

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 bronze 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 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, 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 choosing 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 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 due to shock.

## Testing

Bronze valves described in this section meet or exceed the MSS SP-80 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.

## Illustrations & Weights

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

**Illustrations** – Catalog illustrations are representative of a certain size of each line of product but do not necessarily represent 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 Copper Alloys

CHEMICAL REQUIREMENTS (%)											MECHANICAL PROPERTIES				
	Copper	Tin	Lead	Iron	Nickel	Manganese	Aluminum	Zinc	Silicon	Other	Tensile Strength		Yield Strength		Elongation
	Cu	Sn	Pb	Fe	Ni	Mn	Al	Zn	Si		ksi	MPa	ksi	MPa	in 2" (50mm) (%)
<b>STEAM OR VALVE BRONZE CASTINGS</b>											<b>ASTM B61, C92200</b>				
Min.	86.0	5.5	1.0					3.0			34	235	16	110	24
Max.	90.0	6.5	2.0	0.25	1.0		0.005	5.0	0.005	0.05*					
<b>COMPOSITION BRONZE CASTINGS</b>											<b>ASTM B62, C83600</b>				
Min.	84.0	4.0	4.0					4.0			30	205	14	95	20
Max.	86.0	6.0	6.0	0.30	1.0		0.005	6.0	0.005	0.05*					
<b>COPPER-ZINC SILICON ALLOY ROD</b>											<b>ASTM B371, C69400</b>				
Min.	80.0							remainder	3.5		80	550	40	250	15
Max.	83.0		0.30	0.20					4.5						
<b>LEADED SEMI-RED BRASS</b>											<b>ASTM B584, C84400</b>				
Min.	78.0	2.3	6.0					7.0			29	200	13	90	18
Max.	82.0	3.5	8.0		1.0		0.005	10.0	0.005						
<b>SILICONE BRASS CASTINGS</b>											<b>ASTM B584, C87600</b>				
Min.	88.0							4.0	3.5		60	414	30	207	16
Max.			0.50					7.0	5.5						
<b>FREE CUTTING BRASS ROD/BAR</b>											<b>ASTM B16, C36000, H02</b>				
Min.	60.0		2.5					remainder			+	+	+	+	+
Max.	63.0		3.7	0.35						0.50**	+	+	+	+	+
<b>NAVAL BRASS ROD</b>											<b>ASTM B16, C48200, H02</b>				
Min.	59.0	0.5	0.4					remainder			+	+	+	+	+
Max.	62.0	1.0	1.0	0.15						0.10**	+	+	+	+	+
<b>ALUMINUM SILICONE BRONZE ROD</b>											<b>ASTM B150, C64200</b>				
Min.	87.5						6.3		1.5		+	+	+	+	+
Max.	92.5	0.20	0.05	0.30	0.25	0.10	7.6	0.50	2.2	0.50***	+	+	+	+	+
<b>LEADED RED BRASS CONTINUOUS CASTINGS</b>											<b>ASTM B505, C83600</b>				
Min.	84.0	4.0	4.0					4.0			36	248	19	131	15
Max.	86.0	6.0	6.0	0.30	1.0		0.005	6.0	0.005						
<b>BRASS PLATE/SHEET STRIP</b>											<b>ASTM B36, C26000, H04</b>				
Min.	68.5							remainder			71	489			
Max.	71.5		0.07	0.05							81	558			
<b>BRASS WIRE</b>											<b>ASTM B134, C26000, H02</b>				
Min.	68.5							remainder			57	395			
Max.	71.5		0.07	0.05							67	460			
<b>ALUMINUM SILICONE BRONZE FORGINGS</b>											<b>ASTM B283, C64200</b>				
Min.	88.7						6.3		1.5		+	+	+	+	+
Max.	90.1	0.20	0.05	0.30	0.25	0.10	7.6	0.50	2.2	0.15***	+	+	+	+	+
<b>COPPER SILICON ALLOY ROD/BAR</b>											<b>ASTM B98, C65100, H02</b>				
Min.	96.0								0.80		55	379	20	138	11
Max.			0.05	0.08		0.7		1.5	2.00						
<b>SEAMLESS COPPER WATER TUBE</b>											<b>ASTM B88, C12200</b>				
Min.	99.9										30	207			
Max.															

\* Also may include maximum of 0.05% phosphorus.

\*\* Maximum percent of elements permissible other than those indicated.

\*\*\* Also may include maximum of 0.15% arsenic.

+ Depends on diameter or thickness (surface to surface) of material: data on request.

## Introduction to Ratings

- A) Ratings for Class 125, 150, 200 and 300 bronze valves are indicated on page 5 in this catalogue:
- PSI Steam, Basic Rating; i.e., the nominal rated pressure of the valve.
  - PSI Cold Working Pressure; i.e., the maximum rated pressure of the valve at a temperature range of -20° to 150°F (-30° to 65°C).
- B) Ratings for Class 125 and 150 bronze valves equipped with non-metallic discs are indicated on the relevant catalog pages in this manner;
- PSI Saturated Steam; where “Saturated Steam” is the maximum rated pressure of the valve at the corresponding temperature of saturated steam.
  - PSI Cold Working Pressure; where “Cold Working Pressure” is the maximum rated pressure of the valve at a temperature range of -20°F to 150°F (-30°C to 65°C).
- The full range of allowable pressures and temperatures for these valves is determined by referring to the pressure-temperature charts shown on page 5.
- C) Ratings for bronze valves falling outside Class 125, 150, 200 and 300 are indicated in various ways on the relevant catalog pages. The full range of allowable pressures and temperatures for these valves is determined by referring to the relevant catalogue page.

## General

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.

## Rating Temperature

The operating temperature of the valve is considered the temperature of the media flowing through it. This temperature must not exceed the maximum allowable temperature as stated in the pressure-temperature chart on page 5.

The safe pressure-temperature rating of a solder joint piping system is dependent, not only on valve, fitting and tubing strength but also on the composition of the solder used for joints. It shall be the responsibility of the user to select a solder composition that is compatible with the service conditions.

The safe pressure-temperature rating of valves fitted with non-metallic discs (some Globe, Angle Valves and Check Valves) is dependent upon the composition of the disc material. It shall be the responsibility of the user to specify the service application. PTFE discs are suitable for a maximum service temperature of 400°F (200°C), nitrile composition discs are suitable for a maximum service temperature of 200°F (90°C).



# Ratings: Bronze Valves

## Pressure-Temperature Ratings

IMPERIAL UNITS						
Press. Class	125		150		200	300
End Conn.	THD	THD	FLG	THD	THD**	THD
Temp °F	PRESSURE – PSI NON-SHOCK					
	ASTM B-62			ASTM B-61		
-20 to 150	200	300	225	400	1000	600
200	185	270	210	375	920	560
250	170	240	195	350	830	525
300	155	210	180	325	740	490
350	140	180	165	300	650	450
400	–	–	–	275	560	410
406	125	150	150	–	–	–
450	120*	145*	–	250	480	375
500	–	–	–	225	390	340
550	–	–	–	200	300	300

METRIC UNITS						
Press. Class	125		150		200	300
End Conn.	THD	THD	FLG	THD	THD**	THD
Temp °C	PRESSURE – kPa NON-SHOCK					
	ASTM B-62			ASTM B-61		
-30 to 70	1380	2070	1550	2760	6890	4140
90	1280	1860	1450	2590	6340	3860
120	1170	1660	1340	2410	5720	3620
150	1070	1450	1240	2240	5100	3380
180	970	1240	1140	2070	4490	3100
200	–	–	–	1800	3860	2830
208	860	1030	1030	–	–	–
230	830*	1000*	–	1720	3310	2590
260	–	–	–	1550	2690	2340
290	–	–	–	1380	2070	2070

\* Some codes (i.e. ASME BPVC, Section 1) limit the rating temperatures of the indicated material to 406°F (208°C).

\*\* Alternative ratings for valve size 1/8" - 2" having threaded ends and union bonnet, when so indicated on the relevant catalogue pages.

## Technical Data: Flow Data (Cv Values)

The flow coefficient Cv expresses flow rate in usg per minute of water at 60°F, with 1.0 psi pressure drop across the valve.

Bronze Gate Valves	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
All	–	8	8	16	36	60	90	140	270	470	680
Globe and Angle Valves											
108BJ	–	1.6	3.1	5.1	9.2	16	28	39	66	–	–
592J	–	1.1	2.1	3.3	6.0	10	18	26	44	64	100
594J	–	1.5	3.0	4.9	9.0	15	27	38	64	–	–
106BPJ	–	–	2.1	3.8	5.9	11	21	28	49	–	–
106BJ, 2032J, 2050J, 101J, 105J	–	1.3	2.4	3.9	7.0	12	21	30	50	74	115
Check Valves											
119J	–	1.3	2.5	4.1	7.6	13	23	31	54	78	125
117ATJ	–	0.9	1.8	3.0	5.4	9	16	22	39	–	–
518AJ	–	1.1	2.1	3.3	6.0	10	18	26	44	64	100
4449J, 4962J, 4092J, 4093J, 4037J, 4475TJ, 4041TJ	–	2.3	4.3	7.2	13	22	39	56	92	135	215
Miscellaneous											
743J, 744J	0.3	0.6	1.1	1.9	3.4	–	–	–	–	–	–



# Bronze Globe and Angle Valve Features

Jenkins Globe and Angle Valves are highly efficient for regulating flow because disc and seat design provide flow characteristics with proportionate relationships between valve lift and flow rate. This assures accurate regulated flow control. The additional advantage of an Angle Valve is that it provides a 90° turn in piping so fewer joints are required and make-up time and labor are reduced.

Each valve in this section is classified by its pressure rating. All valves designated as Class 125, 150, 200 or 300 comply with MSS SP-80 Standard Practice.

## Note These Superior Features

**Body** is made of bronze conforming to requirements of ASTM B62 or B61 depending on valve pressure class. Like all parts, bodies are designed to withstand high internal pressures and line strains...and are proportioned to assure a high safety factor under recommended working pressures.

**Body Seat Ring** is made from high grade material especially selected to perform dependably in the services for which the valve is recommended.

**Disc Stem Connection** in all valves is designed to hold the disc securely while allowing it to rotate. The result is true, positive sealing with no damage to sealing surfaces.

**Conventional Metal Disc** has a relatively narrow contact with the body seal. It is recommended for a variety of general services but not for close throttling.

**PTFE Disc** has the same basic construction as the fully guided metal disc except that the disc is inserted in a disc holder. These pliable discs assure tight sealing and simplify valve maintenance. The PTFE disc is recommended for 150 psi saturated steam, 300 psi maximum non-shock cold water, oil, gas, and air.

**Metal Plug Type Disc** is conically shaped. This design is universally accepted for rigorous service. Because of the wide sealing surfaces, it is not easily harmed by foreign matter or wiredrawing. Jenkins uses stainless steel in this design.

**Stem** is made from high grade materials especially selected to perform dependably in the services for which the valve is recommended.

**Multiple Choice Seating** are engineered for optimum performance on a wide range of services; renewable PTFE disc, regrind bronze seating, regrind and renewable plug type disc and seat ring in hardened 450 BHN, AISI 420 stainless steel Hardened stainless steel discs and seat rings are performance proven. Needle or plug type seating provides graduated closure for throttling service. PTFE discs assure tight shut-off and are easy to change.

**Cylindrical Shaped Body** is the strongest and most successful design for withstanding internal pressures and line strains. The extra rigidity imparted by this shape prevents body distortion from line strain.

**Large End Hexagons** add additional body reinforcement and provide large surfaces for positive wrench grip.

**Screwed Bonnet** has generous optimum-sized hexagons for easy and positive wrench grip. For an easily remade and positively leak-tight joint, the flat bonnet seating face contacts a 5° inclined face of the body, providing high unit loading with relatively low torques.

**Union Bonnet** Where service conditions require, generous union bonnet rings facilitate frequent dismantling and reassembly of the bonnets and reinforce the bonnet joint to ensure a tight joint and maximum security under pressure.

**Solder Joint Valves** conform to ANSI B16.18 specification for depth and diameter.

**Heat Dispersing Handwheel** Open rim, rounded multi-rib design provides a comfortable, positive grip. Handles are sized to provide adequate torque to operate the valve without the aid of levers, hickies or wrenches.

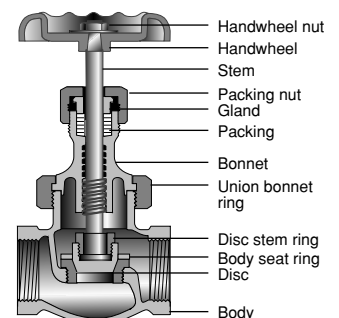
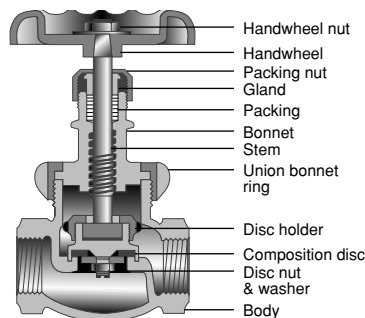
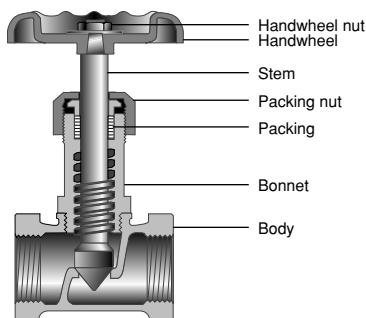
**End Threads** are precision cut in accordance to ANSI/ASME B1.20.1.

**Strong Stem Threads** are precision machined to ensure ease of operation and long service.

Jenkins Bronze Globe and Angle valves have an identification plate which indicates the valve catalog number and the type of disc. Located under the handwheel nut, it permits easy and accurate field reference.

All valves are clearly identified and marked to MSS SP-25 specification.

For pressure-temperature ratings and Cv values, see page 6.



# Bronze Globe Valve Fig. 106BJ

## Class 150 • Rising Stem • Threaded Ends

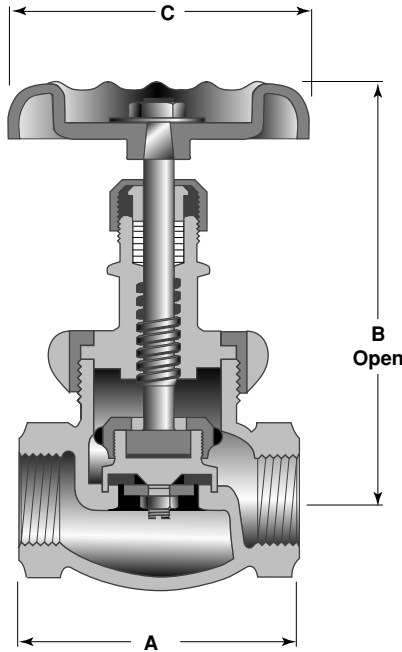


Figure 106BJ

**Size Range:**

1/4 through 3 inches

**Working Pressures**

**Non-Shock:**

150 psi Steam, Basic Rating

300 psi Cold Working Pressure

**Features**

- Rising Stem
- Union Bonnet
- PTFE Disc
- Non-Asbestos Packing
- Valves 2" and smaller have union bonnet. Disc holder retains disc and slips on the stem. Sizes 2 1/2" and 3" have bolted bonnet; disc holder is fastened by a disc stem ring.
- Threaded Ends
- Back Seat
- Integral Bronze Seat
- MSS Specification SP-80

For more detailed features, refer to page 21.

### Principal Parts & Materials

Part	Sizes	Material	ASTM
Body	All	Bronze	B62 alloy C83600
Bonnet	1/4" - 3/8"	Brass	B16 H02
Bonnet	1/2" - 3"	Bronze	B62 alloy C83600
Disc Holder	1/4" - 1/2"	Brass	B16 H02
Disc Holder	3/4" - 3"	Bronze	B62 alloy C83600
Stem	All	Bronze	B371 alloy C69400
Disc	All	PTFE	—

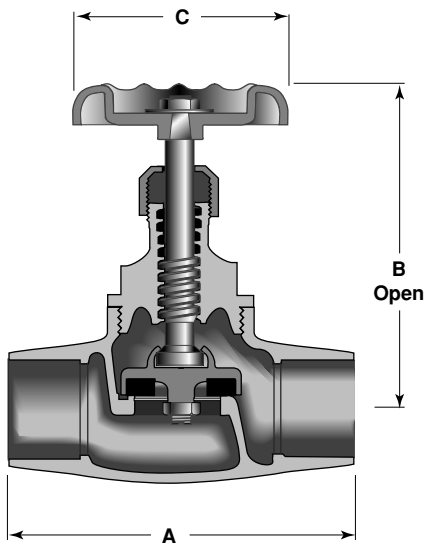
### Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

	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)
A	1.96 (50)	1.96 (50)	2.58 (66)	2.96 (75)	3.52 (89)	4.03 (102)	4.57 (116)	5.72 (145)	7.27 (185)	8.60 (218)
B	4.25 (108)	4.19 (106)	4.11 (104)	5.16 (131)	5.55 (141)	6.52 (166)	7.34 (186)	7.51 (191)	8.68 (220)	9.75 (248)
C	2.13 (54)	2.13 (54)	2.25 (57)	2.96 (75)	3.03 (77)	3.69 (94)	4.61 (117)	5.24 (133)	6.97 (177)	7.00 (178)
WTS.	0.80 (0.36)	0.80 (0.36)	1.30 (0.59)	2.20 (1.00)	3.20 (1.45)	4.90 (2.22)	7.20 (3.24)	11.50 (5.22)	24.90 (11.29)	40.60 (18.42)

# Bronze Globe Valve Fig. 106BPJ

## 300 CWP • Rising Stem • Solder Joint Ends



### Figure 106BPJ

#### Size Range:

3/8 through 2 inches

#### Working Pressures

##### Non-Shock:

300 psi Cold Working Pressure

### Features

- Rising Stem
- Screwed Bonnet
- Solder Joint Ends
- Back Seat
- Integral Bronze Seat
- Renewable PTFE discs simplify valve maintenance.
- MSS Specification SP-80

For more detailed features, refer to page 21.

**Caution:** Before installing solder joint valves, be sure solder or brazing alloy melting point is high enough to withstand line pressure/temperature conditions, and is compatible with fluid medium.

### Principal Parts & Materials

Part	Sizes	Material	ASTM
Body	All	Bronze	B62 alloy C83600
Bonnet	All	Bronze	B62 alloy C83600
Disc	All	PTFE	—
Stem	All	Bronze	B371 alloy C69400

### Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

	3/8 (10)	1/2 (15)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)
A	2.73 (69)	2.73 (69)	3.52 (89)	4.26 (108)	4.70 (119)	5.51 (140)	6.97 (177)
B	4.28 (109)	3.53 (90)	4.55 (116)	5.02 (128)	5.19 (132)	6.22 (158)	6.77 (172)
C	2.13 (54)	2.25 (57)	2.97 (75)	3.04 (77)	3.70 (94)	4.60 (117)	5.24 (133)
WTS.	1.00 (0.45)	1.00 (0.45)	1.70 (0.77)	2.40 (1.09)	3.70 (1.68)	5.20 (2.36)	8.50 (3.86)

# Bronze Angle Valve Fig. 108BJ

## Class 150 • Rising Stem • Threaded Ends

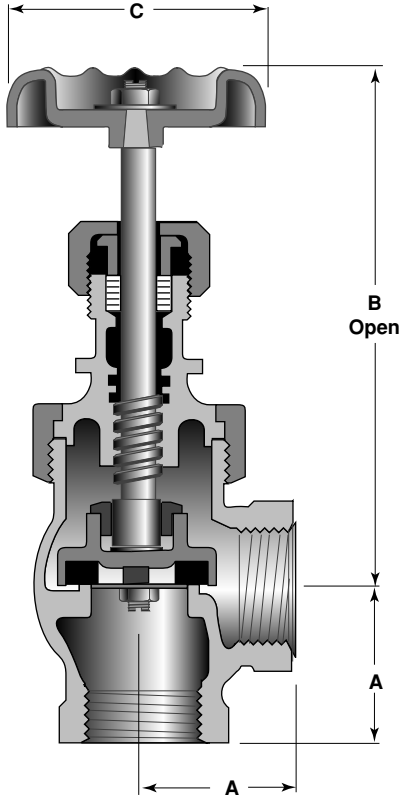


Figure 108BJ

**Size Range:**

1/4 through 2 inches

**Working Pressures**

**Non-Shock:**

150 psi Steam, Basic Rating

300 psi Cold Working Pressure

**Features**

- Rising Stem
- Union Bonnet
- Threaded Ends
- Back Seat
- Integral Bronze Seat
- MSS Specification SP-80
- PTFE Disc
- Non-asbestos Packing

For more detailed features, refer to page 21.

**Principal Parts & Materials**

Part	Sizes	Material	ASTM
Body	All	Bronze	B62 alloy C83600
Bonnet	1/4" - 3/8"	Brass	B16 H02
Bonnet	1/2" - 2"	Bronze	B62 alloy C83600
Disc Holder	1/4" - 1/2"	Brass	B16 H02
Disc Holder	3/4" - 2"	Bronze	B62 alloy C83600
Stem	All	Bronze	B371 alloy C69400
Disc	All	PTFE	—

**Dimensions and Weights**

Inches (millimeters) - pounds (kilograms)

	1/4 (6)	3/8 (10)	1/2 (15)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)
A	1.18 (30)	1.18 (30)	1.17 (30)	1.39 (35)	1.63 (41)	2.02 (51)	2.18 (55)	2.68 (68)
B	4.12 (105)	3.97 (101)	3.91 (99)	5.18 (132)	5.34 (136)	6.53 (166)	6.96 (177)	7.34 (186)
C	2.13 (54)	2.13 (54)	2.25 (57)	2.95 (75)	3.03 (77)	3.69 (94)	4.63 (118)	5.24 (133)
WTS.	1.00 (0.43)	0.90 (0.41)	1.30 (0.59)	2.20 (1.00)	3.30 (1.47)	5.30 (2.38)	7.10 (3.22)	11.90 (5.38)



# Bronze Globe Valve Fig. 2032J

## Class 150 • Rising Stem • Threaded Ends

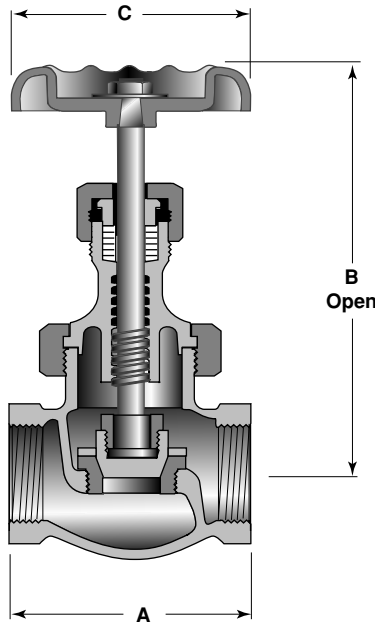


Figure 2032J

**Size Range:**  
 1/2 through 2 inches

**Working Pressures**

**Non-Shock:**

150 psi Steam, Basic Rating  
 300 psi Cold Working Pressure

**Features**

- Rising Stem
- Union Bonnet, 1/2"-2"
- Threaded Ends
- Stainless Steel Seat Rings
- MSS Specification SP-80

For more detailed features, refer to page 21.

### Principal Parts & Materials

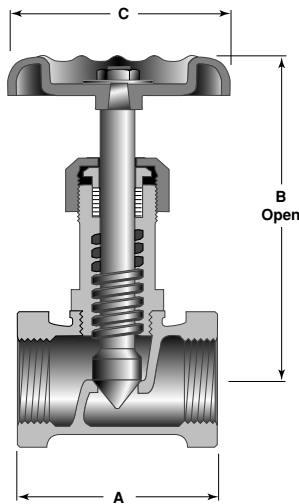
Part	Sizes	Material	ASTM
Body	All	Bronze	B62 alloy C83600
Bonnet	All	Bronze	B62 alloy C83600
Disc and seat ring	All	Stainless Steel	A276 S42000
Stem	All	Bronze	B371 alloy C69400

### Dimensions and Weights

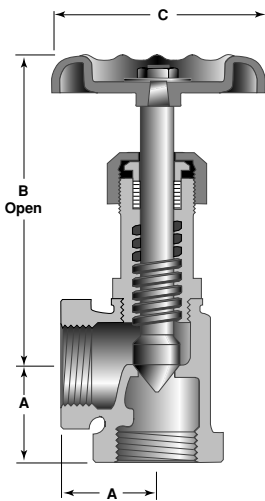
Inches (millimeters) - pounds (kilograms)

	1/2 (15)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)
A	4.09 (104)	5.10 (130)	5.58 (142)	6.42 (163)	7.17 (182)	7.48 (190)
B	2.25 (57)	2.98 (76)	3.02 (77)	3.68 (93)	4.63 (118)	5.24 (133)
C	1.30 (0.59)	2.20 (1.00)	3.20 (1.45)	4.80 (2.18)	7.10 (3.22)	11.50 (5.20)
WTS.						

## Class 200 • Needle Type Seating • Threaded Ends



**Figure 743J**



**Figure 744J**

### Figure 743J

Globe Valve

**Size Range:**

1/8 through 3/4 inches

**Working Pressures**

**Non-Shock:**

200 psi Steam, Basic Rating

400 psi Cold Working Pressure

### Figure 744J

Angle Valve

**Size Range:**

1/8 through 3/4 inches

**Working Pressures**

**Non-Shock:**

200 psi Steam, Basic Rating

400 psi Cold Working Pressure

### Features

- Rising Stem
- Screwed Bonnet
- Threaded Ends
- Integral Seat
- Graphite Packing
- Asbestos Free

For more detailed features, refer to page 21.

### Principal Parts & Materials

Part	Material	ASTM
Body	Bronze	B62 C83600
Bonnet	1/8-3/8 Bronze	B150 C64200
	1/2-3/4 Brass	B16 H02
Stem	Brass	B150 alloy C64200

### Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

Fig. 743J	1/8 (3)	1/4 (6)	3/8 (10)	1/2 (15)	3/4 (20)	Fig. 744J	1/8 (3)	1/4 (6)	3/8 (10)	1/2 (15)	3/4 (20)
A	1.16 (29)	1.53 (39)	1.78 (45)	2.03 (52)	2.28 (58)	A	0.58 (15)	0.78 (20)	0.91 (23)	1.06 (27)	1.23 (31)
B	2.94 (73)	2.88 (73)	3.06 (78)	3.56 (91)	4.12 (105)	B	2.85 (73)	2.88 (73)	3.06 (78)	3.56 (91)	4.20 (106)
C	1.75 (44)	1.75 (44)	1.75 (44)	2.06 (52)	2.56 (65)	C	1.75 (44)	1.75 (44)	1.75 (44)	2.06 (52)	2.50 (64)
WTS.	0.30 (0.14)	0.30 (0.14)	0.50 (0.22)	0.60 (0.27)	1.0 (0.45)	WTS.	0.23 (0.11)	0.30 (0.14)	0.50 (0.22)	0.60 (0.27)	0.96 (0.44)

# Bronze Globe Valves Fig. 2050J

## Class 200 • Rising Stem • Threaded Ends

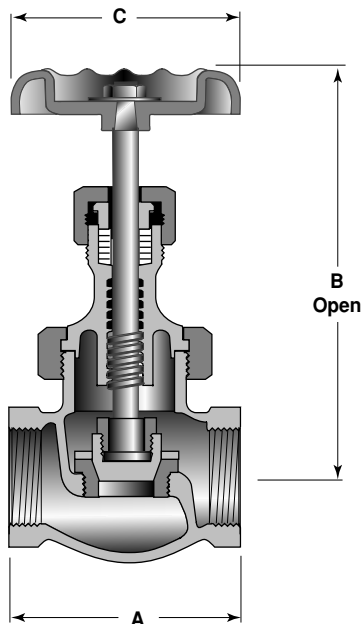


Figure 2050J

**Size Range:**

1/2 through 2 inches

**Working Pressures**

**Non-Shock:**

200 psi Steam, Basic Rating

400 psi Cold Working Pressure

**Features**

- Rising Stem
- Union Bonnet
- Ideal for every service such as throttling, soot blower, blow-off, boiler feed, drip and drain lines and is recommended for non-shock water, oil, gas, or air applications.
- Tapered Plug Type Disc
- Threaded Ends
- Stainless Steel Seat Ring
- Disc and seat ring are renewable.
- MSS Specification SP-80

For more detailed features, refer to page 21.

### Principal Parts & Materials

Part	Material	ASTM
Body & bonnet	Bronze	B61 alloy C92200
Stem	Bronze	B371 alloy C69400
Disc & seat ring	Stainless Steel	A276 S42000

### Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

	1/2 (15)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)
A	2.63 (67)	2.99 (76)	3.51 (89)	4.04 (103)	4.57 (116)	5.72 (145)
B	4.09 (104)	5.10 (130)	5.58 (142)	6.42 (163)	7.17 (182)	7.48 (190)
C	2.50 (64)	2.98 (76)	3.02 (77)	3.68 (93)	4.63 (118)	5.24 (133)
WTS.	1.30 (0.59)	2.20 (1.00)	3.20 (1.45)	4.80 (2.18)	7.10 (3.22)	11.50 (5.20)

# Bronze Globe Valve Fig. 592J

## Class 300 • Rising Stem • Threaded Ends

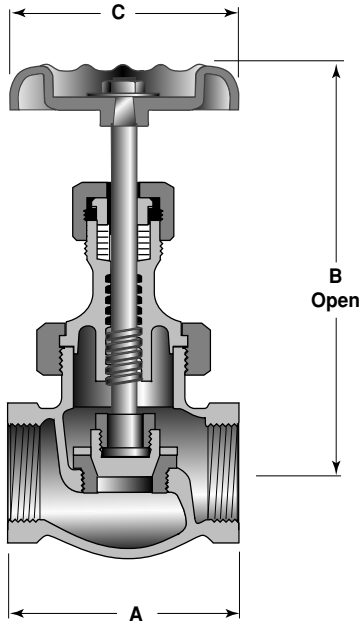


Figure 592J

**Size Range:**

1/4 through 3 inches

**Working Pressures**

**Non-Shock:**

300 psi Steam, Basic Rating

1/4" to 2" - (6mm-50mm)

1000 psi Cold Working Pressure

1/4" to 2" - (6mm-50mm)

600 psi Cold Working Pressure

2 1/2" to 3" - (65mm-80mm)

**Features**

- Rising Stem
- Union Bonnet
- Plug Type Disc
- 450 Brinell hardened Stainless Steel Seat Ring
- Wide Seating Surface
- Valves 2" (50mm) and smaller have compact union bonnet; 2 1/2" (65mm) and 3" (80mm) use bolted bonnet. Both types can be dismantled and reassembled without danger of damage to valve.
- Threaded Ends
- MSS Specification SP-80

For more detailed features, refer to page 21.

### Principal Parts & Materials

Part	Sizes	Material	ASTM
Body	All	Bronze	B61 C92200
Bonnet	1/4" - 3/8"	Brass	B16 H02
Bonnet	1/2" - 3"	Bronze	B61 C92200
Disc & seat ring	All	Stainless Steel	A276 S42000
Stem	All	Bronze	B371 C69400

### Dimensions and Weights

Inches (millimeters) - pounds (kilograms)

	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)
A	1.97 (50)	1.97 (50)	2.63 (67)	2.99 (76)	3.51 (89)	4.04 (103)	4.57 (116)	5.72 (145)	7.28 (185)	8.70 (221)
B	4.43 (113)	4.43 (113)	4.09 (104)	5.10 (130)	5.58 (142)	6.42 (163)	7.17 (182)	7.48 (190)	8.44 (214)	9.79 (249)
C	2.13 (54)	2.13 (54)	2.50 (64)	2.98 (76)	3.02 (77)	3.68 (93)	4.63 (118)	5.24 (133)	6.97 (177)	7.00 (178)
WTS.	0.90 (0.39)	0.90 (0.39)	1.30 (0.59)	2.20 (1.00)	3.20 (1.45)	4.80 (2.18)	7.10 (3.22)	11.50 (5.20)	25.10 (11.39)	40.50 (18.37)

# Bronze Angle Valve Fig. 594J

## Class 300 • Rising Stem • Threaded Ends

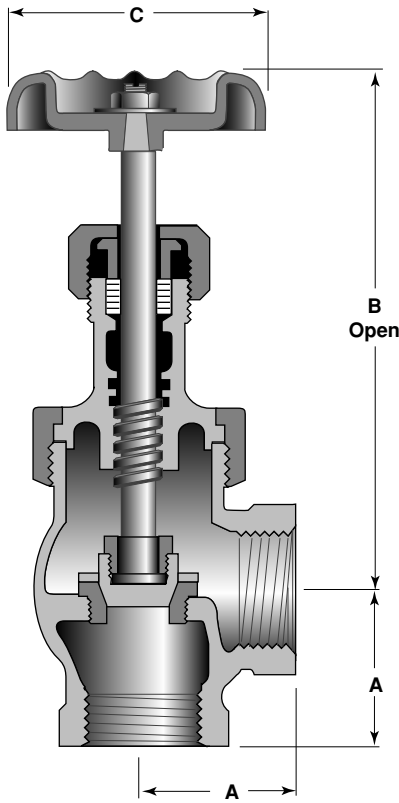


Figure 594J

**Size Range:**

1/4 through 2 inches

**Working Pressures**

**Non-Shock:**

300 psi Steam, Basic Rating

1000 psi Cold Working Pressure

**Features**

- Rising Stem
- All sizes are air tested and reliable for exceptionally severe services such as throttling, blow-off, boiler feed, drip, and drain lines. Recommended for non-shock water, oil, gas or air.
- Plug Type Disc
- Union Bonnet
- Threaded Ends
- Wide Seating Surfaces
- 450 Brinell Hardened Stainless Steel Seat Ring
- Backseat
- MSS Specification SP-80

For more detailed features, refer to page 21.

**Principal Parts & Materials**

Part	Sizes	Material	ASTM
Body	All	Bronze	B61 C92200
Bonnet	1/4" - 3/8"	Brass	B16 H02
Bonnet	1/2" - 2"	Bronze	B61 C92200
Disc	All	Stainless Steel	A276 S42000
Stem	All	Bronze	B371 C69400
Seat Ring	All	Stainless Steel	A276 S42000

**Dimensions and Weights**

Inches (millimeters) - pounds (kilograms)

	1/4 (6)	3/8 (10)	1/2 (15)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)
A	1.14 (29)	1.17 (30)	1.13 (29)	1.37 (35)	1.63 (41)	2.03 (52)	2.19 (56)	2.74 (70)
B	4.24 (108)	4.21 (107)	4.01 (102)	4.97 (126)	5.35 (136)	6.31 (160)	6.99 (178)	7.17 (182)
C	2.13 (54)	2.13 (54)	2.50 (64)	2.96 (75)	3.00 (76)	3.76 (96)	4.60 (117)	5.26 (134)
WTS.	1.00 (0.45)	0.90 (0.41)	1.30 (0.59)	2.20 (1.00)	3.30 (1.50)	5.70 (2.59)	7.70 (3.49)	13.10 (5.94)