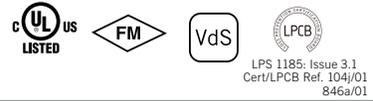


FireLock® Butterfly Valve - Supervised CLOSED



SERIES 707C WITH WEATHERPROOF ACTUATOR

The Series 707C 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 707C has a ductile iron body and disc with EPDM disc coating. Designed for fire protection services only. Contact Victaulic for details of agency approvals.

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



APPROVALS AND LISTINGS

| | Approval/Listing Service Pressures Series 707C Butterfly Valve | | |
|-------------|---|----------------------|----------------------|
| | cULus | FM | VdS |
| 2"/50mm | up to 300psi/2068kPa | n/a | up to 300psi/2068kPa |
| 2 1/2"/65mm | up to 300psi/2068kPa | up to 300psi/2068kPa | n/a |
| 76.1mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |
| 3"/80mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |
| 108mm | up to 300psi/2068kPa | n/a | n/a |
| 4"/100mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |
| 133mm | up to 300psi/2068kPa | n/a | n/a |
| 5"/125mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |
| 139.7mm | up to 300psi/2068kPa | up to 300psi/2068kPa | n/a |
| 6"/150mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |
| 159mm | up to 300psi/2068kPa | n/a | n/a |
| 165.1mm | up to 300psi/2068kPa | up to 300psi/2068kPa | n/a |
| 8"/200mm | up to 300psi/2068kPa | up to 300psi/2068kPa | up to 300psi/2068kPa |

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

FireLock® Butterfly Valve - Supervised CLOSED

SERIES 707C
WITH WEATHERPROOF ACTUATOR

MATERIAL SPECIFICATIONS

Body: Ductile iron conforming to ASTM A-536, grade 65-45-12

End Face, 2 – 6" / 50 – 150 mm: Ductile iron conforming to ASTM A-536, grade 65-45-12

Seal Retainer, 8" / 200 mm: Ductile iron conforming to ASTM A-536, grade 65-45-12

Coating: Black alkyd enamel

Disc: Ductile iron conforming to ASTM A-536, grade 65-45-12, with electroless nickel coating conforming to ASTM B-733

Seat:

- Grade "E" EPDM

Stems: 416 stainless steel conforming to ASTM A-582

Stem Seal Cartridge: C36000 brass

Bearings: Stainless Steel with TFE lining

Stem Seals: EPDM

Stem Retaining Ring: Carbon steel

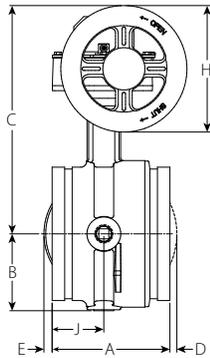
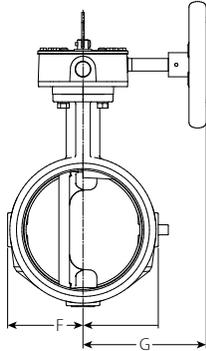
Actuator:

- 2 - 8" / 50 - 200mm: Brass or bronze traveling nut on a steel lead screw, in a ductile iron housing

FireLock® Butterfly Valve - Supervised CLOSED

**SERIES 707C
WITH WEATHERPROOF ACTUATOR**

DIMENSIONS –



| Size | | Dimensions – Inches/millimeters | | | | | | | | | |
|----------------|------------------|---------------------------------|---------------|----------------|--------------|--------------|----------------|---------------|---------------|--------------|--|
| Size | Outside Diameter | End to End A | B | C | D | E | F | G | DIA H | J | |
| 2" 60.3 mm | 2.375 60.3 | 4.25 108.0 | 2.28 57.9 | 6.41 162.8 | — | — | 4.00 101.6 | 4.22 107.2 | 4.50 114.3 | 2.12 53.8 | |
| 2½" 73 mm | 2.875 73.0 | 3.77 95.8 | 2.28 57.9 | 7.54 191.5 | — | — | 4.00 101.6 | 4.22 107.2 | 4.50 114.3 | 1.77 45.0 | |
| 76.1 mm | 3.000 76.1 | 3.77 95.8 | 2.28 57.9 | 7.54 191.5 | — | — | 4.00 101.6 | 4.22 107.2 | 4.50 114.3 | 1.77 45.0 | |
| 3" 88.9 mm | 3.500 88.9 | 3.77 95.8 | 2.53 64.3 | 7.79 197.9 | — | — | 4.50 114.3 | 4.22 107.2 | 4.50 114.3 | 1.77 45.0 | |
| 108 mm | 4.250 108.0 | 4.63 117.6 | 2.88 73.2 | 8.81 223.8 | — | — | 5.50 139.7 | 4.22 107.2 | 4.50 114.3 | 2.20 55.9 | |
| 4" 114.3 mm | 4.500 114.3 | 4.63 117.6 | 2.88 73.2 | 8.81 223.8 | — | — | 5.50 139.7 | 4.22 107.2 | 4.50 114.3 | 2.20 55.9 | |
| 133 mm | 5.250 133.0 | 5.88 149.4 | 3.35 85.1 | 10.88 276.4 | — | — | 6.56 166.6 | 6.19 157.2 | 6.30 160.0 | 2.58 65.5 | |
| 139.7 mm | 5.500 139.7 | 5.88 149.4 | 3.35 85.1 | 10.88 276.4 | — | — | 6.56 166.6 | 6.19 157.2 | 6.30 160.0 | 2.58 65.6 | |
| 5" 141.3 mm | 5.563 141.3 | 5.88 149.4 | 3.35 85.1 | 10.88 276.4 | — | — | 6.56 166.6 | 6.19 157.2 | 6.30 160.0 | 2.58 65.5 | |
| 159 mm | 6.250 159.0 | 5.88 149.4 | 3.84 97.5 | 11.38 289.1 | — | 0.41 10.4 | 7.52 191.0 | 6.19 157.2 | 6.30 160.0 | 2.58 65.5 | |
| 165.1 mm | 6.500 165.1 | 5.88 149.4 | 3.84 97.5 | 11.38 289.1 | — | 0.41 10.4 | 7.52 191.0 | 6.19 157.2 | 6.30 160.0 | 2.58 65.5 | |
| 6" 168.3 | 6.625 168.3 | 5.88 149.4 | 3.84 97.5 | 11.38 289.1 | — | 0.41 10.4 | 7.52 191.0 | 6.19 157.2 | 6.30 160.0 | 1.90 48.3 | |
| 8" 219.1 mm | 8.625 219.1 | 5.33 135.4 | 5.07 128.8 | 13.53 343.6 | 0.80 20.3 | 1.47 37.3 | 10.00 254.0 | 6.19 157.2 | 8.10 205.7 | 2.33 59.2 | |

FireLock® Butterfly Valve - Supervised CLOSED

**SERIES 707C
WITH WEATHERPROOF ACTUATOR**

PERFORMANCE

The chart expresses the frictional resistance of Victaulic Series 707C Supervised CLOSED Butterfly Valve 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 |
| 2 50 | 2.375 60.3 | 6 1.8 | 6 150 | 6.625 168.3 | 14 4.2 |
| 2½ 65 | 2.875 73.0 | 6 1.8 | 159 mm | 159 mm | 14 4.3 |
| 76.1 mm | 3.000 76.1 | 6 1.8 | 165.1 mm | 6.500 165.1 | 14 4.2 |
| 3 80 | 3.500 88.9 | 7 2.1 | 8 200 | 8.625 219.1 | 16 4.9 |
| 4 100 | 4.500 114.3 | 8 2.4 | | | |
| 108 mm | 108 mm | 8 2.4 | | | |
| 5 125 | 5.563 141.3 | 12 3.7 | | | |
| 133 mm | 133 mm | 12 3.7 | | | |
| 139.7 mm | 5.500 139.7 | 12 3.7 | | | |

FireLock® Butterfly Valve - Supervised CLOSED

SERIES 707C WITH 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 (Full Open) | Size | | C _v (Full Open) | Size | | C _v (Full Open) |
|------------------------------|---|-------------------------------|------------------------------|---|-------------------------------|------------------------------|---|-------------------------------|
| 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 | |
| 2 | 2.375 60.3 | 170 | 5 125 | 5.563 141.3 | 1200 | 8 200 | 8.625 219.1 | 3400 |
| 2½ 65 | 2.875 73.0 | 260 | 133 mm | 133 mm | 1200 | | | |
| 76.1 mm | 3.000 76.1 | 260 | 139.7 mm | 5.500 139.7 | 1200 | | | |
| 3 80 | 3.500 88.9 | 440 | 6 150 | 6.625 168.3 | 1800 | | | |
| 4 100 | 4.500 114.3 | 820 | 159 mm | 159 mm | 1800 | | | |
| 108 mm | 108 mm | 820 | 165.1 mm | 6.500 165.1 | 1800 | | | |

Formulas for K_v Values:

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

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

Where:

Q = Flow (m³/hr.)

ΔP = Pressure (bar)

K_v = Flow Factor

| Size | | K _v (Full Open) | Size | | K _v (Full Open) | Size | | K _v (Full Open) |
|------------------------------|---|-------------------------------|------------------------------|---|-------------------------------|------------------------------|---|-------------------------------|
| 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 | |
| 2 | 2.375 60.3 | 147 | 5 125 | 5.563 141.3 | 1040 | 8 200 | 8.625 219.1 | 2940 |
| 2½ 65 | 2.875 73.0 | 225 | 133 mm | 133 mm | 1040 | | | |
| 76.1 mm | 3.000 76.1 | 225 | 139.7 mm | 5.500 139.7 | 1040 | | | |
| 3 80 | 3.500 88.9 | 380 | 6 150 | 6.625 168.3 | 1560 | | | |
| 4 100 | 4.500 114.3 | 710 | 159 mm | 159 mm | 1560 | | | |
| 108 mm | 108 mm | 710 | 165.1 mm | 6.500 165.1 | 1560 | | | |

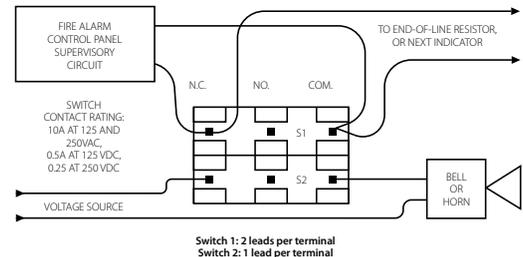
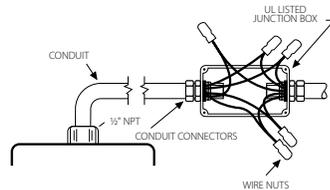
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SERIES 707C WITH WEATHERPROOF ACTUATOR

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 insulated wires per terminal, which permit complete supervision of leads (refer to diagrams and notes below). The second switch has one #18 insulated 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 insulated 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

- S1 { Normally Closed: (2) Blue
Common: (2) Yellow
- S2 { Normally Closed: Blue with Orange Stripe
Normally Open: Brown with Orange Stripe
Common: Yellow with Orange Stripe



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 - Supervised CLOSED

**SERIES 707C
WITH 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.

For complete contact information, visit www.victaulic.com

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