Series ABFV

Automated Butterfly Valve

Resilient Seated, Direct Mount Actuators

Pneumatic

Electric

*Please see website for dimensional drawings

The ABFV Series is offered with standard 316 SS disc, a through shaft that does not come in contact with the media, and choices of EPDM, BUNA-N, or fluoroelastomer liners for great chemical compatibility. Valve design has integral ISO mounting for direct mount actuators creating a more compact automated package. Body is epoxy coated for durable and attractive finish. Liner fully covers the body and assures tight seal with mating flanges without additional gaskets. One-piece shaft ensures positive valve positioning and is an anti-blowout design. Series ABFV is perfect for flow control of water in chillers, cooling towers, and thermal storage systems.

ABFV valves come in two-way and three-way packages. Three-way assemblies include valves and actuators mounted onto a 125# cast iron tee. When ordering you have the choice of valve arrangement for mixing or diverting applications. Valves come in lug or wafer style and wafer models have guide holes for bolts.

ABFV is an economical automated valve package with either an electric or pneumatic actuator. Electrically actuated models are weatherproof, NEMA 4, powered by standard 115 VAC supply, and are available in either two-position or proportional control. Two-position actuators use the 115 VAC input to drive each of the valve ports open or closed, while the modulating actuator accepts a 4 to 20 mA input for infinite valve positioning. Actuator features include thermal overload protection to withstand stall conditions, visual position indication and a permanently lubricated gear train.

The pneumatic double acting actuator uses an air supply to drive each of the actuator ports. Spring return pneumatic actuators use the air supply to drive the valve stem one direction, and internally loaded springs return the valve to its original position. Also available is the SV3 solenoid valve to electrically switch the supply pressure between the air supply ports. Actuators are constructed of anodized aluminum and are epoxy coated for years of corrosion free service.

Cv Values

Valve Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
2″	0.1	5	12	24	45	64	90	125	135
2-1/2″	0.7	8	20	37	65	98	144	204	220
3″	0.3	12	22	39	70	116	183	275	302
4″	0.5	17	36	78	139	230	364	546	600
5″	0.8	29	61	133	237	392	620	930	1022
6″	2	45	95	205	366	605	958	1437	1539
8″	3	89	188	408	727	1202	1903	2854	3136
10″	4	151	320	694	1237	2034	3240	4859	5340
12″	5	234	495	1072	1911	3162	5005	7507	8250

SPECIFICATIONS

Valve Body

Service: Compatible liquids and gases.
Body: 2-way or 3-way.
Line Size: 2″ to 12″.
End Connections: Wafer or lug pattern designed for flanges to ANSI B16.1, BS4504, DIN 2501.
Pressure Limits: Up to 8″: 225 psi (15.5 bar); 10″ – 12″: 150 psi (10.3 bar).
Wetted Materials: Disc: 316 SS; Liner: EPDM BUNA-N, or Fluoroelastomer.
Temperature Limits: EPDM: -30 to 275°F (-34 to 135°C); BUNA-N: 10 to 180°F (-12.2 to 82.2°C); Fluoroelastomer: 400°F (204°C).
Other Materials: Shaft: 316SS; Bottom/Top Bushing: bronze; Body: cast iron; Shaft Seal: EPDM.

ACTUATORS

Electric "U" and "V" Series

Power Requirements: 115 VAC, 50/60 Hz, single phase. Optional 220 VAC, 24 VAC, 12 VDC, and 24 VDC.
Power Consumption: (Locked Rotor Current): U_1, V_1: .55A; U_2, 3, 4, V_2, 3, 4: 0.75A; U_ 5, 6, 7, V_5, 6, 7: 1.1A; U_ 8, V_8: 2.6A; U_9, V_9: 2.9A. (Only for 115 VAC, for other voltages contact the factory).
Cycle Time: (sec. per 90º): U_1, V_1: 2.5; U_2, 3, V_2, 3: 5; U_4, V_4: 10; U_ 5, 6, V_5, 6: 15; U_7, V_7: 30; U_ 8, V_8: 12; U_9, V_9: 14. (Only for 115 VAC, for other voltages contact the factory).
Duty Cycle: U_1: 75%; U_2 to 7: 25%; U_8, 9: 100%; V_1 to 7: 75%; V_8, 9: 100%.
Enclosure Rating: NEMA 4. Optional NEMA 7 (Class 1, Div. II Groups A, B, C, D).
Housing Material: Aluminum with thermal bonding polyester powder finish.
Temperature Limit: 0 to 150ºF (-18 to 65ºC).
Conduit Connection: 1/2″ female NPT.
Modulating Input (V Series): 4 to 20 mA.
Standard Features: Manual override and visual position indicator except modulating units.

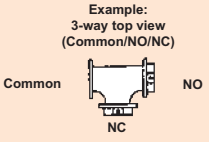
Pneumatic "DA" and "SR" Series

Type: DA series is double acting and SR series is spring return (rack and pinion).
Normal Supply Pressure: 80 psi (5.5 bar).
Maximum Supply Pressure: 120 psig (8 bar).
Air Connections: DA1 to 5 and SR2 to 5: 1/8" female NPT, all others: 1/4" female NPT.
Air Consumption: (cu. in. per stroke) DA1: 2.32, DA2: 6.59, DA3: 12.14, DA4: 16.32, DA5: 30.2, DA6: 45.3, DA7: 61.0, DA8: 106.9, DA9: 137.9, DAA: 220.1, DAB: 348.1, DAC: 915.4, SR2: 7.7, SR3: 14.2, SR4: 17.2, SR5: 32.4, SR6: 54.4, SR7: 85.4, SR8: 122.1, SR9: 146.5, SRA: 215.1, SRB: 462.6, SRC: 945.9.
Cycle Time: (sec. per 90º): DA1: .03, DA2: .04., DA3: .08, DA4: .12, DA5: .19, DA6: 0.27, DA7: .47, DA8: .66, DA9: .93, DAA: 1.1, DAB: 1.7, DAC: 4.5, SR2: .09, SR3: .14, SR4: .22, SR5: .33, SR6: .46, SR7: .78, SR8: .90, SR9: .97, SRA: 1.34, SRB: 2.19, SRC: 6.20.
Housing Material: Anodized aluminum body and epoxy coated aluminum end caps.
Temperature Limit: -4 to 180ºF (-20 to 82ºC).
Accessory Mounting: NAMUR standard.
Standard Features: Visual position indicator.

Series ABFV Automated Butterfly Valve

Complete Model Chart - See next page for built model numbers

Example	ABFV	3	03	WFB	3	3	1	DA3	E	SV	ABFV303WFB331DA3E-SV
Construction	ABFV										Automated Butterfly Valve
Configuration		2									Two-Way
		3									Three-Way
Size			02								2″
			25								2-1/2″
			03								3″
			04								4″
			05								5″
			06								6″
			08								8″
			10								10″
			12								12″
Body				WFB							Wafer
				LTB							Lug
Stem					3						316 SS
Disc						3					316 SS
Liner							1				EPDM
							2				Buna-N
							3				Fluoroelastomer
Actuator Type								DA1			Direct Acting Rack and Pinion Actuator, Size 32
								DA2			Direct Acting Rack and Pinion Actuator, Size 52
								DA3			Direct Acting Rack and Pinion Actuator, Size 63
								DA4			Direct Acting Rack and Pinion Actuator, Size 75
								DA5			Direct Acting Rack and Pinion Actuator, Size 85
								DA6			Direct Acting Rack and Pinion Actuator, Size 100
								DA7			Direct Acting Rack and Pinion Actuator, Size 115
								DA8			Direct Acting Rack and Pinion Actuator, Size 125
								DA9			Direct Acting Rack and Pinion Actuator, Size 140
								DAA			Direct Acting Rack and Pinion Actuator, Size 160
								DAB			Direct Acting Rack and Pinion Actuator, Size 200
								DAC			Direct Acting Rack and Pinion Actuator, Size 270
								SR2			Spring Return Rack and Pinion Actuator, Size 52
								SR3			Spring Return Rack and Pinion Actuator, Size 63
								SR4			Spring Return Rack and Pinion Actuator, Size 75
								SR5			Spring Return Rack and Pinion Actuator, Size 85
								SR6			Spring Return Rack and Pinion Actuator, Size 100
								SR7			Spring Return Rack and Pinion Actuator, Size 115
								SR8			Spring Return Rack and Pinion Actuator, Size 125
								SR9			Spring Return Rack and Pinion Actuator, Size 140
								SRA			Spring Return Rack and Pinion Actuator, Size 160
								SRB			Spring Return Rack and Pinion Actuator, Size 200
								SRC			Spring Return Rack and Pinion Actuator, Size 270
								U_1			Electric Two Position, Size 100
								U_2			Electric Two Position, Size 200
								U_3			Electric Two Position, Size 300
								U_4			Electric Two Position, Size 400
								U_5			Electric Two Position, Size 675
								U_6			Electric Two Position, Size 1000
								U_7			Electric Two Position, Size 1500
								U_8			Electric Two Position, Size 2000
								U_9			Electric Two Position, Size 3800
								U_A			Electric Two Position, Size 5000
								V_1			Electric Modulating, Size 100
								V_2			Electric Modulating, Size 200
								V_3			Electric Modulating, Size 300
								V_4			Electric Modulating, Size 400
								V_5			Electric Modulating, Size 675
								V_6			Electric Modulating, Size 1000
								V_7			Electric Modulating, Size 1500
								V_8			Electric Modulating, Size 2000
								V_9			Electric Modulating, Size 3800
								V_A			Electric Modulating, Size 5000
Arrangement									A		2-Way, Normally Open
									C		2-Way, Normally Closed
									E		3-Way, Common/NO/NC
									G		3-Way, Common/NC/NO
									I		3-Way, NO/Common/NC
									K		3-Way, NC/Common/NO
									L		3-Way, NO/NC/Common
									M		3-Way, NC/NO/Common
Options										SV	Factory Mounted Solenoid Valve (Pneumatic Only)
										EX	Explosion-Proof Electric Actuator (Electric Only)



For Electric U and V actuators middle term, V_1, is the power supply required. Model Code 1 is for 120 VAC, 2 is for 220 VAC, 3 is for 24 VAC and 4 is for 24 VDC. Example, U11, is 120 VAC two position. Consult factory for pricing.

Series
ABFV

Automated Butterfly Valve

For your convenience, sample model configurations are listed with the proper sized actuators. Models listed have cast iron body, 316 SS disc, and EPDM liner and o-rings. The 2-way models have a valve arrangement shown of normally closed, while the 3-way models have no valve arrangement code shown, please specify when ordering. All electric actuators shown are 115 VAC and NEMA 4. All pneumatic actuators are sized with an air supply pressure of 80 psi. Consult the factory for model number changes for electric actuator options of explosion-proof and other supply voltages.

2-Way, Lug Style, EPDM Liner

Size	Double Acting Pneumatic	Spring Return Pneumatic	Two Position Electric	Modulating Electric
	Model	Model	Model	Model
2″	ABFV202LTB331DA2C	ABFV202LTB331SR4C	ABFV202LTB331U12C	ABFV202LTB331V12C
2-1/2″	ABFV225LTB331DA2C	ABFV225LTB331SR4C	ABFV225LTB331U12C	ABFV225LTB331V12C
3″	ABFV203LTB331DA3C	ABFV203LTB331SR5C	ABFV203LTB331U13C	ABFV203LTB331V13C
4″	ABFV204LTB331DA3C	ABFV204LTB331SR6C	ABFV204LTB331U14C	ABFV204LTB331V14C
5″	ABFV205LTB331DA5C	ABFV205LTB331SR6C	ABFV205LTB331U16C	ABFV205LTB331V16C
6″	ABFV206LTB331DA5C	ABFV206LTB331SR8C	ABFV206LTB331U16C	ABFV206LTB331V16C
8″	ABFV208LTB331DA6C	ABFV208LTB331SR8C	ABFV208LTB331U17C	ABFV208LTB331V17C
10″	ABFV210LTB331DA8C	ABFV210LTB331SR9C	ABFV210LTB331U19C	ABFV210LTB331V19C
12″	ABFV212LTB331DAAC	ABFV212LTB331SRBC	ABFV212LTB331U19C	ABFV212LTB331V19C

Model Numbers shown are normally closed, change the model code at the end from "C" to "A" for normally open.

2-Way, Wafer Style, EPDM Liner

Size	Double Acting Pneumatic	Spring Return Pneumatic	Two Position Electric	Modulating Electric
	Model	Model	Model	Model
2″	ABFV202WFB331DA2C	ABFV202WFB331SR4C	ABFV202WFB331U12C	ABFV202WFB331V12C
2-1/2″	ABFV225WFB331DA2C	ABFV225WFB331SR4C	ABFV225WFB331U12C	ABFV225WFB331V12C
3″	ABFV203WFB331DA3C	ABFV203WFB331SR5C	ABFV203WFB331U13C	ABFV203WFB331V13C
4″	ABFV204WFB331DA3C	ABFV204WFB331SR6C	ABFV204WFB331U14C	ABFV204WFB331V14C
5″	ABFV205WFB331DA5C	ABFV205WFB331SR6C	ABFV205WFB331U16C	ABFV205WFB331V16C
6″	ABFV206WFB331DA5C	ABFV206WFB331SR8C	ABFV206WFB331U16C	ABFV206WFB331V16C
8″	ABFV208WFB331DA6C	ABFV208WFB331SR8C	ABFV208WFB331U17C	ABFV208WFB331V17C
10″	ABFV210WFB331DA8C	ABFV210WFB331SR9C	ABFV210WFB331U19C	ABFV210WFB331V19C
12″	ABFV212WFB331DAAC	ABFV212WFB331SRBC	ABFV212WFB331U19C	ABFV212WFB331V19C

Model Numbers shown are normally closed, change the model code at the end from "C" to "A" for normally open.

3-Way, Lug Style, EPDM Liner

Size	Double Acting Pneumatic	Spring Return Pneumatic	Two Position Electric	Modulating Electric
	Model*	Model*	Model*	Model*
2″	ABFV302LTB331DA3_	ABFV302LTB331SR5_	ABFV302LTB331U13_	ABFV302LTB331V13_
2-1/2″	ABFV325LTB331DA3_	ABFV325LTB331SR6_	ABFV325LTB331U14_	ABFV325LTB331V14_
3″	ABFV303LTB331DA4_	ABFV303LTB331SR6_	ABFV303LTB331U15_	ABFV303LTB331V15_
4″	ABFV304LTB331DA5_	ABFV304LTB331SR7_	ABFV304LTB331U16_	ABFV304LTB331V16_
5″	ABFV305LTB331DA6_	ABFV305LTB331SR9_	ABFV305LTB331U16_	ABFV305LTB331V16_
6″	ABFV306LTB331DA7_	ABFV306LTB331SR9_	ABFV306LTB331U17_	ABFV306LTB331V17_
8″	ABFV308LTB331DA9_	ABFV308LTB331SR9_	ABFV308LTB331U19_	ABFV308LTB331V19_
10″	ABFV310LTB331DAA_	ABFV310LTB331SRB_	ABFV310LTB331U19_	ABFV310LTB331V19_
12″	ABFV312LTB331DAB_	ABFV312LTB331SRC_	ABFV312LTB331U1A_	ABFV312LTB331V1A_

***Complete model includes Valve Arrangement - see Model Chart on previous page.**

OPTIONS

Optional Electric Actuator Supply Voltages
-Contact factory for model number change

Solenoid Valve - Add suffix -SV