

C-IRR-0320

# NIBCO®

AHEAD OF THE FLOW®



## Irrigation Valves

# Business-to-Business Solutions

Look to NIBCO for technology leadership.

The velocity with which e-business evolves demands that new products and services be continuously developed and introduced to keep our customers at the center of our business efforts. NIBCO provides an entire suite of business-to-business solutions that is changing the way we interact with customers.



NIBCOpartner.com<sup>sm</sup> is an exclusive set of secure web applications that allow quick access to customer-specific information and online order processing. This self-service approach gives you 24/7 access to your order status putting you in total control of your business.



Real time information includes:

- Online order entry
- Viewable invoices & reports
- Inventory availability
- Current price checks
- Order status
- Online library of price sheets, catalogs & submittals

Electronic Data Interchange (EDI) makes it possible to trade business documents at the speed of light. This technology cuts the cost of each transaction by eliminating the manual labor and paper-work involved in traditional order taking. This amounts to cost-savings, increased accuracy and better use of resources.

With EDI, you can trade:

- Purchase orders
- PO Acknowledgements
- Invoices
- Product activity data
- Advanced ship notices
- Remittance advice



Vendor Managed Inventory (VMI), a sophisticated service for automated inventory management, reduces your overhead by transferring inventory management, order entry and forecasting to NIBCO. This is an on-going, interactive partnership with NIBCO.

Through automation, VMI brings results:

- Improves customer service
- Optimum inventory efficiencies
- Better forecasting
- Cuts transaction costs
- Peace of mind
- Relief from day-to-day management

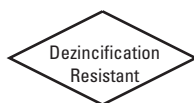




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De-alloying corrosion, known as "Dezincification," was effectively eradicated from valve products in the 1950s. Today, however, this problem has returned with the increased use of high-zinc alloys (commonly referred to as 'Yellow Brass') in forged and cast valves typically produced outside the United States.

Dezincification selectively removes zinc from the alloy, leaving behind a porous, copper-rich structure that has little mechanical strength. The physical attributes of an in-service valve with Dezincification includes a white powdery substance or mineral stains on its exterior surface.

**What's the cure? On all bronze valves the metal components in the waterway must not contain more than 15% zinc in their chemical makeup. As a standard NIBCO bronze irrigation valves are made to be "Dezincification Resistant," which is a seal of quality and longevity.**

# Bronze and Brass Gate Valves

## Illustrated Index

Dezincification  
Resistant

Bronze Gate Valve  
Screw-in Bonnet  
250 PSI

Dezincification  
Resistant



**PR-113-K**  
Non-Rising Stem • Solid Wedge •  
Push-on Ends with Joint Restraints  
Size 2"  
Threaded Ends  
**Page 5**

Bronze Gate Valve  
Screw-in Bonnet  
125 lb. SWP  
200 lb. CWP

Dezincification  
Resistant



**T-113-K/T-113-BHW/T-113**  
Non-Rising Stem • Solid Wedge  
Sizes 1/4" thru 3"  
Threaded Ends  
**Page 6**

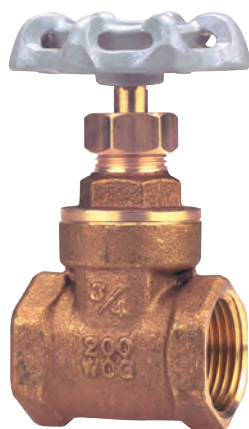
Bronze Gate Valve  
Screw-in Bonnet  
200 lb. CWP

Dezincification  
Resistant



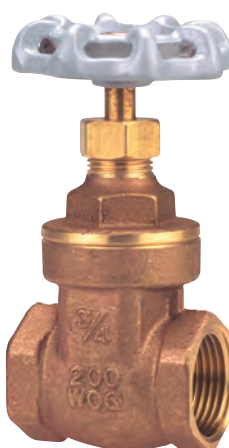
**T-29-K/T-29**  
Non-Rising Stem • Solid Wedge  
Sizes 1/2" thru 2"  
Threaded Ends  
**Page 7**

Brass Gate Valve  
Screw-in Bonnet • Reduced Port  
200 lb. CWP



**TI-7**  
Non-Rising Stem • Solid Wedge  
Sizes 1/2" thru 4"  
Threaded Ends  
**Page 8**

Brass Gate Valve  
Screw-in Bonnet  
200 lb. CWP



**TI-8**  
Non-Rising Stem • Solid Wedge  
Sizes 1/2" thru 2"  
Threaded Ends  
**Page 9**

Bronze Hose Gate Valve  
Screw-in Bonnet  
175 lb. CWP

Dezincification  
Resistant



**T-103-HC**  
Non-Rising Stem • Solid Wedge  
Sizes 1/2" thru 2"  
Threaded x Hose Ends  
**Page 10**

# 250 PSI CWP Bronze Gate Valve

Screw-in Bonnet • Non-Rising Stem • Solid Wedge •  
Push-on Ends with Joint Restraints

**250 PSI/17.2 Bar Bar Non-Shock Cold Working Pressure**

CONFORMS TO MSS SP-80

## MATERIAL LIST

| PART                    | SPECIFICATION                                                    |
|-------------------------|------------------------------------------------------------------|
| 1. Handwheel Nut        | 300 Series Stainless Steel                                       |
| 2. Identification Plate | Aluminum                                                         |
| 3. Handwheel, Cross     | Bronze ASTM B 584 Alloy C84400                                   |
| 4. Stem                 | Silicon Bronze ASTM B 371 Alloy C69430 or ASTM B 99 Alloy C65100 |
| 5. Packing Nut          | Bronze ASTM B 62 or ASTM B 584 or Brass ASTM B 16                |
| 6. Packing Gland        | Bronze ASTM B 62 or ASTM B 584 or Brass ASTM B 16                |
| 7. Packing              | Aramid Fibers with Graphite                                      |
| 8. Stuffing Box         | Bronze ASTM B 62 Alloy C83600                                    |
| 9. Bonnet               | Bronze ASTM B 62 Alloy C83600                                    |
| 10. Body                | Bronze ASTM B 584 Alloy C84400 or ASTM B 62 Alloy C83600         |
| 11. Wedge               | Bronze ASTM B 62 Alloy C83600                                    |

## DIMENSIONS—WEIGHTS

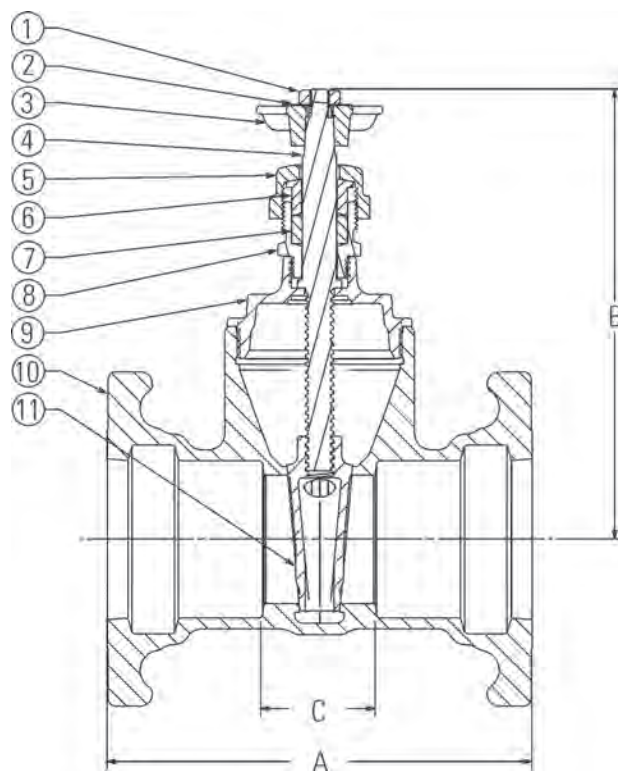
| Size |     | Dimensions |       |      |       |      |      | Weight |      |
|------|-----|------------|-------|------|-------|------|------|--------|------|
|      |     | A          |       | B    |       | C    |      |        |      |
| In.  | mm. | In.        | mm.   | In.  | mm.   | In.  | mm.  | Lbs.   | Kg.  |
| 2    | 50  | 6.63       | 168.4 | 7.00 | 177.8 | 1.78 | 45.2 | 8.28   | 3.75 |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Dezincification  
Resistant



**PR-113-K**



**PR-113-K**  
PO x PO

**Freezing Weather Precaution –** Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

# Class 125 Bronze Gate Valves

Screw-In Bonnet • Non-Rising Stem • Solid Wedge

125 PSI/8.6 bar saturated steam to 353°F/178°C

200 PSI/13.8 bar non-shock cold working pressure

CONFORMS TO MSS SP-80

## MATERIAL LIST

| PART                    | SPECIFICATION                                                                             |
|-------------------------|-------------------------------------------------------------------------------------------|
| 1. Handwheel Nut        | 300 Series Stainless Steel                                                                |
| 2. Identification Plate | Aluminum                                                                                  |
| 3. Handwheel            | a. Malleable Iron ASTM A 47 (T-113)<br>b. Bronze (T-113-BHW)<br>c. Bronze Cross (T-113-K) |
| 4. Stem                 | Silicon Bronze ASTM B 371<br>Alloy C69400/C69430<br>or ASTM B99 Alloy C65100              |
| 5. Packing Nut          | Bronze ASTM B 62 or ASTM B584<br>Alloy C84400 or Brass ASTM B 16                          |
| 6. Packing Gland        | Bronze ASTM B 62 or ASTM B584<br>Alloy C84400 or Brass ASTM B 16                          |
| 7. Packing              | Aramid Fibers with Graphite                                                               |
| 8. Stuffing Box         | Bronze ASTM B 62                                                                          |
| 9. Bonnet               | Bronze ASTM B 62                                                                          |
| 10. Body                | Bronze ASTM B 62                                                                          |
| 11. Wedge               | Bronze ASTM B 62                                                                          |

## DIMENSIONS—WEIGHTS—QUANTITIES

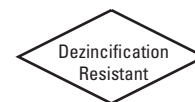
| Dimensions |     |      |     |      |     |      |     |       |      |        |      |
|------------|-----|------|-----|------|-----|------|-----|-------|------|--------|------|
| Size       |     | A    |     | B    |     | C    |     | T-113 |      | Master |      |
| In.        | mm. | In.  | mm. | In.  | mm. | In.  | mm. | Lbs.  | Kg.  | Ctn.   | Qty. |
| ¼ †        | 8   | 1.69 | 43  | 3.38 | 86  | x    | x   | 0.74  | 0.33 |        | 50   |
| ⅜ †        | 10  | 1.69 | 43  | 3.38 | 86  | .69  | 18  | 0.71  | 0.32 |        | 50   |
| ½ †        | 15  | 1.94 | 49  | 3.63 | 92  | .75  | 19  | 0.82  | 0.37 |        | 50   |
| ¾          | 20  | 2.06 | 54  | 3.91 | 99  | .88  | 22  | 1.10  | 0.50 |        | 50   |
| 1          | 25  | 2.44 | 62  | 4.69 | 119 | 1.00 | 25  | 1.82  | 0.82 |        | 30   |
| 1¼         | 32  | 2.63 | 67  | 5.22 | 133 | 1.19 | 32  | 2.40  | 1.09 |        | 20   |
| 1½         | 40  | 2.88 | 72  | 6.25 | 159 | 1.25 | 33  | 3.51  | 1.59 |        | 10   |
| 2          | 50  | 3.06 | 78  | 7.06 | 179 | 1.31 | 34  | 4.93  | 2.24 |        | 10   |
| 2½         | 65  | 4.13 | 105 | 8.41 | 224 | 1.81 | 46  | 9.96  | 4.52 |        | 5    |
| 3          | 80  | 4.50 | 114 | 10   | 254 | 1.94 | 49  | 14.40 | 6.53 |        | 4    |

†No packing gland, packing only in these sizes.

xNot available this size.

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

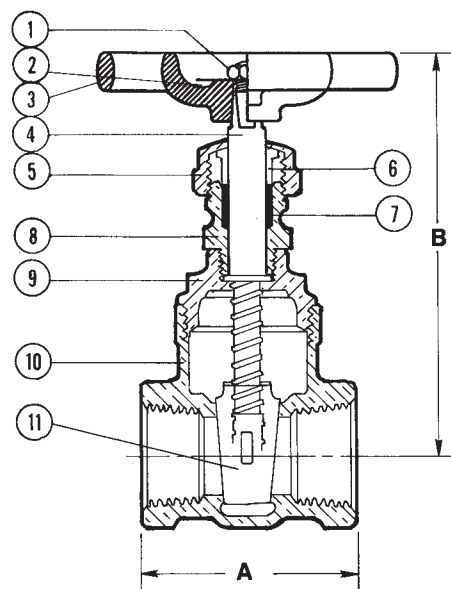
**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



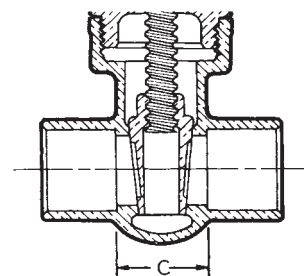
**T-113**  
Threaded



**T-113-K**  
Threaded  
With Cross Handle



**T-113**  
NPT x NPT



**S-113**  
C x C

# 200 PSI CWP Bronze Gate Valves

Screw-in Bonnet • Non-Rising Stem • Solid Wedge • Compact Design

**200 PSI/13.8 Bar Non-Shock Cold Working Pressure**

Dezincification  
Resistant

## MATERIAL LIST

| PART               | SPECIFICATION                                  |
|--------------------|------------------------------------------------|
| 1. Handwheel Screw | Stainless Steel                                |
| 2. Handle          | a. Bronze Cross (T-29-K)<br>b. Aluminum (T-29) |
| 3. Stem            | Copper ASTM B 99 Alloy C10200                  |
| 4. Stem Seal       | Rubber EPDM "O" Ring                           |
| 5. Bonnet          | Cast Copper-based Alloy C84400                 |
| 6. Wedge           | Cast Copper-based Alloy C84400                 |
| 7. Body            | Cast Copper-based Alloy C84400                 |



**T-29-K\***  
Threaded  
with Cross Handle



**T-29**  
Threaded

## DIMENSIONS—WEIGHTS—QUANTITIES

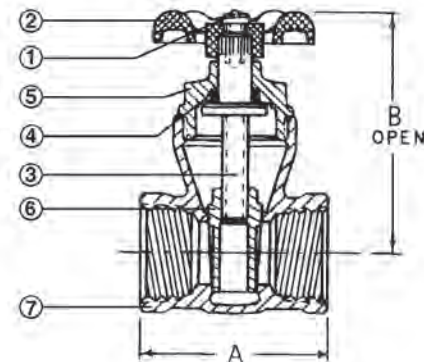
| Size |     | Dimensions |     |      |     | T-29-K |      | Master Ctn. Qty. |
|------|-----|------------|-----|------|-----|--------|------|------------------|
|      |     | A          |     | B    |     |        |      |                  |
| In.  | mm. | In.        | mm. | In.  | mm. | Lbs.   | Kg.  |                  |
| ½    | 15  | 1.81       | 46  | 2.50 | 64  | .48    | .22  | 100              |
| ¾    | 20  | 2.00       | 51  | 2.88 | 73  | .67    | .30  | 100              |
| 1    | 25  | 2.31       | 59  | 3.56 | 90  | 1.22   | .55  | 50               |
| 1 ¼  | 32  | 2.63       | 67  | 3.69 | 94  | 1.54   | .70  | 40               |
| 1 ½  | 40  | 2.75       | 70  | 4.19 | 106 | 2.12   | .96  | 20               |
| 2    | 50  | 2.88       | 73  | 4.88 | 124 | 3.29   | 1.49 | 20               |

Each valve individually tested in ISO 9002 certified facility.

\* T-29-K only available in sizes 1" to 2"

**Freezing Weather Precaution** – Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

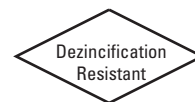
**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**T-29-K**  
NPT x NPT

# 150 PSI CWP Brass Gate Valves

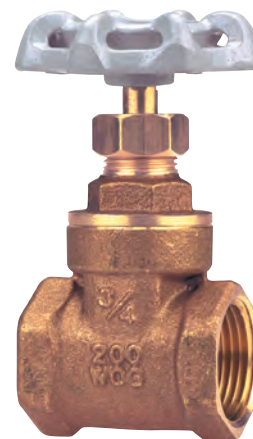
Bronze Body • Non-Rising Stem • Reduced Port



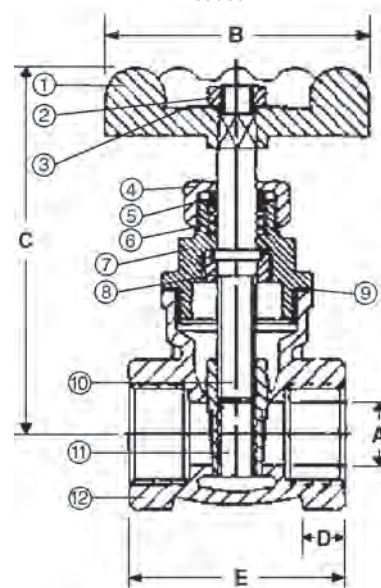
**150 PSI/10.3 Bar Non-Shock Cold Working Pressure to 180° F/82° C**

## MATERIAL LIST

| PART                    | SPECIFICATION |
|-------------------------|---------------|
| 1. Handwheel            | Cast Iron     |
| 2. Handle Nut           | Brass Rod     |
| 3. Identification Plate | Aluminum      |
| 4. Packing Nut          | Brass Rod     |
| 5. Gasket Washer        | PTFE          |
| 6. Gasket               | Brass Tube    |
| 7. Bonnet               | Cast Brass    |
| 8. Retainer             | Brass Rod     |
| 9. Washer               | PTFE          |
| 10. Stem                | Brass Rod     |
| 11. Disc                | Cast Brass    |
| 12. Body                | Cast Brass    |



**TI-7**  
Threaded



**TI-7**  
NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |      |     |         |     |      |     |        |      |           |
|------------|-----|------|-----|------|-----|------|-----|---------|-----|------|-----|--------|------|-----------|
| Size       |     | A    |     | B    |     | C    |     | D (min) |     | E    |     | Master |      |           |
| In.        | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.     | mm. | In.  | mm. | Lbs.   | Kg.  | Ctn. Qty. |
| ½          | 15  | .47  | 12  | 2.09 | 53  | 2.56 | 65  | .50     | 13  | 1.69 | 43  | .46    | .21  | 100       |
| ¾          | 20  | .63  | 16  | 2.09 | 53  | 2.91 | 74  | .50     | 13  | 1.81 | 46  | .59    | .27  | 60        |
| 1          | 25  | .78  | 20  | 2.31 | 59  | 3.22 | 82  | .59     | 15  | 2.06 | 52  | .83    | .38  | 40        |
| 1 ¼        | 32  | 1.03 | 26  | 2.31 | 59  | 3.66 | 93  | .59     | 15  | 2.13 | 54  | 1.18   | .54  | 30        |
| 1 ½        | 40  | 1.25 | 32  | 2.94 | 75  | 4.50 | 114 | .59     | 15  | 2.25 | 57  | 1.65   | .75  | 24        |
| 2          | 50  | 1.69 | 43  | 3.63 | 92  | 5.19 | 132 | .59     | 15  | 2.50 | 64  | 2.62   | 1.19 | 16        |
| 2 ½        | 65  | 2.09 | 53  | 3.63 | 92  | 6.03 | 153 | .88     | 22  | 3.03 | 77  | 3.86   | 1.75 | 8         |
| 3          | 80  | 2.28 | 58  | 4.31 | 110 | 6.81 | 173 | .88     | 22  | 3.19 | 81  | 5.88   | 2.67 | 6         |
| 4          | 100 | 3.00 | 76  | 4.94 | 125 | 7.69 | 195 | .88     | 22  | 3.50 | 89  | 8.82   | 4.00 | 3         |

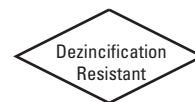


**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Freezing Weather Precaution –** Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

# 200 PSI CWP Brass Gate Valves

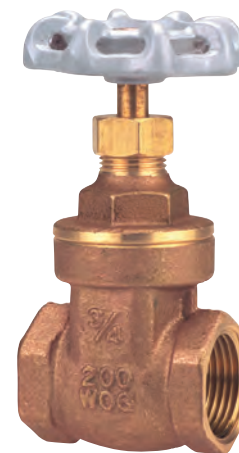
Bronze Body • Non-Rising Stem • Full Port



**200 PSI/13.8 Bar Non-Shock Cold Working Pressure to 180° F/82° C**

## MATERIAL LIST

| PART                    | SPECIFICATION        |
|-------------------------|----------------------|
| 1. Handwheel            | Cast Iron            |
| 2. Handle Nut           | Brass Nut            |
| 3. Identification Plate | Aluminum             |
| 4. Packing Nut          | Brass Rod            |
| 5. Packing Gland        | Graphite Rubber      |
| 6. Bonnet               | Cast Brass           |
| 7. Stem                 | Brass Rod/Cast Brass |
| 8. Retainer             | Brass Rod            |
| 9. Washer               | PTFE                 |
| 10. Disc                | Cast Brass           |
| 11. Body                | Cast Brass           |



**TI-8**  
Threaded

## DIMENSIONS—WEIGHTS—QUANTITIES

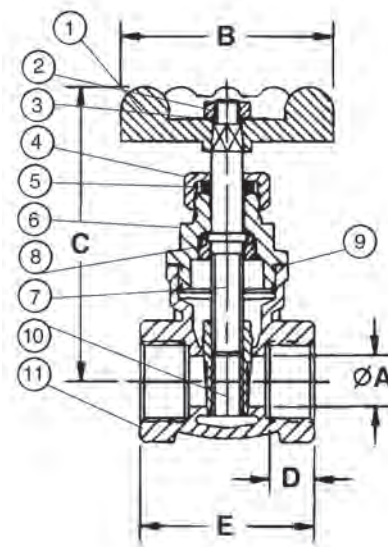
### Dimensions

| Size     | A    |     | B    |     | C     |     | D (min) |     | E    |     | TI-8  |      | Master    |
|----------|------|-----|------|-----|-------|-----|---------|-----|------|-----|-------|------|-----------|
| In. mm.  | In.  | mm. | In.  | mm. | In.   | mm. | In.     | mm. | In.  | mm. | Lbs.  | Kg.  | Ctn. Qty. |
| 1/4 8    | .44  | 11  | 2.09 | 53  | 2.72  | 69  | .38     | 10  | 1.56 | 40  | .57   | .26  | 100       |
| 3/8 10   | .44  | 11  | 2.09 | 53  | 2.84  | 72  | .38     | 10  | 1.63 | 41  | .55   | .25  | 100       |
| 1/2 15   | .47  | 12  | 2.09 | 53  | 3.00  | 76  | .50     | 13  | 1.69 | 43  | .60   | .27  | 100       |
| 3/4 20   | .75  | 19  | 2.09 | 53  | 3.31  | 84  | .50     | 13  | 1.81 | 46  | .77   | .35  | 60        |
| 1 25     | 1.00 | 25  | 2.31 | 59  | 3.75  | 95  | .59     | 15  | 2.09 | 53  | 1.05  | .48  | 40        |
| 1 1/4 32 | 1.22 | 31  | 2.63 | 67  | 4.53  | 115 | .59     | 15  | 2.31 | 59  | 1.54  | .70  | 30        |
| 1 1/2 40 | 1.50 | 38  | 2.94 | 75  | 5.13  | 130 | .59     | 15  | 2.44 | 62  | 2.11  | .96  | 24        |
| 2 50     | 1.88 | 48  | 3.63 | 92  | 5.91  | 150 | .59     | 15  | 2.81 | 71  | 3.17  | 1.44 | 16        |
| 2 1/2 65 | 2.47 | 63  | 4.31 | 110 | 7.81  | 198 | .88     | 22  | 3.59 | 91  | 5.79  | 2.63 | 8         |
| 3 80     | 2.84 | 72  | 4.63 | 117 | 8.91  | 226 | .88     | 22  | 3.81 | 97  | 8.09  | 3.67 | 6         |
| 4 100    | 3.66 | 93  | 4.94 | 125 | 10.38 | 264 | .88     | 22  | 4.53 | 115 | 12.84 | 5.83 | 2         |

Threaded ends per ANSI B1 20.1.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

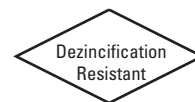


**TI-8**  
NPT x NPT

**Freezing Weather Precaution –** Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

# 175 PSI CWP Bronze Hose Gate Valves

Screw-in Bonnet • Non-Rising Stem • Solid Wedge



**175 PSI/12.1 Bar Non-Shock Cold Working Pressure**

CONFORMS TO MSS SP-80 •  
UL LISTED • FMRC APPROVED

## MATERIAL LIST

| PART                | SPECIFICATION                          |
|---------------------|----------------------------------------|
| 1. Handwheel Nut    | Bronze ASTM B 16                       |
| 2. Handwheel        | Malleable Iron                         |
| 3. Stem             | Silicon Bronze ASTM B 371 Alloy C69400 |
| 4. Packing Nut      | Bronze ASTM B 62                       |
| 5. Packing Gland    | Bronze ASTM B 16<br>or ASTM B 62       |
| 6. Packing          | Non-Asbestos                           |
| 7. Stuffing Box     | Bronze ASTM B 62                       |
| 8. Bonnet           | Bronze ASTM B 62                       |
| 9. Body             | Bronze ASTM B 62                       |
| 10. Wedge           | Bronze ASTM B 62                       |
| 11. Hose Cap        | Bronze ASTM B 62                       |
| 12. Hose Cap Gasket | Rubber                                 |
| 13. Safety Chain    | Brass                                  |



## T-103-HC

Threaded  
with Cap and Chain

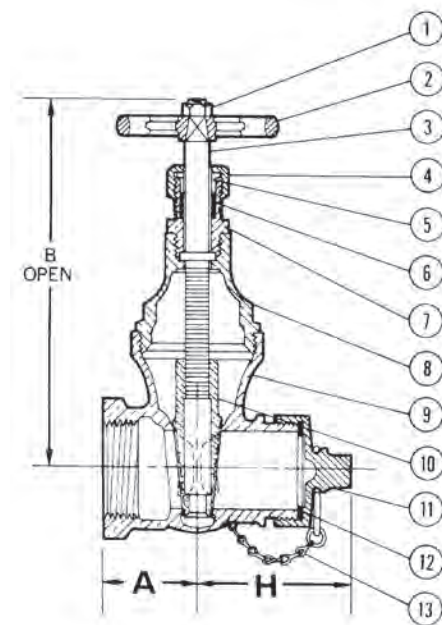
## DIMENSIONS—WEIGHTS—QUANTITIES

### Dimensions

| Size |     | A    |     | B     |     | H    |     | T-103-HC |      | Master    |
|------|-----|------|-----|-------|-----|------|-----|----------|------|-----------|
| In.  | mm. | In.  | mm. | In.   | mm. | In.  | mm. | Lbs.     | Kg.  | Ctn. Qty. |
| 2½   | 65  | 3.00 | 76  | 11.38 | 289 | 4.75 | 121 | 18.5     | 8.40 | 2         |



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



## T-103-HC

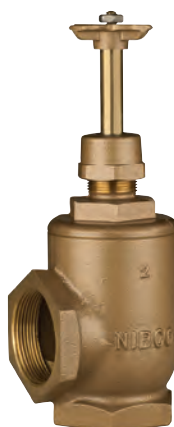
NPT x ANFH (NFA)  
Hose 7.5 Threads Per Inch

**Freezing Weather Precaution –** Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

# Bronze Globe and Angle Valves Illustrated Index

Dezincification  
Resistant

Bronze Globe Valve  
Screw-in Bonnet  
250 PSI CWP



**T-381-WK**  
Integral Seat • Renewable Disc  
Size 2"  
Threaded Ends  
**Page 12**

Bronze Globe Valve  
Screw-in Bonnet  
125 PSI CWP



**75-K**  
Integral Seat • Resilient Disc  
Sizes 1/2" thru 3/4"  
Threaded Ends  
**Page 13**

Bronze Globe Valve  
Screw-in Bonnet • Cross Handle  
125 lb. SWP  
200 lb. CWP



**T-211-YK**  
Integral Seat • Renewable Seat and Disc  
Sizes 1" thru 2"  
Threaded Ends  
**Page 14**

Bronze Globe Valve  
Screw-in Bonnet  
125 lb. SWP  
200 lb. CWP



**T-211-Y**  
Integral Seat • Renewable Seat and Disc  
Sizes 1/4" thru 3"  
Threaded Ends  
**Page 14**

Bronze Angle Valve  
Screw-in Bonnet • Cross Handle  
125 lb. SWP  
200 lb. CWP



**T-311-YK**  
Integral Seat • Renewable Seat and Disc  
Sizes 1" thru 2"  
Threaded Ends  
**Page 15**

Bronze Angle Valve  
Screw-in Bonnet  
125 lb. SWP  
200 lb. CWP



**T-311-Y**  
Integral Seat • Renewable Seat and Disc  
Sizes 1/4" thru 3"  
Threaded Ends  
**Page 15**

# 250 PSI CWP Bronze Angle Valves

Screw-in Bonnet • Integral Seat • Renewable Disc

Dezincification  
Resistant

**250 PSI/17.2 Bar Non-Shock Cold Working Pressure**

CONFORMS TO MSS SP-80

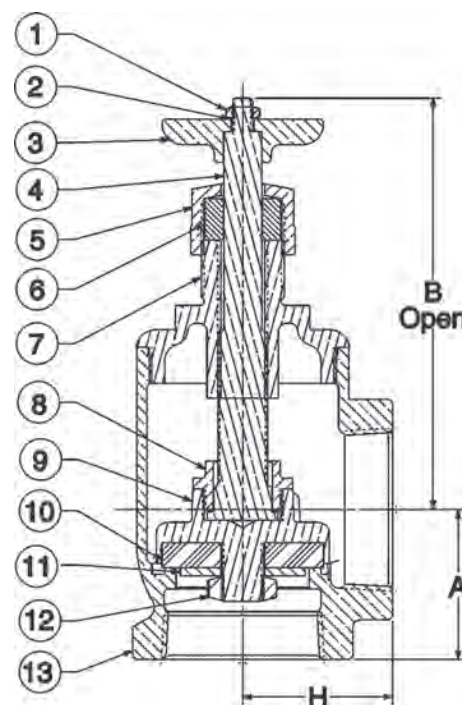
## MATERIAL LIST

| PART                    | SPECIFICATION                          |
|-------------------------|----------------------------------------|
| 1. Handwheel Nut        | Stainless Steel                        |
| 2. Identification Plate | Aluminum                               |
| 3. Handwheel            | Bronze Cross ASTM B 62 Alloy C83600    |
| 4. Stem                 | Silicon Bronze ASTM B 371 Alloy C69430 |
| 5. Packing Nut          | Brass ASTM B 16 Alloy C36000           |
| 6. Packing              | Aramid Fibers with Graphite            |
| 7. Bonnet               | Bronze ASTM B 62 Alloy C83600          |
| 8. Disc Holder Nut      | Bronze ASTM B 62 Alloy C83600          |
| 9. Disc Holder          | Bronze ASTM B 62 Alloy C83600          |
| 10. Seat Disc           | Nitrile Rubber (W)                     |
| 11. Seat Disc Washer    | Stainless Steel                        |
| 12. Seat Disc Nut       | Silicon Bronze ASTM B 96 Alloy C65100  |
| 13. Body                | Bronze ASTM B 584 Alloy C83600         |



**T-381-WK**

Threaded



**T-381-WK**

NPT x NPT

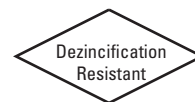
## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |      |        |      |      |           |
|------------|-----|------|-----|------|-----|------|--------|------|------|-----------|
| Size       | A   |      | B   |      | H   |      | Weight |      | Box  |           |
| Master     | In. | mm.  | In. | mm.  | In. | mm.  | Lbs.   | Kg.  | Qty. | Ctn. Qty. |
| 2          | 50  | 2.25 | 57  | 7.14 | 181 | 2.25 | 57     | 6.72 | 3.05 | 1 6       |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# 125 PSI CWP Bronze Globe Valves

Screw-in Bonnet • Integral Seat • Resilient Seat



**125 PSI/8.6 Bar Non-Shock Cold Working Pressure**

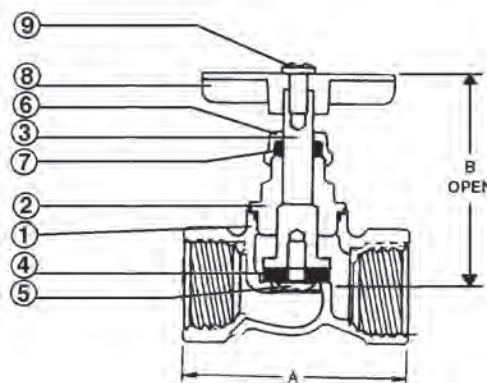
## MATERIAL LIST

| PART               | SPECIFICATION                      |
|--------------------|------------------------------------|
| 1. Body            | Cast Copper-based Alloy C84400     |
| 2. Bonnet          | Cast Copper-based Alloy C84400     |
| 3. Stem            | Cold-formed Copper Alloy           |
| 4. Seat Disc       | Buna-N Rubber                      |
| 5. Seat Disc Screw | Stainless Steel Type 430           |
| 6. Packing Nut     | Free Cutting Brass ASTM B 16       |
| 7. Packing         | Graphite Impregnated Asbestos-Free |
| 8. Handwheel       | Cast Copper-based Alloy C83800     |
| 9. T-Handle Screw  | Stainless Steel                    |

Maximum operating temperature 180° F/82° C.



**75-K**  
Threaded  
with Cross Handle



**75-K**  
NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

| Size |     | Dimensions |     |      |     | 75-K |     | Master |      |
|------|-----|------------|-----|------|-----|------|-----|--------|------|
|      |     | A          |     | B    |     |      |     |        |      |
| In.  | mm. | In.        | mm. | In.  | mm. | Lbs. | Kg. | Ctn.   | Qty. |
| 1/2  | 15  | 2.13       | 54  | 2.44 | 62  | .4   | .18 | 100    |      |
| 3/4  | 20  | 2.25       | 57  | 2.44 | 62  | .5   | .23 | 100    |      |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**Freezing Weather Precaution –** Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

# Class 125 Bronze Globe Valves

Screw-In Bonnet • Integral Seat • Renewable Seat Disc

**125 PSI/8.6 bar saturated steam to 353° F/178° C**

**200 PSI/13.8 bar non-shock cold working pressure**

CONFORMS TO MSS SP-80

## MATERIAL LIST

| PART                    | SPECIFICATION                                                 |
|-------------------------|---------------------------------------------------------------|
| 1. Handwheel Nut        | 300 Series Stainless Steel                                    |
| 2. Identification Plate | Aluminum                                                      |
| 3. Handwheel            | Malleable Iron ASTM A 47                                      |
| 4. Stem                 | Silicon Bronze ASTM B 371<br>Alloy C69400/C69430              |
| 5. Packing Gland        | Bronze ASTM B 62 or ASTM B124<br>Brass ASTM B16 C36000        |
| 6. Packing Nut          | Bronze ASTM B 62 or ASTM B584<br>Alloy C37700 or Alloy C36000 |
| 7. Packing              | Aramid Fibers with Graphite                                   |
| 8. Bonnet               | Bronze ASTM B 62                                              |
| 9. Disc Holder Nut      | Bronze ASTM B 140<br>Alloy C31400 or B 62                     |
| *10. Disc Holder        | Bronze ASTM B 62                                              |
| *11. Seat Disc          | Water, Oil or Gas<br>Steam (PTFE) (Y)                         |
| *11a. Seat Disc         | Bronze ASTM B 62 (B)                                          |
| *12. Disc Nut           | Bronze ASTM B 62/ASTM B 98<br>Alloy C65100 w/SS Washer        |
| 13. Body                | Bronze ASTM B 62                                              |

Note: S-211 not available with (B) Disc.

\*The Bronze Disc does not require a Disc Nut. When converting from (B) Disc to (Y) Disc, order Disc Nut (12) and Disc Holder (10) and proper disc (11).

## DIMENSIONS—WEIGHTS—QUANTITIES

| Size  | Dimensions |      |     |       |     |      |      |       | T-211 | Master Ctn. Qty. |
|-------|------------|------|-----|-------|-----|------|------|-------|-------|------------------|
|       | A          |      | B   |       | C   |      |      |       |       |                  |
|       | In.        | mm.  | In. | mm.   | In. | mm.  | Lbs. | Kg.   |       |                  |
| *1/8† | 6          | 2.38 | 60  | 3.38  | 86  | 1.81 | 46   | 1.01  | 0.46  | 50               |
| *1/4† | 8          | 2.38 | 60  | 3.38  | 86  | 1.81 | 46   | 1.00  | 0.45  | 50               |
| *3/8† | 10         | 2.38 | 60  | 3.38  | 86  | 1.81 | 46   | 0.98  | 0.45  | 50               |
| *1/2† | 15         | 2.56 | 65  | 3.38  | 86  | 1.69 | 43   | 1.03  | 0.47  | 50               |
| 3/4   | 20         | 3.06 | 78  | 4.88  | 124 | 2.25 | 57   | 1.73  | 0.79  | 30               |
| 1     | 25         | 3.69 | 94  | 5.69  | 145 | 2.81 | 72   | 2.85  | 1.29  | 20               |
| 1 1/4 | 32         | 4.31 | 110 | 6.13  | 156 | 3.06 | 78   | 3.79  | 1.72  | 10               |
| 1 1/2 | 40         | 4.69 | 119 | 7.38  | 187 | 3.56 | 91   | 5.90  | 2.68  | 10               |
| 2     | 50         | 5.63 | 143 | 7.94  | 202 | 4.44 | 113  | 8.68  | 3.94  | 6                |
| 2 1/2 | 65         | 6.63 | 168 | 10.19 | 259 | 5.25 | 133  | 15.40 | 6.98  | 2                |
| 3     | 80         | 7.75 | 197 | 11.19 | 284 | 6.50 | 165  | 22.44 | 10.18 | 2                |

\*Stem and Disc (or Disc Holder) are integral.

†No packing gland, packing only in these sizes.

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



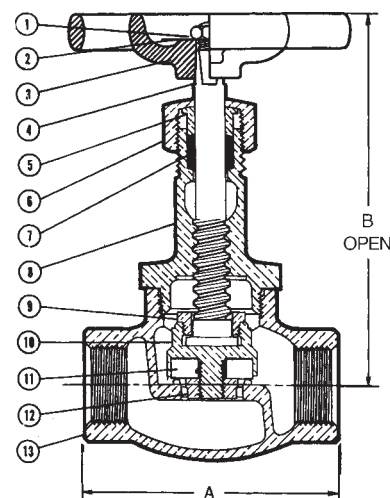
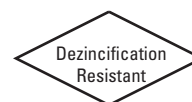
**T-211**

Threaded

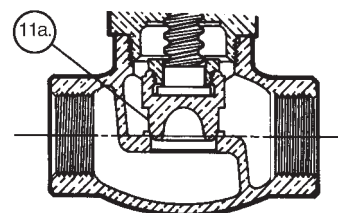


**T-211-YK**

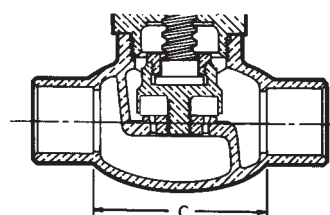
Threaded  
With Cross Handle



**T-211-Y**  
NPT x NPT



**T-211-B**  
NPT x NPT



**S-211-Y**  
C x C

# Class 125 Bronze Angle Valves

Screw-In Bonnet • Integral Seat • Renewable Seat Disc

**125 PSI/8.6 bar saturated steam to 353° F/178° C**

**200 PSI/13.8 bar non-shock cold working pressure**

CONFORMS TO MSS SP-80

## MATERIAL LIST

| PART                    | SPECIFICATION                                                            |
|-------------------------|--------------------------------------------------------------------------|
| 1. Handwheel Nut        | 300 Series Stainless Steel                                               |
| 2. Identification Plate | Aluminum                                                                 |
| 3. Handwheel            | Malleable Iron ASTM A 47                                                 |
| 4. Stem                 | Silicon Bronze ASTM B 371<br>Alloy C69400/C69430                         |
| 5. Packing Gland        | Bronze ASTM B 62 or ASTM B124<br>Brass ASTM B16 C36000                   |
| 6. Packing Nut          | Bronze ASTM B 62 or ASTM B584<br>Alloy C37700 or Brass ASTM Alloy C36000 |
| 7. Packing              | Aramid Fibers with Graphite                                              |
| 8. Bonnet               | Bronze ASTM B 62                                                         |
| *9. Disc Holder Nut     | Bronze ASTM B 62 or<br>B 140 Alloy C31400                                |
| 10. Disc Holder         | Bronze ASTM B 62                                                         |
| 11. Seat Disc           | Steam (PTFE) (Y)                                                         |
| 12. Seat Disc Nut       | Bronze ASTM B 62 w/SS Washer                                             |
| 13. Body                | Bronze ASTM B 62                                                         |

\*2½" and 3" are ASTM B 61

## DIMENSIONS—WEIGHTS—QUANTITIES

| Size |     | Dimensions |     |       |     |       |     | T-311 |      | Master Ctn. Qty. |    |
|------|-----|------------|-----|-------|-----|-------|-----|-------|------|------------------|----|
|      |     | B          |     | F & G |     | H & J |     |       |      |                  |    |
| In.  | mm. | In.        | mm. | In.   | mm. | In.   | mm. | Lbs.  | Kg.  |                  |    |
| *1¼  | 8   | 3.50       | 89  | .94   | 24  | 1.19  | 30  | 0.98  | 0.44 |                  | 50 |
| *¾   | 10  | 3.50       | 89  | .88   | 22  | 1.19  | 30  | 0.93  | 0.42 |                  | 50 |
| *½   | 15  | 3.50       | 89  | .88   | 22  | 1.31  | 33  | 1.01  | 0.46 |                  | 30 |
| ¾    | 20  | 4.94       | 126 | 1.13  | 29  | 1.56  | 40  | 1.70  | 0.77 |                  | 20 |
| 1    | 25  | 5.75       | 146 | 1.44  | 37  | 1.88  | 48  | 2.82  | 1.28 |                  | 10 |
| 1 ¼  | 32  | 6.13       | 156 | 1.50  | 38  | 2.19  | 51  | 3.76  | 1.70 |                  | 10 |
| 1 ½  | 40  | 7.25       | 179 | 1.75  | 45  | 2.38  | 60  | 5.79  | 2.63 |                  | 6  |
| 2    | 50  | 8.13       | 206 | 2.16  | 55  | 2.81  | 72  | 8.76  | 3.97 |                  | 4  |
| 2 ½  | 65  | 10.56      | 268 | 2.69  | 68  | 3.19  | 81  | 16.13 | 7.32 |                  | 2  |
| 3    | 80  | 11.19      | 284 | 3.25  | 83  | 3.88  | 99  | 21.72 | 9.85 |                  | 2  |

\*Stem and Disc or Disc Holder are integral. No packing gland, packing only in these sizes.

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

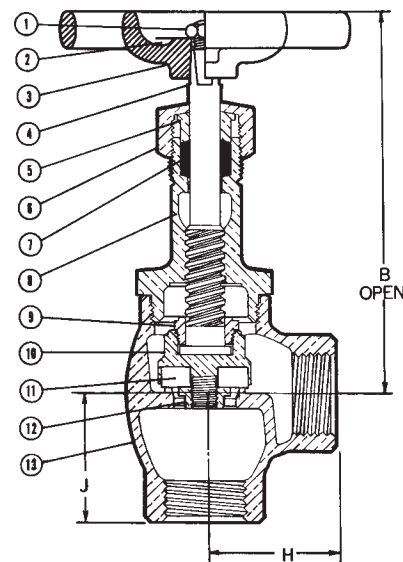
Dezincification  
Resistant



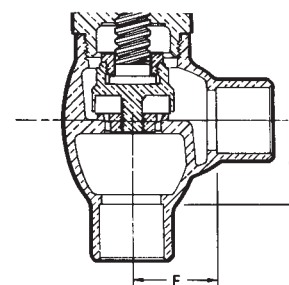
**T-311-Y**  
Threaded



**T-311-YK**  
Threaded  
With Cross Handle



**T-311-Y**  
NPT x NPT



**S-311-Y**  
C x C

# Bronze and Brass Check Valves Illustrated Index

Dezincification  
Resistant

Brass Check Valve  
Horizontal Swing  
200 lb. CWP



**TI-3**  
Sizes ½" thru 4"  
Threaded Ends  
**Page 17**

Bronze Check Valve  
Horizontal Swing  
125 lb. SWP  
200 lb. CWP

Dezincification  
Resistant



**T-413-B or V, W, Y**  
Bronze or Various Non-Metallic Discs  
Regrinding Type • Y-Pattern  
Sizes ¼" thru 3"  
Threaded Ends  
**Page 18**

Bronze Silent Check Valve  
Ring Check Design • Spring Actuated  
125 lb. SWP/250 lb. CWP (PTFE Disc)  
250 lb. CWP (Buna-N Disc)

Dezincification  
Resistant



**T-480**  
Buna-N or PTFE Disc  
Spring Actuated  
Sizes ¾" thru 2"  
Threaded Ends  
**Page 19**

# 200 PSI CWP Brass Check Valves

Swing Type

200 PSI/13.8 Bar Non-Shock Cold Working Pressure to 180° F/82° C

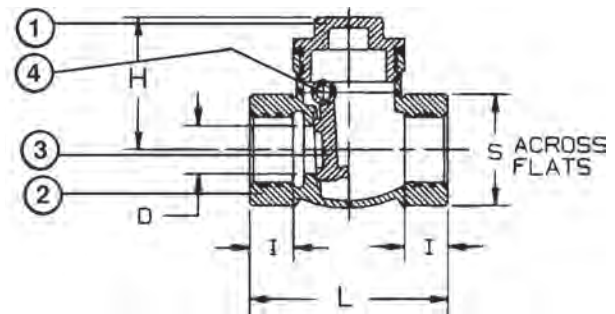
Dezincification  
Resistant



**TI-3**  
Threaded

## MATERIAL LIST

| PART     | SPECIFICATION                            |
|----------|------------------------------------------|
| 1. Cover | Bronze ASTM B 584 Alloy C85700           |
| 2. Body  | Bronze ASTM B 584 Alloy C85700           |
| 3. Disc  | Forging Brass ASTM B 124 Alloy C37700    |
| 4. Pin   | Brass ASTM B 16 Alloy C36000             |
| 5. Screw | Brass ASTM B 16 Alloy C36000 (not shown) |



**TI-3**  
NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

### Dimensions

| Size                                                          | D   |     | H   |     | I (min) |     | L   |     | S   |     | Master |     |           |
|---------------------------------------------------------------|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|--------|-----|-----------|
| In. mm.                                                       | In. | mm. | In. | mm. | In.     | mm. | In. | mm. | In. | mm. | Lbs.   | Kg. | Ctn. Qty. |
| 1/2 15 .50 13 1.50 38 .47 12 2.16 55 1.06 27 .46 .21 160      |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 3/4 20 .72 18 1.66 42 .56 14 2.38 60 1.25 32 .66 .30 120      |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 1 25 .94 24 1.78 45 .56 14 2.75 70 1.56 40 .92 .42 72         |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 1 1/4 32 1.22 31 2.16 55 .72 18 3.22 82 1.97 50 1.60 .73 60   |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 1 1/2 40 1.41 36 2.38 60 .72 20 3.75 95 2.16 55 1.79 .81 32   |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 2 50 1.81 46 2.63 67 .72 20 4.13 105 2.69 68 2.87 1.30 24     |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 2 1/2 65 2.25 57 3.22 82 .88 22 5.31 135 3.31 84 5.29 2.40 12 |     |     |     |     |         |     |     |     |     |     |        |     |           |
| 3 80 2.72 69 3.69 94 1.00 25 5.88 149 3.94 100 8.82 4.00 6    |     |     |     |     |         |     |     |     |     |     |        |     |           |

Threaded ends per ANSI B1 20.1.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

NIBCO check valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position. They will operate satisfactorily in a declining plane (no more than 15°).

**Warning – Do Not Use For Reciprocating Air Compressor Service.**

# Class 125 Bronze Check Valves

Horizontal Swing • Regrinding Type • Y-Pattern • Renewable Seat and Disc

**125 PSI/8.6 Bar Saturated Steam to 353°F/178°C**  
**200 PSI/13.8 Bar Non-Shock Cold Working Pressure**

CONFORMS TO MSS SP-80

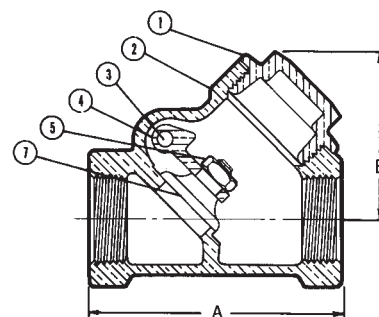
## MATERIAL LIST

| PART                  | SPECIFICATION                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------|
| 1. Bonnet             | Bronze ASTM B 62                                                                          |
| 2. Body               | Bronze ASTM B 62                                                                          |
| 3. Hinge Pin          | Bronze ASTM B140 Alloy C31400 or B 134 Alloy C23000                                       |
| 4. Disc Hanger        | Bronze ASTM B 62 or MPIF SS-316NI-25                                                      |
| 5. Hanger Nut         | Bronze ASTM B 16                                                                          |
| 6. Disc Holder        | Bronze ASTM B 62                                                                          |
| 7. Seat Disc          | Water, Oil or Gas (Buna-N) (W)<br>Steam (PTFE) (Y)<br>Bronze ASTM (B) FKM (V) B 62 C83600 |
| 8. Seat Disc Nut      | Bronze ASTM B 16 or B 62                                                                  |
| 9. Hinge Pin Plug     | Bronze ASTM B140 Alloy C31400 (not shown)                                                 |
| 10. Seat Disc Washer* | ASTM B 98 Alloy C65500 or ASTM B 103                                                      |

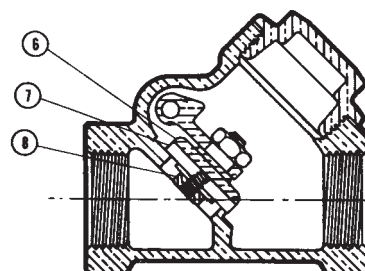
\*Sizes ¾", 1", 1¼", 1½" and 2" only.



**T-413**  
Threaded



**T-413-B**  
NPT x NPT



**T-413-Y**  
NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |      |     |       |      |                  |
|------------|-----|------|-----|------|-----|------|-----|-------|------|------------------|
| Size       |     | A    |     | B    |     | C    |     | T-413 |      | Master Ctn. Qty. |
| In.        | mm. | In.  | mm. | In.  | mm. | In.  | mm. | Lbs.  | Kg.  |                  |
| ¼          | 8   | 2.13 | 54  | 1.63 | 41  | 1.38 | 35  | 0.50  | 0.23 | 50               |
| ⅜          | 10  | 2.13 | 54  | 1.63 | 41  | 1.31 | 33  | 0.47  | 0.22 | 50               |
| ½          | 15  | 2.44 | 62  | 1.69 | 43  | 1.50 | 38  | 0.55  | 0.25 | 50               |
| ¾          | 20  | 2.94 | 75  | 1.88 | 48  | 1.88 | 48  | 0.90  | 0.41 | 10               |
| 1          | 25  | 3.56 | 90  | 2.31 | 59  | 2.25 | 57  | 1.46  | 0.66 | 5                |
| 1¼         | 32  | 4.19 | 106 | 2.69 | 68  | 2.75 | 70  | 2.17  | 0.99 | 20               |
| 1½         | 40  | 4.50 | 114 | 2.94 | 75  | 3.11 | 79  | 2.95  | 1.34 | 10               |
| 2          | 50  | 5.25 | 133 | 3.94 | 100 | 3.75 | 95  | 4.79  | 2.17 | 10               |
| 2½*        | 65  | 8.00 | 203 | 5.06 | 129 | 5.06 | 129 | 11.48 | 5.21 | 5                |
| 3*         | 80  | 9.25 | 235 | 6.25 | 159 | 6.25 | 159 | 17.53 | 7.96 | 4                |

Ordering: T-413 and S-413 normally furnished with Bronze Disc (T-413-B) or (S-413-B).

Both available with PTFE Steam Disc (T-413-Y), (S-413-Y), or CWP Disc (T-413-W), (S-413-W) or 300° F 67 PSI steam FKM Disc (T-413-V).

\*Class 150 (433) furnished for these sizes.

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

Note: On pump discharge, the preferred check valves are: inline, spring assisted, center-guided, lift checks.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position. They will operate satisfactorily in a declining plane (no more than 15°).

Warning – Do Not Use For Reciprocating Air Compressor Service.

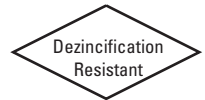
**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Class 125 Bronze Ring Check® Valves

Inline Lift Type • Resilient Discs • Spring Actuated

**125 PSI/8.6 bar saturated steam to 353° F/178° C (PTFE Disc)**

**250 PSI/17.2 bar non-shock cold working pressure**



**T-480**

Threaded

## MATERIAL LIST

| PART           | SPECIFICATION                               |
|----------------|---------------------------------------------|
| 1. Body        | Bronze ASTM B584 Alloy C84400               |
| 2. Stem        | Stainless Steel ASTM A 582 Alloy C30300     |
| 3. Spring      | 316 Stainless Steel                         |
| 4. Disc Holder | Stainless Steel Type 301                    |
| 5. Disc        | Water, Oil or Gas (Buna-N) Steam (PTFE) (Y) |
| 6. Seat Screw  | Stainless Steel ASTM A276 Alloy S43000      |
| 7. Body End    | Bronze ASTM B584 Alloy C84400               |

## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |      |     |       |      |                  |
|------------|-----|------|-----|------|-----|------|-----|-------|------|------------------|
| Size       |     | A    |     | B    |     | C    |     | T-480 |      | Master Ctn. Qty. |
| In.        | mm. | In.  | mm. | In.  | mm. | In.  | mm. | Lbs.  | mm.  |                  |
| ¾          | 10  | 2.00 | 51  | 1.38 | 35  | 1.44 | 37  | 0.41  | 0.19 | 100              |
| ½          | 15  | 2.06 | 52  | 1.38 | 35  | 1.19 | 30  | 0.36  | 0.16 | 100              |
| ¾          | 20  | 2.25 | 57  | 1.63 | 41  | 1.31 | 33  | 0.48  | 0.22 | 100              |
| 1          | 25  | 2.63 | 67  | 2.00 | 51  | 1.50 | 38  | 0.77  | 0.35 | 50               |
| 1 ¼        | 32  | 2.94 | 75  | 2.38 | 60  | 1.69 | 43  | 1.14  | 0.51 | 30               |
| 1 ½        | 40  | 3.31 | 84  | 2.75 | 70  | 2.00 | 51  | 1.63  | 0.74 | 30               |
| 2          | 50  | 3.69 | 94  | 3.38 | 86  | 2.31 | 59  | 2.27  | 1.03 | 10               |

Ordering: The T-480 and S-480 both have standard Buna-N Discs.

Also available with PTFE (Y) Discs; specify T-480-Y or S-480-Y.

3/8" thru 2" require 1/2 pound pressure to open.

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

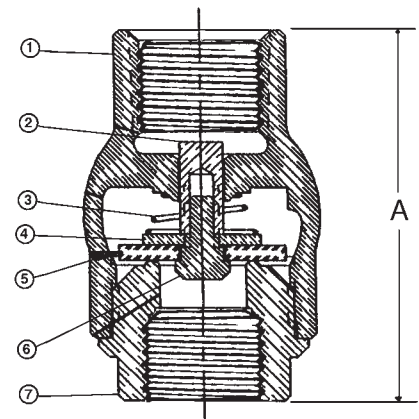
Note: On pump discharge, the preferred check valves are:  
- inline, spring assisted, center-guided, lift checks.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position.

Warning – Do Not Use For Reciprocating Air Compressor Service.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**T-480-Y (PTFE Disc)**  
NPT x NPT

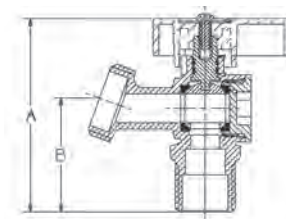
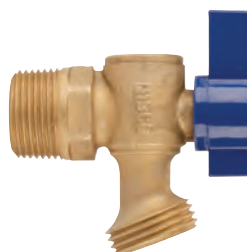
# Quarter-Turn Boiler Drains

125 lb. CWP to 100°F

Maximum Temperature 180°F

## QUARTER-TURN BOILER DRAINS MATERIAL LIST

| PART     | SPECIFICATION               |
|----------|-----------------------------|
| Screw    | Steel                       |
| I.D. Tag | Aluminum                    |
| Handle   | Zinc                        |
| Stem     | Brass ASTM B 16 UNS C36000  |
| O-Ring   | Nitrile                     |
| Seat     | PTFE                        |
| Ball     | Brass ASTM B 16 UNS C36000  |
| Adapter  | Brass ASTM B 283 UNS C37700 |
| Body     | Brass ASTM B 283 UNS C37700 |



### QT74X

| DESCRIPTION                                          | NOM. SIZE | DIMENSIONS |       | APPROX. NET WT. |
|------------------------------------------------------|-----------|------------|-------|-----------------|
|                                                      |           | A          | B     |                 |
| <b>BOILER DRAIN</b><br>Cup or MIP<br>Threads to Hose | 1/2"      | 2.64"      | 1.57" | .40 lb          |
|                                                      | 3/4"*     | 2.72"      | 1.65" | .42 lb          |

IAPMO Listed to cUPC®

\* 3/4" furnished in male threads only

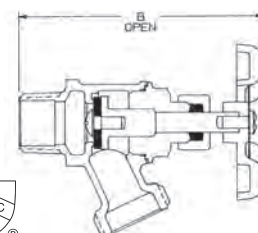
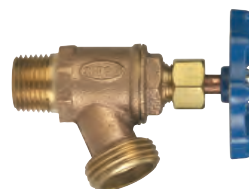
# Multi-Turn Boiler Drains

125 lb. CWP to 100°F

Maximum Temperature 180°F

## MULTI-TURN MATERIALS LIST

| PART            | SPECIFICATION                        |
|-----------------|--------------------------------------|
| Body            | Cast Copper - Based Alloy C84400     |
| Bonnet          | Cast Copper - Based Alloy C84400     |
| Stem            | Cold-formed Copper Alloy             |
| Seat Disc       | Buna-N                               |
| Seat Disc Screw | Stainless Steel, Type 410            |
| Packing Nut     | Free Cutting Brass - ASTM B 16       |
| Packing         | Graphite Impregnated, Asbestos-Free  |
| Handwheel       | Epoxy Coated Zinc Alloy              |
| Handwheel Screw | Carbon Steel - Clear Chromate Finish |

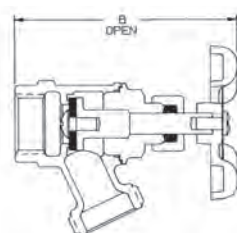
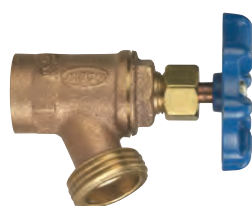


### 74-CL

| DESCRIPTION                                              | NOM. SIZE | DIMENSIONS | APPROX. NET WT. |
|----------------------------------------------------------|-----------|------------|-----------------|
|                                                          |           | B          |                 |
| <b>Boiler Drain</b><br>Copper or Male<br>Threads to Hose | 1/2"      | 3 11/16"   | .4 lb           |
|                                                          | 3/4"*     | 3 3/4"     | .45 lb          |

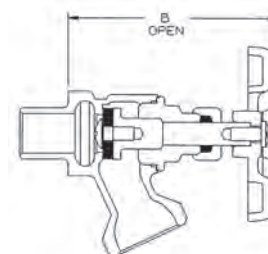
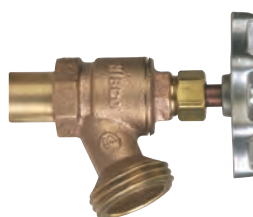
IAPMO Listed to cUPC®

\* 3/4" furnished in male threads only



### 73-CL

| DESCRIPTION                             | NOM. SIZE | DIMENSIONS | APPROX. NET WT. |
|-----------------------------------------|-----------|------------|-----------------|
|                                         |           | B          |                 |
| <b>Boiler Drain</b><br>Threaded to Hose | 1/2"      | 3 1/4"     | .50 lb          |
|                                         | 3/4"      | 3 5/16"    | .60 lb          |



### 74-2

| DESCRIPTION                        | NOM. SIZE | DIMENSIONS | APPROX. NET WT. |
|------------------------------------|-----------|------------|-----------------|
|                                    |           | B          |                 |
| <b>Boiler Drain</b><br>Fit to Hose | 1/2"      | 3 3/8"     | .40 lb          |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

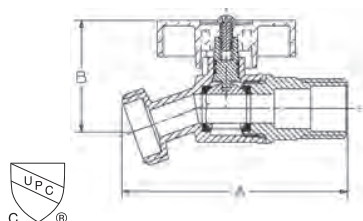
# Hose Bibbs

125 lb. CWP to 100°F

Maximum Temperature 180°F

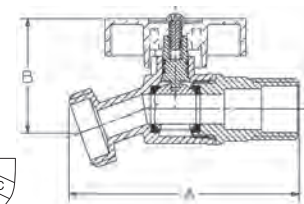
## QUARTER TURN HOSE BIBBS MATERIALS LIST

| PART     | SPECIFICATION               |
|----------|-----------------------------|
| Screw    | Steel                       |
| I.D. Tag | Aluminum                    |
| Handle   | Zinc                        |
| Stem     | Brass ASTM B 16 UNS C36000  |
| O-Ring   | Nitrile                     |
| Seat     | PTFE                        |
| Ball     | Brass ASTM B 16 UNS C36000  |
| Adapter  | Brass ASTM B 283 UNS C37700 |
| Body     | Brass ASTM B 283 UNS C37700 |



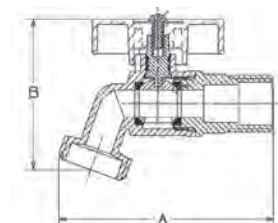
QT55X

| DESCRIPTION                             | Nom. Size | DIMENSIONS |       | APPROX. NET WT. |
|-----------------------------------------|-----------|------------|-------|-----------------|
|                                         |           | A          | B     |                 |
| <b>NO-KINK HOSE BIBB</b><br>FIP to Hose | 1/2       | 2.87"      | 1.54" | .40 lb          |
|                                         | 3/4       | 3.15"      | 1.54" | .45 lb          |



QT54X

| DESCRIPTION                                    | Nom. Size | DIMENSIONS |       | APPROX. NET WT. |
|------------------------------------------------|-----------|------------|-------|-----------------|
|                                                |           | A          | B     |                 |
| <b>NO-KINK HOSE BIB</b><br>Male or Cup to Hose | 1/2       | 3.15"      | 1.54" | .40 lb          |
|                                                | 3/4       | 3.15"      | 1.54" | .42 lb          |



QT56X

| DESCRIPTION                                                    | Nom. Size | DIMENSIONS |       | APPROX. NET WT. |
|----------------------------------------------------------------|-----------|------------|-------|-----------------|
|                                                                |           | A          | B     |                 |
| <b>HOSE BIBB</b><br>Cup or Male to Hose<br>Male Thread to Hose | 1/2       | 3.15"      | 2.17" | .40 lb          |
|                                                                | 3/4       | 3.15"      | 2.14" | .42 lb          |

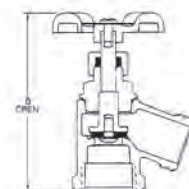
# Garden Valves

125 lb. CWP to 100°F

Maximum Temperature 180°F

## GARDEN VALVE MATERIALS LIST

| PART            | SPECIFICATION                        |
|-----------------|--------------------------------------|
| Body            | Cast Copper - Based Alloy C84400     |
| Bonnet          | Cast Copper - Based Alloy C84400     |
| Stem            | Cold-formed Copper Alloy             |
| Seat Disc       | Buna-N                               |
| Seat Disc Screw | Stainless Steel, Type 410            |
| Packing Nut     | Free Cutting Brass - ASTM B 16       |
| Packing         | Graphite Impregnated, Asbestos-Free  |
| Handwheel       | Epoxy Coated Zinc Alloy              |
| Handwheel Screw | Carbon Steel - Clear Chromate Finish |



61

| DESCRIPTION                               | Nom. Size | DIMENSIONS | APPROX. NET WT. |
|-------------------------------------------|-----------|------------|-----------------|
|                                           |           | B          |                 |
| <b>Bent Nose Hose Bibb</b><br>FIP to Hose | 1/2"      | 3 5/8"     | .60 lb          |
|                                           | 3/4"      | 3 3/4"     | .70 lb          |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# 4660-S/4660-T

One-Piece Molded Body

150 PSI/10.3 Bar Non-Shock Cold Working Pressure to 73° F/23° C

NSF STANDARD 14

## MATERIAL LIST

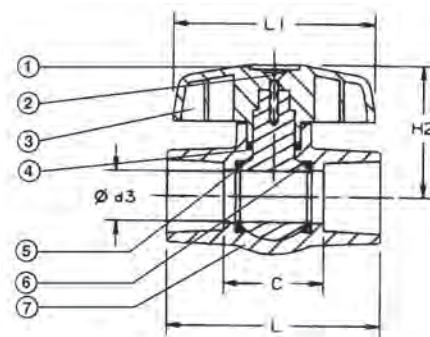
| PART          | SPECIFICATION     |
|---------------|-------------------|
| 1. Handle Cap | ABS               |
| 2. Screw      | Zinc-plated Steel |
| 3. Handle     | ABS               |
| 4. O-Ring     | EPDM              |
| 5. Seat Seal  | PTFE, EPDM        |
| 6. Ball       | PVC               |
| 7. Body       | PVC               |

Dezincification  
Resistant

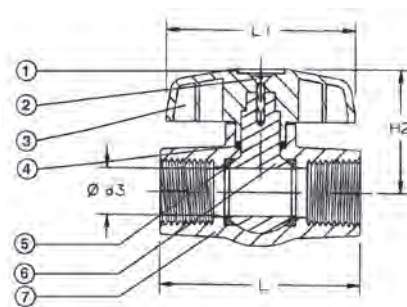


**4660-S**  
Socket Weld

**4660-T**  
Threaded  
(not shown)



**4660-S**  
Socket x Socket



**4660-T**  
Threaded x Threaded

## DIMENSIONS—WEIGHTS—QUANTITIES

| DIMENSIONS WEIGHTS QUANTITIES |     |      |     |      |     |      |     |       |     |       |     |        |      |                     |
|-------------------------------|-----|------|-----|------|-----|------|-----|-------|-----|-------|-----|--------|------|---------------------|
| Dimensions                    |     |      |     |      |     |      |     |       |     |       |     |        |      | Master<br>Ctn. Qty. |
| Size                          |     | C    |     | d3   |     | H2   |     | L     |     | L1    |     | 4660-S |      |                     |
| In.                           | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.   | mm. | In.   | mm. | Lbs.   | Kg.  |                     |
| ½                             | 15  | 1.52 | 38  | .55  | 14  | 1.69 | 43  | 3.27  | 83  | 2.76  | 69  | .18    | .08  | 100                 |
| ¾                             | 20  | 1.74 | 43  | .79  | 20  | 2.13 | 54  | 3.74  | 93  | 3.47  | 87  | .31    | .14  | 100                 |
| 1                             | 25  | 1.92 | 48  | .98  | 24  | 2.56 | 64  | 4.17  | 104 | 3.94  | 98  | .49    | .22  | 100                 |
| 1¼                            | 32  | 1.99 | 50  | 1.18 | 29  | 2.64 | 66  | 4.49  | 112 | 3.94  | 98  | .57    | .25  | 100                 |
| 1½                            | 40  | 2.37 | 59  | 1.42 | 35  | 3.07 | 77  | 5.12  | 128 | 4.29  | 107 | .88    | .39  | 48                  |
| 2                             | 50  | 2.79 | 70  | 1.83 | 46  | 3.50 | 87  | 5.79  | 145 | 5.28  | 132 | 1.50   | .67  | 48                  |
| 2½                            | 65  | 4.53 | 113 | 2.36 | 59  | 4.13 | 103 | 8.03  | 201 | 7.01  | 175 | 2.73   | 1.23 | 12                  |
| 3                             | 80  | 5.27 | 132 | 3.03 | 76  | 4.88 | 122 | 9.02  | 225 | 8.82  | 220 | 4.01   | 1.80 | 12                  |
| 4                             | 100 | 7.31 | 183 | 3.98 | 99  | 5.83 | 146 | 11.81 | 295 | 10.87 | 272 | 8.29   | 3.73 | 6                   |

Socket ends per ASTM D 2466

Thread ends per ANSI B1.20.1

# Bronze and Brass Ball Valves Illustrated Index

Dezincification  
Resistant

Bronze Ball Valve  
Standard Port  
400 lb. CWP



**T-580**  
Two-Piece Body • Blowout-Proof Stem  
Sizes 1/2" thru 2"  
Threaded Ends  
**Page 24**

Bronze Ball Valve  
Conventional Port  
150 lb. SWP  
600 lb. CWP



**T-580-70**  
Two-Piece Body • Blowout-Proof Stem  
Sizes 1/4" thru 3"  
Threaded Ends  
**Page 25**

Dezincification  
Resistant

Bronze Ball Valve  
Full Port  
150 lb. SWP  
600 lb. CWP



**T-585-70**  
Two-Piece Body • Blowout-Proof Stem  
Sizes 1/4" thru 2"  
Threaded Ends  
**Page 26**

Dezincification  
Resistant

Brass Ball Valve  
Full Port  
600 lb. CWP



**T-585-70-SSHN**  
1/2" - 2"  
**T-580-70-SSHN**  
2-1/2" - 3"  
Threaded  
**Page 27**

Brass Ball Valve  
Full Port  
600 lb. CWP



**T-FP-600**  
Sizes 1/4" thru 4"  
Threaded Ends  
**Page 28**

**WARNING:** The body cavity around the ball of all ball valves should always be considered to contain media under pressure. The nature of the Quarter turn and floating ball allows media into the cavity, while in the closed position or anytime the valve is operated. The only means to assure the cavity is drained and the pressure is relieved is to leave the ball in the half open/Half closed position when the line is drained.

# Bronze Ball Valves

Two-Piece Body • Standard Port • Blowout-Proof Stem • PTFE Seats

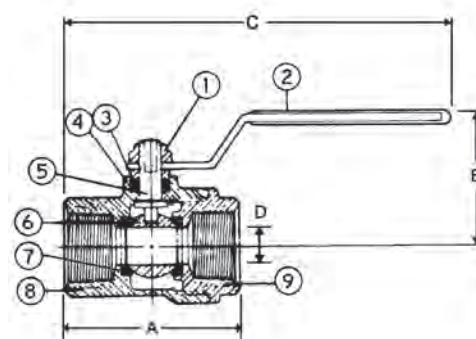
**400 PSI/27.6 Bar Non-Shock Cold Working Pressure**



**T-580**

Threaded

| MATERIAL LIST     |                                                                  |
|-------------------|------------------------------------------------------------------|
| PART              | SPECIFICATION                                                    |
| 1. Handle Nut     | Zinc Plated Steel                                                |
| 2. Handle         | Zinc Plated Steel Clear Chromate Plastisol Coated                |
| 3. Packing Gland  | Brass ASTM B 16 Alloy C36000                                     |
| 4. Packing        | PTFE                                                             |
| 5. Stem           | Silicon Bronze ASTM B 371 Alloy C69400 or ASTM B 16 Alloy C36000 |
| 6. Ball           | Brass ASTM B 124 Alloy C37700 or ASTM B 16 Alloy C36000          |
| 7. Seat Rings     | PTFE                                                             |
| 8. Body           | Bronze ASTM B 584 Alloy C84400 or Brass ASTM B 124 Alloy C37700  |
| 9. Body End Piece | Bronze ASTM B 584 Alloy C84400 or Brass ASTM B 124 Alloy C37700  |



**T-580**

NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |      |        |      |      |      |        |      |
|------------|-----|------|-----|------|-----|------|--------|------|------|------|--------|------|
| Size       | A   |      | B   |      | C   |      | D Port |      |      |      | Master |      |
| In. mm.    | In. | mm.  | In. | mm.  | In. | mm.  | In.    | mm.  | Lbs. | Kg.  | Ctn.   | Qty. |
| ½          | 15  | 2.00 | 51  | 1.56 | 40  | 4.88 | 124    | .38  | 10   | .50  | .23    | 100  |
| ¾          | 20  | 2.28 | 58  | 1.72 | 44  | 5.00 | 127    | .50  | 13   | .70  | .32    |      |
| 1          | 25  | 2.88 | 73  | 2.06 | 52  | 6.06 | 154    | .75  | 19   | 1.20 | .54    | 50   |
| 1 ¼        | 32  | 3.41 | 87  | 2.31 | 59  | 6.34 | 161    | 1.00 | 25   | 1.80 | .82    | 40   |
| 1 ½        | 40  | 3.75 | 95  | 2.81 | 71  | 8.56 | 217    | 1.25 | 32   | 2.90 | .32    | 20   |
| 2          | 50  | 4.44 | 113 | 3.06 | 78  | 8.88 | 226    | 1.50 | 38   | 4.30 | 1.95   | 10   |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

◆ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 45.

# Bronze Ball Valves

Two-Piece Body • Full Port 1/4"-1" • Conventional Port 1 1/4"-3" • Bronze Trim • Blowout-Proof Stem

**600 PSI/41.4 Bar Non-Shock Cold Working Pressure**  
**150 PSI/10.3 Bar Saturated Steam** ◆

CONFORMS TO MSS SP-110

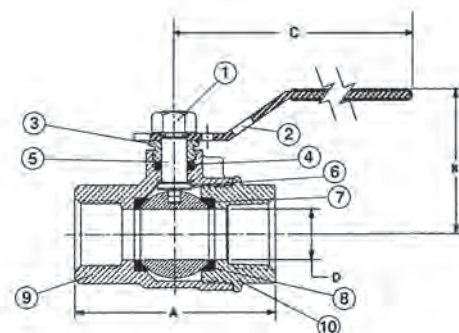
## MATERIAL LIST

| PART                   | SPECIFICATION                                                                    |
|------------------------|----------------------------------------------------------------------------------|
| 1. Handle Nut          | Zinc Plated Steel                                                                |
| 2. Handle              | Zinc Plated Steel Clear Chromate<br>Plastisol Coated                             |
| 3. Threaded Pack Gland | Brass ASTM B 16 Alloy C36000                                                     |
| 4. Packing             | PTFE                                                                             |
| 5. Stem                | Silicon Bronze ASTM B 371 Alloy C69400<br>or ASTM B 99 Alloy C65100              |
| 6. Thrust Washer       | Reinforced PTFE                                                                  |
| 7. Ball                | Brass ASTM B 124 Alloy C37700 or ASTM<br>B16 Alloy C36000 with Hard Chrome Plate |
| 8. Seat Ring (2)       | Reinforced PTFE                                                                  |
| 9. Body                | Cast Red Bronze ASTM B 584 Alloy C84400                                          |
| 10. Body End Piece     | Cast Red Bronze ASTM B 584 Alloy C84400                                          |

1/4" size only has a 304 stainless steel grounding washer.



**T-580-70**  
Threaded



**T-580-70**  
NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions |     |      |     |      |     |       |     |        |     |        |      |           |
|------------|-----|------|-----|------|-----|-------|-----|--------|-----|--------|------|-----------|
| Size       |     | A    |     | B    |     | C     |     | D Port |     | Master |      |           |
| In.        | mm. | In.  | mm. | In.  | mm. | In.   | mm. | In.    | mm. | Lbs.   | Kg.  | Ctn. Qty. |
| ** ¼       | 8   | 2.00 | 51  | 1.75 | 44  | 5.00  | 127 | .38    | 10  | .45    | .21  | 100       |
| ** ⅜       | 10  | 2.00 | 51  | 1.75 | 44  | 5.00  | 127 | .38    | 10  | .45    | .21  | 100       |
| ** ½       | 15  | 2.44 | 62  | 1.88 | 48  | 5.19  | 132 | .50    | 13  | .64    | .29  | 100       |
| ** ¾       | 20  | 2.94 | 75  | 2.25 | 57  | 6.25  | 159 | .75    | 19  | 1.33   | .60  | 50        |
| ** 1       | 25  | 3.34 | 94  | 2.38 | 60  | 6.44  | 164 | 1.00   | 25  | 1.79   | .81  | 40        |
| 1 ¼        | 32  | 3.94 | 100 | 2.63 | 67  | 6.75  | 171 | 1.00   | 25  | 2.17   | .98  | 20        |
| 1 ½        | 40  | 4.31 | 110 | 3.00 | 76  | 8.88  | 226 | 1.25   | 32  | 3.27   | 1.48 | 20        |
| 2          | 50  | 4.63 | 117 | 3.25 | 83  | 9.06  | 230 | 1.50   | 38  | 5.09   | 2.31 | 10        |
| 2 ½        | 65  | 5.84 | 148 | 3.53 | 90  | 9.66  | 245 | 2.00   | 51  | 8.25   | 3.74 | 6         |
| 3          | 80  | 7.09 | 180 | 4.41 | 112 | 11.53 | 293 | 2.50   | 64  | 15.65  | 7.10 | 4         |

\*\*NIBCO supplies full port T-585-70 on this size.

**⚠ WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Bronze Ball Valves

Two-Piece Body • Full Port • Bronze Trim • Blowout-Proof Stem

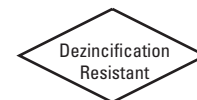
**600 PSI/41.4 Bar Non-Shock Cold Working Pressure**  
**150 PSI/10.3 Bar Saturated Steam** ◆

CONFORMS TO MSS SP-110

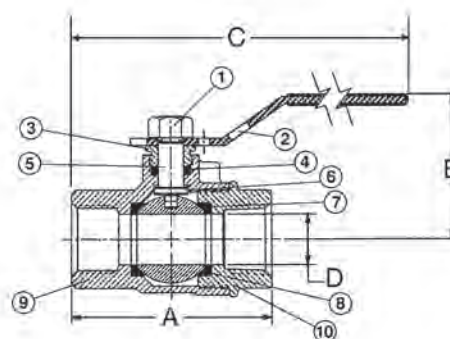
## MATERIAL LIST

| PART                   | SPECIFICATION                                                                    |
|------------------------|----------------------------------------------------------------------------------|
| 1. Handle Nut          | Zinc Plated Steel                                                                |
| 2. Handle              | Zinc Plated Steel Clear Chromate<br>Plastisol Coated                             |
| 3. Threaded Pack Gland | Brass ASTM B 16 Alloy C36000                                                     |
| 4. Packing             | PTFE                                                                             |
| 5. Stem                | Silicon Bronze ASTM B 371 Alloy C69430<br>or ASTM B 99 Alloy C65100              |
| 6. Thrust Washer       | Reinforced PTFE                                                                  |
| 7. Ball                | Brass ASTM B 124 Alloy C37700 or ASTM<br>B16 Alloy C36000 with Hard Chrome Plate |
| 8. Seat Ring (2)       | Reinforced PTFE                                                                  |
| 9. Body                | Cast Red Bronze ASTM B 584 Alloy C84400                                          |
| 10. Body End Piece     | Cast Red Bronze ASTM B 584 Alloy C84400                                          |

¼" size only has a 304 stainless steel grounding washer.



**T-585-70**  
Threaded



NPT x NPT

## DIMENSIONS—WEIGHTS—QUANTITIES

### Dimensions

| Size    | A    |     | B    |     | C    |     | D    |     | Lbs. | Kg.  | Master Ctn. Qty. |
|---------|------|-----|------|-----|------|-----|------|-----|------|------|------------------|
| In. mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.  | mm. |      |      |                  |
| ¼ 8     | 2.00 | 51  | 1.75 | 44  | 5.00 | 127 | .38  | 10  | .45  | .21  | 100              |
| ⅜ 10    | 2.00 | 51  | 1.75 | 44  | 5.00 | 127 | .38  | 10  | .45  | .21  | 100              |
| ½ 15    | 2.44 | 62  | 1.88 | 48  | 5.19 | 132 | .50  | 13  | .64  | .29  | 100              |
| ¾ 20    | 2.94 | 75  | 2.25 | 57  | 6.25 | 159 | .75  | 19  | 1.33 | .60  | 50               |
| 1 25    | 3.34 | 85  | 2.38 | 60  | 6.44 | 164 | 1.00 | 25  | 1.79 | .81  | 40               |
| 1¼ 32   | 4.19 | 106 | 3.00 | 76  | 6.75 | 171 | 1.25 | 32  | 3.12 | 1.41 | 20               |
| 1½ 40   | 4.72 | 120 | 3.16 | 80  | 9.06 | 230 | 1.50 | 38  | 4.78 | 2.17 | 10               |
| 2 50    | 5.16 | 131 | 3.50 | 89  | 9.25 | 235 | 2.00 | 51  | 6.68 | 3.03 | 8                |

**⚠ WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Bronze Ball Valves

Two-Piece Body • Full Port (1/2"-2") • Conventional Port (2 1/2"-3") •  
Bronze Trim • Blowout Proof Stem •  
Stainless Steel Handle and Handle Nut

**600 PSI/41.4 bar non-shock cold working pressure**  
**150 PSI/10.3 bar saturated steam\***

CONFORMS TO MSS SP-110

## MATERIAL LIST

| PART                   | SPECIFICATION                                                                         |
|------------------------|---------------------------------------------------------------------------------------|
| 1. Handle Nut          | 300 Series Stainless Steel                                                            |
| 2. Handle              | 300 Series Stainless Steel<br>Plastisol Coated                                        |
| 3. Threaded Pack Gland | Brass ASTM B 16 Alloy C36000                                                          |
| 4. Packing             | PTFE                                                                                  |
| 5. Stem                | Silicon Bronze ASTM B 371 Alloy C69300<br>or ASTM B 99 Alloy C65100                   |
| 6. Thrust Washer       | Reinforced PTFE                                                                       |
| 7. Ball                | Brass ASTM B 124 Alloy C37700 or ASTM B16<br>Alloy C36000 EACH with Hard Chrome Plate |
| 8. Seat Ring (2)       | Reinforced PTFE                                                                       |
| 9. Body                | Cast Red Bronze ASTM B 584 Alloy C84400                                               |
| 10. Body End Piece     | Cast Red Bronze ASTM B 584 Alloy C84400                                               |



**T-585-70-SSHN**

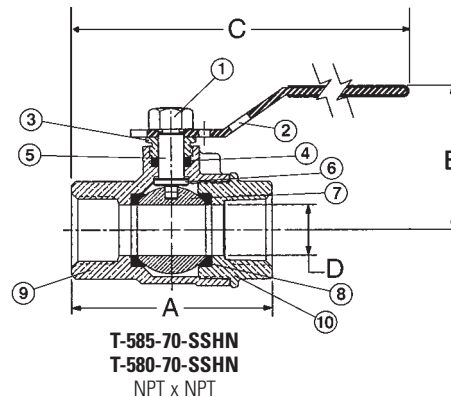
1/2" - 2"

**T-580-70-SSHN**

2-1/2" - 3"

Threaded

Dezincification  
Resistant



## DIMENSIONS—WEIGHTS—QUANTITIES

| Size  |     | Dimensions |     |      |     |       |     |      |     |          |      |        |      |
|-------|-----|------------|-----|------|-----|-------|-----|------|-----|----------|------|--------|------|
|       |     | A          |     | B    |     | C     |     | D    |     | T-585-70 |      | Master |      |
| In.   | mm. | In.        | mm. | In.  | mm. | In.   | mm. | In.  | mm. | Lbs.     | Kg.  | Ctn.   | Qty. |
| 1/2   | 15  | 2.44       | 62  | 1.88 | 48  | 5.19  | 132 | .50  | 13  | .64      | .29  | 100    |      |
| 3/4   | 20  | 2.94       | 75  | 2.25 | 57  | 6.25  | 159 | .75  | 19  | 1.33     | .60  | 50     |      |
| 1     | 25  | 3.34       | 85  | 2.38 | 60  | 6.44  | 164 | 1.00 | 25  | 1.79     | .81  | 40     |      |
| 1 1/4 | 32  | 4.19       | 106 | 3.00 | 76  | 6.75  | 171 | 1.25 | 32  | 3.12     | 1.41 | 20     |      |
| 1 1/2 | 40  | 4.72       | 120 | 3.16 | 80  | 9.06  | 230 | 1.50 | 38  | 4.78     | 2.17 | 10     |      |
| 2     | 50  | 5.16       | 131 | 3.50 | 89  | 9.25  | 235 | 2.00 | 51  | 6.68     | 3.03 | 8      |      |
| 2 1/2 | 65  | 5.84       | 148 | 3.50 | 89  | 9.66  | 245 | 2.00 | 51  | 8.25     | 3.74 | 6      |      |
| 3     | 80  | 7.09       | 180 | 4.41 | 112 | 11.53 | 293 | 2.50 | 64  | 15.65    | 7.10 | 4      |      |

**Note:** Higher temperature solders will damage the seat material. See installation sheet packaged with valves.

♦For detailed operating pressure, refer to pressure temperature chart on page 42.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

\*Weighted average lead content ≤ 0.25%

# Brass Ball Valves

Two-Piece Body • Full Port • Blowout-Proof Stem • PTFE Seats

**1/4"-2" 600 PSI/41.4 Bar Non-Shock Cold Working Pressure**

**2 1/2"-4" 400 PSI/27.6 Bar Non-Shock Cold Working Pressure**

CSA CERTIFIED TO ASME B16.44 AND CR91-002 (THREADED 1/4"-4")  
• UL LISTED (THREADED 1/4"-4") • FM APPROVED (THREADED 1/4"-2")  
• CRN: 0C19353.5XX\*

## Threaded

CSA (1/4" - 4"):

- CR91-002: 1/2 psig, 2 psig, and 5 psig (these are specific approved categories)
- ASME B16.33: 125 psig (maximum)
- Temperature is -4° F to 194° F

## Threaded

FM (1/4" - 2"):

- 175wvp Threaded

UL, Gas and Oil (1/4" - 4"):

- YQNZ, Compressed Gas Shutoff Valves: 250 psi
- YRBX, Flammable Liquid Shutoff Valves: 250 psi
- YRPV, Gas Shutoff Valves: 250 psi
- YSDT, LP-Gas Shutoff Valves: 250 psi
- MHKZ, Manual Valves: 250 psi

\*Please contact Technical  
Customer Service for the CRN  
Jurisdictions/Provinces list



**T-FP-600A**  
Threaded



**S-FP-600A**  
Solder



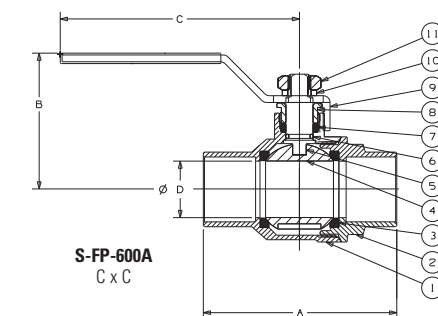
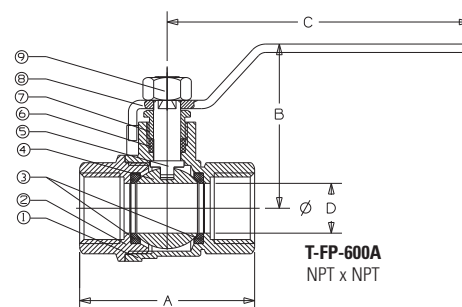
## MATERIAL LIST

| PART                         | SPECIFICATION                      |
|------------------------------|------------------------------------|
| 1. Body                      | Forged Brass <sup>2</sup> CU > 57% |
| 2. End Cap                   | Forged Brass <sup>2</sup> CU > 57% |
| 3. Ball Seat                 | PTFE                               |
| 4. Ball                      | Brass, Chrome Plated               |
| 5. Stem                      | Brass                              |
| 6. O-Ring (Stem Seal)*       | Fluorocarbon (FKM)                 |
| 7. Stem Packing              | PTFE                               |
| 8. Packing Nut               | Brass                              |
| 9. Lever Handle <sup>1</sup> | Steel, Plated                      |
| 10. Lock Washer*             | Stainless Steel                    |
| 11. Handle Nut <sup>1</sup>  | Stainless Steel                    |

Note: \* Parts 6 and 10 are applicable of S-FP-600A only.

<sup>1</sup> Due to Standard Approvals, Lever Handles and Nuts are not interchangeable between Solder and Threaded.

<sup>2</sup> For Material Certification, contact NIBCO Technical Services.



## DIMENSIONS—WEIGHTS—QUANTITIES

| Size |     | Dimensions |     |           |     |           |     |           |     |           |     |           |     |        |     |       |      |      |      | T-FP-600A<br>Lbs. Kg. |      | S-FP-600A<br>Lbs. Kg. |      | T-FP-600A<br>Ctn. Qty. |  | S-FP-600N<br>Ctn. Qty. |  |
|------|-----|------------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|--------|-----|-------|------|------|------|-----------------------|------|-----------------------|------|------------------------|--|------------------------|--|
|      |     | T-FP-600A  |     | S-FP-600A |     | T-FP-600A |     | S-FP-600A |     | T-FP-600A |     | S-FP-600A |     | Port D |     |       |      |      |      |                       |      |                       |      |                        |  |                        |  |
|      |     | A          | A   | B         | B   | C         | C   | C         | C   | D         | D   |           |     |        |     |       |      |      |      |                       |      |                       |      |                        |  |                        |  |
| In.  | mm. | In.        | mm. | In.       | mm. | In.       | mm. | In.       | mm. | In.       | mm. | In.       | mm. | In.    | mm. | Lbs.  | Kg.  | Lbs. | Kg.  | Ctn.                  | Qty. | Ctn.                  | Qty. |                        |  |                        |  |
| ¼    | 8   | 1.76       | 45  | —         | —   | 1.73      | 44  | —         | —   | 3.54      | 90  | —         | —   | .39    | 10  | .33   | .15  | —    | —    | 18                    | —    | —                     | —    |                        |  |                        |  |
| ⅜    | 10  | 1.76       | 45  | 1.75      | 44  | 1.73      | 44  | 1.58      | 40  | 3.54      | 90  | 3.78      | 96  | .39    | 10  | .30   | .14  | .38  | .17  | 18                    | 18   | —                     | —    |                        |  |                        |  |
| ½    | 15  | 2.05       | 52  | 2.01      | 51  | 1.92      | 49  | 1.78      | 45  | 3.54      | 90  | 3.78      | 96  | .59    | 15  | .44   | .20  | .40  | .18  | 18                    | 18   | —                     | —    |                        |  |                        |  |
| ¾    | 20  | 2.36       | 60  | 2.74      | 70  | 2.09      | 53  | 2.13      | 54  | 3.78      | 96  | 3.98      | 101 | .75    | 19  | .66   | .30  | .67  | .30  | 12                    | 12   | —                     | —    |                        |  |                        |  |
| 1    | 25  | 2.76       | 70  | 3.35      | 85  | 2.56      | 65  | 2.52      | 64  | 4.53      | 115 | 4.41      | 112 | .98    | 25  | 1.10  | .50  | 1.12 | .51  | 6                     | 6    | —                     | —    |                        |  |                        |  |
| 1¼   | 32  | 3.31       | 84  | 3.78      | 96  | 2.95      | 75  | 2.65      | 67  | 4.53      | 115 | 5.04      | 128 | 1.26   | 32  | 1.57  | .71  | 1.49 | .67  | 4                     | 4    | —                     | —    |                        |  |                        |  |
| 1½   | 40  | 3.66       | 93  | 4.42      | 112 | 3.35      | 85  | 3.12      | 79  | 5.51      | 140 | 6.22      | 158 | 1.57   | 40  | 2.40  | 1.09 | 2.38 | 1.08 | 2                     | 2    | —                     | —    |                        |  |                        |  |
| 2    | 50  | 4.18       | 106 | 5.34      | 136 | 3.68      | 93  | 3.41      | 87  | 5.51      | 140 | 6.22      | 158 | 1.97   | 50  | 3.37  | 1.53 | 3.62 | 1.64 | 2                     | 2    | —                     | —    |                        |  |                        |  |
| 2½   | 65  | 5.38       | 137 | 6.28      | 160 | 4.76      | 121 | 4.76      | 121 | 8.66      | 220 | 8.66      | 220 | 2.56   | 65  | 7.60  | 3.45 | 6.36 | 2.88 | 3                     | 3    | —                     | —    |                        |  |                        |  |
| 3    | 75  | 6.04       | 153 | 7.15      | 182 | 5.08      | 129 | 5.08      | 129 | 8.66      | 220 | 8.66      | 220 | 2.95   | 75  | 9.36  | 4.24 | 8.32 | 3.77 | 2                     | 2    | —                     | —    |                        |  |                        |  |
| 4    | 100 | 7.39       | 188 | —         | —   | 5.87      | 149 | —         | —   | 9.61      | 244 | —         | —   | 3.89   | 99  | 16.85 | 7.64 | —    | —    | 1                     | —    | —                     | —    |                        |  |                        |  |

NOT FOR USE WITH POTABLE DRINKING WATER APPLICATIONS AFTER JANUARY 3, 2014.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Iron Body Gate Valves

## Illustrated Index

|                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                      | <p>Iron Body Gate Valve<br/>Bolted Bonnet<br/>125 lb. SWP<br/>200 lb. CWP</p>  <p><b>F-619/T-619</b><br/>Non-Rising Stem • Solid Wedge<br/>Sizes 2" thru 16"<br/>Flanged or Threaded Ends<br/><b>Page 30</b></p> | <p>Iron Body Gate Valve<br/>Bolted Bonnet<br/>200 lb. CWP</p>  <p><b>F-619-RWS</b><br/>Non-Rising Stem • Resilient Wedge<br/>Sizes 2" thru 16"<br/>Flanged Ends<br/><b>Page 31</b></p>      |
| <p>Iron Body Gate Valve<br/>Bolted Bonnet<br/>200 lb. CWP</p>  <p><b>FM-619-RWS-SON</b><br/>Non-Rising Stem • Resilient Wedge<br/>Sizes 3" thru 12"<br/>Flanged by MJ Ends<br/><b>Page 32</b></p> | <p>Iron Body Gate Valve<br/>Bolted Bonnet<br/>200 lb. CWP</p>  <p><b>MJ-619-RWS</b><br/>Non-Rising Stem • Resilient Wedge<br/>Sizes 3" thru 16"<br/>Mechanical Joint Ends<br/><b>Page 33</b></p>               | <p>Iron Body Gate Valve<br/>Bolted Bonnet<br/>200 lb. CWP</p>  <p><b>P-619-RW</b><br/>Non-Rising Stem • Resilient Wedge<br/>Sizes 2" thru 12"<br/>IPS Push-On Ends<br/><b>Page 34</b></p> |

# Class 125 Iron Body Gate Valves

Bolted Bonnet • Non-Rising Stem • Solid Wedge • Bronze Mounted

**200 PSI/13.8 bar non-shock cold working pressure from -20°F to 150°F/-29°C to 66°C<sup>♦</sup>**  
**Maximum working temperature 450°F/232°C at 125 PSI/8.6 bar**  
**125 PSI/8.6 bar saturated steam to 353°F/178°C**

CONFORMS TO MSS SP-70

## MATERIAL LIST

| PART                                 | SPECIFICATION                                                |
|--------------------------------------|--------------------------------------------------------------|
| 1. Handwheel Nut                     | Steel ASTM A307                                              |
| 2. Identification Plate              | Aluminum                                                     |
| 3. Handwheel or Square Operating Nut | Cast Iron ASTM A126 Class B                                  |
| 4. Stem                              | Brass ASTM B16 Alloy C36000                                  |
| 5. Gland Follower Nut                | Copper Alloy ASTM F467 Alloy C27000                          |
| 6. Gland Follower                    | Cast Iron ASTM A126 Class B or Ductile Iron ASTM A536        |
| 7. Gland Follower Bolt               | Steel ASTM A307/SAE J429                                     |
| 8. Packing Gland                     | Zinc Plated Powdered Iron ASTM B783 or Copper Alloy ASTM B16 |
| 9. Stuffing Box                      | Cast Iron ASTM A126 Class B                                  |
| 10. Packing                          | Aramid Fibers with Graphite                                  |
| 11. Stuffing Box Gasket              | Synthetic Fibers                                             |
| 12. Bonnet                           | Cast Iron ASTM A126 Class B                                  |
| 13. Body Bolt                        | ASTM A307/SAE J429                                           |
| 14. Body Gasket                      | Synthetic Fibers / Nitrile                                   |
| 15. Body Nut                         | Steel ASTM A307/SAE J429                                     |
| 16. <sup>1</sup> Wedge Bushing       | Copper Alloy ASTM B584 Alloy C84400                          |
| 17. Seat Ring                        | Copper Alloy ASTM B584 Alloy C84400                          |
| 18. Wedge Face Ring                  | Copper Alloy ASTM B584 Alloy C84400                          |
| 19. <sup>1</sup> Wedge               | Cast Iron ASTM A126 Class B                                  |
| 20. Body                             | Cast Iron ASTM A126 Class B                                  |
| 21. Stuffing Box Nut                 | Steel ASTM A307 (not shown) /SAE J429                        |

<sup>1</sup>Sizes thru 6" have Bronze Wedges. Sizes 8" thru 16" made with Cast Iron Wedge with Bronze Bushing and Wedge Face Rings.

NOTE: 14" thru 16" Maximum Steam Rating 100 PSI/6.9 Bar Maximum Non-Shock Cold Working Pressure 150 PSI/10.3 Bar.

Sizes 2" thru 12" have Aramid Fibers/graphite packings. Sizes 14" & 16" have Wire reinforced carbon yarn with resilient core with graphite and Zinc finish.

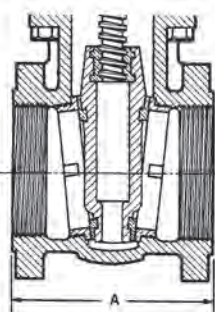
## DIMENSIONS—WEIGHTS—QUANTITIES

| Dimensions - Weights - Continues |     |            |     |       |     |       |      |     |     |       |     |      |     |       |     |       |     |
|----------------------------------|-----|------------|-----|-------|-----|-------|------|-----|-----|-------|-----|------|-----|-------|-----|-------|-----|
| Size                             |     | Dimensions |     |       |     |       |      |     |     |       |     |      |     |       |     |       |     |
|                                  |     | F-619      |     | T-619 |     | B     |      | C   |     | D     |     | E    |     | F-619 |     | T-619 |     |
| A                                |     | A          |     |       |     |       |      |     |     |       |     |      |     |       |     |       |     |
| In.                              | mm. | In.        | mm. | In.   | mm. | In.   | mm.  | In. | mm. | In.   | mm. | In.  | mm. | Lbs.  | Kg. | Lbs.  | Kg. |
| 2                                | 50  | 7.00       | 178 | 5.63  | 143 | 11.00 | 279  | 7   | 178 | 6.00  | 152 | .63  | 16  | 35    | 16  | 25    | 11  |
| 2½                               | 65  | 7.50       | 191 | 5.88  | 149 | 12.50 | 318  | 7   | 178 | 7.00  | 178 | .69  | 17  | 49    | 22  | 33    | 15  |
| 3                                | 80  | 8.00       | 203 | 6.13  | 156 | 13.50 | 343  | 8   | 203 | 7.50  | 191 | .75  | 19  | 60    | 27  | 42    | 19  |
| 4                                | 100 | 9.00       | 229 | 6.50  | 165 | 15.75 | 400  | 10  | 254 | 9.00  | 229 | .94  | 24  | 90    | 41  | 61    | 28  |
| 5                                | 125 | 10.00      | 254 | x     | x   | 17.00 | 432  | 10  | 254 | 10.00 | 254 | .94  | 24  | 129   | 59  | x     | x   |
| 6                                | 150 | 10.50      | 267 | x     | x   | 21.00 | 533  | 12  | 305 | 11.00 | 279 | 1.00 | 25  | 161   | 73  | x     | x   |
| 8                                | 200 | 11.50      | 292 | x     | x   | 25.00 | 635  | 14  | 356 | 13.50 | 343 | 1.13 | 29  | 277   | 126 | x     | x   |
| 10                               | 250 | 13.00      | 330 | x     | x   | 29.00 | 737  | 16  | 406 | 16.00 | 406 | 1.19 | 30  | 415   | 188 | x     | x   |
| 12                               | 300 | 14.00      | 356 | x     | x   | 34.50 | 876  | 18  | 457 | 19.00 | 483 | 1.25 | 32  | 631   | 287 | x     | x   |
| 14                               | 350 | 15.00      | 381 | x     | x   | 40.38 | 1026 | 24  | 610 | 21.00 | 533 | 1.38 | 35  | 869   | 394 | x     | x   |
| 16                               | 400 | 16.00      | 407 | x     | x   | 45.75 | 1162 | 24  | 610 | 23.50 | 597 | 1.44 | 37  | 1224  | 555 | x     | x   |

xNot available this size.



**T-619**  
Threaded



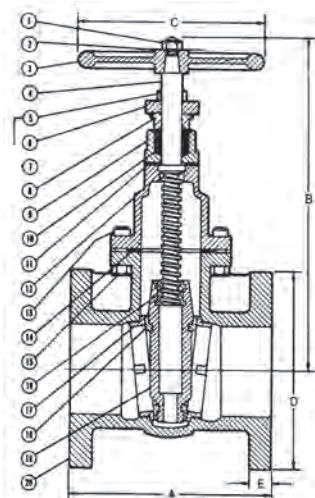
**T-619**  
NPT x NPT



**F-619-SON**  
Flanged  
With Square Op. Nut



**F-619**  
Flanged



**F-619**  
Flg x Flg

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

♦For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# 300 PSI CWP Iron Body Gate Valves

Bolted Bonnet • Non-Rising Stem • Resilient Wedge • Flanged Ends

300 PSI/20.6 bar non-shock cold working pressure to 33°F to 160°F

Maximum working temperature 180°F at 250 PSI

CERTIFIED LEAD-FREE\* BY TRUESDAIL  
LABORATORIES TO NSF/ANSI 61 AND 372

## MATERIAL LIST

| PART                          | SPECIFICATION                            |
|-------------------------------|------------------------------------------|
| 1 Valve Body                  | Ductile Iron ASTM A536 65-45-12          |
| 2 Resilient Wedge             | Ductile Iron ASTM A536 / EPDM ASTM D2000 |
| 3 Wedge Nut                   | ASTM B584 UNS C83600                     |
| 4 Stem                        | Stainless Steel 304                      |
| 5 Bonnet Gasket               | EPDM ASTM D2000                          |
| 6 Bonnet Screw                | Corrosion-resistant Steel                |
| 7 Bonnet                      | Ductile Iron ASTM A536                   |
| 8 Stem Primary O-Ring         | EPDM ASTM D2000                          |
| 9 Stem Thrust Washer (lower)  | Bronze ASTM B584 UNS C83600              |
| 10 Stem Thrust Washer (upper) | Stainless Steel ASTM A276 UNS S41000     |
| 11 Gland Seal O-Ring          | EPDM ASTM D2000                          |
| 12 Stem Seal Bushing          | ASTM B584 UNS C83600                     |
| 13 Stem Secondary O-Ring      | EPDM ASTM D2000                          |
| 14 Gland Flange               | Ductile Iron ASTM A536                   |
| 15 Stem Ring Wiper            | EPDM ASTM D2000                          |

**Coating** — Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside meets or exceeds performance requirements of AWWA C550.

Epoxy coating is not intended to serve as a dielectric barrier internal to the piping system.

**NOTE:** Flanged valve is consistent with ANSI B16.1 Class 125.

**NOTE:** 14" & 16" sizes rated to 250 psi

**NOTE:** Hand wheel is secured with a 12mm x 25mm metric socket head cap screw. Also needs 1/2" wide diameter flat washer.

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



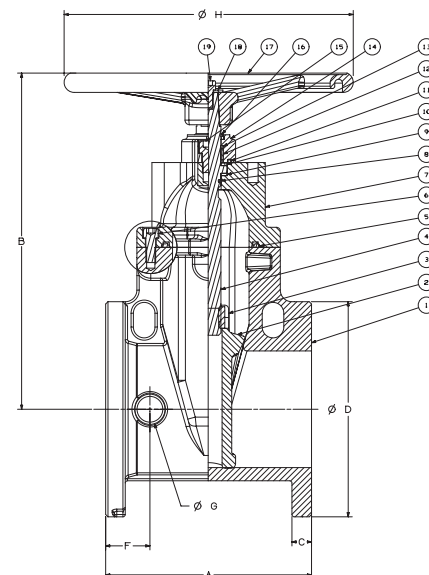
**F-619-RWS**

Flanged



**F-619-RWS-SON**

Flanged



**F-619-RWS**

Flg x Flg

Shown with optional handwheel,  
square operating nut not shown

## DIMENSIONS—WEIGHTS—QUANTITIES

| Size | Dimensions |      |     |      |     |      |      |      |     |      |     |      |     |      | Bolt Circle | Flange Holes | Turns to Open | Weight |      |     |     |
|------|------------|------|-----|------|-----|------|------|------|-----|------|-----|------|-----|------|-------------|--------------|---------------|--------|------|-----|-----|
|      | A          |      | B   |      | C   |      | D    |      | F   |      | G   |      | H   |      |             |              |               | Lbs.   | Kg.  |     |     |
| In.  | mm.        | In.  | mm. | In.  | mm. | In.  | mm.  | In.  | mm. | In.  | mm. | In.  | mm. | In.  | mm.         | In.          | mm.           |        |      |     |     |
| 2    | 50         | 7.0  | 178 | 10.0 | 255 | 0.63 | 16.0 | 6.0  | 152 | 1.42 | 36  | 1.6  | 40  | 7.9  | 200         | 4.75         | 121           | 4      | 6.3  | 22  | 10  |
| 2½   | 65         | 7.5  | 190 | 11.3 | 287 | 0.69 | 17.5 | 7.0  | 178 | 1.50 | 38  | 1.6  | 40  | 7.9  | 200         | 5.50         | 140           | 4      | 8.1  | 29  | 13  |
| 3    | 80         | 8.0  | 203 | 12.6 | 321 | 0.75 | 19.0 | 7.5  | 191 | 1.73 | 44  | 1.42 | 36  | 10.2 | 260         | 6.00         | 152           | 4      | 10.0 | 35  | 16  |
| 4    | 100        | 9.0  | 229 | 13.5 | 344 | 0.94 | 24.0 | 9.0  | 229 | 2.13 | 54  | 1.42 | 36  | 10.2 | 260         | 7.50         | 191           | 8      | 12.5 | 75  | 34  |
| 6    | 150        | 10.5 | 267 | 17.4 | 441 | 1.00 | 25.4 | 11.0 | 279 | 2.24 | 57  | 1.54 | 39  | 14.8 | 375         | 9.50         | 241           | 8      | 15.0 | 105 | 48  |
| 8    | 200        | 11.5 | 292 | 20.8 | 529 | 1.13 | 28.6 | 13.5 | 343 | 2.48 | 63  | 1.54 | 39  | 14.8 | 375         | 11.75        | 298           | 8      | 16.7 | 163 | 74  |
| 10   | 250        | 13.0 | 330 | 24.2 | 614 | 1.19 | 30.2 | 16.0 | 406 | 2.56 | 65  | 1.82 | 46  | 15.7 | 400         | 14.25        | 362           | 12     | 20.8 | 256 | 116 |
| 12   | 300        | 14.0 | 356 | 27.6 | 700 | 1.25 | 31.8 | 19.0 | 483 | 2.91 | 74  | 1.82 | 46  | 19.7 | 500         | 17.00        | 432           | 12     | 25.0 | 399 | 181 |
| 14   | 350        | 15.0 | 381 | 31.8 | 807 | 1.38 | 35.0 | 21.0 | 533 | 2.95 | 75  | 3.1  | 80  | 19.7 | 500         | 18.75        | 476           | 12     | 43.8 | 620 | 281 |
| 16   | 400        | 16.0 | 406 | 34.1 | 869 | 1.46 | 37.0 | 23.5 | 597 | 3.00 | 77  | 3.1  | 80  | 19.7 | 500         | 21.25        | 540           | 16     | 50.0 | 816 | 370 |

\*Weighted average lead content ≤ 0.25%

# 300 PSI CWP Iron Body Gate Valve

Bolted Bonnet • Non-Rising Stem • Resilient Wedge • Flanged by MJ Ends

**300 PSI/20.6 bar non-shock cold working pressure from 33° F to 160° F**  
**Maximum working temperature 180° F at 250 PSI**

CERTIFIED LEAD-FREE BY TRUESDAIL  
LABORATORIES TO NSF 61 AND 372

## MATERIAL LIST

| PART                           | SPECIFICATION                                                    |
|--------------------------------|------------------------------------------------------------------|
| 1. Valve Body                  | Ductile Iron ASTM A 536                                          |
| 2. Resilient Wedge             | Ductile Iron ASTM A 536/EPDM ASTM D 2000                         |
| 3. Wedge Nut                   | Bronze ASTM B 584 UNS C83600<br>4" - 12" ASTM B584 UNS C92200 3" |
| 4. Stem                        | SS304                                                            |
| 5. Bonnet Gasket               | EPDM ASTM D 2000                                                 |
| 6. Bonnet Screw                | 18-8 Stainless Steel ASTM 193                                    |
| 7. Bonnet                      | Ductile Iron ASTM A 536                                          |
| 8. Stem Primary O-Ring         | EPDM ASTM D 2000                                                 |
| 9. Stem Thrust Washer (lower)  | Bronze ASTM B 584 UNS C83600                                     |
| 10. Stem Thrust Washer (upper) | Stainless Steel ASTM A 276 UNS S41000                            |
| 11. Gland Seal O-Ring          | EPDM ASTM D 2000                                                 |
| 12. Stem Seal Bushing          | Bronze ASTM B 584 UNS C83600                                     |
| 13. Stem Secondary O-Ring (2)  | EPDM ASTM D 2000                                                 |
| 14. Gland Flange               | Ductile Iron ASTM A 536                                          |
| 15. Gland Flange Screw         | Alloy Steel ASTM A 574M Zinc Plated                              |
| 16. Stem Ring Wiper            | EPDM ASTM D 2000                                                 |
| 17. Square Operating Nut       | Cast Iron ASTM A 126 B                                           |
| 17A. Handwheel (optional)      | Ductile Iron ASTM A 536                                          |
| 18. Flat Washer                | Carbon Steel Zinc Plated                                         |
| 19. Screw                      | Alloy Steel ASTM A 574M Zinc Plated                              |

Coating — Electrostatically applied fusion-bonded epoxy 10-14 mil. inside and outside.  
Meets or exceeds AWWA C 550  
Coating is NSF and FDA certified

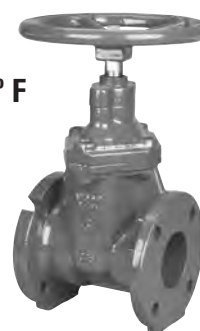
## DIMENSIONS—WEIGHTS—QUANTITIES

|      |     | Dimensions |       |     |       |      |     |      |      |      |     |      |     |      |       |      |     |      |     |
|------|-----|------------|-------|-----|-------|------|-----|------|------|------|-----|------|-----|------|-------|------|-----|------|-----|
| Size |     | A-1        |       | A-2 |       | B    |     | C-1  |      | C-2  |     | D-1  |     | D-2  |       | E    |     | F    |     |
| In.  | mm. | In.        | mm.   | In. | mm.   | In.  | mm. | In.  | mm.  | In.  | mm. | In.  | mm. | In.  | mm.   | In.  | mm. | In.  | mm. |
| 3    | 80  | 4.0        | 101.5 | 4.0 | 101.5 | 12.6 | 321 | 0.75 | 19.0 | 0.94 | 24  | 7.5  | 191 | 7.7  | 195.3 | 4.9  | 126 | 3.1  | 80  |
| 4    | 100 | 4.5        | 114.5 | 5.0 | 127.0 | 13.5 | 344 | 0.94 | 24.0 | 1.00 | 26  | 9.0  | 229 | 9.1  | 232.0 | 6.0  | 153 | 3.9  | 100 |
| 6    | 150 | 5.3        | 133.5 | 5.7 | 146.0 | 17.4 | 441 | 1.00 | 25.4 | 1.06 | 27  | 11.0 | 279 | 11.1 | 282.5 | 8.1  | 206 | 5.9  | 150 |
| 8    | 200 | 5.7        | 146.0 | 5.7 | 146.0 | 20.8 | 529 | 1.13 | 28.6 | 1.12 | 28  | 13.5 | 343 | 13.4 | 339.6 | 10.3 | 261 | 7.9  | 200 |
| 10   | 250 | 6.5        | 165.0 | 6.5 | 165.0 | 24.2 | 614 | 1.19 | 30.2 | 1.18 | 30  | 16.0 | 406 | 15.6 | 396.8 | 12.3 | 313 | 9.8  | 250 |
| 12   | 300 | 7.0        | 178.0 | 7.0 | 178.9 | 27.6 | 700 | 1.25 | 31.8 | 1.25 | 32  | 19.0 | 483 | 17.9 | 454.2 | 14.4 | 367 | 11.8 | 300 |

| Size |     | Dimensions |     |      |     |      |     |              |     |         |     | No. holes | No. holes | Turns   | Weight |     |
|------|-----|------------|-----|------|-----|------|-----|--------------|-----|---------|-----|-----------|-----------|---------|--------|-----|
|      |     | G          |     | H    |     | I    |     | Flanged B.C. |     | MJ B.C. |     |           |           |         |        |     |
| In.  | mm. | In.        | mm. | In.  | mm. | In.  | mm. | In.          | mm. | In.     | mm. | Flanged   | M-Joint   | to Open | Lbs.   | Kg. |
| 3    | 80  | 2.1        | 54  | 10.2 | 260 | 1.73 | 44  | 6.00         | 152 | 6.19    | 157 | 4         | 4         | 10.8    | 43     | 20  |
| 4    | 100 | 2.1        | 54  | 10.2 | 260 | 2.13 | 54  | 7.50         | 191 | 7.50    | 191 | 8         | 4         | 13.0    | 70     | 36  |
| 6    | 150 | 2.5        | 64  | 14.8 | 375 | 2.24 | 57  | 9.50         | 241 | 9.50    | 241 | 8         | 6         | 15.7    | 112    | 51  |
| 8    | 200 | 2.8        | 70  | 14.8 | 375 | 2.48 | 63  | 11.75        | 298 | 11.75   | 298 | 8         | 6         | 17.3    | 170    | 77  |
| 10   | 250 | 2.8        | 70  | 15.7 | 400 | 2.56 | 65  | 14.25        | 362 | 14.00   | 356 | 12        | 8         | 21.4    | 267    | 121 |
| 12   | 300 | 3.4        | 86  | 19.7 | 500 | 2.91 | 74  | 17.01        | 432 | 16.25   | 413 | 12        | 8         | 25.3    | 388    | 176 |

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

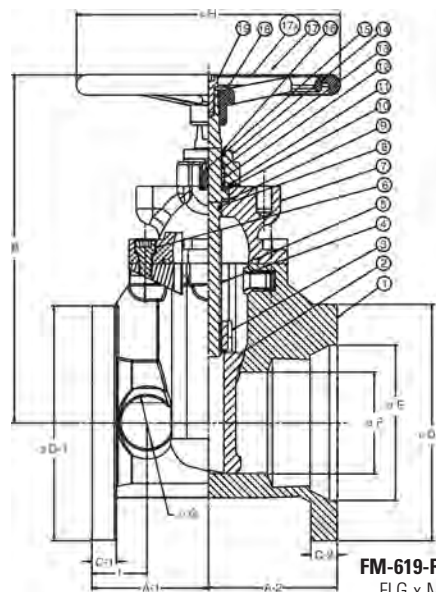
\*Weighted average lead content ≤ 0.25%



FM-619-RWS



FM-619-RWS-SON



FM-619-RWS  
FLG x MJ

## END CONNECTIONS

- A-1 Center to face on Flanged end
- A-2 Center to face on MJ end
- B Center to top of stem
- C-1 Flange thickness on Flanged end
- C-2 Flange thickness on MJ end
- D-1 Flange O.D. on Flanged end
- D-2 Flange O.D. on MJ end
- E O-ring groove diameter or MJ end
- F Waterway diameter
- G Boss diameter on Flanged end
- H Handwheel diameter
- I Face to center of boss on Flanged end

**FREEZING WEATHER PRECAUTIONS:**  
Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

# 300 PSI CWP Iron Body Gate Valves

Bolted Bonnet • Non-Rising Stem • Resilient Wedge • Mechanical Joint Ends

**300 PSI/20.6 bar non-shock cold working pressure to 33°F to 160°F**

**Maximum working temperature 180°F at 250 PSI**

CERTIFIED LEAD-FREE\* BY TRUESDAIL LABORATORIES TO NSF/  
ANSI 61 & 372 • DUCTILE IRON PIPE SIZE AWWA C151/  
ANSI A21.51 AND C900 CPVC PIPE

## MATERIAL LIST

| PART                          | SPECIFICATION                            |
|-------------------------------|------------------------------------------|
| 1 Valve Body                  | Ductile Iron ASTM A536                   |
| 2 Resilient Wedge             | Ductile Iron ASTM A536 / EPDM ASTM D2000 |
| 3 Wedge Nut                   | ASTM B584 UNS C83600                     |
| 4 Stem                        | Stainless Steel 304                      |
| 5 Bonnet Gasket               | EPDM ASTM D2000                          |
| 6 Bonnet Screw                | Corrosion-resistant Steel                |
| 7 Bonnet                      | Ductile Iron ASTM A536                   |
| 8 Stem Primary O-Ring         | EPDM ASTM D2000                          |
| 9 Stem Thrust Washer (lower)  | Bronze ASTM B584 UNS C83600              |
| 10 Stem Thrust Washer (upper) | Stainless Steel ASTM A276 UNS S41000     |
| 11 Gland Seal O-Ring          | EPDM ASTM D2000                          |
| 12 Stem Seal Bushing          | ASTM B584 UNS C83600                     |
| 13 Stem Secondary O-Ring      | EPDM ASTM D2000                          |
| 14 Gland Flange               | Ductile Iron ASTM A536                   |
| 15 Stem Ring Wiper            | EPDM ASTM D2000                          |

**Coating** — Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside meets or exceeds performance requirements of AWWA C550.  
Epoxy coating is not intended to serve as a dielectric barrier internal to the piping system.

**NOTE:** Flanged valve is consistent with ANSI B16.1 Class 125.

**NOTE:** 14" & 16" sizes rated to 250 psi

**NOTE:** Hand wheel is secured by a 12mm x 25mm socket head cap screw. Also need 1/2" wide diameter washer.

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.



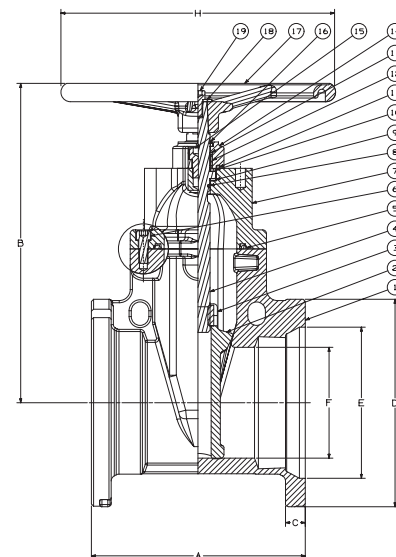
**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**MJ-619-RWS**  
Mechanical Joint



**MJ-619-RWS-SON**  
Mechanical Joint



**MJ-619-RWS**

MJ x MJ

square operating nut not shown

## DIMENSIONS—WEIGHTS—QUANTITIES

| Size |     | Dimensions |     |      |     |      |     |      |     |      |     |      |     |      |     | Bolt Circle | Flange Holes | Turns to Open | Weight |     |     |
|------|-----|------------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|-------------|--------------|---------------|--------|-----|-----|
|      |     | A          |     | B    |     | C    |     | D    |     | E    |     | F    |     | H    |     |             |              |               |        |     |     |
| In.  | mm. | In.        | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.  | mm. | In.         | mm.          | Lbs.          | Kg.    |     |     |
| 3    | 80  | 8.0        | 203 | 12.7 | 322 | 0.94 | 24  | 7.7  | 196 | 4.9  | 126 | 3.1  | 80  | 10.2 | 260 | 6.19        | 157          | 4             | 10.0   | 39  | 16  |
| 4    | 100 | 10.0       | 254 | 13.5 | 344 | 1.00 | 26  | 9.1  | 232 | 6.0  | 153 | 3.9  | 100 | 10.2 | 260 | 7.50        | 191          | 4             | 12.5   | 64  | 33  |
| 6    | 150 | 11.5       | 292 | 17.4 | 441 | 1.06 | 27  | 11.1 | 283 | 8.1  | 206 | 5.9  | 150 | 14.8 | 375 | 9.50        | 241          | 6             | 15.0   | 104 | 46  |
| 8    | 200 | 11.5       | 292 | 20.8 | 529 | 1.12 | 28  | 13.4 | 340 | 10.3 | 261 | 7.9  | 200 | 14.8 | 375 | 11.75       | 298          | 6             | 16.7   | 161 | 67  |
| 10   | 250 | 13.0       | 330 | 24.2 | 614 | 1.18 | 30  | 15.7 | 400 | 12.3 | 313 | 9.8  | 250 | 15.7 | 400 | 14.00       | 356          | 8             | 20.8   | 262 | 107 |
| 12   | 300 | 14.0       | 356 | 27.6 | 700 | 1.25 | 32  | 18.0 | 456 | 14.4 | 367 | 11.8 | 300 | 19.7 | 500 | 16.25       | 413          | 8             | 25.0   | 406 | 160 |
| 14   | 350 | 15.0       | 381 | 31.8 | 807 | 1.34 | 34  | 20.5 | 516 | 16.5 | 420 | 13.8 | 350 | 19.7 | 500 | 18.75       | 476          | 10            | 43.8   | 573 | 259 |
| 16   | 400 | 16.0       | 406 | 34.2 | 869 | 1.38 | 35  | 22.5 | 573 | 18.6 | 474 | 15.7 | 400 | 19.7 | 500 | 21.00       | 533          | 12            | 50.0   | 765 | 348 |

\*Weighted average lead content ≤ 0.25%

# 250 PSI CWP Iron Body Gate Valves

Bolted Bonnet • Non-Rising Stem • Resilient Wedge • IPS PVC Push-On

**250 PSI/17.2 bar non-shock cold working pressure**



**P-619-RW**

IPS Push-On

CERTIFIED LEAD-FREE\* BY IAPMO R&T TO NSF/ANSI 372  
END CONNECTION DESIGNED FOR USE WITH PVC ASTM D1785,  
PVC AND/OR ASME B36.10 STEEL

## MATERIAL LIST

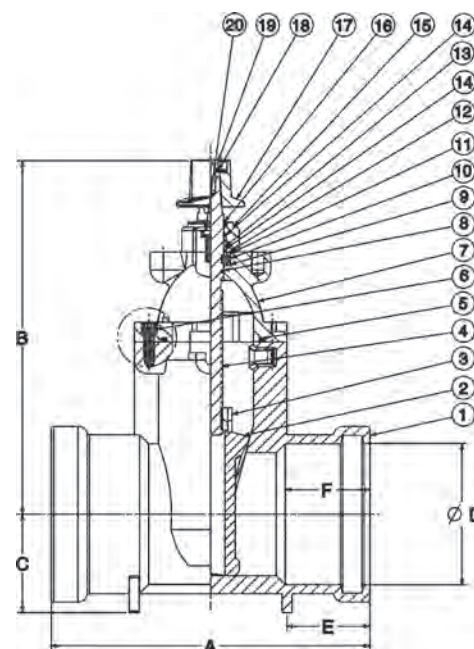
| PART                           | SPECIFICATION                           |
|--------------------------------|-----------------------------------------|
| 1. Valve Body                  | Cast Iron ASTM A126-B                   |
| 2. Resilient Wedge             | Ductile Iron ASTM A536/EPDM ASTM D 2000 |
| 3. Wedge Nut                   | Bronze ASTM B584 UNS C83600             |
|                                | 4" - 12" ASTM B584 UNS C92200 2" - 3"   |
| 4. Stem                        | Stainless Steel ASTM A 276 UNS S41000   |
| 5. Bonnet Gasket               | EPDM ASTM D 2000                        |
| 6. Bonnet Screw                | 18-8 Stainless Steel ASTM A193          |
| 7. Bonnet                      | Cast Iron ASTM A126-B                   |
| 8. Stem Primary O-Ring         | EPDM ASTM D 2000                        |
| 9. Stem Thrust Washer (lower)  | Nylon 1010                              |
| 10. Stem Collar                | Brass ASTM B 16 UNS C36000              |
| 11. Stem Thrust Washer (upper) | Stainless Steel ASTM A 276 UNS S41000   |
| 12. Gland Seal O-Ring          | EPDM ASTM D 2000                        |
| 13. Stem Seal Bushing          | Nylon 1010                              |
| 14. Stem Secondary O-Ring (2)  | EPDM ASTM D 2000                        |
| 15. Gland Flange               | Ductile Iron ASTM A536                  |
| 16. Stem Ring Wiper            | EPDM ASTM D 2000                        |
| 17. Square Operating Nut       | Cast Iron ASTM A126-B                   |
| 17A. Handwheel (Optional)      | Ductile Iron ASTM A536                  |
| 18. Operating Nut Washer       | Carbon Steel Zinc Plated                |
| 19. Operating Nut Screw        | Alloy Steel ASTM A 574M Zinc Plated     |
| 20. Gland Flange Screw         | Alloy Steel ASTM A 574M Zinc Plated     |

Coating — Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside.

Meets or exceeds performance requirements of AWWA C550.

Epoxy coating is not intended to serve as a dielectric barrier internal to the piping system.

Maximum operating temperature 160°F/71°C.



**P-619-RW**

IPS Push-On

## DIMENSIONS — WEIGHTS — QUANTITIES

|      |     | Dimensions |     |      |     |     |     |       |       |     |     |     |     |                  |     |                  |        |     |  |
|------|-----|------------|-----|------|-----|-----|-----|-------|-------|-----|-----|-----|-----|------------------|-----|------------------|--------|-----|--|
| Size |     | A          |     | B    |     | C   |     | D     |       | E   |     | F   |     | Handwheel (Opt.) |     | Turns to<br>Open | Weight |     |  |
| In.  | mm. | In.        | mm. | In.  | mm. | In. | mm. | In.   | mm.   | In. | mm. | In. | mm. | In.              | mm. |                  | Lbs.   | Kg. |  |
| 2    | 50  | 11.4       | 289 | 10.2 | 259 | 2.4 | 60  | 2.48  | 63    | 2.3 | 58  | 2.7 | 69  | 7.9              | 200 | 6.5              | 24     | 11  |  |
| 2½   | 65  | 11.4       | 289 | 11.3 | 288 | 2.6 | 67  | 2.99  | 76    | 2.3 | 58  | 2.7 | 69  | 7.9              | 200 | 8.8              | 32     | 15  |  |
| 3    | 80  | 11.3       | 287 | 12.7 | 322 | 3.1 | 80  | 3.62  | 92    | 2.2 | 56  | 3.0 | 75  | 10.2             | 250 | 10.6             | 40     | 18  |  |
| 4    | 100 | 11.7       | 298 | 13.4 | 341 | 3.5 | 90  | 4.65  | 118   | 2.5 | 63  | 3.5 | 89  | 10.2             | 260 | 12.8             | 56     | 25  |  |
| 6    | 150 | 15.3       | 388 | 17.0 | 431 | 4.7 | 120 | 6.77  | 172   | 4.0 | 101 | 4.1 | 103 | 14.8             | 375 | 15.6             | 106    | 48  |  |
| 8    | 200 | 16.5       | 418 | 20.4 | 518 | 5.9 | 150 | 8.74  | 222   | 3.0 | 77  | 4.5 | 115 | 14.8             | 375 | 17.3             | 172    | 78  |  |
| 10   | 250 | 21.2       | 539 | 23.8 | 604 | 7.1 | 180 | 10.94 | 278   | 3.7 | 93  | 5.2 | 132 | 15.7             | 400 | 21.3             | 307    | 140 |  |
| 12   | 300 | 26.5       | 672 | 27.0 | 685 | 8.1 | 206 | 12.89 | 327.5 | 4.1 | 103 | 5.5 | 139 | 19.7             | 500 | 25.3             | 447    | 203 |  |

**FREEZING WEATHER PRECAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

\*Weighted average lead content ≤ 0.25%

# Iron Body Check Valves Illustrated Index

Iron Body Check Valve  
Horizontal Swing Type  
125 lb. SWP  
200 lb. CWP



**F-918/T-918**  
Bolted Bonnet • Renewable Seat and Disc  
Sizes 2" thru 12"  
Flanged or Threaded Ends  
**Page 36**

Iron Body Silent Check Valve  
Spring Actuated Type  
Class 125/200 CWP  
Class 250/400 CWP



**W-910/W-960**  
Renewable Seat and Disc • Wafer Style  
Sizes 2" thru 12"  
**Page 37**

# Class 125 Iron Body Check Valves

Bolted Bonnet • Horizontal Swing • Renewable Seat and Disc\*

**200 PSI/13.8 bar non-shock cold working pressure to -20°F to 150°F/-29°C to 66°C\***

**Maximum working temperature 450°F/232°C at 125 PSI/8.6 bar**

**125 PSI/8.6 bar saturated steam to 353°F/178°C**

CONFORMS TO MSS SP-71 TYPE 1

## MATERIAL LIST

| PART                       | SPECIFICATION                                                                     |
|----------------------------|-----------------------------------------------------------------------------------|
| 1. Body Bolt               | Steel ASTM A307                                                                   |
| 2. Identification Plate    | Aluminum                                                                          |
| 3. Bonnet                  | Cast Iron ASTM A126 Class B                                                       |
| 4. Body Gasket             | Synthetic Fibers                                                                  |
| 5. Body Nut                | Steel ASTM A563                                                                   |
| 6. Side Plug               | Brass ASTM B16 Alloy C36000                                                       |
| 7. Hanger Pin              | Brass ASTM B16 Alloy C36000                                                       |
| 8. Hanger                  | Ductile Iron ASTM A536                                                            |
| 9. <sup>1</sup> Disc       | Brass ASTM B584 Alloy C84400<br>or ASTM A536 Ductile Iron with<br>Brass Face Ring |
| 10. Seat Ring              | Brass ASTM B584 Alloy C84400                                                      |
| 11. Disc Nut               | Brass ASTM B16 Alloy C36000                                                       |
| 12. Body                   | Cast Iron ASTM A126 Class B                                                       |
| 13. <sup>1</sup> Disc Bolt | Brass ASTM B16 Alloy C36000                                                       |
| 14. Disc Plate**           | Cast Iron ASTM A126 Class B                                                       |
| 15. Disc Cage**            | Cast Iron ASTM A126 Class B                                                       |

<sup>1</sup>2" thru 4" have Bronze ASTM B584 Disc.

<sup>5</sup>" thru 12" have Iron Disc with Bronze Disc Face Rings and Disc Bolt.

\*\*These items are not in the -B, only the -W and -Y.

## DIMENSIONS—WEIGHTS—QUANTITIES

### Dimensions

| Size |     | F-918-B |     | T-918-B |     | B     |     | D     |     | E    |     | F-918-B |     | T-918-B |     |
|------|-----|---------|-----|---------|-----|-------|-----|-------|-----|------|-----|---------|-----|---------|-----|
| In.  | mm. | In.     | mm. | In.     | mm. | In.   | mm. | In.   | mm. | In.  | mm. | Lbs.    | Kg. | Lbs.    | Kg. |
| 2    | 50  | 8.00    | 203 | 6.50    | 165 | 3.94  | 100 | 6.00  | 152 | .63  | 16  | 24      | 11  | 15      | 7   |
| 2½   | 65  | 8.50    | 216 | 7.50    | 191 | 4.50  | 114 | 7.00  | 178 | .69  | 17  | 35      | 16  | 26      | 12  |
| 3    | 80  | 9.50    | 241 | 8.00    | 203 | 5.13  | 130 | 7.50  | 191 | .75  | 19  | 47      | 21  | 31      | 14  |
| 4    | 100 | 11.50   | 292 | 9.38    | 238 | 6.13  | 156 | 9.00  | 229 | .94  | 24  | 80      | 36  | 54      | 24  |
| 5    | 125 | 13.00   | 330 | x       | x   | 6.81  | 173 | 10.00 | 254 | .94  | 24  | 100     | 45  | 80      | 36  |
| 6    | 150 | 14.00   | 356 | x       | x   | 8.00  | 203 | 11.00 | 279 | 1.00 | 25  | 146     | 66  | 121     | 54  |
| 8    | 200 | 19.50   | 495 | x       | x   | 9.44  | 240 | 13.50 | 343 | 1.13 | 29  | 274     | 124 | x       | x   |
| 10   | 250 | 24.50   | 622 | x       | x   | 12.06 | 306 | 16.00 | 406 | 1.19 | 30  | 426     | 193 | x       | x   |
| 12   | 300 | 27.50   | 699 | x       | x   | 16.13 | 410 | 19.00 | 483 | 1.25 | 32  | 675     | 306 | x       | x   |

Note: On pump discharge, the preferred check valves are:

- inline, spring assisted, center-guided, lift checks
- spring assisted twin (double) disc
- swing design with lever and weight or lever and spring

\*Proper machining facilities required.

x Not available this size.

2½" thru 12" are available with lever and weight or lever and spring.

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NIBCO Iron Body Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position.

Warning – Do Not Use For Reciprocating Air Compressor Service.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.



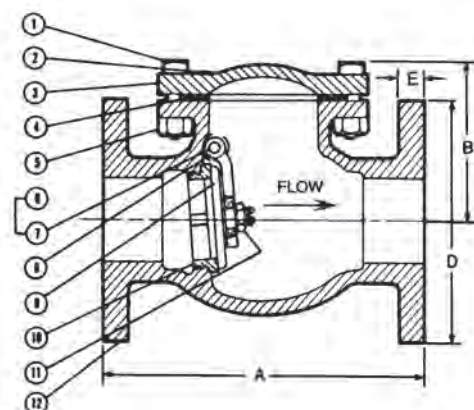
**F-918-B**

Flanged



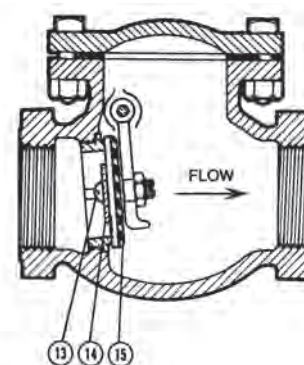
**T-918-B**

Threaded



**F-918-B**

Flg x Flg



**T-918**

NPT x NPT

Buna-N Disc Shown



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# Lead-Free\* Class 125/250 Iron Body Silent Check Valves

Wafer Style • Renewable Seat and Disc • Spring Actuated (1/2 PSI cracking pressure)

**Class 125, 200 PSI/13.8 bar non-shock cold working pressure**

**Class 250, 400 PSI/27.6 bar non-shock cold working pressure**

**Maximum temperature to 200°F/93°C**

**W910-B-LF — 2" thru 10" ONLY**

CERTIFIED LEAD-FREE\* BY WQA TO NSF/ANSI 372

NSF/ANSI 61 CERTIFIED BY UL

CONFORMS TO MSS SP-125 • FM APPROVED



**C USA**  
**COMPONENT**  
**LEAD-FREE**



**WATER QUALITY**  
**NSF 61 CERTIFIED**



## MATERIAL LIST

| PART         | SPECIFICATION                        |
|--------------|--------------------------------------|
| 1. Body      | Cast Iron ASTM 126 Class B           |
| 2. Seat (B)  | Bronze ASTM B584 Alloy C87600        |
| 2a. Seat (W) | with Buna-N O-ring                   |
| 3. Disc      | Bronze ASTM B584 Alloy C87600        |
| 4. Spring    | Stainless Steel ASTM A313 UNS S31600 |
| 5. Bushing   | Aluminum Bronze B505 C95400          |
| 6. O-Ring    | EPDM                                 |

## DIMENSIONS—WEIGHTS

| Size |     | Dimensions |     |      |     | W-910 |     | W-960 |     |
|------|-----|------------|-----|------|-----|-------|-----|-------|-----|
|      |     | A          |     | B    |     |       |     |       |     |
| In.  | mm. | In.        | mm. | In.  | mm. | Lbs.  | Kg. | Lbs.  | Kg. |
| *2   | 50  | 4.25       | 108 | 2.63 | 67  | 6     | 5   | 6     | 3   |
| *2½  | 65  | 5.00       | 127 | 2.88 | 73  | 7     | 3   | 7     | 3   |
| *3   | 80  | 5.75       | 146 | 3.13 | 79  | 12    | 5   | 12    | 5   |
| *4   | 100 | 7.00       | 178 | 4.00 | 102 | 18    | 8   | 18    | 8   |
| *5   | 125 | 8.38       | 213 | 4.75 | 121 | 27    | 12  | 27    | 12  |
| *6   | 150 | 9.75       | 248 | 5.50 | 140 | 42    | 19  | 42    | 19  |
| 8    | 200 | 13.38      | 340 | 6.50 | 165 | †85   | 39  | 86    | 39  |
| 10   | 250 | 16.00      | 406 | 8.25 | 210 | †99   | 45  | †137  | 62  |

\*NOTE: Sizes 2" thru 6" have dual class ratings (125 lb. and 250 lb.) resulting in W-910-LF and W-960-LF being identical. 8" and 10" have special machining in accordance with Flange Class.

†Class 125 only.

‡Class 250 only.

**WARNING:** 1. These are not to be used as steam valves.

2. Valves are not to be used near a reciprocating air compressor.

3. Do not install in vertical line with downward flow.

**Note:** On pump discharge, the preferred check valves are:

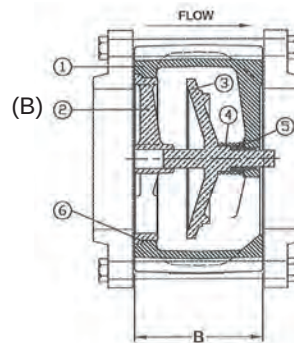
- inline, spring assisted, center-guided, lift checks
- spring assisted twin (double) disc
- swing design with lever and weight or lever and spring

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

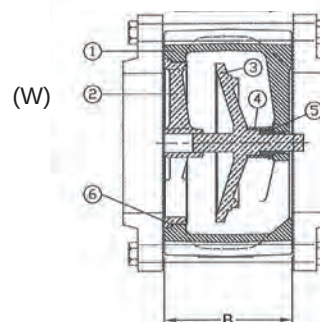
**Note:** W-960-LF 8" and 10" not FM approved.

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

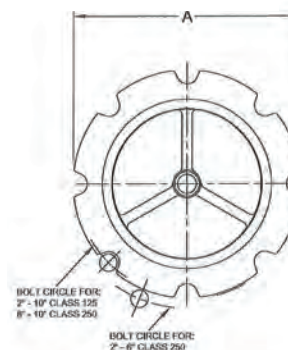
**W-910-LF 125 lb. Class**  
**W-960-LF 250 lb. Class**



**W-910-B-LF/W-960-B-LF**  
Wafer



**W-910-W-LF/W-960-W-LF**  
Wafer



**W-910-B-LF/W-960-B-LF**  
Wafer

\*Weighted average lead content ≤ 0.25%

# Iron Body Butterfly Valves

## Illustrated Index

Iron Body Butterfly Valve  
Ductile Iron Body  
200 lb. CWP



**LD-2000/WD-2000**  
Extended Neck • Molded Insert Liner  
Lug or Wafer Style  
Sizes 2" thru 12"  
**Page 39**

Iron Body Butterfly Valve  
Ductile Iron body  
150 lb. CWP



**LD-1000**  
Extended Neck • Cartridge Seat Liner  
Lug Style  
Sizes 14" thru 24"  
**Page 40**

Iron Body Butterfly Valve  
Cast Iron Body  
200 lb. CWP



**N-200**  
Extended Neck • Cartridge Seat Liner  
Lug Style  
Sizes 2" thru 12"  
**Page 41**

Iron Body Butterfly Valve  
Cast Iron Body  
200 lb. CWP



**N-200**  
Extended Neck • Cartridge Seat Liner  
Wafer Style  
Sizes 2" thru 12"  
**Page 42**

# 200 PSI Butterfly Valves

Ductile Iron Body • Extended Neck • Geometric Drive • Molded-In Seat Liner  
• Lug and Wafer Style

**Sizes 2" through 12"**

Install between Std. ASME Class 125/150 flanges.  
Lug Style 200 PSI bi-directional dead end service rating without a downstream flange required.



THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD •  
U.S. COAST GUARD "CATEGORY A" • CERTIFIED LEAD-FREE\* BY  
TRUESDAIL LABS TO NSF/ANSI 61-8 COMMERCIAL HOT 180°F  
AND NSF/ANSI 61 AND 372

## MATERIAL LIST

| PART              | SPECIFICATION                      |
|-------------------|------------------------------------|
| 1. Stem           | Stainless Steel ASTM A582 Type 416 |
| 2. Collar Bushing | Brass ASTM B16                     |
| 3. Stem Seal      | EPDM Rubber                        |
| 4. Body Seal      | EPDM Rubber                        |
| 5. Nameplate      | Aluminum                           |
| 6. Upper Bushing  | Copper CDA 122                     |
| 7. Liner          | EPDM Rubber                        |
| 8. Disc           | Alum. Brz. ASTM B148 Alloy 955     |
| 9. Lower Bushing  | Copper CDA 122                     |
| 10. Body Wafer    | Ductile Iron ASTM A536             |
| 11. Body Lug      | Ductile Iron ASTM A536             |



**WD-2000**  
Wafer Style  
EPDM Liner  
and Aluminum  
Bronze Disc

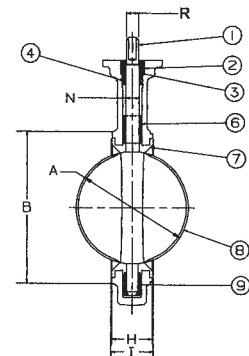
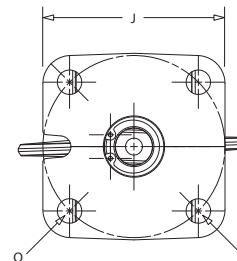


**LD-2000**  
Lug Style  
EPDM Liner  
and Aluminum  
Bronze Disc

NOT RECOMMENDED  
FOR STEAM SERVICE

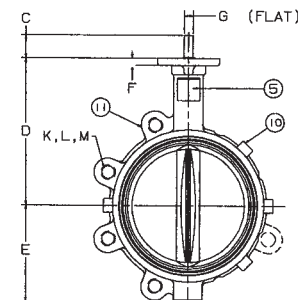
## DIMENSIONS — WEIGHTS

| Size |     | A     | B     | C    | D     | E    | F   | Flat<br>G | Metal<br>H | Rubber<br>I | Square<br>J | Dia.<br>N |
|------|-----|-------|-------|------|-------|------|-----|-----------|------------|-------------|-------------|-----------|
| In.  | mm. |       |       |      |       |      |     |           |            |             |             |           |
| 2    | 50  | 2.53  | 4.00  | 1.25 | 5.38  | 2.88 | .38 | .312      | 1.688      | 1.812       | 3.25        | .500      |
| 2½   | 65  | 2.90  | 4.69  | 1.25 | 5.88  | 3.27 | .38 | .370      | 1.812      | 1.938       | 3.25        | .562      |
| 3    | 80  | 3.15  | 5.12  | 1.25 | 6.12  | 3.40 | .38 | .370      | 1.812      | 1.938       | 3.25        | .562      |
| 4    | 100 | 4.09  | 6.12  | 1.25 | 6.88  | 4.00 | .38 | .403      | 2.062      | 2.188       | 3.25        | .625      |
| 5    | 125 | 5.13  | 7.25  | 1.25 | 7.38  | 4.75 | .38 | .496      | 2.188      | 2.312       | 3.25        | .750      |
| 6    | 150 | 6.13  | 8.25  | 1.25 | 8.00  | 5.29 | .38 | .496      | 2.188      | 2.312       | 3.25        | .750      |
| 8    | 200 | 8.13  | 10.41 | 1.25 | 9.25  | 6.50 | .50 | .560      | 2.375      | 2.500       | 3.25        | .875      |
| 10   | 250 | 10.13 | 12.52 | 1.25 | 10.50 | 8.00 | .50 | .686      | 2.688      | 2.812       | 4.75        | 1.125     |
| 12   | 300 | 12.13 | 15.00 | 1.25 | 12.00 | 9.25 | .50 | .748      | 3.000      | 3.125       | 4.75        | 1.250     |



| Capscrew/Stud Data |     |      |      |       |     |           |        |      |        |        |
|--------------------|-----|------|------|-------|-----|-----------|--------|------|--------|--------|
| Size               | O   | P    | R    | K     | L   | Wafer     | Lug    | M    | Lug    | Wafer  |
| In.                | mm. | B.C. | Dia. | Dia.  | No. | Length    | Length | B.C. | Weight | Weight |
| 2                  | 50  | 3.25 | .437 | .437  | 4   | 5/8-11unc |        | 4 ¾  | 7      | 3.2    |
| 2½                 | 65  | 3.25 | .437 | .500  | 4   | 5/8-11unc |        | 5 ½  | 9      | 4.1    |
| 3                  | 80  | 3.25 | .437 | .500  | 4   | 5/8-11unc |        | 6    | 9.5    | 4.3    |
| 4                  | 100 | 3.25 | .437 | .562  | 8   | 5/8-11unc |        | 7 ½  | 15     | 6.8    |
| 5                  | 125 | 3.25 | .437 | .656  | 8   | ¾-10unc   |        | 8 ½  | 21     | 9.5    |
| 6                  | 150 | 3.25 | .437 | .656  | 8   | ¾-10unc   |        | 9 ½  | 24     | 10.9   |
| 8                  | 200 | 3.25 | .437 | .781  | 8   | ¾-10unc   |        | 11 ¾ | 34     | 15.4   |
| 10                 | 250 | 5.00 | .562 | 1.000 | 12  | 7/8-9unc  |        | 14 ¾ | 62     | 28.1   |
| 12                 | 300 | 5.00 | .562 | 1.062 | 12  | 7/8-9unc  |        | 17   | 90     | 40.9   |

Refer to  
butterfly  
valve  
technical  
information  
for bolt  
lengths



For actuated service where a lower torque is required use NIBCO Fig. No. WDLXXX-0 or LDLXXX-0 series, sizes 2" thru 12" only. Maximum pressure rating of 100 PSI for wet application and 50 PSI for dry application.

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

\*Weighted average lead content ≤ 0.25%

# 150 PSI Butterfly Valves

Ductile Iron Body • Cartridge Liner • Lug Style

Sizes 14", 16", 18", 20", and 24"

Install between Std. ASME Class 125/150 flanges. 150 PSI bi-directional dead end service rating without a downstream flange. Do NOT install between AWWA C115/A21.5 type flanges.

THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD • CERTIFIED LEAD -FREE\* W/ TRUESDAIL TO NSF/ANSI 372

## MATERIAL LIST

| PART                  | SPECIFICATION                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1. Screw              | Steel, ANSI 1035 (2) 16" & 18" (4) 20" & 24"                                                                                  |
| 2. Bottom Plate       | Ductile Iron ASTM A536 grade 65-45-12                                                                                         |
| 3. O-ring             | Nitrile ASTM D2000                                                                                                            |
| 4. Body               | Ductile Iron ASTM A536 grade 65-45-12                                                                                         |
| 5. Long Bushing       | Bronze ASTM B584 UNS C83600                                                                                                   |
| 6. Stem               | Stainless Steel ASTM A582 UNS S41600<br>Stainless Steel ASTM A276 UNS S31600                                                  |
| 7. Disc               | Aluminum bronze ASTM B148 UNS C95400<br>Ductile Iron ASTM A536 grade 65-45-12 Nickel Plated<br>Stainless Steel ASTM A351 CF8M |
| 8. Taper Pin (2)      | Stainless Steel ASTM A564 UNS S17400                                                                                          |
| 9. Seat               | Nitrile ASTM D2000<br>EPDM ASTM D2000                                                                                         |
| 10. Nameplate         | Aluminum                                                                                                                      |
| 11. Short Bushing (2) | Bronze ASTM B584 UNS C83600                                                                                                   |
| 12. O-ring            | Nitrile ASTM D2000                                                                                                            |
| 13. Key               | Steel, ASTM A108 UNS C10450                                                                                                   |
| 14. Screw             | Steel, ANSI 1035 (6) 14" thru 18" (8) 20" & 24"                                                                               |
| 15. Retainer Plate    | ASTM A570 GR33 Galvanized                                                                                                     |
| 16. Bolts M6          | ASTM A570 GR33 Galvanized                                                                                                     |

## DIMENSIONS — WEIGHTS

| Size    | A     | Minimum.  | B     | C     |       |      |       | G    | H    | I     |
|---------|-------|-----------|-------|-------|-------|------|-------|------|------|-------|
| In. mm  | Dia.  | Pipe I.D. | Dia.  | Dia.  | D     | E    | F     | Body | Seat | Dia.  |
| 14" 350 | 13.12 | 13.02     | 14.77 | 17.20 | 14.49 | 1.77 | 26.77 | 3.00 | 3.13 | 1.244 |
| 16" 400 | 15.34 | 15.20     | 17.30 | 19.21 | 15.75 | 2.02 | 29.93 | 3.37 | 3.54 | 1.305 |
| 18" 450 | 17.34 | 17.09     | 19.31 | 21.22 | 16.61 | 2.02 | 31.54 | 4.12 | 4.29 | 1.494 |
| 20" 500 | 19.36 | 18.90     | 21.08 | 23.31 | 18.90 | 2.53 | 35.64 | 5.13 | 5.31 | 1.619 |
| 24" 600 | 23.33 | 23.05     | 25.71 | 32.09 | 22.13 | 2.76 | 42.96 | 5.96 | 6.14 | 1.993 |

## DIMENSIONS — WEIGHTS

| Size    | J     | K    | L    | M                          | P  | Q            | R     | T     | WEIGHT  |
|---------|-------|------|------|----------------------------|----|--------------|-------|-------|---------|
| In. mm  | Dia.  | Dia. | Dia. | Drive Key                  |    | Dia.         | Dia.  | In.   | Lbs. Kg |
| 14" 350 | 5.51  | 4.25 | 0.55 | .250 x 1.125 WOODRUFF #809 | 12 | 1"-8 UNC     | 18.75 | 17.52 | 141 64  |
| 16" 400 | 7.76  | 6.25 | 0.83 | .312 X.312 X 1.811 LONG    | 16 | 1"-8 UNC     | 21.25 | 20.08 | 199 90  |
| 18" 450 | 7.76  | 6.25 | 0.83 | .375 X .375 X 1.881 LONG   | 16 | 1-1/8"-7 UNC | 22.75 | 21.26 | 261 119 |
| 20" 500 | 7.76  | 6.25 | 0.83 | .375 x .375 x 1.811 LONG   | 20 | 1-1/8"-7 UNC | 25.00 | 24.02 | 395 179 |
| 24" 600 | 10.87 | 8.50 | 0.94 | .500 x .500 x 2.362 LONG   | 20 | 1-1/4"-7 UNC | 29.50 | 27.87 | 591 268 |



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

\*Weighted average lead content ≤ 0.25%

## LD-1000/LD-1100

Lug Style  
EPDM or Buna-N Liner  
Aluminum Bronze Disc

## LD-1010/LD-1110

Lug Style  
EPDM or Buna-N Liner  
Ductile Iron Disc

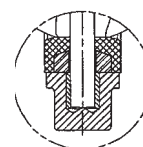
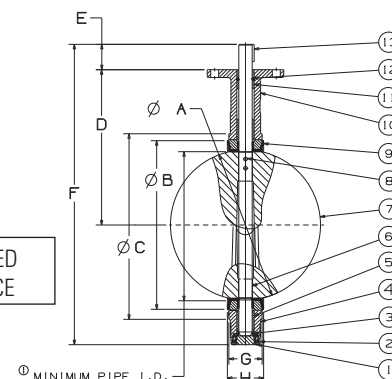
## LD-1022/LD-1122

Lug Style  
EPDM or Buna-N Liner  
Stainless Steel Disc

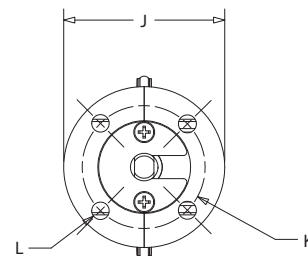
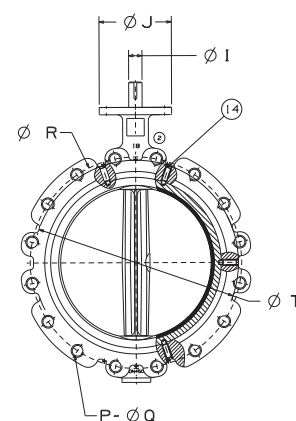


NSF/ANSI 372

NOT RECOMMENDED  
FOR STEAM SERVICE



14" Reference  
Lower Shaft Well



# 200 PSI Butterfly Valves

Cast Iron Body • Extended Neck • Cartridge Seat Liner\* • Wafer Style

Sizes 2" through 12"

Install between Std. ASME Class 125 flanges.

THIRD PARTY CERTIFIED BY QAI TO MEET  
MSS SP-67 STANDARD

## MATERIAL LIST

| PART                             | SPECIFICATION                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------|
| 1. Body                          | Cast Iron, Epoxy coated ASTM A126 CL.B                                              |
| 2. Body Bushing                  | Bronze ASTM B584 Grade C83600                                                       |
| 3. Liner                         | EPDM Rubber w/Phenolic Backing<br>Buna-N Rubber Nitrile w/Phenolic Backing          |
| 4. Stem                          | Stainless Steel ASTM A582 Type 416                                                  |
| 5. Disc                          | Alum. Brz. ASTM B148 Alloy C95400<br>Ductile Iron ASTM A536 Grade 65-45-12 (plated) |
| 6. Taper Pin<br>(2 pin 6" - 12") | Stainless Steel ASTM A582 Type 416                                                  |
| 7. Name Plate                    | Aluminum                                                                            |
| 8. Shaft Bushing                 | Bronze ASTM B584 Grade C83600                                                       |
| 9. Stem Seal                     | Buna-N Rubber Nitrile                                                               |
| 10. Retainer Plate               | ASTM A570 GR33 Galvanized                                                           |
| 11. Bolts M6                     | ASTM A570 GR33 Galvanized                                                           |

## DIMENSIONS — WEIGHTS

| Size    | A     | Min.      | B     | C     | E     | F    | G     | H     | I    |
|---------|-------|-----------|-------|-------|-------|------|-------|-------|------|
| In. mm. | Dia.  | Pipe I.D. | Dia.  | Dia.  | D     |      | Body  | Seat  | Dia. |
| 2 50    | 2.08  | 1.38      | 3.00  | 3.94  | 6.34  | 1.26 | 10.75 | 1.655 | 1.81 |
| 2 ½ 65  | 2.54  | 1.95      | 3.50  | 4.72  | 6.89  | 1.26 | 11.65 | 1.759 | 1.93 |
| 3 80    | 3.10  | 2.66      | 4.09  | 5.00  | 7.13  | 1.26 | 12.12 | 1.780 | 1.93 |
| 4 100   | 4.10  | 3.67      | 5.32  | 6.14  | 7.87  | 1.26 | 13.62 | 2.050 | 2.18 |
| 5 125   | 4.85  | 4.48      | 6.26  | 7.48  | 8.39  | 1.26 | 14.65 | 2.140 | 2.31 |
| 6 150   | 6.12  | 5.84      | 7.42  | 8.35  | 8.90  | 1.26 | 15.62 | 2.195 | 2.33 |
| 8 200   | 7.97  | 7.85      | 9.38  | 10.55 | 10.24 | 1.77 | 18.90 | 2.385 | 2.52 |
| 10 250  | 9.86  | 9.76      | 11.51 | 12.79 | 11.50 | 1.77 | 21.26 | 2.584 | 2.83 |
| 12 300  | 11.87 | 11.72     | 13.55 | 15.87 | 13.27 | 1.77 | 24.57 | 3.029 | 3.19 |

| Size    | J    | B.C. | L    | M    | R     | P  | Q         | T     | Lug Weight |
|---------|------|------|------|------|-------|----|-----------|-------|------------|
| In. mm. | Dia. | Dia. | Dia. | Dia. | Dia.  |    | Dia.      | Flats | Lbs. Kg.   |
| 2 50    | 3.00 | 2.25 | 0.28 | 0.75 | 4.75  | 4  | 5/8-11UNC | .350  | 5.7 2.6    |
| 2 ½ 65  | 3.03 | 2.25 | 0.28 | 0.75 | 5.50  | 4  | 5/8-11UNC | .350  | 7.5 3.9    |
| 3 80    | 3.03 | 2.25 | 0.28 | 0.75 | 6.00  | 4  | 5/8-11UNC | .350  | 8.4 3.8    |
| 4 100   | 3.62 | 2.75 | 0.39 | 0.75 | 7.50  | 8  | 5/8-11UNC | .437  | 12.3 5.6   |
| 5 125   | 3.62 | 2.75 | 0.39 | 0.88 | 8.50  | 8  | 3/4-10UNC | .500  | 17.2 7.8   |
| 6 150   | 3.62 | 2.75 | 0.39 | 0.88 | 9.50  | 8  | 3/4-10UNC | .500  | 19.6 8.9   |
| 8 200   | 4.50 | 3.50 | 0.47 | 0.88 | 11.75 | 8  | 3/4-10UNC | .625  | 29.7 13.5  |
| 10 250  | 4.50 | 3.50 | 0.47 | 1.00 | 14.25 | 12 | 7/8-9UNC  | .812  | 44.0 20.0  |
| 12 300  | 5.50 | 4.25 | 0.47 | 1.00 | 17.00 | 12 | 7/8-9UNC  | .875  | 65.8 29.9  |

\*Note: refer to NIBCO O & M manual for specified installation instructions for optimal performance of cartridge seat valves

## N-200135

Wafer Style  
EPDM Liner  
Aluminum Bronze Disc

## N-200136

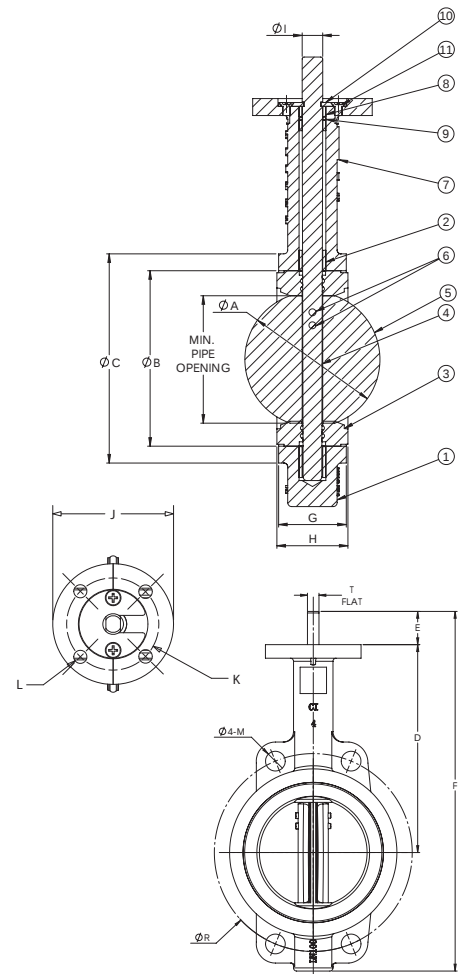
Wafer Style  
EPDM Liner  
Ductile Iron Disc

## N-200145

Wafer Style  
Buna Liner  
Aluminum Bronze Disc

## N-200146

Wafer Style  
Buna Liner  
Ductile Iron Disc



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

NOT RECOMMENDED  
FOR STEAM SERVICE

# 200 PSI Butterfly Valves

Cast Iron Body • Extended Neck • Cartridge Seat Liner\* • Lug Style

Sizes 2" through 12"

Install between Std. ASME Class 125/150 flanges†.  
Bi-directional dead end service rating without a downstream flange required: 2"-6" 200 PSI, 8" 150 PSI, 10"-12" 100 PSI.

THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD

## MATERIAL LIST

| PART                             | SPECIFICATION                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------|
| 1. Body                          | Cast Iron, Epoxy coated ASTM A126 CL.B                                              |
| 2. Body Bushing                  | Bronze ASTM B584 Grade C83600                                                       |
| 3. Liner                         | EPDM Rubber w/Phenolic Backing<br>Buna-N Rubber Nitrile w/Phenolic Backing          |
| 4. Stem                          | Stainless Steel ASTM A582 Type 416                                                  |
| 5. Disc                          | Alum. Brz. ASTM B148 Alloy C95400<br>Ductile Iron ASTM A536 Grade 65-45-12 (plated) |
| 6. Taper Pin<br>(2 pin 6" - 12") | Stainless Steel ASTM A582 Type 416                                                  |
| 7. Name Plate                    | Aluminum                                                                            |
| 8. Shaft Bushing                 | Bronze ASTM B584 Grade C83600                                                       |
| 9. Stem Seal                     | Buna-N Rubber Nitrile                                                               |
| 10. Retainer Plate               | ASTM A570 GR33 Galvanized                                                           |
| 11. Bolts M6                     | ASTM A570 GR33 Galvanized                                                           |

## DIMENSIONS — WEIGHTS

| Size    | A     | Min.      | B     | C     | G     | H    | I     |       |      |       |
|---------|-------|-----------|-------|-------|-------|------|-------|-------|------|-------|
| In. mm. | Dia.  | Pipe I.D. | Dia.  | Dia.  | D     | E    | F     | Body  | Seat | Dia.  |
| 2 50    | 2.08  | 1.38      | 3.00  | 3.94  | 6.34  | 1.26 | 10.75 | 1.655 | 1.81 | 0.496 |
| 2 ½ 65  | 2.54  | 1.95      | 3.50  | 4.72  | 6.89  | 1.26 | 11.65 | 1.759 | 1.93 | 0.496 |
| 3 80    | 3.10  | 2.66      | 4.09  | 5.00  | 7.13  | 1.26 | 12.12 | 1.780 | 1.93 | 0.496 |
| 4 100   | 4.10  | 3.67      | 5.32  | 6.14  | 7.87  | 1.26 | 13.62 | 2.050 | 2.18 | 0.621 |
| 5 125   | 4.85  | 4.48      | 6.26  | 7.48  | 8.39  | 1.26 | 14.65 | 2.140 | 2.31 | 0.745 |
| 6 150   | 6.12  | 5.84      | 7.42  | 8.35  | 8.90  | 1.26 | 15.62 | 2.195 | 2.33 | 0.745 |
| 8 200   | 7.97  | 7.85      | 9.38  | 10.55 | 10.24 | 1.77 | 18.88 | 2.385 | 2.52 | 0.870 |
| 10 250  | 9.86  | 9.76      | 11.51 | 12.79 | 11.50 | 1.77 | 21.26 | 2.584 | 2.83 | 1.120 |
| 12 300  | 11.87 | 11.72     | 13.55 | 15.87 | 13.27 | 1.77 | 24.57 | 3.029 | 3.19 | 1.244 |

| Size    | J    | K         | L    | M    | R     | Q  | T         | Lug Weight |      |      |
|---------|------|-----------|------|------|-------|----|-----------|------------|------|------|
| In. mm. | Dia. | B.C. Dia. | Dia. | Dia. | Dia.  | P  | Flats     | Lbs.       | Kg.  |      |
| 2 50    | 3.00 | 1.97      | 0.28 | 0.75 | 4.75  | 4  | 5/8-11UNC | .350       | 8.6  | 3.9  |
| 2 ½ 65  | 3.03 | 1.97      | 0.28 | 0.75 | 5.50  | 4  | 5/8-11UNC | .350       | 10.8 | 4.9  |
| 3 80    | 3.03 | 1.97      | 0.28 | 0.75 | 6.00  | 4  | 5/8-11UNC | .350       | 11.4 | 5.2  |
| 4 100   | 3.62 | 2.76      | 0.39 | 0.75 | 7.50  | 8  | 5/8-11UNC | .437       | 18.9 | 8.6  |
| 5 125   | 3.62 | 2.76      | 0.39 | 0.88 | 8.50  | 8  | 3/4-10UNC | .500       | 22.8 | 10.4 |
| 6 150   | 3.62 | 2.76      | 0.39 | 0.88 | 9.50  | 8  | 3/4-10UNC | .500       | 27.1 | 12.3 |
| 8 200   | 4.50 | 4.02      | 0.47 | 0.88 | 11.75 | 8  | 3/4-10UNC | .625       | 41.2 | 18.7 |
| 10 250  | 4.50 | 4.02      | 0.47 | 1.00 | 14.25 | 12 | 7/8-9UNC  | .812       | 56.3 | 25.9 |
| 12 300  | 5.50 | 4.02      | 0.47 | 1.00 | 17.00 | 12 | 7/8-9UNC  | .875       | 90.3 | 41.0 |

\* Note: refer to NIBCO O & M manual for specified installation instructions for optimal performance of cartridge seat valves

† Note: lug style valves- extra care should be used when installing with raised face flanges. Over-tightening can result in broken lugs.

## N-200235

Lug Style  
EPDM Liner  
Aluminum Bronze Disc

## N-200236

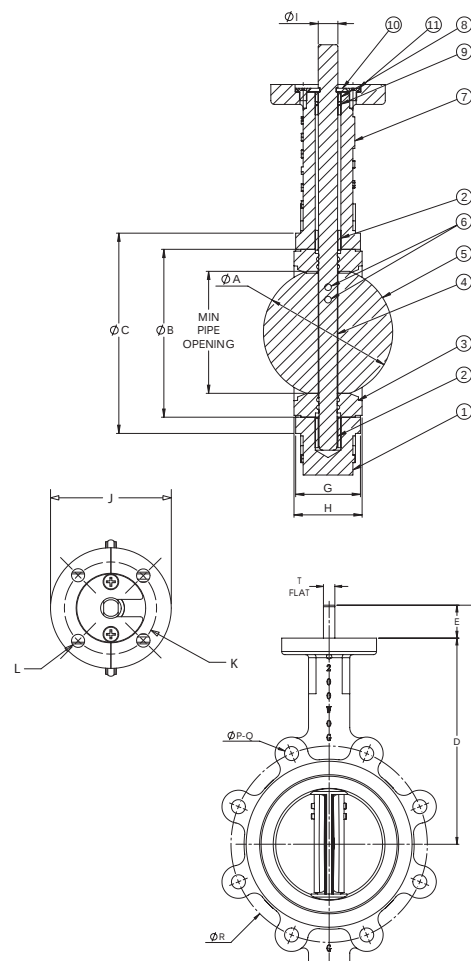
Lug Style  
EPDM Liner  
Ductile Iron Disc

## N-200245

Lug Style  
Buna Liner  
Aluminum Bronze Disc

## N-200246

Lug Style  
Buna Liner  
Ductile Iron Disc



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

NOT RECOMMENDED  
FOR STEAM SERVICE

# 150 PSI Butterfly Valves

Cast Iron Body • Extended Neck • Cartridge Seat Liner\* • Lug Style

**Sizes 14" through 24"**

Install between Std. ASME Class 125 flanges†.  
Bi-directional dead end service rating without a downstream flange required: 2"-6" 200 PSI, 8" 150 PSI, 10"-12" 100 PSI.

THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD

## N-150238

Lug Style  
EPDM Liner  
Nylon Bonded DI Disc

## N-150248

Lug Style  
Buna-N Liner  
Nylon Bonded DI Disc



### MATERIAL LIST

| PART                             | SPECIFICATION                                                              |
|----------------------------------|----------------------------------------------------------------------------|
| 1. Body                          | Cast Iron, Epoxy coated ASTM A126 CL.B                                     |
| 2. Body Bushing                  | Bronze ASTM B584 Grade C83600                                              |
| 3. Liner                         | EPDM Rubber w/Phenolic Backing<br>Buna-N Rubber Nitrile w/Phenolic Backing |
| 4. Stem                          | Stainless Steel ASTM A582 Type 416                                         |
| 5. Disc                          | Ductile Iron ASTM A536 Grade 65-45-12<br>(nylon bonded DI)                 |
| 6. Taper Pin<br>(2 pin 6" - 12") | Stainless Steel ASTM A582 Type 416                                         |
| 7. Name Plate                    | Aluminum                                                                   |
| 8. Shaft Bushing                 | Bronze ASTM B584 Grade C83600                                              |
| 9. Stem Seal                     | Buna-N Rubber Nitrile                                                      |

### DIMENSIONS — WEIGHTS

| Size    | A     | Minimum.  | B     | C     |       |      |       | G    | H    | I     |
|---------|-------|-----------|-------|-------|-------|------|-------|------|------|-------|
| In. mm  | Dia.  | Pipe I.D. | Dia.  | Dia.  | D     | E    | F     | Body | Seat | Dia.  |
| 14" 350 | 13.12 | 13.02     | 14.77 | 17.20 | 14.49 | 1.77 | 26.77 | 3.00 | 3.13 | 1.244 |
| 16" 400 | 15.34 | 15.20     | 17.30 | 19.21 | 15.75 | 2.02 | 29.93 | 3.37 | 3.54 | 1.305 |
| 18" 450 | 17.34 | 17.09     | 19.31 | 21.22 | 16.61 | 2.02 | 31.54 | 4.12 | 4.29 | 1.494 |
| 20" 500 | 19.36 | 18.90     | 21.08 | 23.31 | 18.90 | 2.53 | 35.64 | 5.13 | 5.31 | 1.619 |
| 24" 600 | 23.33 | 23.05     | 25.71 | 32.09 | 22.13 | 2.76 | 42.96 | 5.96 | 6.14 | 1.993 |

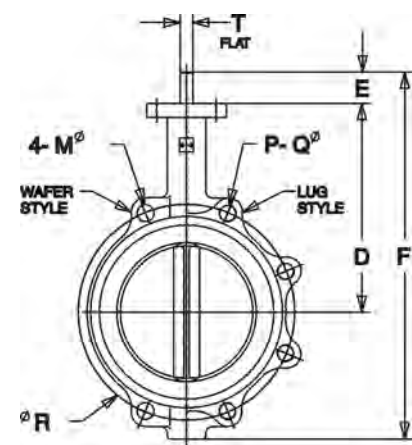
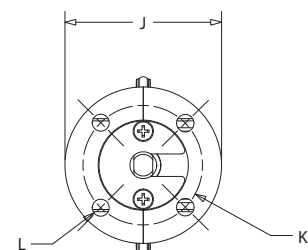
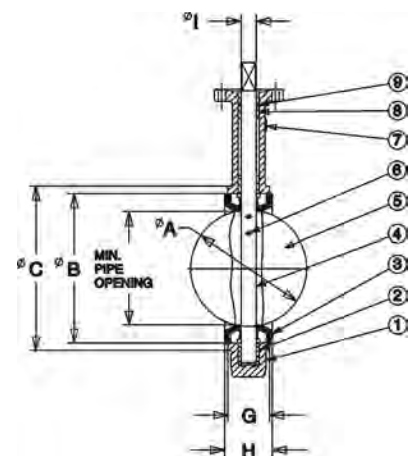
### DIMENSIONS — WEIGHTS

| Size    | J     | K    | L    | M                          | P  | Q            | R     | T           | WEIGHT  |
|---------|-------|------|------|----------------------------|----|--------------|-------|-------------|---------|
| In. mm  | Dia.  | Dia. | Dia. | Drive Key                  |    | Dia.         | Dia.  | In. Lbs. Kg |         |
| 14" 350 | 5.51  | 4.25 | 0.55 | .250 x 1.125 WOODRUFF #809 | 12 | 1"-8 UNC     | 18.75 | 17.52       | 141 64  |
| 16" 400 | 7.76  | 6.25 | 0.83 | .312 X .312 X 1.811 LONG   | 16 | 1"-8 UNC     | 21.25 | 20.08       | 199 90  |
| 18" 450 | 7.76  | 6.25 | 0.83 | .375 X .375 X 1.881 LONG   | 16 | 1-1/8"-7 UNC | 22.75 | 21.26       | 261 119 |
| 20" 500 | 7.76  | 6.25 | 0.83 | .375 x .375 x 1.811 LONG   | 20 | 1-1/8"-7 UNC | 25.00 | 24.02       | 395 179 |
| 24" 600 | 10.87 | 8.50 | 0.94 | .500 x .500 x 2.362 LONG   | 20 | 1-1/4"-7 UNC | 29.50 | 27.87       | 591 268 |

\*Note: refer to NIBCO O & M manual for specified installation instructions for optimal performance of cartridge seat valves

†Note: lug style valves- extra care should be used when installing with raised face flanges. Over-tightening can result in broken lugs.

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



NOT RECOMMENDED  
FOR STEAM SERVICE

# 200 PSI Butterfly Valves

Cast Iron Body • Extended Neck • Cartridge Seat Liner\* • Lug Style

Sizes 2" through 12"

Install between Std. ASME Class 125 flanges†.

Bi-directional dead end service rating without a downstream flange required: 2"-6" 200 PSI, 8" 150 PSI, 10"-12" 100 PSI.

THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD

## MATERIAL LIST

| PART                             | SPECIFICATION                                                              |
|----------------------------------|----------------------------------------------------------------------------|
| 1. Body                          | Cast Iron, Epoxy coated ASTM A126 CL.B                                     |
| 2. Body Bushing                  | Bronze ASTM B584 Grade C83600                                              |
| 3. Liner                         | EPDM Rubber w/Phenolic Backing<br>Buna-N Rubber Nitrile w/Phenolic Backing |
| 4. Stem                          | Stainless Steel ASTM A582 Type 416                                         |
| 5. Disc                          | Ductile Iron ASTM A536 Grade 65-45-12<br>(nylon bonded)                    |
| 6. Taper Pin<br>(2 pin 6" - 12") | Stainless Steel ASTM A582 Type 416                                         |
| 7. Name Plate                    | Aluminum                                                                   |
| 8. Shaft Bushing                 | Bronze ASTM B584 Grade C83600                                              |
| 9. Stem Seal                     | Buna-N Rubber Nitrile                                                      |

## DIMENSIONS — WEIGHTS

| Size    | A     | Min.      | B     | C     |       | G    | H     | I     |      |       |
|---------|-------|-----------|-------|-------|-------|------|-------|-------|------|-------|
| In. mm. | Dia.  | Pipe I.D. | Dia.  | D     | E     | F    | Body  | Seat  | Dia. |       |
| 2 50    | 2.08  | 1.38      | 3.00  | 3.94  | 6.34  | 1.26 | 10.75 | 1.655 | 1.81 | 0.496 |
| 2 ½ 65  | 2.54  | 1.95      | 3.50  | 4.72  | 6.89  | 1.26 | 11.65 | 1.759 | 1.93 | 0.496 |
| 3 80    | 3.10  | 2.66      | 4.09  | 5.00  | 7.13  | 1.26 | 12.12 | 1.780 | 1.93 | 0.496 |
| 4 100   | 4.10  | 3.67      | 5.32  | 6.14  | 7.87  | 1.26 | 13.62 | 2.050 | 2.18 | 0.621 |
| 5 125   | 4.85  | 4.48      | 6.26  | 7.48  | 8.39  | 1.26 | 14.65 | 2.140 | 2.31 | 0.745 |
| 6 150   | 6.12  | 5.84      | 7.42  | 8.35  | 8.90  | 1.26 | 15.62 | 2.195 | 2.33 | 0.745 |
| 8 200   | 7.97  | 7.85      | 9.38  | 10.55 | 10.24 | 1.77 | 18.88 | 2.385 | 2.52 | 0.870 |
| 10 250  | 9.86  | 9.76      | 11.51 | 12.79 | 11.50 | 1.77 | 21.26 | 2.584 | 2.83 | 1.120 |
| 12 300  | 11.87 | 11.72     | 13.55 | 15.87 | 13.27 | 1.77 | 24.57 | 3.029 | 3.19 | 1.244 |

| Size    | J    | K         | L    | M    | R     |    | Q         | T     | Lug Weight |
|---------|------|-----------|------|------|-------|----|-----------|-------|------------|
| In. mm. | Dia. | B.C. Dia. | Dia. | Dia. | Dia.  | P  | Dia.      | Flats | Lbs. Kg.   |
| 2 50    | 3.00 | 1.97      | 0.28 | 0.75 | 4.75  | 4  | 5/8-11UNC | .350  | 8.6 3.9    |
| 2 ½ 65  | 3.03 | 1.97      | 0.28 | 0.75 | 5.50  | 4  | 5/8-11UNC | .350  | 10.8 4.9   |
| 3 80    | 3.03 | 1.97      | 0.28 | 0.75 | 6.00  | 4  | 5/8-11UNC | .350  | 11.4 5.2   |
| 4 100   | 3.62 | 2.76      | 0.39 | 0.75 | 7.50  | 8  | 5/8-11UNC | .437  | 18.9 8.6   |
| 5 125   | 3.62 | 2.76      | 0.39 | 0.88 | 8.50  | 8  | 3/4-10UNC | .500  | 22.8 10.4  |
| 6 150   | 3.62 | 2.76      | 0.39 | 0.88 | 9.50  | 8  | 3/4-10UNC | .500  | 27.1 12.3  |
| 8 200   | 4.92 | 4.02      | 0.47 | 0.88 | 11.75 | 8  | 3/4-10UNC | .625  | 41.2 18.7  |
| 10 250  | 4.92 | 4.02      | 0.47 | 1.00 | 14.25 | 12 | 7/8-9UNC  | .812  | 56.3 25.9  |
| 12 300  | 5.50 | 4.02      | 0.47 | 1.00 | 17.00 | 12 | 7/8-9UNC  | .875  | 90.3 41.0  |

\*Note: refer to NIBCO O & M manual for specified installation instructions for optimal performance of cartridge seat valves

†Note: lug style valves- extra care should be used when installing with raised face flanges. Over-tightening can result in broken lugs.

## N-200238

Lug Style  
EPDM Liner  
Nylon Bonded DI Disc

## N-200138

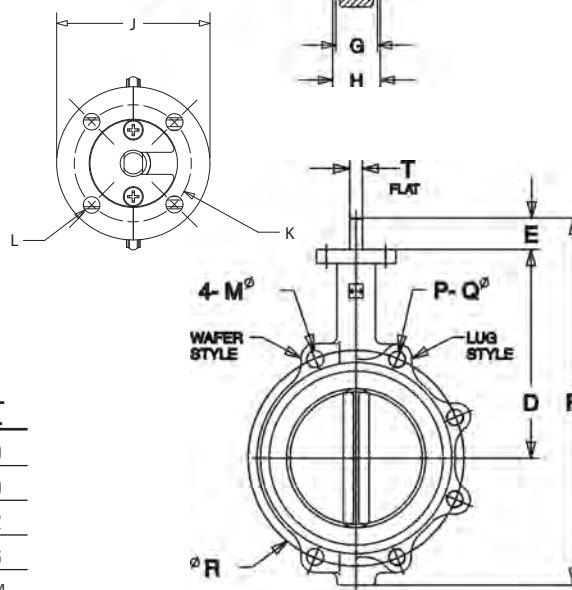
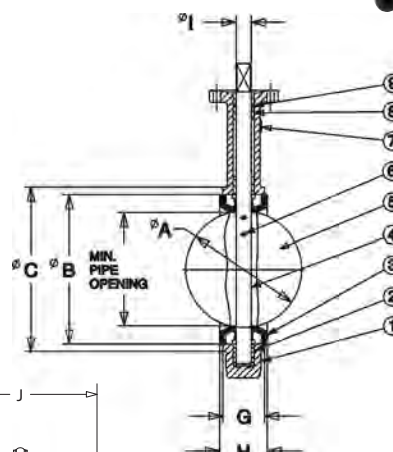
Wafer Style  
EPDM Liner  
Nylon Bonded DI Disc

## N-200248

Lug Style  
Buna-N Liner  
Nylon Bonded DI Disc

## N-200148

Wafer Style  
Buna-N Liner  
Nylon Bonded DI Disc



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

NOT RECOMMENDED  
FOR STEAM SERVICE

# Bronze Valve Options and Accessories Handles

## Malleable Iron

Available for 125, 150, 200, 300 lb. SWP Bronze Body Valves.

## Malleable



## Red Bronze 85-5-5-5% ASTM B 62

Available for some NIBCO 125 lb. SWP Bronze Body Valves 3/8" thru 2".  
Used where code requirements or personal preference dictate a bronze handwheel.  
Specify by adding (BHW) to Fig. No., i.e. T-000-BHW.  
For field replacement, specify valve type and size.

## Bronze



## Red Bronze 85-5-5-5% ASTM B 62

Available for some NIBCO 125 lb. SWP Bronze Body Valves 3/8" thru 3".  
Use where standard handwheel would be out of reach or hand space is restricted.  
Specify by adding (K) to Fig. No., i.e. T-000-K.

## Cross



## Red Bronze 85-5-5-5% ASTM B 62 or ASTM B 16

Available for some NIBCO 125 lb. SWP Bronze Body Valves thru 4".  
Use where valve might be subject to unauthorized use or tampering.  
Specify by adding (L) to Fig. No., i.e. T-000-L.  
For field replacement, specify valve type and size.

## Lockshield



## Red Bronze 85-5-5-5% ASTM B 62

Available for some NIBCO 125 lb. SWP Bronze Body Valves thru 4".  
Used as handle for lockshields.  
Specify: "Lockshield Key."  
For field replacement, specify valve type and size.  
Key available only for valves with spline stems.

## Lockshield Key



NIBCO INC. reserves the right to change materials, options and accessories without notice.

# Iron Valve Options and Accessories

## Operating Nut, Position Indicator, Sprocket Rims

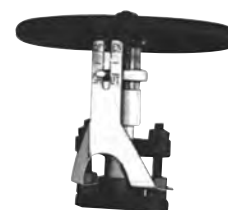
### Square Operating Nut

The square operating nut can be substituted for the regular handwheel when an NRS valve is to be installed in an inaccessible location. It may be operated by a key or a wrench. A directional arrow indicating "open" is cast on top of the nut. All square operating nuts have a standard 2" square which facilitates opening and closing the valve with a square socket wrench as used by the Water Works. Material: Cast Iron ASTM A 126 Class B. Field retrofit is standard. Specify valve figure number and size when ordering.



### Position Indicator

For non-rising stem (2"-12") iron body gate valves. Indicates whether it is open, partly open or closed by the position of the needle which moves as the valve is operated. It may be factory or field mounted. Ordering Information: Specify size and figure number of the valve to be fitted. Available on models T and F619 only.



### Adjustable Sprocket

The Babbitt Adjustable Sprocket Rim will provide for remote operation of gate, globe and angle valves in high, normally out-of-reach locations. Attaches to valve wheel for instant valve open/close response. Sprocket rim made from cast iron, chain guide is malleable iron. When ordering, specify either the sprocket and chain number or the NIBCO valve figure number and size. The chain length must also be specified.

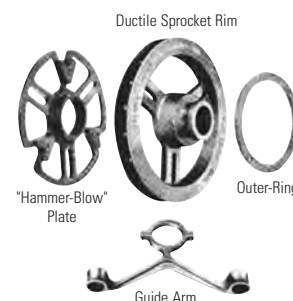
| Size            | Diameter of Sprocket Wheel (In.) | Weight (Lbs.) | Diameter of Valve Wheels Rim Will Fit | Chain Size No. | Chain Weight per 100' (Lbs.) |
|-----------------|----------------------------------|---------------|---------------------------------------|----------------|------------------------------|
| 0               | 4                                | 2             | 2 to 4                                | 2              | 10                           |
| 1               | 5 $\frac{1}{8}$                  | 4             | 4 $\frac{1}{8}$ to 5 $\frac{1}{8}$    | 1/0            | 17 $\frac{1}{2}$             |
| 1 $\frac{1}{2}$ | 7 $\frac{1}{2}$                  | 5             | 6 to 7 $\frac{1}{2}$                  | 1/0            | 17 $\frac{1}{2}$             |
| 2               | 9                                | 8             | 7 $\frac{3}{4}$ to 9                  | 1/0            | 17 $\frac{1}{2}$             |
| 2 $\frac{1}{2}$ | 12 $\frac{1}{2}$                 | 15            | 9 $\frac{1}{4}$ to 12 $\frac{1}{2}$   | 4/0            | 30                           |
| 3               | 15 $\frac{1}{2}$                 | 21            | 12 $\frac{3}{4}$ to 15 $\frac{1}{2}$  | 4/0            | 30                           |
| 3 $\frac{1}{2}$ | 19                               | 25            | 15 $\frac{3}{4}$ to 19                | 4/0            | 30                           |
| 4               | 22                               | 34            | 19 $\frac{1}{4}$ to 22                | 5/0            | 35                           |
| 4 $\frac{1}{2}$ | 26                               | 38            | 22 $\frac{1}{4}$ to 26                | 5/0            | 35                           |
| 5               | 30                               | 46            | 26 $\frac{1}{4}$ to 30                | 5/0            | 35                           |



### Hammer-Blow Sprocket

The Babbitt Adjustable Hammer-Blow Sprocket Rim is for use with hard-to-operate gate, globe and angle valves in overhead locations. The Hammer-Blow plate and rim are made of tough, shock resistant ductile iron to withstand heavy, valve releasing impact. The chain guide is malleable iron. When ordering, specify the sprocket number, chain number and length, or the NIBCO valve figure number, size and the chain length.

| Size            | Ductile Rim Guide with Hammer Blow Complete | Diameter of Sprocket Wheel (In.) | Weight (Lbs.) | Diameter of Valve Wheels Assembly Will Fit | Chain Size No. | Chain Weight per 100' (Lbs.) |
|-----------------|---------------------------------------------|----------------------------------|---------------|--------------------------------------------|----------------|------------------------------|
| 2               |                                             | 9                                | 13            | 7 $\frac{3}{4}$ to 9                       | 1/0            | 17 $\frac{1}{2}$             |
| 2 $\frac{1}{2}$ |                                             | 12 $\frac{1}{2}$                 | 22            | 9 $\frac{1}{4}$ to 12 $\frac{1}{2}$        | 4/0            | 30                           |
| 3               |                                             | 15 $\frac{1}{2}$                 | 30            | 12 $\frac{3}{4}$ to 15 $\frac{1}{2}$       | 4/0            | 30                           |
| 3 $\frac{1}{2}$ |                                             | 19                               | 35            | 15 $\frac{3}{4}$ to 19                     | 4/0            | 30                           |
| 4               |                                             | 22                               | 55            | 19 $\frac{1}{4}$ to 22                     | 5/0            | 35                           |
| 4 $\frac{1}{2}$ |                                             | 26                               | 78            | 22 $\frac{1}{4}$ to 26                     | 5/0            | 35                           |
| 5               |                                             | 30                               | 78            | 26 $\frac{1}{4}$ to 30                     | 5/0            | 35                           |



### Sprocket Rim Selection Guide

|                                      | #1 $\frac{1}{2}$    | #2                        | #2 $\frac{1}{2}$ | #3 | #3 $\frac{1}{2}$ | #4       | #4 $\frac{1}{2}$   | #5  |
|--------------------------------------|---------------------|---------------------------|------------------|----|------------------|----------|--------------------|-----|
| Fig. F-617-O Size Valve Rim will fit | 2"                  | 2 $\frac{1}{2}$ ", 3"     | 4", 5", 6"       | 8" | 10", 12"         |          | 14", 16", 18", 20" | 24" |
| Fig. F-619 Size Valve Rim will fit   | 2", 2 $\frac{1}{2}$ | 3"                        | 4", 5", 6"       | 8" | 10", 12"         | 14"      | 16"                |     |
| Fig. F-667-O Size Valve Rim will fit |                     | 2", 2 $\frac{1}{2}$ ", 3" | 3", 4", 5"       |    | 6", 8"           | 10", 12" |                    |     |
| Fig. F-669 Size Valve Rim will fit   | 2"                  | 2 $\frac{1}{2}$           | 3", 4", 5"       |    | 6", 8", 10"      | 12"      |                    |     |

NIBCO INC. reserves the right to change materials, options and accessories without notice.

# Butterfly Valves

## Options and Accessories

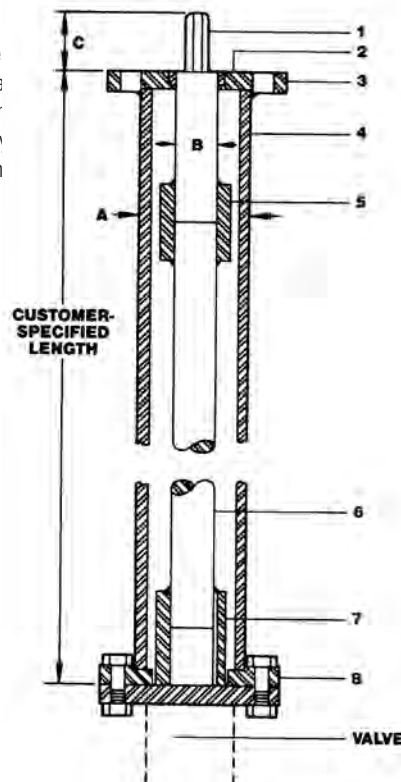
### Stem Extensions

Stem extensions can be furnished to permit remote operation of butterfly valves in any required length. The top flange of an extension stem, plug shaft diameter, and distance across flats on plug shaft are the same size as the valve selected. This allows interchangeability of gear operators, actuators, or adapter bushings from valve mounting flange to extension stem top flange. When ordering, specify valve size, figure number, and the exact distance from the valve flange to the top of extension flange (customer-specified length shown at right). Stem extensions are available in lengths up to 10 feet. For stem extensions in excess of 10 feet, consult factory.

#### MATERIAL LIST

| PART                     | SPECIFICATION |
|--------------------------|---------------|
| 1. Plug                  | Steel         |
| 2. Top Flange Bushing    | Bronze        |
| 3. Top Flange            | Steel         |
| 4. Housing               | Steel         |
| 5. Plug and Rod Coupling | Steel         |
| 6. Rod                   | Steel         |
| 7. Rod and Stem Coupling | Steel         |
| 8. Bottom Flange         | Steel         |

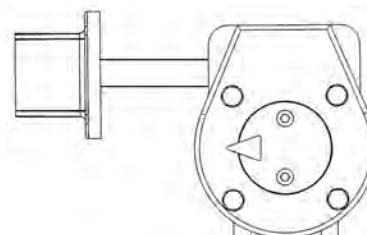
| Dimensions              |      |       |      |
|-------------------------|------|-------|------|
| Size                    | A    | B     | C    |
| 2"-12"                  | 2.38 | 1.125 | 1.12 |
| 14"-24" consult factory |      |       |      |



### Square Operating Nuts for Butterfly LD/WD 2000

Square Operating Nuts for LD/WD 2000 Series Valves - Fits on Gear Operator Only

| Valve Size  | 2" thru 8" Gear Operator | 10" thru 12" Gear Operator |
|-------------|--------------------------|----------------------------|
| Part Number | T117792 FC               | T117793 FC                 |



# Golf Course Service Specifications

The Golf Course industry requirements for strong, sturdy maintenance-free valves are critical to the operation of the Golf Course. Corrosion is a real concern for many irrigation installations and high quality valves are the best solution for flow isolation in irrigation piping systems. NIBCO valves use optimum materials to protect the valves from failure due to corrosion or dezincification, problems often encountered with foreign yellow brass.

## Isolation Valves 3" and Smaller

### Gate Valves:

**Non-Rising Stem:** Valves shall be class 125 and 200 PSI CWP, non-rising stem, screw-in bonnet, solid wedge and USA produced in accordance with MSS SP-80. Body, bonnet, external stuffing box and wedge are to be of Bronze ASTM B 62. Stems shall be of dezincification-resistant silicon Bronze ASTM B 371 or low-zinc alloy B 99, non-asbestos packing and malleable or ductile iron handwheel. For buried service — Bronze Cross or Bronze handwheel required. Valve ends shall be threaded type.

### Acceptable Valves:

200 PSI CWP NIBCO T-113-K (Bronze Cross H/W) (¾" thru 3")  
200 PSI CWP NIBCO T-113-BHW (Bronze H/W) (¼" thru 3")  
200 PSI CWP NIBCO T-113 (MI H/W) (¼" thru 3")

### Globe/Angle Valves:

Valves shall be Class 125 and 200 PSI CWP, body and bonnet are to be of Bronze ASTM B 62 and USA produced in accordance with MSS SP-80. Stems shall be of dezincification-resistant Silicon Bronze ASTM B 371 or Low-Zinc Alloy B 99, non-asbestos packing, PTFE seat disc and malleable or ductile iron handwheel. For buried service — Bronze Cross handwheel required. Valve ends shall be threaded type.

### Acceptable Valves:

200 PSI CWP NIBCO globe/angle T-211-YK/T-311-YK (Bronze Cross H/W) (1" thru 2")  
200 PSI CWP NIBCO globe/angle T-211-Y/T-311-Y (MI H/W) (¼" thru 3")

### Ball Valves:

Valves shall be Class 150 and 600 PSI non-shock CWP and USA produced in accordance with MSS SP-110. Two-piece cast bronze bodies, PTFE seats, full port or reduced port on 2½" and 3", separate packnut with adjustable stem packing, anti-blowout stems. Stainless steel ball, handle and nut or chrome plated ball and steel handle. Valve ends shall have full depth ANSI threads.

### Acceptable Valves – Full Port:

Class 150 NIBCO T-580-70-66 (SS ball and handle) (¼" thru 2")  
Class 150 NIBCO T-585-70 (Chrome plated ball and steel handle) (¼" thru 2")

### Acceptable Valves – Reduced Port:

Class 150 NIBCO T-580-70-66 (SS ball and handle) (2½" and 3")  
Class 150 NIBCO T-580-70 (Chrome plated ball and steel handle) (2½" and 3")

## Isolation Valves 2" and larger

### Gate Valves:

#### Non-Rising Stem:

**Resilient Wedge Design:** Valves shall be 200 PSI CWP and USA produced, valve body and bonnet designed and tested to meet AWWA C 509. Body and bonnet are to be of Cast Iron Alloy ASTM A 126 Class B or Ductile Iron ASTM A 536. Valve to be epoxy coated inside and outside. Two upper O-ring stem seals. Sealed counter sunk body bonnet bolts providing no exposure of bonnet bolts. Stems to be stainless steel. Resilient rubber encapsulated wedge. Cast iron 2" square operating nut. Valve ends shall be IPS PVC push-on joint, flanged-type or mechanical joint-type.

### Acceptable Valves:

# Golf Course Service Specifications

200 PSI CWP NIBCO P-619-RW (IPS PVC push-on) (2" thru 12")  
200 PSI CWP NIBCO F-619-RW (Flanged) (2" thru 16")  
200 PSI CWP NIBCO MJ-619-RW (Mechanical joint) (2" thru 16")  
200 PSI CWP NIBCO FM-619-RW (Flanged by mechanical joint) (2" thru 12")

**IBBM Design:** Valves to be Class 125 and 200 PSI CWP and USA produced in accordance with MSS SP-70. Bolted bonnet, bronze trimmed, with body and bonnet conforming to ASTM A 126 Class B cast iron. Packing and gaskets to be non-asbestos. Valve ends shall be flanged-type.

**Acceptable Valves:**

200 PSI CWP NIBCO F-619 (Cast iron H/W) (2" thru 16")  
200 PSI CWP NIBCO F-619-SON (2" Square operating nut) (2" thru 16")

**Butterfly Valves:**

Valve shall be 200 PSI CWP (2" thru 12") and 150 PSI CWP (14" and larger) and USA produced in accordance with MSS SP-67. Body to have 2" extended neck and to be cast iron or ductile iron. Valve to have aluminum bronze alloy disc with EPDM rubber seat and seals; or EPDM rubber encapsulated disc with polymer-coated body. Stem shall be 400 series stainless steel and shall not have exposed stem to disc fasteners. Sizes 2 1/2" thru 6" shall be lever-operated with 10-position throttling plate; sizes 8" and larger shall have gear operators. Lug-style, flanged and grooved style shall be capable for use as isolation valves and recommended by manufacturer for dead-end service at full pressure—without the need of downstream flanges. Valve ends shall be lug, wafer, flanged or I.P.S. grooved body style.

**Acceptable Valves:**

200 PSI CWP Lug body, aluminum bronze disc NIBCO LD/WD-2000-3 (lever operator); LD/WD-2000-5 (gear operator) (2" thru 24")  
200 PSI CWP Flanged body, rubber coated disc NIBCO FC-2765-3 (lever operator); FC-2765-5 (gear operator) (2" thru 12")  
300 PSI CWP Grooved body, rubber coated disc NIBCO GD-4765-3 (lever operator); GD-4765-5 (gear operator) (2" thru 12")

# Golf Course Service Specifications

## Check Valves for Backflow 3" and Smaller

### Check Valves:

Valves shall be Class 125 and 200 PSI CWP and USA produced in accordance with MSS SP-80, body shall be bronze ASTM B 62 body with PTFE seat disc, Y-pattern swing type or stainless steel spring loaded center guided lift-type with PTFE seating. Valve ends shall be threaded type.

### Acceptable Valves:

200 PSI CWP NIBCO T-413-Y (Swing Type) (1/4" thru 2"); NIBCO T-433-Y (Swing Type) (2 1/2" and 3")

200 PSI CWP NIBCO T-480-Y (Center Guided) (3/8" thru 2")

## Check Valves for Backflow 2" and Larger

### Check Valves:

Valves shall be Class 125 and 200 PSI CWP and USA produced in accordance with MSS SP-71, bolted bonnet, bronze trimmed, with body and bonnet conforming to ASTM A 126 Class B cast iron, gasket to be non-asbestos, swing type. Or, valves shall be Class 125 and 200 PSI CWP and USA manufactured in accordance with FM, bronze trim, with body and bonnet conforming to ASTM A 48 cast iron, stainless steel spring-loaded center-guided globe-style lift-type. Valve ends shall be flanged type or wafer type.

### Acceptable Valves:

200 PSI CWP NIBCO F-918-B (Flanged, swing type) (2" thru 12")

200 PSI CWP NIBCO F-910-B (Flanged, center guided) (2" thru 36")

200 PSI CWP NIBCO W-910-B (Wafer, center guided) (2" thru 10")

# Valve Flow Data

## Liquid Flow:

$$Q = C_v \sqrt{\frac{\Delta P}{S}} \quad \text{or} \quad \Delta P = S \left( \frac{Q}{C_v} \right)^2$$

where... Q = flow rate (gallons per minute)  
ΔP = pressure drop across valve (psi)  
S = specific gravity of media

This equation is good for turbulent flow and for liquids with viscosities near that of water.  
(Cv is defined as the flow in GPM that a valve will carry with a pressure drop of 1.0 psi when the media is water at 60°F.) (The specific gravity of water is 1 (one).)

## Gas Flow:

$$Q = 1360 C_v \sqrt{\frac{\Delta P \times P_1}{S T}}$$

where... Q = gas flow (SCFH—std. cu. ft./hr)  
S = specific gravity of gas (air = 1.0)  
T = temp—degrees Rankine (°F + 460)  
ΔP = pressure drop across valve (psi)  
P<sub>1</sub> = upstream pressure (psia) absolute

**NOTE:** ΔP must be less than .5 P<sub>1</sub>. (Flow is critical w greater than .5 P<sub>1</sub>.)

## Throttling Factors

For throttling use with disc partially open. Multiply Cv by factor.

|           | 0 | 10  | 20  | 30  | 40  | 50  | 60  | 70  | 80   | 90   | 100  |
|-----------|---|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| T-211/311 | 0 | .35 | .65 | .90 | .93 | .96 | .98 | .99 | 1.00 | 1.00 | 1.00 |

|            | 0 | .01 | .05 | .16 | .30 | .37 | .45 | .58 | .71 | .87 | 1.00 |
|------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| T-580      | 0 | .01 | .05 | .16 | .30 | .37 | .45 | .58 | .71 | .87 | 1.00 |
| T-580-70   | 0 | .01 | .05 | .16 | .30 | .37 | .45 | .58 | .71 | .87 | 1.00 |
| T-585-70   | 0 | .01 | .05 | .16 | .30 | .37 | .45 | .58 | .71 | .87 | 1.00 |
| LD/WD 2000 | 0 | .03 | .06 | .12 | .18 | .22 | .27 | .40 | .56 | .80 | 1.00 |

## Warning

The Fluid Flow factors contained herein are calculated values. They are therefore approximations and cannot be used for highly critical flow or pressure drop calculations.

For very precise flow measurements, tests must be conducted on any valve mentioned within this catalog.

## Flow Data

Cv Values for Valves

| Figure Nos.      | 1/8" | 1/4" | 3/8" | 1/2" | 3/4" | 1"   | 1 1/4" | 1 1/2" | 2"    | 2 1/2" | 3"  | 4"  | 5"   | 6"   | 8"   | 10"  | 12"  | 16"   |
|------------------|------|------|------|------|------|------|--------|--------|-------|--------|-----|-----|------|------|------|------|------|-------|
| <b>Gates</b>     |      |      |      |      |      |      |        |        |       |        |     |     |      |      |      |      |      |       |
| T-113            |      | 5.6  | 10.7 | 17.6 | 32   | 54   | 97     | 135    | 230   | 337    | 536 | 960 | 1525 | 2250 |      |      |      |       |
| T/F-619          |      |      |      |      |      |      |        |        | 215   | 335    | 510 | 945 | 1525 | 2250 | 4150 | 6700 | 9925 | 18375 |
| <b>Globes</b>    |      |      |      |      |      |      |        |        |       |        |     |     |      |      |      |      |      |       |
| T-211/311        | 0.61 | 1.16 | 2.21 | 3.64 | 6.65 | 11.1 | 20     | 28     | 48    | 70     | 111 |     |      |      |      |      |      |       |
| <b>Checks</b>    |      |      |      |      |      |      |        |        |       |        |     |     |      |      |      |      |      |       |
| T-413 (swing)    | 1.3  | 2.5  | 4.8  | 14.3 | 24   | 43   | 60     | 102    | 150   | 238    | 465 |     |      |      |      |      |      |       |
| T-480 (poppet)   |      |      | 3.7  | 6.86 | 16.3 | 30   | 49     | 72     | 130   |        |     |     |      |      |      |      |      |       |
| F-918 (swing)    |      |      |      |      |      |      |        |        | 150   | 243    | 356 | 665 | 1073 | 1584 | 2937 | 4730 | 6985 |       |
| W-910 (poppet)   |      |      |      |      |      |      |        |        |       |        |     | 500 | 806  | 1200 | 2200 | 3550 | 5250 |       |
| <b>Ball</b>      |      |      |      |      |      |      |        |        |       |        |     |     |      |      |      |      |      |       |
| T-580            |      |      |      | 5.8  | 13.9 | 27   | 44     | 64     | 100   |        |     |     |      |      |      |      |      |       |
| T-580-70         |      |      |      |      |      |      | 38.5   | 76     | 101.4 | 183    | 390 |     |      |      |      |      |      |       |
| T-585-70         |      | 4.2  | 6.2  | 15.3 | 30.4 | 48.8 | 103    | 143    | 245   |        |     |     |      |      |      |      |      |       |
| <b>Butterfly</b> |      |      |      |      |      |      |        |        |       |        |     |     |      |      |      |      |      |       |
| LD/WD 2000       |      |      |      |      |      |      |        |        | 166   | 247    | 340 | 660 | 1080 | 1613 | 3759 | 5300 | 7969 |       |

# Properties of Valve Materials

|                | ALLOY                                                   | ASTM NO.                                      | OTHER ALLOY DESIGNATION | NOMINAL OR MAXIMUM CHEMICAL COMPOSITION |        |        |        |      |      |           |            |     |
|----------------|---------------------------------------------------------|-----------------------------------------------|-------------------------|-----------------------------------------|--------|--------|--------|------|------|-----------|------------|-----|
|                |                                                         |                                               |                         | CARBON                                  | CHROME | COBALT | COPPER | IRON | LEAD | MANGANESE | MOLYBDENUM |     |
|                |                                                         |                                               |                         | AL                                      | C      | Cr     | Co     | Cu   | Fe   | Pb        | Mn         | Mo  |
| Bronze & Brass | Commercial Aluminum 380                                 | SC 84 A (modified)                            | UNS A38000              | 87.0                                    |        |        |        | 1.0  | 1.3  |           | .35        |     |
|                | Free Cutting Brass                                      | B 16                                          | UNS C36000              |                                         |        |        |        | 61.5 |      | 3.0       |            |     |
|                | Navy "M" (Steam Bronze)                                 | B 61                                          | UNS C92200              | .005                                    |        |        |        | 88.0 | .25  | 1.5       |            |     |
|                | Composition Bronze (Ounce Metal)                        | B 62                                          | UNS C83600              | .005                                    |        |        |        | 85.0 | .30  | 5.0       |            |     |
|                | Copper-Silicon Alloy B                                  | B 98/B 99                                     | UNS C65100              |                                         |        |        |        | 96.0 | .8   | .05       | .7         |     |
|                | Forging Brass                                           | B 124                                         | UNS C37700              |                                         |        |        |        | 60.0 | .3   | 2.0       |            |     |
|                | Forging Brass                                           | B 283                                         | UNS C37700              |                                         |        |        |        | 58.0 | .3   | 2.5       |            |     |
|                | Brass Wire (Red Brass)                                  | B 134                                         | UNS C23000              |                                         |        |        |        | 85.0 | .05  | .05       |            |     |
|                | Leaded Red Brass                                        | B 140                                         | UNS C31400              |                                         |        |        |        | 89.0 | .10  | 1.9       |            |     |
|                | Aluminum Bronze (Cast)                                  | B 148                                         | UNS C95400              | 11.0                                    |        |        |        | 85.0 | 4.0  |           |            |     |
|                | Aluminum Bronze (Rod)                                   | B 150                                         | UNS C64200              | 7.0                                     |        |        |        | 91.0 | .30  | .05       | .10        |     |
|                | Silicon Red Brass                                       | B 371                                         | UNS C69400              |                                         |        |        |        | 81.5 | .20  | .30       |            |     |
| Copper         | Leaded Semi-Red Brass                                   | B 584                                         | UNS C84400              | .005                                    |        |        |        | 81.0 | .40  | 7.0       |            |     |
|                | Leaded Red Brass                                        |                                               | UNS C84500              | .005                                    |        |        |        | 78.0 | .40  | 7.0       |            |     |
|                | Leaded Nickel Bronze                                    | B 584                                         | UNS C97600              |                                         |        |        |        | 64.0 |      | 4.0       |            |     |
|                | Copper (Wrot)                                           | B 75                                          | UNS C12200              |                                         |        |        |        | 99.9 |      |           |            |     |
| Iron           | Gray Iron                                               | A 126                                         | Class B                 |                                         |        |        |        |      |      |           |            |     |
|                | 3% Ni Gray Iron                                         | A 126 (modified)                              | Class B                 |                                         |        |        |        |      |      |           |            |     |
|                | Austenitic Gray Iron (Ni-Resist)                        | A 436                                         | Type 2                  |                                         | 3.00   | 2.0    |        | .5   |      |           | 1.0        |     |
|                | Ductile Iron (Ferritic)                                 | A 395                                         |                         |                                         | 3.20   |        |        |      |      |           |            |     |
|                | Austenitic Ductile Iron (Ductile) (Ductile) (Ni-Resist) | A 536 65-45-12<br>A 536 80-55-06<br>A 439 D2C |                         |                                         | 2.9    | .5     |        |      |      |           | 2.4        | 1.0 |

| NOMINAL OR MAXIMUM CHEMICAL COMPOSITION |           |               |             |           |                     |                    |            | NOMINAL PHYSICAL PROPERTIES |                          |                 |                    |
|-----------------------------------------|-----------|---------------|-------------|-----------|---------------------|--------------------|------------|-----------------------------|--------------------------|-----------------|--------------------|
| NICKEL<br>Ni                            | PHOS<br>P | SILICON<br>Si | SULFUR<br>S | TIN<br>Sn | TITAN-<br>IUM<br>Ti | TUNG-<br>STEN<br>W | ZINC<br>Zn | TENSILE<br>STRENGTH<br>Psi  | YIELD<br>STRENGTH<br>Psi | %<br>ELONGATION | HARDNESS           |
| .50                                     |           | 12.0          |             | .15       |                     |                    | .50        | 42,000                      | 19,000                   | 3.5             |                    |
|                                         |           |               |             |           |                     |                    | 35.5       | 50,000                      | 20,000                   | 15              | 75 HRB             |
| 1.0                                     | .05       | .005          | .05         | 6.0       |                     |                    | 4.5        | 34,000                      | 16,000                   | 22              | 65 HB<br>*500 kg   |
| 1.0                                     | .05       | .005          | .08         | 5.0       |                     |                    | 5.0        | 30,000                      | 14,000                   | 20              | 60 HB<br>500 kg    |
|                                         |           | 1.6           |             |           |                     |                    | 1.5        | 86,000**                    | 20,000                   | 11              | 65 HRB             |
|                                         |           |               |             |           |                     |                    | 38.0       | 52,000                      | 20,000                   | 45              | 80 HRB             |
|                                         |           |               |             |           |                     |                    | 38.0       | 52,000                      | 20,000                   | 45              | 78 HRB             |
|                                         |           |               |             |           |                     |                    | 15.0       | 56,000                      |                          |                 | 60 HRB             |
| .7                                      |           |               |             |           |                     |                    | 9.1        | 50,000                      | 30,000                   | 7               | 60 HRB             |
|                                         |           |               |             |           |                     |                    |            | 75,000                      | 30,000                   | 12              | 170 HB<br>*3000 kg |
| .25                                     |           | 2.0           |             | .20       |                     |                    | .50        | 90,000                      | 45,000                   | 9               | 80 HRB             |
|                                         |           | 4.0           |             |           |                     |                    | 14.5       | 80,000                      | 40,000                   | 15              | 85 HRB             |
|                                         | .02       | .005          | .08         | 3.0       |                     |                    | 9.0        | 29,000                      | 13,000                   | 18              | 55 HB<br>*500 kg   |
| 1.0                                     | .02       | .005          | .08         | 3.0       |                     |                    | 12.0       | 29,000                      | 13,000                   | 16              | 55 HB<br>*500 kg   |
| 20.0                                    |           |               |             | 4.0       |                     |                    | 8.0        | 40,000                      | 17,000                   | 10              | 80 HB              |
|                                         | .02       |               |             |           |                     |                    |            | 36,000                      | 30,000                   | 25              | 45 T               |
|                                         | .75       |               | .15         |           |                     |                    |            | 31,000                      |                          |                 | 195 HB             |
| 3.00                                    | .75       |               | .15         |           |                     |                    |            | 31,000                      |                          |                 | 195 HB             |
| 20.0                                    |           | 2.0           | .12         |           |                     |                    |            | 25,000                      |                          |                 | 118 HB             |
|                                         | .08       | 2.50          |             |           |                     |                    |            | 60,000                      | 40,000                   | 18              | 167 HB             |
|                                         | .08       | 2.50          |             |           |                     |                    |            | 65,000                      | 45,000                   | 12              | 160 HB             |
|                                         | .08       | 2.50          |             |           |                     |                    |            | 80,000                      | 55,000                   | 6               | 160 HB             |
| 24.0                                    | .08       | 3.0           |             |           |                     |                    |            | 58,000                      | 28,000                   | 20              | 146 HB             |

\*Load Applied During Testing  
\*\*Allowable Range is 75,000 to 95,000

# NIBCO® Pressure Rated Metal Valves Limited Warranty



## NIBCO INC. 125% LIMITED WARRANTY

Applicable to NIBCO Pressure Rated Metal Valves

NIBCO INC. warrants each NIBCO pressure rated metal valve ("Valves") to be free from defects in materials and workmanship under normal use, service, and maintenance in accordance with the product specifications (including, but not limited to installation recommendations) for a period of five (5) years from the Warranty Commencement Date. The Warranty Commencement Date shall be the date upon which a Valve is installed.

NIBCO will repair or replace – at its option and at no charge – Valves that have been determined by NIBCO, or an authorized representative or agent thereof, to have failed solely because of a defect in materials or workmanship under normal use, service, and maintenance during the warranty period. Replacements shall be shipped free of charge to the owner. In the event of the replacement of any Valve, NIBCO shall further pay the owner the greater of twenty-five (25%) percent of the price of the Valve according to the published suggested list price schedule of NIBCO in effect at the time of purchase, or ten (\$10.00) dollars, to apply on the cost of the installation of said replacement Valve.

This limited warranty applies to all Valves installed, tested, applied, and used in accordance with NIBCO's approved and published recommendations and instructions.

This warranty does not cover any failure or damage for or caused by:

1. any product, parts, or systems which are not manufactured or sold by NIBCO;
2. any Valve which is used for purposes other than a purpose authorized by NIBCO;
3. any Valve not installed, tested, applied, used, or maintained in accordance with NIBCO's recommended installation guidelines and instructions;
4. any Valve not installed or used in accordance with applicable codes;
5. any damage caused by, contributed in whole or in part by, or resulting from, any of the following:
  - a. abuse, misuse, mishandling, alteration, tampering, neglect, or accidental damage such as, without limitation, vandalism;
  - b. natural disasters, such as, without limitation, flooding, windstorm, and lightning;
  - c. attachments or modifications not authorized by NIBCO;
  - d. external, physical or chemical qualities, or an unsuitable or hostile environment,;
  - e. any defects other than those in material or workmanship; or
  - f. any other cause beyond the control of NIBCO.

NIBCO DISCLAIMS ANY AND ALL LIABILITY FOR ANY OTHER DIRECT OR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO, ECONOMIC LOSS, LOSS OF BUSINESS, LOST PROFITS, PUNITIVE DAMAGES, MOLD INTRUSION, WATER DAMAGE, ETC.

Some states do not allow the exclusion or limitation of damages, so the above limitation or exclusion may not apply to you.

THIS WARRANTY IS THE ONLY WARRANTY FOR THE VALVES PROVIDED BY NIBCO, AND IS AND SHALL BE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND FOR ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF A MANUFACTURER. NO EMPLOYEE OF NIBCO, OR ANY OTHER DISTRIBUTOR, AGENT, OR OTHER PERSON OR BUSINESS, IS AUTHORIZED TO MAKE ANY OTHER WARRANTY ON BEHALF OF NIBCO.

Some states do not allow limitations on implied warranties, so the above limitation may not apply to you.

In the event any defect occurs which is believed to be covered by this warranty, NIBCO Technical Services must immediately be contacted by calling 888.446.4226 or emailing CS-TechnicalServices@nibco.com. NIBCO Technical Services after being contacted will make further arrangements for the product's return to NIBCO at the customer's expense for review and evaluation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



# globally connecting you at all levels

It's a new age of business, and a new way at NIBCO. From Elkhart, Indiana to Lodz, Poland, and points beyond, our company has integrated manufacturing, distribution, and networked communications to provide a seamless source of information and service, 24 hours a day, 7 days a week. But this integration hasn't happened overnight. It's been part of a long-term strategic process that has pushed us to reconsider every aspect of our business. The result? We're a vertically integrated manufacturer with the products and systems in place to deliver low cost and high quality. NIBCO products are manufactured under a Quality Management System conforming to the current revision of ISO-9001 International Standards. We know the flow control industry is only going to get more demanding, and we are more than ready. We will continue to lead. That's what NIBCO is all about.



World Headquarters



Elkhart, Indiana

## MANUFACTURING

Metal Valves and Fittings



Blytheville, Arkansas



McAllen, Texas



Nacogdoches, Texas



Stuarts Draft, Virginia



Worcester, Massachusetts

Plastic Pipe, Valves, and Fittings



Greensboro, Georgia



Goshen, Indiana

Industrial Plastics



Charlestown, Indiana

International



Reynosa, Mexico



Lodz, Poland

## DISTRIBUTION

U.S. Distribution Centers



Elkhart, Indiana

## INTERNATIONAL

Global Offices



Elkhart, Indiana



Lodz, Poland

\*Denotes U.S. and International Direct Shipping Locations

## VALVES

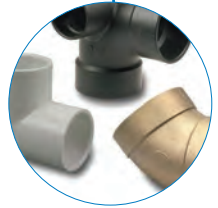


Pressure-rated bronze, iron and alloy-iron gate, globe and check valves • Pressure-rated bronze ball valves • Boiler specialty valves • Commercial and industrial butterfly valves • Lined butterfly valves • Circuit balancing valves and kits • Carbon and stainless steel ball valves • ANSI flanged steel ball valves • Lined ball valves • Pneumatic and electric actuators and controls • Grooved ball and butterfly valves • High performance butterfly valves • UL/FM fire protection valves • MSS specification valves • Bronze specialty valves • Low pressure gate, globe, check and ball valves • Frostproof sillcocks • Quarter-turn supply stops • Quarter-turn low pressure valves • PVC and CPVC plumbing and industrial ball valves • Bronze and iron y-strainers • Sample valves • Sanitary valves • Lead-free valves • Hydronic valves • Labor saving valves • Manifold systems • Water temperature control valves • System quality valves • Press x PEX transition valves

## FITTINGS

Wrot and cast copper pressure and drainage fittings • Cast copper alloy flanges • Powder coated steel companion flanges • Wrot and cast press fittings • ABS and PVC DWV fittings • Schedule 40 PVC pressure fittings • CPVC CTS fittings • CPVC CTS-to-metal transition fittings • Schedule 80 PVC and CPVC systems • Lead-free fittings • Press x PEX transition fittings • Cast bronze push fittings

LEAD-FREE: Weighted average lead content ≤0.25%



## INDUSTRIAL PLASTICS

PVC and Corzan® CPVC schedule 80 fittings, true union ball and ball check valves, butterfly valves, and specialty valves • Polypropylene and Kynar® PVDF schedule 80 pipe, fittings, and true union ball and ball check valves • Pneumatic and electric actuation systems

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Kynar® is a registered trademark of Arkema Inc.



## eNIBCO

EDI—Electronic Data Interchange • VMI—Vendor Managed Inventory • NIBCO.com • NIBCOpartner.com



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