

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED) INCLUDES WEATHERPROOF ACTUATOR

The Series 707 butterfly valve features a weatherproof actuator housing approved for indoor or outdoor use. It has been developed for fire pump metering test lines, per NFPA 20 and rooftop test units, as well as pressure reducing valve by-pass lines per NFPA 14. The Series 707 has a ductile iron body and disc with EPDM disc coating. The body is coated with a heat fused polyphenylene sulfide blend to meet FM requirements. Designed for fire protection services only; Series 707 valve is UL Listed and FM Approved for 300 psi/2065 kPa service. Contact Victaulic for details of agency approvals. The Series 707 Butterfly Valve is designed to be SUPERVISED CLOSED. Under normal operating conditions, this valve will be CLOSED, and the internal limit switches will supervise the valve only in the CLOSED position. The valve will be in the open position only during system testing and maintenance.

This supervised closed Series 707 Butterfly Valve should NOT be installed where fluid flow is required as part of normal system operation.

WEATHERPROOF ACTUATOR

Supervisory switches that monitor the valve in the fully closed position for valves are available 2½ – 8" valves.



CSFM: 7770-0531:113



MATERIAL SPECIFICATIONS

Body: Ductile iron conforming to ASTM A-536, coated with polyphenylene sulfide blend.

Disc: Ductile iron conforming to ASTM A-536, various grades, EPDM coated.

Disc Coating:

- **Grade "E" EPDM**

EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to +110°C.

Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

Stem Bearings: Teflon impregnated fiberglass with stainless steel backing.

Stem Bearing Nuts: Type 416 Stainless Steel.

O-Ring: EPDM

Bracket: Carbon steel, painted.

Actuator:

- Bronze traveling nut on a steel lead screw, in a ductile iron housing.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

VICTAULIC IS A REGISTERED TRADEMARK OF VICTAULIC COMPANY. © 2008 VICTAULIC COMPANY. ALL RIGHTS RESERVED.

REV_B



10.75_1

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

DIMENSIONS –  

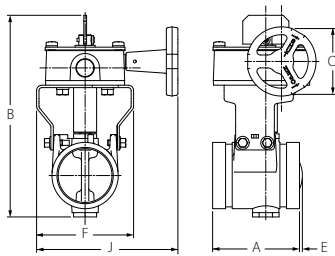
Size		Dimensions – inches/millimeters						Aprx. Wgt. Each
Nominal Size inches mm	Actual Outside Diameter inches mm	End to End "A"	Hgt. "B"	"E"	"F"	"J"	"O"	lbs/kg
2½ 65	2.875 73.0	3.77 95.6	8.76 222.5	—	4.21 106.9	6.08 154.4	3.00 76.2	8.3 3.8
76.1 mm	3.000 76.1	3.77 95.6	8.76 222.5	—	4.21 106.9	6.08 154.4	3.00 76.2	8.3 3.8
3 80	3.500 88.9	3.77 95.6	9.40 238.8	0.08 2.0	4.21 106.9	6.08 154.4	3.00 76.2	8.9 4.0
4 100	4.500 114.3	4.63 117.6	10.84 275.3	0.07 1.8	6.01 152.7	6.98 177.3	3.00 76.2	14.9 6.8
139.7 mm	5.500 139.7	5.88 149.4	12.38 314.5	0.43 10.9	6.01 152.7	8.57 217.7	4.50 114.3	21.0 9.5
5 125	5.563 141.3	5.88 149.4	12.38 314.5	0.43 10.9	6.01 152.7	8.57 217.7	4.50 114.3	21.0 9.5
165.1 mm	6.500 165.1	5.88 149.4	13.41 340.6	1.00 25.4	7.51 190.8	9.32 236.7	4.50 114.3	26.5 12.0
6 150	6.625 168.3	5.88 149.4	13.41 340.6	1.00 25.4	7.51 190.8	9.32 236.7	4.50 114.3	26.5 12.0
8 200	8.625 219.1	5.33 135.4	16.50 419.1	1.27 32.3	9.65 245.1	10.98 278.9	6.30 160.0	43.0 19.5

1. To prevent rotation of valves, it is recommended that Series 707 be installed with Victaulic Style 07 Zero-Flex®, Style 005 FireLock, Style 009/009V FireLock EZ, or Style HP-70 Rigid Couplings. If Victaulic flexible couplings are used, additional support may be required.

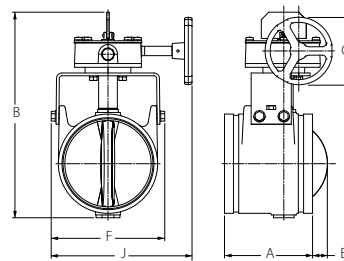
2. Valve must not be installed with disc in full open position. Disc must be partly closed so that no part is protruding beyond end of valve body.

3. Victaulic grooved end butterfly valves are permitted for use with grooved end pipe (IPS) only. Not permitted for use with plain end (IPS) pipe.

4. Series 707 valves are designed for ambient weather conditions as opposed to submersible service.



2 ½ – 4-INCH/65 – 100-MM SIZES



5 – 8 INCH

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

PERFORMANCE

The chart expresses the frictional resistance of Victaulic Series 707 in equivalent feet/meters of straight pipe.

Size			Size		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Equiv. Feet/m of Pipe	Nominal Size Inches mm	Actual Outside Diameter Inches mm	Equiv. Feet/m of Pipe
2½ 65	2.875 73.0	5 1.6	165.1 mm	6.500 165.1	8 2.5
76.1 mm	3.000 76.1	5 1.6	6 150	6.625 168.3	8 2.5
3 80	3.500 88.9	5 1.6	8 200	8.625 219.1	11 3.4
4 100	4.500 114.3	12 3.7			
139.7 mm	5.500 139.7	12 3.7			
5 125	5.563 141.3	12 3.7			

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

PERFORMANCE

C_v values for flow of water at +60°F/+16°C with a fully open valve are shown in the table below. For additional details, contact Victaulic.

Formulas for C_v Values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

$$Q = C_v \times \sqrt{\Delta P}$$

Where:

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

C_v = Flow Coefficient

Size		C _v	Size		C _v	Size		C _v
Nominal Size Inches mm	Actual Outside Diameter Inches mm		Nominal Size Inches mm	Actual Outside Diameter Inches mm		Nominal Size Inches mm	Actual Outside Diameter Inches mm	
2½ 65	2.875 73.0	325	139.7 mm	5.500 139.7	1150	8 200	8.625 219.1	3400
76.1 mm	3.000 76.1	325	5 125	5.563 141.3	1150			
3 80	3.500 88.9	482	165.1 mm	6.500 165.1	1850			
4 100	4.500 114.3	600	6 150	6.625 168.3	1850			

Formulas for K_v Values:

$$\Delta P = \frac{Q^2}{K_v}$$

$$Q = K_v \times \sqrt{\Delta P}$$

Where:

Q = Flow ($\frac{m^3}{hr.}$)

ΔP = Pressure (bar)

K_v = Flow Factor

Size		K _v	Size		K _v	Size		K _v
Nominal Size Inches mm	Actual Outside Diameter Inches mm		Nominal Size Inches mm	Actual Outside Diameter Inches mm		Nominal Size Inches mm	Actual Outside Diameter Inches mm	
2½ 65	2.875 73.0	280	139.7 mm	5.500 139.7	995	8 200	8.625 219.1	2940
76.1 mm	3.000 76.1	280	5 125	5.563 141.3	995			
3 80	3.500 88.9	415	165.1 mm	6.500 165.1	1600			
4 100	4.500 114.3	520	6 150	6.625 168.3	1600			

FireLock® Butterfly Valve

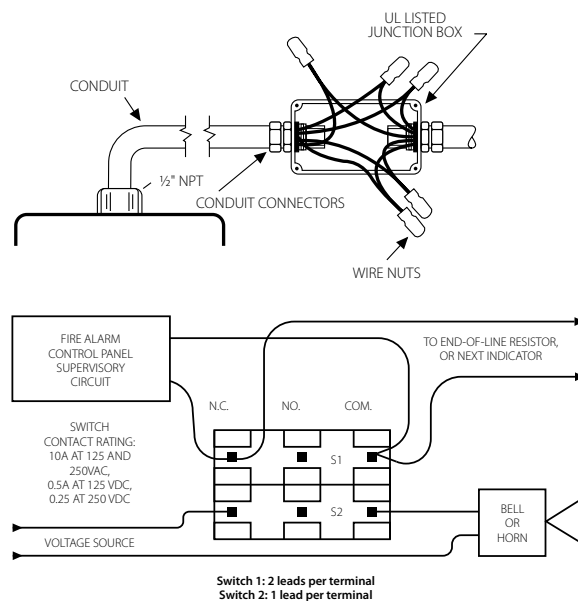
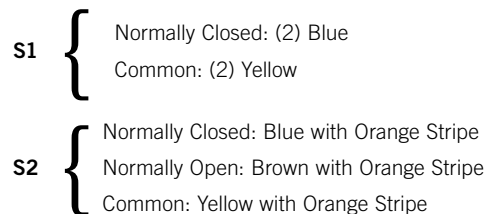
SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

SWITCH AND WIRING

1. The supervisory switch contains two single pole, double throw, pre-wired switches.
2. Switches are rated:
 - 10 amps @ 125 or 250 VAC/60 Hz
 - 0.50 amps @ 125 VDC
 - 0.25 amps @ 250 VDC
3. **Switches supervise the valve in the “CLOSED” position.**
4. One switch has two #18 MTW wires per terminal, which permit complete supervision of leads (refer to diagrams and notes on this page). The second switch has one #18 MTW wire per terminal. This double circuit provides flexibility to operate two electrical devices at separate locations, such as an indicating light and an audible alarm, in the area that the valve is installed.
5. A #14 MTW ground lead (green) is provided.

Switch #1 = S1 For connection to the supervisory circuit of a UL Listed alarm control panel

Switch #2 = S2 Auxiliary switch that may be connected to auxiliary devices, per the authority having jurisdiction



NOTE:

The above diagram shows a connection between the common terminal (yellow – S1 and yellow-with-orange stripe – S2) and the normally closed terminal (blue – S1 and blue-with-orange stripe – S2). In this example, the indicator light and alarm will stay on until the valve is fully **CLOSED**. When the valve is fully **CLOSED**, the indicator light and alarm will go out. Cap off any unused wires (e.g. brown with orange stripe).

Only S1 (two leads per terminal) may be connected to the fire alarm control panel.

The connection of the alarm switch wiring shall be in accordance with NFPA 72 and the auxiliary switch per NFPA 70 (NEC).

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

FireLock® Butterfly Valve

SERIES 707 BUTTERFLY VALVE (SUPERVISED CLOSED)
INCLUDES WEATHERPROOF ACTUATOR

WARRANTY

Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

INSTALLATION

Reference should always be made to the installation sheet included with the valve. Verify you have the latest revision by visiting our website at www.victaulic.com. Further reference can be found in the I-100 Victaulic Field Installation Handbook.



WCAS-7GJJA2

For complete contact information, visit www.victaulic.com

10.75 5198 REV B UPDATED 7/2008

VICTAULIC IS A REGISTERED TRADEMARK OF VICTAULIC COMPANY. © 2008 VICTAULIC COMPANY. ALL RIGHTS RESERVED.

10.75

