

BF

Series 44

Butterfly Valve

Electric 120 VAC - Fail-Safe NEMA 4

Description

The BF Series 44 electric actuated valve assemblies are rated NEMA 4 for outside use. These assemblies are available in 2-way and 3-way configurations 2" - 12", in a Fail-Safe design. Two way assemblies are complete with full lugged bodies, 304 stainless disc, EPDM seat, and direct mounted to an electric actuator. Three way assemblies are complete with (2) lugged valves mounted on a cast iron tee with linkage kit to an electric actuator for use in either mixing or diverting applications.

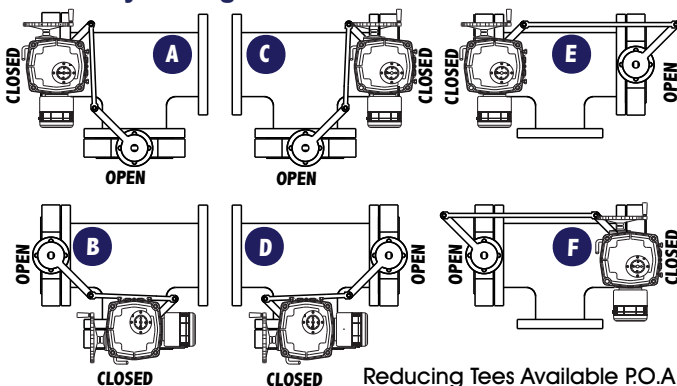
Operation

Valve assemblies with NEMA 4 electric actuators are powered by 120 VAC voltage. Each actuator is controlled by either on/off or modulating commands. All actuators contain reversible type, high torque output, single phase motors. When power is available the actuator acts like a normal quarter turn on/off or modulating actuator. Upon loss of power the super capacitors stored energy is released and this drives the actuator to the predesignated failsafe position.

Actuator Performance

- Housing NEMA 4 (indoor or outdoor applications) protects against wind blown dust, rain, splashes and hose water
- Agency approved listing is CE
- Power supply 120 VAC 50/60 Hz
- Controls available are on/off or mod. (4-20 MA, 0-10 VDC)
- Manual handwheel override standard on each actuator
- Visual position indicator that confirms valve travel
- Noise level: 50 DB maximum
- Operating temperature: -40°F to +140°F
- Self-locking, permanently lubricated, worm gear train prevents backdrive and the need for a mechanical brake
- Heater, thermostat standard to minimize condensation
- Auxiliary switches standard
- Mechanical stops standard
- External housing for failsafe operation
- LED lights for fault and status indication

Assembly Configurations

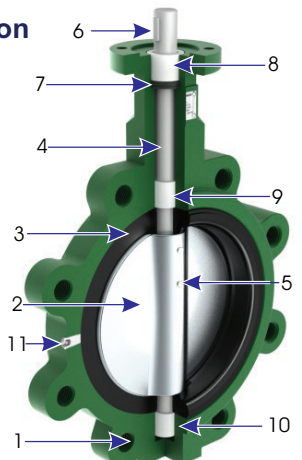


Valve Performance

- 2-way and 3-way assemblies 2" through 12"
- Valves comply with MSS SP-67 specifications, for industry standard face to face requirements
- Lug bodies compatible with ANSI 125/150# flanges
- Extended 2" neck for insulation clearance
- 304 stainless steel disc for corrosion resistance
- Phenolic backed cartridge style seat which is non-collapsible, stretch resistant and blow out proof
- Maximum seat temperature EPDM -30°F to +275°F
- Maximum valve rating is 200 psi
- Bi-directional, bubble tight close off
- Maximum steam rating 15 psi (EPDM only)
- Valve seat does not require gaskets
- Valve rated for dead end service

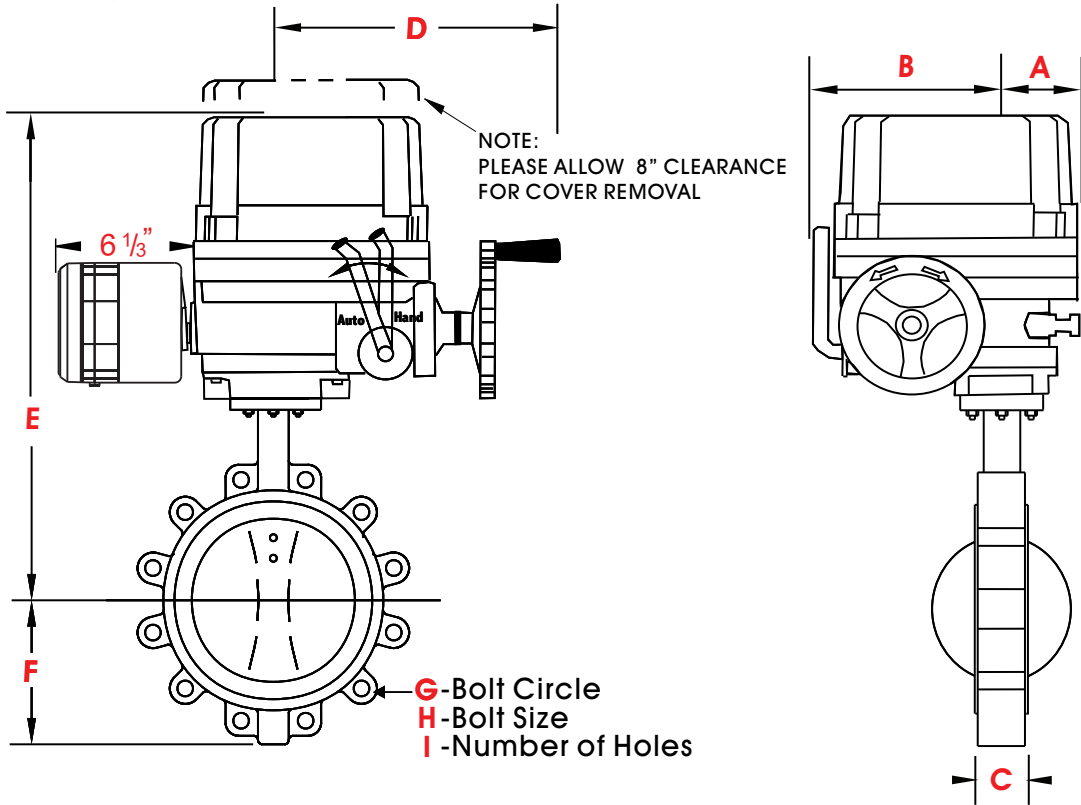
Standard Valve Construction

Item	Description	Materials
1	BODY	DUCTILE IRON
2	DISC	304 SS
3	SEAT	EPDM
4	SHAFT	416 SS
5	TAPER PINS	316 SS
6	KEY	416 SS
7	U-Cup Seal	BUNA-N
8	BUSHING	PTFE
9	BUSHING	PTFE
10	BUSHING	PTFE
11	SET SCREW	CARBON



BF Series 44 / Fail-Safe

 **2-Way**



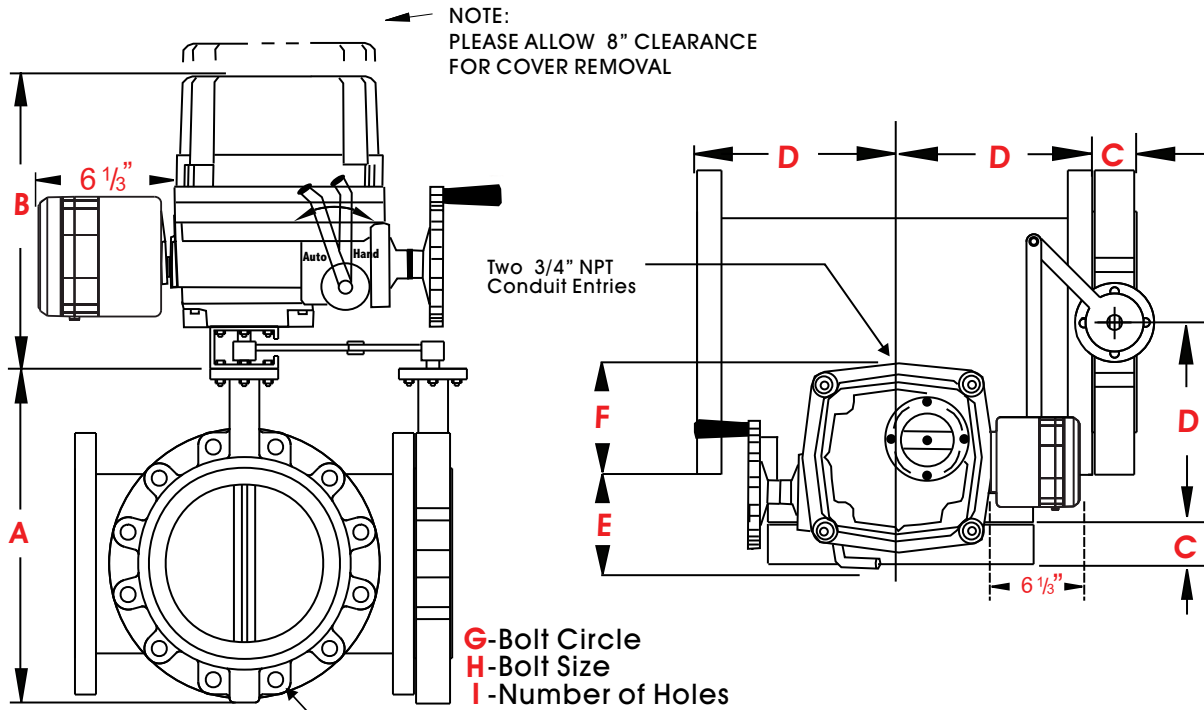
Standard Assembly: Ductile Iron Body, 304 Stainless Disc, EPDM Seat, On/Off, 24 VAC, with Heater, Manual Override, 2-SPDT Switches Modulating Service Change Last O to E in Model Number, For Accessories See page 4, Wiring under "Electrical Section" Series 44

Assembly Specification				Speed 90° On/Off Mod.	Amp draw On/Off Mod.	44 Series operator On/off Mod.		Assembly Dimensions								
Size in DN	Model Number	Close off Psi Bar	Wt. lb kg			On/off	Mod.	A	B	C	D	E	F	G	H	I
2 50	BF202FA440	200 14	36 16	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	1 3/4 44.5	10.4 264	16 5/8 422.3	3 1/4 82.6	4 3/4 120.7	5/8 - 11 UNC	4	
2 1/2 65	BF225FA440	200 14	37 17	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	1 7/8 47.6	10.4 264	17 7/8 434.9	3 3/4 95.2	5 1/2 139.7	5/8 - 11 UNC	4	
3 80	BF203FA440	200 14	43 20	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	1 7/8 47.6	10.4 264	17 7/8 441.3	4.0 101.6	6.0 152.4	5/8 - 11 UNC	4	
4 100	BF204FA440	200 14	55 25	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	2 1/8 53.9	10.4 264	18 1/8 460.4	4 7/8 123.8	7 1/2 190.5	5/8 - 11 UNC	8	
5 125	BF205FA440	200 14	57 26	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	2 1/4 57.2	10.4 264	18 5/8 473	5 3/8 136.5	8 1/2 215.9	3/4 - 10 UNC	8	
6 150	BF206FA440	200 14	60 27	33 Seconds	2.4	FS-800-02	3 1/2 89	5 1/2 140	2 1/4 57.2	10.4 264	19 1/8 486	5 7/8 149.2	9 1/2 241.3	3/4 - 10 UNC	8	
8 200	BF208FA440	200 14	100 45	33 Seconds	2.4	FS-800-02	3 1/2 89.0	5 1/2 140	2 1/2 63.5	10 1/2 267.0	21 3/4 550.4	7 7/8 180.9	11 3/4 298.5	3/4 - 10 UNC	8	
10 250	BF210FA440	200 14	124 56	34 Seconds	3.8	FS-800-03	4.0 102.0	5 1/2 140	2 3/4 69.9	11 1/4 286.0	23.0 582.1	8 1/4 209.6	14 1/4 361.9	7/8 - 9 UNC	12	
12 300	BF212FA440	200 14	159 72	34 Seconds	5.0	FS-800-05	4.0 102.0	6 3/8 162.0	3 3/8 79.4	11 1/4 286.0	24 3/4 626.6	9 3/4 247.7	17.0 431.8	7/8 - 9 UNC	12	
12-U 300	BF212UA440	100 7	159 72	34 Seconds	3.8	FS-800-03	4.0 102.0	6 3/8 162.0	3 3/8 79.4	11 1/4 286.0	24 3/4 626.6	9 3/4 247.7	17.0 431.8	7/8 - 9 UNC	12	

NOTE: Wiring Diagrams Located in Electra Fail-Safe Brochure.

BF Series 44 / Fail-Safe

 3-Way



Standard Assembly: Ductile Iron Body, 304 Stainless Disc, EPDM Seat, On/Off, 24 VAC, with Heater, Manual Override, 2-SPDT Switches Modulating Service Change Last O to E in Model Number, For Accessories See page 4, Wiring under "Electrical Section" Series 44

Assembly Specification				Speed 90° Drive / Fail-Safe	Amp draw On/Off Mod.	44 Series operator On/off Mod.	Assembly Dimensions								
Size in DN	Model Number	Close off Psi Bar	Wt. lb kg				A	B	C	D	E	F	G	H	I
2 50	BF302FA440	200 14	62 28	33 Seconds	2.4	FS-800-02	9 5/8 244.5	13 1/4 336.6	1 3/4 44.5	4 1/2 114.3	5 1/2 140	3 1/2 89	4 3/4 120.7	5/8 - 11 UNC	4
2 1/2 65	BF325FA440	200 14	73 33	33 Seconds	2.4	FS-800-02	10 5/8 269.9	13 1/4 336.6	1 7/8 47.6	5.0 127.0	5 1/2 140	3 1/2 89	5 1/2 139.7	5/8 - 11 UNC	4
3 80	BF303FA440	200 14	92 42	33 Seconds	2.4	FS-800-02	11 7/8 282.6	13 1/4 336.6	1 7/8 47.6	5 1/2 139.7	5 1/2 140	3 1/2 89	6.0 152.4	5/8 - 11 UNC	4
4 100	BF304FA440	200 14	143 65	33 Seconds	2.4	FS-800-02	12 3/4 323.9	13 1/4 336.6	2 1/8 53.9	6 1/2 165.1	5 1/2 140	3 1/2 89	7 1/2 190.5	5/8 - 11 UNC	8
5 125	BF305FA440	200 14	165 75	33 Seconds	2.4	FS-800-02	13 3/4 349.3	13 1/4 336.6	2 1/4 57.2	7 1/2 190.5	5 1/2 140	3 1/2 89	8 1/2 215.9	3/4 - 10 UNC	8
6 150	BF306FA440	200 14	195 89	33 Seconds	2.4	FS-800-02	14 3/4 374.7	13 1/4 336.6	2 1/4 57.2	8.0 203.2	5 1/2 140	3 1/2 89	9 1/2 241.3	3/4 - 10 UNC	8
8 200	BF308UA440	100 7	319 145	33 Seconds	2.4	FS-800-02	17 3/8 441.3	13 1/4 336.6	2 1/2 63.5	9.0 228.6	5 1/2 140	3 1/2 102	11 3/4 298.5	3/4 - 10 UNC	8
10 250	BF310UA440	100 7	480 219	37 Seconds	3.8	FS-800-03	19 3/4 501.7	15.0 381.2	2 3/4 69.9	11.0 279.4	6 3/8 162	4.0 102	14 1/4 361.9	7/8 - 9 UNC	12
12 300	BF312UA440	100 7	652 296	37 Seconds	3.8	FS-800-03	21.0 533.4	15.0 381.2	3 1/8 79.4	12.0 308.4	6 3/8 162	4.0 102	17.0 431.8	7/8 - 9 UNC	12

NOTE: Wiring Diagrams Located Under "Electrical Section" Series 44, Tagged With Operator Number

Flow Coefficients (C_v) Degrees represent angle of disc opening

2-Way Valve Assembly

Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	0.06	3	7	15	27	44	70	105	115
2 1/2"	0.10	6	12	25	45	75	119	278	196
3"	0.20	9	18	39	70	116	183	275	302
4"	0.30	17	36	78	139	230	364	546	600
5"	0.50	29	61	133	237	392	620	930	1022
6"	0.80	45	95	205	366	605	958	1437	1579
8"	2	89	188	408	727	1202	1903	2854	3136
10"	3	151	320	694	1237	2047	3240	4859	5340
12"	4	234	495	1072	1911	3162	5005	7507	8250
14"	6	338	715	1549	2761	4568	7230	10844	11917

3-Way Valve Assembly

Size	10°	20°	30°	40°	45°	50°	60°	70°	80°	90°
2"	105	73	51	42	42	42	51	73	105	115
2 1/2"	178	125	87	70	70	70	87	125	178	196
3"	275	192	134	109	109	109	134	192	275	302
4"	546	381	266	217	217	217	266	381	546	600
5"	931	649	453	370	370	370	453	649	931	1022
6"	1438	1003	700	571	571	571	700	1003	1438	1579
8"	2856	1992	1390	1135	1135	1135	1390	1992	2856	3136
10"	4862	3391	2367	1931	1931	1931	2367	3391	4862	5340
12"	7511	5239	3657	2983	2983	2983	3657	5239	7511	8250
14"	10850	7568	5283	4310	4310	4310	5283	7568	10850	11917

Note: 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

Series	Config	Size	Close Off	Disc/Seat	Actuator	Controls
BF	2	04	F	A	44	E
1	2	3	4	5	6	7

1. Series
BF = BF Butterfly Valve

2. Configuration
2 = 2-way
3 = 3-way

3. Size
02 = 2.0"
25 = 2.5"
03 = 3.0"
04 = 4.0"
to
12 = 12.0"


4. Close Off
F = Full Rated / 200 PSI
U = Under Cut / 100 PSI

5. Construction
A = 304 Stainless Disc / EPDM Seat

6. Actuator
44 = Fail-Safe / 120 VAC
Specify Fail Open or Fail Closed

7. Controls
O = On/Off
E = Modulating 0-10 VDC / 4-20 MA
Jumper Selectable

Feed Back 0-10 VDC / 4-20 MA Standard
Auxiliary Switches 2-SPDT Standard

 Please specify 3-Way Configuration Located on Front of Brochure
Gold Seal Warranty: 2 Years Limited Warranty