

# Victaulic Butterfly Valve

## Series 700



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 1 ½ – 6"/DN40 – DN150

#### Maximum Working Pressure

- 200 psi/1400 kPa/14 bar

#### Operating Temperature

- Dependent on seat selection from section 3.0

#### Application

- For use in carbon steel, ductile iron, and plastic piping systems

### 2.0 CERTIFICATION/LISTINGS



BS EN 10311  
CPR (UK)  
2019 No. 465

EN 10311  
CPR (EU)  
No. 305/2011

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

### 3.0 SPECIFICATIONS – MATERIAL

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**Housing:** Ductile iron conforming to ASTM A536, Grade 65-45-12.

**Body:** Carbon steel, elastomer lined.

**Coating:** Black alkyd enamel.

**Seat/Liner: (specify choice)**

**Victaulic EPDM**

EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to +110°C. NOT RECOMMENDED FOR PETROLEUM SERVICES OR STEAM SERVICES.

**Victaulic Nitrile**

Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/60°C. NOT RECOMMENDED FOR HOT WATER SERVICES OR STEAM SERVICES.

**Upper and Lower Stem:** 416 stainless steel.

**Disc: (specify choice)**

Standard: Aluminum bronze alloy C95300 conforming to ASTM B148 and B106; Aluminum bronze alloy C64200 conforming to ASTM B283.

Optional: Stainless steel Grade CF8M conforming to ASTM A743.

**Handle:** Cast ductile iron.

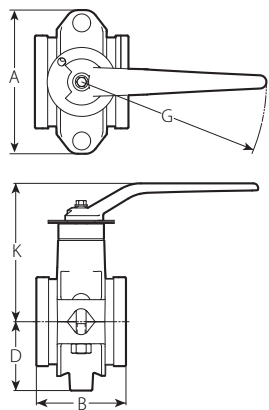
**O-Ring:** Same as Seat.

**Track Bolts:** Electroplated steel.

**Nuts:** Electroplated steel.

4.0 DIMENSIONS

Series 700 Butterfly Valve



1 ½ – 6"/DN40 – DN150 (Typical)

Size		Dimensions					Weight
Nominal	Actual Outside Diameter	A	B	D	G	K	Approximate (Each)
inches	inches	inches	inches	inches	inches	inches	lb
DN	mm	mm	mm	mm	mm	mm	kg
1 ½	1.900	3.63	3.38	1.63	5.50	4.44	2.8
DN40	48.3	92.2	85.9	41.4	139.7	112.8	1.3
2	2.375	4.06	3.19	1.87	5.50	4.71	3.3
DN50	60.3	103.1	81.0	47.5	139.7	119.6	1.5
2 ½	2.875	4.87	3.81	2.50	7.00	5.31	6.4
	73.0	123.7	96.8	63.5	177.8	134.9	2.9
3	3.500	5.62	3.81	2.75	7.00	5.62	6.8
DN80	88.9	142.7	96.8	69.9	177.8	142.7	3.1
4	4.500	7.00	4.56	3.50	9.00	6.69	12.1
DN100	114.3	177.8	115.8	88.9	228.6	179.9	5.5
5	5.563	8.50	5.81	4.00	12.00	8.25	26.1
	141.3	215.9	147.6	101.6	304.8	209.6	11.8
	6.500	9.50	5.81	4.50	12.00	8.78	30.5
	165.1	241.3	147.6	114.3	304.8	223.0	13.8
6	6.625	9.50	5.81	4.50	12.00	8.78	32.5
DN150	168.3	241.3	147.6	114.3	304.8	223.0	14.7

## 5.0 PERFORMANCE

### Series 700 Butterfly Valve

Cv values for flow of water at +60°F/+16°C with single disc position is shown in the table below.

#### Formulas for Cv/Kv values:

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

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

#### Where:

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

Cv = Flow Coefficient

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


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

#### Where:

Q = Flow (m³/hr)

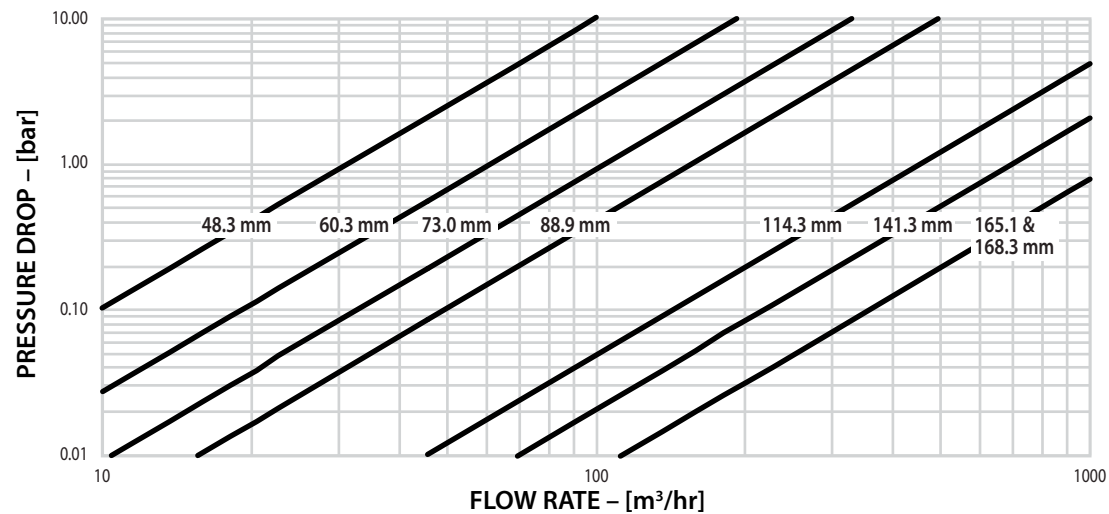
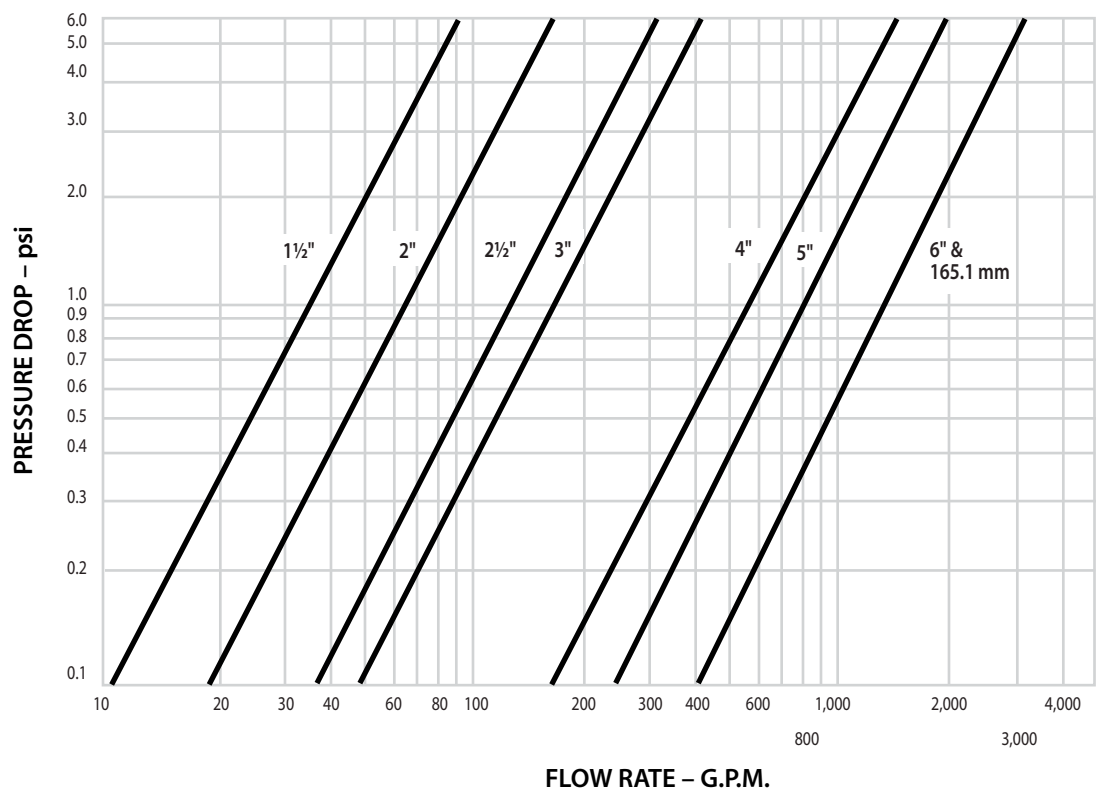
ΔP = Pressure Drop (Bar)

Kv = Flow Coefficient







Valve Size		Flow Coefficients
Nominal inches DN	Actual Outside Diameter inches mm	Disc Position (Degrees open) 90  Cv Kv
1½ DN40	1.900 48.3	36 31
2 DN50	2.375 60.3	70 61
2½	2.875 73.0	120 104
3 DN80	3.500 88.9	180 156
4 DN100	4.500 114.3	520 450
5	5.563 141.3	800 692
	6.500 165.1	1300 1125
6 DN150	6.625 168.3	1300 1125


5.1 PERFORMANCE

Flow Characteristics



6.0 NOTIFICATIONS



 **WARNING**

- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

[I-100: Victaulic Field Installation Handbook](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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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 Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

Warranty

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

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