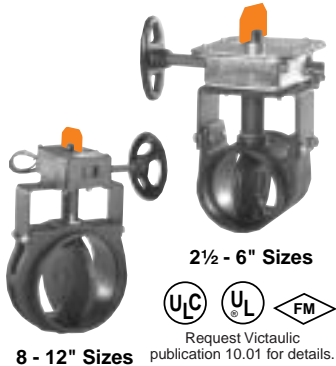


Series 705W FireLock™ Butterfly Valve With Weatherproof Actuator For 300 PSI Service

PRODUCT DESCRIPTION



The Series 705W butterfly valve features a weatherproof actuator housing approved for indoor or outdoor use. It 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 and the new coating requirements for the 5th edition of UL-1091.

For fire protection services, Series 705W valve is UL Listed

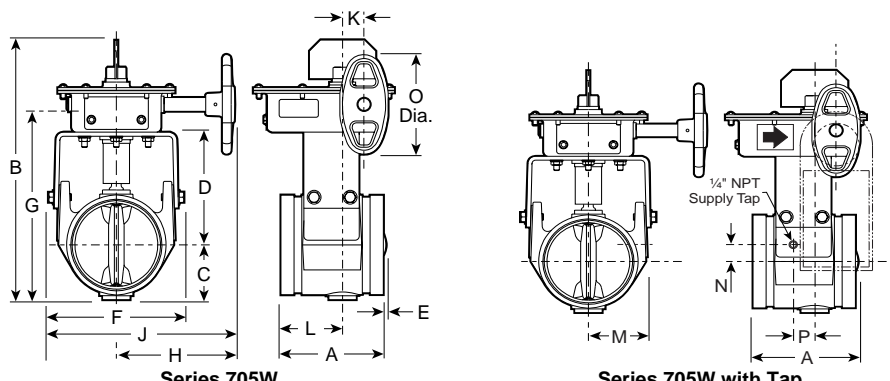
and FM Approved for 300 PSI (2065 kPa) service. Flow performance exceeds UL Specification 1091 and FM Approval Standard 1112.

Weatherproof Actuator
Supervisory switches for valves are available 2½ - 12" (73,0 - 323,9 mm) pre-wired (PW).

able with a ¼" NPT supply side tap designed to allow direct water supply connection to Victaulic FireLock actuated fire protection valves. See separate drawings below. This is an optional feature and must be clearly noted on all orders. Contact Victaulic for additional information on tapped valves.

Supply-side Tap
Series 705W valves are avail-

DIMENSIONS



SIZE Nominal In. Actual mm	Dimensions – Inches/millimeters															Aprx. Wgt. Ea. Lbs./kg
	E to E A	Hgt. B	C	D	E	F	G	H	J	K	L	O	M	N	P	
2½ 73,0	3.77 96	9.80 249	1.80 46	3.92 100	–	2.88 73	6.97 177	5.45 138	7.02 178	0.97 25	2.31 59	4.50 114	1.44 37	0.60 15	1.03 26	9.1 4,1
76,1 mm	3.77 96	9.80 249	1.80 46	3.92 100	–	2.88 73	6.97 177	5.45 138	7.02 178	0.97 25	2.31 59	4.50 114	1.50 38	0.60 15	1.03 26	9.1 4,1
3 88,9	3.77 96	10.48 266	2.14 54	4.22 107	0.08 2	3.50 89	7.61 193	5.45 138	7.33 186	0.97 25	2.31 59	4.50 114	1.75 45	0.00* 0	0.80 20	9.8 4,4
4 114,3	4.63 118	11.89 302	2.71 69	5.09 129	0.07 2	6.01 153	9.05 230	5.45 138	8.59 218	0.97 25	2.79 71	4.50 114	2.60 66	0.73 19	1.22 31	15.3 6,9
139,7 mm	5.88 149	12.82 326	3.12 79	5.61 143	0.43 11	6.01 153	9.98 253	5.45 138	8.59 218	0.97 25	3.92 100	4.50 114	–	–	–	20.0 9,1
5 141,3	5.88 149	12.82 326	3.12 79	5.61 143	0.43 11	6.01 153	9.98 253	5.45 138	8.59 218	0.97 25	3.92 100	4.50 114	–	–	–	20.0 9,1
165,1 mm	5.88 149	13.74 349	3.61 92	6.06 154	1.00 25	7.20 183	10.92 277	5.45 138	9.05 230	0.97 25	3.96 101	4.50 114	3.25 83	1.25 32	1.50 38	25.0 11,3
6 168,3	5.88 149	13.74 349	3.61 92	6.06 154	1.00 25	7.20 183	10.92 277	5.45 138	9.05 230	0.97 25	3.96 101	4.50 114	3.32 84	1.25 32	1.50 38	25.0 11,3
8 219,1	5.33 135	16.92 430	4.88 124	7.94 202	1.27 32	10.20 259	14.06 357	8.28 210	13.30 338	2.05 52	2.66 68	6.00 152	5.10 130	0.18 5	0.91 23	52.0 23,6
10 † 273,0	6.40 163	19.14 486	5.84 148	8.69 221	1.72 44	12.20 310	15.77 400	10.09 256	16.19 411	2.05 52	3.20 81	9.00 229	–	–	–	80.0 36,3
12 † 323,9	6.50 165	21.54 547	7.04 179	10.00 254	2.66 68	14.25 362	18.28 464	10.09 256	17.22 437	2.05 52	3.25 83	9.00 229	–	–	–	102.0 46,3

* On centerline. † Contact Victaulic Company of Canada for ULC Listings.
 1. To prevent rotation of valves, it is recommended that Series 705W be installed with Victaulic Style 07 Zero-Flex®, Style 005 FireLock™ 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) or grooved end cast ductile iron pipe.
 4. Series 705W valves are designed for ambient weather conditions as opposed to submersible service.

VICTAULIC® IS AN ISO 9001 CERTIFIED COMPANY

Victaulic Company of America Phone: 1-800-PICK-VIC (1-800-742-5842) Fax: 610-250-8817 e-mail: pickvic@victaulic.com	Victaulic Company of Canada Phone: 416-675-5575 Fax: 416-675-5565 e-mail: viccanada@victaulic.com	Victaulic Europe Phone: 32-9-381-1500 Fax: 32-9-380-4438 e-mail: viceuro@victaulic.be	Victaulic America Latina Phone: 610-559-3300 Fax: 610-559-3608 e-mail: vical@victaulic.com	Victaulic Asia Pacific Phone: 65-235-3035 Fax: 65-235-0535 e-mail: vicap@victaulic.com
---	---	---	--	--

MATERIAL SPECIFICATIONS

Body: Ductile iron conforming to ASTM A-395, grade 65-45-15, and ASTM A-536, grade 65-45-12, coated with polyphenylene sulfide blend.

Disc: Ductile iron conforming to ASTM A-395, grade 65-45-15, and ASTM A-536, grade 65-45-12, EPDM coating

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: Carbon steel, nickel plated

Tap Plug: Carbon steel, plated.

Bracket: Carbon steel, painted

Actuator:

□ **2½ - 6" (73,0 - 168,3 mm):** Bronze traveling nut on a steel lead screw, in a steel housing.

□ **8 - 12" (219,1 - 323,9 mm):** Steel worm and cast iron quadrant gear, in a cast iron housing.

PERFORMANCE

The chart expresses the frictional resistance of Victaulic Series 705W in equivalent feet/meters of straight pipe.

SIZE Nom. In. Actual mm	Equiv. Feet/m of Pipe	SIZE Nom. In. Actual mm	Equiv. Feet/m of Pipe
2½ 73,0	5 1,6	165,1 †	8 2,5
76,1 †	5 1,6	6 168,3	8 2,5
3 88,9	5 1,6	8 219,1	11 3,4
4 114,3	12 3,7	10 273,0	12 3,7
139,7 †	12 3,7	12 323,9	14 4,3
5 141,3	12 3,7		

† millimeters

C_v Values

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.

SIZE Nominal Inches Actual mm	C _v (Full Open)	SIZE Nominal Inches Actual mm	C _v (Full Open)	SIZE Nominal Inches Actual mm	C _v (Full Open)
2½ 73,0	325	139,7 mm	1150	8 219,1	3400
76,1 mm	325	5 141,3	1150	10 273,0	5750
3 88,9	482	165,1 mm	1850	12 323,9	8300
4 114,3	600	6 168,3	1850		

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

SWITCH AND WIRING

Supervisory Switch

2½ - 12" (73,0 - 323,9 mm) sizes: Series 705W PW - Two, single pole, double throw, pre-wired switches.

Switches are rated 10A @ 125 or 250 VAC 60 Hz and 0.25A @ 250 VDC, 0.50A @ 125 VDC

Supervisory Switch Wiring

A. Pre-wired Switches

- (1) Switches Supervise Open Valve
- (2) One switch has two #18 MTW wires per terminal. Permits complete supervision of leads (see diagrams below). Second switch has one #18MTW wire per terminal. This double circuit provides

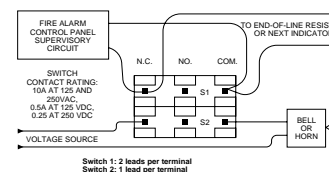
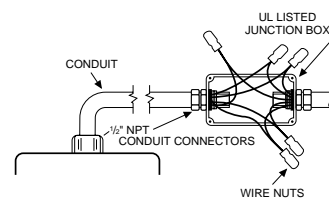
flexibility to operate two electrical devices at separate locations such as an indicating light and an audible alarm in the area at the valve installation.

Switch #1 S1
Switch #2 S2

S1 { Normally Closed: (2) Blue
Normally Open: (2) Brown
Common: (2) Yellow

S2 { Normally Closed: Blue with Stripe
Normally Open: Brown with Stripe
Common: Yellow with Stripe

(3) A ground lead, #14MTW is provided (green)



NOTE: Connecting to Common Terminals (Yellow S1 and Yellow with Orange Stripe - S2), and Normally Closed Terminals (Blue S1 and Blue with Orange Stripe - S2); e.g., indicator light and alarm stays on until valve is fully opened; then indicator light and alarm go out. Cap off unused wire, e.g., Brown and Brown with Orange Stripe.

Actuator Repair

In the unlikely event of an actuator failure, complete actuation replacement is required.

ALL REPLACEMENT PARTS MUST BE OBTAINED FROM THE MANUFACTURER TO ASSURE PROPER OPERATION OF THE VALVE.

This product shall be manufactured by Victaulic Company. All products shall 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.