

Swing Check Valve

Series 712



1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 4"/DN50 – DN100

Pressure Class

- 300 psi/2065 kPa

Application

- Controls flow through the valve with a stainless steel clapper.

Codes and Requirements

- Not applicable- Contact Victaulic with any questions.

NOTES

- Should not be installed on vertical pipelines
- Available with Teflon, EPDM, nitrile or an optional fluoroelastomer seat.
- Available with EPDM, nitrile or fluoroelastomer bonnet gasket

2.0 CERTIFICATION/LISTINGS

Not applicable. Contact Victaulic for details.

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

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

3.0 SPECIFICATIONS – MATERIAL

Housing:

Ductile iron conforming to ASTM A-536, grade 65-45-12, painted. Series 712S stainless steel Type 316.

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

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

Cap Plug: Carbon steel, zinc electroplated.

Clapper Seat: See Seat/Closure Gasket.

Bumper: See Seat/Closure Gasket.

Clapper: Stainless steel Type 316.

Clapper Pin: Stainless Steel Type 316.

Closure Bolt/Nut: Heat treated carbon steel track-head conforming to ASTM A-183, electroplated.

Pin Retaining Nut: Carbon steel (for ductile iron housings) and stainless steel (for stainless steel housings).

Seat/Closure Gasket: (specify choice¹)

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.

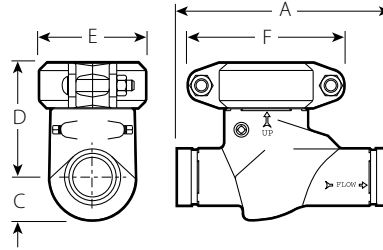
Grade “O” Fluoroelastomer

(Blue color code). Temperature range +20°F to +300°F/–7°C to +149°C. Recommended for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons to +300°F/+149°C.

¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

4.0 DIMENSIONS

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Valve Size		Maximum Working Pressure	Dimensions					Weight
Nominal inches mm	Actual Outside Diameter inches mm		End to End A inches mm	C inches mm	D inches mm	E inches mm	F inches mm	Approximate (Each) lb kg
2	2.375	300	9.00	1.81	4.88	4.38	6.38	11.6
50	60.3	2065	229	46	124	111	162	55.3
2 ½	2.875	300	9.25	2.25	5.50	5.69	7.69	18.0
65	73.0	2065	235	57	140	145	195	8.2
3	3.500	300	10.75	2.50	5.75	6.25	9.00	22.5
80	88.9	2065	273	64	146	159	229	10.2
4	4.500	300	12.00	3.38	7.63	7.96	10.75	38.0
100	114.3	2065	305	86	194	202	273	17.2

5.0 PERFORMANCE

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C_v/K_v values for flow of water at +60°F/+16°C with various disc positions are shown in the table below. Some of the following values are estimated. For exact values, please contact Victaulic for details.

Formulas for C_v/K_v values:

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

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

Where:

Q = Flow (GPM)

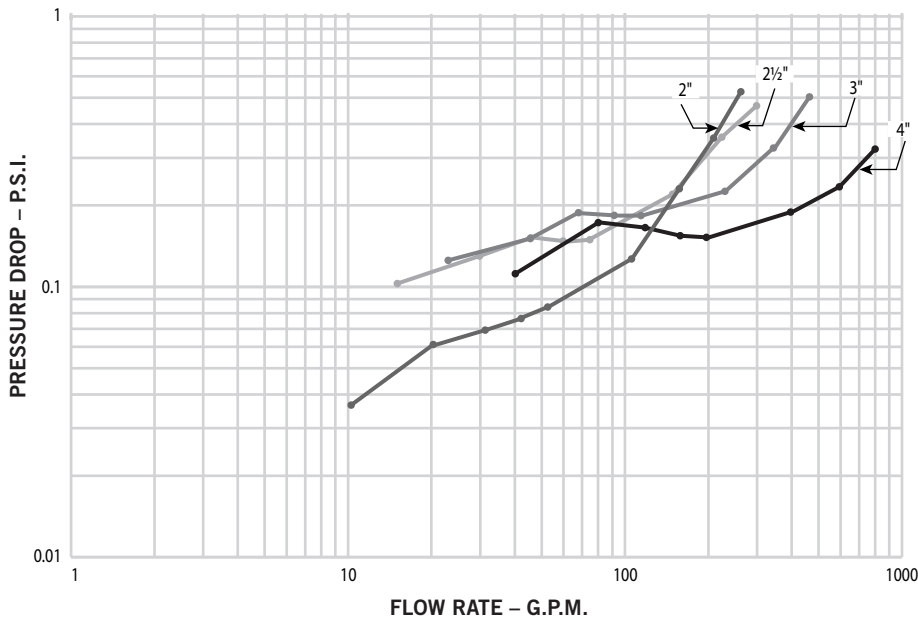
ΔP = Pressure Drop (psi)

C_v = Flow Coefficient

Size		C _v (Full Open)	Size		C _v (Full Open)
Nominal inches DN	Actual Outside Diameter inches mm		Nominal inches DN	Actual Outside Diameter inches mm	
2 DN50	2.375 60.3	360	3 DN80	3.500 88.9	646
2 ½	2.875 73.0		4 DN100	4.500 114.3	

5.0 PERFORMANCE (Continued)

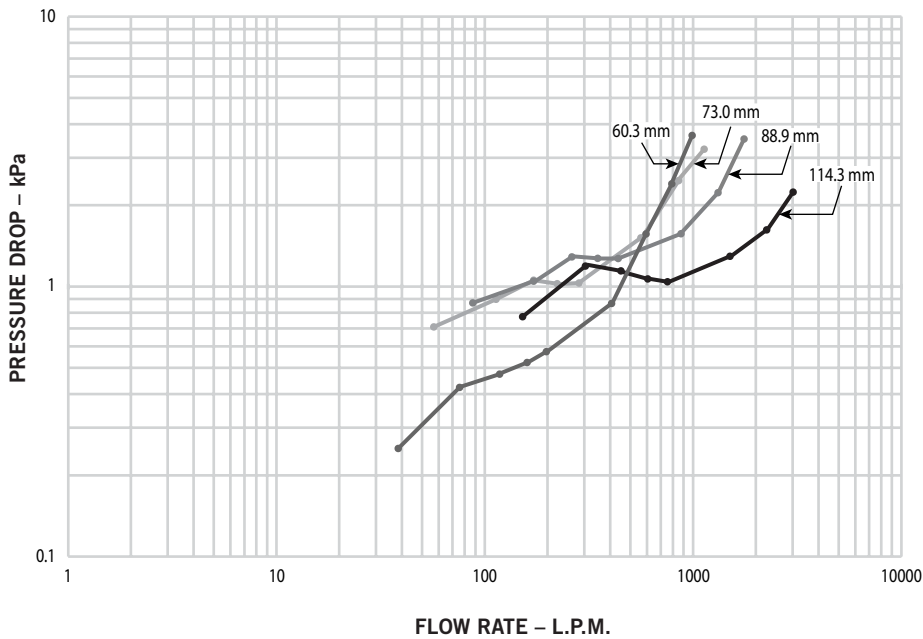
Flow Characteristics



712 Friction Loss: Gallons per Minute vs Delta P (Psi)

NOTE

- Placement of check valves too close to sources of unstable flow will shorten the life of the valve and potentially may damage the system. To extend valve life, valves should be installed a reasonable distance downstream from pumps, elbows, expanders, reducers or other similar devices. Sound piping practices dictate a minimum of five (5) times the pipe diameter for general use. Distances between three (3) and five (5) diameters are allowable provided the flow velocity is less than eight (8) feet per second (2.4 mps). Distances less than three (3) diameters are not recommended and will violate the Victaulic product warranty.



712 Friction Loss: Liters per Minute vs Delta P (kPa)

NOTE

- Placement of check valves too close to sources of unstable flow will shorten the life of the valve and potentially may damage the system. To extend valve life, valves should be installed a reasonable distance downstream from pumps, elbows, expanders, reducers or other similar devices. Sound piping practices dictate a minimum of five (5) times the pipe diameter for general use. Distances between three (3) and five (5) diameters are allowable provided the flow velocity is less than eight (8) feet per second (2.4 mps). Distances less than three (3) diameters are not recommended and will violate the Victaulic product warranty.

6.0 NOTIFICATIONS

Not applicable. Contact Victaulic for details.

7.0 REFERENCE MATERIALS

[05.01: Seal Selection Guide](#)

[06.15: Pressure Ratings and End Loads for Victaulic Couplings on Steel Pipe](#)

[08.54: Victaulic Swing Check Valve Series 713](#)

[10.01: Regulatory Approval Reference Guide](#)

[17.08: Stainless Steel Swing Check Valve Series 712S](#)

[29.01: Terms and Conditions/Warranty](#)

[I-100: 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, and the applicable building codes and related regulations 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.

Warranty

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

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