



General Data

Advanced manufacturing techniques and equipment, a continuing program of engineering research and product development, skilled craftsman, and over twelve decades of experience in flow control are behind the quality and dependability built into every Jenkins product.

This catalog presents some of these products, namely: Jenkins line of industrial iron gate, globe and check valves. The information is presented in a comprehensive manner and includes material, construction, rating, principal dimension, and weight data.

Hydrostatic and Shock Working Pressures

Jenkins valves are suitable for liquid working pressures specified on catalog pages only when used in hydraulic installations in which shock is absent or negligible. The sudden closure of a valve in a hydraulic system causes the body of liquid, which may be moving at a rate generally in excess of one foot per second, to stop instantaneously. As liquids are relatively incompressible, the sudden cessation of flow effects a rise in pressure considerably greater than the static working pressure. This pressure increase is termed "SHOCK" and may, in some cases, be sufficient to cause valves or piping to fail.

Pressure increase due to shock is not dependent upon the working pressure in the system but upon the velocity at which the liquid is flowing. This pressure surge, or shock, severely limits design velocities...a fact readily understandable if it is remembered that pressure rise resulting from arrest of flow may be as high as 60 psi for each foot per second initial velocity. For example, installations of 100 psi and 1000 psi working pressures, with the same initial velocity of 10 feet per second, will be subject to the same increase in pressure (approximately 600 psi) due to instantaneous closure of a valve.

Shock generally prevails in lines equipped with check or quick-closing valves, or in lines supplied by reciprocating pumps. It may also be produced, to a lesser degree, by rapid closure of gate and globe valves. Therefore, care should be exercised when closing valves installed in liquid lines.

Where shock is likely to occur, the maximum shock pressure should be added to the working pressure of the line to determine working pressure of products in the line...also, hydraulic installations should be equipped with air chambers or other types of shock absorbers to eliminate, as much as possible, increase in pressure due to shock.

Testing

Iron valves described in this section meet or exceed the MSS SP-82, MSS SP-70, MSS SP-71 and MSS SP-85 specifications for testing.

Materials

The selection of materials for components of Jenkins valves is based upon expert metallurgical, engineering, foundry and fabrication knowledge as well as on many years of usage experience. Considerations affecting materials of parts which come in contact with the conveyed fluid include pressure, temperature and chemical composition of the fluid. The materials of moving parts that are subject to rubbing contact are selected on the basis of their resistance to wear, corrosion, seizing or galling, and on their frictional characteristics.

Utilization of materials to their full capability is assured by the use of stress analysis techniques that include extensive laboratory testing as well as the application of analytical theory. Stress levels for all materials used are maintained within the levels established by applicable codes, standards and specifications.

Metrication

This catalogue shows equivalent metric values to the customary imperial units. The "soft" conversion was arrived at by following MSS SP-86 guidelines.

Illustrations , Weights and Material & Designs

Illustrations – Catalogue illustrations are intended to show the basic concept only and are representative of a certain size of each line of product, not necessarily all sizes in all details.

Material & Design – We reserve the right to institute changes in materials, designs, dimensions and specifications without notice in keeping with our policy of continuing product development.

Weights – shown are approximate and are not guaranteed. They represent the average weight of Jenkins 'Valves' products as made from patterns in use at time weights were compiled.



Jenkins Iron Alloys

Cast Iron

Used primarily for valve pressure retaining parts.
Recommended to 450 °F (232 °C).

ASTM A126, Class B

Chemical Requirements

| | Minimum | Maximum |
|------------------|---------|---------|
| Sulphur | – | 0.15 |
| Phosphorus | – | 0.75 |

Tensile Requirements

| | Minimum | Maximum |
|---------------------------|---------|---------|
| Tensile Strength, psi | 31,000 | – |
| Transverse Strength, lbs. | 3,300 | – |
| Deflection @ Center, in. | 0.12 | – |

3% Nickel Iron

Tensile strength comparable to ASTM A126, Class B, but is used for corrosive service where ordinary grey iron is not adequate. Castings are marked “3Ni”.

Chemical Requirements

| | Minimum | Maximum |
|------------------|---------|---------|
| Nickel | 2.75 | 3.25 |
| Sulphur | – | 0.12 |
| Phosphorus | – | 0.40 |

Tensile Requirements

| | Minimum | Maximum |
|---------------------------|---------|---------|
| Tensile Strength, psi | 31,000 | – |
| Transverse Strength, lbs. | 3,300 | – |
| Deflection @ Center, in. | 0.12 | – |

NI-Resist Iron

A copper-free alloy used where physical properties of cast iron suffice but where greater corrosion resistance is required. Castings are marked “2NR.”

Ni-Resist is a registered trademark of the International Nickel Company, Inc.

ASTM A436, Type 2

Chemical Requirements

| | Minimum | Maximum |
|-----------------|-----------|---------|
| Carbon | – | 3.00 |
| Manganese | 0.50 | 1.50 |
| Sulphur | – | 0.12 |
| Silicon | 1.00 | 2.80 |
| Chromium | 1.50 | 2.50 |
| Nickel | 18.00 | 22.00 |
| Copper | – | 0.50 |
| Iron | remainder | |

Tensile Requirements

| | Minimum | Maximum |
|----------------------------|---------|---------|
| Tensile Strength, psi | 25,000 | – |
| Brinell Hardness (3000 Kg) | 118 | 174 |

Malleable Iron

Used for valves subjected to expansion and contraction stresses and shock.

ASTM A338. Supplementary: ASTM A47, Grade 32510

Tensile Requirements

| | Minimum | Maximum |
|---------------------------|---------|---------|
| Tensile Strength, psi | 50,000 | – |
| Yield Point, psi | 32,500 | – |
| elongation in 2 inches, % | 10 | – |



Iron Valve Ratings

Introduction to Rating

The pressure-temperature ratings shown below apply to class 125 and 250 iron valves covered in this catalogue.

A. Ratings for Class 125 and 250 iron valves are indicated on the relevant catalog page in this manner:

... PSI Steam, Basic Rating: i.e.: is the nominal steam rated pressure of the valve.

...Cold Working Pressure: where "Cold Working Pressure" is the maximum rated pressure of the valve at a temperature up to 150 °F (65 °C).

The full range of allowable pressure and temperature is determined by referring to the main pressure-temperature chart below.

B. Ratings for iron valves falling outside Class 125 and 250 are indicated in various ways on the relevant catalog page.

All ratings represent the maximum allowable non-shock pressure at the indicated temperature. If the temperature is different from indicated, the allowable pressure may be interpolated.

The operating temperature of the valve is considered as the temperature of the media flowing through it. This temperature must not exceed the maximum allowable temperature as stated in the pressure-temperature chart below.

Pressure-Temperature Ratings

Jenkins Cast Iron Gate, Globe, Angle and Check Valves

| Imperial Units | | | | | |
|----------------|---------------|-------------|-------------|------------|-------------|
| Class | 125 | | | 250 | |
| Temp. °F | Non-Shock-PSI | | | | |
| | NPS 2"-12" | NPS 14"-24" | NPS 30"-48" | NPS 2"-12" | NPS 14"-24" |
| -20 to 150 | 200 | 150 | 150 | 500 | 300 |
| 200 | 190 | 135 | 115 | 460 | 280 |
| 225 | 180 | 130 | 100 | 440 | 270 |
| 250 | 175 | 125 | 85 | 415 | 260 |
| 275 | 170 | 120 | 65 | 395 | 250 |
| 300 | 165 | 110 | 50 | 375 | 240 |
| 325 | 155 | 105 | – | 355 | 230 |
| 350 | 150 | 100 | – | 335 | 220 |
| 375 | 145 | – | – | 315 | 210 |
| 400 | 140 | – | – | 290 | 200 |
| 425 | 130 | – | – | 270 | – |
| 450 | 125 | – | – | 250 | – |

| Metric Units | | | | | |
|--------------|---------------|-------------|-------------|------------|-------------|
| Class | 125 | | | 250 | |
| Temp. °C | Non-Shock-kPa | | | | |
| | NPS 2"-12" | NPS 14"-24" | NPS 30"-48" | NPS 2"-12" | NPS 14"-24" |
| -29 to 66 | 1380 | 1030 | 1030 | 3480 | 2070 |
| 90 | 1310 | 930 | 790 | 3170 | 1930 |
| 110 | 1240 | 900 | 670 | 3030 | 1860 |
| 120 | 1210 | 860 | 570 | 2860 | 1790 |
| 140 | 1170 | 830 | 450 | 2720 | 1720 |
| 150 | 1140 | 760 | 340 | 2590 | 1650 |
| 160 | 1070 | 720 | – | 2450 | 1590 |
| 180 | 1030 | 690 | – | 2310 | 1520 |
| 190 | 1000 | – | – | 2170 | 1450 |
| 200 | 970 | – | – | 2000 | 1380 |
| 220 | 900 | – | – | 1860 | – |
| 230 | 860 | – | – | 1720 | – |

Manufacturers Standardization Society (MSS)
Standard Practice SP-70, SP-71, SP-85

Gate Valve Features

Jenkins gate valves offer the ultimate in dependable service wherever minimum pressure drop is important. They serve as efficient stop valves with fluid flow in either direction.

The straight through design offers little resistance to flow and reduces pressure drop to a minimum. A disc actuated by a stem and handwheel moves up and down at right angles to the path of flow, and seats against two seat faces to shut off flow.

Gate valves are best for services that require infrequent valve operation, and where disc is kept either fully opened or closed. They are not recommended for throttling. With the usual type of gate valve, close flow regulation is impossible. Velocity of flow against a partly opened disc may cause vibration and chattering and result in damage to the seating surfaces. Also, when throttled, the disc is subjected to severe wire-drawing erosive effects.

Each valve in this section is classified by its pressure rating. All valves, except Clamp Gate Valves, designated as Class 125 and 250 comply with MSS SP-70 Standard Practice.

Bronze trim valves are recommended for steam, water, air and non-corrosive oil or gas. All have bronze screwed-in seat rings and the discs are solid bronze in sizes 3" (80 mm) and smaller. In larger sizes, bronze rings are rolled into cast iron discs.

All-iron valves have integral seats, some valves have screwed in seat rings (discs are cast iron) and nickel-plated steel stems. They are recommended for oil, gas, gasoline, or fluids that corrode bronze but not iron or steel.

Features

Face-to-Face Dimensions of flanged end valves conform to ASME (ANSI) B16.10 in their pressure class. (See note re MSS SP-70 for flanged clamp gate valves.)

Flanged End Valves adhere to ASME (ANSI) Specification B16.1 for their pressure class.

Body and Bonnet Components are cast with rigorous control to ASTM A126 Class B Specification for cast-iron.

Handwheels are furnished on all valves. Manual gear, hydraulic or motor operators and chainwheels can be supplied when specified.

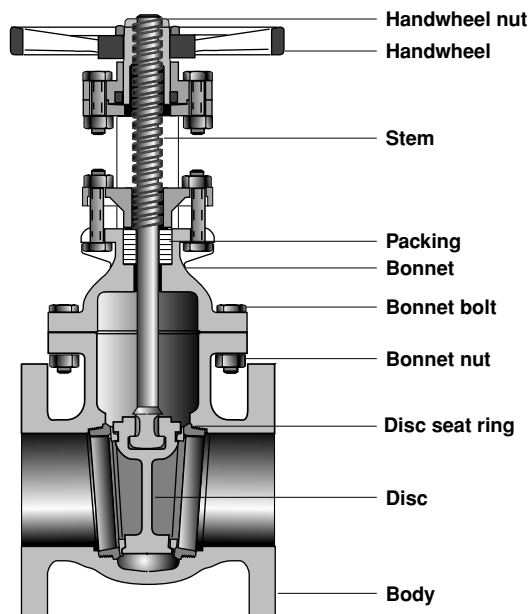
Backseating - Rising stem valves are equipped with backseats. It is recommended that the backseat be used as a means for determining the full open valve position. For normal operation in the open position, the stem should be backed off so that the backseat is not in contact. This permits the stem packing to assume its intended sealing function and not conceal

unsatisfactory stem packing. In the event of stem packing leakage, the backseat can be used to stop stem leakage until circumstances permit a system shutdown and time for packing replacement. Stem packing replacement with the valve under pressure and backseated represents a hazard and should not be undertaken. The hazard is magnified as fluid pressure or temperature increases or when the fluid is toxic.

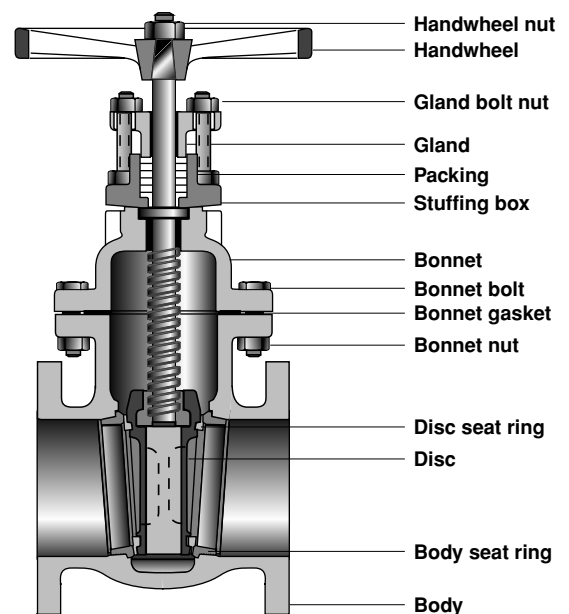
Solid Wedge Gate Valve Discs - The strong, simple, single piece design with long disc guides is a proven performer for all service conditions, particularly suitable for conditions of severe turbulence and stem vibration. Seat and disc surfaces are accurately machined and tapered for shut-off without undue strain.

Threaded End Valves have precision cut threads in accordance with ASME B1.20.1.

Jenkins Iron Gate Valves have an identification tag which indicates the valve catalog number and other pertinent data. It provides easy and accurate field reference.



OS & Y Bolted Bonnet Gate Valve



Non-Rising Stem bolted Bonnet Gate Valve

Class 125 • Non-Rising Stem

Figure 451J

Threaded with Bronze Trim

Size Range:

2 through 4 inches

Working Pressures Non-Shock

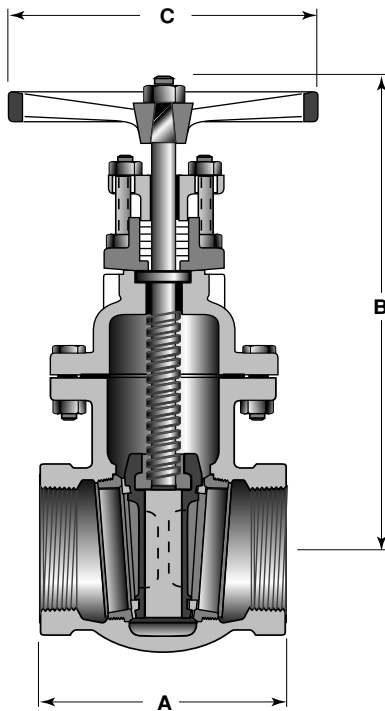
125 psi Steam, Basic Rating

200 psi Cold Working Pressure

Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Renewable Bronze Seat Rings
- Stem with Acme Double Threads
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ANSI/ASME B1.20.1

For more detailed features, refer to page 5.



Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|---------|--------|---------|-----------|
| 451J | 2" - 4" | Bronze | Bronze | Threaded |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) |
|--------|----------------|----------------|----------------|----------------|
| A | 5.38 (137) | 6.62 (168) | 7.00 (178) | 8.00 (203) |
| B | 11.31 (287) | 12.40 (315) | 13.25 (337) | 16.31 (414) |
| C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) |
| Wt. | 25 (11.3) | 31 (14.0) | 44 (20.0) | 71 (32.2) |

Class 125 • Non-Rising Stem

Figure 452J

Flanged with Bronze Trim

Size Range:

2 through 30 inches

Working Pressures Non-Shock

2" – 12"

125 psi Steam, Basic Rating
200 psi Cold Working Pressure

14" – 24"

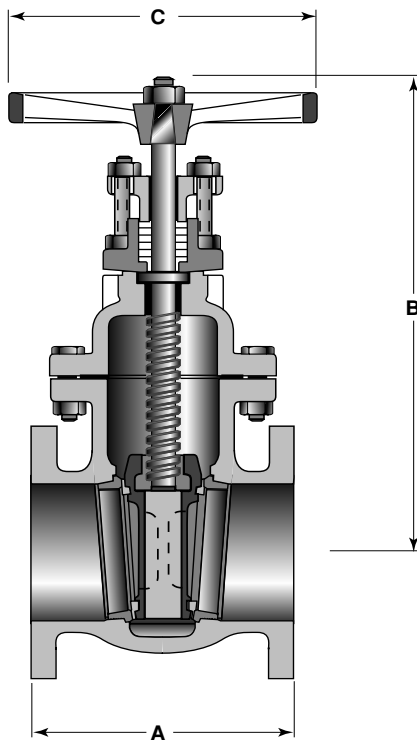
100 psi Steam, Basic Rating

14" – 30"

150 psi Cold Working Pressure

30"

50 psi Steam, Basic Rating



Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Renewable Bronze Seat Rings
- Stem with Acme Double Threads for 24" & smaller valves
- ACME Single Threads for 30" valves
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ASME (ANSI) B16.10, ASME (ANSI) B16.1,
- Valves can be equipped with by-passes when specified.

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|----------|--------|---------|-----------|
| 452J | 2" - 30" | Bronze | Bronze | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 5 (125) | 6 (150) | 8 (200) | 10 (250) | 12 (300) | 14 (350) | 16 (400) | 18 (450) | 20 (500) | 24 (600) | 30 (750) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| A | 7.00 (178) | 7.50 (191) | 8.00 (203) | 9.00 (229) | 10.00 (254) | 10.50 (267) | 11.50 (292) | 13.00 (330) | 14.00 (356) | 15.00 (381) | 16.00 (406) | 17.00 (432) | 18.00 (457) | 20.00 (508) | 24.00 (610) |
| B | 11.31 (287) | 12.40 (315) | 13.25 (337) | 16.31 (414) | 18.00 (457) | 20.69 (526) | 24.12 (613) | 33.00 (838) | 36.50 (827) | 40.50 (1029) | 46.62 (1184) | 50.75 (1289) | 56.12 (1425) | 64.00 (1625) | 86.63 (2200) |
| C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) | 10.00 (254) | 12.00 (305) | 14.00 (356) | 20.00 (508) | 20.00 (508) | 20.00 (508) | 22.00 (559) | 22.00 (559) | 24.00 (610) | 30.00 (762) | 30.00 (762) |
| Wt. | 30 (13.6) | 40 (18.1) | 56 (25.4) | 90 (41.0) | 126 (57.2) | 152 (69.0) | 260 (118) | 475 (215) | 680 (308) | 968 (439) | 1350 (613) | 1701 (772) | 2188 (994) | 3150 (1430) | 6009 (2728) |

200 CWP • Non-Rising Stem

Figure 523J

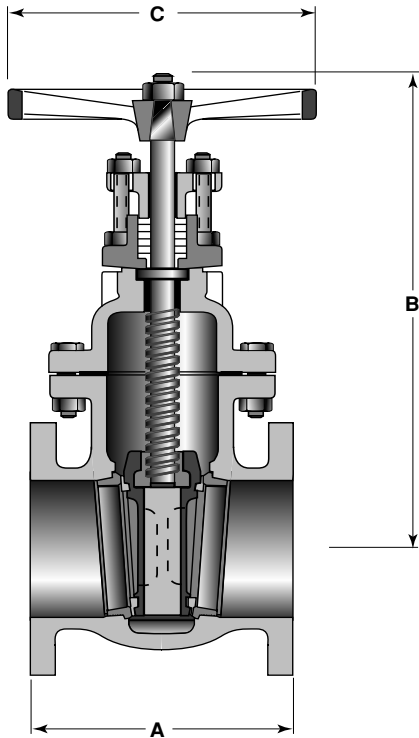
Flanged – All Iron

Size Range:

2 through 8 inches

Working Pressures Non-Shock

200 psi Cold Working Pressure



Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Integral Seats
- Stem with ACME Double Threads
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ASME (ANSI) B16.10, ASME (ANSI) B16.1,
- Valves can be equipped with by-passes when specified.

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|---------|-------|---------|-----------|
| 523J | 2" - 8" | Steel | Iron | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 5 (125) | 6 (150) | 8 (200) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| A | 7.00 (178) | 7.50 (191) | 8.00 (203) | 9.00 (229) | 10.00 (254) | 10.50 (267) | 11.50 (292) |
| B | 11.31 (287) | 12.40 (315) | 13.25 (337) | 16.31 (414) | 18.00 (457) | 20.69 (526) | 24.12 (613) |
| C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) | 10.00 (254) | 12.00 (305) | 14.00 (356) |
| Wt. | 30 (13.6) | 40 (18.1) | 56 (25.4) | 90 (41.0) | 126 (57.2) | 152 (69.0) | 260 (118) |

Class 125 • Outside Screw & Yoke • Rising Stem

Figure 453J

Threaded with Bronze Trim

Size Range:

2 through 4 inches

Working Pressures Non-Shock

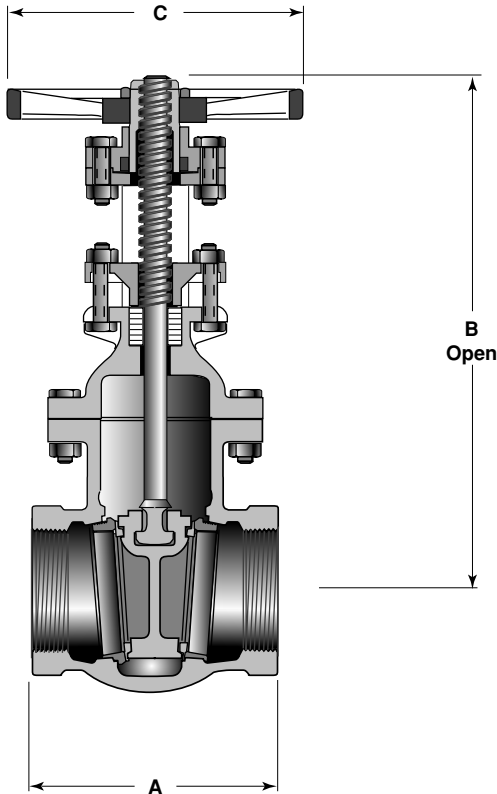
125 psi Steam, Basic Rating

200 psi Cold Working Pressure

Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Renewable Bronze Seat Rings
- Stem with Acme Double Threads
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ANSI(ASME) B1.20.1

For more detailed features, refer to page 5.



Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|---------|--------|---------|-----------|
| 453J | 2" - 4" | Bronze | Bronze | Threaded |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) |
|--------|----------------|----------------|----------------|----------------|
| A | 5.38 (137) | 6.62 (168) | 7.00 (178) | 8.00 (203) |
| B | 14.75 (375) | 16.06 (408) | 17.38 (441) | 21.44 (545) |
| C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) |
| Wt. | 25 (11.3) | 38 (17.2) | 46 (20.9) | 77 (35.0) |

Class 125 • Outside Screw & Yoke • Rising Stem

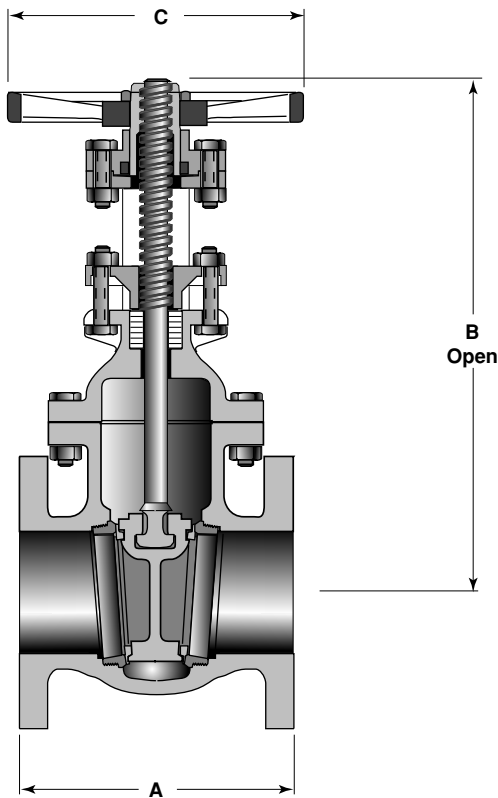


Figure 454J

Flanged with Bronze Trim

Size Range:

2 through 36 inches

Working Pressures Non-Shock

2" – 12"

125 psi Steam, Basic Rating

200 psi Cold Working Pressure

14" – 24"

100 psi Steam, Basic Rating

14" – 36"

150 psi Cold Working Pressure

30" – 36"

50 psi Steam, Basic Rating

150 psi Cold Working Pressure

Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Renewable Bronze Seat Rings
- Stem with Acme Double Threads for 24" & smaller valves
- ACME Single Threads for 30" & 36" valves
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ASME (ANSI) B16.10, ASME (ANSI) B16.1,
- Valves can be equipped with by-passes when specified.

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|----------|--------|---------|-----------|
| 454J | 2" - 36" | Bronze | Bronze | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 5 (125) | 6 (150) | 8 (200) | 10 (250) | 12 (300) | 14 (350) | 16 (400) | 18 (450) | 20 (500) | 24 (600) | 30 (750) | 36 (900) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| A | 7.00 (178) | 7.50 (191) | 8.00 (203) | 9.00 (229) | 10.00 (254) | 10.50 (267) | 11.50 (292) | 13.00 (330) | 14.00 (356) | 15.00 (381) | 16.00 (406) | 17.00 (432) | 18.00 (457) | 20.00 (508) | 24.00 (610) | 28.00 (711) |
| B | 14.75 (375) | 16.06 (408) | 17.38 (441) | 21.44 (545) | 25.81 (656) | 30.31 (770) | 37.75 (959) | 49.41 (1255) | 56.81 (1443) | 64.88 (1648) | 75.19 (1910) | 82.00 (2083) | 90.19 (2291) | 105.31 (2675) | 160.25 (4070) | 192.69 (4894) |
| 5 C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) | 10.00 (254) | 12.00 (305) | 14.00 (356) | 18.00 (457) | 18.00 (457) | 20.00 (508) | 22.00 (559) | 22.00 (559) | 24.00 (610) | 30.00 (762) | 30.00 (762) | 30.00 (762) |
| Wt. | 30 (13.6) | 47 (21.3) | 58 (26.3) | 97 (44.0) | 125 (56.7) | 162 (73.6) | 280 (127.2) | 502 (228) | 670 (304) | 1093 (496) | 1425 (646) | 1738 (788) | 2085 (946) | 3183 (1444) | 5795 (2629) | 7622 (3457) |

Class 125 • Outside Screw & Yoke • Rising Stem

Figure 525J

Flanged – All Iron

Size Range:

2 through 36 inches

Working Pressures Non-Shock

2" – 12"

200 psi Cold Working Pressure

14" – 36"

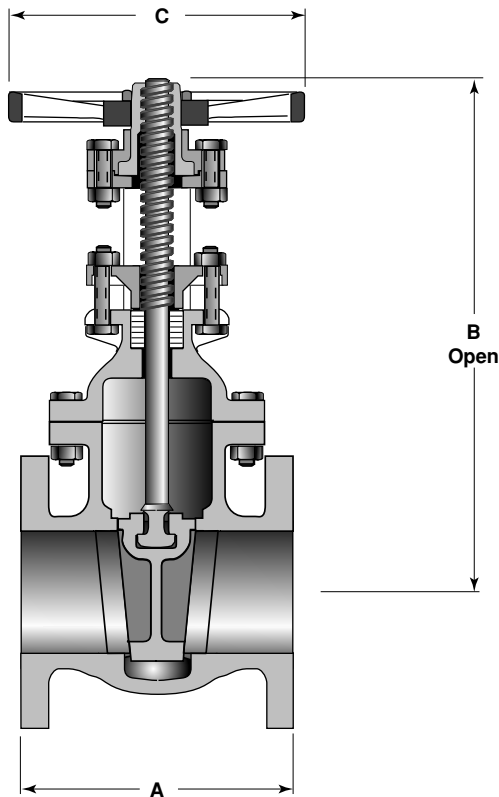
150 psi Cold Working Pressure

Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- 2"-8" Integral Seats, 10" and Larger Renewable Cast Iron Seat Rings
- Stem with Acme Double Threads for 24" & smaller valves
- ACME Single Threads for 30" & 36" valves
- Non-Asbestos Packing and Gaskets
- MSS SP-70 and MSS SP-25
- ASME (ANSI) B16.10, ASME (ANSI) B16.1,

- Valves can be equipped with by-passes when specified.

For more detailed features, refer to page 5.



Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|----------|-------|---------|-----------|
| 525J | 2" - 36" | Steel | Iron | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 5 (125) | 6 (150) | 8 (200) | 10 (250) | 12 (300) | 14 (350) | 16 (400) | 18 (450) | 20 (500) | 24 (600) | 30 (750) | 36 (900) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|
| A | 7.00 (178) | 7.50 (191) | 8.00 (203) | 9.00 (229) | 10.00 (254) | 10.50 (267) | 11.50 (292) | 13.00 (330) | 14.00 (356) | 15.00 (381) | 16.00 (406) | 17.00 (432) | 18.00 (457) | 20.00 (508) | 24.00 (610) | 28.00 (711) |
| B | 14.75 (375) | 16.06 (408) | 17.38 (441) | 21.44 (545) | 25.81 (656) | 30.31 (770) | 37.75 (959) | 49.41 (1255) | 56.81 (1443) | 64.88 (1648) | 75.19 (1910) | 82.00 (2083) | 90.19 (2291) | 105.31 (2675) | 160.25 (4070) | 192.69 (4894) |
| C | 8.00 (203) | 8.00 (203) | 8.00 (203) | 10.00 (254) | 10.00 (254) | 12.00 (305) | 14.00 (356) | 18.00 (457) | 18.00 (457) | 20.00 (508) | 22.00 (559) | 22.00 (559) | 24.00 (610) | 30.00 (762) | 30.00 (762) | 30.00 (762) |
| Wt. | 30 (13.6) | 47 (21.3) | 58 (26.3) | 97 (44.0) | 125 (56.7) | 162 (73.6) | 280 (127.2) | 502 (228) | 670 (304) | 1093 (496) | 1425 (646) | 1738 (788) | 2085 (946) | 3183 (1444) | 5795 (2629) | 7622 (3457) |



Iron Body Gate Valve

Figure 825CJ

175 CWP • Outside Screw & Yoke • UL/ULC/FM Listed

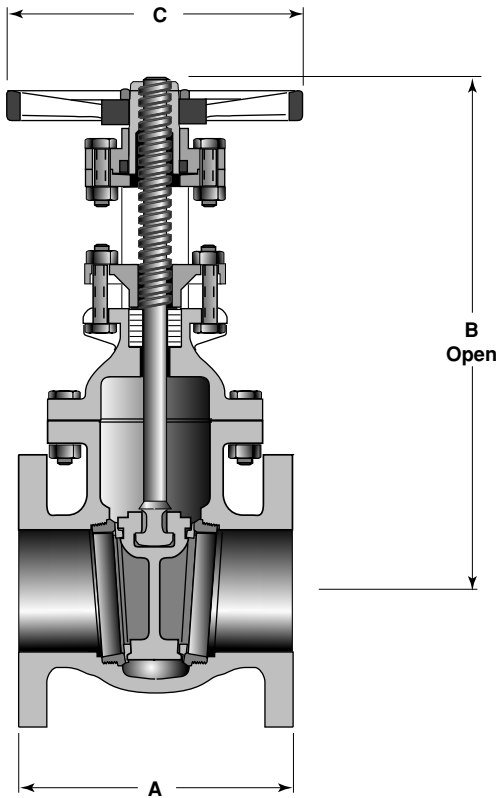
Figure 825CJ

Size Range:

2-1/2 through 12 inches

Working Pressure Non-Shock

175 psi Cold Working Pressure



Features

- Designed expressly for Fire Protection Service. Listed by Underwriter's Laboratories of Canada and Factory Mutual Research Corp.
- Stem with Acme Double Threads
- Tapered Solid Wedge Disc
- Flanged Ends
- Renewable Bronze Seat Rings
- Non-Abestos Packing and Gaskets
- ASME(ANSI) B16.10, ASME(ANSI) B16.1
- UL 262 Standard

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Stem | Seating | End Conn. |
|----------|--------|---------|-----------|
| 825CJ | Bronze | Bronze | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 1/2 (65) | 3 (80) | 4 (100) | 6 (150) | 8 (200) | 10 (250) | 12 (300) |
|--------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|
| A | 7.50 (191) | 8.00 (203) | 9.00 (229) | 10.50 (267) | 11.50 (292) | 13.00 (330) | 14.00 (356) |
| B | 16.06 (408) | 17.38 (441) | 21.44 (545) | 30.31 (770) | 37.75 (959) | 49.41 (1,255) | 56.81 (1,443) |
| C | 8.00 (203) | 8.00 (203) | 10.00 (254) | 12.00 (305) | 14.00 (356) | 18.00 (457) | 18.00 (457) |
| Wt. | 47 (21.3) | 58 (26.3) | 97 (44.0) | 162 (73.5) | 280 (127.0) | 502 (227.7) | 670 (303.9) |

Class 125 - 150 • Clamp Gate • Inside Screw • Rising Stem

Figure 40BJ

Threaded - All Iron
Size Range:
1/4 through 4 inches

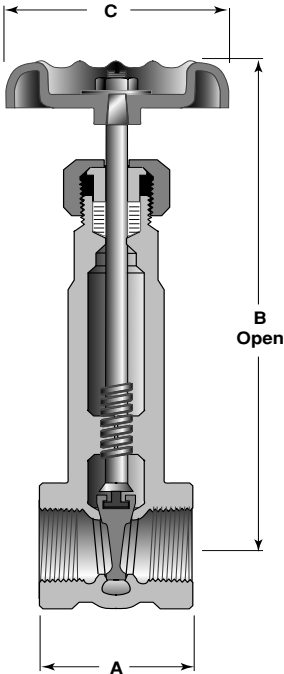
Figure 41J

Flanged - All Iron
Size Range:
1 through 4 inches

Features

- Compact Design
- Easy Maintenance
- Steel U-Bolt Clamp
- Anti-Clogging Bonnet
- Integral Seats
- Malleable Iron Disc
- Nickel Plated Steel Stem
- Non-Asbestos Packing & Gaskets
- Body and Bonnet Malleable Iron
- ASME (ANSI) B16.1, ANSI/ASME B1.20.1

For more detailed features, refer to page 5.



| TEMPERATURE | | WORKING PRESSURES, NON-SHOCK | | | | | |
|---------------|-----------|--------------------------------------|------|------------------------------------|------|-------------------------------------|------|
| | | Threaded 1/4" to 2" (6mm to 50mm) | | Flanged 1" to 2" (25mm to 50mm) | | All 2 1/2" to 4" (65mm to 100mm) | |
| Valve Ratings | | 225 psi, CWP | | 200 psi, CWP | | 175 psi, CWP | |
| °F | °C | PSI | kPa | PSI | kPa | PSI | kPa |
| -20 to 150 | -30 to 65 | 225 | 1550 | 200 | 1380 | 175 | 1210 |
| 200 | 93 | 210 | 1450 | 185 | 1280 | 165 | 1140 |
| 225 | 107 | 200 | 1380 | 175 | 1210 | 160 | 1100 |
| 250 | 121 | 190 | 1310 | 165 | 1140 | 150 | 1030 |
| 275 | 135 | 185 | 1280 | 155 | 1070 | 145 | 1000 |
| 300 | 149 | 175 | 1210 | 145 | 1000 | 140 | 970 |
| 325 | 163 | 165 | 1140 | 135 | 930 | 135 | 930 |
| 350 | 177 | 160 | 1100 | 130 | 900 | 125 | 860 |
| 375 | 191 | 150 | 1030 | 120 | 830 | 120 | 830 |

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating | End Conn. |
|----------|-----------|---------------------|---------|-----------|
| 40BJ | 1/4" - 4" | Steel/Nickel Plated | Iron | Threaded |
| 41J | 1" - 4" | Steel/Nickel Plated | Iron | Flanged |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | | 1/4 (6) | 3/8 (10) | 1/2 (15) | 3/4 (20) | 1 (25) | 1 1/4 (32) | 1 1/2 (40) | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) |
|--------|-----|-----------------|-----------------|---------------|---------------|----------------|---------------|-----------------|-----------------|-----------------|----------------|-----------------|
| 40JB | A | 3.00* (76.2) | 3.00* (76.2) | 2.06 (52) | 2.32 (59) | 2.56 (65) | 2.87 (73) | 3.15 (80) | 3.62 (92) | 4.12 (105) | 4.56 (116) | 5.56 (141) |
| 41J | A | - (-) | - (-) | - (-) | - (-) | 3.19 (61) | - (-) | 3.74 (95) | 4.25 (108) | 4.94 (125) | 5.06 (129) | 6.75 (172) |
| All | B | 5.08 (129) | 5.08 (129) | 5.08 (129) | 6.19 (157) | 7.40 (188) | 8.90 (226) | 9.96 (253) | 11.61 (295) | 12.91 (328) | 15.35 (390) | 19.76 (502) |
| All | C | 2.06 (52) | 2.06 (52) | 2.06 (52) | 2.56 (65) | 2.75 (70) | 3.06 (78) | 3.62 (92) | 4.06 (103) | 4.75 (121) | 6.00 (152) | 9.00 (229) |
| 40BJ | Wt. | 2.86 (1.84) | 2.86 (1.84) | 1.86 (-) | 2.40 (-) | 3.50 (-) | 5.80 (-) | 7.00 (-) | 11.20 (-) | 19.20 (8.71) | 23.10 (-) | 52.10 (-) |
| 41J | Wt. | - (-) | - (-) | - (-) | - (-) | 5.50 (2.49) | - (-) | 10.40 (4.71) | 14.30 (6.48) | 22.00 (9.97) | 32.0 (14.5) | 60.0 (27.19) |

* Includes hexagon bushing in each end.

Class 250 • Non-Rising Stem • Flanged Ends

Figure 203J

Flanged with Bronze Trim

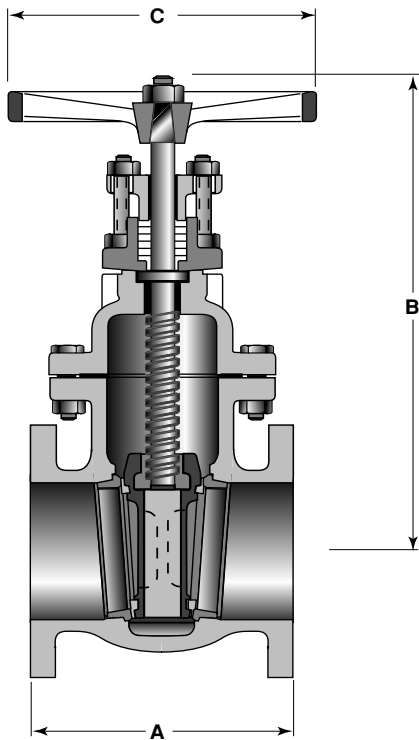
Size Range:

2 through 12 inches

Working Pressures Non-Shock

250 psi Steam, Basic Rating

500 psi Cold Working Pressure



Features

- Body Guide Ribs
- Renewable Bronze Seat Rings
- Non-Asbestos Packing & Gaskets
- Solid Wedge Disc
- Valves can be equipped with by-passes when specified
- Valves 6" and larger have bosses cast into the bodies and bonnets, and can be equipped with taps and drains to prevent fluids from accumulating and possibly causing damage. Orders must specify location of taps and drains.
- Type 1 and MSS SP-25, MSS SP-70, ASME (ANSI) B16.10, ASME (ANSI) B16.1

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating |
|----------|----------|--------|---------|
| 203J | 2" - 12" | Bronze | Bronze |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 6 (150) | 8 (200) | 10 (250) | 12 (300) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| A | 8.50 (216) | 9.50 (241) | 11.12 (282) | 12.00 (305) | 15.88 (403) | 16.50 (419) | 18.00 (457) | 19.75 (502) |
| B | 11.94 (303) | 12.94 (329) | 14.50 (368) | 17.38 (441) | 23.00 (584) | 30.75 (781) | 36.00 (914) | 39.75 (1010) |
| C | 8.00 (203) | 8.00 (229) | 10.00 (254) | 12.00 (305) | 16.00 (406) | 20.00 (508) | 22.00 (559) | 24.00 (610) |
| Wt. | 47 (21) | 84 (38) | 113 (51) | 175 (80) | 335 (152) | 545 (247) | 961 (386) | 1300 (590) |

Class 250 • Outside Screw & Yoke • Rising Stem

Figure 204J

Flanged with Bronze Trim

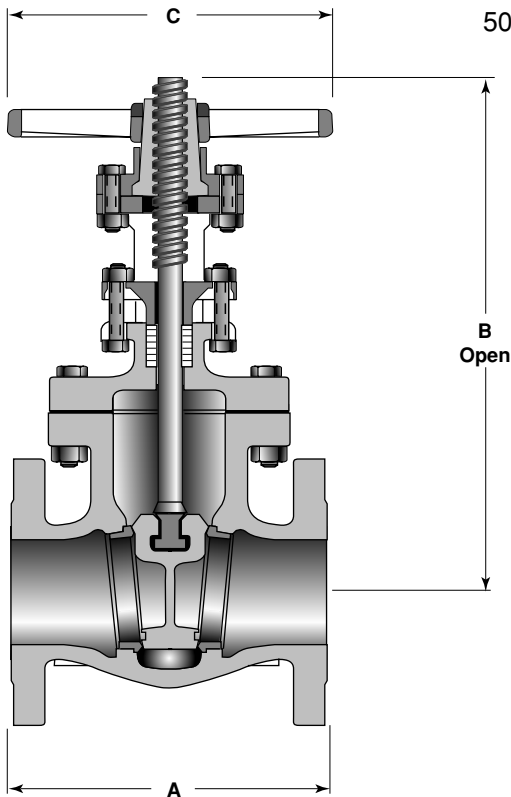
Size Range:

2 through 12 inches

Working Pressures Non-Shock

250 psi Steam, Basic Rating

500 psi Cold Working Pressure



Features

- Tapered Solid Wedge Disc
- Body Guide Ribs
- Non Asbestos Packing and Gaskets
- Manganese Bronze Stem
- Renewable Bronze Seat Rings
- Acme Double Stem Threads
- Valves can be equipped with by-passes when specified.
- Valves 6" and larger have bosses cast into the bodies and bonnets, and can be equipped with taps and drains to prevent fluids from accumulating and possibly causing damage. Orders must specify location of taps and drains.
- MSS SP-25, MSS SP-70 Type 1 ASME (ANSI) B16.10, ASME (ANSI) B16.1
- Complies with WW-V-58 Type 1, Class 1.

For more detailed features, refer to page 5.

Principal Parts & Materials

| Fig. No. | Size | Stem | Seating |
|----------|----------|--------|---------|
| 204J | 2" - 12" | Bronze | Bronze |

Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

| Valves | 2 (50) | 2 1/2 (65) | 3 (80) | 4 (100) | 5 (125) | 6 (150) | 8 (200) | 10 (250) | 12 (300) |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| A | 8.50 (216) | 9.50 (241) | 11.12 (282) | 12.00 (305) | 15.00 (381) | 15.88 (403) | 16.50 (419) | 18.00 (457) | 19.75 (502) |
| B | 15.06 (383) | 16.69 (424) | 18.75 (476) | 23.44 (595) | 29.75 (756) | 31.75 (806) | 39.88 (1012) | 54.25 (1378) | 62.81 (1595) |
| C | 8.00 (203) | 8.00 (229) | 10.00 (254) | 12.00 (305) | 14.00 (356) | 16.00 (406) | 18.00 (508) | 22.00 (559) | 24.00 (610) |
| Wt. | 54 (24) | 80 (36) | 114 (52) | 174 (79) | 280 (127) | 332 (150) | 600 (272) | 920 (418) | 1400 (636) |