

BF-V

Series 82

Butterfly Valve Victaulic Ends

Pneumatic - Spring Return 80 psi

Description

The BF Series 82 pneumatic spring return assemblies are available in 2-way and 3-way configurations 2" - 24". Two way assemblies are complete with ductile iron grooved end valves, EPDM seat, and mounted with a mounting kit to a pneumatic actuator. Three way assemblies are complete with (2) ductile iron grooved end valves, EPDM seat, mounted on a grooved end tee with linkage kit to a pneumatic actuator for use in either diverting or mixing applications. These two and three way assemblies are suitable for indoor or outdoor applications.

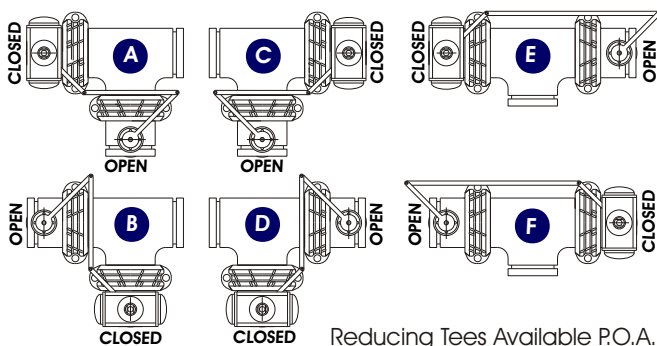
Operation

Valve assemblies with pneumatic high pressure actuators are energized when air is supplied to port A forcing the pistons away from each other and the springs to compress, with the valve rotating to the next position. When air is not applied, loss of pressure allows the compressed springs to extend and rotate the pistons back to the start position. On loss of air supply the actuator fails to the preset default position. Factory mounted, tested, and calibrated, these assemblies provide accurate and automatic valve positioning for temperature control.

Actuator Performance

- Housing protection corrosion resistant weatherproof with a hard anodized finish
- Supply pressure minimum 80 psi, maximum 150 psi
- Operating media is clean dry air or non corrosive gas
- Compact and efficient rack and pinion design
- Travel stops for stroke adjustment
- Linear torque output through 90° stroke
- Square female input shaft allows for easy field rotation of actuator to conform to tight areas
- Permanently lubricated rack and pinion
- Namur drilling permits direct mounting of solenoid valves
- Spring return fails to preset position, open or closed
- Position indicator confirms valve travel
- Controls are on/off and modulating 4-20 ma, 3-15 psi
- 2-year warranty

Assembly Configurations



Reducing Tees Available P.O.A.

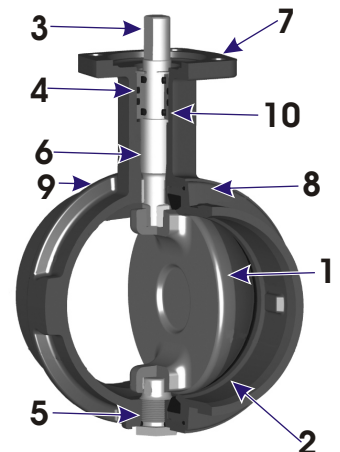


Valve Performance

- 2-way and 3-way assemblies 2" through 24"
- Grooved ends permit installation with two Vic couplings
- Narrow profile disc design has high flow coefficient
- Pressure responsive rubber seat design
- Multiple o-ring stem seal prevents leakage of stem
- Seal cartridge allows for easy servicing
- Upper and lower bearings reduce torque
- Rectangular drive eliminates fasteners
- Maximum seat temperature EPDM -30°F to 230°F
- Maximum valve body rating 300 psi
- Bi-directional, bubble tight close off
- Easy and economical installation of valve assemblies

Standard Valve Construction

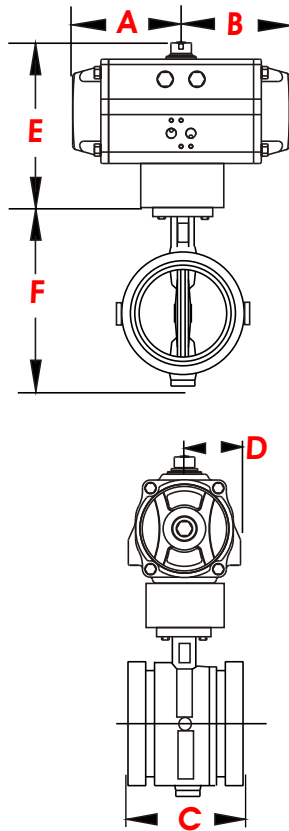
Item	Description	Materials
1	DISC	DUCTILE IRON
2	SEAT	EPDM
3	DRIVE HUB	STAINLESS
4	STEM O-RING	EPDM
5	BEARING	FIBERGLASS
6	STEM	STAINLESS
7	ISO FLANGE	DUCTILE IRON
8	ENDS	GROOVED
9	BODY	DUCTILE IRON
10	CARTRIDGE	BRASS



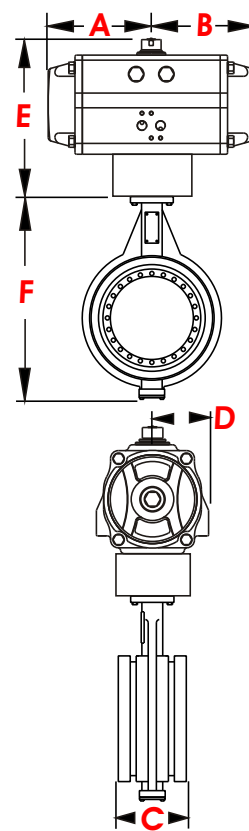
2-Way Spring Return

Dimensional Data

Sizes
2"-12"



Sizes
14"-24"



Standard Assembly, Ductile Iron Disc, EPDM Seat, Spring Return Actuator.
Modulating Service Change Last letter O to, E (4-20 ma) or P (3-15 psi), in Model #, Accessories on page 4.

Assembly Specification				Speed 90°		Air Ports	82 Series operator	Assembly Dimensions					
Size in DN	Model Number	Close off Psi Bar	Wt. lb Kg	Air Open (sec.)	Air Close (sec.)			inch mm					
2 50	BF202VE82O	200 14	18 8	0.3	0.4	1/8"	75 SR	A 4 102	B 4 102	C 3 1/4 82	D 2 51	E 8 203	F 8 1/2 216
2 1/2 65	BF225VE82O	200 14	28 13	0.3	0.4	1/8"	75 SR	A 4 102	B 4 102	C 3 3/4 96	D 2 51	E 8 203	F 9 1/4 235
3 80	BF203VE82O	200 14	30 14	0.4	0.5	1/8"	88 SR	A 5 127	B 5 127	C 3 3/4 96	D 2 1/8 54	E 8 1/2 216	F 10 254
4 100	BF204VE82O	200 14	37 17	0.4	0.5	1/8"	88 SR	A 5 127	B 5 127	C 4 5/8 117	D 2 1/8 54	E 8 1/2 216	F 11 1/2 292
5 125	BF205VE82O	200 14	40 18	0.9	1.2	1/4"	125 SR	A 6 3/4 172	B 6 3/4 172	C 5 7/8 149	D 3 76	E 11 279	F 12 1/2 318
6 150	BF206VE82O	200 14	60 27	0.9	1.2	1/4"	125 SR	A 6 3/4 172	B 6 3/4 172	C 5 7/8 149	D 3 76	E 11 279	F 13 1/2 343
8 200	BF208VE82O	200 14	125 57	1.5	1.8	1/4"	160 SR	A 9 229	B 9 229	C 5 1/3 135	D 4 102	E 13 330	F 17 432
10 250	BF210VE82O	200 14	175 80	1.5	1.8	1/4"	160 SR	A 9 229	B 9 229	C 6 3/8 163	D 4 1/2 114	E 13 330	F 20 508
12 300	BF212VE82O	200 14	235 107	5.2	6.8	1/4"	1750 SR	A 11 1/2 292	B 11 1/2 292	C 6 1/2 165	D 5 127	E 15 381	F 22 559
14 350	BF214VE82O	150 10	285 130	5.0	5.0	1/4"	2500 SR	A 12 1/2 318	B 12 1/2 318	C 10 254	D 5 127	E 16 406	F 22 1/2 572
16 400	BF216VE82O	150 10	370 168	5.0	5.0	1/4"	3500 SR	A 12 1/2 318	B 12 1/2 318	C 10 1/2 267	D 5 127	E 16 406	F 25 635
18 450	BF218VE82O	150 10	425 193	9.9	9.9	1/4"	3500 SR	A 12 1/2 318	B 12 1/2 318	C 11 279	D 5 127	E 16 406	F 27 1/3 693
20 500	BF220VE82O	150 10	515 234	9.9	9.9	1/4"	3500 SR	A 12 1/2 318	B 12 1/2 318	C 11 1/2 292	D 5 127	E 16 406	F 30 1/8 765
24 600	BF224VE82O	150 10	725 330	10.0	10.0	1/4"	RC88 SR	A 20 508	B 20 508	C 12 305	D 5 127	E 25 635	F 36 1/8 918

NOTE: Above Actuators Sized For Minimum of 80 psi, Speed Controls Available for Different Opening and Closing Times

4575 Damascus Rd.
Memphis, Tn. 38118

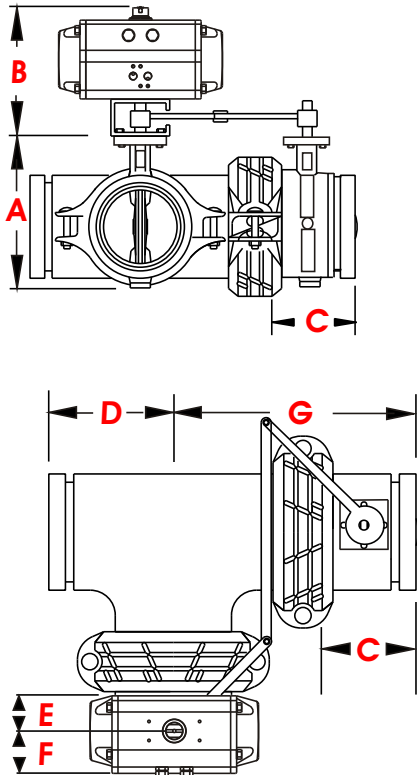
VALVES ✦ ACTUATORS ✦ ACCESSORIES

Phone (901) 794-5790
Fax (901) 363-1123

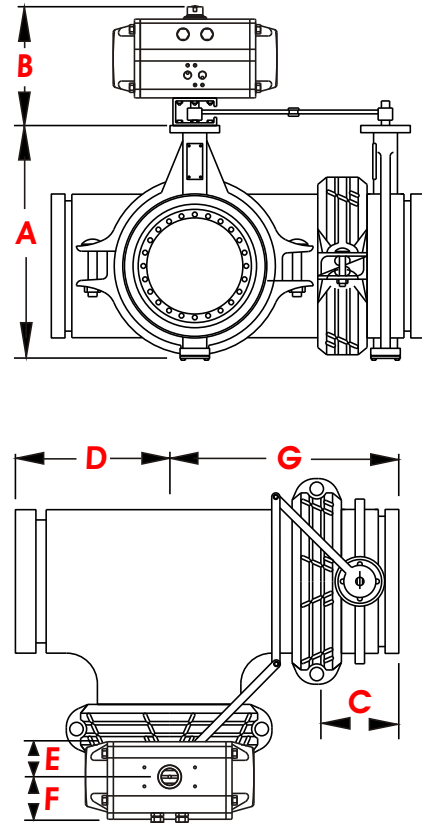
3-Way Spring Return

Dimensional Data

Sizes
2"-12"



Sizes
14"-24"



Standard Assembly, Ductile Iron Disc, EPDM Seat, Spring Return Actuator.
Modulating Service Change Last letter O to, E (4-20 ma) or P (3-15 psi), in Model #, Accessories on page 4.

Assembly Specification				Speed 90°		Air Ports	82 Series operator	Assembly Dimensions						
Size in DN	Model Number	Close off Psi Bar	Wt. lb kg	Air Open (sec.)	Spring Close (sec.)			inch mm						
2 50	BF302VE82O	200 14	37 17	0.5	0.6	1/8"	88 SR	5 1/2 140	8 1/2 216	3 1/4 82	3 1/4 83	2 1/8 54	2 1/8 54	6 1/2 165
2 1/2 65	BF325VE82O	200 14	39 18	0.5	0.6	1/8"	88SR	6 1/2 165	8 1/2 216	3 3/4 96	3 3/4 95	2 1/8 54	2 1/8 54	7 1/2 191
3 80	BF303VE82O	200 14	43 20	0.6	0.9	1/4"	100 SR	7 178	10 254	3 3/4 96	4 1/4 108	2 1/2 64	2 1/2 64	8 203
4 100	BF304VE82O	200 14	80 36	1.1	1.4	1/4"	125 SR	8 1/4 210	11 279	4 5/8 117	5 127	3 76	3 76	9 3/4 248
5 125	BF305VE82O	200 14	105 48	1.1	1.4	1/4"	125 SR	9 1/2 241	11 279	5 7/8 149	5 1/2 140	3 76	3 76	11 1/2 292
6 150	BF306VE82O	200 14	140 64	1.1	1.4	1/4"	125 SR	10 1/2 267	11 279	5 7/8 149	6 1/2 165	3 76	3 76	12 1/2 318
8 200	BF308VE82O	200 14	295 134	1.7	2.1	1/4"	160 SR	13 330	13 330	5 1/8 135	7 3/4 197	4 102	4 102	13 1/4 337
10 250	BF310VE82O	200 14	433 197	5.2	6.8	1/4"	1750 SR	16 406	16 1/2 419	6 7/8 163	9 229	4 1/2 114	4 1/2 114	15 1/2 394
12 300	BF312VE82O	200 14	509 231	5.0	5.0	1/4"	2500 SR	18 457	16 1/2 419	6 1/2 165	10 254	4 3/4 121	4 3/4 121	16 3/4 425
14 350	BF314VE82O	150 10	750 341	9.9	9.9	1/4"	3500 SR	22 1/2 572	16 1/2 419	10 254	11 279	4 3/4 121	4 3/4 121	21 1/8 537
16 400	BF316VE82O	150 10	850 386	9.9	9.9	1/4"	3500 SR	25 635	16 1/2 419	10 1/2 267	12 305	4 3/4 121	4 3/4 121	22 5/8 575
18 450	BF318VE82O	150 10	1150 523	10.0	10.0	1/4"	RC88 SR	27 1/3 693	16 1/2 419	11 279	13 1/2 343	5 127	5 127	24 5/8 625
20 500	BF320VE82O	150 10	1500 682	10.0	10.0	1/4"	RC88 SR	30 1/8 765	16 1/2 419	11 1/2 292	15 381	5 127	5 127	26 5/8 676
24 600	BF324VE82O	150 10	2270 1032	10.0	10.0	1/4"	RC88 SR	36 1/8 918	16 1/2 419	12 305	17 432	5 127	5 127	29 1/8 740

NOTE: Above Actuators Sized for Minimum of 80 psi, Speed Controls Available for Different Opening and Closing Times

Engineering / Order Code

Flow Coefficients (C_v) Degrees represent angle of disc opening
Single Valve Assembly

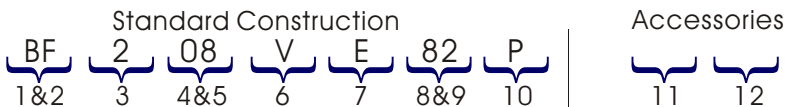
Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	0.06	2	7	14	23	36	60	88	115
2½"	0.16	5	16	30	50	80	140	205	260
3"	0.24	9	26	50	90	140	230	335	440
4"	0.30	16	50	100	160	250	430	750	820
5"	0.58	24	70	140	240	370	620	925	1200
6"	0.93	36	110	220	360	560	940	1400	1800
8"	2	70	200	410	670	1050	1770	2575	3400
10"	3	120	350	700	1150	1800	3020	4425	5800
12"	4	180	540	1080	1780	2790	4680	6800	9000
14"	5	480	900	1490	2130	3040	4350	6300	9360
16"	6	590	1130	1880	2730	3940	5680	8280	12,400
18"	8	720	1400	2340	3420	4970	7200	10,600	15,900
20"	10	820	1610	2740	4080	6010	8810	13,100	19,800
24"	14	1100	2210	3800	5760	8580	12,700	18,900	28,900

Three-Way Valve Assembly

Size	10°	20°	30°	40°	45°	50°	60°	70°	80°	90°
2"	88	81	45	27	27	27	45	81	88	115
2½"	205	145	96	80	80	80	96	145	205	260
3"	335	239	166	140	140	140	166	239	335	440
4"	750	480	300	260	260	260	300	480	750	820
5"	925	642	440	380	380	380	440	642	925	1200
6"	1400	976	670	580	580	580	670	976	1400	1800
8"	2575	1840	1250	1080	1080	1080	1250	1840	2575	3400
10"	4425	3140	2150	1850	1850	1850	2150	3140	4425	5800
12"	6800	4860	3330	2860	2860	2860	3330	4860	6800	9000
14"	6305	4830	3940	3620	3620	3620	3940	4830	6305	9360
16"	8286	6270	5070	4610	4610	4610	5070	6270	8286	12,400
18"	10,608	7920	6370	5760	5760	5760	6370	7920	10,608	15,900
20"	13,110	9630	7620	6820	6820	6820	7620	9630	13,110	19,800
24"	18,914	13,800	10,790	9560	9560	9560	10,790	13,800	18,914	28,900

The flow characteristic of a valve is described as the C_v value. C_v is defined as the max flow of 60°F water expressed in GPM (Gallons per minute) which produces a 1 psi pressure drop across the valve.

Assembly Number



Butterfly Valve Assembly, 2-Way, 8", Victaulic Grooved Ends, Ductile Iron Body, EPDM Disc, Pneumatic Spring Return Actuator, Modulating 3-15 psi instrument input.

#	ITEM	CODE	DESCRIPTION	#	ITEM	CODE	DESCRIPTION
1 & 2	Series	BF	Butterfly Valve	7	Construction	E	Ductile Iron Body & Disc EPDM Seat
3	Assembly	2 3	2-Way Configuration 3-Way Configuration	8 & 9	Actuator	82	Spring Return
4 & 5	Size	02 25 to 24	2" - 24" Assemblies	10	Controls	O E P	On/Off Electronic 4-20 input Pneumatic 3-15 input
6	Close Off	V	Victaulic BF-V Series Grooved Ends	11 & 12	Accessories	S L C Q	EP Solenoid Valve Limit Switch w/ Visual EP w/ Limit Switch Limit Switch w/ Feedback

Please Specify 3-way Configurations Located On Front Of Brochure