

Butterfly Valves

SERIES 700

Victaulic Series 700 butterfly valves are designed for bubble-tight shut-off to 200psi/1400kPa. Two piece stem permits narrow disc design for low pressure drop performance and is self-centering for positive shut-off. Valves are available with liners molded from EPDM for water service to +230°F/+110°C or nitrile for oil services to +180°F/+82°C. Refer to Liner/Disc Selection for general service recommendations.

Series 700 butterfly valves are available in 1 ½ – 6" / 40 – 150mm sizes. The body is fully rubber lined, and the valve housing is cast of durable ductile iron. Standard disc is aluminum bronze (also available in 316 stainless steel), with a two position cast handle with padlock feature as the standard operator.

Victaulic recommends the use of Style 07 Zero-Flex®/Style 107 QuickVic rigid couplings with the Series 700 butterfly valve to eliminate joint deflection or valve rotation at the coupling connection to the piping system.



LEVER HANDLE

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536, grade 65-45-12, painted black.

Body: Carbon steel, elastomer lined.

Seat/Liner: (specify choice*)

- **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.

- **Grade "T" nitrile**

Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C.

Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

* Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Liner/Disc Selection for specific service recommendations and for a listing of services which are not recommended.

Stem-Upper/Lower: 416 stainless steel

Disc: Aluminum bronze

- **Optional:** 316 stainless steel

Handle: Cast ductile iron

O-ring: (Same as seat)

Track Bolts: Steel, Electroplated

Nuts: Steel, Electroplated

JOB OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

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REV_E

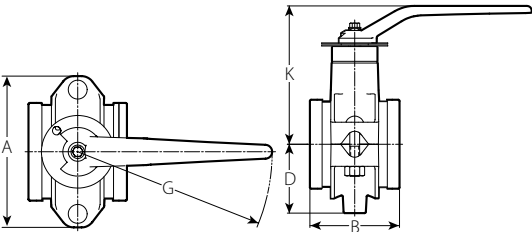


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DIMENSIONS



1 ½ – 6"/40 – 150 MM (TYPICAL)

STANDARD PROFILE BFV

Size		Dimensions – Inches/millimeters					Aprx. Weight Each
Nominal Size Inches/mm	Actual Outside Dia. Inches/mm	A	B	D	G	K	Lbs./kg
1 ½ 40	1.900 48.3	3.63 92.2	3.38 85.9	1.63 41.4	5.50 139.7	4.44 112.8	2.8 1.3
2 50	2.375 60.3	4.06 103.1	3.19 81.0	1.87 47.5	5.50 139.7	4.71 119.6	3.3 1.5
2 ½ 65	2.875 73.0	4.87 123.7	3.81 96.8	2.50 63.5	7.00 177.8	5.31 134.9	6.4 2.9
3 80	3.500 88.9	5.62 142.7	3.81 96.8	2.75 69.9	7.00 177.8	5.62 142.7	6.8 3.1
4 100	4.500 114.3	7.00 177.8	4.56 115.8	3.50 88.9	9.00 228.6	6.69 179.9	12.1 5.5
5 125	5.563 141.3	8.50 215.9	5.81 147.6	4.00 101.6	12.00 304.8	8.25 209.6	26.1 11.8
6 150	6.625 168.3	9.50 241.3	5.81 147.6	4.50 114.3	12.00 304.8	8.78 223.0	32.5 14.7
165.1 mm	6.500 165.1	9.50 241.3	5.81 147.6	4.50 114.3	12.00 304.8	8.78 223.0	30.5 13.8

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PERFORMANCE

C_v values for flow of water at +60°F/+16°C with various disc positions are shown in the table below.

Formulas for C_v Values:

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


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

Where:

Q = Flow (GPM)

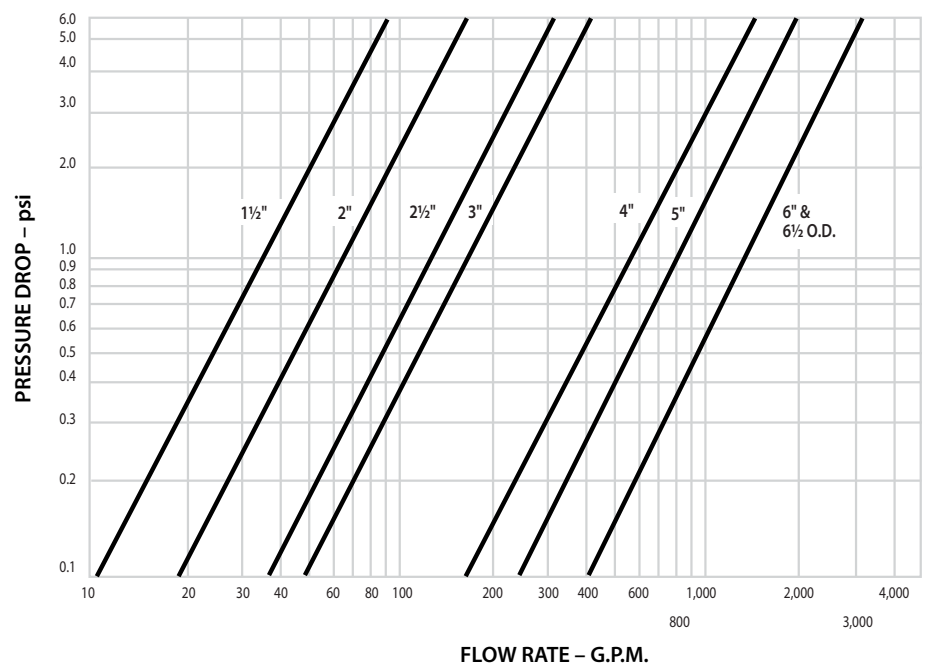
ΔP = Pressure Drop (psi)

C_v = Flow Coefficient

Size		FLOW COEFFICIENTS – C_v
Nominal Size Inches/mm	Actual Outside Diameter Inches/mm	Disc Position (Degrees open)
		90 
1½ 40	1.900 48.3	36
2 50	2.375 60.3	70
2½ 65	2.875 73.0	120
3 80	3.500 88.9	180
4 100	4.500 114.3	520
5 125	5.563 141.3	800
6 150	6.625 168.3	1300
165.1 mm	6.500 165.1	1300

FLOW CHARACTERISTICS

The chart below expresses the flow of water at 65°F/18°C through a full open valve.



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TYPICAL SPECIFICATIONS

Grooved end butterfly valves as manufactured by Victaulic Company, shall be incorporated wherever possible, in lieu of wafer, lug, or flanged-type valves. Valves shall have grooved ends designed to accept grooved mechanical couplings (from the same manufacturer) without field preparation. Valves shall have operating conditions not to exceed -30°F to $+230^{\circ}\text{F}$ / -34°C to $+110^{\circ}\text{C}$ temperature range according to the valve lining selected (refer to manufacturer's data) and must provide service from 29.9 inches of mercury vacuum service through 200psi/1400 kPa. Shut-off must be bubble-tight to full pressure rating and provide dead-end service.

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.



For complete contact information, visit www.victaulic.com

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