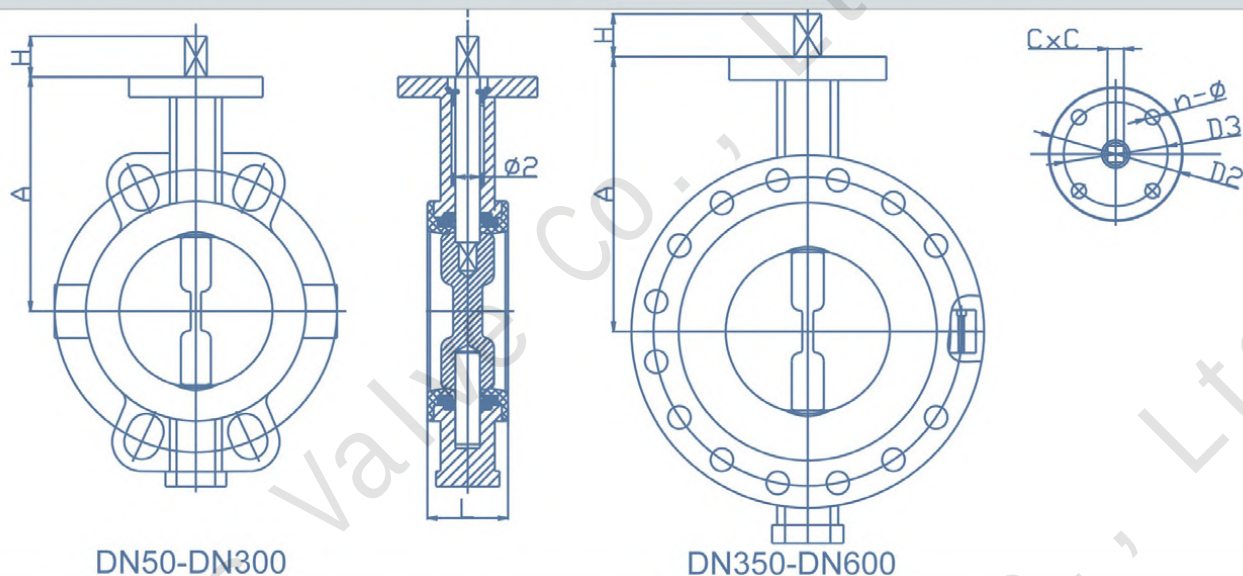


1	Retaining Ring	Sk7
2	Shaft Retainer	Stainless Steel
3	Bushing	PTFE
4	Up Shaft	Stainless Steel Bronze
5	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95400 C95500
6	Spring Planet	Spring Steel
7	Gland	Stainless Steel
8	"O"Ring	FKM
9	Seat Energizer	Silicone
10	Body seat	PTFE
11	Seat Energizer	Silicone
12	Disc	GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95400 C95500 C95800
13	Down Shaft	Stainless Steel Bronze
14	"O"Ring	FKM
15	Gland	Stainless Steel
16	Spring Planet	Spring Steel
17	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
18	Hex Bolts	Stainless Steel

Main Spare Part Material Quality (DN250-DN600)



1	Retaining Ring	Sk7
2	Shaft Retainer	Stainless Steel
3	Bushing	PTFE
4	Up Shaft	Stainless Steel Bronze
5	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95400 C95500
6	Spring Planet	Spring Steel
7	Gland	Stainless Steel
8	"O"Ring	FKM
9	Seat Energizer	Silicone
10	Body seat	PTFE
11	Seat Energizer	Silicone
12	Disc	GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95400 C95500 C95800
13	Down Shaft	Stainless Steel Bronze
14	"O"Ring	FKM
15	Gland	Stainless Steel
16	Spring Planet	Spring Steel
17	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
18	Hex Bolts	Stainless Steel

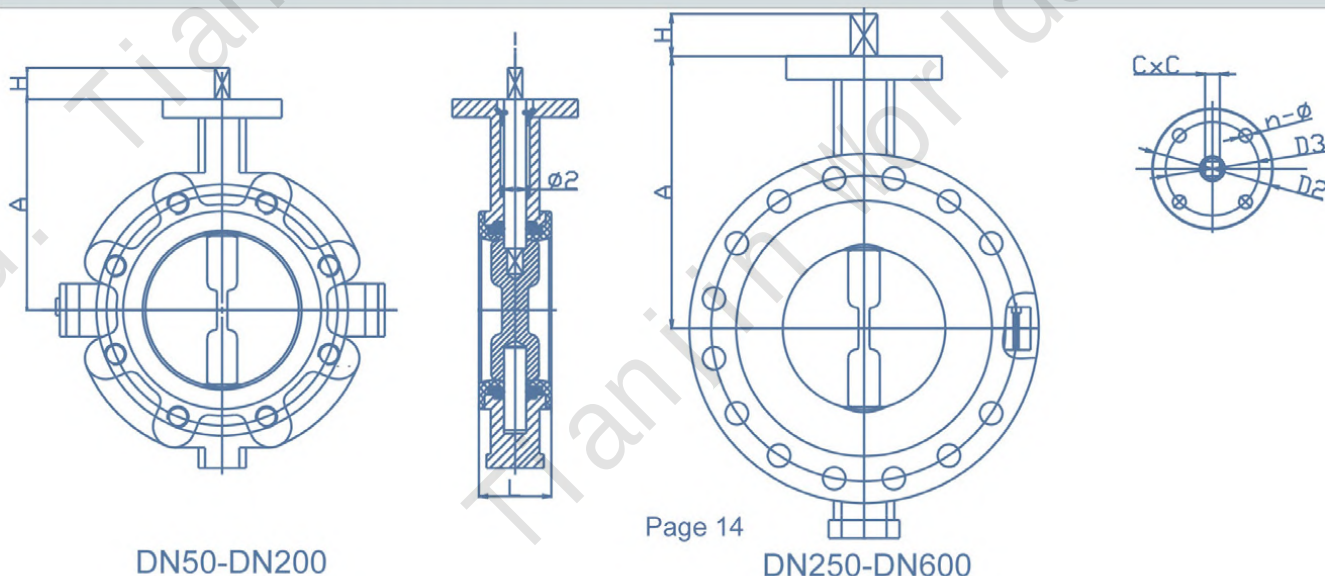
Drawing (CBF05E-TA01-DN50-DN600)


DN50-DN300

DN350-DN600

Outline Dimensions

SIZE	L	A	H	CxC	ISO5211	D2	D3	n- ϕ	$\phi 2$
DN50	43	140	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN65	46	150	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN80	46	160	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN100	52	178	14	11x11	F07	90	70	4-10	15.77
DN125	56	190	17	14x14	F07	90	70	4-10	18.92
DN150	56	200	17	14x14	F07	90	70	4-10	18.92
DN200	60	240	22	17x17	F10	125	102	4-12	22.10
DN250	68	273	22	22x22	F10	125	102	4-12	28.45
DN300	78	310	22	22x22	F10	125	102	4-12	31.60
DN350	78	346	22	22x22	F10	125	102	4-12	31.60
DN400	102	375	36	27x27	F14	175	140	4-18	33.15
DN450	114	406	36	27x27	F14	175	140	4-18	37.95
DN500	127	438	36	36x36	F14	175	140	4-18	45.72
DN600	154	495	46	36x36	F16	210	165	4-22	50.62

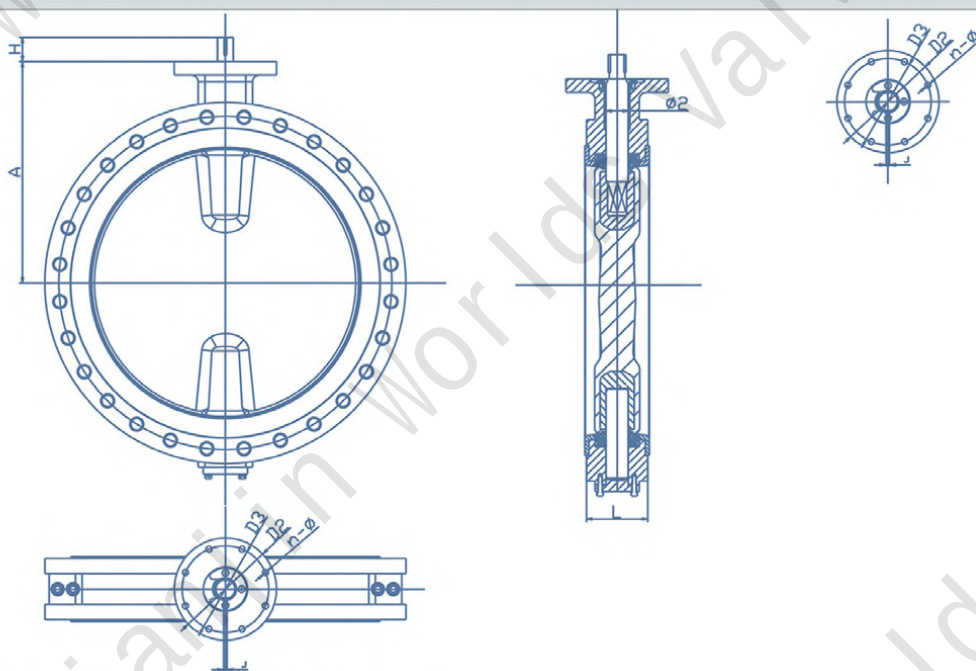
Drawing (CBF05E-TL01-DN50-DN600)


DN50-DN200

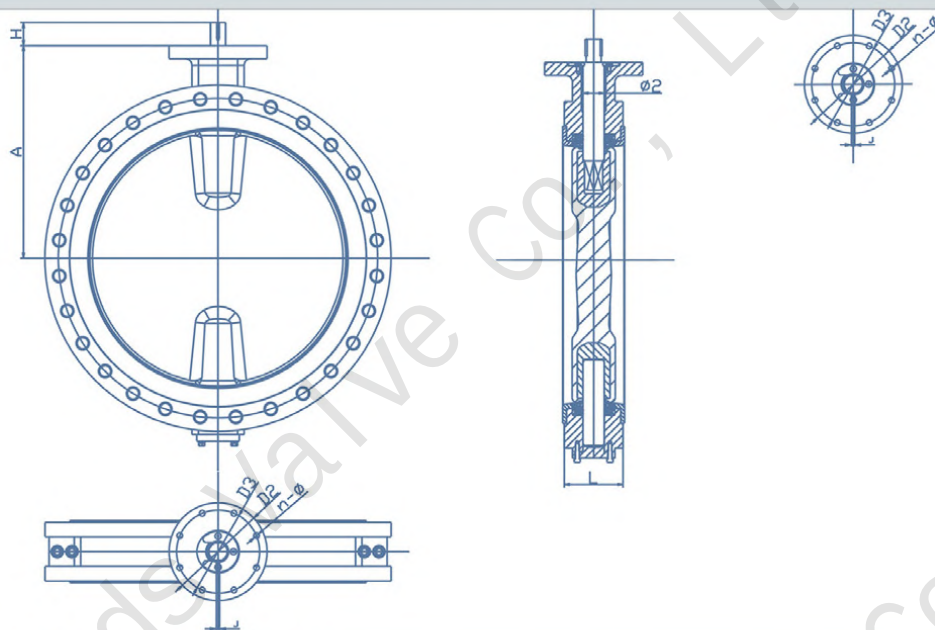
DN250-DN600

Outline Dimensions

SIZE	L	A	H	Cx C	ISO5211	D2	D3	n- ϕ	$\phi 2$
DN50	43	140	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN65	46	150	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN80	46	160	14	9x9	F07/F05	90/65	70/50	4-10/7	12.6
DN100	52	178	14	11x11	F07	90	70	4-10	15.77
DN125	56	190	17	14x14	F07	90	70	4-10	18.92
DN150	56	200	17	14x14	F07	90	70	4-10	18.92
DN200	60	240	22	17x17	F10	125	102	4-12	22.10
DN250	68	273	22	22x22	F10	125	102	4-12	28.45
DN300	78	310	22	22x22	F10	125	102	4-12	31.60
DN350	78	346	22	22x22	F10	125	102	4-12	31.60
DN400	102	375	36	27x27	F14	175	140	4-18	33.15
DN450	114	406	36	27x27	F14	175	140	4-18	37.95
DN500	127	438	36	36x36	F14	175	140	4-18	45.72
DN600	154	495	46	36x36	F16	210	165	4-22	50.62

Drawing (CBF05E-TA01-DN700-DN1200)

Outline Dimensions (Wafer)

SIZE	L	A	H	J	ISO5211	D2	D3	n- ϕ	$\phi 2$
DN700	165	600	110	18	F25	300	200	8-18	63.35
DN750	165	610	110	18	F25	300	200	8-18	63.35
DN800	190	672	110	18	F25	300	200	8-18	63.35
DN900	203	720	110	20	F25	300	200	8-18	75
DN1000	216	800	110	22	F35	415	356	8-33	85
DN1200	254	920	130	28	F35	415	356	8-33	105

Drawing (CBF05E-TL01-DN700-DN1200)

Outline Dimensions (Lug)

SIZE	L	A	H	J	IS05211	D2	D3	n-φ	φ2
DN700	165	600	110	18	F25	300	200	8-18	63.35
DN750	165	610	110	18	F25	300	200	8-18	63.35
DN800	190	672	110	18	F25	300	200	8-18	63.35
DN900	203	720	110	20	F25	300	200	8-18	75
DN1000	216	800	110	22	F35	415	356	8-33	85
DN1200	254	920	130	28	F35	415	356	8-33	105

Torque values-Nm

CBF04-TA01				CBF04-TL01			
SIZE		10 Bar	16 Bar	SIZE		10 Bar	16 Bar
mm	inch	wet (N .m)	wet (N .m)	mm	inch	wet (N .m)	wet (N .m)
DN40	1.5"	18	20	DN40	1.5"	18	20
DN50	2"	20	25	DN50	2"	20	25
DN65	2.5"	30	35	DN65	2.5"	30	35
DN80	3"	40	45	DN80	3"	40	45
DN100	4"	65	75	DN100	4"	65	75
DN125	5"	100	120	DN125	5"	100	120
DN150	6"	150	160	DN150	6"	150	160
DN200	8"	290	320	DN200	8"	290	320
DN250	10"	430	460	DN250	10"	430	460
DN300	12"	560	650	DN300	12"	560	650
DN350	14"	732	850	DN350	14"	732	850
DN400	16"	1300		DN400	16"	1300	
DN450	18"	1700		DN450	18"	1700	
DN500	20"	2700		DN500	20"	2700	
DN600	24"	4200		DN600	24"	4200	

NOTICE:

The above torque data
based on 25 °C
purified water
not include safety factor .

Connection Dimensions (CBF05E-TA01-DN40-DN1200)

	Outer Diameter Of Flange				Diameter Of Center Circle				Number And Diameter Of Bolt Holes			
DN	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K
40	125	150	150	140	98.4	110	110	105	4-16	4-19	4-19	4-19
50	150	165	165	155	120.7	125	125	120	4-19	4-19	4-19	4-19
65	180	185	185	175	139.7	145	145	140	4-19	4-19	4-19	4-19
80	190	200	200	185	152.4	160	160	150	4-19	8-19	8-19	8-19
100	230	220	220	210	190.5	180	180	175	8-19	8-19	8-19	8-19
125	255	250	250	250	215.9	210	210	210	8-22	8-19	8-19	8-23
150	280	285	285	280	241.3	240	240	240	8-22	8-23	8-23	8-23
200	345	340	340	330	298.5	295	295	290	8-22	8-23	12-23	12-23
250	405	395	405	400	362	350	355	355	12-26	12-23	12-28	12-25
300	485	445	460	445	431.8	400	410	400	12-26	12-23	12-28	16-25
350	535	505	520	490	476.3	460	470	445	12-29	16-23	16-28	16-25
400	595	565	580	560	539.8	515	525	510	16-29	16-28	16-31	16-27
450	635	615	640	620	577.9	565	585	565	16-32	20-28	20-31	20-27
500	700	670	715	675	635	620	650	620	20-32	20-28	20-34	20-27
600	815	780	840	795	749.3	725	770	730	20-35	20-31	20-37	24-33
700	927	895	910	905	863.6	840	840	840	28-35	24-31	24-37	24-33
800	1060	1015	1025	1020	977.9	950	950	950	28-42	24-34	24-41	28-33
900	1168	1115	1125	1120	1085.85	1050	1050	1050	32-42	28-34	28-41	28-33
1000	1289	1230	1255	1235	1200.15	1160	1170	1160	36-42	28-37	28-44	28-39
1200	1511	1455	1485	1465	1422.4	1380	1390	1380	44-42	32-41	32-50	32-39

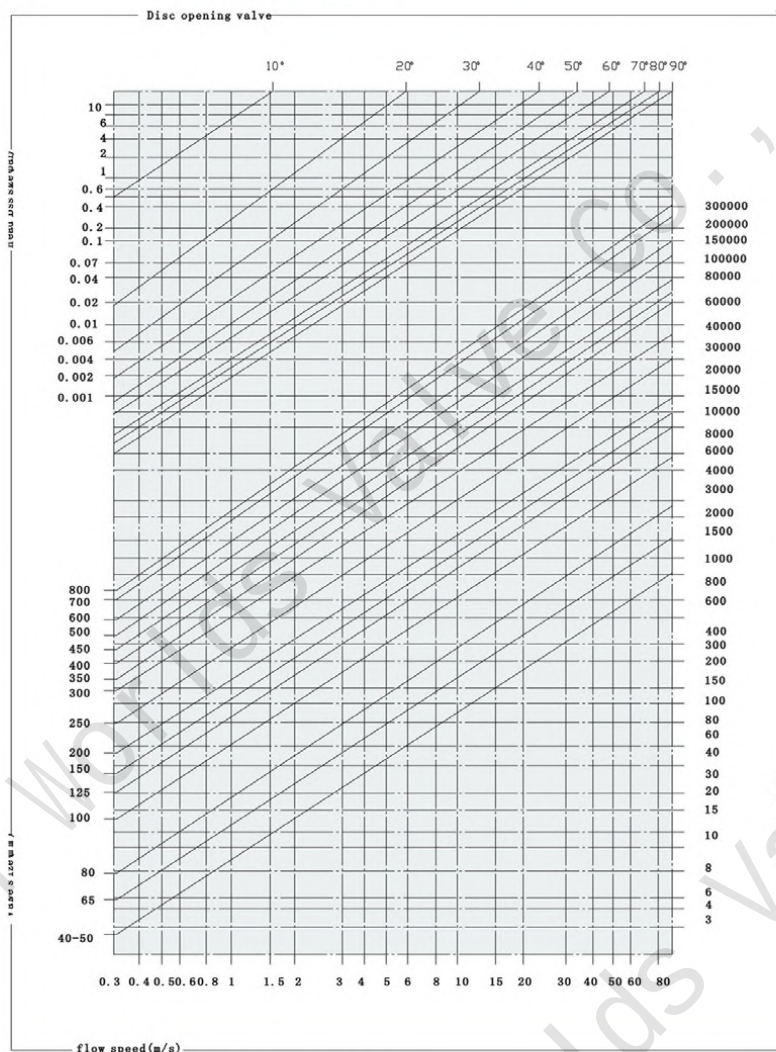
Connection Dimensions (CBF05E-TL01-DN40-DN1200)

	Outer Diameter Of Flange				Diameter Of Center Circle				Number And Diameter Of Bolt			
DN	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K
40	125	150	150	140	98.4	110	110	105	4- $\frac{1}{2}$ "-13UNC	4-M16	4-M16	4-M16
50	150	165	165	155	120.7	125	125	120	4- $\frac{5}{8}$ "-11UNC	4-M16	4-M16	4-M16
65	180	185	185	175	139.7	145	145	140	4- $\frac{5}{8}$ "-11UNC	4-M16	4-M16	4-M16
80	190	200	200	185	152.4	160	160	150	4- $\frac{5}{8}$ "-11UNC	8-M16	8-M16	8-M16
100	230	220	220	210	190.5	180	180	175	8- $\frac{5}{8}$ "-11UNC	8-M16	8-M16	8-M16
125	255	250	250	250	215.9	210	210	210	8- $\frac{3}{4}$ "-10UNC	8-M16	8-M16	8-M20
150	280	285	285	280	241.3	240	240	240	8- $\frac{3}{4}$ "-10UNC	8-M20	8-M20	8-M20
200	345	340	340	330	298.5	295	295	290	8- $\frac{3}{4}$ "-10UNC	8-M20	12-M20	12-M20
250	405	395	405	400	362	350	355	355	12- $\frac{7}{8}$ "-9UNC	12-M20	12-M24	12-M22
300	485	445	460	445	431.8	400	410	400	12- $\frac{7}{8}$ "-9UNC	12-M20	12-M24	16-M22
350	535	505	520	490	476.3	460	470	445	12-1"-8UNC	16-M20	16-M24	16-M22
400	595	565	580	560	539.8	515	525	510	16-1"-8UNC	16-M24	16-M27	16-M24
450	635	615	640	620	577.9	565	585	565	16-1 $\frac{1}{8}$ "-8UN	20-M24	20-M27	20-M24
500	700	670	715	675	635	620	650	620	20-1 $\frac{1}{8}$ "-8UN	20-M24	20-M30	20-M24
600	815	780	840	795	749.3	725	770	730	20-1 $\frac{1}{4}$ "-8UN	20-M27	20-M33	24-M30
700	927	895	910	905	863.6	840	840	840	28-1 $\frac{1}{4}$ "-8UN	24-M27	24-M33	24-M30
800	1060	1015	1025	1020	977.9	950	950	950	28-1 $\frac{1}{2}$ "-8UN	24-M30	24-M36	28-M30
900	1168	1115	1125	1120	1085.85	1050	1050	1050	32-1 $\frac{1}{2}$ "-8UN	28-M30	28-M36	28-M30
1000	1289	1230	1255	1235	1200.15	1160	1170	1160	36-1 $\frac{1}{2}$ "-8UN	28-M33	28-M39	28-M36
1200	1511	1455	1485	1465	1422.4	1380	1390	1380	44-1 $\frac{1}{2}$ "-8UN	32-M36	32-M45	32-M36

Head losses

Formulae for calculation of rate flow

Notes: Values indicated in this page is only for information



Liquids: $Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$

Q rate of flow (m³/h)

PS specific gravity (water=1)

ΔP pressure drop (bar)

Gas: $Q = 28.5 \cdot \frac{KV}{\sqrt{\frac{PS}{P_2 \cdot \Delta P}}}$

Q rate of flow (m³/h)

PS specific gravity (air=1)

ΔP pressure drop (bar)

(less than 1/2 inlet pressure)

P2 outlet pressure

Steam: $Q = 22.5 \cdot KV \cdot \sqrt{P_2 \cdot \Delta P}$

Q rate of flow (Kg/h)

ΔP pressure drop (bar)

(less than 1/2 inlet pressure)

P2 outlet pressure

Calculation of the rate of flow equivalent to H2O:

For different liquid, gas or steam head losses are determined by equivalent water of flow, as follows:

Qe equivalent water flow
(mc/l or l/s)

Q fluid flow
(mc/l or l/s)

d fluid specific gravity
(Kg/mc)

Values CV (CV=1.16KV)

Flow in Gpm@ PSI P@ Various Disc Angles										Full 90°
(mm)	10°	20°	30°	40°	50°	60°	70°	80°	Open	
40	0.04	3	6	12	23	32	46	60	69	
50	0.08	4	10	20	38	54	77	106	115	
65	0.17	7	17	31	55	83	122	173	187	
80	0.26	10	19	33	60	99	156	234	257	
100	0.43	14	31	66	118	196	309	464	510	
125	0.68	25	52	113	201	333	527	791	869	
150	1.7	38	81	174	311	514	814	1221	1342	
200	2.55	76	160	347	618	1022	1618	2426	2666	
250	3.4	128	272	590	1051	1740	2754	4130	4539	
300	4.3	199	421	911	1624	2688	4254	6381	7013	
350	5	287	608	1317	2347	3883	6146	9217	10129	
400	7	394	836	1811	3227	5340	8451	12676	13930	
450	9	523	1107	2399	4274	7072	11193	16789	18449	
500	12	825	1423	3084	5495	9093	14391	21587	23722	
600	19	1039	2199	4764	8491	14049	22233	33351	36649	

Installation Instructions



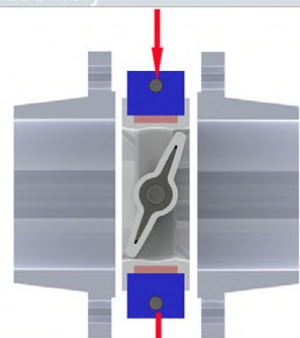
The butterfly valve can be installed on the pipeline, which is at any angle.

1. The valve should be installed in the location being sure to provide convenient operation, maintenance and replacement.
2. As mounting the butterfly valve, fail to consider flow direction of mediums in pipeline, that is to say, the valve can be used in double way.
3. Before installation, the butterfly valve should be stored in ware house and prevent it from moisture and in so doing, the disc should be kept to open at an angle of 15 degree.
4. Before installation, the following processes should be completed:
 - (1) Check carefully and confirm the operation condition of the valve is in line with the technical specification and requirements.
 - (2) Clean the disc sealing area and body sealing completely. It is not permitted to open the disc before cleaning.
 - (3) Check and confirm the handle is strongly collected to the flange and stem.
5. As mounting the butterfly valve in pipeline, the load for tightening connection bolts should be uniformed.
6. After installation, the disc must be opened in the case of the strength pressure test on pipeline being carried out.
7. After being installed, the valve should be examined regularly. The main item to be checked are as follows:
 - (1) Whether the valve seat and 'O' sealing ring have been damaged.
 - (2) Check the sealing effects of the disc sealing area.
 - (3) After the valve was examined and assembled, no scuffing happens at the time of on-off rotation.
 - (4) After the valve was examined and assembled, the sealing test should be carried out as the introduction.
 - (5) After each examination, detailed records should be filed for reference.

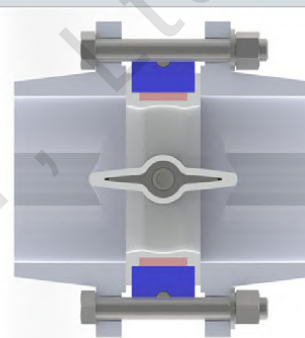


INSTALLATION

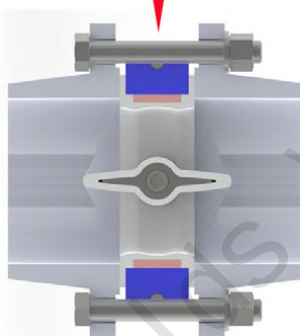
Assembly



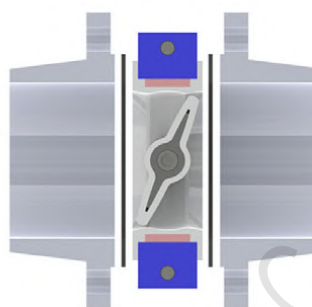
1 Leave a space between flanges so that valve can be easily inserted and removed .and move the valve in accordance with the arrow



2 Open completely the valve before tightening flanges



3 Tighten bolts till flanges are in contact with valve body

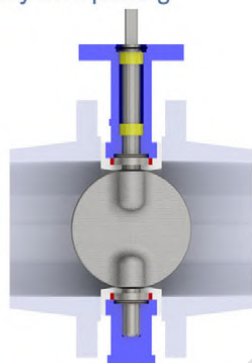


4 NOTE: do not insert other packing between flange and valve

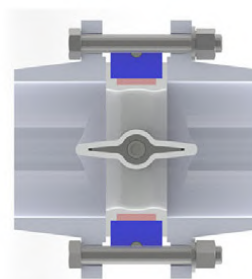
NOTE:Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat, Clean carefully the welding to avoid that slags damage the seat

Installation for powders and muddy fluids

In case of use with powders or muddy fluids,install the valve with horizontal rotation axis,to allow sediments to flow easily on opening



Wrong
Vertical rotation axis



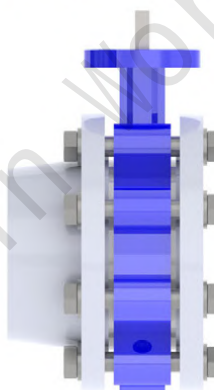
Right
Horizontal rotation axis

End piping installation

When valves are installed end of piping,a counterflange as per dwg type B is needed to secure tightness at max peressure, Please notice in order when the valves are installed as per drawing type A.



Type A installation without end piping



Type B installation with end piping

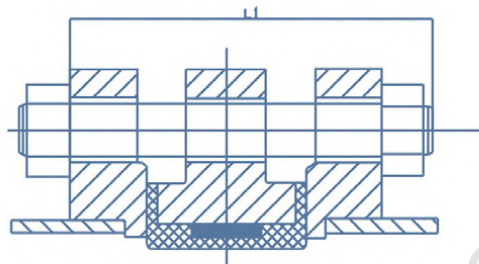
Pressure (max) : Type A installation is 6 Bar

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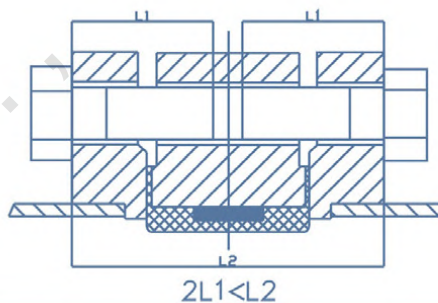
Type B installation is 16 Bar

Length & Quantity of Bolts for Valve Installation

Bolt Connection of Wafer Butterfly Valve



Bolt Connection of Lug Butterfly Valve



2L1<L2

EN1092-1 PN10/16 ISO7005 PN10/16 DIN2501 PN10/16

size	1.0Mpa					1.6Mpa				
	Stud Bolt for Type of wafer valve			Hexagon Heed Bolt for Type of Lug valve		Stud Bolt for Type of wafer valve			Hexagon Heed Bolt for Type of Lug valve	
inch	Qty	Dia×L1	Length	Qty	Dia×L1	Qty	Dia×L1	Length	Qty	Dia×L1
50	4	M16×110	130	4×2	M16×40	4	M16×110	130	4×2	M16×40
65	4	M16×120	140	4×2	M16×45	4	M16×120	140	4×2	M16×45
80	8	M16×120	140	8×2	M16×45	8	M16×120	140	8×2	M16×45
100	8	M16×130	150	8×2	M16×50	8	M16×130	150	8×2	M16×50
125	8	M16×130	150	8×2	M16×50	8	M16×130	150	8×2	M16×50
150	8	M20×140	165	8×2	M20×50	8	M20×140	165	8×2	M20×50
200	8	M20×150	175	8×2	M20×55	12	M20×150	175	12×2	M20×55
250	12	M20×160	185	12×2	M20×60	12	M24×160	185	12×2	M24×60
300	12	M20×170	195	12×2	M20×65	12	M24×170	195	12×2	M24×65
350	16	M20×170	195	16×2	M20×65	16	M24×170	195	16×2	M24×65
400	16	M24×190	220	16×2	M24×75	16	M27×190	220	16×2	M27×75
450	20	M24×220	250	20×2	M24×80	20	M27×220	250	20×2	M27×80
500	20	M24×260	290	20×2	M24×90	20	M30×260	290	20×2	M30×90
600	20	M27×290	324	20×2	M27×100	20	M33×290	324	20×2	M33×100
700	24	M27×290	324	24×2	M27×100	24	M33×290	324	24×2	M33×100
800	24	M30×320	356	24×2	M30×110	24	M36×320	356	24×2	M36×110
900	28	M30×340	376	28×2	M30×130	28	M36×340	376	28×2	M36×130
1000	28	M33×360	400	28×2	M33×140	28	M39×360	400	28×2	M39×140
1200	32	M36×430	470	32×2	M36×165	32	M45×430	470	32×2	M45×165

ASME B 16.5 150LB

size	150LB				
	Stud Bolt for Type of wafer valve			Hexagon Heed Bolt for Type of Lug valve	
inch	Qty	Dia×L1	Length	Qty	Dia×L1
50	4	5/8"×110	130	4×2	5/8"×40
65	4	5/8"×120	140	4×2	5/8"×45
80	4	5/8"×120	140	4×2	5/8"×45
100	8	3/4"×130	150	8×2	3/4"×50
125	8	3/4"×130	150	8×2	3/4"×50
150	8	3/4"×140	165	8×2	3/4"×50
200	8	3/4"×150	175	8×2	3/4"×55
250	12	7/8"×160	185	12×2	7/8"×60
300	12	7/8"×170	195	12×2	7/8"×65
350	12	1"×170	195	12×2	1"×65
400	16	1"×190	220	16×2	1"×75
450	16	9/8"×220	250	16×2	9/8"×80
500	20	9/8"×260	290	20×2	9/8"×90
600	20	5/4"×290	324	20×2	5/4"×100
700	28	5/4"×290	324	28×2	5/4"×100
800	28	3/2"×320	356	28×2	3/2"×110
900	32	3/2"×340	376	32×2	3/2"×130
1000	36	3/2"×360	400	36×2	3/2"×140
1200	44	3/2"×430	470	44×2	3/2"×165

Work principle

This product mainly consists of body, stem, disc, seat bushings etc. The rotation of actuating device makes stem and disc revolved, which ensures on-off operations and flow control.

The rotation of the actuating device ensures dependability and position disc control and position disc control and water flow control. Rotate handle wheel clockwise, the valve is close.

Advantage

- 1.Small in size and light in weight. Easy installation and maintenance. It can be mounted wherever needed.
- 2.Simple and compact construction, quick 90degrees on-off operation.
- 3.Minimized operating torque, energy saving.
- 4.Bubbles-tight sealing with no leakage under the pressure testing
- 5.Wide selection of materials, applicable for various medium.
- 6.Long service life. Standing the test of tens of thousands opening/closing operations.
- 7.Flow curve tending to straight line. Excellent regulation performance.

Trouble & remedy

Trouble	cause	remedy
Leakage in sealing area	Disc sealing area or body sealing seat scratched, disc is not closed completely. Hexagonal socket head bolts on clamping ring are not tightened completely.	Repair the disc sealing replace repair the body sealing seat, adjust actuator to close the disc completely, tighten loosed hexagonal socket head bolts.
Leakage in shaft end	The seat or The 'O' ring is not pressed completely.	Replace the body sealing seat
Leakage in joint area between valve face and relevant flange on pipeline	Connection bolts are not screwed up uniformly.	Tighten the connection bolts evenly.