

FK Series Automated Butterfly Valves

Product Data Sheet



< STANDARDS >



ASTM D4101
ASTM D1784
ASTM D3222



ANSI B16.5

IPEX FK Series Automated Butterfly Valves offer superior strength and chemical resistance in highly corrosive environments and process flow conditions. This versatile industrial valve features double self-lubricating seals, and a special shaped liner and body cavity guaranteeing a bubble tight seal while keeping break-away torque at an absolute minimum. An integral stainless steel lug version provides for full bi-directional operation allowing disassembly of the downstream flange connection without weakening the integrity of the upstream connection to the pressurized line. FK Series Automated 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:	Glass reinforced PP (GRPP)
Disc Material:	PP, PVC, CPVC, PVDF
Size Range:	1-1/2" through 12"
Pressure:	See Sample Specifications
Seats:	EPDM or FKM
Seals:	EPDM or FKM
Body Style:	Wafer or Lugged
End Connections:	Flanged (ANSI 150)
Actuator Control:	Double Acting Pneumatic, Spring Return Pneumatic, Electric

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Sample Specification

1.0 Butterfly Valves - FK

1.1 Material

- The valve body shall be made of glass reinforced polypropylene (GRPP) obtained from homopolymer polypropylene (PPH).
- The valve disc shall be made of stabilized PP homopolymer compound, also containing a RAL 7032 pigment, which shall meet or exceed the requirements of Type I Polypropylene according to ASTM D4101.
- The valve disc shall be made of PVC compound which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784.
- The valve disc shall be made of Corzan® CPVC compound which shall meet or exceed the requirements of cell classification 23447 according to ASTM D1784.
- The valve disc shall be made of virgin, non-regrind PVDF compound which shall meet or exceed the requirements of Table 1 according to ASTM D3222.
- The valve shaft shall be made of 316 or 420 stainless steel.

1.2 Seats

- The disc liner shall be made of EPDM.
- The disc liner shall be made of FKM.

1.3 Seals

- The o-ring seals shall be made of EPDM.
- The o-ring seals shall be made of FKM.

2.0 Connections

2.1 Flanged style

- The ANSI 150 flanged connections shall conform to the dimensional standard ANSI B16.5.

3.0 Design Features

- The valve shall be of either wafer or lugged design (specifier must select one).
- The lugged style shall feature permanently integrated stainless steel lugs. No field inserted lugs allowed.
- The shaft shall have standard ISO square dimensions for direct mounting of actuators.
- The disc seat shall be a trapezoidal elastomeric liner and provide a bubble tight seal.
- The liner shall completely isolate the valve body from the process flow.
- The liner shall function as a flange gasket on both sides of the valve.
- The body cavity shall feature special channeling to prevent liner slippage and compression.
- The disc, seats, and seals shall be the only wetted parts.
- Teflon® seated o-ring seals shall prevent the stainless steel shaft from becoming wetted.

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3.1 Pressure Rating

PP Disc, Wafer Style

- 1-1/2" to 10" shall be rated at 150 psi at 73°F
- 12" shall be rated at 120 psi at 73°F
- 14" shall be rated at 100 psi at 73°F
- 16" shall be rated at 85 psi at 73°F

PVC Disc, Wafer Style

- 14" shall be rated at 100 psi at 73°F
- 16" shall be rated at 85 psi at 73°F

CPVC Disc, Wafer Style

- 1-1/2" and 2" shall be rated at 232 psi at 73°F
- 2-1/2" to 10" shall be rated at 150 psi at 73°F
- 12" shall be rated at 120 psi at 73°F

PVDF Disc, Wafer Style

- 1-1/2" and 2" shall be rated at 232 psi at 73°F
- 2-1/2" to 10" shall be rated at 150 psi at 73°F
- 12" shall be rated at 120 psi at 73°F

PP Disc, Lugged Style

- 2-1/2" to 8" shall be rated at 150 psi at 73°F
- 10" and 12" shall be rated at 85 psi at 73°F

CPVC Disc, Lugged Style

- 2-1/2" to 8" shall be rated at 150 psi at 73°F
- 12" shall be rated at 85 psi at 73°F

PVDF Disc, Lugged Style

- 2-1/2" to 8" shall be rated at 150 psi at 73°F
- 12" shall be rated at 85 psi at 73°F

3.2 Markings

- All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.

3.3 Color Coding

- All valve bodies shall be color-coded beige gray.
- PP valve discs shall be color-coded beige gray
- PVC valve discs shall be color-coded dark gray
- CPVC valve discs shall be color-coded light gray
- PVDF valve discs shall not be color-coded and be white in appearance

4.0 All valves shall be by IPEX or approved equal.

5.0 Actuators

- All Actuators shall be factory installed by IPEX

Pneumatic Actuator:

- Shall be sized for 80 psi control air pressure
- Shall be dual piston rack and pinion design with linear torque output.
- Body shall be Technopolymer UT series or Anodized Aluminum MT series with standard position indicator and NAMUR VDI/VDE 3845 and ISO 5211 mounting dimensions.
- All models shall be operable using air, water, nitrogen or compatible hydraulic fluids from 40 – 120psi.
- Aluminum body models shall feature dual travel stops that provide +/- 10° stroke rotation on both the opening and closing phases.
- All external fasteners shall be stainless steel.

Electric Actuator:

Contact IPEX.

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Valve Selection

Size (inches)	Disc Material	Seal Material	IPEX Part Number					
			Pneumatic Double Acting		Pneumatic Spring Return, Normally Closed		Pneumatic Spring Return, Normally Open	
			Wafer	SS Lugs	Wafer	SS Lugs	Wafer	SS Lugs
1-1/2	PP	EPDM	253536	-	253572	-	253608	-
		FKM	253546	-	253582	-	253618	-
2	PP	EPDM	253537	-	253573	-	253609	-
		FKM	253547	-	253583	-	253619	-
2-1/2	PP	EPDM	253538	253556	253574	253592	253610	253628
		FKM	253548	253564	253584	253600	253620	253636
3	PP	EPDM	253539	253557	253575	253593	253611	253629
		FKM	253549	253565	253585	253601	253621	253637
4	PP	EPDM	253640	253558	253576	253594	253612	253630
		FKM	235550	235566	253586	253602	253622	253638
5	PP	EPDM	253541	253559	253577	253595	253613	253631
		FKM	253551	253567	253587	253603	253623	253639
6	PP	EPDM	253542	253560	253578	253596	253614	253632
		FKM	253552	253568	253588	253604	253624	253640
8	PP	EPDM	253543	253561	253579	253597	253615	253633
		FKM	253553	253569	253589	253605	253625	253641
10	PP	EPDM	253544	253562	253580	253598	253616	253634
		FKM	253554	253570	253590	253606	253626	253642
12	PP	EPDM	253545	253563	253581	253599	253617	253635
		FKM	253555	253571	253591	253607	253627	253643

Size (inches)	Disc Material	Seal Material	IPEX Part Number					
			Pneumatic Double Acting		Pneumatic Spring Return, Normally Closed		Pneumatic Spring Return, Normally Open	
			Wafer	SS Lugs	Wafer	SS Lugs	Wafer	SS Lugs
1-1/2	CPVC	EPDM	154600	-	154618	-	154636	-
		FKM	154668	-	154686	-	154704	-
2	CPVC	EPDM	154601	-	154619	-	154637	-
		FKM	154669	-	154687	-	154705	-
2-1/2	CPVC	EPDM	154602	154610	154620	154628	154638	154646
		FKM	154670	154678	154688	154696	154706	154714
3	CPVC	EPDM	154603	154611	154621	154629	154639	154647
		FKM	154671	154679	154689	154697	154707	154715
4	CPVC	EPDM	154604	154612	154622	154630	154640	154648
		FKM	154672	154680	154690	154698	154708	154716
5	CPVC	EPDM	154605	154613	154623	154631	154641	154649
		FKM	154673	154681	154691	154699	154709	154717
6	CPVC	EPDM	154606	154614	154624	154632	154642	154650
		FKM	154674	154682	154692	154700	154710	154718
8	CPVC	EPDM	154607	154615	154625	154633	154643	154651
		FKM	154675	154683	154693	154701	154711	154719
10	CPVC	EPDM	154608	154616	154626	154634	154644	154652
		FKM	154676	154684	154694	154702	154712	154720
12	CPVC	EPDM	154609	154617	154627	154635	154645	154653
		FKM	154677	154685	154695	154703	154713	154721

FOR CUSTOM CONFIGURATIONS, PLEASE CONTACT IPEX.

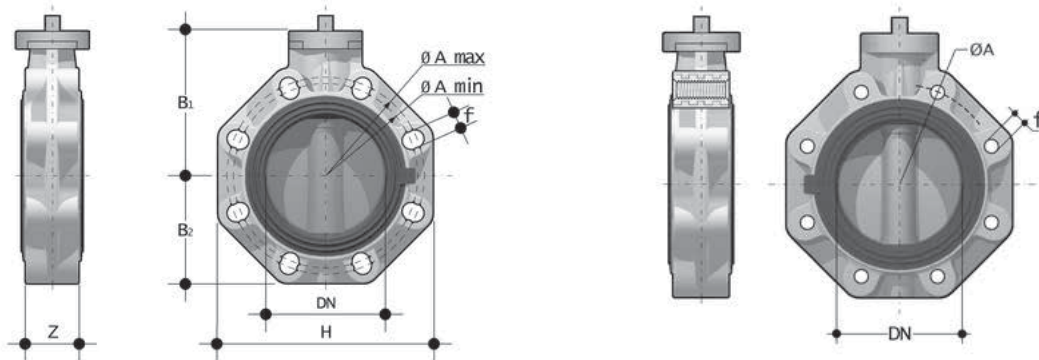
PVC and PVDF disc valves available on request. For 10" and 12" electrically actuated valves, please contact IPEX.

For 14" and 24" actuated valves, please contact IPEX

FK Series Automated Butterfly Valves

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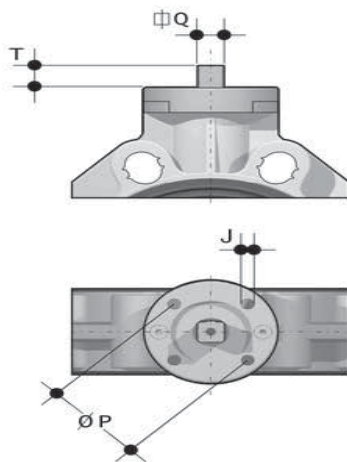
Dimensions



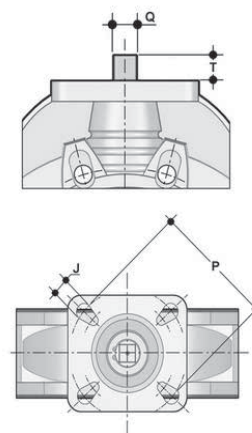
Dimensions (inches)

Size	DN	Z	B ₁	B ₂	H	A _{min}	A _{max}	f	Alug	flug	# holes
1-1/2	1.57	1.30	4.17	2.36	5.20	3.90	4.29	0.75	3.87	1/2-UNC	4
2	1.97	1.69	4.41	2.76	5.79	4.53	4.94	0.75	4.75	5/8-UNC	4
2-1/2	2.56	1.81	4.69	3.15	6.50	5.04	5.67	0.75	5.50	5/8-UNC	4
3	3.15	1.93	5.24	3.66	7.28	5.71	6.30	0.75	6.00	5/8-UNC	8
4	3.94	2.20	5.79	4.21	8.31	6.50	7.48	0.75	7.50	5/8-UNC	8
5	4.92	2.52	6.57	4.72	9.45	8.03	8.46	0.91	8.50	3/4-UNC	8
6	5.91	2.76	7.09	5.28	10.55	9.06	9.53	0.91	9.50	3/4-UNC	8
8	7.87	2.80	8.94	6.34	12.72	11.02	11.73	0.91	11.75	3/4-UNC	8
10	9.84	4.49	9.76	8.27	15.94	13.19	14.25	1.00	14.25	7/8-UNC	12
12	11.81	4.49	12.01	9.65	18.70	15.35	17.01	1.14	17.00	7/8-UNC	12

Sizes 1-1/2" to 8"



Sizes 10" to 12"



Dimensions (inches)

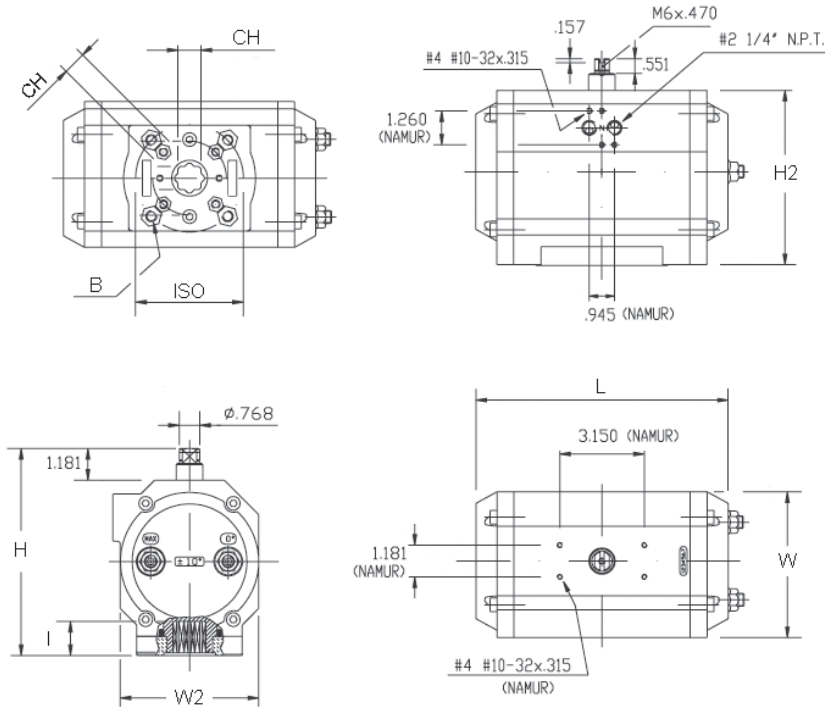
Size	T	Q	ISO	P	J
1-1/2	0.47	0.43	F05	1.97	0.28
2	0.47	0.43	F05	1.97	0.28
2-1/2	0.47	0.43	F05 / F07	1.97 / 2.76	0.28 / 0.35
3	0.63	0.55	F07	2.76	0.35
4	0.63	0.55	F07	2.76	0.35
5	0.75	0.67	F07	2.76	0.35
6	0.75	0.67	F07	2.76	0.35
8	0.94	0.87	F10	4.02	0.43
10	1.14	1.06	F10 / F12 / F14	4.02 / 4.92 / 5.51	0.43 / 0.51 / 0.67
12	1.14	1.06	F10 / F12 / F14	4.02 / 4.92 / 5.51	0.43 / 0.51 / 0.67

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Pneumatic Actuator Dimensions

Models UT16, UT21, UT26, UT31, UT36, UT41, UT46, UT51, UT61



Dimensions (inches)

Valve Size	Double Acting Model	ISO	CH	L	W	W2	H	H2	I	B
1-1/2	MT16DA	F05 / F07	0.55	6.50	3.19	2.44	4.37	3.19	0.75	1/4-20 UNC x 0.51
2	MT16DA	F05 / F07	0.55	6.50	3.19	2.44	4.37	3.19	0.75	1/4-20 UNC x 0.51
2-1/2	MT16DA	F05 / F07	0.55	6.50	3.19	2.44	4.37	3.19	0.75	1/4-20 UNC x 0.51
3	MT21DA	F05 / F07	0.67	6.97	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
4	MT21DA	F05 / F07	0.67	6.97	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
5	MT26DA	F05 / F07	0.67	9.41	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
6	MT31DA	F05 / F07	0.67	9.06	4.49	3.56	5.79	4.61	0.91	5/16-18 UNC x 0.51
8	MT36DA	F07 / F10	0.87	9.69	5.10	3.76	7.24	6.06	1.18	3/8-16 UNC x 0.71
10	MT51DA	F10 / F12	1.06	14.21	7.13	4.33	9.13	7.95	1.57	1/2-13 UNC x 0.79
12	MT51DA	F10 / F12	1.06	14.21	7.13	4.33	9.13	7.95	1.57	1/2-13 UNC x 0.79

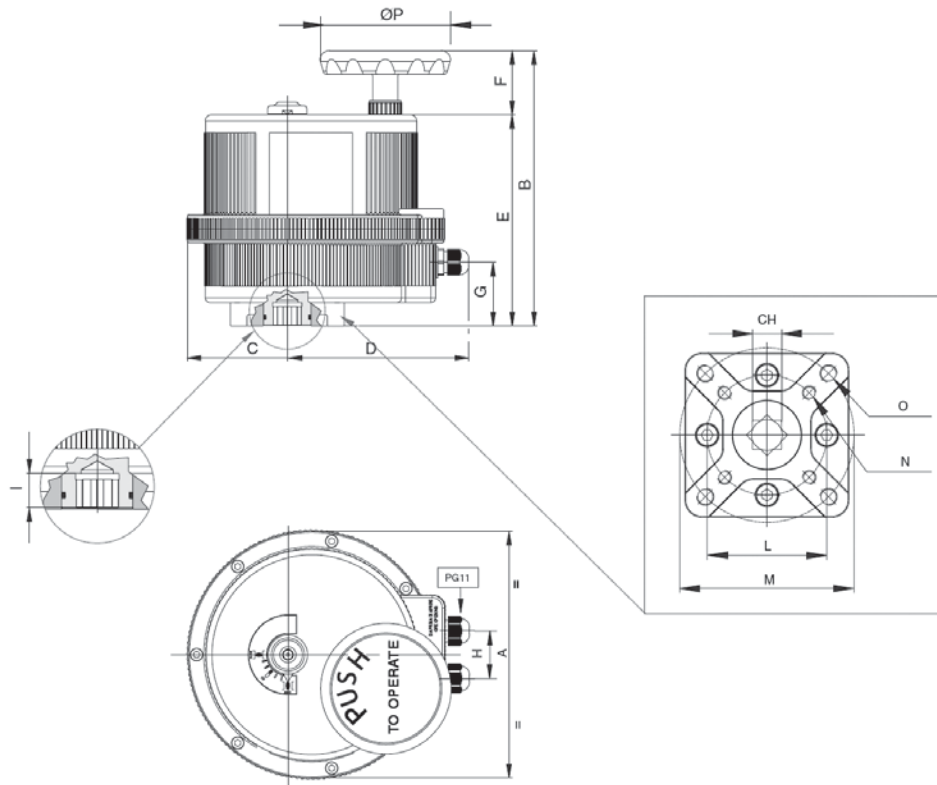
Dimensions (inches)

Valve Size	Spring Return Model	ISO	CH	L	W	W2	H	H2	I	B
1-1/2	MT21S5	F05 / F07	0.67	6.97	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
2	MT26S4	F05 / F07	0.67	9.41	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
2-1/2	MT26S4	F05 / F07	0.67	9.41	3.78	3.01	5.04	3.86	0.75	5/16-18 UNC x 0.51
3	MT31S4	F05 / F07	0.67	9.06	4.49	3.56	5.79	4.61	0.91	5/16-18 UNC x 0.51
4	MT36S4	F07 / F10	0.87	9.69	5.10	3.76	7.24	6.06	1.18	3/8-16 UNC x 0.71
5	MT41S4	F07 / F10	0.87	11.42	5.16	3.76	7.24	6.06	1.18	3/8-16 UNC x 0.71
6	MT46S4	F07 / F10	0.87	13.82	5.71	3.88	7.81	6.63	1.18	3/8-16 UNC x 0.71
8	MT51S4	F10 / F12	1.06	14.21	7.13	4.33	9.13	7.95	1.57	1/2-13 UNC x 0.79
10	MT61S5	F14	1.42	17.48	9.13	6.32	11.30	10.12	1.97	5/8-11 UNC x 0.98
12	MT61S5	F14	1.42	17.48	9.13	6.32	11.30	10.12	1.97	5/8-11 UNC x 0.98

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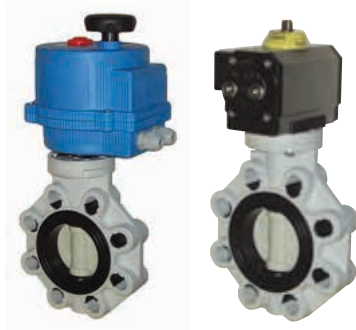
Electric Actuator Dimensions



Valve Size	Actuator Model	ISO	CH	A	B	C	D	E	F	G	H	I	L	M	N	O	ØP
1-1/2	VB015	F03/F05	0.43	4.84	5.57	1.67	4.74	4.96	0.61	4.06	1.26	0.55	1.42	1.97	10-24 UNC 2BX0.47	1/4-20 UNC 2BX0.55	2.68
2	VB030	F03/F05	0.43	6.18	7.40	2.38	5.12	5.75	1.65	1.30	1.42	0.47	1.42	1.97	10-24 UNC 2BX0.47	1/4-20 UNC 2BX0.55	2.56
2-1/2	VB030	F03/F05	0.43	6.18	7.40	2.38	5.12	5.75	1.65	1.30	1.42	0.47	1.42	1.97	10-24 UNC 2BX0.47	1/4-20 UNC 2BX0.55	2.56
3	VB060	F05/F07	0.55	7.28	8.46	2.66	5.77	6.81	1.65	2.01	1.42	0.63	1.97	2.76	1/4-20 UNC 2BX0.59	5/16-18 UNC 2BX0.67	2.56
4	VB060	F05/F07	0.67	7.28	8.46	2.66	5.77	6.81	1.65	2.01	1.42	0.63	1.97	2.76	1/4-20 UNC 2BX0.59	5/16-18 UNC 2BX0.67	2.56
5	VB110	F07/F10	0.67	8.31	9.14	3.31	6.02	7.01	2.13	2.13	1.58	0.75	2.76	4.02	5/16-18 UNC 2BX0.79	3/8-16 UNC 2BX0.79	4.33
6	VB110	F07/F10	0.67	8.31	9.14	3.31	6.02	7.01	2.13	2.13	1.58	0.75	2.76	4.02	5/16-18 UNC 2BX0.79	3/8-16 UNC 2BX0.79	4.33
8	VB270	F07/F10	0.87	8.74	9.19	3.03	6.69	7.17	2.03	2.13	1.58	0.95	2.76	4.02	5/16-18 UNC 2BX0.79	3/8-16 UNC 2BX0.79	4.33

FK Series Automated Butterfly Valves

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Note: Pneumatic actuator performance is based on 80psi available control air pressure.

Valve Size (inches)	Double Acting Pneumatic	Spring Return Pneumatic
1-1/2	UT16DA	UT21S5
2	UT16DA	UT26S4
2-1/2	UT16DA	UT26S4
3	UT21DA	UT31S4
4	UT21DA	UT36S4
5	UT26DA	UT41S4
6	UT31DA	UT46S4
8	UT36DA	UT51S4
10	UT51DA	UT61S5
12	UT51DA	UT61S5

Pneumatic Actuator Torque Data

Valve Size (inches)	DOUBLE ACTING			SPRING RETURN				
	Model	Torque (in-lbs)	Model	Spring Set (standard)	Spring Torque (in-lbs) Start	Spring Torque (in-lbs) End	Air Torque (in-lbs) Start	Air Torque (in-lbs) End
1-1/2	UT16DA	275	UT21S5	S5	307	230	270	193
2	UT16DA	275	UT26S4	S4	392	247	503	358
2-1/2	UT16DA	275	UT26S4	S4	392	247	503	358
3	UT21DA	500	UT31S4	S4	502	374	626	498
4	UT21DA	500	UT36S4	S4	824	614	986	776
5	UT26DA	750	UT41S4	S4	1011	741	1259	989
6	UT31DA	1000	UT46S4	S4	1779	1120	2005	1346
8	UT36DA	1600	UT51S4	S4	2203	1738	2762	2297
10	UT51DA	4500	UT61S5	S5	5366	4277	4823	3734
12	UT51DA	4500	UT61S5	S5	5366	4277	4823	3734

Pneumatic Actuator Weights and Air Consumption

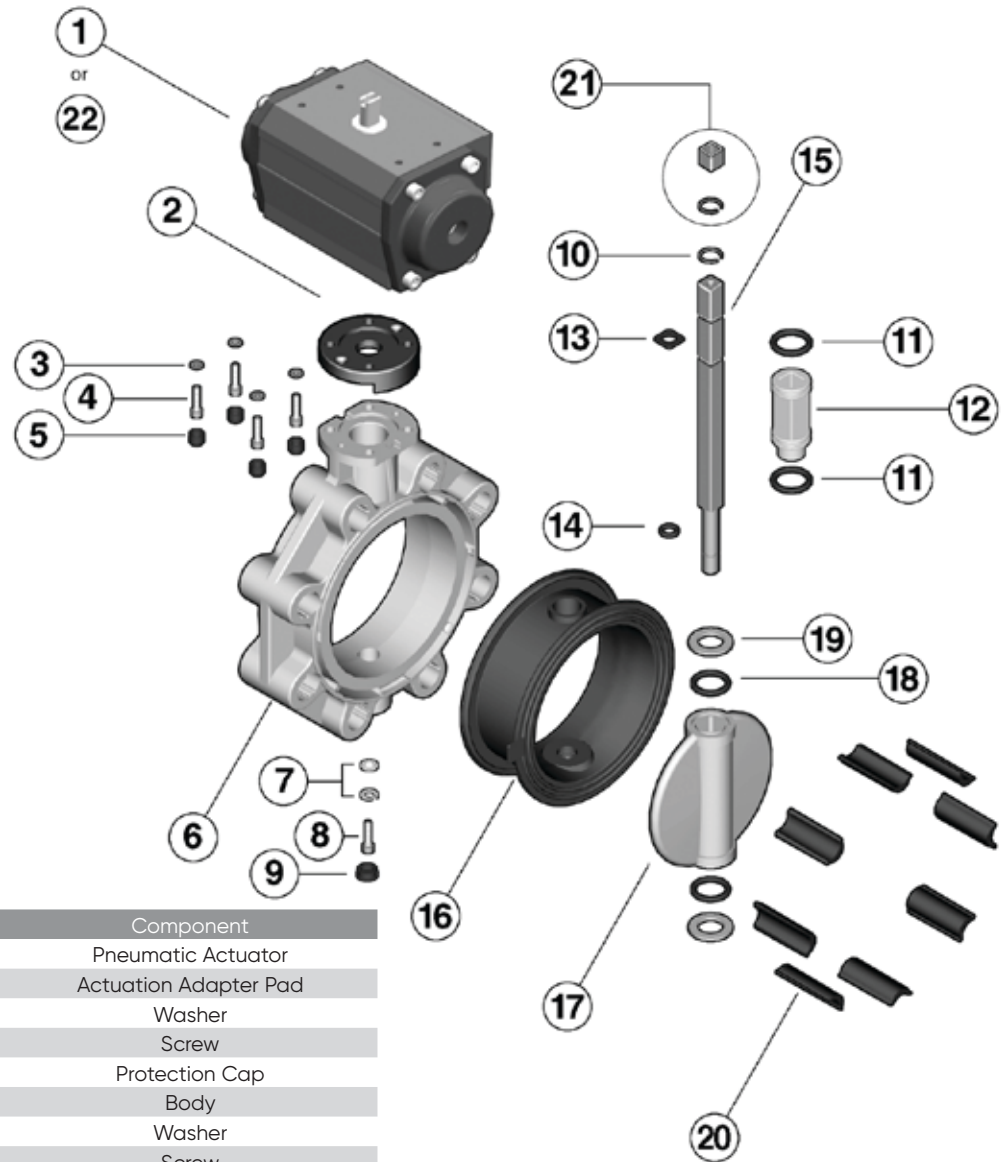
Valve Size (inches)	DOUBLE ACTING			SPRING RETURN		
	Model	Weight (lbs)	Air Cons. (in3)	Model	Weight (lbs)	Air Cons. (in3)
1-1/2	UT16DA	4.03	25.6	UT21S5	7.16	18.1
2	UT16DA	4.03	25.6	UT26S4	9.88	30.0
2-1/2	UT16DA	4.03	25.6	UT26S4	9.88	30.0
3	UT21DA	6.33	44.4	UT31S4	12.28	40.6
4	UT21DA	6.33	44.4	UT36S4	19.88	75.0
5	UT26DA	8.82	68.7	UT41S4	23.61	100.0
6	UT31DA	10.67	88.9	UT46S4	33.11	115.6
8	UT36DA	16.71	153.1	UT51S4	49.89	181.3
10	UT51DA	39.24	425.0	UT61S5	101.19	343.8
12	UT51DA	39.24	425.0	UT61S5	101.19	343.8

FK Series Automated Butterfly Valves

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Components

Sizes 1-1/2" to 8"



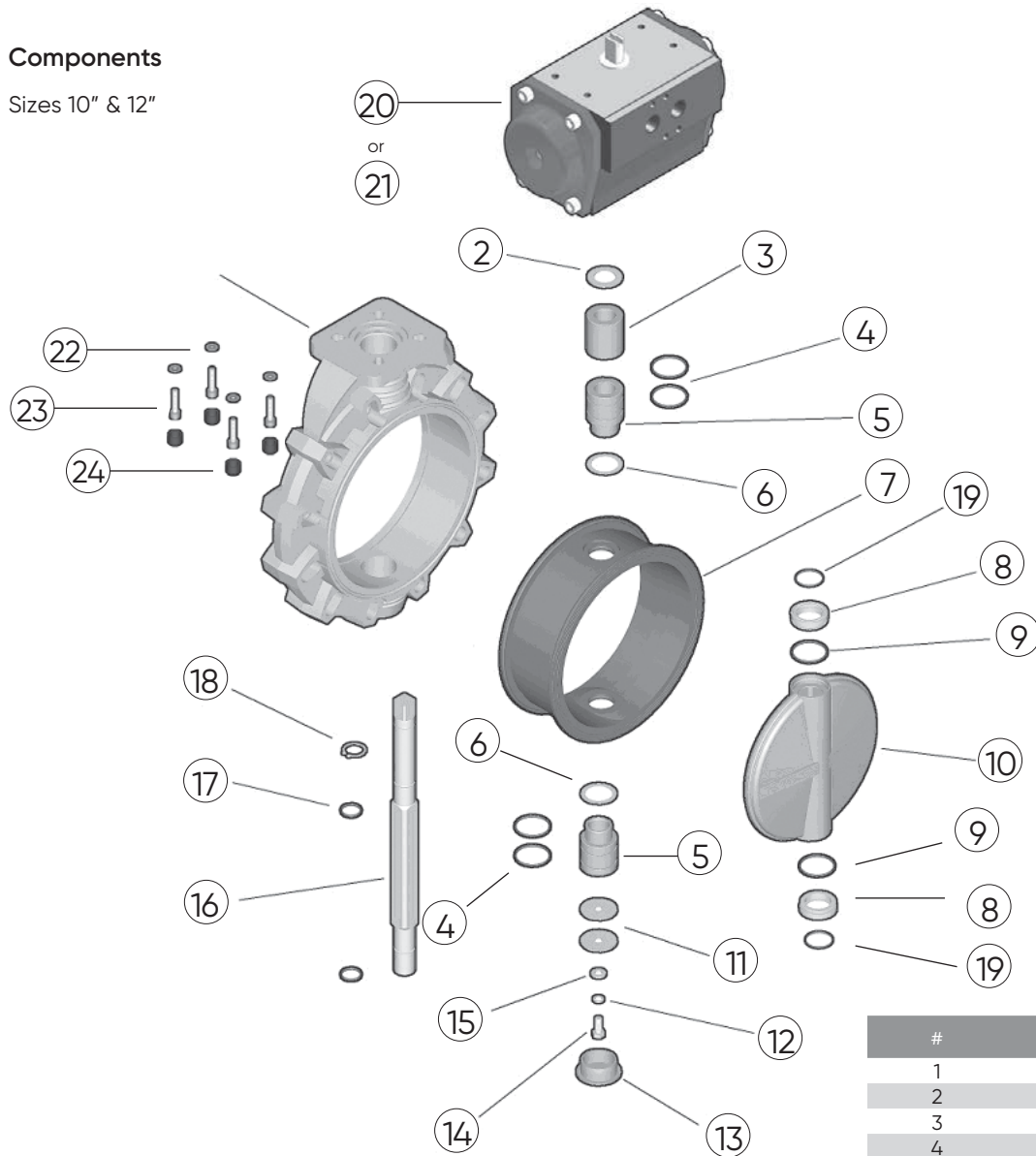
#	Component
1	Pneumatic Actuator
2	Actuation Adapter Pad
3	Washer
4	Screw
5	Protection Cap
6	Body
7	Washer
8	Screw
9	Protection Cap
10	Seeger Ring
11	Bush O-Ring
12	Bush
13	Shaft O-Ring
14	Shaft O-Ring
15	Shaft
16	Primary Liner
17	Disc
18	Disc O-Ring
19	Anti-Friction Ring
20	Centering Inserts
21	Reduction Sleeve
22	Electric Actuator (not shown)

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Components

Sizes 10" & 12"



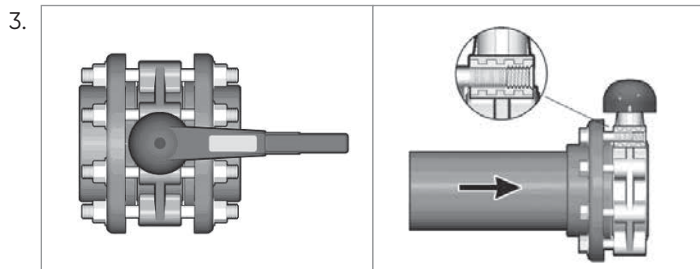
#	Component
1	Body
2	Washer
3	Bushing
4	Bushing O-Ring
3	Bushing for O-Ring
6	Washer
7	Primary Liner
8	Anti-Friction Ring
9	Disc O-Ring
10	Disc
11	Washer
12	Washer
13	Cap
14	Screw
15	Washer
16	Shaft
17	Shaft O-Ring
18	Retaining Ring
19	O-Ring
20	Pneumatic Actuator
21	Electric Actuator (not shown)
22	Washer
23	Screw
24	Protection Cap

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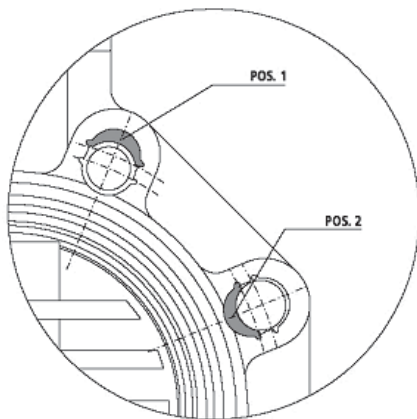
Installation

1. For non-lugged style sizes 1-1/2" through 8", push the inserts (27) into the body holes according to the position chart below.
2. 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.

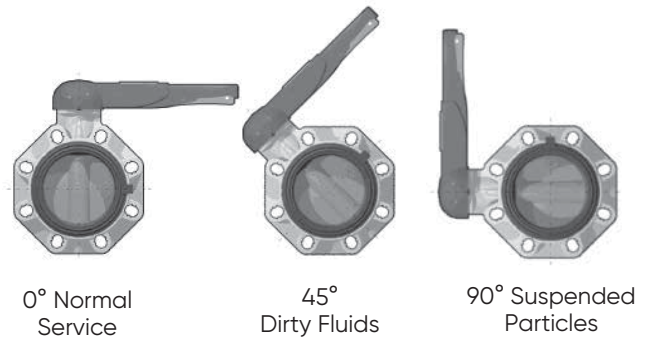


Please refer to the appropriate application sub-section:

- 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.
- b. For lugged version end of line installation, ensure that the disc is in the partially closed position then carefully position the valve on the flange. Insert the bolts, and washers, then hand tighten. Take care to properly line up the valve and flange as any misalignment may cause leakage.



4. Connect pneumatic or electric connections according to provided diagrams.



Size (inches)	ANSI 150 Insert Position	Nominal Bolt Torque (ft-lbs)
1-1/2	POS 1	7
2	-	9
2-1/2	POS 2	11
3	POS 2	13
4	POS 2	15
5	POS 2	26
6	POS 2	30
8	POS 2	41
10	-	52
12	-	52

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.

Note: All quarter turn automated valves are tested for proper operation before leaving the factory.

FK Series Automated Butterfly Valves

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Disassembly

1. If removing the valve from an operating system, isolate the valve from the rest of the system. Be sure to depressurize and drain the isolated branch before continuing. It is recommended that all actuators be de-activated before servicing the valve to avoid injury.
2. Cycle the valve to a partially open position then loosen each bolt holding the valve to the pipe flange(s). Please refer to the section entitled, "Joining Methods – Flanging" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems" for a recommended bolt tightening pattern diagram. Follow the same pattern when disassembling the flanged joint(s) then carefully remove the valve from the line.

Sizes 1-1/2" to 8":

3. Loosen and remove the bolts, washers and protection caps fixed to the actuator (3, 4, & 5). Carefully remove the actuator and the pad (2) from the valve taking care not to damage the stem.
4. Remove the cap (9) then loosen and remove the screw (8) and washer (7) from the base of the valve body.
5. Carefully pull the shaft (15) out of the valve body then remove the disc (17).
6. Remove the primary liner (16) from the valve body.
7. Remove the nylon bushing (12) and o-rings (11) from the valve body (sizes 2-1/2" to 8").
8. Remove the disc anti-friction rings (19), and o-rings (18, sizes 2-1/2" to 8").
9. Remove the retaining ring (10, sizes 2-1/2" to 8") and o-rings (13, 14) from the shaft.
10. The valve components can now be checked for problems and/or replaced.

Sizes 10" to 12":

3. Loosen and remove the bolts, washers and protection caps fixed to the actuator (22, 23 & 24). Carefully remove the actuator from the valve taking care not to damage the stem.
4. Remove the cap (13) then loosen and remove the screw (14) and washers (11, 12 & 15) from the base of the valve body (1).
5. Carefully pull the shaft (16) out of the valve body then remove the disc (10).
6. Remove the primary liner (7) from the valve body.
7. Remove the upper and lower bushings (3, 5), washers (2, 6), and o-rings (4) from the valve body.
8. Remove the disc anti-friction rings (8) and o-rings (9, 19).
9. Remove the retaining ring (18) and o-rings (17) from the shaft.
10. The valve components can now be checked for problems and/or replaced.

FK Series Automated Butterfly Valves

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Assembly

Note: Before assembling the valve components, it is advisable to lubricate the o-rings with a water soluble lubricant. Be sure to consult the "IPEX Chemical Resistance Guide" and/or other trusted resources to determine specific lubricant-rubber compatibilities.

Sizes 1-1/2" to 8":

1. Insert the primary liner (16) into the valve body (6). Ensure that the proper holes line up with those on the body.
2. Properly fit the o-rings (11) on the nylon bushing (12) (sizes 2-1/2" to 8") then insert the Teflon washer and bushing into the valve body from above.
3. Properly fit the disc o-rings (18, sizes 2-1/2" to 8") and anti-friction rings (19) on the disc (17), then insert into the valve liner taking care to center the holes.
4. Properly fit the o-rings (13, 14) and retaining ring (10, sizes 2-1/2" to 8") in their grooves on the shaft (15), then carefully insert into the valve body from above.
5. Fasten the shaft at the base of the valve body using the screw (8) and washer (7). Affix the cap (9) over the bolt.
6. Place the spacer pad (2) on the valve body.
7. Carefully place the actuator on the stem, lining up the holes. Fasten using the necessary bolts, washers and protection caps (3, 4 & 5). Ensure that the actuator and disk position correspond to the same operating position.

Sizes 10" to 12":

1. Insert the primary liner (7) into the valve body (1). Ensure that the proper holes line up with those on the body.
2. Properly fit the o-rings (4) on the upper and lower bushings (3, 5) then insert into the valve body from above and below along with the washers (2, 6).
3. Properly fit the disc o-rings (9, 19) and anti-friction rings (8) on the disc (10), then insert into the valve liner taking care to center the holes.
4. Properly fit the o-rings (17) and retaining ring (18) in their grooves on the shaft (16), then carefully insert into the valve body from above.
5. Fasten the shaft at the base of the valve body using the screw (14) and washers (11, 12, and 15). Affix the cap (13) over the bolt.
6. Carefully place the actuator on the stem, lining up the holes. Fasten using the necessary bolts, washers and protection cap (22, 23 & 24). Ensure that the actuator and disk position correspond to the same operating position.

FK Series Automated Butterfly Valves

Product Data Sheet

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.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Irrigation systems
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