



“ WE EXPERT OF OILFIELD EQUIPMENT ”

[www.bhtforge.com](http://www.bhtforge.com)

Founded in **2016** by **Loveshik Patel**, **BHT Forge** is a globally recognized manufacturer of high-quality **oil and gas equipment**. Operating under the brand name **BHT**, we specialize in precision-engineered forged components made from **Carbon Steel, Alloy Steel, Stainless Steel (SS), Brass, and Copper**. With a strong commitment to quality, innovation, and customer satisfaction, BHT Forge has become a trusted name in the oil and gas industry.

Our manufacturing facility, strategically located in **Rajkot - Jamnagar**, is equipped with **state-of-the-art forging and machining technology**. We adhere to the highest international standards and are a **TÜV SÜD and CE-certified company**, ensuring our products meet global quality and safety requirements.

With an expanding global footprint, BHT Forge exports its premium products to major international markets, including **the US, Canada, Colombia, UAE, Kuwait, Oman, Singapore, Malaysia, Germany, Iran, Iraq, Türkiye, Australia, Azerbaijan, and more**.



Choke Valves | Plug Valves | Flow Line | Wellhead Production  
Hammer Union | Forge Fitting | Flanges

One Earth      One Family      One Future



## Vision

"To be a global leader in forging technology, delivering high-performance and sustainable oil and gas equipment through precision engineering and innovation."

## Mission

**Uncompromised Quality:** Adhere to the highest international standards through continuous improvement and strict quality control.

**Technological Advancement:** Invest in cutting-edge manufacturing processes to enhance product durability and efficiency.

**Customer-Centric Approach:** Build long-term relationships by providing reliable and customized solutions.

**Global Expansion:** Strengthen our presence in existing and emerging markets by delivering superior forged products.

**Sustainability & Ethics:** Operate responsibly by integrating eco-friendly and ethical business practices.



## Milestones

Established **BHT Forge** in Rajkot - Jamnagar, focusing on the production of high-quality oil and gas equipment.

**2016**

Successfully developed and launched our first range of **forged components** for the oil and gas sector.

**2017**

Expanded production to include **Carbon Steel, Alloy Steel, SS, Brass, and Copper materials**.

**2018**

Achieved **TÜV SÜD and CE Certifications**, ensuring compliance with international quality standards.

**2020**

Expanded into new international markets, including **Singapore, Malaysia, Australia, and Azerbaijan**.

**2022**

Introduced next-generation forged equipment with enhanced performance for high-pressure applications.

**2024**

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## Hammer Unions

BHT hammer unions are available in a wide range of sizes and in working pressures to 15,000 psi. Pressure seal, non-pressure seal, and welded styles are offered in various sizes. All BHT hammer unions provide pressure-tight, positive sealing and are available for standard services and sour gas models. BHT hammer unions for sour gas services are specially heat-treated for controlled hardness and utilises fluorocarbon elastomer seal rings.

### Specifications For Threaded and Butt Weld Hammer Unions

| Fig. No. | Assembly Color Code for Standard Service                                            | Pressure Rating (PSI) |        |                  |        | Nominal Pipe Sizes |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
|----------|-------------------------------------------------------------------------------------|-----------------------|--------|------------------|--------|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----|
|          |                                                                                     | Standard Service      |        | Sour Gas Service |        | (in.)              | 1/2                                                                                 | 1                                                                                   | 1-1/4                                                                               | 1-1/2                                                                               | 2                                                                                    | 2-1/2                                                                                 | 3                                                                                     | 4                                                                                     | 5                                                                                     | 6                                                                                     | 8                                                                                     | 10                                                                                    | 12  |
|          |                                                                                     | Cold Working          | Test   | Cold Working     | Test   | (mm)               | 13                                                                                  | 25                                                                                  | 32                                                                                  | 38                                                                                  | 50                                                                                   | 65                                                                                    | 80                                                                                    | 100                                                                                   | 125                                                                                   | 150                                                                                   | 200                                                                                   | 250                                                                                   | 300 |
| 50       |    | 500                   | 750    | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |    |    |                                                                                       |                                                                                       |                                                                                       |     |
| 100      |    | 1,000                 | 1,500  | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |    |    |    |    |    |    |    |                                                                                       |     |
| 101      |    | 1,000                 | 1,500  | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |    |                                                                                       |                                                                                       |                                                                                       |     |
| 200      |   | 2,000                 | 3,000  | 2,000            | 3,000  |                    |                                                                                     |   |   |   |   |   |   |   |   |   |   |   |     |
| 201      |  | 2,000                 | 3,000  | 2,000            | 3,000  |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 206      |  | 2,000                 | 3,000  | 2,000            | 3,000  |                    |                                                                                     |  |  |  |  |  |  |  |  |  |  |  |     |
| 207      |  | 2,000                 | 3,000  | 2,000            | 3,000  |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |  |  |                                                                                       |  |                                                                                       |                                                                                       |     |
| 211      |  | 2,000                 | 3,000  | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |                                                                                       |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 300      |  | 2,000                 | 3,000  | N/A              | N/A    |                    |  |  |                                                                                     |                                                                                     |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 400      |  | 4,000                 | 6,000  | 4,000            | 6,000  |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |                                                                                       |  |  |  |  |                                                                                       |  |     |
| 602      |  | 6,000                 | 9,000  | 6,000            | 9,000  |                    |                                                                                     |  |  |  |  |                                                                                       |  |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 1002     |  | 10,000                | 15,000 | 7,500            | 11,250 |                    |                                                                                     |  |  |  |  |                                                                                       |  |  |  |  |                                                                                       |                                                                                       |     |
| 1003     |  | 10,000                | 15,000 | 7,500            | 11,250 |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |  |  |  |                                                                                       |                                                                                       |                                                                                       |     |
| 1004     |  | 10,000                | 15,000 | 7,500            | 11,250 |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |  |  |                                                                                       |                                                                                       |     |
| 1502     |  | 15,000                | 22,500 | 10,000           | 15,000 |                    |                                                                                     |  |                                                                                     |  |  |                                                                                       |  |  |  |  |                                                                                       |                                                                                       |     |
| 2002     |  | 20,000                | 30,000 | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |                                                                                       |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 2202     |  | N/A                   | N/A    | 15,000           | 22,500 |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  |                                                                                       |  |  |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |
| 6666     |  | 6,000                 | 9,000  | N/A              | N/A    |                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |   |   |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |     |

\* Indicates different Cold Working Pressure due to other design factor - Difference as shown below:

- 5", 6", 12": Figure 400, Cold Working Pressure 2,500 PSI & Test Pressure 4,000 PSI
- 5", 6" : Figure 1002 Butt weld, Cold Working Pressure 7,500 PSI & Test Pressure 11,250 PSI Std. Service
- 4", 5" : Figure 1003 Butt weld, Cold Working Pressure 7,500 PSI & Test Pressure 11,250 PSI Std. Service
- 5", 6" : Figure 1002 Butt weld, Cold Working Pressure 5,000 PSI & Test Pressure 7,500 PSI Sour Service
- 4", 5" : Figure 1003 Butt weld, Cold Working Pressure 5,000 PSI & Test Pressure 7,500 PSI Sour Service
- 1/2" : Figure 300, Cold Working Pressure 15,000 PSI & Test Pressure 20,000 PSI, Zinc Plated

## Hammer Unions



**Fig. 100  
Black Nut Yellow Subs**  
An economical union with precision machined metal-to-metal sealing surfaces for air, water, oil or gas service to 1,000 psi NSCWP\*.



**Fig. 207  
Blue Cap Gray Subs**  
Interchangeable Fig. 206 sub with blanking cap and O-ring seal to assure no-leak closure of manifolds and lines to 2,000 psi NSCWP\*.



**Fig. 602  
Black Nut Orange Subs**  
A replaceable lip-type seal ring minimizes fluid flow turbulence and gives pressure seal for air, water, oil, gas and mud service to 6,000 psi NSCWP\*.



**Fig. 206  
Blue Nut Gray Subs**  
A precision metal-to-metal seal plus O-ring seal for air, water, oil, gas and mud service to 2,000 psi NSCWP\*.



**Fig. 1502  
Blue Nut Red Subs**  
For manifold and truck mountings or installations encountering high pressures including air, water, oil, gas and mud services to 15,000 psi NSCWP\*.



**Fig. 200  
Blue Nut Gray Subs**  
A precision metal-to-metal sealing surface between male and female subs for air, water, oil, gas and mud service to 2,000 psi NSCWP\*.



**Fig. 400  
Black Nut Red Subs**  
Features a precision ball and cone sealing surface for sure metal-to-metal seal for air, water, oil, gas and mud service to 4,000 psi NSCWP\*.



**Fig. 1002  
Red Nut Blue Subs**  
A resilient lip-type seal protects ball and cone seal against abrasion in air, water, oil, gas and mud service to 10,000 psi NSCWP\*.



**Fig. 402  
Black Nut Black Subs**  
A resilient lip-type seal for air, water, oil or mud service to 4,000 psi NSCWP\*.



**Fig. 2002  
White Nut White Subs**  
For cementing, fracturing, acidizing, testing and choke-and-kill lines where extreme pressures are encountered to 20,000 psi NSCWP\*.



**Fig. 2202  
Green Nut Green Subs**  
Especially for sour gas service; with heat-treated components, fluoroelastomer seal rings. For service to 15,000 psi NSCWP\*.

## Hammer Seal Union



### MUD TANK - DATA SHEET



### MUD TANK UNION DIMENTION IN MM

| PART NO  | A     | B    | C     | D     | E     | F     | G     | OILFULD PIPE SIZE | FEMALE COMPONENT WELD |
|----------|-------|------|-------|-------|-------|-------|-------|-------------------|-----------------------|
| BHT 3HS  | 212.8 | 50.8 | 114.3 | 100.0 | 95.0  | 89.0  | 76.0  | 3" (88.9MM OD)    | 4"                    |
| BHT 4HS  | 242.0 | 50.8 | 168.3 | 150.0 | 122.0 | 94.0  | 76.0  | 4" (114.3MM OD)   | 6"                    |
| BHT 6HS  | 297.0 | 50.8 | 219.2 | 200.0 | 175.0 | 132.0 | 114.0 | 6" (168.3MM OD)   | 8"                    |
| BHT 8HS  | 350.0 | 50.8 | 273.0 | 254.0 | 225.0 | 132.0 | 114.0 | 8" (219.0MM OD)   | 10"                   |
| BHT 10HS | 458.0 | 50.8 | 323.8 | 304.8 | 280.0 | 132.0 | 114.0 | 10" (273.0MM OD)  | 12"                   |
| BHT 12HS | 502.0 | 50.8 | 355.6 | 333.5 | 330.0 | 132.0 | 114.0 | 12" (323.8MM OD)  | 14"                   |
| BHT 14HS | 543.0 | 50.8 | 406.0 | 381.0 | 362.9 | 119.0 | 102.0 | 14" (355.6MM OD)  | 16"                   |
| BHT 16HS | 610.0 | 50.8 | 457.0 | 419.0 | 413.0 | 123.0 | 102.0 | 16" (406.4MM OD)  | 18"                   |
| BHT 18HS | 660.0 | 58.0 | 508.0 | 478.0 | 463.0 | 116.0 | 102.0 | 18" (457.0MM OD)  | 20"                   |
| BHT 20HS | 712.0 | 58.0 | 558.0 | 528.0 | 514.5 | 143.0 | 127.0 | 20" (508.0MM OD)  | 22"                   |

## Hose Union Fittings



BHT Figure 206 Hose Fitting is constructed of high quality cast ductile iron. This union is also referred to as a Hose Barb Union. It features a union end connection that is interchangeable with a figure 200/206 connection, and it comes with an integral hose shank on both the male and female sub. The figure 206 union is designed to save time and money by eliminating the need to weld a hose nipple onto a figure 200/206 hammer union. This union is uniquely designed to be tested to twice the rated working pressure, which is often a requirement for hoses used in oilfield applications.

| Standard Service |         | H2S Service** |         |
|------------------|---------|---------------|---------|
| NSCWP            | Test    | NSCWP         | TEST    |
| 400 PSI          | 800 PSI | 400 PSI       | 800 PSI |

\*All Working Pressures are Non-shock Cold Working Pressure Ratings (NSCWP)

## Integral Union Connections

BHT manufactures a quality line of high-pressure integral union connections in a broad range of configurations and sizes from 2" and 3" and in pressure ratings to 15,000 psi NSCWP\*. Manufactured from high strength alloy steel, BHT integrals feature a lightweight design which is not found in competitors' products. All BHT integral union connections are subjected to controlled heat-treat process.



| Size | Fig. 602<br>6,000 psi* | Fig. 1002<br>10,000 psi* | Fig. 1502<br>15,000 psi* | Fig. 1502<br>10,000 psi*<br>H25 | Fig. 2002<br>15,000 psi* | All Female<br>(Thread) | All Male<br>(Wing) | Combination<br>styles and<br>Sizes |
|------|------------------------|--------------------------|--------------------------|---------------------------------|--------------------------|------------------------|--------------------|------------------------------------|
| 2"   |                        |                          | •                        | •                               | •                        | •                      | •                  | •                                  |
| 3"   | •                      |                          | •                        | •                               | •                        | •                      | •                  | •                                  |

\*Non-Shock Cold Working Pressure

### Union Changeover And Crossover Adaptors



Available in a variety of sizes and thread types in female-to-male, female-to-female, and male-to-male configurations from 1" thru 4", in pressure rating from 6,000 to 15,000 psi NSCWP\* in standard service, and up to 10,000 psi in sour gas service.

### Union Bull, Gauge And Lifting Bull Plugs



Available in a variety of sizes and thread types in female-to-male, female-to-female, and male-to-male configurations from 1" thru 4", in pressure rating from 6,000 to 15,000 psi NSCWP\* in standard service, and up to 10,000 psi in sour gas service.

### Union Male And Female To Pipe And Tubing Thread Swages



Available in numerous sizes and threaded configurations from 1" thru 4" in pressure rating from 6,000 to 10,000 psi NSCWP\*.

## Swivel Joints

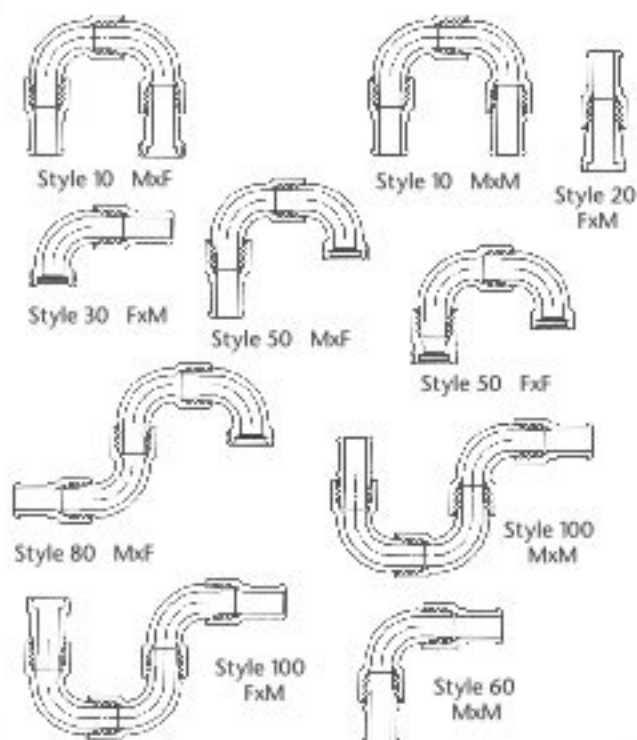
BHT 2" Fig. 1502 and 3" Fig 1502 Long Radius Swivel Joints have undergone a design enhancement, creating a superior and longer lasting product. New features have created a swivel with extended life while maintaining uniform flow.

### New features include:

- Additional erosion material under critical ball race locations.
- More stable assembly with better load distribution in 3" Fig. 1502 series, featuring longer ball race life.
- Better distribution of material for more robust female ball race components in 2" Fig. 1502 and 3" Fig. 1502 models.
- No danger for any mismatches.
- Available in traditional hammer union styles.



All BHT swivel joints feature uniform wall thickness throughout for longer and more uniform flow of fluids (including slurries and abrasives), elastomeric packing for service to instream packing that is designed not to enter stream regardless of velocity and improved lubrication.



| Pressure Rating         | Size |        |   |        |
|-------------------------|------|--------|---|--------|
|                         | 2"   | 2" H2S | 3 | 3" H2S |
| Style 10 Fig. 1502 MxF  | •    | •      | • | •      |
| Style 10 Fig. 1502 MxM  | •    | •      | • | •      |
| Style 20 Fig. 1502 MxF  | •    | •      | • | •      |
| Style 30 Fig. 1502 MxF  | •    | •      | • | •      |
| Style 50 Fig. 1502 MxF  | •    | •      | • | •      |
| Style 60 Fig. 1502 MxF  | •    | •      | • | •      |
| Style 80 Fig. 1502 MxF  | •    |        | • | •      |
| Style 50 Fig. 602 MxF   |      |        |   |        |
| Style 100 Fig. 1502 MxF | •    | •      | • |        |
| Style 100 Fig. 1502 MxM | •    | •      | • |        |

## Swivel Joint / Short Radius



- Size : 2"
- End Type : customized
- Test Pressure : 9,000psi
- CWP : 6,000psi (413.68 bar)
- Service : Standard, H<sub>2</sub>S
- Used for Cementing, Drill Mud, Fracturing Fluids, Well Servicing
- MTR and Test Report are offered at any time

### Swivel Joint Short Radius Repair Kit

| NO | Item              | Q'ty |
|----|-------------------|------|
| -  | Repair Kit Set    | -    |
| 1  | O-ring            | 1    |
| 2  | Pressure Seal     | 1    |
| 3  | Ball              | 52   |
| 4  | Nipple Nut O-ring | 1    |
| 5  | Nipple Nut        | 1    |
| 6  | Grease Fitting    | 1    |



Style 10



Style 20



Style 30



Style 40



Style 50



Style 60



Style 70



Style 80

## Hose Loops

BHT hose loops are used for a variety of high pressure well service applications including discharge lines, water lines, cementing and circulating lines, well test lines and temporary flow lines.

BHT hoses utilize field proven BHT swivel joints for greater flexibility, shock and vibration resistance, and more uniform flow. Also utilized are BHT wing union end connections for fast, pressure tight make-up and break-out.

These rugged hoses handle a full range of fluids to cold working pressures up to 15,000 psi and come in sizes and configurations to meet any need. Hoses for sour gas service are available at cold working pressure up to 10,000 psi. OFE hoses are designed to easily and conveniently fold up for storage and transportation.



| BHT Model                 | Color Code   | Method of Construction |     |          | NSCWP* (PSI) | Size (In.) |   |
|---------------------------|--------------|------------------------|-----|----------|--------------|------------|---|
|                           |              | Threaded               | NPS | Integral |              | 2          | 3 |
| Long Radius Swivel joints | Olive Green† |                        | •   | •        | 10,000       | •          | • |
|                           | Red          |                        | •   | •        | 15,000       | •          | • |
| Long Radius Swivel joints | Black        | •                      |     |          | 10,000       | •          |   |

† Sour Gas Service

\*Non-Shock Cold Working Pressure

## Steel Hoses (Pup Joint)

OFE Integral pup joints with wing union end connections for an uninterrupted and greater flow.



### Integral PUP Joints

This light weight piping is available in lengths up to 10 feet to handle fluids at cold working pressure to 15,000 psi. They are used on high-pressure discharge lines, auxiliary flow lines, choke-and-kill lines and for abrasive applications.



BHT also manufactures flow line piping in non-pressure seal thread from 6,000 to 15,000 psi, up to 20 feet in length.

### NPST Pup joint

### Integral Style

| Size (In.) | Type of Service | NSCWP* (PSI) | End Connection  |
|------------|-----------------|--------------|-----------------|
| 2          | Standard        | 15,000       | Fig. 1502 Union |
| 2          | Sour Gas        | 10,000       | Fig. 1502 Union |
| 3          | Standard        | 15,000       | Fig. 1502 Union |
| 3          | Sour Gas        | 10,000       | Fig. 1502 Union |

### NPS & Butt Weld Piping

| Style      | NSCWP* (PSI) | 1" | 1½" | 2" | 3" | Non Press Seal | Butt Weld |
|------------|--------------|----|-----|----|----|----------------|-----------|
| Fig. 602   | 6,000        | •  | •   |    | •  | •              | •         |
| Fig. 1002  | 10,000       | •  | •   | •  |    | •              | •         |
| Fig. 1502† | 10,000       | •  | •   | •  | •  |                | •         |
| Fig. 1502  | 15,000       | •  | •   | •  | •  | •              | •         |

\*Non-Shock Cold Working Pressure

† Sour Gas Service

## API 5CT PUP JOINTS

### SIZE:

2-3/8", 2-7/8", 3-1/2" and 4-1/2"

### GRADE:

H-40, J-55, K-55, N-80(1), N-80(Q),  
L-80(1), L-80(13Cr), L-80(9Cr) and  
P-110

### THREAD:

EUE and NUE

### CONNECTION:

PIN x PIN, PIN x BOX, BOX x BOX



| Pup Joint Size | Non Upset End | Ext Upset End | Wall Thickness | Outside Diameter | Outside Dia D4 for EU Pup Joints | Inside Diameter | Lengths                |
|----------------|---------------|---------------|----------------|------------------|----------------------------------|-----------------|------------------------|
| Inch           | ppf           | ppf           | Inch           | Inch             | Inch                             | Inch            | Feet                   |
| 1.66           | 2.30          | 2.40          | 0.140          | 1.660            | 1.812                            | 1.380           | 2, 4, 6, 8, 10, 12, 15 |
| 1.66           | 3.03          | 3.07          | 0.190          | 1.660            | 1.812                            | 1.278           | 2, 4, 6, 8, 10, 12, 15 |
| 1.9            | 2.75          | 2.90          | 0.145          | 1.990            | 2.094                            | 1.650           | 2, 4, 6, 8, 10, 12, 15 |
| 1.9            | 3.65          | 3.73          | 0.200          | 1.990            | 2.094                            | 1.610           | 2, 4, 6, 8, 10, 12, 15 |
| 2-3/8          | 4.60          | 4.70          | 0.190          | 2.375            | 2.594                            | 1.995           | 2, 4, 6, 8, 10, 12, 15 |
| 2-3/8          | 5.80          | 5.95          | 0.254          | 2.375            | 2.594                            | 1.867           | 2, 4, 6, 8, 10, 12, 15 |
| 2-3/8          | 7.35          | 7.45          | 0.336          | 2.375            | 2.594                            | 1.703           | 2, 4, 6, 8, 10, 12, 15 |
| 2-7/8          | 6.40          | 6.50          | 0.217          | 2.875            | 3.094                            | 2.441           | 2, 4, 6, 8, 10, 12, 15 |
| 2-7/8          | 7.80          | 7.90          | 0.276          | 2.875            | 3.094                            | 2.323           | 2, 4, 6, 8, 10, 12, 15 |
| 2-7/8          | 8.60          | 8.70          | 0.308          | 2.875            | 3.094                            | 2.259           | 2, 4, 6, 8, 10, 12, 15 |
| 2-7/8          | 9.35          | 9.45          | 0.340          | 2.875            | 3.094                            | 2.195           | 2, 4, 6, 8, 10, 12, 15 |
| 3-1/2          | 9.20          | 9.30          | 0.254          | 3.500            | 3.750                            | 2.992           | 2, 4, 6, 8, 10, 12, 15 |
| 3-1/2          | 12.70         | 12.95         | 0.375          | 3.500            | 3.750                            | 2.750           | 2, 4, 6, 8, 10, 12, 15 |
| 4              | 10.70         | 11.00         | 0.262          | 4.000            | 4.250                            | 3.476           | 2, 4, 6, 8, 10, 12, 15 |
| 4-1/2          | 12.60         | 12.75         | 0.271          | 4.500            | 4.750                            | 3.959           | 2, 4, 6, 8, 10, 12, 15 |

Note: We manufacture Pup Joints of Odd Lengths and custom lengths as per Customer requirements

## API 5CT Couplings

### Tubing Couplings

| API EUE Tubing Couplings                                                                                      | Tubing Size (Inches) | Coupling Size OD (Inches) | Length (Inches) | Weight per Piece (lbs) | Palletized Carton Quantity | Palletized Carton Weight |
|---------------------------------------------------------------------------------------------------------------|----------------------|---------------------------|-----------------|------------------------|----------------------------|--------------------------|
|                              | 2-3/8                | 3.063                     | 4.875           | 3.42                   | 1,444                      | 3942                     |
|                                                                                                               | 2-7/8                | 3.668                     | 5.500           | 5.29                   | 792                        | 4220                     |
|                                                                                                               | 3-1/2                | 4.500                     | 5.750           | 9.02                   | 448                        | 3890                     |
|                                                                                                               | 4-1/2                | 5.563                     | 6.500           | 13.31                  | 252                        | 3496                     |
| API NUE Tubing Couplings<br> | 2-3/8                | 2.875                     | 4.500           | 2.82                   | 1,512                      | 4264                     |
|                                                                                                               | 2-7/8                | 3.500                     | 5.500           | 5.15                   | 800                        | 4120                     |
|                                                                                                               | 3-1/2                | 4.250                     | 5.675           | 8.17                   | 502                        | 4101                     |
|                                                                                                               | 4-1/2                | 5.200                     | 6.500           | 10.76                  | 252                        | 2712                     |

### Casing Couplings

| API Casing Couplings Short Thread                                                                                           | Casing Size OD (Inches) | Coupling Size OD (Inches) | Length (Inches) | Weight per Coupling (lbs) | Palletized Carton Quantity | Palletized Carton Weight |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------|-----------------|---------------------------|----------------------------|--------------------------|
|                                          | 4-1/2                   | 5.000                     | 6.250           | 8.95                      | 343                        | 2716                     |
|                                                                                                                             | 5                       | 5.563                     | 6.500           | 10.18                     | 210                        | 2168                     |
|                                                                                                                             | 5-1/2                   | 6.050                     | 6.750           | 11.44                     | 216                        | 2501                     |
|                                                                                                                             | 6-5/8                   | 7.390                     | 7.250           | 19.97                     | 115                        | 2322                     |
|                                                                                                                             | 7                       | 7.875                     | 7.250           | 18.34                     | 120                        | 2231                     |
|                                                                                                                             | 7-5/8                   | 8.500                     | 7.500           | 26.93                     | 80                         | 2322                     |
|                                                                                                                             | 8-5/8                   | 9.625                     | 7.750           | 35.58                     | 60                         | 2132                     |
|                                                                                                                             | 9-5/8                   | 10.625                    | 7.750           | 39.51                     | 50                         | 2006                     |
|                                                                                                                             | 10-3/4                  | 11.750                    | 8.000           | 49.61                     | 45                         | 2079                     |
|                                                                                                                             | 11-3/4                  | 12.750                    | 8.000           | 50.49                     | 35                         | 1767                     |
|                                                                                                                             | 13-3/8                  | 14.375                    | 8.000           | 56.23                     | 25                         | 1436                     |
|                                                                                                                             | 16                      | 17.000                    | 8.000           | 78.98                     |                            |                          |
|                                                                                                                             | 20                      | 21.000                    | 9.000           | 98.25                     |                            |                          |
| API Casing Couplings Long Thread<br>     | 4-1/2                   | 5.000                     | 7.000           | 9.97                      | 294                        | 2697                     |
|                                                                                                                             | 5                       | 5.563                     | 7.750           | 12.56                     | 210                        | 2573                     |
|                                                                                                                             | 5-1/2                   | 6.050                     | 8.000           | 14.03                     | 180                        | 2555                     |
|                                                                                                                             | 6-5/8                   | 7.390                     | 8.750           | 24.82                     | 100                        | 2315                     |
|                                                                                                                             | 7                       | 7.875                     | 9.000           | 23.67                     | 100                        | 2351                     |
|                                                                                                                             | 7-5/8                   | 8.500                     | 9.250           | 34.23                     | 80                         | 2807                     |
|                                                                                                                             | 8-5/8                   | 9.625                     | 10.000          | 47.48                     | 48                         | 2337                     |
|                                                                                                                             | 9-5/8                   | 10.625                    | 10.500          | 55.77                     | 40                         | 2302                     |
| API Casing Couplings Buttress Thread<br> | 4-1/2                   | 5.000                     | 8.875           | 10.11                     | 196                        | 2007                     |
|                                                                                                                             | 5                       | 5.563                     | 9.125           | 12.99                     | 144                        | 2840                     |
|                                                                                                                             | 5-1/2                   | 6.050                     | 9.250           | 14.14                     | 144                        | 2061                     |
|                                                                                                                             | 6-5/8                   | 7.390                     | 9.625           | 24.46                     | 92                         | 2295                     |
|                                                                                                                             | 7                       | 7.875                     | 10.000          | 23.22                     | 80                         | 2068                     |
|                                                                                                                             | 7-5/8                   | 8.500                     | 10.375          | 34.84                     | 64                         | 2221                     |
|                                                                                                                             | 8-5/8                   | 9.625                     | 10.625          | 45.94                     | 48                         | 2414                     |
|                                                                                                                             | 9-5/8                   | 10.625                    | 10.625          | 50.99                     | 40                         | 2256                     |
|                                                                                                                             | 10-3/4                  | 11.750                    | 10.625          | 56.68                     | 40                         | 2307                     |
|                                                                                                                             | 11-3/4                  | 12.750                    | 10.625          | 61.74                     | 36                         | 2179                     |
|                                                                                                                             | 13-3/8                  | 14.375                    | 10.625          | 69.95                     | 20                         | 1429                     |
|                                                                                                                             | 16                      | 17.000                    | 10.625          |                           |                            |                          |
|                                                                                                                             | 18-5/8                  | 20.000                    | 10.625          |                           |                            |                          |
|                                                                                                                             | 20                      | 21.000                    | 10.625          |                           |                            |                          |

- API Tubing Couplings: 1" – 4-1/2" EUE – NUE
- API Casing Couplings: 4-1/2" – 20" STC – LTC – BTC
- Grades: H-40, J-55, K-55, N-80, L-80, T-95, P-110, C-110, Q-125
- Improved Buttress Couplings
- Modified Couplings
- Special Clearance Couplings
- Custom sizes and lengths available

## Plug Valves

- Standard service is used up to 15,000psi and tested at 22,500psi
- H<sub>2</sub>S service is used up to 10,000psi and tested at 15,000psi
- Rugged Construction with Forged Alloy Steel Body
- Reliable Performance at high working pressure
- Bottom Entry design, Top Entry design, Easy Maintenance
- Valve Parts are Interchangeable with most major designs
- Suitable for variety of high pressure applications such as fracturing, cementing, acidizing and etc.
- Each valve is serialized
- MTR and Test Report are available at any time



### Plug Valve

| NO    | Item                       | Q'ty |
|-------|----------------------------|------|
| Ass'y | Plug Valve 1502 HandleType | 1    |
| 1     | Cap Screw                  | 2    |
| 2     | Washer 1(Small)            | 2    |
| 3     | Washer 2(Bigger)           | 2    |
| 4     | Handle Adapter             | 1    |
| 5     | Stop Bolt                  | 1    |
| 6     | Stop Collar                | 1    |
| 7     | Grease Fitting             | 1    |
| 8     | Body                       | 1    |
| 9     | Wing Nut                   | 1    |
| 10    | Segment                    | 3    |
| 11    | Retainer Ring              | 1    |
| 12    | Lip Seal                   | 1    |
| 13    | Plug Seal                  | 2    |
| 14    | Plug                       | 1    |
| 15    | Roll Pin                   | 2    |
| 16    | Insert                     | 2    |
| 17    | Insert O-ring              | 2    |
| 18    | Adjusting Nut O-ring       | 1    |
| 19    | Adjusting Nut              | 1    |



### Plug Valve Repair Kit

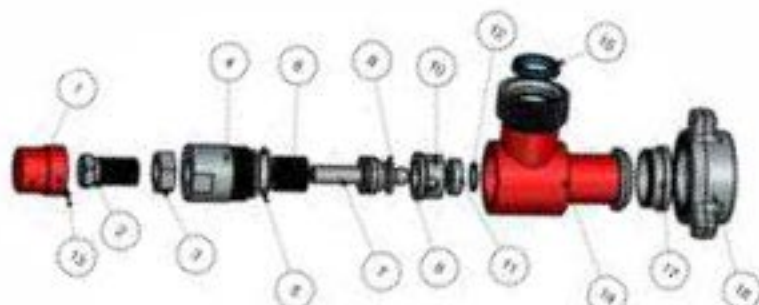
| NO | Item                 | Q'ty |
|----|----------------------|------|
| -  | Repair kit Set       | -    |
| 13 | Plug Seal            | 2    |
| 14 | Plug                 | 1    |
| 16 | Insert               | 2    |
| 17 | Insert O-ring        | 2    |
| 18 | Adjusting Nut O-ring | 1    |

Seal Kit Contains No. 13, 17 and 18.

| Size | End Connection | Service          | Working Pressure | Test Pressure | Operation type | Dimensions (Inch) |      |      |      |      |
|------|----------------|------------------|------------------|---------------|----------------|-------------------|------|------|------|------|
|      |                |                  |                  |               |                | A                 | B    | C    | D    | E    |
| 2x1  | 1502 MxF       | Standard         | 15,000           | 22,500        | Handle         | 10.53             | 4.74 | 4.50 | 4.50 | 1.00 |
|      |                | H <sub>2</sub> S | 10,000           | 15,000        |                |                   |      |      |      |      |
| 2x2  | LP Thread      | Standard         | 10,000           | 15,000        | Handle         | 8.50              | 5.41 | 5.25 | 6.85 | 2.05 |
|      |                | H <sub>2</sub> S | 10,000           | 15,000        |                |                   |      |      |      |      |
|      | 1502 MxF       | Standard         | 15,000           | 22,500        |                | 13.88             | 5.41 | 5.26 | 6.85 | 1.75 |
|      |                | H <sub>2</sub> S | 10,000           | 15,000        |                |                   |      |      |      |      |
| 3x3  | 1502 MxF       | Standard         | 15,000           | 22,500        | Gear           | 17.00             | 7.20 | -    | 9.06 | 3.05 |
|      |                | H <sub>2</sub> S | 10,000           | 15,000        | Handle         |                   |      |      |      |      |

\* Each size can be changed as customer's requirements.

## Relief Valves



| Parts Listing |      |                                                         |                |
|---------------|------|---------------------------------------------------------|----------------|
| Item          | Qty. | Description                                             | part           |
| 1             | 1    | seal cap                                                | 1502200PRVSC   |
| 2             | 1    | Adjusting Screw                                         | 1502200PRVAS   |
| 3             | 1    | Thin Hex Nut, 1-1/2-12 (Jamb Nut)                       | 1502200PRVN    |
| 4             | 1    | Cap                                                     | 1502200PRVC    |
| 5             | 1    | O-Ring 038                                              | 1502200PRVOR38 |
| 6             | 16   | Disk Spring                                             | 1502200PRVSD5  |
| 7             | 1    | Keeper                                                  | 1502200PRVSK   |
| 8             | 1    | O-Ring 44.45ID, THICKNESS 6                             | 1502200PRVOR4  |
| 9             | 1    | Ball                                                    | 1502200PRVB    |
| 10            | 1    | Spider                                                  | 1502200PRVS    |
| 11            | 1    | Seat                                                    | 1502200PRVSEAT |
| 12            | 1    | O-Ring 028                                              | 1502200PRVOR28 |
| 13            | 1    | Set Screw, Socket Head, Brass Tip 5/16-18 X 3/32 X 3/16 | 1502200PRVSH   |
| 14            | 1    | Pressure Relief Valve Body                              | 1502200PRVBD   |
| 15            | 1    | Union seal                                              | 1502200CS      |
| 16            | 1    | Wingnut                                                 | 1502200WN      |
| 17            | 1    | segment set                                             | 1502200SG      |

| Major Repair kit |    |                                   |                |
|------------------|----|-----------------------------------|----------------|
| 2                | 1  | Adjusting Screw                   | 1502200PRVAS   |
| 3                | 1  | Thin Hex Nut, 1-1/2-12 (Jamb Nut) | 1502200PRVN    |
| 5                | 1  | O-Ring 038                        | 1502200PRVOR38 |
| 6                | 16 | Disk Spring                       | 1502200PRVSD5  |
| 7                | 1  | Keeper                            | 1502200PRVSK   |
| 8                | 1  | O-Ring 44.45ID, THICKNESS 6       | 1502200PRVOR4  |
| 9                | 1  | Ball                              | 1502200PRVB    |
| 10               | 1  | Spider                            | 1502200PRVS    |
| 11               | 1  | Seat                              | 1502200PRVSEAT |
| 12               | 1  | O-Ring 028                        | 1502200PRVOR28 |

| Minor Repair kit |   |            |                |
|------------------|---|------------|----------------|
| 9                | 1 | Ball       | 1502200PRVB    |
| 11               | 1 | Seat       | 1502200PRVSEAT |
| 12               | 1 | O-Ring 028 | 1502200PRVOR28 |

| Pressure/ Temperature Ratings: |                        |                |                |          |               |
|--------------------------------|------------------------|----------------|----------------|----------|---------------|
| Inlet                          | Low Pressure Discharge | Pressure Range | Int. End NSCWP | Service  | Temp. Range   |
| 2" - 1502M                     | 2" - 1502M             | 0 - 15000      | 15000          | Standard | -30°C - 110°C |
| 2" - 2002M                     | 2" - 2002F             | 0 - 20000      | 20000          | Standard | -30°C - 110°C |
| 2" - 1502M                     | 2" - 1502M             | 0 - 10000      | 10000          | H2S      | -30°C - 176°C |
| 2" - 2002M                     | 2" - 2002F             | 0 - 15000      | 15000          | H2S      | -30°C - 176°C |

## Dark Check Valves



### 2" dart type Check Valve for oil equipment

- 1) Sizes range from 2" to 3". The model of check valve available: D×F70-2"×2", D×F105-2"×2", D×F70-3"×3", D×F105-3"×3"
- 2) Working pressure rated: 5000psi(35MPa)~15000psi(105MPa).
- 3) Our check valves are mainly used for high pressure applications and workover equipments. They are usually installed in high pressure pipelines for preventing fluid flowing back. When fluid is pushed back, a retainer plate will automatically close.
- 4) Check valves, forged of high strength alloy steel based on US technologies, are fitted with unions on both ends for easy dismantlement. The retainer plate inside sulfidized with Buna-N has a good sealing effect and a longer service life under high pressure, for conventional or H<sub>2</sub>S environments.

#### Product Parameters

| Size                                | Connection        | Pressure Class(Psi) | Service |
|-------------------------------------|-------------------|---------------------|---------|
| <b>In-Line Flapper Check Valves</b> |                   |                     |         |
| 2"                                  | Fig 1502/2002 MxF | 15000/20000         | STD     |
| 3"                                  | Fig 1502/2002 MxF | 15000/20000         | STD     |
| <b>Top Entry Check Valves</b>       |                   |                     |         |
| 2"                                  | Fig 1502 M x F    | 15000               | STD     |
| 3"                                  | Fig 1502 M x F    | 15000               | STD     |
| <b>Dart Check Valves</b>            |                   |                     |         |
| 2"                                  | Fig 1502 M x F    | 15000               | STD     |
| 3"                                  | Fig 1502 M x F    | 15000               | STD     |

## Choke Valves



**2" 1502 Positive Choke Valve**

- 2" Fig 1502 MxF with 3/4" or 1" Orifice and 3" Fig 1502 MxF with 2" Orifice.
- Standard service is used up to 15,000psi and tested at 22,500psi
- H2S service is used up to 10,000psi and tested at 15,000psi
- Hammer Union End Connection
- Forged alloy steel body, stainless steel and tungsten carbide parts
- Parts are interchangeable with major brands
- Suitable for a broad range of applications including wellheads, well testing, stream injection, choke and kill manifolds and well clean operations, etc.



**2" 1502 Adjustable Choke Valve**



**3" 1502 Adjustable Choke Valve**

## 2" Positive Choke Valve



**2" Positive Choke Valve**

| NO    | Item                      | Q'ty |
|-------|---------------------------|------|
| Ass'y | Positive Choke Valve 1502 | 1    |
| 13    | Wing Nut                  | 3    |
| 14    | Lip Seal                  | 2    |
| 15    | Choke Body                | 1    |
| 16    | Plug Stem                 | 1    |
| 17    | Stem Cap                  | 1    |
| 18    | Retainer Ring             | 2    |
| 19    | Segment                   | 6    |
| 20    | Choke Bean                | 1    |
| 21    | Choke Saver               | 1    |
| 22    | Blind Male Sub            | 1    |

**2" Positive Choke Valve Repair Kit**

| NO | Item       | Q'ty |
|----|------------|------|
| 20 | Choke Bean | 1    |

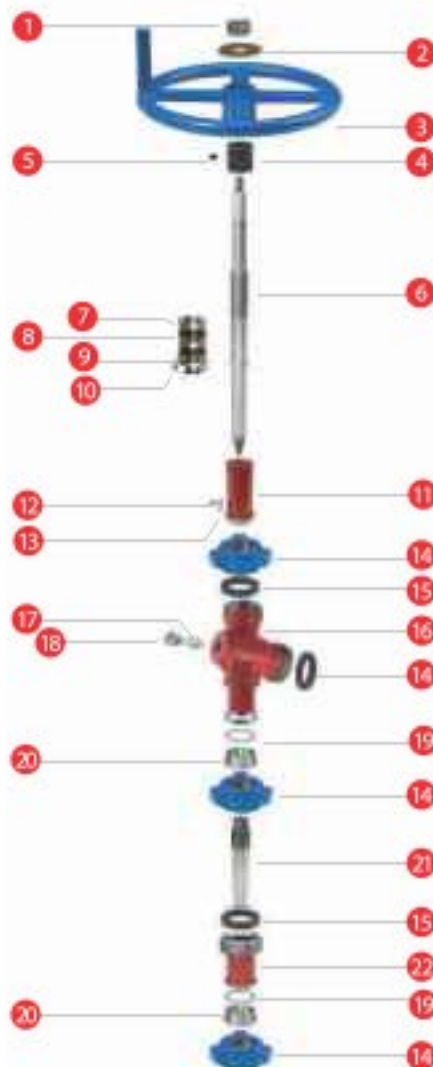


## 2" Adjustable Choke Valve



2" Adjustable Choke Valve

| NO    | Item                        | Q'ty |
|-------|-----------------------------|------|
| Ass'y | Adjustable Choke Valve 1502 | 1    |
| 1     | Stem Nut                    | 1    |
| 2     | Washer                      | 1    |
| 3     | Hand Wheel                  | 1    |
| 4     | Indicator                   | 1    |
| 5     | Lock Screw                  | 1    |
| 6     | Choke Stem                  | 1    |
| 7     | Stem Guide                  | 2    |
| 8     | Stem Seal                   | 2    |
| 9     | Junk Ring                   | 1    |
| 10    | Snap Ring                   | 1    |
| 11    | Choke Bonnet                | 1    |
| 12    | Thumb Screw                 | 1    |
| 13    | Grease Fitting              | 1    |
| 14    | Wing Nut                    | 3    |
| 15    | Lip Seal                    | 2    |
| 16    | Choke Body                  | 1    |
| 17    | Plug Stem                   | 1    |
| 18    | Stem Cap                    | 1    |
| 19    | Retainer Ring               | 2    |
| 20    | Segment                     | 6    |
| 21    | Choke Seat                  | 1    |
| 22    | Choke Saver                 | 1    |



2" Adjustable Choke Valve Repair Kit

| NO | Item           | Q'ty |
|----|----------------|------|
| -  | Repair Kit Set | -    |
| 7  | Stem Guide     | 2    |
| 8  | Stem Seal      | 2    |
| 9  | Junk Ring      | 1    |
| 10 | Snap Ring      | 1    |

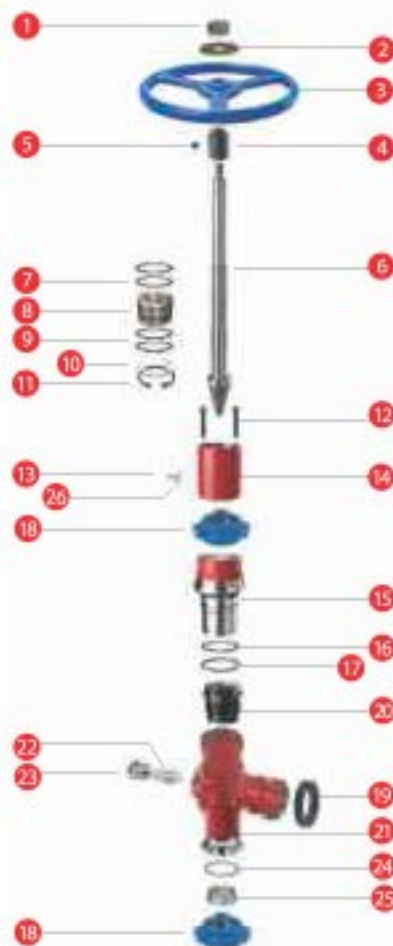
\* Each size can be changed as customer's requirements.

## 3" Adjustable Choke Valve



3" Adjustable Choke Valve

| NO    | Item                        | Q'ty |
|-------|-----------------------------|------|
| Ass'y | Adjustable Choke Valve 1502 | 1    |
| 1     | Stem Nut                    | 1    |
| 2     | Washer                      | 1    |
| 3     | Hand Wheel                  | 1    |
| 4     | Indicator                   | 1    |
| 5     | Lock Screw                  | 1    |
| 6     | Choke Stem                  | 1    |
| 7     | Outsider O-ring             | 2    |
| 8     | Seal Piston                 | 1    |
| 9     | Inside O-ring               | 2    |
| 10    | Stem Seal                   | 1    |
| 11    | Snap Ring                   | 1    |
| 12    | Bonnet Bolt                 | 2    |
| 13    | Thumb Screw                 | 1    |
| 14    | Bonnet Extension            | 1    |
| 15    | Choke Bonnet                | 1    |
| 16    | Bonnet O-ring               | 1    |
| 17    | Bonnet Back Up Ring         | 1    |
| 18    | Wing Nut                    | 2    |
| 19    | Lip Seal                    | 1    |
| 20    | Choke Seat                  | 1    |
| 21    | Choke Body                  | 1    |
| 22    | Plug Stem                   | 1    |
| 23    | Stem Cap                    | 1    |
| 24    | Retainer Ring               | 1    |
| 25    | Segment                     | 3    |
| 26    | Grease Fitting              | 1    |



3" Adjustable Choke Valve Repair Kit

| NO | Item                | Q'ty |
|----|---------------------|------|
| -  | Repair Kit Set      | -    |
| 7  | Outsider O-ring     | 2    |
| 8  | Seal Piston         | 1    |
| 9  | Inside O-ring       | 2    |
| 10 | Stem Seal           | 1    |
| 11 | Snap Ring           | 1    |
| 16 | Bonnet O-ring       | 1    |
| 17 | Bonnet Back Up Ring | 1    |

\* Each size can be changed as customer's requirements.

## API 6A Adjustable Choke Valves

### Features:

- Long life and low maintenance.
- Body to bonnet contact behind the O-ring seal eliminates bonnet seal extrusion.
- A locking device is set on stem.
- Ideal for many flow regulating services and easily convertible to a positive choke.
- The stem of adjustable choke are made of high strength alloy steel. The materials have the feature of abrasion resistance, erosion resistance and reliable serviceability.
- The valve and seat can be removed by hand, without special tools and without removal of the valve body from the line, by simply removing the bonnet.

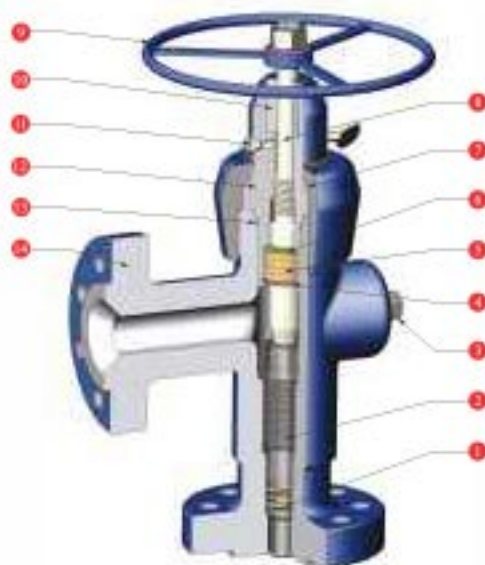
### Specifications:

|                                 | API-6A                                                   | ANSI                           |
|---------------------------------|----------------------------------------------------------|--------------------------------|
| • Basic Design and Test         | 2000, 3000, 5000, 10000, 15000, 20000 (Psi)              | 400, 600, 900, 1500, 2500 (LB) |
| • Working Pressure              | N60, N62, 1-13/16, 2-1/16, 2-9/16, 3-1/16, 3-1/8, 4-1/16 | 2, 2-1/2, 3, 4, 6, 8           |
| • Main Nominal Size(in)         | PSL1, PSL2, PSL3, PSL4                                   | PSL1, PSL2, PSL3, PSL4         |
| • Product Specification Level   | PR1, PR2                                                 | PR1, PR2                       |
| • Performance Requirement Level | AA, BB, CC, DD, EE, FF                                   | AA, BB, CC, DD, EE, FF         |
| • Material Class                | Flanged, Thread, Flanged and Thread                      | Flanged, Weld                  |
| • End Connection                |                                                          |                                |

### Parts List

| No | Name           | Material      |
|----|----------------|---------------|
| 1  | O-RING         | VITON-B       |
| 2  | SEAT           | AISI 4135     |
| 3  | DRAIN FITTING  | AISI 4140     |
| 4  | MALE ADAPTER   | ASTM A182 F6a |
| 5  | V-PACKING      | VITON         |
| 6  | FEMALE ADAPTER | ASTM A182 F6a |
| 7  | WING NUT       | AISI 4130     |
| 8  | STEM           | AISI 4135     |
| 9  | HANDWHEEL      | ASTM 47       |
| 10 | INDICATOR      | CARBON STEEL  |
| 11 | LUBRICATOR     | CARBON STEEL  |
| 12 | BONNET         | AISI 4130     |
| 13 | O-RING         | VITON-B       |
| 14 | BODY           | AISI 4130     |

Other trim and body material are available upon request.



## API 6A Positive Choke Valves

### Features:

- Body to bonnet contact behind the O-ring seal eliminates bonnet seal extrusion.
- The bean of positive choke are made of ceramic or hard alloy steel. Both have the feature of abrasion resistance, erosion resistance and reliable serviceability.
- Flow bean chamfers are available from 2/64" to 64/64", in 1/64" increments for precise regulation of flow rate.
- The choke bean may be dismantled quickly for change of beans.

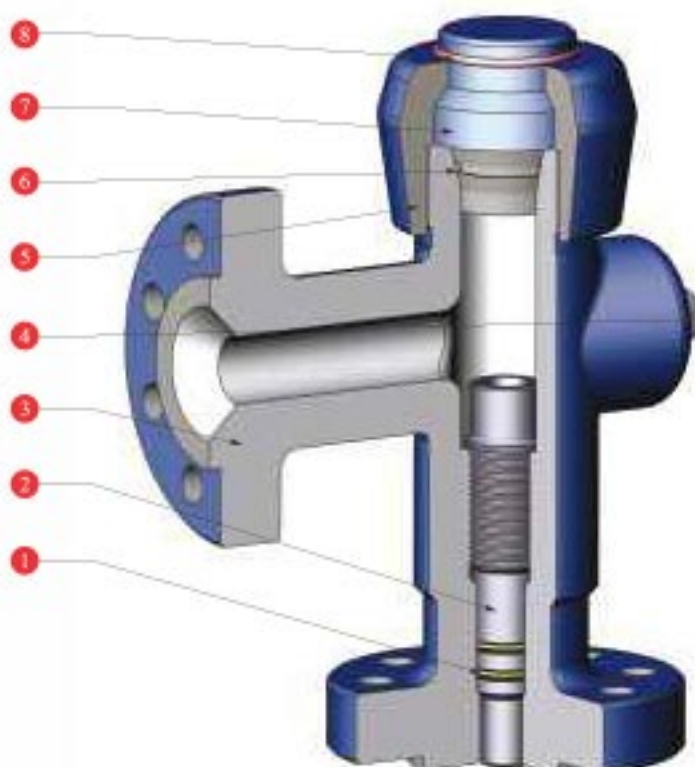
### Specifications :

|                                 |                                                       |
|---------------------------------|-------------------------------------------------------|
| • Basic Design and Test         | <b>API-6A</b>                                         |
| • Working Pressure (Psi)        | <b>2000, 3000, 5000, 10000, 15000, 20000</b>          |
| • Main Nominal Size (in)        | <b>1-13/16, 2-1/16, 2-9/16, 3-1/16, 3-1/8, 4-1/16</b> |
| • Product Specification Level   | <b>PSL1, PSL2, PSL3, PSL4</b>                         |
| • Performance Requirement Level | <b>PR1, PR2</b>                                       |
| • Material Class                | <b>AA, BB, CC, DD, EE, FF</b>                         |
| • End Connection                | <b>Flanged, Thread, Flanged and Thread</b>            |

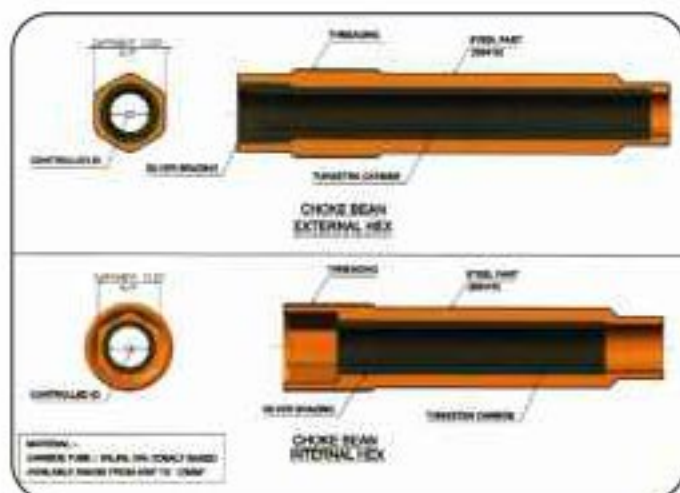
### Parts List

| No | Name          | Material    |
|----|---------------|-------------|
| 1  | O-RING        | VITON-B     |
| 2  | SEAT          | AISI 4135   |
| 3  | BODY          | AISI 4135   |
| 4  | DRAIN FITTING | AISI 4140   |
| 5  | WING NUT      | AISI 4130   |
| 6  | O-RING        | VITON-B     |
| 7  | BONNET        | AISI 4135   |
| 8  | GLAND RING    | ALLOY STEEL |

Other trim and body material are available upon request.

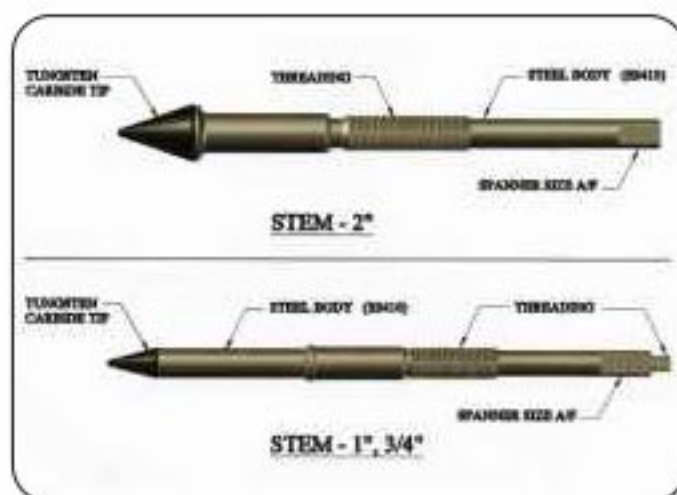


## Seat & Stem



A choke is used to control the flow of fluids and is usually mounted on or close to the christmas tree. High pressure gas/oil, with abrasive sand minerals pass through these chokes at high speed causing a rapid wear. BHT Bean Chokes have steel housings which may be nitrided and are lined with Tungsten Carbide or Zirconia Ceramic inserts, to protect them from corrosive, erosive and abrasive wear.

BHT Bean Chokes are exported all over the world and are known for their international standards. BHT manufactures a wide range of bean chokes to match 'OCT' Type FC140, 'Thronill Craver', 'Gray Tool', 'Cameron' & custom made types. These are mated with a precise diameter seat that forms the choke, through which all the abrasive/ corrosive fluids must pass. Beans are available in complete range of sizes (4/64 to 128/64) generally identified by the choke diameter stated in 64th of an inch. BHT offers Tungsten Carbide / Zirconia lined choke beans & Tungsten Carbide stems for the above makes, other custom designed flanged positive chokes, threaded adjustable chokes & stems/ seats.

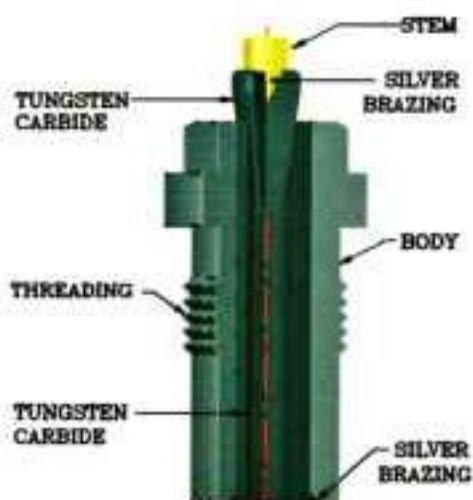


## H2 Choke Valve Material Recommendations

| API MATERIAL CLASS                                  | Body                      | Bonnet                    | Choke Trim (Stem, Seat, Bean)                           |
|-----------------------------------------------------|---------------------------|---------------------------|---------------------------------------------------------|
| AA & BB<br>General Service                          | Alloy steel               | Alloy steel               | Stainless steel or stainless steel and tungsten carbide |
| CC Non-Sour,<br>High CO <sub>2</sub>                | Stainless steel           | Stainless steel           | Stainless steel or stainless steel and tungsten carbide |
| DD & EE- 0.5 Sour,<br>Low CO <sub>2</sub> †         | Alloy steel               | Alloy steel               | Stainless steel and tungsten carbide                    |
| FF - 0.5 Sour,<br>High CO <sub>2</sub> †c           | Stainless steel           | Stainless steel           | Stainless steel and tungsten carbide                    |
| HH High H <sub>2</sub> S,<br>High CO <sub>2</sub> † | Corrosion resistant alloy | Corrosion resistant alloy | Corrosion resistant alloy and tungsten carbide          |

\*In compliance with NACE Standard MR-01-75

## Tungsten Carbide - Seat & Assembly



### H2 Choke Valve Available Sizes and Pressures

| NOMINAL SIZE, IN | Available Needle/Max. Orifice Size, in | Pressure Range, psi |
|------------------|----------------------------------------|---------------------|
| 2                | 1                                      | 2,000–10,000        |
| 2                | 1                                      | 15,000              |
| 3                | 2                                      | 2,000–10,000        |
| 4                | 3                                      | 2,000–5,000         |

## Various Types of Choke Bean



## Adapters Flanges

BHT Wellhead Flange Adapters are designed to be used in the upper most position on wellheads and therefore enables wireline and other well service operations to be performed through the wellhead into the well bore.

BHT Wellhead Flange Adapters are available in various bore sizes and with quick union connections compatible with Bowen and Otis type quick unions. Additionally, Flange / Adapters are supplied for standard or H<sub>2</sub>S service and working pressure up to 15,000 psi.



## API 6A Flanges

BHT is a manufacturer of various types of Flanges and Pipe Fittings required by the oilfield, petrochemical and different process industries. Our name is synonymous with high quality manufacturing, precision machining and unparalleled dedication to quality excellence which has kept us in the fore front of the oil industry.



**Weld Neck Flange**



**Threaded Flange**



**Blind Flange**



**Test Blind Flange**

## API 6A Ring Gaskets

### Precision Finish

- Material Stainless Steel, Low Carbon or Inconel.
- Dual Certification for low Carbon
- Full Traceability



API 6A Spec Flange Bolt & Ring Chart

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 2000 lb             | 2 1/16"            | R-23 RX-23  | 8               | 5/8"            | 4 3/4"  |
|                     | 2 9/16"            | R-26 RX-26  | 8               | 3/4"            | 5 1/4"  |
|                     | 3 1/8"             | R-31 RX-31  | 8               | 3/4"            | 5 1/2"  |
|                     | 4 1/16"            | R-37 RX-37  | 8               | 7/8"            | 6 1/4"  |
|                     | 5 1/8"             | R-41 RX-41  | 8               | 1"              | 7 1/4"  |
|                     | 7 1/16"            | R-45 RX-45  | 12              | 1"              | 7 1/2"  |
|                     | 9"                 | R-49 RX-49  | 12              | 1 1/8"          | 8 1/2"  |
|                     | 11"                | R-53 RX-53  | 16              | 1 1/4"          | 9 1/4"  |
|                     | 13 5/8"            | R-57 RX-57  | 20              | 1 1/4"          | 9 1/2"  |
|                     | 16 3/4"            | R-65 RX-65  | 20              | 1 1/2"          | 10 3/4" |
| 6BX                 | 21 1/4"            | R-73 RX-73  | 24              | 1 5/8"          | 12 1/2" |
|                     | 26 3/4"            | BX-167      | 20              | 1 3/4"          | 14 1/4" |

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 3000 lb             | 2 1/16"            | R-24 RX-24  | 8               | 7/8"            | 6"      |
|                     | 2 9/16"            | R-27 RX-27  | 8               | 1"              | 7"      |
|                     | 3 1/8"             | R-31 RX-31  | 8               | 7/8"            | 6 1/4"  |
|                     | 4 1/16"            | R-37 RX-37  | 8               | 1 1/8"          | 7 1/2"  |
|                     | 5 1/8"             | R-41 RX-41  | 8               | 1 1/4"          | 8 1/4"  |
|                     | 7 1/16"            | R-45 RX-45  | 12              | 1 1/8"          | 8 1/2"  |
|                     | 9"                 | R-49 RX-49  | 12              | 1 3/8"          | 9 1/2"  |
|                     | 11"                | R-53 RX-53  | 16              | 1 3/8"          | 10"     |
|                     | 13 5/8"            | R-57 RX-57  | 20              | 1 3/8"          | 10 3/4" |
|                     | 16 3/4"            | R-66 RX-66  | 20              | 1 5/8"          | 12 1/4" |
| 6BX                 | 20 3/4"            | R-74 RX-74  | 20              | 2"              | 15"     |
|                     | 26 3/4"            | BX-168      | 24              | 2"              | 17 1/2" |

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 5000 lb             | 2 1/16"            | R-24 RX-24  | 8               | 7/8"            | 6 1/4"  |
|                     | 2 9/16"            | R-27 RX-27  | 8               | 1"              | 7"      |
|                     | 3 1/8"             | R-35 RX-35  | 8               | 1 1/8"          | 7 3/4"  |
|                     | 4 1/16"            | R-39 RX-39  | 8               | 1 1/4"          | 8 1/2"  |
|                     | 5 1/8"             | R-44 RX-44  | 8               | 1 1/2"          | 10 3/4" |
|                     | 7 1/16"            | R-46 RX-46  | 12              | 1 3/8"          | 11 1/4" |
|                     | 9"                 | R-50 RX-50  | 12              | 1 5/8"          | 12 1/2" |
|                     | 11"                | R-54 RX-54  | 12              | 1 7/8"          | 14 1/2" |
|                     | 13 5/8"            | BX-160      | 16              | 1 5/8"          | 12 3/4" |
|                     | 16 3/4"            | BX-162      | 16              | 1 7/8"          | 14 3/4" |
| 6BX                 | 18 3/4"            | BX-163      | 20              | 2"              | 17 1/2" |
|                     | 21 1/4"            | BX-165      | 24              | 2"              | 18 3/4" |

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 10000 lb            | 1 13/16"           | BX-151      | 8               | 3/4"            | 5 1/4"  |
|                     | 2 1/16"            | BX-152      | 8               | 3/4"            | 5 1/2"  |
|                     | 2 9/16"            | BX-153      | 8               | 7/8"            | 6 1/4"  |
|                     | 3 1/16"            | BX-154      | 8               | 1"              | 7 1/4"  |
|                     | 4 1/16"            | BX-155      | 8               | 1 1/8"          | 8 1/4"  |
|                     | 5 1/8"             | BX-169      | 12              | 1 1/8"          | 9"      |
|                     | 7 1/16"            | BX-156      | 12              | 1 1/2"          | 11 3/4" |
|                     | 9"                 | BX-157      | 16              | 1 1/2"          | 13 1/4" |
|                     | 11"                | BX-158      | 16              | 1 3/4"          | 15 1/2" |
|                     | 13 5/8"            | BX-159      | 20              | 1 7/8"          | 17 3/4" |
| 6BX                 | 16 3/4"            | BX-162      | 24              | 1 7/8"          | 17 3/4" |
|                     | 18 3/4"            | BX-164      | 24              | 2 1/4"          | 22 1/2" |
| 6BX                 | 21 1/4"            | BX-166      | 24              | 2 1/2"          | 24 1/2" |

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 15000 lb            | 1 13/16"           | BX-151      | 8               | 7/8"            | 5 3/4"  |
|                     | 2 1/16"            | BX-152      | 8               | 7/8"            | 6 1/4"  |
|                     | 2 9/16"            | BX-153      | 8               | 1"              | 7"      |
|                     | 3 1/16"            | BX-154      | 8               | 1 1/8"          | 8"      |
|                     | 4 1/16"            | BX-155      | 8               | 1 3/8"          | 9 1/2"  |
|                     | 5 1/8"             | BX-169      | 12              | 1 1/2"          | 11 1/2" |
|                     | 7 1/16"            | BX-156      | 16              | 1 1/2"          | 13"     |
|                     | 9"                 | BX-157      | 16              | 1 7/8"          | 15 3/4" |
|                     | 11"                | BX-158      | 20              | 2"              | 19 1/2" |
|                     | 13 5/8"            | BX-159      | 20              | 2 1/4"          | 21"     |
| 6BX                 | 18 3/4"            | BX-164      | 20              | 3"              | 26 3/4" |

| API Pressure Rating | Flange Size & Bore | Ring Gasket | Number of Studs | Stud Dimensions |         |
|---------------------|--------------------|-------------|-----------------|-----------------|---------|
|                     |                    |             |                 | Diameter        | Length  |
| 20000 lb            | 1 13/16"           | BX-151      | 8               | 1"              | 7 3/4"  |
|                     | 2 1/16"            | BX-152      | 8               | 1 1/8"          | 8 1/2"  |
|                     | 2 9/16"            | BX-153      | 8               | 1 1/4"          | 9 1/2"  |
|                     | 3 1/16"            | BX-154      | 8               | 1 3/8"          | 10 1/4" |
|                     | 4 1/16"            | BX-155      | 8               | 1 3/4"          | 12 1/4" |
|                     | 7 1/16"            | BX-156      | 16              | 2"              | 17 3/4" |
|                     | 9"                 | BX-157      | 16              | 2 1/2"          | 21 3/4" |
|                     | 11"                | BX-158      | 16              | 2 3/4"          | 23 3/4" |
|                     | 13 5/8"            | BX-159      | 20              | 3"              | 30"     |
| 6BX                 |                    |             |                 |                 |         |

## RESILIENT SEATED WAFER DESIGN CENTRIC BUTTERFLY VALVES



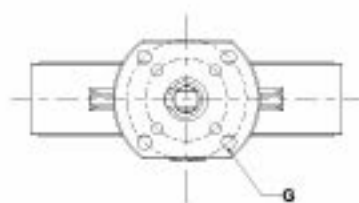
| DESIGN FEATURES            |                                                                                                                                                |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Our Size Range             | NPS 1 1/2" to 12"<br>DN 40 to 300                                                                                                              |
| Temperature Range          | -20°F to 250°F<br>-29°C to 121°C                                                                                                               |
| Maximum Operating Pressure | High Pressure PN16<br>250 psi / 17.2 bar<br>Standard Disc PN10<br>175 psi / 12 bar                                                             |
| Body Style                 | One - Piece Wafer<br>One - Piece Lug<br>One piece investment Cast Wafer<br>One piece investment Cast Lug                                       |
| Sleeve/Seat Style          | Tongue and Grooved Replaceable. The tongue and groove lock the seat in place and make the valve dead end capable.                              |
| Mounting Flange            | Our design includes gear operation, pneumatic and electrical actuators mount directly to FFC resilient seated valves. No bracket are required. |
| Leakage Rate               | Bubble tight                                                                                                                                   |

| DESIGN STANDARDS    |                           |
|---------------------|---------------------------|
| Valve Design        | API 609 (Category A)      |
|                     | IS 13095                  |
|                     | ASME B 16.34<br>BS EN-593 |
| Face-to-Face        | API 609                   |
|                     | IS 13095                  |
|                     | ISO 5752                  |
| Seat Tightness Test | API 598                   |
|                     | API 6D                    |
|                     | BS EN 12266-1             |
| Top Mounting Flange | ISO 5211                  |
|                     | ASME B16.5 Class          |
|                     | 125/150                   |
| Flange Drilling     | EN 1092-1 PN 6   10   16  |
|                     | JIS 10 K                  |
|                     | AS 2129 Table D & E       |

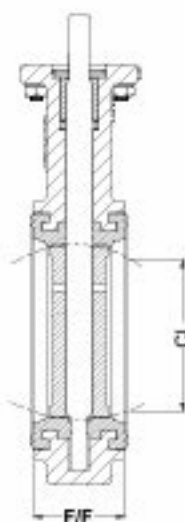
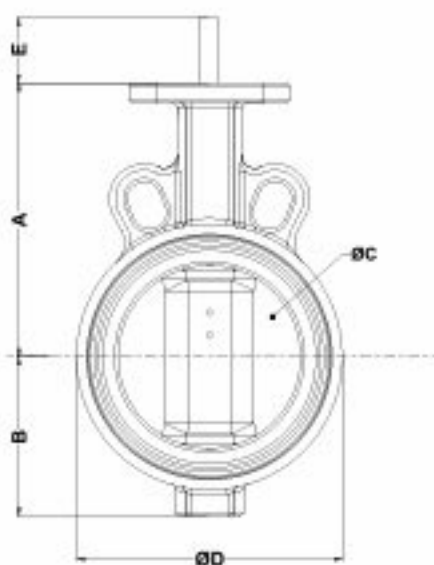
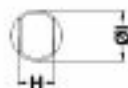
| MATERIAL AVAILABILITY |                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Shell                 | CI, SG Iron, WCB, CF8, CF3, CF8M, CF3M, Duplex, Super Duplex, Aluminum Bronze, etc.                                      |
| DISC                  | SG Iron, SS304, SS304L, SS316, SS316L, Duplex Stainless Steel 4A, Super Duplex Stainless Steel 5A, Aluminum Bronze, etc. |
| SEAT                  | EPDM, BUNA-N(Black or White), Neoprene, Viton (FKM), etc.                                                                |



FOR 2" TO 6"



FOR 8" TO 12"

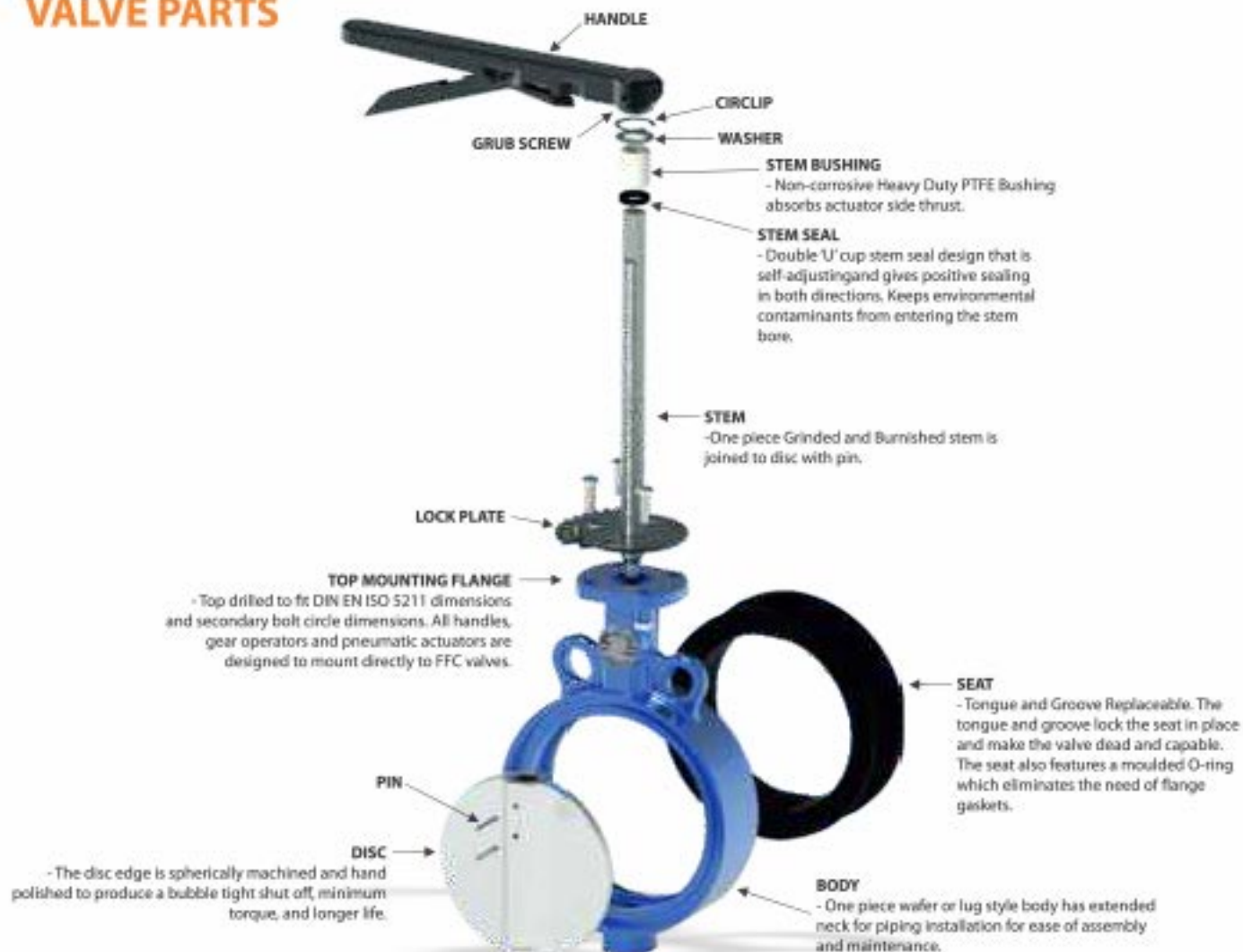


BARE SHAFT VIEW

## DIMENSIONS

| DN/NPS  | F/F | A   | B   | C   | ØD  | E    | Mounting Flange |              |          | Bolt Circle PCD |                | H  | ØI | CL     | SQ. FOR BARE VIEW (J X J) |
|---------|-----|-----|-----|-----|-----|------|-----------------|--------------|----------|-----------------|----------------|----|----|--------|---------------------------|
| MM/INCH |     |     |     |     |     |      | G               | No. of Holes | Hole Dia | ISD 7005 PCD    | ASME B16.5 PCD |    |    |        |                           |
| 40/1.5" | 33  | 86  | 46  | 41  | 71  | 30   | F5              | 4            | 7.5      | 110             | 98.4           | 10 | 14 | 20.54  | 9                         |
| 50/2"   | 43  | 114 | 58  | 53  | 93  | 29.5 | F5              | 4            | 7.5      | 125             | 120.7          | 10 | 14 | 26.16  | 9                         |
| 65/2.5" | 46  | 110 | 64  | 65  | 99  | 29.5 | F5              | 4            | 7.5      | 145             | 139.7          | 10 | 14 | 42.15  | 9                         |
| 80/3"   | 46  | 128 | 73  | 80  | 119 | 29.5 | F5              | 4            | 7.5      | 160             | 152.4          | 10 | 14 | 63.06  | 9                         |
| 100/4"  | 52  | 154 | 89  | 104 | 150 | 28   | F7              | 4            | 9        | 180             | 190.5          | 11 | 16 | 88     | 11                        |
| 125/5"  | 56  | 170 | 104 | 125 | 171 | 29   | F7              | 4            | 9        | 210             | 215.9          | 13 | 19 | 110.08 | 11                        |
| 150/6"  | 56  | 190 | 120 | 151 | 204 | 29   | F7              | 4            | 9        | 240             | 241.3          | 13 | 19 | 138    | 11                        |
| 200/8"  | 60  | 214 | 151 | 199 | 267 | 30   | F7/F10          | 4            | 9/11     | 295             | 298.5          | 16 | 22 | 187.35 | 14                        |
| 250/10" | 68  | 251 | 185 | 249 | 308 | 32   | F10/F12         | 4            | 11/14    | 350             | 362            | 20 | 28 | 240.99 | 22                        |
| 300/12" | 78  | 289 | 214 | 299 | 361 | 32   | F10/F12         | 4            | 11/14    | 400             | 431.8          | 22 | 30 | 289.68 | 22                        |

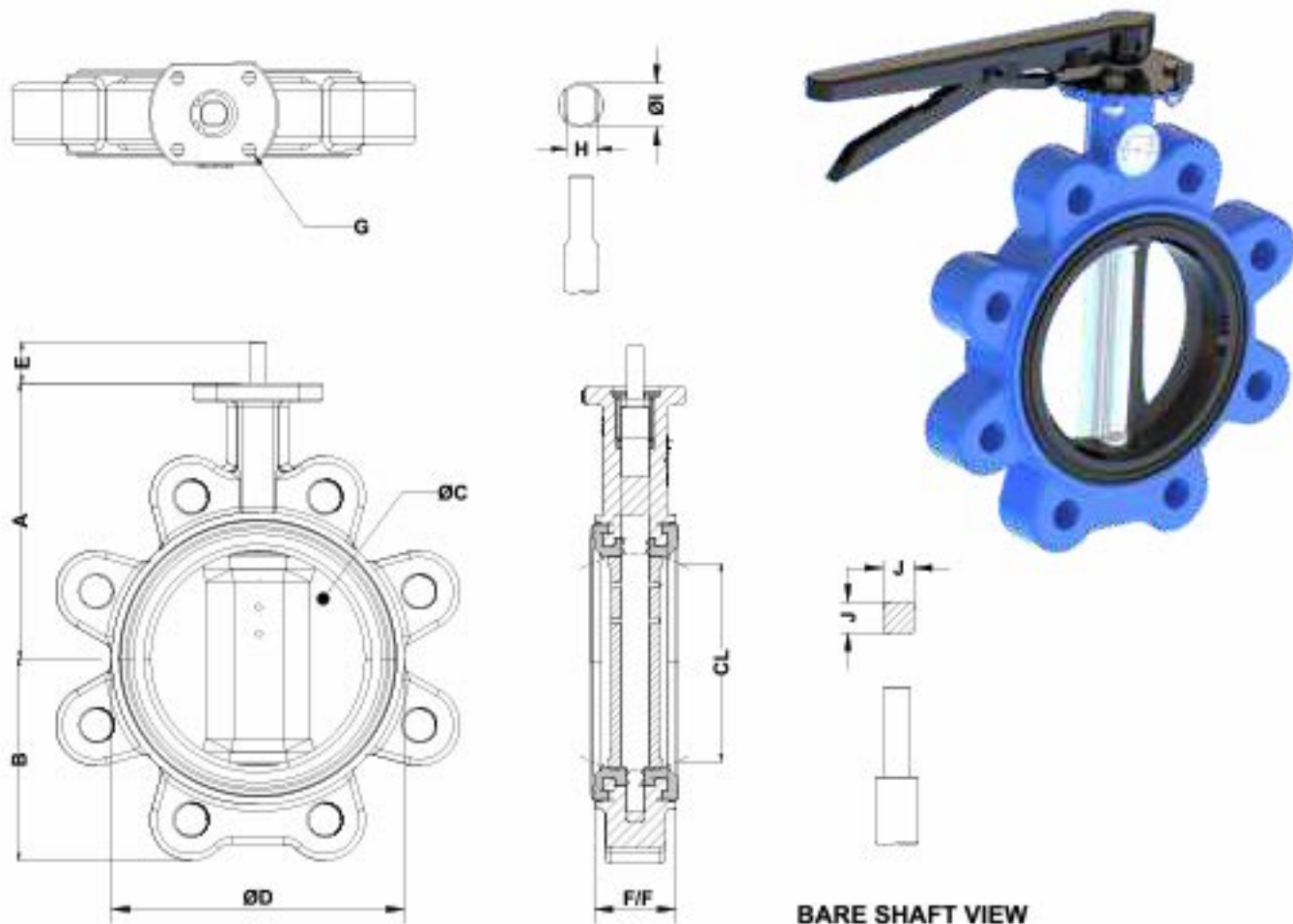
## VALVE PARTS



### SEAT SELECTION GUIDE

| SEAT TYPE                                   | TEMPERATURE RANGE |              | CHARACTERISTICS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|-------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EPDM / WHITE EPDM                           | -20°F(-19°C)      | 250°F(121°C) | EPDM (Ethylene Propylene Diene Monomer) seats have a higher resistance to abrasion, lower compression set, and higher temperature capabilities than sulphur cured seats.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| BUNA-N<br>(BLACK OR WHITE)<br>NBR / Nitrile | 0°F(-18°C)        | 212°F(100°C) | BUNA-N is the commonly used name for Nitrile synthetic rubber. Nitrile is a copolymer of acrylonitrile and butadiene. BUNA-N is sometimes referred to as NBR, Nitrile, or Hycar. BUNA-N is a general-purpose seat material particularly suitable for hydrocarbon service. BUNA-N is also available in Food grade for sanitary applications                                                                                                                                                                                                                                                     |
| VITON (FKM)                                 | 0°F(-18°C)        | 392°F(200°C) | FKM has some outstanding characteristics such as improved acid, oil, and temperature resistance over other seat materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| NEOPRENE                                    | 0°F(-18°C)        | 180°F(82°C)  | Neoprene is an all-purpose polymer with desirable characteristics including high resiliency with low compression, resistance to vegetable and animal oil, and flame resistance. This sealing material is excellent for refrigerants, ammonia and Freon, and is principally used in pulp and (non-bleached) paper lines. Neoprene is not recommended for strong oxidizing acids, chlorinated solvents, esters, ketones, aromatic hydrocarbons or hydraulic fluids. White neoprene is generally used in sanitary applications while the black grade provides better abrasion and oil resistance. |
| SILICON                                     | -40°F(-40°C)      | 356°F(180°C) | Silicone Rubber has good resistance to high temperature and low temperature and its chemical is stable. It is recommended for foods, strong acids and weak alkalis                                                                                                                                                                                                                                                                                                                                                                                                                             |

## RESILIENT SEATED LUG DESIGN CENTRIC BUTTERFLY VALVE



### DIMENSIONS

| DN/NPS  | A   | B   | C   | ØD  | F/F | E    | Mounting Flange |              |          | Bolt Circle PCD |                |                | H  | ØI | CL     | SQ. FOR BARE VIEW (J X J) |
|---------|-----|-----|-----|-----|-----|------|-----------------|--------------|----------|-----------------|----------------|----------------|----|----|--------|---------------------------|
| MM/INCH |     |     |     |     |     |      | G               | No. of Holes | Hole Dia | ISD 7005 PCD    | ASME B16.5 PCD | Threads UNC-2B |    |    |        |                           |
| 40/1.5" | 86  | 46  | 41  | 71  | 33  | 30   | F5              | 4            | 7.5      | 110             | 98.4           | 1/2-13         | 10 | 14 | 20.54  | 9                         |
| 50/2"   | 114 | 58  | 53  | 93  | 43  | 29.5 | F5              | 4            | 7.5      | 125             | 120.7          | 5/8-11         | 10 | 14 | 26.16  | 9                         |
| 65/2.5" | 110 | 64  | 65  | 99  | 46  | 29.5 | F5              | 4            | 7.5      | 145             | 139.7          | 5/8-11         | 10 | 14 | 42.15  | 9                         |
| 80/3"   | 128 | 73  | 80  | 119 | 46  | 29.5 | F5              | 4            | 7.5      | 160             | 152.4          | 5/8-11         | 10 | 14 | 63.06  | 9                         |
| 100/4"  | 154 | 89  | 104 | 150 | 52  | 28   | F7              | 4            | 9        | 180             | 190.5          | 5/8-11         | 11 | 16 | 88     | 11                        |
| 125/5"  | 170 | 104 | 125 | 171 | 56  | 29   | F7              | 4            | 9        | 210             | 215.9          | 3/4-10         | 13 | 19 | 110.08 | 11                        |
| 150/6"  | 190 | 120 | 151 | 204 | 56  | 29   | F7              | 4            | 9        | 240             | 241.3          | 3/4-10         | 13 | 19 | 138    | 11                        |
| 200/8"  | 214 | 151 | 199 | 267 | 60  | 30   | F7/F10          | 4            | 9/11     | 295             | 298.5          | 3/4-10         | 16 | 22 | 187.35 | 14                        |
| 250/10" | 251 | 185 | 249 | 308 | 68  | 32   | F10/F12         | 4            | 11/14    | 350             | 362            | 7/8-9          | 20 | 28 | 240.99 | 22                        |
| 300/12" | 289 | 214 | 299 | 361 | 78  | 32   | F10/F12         | 4            | 11/14    | 400             | 431.8          | 7/8-9          | 22 | 30 | 289.68 | 22                        |

## TORQUE INFORMATION

TORQUE RATING(NM) FOR Rubber Line Wafer Butterfly Valve:-

| VALVE     | PRESSURE | 1½" | 2" | 2½" | 3" | 4" | 5" | 6"  | 8"  | 10" | 12" |
|-----------|----------|-----|----|-----|----|----|----|-----|-----|-----|-----|
| FULL      | 3.5      | 7   | 7  | 13  | 14 | 28 | 42 | 56  | 98  | 157 | 258 |
| RATED     | 7        | 8   | 8  | 14  | 18 | 29 | 45 | 62  | 113 | 175 | 304 |
| PRESSURE  | 10       | 8   | 8  | 14  | 18 | 29 | 46 | 63  | 117 | 190 | 323 |
| VALVE BAR | 12       | 12  | 12 | 18  | 23 | 33 | 51 | 70  | 125 | 209 | 354 |
| (PSI)     | 16       | 17  | 17 | 22  | 32 | 44 | 63 | 105 | 201 | 306 | 450 |

### Installation

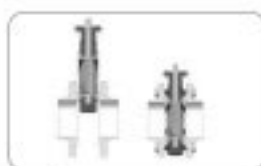
The valves shall never be installed where service conditions could exceed the valve ratings concerning pressure, temperature or operating media. Failure to comply with this warning may result in personal injury or property damage.

### Installation Instructions

1. Check the valve identification tag to make sure the pressure and valve materials are correct for the application.
2. Make sure the pipe line has sufficient support in order to prevent vibrations and load weight from damaging the valve.
3. Make sure pipes are aligned.
4. Make sure the pipe flanges and valve sealing faces are clean from any debris.
5. Spread the flanges enough to allow the butterfly valve to fit with partly opened disc (5-10 degrees).



6. Fix the valve (without any gaskets) with the bolts - without tighten them - open the disc to a fully open position and make sure it will not be in contact with the pipe.



7. Tighten each bolt crosswise according to below figure,



## OPERATING OPTIONS



LEVER OPERATED



MANUAL GEAR OPERATED



PNEUMATIC ACTUATED



ELECTRICAL ACTUATED

## PISTON VALVE

### DESIGN FEATURE

**Design and Manufacturing :** ASME B16.34/API 602/IBR-1950

**Inspection and Testing :** API 598

**Face to Face Standard for General Valves :** As per Manufacturer's Standard

**Face to Face Standard for Flanged Valves :** ASME B16.10

**Flange Standard :** ASME B16.5

**Socket Weld Standard :** ASME B16.11

**Screwed End Standard :** ASME B1.20.1 (Screwed to NPT Female, BSP Female, BSPT Female)

**Butt Weld Standard :** ASME B16.25 (Schedule 40, 80)

### Special Feature :

- Bubble Tight (ANSI leakage class VI) Shut off
- Can be used for throttling applications
- Robust and maintenance free
- Long service life
- Effective sealing area is large, as compared to the conventional linear movement valves
- Performance is not affected by presence of dirt or any other impurities in the media
- Compensates for thermal expansions with reinforced, Grafoil sealing rings and Belleville washers
- Can be easily serviced inline
- Easy to repair: The only wearing parts are sealing rings which are easily replaceable.
- Low cost of ownership (Cost of ownership includes maintenance, inventory cost in addition to the purchase cost)

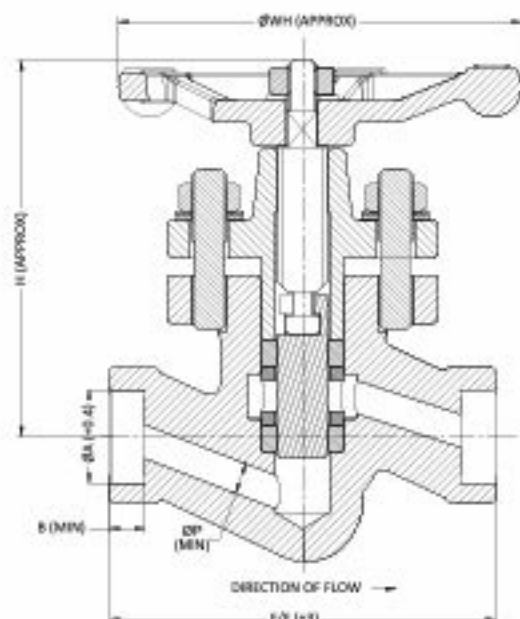


### CLASS 800# (in mm)

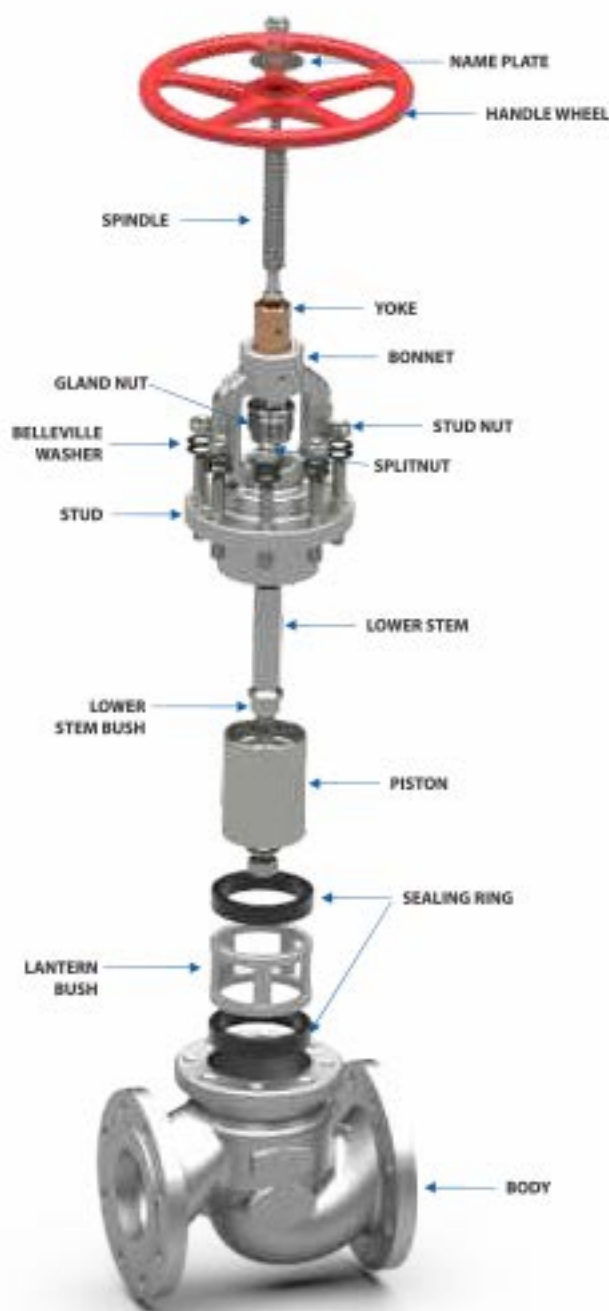
| Size  | F/F | ØP | ØA   | B(min) | ØWH | H(close) | H(open) | Weight(kg) |
|-------|-----|----|------|--------|-----|----------|---------|------------|
| 15 MM | 110 | 9  | 21.8 | 9.5    | 86  | 104      | 127     | 1.9        |
| 20 MM | 112 | 12 | 27.2 | 12.5   | 86  | 104      | 127     | 1.9        |
| 25 MM | 126 | 17 | 33.9 | 12.5   | 116 | 141      | 175     | 4          |
| 40 MM | 180 | 28 | 48.8 | 12.5   | 231 | 150      | 185     | 5.8        |

### COMPARISON BETWEEN GLOBE VALVES AND PISTON VALVES

| Parameter           | Piston Valve                                                             | Traditional Globe Valve                           |
|---------------------|--------------------------------------------------------------------------|---------------------------------------------------|
| Leakage Class       | VI                                                                       | VI                                                |
| Valve Life          | Very high compared to Globe Valve                                        | Very low due to leakage through gland occur       |
| Maintenance         | Inline Maintenance                                                       | Valve needs to be removed from line               |
| Gland Leakage       | No gland, hence no leak                                                  | Frequent                                          |
| Operation           | Valve Operate without using spanner                                      | Spanner Required for Operate valves               |
| Sealing Area        | Large                                                                    | Small                                             |
| Repair Cost         | Very Low<br>Wearing Parts are Sealing rings which are easily replaceable | High<br>Seat dwarfish during isolation            |
| Steam Leakage       | Not Possible till the ring wear out                                      | Very Common Due to friction between steam & gland |
| Steam Seal          | Sealing Ring                                                             | Gland Packing                                     |
| Equipment Down time | Low for replacing sealing ring                                           | Very high for replacing gland packing             |



## VALVE PARTS

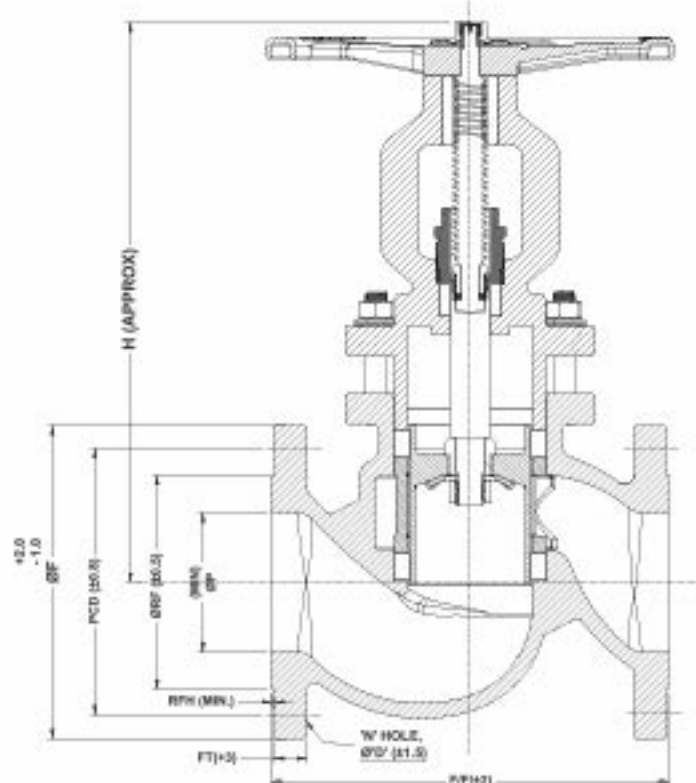


### IMPORTANT INSTRUCTIONS :

**INSTALLATION :** The valve should be installed in the direction of flow indicated on the body. The valve can be installed in any plane, except with the handwheel on the lower side.

**MAINTENANCE :** In case any leakage is observed the bonnet nuts should be tightened with the valve in the fully closed position. Tightening the bonnet nuts may be repeated as and when required until the rings are worn out and no further adjustment or tightening is possible. At this stage the sealing rings need to be replaced. No undue force should be used when tightening the nuts, as they should rotate easily with a standard spanner. Care should be taken while tightening the nuts to avoid tilting of the bonnet. Undue force should not be used to shut the valve as this may damage the spindle or the wheel.

**IMPORTANT :** Always use the recommended tightening torque. Avoid excessive tightening, as this may reduce the life of the sealing rings. Care should be taken while removing the old sealing rings for replacement.



## DIMENSIONS & WEIGHT CHART :

### CLASS 150#

| SIZE   | F/F | ØP  | ØRF   | RFH | ØF  | FT    | PCD   | N | ØD   | H(CLOSE) | H(OPEN) | ØWH | WEIGHT(KG) |
|--------|-----|-----|-------|-----|-----|-------|-------|---|------|----------|---------|-----|------------|
| 15 MM  | 108 | 12  | 34.9  | 1.5 | 90  | 8.0   | 60.3  | 4 | 15.9 | 104      | 127     | 86  | 2.3        |
| 20 MM  | 117 | 17  | 42.9  | 1.5 | 100 | 8.9   | 69.9  | 4 | 15.9 | 110      | 135     | 86  | 3.2        |
| 25 MM  | 127 | 25  | 50.8  | 1.5 | 110 | 12.9  | 79.4  | 4 | 15.9 | 142      | 176     | 116 | 4.3        |
| 32 MM  | 140 | 28  | 63.5  | 1.5 | 117 | 11.32 | 88.9  | 4 | 15.9 | 193      | 240     | 150 | 8.0        |
| 40 MM  | 165 | 40  | 73    | 1.5 | 125 | 12.7  | 98.4  | 4 | 15.9 | 193      | 240     | 150 | 9.6        |
| 50 MM  | 203 | 50  | 92.1  | 1.5 | 150 | 14.3  | 120.7 | 4 | 19.0 | 223      | 269     | 200 | 13.8       |
| 65 MM  | 216 | 65  | 104.8 | 1.5 | 180 | 15.7  | 139.7 | 4 | 19.0 | 252      | 315     | 250 | 20         |
| 80 MM  | 241 | 80  | 127   | 1.5 | 190 | 17.5  | 152.4 | 4 | 19.0 | 270      | 345     | 250 | 24.5       |
| 100 MM | 292 | 100 | 157.2 | 1.5 | 230 | 22.3  | 190.5 | 8 | 19.0 | 330      | 412     | 300 | 47.5       |
| 125 MM | 356 | 125 | 185.7 | 1.5 | 254 | 22.5  | 215.9 | 8 | 22.2 | 495      | 615     | 400 | 80         |
| 150 MM | 406 | 152 | 215.9 | 1.5 | 280 | 23.9  | 251.3 | 8 | 22.2 | 495      | 615     | 400 | 88         |
| 200 MM | 495 | 200 | 269.9 | 1.5 | 343 | 26.9  | 298.4 | 8 | 22.2 | 575      | 720     | 400 | 152        |

### CLASS 300#

| SIZE   | F/F | ØP  | ØRF   | RFH | ØF  | FT   | PCD   | N  | ØD   | H(CLOSE) | H(OPEN) | ØWH | WEIGHT(KG) |
|--------|-----|-----|-------|-----|-----|------|-------|----|------|----------|---------|-----|------------|
| 15 MM  | 152 | 12  | 34.9  | 1.5 | 95  | 12.5 | 66.7  | 4  | 15.9 | 104      | 127     | 86  | 2.9        |
| 20 MM  | 178 | 17  | 42.9  | 1.5 | 115 | 14.2 | 82.6  | 4  | 15.9 | 107      | 132     | 86  | 5.1        |
| 25 MM  | 203 | 25  | 50.8  | 1.5 | 125 | 15.9 | 88.9  | 4  | 19   | 142      | 176     | 116 | 6.8        |
| 32 MM  | 216 | 28  | 63.5  | 1.5 | 133 | 19.1 | 98.6  | 4  | 19   | 193      | 240     | 150 | 11         |
| 40 MM  | 229 | 40  | 73    | 1.5 | 155 | 19.1 | 114.3 | 4  | 22.2 | 193      | 240     | 150 | 13.7       |
| 50 MM  | 267 | 50  | 92.1  | 1.5 | 165 | 20.7 | 127   | 8  | 19.0 | 223      | 269     | 200 | 13.8       |
| 80 MM  | 318 | 80  | 127   | 1.5 | 210 | 27   | 168.3 | 8  | 22.2 | 270      | 345     | 250 | 32         |
| 100 MM | 356 | 100 | 157.2 | 1.5 | 255 | 30.2 | 200   | 8  | 22.2 | 412      | 496     | 300 | 62         |
| 125 MM | 400 | 125 | 185.7 | 1.5 | 279 | 33.3 | 235   | 8  | 22.2 | 495      | 615     | 400 | 95         |
| 150 MM | 444 | 150 | 215.9 | 1.5 | 320 | 35.0 | 269.9 | 12 | 22.2 | 495      | 615     | 400 | 105        |
| 200 MM | 559 | 200 | 269.7 | 1.5 | 381 | 39.6 | 330.0 | 12 | 25.4 | 575      | 750     | 400 | 185        |

## TWO PIECE FLANGE END BALL VALVE

### DESIGN FEATURE :

**Design and Manufacturing :** BS EN ISO 17292 (CLASS 150)

**Inspection and Testing :** ISO 5208 / API 598

**Face to Face Standard :** ASME B16.10

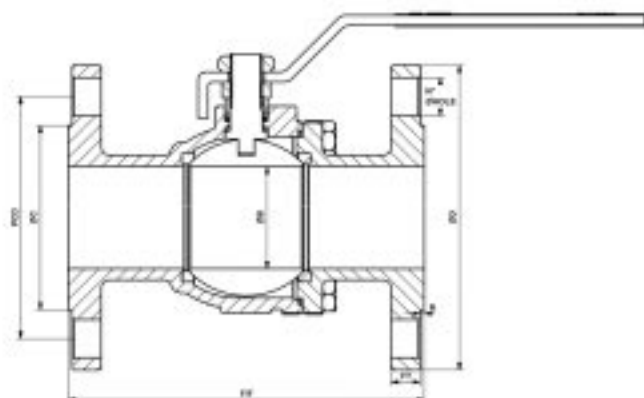
**Closer Member :** Solid / Hollow Ball

**Flange Standard :** ASME B16.5

**Structure Feature :** 2 Piece, Soft Seated, Investment Casting, Full Bore

**Shell Materials :** WCB, LCB, CF8, CF3, CF8M, CF3M, Duplex, Super Duplex, etc.

**Special Features :** Locking Arrangement, Mounting Pad, Antistatic,  
Stem Extension, Fire safe, Pneumatic Operated, etc.



### DIMENSION CHART

| SIZE |        | F/F<br>(±1.5) | ØB   | FT<br>(Min.) | ØD  | ØC    | R   | FLANGE DRILLING |       |        |
|------|--------|---------------|------|--------------|-----|-------|-----|-----------------|-------|--------|
| MM   | INCH   |               |      |              |     |       |     | PCD             | ØHOLE | N of H |
| 15   | 1/2"   | 108           | 13   | 7.9          | 89  | 35.1  | 1.8 | 60.5            | 15.9  | 4      |
| 20   | 3/4"   | 117           | 19   | 8.6          | 99  | 42.9  | 1.8 | 69.8            | 15.9  | 4      |
| 25   | 1"     | 127           | 25   | 9.7          | 108 | 50.8  | 1.8 | 79.2            | 15.9  | 4      |
| 32   | 1 3/4" | 140           | 32   | 11.2         | 117 | 63.5  | 1.8 | 88.9            | 15.9  | 4      |
| 40   | 1 1/2" | 165           | 38   | 12.7         | 127 | 73    | 1.8 | 98.6            | 15.9  | 4      |
| 50   | 2"     | 178           | 50.5 | 14.2         | 152 | 91.9  | 1.8 | 120.6           | 19.1  | 4      |
| 65   | 2 1/2" | 191           | 64   | 15.7         | 178 | 104.6 | 1.8 | 139.7           | 19.1  | 4      |
| 80   | 3"     | 203           | 76   | 17.5         | 190 | 127   | 1.8 | 152.4           | 19.1  | 4      |
| 100  | 4"     | 229           | 101  | 22.4         | 229 | 157.2 | 1.8 | 190.5           | 19.1  | 8      |
| 150  | 6"     | 267           | 151  | 23.9         | 279 | 215.9 | 1.8 | 241.3           | 22.22 | 8      |

## THREE PIECE FLANGED END BALL VALVE

### DESIGN FEATURE :

**Design and Manufacturing :** BS EN ISO 17292 (CLASS 150)

**Inspection and Testing :** ISO 5208 / API 598

**Face to Face Standard :** ASME B 16.10

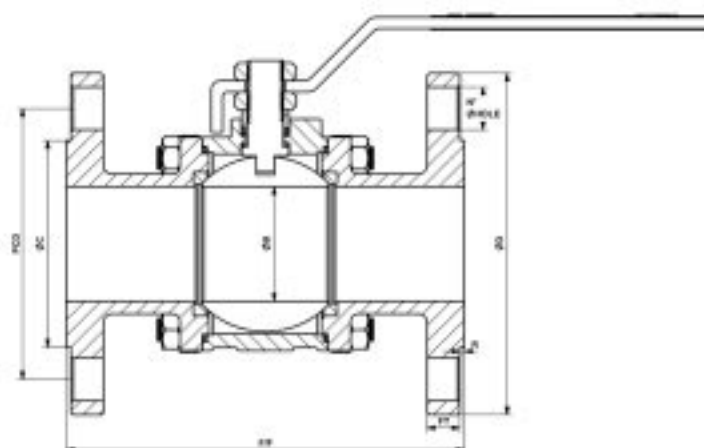
**Closer member :** Solid / Hollow Ball

**Flange Standard :** ASME B16.5

**Structure Feature :** 3 Piece Soft Seated, Lever Operated, Investment Casting, Full Bore.

**Shell Materials :** WCB, LCB, CF8, CF3, CF8M, CF3M, Duplex, Super Duplex, etc.

**Special Features :** Locking Arrangement, Mounting Pad, Antistatic, Stem Extension, Fire safe, Pneumatic Operated.



### DIMENSION CHART

| SIZE |        | F/F<br>(±1.5) | ØB   | FT<br>(Min.) | ØD  | ØC    | R   | FLANGE DRILLING |       |        |
|------|--------|---------------|------|--------------|-----|-------|-----|-----------------|-------|--------|
| MM   | INCH   |               |      |              |     |       |     | PCD             | ØHOLE | N of H |
| 15   | 1/2"   | 108           | 13   | 7.9          | 89  | 35.1  | 1.8 | 60.5            | 15.9  | 4      |
| 20   | 3/4"   | 117           | 19   | 8.6          | 99  | 42.9  | 1.8 | 69.8            | 15.9  | 4      |
| 25   | 1"     | 127           | 25   | 9.7          | 108 | 50.8  | 1.8 | 79.2            | 15.9  | 4      |
| 32   | 1 3/4" | 140           | 32   | 11.2         | 117 | 63.5  | 1.8 | 88.9            | 15.9  | 4      |
| 40   | 1 1/2" | 165           | 38   | 12.7         | 127 | 73    | 1.8 | 98.6            | 15.9  | 4      |
| 50   | 2"     | 178           | 50.5 | 14.2         | 152 | 91.9  | 1.8 | 120.6           | 19.1  | 4      |
| 65   | 2 1/2" | 191           | 64   | 15.7         | 178 | 104.6 | 1.8 | 139.7           | 19.1  | 4      |
| 80   | 3"     | 203           | 76   | 17.5         | 190 | 127   | 1.8 | 152.4           | 19.1  | 4      |
| 100  | 4"     | 229           | 101  | 22.4         | 229 | 157.2 | 1.8 | 190.5           | 19.1  | 8      |
| 150  | 6"     | 267           | 151  | 23.9         | 279 | 215.9 | 1.8 | 241.3           | 22.22 | 8      |

## THREE PIECE SCREWED END

### DESIGN FEATURE :

**Design and Manufacturing :** BS EN ISO 17292-1 (CLASS 150)

**Inspection and Testing :** ISO 5208 / API 598

**Face to Face Standard :** As per Manufacturer's Standard

**Screwed End Standard :** ASME B1.20.1 (NPT/BSP/BSPT)

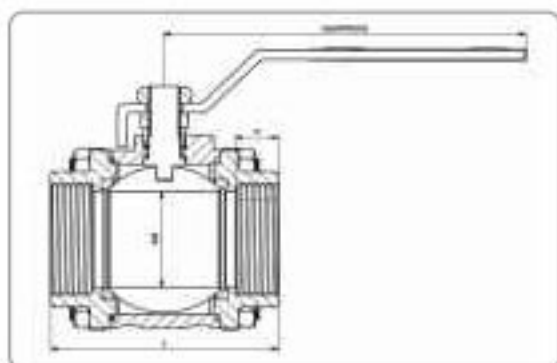
**Socket weld End Standard :** ASME B16.11

**Closer member :** Solid / Hollow Ball

**Structure Feature :** 3 Piece, Soft Seated, Lever Operated,  
Investment Casting, Full Bore

**Shell Materials :** WCB, LCB, CF8, CF3, CF8M, CF3M, Duplex,  
Super Duplex, etc.

**Special Features :** Locking Arrangement, Mounting Pad,  
Antistatic, Stem Extension, Fire safe, Pneumatic Operated, etc.



| SIZE |        | L<br>(±3) | ØB<br>(Min.) | D<br>(Approx) | H<br>(Min.) |
|------|--------|-----------|--------------|---------------|-------------|
| MM   | INCH   |           |              |               |             |
| 15   | 1/2"   | 63        | 13           | 115           | 14          |
| 20   | 3/4"   | 72        | 19           | 115           | 15.5        |
| 25   | 1"     | 87        | 25           | 142           | 20          |
| 40   | 1 1/2" | 114       | 38           | 170           | 18.25       |
| 50   | 2"     | 132       | 50.5         | 170           | 23          |
| 65   | 2 1/2" | 142       | 64           | 240           | 25.5        |
| 80   | 3"     | 158       | 76           | 270           | 26          |

## ONE PIECE SCREWED END

### DESIGN FEATURE :

**Design and Manufacturing :** BS EN ISO 17292-1 (CLASS 150)

**Inspection and Testing :** ISO 5208 / API 598

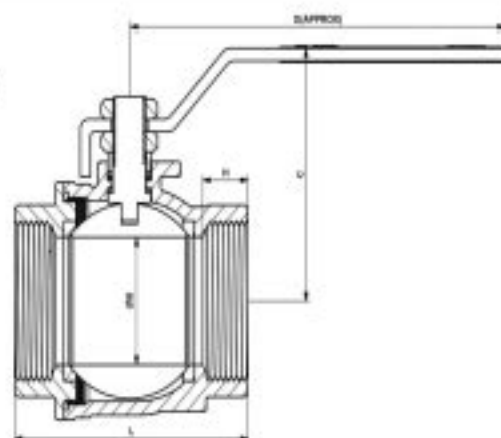
**Face to Face Standard :** As per Manufacturer's Standard

**Screwed End Standard :** ASME B1.20.1 (NPT/BSP)

**Closer member :** Solid / Hollow Ball

**Structure Feature :** 1 Piece, Soft Seated, Lever Operated,  
Investment Casting, Full Bore

**Shell Materials :** WCB, LCB, CF8, CF3, CF8M, CF3M,  
Duplex, Super Duplex, etc.



| SIZE |        | L<br>(±3) | ØB<br>(Min.) | C<br>(±3) | D<br>(Approx) | H<br>(Min.) |
|------|--------|-----------|--------------|-----------|---------------|-------------|
| MM   | INCH   |           |              |           |               |             |
| 15   | 1/2"   | 58        | 13           | 47        | 115           | 13.5        |
| 20   | 3/4"   | 68        | 19           | 55        | 115           | 15          |
| 25   | 1"     | 76        | 25           | 70        | 142           | 16.5        |
| 40   | 1 1/2" | 98        | 38           | 95        | 170           | 17.8        |
| 50   | 2"     | 116       | 50.5         | 105       | 170           | 21          |

## FORGED STEEL THREE PIECE BALL VALVE

### DESIGN FEATURE :

**Design and Manufacturing :** BS EN ISO 17292 (CLASS 600 & 800)

**Inspection and Testing :** BS EN 12266-1/ISO 5208-A/API 598

**Face to Face Standard :** As per Manufacturer's Standard

**Screwed End Standard :** ASME B1.20.1 (NPT/BSP/BSPT)

**Socket weld End Standard :** ASME B16.11

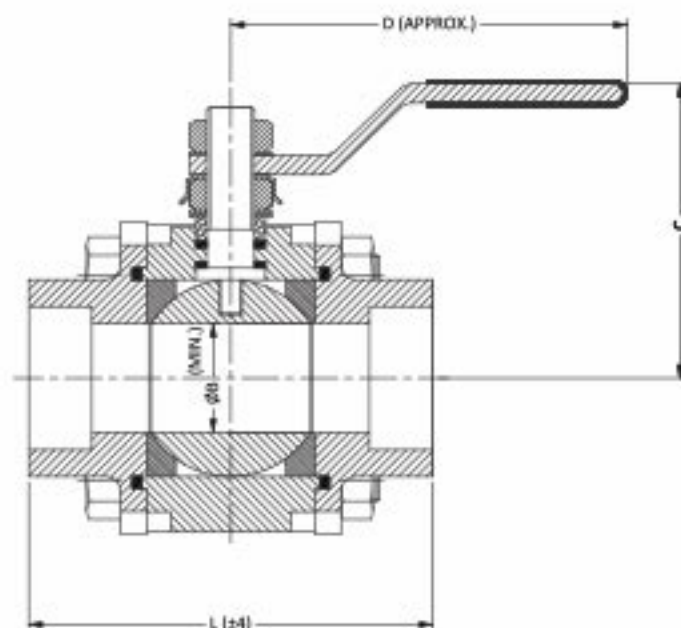
**Butt weld End Standard :** ASME B 16.25

**Closer member :** Solid Ball

**Structure Feature :** 3 Piece, Soft Seated, Lever Operated, Forged steel,  
Reduced Bore, Full Bore

**Shell Materials :** A105, F304/L, F316/L, F51, F55, F60, etc.

**Special Features :** Locking Arrangement, Antistatic, Stem Extension,  
Fire safe, Nipple Extension, Position Indicator, etc.



### BALL VALVE SOCKET/SCREWED DIMENSION CHART

| CLASS 600/800 REDUCED BORE |        |           |             |    |     |            | CLASS 600/800 FULL BORE |        |           |             |    |     |            |
|----------------------------|--------|-----------|-------------|----|-----|------------|-------------------------|--------|-----------|-------------|----|-----|------------|
| SIZE                       |        | L<br>(±3) | ØB<br>(Min) | C  | D   | WT<br>(KG) | SIZE                    |        | L<br>(±3) | ØB<br>(Min) | C  | D   | WT<br>(KG) |
| MM                         | INCH   |           |             |    |     |            | MM                      | INCH   |           |             |    |     |            |
| 15                         | 1/2"   | 68        | 10          | 38 | 128 | 0.7        | 15                      | 1/2"   | 73        | 14          | 40 | 128 | 1          |
| 20                         | 3/4"   | 73        | 14          | 40 | 128 | 1          | 20                      | 3/4"   | 96        | 20          | 53 | 155 | 1.9        |
| 25                         | 1"     | 96        | 20          | 53 | 155 | 1.9        | 25                      | 1"     | 103       | 25          | 56 | 165 | 2.5        |
| 40                         | 1 1/2" | 116       | 30.5        | 75 | 200 | 3.3        | 40                      | 1 1/2" | 128       | 37.3        | 80 | 200 | 4.7        |
| 50                         | 2"     | 128       | 37.3        | 80 | 200 | 4.7        | 50                      | 2"     | 142       | 50          | 90 | 200 | 6.5        |

## FORGED STEEL GATE VALVE

### DESIGN FEATURE :

**Design and Manufacturing :** API 602 / BS EN ISO 15761

**Inspection and Testing :** API 598

**Socket Weld Standard :** ASME B 16.11

**Screwed End Standard :** ASME B1.20.1

**Butt Weld Standard :** ASME B 16.25

**Flange Standard :** ASME B16.5

**Face To Face for General Valves :** As per Manufacturer's Standard

**Face To Face for Flanged Valves :** ASME B 16.10

**Material Standard :** ASTM, A105, ASTM A182 GR.F304,  
F304L, F316, F316L, F51, F55, F60, etc.

**Special Feature :** Locking arrangement, Stem extension, Nipple  
Extension, etc.



## DIMENSION CHART

### CLASS 150# (Flange End)

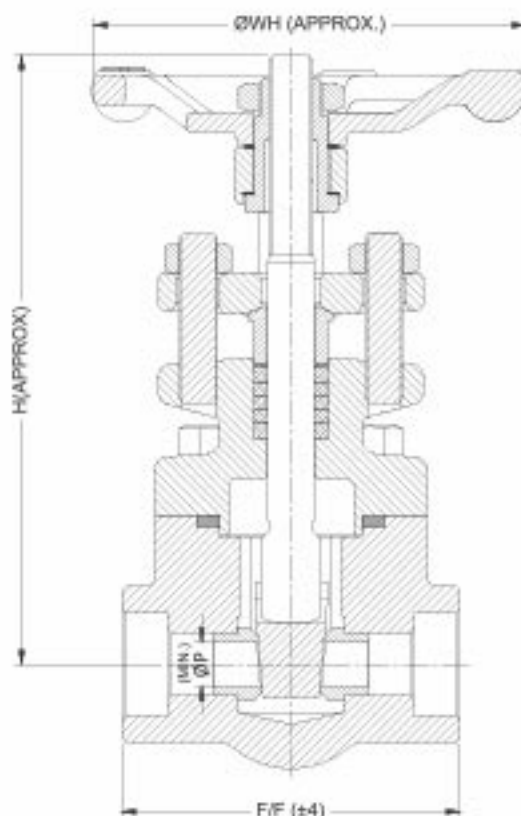
| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 108 | 90  | 9.6  | 15.8 | 2.6    |
| 20MM | 117 | 100 | 11.2 | 21   | 3.5    |
| 25MM | 127 | 110 | 12.7 | 26.7 | 5.1    |
| 40MM | 165 | 125 | 15.9 | 41   | 9.3    |
| 50MM | 178 | 150 | 17.5 | 52.5 | 15.0   |

### CLASS 300# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 140 | 95  | 12.7 | 15.8 | 3.2    |
| 20MM | 152 | 115 | 14.3 | 21   | 4.7    |
| 25MM | 165 | 125 | 15.9 | 26.7 | 6.5    |
| 40MM | 190 | 155 | 19.1 | 41   | 12.1   |
| 50MM | 216 | 165 | 20.7 | 52.5 | 17.2   |

### CLASS 600# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 165 | 95  | 14.3 | 15.8 | 3.6    |
| 20MM | 190 | 115 | 15.9 | 21   | 5.1    |
| 25MM | 216 | 125 | 17.5 | 26.7 | 7.3    |
| 40MM | 241 | 155 | 22.3 | 41   | 13.7   |
| 50MM | 292 | 165 | 25.4 | 52.5 | 20     |



## SOCKET / SCREWED END

### CLASS 800#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 87  | 9  | 146  | 131  | 90  | 1.65   |
| 20MM | 92  | 12 | 150  | 135  | 90  | 1.92   |
| 25MM | 106 | 17 | 184  | 163  | 116 | 3.15   |
| 40MM | 127 | 28 | 238  | 205  | 150 | 6.25   |
| 50MM | 142 | 36 | 282  | 236  | 150 | 10.4   |

### CLASS 1500#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 92  | 9  | 150  | 135  | 90  | 2.25   |
| 20MM | 106 | 12 | 178  | 163  | 116 | 3.30   |
| 25MM | 127 | 17 | 226  | 205  | 150 | 7.3    |
| 40MM | 142 | 28 | 269  | 236  | 150 | 11     |
| 50MM | 172 | 36 | 310  | 270  | 200 | 14.5   |

### CLASS 2500#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 106 | 9  | 178  | 163  | 116 | 3.45   |
| 20MM | 127 | 12 | 220  | 205  | 150 | 6.85   |
| 25MM | 142 | 17 | 236  | 236  | 150 | 11.5   |
| 40MM | 172 | 28 | 270  | 270  | 200 | 15.0   |
| 50MM | -   | -  | -    | -    | -   | -      |

## FORGED STEEL GLOBE VALVE

### DESIGN FEATURE :

**Design and Manufacturing :** API 602 / BS EN ISO 15761

**Inspection and Testing :** API 598

**Socket Weld Standard :** ASME B 16.11

**Screwed End Standard :** ASME B1.20.1

**Butt Weld Standard :** ASME B 16.25

**Flange Standard :** ASME B16.5

**Face To Face for General Valves :** As per Manufacturer's Standard

**Face To Face for Flanged Valves :** ASME B 16.10

**Special Feature :** Locking arrangement, Stem extension, Nipple Extension, etc.



### DIMENSION CHART

#### CLASS 150# (Flange End)

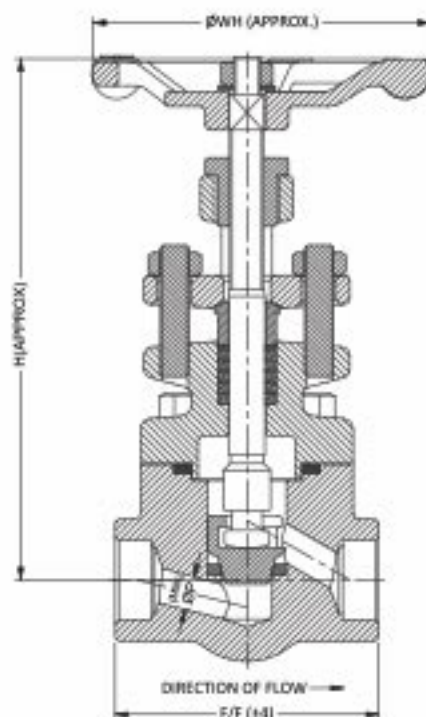
| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 108 | 90  | 9.6  | 15.8 | 2.60   |
| 20MM | 117 | 100 | 11.2 | 21   | 3.50   |
| 25MM | 127 | 110 | 12.7 | 26.7 | 5.00   |
| 40MM | 165 | 125 | 15.9 | 41   | 9.50   |
| 50MM | 203 | 150 | 17.5 | 52.5 | 15.30  |

#### CLASS 300# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 152 | 95  | 12.7 | 15.8 | 3.20   |
| 20MM | 178 | 115 | 14.3 | 21   | 4.70   |
| 25MM | 203 | 125 | 15.9 | 26.7 | 6.80   |
| 40MM | 229 | 155 | 19.1 | 41   | 12.50  |
| 50MM | 267 | 165 | 20.7 | 52.5 | 17.90  |

#### CLASS 600# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 165 | 95  | 14.3 | 15.8 | 3.60   |
| 20MM | 190 | 115 | 15.9 | 21   | 5.10   |
| 25MM | 216 | 125 | 17.5 | 26.7 | 7.20   |
| 40MM | 241 | 155 | 22.3 | 41   | 13.50  |
| 50MM | 292 | 165 | 25.4 | 52.5 | 19.90  |



### SOCKET / SCREWED END

#### CLASS 800#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 87  | 9  | 148  | 141  | 90  | 1.70   |
| 20MM | 92  | 12 | 152  | 145  | 90  | 2.00   |
| 25MM | 106 | 17 | 186  | 172  | 116 | 3.20   |
| 40MM | 127 | 25 | 236  | 215  | 150 | 6.40   |
| 50MM | 142 | 29 | 279  | 250  | 150 | 10.60  |

#### CLASS 1500#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 92  | 8  | 152  | 145  | 90  | 2.30   |
| 20MM | 106 | 9  | 183  | 169  | 116 | 3.35   |
| 25MM | 127 | 14 | 231  | 210  | 150 | 6.65   |
| 40MM | 142 | 25 | 273  | 244  | 150 | 11.20  |
| 50MM | 172 | 27 | 321  | 297  | 200 | 14.50  |

#### CLASS 2500#

| SIZE | F/F | ØP | H(O) | H(C) | ØHW | WT(KG) |
|------|-----|----|------|------|-----|--------|
| 15MM | 106 | 7  | 183  | 169  | 116 | 4.00   |
| 20MM | 127 | 8  | 228  | 207  | 150 | 7.00   |
| 25MM | 142 | 12 | 268  | 239  | 150 | 11.70  |
| 40MM | 172 | 22 | 321  | 297  | 200 | 15.00  |
| 50MM | -   | -  | -    | -    | -   | -      |

## FORGED STEEL LIFT CHECK VALVE (NRV)

### DESIGN FEATURE :

**Design and Manufacturing :** API 602 / BS EN ISO 15761

**Inspection and Testing :** API 598

**Socket Weld Standard :** ASME B 16.11

**Screwed End Standard :** ASME B1.20.1

**Butt Weld Standard :** ASME B 16.25

**Flange Standard :** ASME B16.5

**Face To Face for General Valves :** As per Manufacturer's Standard

**Face To Face for Flanged Valves :** ASME B 16.10

**Special Feature :** Nipple Extension



## DIMENSION CHART

### CLASS 150# (Flange End)

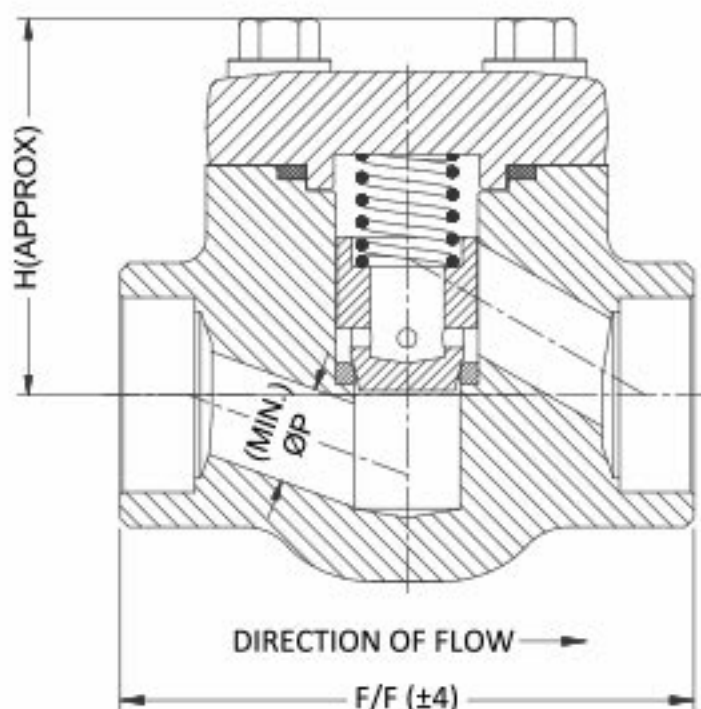
| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 108 | 90  | 9.6  | 15.8 | 2      |
| 20MM | 117 | 100 | 11.2 | 21   | 2.9    |
| 25MM | 127 | 110 | 12.7 | 26.7 | 4.2    |
| 40MM | 165 | 125 | 15.9 | 41   | 7.9    |
| 50MM | 203 | 150 | 17.5 | 52.5 | 13.4   |

### CLASS 300# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 152 | 95  | 12.7 | 15.8 | 2.8    |
| 20MM | 178 | 115 | 14.3 | 21   | 4      |
| 25MM | 203 | 125 | 15.9 | 26.7 | 6      |
| 40MM | 229 | 155 | 19.1 | 41   | 9.3    |
| 50MM | 267 | 165 | 20.7 | 52.5 | 16     |

### CLASS 600# (Flange End)

| SIZE | F/F | ØF  | FT   | ØA   | WT(KG) |
|------|-----|-----|------|------|--------|
| 15MM | 165 | 95  | 14.3 | 15.8 | 3      |
| 20MM | 190 | 115 | 15.9 | 21   | 4.2    |
| 25MM | 216 | 125 | 17.5 | 26.7 | 6.4    |
| 40MM | 241 | 155 | 22.3 | 41   | 11.9   |
| 50MM | 292 | 165 | 25.4 | 52.5 | 18     |



## SOCKET / SCREWED END

### CLASS 800#

| SIZE | F/F | ØP | H   | WT(KG) |
|------|-----|----|-----|--------|
| 15MM | 87  | 9  | 53  | 1      |
| 20MM | 92  | 12 | 56  | 1.3    |
| 25MM | 106 | 17 | 66  | 2.2    |
| 40MM | 127 | 25 | 86  | 4.7    |
| 50MM | 142 | 29 | 104 | 8.2    |

### CLASS 1500#

| SIZE | F/F | ØP | H   | WT(KG) |
|------|-----|----|-----|--------|
| 15MM | 92  | 8  | 56  | 1.5    |
| 20MM | 106 | 9  | 66  | 2.5    |
| 25MM | 127 | 14 | 86  | 5.6    |
| 40MM | 142 | 25 | 104 | 9.4    |
| 50MM | 172 | 27 | 120 | 11     |

### CLASS 2500#

| SIZE | F/F | ØP | H   | WT(KG) |
|------|-----|----|-----|--------|
| 15MM | 106 | 7  | 66  | 2.9    |
| 20MM | 127 | 8  | 86  | 6.4    |
| 25MM | 142 | 12 | 104 | 10.8   |
| 40MM | 172 | 22 | 120 | 11.5   |
| 50MM | -   | -  | -   | -      |

## CASTING/FORGING/BARSTOCK MATERIAL GRADES

| DESCRIPTION     | UNS GRADE       | FORGING    | CASTING     | BARSTOCK               |
|-----------------|-----------------|------------|-------------|------------------------|
| Carbon Steel    | K30504          | A105       | A216 WBC    | A105                   |
| Alloy Steel     | K41545          | A182 F5    | A217 C5     | A182 F5                |
|                 | K11597          | A182 F11   | A217 WC6    | A739 B11               |
|                 | K21590          | A182 F22   | A217 WC9    | A739 B22               |
|                 | K90941          | A182 F9    | A217 WC6    | A182 F9                |
| Stainless Steel | S30400          | A182 F304  | A351 CF8    | A276 or A479 304       |
|                 | S30403          | A182 F304L | A351 CF3    | A276 or A479 304L      |
|                 | S31600          | A182 F316  | A351 CF8M   | A276 or A479 316       |
|                 | S31603          | A182 F316L | A351 CF3M   | A276 or A479 316L      |
|                 | S32100          | A182 F321  | -           | A276 or A479 321       |
|                 | S34700          | A182 F347  | A351 CF8C   | A276 or A479 347       |
| Duplex          | S13803          | A182 F51   | A890 Gr. 4A | A276 or A479 S31803    |
| Super Duplex    | S32750 or 32760 | A182 F53   | A890 Gr. 6A | A276/A479 S32750 or 60 |

## TEST PRESSURE CHART

| VALVE RATING | SHELL HYDRO |       | SEAT CLOSURE HYDRO |       | BACKSEAT HYDRO |       | SEAT CLOSURE PNEUMATIC |     |
|--------------|-------------|-------|--------------------|-------|----------------|-------|------------------------|-----|
|              | Psi         | Bar   | Psi                | Bar   | Psi            | Bar   | Psi                    | Bar |
| PN 6         | 132         | 9     | 132                | 9.1   | 97             | 6.6   | 100                    | 7.0 |
| PN 10        | 219         | 15    | 219                | 15    | 161            | 11    | 100                    | 7.0 |
| PN 16        | 350         | 24    | 350                | 24    | 256            | 17.6  | 100                    | 7.0 |
| PN 20        | 437         | 30    | 437                | 30    | 320            | 22    | 100                    | 7.0 |
| PN 25        | 545         | 37.5  | 363                | 25    | 399            | 27.5  | 100                    | 7.0 |
| 150          | 450         | 31.0  | 325                | 22.4  | 325            | 22.4  | 100                    | 7.0 |
| 300          | 1125        | 77.6  | 825                | 56.9  | 825            | 56.9  | 100                    | 7.0 |
| 600          | 2225        | 153.4 | 1650               | 113.8 | 1650           | 113.8 | 100                    | 7.0 |
| 800          | 3000        | 206.8 | 2200               | 151.4 | 2200           | 151.7 | 100                    | 7.0 |
| 900          | 3375        | 232.7 | 2475               | 170.6 | 2475           | 170.6 | 100                    | 7.0 |
| 1500         | 5625        | 387.8 | 4125               | 284.4 | 4125           | 284.4 | 100                    | 7.0 |
| 2500         | 9375        | 646.4 | 6875               | 473.9 | 6875           | 473.9 | 100                    | 7.0 |

## COEFFICIENT VALUE FOR BUTTERFLY VALVE

Valve Flow Coefficient (Cv) is the flow capability of a control valve at fully open conditions relative to the pressure drop across the valve. It is defined as the Volume of water (GPM in the US) at 60° F that will flow through a fully open valve with a pressure differential of 1 psi across the valve. It is useful to know how to calculate Cv because it is the standardized valve sizing and selection method for control valves used throughout the HVAC Industry.

The equation used to find Cv is

$$Cv = \frac{Q \cdot \sqrt{G}}{\sqrt{\Delta P}} \quad \Delta P = \left[ \frac{Q \cdot \sqrt{G}}{Cv} \right]^2$$

Q = Flow in Gallons per Minute  
G = Specific gravity of fluid (estimated as 1 for water systems)  
ΔP = 1

| DN / NPS | VALVE OPENING POSITION |     |      |      |      |
|----------|------------------------|-----|------|------|------|
|          | 10°                    | 30° | 50°  | 70°  | 90°  |
| 40/1½"   | 1.2                    | 21  | 35   | 92   | 177  |
| 50/2"    | 1.5                    | 26  | 44   | 115  | 221  |
| 65/2"    | 1.3                    | 34  | 57   | 150  | 287  |
| 80/3"    | 3.20                   | 56  | 99   | 225  | 505  |
| 100/4"   | 5.1                    | 48  | 144  | 434  | 870  |
| 125/5"   | 7.5                    | 70  | 248  | 685  | 1422 |
| 150/6"   | 12                     | 109 | 369  | 988  | 2106 |
| 200/8"   | 22                     | 190 | 662  | 1810 | 3610 |
| 250/10"  | 33                     | 290 | 990  | 2667 | 5631 |
| 300/12"  | 40                     | 360 | 1306 | 3730 | 8106 |

## 100% On Site Production

### BRASS & ALUMINIUM CAMLOCK FORGING PROCESS

Cutting



Forging



Deburring



Machining



Assembly



## 100% On Site Production

### STAINLESS STEEL CAMLOCK INVESTMENT CASTING PROCESS

Wax pattern



Ceramic shell



Cut o & Grinding



Shot blasting



Assembly



# CAMLOCK COUPLINGS

## Normative regulation:

MIL A-A-59326A

EN 14420-7

DIN 2828

## Sizes:

DN15 Up To DN300

## Materials:

Stainless Steel 316 (Investment Casting)

Brass (Forging)

Aluminium (Casting)

Polypropylen (injection)

## Working Pressure:

18 bar / 250 psi (for SS and BR)

18 bar / 250 psi (for AL )

6 bar / 87 psi (for PP )

## Thread type:

BSPP : EN ISO228-1 / DIN ISO 228-1

BSPT : EN 10226-1 / DIN 2999-1

NPT : ANSI B 1.20.1

## Coupling Gaskets:

NBR (-30° C/+120° C)

EPDM (-45° C/+145° C)

FPM (-30° C/+200° C)

CSM (-30° C/+125° C)

## Thread Gaskets:

PU (-50° C/+100° C)

PTFE(-25° C/+250° C)

## Applications:

Chemicals

All industry

Tank Fuel Truck Equipement



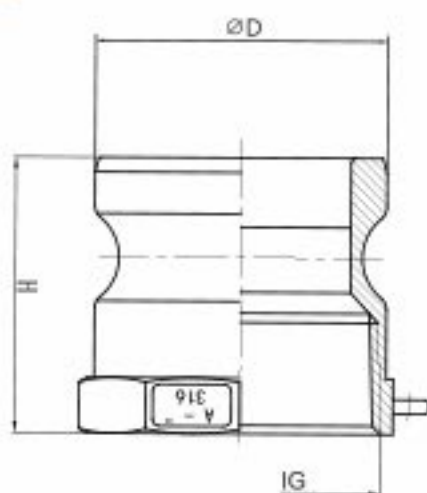
## SCOPE

This document details the design, materials and dimensions for cam locking couplings that serve as the link between hoses and connections to transport liquids, solids and gases, except liquid gas and steam. The couplings are capable of operating the pressure range 3 bar to 18 bar working pressure in a working temperature range of  $-50^{\circ}\text{C}$  up to  $+250^{\circ}\text{C}$ .

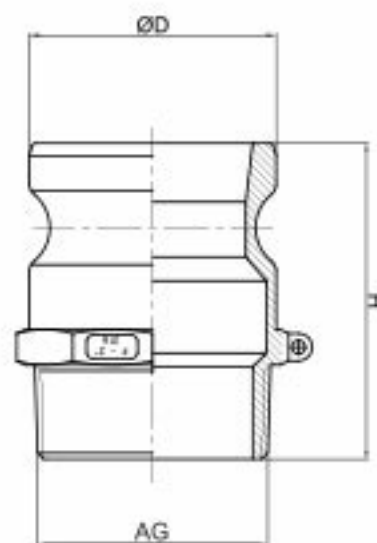
**WARNING** — Line pressure shall be reduced before disconnection.

|        | SS  |     | BR  |     | AL  |     | PP  |     |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
|        | Bar | Psi | Bar | Psi | Bar | Psi | Bar | Psi |
| DN 15  | 16  | 225 | 16  | 225 | 16  | 225 | 6   | 87  |
| DN 20  | 18  | 250 | 18  | 250 | 16  | 225 | 6   | 87  |
| DN 25  | 18  | 250 | 18  | 250 | 18  | 250 | 6   | 87  |
| DN 32  | 18  | 250 | 18  | 250 | 18  | 250 | 6   | 87  |
| DN 40  | 18  | 250 | 18  | 250 | 18  | 250 | 6   | 87  |
| DN 50  | 18  | 250 | 18  | 250 | 18  | 250 | 6   | 87  |
| DN 65  | 16  | 225 | 16  | 225 | 16  | 225 | 6   | 87  |
| DN 80  | 14  | 220 | 9   | 150 | 9   | 125 | 6   | 87  |
| DN 100 | 7   | 100 | 7   | 100 | 7   | 100 | 6   | 87  |
| DN 125 | 7   | 100 | 5   | 75  | 5   | 75  | 3   | 50  |
| DN 150 | 7   | 100 | 5   | 75  | 5   | 75  | 3   | 50  |
| DN 200 | 5   | 75  | 5   | 75  | 5   | 75  | 3   | 50  |





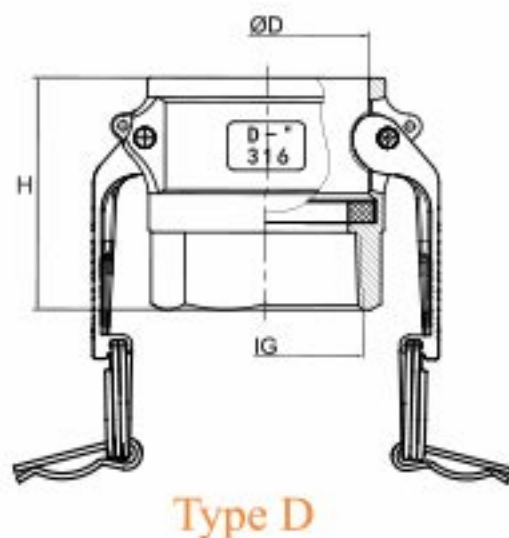
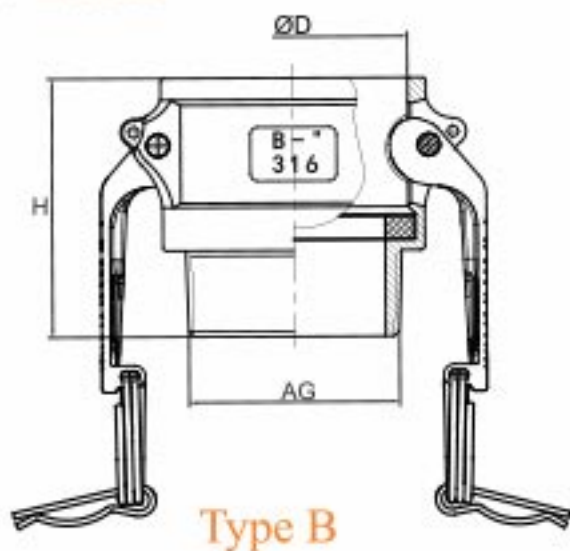
**Type A**



**Type F**

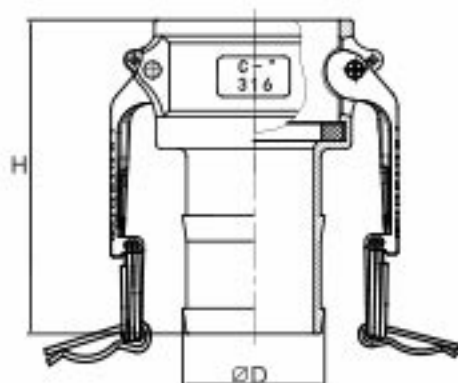
| Name (A) | IG (Female Thread) | D (mm) | H (mm) |
|----------|--------------------|--------|--------|
| 050      | 1/2"               | 24.3   | 33.4   |
| 075      | 3/4"               | 32.1   | 35.4   |
| 100      | 1"                 | 36.7   | 43.5   |
| 125      | 1 1/4"             | 45.5   | 50.5   |
| 150      | 1 1/2"             | 53.4   | 52     |
| 200      | 2"                 | 63     | 59.5   |
| 250      | 2 1/2"             | 75.8   | 75     |
| 300      | 3"                 | 91.5   | 65     |
| 400      | 4"                 | 119.5  | 70     |
| 500      | 5"                 | 145.6  | 80     |
| 600      | 6"                 | 176    | 83     |

| Name (F) | AG (Male Thread) | D (mm) | H (mm) |
|----------|------------------|--------|--------|
| 050      | 1/2"             | 24.3   | 46.4   |
| 075      | 3/4"             | 32.1   | 48.4   |
| 100      | 1"               | 36.7   | 57     |
| 125      | 1 1/4"           | 45.5   | 67.5   |
| 150      | 1 1/2"           | 53.4   | 69     |
| 200      | 2"               | 63     | 80.5   |
| 250      | 2 1/2"           | 75.8   | 86     |
| 300      | 3"               | 91.5   | 94     |
| 400      | 4"               | 119.5  | 101    |
| 500      | 5"               | 145.6  | 114    |
| 600      | 6"               | 176    | 122    |

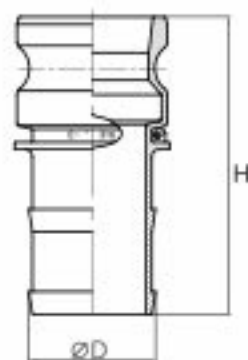


| Name (B) | AG (Male Thread) | D (mm) | H (mm) |
|----------|------------------|--------|--------|
| 050      | 1/2"             | 24.8   | 43.5   |
| 075      | 3/4"             | 32.5   | 45     |
| 100      | 1"               | 37.3   | 54     |
| 125      | 1 1/4"           | 46     | 60.5   |
| 150      | 1 1/2"           | 54     | 62.5   |
| 200      | 2"               | 63.8   | 72     |
| 250      | 2 1/2"           | 76     | 75     |
| 300      | 3"               | 92.5   | 82     |
| 400      | 4"               | 120.3  | 86.5   |
| 500      | 5"               | 146.5  | 95.5   |
| 600      | 6"               | 176.5  | 107    |

| Name (D) | IG (Female Thread) | D (mm) | H (mm) |
|----------|--------------------|--------|--------|
| 050      | 1/2"               | 24.8   | 43.5   |
| 075      | 3/4"               | 32.5   | 45     |
| 100      | 1"                 | 37.3   | 54     |
| 125      | 1 1/4"             | 46     | 60.5   |
| 150      | 1 1/2"             | 54     | 62.5   |
| 200      | 2"                 | 63.8   | 72     |
| 250      | 2 1/2"             | 76     | 75     |
| 300      | 3"                 | 92.5   | 82     |
| 400      | 4"                 | 120.3  | 86.5   |
| 500      | 5"                 | 146.5  | 95.5   |
| 600      | 6"                 | 176.5  | 104    |



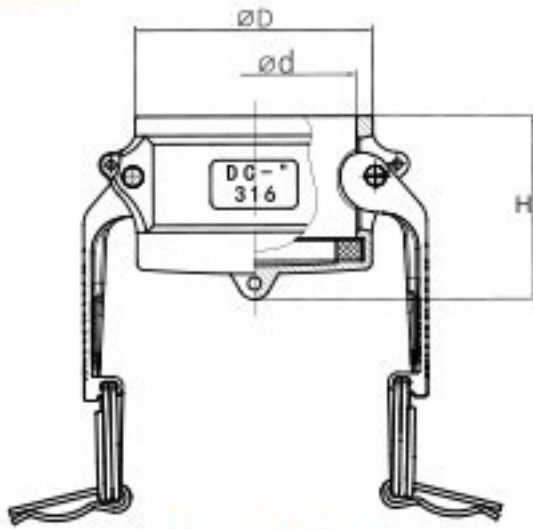
**Type C**



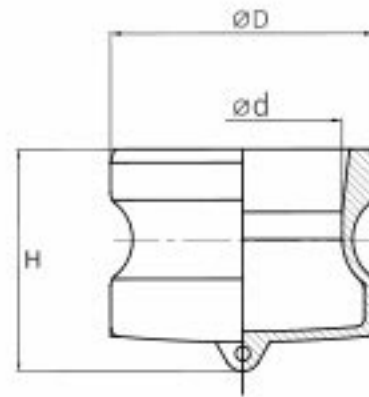
**Type E**

| Name(C) | Size   | D (mm) | H (mm) |
|---------|--------|--------|--------|
| 050     | 1/2"   | 15     | 61     |
| 075     | 3/4"   | 21     | 78     |
| 100     | 1"     | 27.3   | 92.5   |
| 125     | 1 1/4" | 34     | 96.5   |
| 150     | 1 1/2" | 40.6   | 102    |
| 200     | 2"     | 53     | 117    |
| 250     | 2 1/2" | 66.7   | 126    |
| 300     | 3"     | 78.8   | 146    |
| 400     | 4"     | 104.5  | 150.5  |
| 500     | 5"     | 130    | 172.5  |
| 600     | 6"     | 155.5  | 227    |

| Name(E) | Size   | D(mm) | H(mm) |
|---------|--------|-------|-------|
| 050     | 1/2"   | 15    | 66.5  |
| 075     | 3/4"   | 21    | 80    |
| 100     | 1"     | 27.3  | 97.5  |
| 125     | 1 1/4" | 34    | 102.5 |
| 150     | 1 1/2" | 40.6  | 109   |
| 200     | 2"     | 53    | 124.5 |
| 250     | 2 1/2" | 66.7  | 136.5 |
| 300     | 3"     | 78.8  | 154.5 |
| 400     | 4"     | 104.5 | 162   |
| 500     | 5"     | 130   | 180   |
| 600     | 6"     | 155.5 | 239   |



**Type DC**



**Type DP**

| Name( DC) | Size   | D (mm) | d (mm) | H (mm) |
|-----------|--------|--------|--------|--------|
| 050       | 1/2"   | 33     | 24.8   | 35     |
| 075       | 3/4"   | 40     | 32.5   | 38.5   |
| 100       | 1"     | 46     | 37.3   | 44.5   |
| 125       | 1 1/4" | 56     | 46     | 49.5   |
| 150       | 1 1/2" | 64     | 54     | 52     |
| 200       | 2"     | 74     | 63.8   | 57     |
| 250       | 2 1/2" | 87     | 76.5   | 59.5   |
| 300       | 3"     | 105    | 92.5   | 65     |
| 400       | 4"     | 134    | 120.3  | 66     |
| 500       | 5"     | 161    | 146.5  | 74     |
| 600       | 6"     | 194    | 176.5  | 80     |
| 800       | 8"     | 262    | 245    | 85     |

| Name( DP) | Size   | D (mm) | d (mm) | H (mm) |
|-----------|--------|--------|--------|--------|
| 050       | 1/2"   | 24.3   | 14     | 30.9   |
| 075       | 3/4"   | 32.1   | 19     | 32     |
| 100       | 1"     | 36.7   | 24     | 40.5   |
| 125       | 1 1/4" | 45.5   | 30.3   | 46     |
| 150       | 1 1/2" | 53.4   | 38.5   | 48     |
| 200       | 2"     | 63     | 48     | 44.5   |
| 250       | 2 1/2" | 75.8   | 59.6   | 58.5   |
| 300       | 3"     | 91.5   | 76     | 62     |
| 400       | 4"     | 119.5  | 100    | 65.5   |
| 500       | 5"     | 145.6  | 126    | 67.5   |
| 600       | 6"     | 176    | 152    | 80.5   |
| 800       | 8"     | 260    | 198    | 82.5   |

## Camlock Couplings

### Camlock A (Female NPT Thread)



| Name | Thread | Code     | Weight(kg) | Gasket | Material |
|------|--------|----------|------------|--------|----------|
| 050  | 1/2"   | B1021001 | 0.07       | -      | SS       |
| 075  | 3/4"   | B1021004 | 0.11       | -      | SS       |
| 100  | 1"     | B1021007 | 0.15       | -      | SS       |
| 125  | 1 1/4" | B1021010 | 0.24       | -      | SS       |
| 150  | 1 1/2" | B1021013 | 0.32       | -      | SS       |
| 200  | 2"     | B1021016 | 0.42       | -      | SS       |
| 250  | 2 1/2" | B1021019 | 0.71       | -      | SS       |
| 300  | 3"     | B1021022 | 0.73       | -      | SS       |
| 400  | 4"     | B1021025 | 1.42       | -      | SS       |
| 500  | 5"     | B1021028 | 1.92       | -      | SS       |
| 600  | 6"     | B1021031 | 3.17       | -      | SS       |
| 800  | 8"     | B1021045 | 2.31       | -      | SS       |
| 1000 | 10"    | -        | -          | -      | SS       |
| 1200 | 12"    | -        | -          | -      | SS       |



|      |        |          |      |   |    |
|------|--------|----------|------|---|----|
| 050  | 1/2"   | B1041001 | 0.02 | - | AL |
| 075  | 3/4"   | B1041004 | 0.04 | - | AL |
| 100  | 1"     | B1041007 | 0.05 | - | AL |
| 125  | 1 1/4" | B1041010 | 0.09 | - | AL |
| 150  | 1 1/2" | B1041013 | 0.11 | - | AL |
| 200  | 2"     | B1041016 | 0.15 | - | AL |
| 250  | 2 1/2" | B1041019 | 0.24 | - | AL |
| 300  | 3"     | B1041022 | 0.27 | - | AL |
| 400  | 4"     | B1041025 | 0.58 | - | AL |
| 500  | 5"     | B1041028 | 0.90 | - | AL |
| 600  | 6"     | B1041031 | 0.84 | - | AL |
| 800  | 8"     | B1041045 | 2.31 | - | AL |
| 1000 | 10"    | -        | -    | - | AL |
| 1200 | 12"    | -        | -    | - | AL |



|      |        |          |      |   |    |
|------|--------|----------|------|---|----|
| 050  | 1/2"   | B1061001 | 0.07 | - | BR |
| 075  | 3/4"   | B1061004 | 0.10 | - | BR |
| 100  | 1"     | B1061007 | 0.15 | - | BR |
| 125  | 1 1/4" | B1061010 | 0.20 | - | BR |
| 150  | 1 1/2" | B1061013 | 0.29 | - | BR |
| 200  | 2"     | B1061016 | 0.35 | - | BR |
| 250  | 2 1/2" | B1061019 | 0.72 | - | BR |
| 300  | 3"     | B1061022 | 0.73 | - | BR |
| 400  | 4"     | B1061025 | 1.48 | - | BR |
| 500  | 5"     | B1061028 | 1.79 | - | BR |
| 600  | 6"     | B1061031 | 3.38 | - | BR |
| 800  | 8"     | B1061045 | 7.36 | - | BR |
| 1000 | 10"    | -        | -    | - | BR |
| 1200 | 12"    | -        | -    | - | BR |



|     |        |          |      |   |    |
|-----|--------|----------|------|---|----|
| 050 | 1/2"   | B1071001 | 0.02 | - | PP |
| 075 | 3/4"   | B1071004 | 0.02 | - | PP |
| 100 | 1"     | B1071007 | 0.03 | - | PP |
| 125 | 1 1/4" | B1071010 | 0.05 | - | PP |
| 150 | 1 1/2" | B1071013 | 0.07 | - | PP |
| 200 | 2"     | B1071016 | 0.09 | - | PP |
| 250 | 2 1/2" | B1071019 | 0.11 | - | PP |
| 300 | 3"     | B1071022 | 0.21 | - | PP |
| 400 | 4"     | B1071025 | 0.36 | - | PP |

**Camlock A (Female BSP Thread)**

| Name | Thread | Code      | Weight(kg) | Gasket | Material |
|------|--------|-----------|------------|--------|----------|
| 050  | 1/2"   | B 1021002 | 0.07       | -      | SS       |
| 075  | 3/4"   | B 1021005 | 0.11       | -      | SS       |
| 100  | 1"     | B 1021008 | 0.15       | -      | SS       |
| 125  | 1 1/4" | B 1021011 | 0.24       | -      | SS       |
| 150  | 1 1/2" | B 1021014 | 0.32       | -      | SS       |
| 200  | 2"     | B 1021017 | 0.42       | -      | SS       |
| 250  | 2 1/2" | B 1021020 | 0.71       | -      | SS       |
| 300  | 3"     | B 1021023 | 0.73       | -      | SS       |
| 400  | 4"     | B 1021026 | 1.42       | -      | SS       |
| 500  | 5"     | B 1021029 | 1.92       | -      | SS       |
| 600  | 6"     | B 1021032 | 3.17       | -      | SS       |
| 800  | 8"     | B 1021046 | 2.31       | -      | SS       |
| 1000 | 10"    | -         | -          | -      | SS       |
| 1200 | 12"    | -         | -          | -      | SS       |



|      |        |           |      |   |    |
|------|--------|-----------|------|---|----|
| 050  | 1/2"   | B 1041002 | 0.02 | - | AL |
| 075  | 3/4"   | B 1041005 | 0.04 | - | AL |
| 100  | 1"     | B 1041008 | 0.05 | - | AL |
| 125  | 1 1/4" | B 1041011 | 0.09 | - | AL |
| 150  | 1 1/2" | B 1041014 | 0.11 | - | AL |
| 200  | 2"     | B 1041017 | 0.15 | - | AL |
| 250  | 2 1/2" | B 1041020 | 0.24 | - | AL |
| 300  | 3"     | B 1041023 | 0.27 | - | AL |
| 400  | 4"     | B 1041026 | 0.58 | - | AL |
| 500  | 5"     | B 1041029 | 0.90 | - | AL |
| 600  | 6"     | B 1041032 | 0.84 | - | AL |
| 800  | 8"     | -         | 2.31 | - | AL |
| 1000 | 10"    | -         | -    | - | AL |
| 1200 | 12"    | -         | -    | - | AL |



|      |        |           |      |   |    |
|------|--------|-----------|------|---|----|
| 050  | 1/2"   | B 1061002 | 0.07 | - | BR |
| 075  | 3/4"   | B 1061005 | 0.10 | - | BR |
| 100  | 1"     | B 1061008 | 0.15 | - | BR |
| 125  | 1 1/4" | B 1061011 | 0.20 | - | BR |
| 150  | 1 1/2" | B 1061014 | 0.29 | - | BR |
| 200  | 2"     | B 1061017 | 0.35 | - | BR |
| 250  | 2 1/2" | B 1061020 | 0.72 | - | BR |
| 300  | 3"     | B 1061023 | 0.73 | - | BR |
| 400  | 4"     | B 1061026 | 1.48 | - | BR |
| 500  | 5"     | B 1061029 | 1.79 | - | BR |
| 600  | 6"     | B 1061032 | 3.38 | - | BR |
| 800  | 8"     | -         | 7.36 | - | BR |
| 1000 | 10"    | -         | -    | - | BR |
| 1200 | 12"    | -         | -    | - | BR |



|     |        |           |      |   |    |
|-----|--------|-----------|------|---|----|
| 050 | 1/2"   | B 1071002 | 0.01 | - | PP |
| 075 | 3/4"   | B 1071005 | 0.02 | - | PP |
| 100 | 1"     | B 1071008 | 0.03 | - | PP |
| 125 | 1 1/4" | B 1071011 | 0.05 | - | PP |
| 150 | 1 1/2" | B 1071014 | 0.06 | - | PP |
| 200 | 2"     | B 1071017 | 0.09 | - | PP |
| 250 | 2 1/2" | B 1071020 | 0.14 | - | PP |
| 300 | 3"     | B 1071023 | 0.18 | - | PP |
| 400 | 4"     | B 1071026 | 0.36 | - | PP |



### Camlock A (Female BSPP Thread/Gasket)



| Name | Thread | Code     | Weight(kg) | Gasket | Material |
|------|--------|----------|------------|--------|----------|
| 050  | 1/2"   | B1021003 | 0.07       | PTFE   | SS       |
| 075  | 3/4"   | B1021006 | 0.11       | PTFE   | SS       |
| 100  | 1"     | B1021009 | 0.15       | PTFE   | SS       |
| 125  | 1 1/4" | B1021012 | 0.24       | PTFE   | SS       |
| 150  | 1 1/2" | B1021015 | 0.32       | PTFE   | SS       |
| 200  | 2"     | B1021018 | 0.42       | PTFE   | SS       |
| 250  | 2 1/2" | B1021021 | 0.71       | PTFE   | SS       |
| 300  | 3"     | B1021024 | 0.73       | PTFE   | SS       |
| 400  | 4"     | B1021027 | 1.42       | PTFE   | SS       |
| 500  | 5"     | B1021029 | 1.92       | PTFE   | SS       |
| 600  | 6"     | B1021032 | 3.17       | PTFE   | SS       |
| 800  | 8"     | B1021046 | 2.31       | PTFE   | SS       |
| 1000 | 10"    | -        | -          | PTFE   | SS       |
| 1200 | 12"    | -        | -          | PTFE   | SS       |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1041003 | 0.02 | NBR | AL |
| 075  | 3/4"   | B1041006 | 0.04 | NBR | AL |
| 100  | 1"     | B1041009 | 0.05 | NBR | AL |
| 125  | 1 1/4" | B1041012 | 0.09 | NBR | AL |
| 150  | 1 1/2" | B1041015 | 0.11 | NBR | AL |
| 200  | 2"     | B1041018 | 0.15 | NBR | AL |
| 250  | 2 1/2" | B1041021 | 0.24 | NBR | AL |
| 300  | 3"     | B1041046 | 0.27 | NBR | AL |
| 400  | 4"     | B1041027 | 0.58 | NBR | AL |
| 500  | 5"     | B1041030 | 0.90 | NBR | AL |
| 600  | 6"     | B1041032 | 0.84 | NBR | AL |
| 800  | 8"     | -        | 2.31 | NBR | AL |
| 1000 | 10"    | -        | -    | NBR | AL |
| 1200 | 12"    | -        | -    | NBR | AL |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1061003 | 0.07 | NBR | BR |
| 075  | 3/4"   | B1061006 | 0.10 | NBR | BR |
| 100  | 1"     | B1061009 | 0.15 | NBR | BR |
| 125  | 1 1/4" | B1061012 | 0.20 | NBR | BR |
| 150  | 1 1/2" | B1061015 | 0.29 | NBR | BR |
| 200  | 2"     | B1061018 | 0.35 | NBR | BR |
| 250  | 2 1/2" | B1061021 | 0.72 | NBR | BR |
| 300  | 3"     | B1061024 | 0.73 | NBR | BR |
| 400  | 4"     | B1061027 | 1.48 | NBR | BR |
| 500  | 5"     | B1061029 | 1.79 | NBR | BR |
| 600  | 6"     | B1061032 | 3.38 | NBR | BR |
| 800  | 8"     | -        | 7.36 | NBR | BR |
| 1000 | 10"    | -        | -    | NBR | BR |
| 1200 | 12"    | -        | -    | NBR | BR |

**Camlock B (Male NPT Thread/Gasket)**

| Name | Thread | Code     | Weight(kg) | Gasket | Material |
|------|--------|----------|------------|--------|----------|
| 050  | 1/2"   | B1022001 | 0.12       | NBR    | SS       |
| 075  | 3/4"   | B1022004 | 0.20       | NBR    | SS       |
| 100  | 1"     | B1022007 | 0.29       | NBR    | SS       |
| 125  | 1 1/4" | B1022010 | 0.47       | NBR    | SS       |
| 150  | 1 1/2" | B1022013 | 0.54       | NBR    | SS       |
| 200  | 2"     | B1022016 | 0.67       | NBR    | SS       |
| 250  | 2 1/2" | B1022019 | 1.14       | NBR    | SS       |
| 300  | 3"     | B1022022 | 1.36       | NBR    | SS       |
| 400  | 4"     | B1022025 | 1.97       | NBR    | SS       |
| 500  | 5"     | B1022028 | 2.98       | NBR    | SS       |
| 600  | 6"     | B1022031 | 4.11       | NBR    | SS       |
| 800  | 8"     | B1022034 | 2.60       | NBR    | SS       |
| 1000 | 10"    | -        | -          | NBR    | SS       |
| 1200 | 12"    | -        | -          | NBR    | SS       |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1042001 | 0.07 | NBR | AL |
| 075  | 3/4"   | B1042004 | 0.10 | NBR | AL |
| 100  | 1"     | B1042007 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B1042010 | 0.27 | NBR | AL |
| 150  | 1 1/2" | B1042013 | 0.30 | NBR | AL |
| 200  | 2"     | B1042016 | 0.35 | NBR | AL |
| 250  | 2 1/2" | B1042019 | 0.43 | NBR | AL |
| 300  | 3"     | B1042022 | 0.68 | NBR | AL |
| 400  | 4"     | B1042025 | 0.92 | NBR | AL |
| 500  | 5"     | B1042028 | 1.81 | NBR | AL |
| 600  | 6"     | B1042031 | 1.78 | NBR | AL |
| 800  | 8"     | B1042034 | 2.31 | NBR | AL |
| 1000 | 10"    | -        | -    | NBR | AL |
| 1200 | 12"    | -        | -    | NBR | AL |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1062001 | 0.17 | NBR | BR |
| 075  | 3/4"   | B1062004 | 0.21 | NBR | BR |
| 100  | 1"     | B1062007 | 0.32 | NBR | BR |
| 125  | 1 1/4" | B1062010 | 0.45 | NBR | BR |
| 150  | 1 1/2" | B1062013 | 0.52 | NBR | BR |
| 200  | 2"     | B1062016 | 0.64 | NBR | BR |
| 250  | 2 1/2" | B1062019 | 0.94 | NBR | BR |
| 300  | 3"     | B1062022 | 1.38 | NBR | BR |
| 400  | 4"     | B1062025 | 1.94 | NBR | BR |
| 500  | 5"     | B1062028 | 3.98 | NBR | BR |
| 600  | 6"     | B1062031 | 3.65 | NBR | BR |
| 800  | 8"     | -        | -    | NBR | BR |
| 1000 | 10"    | -        | -    | NBR | BR |
| 1200 | 12"    | -        | -    | NBR | BR |



|     |        |          |      |     |    |
|-----|--------|----------|------|-----|----|
| 050 | 1/2"   | B1072001 | 0.07 | NBR | PP |
| 075 | 3/4"   | B1072004 | 0.08 | NBR | PP |
| 100 | 1"     | B1072007 | 0.11 | NBR | PP |
| 125 | 1 1/4" | B1072010 | 0.21 | NBR | PP |
| 150 | 1 1/2" | B1072013 | 0.21 | NBR | PP |
| 200 | 2"     | B1072016 | 0.25 | NBR | PP |
| 250 | 2 1/2" | B1072019 | 0.30 | NBR | PP |
| 300 | 3"     | B1072022 | 0.50 | NBR | PP |
| 400 | 4"     | B1072025 | 0.76 | NBR | PP |



## Camlock Couplings

### Camlock B (Male BSPT Thread/Gasket)



| Name | Thread | Code      | Weight (kg) | Gasket | Material |
|------|--------|-----------|-------------|--------|----------|
| 050  | 1/2"   | B 1022002 | 0.12        | NBR    | SS       |
| 075  | 3/4"   | B 1022005 | 0.20        | NBR    | SS       |
| 100  | 1"     | B 1022008 | 0.29        | NBR    | SS       |
| 125  | 1 1/4" | B 1022011 | 0.47        | NBR    | SS       |
| 150  | 1 1/2" | B 1022014 | 0.54        | NBR    | SS       |
| 200  | 2"     | B 1022017 | 0.67        | NBR    | SS       |
| 250  | 2 1/2" | B 1022020 | 1.14        | NBR    | SS       |
| 300  | 3"     | B 1022023 | 1.36        | NBR    | SS       |
| 400  | 4"     | B 1022026 | 1.97        | NBR    | SS       |
| 500  | 5"     | B 1022029 | 2.98        | NBR    | SS       |
| 600  | 6"     | B 1022032 | 4.11        | NBR    | SS       |
| 800  | 8"     | B 1022035 | 2.60        | NBR    | SS       |
| 1000 | 10"    | -         | -           | NBR    | SS       |
| 1200 | 12"    | -         | -           | NBR    | SS       |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1042002 | 0.07 | NBR | AL |
| 075  | 3/4"   | B 1042005 | 0.10 | NBR | AL |
| 100  | 1"     | B 1042008 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B 1042011 | 0.27 | NBR | AL |
| 150  | 1 1/2" | B 1042014 | 0.30 | NBR | AL |
| 200  | 2"     | B 1042017 | 0.35 | NBR | AL |
| 250  | 2 1/2" | B 1042020 | 0.43 | NBR | AL |
| 300  | 3"     | B 1042023 | 0.68 | NBR | AL |
| 400  | 4"     | B 1042026 | 0.92 | NBR | AL |
| 500  | 5"     | B 1042029 | 1.81 | NBR | AL |
| 600  | 6"     | B 1042032 | 1.78 | NBR | AL |
| 800  | 8"     | -         | 2.31 | NBR | AL |
| 1000 | 10"    | -         | -    | NBR | AL |
| 1200 | 12"    | -         | -    | NBR | AL |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1062002 | 0.17 | NBR | BR |
| 075  | 3/4"   | B 1062005 | 0.21 | NBR | BR |
| 100  | 1"     | B 1062008 | 0.32 | NBR | BR |
| 125  | 1 1/4" | B 1062011 | 0.45 | NBR | BR |
| 150  | 1 1/2" | B 1062014 | 0.52 | NBR | BR |
| 200  | 2"     | B 1062017 | 0.64 | NBR | BR |
| 250  | 2 1/2" | B 1062020 | 0.94 | NBR | BR |
| 300  | 3"     | B 1062023 | 1.38 | NBR | BR |
| 400  | 4"     | B 1062026 | 1.94 | NBR | BR |
| 500  | 5"     | B 1062029 | 3.98 | NBR | BR |
| 600  | 6"     | B 1062032 | 3.65 | NBR | BR |
| 800  | 8"     | -         | -    | NBR | BR |
| 1000 | 10"    | -         | -    | NBR | BR |
| 1200 | 12"    | -         | -    | NBR | BR |



|     |        |           |      |     |    |
|-----|--------|-----------|------|-----|----|
| 050 | 1/2"   | B 1072002 | 0.07 | NBR | PP |
| 075 | 3/4"   | B 1072005 | 0.08 | NBR | PP |
| 100 | 1"     | B 1072008 | 0.11 | NBR | PP |
| 125 | 1 1/4" | B 1072011 | 0.21 | NBR | PP |
| 150 | 1 1/2" | B 1072014 | 0.21 | NBR | PP |
| 200 | 2"     | B 1072017 | 0.25 | NBR | PP |
| 250 | 2 1/2" | B 1072020 | 0.30 | NBR | PP |
| 300 | 3"     | B 1072023 | 0.50 | NBR | PP |
| 400 | 4"     | B 1072026 | 0.76 | NBR | PP |

### Camlock C (Gasket)

| Name | Size   | Code      | Weight (kg) | Gasket | Material |
|------|--------|-----------|-------------|--------|----------|
| 050  | 1/2"   | B 1023001 | 0.12        | NBR    | SS       |
| 075  | 3/4"   | B 1023002 | 0.20        | NBR    | SS       |
| 100  | 1"     | B 1023003 | 0.29        | NBR    | SS       |
| 125  | 1 1/4" | B 1023004 | 0.47        | NBR    | SS       |
| 150  | 1 1/2" | B 1023005 | 0.54        | NBR    | SS       |
| 200  | 2"     | B 1023006 | 0.67        | NBR    | SS       |
| 250  | 2 1/2" | B 1023007 | 1.14        | NBR    | SS       |
| 300  | 3"     | B 1023008 | 1.35        | NBR    | SS       |
| 400  | 4"     | B 1023009 | 1.97        | NBR    | SS       |
| 500  | 5"     | B 1023010 | 2.98        | NBR    | SS       |
| 600  | 6"     | B 1023011 | 4.11        | NBR    | SS       |
| 800  | 8"     | B 1023023 | 2.60        | NBR    | SS       |
| 1000 | 10"    | -         | -           | NBR    | SS       |
| 1200 | 12"    | -         | -           | NBR    | SS       |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1043001 | 0.07 | NBR | AL |
| 075  | 3/4"   | B 1043002 | 0.10 | NBR | AL |
| 100  | 1"     | B 1043003 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B 1043004 | 0.27 | NBR | AL |
| 150  | 1 1/2" | B 1043005 | 0.30 | NBR | AL |
| 200  | 2"     | B 1043006 | 0.35 | NBR | AL |
| 250  | 2 1/2" | B 1043007 | 0.43 | NBR | AL |
| 300  | 3"     | B 1043008 | 0.68 | NBR | AL |
| 400  | 4"     | B 1043009 | 0.92 | NBR | AL |
| 500  | 5"     | B 1043010 | 1.81 | NBR | AL |
| 600  | 6"     | B 1043011 | 1.78 | NBR | AL |
| 800  | 8"     | B 1043023 | 4.75 | NBR | AL |
| 1000 | 10"    | -         | -    | NBR | AL |
| 1200 | 12"    | -         | -    | NBR | AL |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1063001 | 0.15 | NBR | BR |
| 075  | 3/4"   | B 1063002 | 0.23 | NBR | BR |
| 100  | 1"     | B 1063003 | 0.36 | NBR | BR |
| 125  | 1 1/4" | B 1063004 | 0.49 | NBR | BR |
| 150  | 1 1/2" | B 1063005 | 0.62 | NBR | BR |
| 200  | 2"     | B 1063006 | 0.77 | NBR | BR |
| 250  | 2 1/2" | B 1063007 | 1.07 | NBR | BR |
| 300  | 3"     | B 1063008 | 1.58 | NBR | BR |
| 400  | 4"     | B 1063009 | 4.13 | NBR | BR |
| 500  | 5"     | B 1063010 | 3.32 | NBR | BR |
| 600  | 6"     | B 1063011 | 6.05 | NBR | BR |
| 800  | 8"     | -         | -    | NBR | BR |
| 1000 | 10"    | -         | -    | NBR | BR |
| 1200 | 12"    | -         | -    | NBR | BR |



|     |        |           |      |     |    |
|-----|--------|-----------|------|-----|----|
| 050 | 1/2"   | B 1073001 | 0.07 | NBR | PP |
| 075 | 3/4"   | B 1073002 | 0.08 | NBR | PP |
| 100 | 1"     | B 1073003 | 0.12 | NBR | PP |
| 125 | 1 1/4" | B 1073004 | 0.23 | NBR | PP |
| 150 | 1 1/2" | B 1073005 | 0.23 | NBR | PP |
| 200 | 2"     | B 1073006 | 0.31 | NBR | PP |
| 250 | 2 1/2" | B 1073007 | 0.51 | NBR | PP |
| 300 | 3"     | B 1073008 | 0.64 | NBR | PP |
| 400 | 4"     | B 1073009 | 0.91 | NBR | PP |



## Type C - Serrated hose shank



| Name | Size   | Code      | Weight (kg) | Gasket | Material |
|------|--------|-----------|-------------|--------|----------|
| 050  | 1/2"   | B 1023199 | 0.12        | NBR    | SS       |
| 075  | 3/4"   | B 1023202 | 0.20        | NBR    | SS       |
| 100  | 1"     | B 1023005 | 0.29        | NBR    | SS       |
| 125  | 1 1/4" | B 1023208 | 0.47        | NBR    | SS       |
| 150  | 1 1/2" | B 1023211 | 0.54        | NBR    | SS       |
| 200  | 2"     | B 1023213 | 0.67        | NBR    | SS       |
| 250  | 2 1/2" | B 1023216 | 1.14        | NBR    | SS       |
| 300  | 3"     | B 1023219 | 1.35        | NBR    | SS       |
| 400  | 4"     | B 1023222 | 1.97        | NBR    | SS       |
| 500  | 5"     | B 1023225 | 2.98        | NBR    | SS       |
| 600  | 6"     | B 1023228 | 4.11        | NBR    | SS       |
| 800  | 8"     | B 1023231 | 2.60        | NBR    | SS       |
| 1000 | 10"    | -         | -           | NBR    | SS       |
| 1200 | 12"    | -         | -           | NBR    | SS       |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1043128 | 0.07 | NBR | AL |
| 075  | 3/4"   | B 1043130 | 0.10 | NBR | AL |
| 100  | 1"     | B 1043132 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B 1043134 | 0.27 | NBR | AL |
| 150  | 1 1/2" | B 1043136 | 0.30 | NBR | AL |
| 200  | 2"     | B 1043138 | 0.35 | NBR | AL |
| 250  | 2 1/2" | B 1043140 | 0.43 | NBR | AL |
| 300  | 3"     | B 1043142 | 0.68 | NBR | AL |
| 400  | 4"     | B 1043144 | 0.92 | NBR | AL |
| 500  | 5"     | B 1043146 | 1.81 | NBR | AL |
| 600  | 6"     | B 1043148 | 1.78 | NBR | AL |
| 800  | 8"     | B 1043150 | 4.75 | NBR | AL |
| 1000 | 10"    | -         | -    | NBR | AL |
| 1200 | 12"    | -         | -    | NBR | AL |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1063068 | 0.15 | NBR | BR |
| 075  | 3/4"   | B 1063071 | 0.23 | NBR | BR |
| 100  | 1"     | B 1063074 | 0.36 | NBR | BR |
| 125  | 1 1/4" | B 1063077 | 0.49 | NBR | BR |
| 150  | 1 1/2" | B 1063080 | 0.62 | NBR | BR |
| 200  | 2"     | B 1063083 | 0.77 | NBR | BR |
| 250  | 2 1/2" | B 1063086 | 1.07 | NBR | BR |
| 300  | 3"     | B 1063089 | 1.58 | NBR | BR |
| 400  | 4"     | B 1063092 | 4.13 | NBR | BR |
| 500  | 5"     | B 1063098 | 3.32 | NBR | BR |
| 600  | 6"     | B 1063101 | 6.05 | NBR | BR |
| 800  | 8"     | -         | -    | NBR | BR |
| 1000 | 10"    | -         | -    | NBR | BR |
| 1200 | 12"    | -         | -    | NBR | BR |



|     |        |           |      |     |    |
|-----|--------|-----------|------|-----|----|
| 050 | 1/2"   | B 1073012 | 0.01 | NBR | PP |
| 075 | 3/4"   | B 1073013 | 0.08 | NBR | PP |
| 100 | 1"     | B 1073014 | 0.12 | NBR | PP |
| 125 | 1 1/4" | B 1073015 | 0.23 | NBR | PP |
| 150 | 1 1/2" | B 1076016 | 0.23 | NBR | PP |
| 200 | 2"     | B 1073017 | 0.31 | NBR | PP |
| 250 | 2 1/2" | B 1073018 | 0.51 | NBR | PP |
| 300 | 3"     | B 1073019 | 0.64 | NBR | PP |
| 400 | 4"     | B 1073020 | 0.91 | NBR | PP |

\* the serrated suitable to safety clamps and crimping ferrules (only for SS,BR,AL)

## Type C - Smooth shank EN 14420 - 7 (16 bars)

| Name | Size   | Code      | Weight (kg) | Gasket | Material |
|------|--------|-----------|-------------|--------|----------|
| 050  | 1/2"   | B 1023012 | 0.12        | NBR    | SS       |
| 075  | 3/4"   | B 1023013 | 0.24        | NBR    | SS       |
| 100  | 1"     | B 1023014 | 0.35        | NBR    | SS       |
| 125  | 1 1/4" | B 1023015 | 0.59        | NBR    | SS       |
| 150  | 1 1/2" | B 1023016 | 0.68        | NBR    | SS       |
| 200  | 2"     | B 1023017 | 0.90        | NBR    | SS       |
| 250  | 2 1/2" | B 1023018 | 1.24        | NBR    | SS       |
| 300  | 3"     | B 1023019 | 1.57        | NBR    | SS       |
| 400  | 4"     | B 1023020 | 2.59        | NBR    | SS       |



\* Suitable for safety clamps and crimping ferrules.

|     |        |           |      |     |    |
|-----|--------|-----------|------|-----|----|
| 050 | 1/2"   | B 1063023 | 0.15 | NBR | BR |
| 075 | 3/4"   | B 1063024 | 0.25 | NBR | BR |
| 100 | 1"     | B 1063025 | 0.38 | NBR | BR |
| 125 | 1 1/4" | B 1063026 | 0.63 | NBR | BR |
| 150 | 1 1/2" | B 1063027 | 0.69 | NBR | BR |
| 200 | 2"     | B 1063028 | 0.91 | NBR | BR |
| 250 | 2 1/2" | B 1063029 | 1.18 | NBR | BR |
| 300 | 3"     | B 1063030 | 1.57 | NBR | BR |
| 400 | 4"     | B 1063031 | 2.71 | NBR | BR |



\* Suitable for safety clamps and crimping ferrules.

**Camlock D (Female NPT Thread/Gasket)**



| Name | Thread | Code      | Weight(kg) | Gasket | Material |
|------|--------|-----------|------------|--------|----------|
| 050  | 1/2"   | B 1024001 | 0.13       | NBR    | SS       |
| 075  | 3/4"   | B 1024004 | 0.23       | NBR    | SS       |
| 100  | 1"     | B 1024007 | 0.31       | NBR    | SS       |
| 125  | 1 1/4" | B 1024010 | 0.49       | NBR    | SS       |
| 150  | 1 1/2" | B 1024013 | 0.55       | NBR    | SS       |
| 200  | 2"     | B 1024016 | 0.71       | NBR    | SS       |
| 250  | 2 1/2" | B 1024019 | 1.01       | NBR    | SS       |
| 300  | 3"     | B 1024022 | 1.31       | NBR    | SS       |
| 400  | 4"     | B 1024025 | 2.14       | NBR    | SS       |
| 500  | 5"     | B 1024028 | 3.54       | NBR    | SS       |
| 600  | 6"     | B 1024031 | 4.61       | NBR    | SS       |
| 800  | 8"     | -         | -          | NBR    | SS       |
| 1000 | 10"    | -         | -          | NBR    | SS       |
| 1200 | 12"    | -         | -          | NBR    | SS       |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1044001 | 0.06 | NBR | AL |
| 075  | 3/4"   | B 1044004 | 0.12 | NBR | AL |
| 100  | 1"     | B 1044007 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B 1044010 | 0.28 | NBR | AL |
| 150  | 1 1/2" | B 1044013 | 0.32 | NBR | AL |
| 200  | 2"     | B 1044016 | 0.36 | NBR | AL |
| 250  | 2 1/2" | B 1044019 | 0.47 | NBR | AL |
| 300  | 3"     | B 1044022 | 0.73 | NBR | AL |
| 400  | 4"     | B 1044025 | 1.21 | NBR | AL |
| 500  | 5"     | B 1044028 | 1.41 | NBR | AL |
| 600  | 6"     | B 1044031 | 2.16 | NBR | AL |
| 800  | 8"     | B 1044035 | 2.61 | NBR | AL |
| 1000 | 10"    | -         | -    | NBR | AL |
| 1200 | 12"    | -         | -    | NBR | AL |



|      |        |           |      |     |    |
|------|--------|-----------|------|-----|----|
| 050  | 1/2"   | B 1064001 | 0.16 | NBR | BR |
| 075  | 3/4"   | B 1064004 | 0.22 | NBR | BR |
| 100  | 1"     | B 1064007 | 0.32 | NBR | BR |
| 125  | 1 1/4" | B 1064010 | 0.46 | NBR | BR |
| 150  | 1 1/2" | B 1064013 | 0.54 | NBR | BR |
| 200  | 2"     | B 1064016 | 0.67 | NBR | BR |
| 250  | 2 1/2" | B 1064019 | 0.94 | NBR | BR |
| 300  | 3"     | B 1064022 | 1.40 | NBR | BR |
| 400  | 4"     | B 1064025 | 2.09 | NBR | BR |
| 500  | 5"     | B 1064028 | 2.58 | NBR | BR |
| 600  | 6"     | B 1064031 | 5.02 | NBR | BR |
| 800  | 8"     | -         | -    | NBR | BR |
| 1000 | 10"    | -         | -    | NBR | BR |
| 1200 | 12"    | -         | -    | NBR | BR |



|     |        |           |      |     |    |
|-----|--------|-----------|------|-----|----|
| 050 | 1/2"   | B 1074001 | 0.07 | NBR | PP |
| 075 | 3/4"   | B 1074004 | 0.08 | NBR | PP |
| 100 | 1"     | B 1074007 | 0.13 | NBR | PP |
| 125 | 1 1/4" | B 1074010 | 0.21 | NBR | PP |
| 150 | 1 1/2" | B 1074013 | 0.23 | NBR | PP |
| 200 | 2"     | B 1074016 | 0.27 | NBR | PP |
| 250 | 2 1/2" | B 1074019 | 0.44 | NBR | PP |
| 300 | 3"     | B 1074022 | 0.50 | NBR | PP |
| 400 | 4"     | B 1074025 | 0.75 | NBR | PP |

**Camlock D (Female BSP Thread/Gasket)**

| Name | Thread | Code     | Weight(kg) | Gasket | Material |
|------|--------|----------|------------|--------|----------|
| 050  | 1/2"   | B1024002 | 0.13       | NBR    | SS       |
| 075  | 3/4"   | B1024005 | 0.23       | NBR    | SS       |
| 100  | 1"     | B1024008 | 0.31       | NBR    | SS       |
| 125  | 1 1/4" | B1024011 | 0.49       | NBR    | SS       |
| 150  | 1 1/2" | B1024014 | 0.55       | NBR    | SS       |
| 200  | 2"     | B1024017 | 0.71       | NBR    | SS       |
| 250  | 2 1/2" | B1024020 | 1.01       | NBR    | SS       |
| 300  | 3"     | B1024023 | 1.31       | NBR    | SS       |
| 400  | 4"     | B1024026 | 2.14       | NBR    | SS       |
| 500  | 5"     | B1024029 | 3.54       | NBR    | SS       |
| 600  | 6"     | B1024032 | 4.61       | NBR    | SS       |
| 800  | 8"     | B1024046 | -          | NBR    | SS       |
| 1000 | 10"    | -        | -          | NBR    | SS       |
| 1200 | 12"    | -        | -          | NBR    | SS       |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1044002 | 0.06 | NBR | AL |
| 075  | 3/4"   | B1044005 | 0.12 | NBR | AL |
| 100  | 1"     | B1044008 | 0.16 | NBR | AL |
| 125  | 1 1/4" | B1044011 | 0.28 | NBR | AL |
| 150  | 1 1/2" | B1044014 | 0.32 | NBR | AL |
| 200  | 2"     | B1044017 | 0.36 | NBR | AL |
| 250  | 2 1/2" | B1044020 | 0.47 | NBR | AL |
| 300  | 3"     | B1044023 | 0.73 | NBR | AL |
| 400  | 4"     | B1044026 | 1.21 | NBR | AL |
| 500  | 5"     | B1044029 | 1.41 | NBR | AL |
| 600  | 6"     | B1044032 | 2.16 | NBR | AL |
| 800  | 8"     | -        | 2.61 | NBR | AL |
| 1000 | 10"    | -        | -    | NBR | AL |
| 1200 | 12"    | -        | -    | NBR | AL |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1064002 | 0.16 | NBR | BR |
| 075  | 3/4"   | B1064005 | 0.22 | NBR | BR |
| 100  | 1"     | B1064008 | 0.32 | NBR | BR |
| 125  | 1 1/4" | B1064011 | 0.46 | NBR | BR |
| 150  | 1 1/2" | B1064014 | 0.54 | NBR | BR |
| 200  | 2"     | B1064017 | 0.67 | NBR | BR |
| 250  | 2 1/2" | B1064020 | 0.94 | NBR | BR |
| 300  | 3"     | B1064023 | 1.40 | NBR | BR |
| 400  | 4"     | B1064026 | 2.09 | NBR | BR |
| 500  | 5"     | B1064023 | 2.58 | NBR | BR |
| 600  | 6"     | B1064032 | 5.02 | NBR | BR |
| 800  | 8"     | -        | -    | NBR | BR |
| 1000 | 10"    | -        | -    | NBR | BR |
| 1200 | 12"    | -        | -    | NBR | BR |



|     |        |          |      |     |    |
|-----|--------|----------|------|-----|----|
| 050 | 1/2"   | B1074002 | 0.07 | NBR | PP |
| 075 | 3/4"   | B1074005 | 0.08 | NBR | PP |
| 100 | 1"     | B1074008 | 0.13 | NBR | PP |
| 125 | 1 1/4" | B1074011 | 0.21 | NBR | PP |
| 150 | 1 1/2" | B1074014 | 0.23 | NBR | PP |
| 200 | 2"     | B1074017 | 0.27 | NBR | PP |
| 250 | 2 1/2" | B1074020 | 0.44 | NBR | PP |
| 300 | 3"     | B1074023 | 0.50 | NBR | PP |
| 400 | 4"     | B1074026 | 0.75 | NBR | PP |



### Camlock D (Female BSPP Thread/Gasket)

| Name | Thread | Code     | Weight(kg) | Threadgasket | Gasket | Material |
|------|--------|----------|------------|--------------|--------|----------|
| 050  | 1/2"   | B1024290 | 0.13       | PTFE         | NBR    | SS       |
| 075  | 3/4"   | B1024293 | 0.23       | PTFE         | NBR    | SS       |
| 100  | 1"     | B1024297 | 0.31       | PTFE         | NBR    | SS       |
| 125  | 1 1/4" | B1024301 | 0.49       | PTFE         | NBR    | SS       |
| 150  | 1 1/2" | B1024304 | 0.55       | PTFE         | NBR    | SS       |
| 200  | 2"     | B1024308 | 0.71       | PTFE         | NBR    | SS       |
| 250  | 2 1/2" | B1024312 | 1.01       | PTFE         | NBR    | SS       |
| 300  | 3"     | B1024316 | 1.31       | PTFE         | NBR    | SS       |
| 400  | 4"     | B1024320 | 2.14       | PTFE         | NBR    | SS       |
| 500  | 5"     | B1024323 | 3.54       | PTFE         | NBR    | SS       |
| 600  | 6"     | B1024327 | 4.61       | PTFE         | NBR    | SS       |
| 800  | 8"     | B1024331 | -          | PTFE         | NBR    | SS       |
| 1000 | 10"    | -        | -          | PTFE         | NBR    | SS       |
| 1200 | 12"    | -        | -          | PTFE         | NBR    | SS       |



|      |        |          |      |     |     |    |
|------|--------|----------|------|-----|-----|----|
| 050  | 1/2"   | B1044101 | 0.06 | NBR | NBR | AL |
| 075  | 3/4"   | B1044105 | 0.12 | NBR | NBR | AL |
| 100  | 1"     | B1044109 | 0.16 | NBR | NBR | AL |
| 125  | 1 1/4" | B1044113 | 0.28 | NBR | NBR | AL |
| 150  | 1 1/2" | B1044117 | 0.32 | NBR | NBR | AL |
| 200  | 2"     | B1044121 | 0.36 | NBR | NBR | AL |
| 250  | 2 1/2" | B1044125 | 0.47 | NBR | NBR | AL |
| 300  | 3"     | B1044129 | 0.73 | NBR | NBR | AL |
| 400  | 4"     | B1044133 | 1.21 | NBR | NBR | AL |
| 500  | 5"     | B1044137 | 1.41 | NBR | NBR | AL |
| 600  | 6"     | B1044141 | 2.16 | NBR | NBR | AL |
| 800  | 8"     | B1044145 | 2.61 | NBR | NBR | AL |
| 1000 | 10"    | -        | -    | NBR | NBR | AL |
| 1200 | 12"    | -        | -    | NBR | NBR | AL |



|      |        |          |      |     |     |    |
|------|--------|----------|------|-----|-----|----|
| 050  | 1/2"   | B1064116 | 0.16 | NBR | NBR | BR |
| 075  | 3/4"   | B1064120 | 0.22 | NBR | NBR | BR |
| 100  | 1"     | B1064124 | 0.32 | NBR | NBR | BR |
| 125  | 1 1/4" | B1064128 | 0.46 | NBR | NBR | BR |
| 150  | 1 1/2" | B1064132 | 0.54 | NBR | NBR | BR |
| 200  | 2"     | B1064136 | 0.67 | NBR | NBR | BR |
| 250  | 2 1/2" | B1064140 | 0.94 | NBR | NBR | BR |
| 300  | 3"     | B1064144 | 1.40 | NBR | NBR | BR |
| 400  | 4"     | B1061148 | 2.09 | NBR | NBR | BR |
| 500  | 5"     | B1064152 | 2.58 | NBR | NBR | BR |
| 600  | 6"     | B1064156 | 5.02 | NBR | NBR | BR |
| 800  | 8"     | B1064160 | -    | NBR | NBR | BR |
| 1000 | 10"    | -        | -    | NBR | NBR | BR |
| 1200 | 12"    | -        | -    | NBR | NBR | BR |



## Camlock E

| Name | Size   | Code     | Weight(kg) | Material |
|------|--------|----------|------------|----------|
| 050  | 1/2"   | B1025001 | 0.07       | SS       |
| 075  | 3/4"   | B1025002 | 0.14       | SS       |
| 100  | 1"     | B1025003 | 0.25       | SS       |
| 125  | 1 1/4" | B1025004 | 0.37       | SS       |
| 150  | 1 1/2" | B1025005 | 0.56       | SS       |
| 200  | 2"     | B1025006 | 0.85       | SS       |
| 250  | 2 1/2" | B1025007 | 1.17       | SS       |
| 300  | 3"     | B1025008 | 1.73       | SS       |
| 400  | 4"     | B1025009 | 2.85       | SS       |
| 500  | 5"     | B1025010 | 4.05       | SS       |
| 600  | 6"     | B1025011 | 5.64       | SS       |
| 800  | 8"     | B1025038 | 10.11      | SS       |
| 1000 | 10"    | -        | -          | SS       |
| 1200 | 12"    | -        | -          | SS       |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1045001 | 0.03 | AL |
| 075  | 3/4"   | B1045002 | 0.05 | AL |
| 100  | 1"     | B1045003 | 0.09 | AL |
| 125  | 1 1/4" | B1045004 | 0.12 | AL |
| 150  | 1 1/2" | B1045005 | 0.19 | AL |
| 200  | 2"     | B1045006 | 0.28 | AL |
| 250  | 2 1/2" | B1045007 | 0.45 | AL |
| 300  | 3"     | B1045008 | 0.66 | AL |
| 400  | 4"     | B1045009 | 1.13 | AL |
| 500  | 5"     | B1045010 | 1.48 | AL |
| 600  | 6"     | B1045011 | 2.21 | AL |
| 800  | 8"     | B1045023 | 3.61 | AL |
| 1000 | 10"    | -        | -    | AL |
| 1200 | 12"    | -        | -    | AL |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1065001 | 0.11 | BR |
| 075  | 3/4"   | B1065002 | 0.16 | BR |
| 100  | 1"     | B1065003 | 0.24 | BR |
| 125  | 1 1/4" | B1065004 | 0.33 | BR |
| 150  | 1 1/2" | B1065005 | 0.44 | BR |
| 200  | 2"     | B1065006 | 0.73 | BR |
| 250  | 2 1/2" | B1065007 | 0.96 | BR |
| 300  | 3"     | B1065008 | 1.25 | BR |
| 400  | 4"     | B1065009 | 1.91 | BR |
| 500  | 5"     | B1065010 | 4.54 | BR |
| 600  | 6"     | B1065011 | 5.07 | BR |
| 800  | 8"     | -        | -    | BR |
| 1000 | 10"    | -        | -    | BR |
| 1200 | 12"    | -        | -    | BR |



|     |        |          |      |    |
|-----|--------|----------|------|----|
| 050 | 1/2"   | B1075001 | 0.01 | PP |
| 075 | 3/4"   | B1075002 | 0.03 | PP |
| 100 | 1"     | B1075003 | 0.04 | PP |
| 125 | 1 1/4" | B1075004 | 0.07 | PP |
| 150 | 1 1/2" | B1075005 | 0.09 | PP |
| 200 | 2"     | B1075006 | 0.15 | PP |
| 250 | 2 1/2" | B1075007 | 0.25 | PP |
| 300 | 3"     | B1075008 | 0.35 | PP |
| 400 | 4"     | B1075009 | 0.55 | PP |

### Type E - Serrated hose shank



| Name | Size   | Code     | Weight (kg) | Material |
|------|--------|----------|-------------|----------|
| 050  | 1/2"   | B1025113 | 0.07        | SS       |
| 075  | 3/4"   | B1025101 | 0.14        | SS       |
| 100  | 1"     | B1025102 | 0.25        | SS       |
| 125  | 1 1/4" | B1025103 | 0.37        | SS       |
| 150  | 1 1/2" | B1025104 | 0.56        | SS       |
| 200  | 2"     | B1025105 | 0.85        | SS       |
| 250  | 2 1/2" | B1025106 | 1.17        | SS       |
| 300  | 3"     | B1025107 | 1.73        | SS       |
| 400  | 4"     | B1025108 | 2.85        | SS       |
| 500  | 5"     | B1025109 | 4.05        | SS       |
| 600  | 6"     | B1025110 | 5.64        | SS       |
| 800  | 8"     | B1025111 | 10.11       | SS       |
| 1000 | 10"    | -        | -           | SS       |
| 1200 | 12"    | -        | -           | SS       |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1045012 | 0.03 | AL |
| 075  | 3/4"   | B1045013 | 0.05 | AL |
| 100  | 1"     | B1045014 | 0.09 | AL |
| 125  | 1 1/4" | B1045015 | 0.12 | AL |
| 150  | 1 1/2" | B1045016 | 0.19 | AL |
| 200  | 2"     | B1045104 | 0.28 | AL |
| 250  | 2 1/2" | B1045018 | 0.45 | AL |
| 300  | 3"     | B1045019 | 0.66 | AL |
| 400  | 4"     | B1045020 | 1.13 | AL |
| 500  | 5"     | B1045021 | 1.48 | AL |
| 600  | 6"     | B1045022 | 2.21 | AL |
| 800  | 8"     | B1045025 | 3.61 | AL |
| 1000 | 10"    | -        | -    | AL |
| 1200 | 12"    | -        | -    | AL |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1065012 | 0.11 | BR |
| 075  | 3/4"   | B1065013 | 0.16 | BR |
| 100  | 1"     | B1065014 | 0.24 | BR |
| 125  | 1 1/4" | B1065015 | 0.33 | BR |
| 150  | 1 1/2" | B1065016 | 0.44 | BR |
| 200  | 2"     | B1065017 | 0.73 | BR |
| 250  | 2 1/2" | B1065018 | 0.96 | BR |
| 300  | 3"     | B1065019 | 1.25 | BR |
| 400  | 4"     | B1065020 | 1.91 | BR |
| 500  | 5"     | B1065021 | 4.54 | BR |
| 600  | 6"     | B1065022 | 5.07 | BR |
| 800  | 8"     | B1065035 | 7.13 | BR |
| 1000 | 10"    | -        | -    | BR |
| 1200 | 12"    | -        | -    | BR |



|     |        |          |      |    |
|-----|--------|----------|------|----|
| 050 | 1/2"   | B1075012 | 0.01 | PP |
| 075 | 3/4"   | B1075013 | 0.03 | PP |
| 100 | 1"     | B1075014 | 0.04 | PP |
| 125 | 1 1/4" | B1075015 | 0.07 | PP |
| 150 | 1 1/2" | B1075016 | 0.09 | PP |
| 200 | 2"     | B1075017 | 0.15 | PP |
| 250 | 2 1/2" | B1075018 | 0.25 | PP |
| 300 | 3"     | B1075019 | 0.35 | PP |
| 400 | 4"     | B1075020 | 0.55 | PP |
| 600 | 6"     | B1075022 | 0.75 | PP |

\* the serrated suitable to safety clamps and crimping ferrules ( only for SS BR AL)

### Type E - Smooth shank EN 14420 - 7 (16 bars)

| Name | Size   | Code      | Weight (kg) | Material |
|------|--------|-----------|-------------|----------|
| 050  | 1/2"   | B 1025012 | 0.07        | SS       |
| 075  | 3/4"   | B 1025013 | 0.13        | SS       |
| 100  | 1"     | B 1025014 | 0.20        | SS       |
| 125  | 1 1/4" | B 1025015 | 0.33        | SS       |
| 150  | 1 1/2" | B 1025016 | 0.45        | SS       |
| 200  | 2"     | B 1025017 | 0.58        | SS       |
| 250  | 2 1/2" | B 1025018 | 0.96        | SS       |
| 300  | 3"     | B 1025019 | 1.16        | SS       |
| 400  | 4"     | B 1025020 | 2.26        | SS       |



\* Suitable for safety clamps and crimping ferrules.

|     |        |           |      |    |
|-----|--------|-----------|------|----|
| 050 | 1/2"   | B 1065023 | 0.11 | BR |
| 075 | 3/4"   | B 1065024 | 0.14 | BR |
| 100 | 1"     | B 1065025 | 0.21 | BR |
| 125 | 1 1/4" | B 1065026 | 0.35 | BR |
| 150 | 1 1/2" | B 1065027 | 0.45 | BR |
| 200 | 2"     | B 1065028 | 0.66 | BR |
| 250 | 2 1/2" | B 1065029 | 0.98 | BR |
| 300 | 3"     | B 1065030 | 1.26 | BR |
| 400 | 4"     | B 1065031 | 2.69 | BR |



\* Suitable for safety clamps and crimping ferrules.

**Camlock F (Male NPT Thread)**



| Name | Thread | Code     | Weight (kg) | Material |
|------|--------|----------|-------------|----------|
| 050  | 1/2"   | B1026001 | 0.13        | SS       |
| 075  | 3/4"   | B1026004 | 0.18        | SS       |
| 100  | 1"     | B1026009 | 0.25        | SS       |
| 125  | 1 1/4" | B1026010 | 0.43        | SS       |
| 150  | 1 1/2" | B1026012 | 0.51        | SS       |
| 200  | 2"     | B1026015 | 0.76        | SS       |
| 250  | 2 1/2" | B1026018 | 0.84        | SS       |
| 300  | 3"     | B1026021 | 1.01        | SS       |
| 400  | 4"     | B1026024 | 1.73        | SS       |
| 500  | 5"     | B1026027 | 2.74        | SS       |
| 600  | 6"     | B1026030 | 4.28        | SS       |
| 800  | 8"     | B1026052 | 5.31        | SS       |
| 1000 | 10"    | -        | -           | SS       |
| 1200 | 12"    | -        | -           | SS       |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1046001 | 0.05 | AL |
| 075  | 3/4"   | B1046004 | 0.11 | AL |
| 100  | 1"     | B1046007 | 0.14 | AL |
| 125  | 1 1/4" | B1046010 | 0.24 | AL |
| 150  | 1 1/2" | B1046013 | 0.27 | AL |
| 200  | 2"     | B1046016 | 0.33 | AL |
| 250  | 2 1/2" | B1046019 | 0.41 | AL |
| 300  | 3"     | B1046022 | 0.65 | AL |
| 400  | 4"     | B1016025 | 0.92 | AL |
| 500  | 5"     | B1046028 | 1.16 | AL |
| 600  | 6"     | B1046031 | 1.78 | AL |
| 800  | 8"     | B1046034 | 4.21 | AL |
| 1000 | 10"    | -        | -    | AL |
| 1200 | 12"    | -        | -    | AL |



|      |        |          |      |    |
|------|--------|----------|------|----|
| 050  | 1/2"   | B1066001 | 0.12 | BR |
| 075  | 3/4"   | B1066004 | 0.13 | BR |
| 100  | 1"     | B1066007 | 0.27 | BR |
| 125  | 1 1/4" | B1066010 | 0.41 | BR |
| 150  | 1 1/2" | B1066013 | 0.48 | BR |
| 200  | 2"     | B1066016 | 0.61 | BR |
| 250  | 2 1/2" | B1066019 | 0.77 | BR |
| 300  | 3"     | B1066022 | 1.21 | BR |
| 400  | 4"     | B1066025 | 1.87 | BR |
| 500  | 5"     | B1066028 | 2.11 | BR |
| 600  | 6"     | B1066031 | 3.72 | BR |
| 800  | 8"     | -        | -    | BR |
| 1000 | 10"    | -        | -    | BR |
| 1200 | 12"    | -        | -    | BR |



|     |        |          |      |    |
|-----|--------|----------|------|----|
| 050 | 1/2"   | B1076001 | 0.07 | PP |
| 075 | 3/4"   | B1076004 | 0.07 | PP |
| 100 | 1"     | B1076007 | 0.11 | PP |
| 125 | 1 1/4" | B1076010 | 0.21 | PP |
| 150 | 1 1/2" | B1076013 | 0.22 | PP |
| 200 | 2"     | B1076016 | 0.24 | PP |
| 250 | 2 1/2" | B1076019 | 0.36 | PP |
| 300 | 3"     | B1076022 | 0.43 | PP |
| 400 | 4"     | B1076025 | 0.67 | PP |

### Camlock F (Male BSPT Thread)

| Name | Thread | Code     | Weight (kg) | Material |
|------|--------|----------|-------------|----------|
| 050  | ½"     | B1026002 | 0.13        | SS       |
| 075  | ¾"     | B1026005 | 0.18        | SS       |
| 100  | 1"     | B1026008 | 0.25        | SS       |
| 125  | 1¼"    | B1026011 | 0.43        | SS       |
| 150  | 1½"    | B1026014 | 0.51        | SS       |
| 200  | 2"     | B1026017 | 0.76        | SS       |
| 250  | 2½"    | B1026020 | 0.84        | SS       |
| 300  | 3"     | B1026023 | 1.01        | SS       |
| 400  | 4"     | B1026026 | 1.73        | SS       |
| 500  | 5"     | B1026029 | 2.74        | SS       |
| 600  | 6"     | B1026032 | 4.28        | SS       |
| 800  | 8"     | B1026053 | 5.31        | SS       |
| 1000 | 10"    | -        | -           | SS       |
| 1200 | 12"    | -        | -           | SS       |



|      |     |          |      |    |
|------|-----|----------|------|----|
| 050  | ½"  | B1046002 | 0.05 | AL |
| 075  | ¾"  | B1046005 | 0.11 | AL |
| 100  | 1"  | B1046008 | 0.14 | AL |
| 125  | 1¼" | B1046011 | 0.24 | AL |
| 150  | 1½" | B1046014 | 0.27 | AL |
| 200  | 2"  | B1046017 | 0.33 | AL |
| 250  | 2½" | B1046020 | 0.41 | AL |
| 300  | 3"  | B1046023 | 0.65 | AL |
| 400  | 4"  | B1016026 | 0.92 | AL |
| 500  | 5"  | B1046029 | 1.16 | AL |
| 600  | 6"  | B1046032 | 1.78 | AL |
| 800  | 8"  | -        | 4.21 | AL |
| 1000 | 10" | -        | -    | AL |
| 1200 | 12" | -        | -    | AL |



|      |     |          |      |    |
|------|-----|----------|------|----|
| 050  | ½"  | B1066002 | 0.12 | BR |
| 075  | ¾"  | B1066005 | 0.13 | BR |
| 100  | 1"  | B1066008 | 0.27 | BR |
| 125  | 1¼" | B1066011 | 0.41 | BR |
| 150  | 1½" | B1066014 | 0.48 | BR |
| 200  | 2"  | B1066017 | 0.61 | BR |
| 250  | 2½" | B1066020 | 0.77 | BR |
| 300  | 3"  | B1066023 | 1.21 | BR |
| 400  | 4"  | B1066026 | 1.87 | BR |
| 500  | 5"  | B1066029 | 2.11 | BR |
| 600  | 6"  | B1066032 | 3.72 | BR |
| 800  | 8"  | -        | -    | BR |
| 1000 | 10" | -        | -    | BR |
| 1200 | 12" | -        | -    | BR |



|     |     |          |      |    |
|-----|-----|----------|------|----|
| 050 | ½"  | B1076002 | 0.07 | PP |
| 075 | ¾"  | B1076005 | 0.07 | PP |
| 100 | 1"  | B1076008 | 0.11 | PP |
| 125 | 1¼" | B1076011 | 0.21 | PP |
| 150 | 1½" | B1076014 | 0.22 | PP |
| 200 | 2"  | B1076017 | 0.24 | PP |
| 250 | 2½" | B1076020 | 0.36 | PP |
| 300 | 3"  | B1076023 | 0.43 | PP |
| 400 | 4"  | B1076026 | 0.67 | PP |



**Camlock DC (Gasket)**



| Name | Size   | Code     | Weight(kg) | Gasket | Material |
|------|--------|----------|------------|--------|----------|
| 050  | 1/2"   | B1028001 | 0.13       | NBR    | SS       |
| 075  | 3/4"   | B1028002 | 0.18       | NBR    | SS       |
| 100  | 1"     | B1028003 | 0.25       | NBR    | SS       |
| 125  | 1 1/4" | B1028004 | 0.43       | NBR    | SS       |
| 150  | 1 1/2" | B1028005 | 0.51       | NBR    | SS       |
| 200  | 2"     | B1028006 | 0.76       | NBR    | SS       |
| 250  | 2 1/2" | B1028007 | 0.84       | NBR    | SS       |
| 300  | 3"     | B1028008 | 1.01       | NBR    | SS       |
| 400  | 4"     | B1028009 | 1.73       | NBR    | SS       |
| 500  | 5"     | B1028010 | 2.74       | NBR    | SS       |
| 600  | 6"     | B1028011 | 4.28       | NBR    | SS       |
| 800  | 8"     | -        | -          | NBR    | SS       |
| 1000 | 10"    | -        | -          | NBR    | SS       |
| 1200 | 12"    | -        | -          | NBR    | SS       |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1048001 | 0.05 | NBR | AL |
| 075  | 3/4"   | B1048002 | 0.11 | NBR | AL |
| 100  | 1"     | B1048003 | 0.14 | NBR | AL |
| 125  | 1 1/4" | B1048004 | 0.24 | NBR | AL |
| 150  | 1 1/2" | B1048005 | 0.27 | NBR | AL |
| 200  | 2"     | B1048006 | 0.33 | NBR | AL |
| 250  | 2 1/2" | B1048007 | 0.41 | NBR | AL |
| 300  | 3"     | B1048008 | 0.65 | NBR | AL |
| 400  | 4"     | B1048009 | 0.92 | NBR | AL |
| 500  | 5"     | B1048010 | 1.16 | NBR | AL |
| 600  | 6"     | B1048011 | 1.78 | NBR | AL |
| 800  | 8"     | B1048012 | 4.21 | NBR | AL |
| 1000 | 10"    | -        | -    | NBR | AL |
| 1200 | 12"    | -        | -    | NBR | AL |



|      |        |          |      |     |    |
|------|--------|----------|------|-----|----|
| 050  | 1/2"   | B1068001 | 0.12 | NBR | BR |
| 075  | 3/4"   | B1068002 | 0.13 | NBR | BR |
| 100  | 1"     | B1068003 | 0.27 | NBR | BR |
| 125  | 1 1/4" | B1068004 | 0.41 | NBR | BR |
| 150  | 1 1/2" | B1068005 | 0.48 | NBR | BR |
| 200  | 2"     | B1068006 | 0.61 | NBR | BR |
| 250  | 2 1/2" | B1068007 | 0.77 | NBR | BR |
| 300  | 3"     | B1068008 | 1.21 | NBR | BR |
| 400  | 4"     | B1068009 | 1.87 | NBR | BR |
| 500  | 5"     | B1068010 | 2.11 | NBR | BR |
| 600  | 6"     | B1068011 | 3.72 | NBR | BR |
| 800  | 8"     | -        | -    | NBR | BR |
| 1000 | 10"    | -        | -    | NBR | BR |
| 1200 | 12"    | -        | -    | NBR | BR |



|     |        |          |      |   |    |
|-----|--------|----------|------|---|----|
| 050 | 1/2"   | B1078001 | 0.07 | - | PP |
| 075 | 3/4"   | B1078002 | 0.07 | - | PP |
| 100 | 1"     | B1078003 | 0.11 | - | PP |
| 125 | 1 1/4" | B1078004 | 0.21 | - | PP |
| 150 | 1 1/2" | B1078005 | 0.22 | - | PP |
| 200 | 2"     | B1078006 | 0.24 | - | PP |
| 250 | 2 1/2" | B1078007 | 0.36 | - | PP |
| 300 | 3"     | B1078008 | 0.43 | - | PP |
| 400 | 4"     | B1078009 | 0.67 | - | PP |

\* we can add a chain on request.

### Camlock DP

| Name | Size   | Code     | Weight (kg) | Accessories | Material |
|------|--------|----------|-------------|-------------|----------|
| 050  | 1/2"   | B1027001 | 0.06        | Chain       | SS       |
| 075  | 3/4"   | B1027002 | 0.08        | Chain       | SS       |
| 100  | 1"     | B1027003 | 0.13        | Chain       | SS       |
| 125  | 1 1/4" | B1027004 | 0.25        | Chain       | SS       |
| 150  | 1 1/2" | B1027005 | 0.32        | Chain       | SS       |
| 200  | 2"     | B1027006 | 0.46        | Chain       | SS       |
| 250  | 2 1/2" | B1027007 | 0.67        | Chain       | SS       |
| 300  | 3"     | B1027008 | 0.93        | Chain       | SS       |
| 400  | 4"     | B1027009 | 1.59        | Chain       | SS       |
| 500  | 5"     | B1027010 | 1.91        | Chain       | SS       |
| 600  | 6"     | B1027011 | 3.84        | Chain       | SS       |
| 800  | 8"     | -        | -           | Chain       | SS       |
| 1000 | 10"    | -        | -           | Chain       | SS       |
| 1200 | 12"    | -        | -           | Chain       | SS       |



|      |        |          |      |       |    |
|------|--------|----------|------|-------|----|
| 050  | 1/2"   | B1047001 | 0.02 | Chain | AL |
| 075  | 3/4"   | B1047002 | 0.03 | Chain | AL |
| 100  | 1"     | B1047003 | 0.05 | Chain | AL |
| 125  | 1 1/4" | B1047004 | 0.07 | Chain | AL |
| 150  | 1 1/2" | B1047005 | 0.12 | Chain | AL |
| 200  | 2"     | B1047006 | 0.16 | Chain | AL |
| 250  | 2 1/2" | B1047007 | 0.22 | Chain | AL |
| 300  | 3"     | B1047008 | 0.28 | Chain | AL |
| 400  | 4"     | B1047009 | 0.51 | Chain | AL |
| 500  | 5"     | B1047010 | 0.55 | Chain | AL |
| 600  | 6"     | B1047011 | 0.74 | Chain | AL |
| 800  | 8"     | B1047012 | 4.21 | Chain | AL |
| 1000 | 10"    | -        | -    | Chain | AL |
| 1200 | 12"    | -        | -    | Chain | AL |



|      |        |          |      |       |    |
|------|--------|----------|------|-------|----|
| 050  | 1/2"   | B1067001 | 0.07 | Chain | BR |
| 075  | 3/4"   | B1067002 | 0.09 | Chain | BR |
| 100  | 1"     | B1067003 | 0.13 | Chain | BR |
| 125  | 1 1/4" | B1067004 | 0.21 | Chain | BR |
| 150  | 1 1/2" | B1067005 | 0.24 | Chain | BR |
| 200  | 2"     | B1067006 | 0.41 | Chain | BR |
| 250  | 2 1/2" | B1067007 | 0.59 | Chain | BR |
| 300  | 3"     | B1067008 | 0.72 | Chain | BR |
| 400  | 4"     | B1067009 | 1.03 | Chain | BR |
| 500  | 5"     | B1067010 | 1.61 | Chain | BR |
| 600  | 6"     | B1067011 | 1.81 | Chain | BR |
| 800  | 8"     | -        | -    | Chain | BR |
| 1000 | 10"    | -        | -    | Chain | BR |
| 1200 | 12"    | -        | -    | Chain | BR |



|     |        |          |      |       |    |
|-----|--------|----------|------|-------|----|
| 050 | 1/2"   | B1077001 | 0.01 | Chain | PP |
| 075 | 3/4"   | B1077002 | 0.01 | Chain | PP |
| 100 | 1"     | B1077003 | 0.02 | Chain | PP |
| 125 | 1 1/4" | B1077004 | 0.04 | Chain | PP |
| 150 | 1 1/2" | B1077005 | 0.05 | Chain | PP |
| 200 | 2"     | B1077006 | 0.08 | Chain | PP |
| 250 | 2 1/2" | B1077007 | 0.17 | Chain | PP |
| 300 | 3"     | B1077008 | 0.22 | Chain | PP |
| 400 | 4"     | B1077009 | 0.26 | Chain | PP |



\* we can add a chain on request.

### Camlock DC with special handle



| Name  | Size   | Code      | Weight(kg) | Gasket | Material |
|-------|--------|-----------|------------|--------|----------|
| DN 32 | 1 1/4" | B 1048031 | 0.24       | NBR    | AL       |
| DN 40 | 1 1/2" | B 1048032 | 0.27       | NBR    | AL       |
| DN 50 | 2"     | B 1048033 | 0.33       | NBR    | AL       |
| DN 65 | 2 1/2" | B 1048034 | 0.41       | NBR    | AL       |
| DN 80 | 3"     | B 1048035 | 0.65       | NBR    | AL       |

### Camlock adapter FW welding



| Name   | Weld Size | Code      | Weight (kg) | Material |
|--------|-----------|-----------|-------------|----------|
| DN 15  | 21.3*2.3  | B 1013054 | 0.07        | SS       |
| DN 20  | 26.9*2.3  | B 1013055 | 0.11        | SS       |
| DN 25  | 33.7*2.6  | B 1013056 | 0.15        | SS       |
| DN 32  | 42.2*2.6  | B 1013057 | 0.24        | SS       |
| DN 40  | 48.3*2.6  | B 1013058 | 0.32        | SS       |
| DN 50  | 60.3*2.9  | B 1013059 | 0.42        | SS       |
| DN 65  | 76.1*2.9  | B 1013060 | 0.71        | SS       |
| DN 80  | 88.9*3.2  | B 1013061 | 0.73        | SS       |
| DN 100 | 114.3*3.6 | B 1013062 | 1.42        | SS       |
| DN 125 | 139.7*3.6 | B 1013063 | -           | SS       |
| DN 150 | 168.3*4.5 | B 1013064 | -           | SS       |

### Camlock adapter BW welding



| Name   | WeldSize   | Code      | Weight (kg) | Gasket | Material |
|--------|------------|-----------|-------------|--------|----------|
| DN 15  | 21.3 *2.3  | B 1022366 | 0.12        | NBR    | SS       |
| DN 20  | 26.9 *2.3  | B 1022360 | 0.20        | NBR    | SS       |
| DN 25  | 33.7 *2.6  | B 1022357 | 0.29        | NBR    | SS       |
| DN 32  | 42.2 *2.6  | B 1022365 | 0.47        | NBR    | SS       |
| DN 40  | 48.3 *2.6  | B 1022355 | 0.54        | NBR    | SS       |
| DN 50  | 60.3 *2.9  | B 1022367 | 0.67        | NBR    | SS       |
| DN 65  | 76.1 *2.9  | B 1022368 | 1.14        | NBR    | SS       |
| DN 80  | 88.9 *3.2  | B 1022369 | 1.35        | NBR    | SS       |
| DN 100 | 114.3 *3.6 | B 1022361 | 1.97        | NBR    | SS       |
| DN 125 | 139.7 *4   | B 1013052 | 2.98        | NBR    | SS       |
| DN 150 | 168.3 *4.5 | B 1013053 | 4.11        | NBR    | SS       |

### Camlock - Reduction (DD)

| Code     | Size                             | Gasket | Material |
|----------|----------------------------------|--------|----------|
| B1012093 | 11/2"x 11/2" dual coupler D type | NBR    | AL       |
| B1012094 | 2"x 2" dual coupler D type       | NBR    | AL       |
| B1012095 | 3"x 3" dual coupler D type       | NBR    | AL       |
| B1012096 | 4"x 4" dual coupler D type       | NBR    | AL       |
| B1012086 | 6"x 6" dual coupler D type       | NBR    | AL       |



### Camlock - Reduction (DA)

| Code     | Size                                      | Gasket | Material |
|----------|-------------------------------------------|--------|----------|
| B1012055 | 1.1/2" coupler D type x 1" adapter A type | NBR    | AL       |
| B1012056 | 1.1/2" coupler D type x 2" adapter A type | NBR    | AL       |
| B1012057 | 2" coupler D type x 1.1/2" adapter A type | NBR    | AL       |
| B1012058 | 2" coupler D type x 3" adapter A type     | NBR    | AL       |
| B1012059 | 2" coupler D type x 4" adapter A type     | NBR    | AL       |
| B1012060 | 3" coupler D type x 11/2" adapter A type  | NBR    | AL       |
| B1012061 | 3" coupler D type x 2" adapter A type     | NBR    | AL       |
| B1012062 | 3" coupler D type x 2 1/2" adapter A type | NBR    | AL       |
| B1012063 | 3" coupler D type x 4" adapter A type     | NBR    | AL       |
| B1012064 | 4" coupler D type x 2" adapter A type     | NBR    | AL       |
| B1012065 | 4" coupler D type x 3" adapter A type     | NBR    | AL       |
| B1012066 | 4" coupler D type x 6" adapter A type     | NBR    | AL       |
| B1012067 | 6" coupler D type x 4" adapter A type     | NBR    | AL       |



### Camlock - Reduction (AA)

| Code     | Size                               | Material |
|----------|------------------------------------|----------|
| B1012097 | dual adapter A type 1"x 1"         | AL       |
| B1012039 | dual adapter A type 1 1/4"x 1 1/4" | AL       |
| B1012040 | dual adapter A type 1 1/2"x 1 1/2" | AL       |
| B1012041 | dual adapter A type 1 1/2"x 2"     | AL       |
| B1012098 | dual adapter A type 2"x 2"         | AL       |
| B1012042 | dual adapter A type 2"x 2 1/2"     | AL       |
| B1012043 | dual adapter A type 2"x 3"         | AL       |
| B1012026 | dual adapter A type 3"x 3"         | AL       |
| B1012044 | dual adapter A type 3"x 4"         | AL       |
| B1012045 | dual adapter A type 4"x 4"         | AL       |
| B1012046 | dual adapter A type 4"x 6"         | AL       |
| B1012047 | dual adapter A type 6"x 6"         | AL       |



## Camlock Couplings

### Camlock Reduction (AR)



| Code     | Size                                  | Gasket | Material |
|----------|---------------------------------------|--------|----------|
| B1012099 | 2"adapter A type with 3"female thread | NBR    | AL       |
| B1012100 | 3"adapter A type with 2"female thread | NBR    | AL       |
| B1012101 | 3"adapter A type with 4"female thread | NBR    | AL       |
| B1012102 | 4"adapter A type with 3"female thread | NBR    | AL       |
| B1012103 | 4"adapter A type with 6"female thread | NBR    | AL       |
| B1012104 | 6"adapter A type with 4"female thread | NBR    | AL       |

### Camlock Reduction (BR)



| Code     | Size                                    | Gasket | Material |
|----------|-----------------------------------------|--------|----------|
| B1012106 | 1.1/2"coupler B type with 1"male thread | NBR    | AL       |
| B1012107 | 2"coupler B type with 1 1/2"male thread | NBR    | AL       |
| B1012108 | 3"coupler B type with 2"male thread     | NBR    | AL       |
| B1012109 | 3"coupler B type with 4"male thread     | NBR    | AL       |
| B1012110 | 4"coupler B type with 3"male thread     | NBR    | AL       |



### Camlock Reduction (CR)

| Code     | Size                              | Gasket | Material |
|----------|-----------------------------------|--------|----------|
| B1012111 | 3"coupler C type with 2"hose tail | NBR    | AL       |
| B1012112 | 3"coupler C type with 4"hose tail | NBR    | AL       |
| B1012113 | 4"coupler C type with 3"hose tail | NBR    | AL       |



### Camlock Reduction (ER)

| Code     | Size                              | Material |
|----------|-----------------------------------|----------|
| B1012018 | 3"adapter E type with 2"hose tail | AL       |
| B1012019 | 4"adapter E type with 2"hose tail | AL       |
| B1012020 | 4"adapter E type with 3"hose tail | AL       |

### Camlock Reduction (FR)



| Code     | Size                                    | Material |
|----------|-----------------------------------------|----------|
| B1012105 | 3"adapter F type with 1.1/2"maBe thread | AL       |
| B1012021 | 3"adapter F type with 2"maBe thread     | AL       |
| B1012022 | 3"adapter F type with 3"maBe thread     | AL       |
| B1012023 | 3"adapter F type with 4"maBe thread     | AL       |
| B1012024 | 4"adapter F type with 3"maBe thread     | AL       |

### Camlock - CVR

| Code     | Size                         | Gasket | Material |
|----------|------------------------------|--------|----------|
| B1012016 | 4" coupler with 3" hose tail | NBR    | AL       |
| B1012017 | 4" coupler with 4" hose tail | NBR    | AL       |



### Camlock - DVR

| Code     | Size                             | Gasket | Material |
|----------|----------------------------------|--------|----------|
| B1012015 | 4" coupler with 3" female thread | NBR    | AL       |



### Camlock - API

| Code     | Size                           | Gasket | Material |
|----------|--------------------------------|--------|----------|
| B1012001 | 6" coupler with 3" male thread | NBR    | AL       |



### Camlock - API (without sight glass)

| Code     | Size                       | Gasket | Material |
|----------|----------------------------|--------|----------|
| B1012002 | 6" coupler with 3" adapter | NBR    | AL       |



### Camlock - API (with thread)

| Code     | Size                       | Gasket | Material |
|----------|----------------------------|--------|----------|
| B1012003 | 6" coupler with 3" adapter | NBR    | AL       |



### Camlock Flange (AFL)



| Name   | Size | Code      | Weight (kg) | Material |
|--------|------|-----------|-------------|----------|
| DN 25  | 1"   | B 1033005 | 1.35        | SS       |
| DN 50  | 2"   | B 1033006 | 3.29        | SS       |
| DN 80  | 3"   | B 1033007 | 4.80        | SS       |
| DN 100 | 4"   | B 1033008 | 7.21        | SS       |
| DN 125 | 5"   | B 1033009 | 9.82        | SS       |
| DN 150 | 6"   | B 1033010 | 13.86       | SS       |

|        |    |           |      |    |
|--------|----|-----------|------|----|
| DN 80  | 3" | B 1033001 | 2.24 | AL |
| DN 100 | 4" | B 1033002 | 3.67 | AL |
| DN 125 | 5" | B 1033003 | 5.24 | AL |
| DN 150 | 6" | B 1033004 | 7.67 | AL |

\* Flange PN according your needs.

### Camlock Flange (BFL)



| Name   | Inch   | Code      | Weight (kg) | Gasket | Material |
|--------|--------|-----------|-------------|--------|----------|
| DN 25  | 1/2"   | B 1033011 | 1.09        | NBR    | SS       |
| DN 50  | 3/4"   | B 1033012 | 2.87        | NBR    | SS       |
| DN 80  | 1"     | B 1033013 | 5.16        | NBR    | SS       |
| DN 100 | 1 1/4" | B 1033014 | 7.44        | NBR    | SS       |
| DN 125 | 1 1/2" | B 1033015 | 9.86        | NBR    | SS       |
| DN 150 | 2"     | B 1033016 | 11.77       | NBR    | SS       |

\* Flange PN according your needs.

### Type C - swivel 360° smooth hose tail



| Name   | Size   | Code      | Weight (kg) | Gasket | Material |
|--------|--------|-----------|-------------|--------|----------|
| DN 50  | 2"     | B 1023122 | 0.71        | NBR    | SS       |
| DN 65  | 2 1/2" | B 1023123 | 1.01        | NBR    | SS       |
| DN 80  | 3"     | B 1023124 | 1.31        | NBR    | SS       |
| DN 100 | 4"     | B 1023125 | 2.14        | NBR    | SS       |

### Type C 90° hose shank



| Name   | Size   | Code      | Weight (kg) | Gasket | Material |
|--------|--------|-----------|-------------|--------|----------|
| DN 150 | 1 1/2" | B 1036001 | 1.71        | NBR    | SS       |
| DN 200 | 2"     | B 1036002 | 2.01        | NBR    | SS       |
| DN 150 | 1 1/2" | B 1036003 | 1.24        | NBR    | AL       |
| DN 200 | 2"     | B 1036004 | 1.67        | NBR    | AL       |

## GASKET - NBR

| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B1090017 | 26.5  | 17.5  | 4.0 | Black  | NBR      |
| DN 20  | 3/4"   | B1090076 | 35    | 22    | 5.5 | Black  | NBR      |
| DN 25  | 1"     | B1090077 | 40    | 27    | 6.4 | Black  | NBR      |
| DN 32  | 1 1/4" | B1090078 | 50    | 35    | 6.4 | Black  | NBR      |
| DN 40  | 1 1/2" | B1090079 | 56    | 41    | 6.4 | Black  | NBR      |
| DN 50  | 2"     | B1090080 | 67    | 51    | 6.4 | Black  | NBR      |
| DN 65  | 2 1/2" | B1090081 | 80    | 60    | 6.4 | Black  | NBR      |
| DN 80  | 3"     | B1090082 | 95    | 76    | 6.4 | Black  | NBR      |
| DN 100 | 4"     | B1090083 | 124   | 102   | 6.4 | Black  | NBR      |
| DN 125 | 5"     | B1090084 | 150.5 | 124   | 6.4 | Black  | NBR      |
| DN 150 | 6"     | B1090085 | 180   | 153   | 6.4 | Black  | NBR      |
| DN 200 | 8"     | B1090086 | 232.5 | 203.5 | 7.9 | Black  | NBR      |



## GASKET - EPDM

| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B1090099 | 26.5  | 17.5  | 4.0 | Black  | EPDM     |
| DN 20  | 3/4"   | B1090100 | 35    | 22    | 5.5 | Black  | EPDM     |
| DN 25  | 1"     | B1090101 | 40    | 27    | 6.4 | Black  | EPDM     |
| DN 32  | 1 1/4" | B1090102 | 50    | 35    | 6.4 | Black  | EPDM     |
| DN 40  | 1 1/2" | B1090103 | 56    | 41    | 6.4 | Black  | EPDM     |
| DN 50  | 2"     | B1090104 | 67    | 51    | 6.4 | Black  | EPDM     |
| DN 65  | 2 1/2" | B1090105 | 80    | 60    | 6.4 | Black  | EPDM     |
| DN 80  | 3"     | B1090106 | 95    | 76    | 6.4 | Black  | EPDM     |
| DN 100 | 4"     | B1090107 | 124   | 102   | 6.4 | Black  | EPDM     |
| DN 125 | 5"     | B1090108 | 150.5 | 124   | 6.4 | Black  | EPDM     |
| DN 150 | 6"     | B1090109 | 180   | 153   | 6.4 | Black  | EPDM     |
| DN 200 | 8"     | B1090110 | 232.5 | 203.5 | 7.9 | Black  | EPDM     |



### GASKET - FPM (Viton ®)



| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B1090135 | 26.5  | 17.5  | 4.0 | Green  | FPM      |
| DN 20  | 3/4"   | B1090136 | 35    | 22    | 5.5 | Green  | FPM      |
| DN 25  | 1"     | B1090137 | 40    | 27    | 6.4 | Green  | FPM      |
| DN 32  | 1 1/4" | B1090138 | 50    | 35    | 6.4 | Green  | FPM      |
| DN 40  | 1 1/2" | B1090139 | 56    | 41    | 6.4 | Green  | FPM      |
| DN 50  | 2"     | B1090140 | 67    | 51    | 6.4 | Green  | FPM      |
| DN 65  | 2 1/2" | B1090141 | 80    | 60    | 6.4 | Green  | FPM      |
| DN 80  | 3"     | B1090142 | 95    | 76    | 6.4 | Green  | FPM      |
| DN 100 | 4"     | B1090143 | 124   | 102   | 6.4 | Green  | FPM      |
| DN 125 | 5"     | B1090144 | 150.5 | 124   | 6.4 | Green  | FPM      |
| DN 150 | 6"     | B1090145 | 180   | 153   | 6.4 | Green  | FPM      |
| DN 200 | 8"     | B1090146 | 232.5 | 203.5 | 7.9 | Green  | FPM      |

### GASKET - CSM (Hypalon ®)



| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B1090147 | 26.5  | 17.5  | 4.0 | Green  | CSM      |
| DN 20  | 3/4"   | B1090148 | 35    | 22    | 5.5 | Green  | CSM      |
| DN 25  | 1"     | B1090149 | 40    | 27    | 6.4 | Green  | CSM      |
| DN 32  | 1 1/4" | B1090150 | 50    | 35    | 6.4 | Green  | CSM      |
| DN 40  | 1 1/2" | B1090151 | 56    | 41    | 6.4 | Green  | CSM      |
| DN 50  | 2"     | B1090152 | 67    | 51    | 6.4 | Green  | CSM      |
| DN 65  | 2 1/2" | B1090153 | 80    | 60    | 6.4 | Green  | CSM      |
| DN 80  | 3"     | B1090154 | 95    | 76    | 6.4 | Green  | CSM      |
| DN 100 | 4"     | B1090155 | 124   | 102   | 6.4 | Green  | CSM      |
| DN 125 | 5"     | B1090156 | 150.5 | 124   | 6.4 | Green  | CSM      |
| DN 150 | 6"     | B1090157 | 180   | 153   | 6.4 | Green  | CSM      |
| DN 200 | 8"     | B1090158 | 232.5 | 203.5 | 7.9 | Green  | CSM      |

## OPEN ENVELOPE PTFE - NBR

| Name   | Size   | Code     | OD    | ID    | H   | Colour      | Material |
|--------|--------|----------|-------|-------|-----|-------------|----------|
| DN 15  | 1/2"   | B1090037 | 26.5  | 17.5  | 4.0 | White-Black | PTFE-NBR |
| DN 20  | 3/4"   | B1090219 | 35    | 22    | 5.5 | White-Black | PTFE-NBR |
| DN 25  | 1"     | B1090220 | 40    | 27    | 6.4 | White-Black | PTFE-NBR |
| DN 32  | 1 1/4" | B1090221 | 50    | 35    | 6.4 | White-Black | PTFE-NBR |
| DN 40  | 1 1/2" | B1090222 | 56    | 41    | 6.4 | White-Black | PTFE-NBR |
| DN 50  | 2"     | B1090223 | 67    | 51    | 6.4 | White-Black | PTFE-NBR |
| DN 65  | 2 1/2" | B1090224 | 80    | 60    | 6.4 | White-Black | PTFE-NBR |
| DN 80  | 3"     | B1090225 | 95    | 76    | 6.4 | White-Black | PTFE-NBR |
| DN 100 | 4"     | B1090226 | 124   | 102   | 6.4 | White-Black | PTFE-NBR |
| DN 125 | 5"     | B1090227 | 150.5 | 124   | 6.4 | White-Black | PTFE-NBR |
| DN 150 | 6"     | B1090228 | 180   | 153   | 6.4 | White-Black | PTFE-NBR |
| DN 200 | 8"     | B1090229 | 232.5 | 203.5 | 7.9 | White-Black | PTFE-NBR |



## OPEN ENVELOPE PTFE - EPDM

| Name   | Size   | Code     | OD    | ID    | H   | Colour      | Material  |
|--------|--------|----------|-------|-------|-----|-------------|-----------|
| DN 15  | 1/2"   | B1090195 | 26.5  | 17.5  | 4.0 | White-Black | PTFE-EPDM |
| DN 20  | 3/4"   | B1090196 | 35    | 22    | 5.5 | White-Black | PTFE-EPDM |
| DN 25  | 1"     | B1090197 | 40    | 27    | 6.4 | White-Black | PTFE-EPDM |
| DN 32  | 1 1/4" | B1090198 | 50    | 35    | 6.4 | White-Black | PTFE-EPDM |
| DN 40  | 1 1/2" | B1090199 | 56    | 41    | 6.4 | White-Black | PTFE-EPDM |
| DN 50  | 2"     | B1090200 | 67    | 51    | 6.4 | White-Black | PTFE-EPDM |
| DN 65  | 2 1/2" | B1090201 | 80    | 60    | 6.4 | White-Black | PTFE-EPDM |
| DN 80  | 3"     | B1090202 | 95    | 76    | 6.4 | White-Black | PTFE-EPDM |
| DN 100 | 4"     | B1090203 | 124   | 102   | 6.4 | White-Black | PTFE-EPDM |
| DN 125 | 5"     | B1090204 | 150.5 | 124   | 6.4 | White-Black | PTFE-EPDM |
| DN 150 | 6"     | B1090205 | 180   | 153   | 6.4 | White-Black | PTFE-EPDM |
| DN 200 | 8"     | B1090206 | 232.5 | 203.5 | 7.9 | White-Black | PTFE-EPDM |



## OPEN ENVELOPE FTFE - FPM



| Name   | Size   | Code     | OD    | ID    | H   | Colour      | Material |
|--------|--------|----------|-------|-------|-----|-------------|----------|
| DN 15  | 1/2"   | B1090207 | 26.5  | 17.5  | 4.0 | White-Black | PTFE-FPM |
| DN 20  | 3/4"   | B1090208 | 35    | 22    | 5.5 | White-Black | PTFE-FPM |
| DN 25  | 1"     | B1090209 | 40    | 27    | 6.4 | White-Black | PTFE-FPM |
| DN 32  | 1 1/4" | B1090210 | 50    | 35    | 6.4 | White-Black | PTFE-FPM |
| DN 40  | 1 1/2" | B1090211 | 56    | 41    | 6.4 | White-Black | PTFE-FPM |
| DN 50  | 2"     | B1090212 | 67    | 51    | 6.4 | White-Black | PTFE-FPM |
| DN 65  | 2 1/2" | B1090213 | 80    | 60    | 6.4 | White-Black | PTFE-FPM |
| DN 80  | 3"     | B1090214 | 95    | 76    | 6.4 | White-Black | PTFE-FPM |
| DN 100 | 4"     | B1090215 | 124   | 102   | 6.4 | White-Black | PTFE-FPM |
| DN 125 | 5"     | B1090216 | 150.5 | 124   | 6.4 | White-Black | PTFE-FPM |
| DN 150 | 6"     | B1090217 | 180   | 153   | 6.4 | White-Black | PTFE-FPM |
| DN 200 | 8"     | B1090218 | 232.5 | 203.5 | 7.9 | White-Black | PTFE-FPM |

## THREAD SEAL - PTFE



| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B1090171 | 26    | 19    | 1.5 | White  | PTFE     |
| DN 20  | 3/4"   | B1090172 | 33    | 24    | 2   | White  | PTFE     |
| DN 25  | 1"     | B1090173 | 42    | 33    | 2   | White  | PTFE     |
| DN 32  | 1 1/4" | B1090174 | 48    | 39    | 2   | White  | PTFE     |
| DN 40  | 1 1/2" | B1090175 | 60    | 49    | 2   | White  | PTFE     |
| DN 50  | 2"     | B1090176 | 76    | 63    | 2   | White  | PTFE     |
| DN 65  | 2 1/2" | B1090177 | 88    | 77    | 2.5 | White  | PTFE     |
| DN 80  | 3"     | B1090178 | 114   | 100   | 3   | White  | PTFE     |
| DN 100 | 4"     | B1090179 | 124   | 102   | 3   | White  | PTFE     |
| DN 125 | 5"     | B1090180 | 150.5 | 124   | 3   | White  | PTFE     |
| DN 150 | 6"     | B1090181 | 180   | 153   | 3   | White  | PTFE     |
| DN 200 | 8"     | B1090182 | 232.5 | 203.5 | 4   | White  | PTFE     |

## THREAD SEAL - PU

| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B9001873 | 26    | 19    | 1.5 | BLUE   | PU       |
| DN 20  | 3/4"   | B9001874 | 33    | 24    | 2   | BLUE   | PU       |
| DN 25  | 1"     | B9001875 | 42    | 33    | 2   | BLUE   | PU       |
| DN 32  | 1 1/4" | B9001876 | 48    | 39    | 2   | BLUE   | PU       |
| DN 40  | 1 1/2" | B9001877 | 60    | 49    | 2   | BLUE   | PU       |
| DN 50  | 2"     | B9001878 | 76    | 63    | 2   | BLUE   | PU       |
| DN 65  | 2 1/2" | B9001879 | 88    | 77    | 2.5 | BLUE   | PU       |
| DN 80  | 3"     | B9001880 | 114   | 100   | 3   | BLUE   | PU       |
| DN 100 | 4"     | B9001881 | 124   | 102   | 3   | BLUE   | PU       |
| DN 125 | 5"     | B9001882 | 150.5 | 124   | 3   | BLUE   | PU       |
| DN 150 | 6"     | B9001883 | 180   | 153   | 3   | BLUE   | PU       |
| DN 200 | 8"     | B9001884 | 232.5 | 203.5 | 4   | BLUE   | PU       |



## THREAD SEAL - NBR

| Name   | Size   | Code     | OD    | ID    | H   | Colour | Material |
|--------|--------|----------|-------|-------|-----|--------|----------|
| DN 15  | 1/2"   | B9001825 | 26    | 19    | 1.5 | Black  | NBR      |
| DN 20  | 3/4"   | B9001826 | 33    | 24    | 2   | Black  | NBR      |
| DN 25  | 1"     | B9001827 | 42    | 33    | 2   | Black  | NBR      |
| DN 32  | 1 1/4" | B9001828 | 48    | 39    | 2   | Black  | NBR      |
| DN 40  | 1 1/2" | B9001829 | 60    | 49    | 2   | Black  | NBR      |
| DN 50  | 2"     | B9001830 | 76    | 63    | 2   | Black  | NBR      |
| DN 65  | 2 1/2" | B9001831 | 88    | 77    | 2.5 | Black  | NBR      |
| DN 80  | 3"     | B9001832 | 114   | 100   | 3   | Black  | NBR      |
| DN 100 | 4"     | B9001833 | 124   | 102   | 3   | Black  | NBR      |
| DN 125 | 5"     | B9001834 | 150.5 | 124   | 3   | Black  | NBR      |
| DN 150 | 6"     | B9001835 | 180   | 153   | 3   | Black  | NBR      |
| DN 200 | 8"     | B9001836 | 232.5 | 203.5 | 4   | Black  | NBR      |





### HANDLE SET: Handle + ring + pin + clip

| Name      | Size          | Code     | Material |
|-----------|---------------|----------|----------|
| DN 15-20  | 1/2"-3/4"     | B1009078 | SS       |
| DN 25     | 1"            | B1009079 | SS       |
| DN 32-65  | 1 1/4"-2 1/2" | B1009080 | SS       |
| DN 80-125 | 3"-5"         | B1009081 | SS       |
| DN 150    | 6"            | B1009096 | SS       |



### PULL RING

| Name      | Size          | Code     | Material |
|-----------|---------------|----------|----------|
| DN 15-25  | 1/2"-1"       | B1090289 | SS       |
| DN 32-65  | 1 1/4"-2 1/2" | B1090290 | SS       |
| DN 80-125 | 3"-6"         | B1090291 | SS       |



### PIN

| Name      | Size          | Code     | Material |
|-----------|---------------|----------|----------|
| DN 15-20  | 1/2"-3/4"     | B1090233 | SS       |
| DN 25     | 1"            | B1090234 | SS       |
| DN 32-65  | 1 1/4"-2 1/2" | B1090237 | SS       |
| DN 80-100 | 3"-4"         | B1090238 | SS       |



### SAFETY CLIP

| Name        | Code     | Material |
|-------------|----------|----------|
| SAFETY CLIP | B1090046 | SS       |



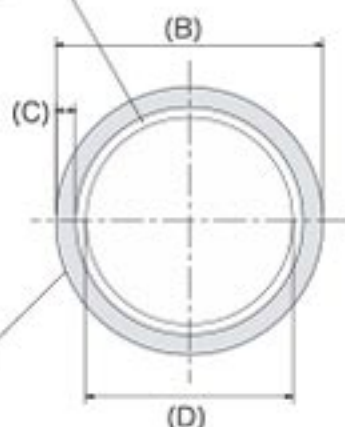
### CHAIN WITH S - HOOK

| Name              | Size  | Code     | Material |
|-------------------|-------|----------|----------|
| CHAIN WITH S-HOOK | 200mm | B0110001 | SS       |
| CHAIN WITH S-HOOK | 300mm | B0110002 | SS       |

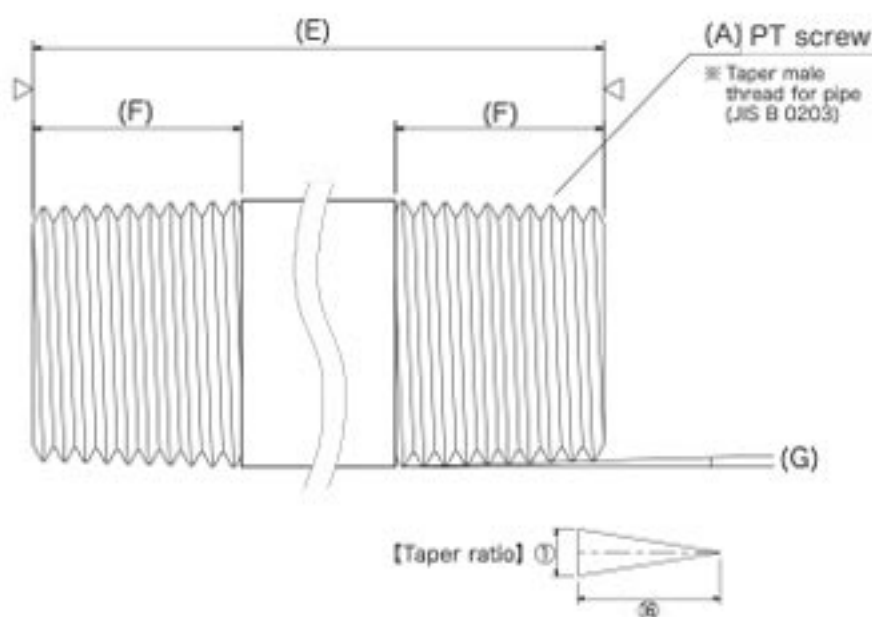
## NPT Nipple

Hard vinyl chloride resin

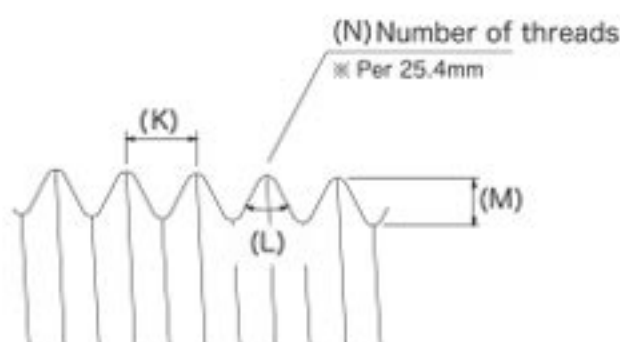
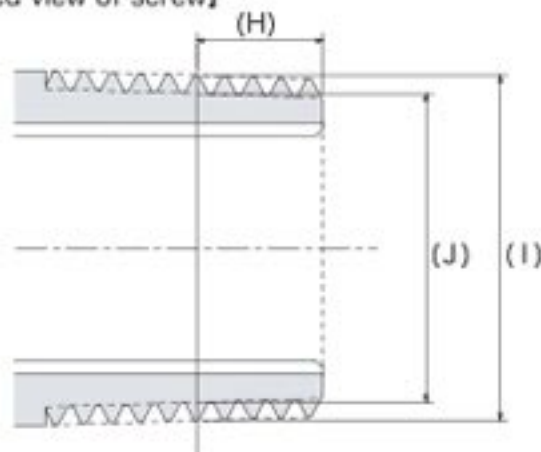
※JIS K6742



Hot-dip galvanized

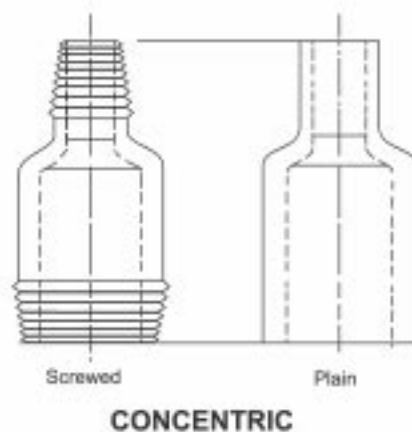
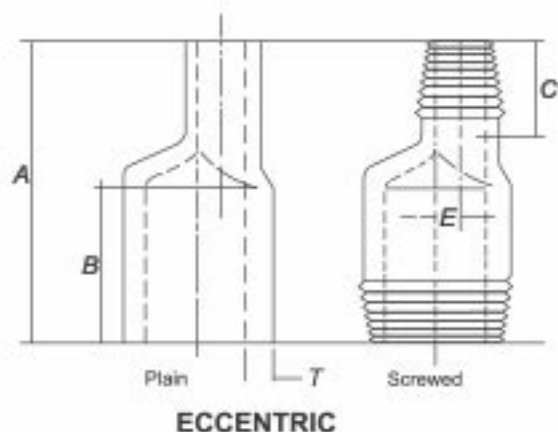


【Detailed view of screw】



※ Dimensional unit is mm

| A | Size                         | 15A     | 20A     | 25A     | 32A     | 40A     | 50A     | 65A     | 80A     | 100A    | 125A    | 150A    |
|---|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| B | Outer diameter(Φ)            | 21.7    | 27.2    | 34.0    | 42.7    | 48.6    | 60.5    | 76.3    | 89.1    | 114.3   | 139.8   | 165.2   |
| C | Thickness(t)                 | 2.8     | 2.8     | 3.2     | 3.5     | 3.5     | 3.8     | 4.2     | 4.2     | 4.5     | 4.5     | 5.0     |
| D | Inner diameter(Φ)            | 13.1    | 18.6    | 24.6    | 32.7    | 38.6    | 49.9    | 64.9    | 76.7    | 101.3   | 126.8   | 150.2   |
| E | Short nipple dimensions      | 34      | 38      | 42      | 50      | 50      | 58      | 70      | 78      | 90      | 103     | 103     |
| F | Screw dimensions             | 16.5    | 18.5    | 20.5    | 24.5    | 24.5    | 28.5    | 34.5    | 38.5    | 44.5    | 50      | 50      |
| G | Taper angle                  | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° | 1.7899° |
| H | Effective thread size        | 8.16    | 9.53    | 10.39   | 12.7    | 12.7    | 15.88   | 17.46   | 20.64   | 25.4    | 28.58   | 28.58   |
| I | Effective diameter(Φ)        | 20.955  | 26.441  | 33.249  | 41.91   | 47.803  | 59.614  | 75.184  | 87.884  | 113.03  | 138.43  | 163.83  |
| J | Effective valley diameter(Φ) | 18.631  | 24.117  | 30.291  | 38.952  | 44.845  | 56.656  | 72.226  | 84.926  | 110.072 | 135.472 | 160.872 |
| K | Screw pitch                  | 1.8143  | 1.8143  | 2.3091  | 2.3091  | 2.3091  | 2.3091  | 2.3091  | 2.3091  | 2.3091  | 2.3091  | 2.3091  |
| L | Thread angle                 | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     | 55°     |
| M | Thread height                | 1.162   | 1.162   | 1.479   | 1.479   | 1.479   | 1.479   | 1.479   | 1.479   | 1.479   | 1.479   | 1.479   |
| N | Number of threads            | 14      | 14      | 11      | 11      | 11      | 11      | 11      | 11      | 11      | 11      | 11      |

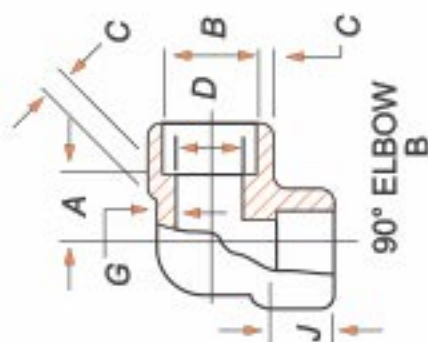
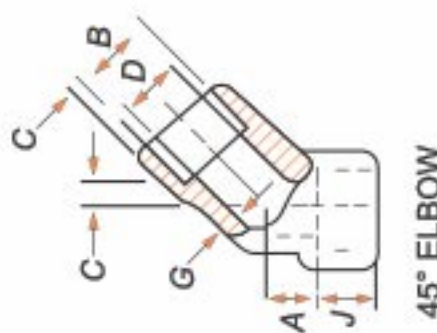
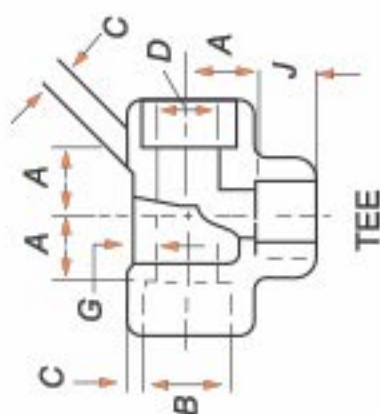
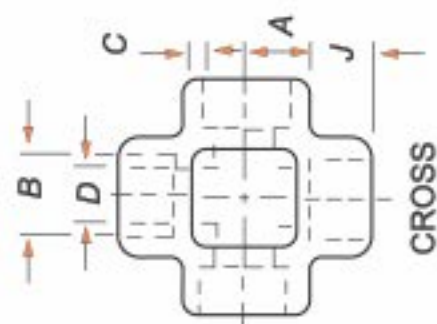


**SWAGE NIPPLES [ MSS SP 95 - 2018 ]**

| Nominal Pipe Size | A               | B        | C        | E              |      |
|-------------------|-----------------|----------|----------|----------------|------|
|                   | Parallel length |          |          | Eccentricity E |      |
|                   | (min.) A        | (min.) B | (min.) C | 3000           | 6000 |
| 10 x 8            | 76              | 48       | 16       | 1.6            | -    |
| 15 x 10           | 89              | 56       | 19       | 1.6            | -    |
| 15 x 8            | 89              | 56       | 19       | 3.2            | -    |
| 20 x 15           | 95              | 57       | 22       | 2.4            | 2.4  |
| 20 x 10           | 95              | 57       | 22       | 4.0            | -    |
| 25 x 20           | 102             | 64       | 22       | 2.8            | 2.0  |
| 25 x 15           | 102             | 64       | 22       | 5.2            | 4.4  |
| 40 x 25           | 114             | 70       | 25       | 6.7            | 6.4  |
| 40 x 20           | 114             | 70       | 25       | 9.5            | 8.3  |
| 40 x 15           | 114             | 70       | 25       | 11.9           | 10.7 |
| 50 x 40           | 165             | 108      | 29       | 5.6            | 5.2  |
| 50 x 25           | 165             | 108      | 29       | 12.7           | 11.5 |
| 50 x 20           | 165             | 108      | 29       | 15.5           | 13.5 |
| 40 x 15           | 165             | 108      | 29       | 17.5           | 15.9 |
| 65 x 50           | 178             | 114      | 32       | 4.8            | 3.2  |
| 65 x 40           | 178             | 114      | 32       | 10.3           | 8.3  |
| 80 x 65           | 203             | 133      | 41       | 7.1            | 6.7  |
| 80 x 50           | 203             | 133      | 41       | 11.9           | 9.9  |
| 80 x 40           | 203             | 133      | 41       | 17.5           | 15.5 |
| 100 x 80          | 229             | 140      | 48       | 11.9           | 10.7 |
| 100 x 65          | 229             | 140      | 48       | 19.1           | 17.5 |

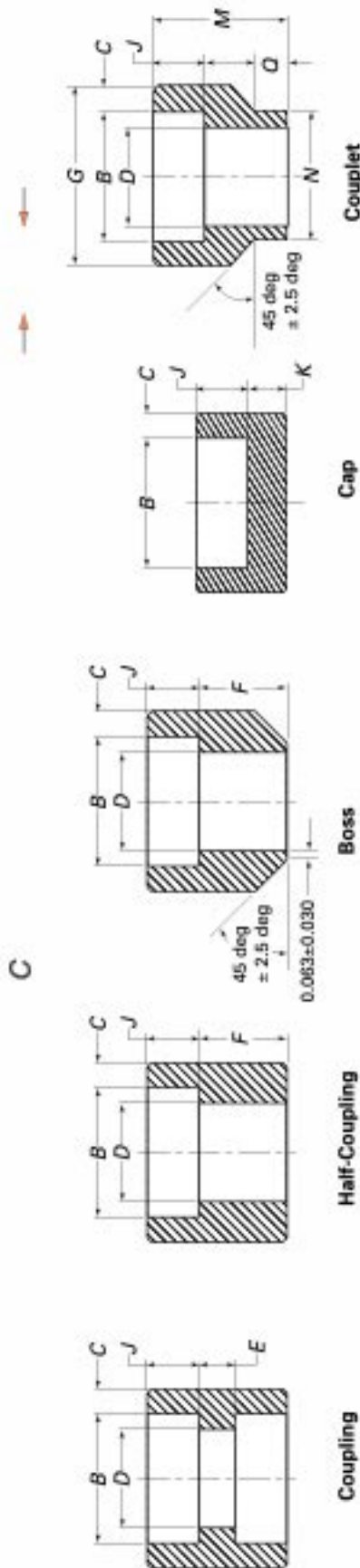
**NOTES :**

1. All dimensions given in millimeter.
2. Thickness and outside diameters of swage nipples shall correspond to those of the appropriate nominal pipe size.
3. All dimensions herein above are nominal and subject to normal manufacturing tolerances.



DIMENSIONS OF SOCKET - WELDING FITTINGS (ASME B16.11 - 2016)

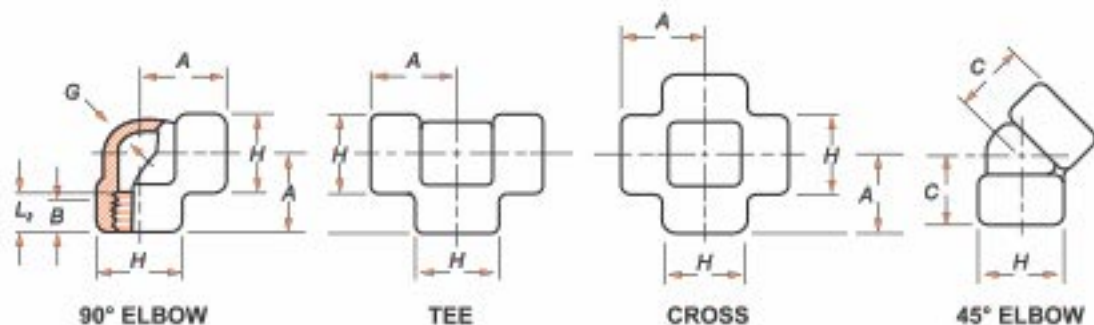
| Nominal<br>Pipe<br>Size | B                   |       | D                        |       |      |      |      |      | C                                |      |       |      |       |       | G         |      |       |      | J                     |      | A                          |              |          |      |     |
|-------------------------|---------------------|-------|--------------------------|-------|------|------|------|------|----------------------------------|------|-------|------|-------|-------|-----------|------|-------|------|-----------------------|------|----------------------------|--------------|----------|------|-----|
|                         | Socket Bore<br>Diam |       | Bore Diameter of Fitting |       |      |      |      |      | Socket Wall Thickness [Note] (1) |      |       |      |       |       | Body Wall |      |       |      | Socket<br>Depth,<br>J |      | Center-to-Bottom of Socket |              |          |      |     |
|                         | Max.                | Min.  | 3000                     | Max.  | Min. | 6000 | Max. | Min. | Avg.                             | Min. | Avg.  | Min. | 3000  | Max.  | Min.      | Avg. | Min.  | 3000 | Max.                  | Min. | 90 El. Cross, Tee          | 45-deg Elbow | Tol<br>± |      |     |
| 1/8                     | 11.2                | 10.8  | 7.6                      | 6.1   | 4.8  | 3.2  | ...  | ...  | 3.18                             | 3.18 | 3.96  | 3.43 | ...   | ...   | 2.41      | 3.15 | ...   | 9.5  | 11.0                  | 11.0 | ...                        | 8.0          | 8.0      | ...  | 1.0 |
| 1/4                     | 14.6                | 14.2  | 10.0                     | 8.5   | 7.1  | 5.6  | ...  | ...  | 3.78                             | 3.30 | 4.60  | 4.01 | ...   | ...   | 3.02      | 3.68 | ...   | 9.5  | 11.0                  | 13.5 | ...                        | 8.0          | 8.0      | ...  | 1.0 |
| 3/8                     | 18.0                | 17.6  | 13.3                     | 11.8  | 9.9  | 8.4  | ...  | ...  | 4.01                             | 3.50 | 5.03  | 4.37 | ...   | ...   | 3.20      | 4.01 | ...   | 9.5  | 13.5                  | 15.5 | ...                        | 8.0          | 11.0     | ...  | 1.5 |
| 1/2                     | 22.2                | 21.8  | 16.6                     | 15.0  | 12.5 | 11.0 | 7.2  | 5.6  | 4.67                             | 4.09 | 5.97  | 5.18 | 9.35  | 8.18  | 3.73      | 4.78 | 7.47  | 9.5  | 15.5                  | 19.0 | 25.5                       | 11.0         | 12.5     | 5.5  | 1.5 |
| 3/4                     | 27.6                | 27.2  | 21.7                     | 20.2  | 16.3 | 14.8 | 11.8 | 10.3 | 4.90                             | 4.27 | 6.96  | 6.04 | 9.78  | 8.58  | 3.91      | 5.56 | 7.82  | 12.5 | 19.0                  | 22.5 | 28.5                       | 13.0         | 14.0     | 19.0 | 1.5 |
| 1                       | 34.3                | 33.9  | 27.4                     | 25.9  | 21.5 | 19.9 | 16.0 | 14.4 | 5.09                             | 4.98 | 7.92  | 6.93 | 11.38 | 9.86  | 4.55      | 6.35 | 9.09  | 12.5 | 22.5                  | 27.0 | 32.0                       | 14.0         | 17.5     | 20.5 | 2.0 |
| 1 1/4                   | 43.1                | 42.7  | 35.6                     | 34.3  | 30.2 | 28.7 | 23.5 | 22.0 | 6.07                             | 5.28 | 7.92  | 6.93 | 12.14 | 10.62 | 4.85      | 6.35 | 9.70  | 12.5 | 27.0                  | 32.0 | 35.0                       | 17.5         | 20.5     | 22.5 | 2.0 |
| 1 1/2                   | 49.2                | 48.8  | 41.6                     | 40.1  | 34.7 | 33.2 | 28.7 | 27.2 | 6.35                             | 5.54 | 8.92  | 7.80 | 12.70 | 11.12 | 5.08      | 7.14 | 10.15 | 12.5 | 32.0                  | 38.0 | 38.0                       | 20.5         | 25.5     | 25.5 | 2.0 |
| 2                       | 61.7                | 61.2  | 53.3                     | 51.7  | 43.6 | 42.1 | 38.9 | 37.4 | 6.93                             | 6.04 | 10.92 | 9.50 | 13.84 | 12.12 | 5.54      | 8.74 | 11.07 | 16.0 | 38.0                  | 41.0 | 54.0                       | 25.5         | 28.5     | 28.5 | 2.0 |
| 2 1/2                   | 74.4                | 73.9  | 64.2                     | 61.2  | ...  | ...  | ...  | ...  | 8.76                             | 7.67 | ...   | ...  | ...   | ...   | 7.01      | ...  | ...   | 16.0 | 41.0                  | ...  | ...                        | 28.5         | ...      | ...  | 2.5 |
| 3                       | 90.3                | 89.8  | 79.4                     | 76.4  | ...  | ...  | ...  | ...  | 9.52                             | 8.30 | ...   | ...  | ...   | ...   | 7.62      | ...  | ...   | 16.0 | 57.0                  | ...  | ...                        | 32.0         | ...      | ...  | 2.5 |
| 4                       | 115.7               | 115.2 | 103.8                    | 100.7 | ...  | ...  | ...  | ...  | 10.69                            | 9.35 | ...   | ...  | ...   | ...   | 8.56      | ...  | ...   | 19.0 | 66.5                  | ...  | ...                        | 41.0         | ...      | ...  | 2.5 |



**DIMENSIONS OF SOCKET - WELDING FITTINGS (ANSI B16.11)**

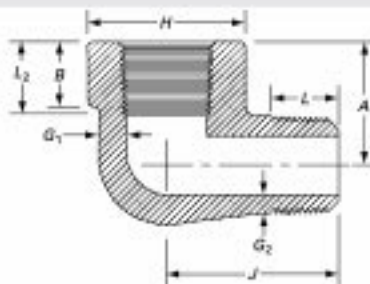
| Nominal Pipe Size | B                |       | D                         |       |      |      |      |      | C                                |      |       |      |       |       | G                    |       | J            |      | E            |      | F            |      | K    |      |                    |      | M    |      | N                  |       | Q                  |          |                  |          |     |     |
|-------------------|------------------|-------|---------------------------|-------|------|------|------|------|----------------------------------|------|-------|------|-------|-------|----------------------|-------|--------------|------|--------------|------|--------------|------|------|------|--------------------|------|------|------|--------------------|-------|--------------------|----------|------------------|----------|-----|-----|
|                   | Socket Bore Dia. |       | Bore Diameter of Fittings |       |      |      |      |      | Socket Wall Thickness [Note (1)] |      |       |      |       |       | Outside Dia. Couplet |       | Socket Depth |      | Laying Lgth. |      | Laying Lgth. |      | Tol  |      | End Wall Thickness |      |      |      | End to End Couplet |       | Weld Ring Diameter |          | Weld Ring Length |          |     |     |
|                   | Max.             | Min.  | 3600                      | 6000  | 9300 | 3000 | 4500 | 6000 | 9300                             | 3000 | 4500  | 6000 | 9300  | 3000  | 4500                 | 6000  | 9300         | 3600 | 6000         | 9300 | 3600         | 6000 | 9300 | 3600 | 6000               | 9300 | 3600 | 6000 | 9300               | 3600  | 6000               | 9300     |                  |          |     |     |
| 1/8               | 11.2             | 10.8  | 7.6                       | 6.1   | 4.8  | 3.2  | ...  | ...  | ...                              | ...  | 3.18  | 3.18 | 3.06  | 3.43  | ...                  | ...   | ...          | ...  | ...          | ...  | 6.5          | 1.5  | 16.0 | 1.5  | 4.8                | 6.4  | ...  | ...  | ...                | ...   | ±1.5+0.0           | ...      | ...              | ...      | ... |     |
| 1/4               | 14.6             | 14.2  | 10.0                      | 8.5   | 7.1  | 5.6  | ...  | ...  | ...                              | ...  | 3.78  | 3.30 | 4.60  | 4.01  | ...                  | ...   | ...          | ...  | ...          | ...  | 6.5          | 1.5  | 16.0 | 1.5  | 4.8                | 6.4  | ...  | ...  | ...                | ...   | 30.2               | ±0.8+0.0 | 17.5             | ±1.5+0.0 | 9.5 | 0.8 |
| 3/8               | 18.0             | 17.6  | 13.3                      | 11.8  | 9.9  | 8.4  | ...  | ...  | ...                              | ...  | 4.01  | 3.50 | 5.03  | 4.37  | ...                  | ...   | ...          | ...  | ...          | ...  | 6.5          | 3.0  | 17.5 | 3.0  | 4.8                | 6.4  | ...  | ...  | ...                | ...   | 30.2               | ±0.8+0.0 | 20.7             | ±1.5+0.0 | 9.5 | 0.8 |
| 1/2               | 22.2             | 21.8  | 16.8                      | 15.0  | 12.5 | 11.0 | 7.2  | 5.6  | 4.07                             | 4.09 | 5.97  | 5.18 | 9.35  | 8.18  | 33.4                 | 38.1  | ...          | ...  | ...          | ...  | 9.5          | 3.0  | 22.5 | 3.0  | 6.4                | 7.9  | 11.2 | 33.4 | ±0.8+0.0           | 23.8  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 3/4               | 27.6             | 27.2  | 21.7                      | 20.2  | 16.3 | 14.8 | 11.8 | 10.3 | 4.00                             | 4.27 | 6.96  | 6.04 | 9.78  | 8.58  | 38.1                 | 44.5  | ...          | ...  | ...          | ...  | 12.5         | 3.0  | 24.0 | 3.0  | 6.4                | 7.9  | 12.7 | 34.9 | ±0.8+0.0           | 27.0  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 1                 | 34.3             | 33.9  | 27.4                      | 25.9  | 21.5 | 19.9 | 16.0 | 14.4 | 5.69                             | 4.98 | 7.92  | 6.93 | 11.38 | 9.96  | 46.1                 | 57.2  | ...          | ...  | ...          | ...  | 12.5         | 4.0  | 28.5 | 4.0  | 9.6                | 11.2 | 14.2 | 47.6 | ±0.8+0.0           | 42.9  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 1 1/4             | 43.1             | 42.7  | 35.8                      | 34.3  | 30.2 | 28.7 | 23.5 | 22.0 | 6.07                             | 6.29 | 7.92  | 6.93 | 12.14 | 10.62 | 56.6                 | 63.5  | ...          | ...  | ...          | ...  | 12.5         | 4.0  | 30.0 | 4.0  | 9.6                | 11.2 | 14.2 | 47.6 | ±0.8+0.0           | 42.9  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 1 1/2             | 49.2             | 48.8  | 41.6                      | 40.1  | 34.7 | 33.2 | 28.7 | 27.2 | 6.35                             | 5.54 | 8.92  | 7.80 | 12.70 | 11.12 | 63.5                 | 76.2  | ...          | ...  | ...          | ...  | 12.5         | 4.0  | 32.0 | 4.0  | 11.2               | 12.7 | 15.7 | 50.8 | ±0.8+0.0           | 49.2  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 2                 | 61.7             | 61.2  | 53.3                      | 51.7  | 43.6 | 42.1 | 36.9 | 37.4 | 6.93                             | 6.04 | 10.92 | 9.50 | 13.84 | 12.21 | 79.4                 | 92.1  | ...          | ...  | ...          | ...  | 16.0         | 4.0  | 41.0 | 4.0  | 12.7               | 15.7 | 19.0 | 57.2 | ±1.5+0.0           | 61.9  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 2 1/2             | 74.4             | 73.9  | 64.2                      | 61.2  | ...  | ...  | ...  | ...  | 8.76                             | 7.67 | ...   | ...  | ...   | ...   | 92.1                 | 108.0 | ...          | ...  | ...          | ...  | 16.0         | 5.0  | 43.0 | 5.0  | 15.7               | 19.0 | ...  | 63.5 | ±1.5+0.0           | 73.0  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 3                 | 90.3             | 89.8  | 79.4                      | 76.4  | ...  | ...  | ...  | ...  | 9.62                             | 8.30 | ...   | ...  | ...   | ...   | 111.1                | 127.0 | ...          | ...  | ...          | ...  | 16.0         | 5.0  | 44.5 | 5.0  | 19.0               | 22.4 | ...  | 68.9 | ±1.5+0.0           | 88.9  | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |
| 4                 | 115.7            | 115.2 | 103.8                     | 100.7 | ...  | ...  | ...  | ...  | 10.89                            | 9.35 | ...   | ...  | ...   | ...   | 141.3                | 158.8 | ...          | ...  | ...          | ...  | 19.0         | 5.0  | 48.0 | 5.0  | 22.4               | 28.4 | ...  | 76.2 | ±1.5+0.0           | 114.3 | ±1.5+0.0           | 9.5      | 0.8              |          |     |     |

GENERAL NOTE : Dimensions are in millimeters.



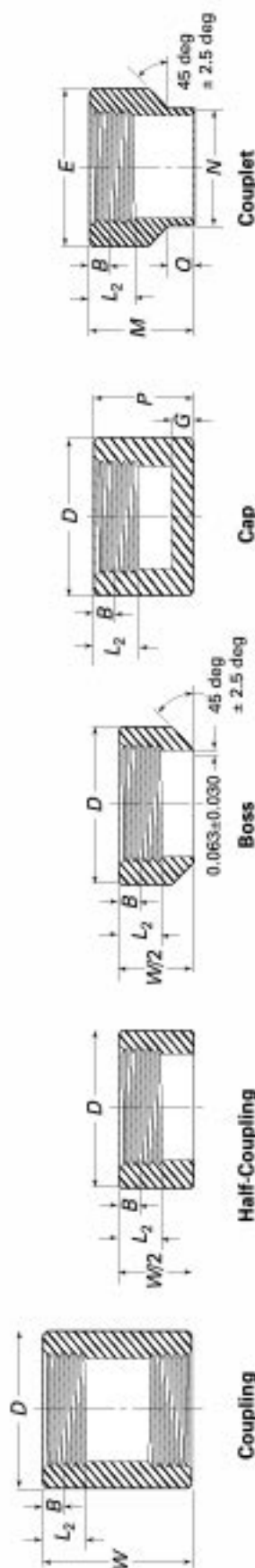
**DIMENSIONS OF FORGED THREADED FITTINGS [ASME B 16.11-2016]**

| Nominal<br>Pipe<br>Size |        | A                                            |      |      | C                                   |      |      | H                                 |      |      | G                         |       |       | B                        |      |
|-------------------------|--------|----------------------------------------------|------|------|-------------------------------------|------|------|-----------------------------------|------|------|---------------------------|-------|-------|--------------------------|------|
|                         |        | Center-to-End<br>Elbows, Tees, Crosses,<br>A |      |      | Center-to-End<br>45 deg Elbow,<br>C |      |      | Outside Diameter of<br>Band,<br>H |      |      | Min. Wall Thickness,<br>G |       |       | Min.<br>Length of Thread |      |
| (mm)                    | (inch) | 2000                                         | 3000 | 6000 | 2000                                | 3000 | 6000 | 2000                              | 3000 | 6000 | 2000                      | 3000  | 6000  | S                        | L2   |
| 6                       | 1/8    | 21                                           | 21   | 25   | 17                                  | 17   | 19   | 22                                | 22   | 25   | 3.18                      | 3.18  | 6.35  | 6.4                      | 6.7  |
| 8                       | 1/4    | 21                                           | 25   | 28   | 17                                  | 19   | 22   | 22                                | 25   | 33   | 3.18                      | 3.30  | 6.60  | 8.1                      | 10.2 |
| 10                      | 3/8    | 25                                           | 28   | 33   | 19                                  | 22   | 25   | 25                                | 33   | 38   | 3.18                      | 3.51  | 6.98  | 9.1                      | 10.4 |
| 15                      | 1/2    | 28                                           | 33   | 38   | 22                                  | 25   | 28   | 33                                | 38   | 46   | 3.18                      | 4.09  | 8.15  | 10.9                     | 13.6 |
| 20                      | 3/4    | 33                                           | 38   | 44   | 25                                  | 28   | 33   | 38                                | 46   | 56   | 3.18                      | 4.32  | 8.53  | 12.7                     | 13.9 |
| 25                      | 1      | 38                                           | 44   | 51   | 28                                  | 33   | 35   | 46                                | 56   | 62   | 3.68                      | 4.98  | 9.93  | 14.7                     | 17.3 |
| 32                      | 1 1/4  | 44                                           | 51   | 60   | 33                                  | 35   | 43   | 56                                | 62   | 75   | 3.89                      | 5.28  | 10.59 | 17.0                     | 18.0 |
| 40                      | 1 1/2  | 51                                           | 60   | 64   | 35                                  | 43   | 44   | 62                                | 75   | 84   | 4.01                      | 5.56  | 11.07 | 17.8                     | 18.4 |
| 50                      | 2      | 60                                           | 64   | 83   | 43                                  | 44   | 52   | 75                                | 84   | 102  | 4.27                      | 7.14  | 12.09 | 19.0                     | 19.2 |
| 65                      | 2 1/2  | 76                                           | 83   | 95   | 52                                  | 52   | 64   | 92                                | 102  | 121  | 5.61                      | 7.65  | 15.29 | 23.6                     | 28.9 |
| 80                      | 3      | 86                                           | 95   | 106  | 64                                  | 64   | 79   | 109                               | 121  | 148  | 5.99                      | 8.84  | 16.64 | 25.9                     | 30.5 |
| 100                     | 4      | 106                                          | 114  | 114  | 79                                  | 79   | 79   | 146                               | 152  | 152  | 6.55                      | 11.18 | 18.67 | 27.7                     | 33.0 |



**Threaded Street Elbow**

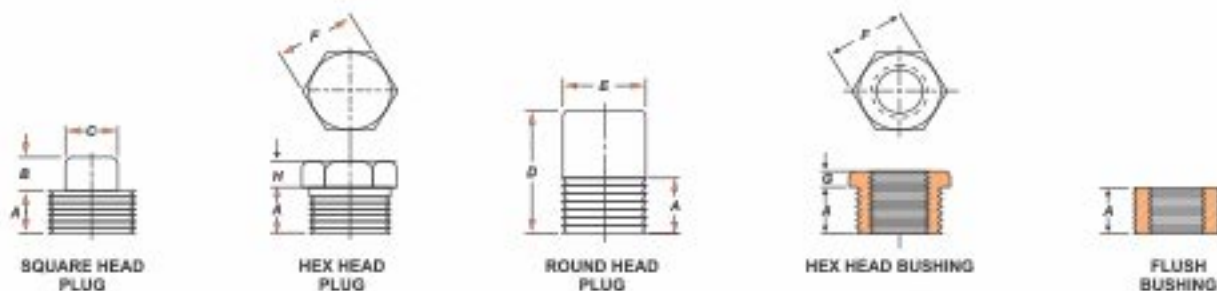
| Nominal<br>Pipe Size,<br>NPS | A<br>Center-to-Female<br>End Street Elb.,<br>Class Designation |      | J<br>Center-to-Female<br>End Street Elb.<br>Class Designation |      | H<br>Outside Diameter of<br>Band<br>Class Designation |      | G<br>Minimum Wall<br>Thickness<br>Class Designation |       | G<br>Minimum Wall<br>Thickness<br>Class Designation |      | B<br>Minimum Length<br>Internal Thread |      | L<br>Minimum Length<br>Male Thread |  |
|------------------------------|----------------------------------------------------------------|------|---------------------------------------------------------------|------|-------------------------------------------------------|------|-----------------------------------------------------|-------|-----------------------------------------------------|------|----------------------------------------|------|------------------------------------|--|
|                              | 3000                                                           | 6000 | 3000                                                          | 6000 | 3000                                                  | 6000 | 3000                                                | 6000  | 3000                                                | 6000 | S                                      | L2   |                                    |  |
| 1/8                          | 19                                                             | 22   | 25                                                            | 32   | 19                                                    | 25   | 3.18                                                | 5.08  | 2.74                                                | 4.22 | 6.4                                    | 6.7  | 10                                 |  |
| 1/4                          | 22                                                             | 25   | 32                                                            | 38   | 25                                                    | 32   | 3.30                                                | 5.66  | 3.22                                                | 5.28 | 8.1                                    | 10.2 | 11                                 |  |
| 3/8                          | 25                                                             | 28   | 38                                                            | 41   | 32                                                    | 38   | 3.51                                                | 6.98  | 3.50                                                | 5.59 | 9.1                                    | 10.4 | 13                                 |  |
| 1/2                          | 28                                                             | 35   | 41                                                            | 48   | 38                                                    | 44   | 4.09                                                | 8.15  | 4.16                                                | 6.53 | 10.9                                   | 13.6 | 14                                 |  |
| 3/4                          | 35                                                             | 44   | 48                                                            | 57   | 44                                                    | 51   | 4.32                                                | 8.53  | 4.88                                                | 6.86 | 12.7                                   | 13.6 | 16                                 |  |
| 1                            | 44                                                             | 51   | 57                                                            | 66   | 51                                                    | 62   | 4.98                                                | 9.93  | 5.56                                                | 7.95 | 14.7                                   | 17.3 | 19                                 |  |
| 1 1/4                        | 51                                                             | 54   | 66                                                            | 71   | 62                                                    | 70   | 5.28                                                | 10.59 | 5.56                                                | 8.48 | 17.0                                   | 18.0 | 21                                 |  |
| 1 1/2                        | 54                                                             | 64   | 71                                                            | 84   | 70                                                    | 84   | 5.56                                                | 11.07 | 6.25                                                | 8.89 | 17.8                                   | 18.4 | 21                                 |  |
| 2                            | 64                                                             | 83   | 84                                                            | 105  | 84                                                    | 102  | 7.14                                                | 12.09 | 7.64                                                | 9.70 | 19.0                                   | 19.2 | 22                                 |  |



### Threaded Couplings, Bosses Cups, and Couplets

|                  | D                          | E                         | W                   | P               | G                   | Q                          | N                | B                  | L <sub>2</sub>                     |
|------------------|----------------------------|---------------------------|---------------------|-----------------|---------------------|----------------------------|------------------|--------------------|------------------------------------|
| Normal Pipe Size | Outside Diameter, Coupling | Outside Diameter, Couplet | End-to-End Coupling | End-to-End Caps | End-to-End Coupling | Minimum End Wall Thickness | Weld Ring Length | Weld Ring Diameter | Minimum Length of Thread [Note(1)] |
|                  | 3060                       | 4000                      | 3000/6000           | 3200            | 6010                | 3000/6000                  | 3000/6000        | 3000/6000          | 3000/6000                          |
| 1/8              | 16                         | 22                        | 32                  | 19              | 22                  | 4.8                        | 6.4              | 17.5               | 6.4                                |
| 1/4              | 19                         | 25                        | 35                  | 25              | 27                  | 4.8                        | 6.4              | 17.5               | 6.4                                |
| 3/8              | 22                         | 32                        | 48                  | 32              | 27                  | 4.8                        | 6.4              | 20.7               | 8.1                                |
| 1/2              | 28                         | 38                        | 48                  | 32              | 33                  | 6.4                        | 7.9              | 23.8               | 9.1                                |
| 3/4              | 35                         | 44                        | 51                  | 37              | 38                  | 6.4                        | 7.9              | 23.8               | 10.9                               |
| 1                | 44                         | 57                        | 60                  | 41              | 43                  | 6.4                        | 7.9              | 27.0               | 12.7                               |
| 1 1/4            | 57                         | 64                        | 67                  | 44              | 46                  | 9.7                        | 11.2             | 33.4               | 14.7                               |
| 1 1/2            | 64                         | 76                        | 79                  | 44              | 48                  | 9.7                        | 11.2             | 42.9               | 17.0                               |
| 2                | 76                         | 92                        | 86                  | 48              | 51                  | 11.2                       | 12.7             | 46.2               | 17.8                               |
| 2 1/2            | 92                         | 108                       | 92                  | 60              | 64                  | 15.7                       | 15.7             | 81.9               | 19.0                               |
| 3                | 108                        | 127                       | 108                 | 65              | 68                  | 19.0                       | 19.0             | 73.0               | 23.6                               |
| 4                | 140                        | 159                       | 121                 | 88              | 75                  | 22.4                       | 22.4             | 114.3              | 25.9                               |
|                  |                            |                           |                     |                 |                     |                            |                  |                    | 27.7                               |
|                  |                            |                           |                     |                 |                     |                            |                  |                    | 30.5                               |
|                  |                            |                           |                     |                 |                     |                            |                  |                    | 33.0                               |

GENERAL NOTE : Dimensions are in millimeters.



### DIMENSIONS OF PLUGS & BUSHINGS [ANSI B 16.11]

| Nominal<br>Pipe<br>Size |        | A                       | B                             | C                            | E                                | D                       | F                              | G                | H             |
|-------------------------|--------|-------------------------|-------------------------------|------------------------------|----------------------------------|-------------------------|--------------------------------|------------------|---------------|
|                         |        | Min.<br>Length<br><br>A | Square Head Plugs             |                              | Round Head Plugs                 |                         | Hex Plugs and Bushings         |                  |               |
|                         |        |                         | Min.<br>Square<br>Height<br>B | Min.<br>Width<br>Flats,<br>C | Nominal<br>Head<br>Diameter<br>E | Min.<br>Length<br><br>D | Nominal<br>Width<br>Flats<br>F | Min. Hex Height  |               |
|                         |        |                         |                               |                              |                                  |                         |                                | Bushing<br><br>G | Plug<br><br>H |
| (mm)                    | (inch) |                         |                               |                              |                                  |                         |                                |                  |               |
| 6                       | 1/8    | 10                      | 6                             | 7.15                         | 10                               | 35                      | 11.11                          | ---              | 6             |
| 8                       | 1/4    | 11                      | 8                             | 9.55                         | 14                               | 41                      | 15.9                           | 3                | 6             |
| 10                      | 3/8    | 13                      | 8                             | 11.11                        | 18                               | 41                      | 17.46                          | 4                | 8             |
| 15                      | 1/2    | 14                      | 10                            | 14.29                        | 21                               | 44                      | 23                             | 5                | 8             |
| 20                      | 3/4    | 16                      | 11                            | 15.88                        | 27                               | 44                      | 27                             | 6                | 10            |
| 25                      | 1      | 19                      | 13                            | 20.64                        | 33                               | 51                      | 34.93                          | 6                | 10            |
| 32                      | 1-1/4  | 21                      | 14                            | 23.81                        | 43                               | 51                      | 44.45                          | 7                | 14            |
| 40                      | 1-1/2  | 21                      | 16                            | 28.58                        | 48                               | 51                      | 50.80                          | 8                | 16            |
| 50                      | 2      | 22                      | 18                            | 33.27                        | 60                               | 64                      | 63.5                           | 9                | 18            |
| 65                      | 2-1/2  | 27                      | 19                            | 38.1                         | 73                               | 70                      | 78.2                           | 10               | 19            |
| 80                      | 3      | 28                      | 21                            | 42.86                        | 89                               | 70                      | 88.9                           | 10               | 21            |
| 100                     | 4      | 32                      | 25                            | 63.5                         | 114                              | 76                      | 117.5                          | 13               | 25            |

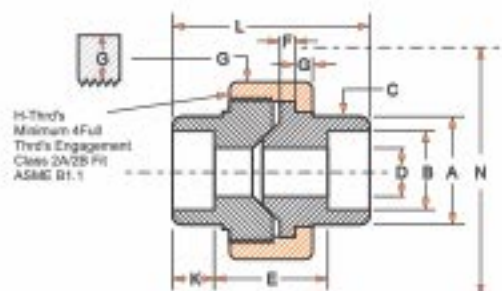
### BULL PLUGS

(As Per MSS SP 95)



### DIMENSIONS OF BULL PLUGS MSS SP 95

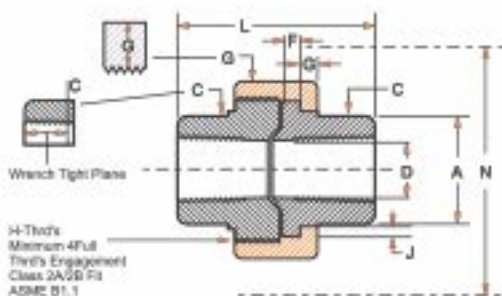
| Size (inch) | Outside Diameter (mm) | End To End (mm) |
|-------------|-----------------------|-----------------|
| 1/8         | 10.3                  | 51              |
| 1/4         | 13.7                  | 51              |
| 3/8         | 17.1                  | 57              |
| 1/2         | 21.3                  | 64              |
| 3/4         | 26.7                  | 70              |
| 1           | 33.4                  | 76              |
| 1-1/4       | 42.2                  | 83              |
| 1-1/2       | 48.3                  | 89              |
| 2           | 60.3                  | 102             |
| 2-1/2       | 73                    | 127             |
| 3           | 88.9                  | 152             |
| 3-1/2       | 101.6                 | 165             |
| 4           | 114.3                 | 178             |
| 5           | 141.3                 | 216             |
| 6           | 168.3                 | 254             |
| 8           | 219.1                 | 279             |
| 10          | 273                   | 330             |
| 12          | 328.8                 | 356             |



**Pipe Unions - Socket Welding Ends Class 3000 ( As per MSS SP 83 - 2018 )**

| Nominal Pipe Size | A             | B                |       | C                | D                  |       | E             |       | F                | G        | H              | J       | K                    | L                     | N                |
|-------------------|---------------|------------------|-------|------------------|--------------------|-------|---------------|-------|------------------|----------|----------------|---------|----------------------|-----------------------|------------------|
|                   | Pipe End Min. | Socket Bore Dia. |       | Socket Wall Min. | Water Way Bore (a) |       | Laying Length |       | Male Flange Min. | Nut Min. | Thrds Per Inch | Bearing | Depth of Socket Min. | Length Assem. Nominal | Clear Assem. Nut |
|                   | Min.          | Min.             | Max.  |                  | Min.               | Max.  | Min.          | Max.  |                  |          |                |         |                      |                       |                  |
| 1/8               | 21.84         | 10.67            | 11.18 | 3.18             | 6.07               | 7.59  | 19.05         | 22.35 | 3.18             | 3.18     | 16.00          | 1.24    | 9.65                 | 41.40                 | 50.80            |
| 1/4               | 21.84         | 14.10            | 14.81 | 3.30             | 8.48               | 10.01 | 19.05         | 22.35 | 3.18             | 3.18     | 16.00          | 1.24    | 9.65                 | 41.40                 | 50.80            |
| 3/8               | 25.91         | 17.53            | 18.03 | 3.51             | 11.76              | 13.28 | 20.57         | 26.92 | 3.43             | 3.43     | 14.00          | 1.37    | 9.65                 | 45.97                 | 55.88            |
| 1/2               | 31.24         | 21.72            | 22.23 | 4.09             | 15.04              | 16.56 | 20.57         | 26.92 | 3.68             | 3.68     | 14.00          | 1.50    | 9.65                 | 49.02                 | 58.42            |
| 3/4               | 37.08         | 27.05            | 27.56 | 4.27             | 20.17              | 21.69 | 25.40         | 31.75 | 4.06             | 4.06     | 11.00          | 1.68    | 12.70                | 56.90                 | 66.04            |
| 1                 | 45.47         | 33.78            | 34.29 | 4.98             | 25.88              | 27.41 | 26.16         | 34.29 | 4.57             | 4.45     | 11.00          | 1.85    | 12.70                | 61.98                 | 78.74            |
| 1 1/4             | 54.86         | 42.55            | 43.05 | 5.28             | 34.29              | 35.81 | 32.51         | 40.64 | 5.33             | 5.21     | 10.00          | 2.13    | 12.70                | 71.12                 | 93.98            |
| 1 1/2             | 61.47         | 48.64            | 49.15 | 5.54             | 40.13              | 41.66 | 34.29         | 42.16 | 5.84             | 5.59     | 10.00          | 2.31    | 12.70                | 76.45                 | 111.76           |
| 2                 | 75.18         | 61.11            | 61.62 | 6.05             | 51.74              | 53.26 | 37.34         | 45.47 | 6.80             | 6.35     | 10.00          | 2.69    | 15.75                | 86.11                 | 132.08           |
| 2 1/2             | 91.69         | 73.81            | 74.45 | 7.67             | 61.19              | 62.71 | 44.24         | 52.07 | 7.49             | 7.11     | 8.00           | 3.07    | 15.75                | 102.36                | 149.86           |
| 3                 | 109.22        | 89.79            | 90.42 | 8.31             | 76.40              | 77.92 | 53.59         | 63.75 | 8.26             | 8.00     | 8.00           | 3.53    | 15.75                | 108.97                | 175.26           |

Note : (a) The Contact diameter of the male/female tailpiece is affected by the waterway bore ( Col. D).  
The manufacturer shall consider the relationship between the contact point and Waterway diameter in his design.



**Pipe Unions - Threaded Ends Class 3000 ( As per MSS SP 83 - 2018 )**

| Nominal Pipe Size | A             | C         | D                  |       | F                | G        | H              | J       | L                     | N                |
|-------------------|---------------|-----------|--------------------|-------|------------------|----------|----------------|---------|-----------------------|------------------|
|                   | Pipe End Min. | Wall Min. | Water Way Bore (a) |       | Male Flange Min. | Nut Min. | Thrds Per Inch | Bearing | Length Assem. Nominal | Clear Assem. Nut |
|                   |               |           | Min.               | Max.  |                  |          |                |         |                       |                  |
| 1/8               | 14.73         | 2.41      | 6.43               | 8.43  | 3.18             | 3.18     | 16.00          | 1.24    | 41.40                 | 50.80            |
| 1/4               | 19.05         | 3.02      | 9.45               | 11.13 | 3.18             | 3.18     | 16.00          | 1.24    | 41.40                 | 50.80            |
| 3/8               | 22.86         | 3.20      | 13.51              | 14.27 | 3.43             | 3.43     | 14.00          | 1.37    | 45.97                 | 55.88            |
| 1/2               | 27.69         | 3.73      | 17.07              | 17.86 | 3.68             | 3.68     | 14.00          | 1.50    | 49.02                 | 58.42            |
| 3/4               | 33.53         | 3.91      | 21.39              | 23.01 | 4.06             | 4.06     | 11.00          | 1.68    | 56.90                 | 66.04            |
| 1                 | 41.40         | 20.07     | 27.74              | 28.98 | 4.57             | 4.45     | 11.00          | 1.85    | 61.98                 | 78.74            |
| 1 1/4             | 50.55         | 4.85      | 35.36              | 37.69 | 5.33             | 5.21     | 10.00          | 2.13    | 71.12                 | 93.98            |
| 1 1/2             | 57.15         | 5.08      | 41.20              | 43.54 | 5.84             | 5.59     | 10.00          | 2.31    | 76.45                 | 111.76           |
| 2                 | 70.10         | 5.54      | 52.12              | 55.58 | 6.80             | 6.35     | 10.00          | 2.69    | 86.11                 | 132.08           |
| 2 1/2             | 85.34         | 7.01      | 64.31              | 66.27 | 7.49             | 7.11     | 8.00           | 3.07    | 102.36                | 149.86           |
| 3                 | 102.36        | 7.62      | 77.27              | 82.55 | 8.26             | 8.00     | 8.00           | 3.53    | 108.97                | 175.26           |

Note : (a) The Contact diameter of the male/female tailpiece is affected by the waterway bore ( Col. D).  
The manufacturer shall consider the relationship between the contact point and Waterway diameter in his design.



**Dimension of Branch Outlet Socket Welding as per MSS SP 97**

| OUTLET DN | OUTLET NPS | B<br>MIN | C<br>MAX |      |
|-----------|------------|----------|----------|------|
|           |            |          | 3000     | 6000 |
| 6         | 1/8        | 6        | 19       |      |
| 8         | 1/4        | 8        | 19       |      |
| 10        | 3/8        | 10       | 21       |      |
| 15        | 1/2        | 15       | 25       |      |
| 2         | 3/4        | 2        | 27       | 32   |
| 25        | 1          | 25       | 33       | 37   |
| 32        | 1.1/4      | 32       | 33       | 40   |
| 40        | 1.1/2      | 40       | 35       | 41   |
| 50        | 2          | 50       | 38       | 43   |
| 65        | 2.1/2      | 65       | 46       | 52   |
| 80        | 3          | 80       | 51       |      |
| 100       | 4          | 100      | 57       |      |

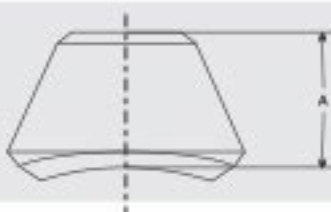
Tolerance : 1/8 - 3/4  $\pm 0.8\text{mm}$  1 - 4  $\pm 1.6\text{mm}$   
Dimensions are in millimeters.



**Dimension of Branch Outlet Threaded as per MSS SP 97**

| OUTLET DN | OUTLET NPS | A<br>FACE OF FITINGS TO CROTH<br>THREADED |      |
|-----------|------------|-------------------------------------------|------|
|           |            | 3000                                      | 6000 |
| 6         | 1/8        | 19                                        |      |
| 8         | 1/4        | 19                                        |      |
| 10        | 3/8        | 21                                        |      |
| 15        | 1/2        | 25                                        |      |
| 2         | 3/4        | 27                                        | 32   |
| 25        | 1          | 33                                        | 37   |
| 32        | 1.1/4      | 33                                        | 40   |
| 40        | 1.1/2      | 35                                        | 41   |
| 50        | 2          | 38                                        | 43   |
| 65        | 2.1/2      | 46                                        | 52   |
| 80        | 3          | 51                                        |      |
| 100       | 4          | 57                                        |      |

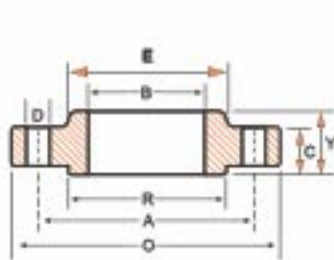
Tolerance : 1/8 - 3/4  $\pm 0.8\text{mm}$  1 - 4  $\pm 1.6\text{mm}$   
Dimensions are in millimeters.



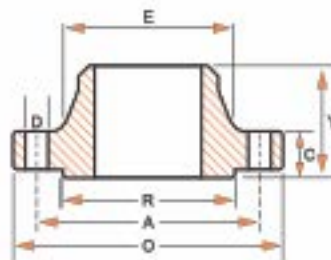
Dimensions are in millimeters.  
Tolerance : 1/8-3/4  $\pm 0.8\text{mm}$   
1 - 4  $\pm 1.6\text{mm}$   
5 - 12  $\pm 3.2\text{mm}$   
14 - 24  $\pm 4.8\text{mm}$

**Dimension of Branch Outlet - Butt Welding as per MSS SP 97**

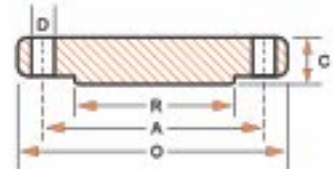
| Outlet DN | Outlet NPS | A<br>FACE OF FITINGS TO CROTH |      |              |      |              |      |
|-----------|------------|-------------------------------|------|--------------|------|--------------|------|
|           |            | Standard                      |      | Extra Strong |      | Schedule 160 |      |
|           |            | Reducing                      | Full | Reducing     | Full | Reducing     | Full |
| 6         | 1/2        | 16                            |      | 16           |      |              |      |
| 8         | 1/4        | 16                            |      | 16           |      |              |      |
| 10        | 3/8        | 19                            |      | 19           |      |              |      |
| 15        | 1/2        | 19                            | 19   | 19           | 19   | 28           | 28   |
| 20        | 3/4        | 22                            | 22   | 22           | 22   | 32           | 32   |
| 25        | 1          | 27                            | 27   | 27           | 27   | 38           | 38   |
| 32        | 1.1/4      | 32                            | 32   | 32           | 30   | 44           | 44   |
| 40        | 1.1/2      | 33                            | 33   | 33           | 33   | 51           | 51   |
| 50        | 2          | 38                            | 38   | 38           | 38   | 55           | 55   |
| 65        | 2.1/2      | 41                            | 41   | 41           | 41   | 62           | 62   |
| 80        | 3          | 44                            | 44   | 44           | 44   | 73           | 73   |
| 90        | 3.1/2      | 48                            | 51   | 48           | 51   | -            | -    |
| 100       | 4          | 51                            | 51   | 51           | 51   | 84           | 84   |



SLIP-ON WELDING



WELDING NECK



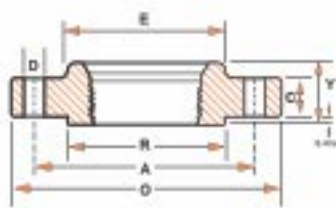
BLIND

### DIMENSIONS OF CLASS 150 FLANGES (ANSI B 16.5)

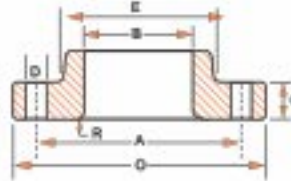
| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia<br>O | Dia of<br>Bolt Circle<br>A | Dia of<br>Bolt Holes<br>D | No. of<br>Holes | Thk of<br>Flange<br>C | Dia of<br>Hub<br>E | Length through Hub |          |          | Dia of Bore    |          | Dia of<br>R/F<br>R | Depth of<br>Socket<br>F |
|--------------------------------|--------------------|----------------------------|---------------------------|-----------------|-----------------------|--------------------|--------------------|----------|----------|----------------|----------|--------------------|-------------------------|
|                                |                    |                            |                           |                 |                       |                    | S/O & S/W<br>Y     | W/N<br>Y | L/J<br>Y | S/O & S/W<br>B | L/J<br>B |                    |                         |
| 1/2                            | 90                 | 60.3                       | 15.9                      | 4               | 11.2                  | 30                 | 14                 | 46       | 16       | 22.2           | 22.9     | 34.9               | 10                      |
| 3/4                            | 100                | 69.9                       | 15.9                      | 4               | 12.8                  | 38                 | 14                 | 51       | 16       | 27.7           | 28.2     | 42.9               | 11                      |
| 1                              | 110                | 79.4                       | 15.9                      | 4               | 14.3                  | 49                 | 16                 | 54       | 17       | 34.5           | 34.9     | 50.8               | 13                      |
| 1 1/4                          | 115                | 88.9                       | 15.9                      | 4               | 15.9                  | 59                 | 19                 | 58       | 21       | 43.2           | 43.7     | 63.5               | 14                      |
| 1 1/2                          | 125                | 98.4                       | 15.9                      | 4               | 17.5                  | 65                 | 21                 | 60       | 22       | 49.5           | 50.0     | 73.0               | 16                      |
| 2                              | 150                | 120.7                      | 19.0                      | 4               | 19.1                  | 78                 | 24                 | 62       | 26       | 61.9           | 62.5     | 92.1               | 17                      |
| 2 1/2                          | 180                | 139.7                      | 19.0                      | 4               | 22.3                  | 90                 | 27                 | 68       | 29       | 74.6           | 75.4     | 104.8              | 19                      |
| 3                              | 190                | 152.4                      | 19.0                      | 4               | 23.9                  | 108                | 29                 | 68       | 30       | 90.7           | 91.4     | 127.0              | 21                      |
| 4                              | 230                | 190.5                      | 19.0                      | 8               | 23.9                  | 135                | 32                 | 75       | 33       | 116.1          | 116.8    | 157.2              | -                       |
| 5                              | 255                | 215.9                      | 22.2                      | 8               | 23.9                  | 164                | 35                 | 87       | 36       | 143.8          | 144.4    | 185.7              | -                       |
| 6                              | 280                | 241.3                      | 22.2                      | 8               | 25.5                  | 192                | 38                 | 87       | 40       | 170.7          | 171.4    | 215.9              | -                       |
| 8                              | 345                | 298.5                      | 22.2                      | 8               | 28.6                  | 246                | 43                 | 100      | 44       | 221.5          | 222.2    | 269.9              | -                       |
| 10                             | 405                | 362.0                      | 25.4                      | 12              | 30.2                  | 305                | 48                 | 100      | 49       | 276.2          | 277.4    | 323.8              | -                       |
| 12                             | 485                | 431.8                      | 25.4                      | 12              | 31.8                  | 365                | 54                 | 113      | 56       | 327.0          | 328.2    | 381.0              | -                       |
| 14                             | 535                | 476.3                      | 28.6                      | 12              | 35.0                  | 400                | 56                 | 125      | 79       | 359.2          | 360.2    | 412.8              | -                       |
| 16                             | 595                | 539.8                      | 28.6                      | 16              | 36.6                  | 457                | 62                 | 125      | 87       | 410.5          | 411.2    | 469.9              | -                       |
| 18                             | 635                | 577.9                      | 31.7                      | 16              | 39.7                  | 505                | 67                 | 138      | 97       | 461.8          | 462.3    | 533.4              | -                       |
| 20                             | 700                | 635.0                      | 31.7                      | 20              | 42.9                  | 559                | 71                 | 143      | 103      | 513.1          | 514.3    | 584.2              | -                       |
| 24                             | 815                | 749.3                      | 34.9                      | 20              | 47.7                  | 663                | 81                 | 151      | 111      | 616.0          | 616.0    | 692.2              | -                       |

### DIMENSIONS OF CLASS 300 FLANGES (ANSI B 16.5)

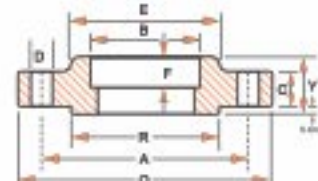
| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia<br>O | Dia of<br>Bolt Circle<br>A | Dia of<br>Bolt Holes<br>D | No. of<br>Holes | Thk of<br>Flange<br>C | Dia of<br>Hub<br>E | Length through Hub |          |          | Dia of Bore    |          | Dia of<br>R/F<br>R | Depth of<br>Socket<br>F |
|--------------------------------|--------------------|----------------------------|---------------------------|-----------------|-----------------------|--------------------|--------------------|----------|----------|----------------|----------|--------------------|-------------------------|
|                                |                    |                            |                           |                 |                       |                    | S/O & S/W<br>Y     | W/N<br>Y | L/J<br>Y | S/O & S/W<br>B | L/J<br>B |                    |                         |
| 1/2                            | 95                 | 66.7                       | 15.9                      | 4               | 14.3                  | 38                 | 21                 | 51       | 22       | 22.2           | 22.9     | 34.9               | 10                      |
| 3/4                            | 115                | 82.6                       | 19.0                      | 4               | 15.9                  | 48                 | 24                 | 56       | 25       | 27.7           | 28.2     | 42.9               | 11                      |
| 1                              | 125                | 88.9                       | 19.0                      | 4               | 17.5                  | 54                 | 25                 | 60       | 27       | 34.5           | 34.9     | 50.8               | 13                      |
| 1 1/4                          | 135                | 98.4                       | 19.0                      | 4               | 19.1                  | 64                 | 25                 | 64       | 27       | 43.2           | 43.7     | 63.5               | 14                      |
| 1 1/2                          | 155                | 114.3                      | 22.2                      | 4               | 20.7                  | 70                 | 29                 | 67       | 30       | 49.5           | 50.0     | 73.0               | 16                      |
| 2                              | 165                | 127.0                      | 19.0                      | 8               | 22.3                  | 84                 | 32                 | 68       | 33       | 61.9           | 62.5     | 92.1               | 17                      |
| 2 1/2                          | 190                | 149.2                      | 22.2                      | 8               | 25.4                  | 100                | 37                 | 75       | 38       | 74.6           | 75.4     | 104.8              | 19                      |
| 3                              | 210                | 168.3                      | 22.2                      | 8               | 28.6                  | 117                | 41                 | 78       | 43       | 90.7           | 91.4     | 127.0              | 21                      |
| 4                              | 255                | 200.0                      | 22.2                      | 8               | 31.8                  | 146                | 46                 | 84       | 48       | 116.1          | 116.8    | 157.2              | -                       |
| 5                              | 298                | 235.0                      | 22.2                      | 8               | 35.0                  | 178                | 49                 | 97       | 51       | 143.8          | 144.4    | 185.7              | -                       |
| 6                              | 320                | 269.9                      | 22.2                      | 12              | 36.6                  | 206                | 51                 | 97       | 52       | 170.7          | 171.4    | 215.9              | -                       |
| 8                              | 380                | 330.2                      | 25.4                      | 12              | 41.3                  | 260                | 60                 | 110      | 62       | 221.5          | 222.2    | 269.9              | -                       |
| 10                             | 445                | 387.4                      | 28.6                      | 16              | 47.7                  | 321                | 65                 | 116      | 95       | 276.2          | 277.4    | 323.8              | -                       |
| 12                             | 520                | 450.8                      | 31.7                      | 16              | 50.8                  | 375                | 71                 | 129      | 102      | 327.0          | 328.2    | 381.0              | -                       |
| 14                             | 585                | 514.4                      | 31.7                      | 20              | 54.0                  | 425                | 75                 | 141      | 111      | 359.2          | 360.2    | 412.8              | -                       |
| 16                             | 650                | 571.5                      | 34.9                      | 20              | 57.2                  | 483                | 81                 | 144      | 121      | 410.5          | 411.2    | 469.9              | -                       |
| 18                             | 710                | 628.6                      | 34.9                      | 24              | 60.4                  | 533                | 87                 | 157      | 130      | 461.8          | 462.3    | 533.4              | -                       |
| 20                             | 775                | 685.8                      | 34.9                      | 24              | 63.5                  | 587                | 94                 | 160      | 140      | 513.1          | 514.3    | 584.2              | -                       |
| 24                             | 915                | 812.8                      | 41.3                      | 24              | 69.9                  | 702                | 105                | 167      | 152      | 616.0          | 616.0    | 692.2              | -                       |



THREADED



LAPPED



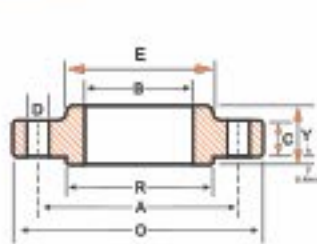
SOCKET WELDING  
(1/2 TO 3 ONLY)

### DIMENSIONS OF CLASS 600 FLANGES (ANSI B 16.5)

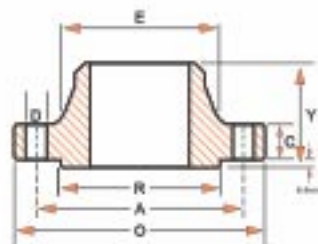
| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia | Dia of<br>Bolt Circle | Dia of<br>Bolt Holes | No. of<br>Holes | Thk of<br>Flange | Dia of<br>Hub | Length through Hub |     |     | Dia of Bore  |       | Dia of<br>R/F | Depth of<br>Socket |
|--------------------------------|---------------|-----------------------|----------------------|-----------------|------------------|---------------|--------------------|-----|-----|--------------|-------|---------------|--------------------|
|                                |               |                       |                      |                 |                  |               | S/O &<br>S/W       | W/N | L/J | S/O &<br>S/W | L/J   |               |                    |
| 1/2                            | 15            | 95                    | 66.7                 | 15.9            | 4                | 14.3          | 22                 | 52  | 22  | 22.2         | 22.9  | 34.9          | 10                 |
| 3/4                            | 20            | 115                   | 82.6                 | 19.0            | 4                | 15.9          | 25                 | 57  | 25  | 27.7         | 28.2  | 42.9          | 11                 |
| 1                              | 25            | 125                   | 88.9                 | 19.0            | 4                | 17.5          | 27                 | 62  | 27  | 34.5         | 34.9  | 50.8          | 13                 |
| 1.1/4                          | 32            | 135                   | 98.4                 | 19.0            | 4                | 20.7          | 29                 | 67  | 29  | 43.2         | 43.7  | 63.5          | 14                 |
| 1.1/2                          | 40            | 155                   | 114.3                | 22.2            | 4                | 22.3          | 32                 | 70  | 32  | 49.5         | 50.0  | 73.0          | 16                 |
| 2                              | 50            | 165                   | 127.0                | 19.0            | 8                | 25.4          | 37                 | 73  | 37  | 61.9         | 62.5  | 92.1          | 17                 |
| 2.1/2                          | 65            | 190                   | 149.2                | 22.2            | 8                | 28.6          | 41                 | 79  | 41  | 74.6         | 75.4  | 104.8         | 19                 |
| 3                              | 80            | 210                   | 168.3                | 22.2            | 8                | 31.8          | 46                 | 83  | 46  | 90.7         | 91.4  | 127.0         | -                  |
| 4                              | 100           | 275                   | 215.9                | 25.4            | 8                | 38.1          | 54                 | 102 | 54  | 116.1        | 116.8 | 157.2         | -                  |
| 5                              | 125           | 330                   | 266.7                | 28.6            | 8                | 44.5          | 60                 | 114 | 60  | 143.8        | 144.4 | 185.7         | -                  |
| 6                              | 150           | 355                   | 292.1                | 28.6            | 12               | 47.7          | 67                 | 117 | 67  | 170.7        | 171.4 | 215.9         | -                  |
| 8                              | 200           | 420                   | 349.2                | 31.7            | 12               | 55.6          | 76                 | 133 | 76  | 221.5        | 222.2 | 269.9         | -                  |
| 10                             | 250           | 510                   | 431.8                | 34.9            | 16               | 63.5          | 86                 | 152 | 111 | 276.2        | 277.4 | 323.8         | -                  |
| 12                             | 300           | 560                   | 489.0                | 34.9            | 20               | 66.7          | 92                 | 156 | 117 | 327.0        | 328.2 | 381.0         | -                  |
| 14                             | 350           | 605                   | 527.0                | 38.1            | 20               | 69.9          | 94                 | 165 | 127 | 359.2        | 360.2 | 412.8         | -                  |
| 16                             | 400           | 685                   | 603.2                | 41.3            | 20               | 76.2          | 106                | 178 | 140 | 410.5        | 411.2 | 469.9         | -                  |
| 18                             | 450           | 745                   | 654.0                | 44.4            | 20               | 82.6          | 117                | 184 | 152 | 461.8        | 462.3 | 533.4         | -                  |
| 20                             | 500           | 815                   | 723.9                | 44.4            | 24               | 88.9          | 127                | 190 | 165 | 513.1        | 514.3 | 584.2         | -                  |
| 24                             | 600           | 940                   | 838.2                | 50.8            | 24               | 101.6         | 140                | 203 | 184 | 616.0        | 616.0 | 692.2         | -                  |

### DIMENSIONS OF CLASS 900 FLANGES (ANSI B 16.5)

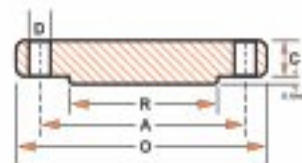
| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia | Dia of<br>Bolt Circle | Dia of<br>Bolt Holes | No. of<br>Holes | Thk of<br>Flange | Dia of<br>Hub | Length through Hub |     |     | Dia of Bore  |       | Dia of<br>R/F | Depth of<br>Socket |
|--------------------------------|---------------|-----------------------|----------------------|-----------------|------------------|---------------|--------------------|-----|-----|--------------|-------|---------------|--------------------|
|                                |               |                       |                      |                 |                  |               | S/O &<br>S/W       | W/N | L/J | S/O &<br>S/W | L/J   |               |                    |
| 1/2                            | 15            | 120                   | 82.6                 | 22.2            | 4                | 22.3          | 32                 | 60  | 32  | 22.2         | 22.9  | 34.9          | 10                 |
| 3/4                            | 20            | 130                   | 88.9                 | 22.2            | 4                | 25.4          | 35                 | 70  | 35  | 27.7         | 28.2  | 42.9          | 11                 |
| 1                              | 25            | 150                   | 101.6                | 25.4            | 4                | 28.6          | 41                 | 73  | 41  | 34.5         | 34.9  | 50.8          | 13                 |
| 1.1/4                          | 32            | 160                   | 111.1                | 25.4            | 4                | 28.6          | 41                 | 73  | 41  | 43.2         | 43.7  | 63.5          | 14                 |
| 1.1/2                          | 40            | 180                   | 123.8                | 28.6            | 4                | 31.8          | 44                 | 83  | 44  | 49.5         | 50.0  | 73.0          | 16                 |
| 2                              | 50            | 215                   | 165.1                | 25.4            | 8                | 38.1          | 57                 | 102 | 57  | 61.9         | 62.5  | 92.1          | 17                 |
| 2.1/2                          | 65            | 245                   | 190.5                | 28.6            | 8                | 41.3          | 64                 | 105 | 64  | 74.6         | 75.4  | 104.8         | 19                 |
| 3                              | 80            | 240                   | 190.5                | 25.4            | 8                | 38.1          | 127                | 54  | 102 | 90.7         | 91.4  | 127.0         | -                  |
| 4                              | 100           | 290                   | 235.0                | 31.7            | 8                | 44.5          | 159                | 70  | 114 | 116.1        | 116.8 | 157.2         | -                  |
| 5                              | 125           | 350                   | 279.4                | 35.0            | 8                | 50.8          | 190                | 79  | 127 | 143.8        | 144.4 | 185.7         | -                  |
| 6                              | 150           | 380                   | 317.5                | 31.7            | 12               | 55.6          | 235                | 86  | 140 | 170.7        | 171.4 | 215.9         | -                  |
| 8                              | 200           | 470                   | 393.7                | 38.1            | 12               | 63.5          | 298                | 102 | 162 | 221.5        | 222.2 | 269.9         | -                  |
| 10                             | 250           | 545                   | 469.9                | 38.1            | 16               | 69.5          | 368                | 108 | 184 | 276.2        | 277.4 | 323.8         | -                  |
| 12                             | 300           | 610                   | 533.4                | 38.1            | 20               | 79.4          | 419                | 117 | 200 | 327.0        | 328.2 | 381.0         | -                  |



SLIP-ON WELDING



WELDING NECK



BLIND

### DIMENSIONS OF CLASS 1500 FLANGES (ANSI B 16.5)

| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia<br>O | Dia of<br>Bolt Circle<br>A | Dia of<br>Bolt Holes<br>D | No. of<br>Holes | Thk of<br>Flange<br>C | Dia of<br>Hub<br>E | Length through Hub |          |          | Dia of Bore    |          | Dia of<br>R/F<br>R | Depth of<br>Socket<br>F |
|--------------------------------|--------------------|----------------------------|---------------------------|-----------------|-----------------------|--------------------|--------------------|----------|----------|----------------|----------|--------------------|-------------------------|
|                                |                    |                            |                           |                 |                       |                    | S/O & S/W<br>Y     | W/N<br>Y | L/J<br>Y | S/O & S/W<br>B | L/J<br>B |                    |                         |
| 1/2                            | 15                 | 120                        | 82.6                      | 22.2            | 4                     | 22.3               | 32                 | 60       | 32       | 22.2           | 22.9     | 34.9               | 10                      |
| 3/4                            | 20                 | 130                        | 88.9                      | 22.2            | 4                     | 25.4               | 35                 | 70       | 35       | 27.7           | 28.2     | 42.9               | 11                      |
| 1                              | 25                 | 150                        | 101.6                     | 25.4            | 4                     | 28.6               | 41                 | 73       | 41       | 34.5           | 34.9     | 50.8               | 13                      |
| 1.1/4                          | 32                 | 160                        | 111.1                     | 25.4            | 4                     | 28.6               | 41                 | 73       | 41       | 43.2           | 43.7     | 63.5               | 14                      |
| 1.1/2                          | 40                 | 180                        | 123.8                     | 28.6            | 4                     | 31.8               | 44                 | 83       | 44       | 49.5           | 50.0     | 73.0               | 16                      |
| 2                              | 50                 | 215                        | 165.1                     | 25.4            | 8                     | 38.1               | 57                 | 102      | 57       | 61.9           | 62.5     | 92.1               | 17                      |
| 2.1/2                          | 65                 | 245                        | 190.5                     | 28.6            | 8                     | 41.3               | 64                 | 105      | 64       | 74.6           | 75.4     | 104.8              | 19                      |
| 3                              | 80                 | 265                        | 203.2                     | 31.7            | 8                     | 47.7               | 73                 | 117      | 73       | 90.7           | 91.4     | 127.0              | -                       |
| 4                              | 100                | 310                        | 241.3                     | 34.9            | 8                     | 54.0               | 91                 | 124      | 90       | 116.1          | 116.8    | 157.2              | -                       |
| 5                              | 125                | 375                        | 292.1                     | 41.3            | 8                     | 73.1               | 106                | 156      | 106      | 143.8          | 144.4    | 185.7              | -                       |
| 6                              | 150                | 395                        | 317.5                     | 38.1            | 12                    | 82.6               | 119                | 171      | 119      | 170.7          | 171.4    | 215.9              | -                       |
| 8                              | 200                | 485                        | 393.7                     | 44.4            | 12                    | 92.1               | 143                | 213      | 143      | 221.5          | 222.2    | 269.9              | -                       |
| 10                             | 250                | 585                        | 482.6                     | 50.8            | 12                    | 105.0              | 159                | 254      | 176      | 276.3          | 277.4    | 323.8              | -                       |
| 12                             | 300                | 675                        | 571.5                     | 54.0            | 16                    | 123.9              | 181                | 283      | 219      | 327.1          | 328.2    | 381.0              | -                       |

### DIMENSIONS OF CLASS 2500 FLANGES (ANSI B 16.5)

| Nominal<br>Pipe Size<br>(inch) | Flange<br>Dia<br>O | Dia of<br>Bolt Circle<br>A | Dia of<br>Bolt Holes<br>D | No. of<br>Holes | Thk of<br>Flange<br>C | Dia of<br>Hub<br>E | Length through Hub |          |          | Dia of Bore    |          | Dia of<br>R/F<br>R | Depth of<br>Socket<br>F |
|--------------------------------|--------------------|----------------------------|---------------------------|-----------------|-----------------------|--------------------|--------------------|----------|----------|----------------|----------|--------------------|-------------------------|
|                                |                    |                            |                           |                 |                       |                    | S/O & S/W<br>Y     | W/N<br>Y | L/J<br>Y | S/O & S/W<br>B | L/J<br>B |                    |                         |
| 1/2                            | 15                 | 135                        | 88.9                      | 22.2            | 4                     | 30.2               | 40                 | 73       | 40       | 22.3           | 22.9     | 34.9               | 10                      |
| 3/4                            | 20                 | 140                        | 95.2                      | 22.2            | 4                     | 31.8               | 43                 | 79       | 43       | 28.2           | 28.2     | 42.9               | 11                      |
| 1                              | 25                 | 160                        | 108.0                     | 25.4            | 4                     | 35.0               | 48                 | 89       | 48       | 34.9           | 34.9     | 50.8               | 13                      |
| 1.1/4                          | 32                 | 185                        | 130.2                     | 28.6            | 4                     | 38.1               | 52                 | 95       | 52       | 43.7           | 43.7     | 63.5               | 14                      |
| 1.1/2                          | 40                 | 205                        | 146.0                     | 31.7            | 4                     | 44.5               | 60                 | 111      | 60       | 50.0           | 50.0     | 73.0               | 16                      |
| 2                              | 50                 | 235                        | 171.4                     | 28.6            | 8                     | 50.9               | 70                 | 127      | 70       | 62.5           | 62.5     | 92.1               | 17                      |
| 2.1/2                          | 65                 | 265                        | 196.8                     | 31.7            | 8                     | 57.2               | 79                 | 143      | 79       | 75.4           | 75.4     | 104.8              | 19                      |
| 3                              | 80                 | 305                        | 228.6                     | 34.9            | 8                     | 66.7               | 92                 | 168      | 92       | 91.4           | 91.4     | 127.0              | -                       |
| 4                              | 100                | 355                        | 273.0                     | 41.3            | 8                     | 76.2               | 108                | 190      | 108      | 116.8          | 116.8    | 157.2              | -                       |
| 5                              | 125                | 420                        | 323.8                     | 47.6            | 8                     | 92.1               | 130                | 229      | 130      | 144.4          | 144.4    | 185.7              | -                       |
| 6                              | 150                | 485                        | 368.3                     | 54.0            | 8                     | 108.0              | 152                | 273      | 152      | 171.4          | 171.4    | 215.9              | -                       |
| 8                              | 200                | 560                        | 438.2                     | 54.0            | 12                    | 127.0              | 178                | 318      | 178      | 222.2          | 222.2    | 269.9              | -                       |
| 10                             | 250                | 675                        | 539.8                     | 66.7            | 12                    | 165.1              | 229                | 419      | 229      | 277.4          | 277.4    | 323.8              | -                       |
| 12                             | 300                | 760                        | 619.1                     | 73.0            | 12                    | 184.2              | 254                | 464      | 254      | 328.2          | 328.2    | 381.0              | -                       |

## GLOBAL CUSTOMERS





Note



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