RHINOFLEX™

Butterfly Valve BF-736

Introduction of the valve

The two pieces of body wafer type butterfly valve and a concentric disc and seat configuration to with whole pack age PTFE sealed structure, takes whole package PTFE painting skills for the body. The painting thickness can reach up to 3~4mm ,which effectively avoids the direct interaction between the body and the medium and the medium's corrosion for the body. Different painting skills and materials of valve's disc are taken according to the customer's need, such as PTFE and nylon painting, stainless steel and bronze material for the body, etc.

Features

Absolutely tight sealing with flow in either direction

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

Can be disassembled, material specific recycling possible

Can be installed at the end of pipe for lugged type butterfly valve

General Applications

The products are used in a wide range of industries worldwide including:

- 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

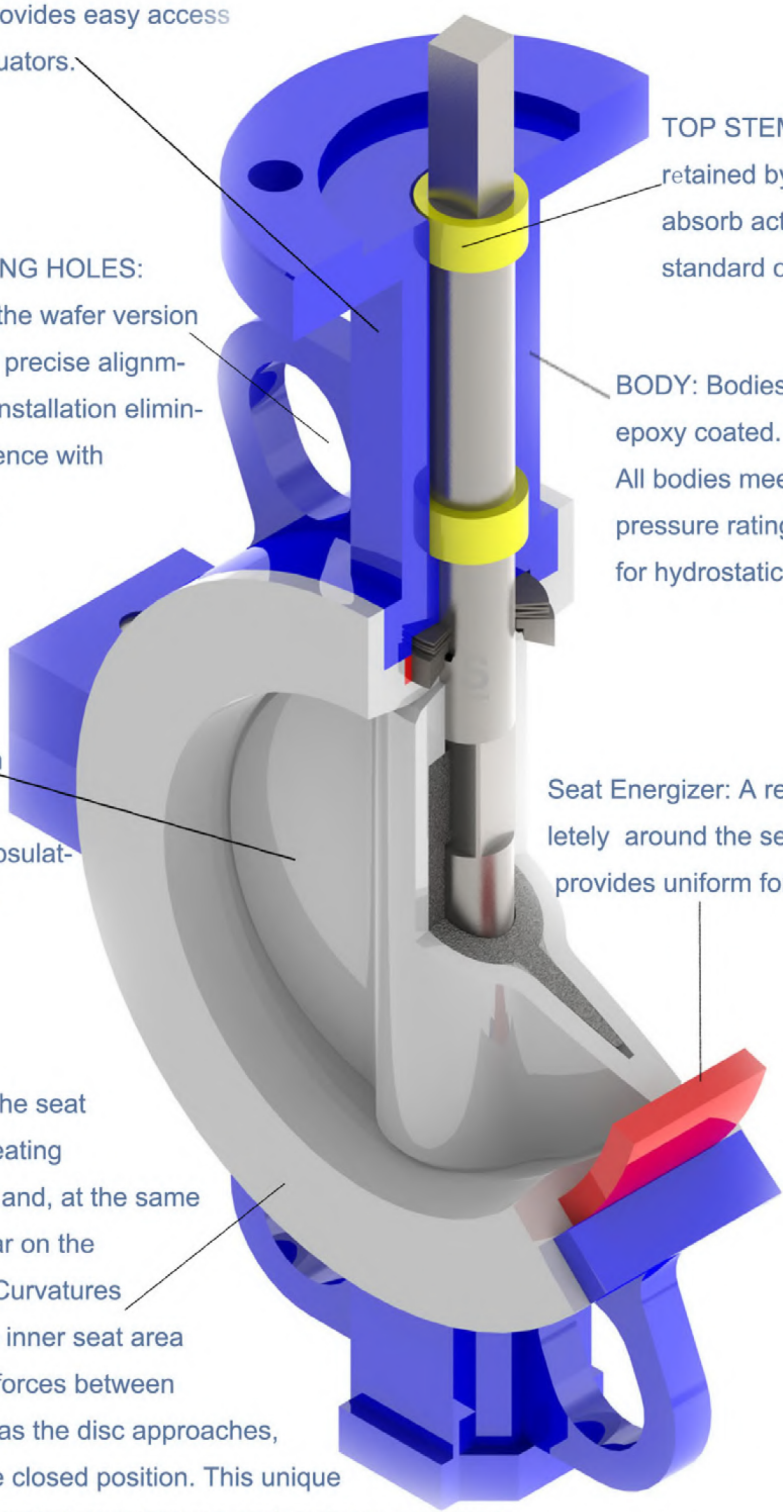
Parts of name and purpose (DN50-DN300)

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

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

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.

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.



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

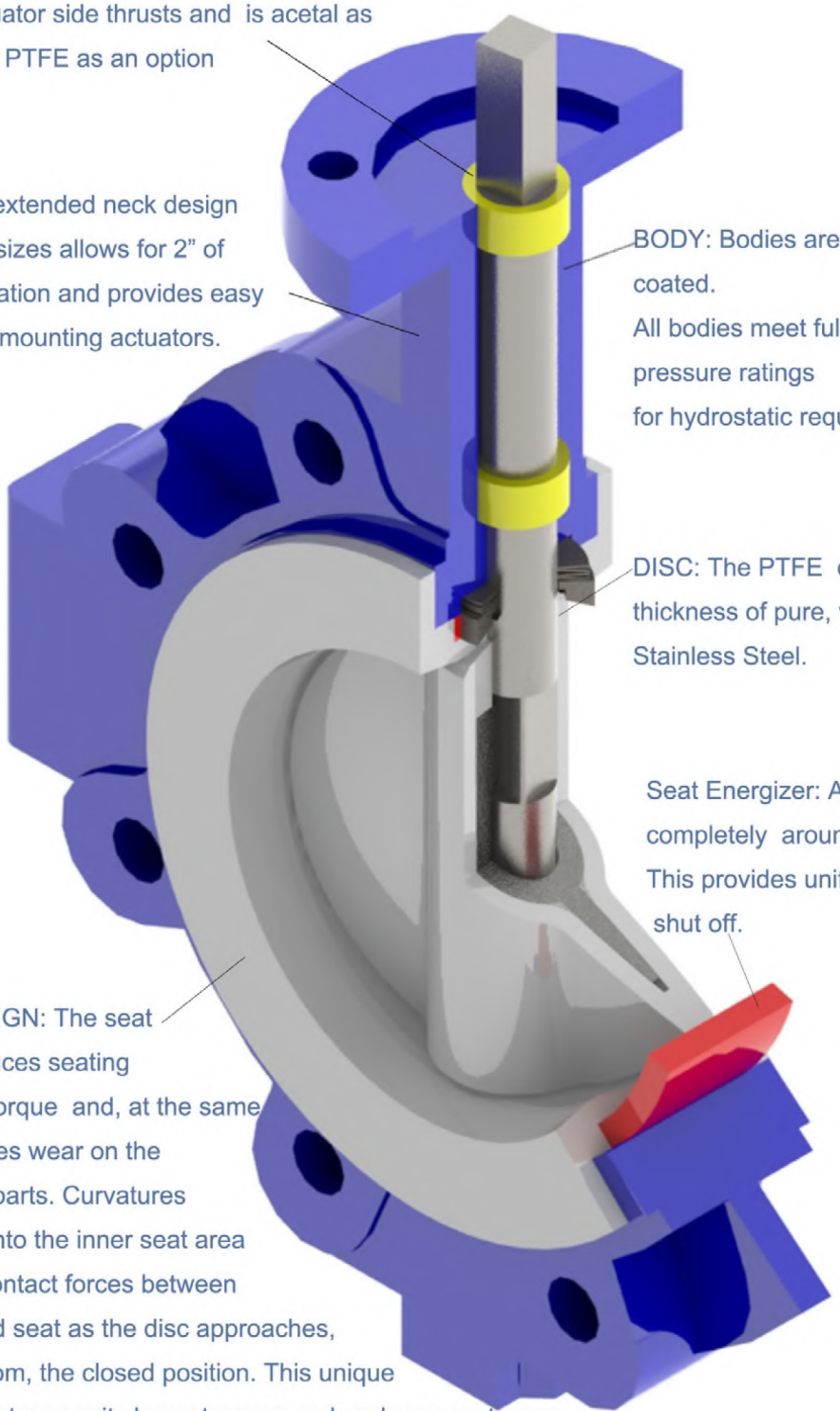
Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.

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 (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-DN900)

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

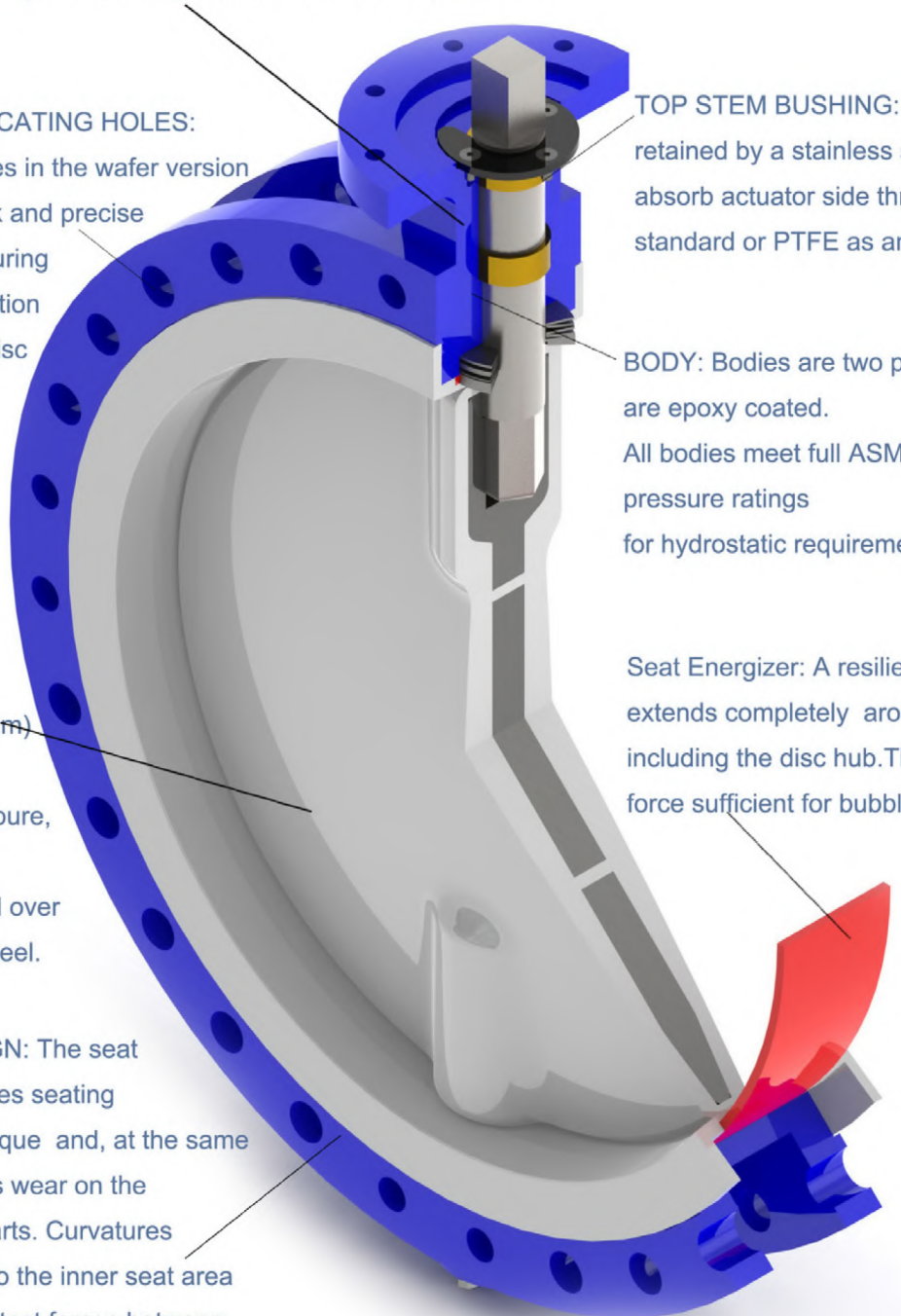
FLANGE LOCATING HOLES: Locating holes in the wafer version provide quick and precise alignment during valve installation eliminating disc interference with adjacent pipe I.D.

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.

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.

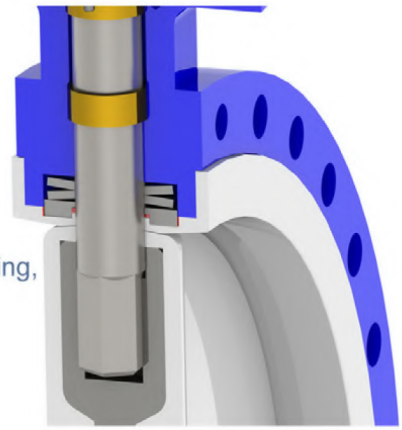


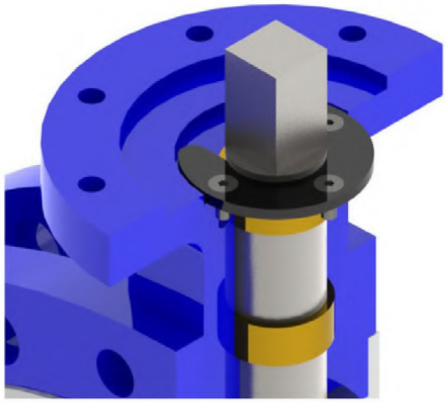
SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry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

Key Design

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 .

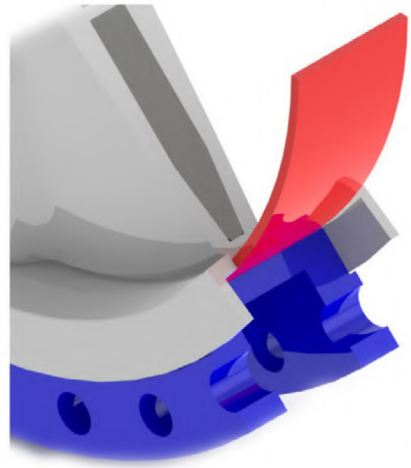




TOP STEM BUSHING:

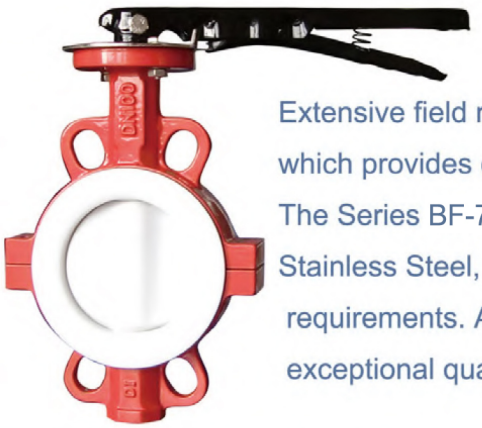
The bushing can assure the correct interaction between the upper shaft and the lower shaft, at the same time, it can make sure the smooth running of the shaft.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvaturesmachined 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.



Extensive field research and engineering have developed this state of the art design which provides excellent shut off protection (bubbletight shut off) and high Cv values. The Series BF-736 is crafted in a variety of materials such as PTFE, Stainless 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 Date(DN50-DN900)

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 custumer need)

Temperature Range

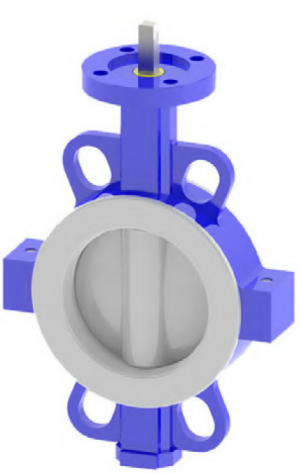
- 35 to +200(depending on pressure,medium and material)

Suitable Medium

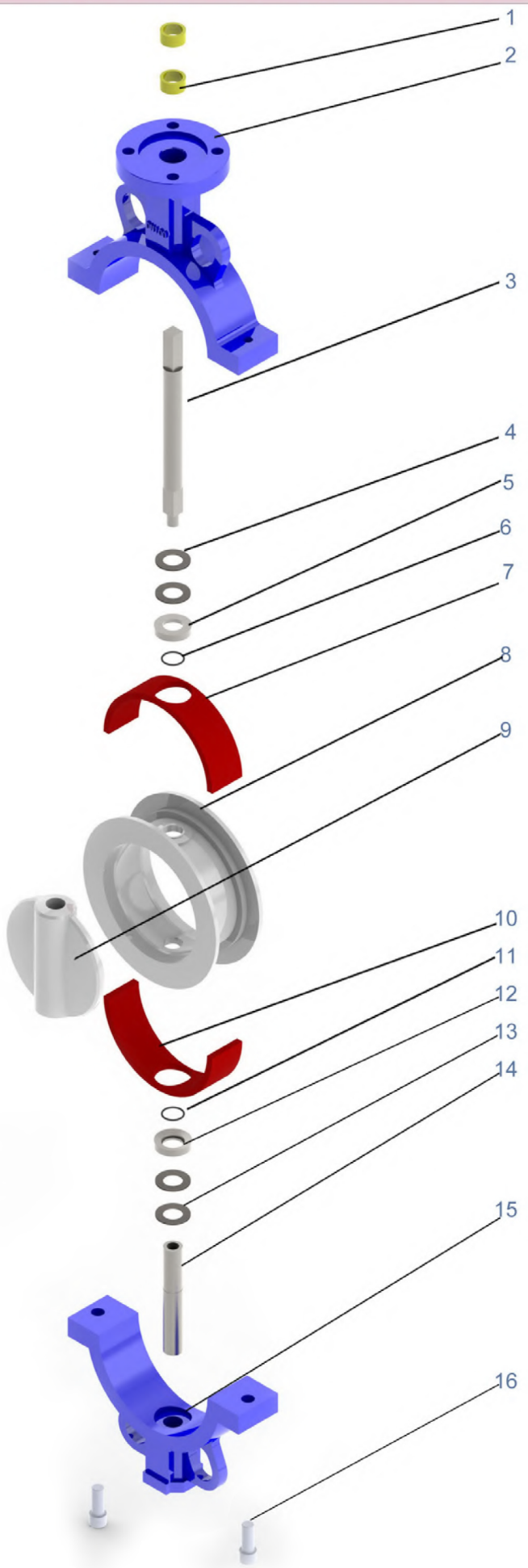
flesh water, waste water,sewage,seawater,air,vapor,food,oils,medicine
alkailis, salt, ect

Max Working Pressure

DN50-DN250	16Bar
DN300-DN900	10Bar

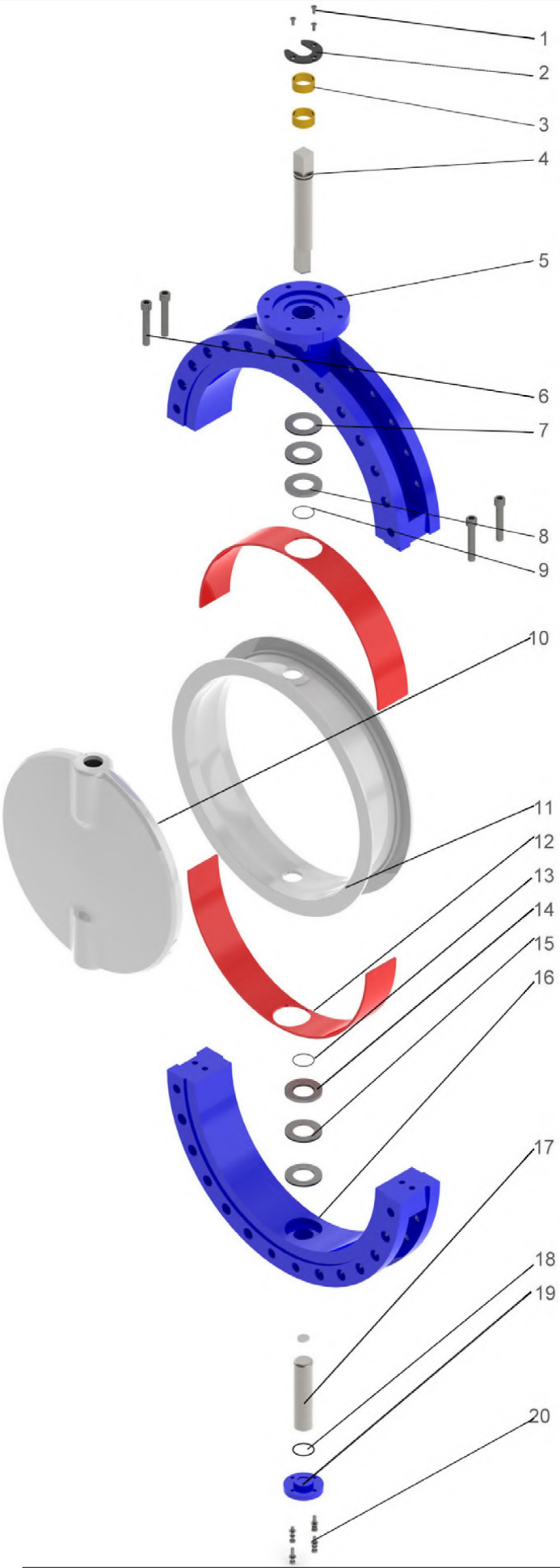


Main Spare Part Material Quality（DN50-DN300）



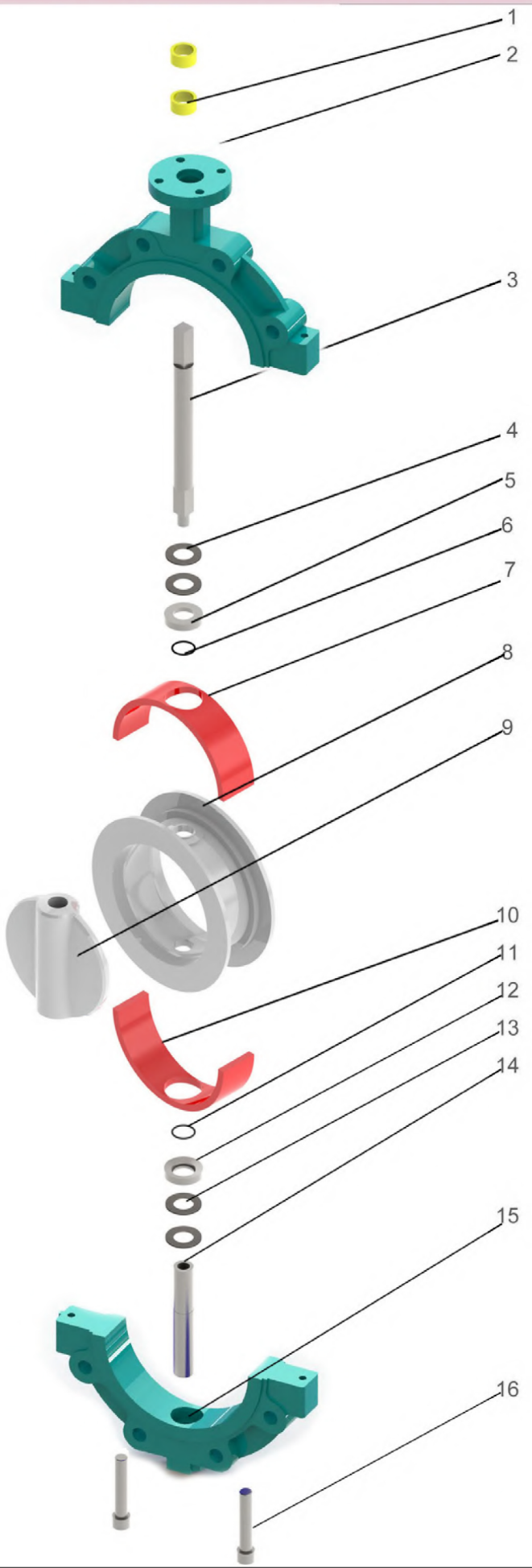
1	Bushing	PTFE
2	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95400
3	Up Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
4	Spring Planet	Spring Steel
5	Gland	Stainless Steel
6	"O"Ring	FKM
7	Seat Energizer	Silicone
8	Body seat	PTFE/PFA
9	Disc	GGG40 GGG45 GGG50+PTFE/PFA WCB WCC LCC LCB+PTFE/PFA CF8 CF8M CF3 CF3M+PTFE/PFA C95400 C95500 C95800 +PTFE/PFA
10	Seat Energizer	Silicone
11	"O"Ring	FKM
12	Gland	Stainless Steel
13	Spring Planet	Spring Steel
14	Down Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
15	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
16	Hex Bolts	Stainless Steel

Main Spare Part Material Quality（DN350-DN900）



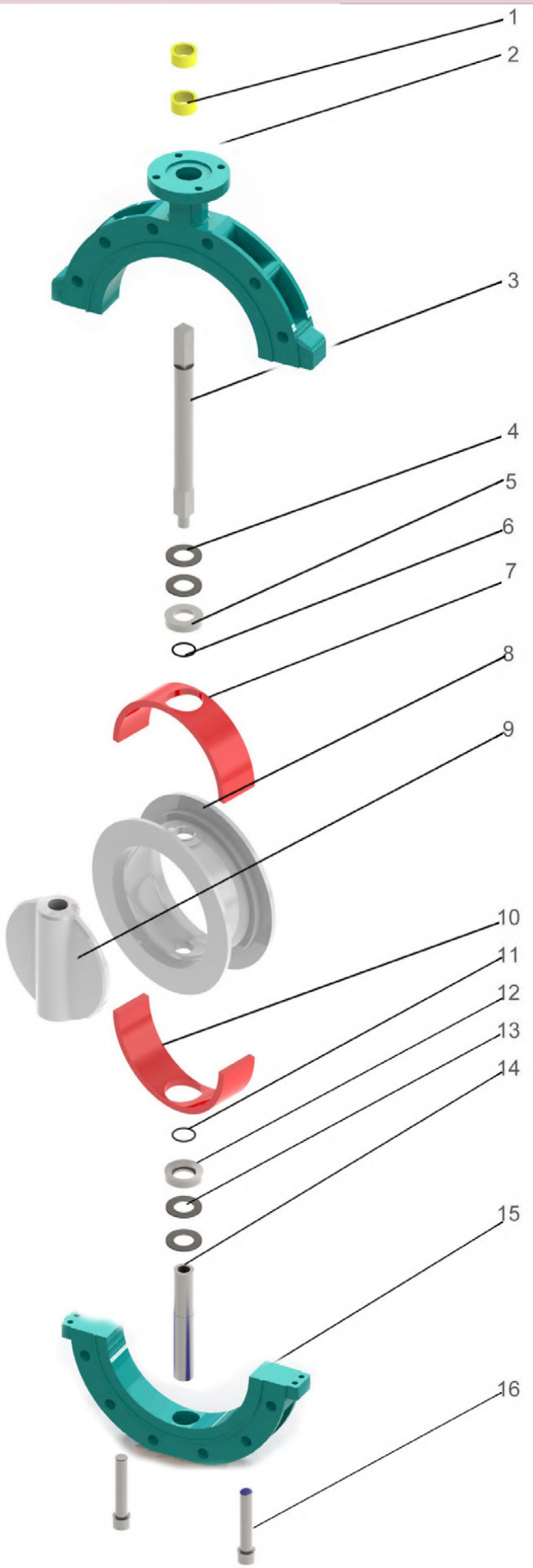
1	Screw	Stainless Steel
2	Retainer Ring	Q235
3	Bushing	PTFE
4	Up Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
5	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
6	Pin	Stainless Steel
7	Spring Planet	Spring Steel
8	Gland	Stainless Steel
9	"O"Ring	FKM
10	Disc	GGG40 GGG45 GGG50+PTFE/PFA WCB WCC LCC LCB+PTFE/PFA CF8 CF8M CF3 CF3M+PTFE/PFA C95400 C95500 C95800 +PTFE/PFA
11	Body seat	PTFE/PFA
12	Seat Energizer	Silicone
13	" O"Ring	FKM
14	Gland	Stainless Steel
15	Spring Planet	Spring Steel
16	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
17	Down Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
18	“O” Ring	FKM
19	End Cover	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
20	Spring Washer	Stainless Steel
	Screw	Stainless Steel

Main Spare Part Material Quality（DN50-DN200）



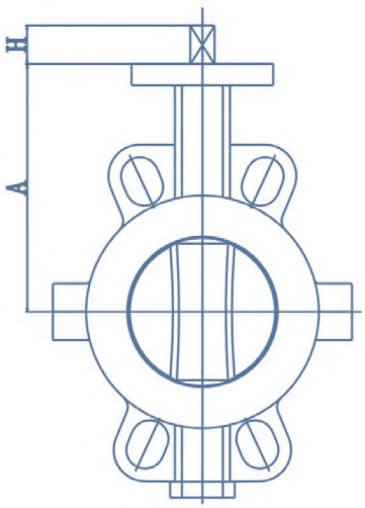
1	Bushing	PTFE
2	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95400
3	Up Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
4	Spring Planet	Spring Steel
5	Gland	Stainless Steel
6	"O"Ring	FKM
7	Seat Energizer	Silicone
8	Body seat	PTFE/PFA
9	Disc	GGG40 GGG45 GGG50+PTFE/PFA WCB WCC LCC LCB+PTFE/PFA CF8 CF8M CF3 CF3M+PTFE/PFA C95400 C95500 C95800+PTFE/PFA
10	Seat Energizer	Silicone
11	"O"Ring	FKM
12	Gland	Stainless Steel
13	Spring Planet	Spring Steel
14	Down Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
15	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
16	Hex Bolts	Stainless Steel

Main Spare Part Material Quality（DN250-DN600）

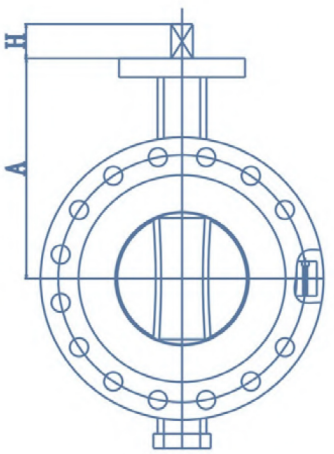


1	Bushing	PTFE
2	Up Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95400
3	Up Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
4	Spring Planet	Spring Steel
5	Gland	Stainless Steel
6	"O"Ring	FKM
7	Seat Energizer	Silicone
8	Body seat	PTFE/PFA
9	Disc	GGG40 GGG45 GGG50+PTFE/PFA WCB WCC LCC LCB+PTFE/PFA CF8 CF8M CF3 CF3M+PTFE/PFA C95400 C95500 C95800 +PTFE/PFA
10	Seat Energizer	Silicone
11	"O"Ring	FKM
12	Gland	Stainless Steel
13	Spring Planet	Spring Steel
14	Down Shaft	SS410 SS304 SS431 SS316 MONEL K500 17-4PH C63000 C92200 2507 2205
15	Down Body	GG20 GG25 GGG40 GGG45 GGG50 WCB WCC LCC LCB CF8 CF8M CF3 CF3M C95800 C95500 C95400
16	Hex Bolts	Stainless Steel

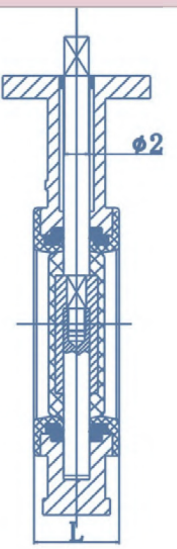
Drawing (RFBF04-TA01-DN50-DN600)

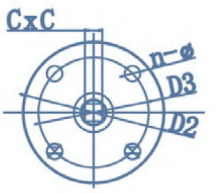


DN50-DN300



DN350-DN600

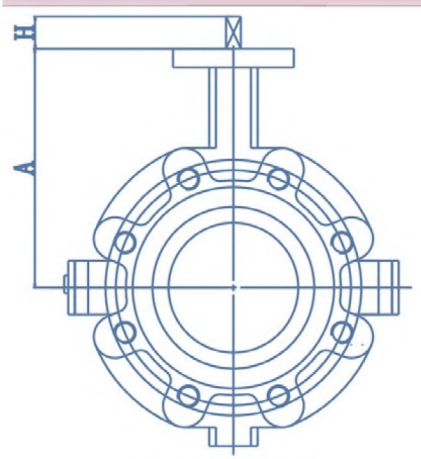




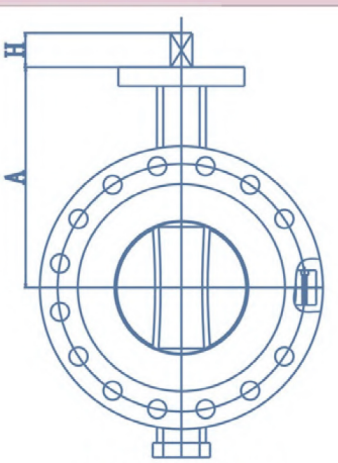
Outline Dimensions

SIZE	L	A	H	CxC	ISO5211	D2	D3	n- ø	ø2
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

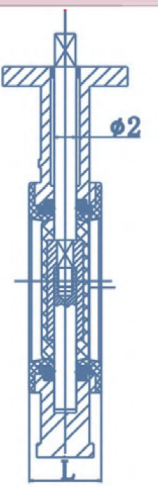
Drawing (RFBF04-TL01-DN50-DN600)

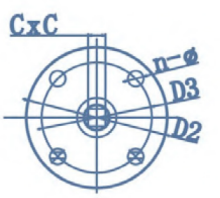


DN50-DN200



DN250-DN600

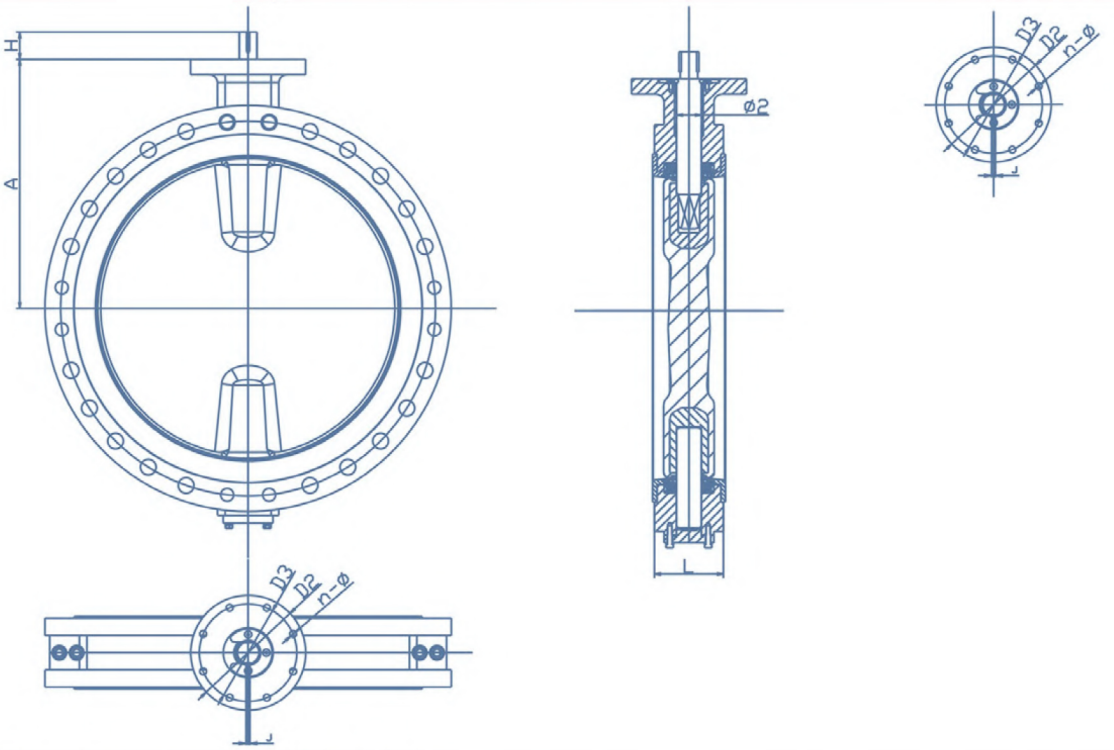




Outline Dimensions

SIZE	L	A	H	CxC	ISO5211	D2	D3	n- ø	ø2
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

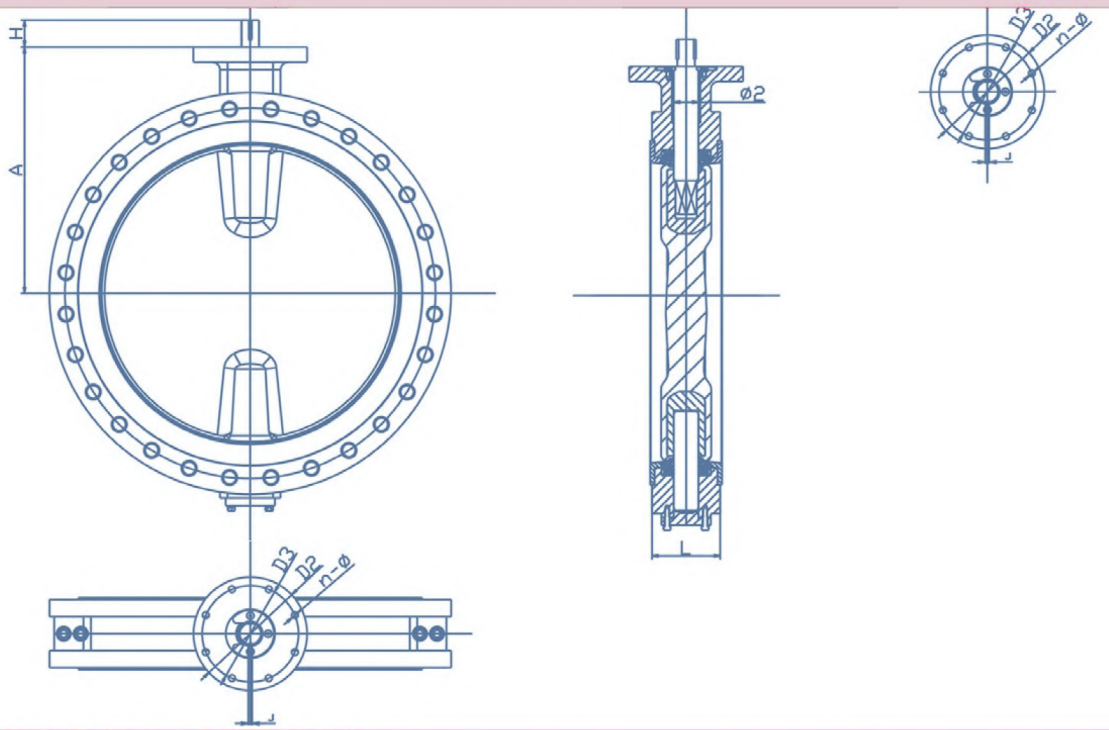
Drawing (RFBF04-TA01-DN700-DN900)



Outline Dimensions (Wafer)

SIZE	L	A	H	J	ISO5211	D2	D3	n-ø	ø2
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

Drawing (RFBF04-TL01-DN700-DN900)



Outline Dimensions (Lug)

SIZE	L	A	H	J	ISO5211	D2	D3	n-ø	ø2
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

Torque values-Nm

RFBF04-TA01				RFBF04-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 Dimensisns (RFBF04-TA01-DN50-DN900)

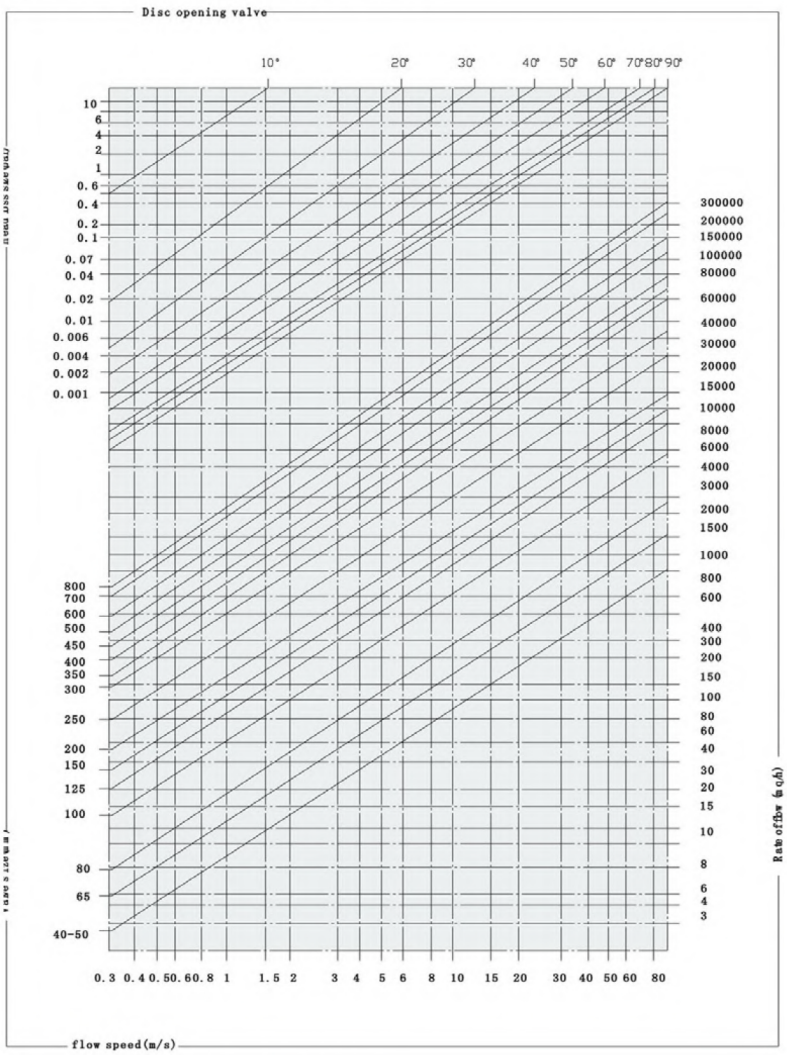
	Outer Diameter Of Flange				Diameter Of Center Circle				Number And Diameter Of Bolt Holes			
DN	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K	150LB	PN10	PN16	JIS10K
50	150	165	165	155	120.7	125	125	120	4-19	4-19	4-19	4-19
65	180	185	185	175	139.7	145	145	140	4-19	4-19	4-19	4-19
80	190	200	200	185	152.4	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

Connection Dimensisns (RFBF04-TL01-DN50-DN900)

	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
50	150	165	165	155	120.7	125	125	120	4-5/8"-11UNC	4-M16	4-M16	4-M16
65	180	185	185	175	139.7	145	145	140	4-5/8"-11UNC	4-M16	4-M16	4-M16
80	190	200	200	185	152.4	160	160	150	4-5/8"-11UNC	8-M16	8-M16	8-M16
100	230	220	220	210	190.5	180	180	175	8-5/8"-11UNC	8-M16	8-M16	8-M16
125	255	250	250	250	215.9	210	210	210	8-3/4"-10UNC	8-M16	8-M16	8-M20
150	280	285	285	280	241.3	240	240	240	8-3/4"-10UNC	8-M20	8-M20	8-M20
200	345	340	340	330	298.5	295	295	290	8-3/4"-10UNC	8-M20	12-M20	12-M20
250	405	395	405	400	362	350	355	355	12-7/8"-9UNC	12-M20	12-M24	12-M22
300	485	445	460	445	431.8	400	410	400	12-7/8"-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 1/8"-8UN	20-M24	20-M27	20-M24
500	700	670	715	675	635	620	650	620	20-1 1/8"-8UN	20-M24	20-M30	20-M24
600	815	780	840	795	749.3	725	770	730	20-1 1/4"-8UN	20-M27	20-M33	24-M30
700	927	895	910	905	863.6	840	840	840	28-1 1/4"-8UN	24-M27	24-M33	24-M30
800	1060	1015	1025	1020	977.9	950	950	950	28-1 1/2"-8UN	24-M30	24-M36	28-M30
900	1168	1115	1125	1120	1085.85	1050	1050	1050	32-1 1/2"-8UN	28-M30	28-M36	28-M30

Head losses

Notes:Values indicated in this page is only for information



Formulae for calculation of rate flow

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

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 followsw:

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

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

d fluid specific gravity
(Kg/mc)

Values CV (CV=1.16KV)

Flow in Gpm@1 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.

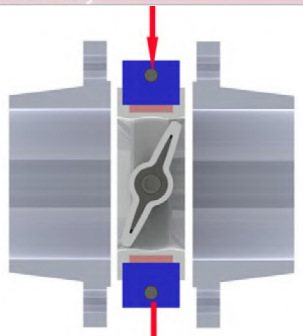
(3)After the valve was examined and assembled, no scuffing happens at the time of on-off rotation.

(4)After the valve was examined and assembled, the sealing test should be carried out as the introduction.

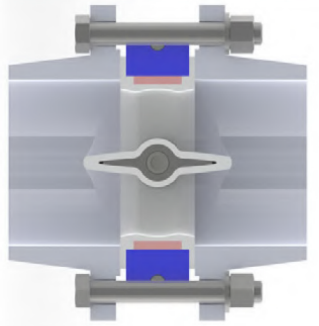
(5)After each examination, detailed records should be filed for reference.

INSTALLATION

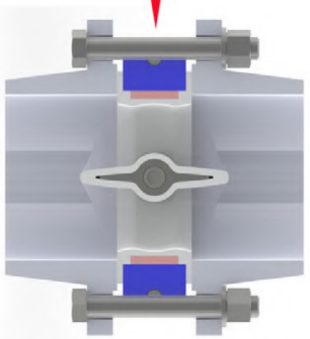
Assembly



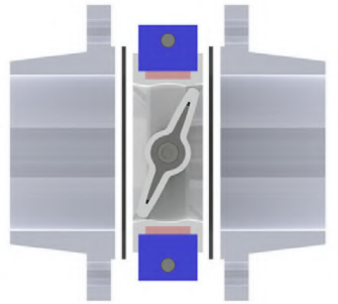
1 Leave a space between flanges so that valve can be easily inserted and removed .and move the valve in accor-dance with the arrow



2 Open completely the valve before tightening flanges



3 Tighten bolts till flanges are in contact with valve body

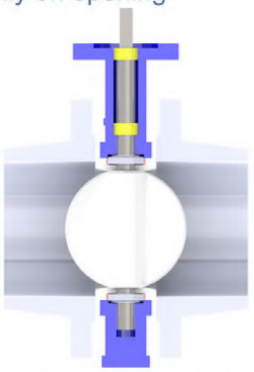


4 NOTE: do not insert other packing between flange and valve

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

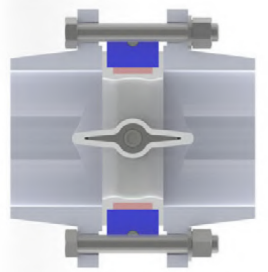
Installation for powders and muddy fluids

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

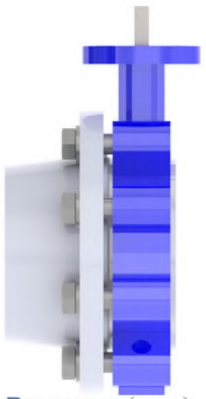


Right

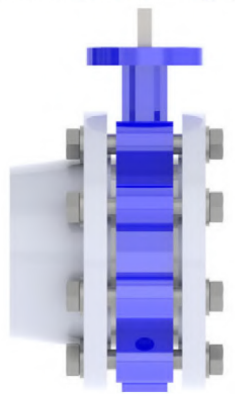
Horizontal rotation axis

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



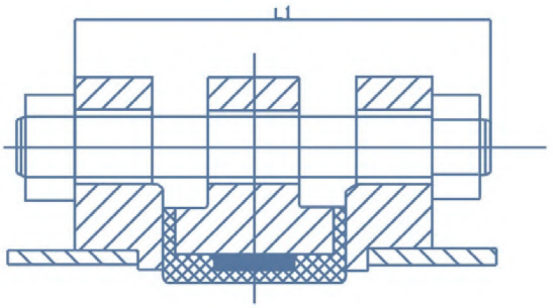
Type B installation with end piping

Pressure（max）：Type A installation is 6 Bar

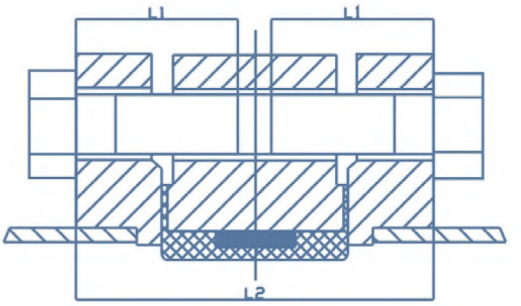
Type B installation is 16 Bar

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

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

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.

Rhinoflex Valve Solutions Pty.Ltd
4/7 Holder Way , Malaga,
Western Australia 6090

Phone: +61 08 61130808
Email : sales@rfvs.com.au
Web : www.rfvs.com.au