

# Victaulic® Butterfly Valve for Copper Tubing in Potable Water Applications

## Series 608N



22.14



### 1.0 PRODUCT DESCRIPTION

#### Available Sizes

- 2½ – 6”/66.7 – 155.6 mm

#### Pipe Material

- ASTM B88 drawn temper tube Types K, L and M and ASTM B306 Type DWV copper tubing

#### Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 300 psi/2068 kPa/21 bar
- Full working pressure for bi-directional, dead end services

#### Operating Temperature Range

- +0°F to +180°F/-18°C to +82°C

#### Application

- For use in copper tubing systems

#### Actuation Options

- Standard ISO 5211 mounting flange
- Lever lock handle
  - Infinitely variable service with memory stop; Padlockable
- Gear operator
- Accommodates 2”/50 mm of insulation

#### NOTES

- A padlockable valve refers to those valves which can be padlocked to lockout equipment for preventing inadvertent valve operation. When used in conjunction with an appropriate lockout/tagout system, multiple padlocks may be used. The valve may be padlocked either fully open or fully closed.
- A tamper-resistant option is also available, which is meant to deter theft, vandalism or other malicious activity. The handles and associated components are assembled with tamper-resistant fasteners which are designed for one-time assembly. Attempts to defeat the padlock by partial disassembly of the valve will likely result in evidence of such activity. The valve may be padlocked either fully open or fully closed.
- Handwheel input shaft extensions are not for use with chainwheels.

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	



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## 2.0 CERTIFICATION/LISTINGS

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Valve construction and performance meet or exceed MSS-SP-67 requirements.

**NOTE**

- See [publication 02.06](#): Victaulic Approvals for Potable Water Products – ANSI/NSF 61 and ANSI/NSF 372 for more details.

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## 3.0 SPECIFICATIONS – MATERIAL

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**Body:** Brass castings conforming to UNS C87850

**Disc:** Aluminum-bronze casting conforming to UNS C95500

**Seat<sup>1</sup>: Victaulic Fluoroelastomer Blend**

Fluoroelastomer (Blue/Copper color code). Temperature range +0°F to +180°F/-18°C to +82°C. Specifically formulated for compatibility with potable water systems. Optimized for improved resistance to chlorine, chloramine and other typical potable water disinfectants. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372.

- <sup>1</sup> 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 Seal Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

**NOTE**

- Victaulic reserves the right to substitute equivalent and/or higher grade elastomer products.

**Drive Hub Adapter:** Black enamel coated steel

**Stem/Lower Nut Seals:** EPDM

**Trim (Stem/Lower Nut):** 316SS

**Operator Bracket:** Black enamel coated steel

**Bracket Bolts/Washers:** Zinc-plated steel

**Handle: (specify choice)**

**Lever Lock:** Painted ductile iron conforming to ASTM A536, Grade 65-45-12, with carbon steel latch plate and zinc-plated carbon steel fasteners. Infinitely variable, padlockable and includes memory stop. Optionally available with tamper-resistant hardware.

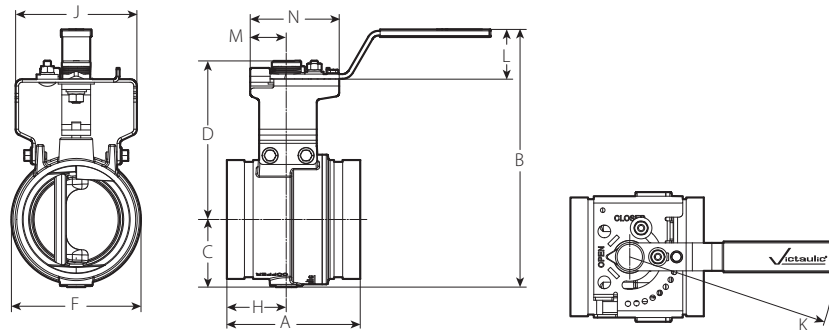
**Gear Operator with options below:**

Handwheel with memory stop

Handwheel with chain wheel

## 4.0 DIMENSIONS

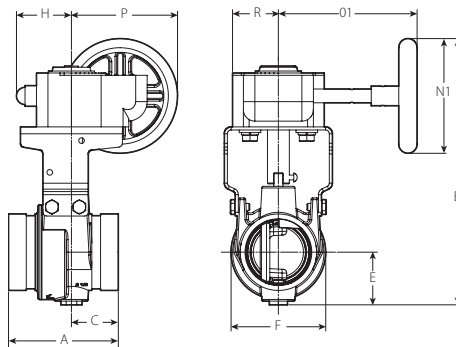
### Series 608N Butterfly Valve for Copper Tubing in Potable Water Applications – With Lever Lock Handle



Size		Dimensions											Weight
Nominal	Actual Outside Diameter	A	B	C	D	F	H	J	K	L	M	N	Approx. (Each)
inches	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lb kg
2½	2.625 66.7	3.77 96	7.80 198	1.81 46	4.90 124	3.25 83	1.61 41	4.21 107	7.20 183	1.70 43	1.25 32	3.09 78	5.3 2.4
3	3.125 79.4	3.77 96	8.50 216	2.10 53	5.30 135	4.00 102	1.61 41	4.21 107	7.20 183	1.70 43	1.25 32	3.09 78	5.7 2.6
4	4.125 104.8	4.63 118	8.90 226	2.35 60	5.50 140	4.50 114	2.06 52	4.21 107	7.20 183	1.70 43	1.25 32	3.09 78	7.8 3.5
6	6.125 155.6	5.88 149	12.20 310	3.34 85	7.70 196	6.30 160	2.50 64	6.88 175	10.70 272	2.60 66	1.88 48	5.13 130	19.8 9.0

## 4.1 DIMENSIONS

### Series 608N Butterfly Valve for Copper Tubing in Potable Water Applications – With Gear Operator



Size		Dimensions										Weight
Nominal	Actual Outside Diameter	A	B	C	E	F	H	N1	O1	P	R	Approx. (Each)
inches	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lb kg
2½	2.625 66.7	3.77 96	9.10 231	1.61 41	1.81 46	3.25 83	1.89 48	3.94 100	4.76 121	3.64 92	1.57 40	7.1 3.2
3	3.125 79.4	3.77 96	9.80 249	1.61 41	2.10 53	4.00 102	1.89 48	3.94 100	4.76 121	3.64 92	1.57 40	7.5 3.4
4	4.125 104.8	4.63 118	10.30 262	2.06 52	2.35 60	4.50 114	1.89 48	3.94 100	4.76 121	3.64 92	1.57 40	10.5 4.8
6	6.125 155.6	5.88 149	13.20 335	2.50 64	3.34 85	6.30 160	2.20 56	4.92 125	7.20 183	4.43 113	1.97 50	4.5 2.0

## 5.0 PERFORMANCE

### Series 608N Butterfly Valve for Copper Tubing in Potable Water Applications

C<sub>v</sub>/K<sub>v</sub> values for flow of water at +60°F/+16°C with a fully open valve are shown in the table below.

Formulas for C<sub>v</sub>/K<sub>v</sub> 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<sub>v</sub> = Flow Coefficient

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

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

**Where:**


Q = Flow (m<sup>3</sup>/hr)







ΔP = Pressure Drop (Bar)

K<sub>v</sub> = Flow Coefficient

Size		Full Open C <sub>v</sub> K <sub>v</sub>
Nominal inches	Actual Outside Diameter inches mm	
2 1/2	2.625	113
	66.7	98
3	3.125	276
	79.4	238
4	4.125	383
	104.8	330
6	6.125	1029
	155.6	887

## 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

- [02.06: Victaulic Potable Water Approvals ANSI/NSF](#)
- [05.01: Victaulic Seal Selection Guide](#)
- [22.01: Victaulic Copper Connection Systems for Copper Tubing \(CTS\)](#)
- [22.03: Victaulic Style 641 Vic-Flange™ Adapter for Copper Tubing](#)
- [22.04: Victaulic Copper Fittings](#)
- [22.13: Victaulic Style 607 QuickVic™ Rigid Coupling for Copper](#)
- [24.01: Victaulic Pipe Preparation Tools](#)
- [25.06: Victaulic Copper Tubing Roll Groove Specifications](#)
- [I-600: Victaulic Field Installation Handbook for Copper Products](#)

### 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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