

A background image of a warehouse filled with tall metal shelving units. The shelves are stocked with various industrial components, including large blue and silver valves. Some shelves have white labels with letters like 'B', 'C', 'D', and 'E'. There are also signs that say 'NO STORAGE ABOVE TOP OF THIS BEAM'.

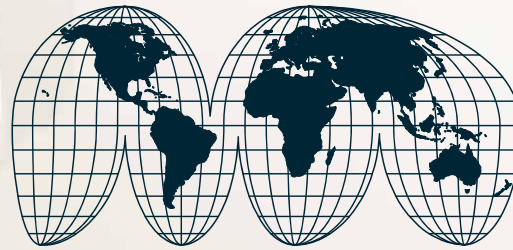
# PBV Ball Valves

## Three Piece Trunnion Supported Ball Valves

REQUEST A QUOTE  
[sales@dkamans.com](mailto:sales@dkamans.com)

SCHEDULE SERVICES  
562-529-8400

[WWW.DKAMANS.COM](http://WWW.DKAMANS.COM)



## Manufacturer of Quality Valve Products Around the Globe

**At Forum™ Energy Technologies we are committed to improving our clients' operational and financial performance by supplying the most comprehensive range of valve products in the industry through our family of trusted valve brands.**



### **Engineering Expertise**

Forum™ utilizes the latest state of the art engineering software to provide custom design services for any application. Finite element analysis is just one of many Design Verification Tools FET uses for designing valves to specific customer requirements.



### **CAD & NC Capabilities**

With FET's fast and efficient workflow, CAD drawings can be released to the network for manufacturing and purchasing. All computer generated machine programs can be quickly changed for weld overlays or other processes. The result is faster deliveries.



### **Accurate Inventories**

Daily cycle counting & order picking using wireless barcode guns and automated part delivery systems results in more accurate inventories and faster product delivery.



### **Quality Control**

All FET Companies manufacture quality products designed and tested to meet the standards of Qualifying Authorities around the world. Advanced engineering and our Quality Management System assure that our valve products continue to exceed your expectations for performance.



### **Customer Service**

Forum™'s Customer Service Department is fully staffed with trained customer service representatives ready to help you with your ordering information, technical specifications and logistics.



Licensed for manufacture in accordance with API 6A-0383 and API 6D-0129 and fire tested to API 6FA and 607

# Contents

## PBV® Series 5700/6700 Trunnion Supported Ball Valves

|                                                         |       |                                                       |       |
|---------------------------------------------------------|-------|-------------------------------------------------------|-------|
| Product Range .....                                     | 3     | <b>Medium Bore Valves</b>                             |       |
| How to Order .....                                      | 4     | <b>Series 5700</b>                                    |       |
| How To Measure for Stem Extensions .....                | 4     | <b>8"-14"RP CL 150, 300, 600, 900 &amp; 1500</b>      |       |
| Flow Coefficient (Cv) .....                             | 5     | <b>6"-12"RP CL 2500</b>                               |       |
| How To Read A PBV® Name Plate .....                     | 5     | <b>Series 6700</b>                                    |       |
| Design Features .....                                   | 6-10  | <b>6"-12"FP CL 150, 300, 600, 900 &amp; 1500</b>      |       |
| Options .....                                           | 11    | <b>6"-10"FP CL 2500</b>                               |       |
| MSA Special Services .....                              | 12    | Parts List .....                                      | 19    |
| Design Standards and Specifications .....               | 13    | Dimensional Data .....                                | 20-21 |
| <b>Parts and Dimensional Data</b>                       |       | <b>Series 5700/6700 Large Bore Valves</b>             |       |
| <b>Series 6700 Small Bore Valves, Low Pressure</b>      |       | <b>14"FP - 56"FP CL 150, 300, 600, 900 &amp; 1500</b> |       |
| <b>2"-4" CL 150 • 2" CL 300</b>                         |       | <b>12" CL 2500</b>                                    |       |
| Parts List .....                                        | 14    | Parts List .....                                      | 22    |
| Dimensional Data .....                                  | 15    | Dimensional Data .....                                | 23-26 |
| <b>Series 5700/6700</b>                                 |       | <b>ANSI Top Works Data</b>                            |       |
| <b>Small Bore Valves, High Pressure</b>                 |       | Series 5700/6700 .....                                | 27-29 |
| <b>2"FP-6"RP CL 150, 300, 600, 900, 1500 &amp; 2500</b> |       | <b>Additional Information</b>                         |       |
| Parts List .....                                        | 16    | Bore Sizes and Shipping Information .....             | 30    |
| Dimensional Data .....                                  | 17-18 | Temperature Conversion Chart .....                    | 31    |

Due to upgrades in industry standards, material innovations, and PBV®'s constant commitment to product advancement, data presented in this brochure is subject to change. Please contact your PBV® sales person for updated and/or current drawings and material compliance.

This information is available on our website at [www.f-e-t.com](http://www.f-e-t.com).



### Product Range • Series 5700/6700 Three-Piece Trunnion • Forged

| Product Range, Series 5700/6700, Full & Reduced Port, Flanged Ends |        |        |                |            |   |   |   |   |    |    |    |    |    |    |    |       |
|--------------------------------------------------------------------|--------|--------|----------------|------------|---|---|---|---|----|----|----|----|----|----|----|-------|
| Body Material                                                      | Class  |        | Port           | Size (in.) |   |   |   |   |    |    |    |    |    |    |    |       |
|                                                                    | API 6D | API 6A |                | 2*         | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 26-56 |
| Carbon Steel & Stainless Steel & Special                           | 150    | —      | Full & Reduced | X          | X | X | X | X | X  | X  | X  | X  | X  | X  | X  | X     |
|                                                                    | 300    | —      |                | X          | X | X | X | X | X  | X  | X  | X  | X  | X  | X  | X     |
|                                                                    | 600    | —      |                | X          | X | X | X | X | X  | X  | X  | X  | X  | X  | X  | X     |
|                                                                    | 900    | 2000   |                | X          | X | X | X | X | X  | X  | X  | X  | X  | X  | X  | X     |
|                                                                    | 1500   | 3000   |                | X          | X | X | X | X | X  | X  | X  | —  | —  | —  | —  | —     |
|                                                                    | 2500   | 5000   |                | X          | X | X | X | X | X  | X  | —  | —  | —  | —  | —  | —     |
|                                                                    | —      | 10,000 |                | X          | X | X | X | X | X  | —  | —  | —  | —  | —  | —  | —     |

\* Full Port only.

Sizes and classes not listed are available upon special request.

# How To Order

## Specifying PBV® Series 5700/6700 Valve Figure Numbers

**Example: 6" C-6710-71-2200-GV-N G -** This number represents a 6" ANSI Class 150, Full Port, Three-Piece Trunnion Ball Valve, Fire Tested with Emergency Grease Seals, with Raised Face, Carbon Steel Body Material, Carbon Steel Trim, Glass Filled TFE Seats, Viton® A Seals, for NACE MR0175/ISO 15156 Service and Gear Operated.

| C                    | - | 6            | 7                                    | 10             | - | 7                                         | 1             | - | 22                     | 00                                   | - | G                                        | V                                    | - | N             | G                  | -                         |
|----------------------|---|--------------|--------------------------------------|----------------|---|-------------------------------------------|---------------|---|------------------------|--------------------------------------|---|------------------------------------------|--------------------------------------|---|---------------|--------------------|---------------------------|
| Material Code        |   | Port Config. | Valve Type                           | Pressure Class |   | Fire Tested                               | End Conn.     |   | Body Material          | Trim Material                        |   | Seat Material                            | Seal Material                        |   | NACE Option   | Operator           | Modifier Code             |
| C<br>Carbon Steel    |   | 5<br>Std.    | 7<br>3 Pc. Trunnion Type Bolted Body | 10<br>150 CL   |   | 3<br>Fire Tested w/No Emerg. Grease Seals | 1<br>RF       |   | 22*<br>A105/A350 LF2   | 00<br>Same as Body                   |   | G<br>Glass Filled PTFE                   | B<br>Buna-N                          |   | N<br>NACE     | A<br>Actuator      | EXX<br>Stem Exten. inches |
| S<br>Stainless Steel |   | 6<br>Full    | 9<br>3 Pc. Trunnion Type Welded Body | 30<br>300 CL   |   | 7<br>Fire Tested w/ Emerg. Grease Seals   | 2<br>Non-Std. |   | 25*<br>A105/A350 LF2   | 36 <sup>(3)</sup><br>Stainless Steel |   | D<br>Devlon®                             | E<br>EPDM                            |   | S<br>Non NACE | B<br>Bare Stem     | XXX<br>Modifier Code      |
|                      |   |              |                                      | 60<br>600 CL   |   |                                           | 3<br>RTJ      |   | 34<br>304SS            | 55<br>F55 Duplex                     |   | N<br>Nylon                               | H <sup>(2)</sup><br>HNBR             |   |               | G<br>Gear Operator |                           |
|                      |   |              |                                      | 90<br>900 CL   |   |                                           | 4<br>RF x WE  |   | 36<br>316SS            | 71<br>Monel®                         |   | P<br>PEEK™                               | R<br>Low Temp                        |   |               | L<br>Lever         |                           |
|                      |   |              |                                      | 15<br>1500 CL  |   |                                           | 5<br>WE x WE  |   | 55<br>F55 Duplex       |                                      |   | V<br>Viton® A                            | T <sup>(1)(2)</sup><br>Lip Seal PTFE |   |               |                    |                           |
|                      |   |              |                                      | 25<br>2500 CL  |   |                                           | 6<br>RTJ x WE |   | 81<br>ENP              |                                      |   | Z<br>Tungsten Carbide Coating or Special | V<br>Viton® A                        |   |               |                    |                           |
|                      |   |              |                                      |                |   |                                           |               |   | 82<br>CRA Weld Overlay |                                      |   |                                          | W <sup>(2)</sup><br>Viton® B         |   |               |                    |                           |

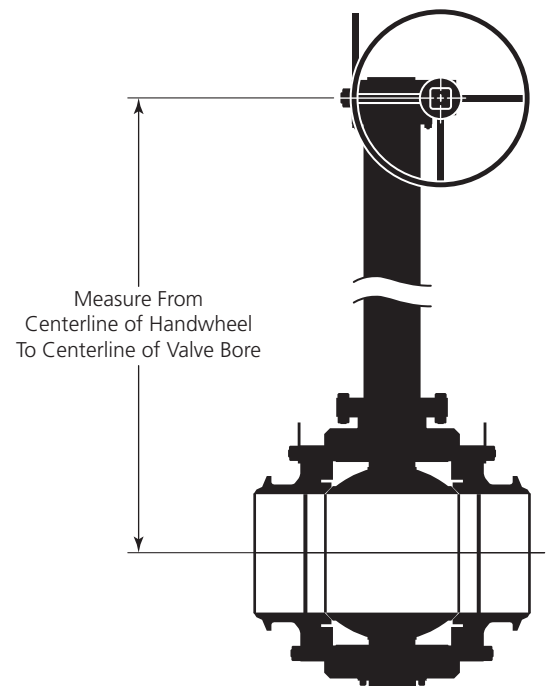
**Notes:** 1) For Low Temperature Service & Severe Service.

2) For Explosive Decompression Service. Other body, trim, seat and seal materials are available upon request.

3) For "36" trim, large diameter and Class 900 and higher, 17-4PH material is standard for ball and stem. All valves 6" and larger have 17-4PH stems when "36" trim is specified. Stronger material may be used to satisfy design requirements. Stems can be 316SS, S20910, 17-4PH, etc.

\* Dual rated A105/A350 LF2

### How to Measure for PBV® Stem Extensions



- Take measurement from centerline of valve bore to handwheel centerline as illustrated here.
- Body vent drain and emergency sealant lines are extended with the stem.



# Flow Coefficients (C<sub>v</sub>)

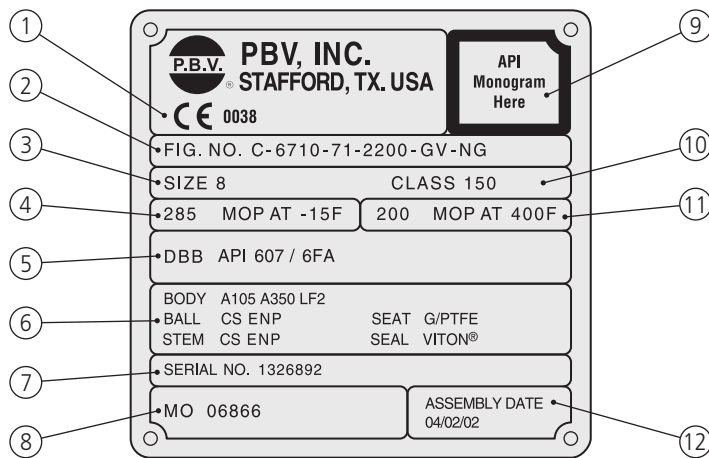
## PBV® Series 5700/6700 Trunnion Ball Valves

C<sub>v</sub>, by definition, is the volume of water in gallons per minute at 60°F that will flow through a given element with a pressure drop of 1 psi.

| Size (in.) | Flow Coefficients (C <sub>v</sub> ) Rating |         |        |        |         |         |
|------------|--------------------------------------------|---------|--------|--------|---------|---------|
|            | CL 150                                     | CL 300  | CL 600 | CL 900 | CL 1500 | CL 2500 |
| 2x2        | 500                                        | 460     | 400    | 330    | 330     | 300     |
| 3x2        | 180                                        | 195     | 180    | 187    | 187     | 150     |
| 3x3        | 1350                                       | 1150    | 1050   | 935    | 830     | 740     |
| 4x3        | 545                                        | 535     | 550    | 510    | 510     | 410     |
| 4x4        | 2500                                       | 2200    | 1850   | 1760   | 1660    | 1460    |
| 6x4        | 790                                        | 765     | 745    | 740    | 740     | 590     |
| 6x6        | 5300                                       | 5290    | 4460   | 4405   | 4100    | 2600    |
| 8x6        | 1945                                       | 1945    | 2220   | 2035   | 1930    | 1400    |
| 8x8        | 10,500                                     | 9600    | 8730   | 8475   | 8010    | 5370    |
| 10x8       | 4050                                       | 4040    | 4065   | 4050   | 3860    | 3050    |
| 10x10      | 17,500                                     | 16,750  | 14,250 | 14,205 | 13,310  | 8630    |
| 12x10      | 6900                                       | 7100    | 7050   | 7025   | 6670    | 5350    |
| 12x12      | 26,300                                     | 25,500  | 22,550 | 21,430 | 17,070  | 12,500  |
| 14x12      | 13,100                                     | 13,200  | 13,350 | 13,300 | 12,630  | —       |
| 14x14      | 31,850                                     | 30,050  | 28,400 | 26,800 | 24,275  | —       |
| 16x14      | 14,600                                     | 14,580  | 14,300 | 14,200 | 13,490  | —       |
| 16x16      | 43,300                                     | 41,700  | 38,150 | 36,700 | 33,215  | —       |
| 18x16      | 19,750                                     | 19,800  | 20,350 | 19,750 | 18,760  | —       |
| 18x18      | 57,300                                     | 55,370  | 50,950 | 48,700 | 43,400  | —       |
| 20x18      | 27,750                                     | 28,050  | 28,300 | 27,300 | 20,470  | —       |
| 20x20      | 74,500                                     | 72,300  | 65,600 | 62,500 | 55,930  | —       |
| 24x20      | 27,100                                     | 27,130  | 27,250 | 26,900 | 25,500  | —       |
| 24x24      | 112,300                                    | 109,150 | 98,150 | 94,050 | 84,025  | —       |
| 26x24      | 85,270                                     | 82,470  | 77,630 | 67,880 | 53,190  | —       |

| Size (in.) | Flow Coefficients (C <sub>v</sub> ) Rating |         |         |         |         |         |
|------------|--------------------------------------------|---------|---------|---------|---------|---------|
|            | CL 150                                     | CL 300  | CL 600  | CL 900  | CL 1500 | CL 2500 |
| 26x26      | 116,800                                    | 111,900 | 103,750 | 93,240  | 71,670  | —       |
| 28x24      | 62,590                                     | 61,470  | 59,380  | 53,880  | 43,750  | —       |
| 28x28      | 136,850                                    | 131,600 | 122,650 | 112,200 | 84,220  | —       |
| 30x24      | 49,980                                     | 49,390  | 48,030  | 44,540  | 37,130  | —       |
| 30x30      | 161,700                                    | 155,650 | 143,200 | 131,500 | 98,390  | —       |
| 32x30      | 143,600                                    | 137,400 | 128,600 | 116,950 | 90,690  | —       |
| 32x32      | 182,650                                    | 173,300 | 160,450 | 151,250 | 113,800 | —       |
| 34x30      | 109,950                                    | 107,050 | 101,950 | 94,300  | 76,200  | —       |
| 34x34      | 207,800                                    | 197,800 | 181,550 | 172,950 | 129,550 | —       |
| 36x30      | 90,830                                     | 88,660  | 85,210  | 78,690  | 65,010  | —       |
| 36x32      | 127,750                                    | 123,350 | 116,650 | 112,150 | 88,850  | —       |
| 36x36      | 233,600                                    | 219,450 | 199,800 | 197,600 | 145,950 | —       |
| 40x36      | 160,850                                    | 160,850 | 157,250 | 148,650 | —       | —       |
| 40x40      | 282,300                                    | 282,300 | 271,550 | 248,400 | —       | —       |
| 42x40      | 265,250                                    | 265,250 | 253,450 | 232,050 | —       | —       |
| 42x42      | 312,350                                    | 312,350 | 297,100 | 275,550 | —       | —       |
| 44x40      | 218,100                                    | 218,100 | 209,800 | 196,700 | —       | —       |
| 44x44      | 351,600                                    | 351,600 | 331,000 | 306,400 | —       | —       |
| 46x46      | 379,700                                    | 379,700 | 358,450 | 352,400 | —       | —       |
| 48x42      | 201,050                                    | 201,050 | 196,400 | 187,150 | —       | —       |
| 48x44      | 275,950                                    | 275,950 | 266,850 | 248,200 | —       | —       |
| 48x48      | 412,500                                    | 412,500 | 393,150 | 373,200 | —       | —       |
| 56x56      | 605,150                                    | 605,150 | 587,750 | —       | —       | —       |

### How to Read a PBV® Name Plate



Typical Name Plate

| Item | Description                                                         |
|------|---------------------------------------------------------------------|
| 1    | CE mark and notified body required for delivery to EEC.             |
| 2    | Figure number describes valve construction.                         |
| 3    | Nominal pipe size in inches                                         |
| 4    | Max. operating pressure at min. valve design temperature            |
| 5    | Valve features double block and bleed (DBB) and firesafe standards. |
| 6    | Body and trim materials                                             |
| 7    | PBV® serial number                                                  |
| 8    | PBV® manufacturing order                                            |
| 9    | API 6D or 6A monogram stamp                                         |
| 10   | ANSI Pressure Class                                                 |
| 11   | Max. operating pressure at max. valve design temperature            |
| 12   | Date of assembly MM/DD/YY                                           |

### PBV® Repair Kits

Spare parts are available for quick delivery. Orders with valve serial numbers will ensure the correct parts are shipped. Contact your PBV® salesperson for more information.

### Our Quality Commitment...

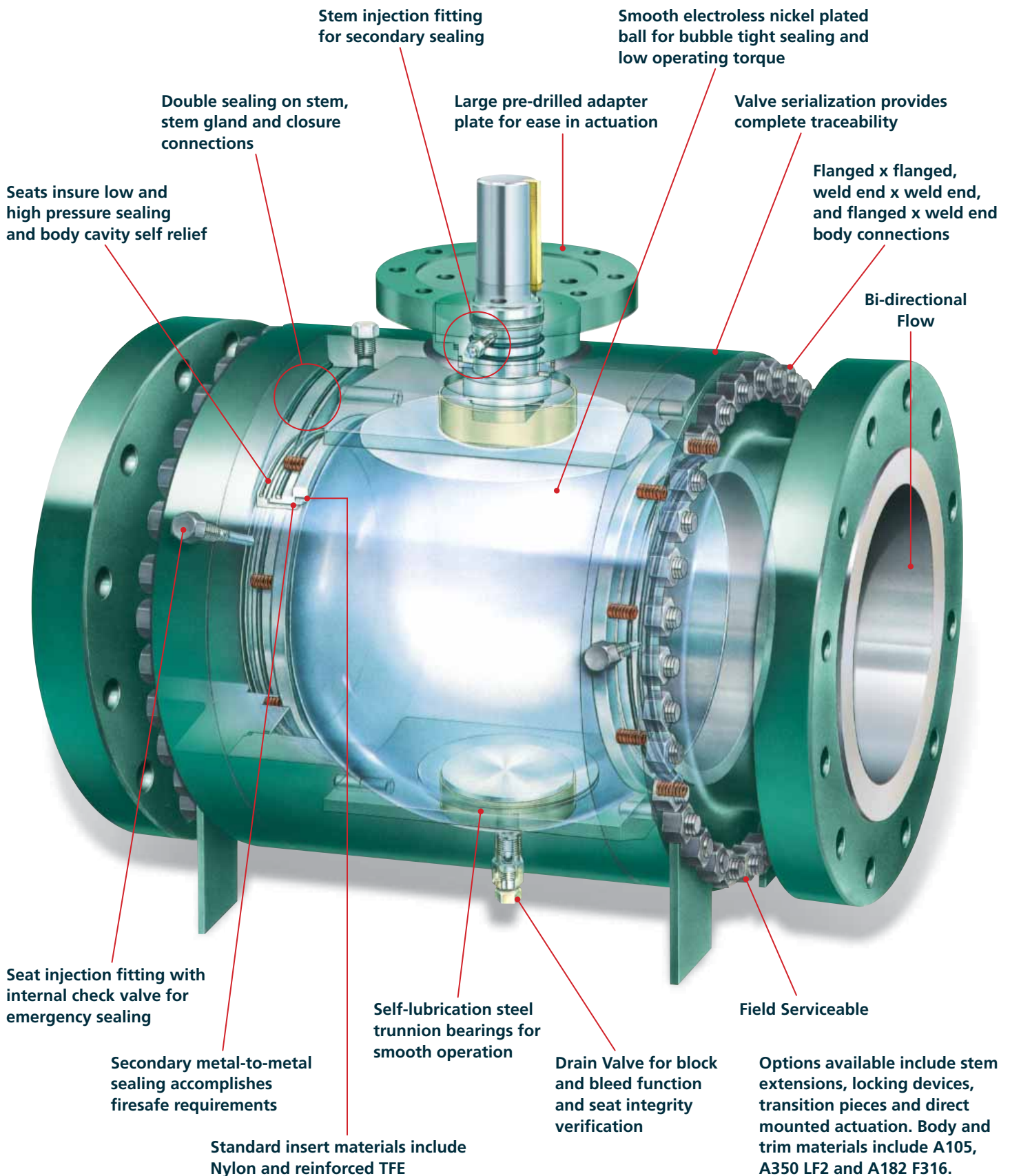
Forum™ Energy Technologies is dedicated to continually improving their state-of-the-art engineering and manufacturing capabilities to improve the overall quality of their products and customer service. FET's entire global network of flow control experts consist of highly trained technicians, engineers, and superior testing laboratories to ensure that all products supplied to our customers are 100% in accordance with industry standards as well as our own Quality Management System.

# PBV® Engineering Excellence t Work

## PBV® Series 5700/6700 Three-Piece, Side-Entry, Trunnion Ball Valve

### 2"- 56" ANSI Class 150/300, 600, 900, 1500 & 2500 • Full and Standard Port

PBV®'s trunnion ball valves are available in a variety of materials and configurations to meet your specific project requirements. Typical construction is shown here.



# Features

## Materials of Construction

PBV® manufactures trunnion ball valves using a full range of carbon, alloy and stainless materials. Our commodity valves are manufactured using dual rated A105/A350 LF2 steel, B7M/ 2HM fasteners, and 3 mil ENP carbon steel trim on 6" and larger. Material test reports in accordance with EN10204 3.1b are available on each serialized valve.

### NACE Compliance

The demand for valves to be resistant to sulfide stress cracking, and to perform in corrosive hydrocarbon environments, has become commonplace. Facilities handling H<sub>2</sub>S bearing hydrocarbons have increased dramatically over recent years. Hydrogen sulfide concentration, total system pressure, application temperature, existence of elemental sulfur, and chloride content all have a bearing on appropriate material selection in this severe environment.

All materials used by PBV® are in accordance with the pre-qualified materials identified in NACE MR0175/ISO 15156. In order to ensure compliance customers must provide application specific operating conditions.

Inclusive to the above, valves with bore diameters 4" and smaller are supplied standard with Stainless Steel balls, seats and stems. Material type selected may vary depending on design requirements.

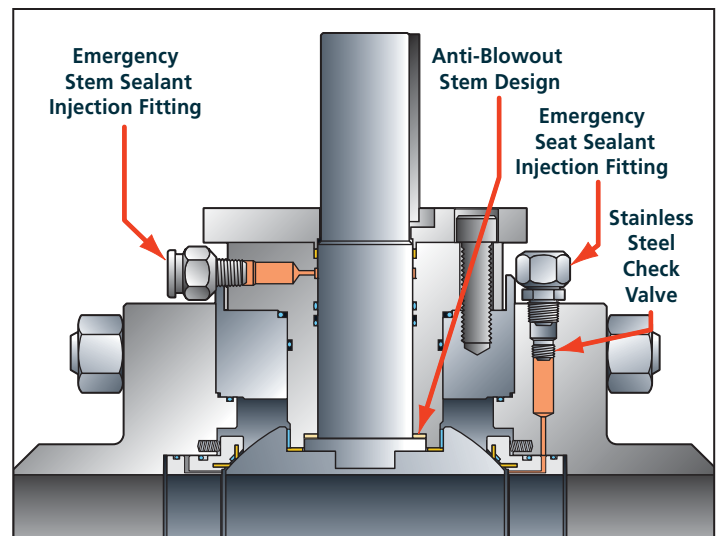


### Emergency Sealant Injection

A secondary sealant injection system for stem seals is a standard feature on all PBV® Trunnion ball valves. On valves 6" bore and larger, the seat emergency sealant system shown here is a standard feature. A similar system is available for sizes 2" thru 4" on request. These systems are made available for the sole purpose of providing a temporary seal to an otherwise damaged area. PBV® ball valves require no lubrication under ordinary circumstances.

### Anti-Blowout

Blowout proof stems are a standard feature of all PBV® ball valves.



# Features

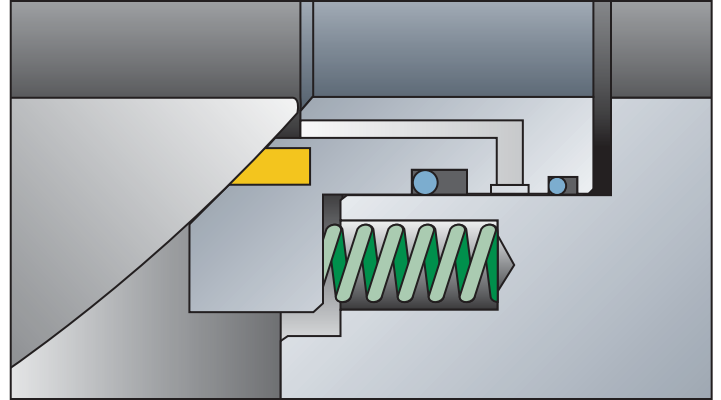
## PBV®'s Patented Seat Technologies

PBV® provides the latest in valve seat technology, leading the industry with the patented Comp II seat. Other seat designs are also available to meet your application requirements. This makes PBV® one of the most flexible manufacturers in terms of available seat configurations

and designs. PBV®'s metal-to-metal seating technologies and manufacturing capabilities continue to lead the way in industry innovations where severe service applications are required.

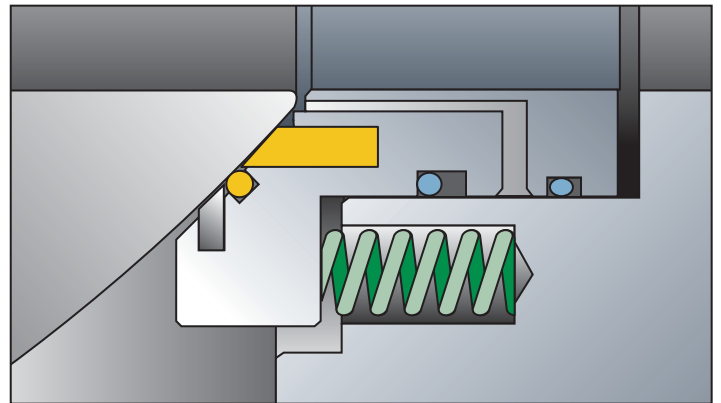
### Compseal-0

The PBV® Compseal-0 design is ideal for applications where non-standard seat materials are required for the service conditions. The different materials give added flexibility for faster delivery in demanding applications. The seat inserts allow for a variety of materials to be used while still complying to API seat test requirements for "bubble-tight shut-off". Nylon Compseal-0 designs are standard on sizes 14" and larger.



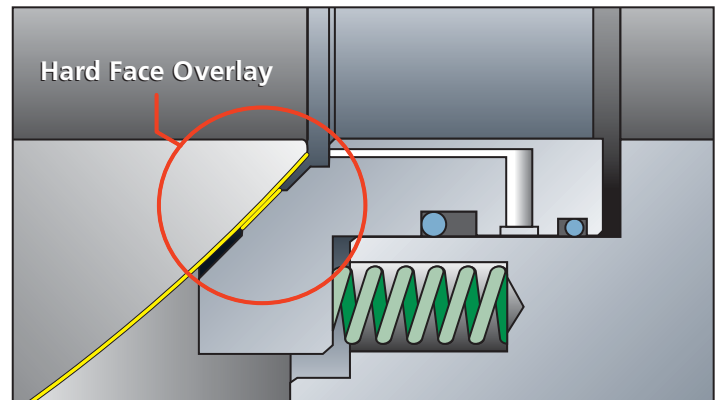
### Compseal-1

PBV® Compseal-1 seat designs are for applications that require redundant sealing when access to a valve is limited or start up conditions are known to have debris in the line. Lower torque and low pressure shut-off are often achieved utilizing this design while providing customers with zero leakage reliability at an affordable price.



### Metal-To-Metal Seats

There are a number of services that require metal-to-metal seat technology. PBV® has extensive experience in the supply of valves for applications such as high temperature cokers, control valve applications and in corrosive and/or erosive environments. PBV® achieves the metal-to-metal seating technology through the use of various hard face material on the ball and seat face.

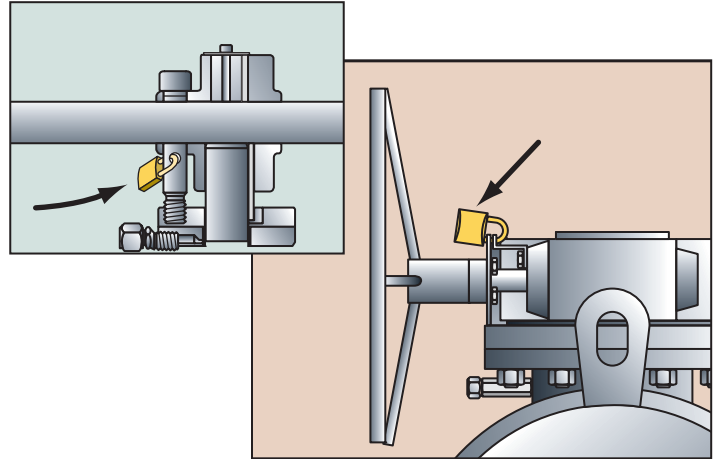




# Features

## Locking Devices

Locking devices are standard on all PBV® trunnion ball valves. The designs shown depict the locking feature for both lever-operated and gear-operated valves. In addition, a multiple lock template can accommodate safety requirements when more than one person needs reassurance of security. Special safety interlock devices are also available.



## Actuation

PBV® ball valves are built to easily accept pneumatic, electric, hydraulic or gas-over-oil actuators. Break-away and run torque, which normally affect actuator sizing, are minimized to allow for economical actuator packages. Actuated ball valves may be supplied directly from PBV® under a single warranty.

Valve/Actuator assemblies can be tested to customer requirements at PBV® before shipment to the job site.



The valves shown above are just a few of many severe service ball valves PBV® produced for the United States Department of Energy, Strategic Petroleum Reserves, complete with gear operators built and tested to DOE specifications.

## Weld Overlay Technology

This technology is cost effective for ball valves in highly corrosive or erosive services. The life of a valve can be considerably extended at a fraction of the cost of a solid corrosion resistant alloy valve by the application of a weld overlay to valve internal surfaces.

If you are currently using solid stainless steel or other high alloy valves the use of this technology could result in considerable savings with no sacrifice to service life or performance. Offered on valves 6" and larger.

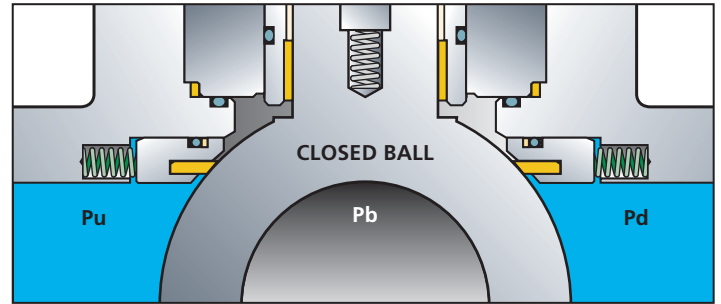
Welding is performed in accordance with ASME BPV Section 9.



# Features

## Double Block and Bleed Valves

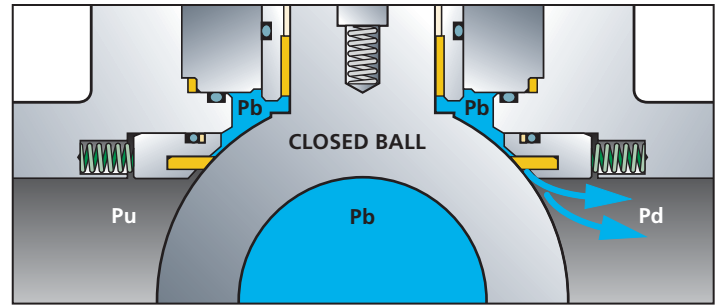
All PBV® trunnion mounted ball valves are designed and manufactured to facilitate block and bleed applications in the closed position only. In addition, valves 6" and larger can be completely flushed with the valve under pressure and in the closed position. This is achieved by utilizing the drain valve and vent hole in combination. The illustration shows both the upstream pressure ( $P_u$ ) and the downstream pressure ( $P_d$ ) being held independently from the body pressure ( $P_b$ ). The piston effect principle illustrated assures bubble tight sealing simultaneously on both sides of the ball.



Shown In Closed Position.

## Valve Cavity Pressure Relief

When a trunnion ball valve is in the closed position, media will be trapped in the body cavity. Unless this media is drained, it will be subjected to thermal expansion and contraction. As the temperature rises, the trapped media desires to expand and the pressure increases in the area shown as ( $P_b$ ). In order to avoid excessive pressure build-up, the PBV® seats are designed to self-relieve, allowing the media in the body to escape to the pipeline. In this case, we have shown it to relieve to the downstream side ( $P_d$ ). This self-relieving seat design feature is standard on all PBV® trunnion ball valves.



Shown In Closed Position.

# Options

## Buried Service

The photos and illustrations shown here typify the designs used for adapting a PBV® ball valve for buried service.



PBV® manufactures hi-head extensions exactly in accordance with customer specifications or according to our own engineering and manufacturing designs.

PBV® has the capabilities to produce giants like the one pictured at right. PBV® produced two 48" Class 600 ball valves with 96" extended stems for the Williams Energy, "Sundance Pipeline Project."



## PBV® Ball Valves For Cryogenic Service

For service temperatures below -50°F, PBV®'s standard design includes lip seals and stem extensions using selected materials for your application. The 12" gas column shown at right is a standard feature to isolate the gear operator and stem seals from the cold media.



PBV® provides extended stems which are used in a variety of applications.



Subsea Valve



Splash Zone Valve

PBV® supplies subsea valves to individual customer requirements or to our own internal standards. Coatings, fastener protection, gear boxes with pressure equalizing devices, protected drive stems and customized ROV couplings are all components of design considered for PBV® ball valves being used in subsea service.



# Large Diameter Special Features

## Seat Design

The necessary thrust required for proper sealing of the seat to the ball at low pressure is provided by spiral springs (See Illustration 1). At high pressure the thrust of the seat to the ball is increased by the pressure of service medium in the pipeline.

Primary seat sealing is provided by a soft sealing ring of different rubber types. Alternatively, a PTFE hard sealing ring (or PTFE modifications) can be used for primary sealing. Secondary sealing is provided by metal-to-metal contact of the seat to the ball. Emergency sealant, which can be injected between the seat and ball, can be used as tertiary sealing. Seats with soft sealing rings are automatically supplied as DPE design (See Illustration 2). DPE design means, that if the upstream seat is damaged, function of a ball valve is still secured by a downstream seat.

## Two-Way Double Acting

To meet customers requirements, often times a two-way seat design is required. This design allows for downstream seat sealing in the case of an upstream seat failing to seal. This design also provides for the function of testing a valve in-line and in full open position with the drain or bleed valve open to the air.

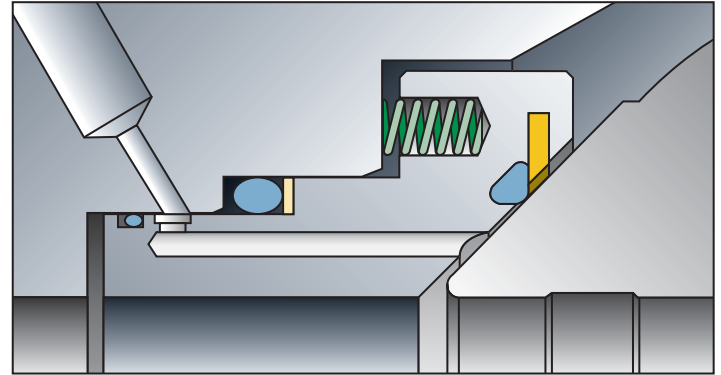


Illustration No. 1

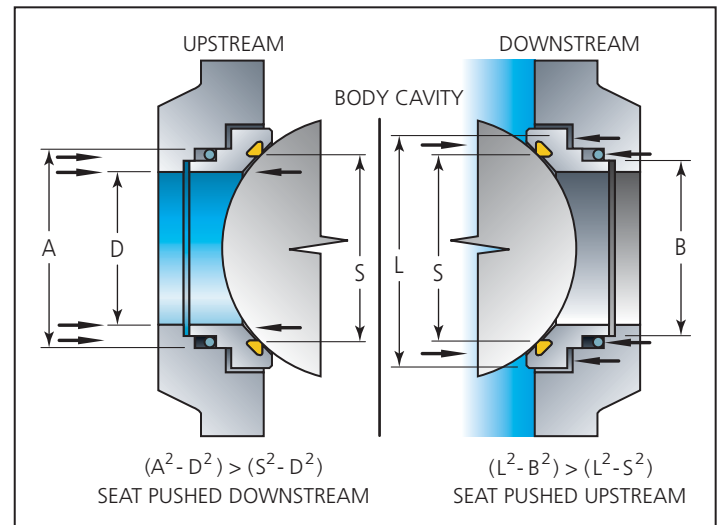


Illustration No. 2

## Fully Welded Body Design

Fully welded three-piece body designs are available in larger sizes.

## Special Under Water Gas Testing

Valves can be air or gas tested under water in a special chamber.





# Design Standards and Specifications

Valve designs covered in this catalog conform to the following industry standards and specifications.

## American Petroleum Institute

API 6D • Specifications for pipeline valves  
API 607 • Fire test for soft-seated ball valves (Div. of Refining)  
API 6FA • Fire test for valves (Div. of Production)  
API Q1 • Specifications for quality programs  
API 6A • Specifications for Wellhead and Christmas Tree Equipment

## Manufacturers Standardization Society

MSS SP-25 • Standard marking system for valves  
MSS SP-55 • Quality Standard for Steel Castings

## National Association of Corrosion Engineers

NACE MR0175 2002 • Sulfide stress cracking resistant metallic materials for oilfield equipment

## American National Standard

ASME/ANSI B 16.10 • Face-to-face and end-to-end dimensions on ferrous valves  
ASME/ANSI B 16.5 • Steel pipe flanges and flanged fittings  
ASME/ANSI B 16.34 • Steel valves-flanged and butt-welded end  
ASME/ANSI B 31.1 • Chemical plant and petroleum refinery piping  
ASME B 31.4 • Liquid petroleum transportation piping systems  
ASME B 31.8 • Gas transmission and distribution piping systems

## Code of Federal Regulations

Title 49-Part 192 • Transportation of natural and other gas by pipeline: Minimum federal safety standards

## European Community

Pressure Equipment Directive 97/23/EC

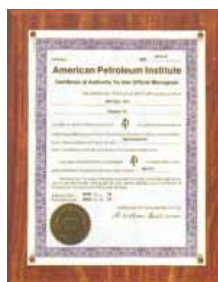
CE 0038

## Certification of Quality and Design

Quality systems are a way of life at PBV®. In addition, PBV® functions under the requirements of an API Q1 quality program. Our facilities and quality programs are always open to customer audits.

The complete PBV® trunnion ball valve line has been designed and tested to ensure that the external and through-bore maximum allowable leakage rates are maintained in the event of a fire. PBV® has equipment and facilities to firesafe test our products to the edition of API 607 and API 6FA firesafe standards.

API 6D



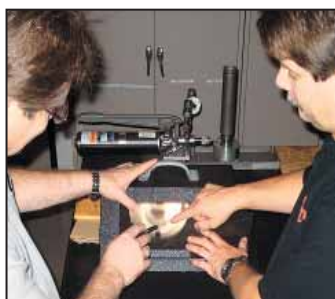
API 6A



ISO 9001:2000



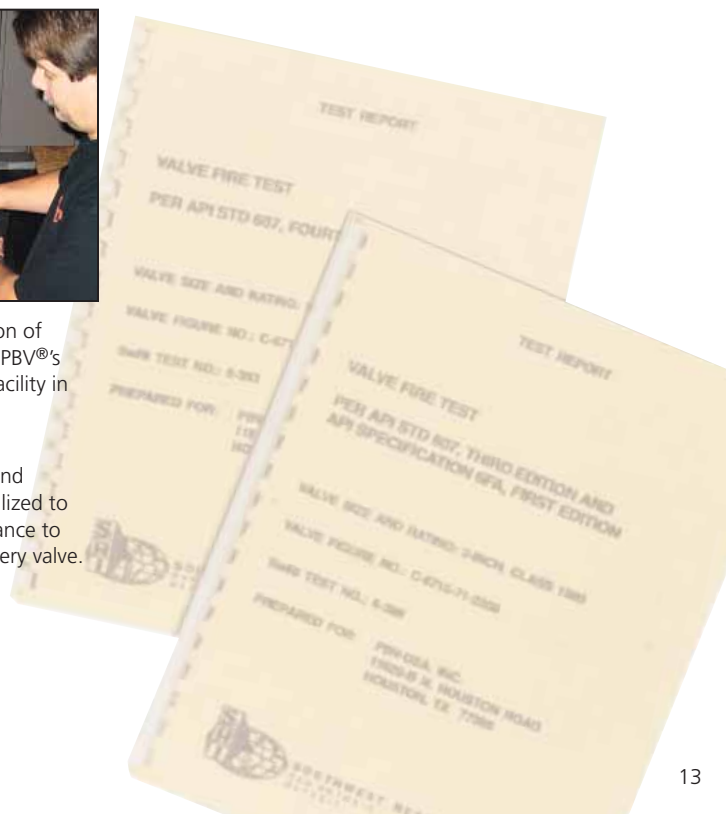
All API 6D, API 6A, CE PED and other licenses are maintained on a current basis. Each and every PBV® trunnion ball valve is monogrammed and serialized under our API 6D-0129 or our API 6A-0383 license numbers.



X-ray testing and evaluation of castings are performed at PBV®'s Engineering and Testing Facility in Stafford, Texas.



Pressure Testing Stations and Qualified Personnel are utilized to provide consistent compliance to industry test criteria for every valve.



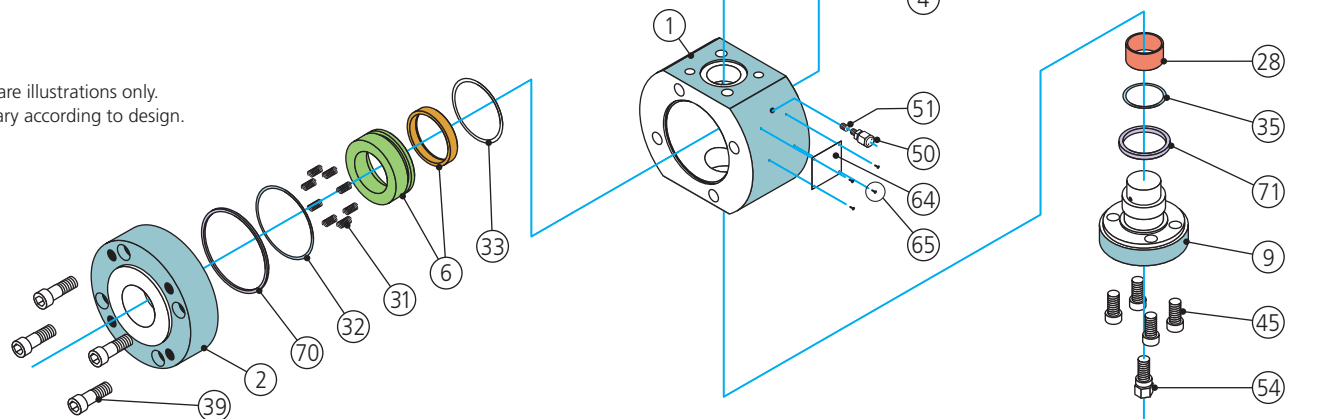
# Parts for Low Pressure Small Size Diameter Valves

## Series 6700 • 2"-4", Class 150 • 2", Class 300

| No. | Description             | Material        | Spares |
|-----|-------------------------|-----------------|--------|
| 1   | Body                    | A105/A350 LF2   |        |
| 2   | Closure                 | A105/A350 LF2   |        |
| 4   | Ball                    | 316SS           |        |
| 5   | Stem                    | 316SS           |        |
| 6   | Seat Ring Sub Assembly  | 316SS-G/PTFE    | S      |
| 9   | Trunnion                | 4130 ENP        |        |
| 10  | Gland                   | 4130 ENP        |        |
| 12  | Adapter Plate           | A36             |        |
| 20  | Stem Key                | Carbon Steel    |        |
| 25  | Stem Thrust Washer      | Graphite        | S      |
| 28  | DU Bearing              | DU Dry Bearing  |        |
| 31  | Seat/Stem Spring        | X-750           |        |
| 32  | Body O-ring             | Viton®          | S      |
| 33  | Seat O-ring             | Viton®          | S      |
| 34  | Stem O-ring             | Viton®          | S      |
| 35  | Gland & Trunnion O-ring | Viton®          | S      |
| 39  | Body Cap Screw          | A574 Modified   |        |
| 43  | Gland Cap Screw         | A574 Modified   |        |
| 44  | Adapter Plate Cap Screw | A574 Modified   |        |
| 45  | Trunnion Cap Screw      | A574 Modified   |        |
| 46  | Stem Key Cap Screw      | Carbon Steel    |        |
| 49  | Stem Grease Fitting     | Carbon Steel    |        |
| 50  | Body Grease Fitting     | Carbon Steel    |        |
| 51  | Check Valve             | Stainless Steel |        |
| 54  | Drain Valve             | Carbon Steel    |        |
| 60  | Handle                  | Carbon Steel    |        |
| 62  | Indicator Screw         | Carbon Steel    |        |
| 63  | Retainer Washer         | Carbon Steel    |        |
| 64  | Name Plate              | Stainless Steel |        |
| 65  | Drive Screw             | Stainless Steel |        |
| 67  | Handle Adapter          | Carbon Steel    |        |
| 69  | Lock Screw              | Carbon Steel    |        |
| 70  | Body Gasket             | Graphite        | S      |
| 71  | Gland & Trunnion Gasket | Graphite        | S      |
| 72  | Stem Packing            | Graphite        | S      |

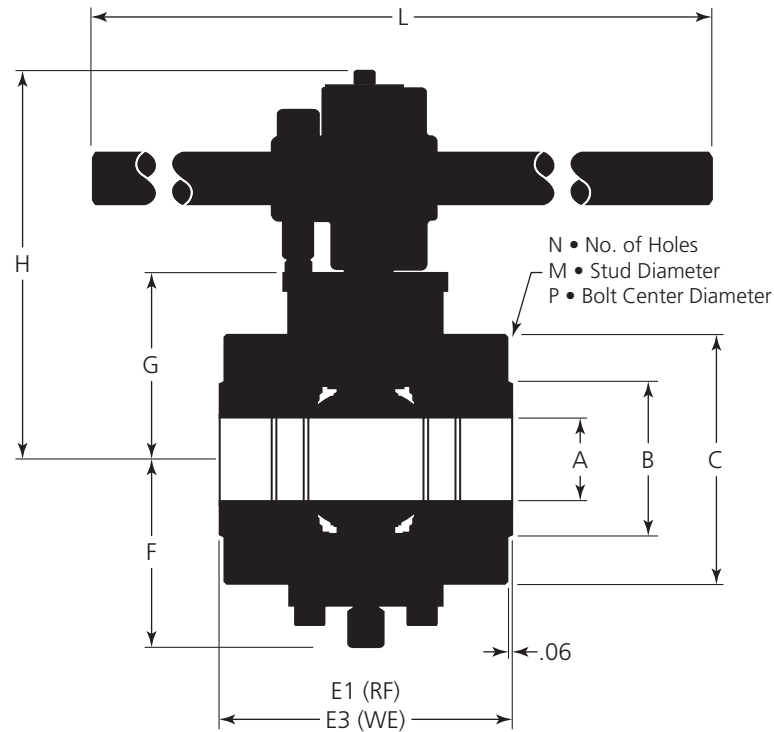
**Note:** Materials listed are typical for stainless steel trim valves. Stronger materials may be used to satisfy design requirements.

Assemblies are illustrations only.  
Parts may vary according to design.



## Dimensional Data for Low Pressure Small Size Diameter Valves

### Series 6700 • 2"-4", Class 150 • 2", Class 300



#### Class 150, 2"FP-4"FP

| Size (in.) | A         | B    | C    | D1 | E1-RF | E3-WE | F    | G    | H     | N | M          | P    | L  |
|------------|-----------|------|------|----|-------|-------|------|------|-------|---|------------|------|----|
| 2x2        | 2.00x2.00 | 3.62 | 6.00 | NA | 7.00  | 8.50  | 4.89 | 4.87 | 9.55  | 4 | 5/8-11 UNC | 4.75 | 30 |
| 3x3        | 3.00x3.00 | 5.00 | 7.87 | NA | 8.00  | 11.12 | 5.87 | 5.94 | 10.92 | 4 | 5/8-11 UNC | 6.00 | 30 |
| 4x4        | 4.00x4.00 | 6.19 | 9.49 | NA | 9.00  | 12.00 | 7.30 | 7.35 | 12.93 | 8 | 5/8-11 UNC | 7.50 | 48 |

#### Class 300, 2"FP

| Size (in.) | A         | B    | C    | D1 | E1-RF | E3-WE | F    | G    | H    | N | M          | P    | L  |
|------------|-----------|------|------|----|-------|-------|------|------|------|---|------------|------|----|
| 2x2        | 2.00x2.00 | 3.62 | 6.50 | NA | 8.50  | 8.50  | 4.89 | 4.87 | 9.55 | 8 | 5/8-11 UNC | 5.00 | 30 |

#### Small Bore Valve Design Utilizes Tapped Holes In The End Flanges to Maintain API 6D Face-to-Face Specifications

Small diameter trunnion ball valves often require tapped holes on the end flanges in order to maintain the face-to-face dimensions specified in API 6D. The full bore valves have tapped holes in accordance with API 6D instead of straight holes on both ends. The recommended stud length is listed at right.

#### For Reference Only Stud Length to Install Valve

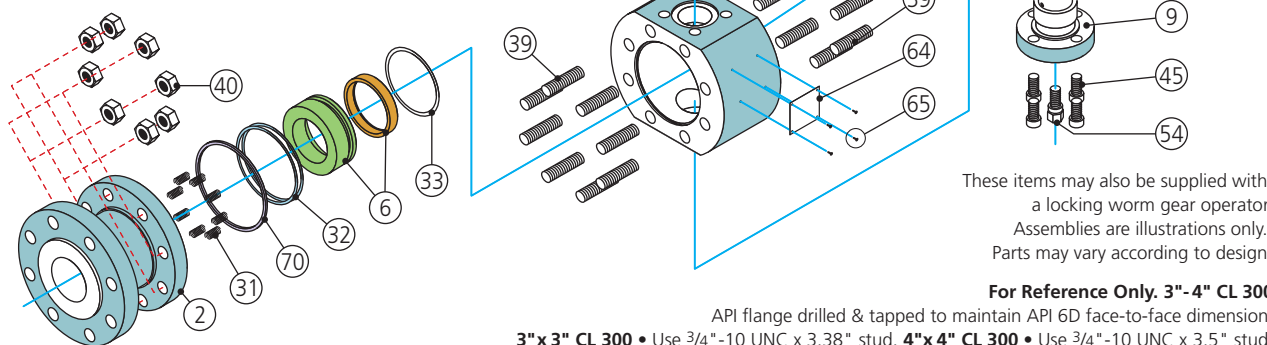
| Bore Size | Stud Bolt Size    | Quantity/Flange |
|-----------|-------------------|-----------------|
| 2-150     | 5/8-11 UNC X 2.25 | 4               |
| 3-150     | 5/8-11 UNC X 2.38 | 4               |
| 4-150     | 5/8-11 UNC X 2.50 | 8               |
| 2-300     | 5/8-11 UNC X 2.50 | 8               |

# Parts for High Pressure Small Size Diameter Valves

**Series 5700/6700 • 3"FP-4"RP, Class 300 • 2"-4", Class 600, 900, 1500 and 2500**

| No. | Description             | Material                      | Spares |
|-----|-------------------------|-------------------------------|--------|
| 1   | Body                    | A105/A350 LF2                 |        |
| 2   | Closure/Flanged End     | A105/A350 LF2                 |        |
| 4   | Ball                    | 316SS                         |        |
| 5   | Stem                    | 316SS                         |        |
| 6   | Seat Ring Sub Assembly  | 316SS -G/PTFE<br>316SS -Nylon | S      |
| 9   | Trunnion                | 4130 ENP                      |        |
| 10  | Gland                   | 4130 ENP                      |        |
| 12  | Adapter Plate           | A36                           |        |
| 20  | Stem Key                | Carbon Steel                  |        |
| 25  | Stem Thrust Washer      | Graphite                      | S      |
| 28  | DU Bearing              | DU Dry Bearing                |        |
| 31  | Seat/Stem Spring        | X-750                         |        |
| 32  | Body O-ring             | Viton®                        | S      |
| 33  | Seat O-ring             | Viton®                        | S      |
| 34  | Stem O-ring             | Viton®                        | S      |
| 35  | Gland & Trunnion O-ring | Viton®                        | S      |
| 39  | Body Stud               | A193 B7M                      |        |
| 40  | Body Nut                | A194 2HM                      |        |
| 43  | Gland Cap Screw         | A574 Modified                 |        |
| 44  | Adapter Plate Cap Screw | A574 Modified                 |        |
| 45  | Trunnion Cap Screw      | A574 Modified                 |        |
| 46  | Stem Key Cap Screw      | Carbon Steel                  |        |
| 49  | Stem Grease Fitting     | Carbon Steel                  |        |
| 50  | Body Grease Fitting     | Carbon Steel                  |        |
| 51  | Check Valve             | Stainless Steel               |        |
| 54  | Drain Valve             | Carbon Steel                  |        |
| 60  | Handle                  | Carbon Steel                  |        |
| 62  | Indicator Screw         | Carbon Steel                  |        |
| 63  | Retainer Washer         | Carbon Steel                  |        |
| 64  | Name Plate              | Stainless Steel               |        |
| 65  | Drive Screw             | Stainless Steel               |        |
| 67  | Handle Adapter          | Carbon Steel                  |        |
| 69  | Lock Screw              | Carbon Steel                  |        |
| 70  | Body Gasket             | Graphite                      | S      |
| 71  | Gland & Trunnion Gasket | Graphite                      | S      |
| 72  | Stem Packing            | Graphite                      | S      |

**Note:** Materials listed are typical for stainless steel trim valves. Stronger materials may be used to satisfy design requirements.



These items may also be supplied with a locking worm gear operator. Assemblies are illustrations only. Parts may vary according to design.

**For Reference Only. 3"-4" CL 300**

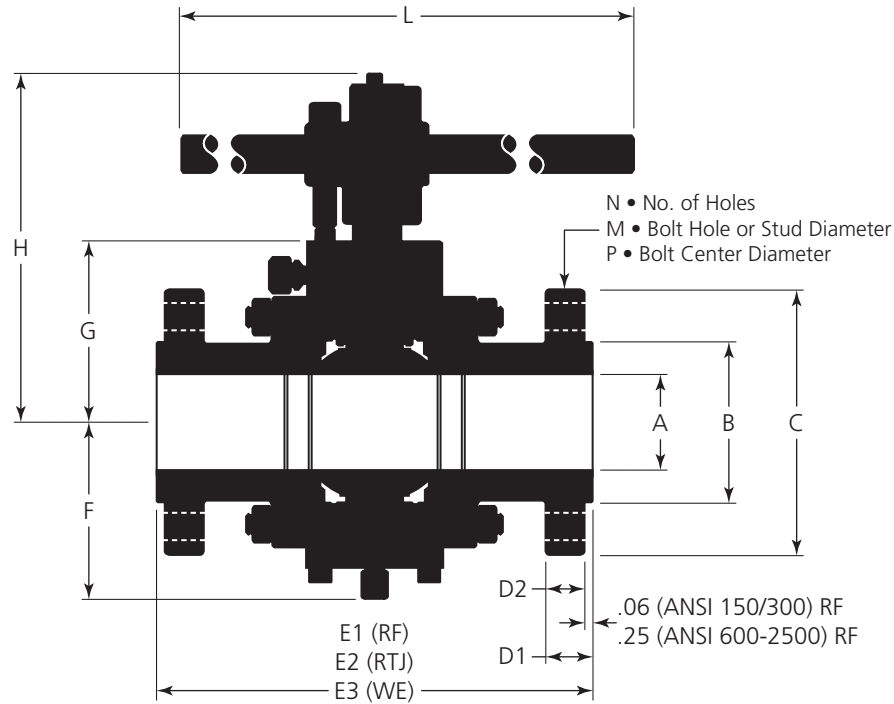
API flange drilled & tapped to maintain API 6D face-to-face dimension.

**3"x3" CL 300 • Use 3/4"-10 UNC x 3.38" stud. 4"x4" CL 300 • Use 3/4"-10 UNC x 3.5" stud.**



# Dimensional Data for High Pressure Small Size Diameter Valves

**Series 5700/6700 • 6"RP, Class 150 • 3"RP-6"RP, Class 300 • 2"FP-6"RP, Class 600**



## Class 150, 6"RP

| Size (in.) | A         | B    | C     | D1   | E1-RF | E2-RTJ | E3-WE | F    | G    | H     | N | M    | P    | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|------|-------|---|------|------|----|
| 6x4        | 6.00x4.00 | 8.50 | 11.00 | 1.00 | 15.50 | 16.00  | 18.00 | 7.30 | 7.35 | 12.93 | 8 | 0.88 | 9.50 | 48 |

## Class 300, 3"RP-6"RP

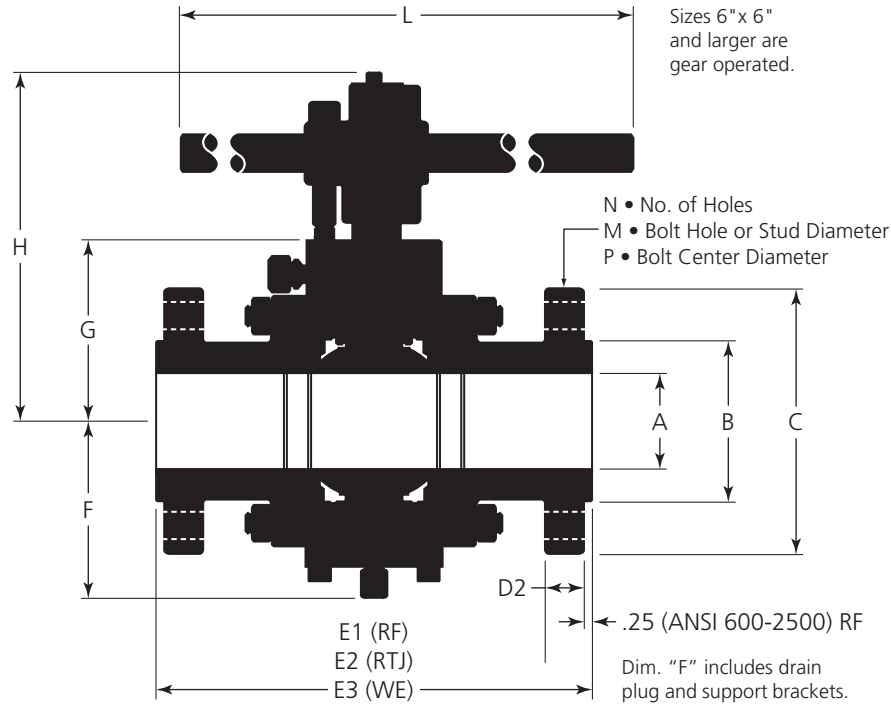
| Size (in.) | A         | B    | C     | D1   | E1-RF | E2-RTJ | E3-WE | F    | G    | H     | N  | M          | P     | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|------|-------|----|------------|-------|----|
| 3x2        | 3.00x2.00 | 5.00 | 8.25  | 1.12 | 11.12 | 11.75  | 11.12 | 4.89 | 4.87 | 9.55  | 8  | 0.88       | 6.62  | 30 |
| 3x3        | 3.00x3.00 | 5.00 | 8.25  | 1.12 | 11.12 | 11.75  | 11.12 | 5.87 | 5.94 | 10.92 | 8  | 3/4-10 UNC | 6.62  | 30 |
| 4x3        | 4.00x3.00 | 6.19 | 10.00 | 1.25 | 12.00 | 12.62  | 12.00 | 5.87 | 5.94 | 10.92 | 8  | 0.88       | 7.88  | 30 |
| 4x4        | 4.00x4.00 | 6.19 | 10.00 | 1.25 | 12.00 | 12.62  | 12.00 | 7.30 | 7.35 | 12.93 | 8  | 3/4-10 UNC | 7.88  | 48 |
| 6x4        | 6.00x4.00 | 8.50 | 12.50 | 1.44 | 15.88 | 16.50  | 18.00 | 7.30 | 7.35 | 12.93 | 12 | 0.88       | 10.62 | 48 |

## Class 600, 2"FP-6"RP

| Size (in.) | A         | B    | C     | D1   | E1-RF | E2-RTJ | E3-WE | F    | G    | H     | N  | M    | P     | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|------|-------|----|------|-------|----|
| 2x2        | 2.00x2.00 | 3.62 | 6.50  | 1.00 | 11.50 | 11.62  | 11.50 | 4.89 | 4.87 | 9.55  | 8  | 0.75 | 5.00  | 30 |
| 3x2        | 3.00x2.00 | 5.00 | 8.25  | 1.25 | 14.00 | 14.12  | 14.00 | 4.89 | 4.87 | 9.55  | 8  | 0.88 | 6.62  | 30 |
| 3x3        | 3.00x3.00 | 5.00 | 8.25  | 1.25 | 14.00 | 14.12  | 14.00 | 5.87 | 5.94 | 10.92 | 8  | 0.88 | 6.62  | 30 |
| 4x3        | 4.00x3.00 | 6.19 | 10.75 | 1.50 | 17.00 | 17.12  | 17.00 | 5.87 | 5.94 | 10.92 | 8  | 1.00 | 8.50  | 30 |
| 4x4        | 4.00x4.00 | 6.19 | 10.75 | 1.50 | 17.00 | 17.12  | 17.00 | 7.30 | 7.35 | 12.93 | 8  | 1.00 | 8.50  | 48 |
| 6x4        | 6.00x4.00 | 8.50 | 14.00 | 1.88 | 22.00 | 22.12  | 22.00 | 7.30 | 7.35 | 12.93 | 12 | 1.12 | 11.50 | 48 |

# Dimensional Data for High Pressure Small Size Diameter Valves

## Series 5700/6700 • 2"FP-6"RP, Class 900, 1500 and 2500



### Class 900, 2"FP-6"RP

| Size (in.) | A         | B    | C     | D2   | E1-RF | E2-RTJ | E3-WE | F    | G    | H     | N  | M    | P     | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|------|-------|----|------|-------|----|
| 2x2        | 2.00x2.00 | 3.62 | 8.50  | 1.50 | 14.50 | 14.62  | 14.50 | 4.89 | 4.87 | 9.55  | 8  | 1.00 | 6.50  | 30 |
| 3x2        | 3.00x2.00 | 5.00 | 9.50  | 1.50 | 15.00 | 15.12  | 15.00 | 4.89 | 4.87 | 9.55  | 8  | 1.00 | 7.50  | 30 |
| 3x3        | 3.00x3.00 | 5.00 | 9.50  | 1.50 | 15.00 | 15.12  | 15.00 | 5.87 | 5.94 | 10.92 | 8  | 1.00 | 7.50  | 30 |
| 4x3        | 4.00x3.00 | 6.19 | 11.50 | 1.75 | 18.00 | 18.12  | 18.00 | 5.87 | 5.94 | 10.92 | 8  | 1.25 | 9.25  | 30 |
| 4x4        | 4.00x4.00 | 6.19 | 11.50 | 1.75 | 18.00 | 18.12  | 18.00 | 7.30 | 7.35 | 12.93 | 8  | 1.25 | 9.25  | 48 |
| 6x4        | 6.00x4.00 | 8.50 | 15.00 | 2.19 | 24.00 | 24.12  | 24.00 | 7.30 | 7.35 | 12.93 | 12 | 1.25 | 12.50 | 48 |

### Class 1500, 2"FP-6"RP

| Size (in.) | A         | B    | C     | D2   | E1-RF | E2-RTJ | E3-WE | F    | G    | H     | N  | M    | P     | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|------|-------|----|------|-------|----|
| 2x2        | 2.00x2.00 | 3.62 | 8.50  | 1.50 | 14.50 | 14.62  | 14.50 | 5.32 | 5.47 | 10.30 | 8  | 1.00 | 6.50  | 30 |
| 3x2        | 3.00x2.00 | 5.00 | 10.50 | 1.88 | 18.50 | 18.62  | 18.50 | 5.32 | 5.47 | 10.30 | 8  | 1.25 | 8.00  | 30 |
| 3x3        | 3.00x3.00 | 5.00 | 10.50 | 1.88 | 18.50 | 18.62  | 18.50 | 6.89 | 6.42 | 11.60 | 8  | 1.25 | 8.00  | 30 |
| 4x3        | 4.00x3.00 | 6.19 | 12.25 | 2.12 | 21.50 | 21.62  | 21.50 | 6.89 | 6.42 | 11.60 | 8  | 1.38 | 9.50  | 30 |
| 4x4        | 4.00x4.00 | 6.19 | 12.25 | 2.12 | 21.50 | 21.62  | 21.50 | 8.14 | 7.88 | 13.75 | 8  | 1.38 | 9.50  | 48 |
| 6x4        | 5.75x4.00 | 8.50 | 15.50 | 3.25 | 27.75 | 28.00  | 27.75 | 8.14 | 7.88 | 13.75 | 12 | 1.50 | 12.50 | 48 |

### Class 2500, 2"FP-6"RP

| Size (in.) | A         | B    | C     | D2   | E1-RF | E2-RTJ | E3-WE | F    | G     | H     | N | M    | P     | L  |
|------------|-----------|------|-------|------|-------|--------|-------|------|-------|-------|---|------|-------|----|
| 2x2        | 1.75x1.75 | 3.62 | 9.25  | 2.00 | 17.75 | 17.87  | 17.75 | 6.39 | 7.25  | 13.19 | 8 | 1.12 | 6.75  | 30 |
| 3x2        | 2.50x1.75 | 5.00 | 12.00 | 2.62 | 22.75 | 23.00  | 22.75 | 6.39 | 7.25  | 13.19 | 8 | 1.38 | 9.00  | 30 |
| 3x3        | 2.50x2.50 | 5.00 | 12.00 | 2.62 | 22.75 | 23.00  | 22.75 | 8.20 | 8.42  | 14.68 | 8 | 1.38 | 9.00  | 30 |
| 4x3        | 3.50x2.50 | 6.19 | 14.00 | 3.00 | 26.50 | 26.88  | 26.50 | 8.20 | 8.42  | 14.68 | 8 | 1.63 | 10.75 | 30 |
| 4x4        | 3.50x3.50 | 6.19 | 14.00 | 3.00 | 26.50 | 26.88  | 26.50 | 9.43 | 10.56 | 16.93 | 8 | 1.63 | 10.75 | 48 |
| 6x4        | 5.25x3.50 | 8.50 | 19.00 | 4.25 | 36.00 | 36.50  | 36.00 | 9.43 | 10.56 | 16.93 | 8 | 2.12 | 14.50 | 48 |

# Parts for Mid Size Diameter Valves

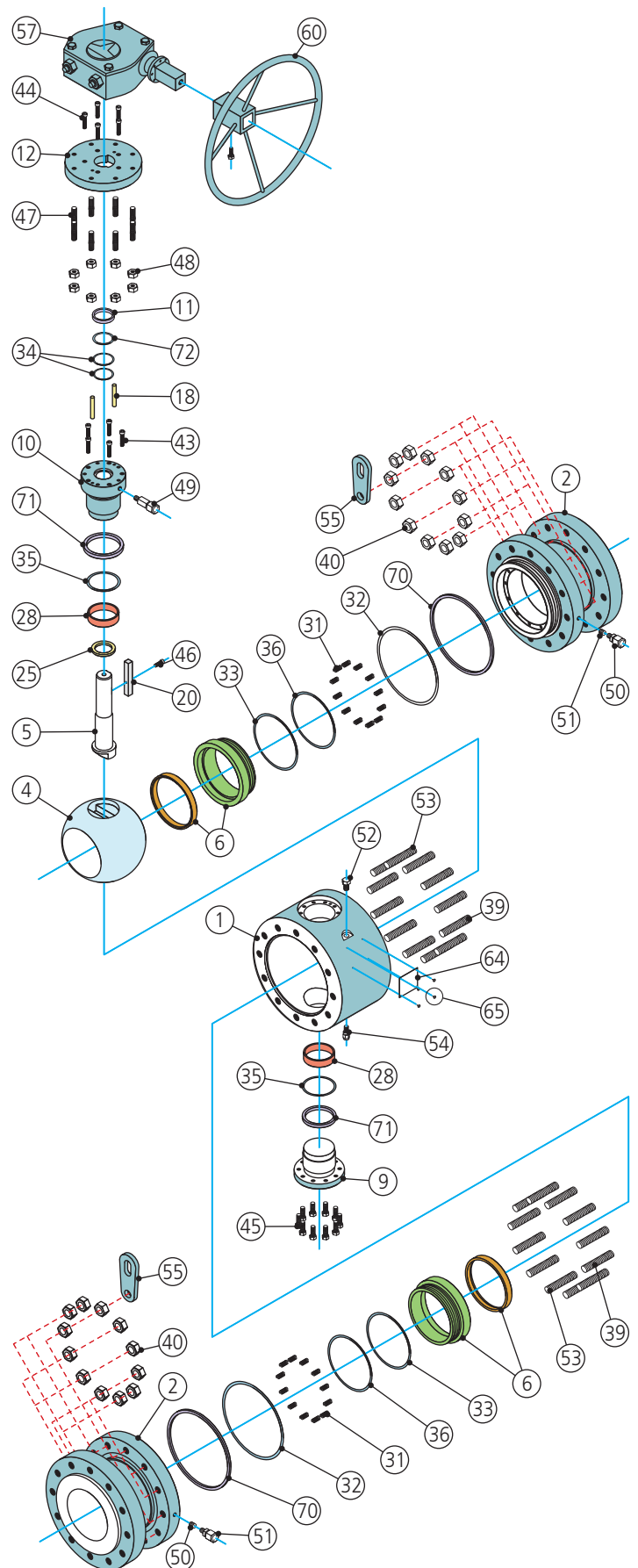
**Series 5700 • 8"- 14"RP, Class 150, 300, 600, 900 and 1500 • 6"- 12"RP, Class 2500**

**Series 6700 • 6"- 12"FP, Class 150, 300, 600, 900 and 1500 • 6"- 10"FP, Class 2500**

| No. | Description              | Material                             | Spares |
|-----|--------------------------|--------------------------------------|--------|
| 1   | Body                     | A105/A350 LF2                        |        |
| 2   | Closure/Flanged End      | A105/A350 LF2                        |        |
| 4   | Ball                     | A105/A350 LF2 ENP                    |        |
| 5   | Stem                     | 4130 ENP                             |        |
| 6   | Seat Ring Sub Assembly   | A105/A350 LF2 ENP<br>G/PTFE or Nylon | S      |
| 9   | Trunnion                 | 4130 ENP                             |        |
| 10  | Gland                    | 4130 ENP                             |        |
| 11  | Bushing                  | Carbon Steel                         |        |
| 12  | Adapter Plate            | A36                                  |        |
| 18  | Gland Pin                | Carbon Steel                         |        |
| 20  | Stem Key                 | Carbon Steel                         |        |
| 25  | Stem Thrust Washer       | Graphite                             | S      |
| 28  | DU Bearing               | DU Dry Bearing                       |        |
| 31  | Seat Spring              | X-750                                |        |
| 32  | Body O-ring              | Viton®                               | S      |
| 33  | Seat O-ring              | Viton®                               | S      |
| 34  | Stem O-ring              | Viton®                               | S      |
| 35  | Gland & Trunnion O-ring  | Viton®                               | S      |
| 36  | Emergency Sealant O-ring | Viton®                               | S      |
| 39  | Body Stud                | A193 B7M                             |        |
| 40  | Body Nut                 | A194 2HM                             |        |
| 43  | Gland Cap Screw          | A574 Modified                        |        |
| 44  | Adapter Plate Cap Screw  | A574 Modified                        |        |
| 45  | Trunnion Cap Screw       | A574 Modified                        |        |
| 46  | Stem Key Cap Screw       | Carbon Steel                         |        |
| 47  | Gear Stud                | A193 B7                              |        |
| 48  | Gear/Adapter Plate Nut   | A194 2H                              |        |
| 49  | Stem Grease Fitting      | Carbon Steel                         |        |
| 50  | Seat Grease Fitting      | Carbon Steel                         |        |
| 51  | Check Valve              | Stainless Steel                      |        |
| 52  | Vent Plug                | Carbon Steel                         |        |
| 53  | Lifting Lug Stud         | A193 B7M                             |        |
| 54  | Drain Valve              | Carbon Steel                         |        |
| 55  | Lifting Lug              | Carbon Steel                         |        |
| 57  | Worm Gear Operator       | Commercial                           |        |
| 60  | Handwheel                | Carbon Steel                         |        |
| 64  | Name Plate               | Stainless Steel                      |        |
| 65  | Drive Screw              | Stainless Steel                      |        |
| 70  | Body Gasket              | Graphite                             | S      |
| 71  | Gland & Trunnion Gasket  | Graphite                             | S      |
| 72  | Stem Packing             | Graphite                             | S      |

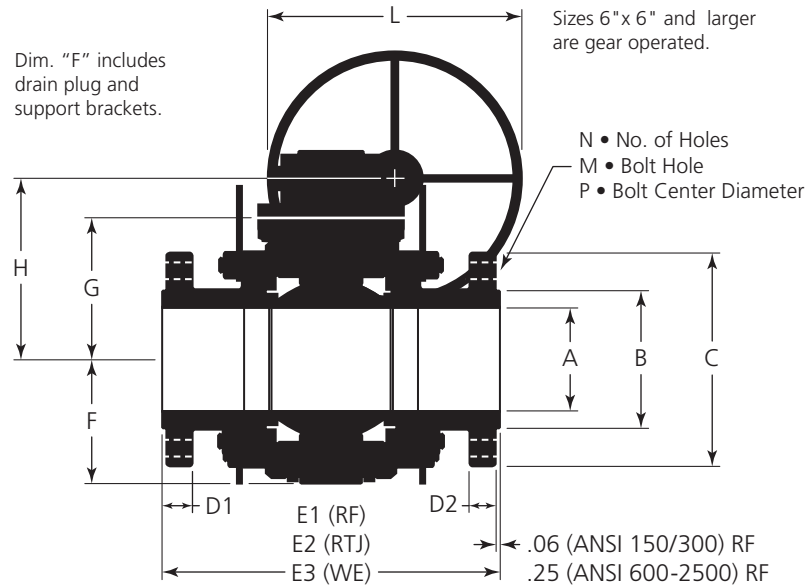
**Note:** Sizes 6" and 8" may be supplied with locking levers. Sizes 10" and 12" are supplied with support feet, not shown. Materials listed are typical for carbon steel valves. Ball, stem & seat rings will be 316, 17-4PH, or XM-19 for stainless steel trim depending on design requirements.

Assemblies are illustrations only.  
Parts may vary according to design.



# Dimensional Data for Mid Size Diameter Valves

## Series 5700/6700 • 6"FP-14"RP, Class 150, 300 and 600



### Class 150, 6"FP-14"RP

| Size (in.) | A           | B     | C     | D1   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 6.00x6.00   | 8.50  | 11.00 | 1.00 | 15.50 | 16.00  | 18.00 | 7.25  | 8.48  | 10.63 | 8  | 0.88 | 9.50  | 24 |
| 8x6        | 8.00x6.00   | 10.62 | 13.50 | 1.12 | 18.00 | 18.50  | 20.50 | 7.25  | 8.48  | 10.63 | 8  | 0.88 | 11.75 | 24 |
| 8x8        | 8.00x8.00   | 10.62 | 13.50 | 1.12 | 18.00 | 18.50  | 20.50 | 8.72  | 10.13 | 12.26 | 8  | 0.88 | 11.75 | 24 |
| 10x8       | 10.00x8.00  | 12.75 | 16.00 | 1.19 | 21.00 | 21.50  | 22.00 | 8.72  | 10.13 | 12.26 | 12 | 1.00 | 14.25 | 24 |
| 10x10      | 10.00x10.00 | 12.75 | 16.00 | 1.19 | 21.00 | 21.50  | 22.00 | 10.56 | 11.96 | 14.09 | 12 | 1.00 | 14.25 | 24 |
| 12x10      | 12.00x10.00 | 15.00 | 19.00 | 1.25 | 24.00 | 24.50  | 25.00 | 10.56 | 11.96 | 14.09 | 12 | 1.00 | 17.00 | 24 |
| 12x12      | 12.00x12.00 | 15.00 | 19.00 | 1.25 | 24.00 | 24.50  | 25.00 | 12.26 | 13.75 | 15.88 | 12 | 1.00 | 17.00 | 24 |
| 14x12      | 13.25x12.00 | 16.25 | 21.00 | 1.38 | 27.00 | 27.50  | 30.00 | 12.26 | 13.75 | 15.88 | 12 | 1.12 | 18.75 | 24 |

### Class 300, 6"FP-14"RP

| Size (in.) | A           | B     | C     | D1   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 6.00x6.00   | 8.50  | 12.50 | 1.44 | 15.88 | 16.50  | 18.00 | 7.25  | 8.48  | 10.63 | 12 | 0.88 | 10.62 | 24 |
| 8x6        | 8.00x6.00   | 10.62 | 15.00 | 1.62 | 19.75 | 20.38  | 20.50 | 7.25  | 8.48  | 10.63 | 12 | 1.00 | 13.00 | 24 |
| 8x8        | 8.00x8.00   | 10.62 | 15.00 | 1.62 | 19.75 | 20.38  | 20.50 | 8.72  | 10.13 | 12.26 | 12 | 1.00 | 13.00 | 24 |
| 10x8       | 10.00x8.00  | 12.75 | 17.50 | 1.88 | 22.38 | 23.00  | 22.00 | 8.72  | 10.13 | 12.26 | 16 | 1.12 | 15.25 | 24 |
| 10x10      | 10.00x10.00 | 12.75 | 17.50 | 1.88 | 22.38 | 23.00  | 22.00 | 10.56 | 11.96 | 14.09 | 16 | 1.12 | 15.25 | 24 |
| 12x10      | 12.00x10.00 | 15.00 | 20.50 | 2.00 | 25.50 | 26.12  | 25.00 | 10.56 | 11.96 | 14.09 | 16 | 1.25 | 17.75 | 24 |
| 12x12      | 12.00x12.00 | 15.00 | 20.50 | 2.00 | 25.50 | 26.12  | 25.00 | 12.26 | 13.75 | 15.88 | 16 | 1.25 | 17.75 | 24 |
| 14x12      | 13.25x12.00 | 16.25 | 23.00 | 2.12 | 30.00 | 30.62  | 30.00 | 12.26 | 13.75 | 15.88 | 20 | 1.25 | 20.25 | 30 |

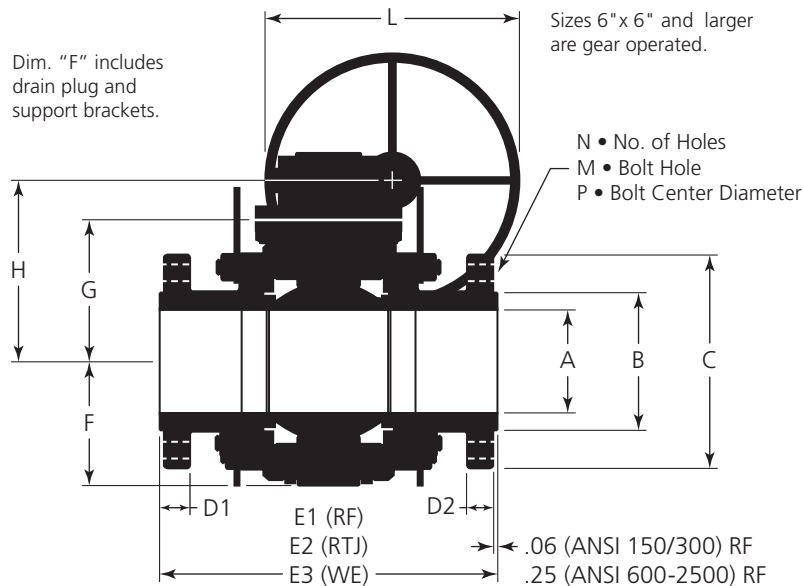
### Class 600, 6"FP-14"RP

| Size (in.) | A           | B     | C     | D1   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 6.00x6.00   | 8.50  | 14.00 | 1.88 | 22.00 | 22.12  | 22.00 | 7.25  | 8.48  | 10.63 | 12 | 1.12 | 11.50 | 24 |
| 8x6        | 8.00x6.00   | 10.62 | 16.50 | 2.19 | 26.00 | 26.12  | 26.00 | 7.25  | 8.48  | 10.63 | 12 | 1.25 | 13.75 | 24 |
| 8x8        | 8.00x8.00   | 10.62 | 16.50 | 2.19 | 26.00 | 26.12  | 26.00 | 10.00 | 11.57 | 13.70 | 12 | 1.25 | 13.75 | 24 |
| 10x8       | 10.00x8.00  | 12.75 | 20.00 | 2.50 | 31.00 | 31.12  | 31.00 | 10.00 | 11.57 | 13.70 | 16 | 1.38 | 17.00 | 24 |
| 10x10      | 10.00x10.00 | 12.75 | 20.00 | 2.50 | 31.00 | 31.12  | 31.00 | 11.74 | 13.32 | 15.45 | 16 | 1.38 | 17.00 | 24 |
| 12x10      | 12.00x12.00 | 15.00 | 22.00 | 2.62 | 33.00 | 33.12  | 33.00 | 11.74 | 13.32 | 15.45 | 20 | 1.38 | 19.25 | 24 |
| 12x12      | 12.00x12.00 | 15.00 | 22.00 | 2.62 | 33.00 | 33.12  | 33.00 | 13.86 | 14.94 | 21.52 | 20 | 1.38 | 19.25 | 30 |
| 14x12      | 13.25x12.00 | 16.25 | 23.75 | 2.75 | 35.00 | 35.12  | 35.00 | 13.86 | 14.94 | 21.52 | 20 | 1.50 | 20.75 | 30 |



# Dimensional Data for Mid Size Diameter Valves

## Series 5700/6700 • 6"FP-14"RP, Class 900 and 1500



### Class 900, 6"FP-14"RP

| Size (in.) | A           | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 6.00x6.00   | 8.50  | 15.00 | 2.19 | 24.00 | 24.12  | 24.00 | 8.62  | 10.01 | 12.14 | 12 | 1.25 | 12.50 | 24 |
| 8x6        | 8.00x6.00   | 10.62 | 18.50 | 2.50 | 29.00 | 29.12  | 29.00 | 8.62  | 10.01 | 12.14 | 12 | 1.50 | 15.50 | 24 |
| 8x8        | 8.00x8.00   | 10.62 | 18.50 | 2.50 | 29.00 | 29.12  | 29.00 | 10.00 | 11.57 | 13.70 | 12 | 1.50 | 15.50 | 24 |
| 10x8       | 10.00x8.00  | 12.75 | 21.50 | 2.75 | 33.00 | 33.12  | 33.00 | 10.00 | 11.57 | 13.70 | 16 | 1.50 | 18.50 | 24 |
| 10x10      | 10.00x10.00 | 12.75 | 21.50 | 2.75 | 33.00 | 33.12  | 33.00 | 11.74 | 13.32 | 19.90 | 16 | 1.50 | 18.50 | 30 |
| 12x10      | 12.00x12.00 | 15.00 | 24.00 | 3.12 | 38.00 | 38.12  | 38.00 | 11.74 | 13.32 | 19.90 | 20 | 1.50 | 21.00 | 30 |
| 12x12      | 12.00x12.00 | 15.00 | 24.00 | 3.12 | 38.00 | 38.12  | 38.00 | 13.86 | 14.94 | 21.52 | 20 | 1.50 | 21.00 | 30 |
| 14x12      | 12.75x12.00 | 16.25 | 25.25 | 3.38 | 40.50 | 40.88  | 40.50 | 13.86 | 14.94 | 21.52 | 20 | 1.62 | 22.00 | 30 |

### Class 1500, 6"FP-14"RP

| Size (in.) | A           | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 5.75x5.75   | 8.50  | 15.50 | 3.25 | 27.75 | 28.00  | 27.75 | 9.72  | 10.67 | 12.80 | 12 | 1.50 | 12.50 | 24 |
| 8x6        | 7.63x5.75   | 10.62 | 19.00 | 3.62 | 32.75 | 33.13  | 32.75 | 9.72  | 10.67 | 12.80 | 12 | 1.75 | 15.50 | 24 |
| 8x8        | 7.63x7.63   | 10.62 | 19.00 | 3.62 | 32.75 | 33.13  | 32.75 | 12.16 | 12.88 | 19.46 | 12 | 1.75 | 15.50 | 30 |
| 10x8       | 9.50x7.63   | 12.75 | 23.00 | 4.25 | 39.00 | 39.38  | 39.00 | 12.16 | 12.88 | 19.46 | 12 | 2.00 | 19.00 | 30 |
| 10x10      | 9.50x9.50   | 12.75 | 23.00 | 4.25 | 39.00 | 39.38  | 39.00 | 14.40 | 15.48 | 22.06 | 12 | 2.00 | 19.00 | 30 |
| 12x10      | 11.38x9.50  | 15.00 | 26.50 | 4.88 | 44.50 | 45.12  | 44.50 | 14.40 | 15.48 | 22.06 | 16 | 2.12 | 22.50 | 30 |
| 12x12      | 11.38x11.38 | 15.00 | 26.50 | 4.88 | 44.50 | 45.12  | 44.50 | 16.98 | 17.83 | 24.41 | 16 | 2.12 | 22.50 | 30 |
| 14x12      | 12.50x11.38 | 16.25 | 29.50 | 5.25 | 49.50 | 50.25  | 49.50 | 16.98 | 17.83 | 24.41 | 16 | 2.38 | 25.00 | 30 |

### Class 2500, 6"FP-12"RP

| Size (in.) | A           | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|-------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 6x6        | 5.25x5.25   | 8.50  | 19.00 | 4.25 | 36.00 | 36.50  | 36.00 | 12.74 | 12.70 | 19.28 | 8  | 2.12 | 14.50 | 30 |
| 8x6        | 7.14x5.25   | 10.62 | 21.75 | 5.00 | 40.25 | 40.87  | 40.25 | 12.74 | 12.70 | 19.28 | 12 | 2.12 | 17.25 | 30 |
| 8x8        | 7.14x7.14   | 10.62 | 21.75 | 5.00 | 40.25 | 40.87  | 40.25 | 15.22 | 16.63 | 18.76 | 12 | 2.12 | 17.25 | 30 |
| 10x8       | 8.88x7.14   | 12.75 | 26.50 | 6.50 | 50.00 | 50.88  | 50.00 | 15.22 | 16.63 | 18.76 | 12 | 2.62 | 21.25 | 30 |
| 10x10      | 8.88x8.88   | 12.75 | 26.50 | 6.50 | 50.00 | 50.88  | 50.00 | 19.73 | 18.25 | 24.83 | 12 | 2.62 | 21.25 | 30 |
| 12x10      | 10.50x8.88  | 15.00 | 30.00 | 7.25 | 56.00 | 56.88  | 56.00 | 19.73 | 18.25 | 24.83 | 12 | 2.88 | 24.38 | 30 |
| 12x12      | 10.50x10.50 | 15.00 | 30.00 | 7.25 | 56.00 | 56.88  | 56.00 | 22.06 | 20.79 | 27.69 | 12 | 2.88 | 24.38 | 30 |

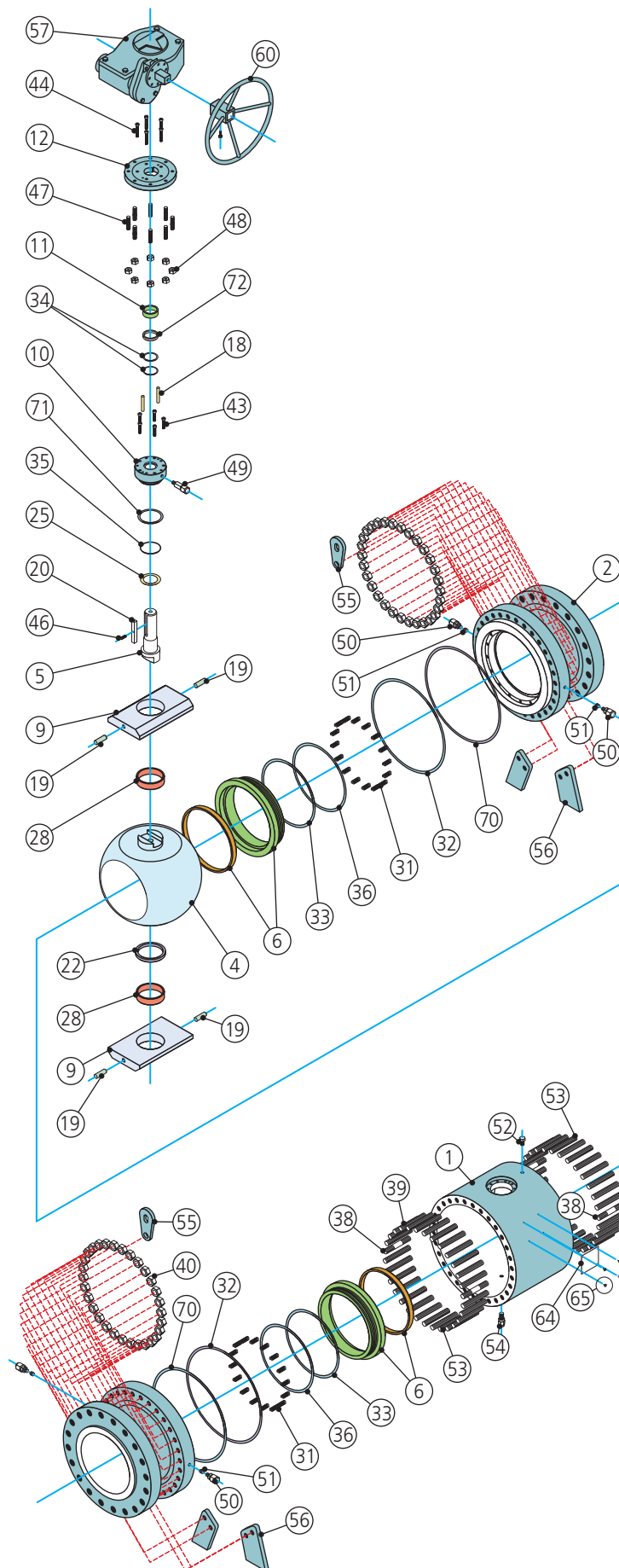
# Parts for Large Size Diameter Valves

**Series 5700/6700 • 14"FP- 56"FP, Class 150, 300, 600, 900 and 1500 • 12", Class 2500**

| No. | Description              | Material                             | Spares |
|-----|--------------------------|--------------------------------------|--------|
| 1   | Body                     | A105/A350 LF2                        |        |
| 2   | Closure/Flanged End      | A105/A350 LF2                        |        |
| 4   | Ball                     | A105/A350 LF2 ENP                    |        |
| 5   | Stem                     | 4130 ENP                             |        |
| 6   | Seat Ring Sub Assembly   | A105/A350 LF2 ENP<br>G/PTFE or Nylon | S      |
| 9   | Bearing Retainer         | Carbon Steel                         |        |
| 10  | Gland                    | 4130 ENP                             |        |
| 11  | Bushing                  | Carbon Steel                         |        |
| 12  | Adapter Plate            | A36                                  |        |
| 18  | Gland Pin                | Carbon Steel                         |        |
| 20  | Stem Key                 | Carbon Steel                         |        |
| 22  | Ball Thrust Washer       | Phenolic                             | S      |
| 25  | Stem Thrust Washer       | Phenolic                             | S      |
| 28  | DU Bearing               | DU Dry Bearing                       |        |
| 31  | Seat Spring              | X-750                                |        |
| 32  | Body O-ring              | Viton®                               | S      |
| 33  | Seat O-ring              | Viton®                               | S      |
| 34  | Stem O-ring              | Viton®                               | S      |
| 35  | Gland O-ring             | Viton®                               | S      |
| 36  | Emergency Sealant O-ring | Viton®                               | S      |
| 38  | Location Stud            | A193 B7M                             |        |
| 39  | Body Stud                | A193 B7M                             |        |
| 40  | Body Nut                 | A194 2HM                             |        |
| 43  | Gland Cap Screw          | A574 Modified                        |        |
| 44  | Adapter Plate Cap Screw  | A574 Modified                        |        |
| 46  | Stem Key Cap Screw       | Carbon Steel                         |        |
| 47  | Gear Stud                | A193 B7                              |        |
| 48  | Gear/Adapter Plate Nut   | A194 2H                              |        |
| 49  | Stem Grease Fitting      | Carbon Steel                         |        |
| 50  | Seat Grease Fitting      | Carbon Steel                         |        |
| 51  | Check Valve              | Stainless Steel                      |        |
| 52  | Vent Plug                | Carbon Steel                         |        |
| 53  | Lifting Lug Stud         | A193 B7M                             |        |
| 54  | Drain Valve              | Carbon Steel                         |        |
| 55  | Lifting Lug              | Carbon Steel                         |        |
| 56  | Support Leg              | Carbon Steel                         |        |
| 57  | Worm Gear Operator       | Commercial                           |        |
| 60  | Handwheel                | Carbon Steel                         |        |
| 64  | Name Plate               | Stainless Steel                      |        |
| 65  | Drive Screw              | Stainless Steel                      |        |
| 70  | Body Gasket              | Graphite                             | S      |
| 71  | Gland & Trunnion Gasket  | Graphite                             | S      |
| 72  | Stem Packing             | Graphite                             | S      |

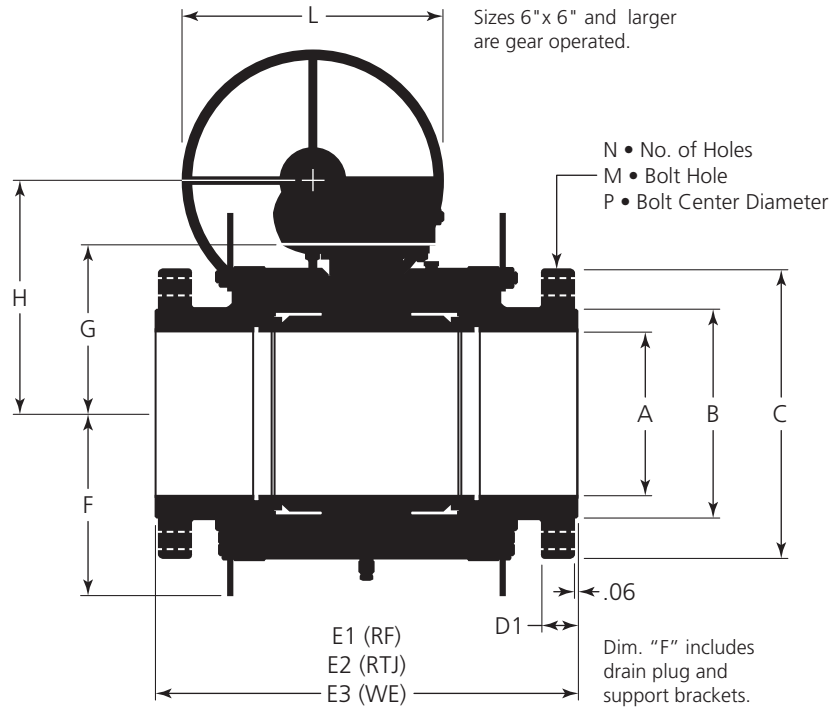
**Note:** Materials listed are typical for carbon steel valves. Ball, stem & seat rings will be 316, 17-4PH, or XM-19 or stainless steel trim depending on design requirements.

Assemblies are illustrations only.  
Parts may vary according to design.



# Dimensional Data for Large Size Diameter Valves

## Series 5700/6700 • 14"FP- 56"FP, Class 150



### Class 150, 14"FP- 56"FP

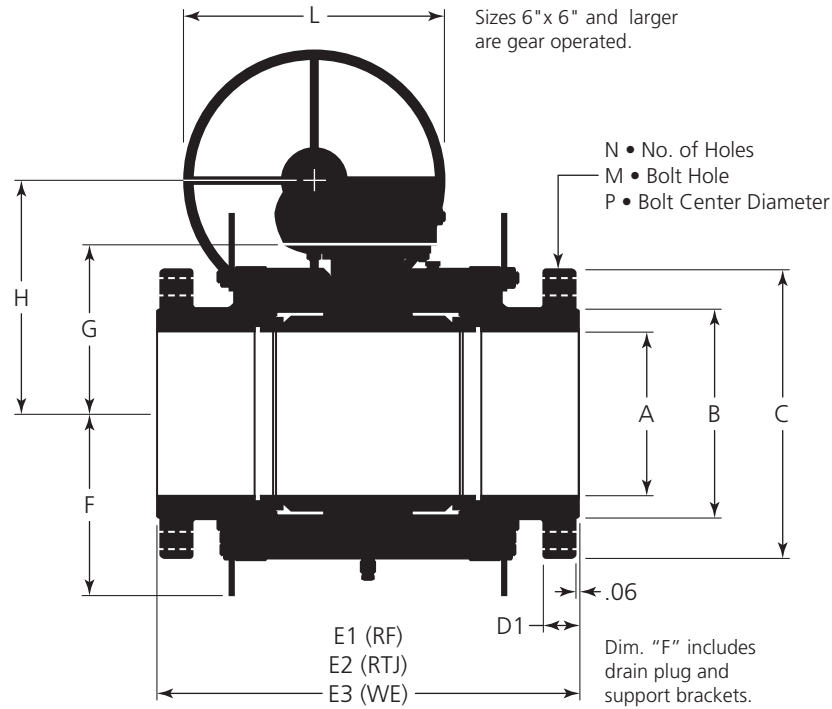
| Size (in.) | A             | B     | C     | D1   | E1-RF | E2-RTJ | E3-WE | F     | G       | H     | N  | M    | P     | L  |
|------------|---------------|-------|-------|------|-------|--------|-------|-------|---------|-------|----|------|-------|----|
| 14x14      | 13.25 x 13.25 | 16.25 | 21.00 | 1.38 | 27.00 | 27.50  | 30.00 | 14.92 | 15.18** | 20.89 | 12 | 1.12 | 18.75 | 30 |
| 16x14      | 15.25 x 13.25 | 18.50 | 23.50 | 1.44 | 30.00 | 30.50  | 33.00 | 16.60 | 15.18** | 20.89 | 16 | 1.12 | 21.25 | 30 |
| 16x16      | 15.25 x 15.25 | 18.50 | 23.50 | 1.44 | 30.00 | 30.50  | 33.00 | 16.60 | 15.89   | 22.47 | 16 | 1.12 | 21.25 | 30 |
| 18x16      | 17.25 x 15.25 | 21.00 | 25.00 | 1.56 | 34.00 | 34.50  | 36.00 | 21.05 | 15.89   | 22.47 | 16 | 1.25 | 22.75 | 30 |
| 18x18      | 17.25 x 17.25 | 21.00 | 25.00 | 1.56 | 34.00 | 34.50  | 36.00 | 21.05 | 19.76   | 26.34 | 16 | 1.25 | 22.75 | 30 |
| 20x18      | 19.25 x 17.25 | 23.00 | 27.50 | 1.69 | 36.00 | 36.50  | 39.00 | 19.67 | 19.76   | 26.34 | 20 | 1.25 | 25.00 | 30 |
| 20x20      | 19.25 x 19.25 | 23.00 | 27.50 | 1.69 | 36.00 | 36.50  | 39.00 | 19.67 | 20.20   | 26.78 | 20 | 1.25 | 25.00 | 30 |
| 24x20      | 23.25 x 19.25 | 27.25 | 32.00 | 1.88 | 42.00 | 42.50  | 45.00 | 22.75 | 20.20   | 26.78 | 20 | 1.38 | 29.50 | 30 |
| 24x24      | 23.25 x 23.25 | 27.25 | 32.00 | 1.88 | 42.00 | 42.50  | 45.00 | 22.75 | 23.34   | 30.24 | 20 | 1.38 | 29.50 | 30 |
| 30x30      | 29.00 x 29.00 | 33.75 | 38.75 | 2.88 | 51.00 | *      | 55.00 | 31.25 | 32.08   | 38.98 | 28 | 1.38 | 36.00 | 30 |
| 36x36      | 34.50 x 34.50 | 40.25 | 46.00 | 3.50 | 60.00 | *      | 68.00 | 34.39 | 35.83   | 42.73 | 32 | 1.62 | 42.75 | 30 |
| 40x40      | 38.50 x 38.50 | 44.25 | 50.75 | 3.50 | 72.83 | *      | 70.08 | 36.54 | 37.13   | *     | *  | *    | *     | *  |
| 44x44      | 42.32 x 42.32 | 49.00 | 55.25 | 3.94 | 76.77 | *      | 74.80 | 39.76 | 40.39   | *     | *  | *    | *     | *  |
| 48x48      | 45.98 x 45.98 | 53.50 | 59.50 | 4.19 | 85.83 | *      | 82.68 | 41.77 | 43.19   | *     | *  | *    | *     | *  |
| 56x56      | 53.62 x 53.62 | 62.00 | 68.75 | 4.82 | 90.55 | *      | 88.58 | 48.50 | 49.92   | *     | *  | *    | *     | *  |

\*Contact your PBV® salesperson for additional sizes and materials.

\*\*Change introduced 2004.

# Dimensional Data for Large Size Diameter Valves

## Series 5700/6700 • 14"FP- 56"FP, Class 300



### Class 300, 14"FP- 56"FP

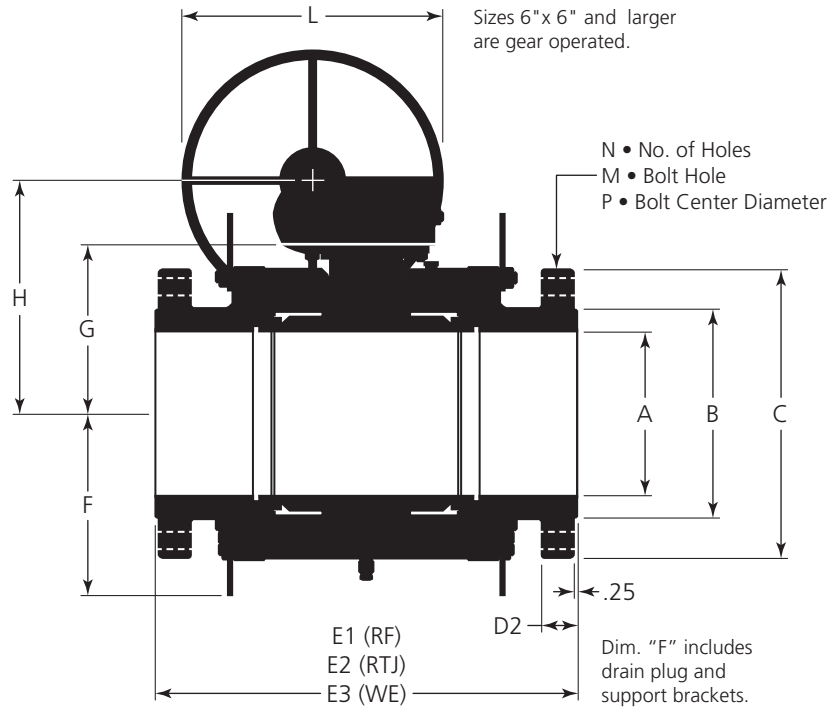
| Size (in.) | A             | B     | C     | D1   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|---------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 14x14      | 13.25 x 13.25 | 16.25 | 23.00 | 2.12 | 30.00 | 30.62  | 30.00 | 14.92 | 14.31 | 20.89 | 20 | 1.25 | 20.25 | 30 |
| 16x14      | 15.25 x 13.25 | 18.50 | 25.50 | 2.25 | 33.00 | 33.62  | 33.00 | 16.60 | 14.31 | 20.89 | 20 | 1.38 | 22.50 | 30 |
| 16x16      | 15.25 x 15.25 | 18.50 | 25.50 | 2.25 | 33.00 | 33.62  | 33.00 | 16.60 | 15.89 | 22.47 | 20 | 1.38 | 22.50 | 30 |
| 18x16      | 17.25 x 15.25 | 21.00 | 28.00 | 2.38 | 36.00 | 36.62  | 36.00 | 21.05 | 15.89 | 22.47 | 24 | 1.38 | 24.75 | 30 |
| 18x18      | 17.25 x 17.25 | 21.00 | 28.00 | 2.38 | 36.00 | 36.62  | 36.00 | 21.05 | 19.76 | 26.34 | 24 | 1.38 | 24.75 | 30 |
| 20x18      | 19.25 x 17.25 | 23.00 | 30.50 | 2.50 | 39.00 | 39.75  | 39.00 | 19.67 | 19.76 | 26.34 | 24 | 1.38 | 27.00 | 30 |
| 20x20      | 19.25 x 19.25 | 23.00 | 30.50 | 2.50 | 39.00 | 39.75  | 39.00 | 19.67 | 20.20 | 26.78 | 24 | 1.38 | 27.00 | 30 |
| 24x20      | 23.25 x 19.25 | 27.25 | 36.00 | 2.75 | 45.00 | 45.88  | 45.00 | 22.75 | 20.20 | 26.78 | 24 | 1.62 | 32.00 | 30 |
| 24x24      | 23.25 x 23.25 | 27.25 | 36.00 | 2.75 | 45.00 | 45.88  | 45.00 | 22.75 | 23.34 | 30.24 | 24 | 1.62 | 32.00 | 30 |
| 30x30      | 29.00 x 29.00 | 33.75 | 43.00 | 3.62 | 55.00 | 56.00  | 55.00 | 31.25 | 32.08 | 38.98 | 28 | 1.88 | 39.25 | 30 |
| 36x36      | 34.50 x 34.50 | 40.25 | 50.00 | 4.12 | 68.00 | 69.12  | 68.00 | 34.39 | 35.83 | 42.73 | 32 | 2.12 | 46.00 | 30 |
| 40x40      | 38.50 x 38.50 | 42.75 | 48.75 | 4.44 | 72.83 | *      | 70.08 | 36.54 | 37.13 | *     | *  | *    | *     | *  |
| 44x44      | 42.32 x 42.32 | 47.00 | 53.25 | 4.82 | 76.77 | *      | 74.80 | 39.76 | 40.39 | *     | *  | *    | *     | *  |
| 48x48      | 45.98 x 45.98 | 51.25 | 57.75 | 5.19 | 85.83 | *      | 82.68 | 41.77 | 43.19 | *     | *  | *    | *     | *  |
| 56x56      | 53.62 x 53.62 | 59.75 | 67.25 | 6.00 | 90.55 | *      | 88.58 | 48.50 | 49.92 | *     | *  | *    | *     | *  |

\*Contact your PBV® salesperson for additional sizes and materials.



# Dimensional Data for Large Size Diameter Valves

## Series 5700/6700 • 14"FP- 56"FP, Class 600



### Class 600, 14"FP- 56"FP

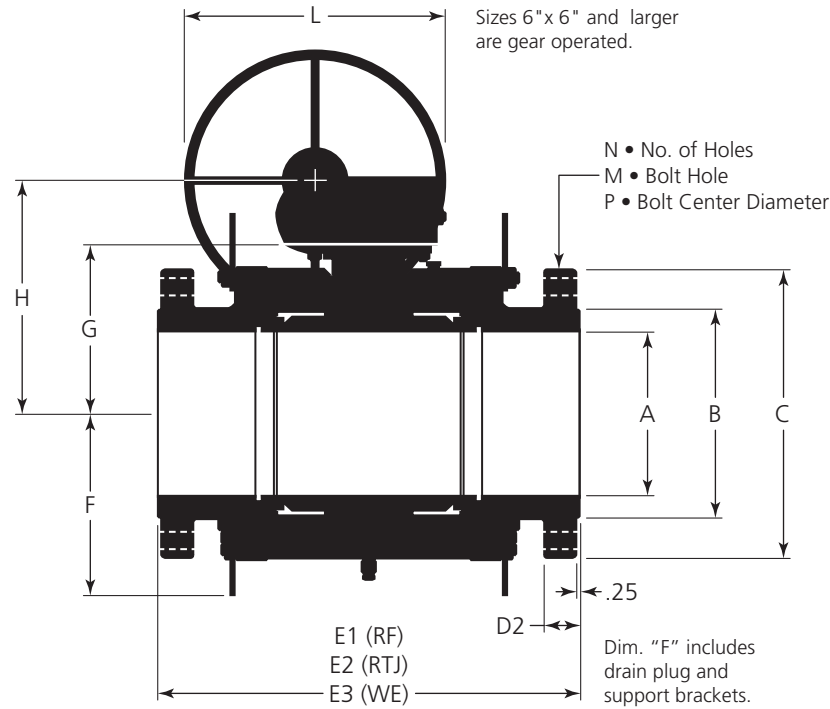
| Size (in.) | A             | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G       | H     | N  | M    | P     | L  |
|------------|---------------|-------|-------|------|-------|--------|-------|-------|---------|-------|----|------|-------|----|
| 14x14      | 13.25 x 13.25 | 16.25 | 23.75 | 2.75 | 35.00 | 35.12  | 35.00 | 14.92 | 14.31   | 20.89 | 20 | 1.50 | 20.75 | 30 |
| 16x14      | 15.25 x 13.25 | 18.50 | 27.00 | 3.00 | 39.00 | 39.12  | 39.00 | 16.33 | 14.31   | 20.89 | 20 | 1.62 | 23.75 | 30 |
| 16x16      | 15.25 x 15.25 | 18.50 | 27.00 | 3.00 | 39.00 | 39.12  | 39.00 | 16.33 | 15.89   | 22.47 | 20 | 1.62 | 23.75 | 30 |
| 18x16      | 17.25 x 15.25 | 21.00 | 29.25 | 3.25 | 43.00 | 43.12  | 43.00 | 21.05 | 15.89   | 22.47 | 20 | 1.75 | 25.75 | 30 |
| 18x18      | 17.25 x 17.25 | 21.00 | 29.25 | 3.25 | 43.00 | 43.12  | 43.00 | 21.05 | 19.76   | 23.20 | 20 | 1.75 | 25.75 | 30 |
| 20x18      | 19.25 x 17.25 | 23.00 | 32.00 | 3.50 | 47.00 | 47.25  | 47.00 | 19.67 | 19.76   | 23.20 | 24 | 1.75 | 28.50 | 30 |
| 20x20      | 19.25 x 19.25 | 23.00 | 32.00 | 3.50 | 47.00 | 47.25  | 47.00 | 19.67 | 20.09   | 23.53 | 24 | 1.75 | 28.50 | 30 |
| 24x20      | 23.25 x 19.25 | 27.25 | 37.00 | 4.00 | 55.00 | 55.38  | 55.00 | 23.13 | 20.09   | 23.53 | 24 | 2.00 | 33.00 | 30 |
| 24x24      | 23.25 x 23.25 | 27.25 | 37.00 | 4.00 | 55.00 | 55.38  | 55.00 | 23.13 | 25.35** | 28.79 | 24 | 2.00 | 33.00 | 30 |
| 30x30      | 29.00 x 29.00 | 33.75 | 44.50 | 4.50 | 65.00 | 65.50  | 65.00 | 31.25 | 32.08   | 38.98 | 28 | 2.13 | 40.25 | 30 |
| 36x36      | 34.50 x 34.50 | 40.25 | 51.75 | 4.88 | 82.00 | 82.64  | 82.01 | 34.39 | 35.83   | 42.73 | 28 | 2.62 | 47.00 | 30 |
| 40x40      | 38.50 x 38.50 | 43.75 | 52.00 | 6.25 | 78.74 | *      | 74.80 | 37.13 | 37.60   | *     | *  | *    | *     | *  |
| 44x44      | 42.32 x 42.32 | 48.25 | 57.25 | 6.81 | 86.61 | *      | 80.71 | 40.55 | 41.73   | *     | *  | *    | *     | *  |
| 48x48      | 45.98 x 45.98 | 52.50 | 62.75 | 7.44 | 94.49 | *      | 85.83 | 43.50 | 44.69   | *     | *  | *    | *     | *  |
| 56x56      | 53.62 x 53.62 | 60.75 | 73.00 | 8.56 | *     | *      | 93.90 | 49.37 | 50.79   | *     | *  | *    | *     | *  |

\*Contact your PBV® salesperson for additional sizes and materials.

\*\*Change introduced 2007

# Dimensional Data for Large Size Diameter Valves

## Series 5700/6700 • 14"FP-48"FP, Class 900 • 14"FP-24"FP, Class 1500



### Class 900, 14"FP-48"FP

| Size (in.) | A             | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|---------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 14x14      | 12.75 x 12.75 | 16.25 | 25.25 | 3.38 | 40.50 | 40.88  | 40.50 | 18.61 | 16.76 | 23.34 | 20 | 1.62 | 22.00 | 30 |
| 16x14      | 14.75 x 12.75 | 18.50 | 27.75 | 3.50 | 44.50 | 44.88  | 44.50 | 20.63 | 16.76 | 23.34 | 20 | 1.75 | 24.25 | 30 |
| 16x16      | 14.75 x 14.75 | 18.50 | 27.75 | 3.50 | 44.50 | 44.88  | 44.50 | 20.63 | 18.87 | 25.77 | 20 | 1.75 | 24.25 | 30 |
| 18x16      | 16.75 x 14.75 | 21.00 | 31.00 | 4.00 | 48.00 | 48.50  | 48.00 | 23.39 | 18.87 | 25.77 | 20 | 2.00 | 27.00 | 30 |
| 18x18      | 16.75 x 16.75 | 21.00 | 31.00 | 4.00 | 48.00 | 48.50  | 48.00 | 23.39 | 24.91 | 31.81 | 20 | 2.00 | 27.00 | 30 |
| 20x18      | 18.63 x 16.75 | 23.00 | 33.75 | 4.25 | 52.00 | 52.50  | 52.00 | 24.30 | 24.91 | 31.81 | 20 | 2.12 | 29.50 | 30 |
| 20x20      | 18.63 x 18.63 | 23.00 | 33.75 | 4.25 | 52.00 | 52.50  | 52.00 | 24.30 | 26.18 | 33.08 | 20 | 2.12 | 29.50 | 30 |
| 24x20      | 22.50 x 18.63 | 27.25 | 41.00 | 5.50 | 61.00 | 61.75  | 61.00 | 21.70 | 24.20 | 28.90 | 20 | 2.62 | 35.50 | 30 |
| 24x24      | 22.50 x 22.50 | 27.25 | 41.00 | 5.50 | 61.00 | 61.75  | 61.00 | 23.80 | 29.80 | 30.90 | 20 | 2.62 | 35.50 | 30 |
| 30x30      | 28.11 x 28.11 | 33.75 | 48.50 | 5.88 | 74.00 | 70.16  | 65.35 | 30.94 | 31.42 | *     | *  | *    | *     | *  |
| 36x36      | 33.74 x 33.74 | 40.25 | 57.50 | 6.75 | 90.00 | 81.89  | 74.80 | 36.38 | 36.14 | *     | *  | *    | *     | *  |
| 40x40      | 37.56 x 37.56 | 45.75 | 59.50 | 7.75 | 85.83 | *      | 82.68 | 39.88 | 39.65 | *     | *  | *    | *     | *  |
| 44x44      | 41.26 x 41.26 | 50.00 | 64.88 | 8.44 | 93.70 | *      | 88.58 | 41.26 | 45.28 | *     | *  | *    | *     | *  |
| 48x48      | 45.00 x 45.00 | 54.50 | 70.25 | 9.19 | 96.46 | *      | 93.70 | 47.64 | 47.72 | *     | *  | *    | *     | *  |

\*Contact your PBV® salesperson for additional sizes and materials.

### Class 1500, 14"FP-24"FP

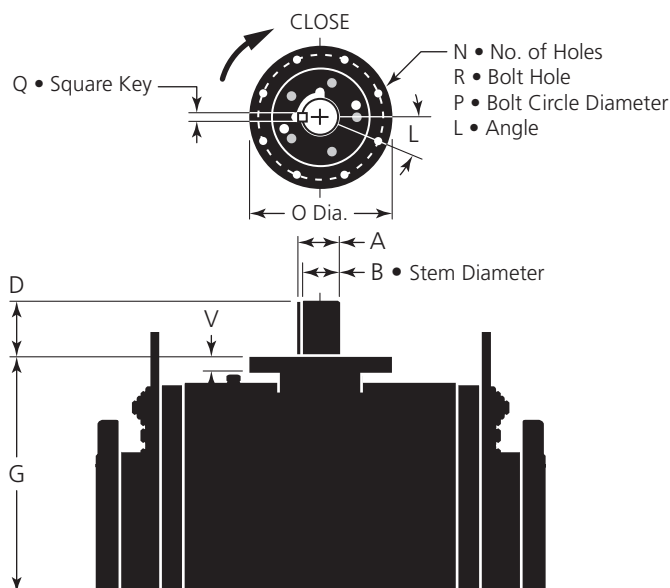
| Size (in.) | A             | B     | C     | D2   | E1-RF | E2-RTJ | E3-WE | F     | G     | H     | N  | M    | P     | L  |
|------------|---------------|-------|-------|------|-------|--------|-------|-------|-------|-------|----|------|-------|----|
| 14x14      | 12.50 x 12.50 | 16.25 | 29.50 | 5.25 | 49.50 | 50.25  | 49.50 | 20.60 | 18.83 | 25.73 | 16 | 2.38 | 25.00 | 30 |
| 16x14      | 14.25 x 12.50 | 18.50 | 32.50 | 5.75 | 54.50 | 55.38  | 54.50 | 22.27 | 18.83 | 25.73 | 16 | 2.62 | 27.75 | 30 |
| 16x16      | 14.25 x 14.25 | 18.50 | 32.50 | 5.75 | 54.50 | 55.38  | 54.50 | 22.27 | 20.50 | 27.40 | 16 | 2.62 | 27.75 | 30 |
| 18x16      | 16.75 x 14.25 | 21.00 | 36.00 | 6.38 | 60.50 | 61.38  | 60.50 | 23.39 | 20.50 | 27.40 | 16 | 2.88 | 30.50 | 30 |
| 18x18      | 16.75 x 16.75 | 21.00 | 36.00 | 6.38 | 60.50 | 61.38  | 60.50 | 23.39 | 24.91 | 31.81 | 16 | 2.88 | 30.50 | 30 |
| 20x18      | 17.88 x 16.00 | 23.00 | 38.75 | 7.00 | 65.50 | 66.38  | 65.50 | 23.39 | 24.96 | 31.81 | 16 | 3.12 | 32.75 | 30 |
| 20x20      | 18.63 x 18.63 | 23.00 | 38.75 | 7.00 | 65.50 | 66.38  | 65.50 | 21.70 | 27.50 | 28.90 | 16 | 3.12 | 32.75 | 30 |
| 24x20      | 21.50 x 18.63 | 27.25 | 46.00 | 8.00 | 80.50 | 81.63  | 80.50 | 21.70 | 27.50 | 28.90 | 16 | 3.62 | 39.00 | 30 |
| 24x24      | 21.50 x 21.50 | 27.25 | 46.00 | 8.00 | 80.50 | 81.63  | 80.50 | 23.80 | 33.70 | 30.90 | 16 | 3.62 | 39.00 | 30 |

\*Contact your PBV® salesperson for additional sizes and materials.

# Top Works Data

## Series 5700/6700

Data contained below is based on ball bore size and not end flange bore sizes. All dimensions are given in inches.



### Class 150 and 300 (in.)

| Size | 2      | 3     | 4     | 6     | 8     | 10    | 12    | 14    | 16    | 18    | 20    | 24    |
|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A    | 1.142  | 1.595 | 1.791 | 1.997 | 2.630 | 2.633 | 2.633 | 3.264 | 3.264 | 3.882 | 3.882 | 3.879 |
| B    | 0.979  | 1.373 | 1.570 | 1.765 | 2.362 | 2.362 | 2.362 | 2.950 | 2.950 | 3.540 | 3.540 | 3.540 |
| D    | 1.53   | 1.83  | 1.80  | 3.64  | 3.49  | 3.56  | 3.51  | 4.36  | 4.36  | 5.30  | 5.29  | 5.49  |
| G    | 4.87** | 5.94  | 7.35  | 8.48  | 10.13 | 11.96 | 13.75 | 14.31 | 15.89 | 19.76 | 20.20 | 23.34 |
| L    | 45°    | 45°   | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° |
| N    | 4      | 4     | 4     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     |
| O    | 6.90   | 8.00  | 8.75  | 10.00 | 11.22 | 11.22 | 11.22 | 11.40 | 11.40 | 11.40 | 11.40 | 16.00 |
| P    | 5.50   | 6.50  | 7.50  | 8.86  | 9.84  | 9.84  | 9.84  | 10.00 | 10.00 | 10.00 | 10.00 | 14.02 |
| Q    | 0.315  | 0.394 | 0.394 | 0.500 | 0.625 | 0.625 | 0.625 | 0.750 | 0.750 | 0.875 | 0.875 | 0.875 |
| R    | 0.69   | 0.81  | 0.69  | 0.65  | 0.65  | 0.65  | 0.65  | 0.69  | 0.69  | 0.69  | 0.69  | 1.13  |
| V    | 0.53   | 0.60  | 0.53  | 0.91  | 1.09  | 1.09  | 1.09  | 1.35  | 1.35  | 1.00  | 1.00  | 1.00  |

| Size | 30    | 36    | 40 | 44 | 48 | 52 | 56 |
|------|-------|-------|----|----|----|----|----|
| A    | 6.554 | 6.554 | *  | *  | *  | *  | *  |
| B    | 5.900 | 5.900 | *  | *  | *  | *  | *  |
| D    | 7.90  | 7.90  | *  | *  | *  | *  | *  |
| G    | 30.08 | 33.83 | *  | *  | *  | *  | *  |
| L    | 22.5° | 22.5° | *  | *  | *  | *  | *  |
| N    | 8     | 8     | *  | *  | *  | *  | *  |
| O    | 22.62 | 22.62 | *  | *  | *  | *  | *  |
| P    | 20.31 | 20.31 | *  | *  | *  | *  | *  |
| Q    | 1.500 | 1.500 | *  | *  | *  | *  | *  |
| R    | 1.31  | 1.31  | *  | *  | *  | *  | *  |
| V    | 2.00  | 2.00  | *  | *  | *  | *  | *  |

\*Contact your PBV® salesperson for additional sizes and materials.

\*\*Lipseal design may vary.

# Top Works Data, Continued

## Series 5700/6700

### Class 600 (in.)

| Size | 2     | 3     | 4     | 6     | 8     | 10    | 12    | 14    | 16    | 18    | 20    | 24    |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A    | 1.142 | 1.595 | 1.791 | 1.997 | 2.630 | 2.630 | 2.630 | 3.264 | 3.264 | 3.882 | 3.882 | 5.291 |
| B    | 0.979 | 1.373 | 1.570 | 1.765 | 2.362 | 2.362 | 2.362 | 2.950 | 2.950 | 3.540 | 3.540 | 4.725 |
| D    | 1.53  | 1.83  | 1.80  | 3.64  | 3.54  | 3.52  | 3.59  | 4.36  | 4.36  | 5.30  | 5.40  | 5.51  |
| G    | 4.87  | 5.94  | 7.35  | 8.48  | 11.57 | 13.32 | 14.94 | 14.31 | 15.89 | 19.76 | 20.09 | 24.35 |
| L    | 45°   | 45°   | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° |
| N    | 4     | 4     | 4     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     |
| O    | 6.90  | 8.00  | 8.75  | 10.00 | 11.22 | 11.22 | 11.22 | 11.40 | 11.40 | 11.40 | 16.00 | 16.00 |
| P    | 5.50  | 6.50  | 7.50  | 8.86  | 9.84  | 9.84  | 10.00 | 10.00 | 10.00 | 10.00 | 14.02 | 14.02 |
| Q    | 0.315 | 0.394 | 0.394 | 0.500 | 0.625 | 0.625 | 0.625 | 0.750 | 0.750 | 0.875 | 0.875 | 1.250 |
| R    | 0.69  | 0.81  | 0.69  | 0.65  | 0.65  | 0.65  | 0.69  | 0.69  | 0.69  | 0.69  | 1.13  | 1.13  |
| V    | 0.53  | 0.60  | 0.53  | 0.91  | 1.09  | 1.09  | 1.09  | 1.35  | 1.35  | 1.00  | 1.00  | 2.00  |

| Size | 30    | 36    | 40 | 44 | 48 | 52 | 56 |
|------|-------|-------|----|----|----|----|----|
| A    | 6.554 | 6.554 | *  | *  | *  | *  | *  |
| B    | 5.900 | 5.900 | *  | *  | *  | *  | *  |
| D    | 7.90  | 7.90  | *  | *  | *  | *  | *  |
| G    | 30.08 | 33.83 | *  | *  | *  | *  | *  |
| L    | 22.5° | 22.5° | *  | *  | *  | *  | *  |
| N    | 8     | 8     | *  | *  | *  | *  | *  |
| O    | 22.62 | 22.62 | *  | *  | *  | *  | *  |
| P    | 20.31 | 20.31 | *  | *  | *  | *  | *  |
| Q    | 1.500 | 1.500 | *  | *  | *  | *  | *  |
| R    | 1.31  | 1.31  | *  | *  | *  | *  | *  |
| V    | 2.00  | 2.00  | *  | *  | *  | *  | *  |

\*Contact your PBV® salesperson for additional sizes and materials.

### Class 900 (in.)

| Size | 2      | 3     | 4     | 6     | 8     | 10    | 12*   | 14    | 16    | 18    | 20    | 24    |
|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A    | 1.142  | 1.595 | 1.791 | 1.997 | 2.630 | 2.630 | 3.261 | 3.882 | 3.882 | 5.291 | 5.291 | 6.550 |
| B    | 0.979  | 1.373 | 1.570 | 1.765 | 2.362 | 2.362 | 2.950 | 3.540 | 3.540 | 4.725 | 4.725 | 5.900 |
| D    | 1.53   | 1.83  | 1.80  | 3.75  | 3.54  | 3.52  | 5.56  | 5.03  | 6.03  | 5.44  | 6.66  | 7.905 |
| G    | 4.87** | 5.94  | 7.35  | 10.01 | 11.57 | 13.32 | 15.46 | 16.76 | 18.87 | 23.84 | 24.18 | 27.92 |
| L    | 45°    | 45°   | 22.5° | 0°    | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° |
| N    | 4      | 4     | 4     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     |
| O    | 6.90   | 8.00  | 8.75  | 11.22 | 11.22 | 11.22 | 13.19 | 11.70 | 16.00 | 16.00 | 16.00 | 22.62 |
| P    | 5.50   | 6.50  | 7.50  | 9.84  | 9.84  | 10.00 | 11.78 | 10.00 | 14.02 | 14.02 | 14.02 | 20.31 |
| Q    | 0.315  | 0.394 | 0.394 | 0.500 | 0.625 | 0.625 | 0.750 | 0.875 | 0.875 | 1.250 | 1.250 | 1.50  |
| R    | 0.69   | 0.81  | 0.69  | 0.69  | 0.65  | 0.69  | 0.81  | 0.69  | 1.12  | 1.12  | 1.12  | 1.31  |
| V    | 0.53   | 0.60  | 0.53  | 1.25  | 1.09  | 1.09  | 1.35  | 1.54  | 1.54  | 2.00  | 1.50  | 2.25  |

Contact your PBV® salesperson for additional sizes and materials.

\*Design change May 2004. Serial number required to verify design.

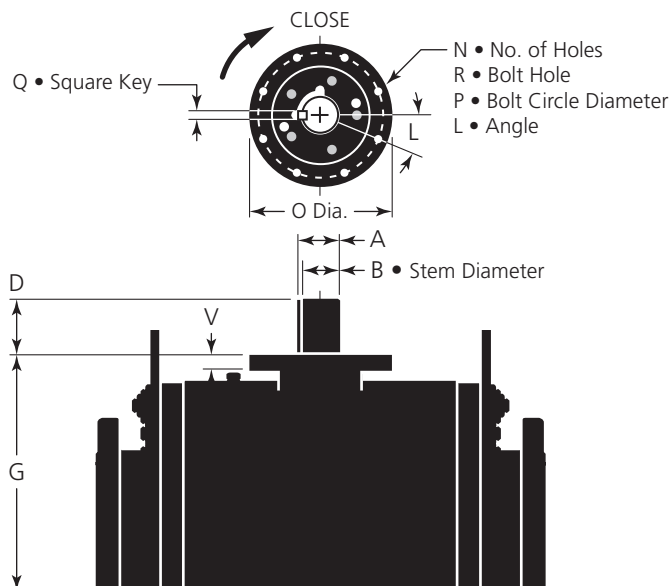
\*\*Lip seal design may vary.

# Top Works Data, Continued

## Series 5700/6700

Data contained below is based on ball bore size and not end flange bore sizes. All dimensions are given in inches.

Dimensions may be changed without notice. Contact PBV® with **valve serial numbers** for exact dimensions.



### Class 1500 (in.)

| Size | 2     | 3     | 4     | 6     | 8     | 10    | 12    | 14    | 16    | 18    | 20    | 24    |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A    | 1.142 | 1.595 | 1.792 | 2.630 | 3.264 | 3.264 | 3.264 | 3.882 | 3.882 | 5.291 | 5.291 | 6.554 |
| B    | .980  | 1.375 | 1.572 | 2.362 | 2.950 | 2.950 | 2.950 | 3.540 | 3.540 | 4.725 | 4.725 | 5.900 |
| D    | 1.68  | 2.07  | 2.09  | 3.87  | 5.87  | 5.87  | 5.86  | 6.03  | 6.03  | 5.50  | 6.63  | 6.84  |
| G    | 5.47  | 6.42  | 7.88  | 10.67 | 12.88 | 15.48 | 17.83 | 18.83 | 20.50 | 24.87 | 27.46 | 33.69 |
| L    | 45°   | 45°   | 22.5° | 0°    | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° |
| N    | 4     | 4     | 4     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     | 8     |
| O    | 7.00  | 8.00  | 8.80  | 11.22 | 13.19 | 13.19 | 13.19 | 16.00 | 16.00 | 16.00 | 16.00 | 22.62 |
| P    | 5.50  | 6.50  | 7.50  | 9.84  | 11.78 | 11.78 | 11.78 | 14.02 | 14.02 | 14.02 | 14.02 | 20.31 |
| Q    | 0.315 | 0.394 | 0.394 | .615  | 0.750 | 0.750 | 0.750 | 0.875 | 0.875 | 1.250 | 1.250 | 1.250 |
| R    | 0.69  | 0.81  | 0.69  | 0.65  | 0.78  | 0.78  | 0.78  | 1.12  | 1.12  | 1.12  | 1.12  | 1.31  |
| V    | 0.49  | 0.60  | 1.00  | 1.25  | 1.35  | 1.35  | 1.35  | 1.54  | 1.54  | 2.00  | 1.50  | 2.00  |

### Class 2500 (in.)

| Size | 2     | 3     | 4     | 6     | 8     | 10    | 12    |
|------|-------|-------|-------|-------|-------|-------|-------|
| A    | 1.263 | 1.595 | 1.997 | 2.650 | 3.264 | 3.264 | 3.882 |
| B    | 1.125 | 1.375 | 1.765 | 2.362 | 2.950 | 2.950 | 3.540 |
| D    | 2.78  | 3.10  | 2.58  | 5.30  | 5.26  | 4.17  | 5.07  |
| G    | 7.25  | 8.42  | 10.56 | 12.70 | 16.63 | 18.25 | 20.79 |
| L*   | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° | 22.5° |
| N    | 4     | 8     | 8     | 8     | 8     | 8     | 8     |
| O    | 8.00  | 10.00 | 8.80  | 11.22 | 13.19 | 11.70 | 16.50 |
| P    | 6.75  | 8.86  | 7.50  | 10.00 | 11.78 | 10.00 | 14.02 |
| Q    | 0.315 | 0.394 | 0.500 | 0.625 | 0.750 | 0.750 | 0.875 |
| R    | 0.66  | 0.66  | 0.69  | 0.69  | 0.78  | 0.69  | 1.12  |
| V    | 0.80  | 0.85  | 0.90  | 1.75  | 1.75  | 1.50  | 1.50  |

\*Contact factory for mounting details.



## Bore Sizes • Shipping Information

Bore sizes in PBV® ball valves conform to API 6D. They present an unobstructed flow path ideally suited for pigging when ordered in the full bore configuration.

| Nominal Bore Size (in.) | Actual Bore Size (in.) |          |           |           |
|-------------------------|------------------------|----------|-----------|-----------|
|                         | ANSI 150-600           | ANSI 900 | ANSI 1500 | ANSI 2500 |
| 2                       | 2.00                   | 2.00     | 2.00      | 1.75      |
| 3                       | 3.00                   | 3.00     | 3.00      | 2.50      |
| 4                       | 4.00                   | 4.00     | 4.00      | 3.50      |
| 6                       | 6.00                   | 6.00     | 5.75      | 5.25      |
| 8                       | 8.00                   | 8.00     | 7.63      | 7.13      |
| 10                      | 10.00                  | 10.00    | 9.50      | 8.88      |
| 12                      | 12.00                  | 12.00    | 11.38     | 10.50     |
| 14                      | 13.25                  | 12.75    | —         | —         |
| 16                      | 15.25                  | 14.75    | —         | —         |
| 18                      | 17.25                  | 16.75    | —         | —         |
| 20                      | 19.25                  | 18.63    | —         | —         |
| 24                      | 23.25                  | 22.50    | —         | —         |
| 26                      | 25.00                  | —        | —         | —         |
| 28                      | 27.00                  | —        | —         | —         |
| 30                      | 29.00                  | —        | —         | —         |
| 32                      | 30.75                  | —        | —         | —         |
| 34                      | 32.75                  | —        | —         | —         |
| 36                      | 34.50                  | —        | —         | —         |



### Weight (lbs.) and Shipping Dimensions (in.)

| Size  | ANSI 150 |           | ANSI 300 |           | ANSI 600 |           | ANSI 900 |           | ANSI 1500 |           | ANSI 2500 |           |
|-------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
|       | Wt.      | Ship Dim. | Wt.      | Ship Dim. | Wt.      | Ship Dim. | Wt.      | Ship Dim. | Wt.       | Ship Dim. | Wt.       | Ship Dim. |
| 2x2   | 60       | 7x8x14    | 65       | 9x7x14    | 70       | 12x7x14   | 115      | 15x11x16  | 120       | 15x10x17  | 385       | 18x11x18  |
| 3x2   | 75       | 8x10x14   | 90       | 11x9x14   | 100      | 14x9x14   | 130      | 15x12x16  | 175       | 19x13x17  | 480       | 23x14x18  |
| 3x3   | 110      | 8x10x17   | 125      | 11x9x16   | 140      | 14x9x17   | 175      | 15x12x16  | 230       | 19x13x18  | 605       | 23x14x20  |
| 4x3   | 140      | 9x12x17   | 150      | 12x11x16  | 200      | 17x12x17  | 240      | 18x15x16  | 260       | 22x15x18  | 770       | 27x17x20  |
| 4x4   | 190      | 9x12x19   | 220      | 12x11x19  | 270      | 17x12x19  | 330      | 18x15x22  | 385       | 22x15x20  | 880       | 27x17x20  |
| 6x4   | 270      | 16x14x19  | 285      | 16x14x19  | 395      | 22x15x19  | 550      | 24x20x22  | 700       | 27x19x20  | 1430      | 37x23x20  |
| 6x6   | 425      | 16x14x19  | 460      | 16x14x20  | 515      | 22x15x19  | 860      | 24x20x25  | 1155      | 28x19x25  | 2100      | 37x23x28  |
| 8x6   | 505      | 18x18x19  | 575      | 20x17x20  | 675      | 26x18x19  | 1070     | 29x24x25  | 1400      | 33x23x25  | 2580      | 41x26x28  |
| 8x8   | 565      | 18x18x22  | 715      | 20x17x22  | 1140     | 26x18x25  | 1410     | 29x24x30  | 1935      | 33x23x30  | 5500      | 41x26x36  |
| 10x8  | 640      | 21x21x22  | 820      | 22x19x22  | 1420     | 31x22x25  | 1760     | 33x28x30  | 2135      | 39x28x30  | 6710      | 51x32x36  |
| 10x10 | 960      | 21x21x26  | 1175     | 22x19x25  | 1700     | 31x22x28  | 2355     | 33x28x33  | 3430      | 39x28x33  | 7400      | 51x32x42  |
| 12x10 | 1100     | 24x25x26  | 1390     | 26x23x25  | 1895     | 33x24x28  | 2530     | 38x31x33  | 3930      | 45x32x33  | 9350      | 57x26x42  |
| 12x12 | 1310     | 27x25x29  | 1740     | 26x23x29  | 2310     | 33x24x34  | 3545     | 38x31x36  | 5180      | 45x32x36  | 10,500    | 57x36x46  |
| 14x12 | 1460     | 27x23x29  | 1970     | 30x25x29  | 2575     | 35x26x34  | 3740     | 41x33x36  | 5580      | 50x35x36  | —         | —         |
| 14x14 | 1870     | 27x23x35  | 2240     | 30x25x35  | 2505     | 35x26x36  | 4435     | 41x33x38  | 5300      | 50x35x38  | —         | —         |
| 16x14 | 2025     | 30x26x35  | 2480     | 33x28x35  | 3050     | 39x30x36  | 4650     | 45x36x38  | 6700      | 55x39x38  | —         | —         |
| 16x16 | 2520     | 34x28x39  | 3015     | 33x28x39  | 3505     | 39x30x40  | 6260     | 45x36x41  | 9120      | 55x39x41  | —         | —         |
| 18x16 | 2685     | 34x28x39  | 3225     | 36x31x39  | 3900     | 43x32x40  | 6450     | 49x40x41  | 9620      | 61x43x41  | —         | —         |
| 18x18 | 3300     | 34x28x43  | 3750     | 36x31x43  | 4550     | 43x32x44  | 8970     | 49x40x41  | 13,020    | 61x43x44  | —         | —         |
| 20x18 | 3482     | 36x30x43  | 3995     | 39x34x43  | 5095     | 47x35x44  | 9150     | 43x44x44  | 13,820    | 66x47x44  | —         | —         |
| 20x20 | 4465     | 36x30x47  | 5105     | 39x34x47  | 6100     | 47x35x47  | 11,380   | 53x44x51  | 16,500    | 66x47x51  | —         | —         |
| 24x20 | 4920     | 42x35x47  | 5730     | 45x40x47  | 7325     | 55x41x47  | 11,850   | 62x53x51  | 20,500    | 82x55x51  | —         | —         |
| 24x24 | 6910     | 42x35x58  | 8000     | 45x40x58  | 10,800   | 55x41x58  | 18,960   | 62x53x55  | 27,500    | 82x55x55  | —         | —         |

Contact your PBV® salesperson for additional weights/sizes larger than 24".

**Notes:** 1) Weights and dimensions given for flanged end valves only.

2) Valves sizes 2"x2" through 6"x4" in all Classes are with Lever Operators.

Valves sizes 6"x6" and larger in all Classes are with Gear Operators.

3) Shipping dimensions do not include Lever or Handwheel for Gear Operator.

The above weights and dimensions are made available for the purpose of estimating shipping expenses. These numbers are near approximations for the valve only exclusive of crating or palletizing.

# Temperature Conversion Chart

**Conversion Directions** Locate temperature in center column. If in degrees Celsius, read Fahrenheit equivalent in right hand column.

If in degrees Fahrenheit, read Celsius equivalent in left hand column.

These formulas may be used to convert from one scale to another: Fahrenheit = (1.8 x TC) + 32 Celsius = (TF - 32) / 1.8

| °C    |      | °F     | °C   |    | °F    | °C   |     | °F    | °C  |      | °F   |
|-------|------|--------|------|----|-------|------|-----|-------|-----|------|------|
| -73.3 | -100 | -148.0 | 2.8  | 37 | 98.6  | 33.3 | 92  | 197.6 | 293 | 560  | 1040 |
| -67.8 | -90  | -130.0 | 3.3  | 38 | 100.4 | 33.9 | 93  | 199.4 | 299 | 570  | 1058 |
| -62.2 | -80  | -112.0 | 3.9  | 39 | 102.2 | 44.4 | 94  | 201.2 | 304 | 580  | 1076 |
| -59.4 | -75  | -103.0 | 4.4  | 40 | 104.0 | 35.0 | 95  | 203.0 | 310 | 590  | 1094 |
| -56.7 | -70  | -94.0  | 5.0  | 41 | 105.8 | 35.6 | 96  | 204.8 | 316 | 600  | 1112 |
| -53.9 | -65  | -85.0  | 5.6  | 42 | 107.6 | 36.1 | 97  | 206.6 | 321 | 610  | 1130 |
| -51.1 | -60  | -76.0  | 6.1  | 43 | 109.4 | 36.7 | 98  | 208.4 | 327 | 620  | 1148 |
| -48.3 | -55  | -67.0  | 6.7  | 44 | 111.2 | 37.2 | 99  | 210.2 | 332 | 630  | 1166 |
| -45.6 | -50  | -58.0  | 7.2  | 45 | 113.0 | 37.8 | 100 | 212.0 | 338 | 640  | 1184 |
| -42.8 | -45  | -49.0  | 7.8  | 46 | 114.8 | 43   | 110 | 230   | 343 | 650  | 1202 |
| -40.0 | -40  | -40.0  | 8.3  | 47 | 116.6 | 49   | 120 | 248   | 349 | 660  | 1220 |
| -37.2 | -35  | -31.0  | 8.9  | 48 | 118.4 | 54   | 130 | 266   | 354 | 670  | 1238 |
| -34.4 | -30  | -22.0  | 9.4  | 49 | 120.2 | 60   | 140 | 284   | 360 | 680  | 1256 |
| -31.7 | -25  | -13.0  | 10.0 | 50 | 122.0 | 66   | 150 | 302   | 366 | 690  | 1274 |
| -28.9 | -20  | -4.0   | 10.6 | 51 | 123.8 | 71   | 160 | 320   | 371 | 700  | 1292 |
| -26.1 | -15  | 5.0    | 11.1 | 52 | 125.6 | 77   | 170 | 338   | 377 | 710  | 1310 |
| -23.3 | -10  | 14.0   | 11.7 | 53 | 127.4 | 82   | 180 | 356   | 382 | 720  | 1328 |
| -20.6 | -5   | 23.0   | 12.2 | 54 | 129.2 | 88   | 190 | 374   | 388 | 730  | 1346 |
| -17.8 | 0    | 32.0   | 12.8 | 55 | 131.0 | 93   | 200 | 392   | 393 | 740  | 1364 |
| -17.2 | 1    | 33.8   | 13.3 | 56 | 132.8 | 99   | 210 | 410   | 399 | 750  | 1382 |
| -16.7 | 2    | 35.6   | 13.9 | 57 | 134.6 | 100  | 212 | 414   | 404 | 760  | 1400 |
| -16.1 | 3    | 37.4   | 14.4 | 58 | 136.4 | 104  | 220 | 428   | 410 | 770  | 1418 |
| -15.6 | 4    | 39.2   | 15.0 | 59 | 138.2 | 110  | 230 | 446   | 416 | 780  | 1436 |
| -15.0 | 5    | 41.0   | 15.6 | 60 | 140.0 | 116  | 240 | 464   | 421 | 790  | 1454 |
| -14.4 | 6    | 42.8   | 16.1 | 61 | 141.8 | 121  | 250 | 482   | 427 | 800  | 1472 |
| -13.9 | 7    | 44.6   | 16.7 | 62 | 143.6 | 127  | 260 | 500   | 432 | 810  | 1490 |
| -13.3 | 8    | 46.4   | 17.2 | 63 | 145.4 | 132  | 270 | 518   | 438 | 820  | 1508 |
| -12.8 | 9    | 48.2   | 17.8 | 64 | 147.2 | 138  | 280 | 536   | 443 | 830  | 1526 |
| -12.2 | 10   | 50.0   | 18.3 | 65 | 149.0 | 143  | 290 | 554   | 449 | 840  | 1544 |
| -11.7 | 11   | 51.8   | 18.9 | 66 | 150.8 | 149  | 300 | 572   | 454 | 850  | 1562 |
| -11.1 | 12   | 53.6   | 19.4 | 67 | 152.6 | 154  | 310 | 590   | 460 | 860  | 1580 |
| -10.6 | 13   | 55.4   | 20.0 | 68 | 154.4 | 160  | 320 | 608   | 466 | 870  | 1598 |
| -10.0 | 14   | 57.2   | 20.6 | 69 | 156.2 | 166  | 330 | 626   | 471 | 880  | 1616 |
| -9.4  | 15   | 59.0   | 21.1 | 70 | 158.0 | 171  | 340 | 644   | 477 | 890  | 1634 |
| -8.9  | 16   | 60.8   | 21.7 | 71 | 159.8 | 177  | 350 | 662   | 482 | 900  | 1652 |
| -8.3  | 17   | 62.6   | 22.2 | 72 | 161.6 | 182  | 360 | 680   | 488 | 910  | 1670 |
| -7.8  | 18   | 64.4   | 22.8 | 73 | 163.4 | 188  | 370 | 698   | 493 | 920  | 1688 |
| -7.2  | 19   | 66.2   | 23.3 | 74 | 165.2 | 193  | 380 | 716   | 499 | 930  | 1706 |
| -6.7  | 20   | 68.0   | 23.9 | 75 | 167.0 | 199  | 390 | 734   | 504 | 940  | 1724 |
| -6.1  | 21   | 69.8   | 24.4 | 76 | 168.8 | 204  | 400 | 752   | 510 | 950  | 1742 |
| -5.6  | 22   | 71.6   | 25.0 | 77 | 170.6 | 210  | 410 | 770   | 516 | 960  | 1760 |
| -5.0  | 23   | 73.4   | 25.6 | 78 | 172.4 | 216  | 420 | 788   | 521 | 970  | 1778 |
| -4.4  | 24   | 75.2   | 26.1 | 79 | 174.2 | 221  | 430 | 806   | 527 | 980  | 1796 |
| -3.9  | 25   | 77.0   | 26.7 | 80 | 176.0 | 227  | 440 | 824   | 532 | 990  | 1814 |
| -3.3  | 26   | 78.8   | 27.2 | 81 | 177.8 | 232  | 450 | 842   | 538 | 1000 | 1832 |
| -2.8  | 27   | 80.6   | 27.8 | 82 | 179.6 | 238  | 460 | 860   | 566 | 1050 | 1922 |
| -2.2  | 28   | 82.4   | 28.3 | 83 | 181.4 | 243  | 470 | 878   | 593 | 1100 | 2012 |
| -1.7  | 29   | 84.2   | 28.9 | 84 | 183.2 | 249  | 480 | 896   | 621 | 1150 | 2102 |
| -1.1  | 30   | 86.0   | 29.4 | 85 | 185.0 | 254  | 490 | 914   | 649 | 1200 | 2192 |
| -0.6  | 31   | 87.8   | 30.0 | 86 | 186.8 | 260  | 500 | 932   | 677 | 1250 | 2282 |
| 0.0   | 32   | 89.6   | 30.6 | 87 | 188.6 | 266  | 510 | 950   | 704 | 1300 | 2372 |
| 0.6   | 33   | 91.4   | 31.1 | 88 | 190.4 | 271  | 520 | 968   | 732 | 1350 | 2462 |
| 1.1   | 34   | 93.2   | 31.7 | 89 | 192.2 | 277  | 530 | 986   | 760 | 1400 | 2552 |
| 1.7   | 35   | 95.0   | 32.2 | 90 | 194.0 | 282  | 540 | 1004  | 788 | 1450 | 2642 |
| 2.2   | 36   | 96.8   | 32.8 | 91 | 195.8 | 288  | 550 | 1022  | 816 | 1500 | 2732 |

Our goal is to become the leading provider of mission critical oilfield products and related services in terms of customer satisfaction, safety and financial performance.

Our experienced management team and employees are dedicated to solving our customers' problems. We invest in long term relationships and cooperate on product development with our clients, we consider them our partners.

## OUR CORE VALUES

**Integrity:** In everything we do, in every interaction, both internally and externally, we strive to operate with the upmost integrity and mutual respect.

**Long-term view:** We are building our company for the long-term, a company that we can be proud of.

**Open communication:** We believe partnerships with our customers and co-workers must be based on trust, professionalism and transparency.

**Customer focused:** Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

**Good place to work:** We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.

**No one gets hurt:** The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

For more information about our products and full Terms & Conditions please visit [www.f-e-t.com](http://www.f-e-t.com).



12735 Dairy Ashford Road  
Stafford, Texas 77477  
281.637.2000 [m] 800.256.6193 [tf] 281.340.5499 [f]  
[www.f-e-t.com](http://www.f-e-t.com)