

Victaulic® Steam and Condensate Gate Valves

Series 871 and Series 871R



Series 871



Series 871R

1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 8"/DN50 – DN200

Maximum Working Pressure

- Suitable for use in saturated steam systems rated up to 200 psi/1379 kPa. Not suitable for use in superheated steam applications.
- For nonsteam applications: Provides working pressures ranging from full vacuum (29.9 inches Hg/760 mm Hg) up to 200 psi/1379 kPa.

Operating Temperature

- +32°F to +388°F/0°C to +198°C

Function

- Flexible-wedge, metal-seated valve for bi-directional shut off service.
- Valve can be mounted in vertical and horizontal runs. On horizontal runs, the stem should be in the vertical up position.
- Series 871: Stand-alone gate valve.
- Series 871R: Modular gate valve used when making repairs to existing steam, condensate and chemical piping systems. Includes fixed length Schedule 40 or 80 carbon steel OGS-200 grooved ends.

Actuation Options

- Handwheel (provided by factory).
- For other actuation options, contact Victaulic.

Pipe Preparation

- The Series 871/871R Gate Valve is exclusively for use on pipe, couplings and fittings which feature the Victaulic OGS-200 groove profile (see section 6.0 for Reference Materials).

2.0 CERTIFICATION/LISTINGS



Valve construction and performance meets API 600 and API 598 requirements.

NOTE

- The valve does not have a potential internal source of ignition and can be used in potentially explosive atmospheres, Group II, category 2 (zones 1+21) and category 3 (zones 2+22) to ATEX 94/9/EC.

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

3.0 SPECIFICATIONS – MATERIAL

Body: ASTM A216 WCB cast steel.

Yoke: ASTM A216 WCB cast steel.

Flexible Wedge: ASTM A216 WCB cast steel, hard faced with AWS A5.9 ER410.

Seat Ring: ASTM A105 carbon steel, hard faced with AWS A5.13 E CoCr-A.

Stem: ASTM A276-410 stainless steel.

Back Seat Bushing: ASTM A276-410 stainless steel.

Gland: ASTM A276-410 stainless steel.

Gland Flange: ASTM A105 carbon steel.

Threaded Bushing: ASTM A276-410 stainless steel.

Stud: ASTM A193 B7 steel.

Nut: ASTM A194 2H steel.

Gland Packing: Flexible graphite.

Joint Ring: Flexible graphite and stainless steel.

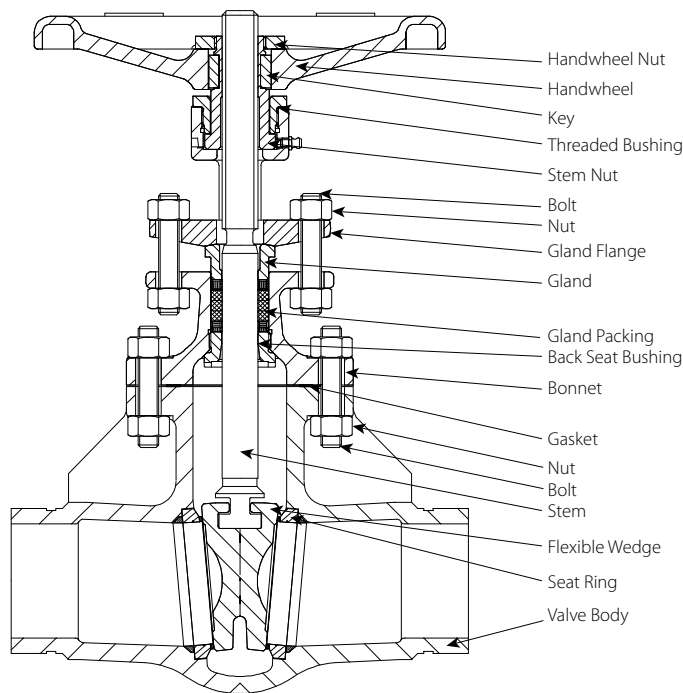
Pin: 1035 carbon steel.

Hand Wheel: Ductile iron equivalent to EN-GJS-400-18.

Hand Wheel Nut: 1035 carbon steel.

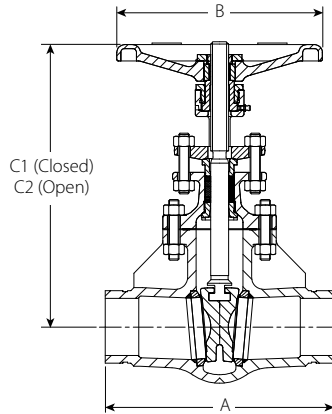
Bearing: 1035 carbon steel.

Lantern Ring: ASTM A276-410 stainless steel



4.0 DIMENSIONS

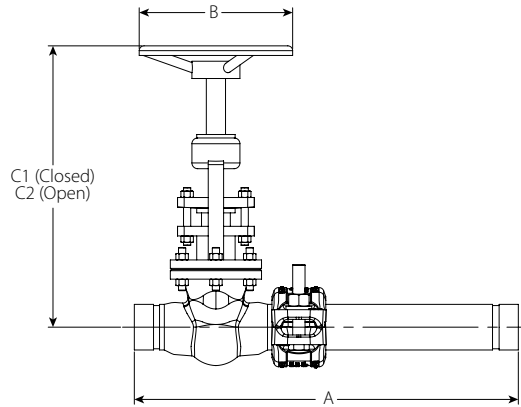
Series 871 Steam and Condensate Gate Valve



| Size | | Dimensions | | | | Weight |
|-------------------------|---|-------------------|-------------------|--------------------------------|------------------------------|-----------------------------------|
| Nominal inches DN | Actual Outside Diameter inches mm | A inches mm | B inches mm | C1 (Closed) inches mm | C2 (Open) inches mm | Approximate (Each) lb kg |
| 2 DN50 | 2.375 60.3 | 8.50 216 | 8.00 203 | 11.70 297 | 14.13 359 | 33.0 15.0 |
| 2 ½ | 2.875 73.0 | 9.50 241 | 8.00 203 | 13.60 345 | 16.63 422 | 50.0 22.7 |
| 3 DN80 | 3.500 88.9 | 11.13 283 | 10.00 254 | 14.20 361 | 17.88 454 | 60.0 27.2 |
| 4 DN100 | 4.500 114.3 | 12.00 305 | 10.00 254 | 16.90 429 | 21.75 552 | 84.0 38.1 |
| 6 DN150 | 6.625 168.3 | 15.88 403 | 12.00 305 | 22.60 574 | 29.63 752 | 148.0 67.1 |
| 8 DN200 | 8.625 219.1 | 16.50 419 | 14.00 356 | 28.70 729 | 37.63 956 | 229.0 103.9 |

4.1 DIMENSIONS

Series 871R Modular Steam and Condensate Gate Valve



| Size | | Dimensions | | | | Weight | |
|-------------------------|--|-------------------|-------------------|-----------------------------|---------------------------|---|---|
| Nominal inches DN | Actual Outside Diameter inches mm | A inches mm | B inches mm | C1 (Closed) inches mm | C2 (Open) inches mm | Approximate (Each) | |
| | | | | | | Sch. 40 OGS-200 Grooved Ends lb kg | Sch. 80 OGS-200 Grooved Ends lb kg |
| 2 DN50 | 2.375 60.3 | 20.00 508 | 8.00 203 | 11.70 297 | 14.13 359 | 44.9 20.4 | 46.2 21.0 |
| 2½ | 2.875 73.0 | 20.00 508 | 8.00 203 | 13.60 345 | 16.63 422 | 64.6 29.3 | 66.2 30.0 |
| 3 DN80 | 3.500 88.9 | 24.00 610 | 10.00 254 | 14.20 361 | 17.88 454 | 78.7 35.7 | 81.6 37.0 |
| 4 DN100 | 4.500 114.3 | 24.00 610 | 10.00 254 | 16.90 429 | 21.75 552 | 110.8 50.3 | 114.9 52.1 |
| 6 DN150 | 6.625 168.3 | 30.00 762 | 12.00 305 | 22.60 574 | 29.63 752 | 195.8 88.8 | 207.0 93.9 |
| 8 DN200 | 8.625 219.1 | 30.00 762 | 14.00 356 | 28.70 729 | 37.63 956 | 304.2 138.0 | 320.8 145.5 |

5.0 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.

6.0 REFERENCE MATERIALS

[05.10: Victaulic Chemical Compatibility Guide for the Style 870 High Performance Rigid Coupling Seal Assembly](#)

[24.11: Victaulic In-Place OGS-0200 Roll Grooving Tool Model RG1200](#)

[24.14: Victaulic OGS-200 Roll Grooving Tool Model RG1210](#)

[25.12: Victaulic OGS-200 Roll Groove Specifications](#)

[100.01: Victaulic OGS-200 Grooved End Fittings](#)

[100.02: Victaulic Rigid Coupling Style 870](#)

[100.13: Victaulic Flexible Loop for Steam Series 159](#)

[I-870: Victaulic Installation Instructions Style 870 Rigid Coupling](#)

[I-871: Victaulic Installation Instructions Series 871 Gate Valve](#)

[TM-RG1200: Victaulic Operating and Maintenance instructions Manual RG1200 Roll Grooving Tool](#)

[TM-RG1210: Victaulic Operating and Maintenance instructions Manual RG1210 Roll Grooving Tool](#)

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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