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FX Series Butterfly Valves

Submittal Data Sheet

Job or Customer: .....

Engineer: .....

Contractor: .....

Submitted by: ..... Date

Approved by: ..... Date

Order No: ..... Date

Specification: .....

< STANDARDS >

ASTM D4101-86
ASTM D1784
ASTM D3222

ANSI B16.5

NSF 61

IPEX FX Series Butterfly Valves offer superior strength and chemical resistance in highly corrosive environments and process flow conditions.
The special trapezoid shape of the liner and a serrated body cavity guarantee a bubble tight seal while keeping break-away torque at an absolute minimum. This versatile industrial valve features double self-lubricating seals, direct actuator mount capability, and the option of either a lever handle or mounted gear box. The FX lever handle includes the EasyFit labeling system for valve identification. FX Series Butterfly Valves are part of our complete systems of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

VALVE AVAILABILITY

Body Material	Polyvinyl Chloride (PVC)
Disc Material	Polypropylene (PP), PVC
Size Range	1-1/2" through 12"
Pressure	150 psi (1-1/2" to 10"), 120 psi (12")
Seals	EPDM or FPM
Body Style	Wafer
Control Style	Lever Handle or Mounted Gear Box
Actuator Control	Double Acting Pneumatic, Spring Return Pneumatic, Electric
End Connections	Flanged (ANSI 150)

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FX Series Butterfly Valves

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Valve Selection

Significant Number	IPEX Part Number	Body Material	Body Style	Liner Material	Size	Disc Material	Control Style	Pressure Rating @ 73oF
FXOV107	353089	PVC	Wafer	EPDM	1-1/2″	PP	Lever Handle	150 PSI
FXOV108	353090				2″			
FXOV109	052137				2-1/2″			
FXOV110	353091				3″			
FXOV111	353092				4″			
FXOV113	353093				6″			
FXOV114	353094				8″			
FXOV207	353097	PVC	Wafer	FPM	1-1/2″	PP	Lever Handle	150 PSI
FXOV208	353098				2″			
FXOV209	052139				2-1/2″			
FXOV210	353099				3″			
FXOV211	353100				4″			
FXOV213	353101				6″			
FXOV214	353102				8″			
FXOV109G	254102	PVC	Wafer	EPDM	2-1/2″	PP	Gearbox	150 PSI
FXOV110G	254103				3″			
FXOV111G	254104				4″			
FXOV113G	254106				6″			
FXOV114G	254107				8″			
FXOV115G	254108				10″			
FXOV116G	254109				12″			120 PSI
FXOV209G	254110	PVC	Wafer	FPM	2-1/2″	PP	Gearbox	150 PSI
FXOV210G	254111				3″			
FXOV211G	254112				4″			
FXOV213G	254114				6″			
FXOV214G	254115				8″			
FXOV215G	254116				10″			
FXOV216G	254117				12″			120 PSI

Significant Number

Code	FX	O	V	1	07	G
Position	1	2	3	4	5	6

Position	Code	Description
1		**Model**
	FX	Butterfly Valve
2		**Connection**
	0	ANSI 150 Flange – Wafer
3		**Body Material**
	V	PVC
4		**Liner Material**
	1	EPDM
	2	FPM
5	**Size**	**Imperial**	**DN**
	07	1-1/2″	40 mm
	08	2″	50 mm
	09	2-1/2″	65 mm
	10	3″	80 mm
	11	4″	100 mm
	13	6″	150 mm
	14	8″	200 mm
	15	10″	250 mm
	16	12″	300 mm
6		**Control Style**
		Lever Handle
	G	Gearbox

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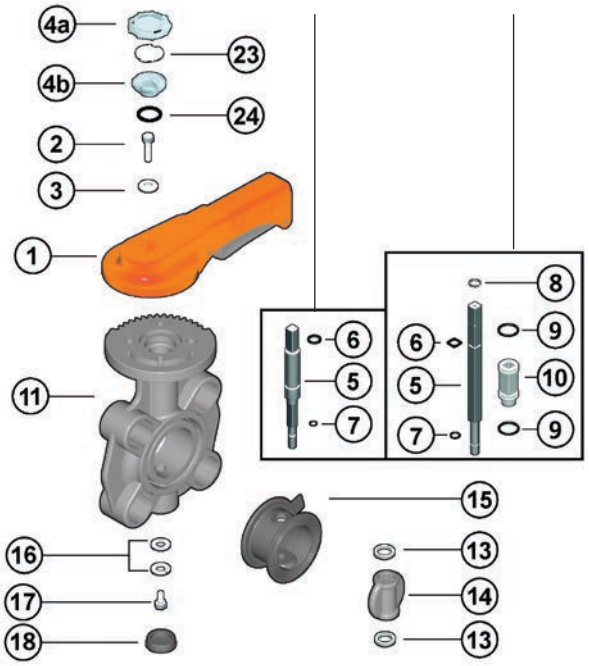
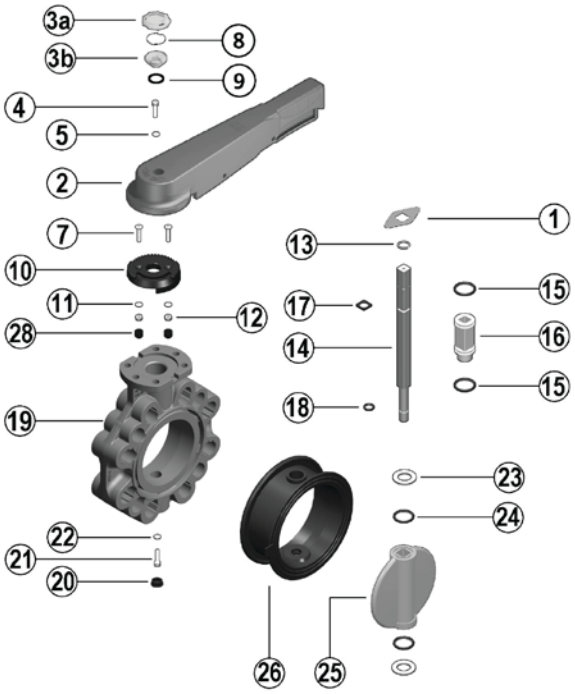
Components

Size 1 1/2" – 2" Size 2 1/2"



#	Component	Material
1	Handle	PVC
2	Screw	304 Stainless Steel
3	Washer	304 Stainless Steel
4a	Plug Upper Part	PVC
4b	Plug Lower Part	PVC
5	Shaft	316 Stainless Steel
6	Shaft O-ring	EPDM or FPM
7	Shaft O-ring	EPDM or FPM
8	Seeger ring	304 Stainless Steel
9	Bush O-ring	EPDM o FPM
10	Bush	Nylon
11	Body	PVC
13	Anti-friction ring	PTFE
14	Disc	PPH
15	Primary Liner	EPDM, FPM
16	Washer	304 Stainless Steel
17	Srew	304 Stainless Steel
18	Protection Cap	PE
23	Tag Holder	NBR
24	Plug O-ring	PVC

Size 3"

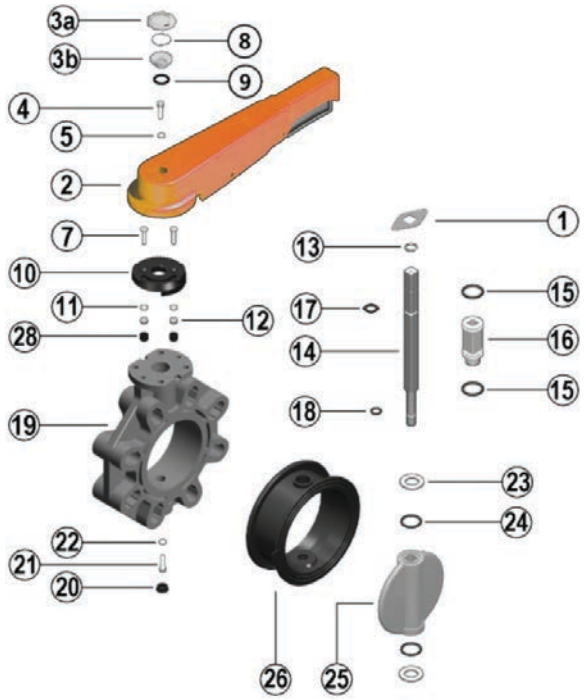


#	Component	Material
1	Position Indicator	ABS
2	Handle	PVC
3	Plug Upper Part	PVC
3b	Plug Lower Part	PVC
4	Screw	304 Stainless Steel
5	Washer	304 Stainless Steel
6	Flange	GR-PP
7	Screw	304 Stainless Steel
8	Tag Holder	NBR
9	Plug O-Ring	PVC
10	Pad	GR-PP
11	Washer	304 Stainless Steel
12	Nut	304 Stainless Steel
13	Seeger Ring	304 Stainless Steel
14	Shaft	316 Stainless Steel
15	Bush O-ring	EPDM or FPM
16	Bush	Nylon
17	Shaft O-ring	EPDM or FPM
18	Shaft O-ring	EPDM or FPM
19	Body	PVC
20	Protection Cap	PE
21	Screw	304 Stainless Steel
22	Washer	304 Stainless Steel
23	Anti-friction Ring	PTFE
24	Dish O-ring	EPDM or FPM
25	Disc	PPH
26	Primary Liner	EPDM, FPM
28	Protection Cap	PE

FX Series Butterfly Valves

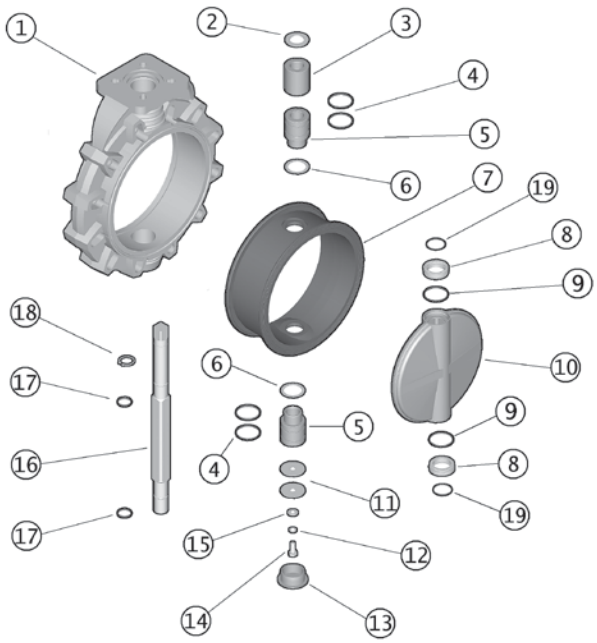
Submittal Data Sheet

Size 4" – 8"



#	Component	Material
1	Position Indicator	ABS
2	Handle	PVC
3	Plug Upper Part	PVC
3b	Plug Lower Part	PVC
4	Screw	304 Stainless Steel
5	Washer	304 Stainless Steel
6	Flange	GR-PP
7	Screw	304 Stainless Steel
8	Tag Holder	NBR
9	Plug O-Ring	PVC
10	Pad	GR-PP
11	Washer	304 Stainless Steel
12	Nut	304 Stainless Steel
13	Seeger Ring	304 Stainless Steel
14	Shaft	316 Stainless Steel
15	Bush O-ring	EPDM or FPM
16	Bush	Nylon
17	Shaft O-ring	EPDM or FPM
18	Shaft O-ring	EPDM or FPM
19	Body	PVC
20	Protection Cap	PE
21	Screw	304 Stainless Steel
22	Washer	304 Stainless Steel
23	Anti-friction Ring	PTFE
24	Dish O-ring	EPDM or FPM
25	Disc	PPH
26	Primary Liner	EPDM, FPM
28	Protection Cap	PE

Size 10" – 12"



#	Component	Material
1	Body	PVC
2	Washer	304 Stainless Steel
3	Bushing	PP
4	Bushing O-ring	EPDM FPM
5	Bushing for O-ring	PP
6	Washer	PTFE
7	Primary Liner	EPDM FPM
8	Anti-friction Ring	PTFE
9	Disc O-ring	EPDM FPM
10	Disc	PP
11	Washer	304 Stainless Steel
12	Washer	304 Stainless Steel
13	Cap	PE
14	Screw	304 Stainless Steel
15	Washer	304 Stainless Steel
16	Shaft	316 Stainless Steel
17	Shaft O-ring	EPDM FPM
18	Retaining Ring	304 Stainless Steel
19	O-Ring	EPDM FPM

FX Series Butterfly Valves

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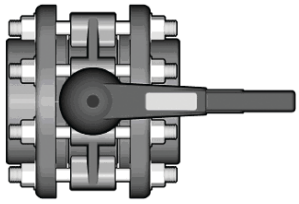
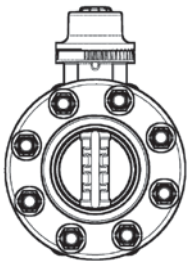
Installation Procedures

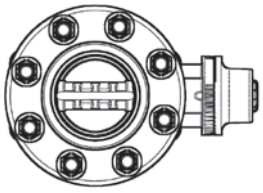
1. For the lever handle style, attach the handle to the valve body using the supplied bolt and washer. Affix the cap over the bolt.
2. For non-lugged style sizes 1-1/2" through 8", push the inserts into the body holes according to the position chart below.
3. Ensure that the length of the bolts is sufficient for the size of valve being installed. Due to the varying designs of plastic flanges, there is no recommended minimum length. However, a length that results in at least 5 exposed threads on each side should be sufficient.
4. Please refer to the appropriate application sub-section:
   a. For typical inline installation, ensure that the disc is in the partially closed position then carefully insert the valve into the piping system between the two flanges. Insert the bolts, washers, and nuts (if necessary), then hand tighten. Take care to properly line up the valve and flanges as any misalignment may cause leakage.
5. To avoid damage to the primary gasket, cycle the valve to the open position before tightening the bolts. For correct joining procedure, please refer to the section entitled, "Joining Methods – Flanging" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems". The bolts should be tightened in an even pattern to the nominal torque in the table below. These torque ratings are sufficient to maintain a watertight seal at the maximum rated operating pressure.

NOTE: If the process media is dirty or contains suspended particles, it is advisable to install the valve in an orientation in which the shaft is not vertical (see diagrams). Over time, particles may collect at the bottom of the valve posing a threat to the seal between the disc, liner, and shaft.

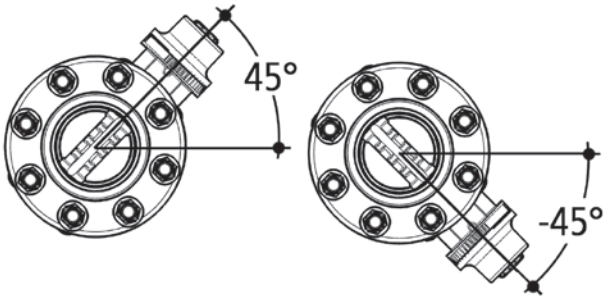




Clean Fluid



Suspended Particles

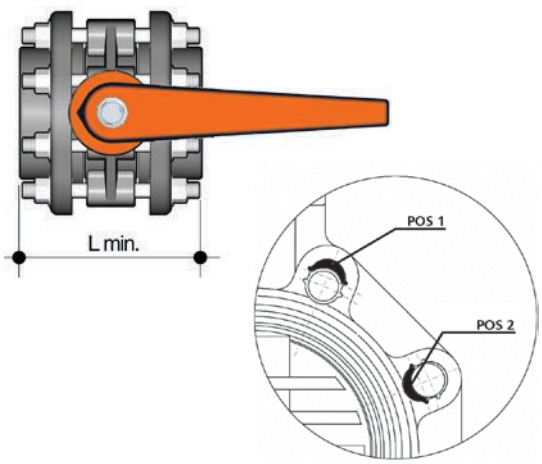


Dirty Fluid

Dirty Fluid

Size in.	Size mm	*ANSI 150 Insert Pos.	L min. (inch)	Lb/ft
1 1/2	40	–	6	6.6
2	50	–	6	8.9
2 1/2	65	–	7	11.1
3	80	–	7	13.3
4	100	* POS 2	7	14.8
5	125	* POS 2	8.5	25.8
6	150	* POS 2	9.5	29.5
8	200	* POS 2	10.5	40.6
10	250	–	12.5	51.6
12	300	–	13.5	51.6

* accessories



Testing and Operating

The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems" under the section entitled, "Testing". The use of this procedure should be sufficient to assess the quality of a valve installation. In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.

Important points:

- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

About IPEX

About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

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