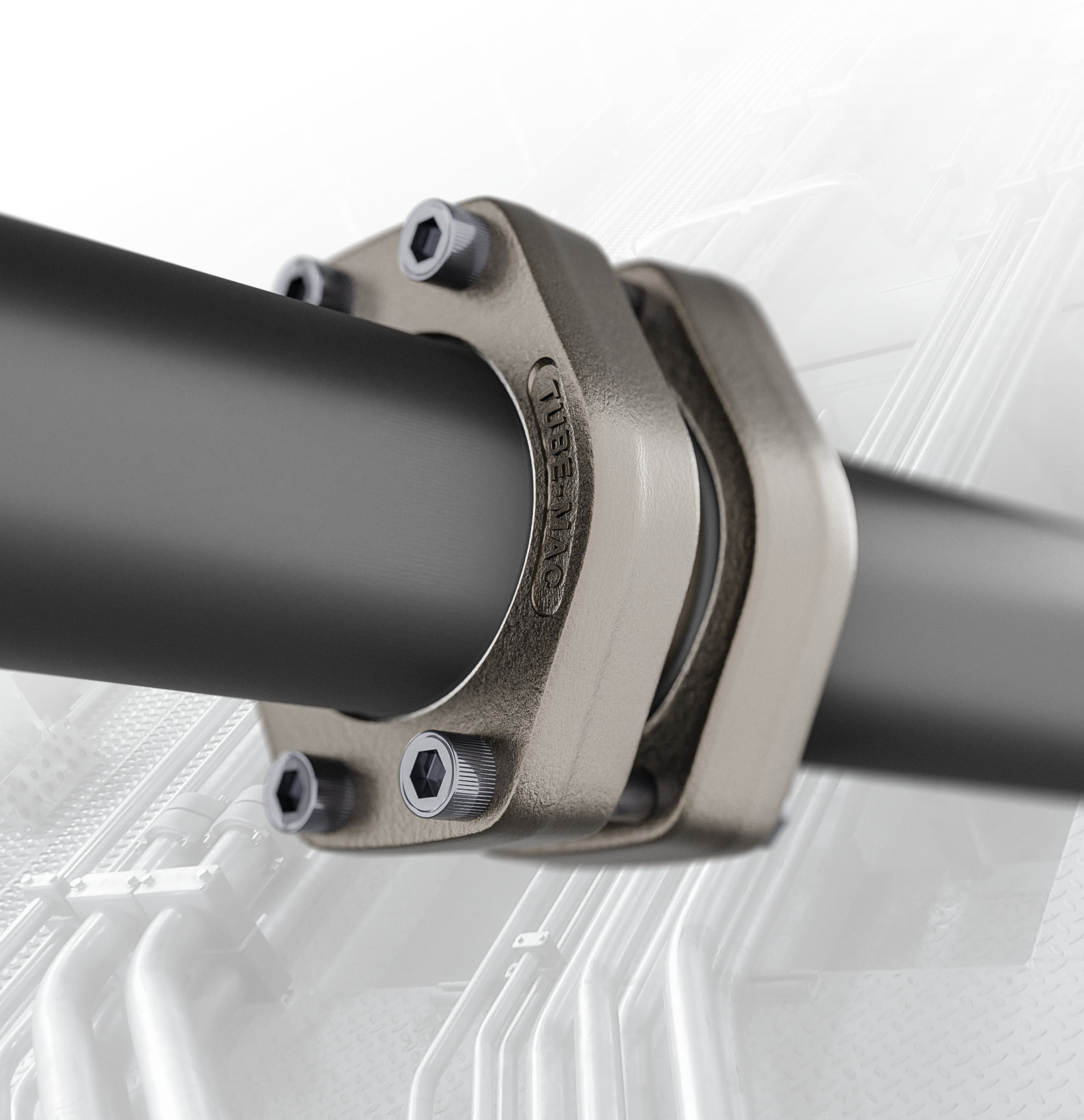


Product Catalogue V.62



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Non-welded flange piping systems and components

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CANADA | USA | AUSTRIA | SPAIN

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Special Notes

1. Tube-Mac reserves the right to alter the design or discontinue any of the products or services without notice.
2. Diagrams and 3-D Models are not to scale. They are for illustrative purposes only.
3. Dimensions and weights are nominal (not exact) and may be subject to change.
4. The entire catalogue is subject to misprints and errors

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Tube-Mac®

Setting the Standard in non-welded Piping Systems

Tube-Mac® was founded in 1977 by our progressive thinking founder always seeking new ideas and methods to join pipes together quickly, cleanly and “without welding”. Quality and integrity is an integral part of Tube-Mac’s commitment to supplying the finest hydraulic/lubrication piping systems and services on the market today.

By the early 1980’s Tube-Mac® was the first company to introduce the 37° Flare Flange and Retain Ring Flange systems to North America. A complete understanding of hydraulics and uncompromising dedication to cleanliness are what propelled Tube-Mac® to the forefront of these types of worldwide piping installations. Continuous investments in cutting edge machining and pipe fabrication technologies plus continuous product improvements keep Tube-Mac ahead of its competition. The TMI® 37° Flare Flange and TMI® Retain Ring Flanges systems were primarily used in various hydraulic oil and lubrication applications but over the years new applications are being introduced such as high pressure air, to expand its customer base. After more than 45 years, Tube-Mac® has thousands of successful projects and satisfied customers around the globe.

Tube-Mac® has offices in four countries and authorized distributors/installers in over thirty countries around the globe. It is this network of Quality People that service our customers. For an office or distributor near you please visit www.tube-mac.com



Headquarters: Stoney Creek, Ontario Canada



Tube-Mac USA



Tube-Mac Spain



Tube-Mac Austria

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

A1

Tube-Mac®

Speed

With construction schedules becoming more and more compacted, today's piping installations demand **SPEED**.

The Tube-Mac piping systems rise to the challenge, setting a new standard with state-of-the-art, leak-free pipe connections.

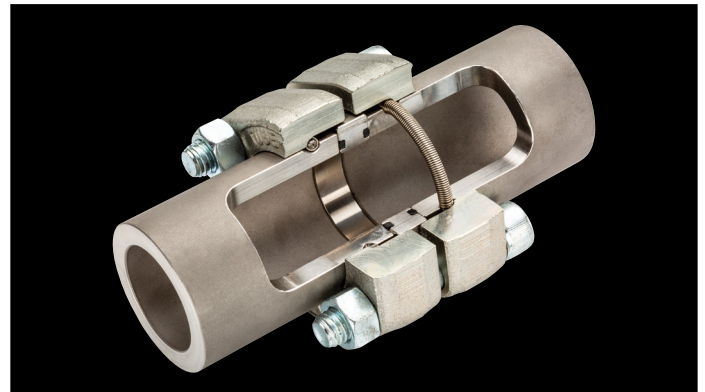


Method 1: TMI® 37° Flared System.

For low, medium and high pressure systems this configuration is the quickest, most economical and easiest system to fabricate and install. Cut and debur the ends of the pipe. Slide the flare flanges onto to each pipe. Using a TFM-01 flaring machine, flare the pipe ends 37° and then insert an O-ring face cone in one end and a Flat face cone in the other end. Slide the flanges together, install the bolts and nuts then tighten to the recommended torque values.

Method 2: TMI® Retain Ring System.

For very high pressures with heavy wall pipes, this configuration is the choice of engineers. This method requires some engineering and pipe layout. The pipes are machined to precise dimensions and a groove is cut on the outside diameter. After machining, the retain ring flange is slid onto the pipe and a retain ring is sprung over the pipe end and into the groove. The union is completed by inserting an O-ring seal retainer between the pipe ends. Slide the flanges together, install the bolts and nut then tighten to the recommended torque values.



Also available are butt weld adapters suitable for a variety of outside diameters and wall thicknesses as well as for low and high low pressure applications. These are pre-machined butt weld adapters with or without a retain ring groove. Pipe ends are prepared with a bevel for butt weld. The flanges are slid onto the pipe and the butt weld adapters are then welded to the pipe end. After cleaning the weld, the retain ring is sprung over the adapter and into the groove. Slide the flanges together, install the bolts and nut then tighten to the recommended torque values. For extreme high pressure applications where external high shock is evident such as forging presses, then it is highly recommended to use butt weld adapters with no retain ring groove. In such cases, the retain ring profile is machined as part of the butt weld adapter. This makes for a much more robust connection. Finally to Speed up the overall installation and commissioning time cold drawn, phosphated pipes along with cold bending techniques to install its piping systems. Portable pipe benders used in the field offer large bend radii with great flow characteristics and low pressure drops. For confined areas where tighter radii are required, mandrel pipe benders are utilized. Both processes bend the pipe cold without introducing any heat. It is because of the non-welded flange connections and cold pipe bending philosophies Tube-Mac® is able to eliminate all the high labour costs associated with welding.

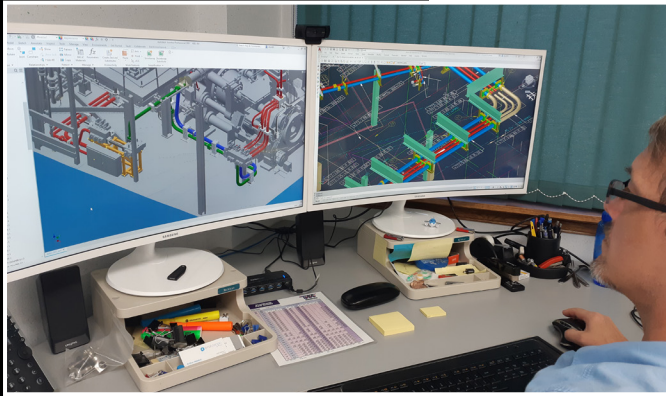
- No special skilled labour required vs. qualified welder
- Actual flaring time is measured in "seconds" vs. "hours" for a welded joint
- No special hot work permits
- No fire watch personnel required
- No leaks as a result of stress fatigue cracks as seen in welds
- No cost to x-ray welds
- No cost to rework welds
- No acid flush chemicals and neutralizers required
- No added cost or environmental issues to dispose of chemical wastes
- Field bend and fabrication – reduces engineering design time

Tube-Mac®

Total Piping Service

With years of applied hydraulics expertise and the latest technologies at our disposal, Tube-Mac® is able to offer **TOTAL PIPING SERVICE.**

Through continued education and total team effort, Tube-Mac® is able to support all phases of a piping installation before, during, and after construction.



Engineering

Close contact between the field technicians and Tube-Mac® project managers is maintained throughout the duration of each project. This interaction provides each project with the immediate service that is required. While utilizing state-of-the-art AutoCAD software, practical engineered piping solutions can also be generated at the design phase, which enhances the installation even further.

Field Coordination

Tube-Mac® Field technicians accompany virtually all piping installations. Each technician is well versed in hydraulic logic and is a qualified instructor on proper bending and installation procedures. While helping to assume the task of crew coordination and total quality assurance, the Tube-Mac® technician is a significant cost saver to the installation contractor.

Flushing & Testing

In the spirit of total piping system commitment, Tube-Mac® has developed the means to flush and pressure test all Tube-Mac® piping installations. This is possible through the use of a portable flushing and testing units. Tube-Mac® can filter each piping system to customer specified cleanliness levels, while at the same time, hydrostatically test each system.

Component Sales

Tube-Mac® offers for independent sale a complete line of hydraulic piping accessories from a large inventory allowing for the fastest possible service. After market availability of all Tube-Mac® product has led to worldwide customer Satisfaction.

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

A3

Tube-Mac®

Cleanliness

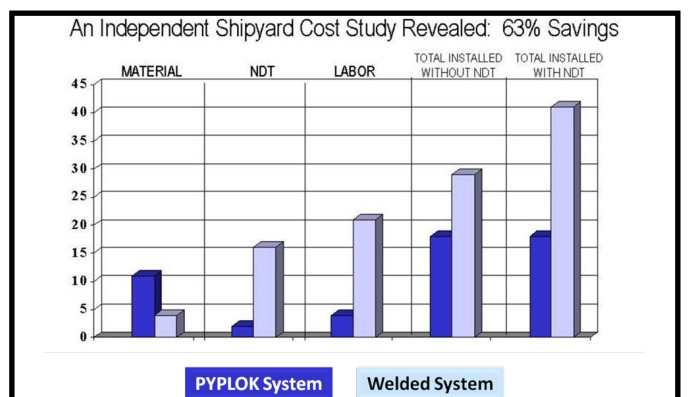
For efficient hydraulic/lube system start-ups and longevity, it is essential to insist upon **CLEANLINESS**. Tube-Mac® Keeps cleanliness at the forefront of all hydraulic/lube piping installations. Today's equipment increases the demand for extremely clean piping. Sensitive piston pumps, servo and proportional valves as well as bearings require the cleanest oil because of tight tolerances. Tube-Mac provides the piping that will meet these demands.

The key to Tube-Mac®'s superior hydraulic cleanliness is our pipe. Our tube quality piping used for working pressure lines is cold drawn during the manufacturing process leaving it internally and externally free of scale. To protect all hydraulic/lube piping, Tube-Mac® has standardized on phosphating. This surface conditioning procedure inhibits rusting, thus maintaining the pipe cleanliness both during storage and installation.

Tube-Mac®'s mechanical joint system eliminates all the contamination pitfalls of typical welded system. The fear of pipe or weld particle migration is no longer a concern with Tube-Mac® hydraulic piping system. Expensive pump groups and sensitive servo systems are now more likely to avoid internal failure.

Because of scale-free, weld-free field installation of the Tube-Mac® piping system, the need for costly internal chemical flushing is a thing of the past. With Tube-Mac® piping, all that is necessary is an independent filtering unit utilizing system fluid for removal of loose contaminants. This method of oil flushing not only removes loose contaminants but at the same time polishes the system fluid. Now, instead of chemical disposal, the customer has a hydraulic system full of clean fluid that is ready for commissioning.

When considering a hydraulic/lube piping installation it is important to think in terms of overall installed economics. Keeping in mind the significant labour savings, the greatly reduced flushing time, and the elimination of hazardous chemical disposal, it is easy to see why a Tube-Mac® piping system installs with an overall cost savings.



Tube-Mac®

Quality

In order to stand the test of time in today's industrial market, the corner stone of a company must be **QUALITY**.

Tube-Mac®'s uncompromising commitment to quality had led to the assembly of the most sound, cost effective hydraulic/lube piping system available.

Material

For high pressure hydraulic applications it is important to realize the need for strong components.

All Tube-Mac® supplied flanges are manufactured from steel to ensure the ability to withstand the shock and dynamics inherent to hydraulic systems.

Preparation

All Tube-Mac® components are conditioned with zinc nickel plating to ensure the longest life before and after installation.

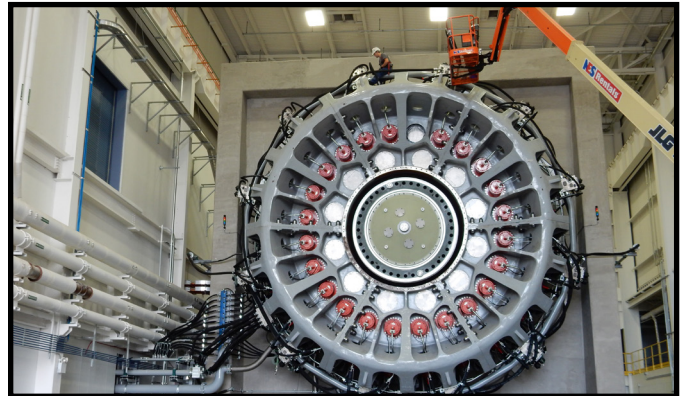
Components

In order to complete the total hydraulic/lube piping system, it is important to have quality accessories. For example Tube-Mac® has standardized on a vibration dampening clamping system. To minimize noise and fatigue due to hydraulic shock, proper support is essential.

Tube-Mac® also supplies and uses only the finest hydraulic hoses and couplings which meet and exceed SAE standards. Also, with our trained personnel manufacturing hose assemblies, the results are reliable, safe and with quality products you can depend on.

The heavy duty hydraulic hose couplings supplied by Tube-Mac® are the industry's finest and feature a tapered flange head, thicker tube walls and a solid one-piece design with NO brazed/weld joints.

Top quality piping components promote expedited installations for which Tube-Mac® has become internationally renowned. With locations in Canada, the USA, Spain and Austria, Tube-Mac® provides customers with the assurance of dealing with an organization that can fulfill their technical needs, and also deliver quality products supported by friendly service in a timely manner.



Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

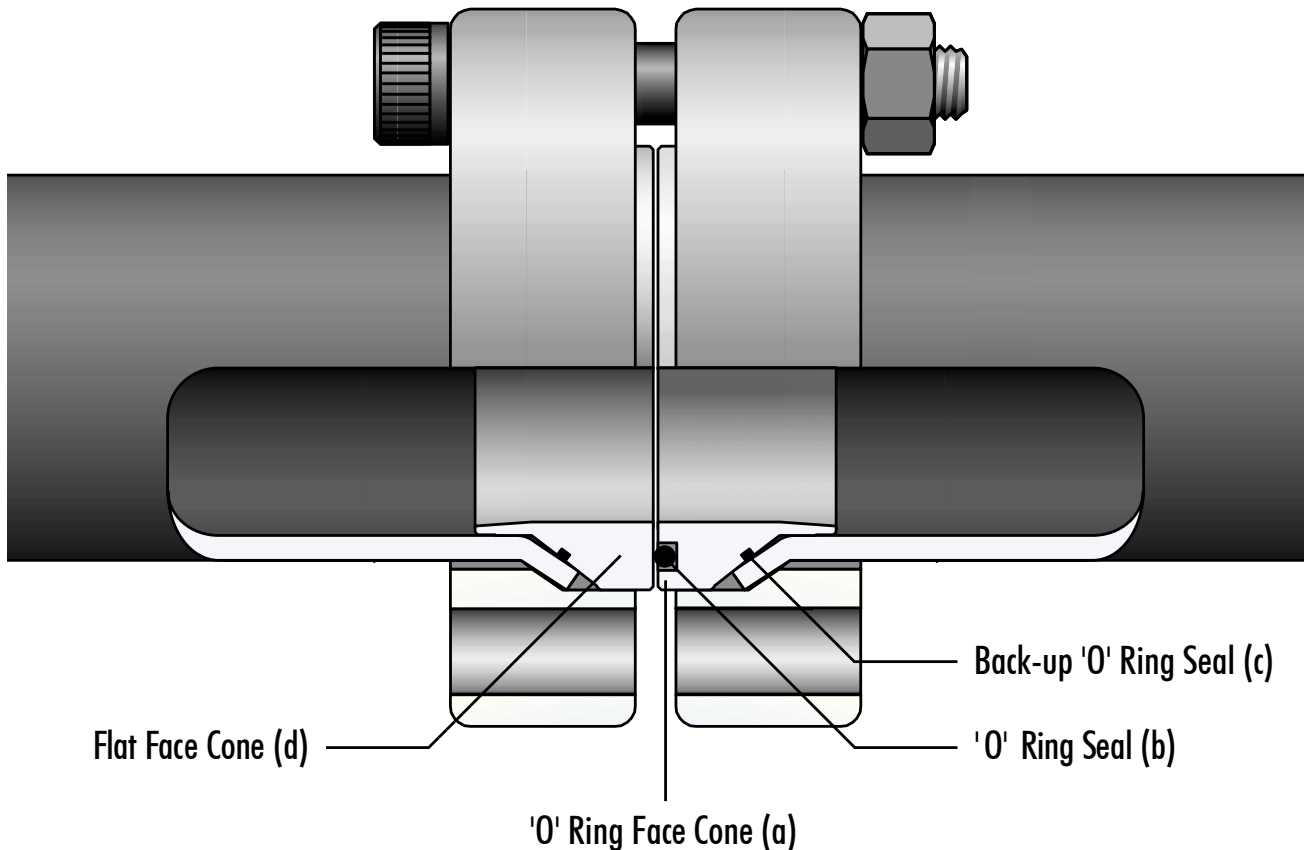
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

A5

Flared System



The flared configuration is based on flaring the pipe ends to 37° and utilizing flanges and internal cones. 'O'ring face cone (a) with 'o'ring seal (b) mating to flat face cone (d). Both internal cones have back-up 'o'rings (c).

Standard flare flanges and NPS pipe sizes are available from:

- 1/2" schedule 40 up to 10" schedule 40
- 1/2" schedule 80 up to 4" schedule 80
- 1-1/2" schedule 160 up to 3" schedule 160

Standard flare flanges and Metric pipe sizes are available from:

- 20mm up to 273mm various thin wall
- 20mm up to 90mm various wall thickness
- 56mm up to 97mm heavy wall

PREPARATION:

The flange is slipped onto the pipe before flaring. After flaring, the cone is located into the pipe. Bolting the flanges together draws the flared pipes and cones in contact with each other providing a leakfree connection.

The standard connection styles offered conform to SAE and ISO 4-bolt flanges. Other flange patterns may also be available.

Flared System

TMI® 37° Flaring and Connection Procedure

The Flare Flange connection consists of pipe suitable for cold forming, flare flanges, flare cones with elastomer seals and bolting hardware.



Step 1: Cut pipe end square, deburr and clean. Slip flange onto the pipe before flaring. Place pipe into the flaring machine with the correct dies and flaring cone to suit the pipe size.



Step 2: Pipe is to protrude to the stop on the die. Lubricate the flaring cone, start the machine, flare the pipe end until fully formed against the die. Stop the machine, remove the pipe from the die.



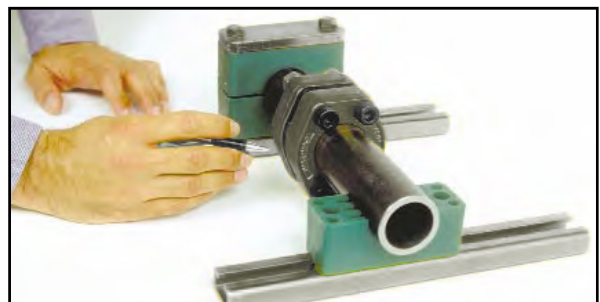
Step 3: Clean and visually inspect the flare. The surface of the flare should be smooth and free of any defects.



Step 4: Select the correct pipe cone style (ref. pgs. B3-B4). Insert pipe cone into the flared end of the pipe (use rubber hammer if required).



Step 5: Select the required bolting hardware.

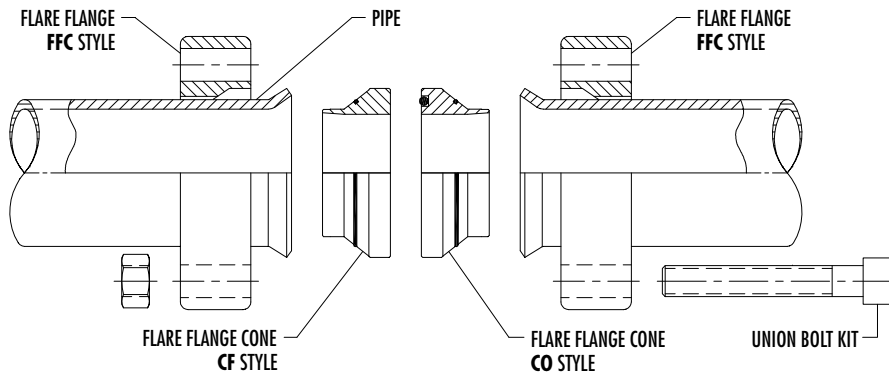


Step 6: Tighten bolts to the torque values specified. Always tighten bolts in a cross-over sequence and ensure that the flanges are parallel.

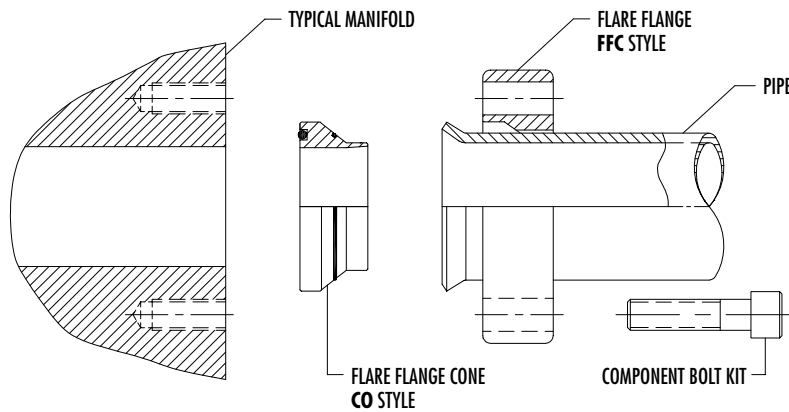
Flared System

Flare Flange Connections - Schedule 40/80/160

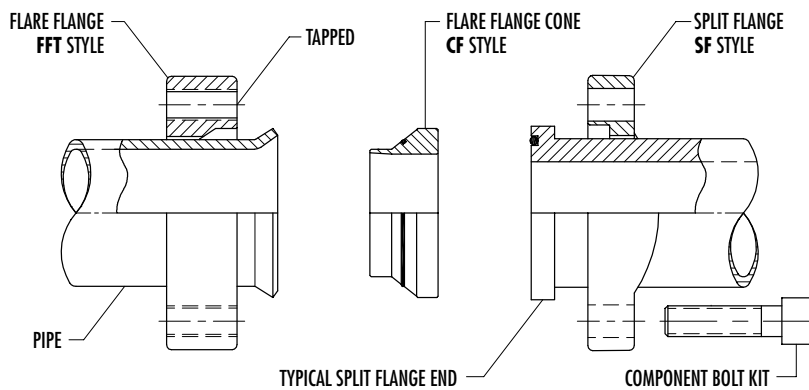
Typical Flare Union Connection



Typical Flare ('O' Ring Face) to Flat Face Component Connection



Typical Flare (Flat Face) to Split Flange Connection



3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

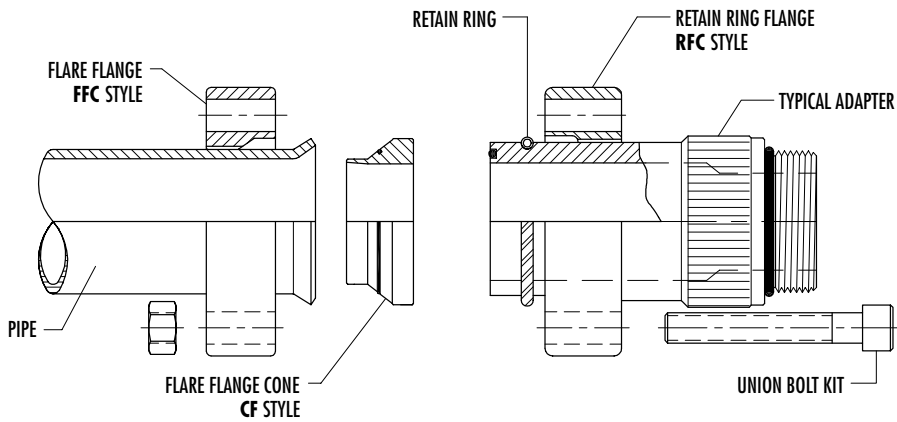
Valves, Ball and Check

B3

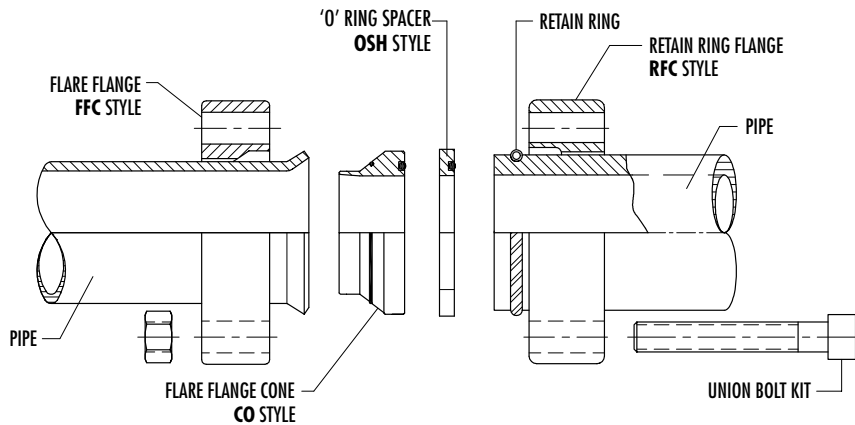
Flared System

Flare Flange Connections - Schedule 40/80/160

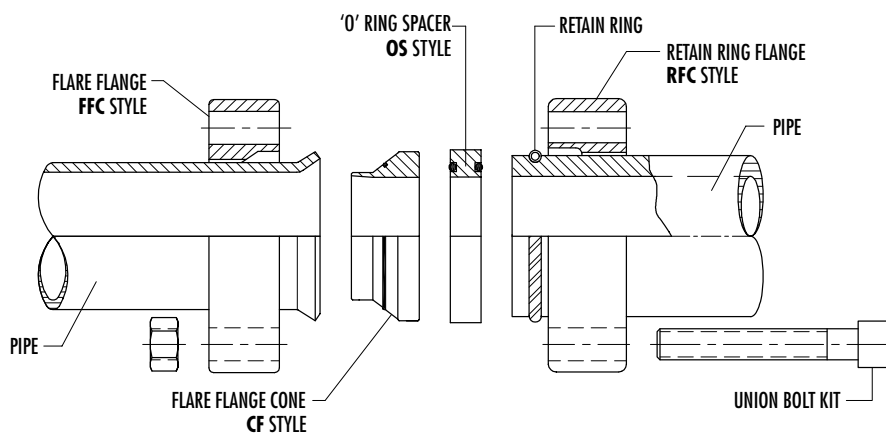
Typical Flare (Flat Face) to 'O' Ring Face Component Connection



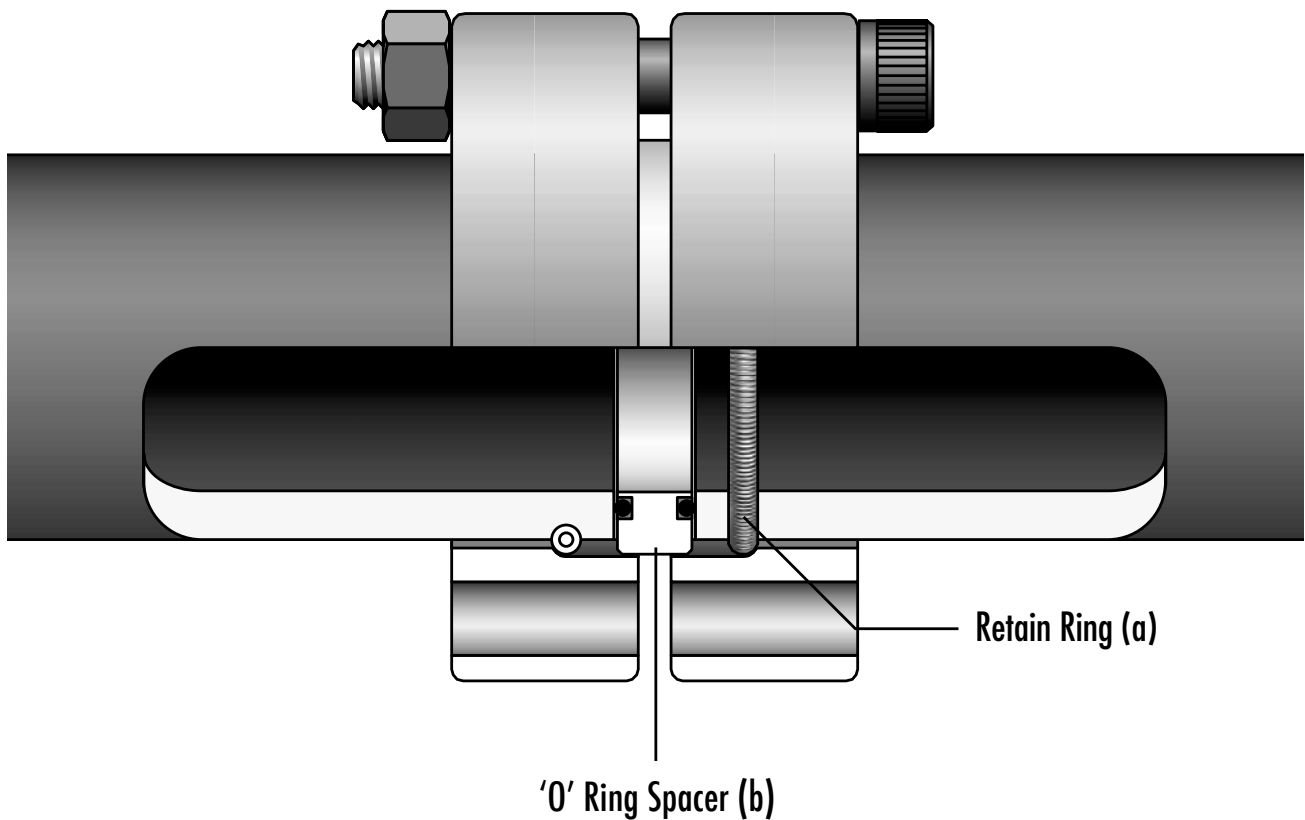
Typical Flare ('O' Ring Face) to Retain Ring Pipe Connection



Typical Flare (Flat Face) to Retain Ring Pipe Connection



Retain Ring System



The retain ring configuration uses heavy wall pipe and has a machined butt end face, along with an annular groove on the outside diameter.

After machining, the flange is slipped onto the pipe and a retain ring (a) which consists of a segmented stainless steel ring bound by a spiral wound stainless steel spring is sprung over the pipe's outside diameter nesting in the annular groove. Bolting the flanges together draws them against the retain rings with the 'o'ring spacer (b) captive within the connection.

Pipe sizes 1 1/2" through 10" are available for use with retain ring flanges.

The standard connection styles offered conform to SAE and ISO 4-bolt flanges along with Tube-Mac® Industries 8-bolt/12-bolt proprietary flanges. Other flange patterns may also be available. Pipe sizes 1 1/2" through 10" are available for use with retain ring flanges.

The standard connection styles offered conform to SAE and ISO 4-bolt flanges along with Tube-Mac® Industries 8-bolt/12-bolt proprietary flanges. Other flange patterns may also be available.

Retain Ring System

TMI® Retain Ring Flange Connection Procedure

The retain ring flange connection consists of machined pipe, retain ring flanges, retain rings, 'o' ring spacer and bolting hardware.



Step 1: Pipe supplied with butt end machined along with an annular groove on the outside diameter.



Step 2: Slip flange onto the pipe.



Step 3: Retain ring is sprung over the pipe's outside diameter nesting in the annular groove.



Step 4: Select the correct 'o' ring spacer style. The 'o' ring provides a seal against the butt end of the pipe.



Step 5: Select the required bolting hardware from Section R of this catalogue. Carefully place the 'o' ring spacer in between the pipe ends. Slide the flanges forward and the 'o' ring seal retainer becomes captive within the flanges.

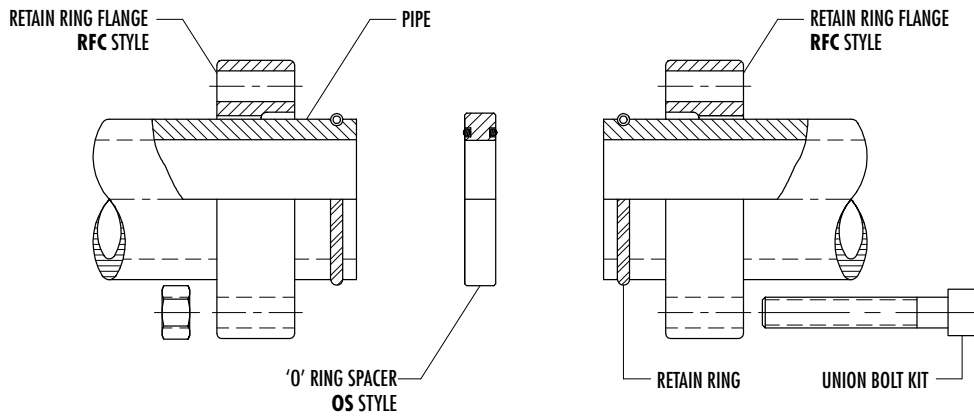


Step 6: Tighten bolts to the torque values specified. Always tighten bolts in a cross-over sequence and ensure that the flanges are parallel.

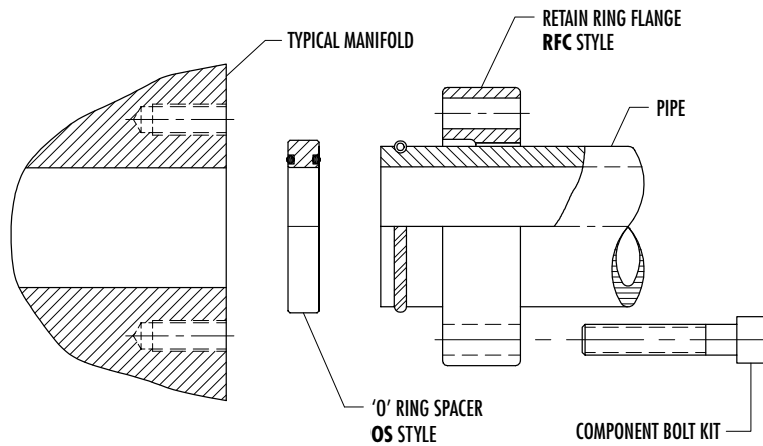
Retain Ring System

Retain Ring Flange Connections - Heavy Wall Pipe

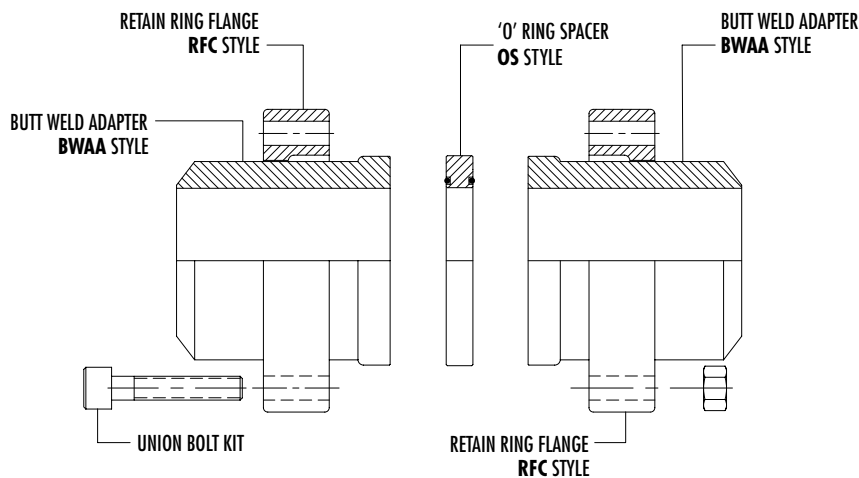
Typical Pipe Union Connection



Typical Pipe to Flat Face Connection



Typical Butt Weld Adapter Union Connection

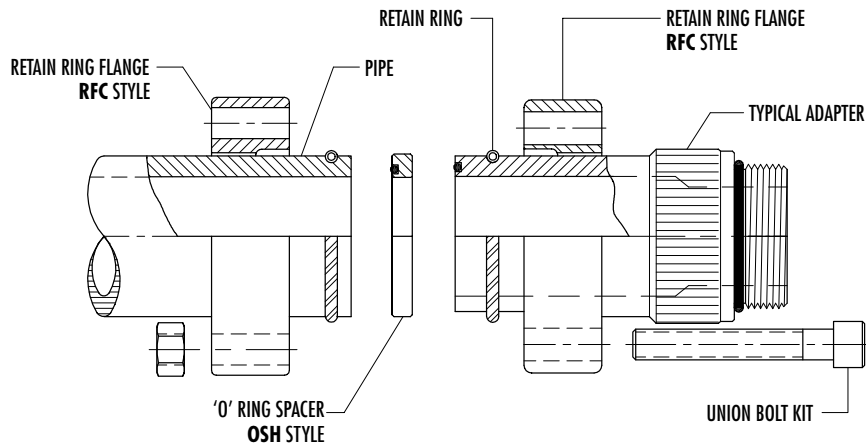


3D step models available upon request

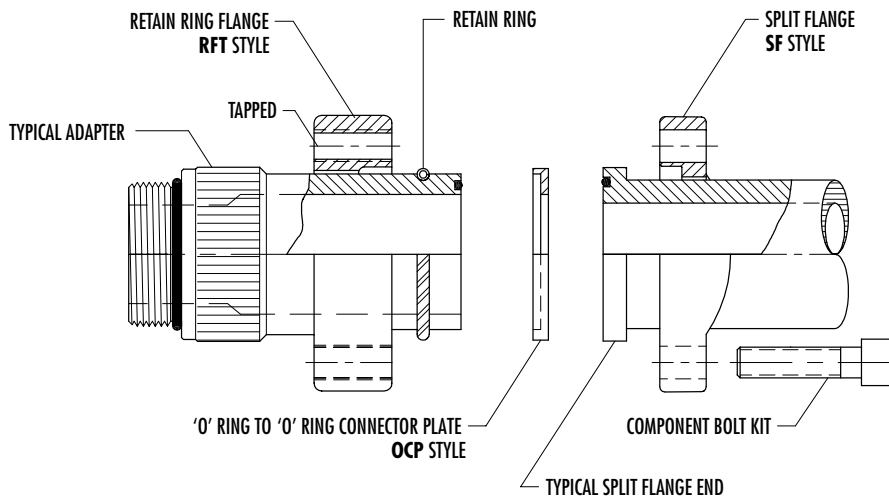
Retain Ring System

Retain Ring Flange Connections - Heavy Wall Pipe

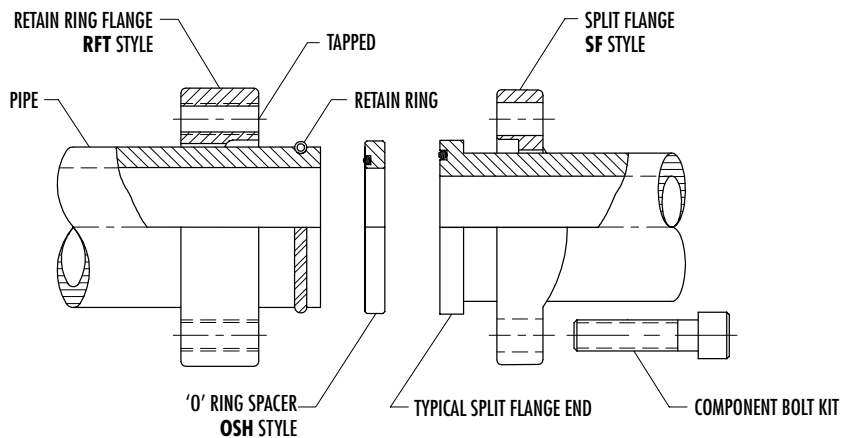
Typical Pipe to 'O' Ring Face Retain Ring Component Connection



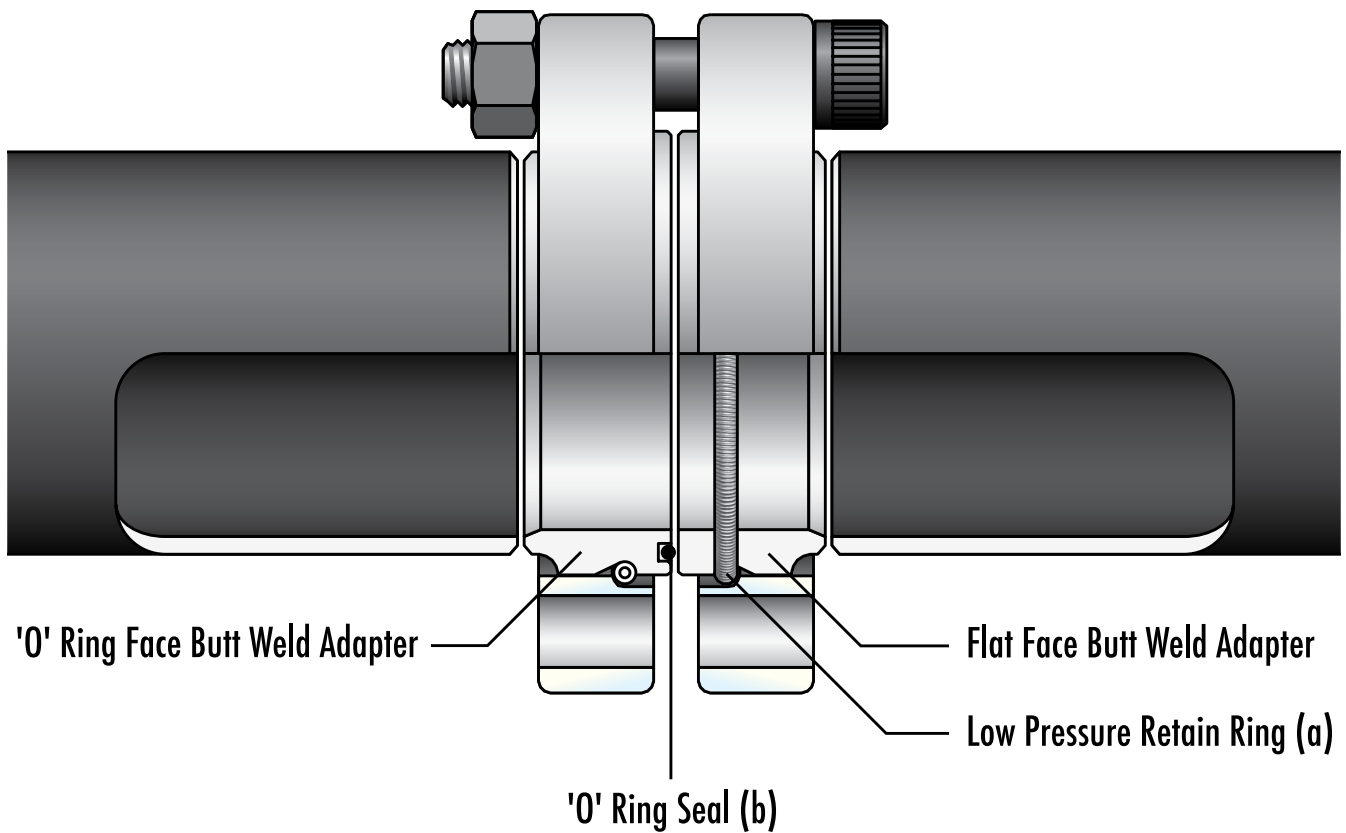
Typical 'O' Ring Face Retain Ring Component to SAE Split Flange Connection



Typical Pipe to SAE Split Flange Connection



Low Pressure Retain Ring System



The low pressure retain ring configuration uses butt weld adapters, (1) 'o'ring face and (1) flat face, with an groove on the outside diameter.

After pipe preparation, the adapter is welded onto the pipe. The flange is slipped onto the pipe and a low pressure retain ring (a) which consists of a segmented stainless steel ring bound by a spiral wound stainless steel spring is sprung over the adapter's outside diameter nesting in the groove.

Bolting the connection together draws the flanges against the retain rings with the o-ring seal (b) captive within the connection. Adapter sizes 2 1/2" through 8" are available for use with low pressure retain ring flanges.

The standard connection styles are SAE J518 Code 61 (ISO 6162-1) and Tube-Mac® proprietary 6-Bolt and 8-Bolt flanges.

TMI® Low Pressure Retain Ring Flange Connection Procedure

The low pressure retain ring flange connection consists of pipe, butt weld adapters with elastomer seal, retain ring flanges, retain rings, and bolting hardware.



Step 1: Cut pipe end square, and bevel for butt weld.



Step 2: Select the correct low pressure retain ring butt weld adapter to suit the pipe size. Weld the root pass with tig, then use #7018 welding stick for the filler and weld cap.



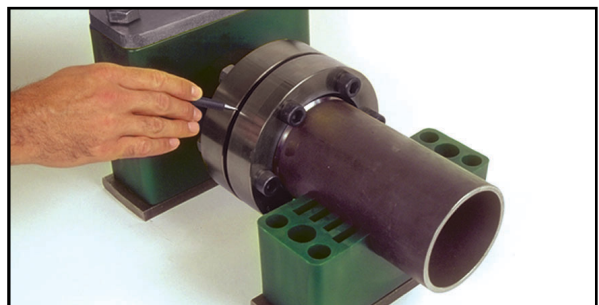
Step 3: Grind the weld on the inside of the pipe using a pencil type grinder. Clean the inside of the pipe after grinding.



Step 4: Slip flange onto the pipe. Retain ring is sprung over the pipe adapter's outside diameter nesting in the groove.



Step 5: Select the required bolting hardware.



Step 6: Tighten bolts to the torque values specified. Always tighten bolts in a cross-over sequence and ensure the flanges are parallel.

TMI® Flange Systems

Procedure for Tightening of the bolts

Most carbon steel socket head cap screw bolts are oiled from the factory.

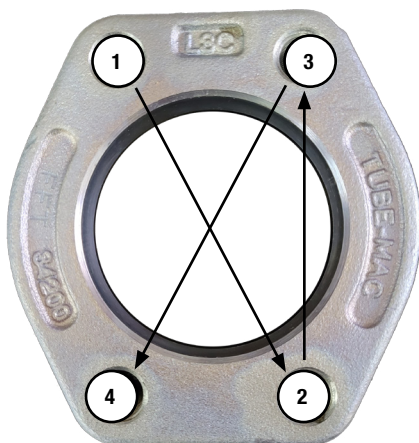
For stainless steel bolts and hot dipped galvanized bolts lubricate the threads with Never Seez Regular Grade White Lubricant or equivalent as shown.



1. Bolting to a component apply lubricant to the threads and bolt head shoulder. (Shown in the photo)
2. Bolting a union, lubricate the threads and hex nut face on the flange side. (Hex nut is not shown in the photo)

Tighten bolts in diagonal sequence 1 thru 4 in small increments to appropriate torque level.

See illustrated example below:



Tightening of the bolts should start immediately after greasing the threads and hex nuts.

Step 1: Tighten lightly with an Allen key and/or wrench.

Step 2: Tighten crosswise as shown with 30% of the recommended torque.

Step 3: Tighten crosswise as shown with 70% of the recommended torque.

Step 4: Tighten crosswise as shown with 100% of the recommended torque.

Note:

The distance between the flanges of a union or the flange and the component's mating surface must be equal around the flange. Never torque one bolt fully at a time. Torquing of the bolts must be done equally in the sequence shown.

TMI® Flange Systems

Torque Values for Lubricated Bolts

1000 PSI (70 bar) TMI® Low Pressure						
Size	Flange (NPS)	Bolt Size (UNC)	Torque (ft-lbs)	Flange (Metric)	Bolt Size (Metric)	Torque (Nm)
1-1/2"	14-150	1/2"	80-90	M14-150	M12	22-27
2"	14-200	1/2"	80-90	14-200	M12	25-30
2-1/2"	14-250	1/2"	80-90	M14-250	M12	30-35
3"	14-300	5/8"	110-120	M14-300	M16	40-45
3-1/2"	14-350	5/8"	110-120	M14-350	M16	50-55
4"	14 and 34-400	5/8"	110-120	14 and 34-400	M16	55-60
5"	14 and 34-500	5/8"	110-120	14 and M34-500	M16	65-70
6"	16-600	5/8"	110-120	M16-600	M16	175-180
8"	18-800	3/4"	120-130	M18-80	M20	175-180
10"	18-1000	3/4"	120-130	18-1000	M20	175-180

3000 PSI (210 bar) SAE Code 61 (ISO 6162-1)						
Size	Flange (NPS)	Bolt Size (UNC)	Torque (ft-lbs)	Flange (Metric)	Bolt Size (Metric)	Torque (Nm)
1/2"	34-050	5/16"	15-18	M34-050	M8	22-27
3/4"	34-075	3/8"	20-30	M34-075	M10	25-30
1"	34-100	3/8"	20-30	M34-100	M10	30-35
1-1/4"	34-125	7/16"	40-50	M34-125	M10	40-45
1-1/2"	34-150	1/2"	55-60	M34-150	M12	50-55
2"	34-200	1/2"	80-90	M34-200	M12	55-60
2-1/2"	34-250	1/2"	80-90	M34-250	M12	65-70
3"	34-300	5/8"	110-120	M34-300	M16	175-180
3-1/2"	34-350	5/8"	110-120	M34-350	M16	175-180
4"	34-400	5/8"	110-120	M34-400	M16	175-180

6000 PSI (420 bar) SAE Code 62 (ISO 6162-2)						
Size	Flange (NPS)	Bolt Size (UNC)	Torque (ft-lbs)	Flange (Metric)	Bolt Size (Metric)	Torque (Nm)
1/2"	64-050	5/16"	16-18	M64-050	M8	22-27
3/4"	64-075	3/8"	20-30	M64-075	M10	30-35
1"	64-100	7/16"	40-50	M64-100	M12	45-50
1-1/4"	64-125	1/2"	55-60	M64-125	M12	60-65
1-1/4" ⁽²⁾	-	-	-	M64-125-M14	M14	80-85
1-1/2"	64-150	5/8"	110-120	M64-150	M16	120-130
2"	64-200	3/4"	120-130	M64-200	M20	150-160

TMI® Flange Systems

Torque Values for Lubricated Bolts

5800 PSI (400 bar) ISO 6164 and TMI® 8-Bolt						
Size	Flange (NPS)	Bolt Size (UNC)	Torque (ft-lbs)	Flange (Metric)	Bolt Size (Metric)	Torque (Nm)
1-1/2"	74-150	5/8"	110-120	M74-150	M16	120-130
2"	74-200	5/8"	110-120	M74-200	M16	120-130
2-1/2"	74-250	3/4"	120-130	M74-250	M20	155-160
3"	74-300	1"	350-400	M74-300	M24	325-330
4"	74-400	1-1/8"	500-550	M74-400	M30	520-530
4-1/2"	48-450	3/4"	190-200	48-450	M20	320-330
5"	48-500	1"	350-400	48-500	M24	370-380
6"	48-600	1-1/8"	500-550	48-600	M30	800-810
8" ⁽¹⁾	48-800-290BC	1-1/8"	500-550	48-800-290BC	M30	800-810
8"	48-800	1-1/2"	1100-1200	48-800	M36	1550-1620
10"	412-1000	1-1/2"	1100-1200	412-1000	M36	1550-1620

10000 PSI (690 bar) Pattern acc. to SAE Code 62 (ISO 6162-2)						
Size	Flange (NPS)	Bolt Size (UNC)	Torque (ft-lbs)	Flange (Metric)	Bolt Size (Metric)	Torque (Nm)
1/2"	104-050	5/16"	20	M104-050	M8	30
3/4"	104-075	3/8"	30	M104-075	M10	35
1"	104-100	7/16"	50	M104-100	M12	45
1-1/4"	104-125	1/2"	60	M104-125	M12	65
1-1/4" ⁽²⁾	-	-	-	M104-125-M14	M14	85
1-1/2"	104-150	5/8"	120	M104-150	M16	135
2"	104-200	3/4"	130	M104-200	M20	165
2-1/2"	104-250	1"	350	M104-250	M24	330
3"	104-300	1-1/8"	500	M104-300	M30	520

Note:

Above 10000 PSI (690 bar) Flange is only available for SCHXXS NPS Duplex Pipe. Flanges with Metric Threads available.

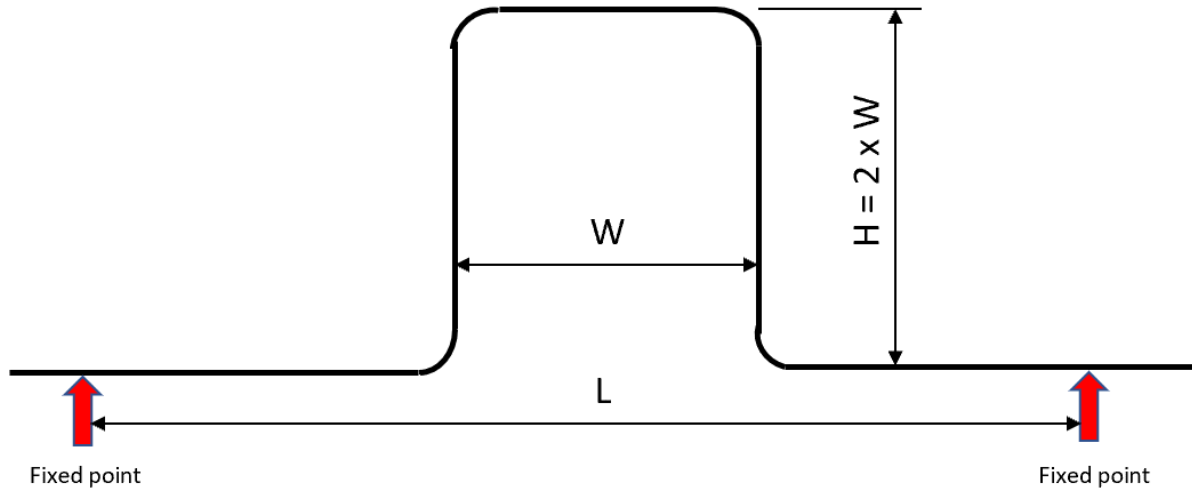
TMI® Flange Systems

Expansion Loop for High Pressure Pipes

Thermal expansion will occur between all fixed points in a piping system. The fixed points should be solid anchor points and not pipe clamps. The pipe is free to expand between the fixed points. The expansion loop, as a rule, should be located in the centre distance between the two fixed points.

The height of the expansion loop is normally twice the width. The exception happens when more than one line runs parallel in a bank of lines. Then the dimensions of the loops must be increased to allow nesting of the additional lines.

See illustration below:



Calculations

1. The formula for calculating thermal expansion:

$$\Delta L = C \times L \times (T_f - T_g) \times 12 \text{ in./ft.}$$

Coefficient of thermal expansion (C):

$$\text{Steel (C)} = 6.5 \times 10^{-6} \text{ in./in.}^\circ\text{F}$$

Distance between fixed points (L) in feet.

Temperature of fluid (T_f)

Temperature of ground (T_g)

2. After calculating the expansion, find the expansion loop size from the charts for the applicable pipe or tube. Loop sizes are taken to the nearest half foot on the height and width.

Example

Find the loop size for a 4" diameter steel pipe hydraulic oil 120°F with 200 ft between fixed points and an average ground temperature of 70°F.

Given:

$$\text{Steel (C)} = 6.5 \times 10^{-6} \text{ in./in.}^\circ\text{F}$$

Distance (L) = 200 ft.

$$\text{Temp. Diff. } (\Delta T) = (120^\circ\text{F} - 70^\circ\text{F}) = 50^\circ\text{F}$$

Pipe Diam. (D) = 4"

Calculations:

$$\Delta L = C \times L \times (T_f - T_g) \times 12 \text{ in./ft.}$$

$$\Delta L = 6.5 \times 10^{-6} \times 200 \times (120 - 70) \times 12$$

$$\Delta L = 0.78 \text{ in. (thermal expansion)}$$

From the expansion loop chart for carbon steel on the following page B15

Nominal 4" Pipe Size

Thermal Expansion calculated at 0.78 in.

The Expansion Loop is 6 feet high x 3 feet wide.

Note: The recommendation for using an expansion loop:

- Carbon steel pipes, every 100 feet (30 meters)
- Stainless steel pipes, every 65 feet (20 meters)

TMI® Flange Systems

Expansion Loop Sizes for Carbon Steel Pipes

Based on (ΔL) Thermal Expansion

Pipe Size (in)	ΔL (in)	Loop Size (ft)	
		H	W
3/4"	0.00 - 1.50	4	2
	1.50 - 6.00	6	3
1"	0.00 - 1.00	4	2
	1.00 - 4.14	6	3
1-1/4"	0.00 - 0.93	4	2
	0.93 - 3.33	6	3
	3.33 - 5.56	8	4
1-1/2"	0.00 - 0.88	4	2
	0.88 - 2.75	6	3
	2.75 - 4.75	8	4
2"	0.00 - 0.85	4	2
	0.85 - 2.38	6	3
	2.38 - 4.00	8	4
2-1/2"	0.00 - 0.78	4	2
	0.78 - 2.14	6	3
	2.14 - 3.71	8	4
	3.71 - 5.31	10	5
3"	0.00 - 0.72	4	2
	0.72 - 1.78	6	3
	1.78 - 3.00	8	4
	3.00 - 4.35	10	5
3-1/2"	0.00 - 0.68	4	2
	0.68 - 1.35	6	3
	1.35 - 2.70	8	4
	2.70 - 3.84	10	5
	3.84 - 5.00	12	6
4"	0.00 - 0.63	4	2
	0.63 - 1.45	6	3
	1.45 - 2.41	8	4
	2.41 - 3.45	10	5
	3.45 - 4.52	12	6
5"	0.00 - 0.42	4	2
	0.42 - 1.27	6	3
	1.27 - 2.12	8	4
	2.12 - 3.00	10	5
	3.00 - 3.96	12	6
	3.96 - 4.13	14	7

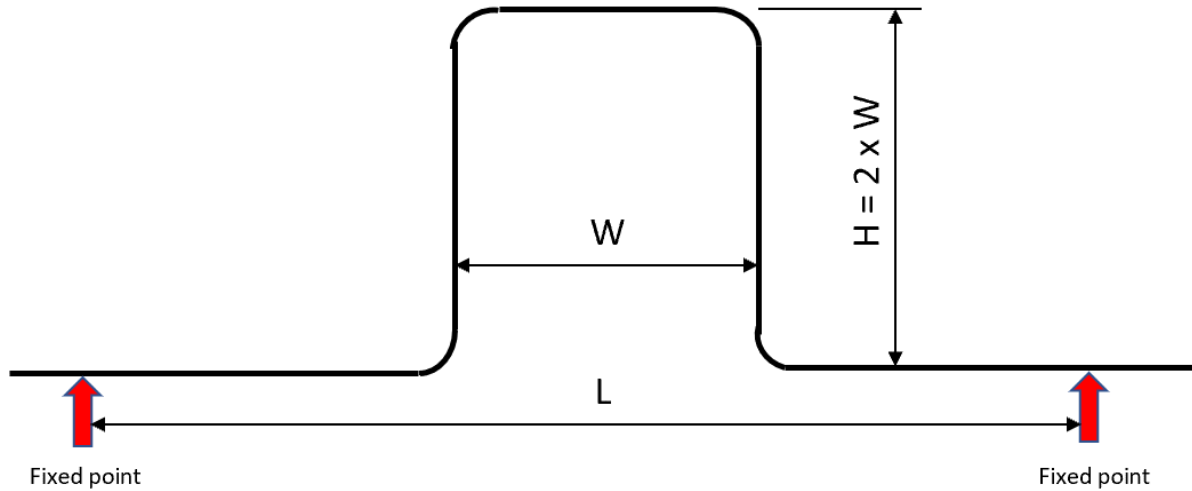
Pipe Size (in)	ΔL (in)	Loop Size (ft)	
		H	W
6"	0.00 - 0.46	4	2
	0.46 - 1.16	6	3
	1.16 - 1.87	8	4
	1.87 - 2.35	10	5
	2.35 - 3.51	12	6
8"	3.51 - 4.26	14	7
	0.00 - 0.54	4	2
	0.54 - 1.00	6	3
	1.00 - 1.64	8	4
	1.64 - 2.30	10	5
10"	2.30 - 2.95	12	6
	2.95 - 3.64	14	7
	3.64 - 4.35	16	8
	0.00 - 0.42	4	2
	0.42 - 0.91	6	3
	0.92 - 1.44	8	4
12" & 14"	1.44 - 2.00	10	5
	2.00 - 2.57	12	6
	2.57 - 3.16	14	7
	3.16 - 3.80	16	8
	3.80 - 4.14	18	9
	16"	0.00 - 0.39	4
0.39 - 0.87		6	3
0.87 - 1.34		8	4
1.34 - 1.88		10	5
1.88 - 2.43		12	6
2.43 - 3.00		14	7
3.00 - 3.57		16	8
3.57 - 4.14		18	9
0.00 - 0.41		4	2
0.41 - 0.85	6	3	
0.85 - 1.32	8	4	
1.32 - 1.83	10	5	
1.83 - 2.34	12	6	
2.34 - 2.86	14	7	
2.86 - 3.43	16	8	
3.43 - 4.00	18	9	

Courtesy of Thermacor 9.20.21

TMI® Flange Systems

Guideline for Expansion Loop of High Pressure Pipes

Refer to illustration below.



The charts below are a guideline for carbon steel pipe sizes based on hydraulic oil systems with $\Delta T = (120^\circ\text{F} - 70^\circ\text{F}) = 50^\circ\text{F}$

NPS Pipe Size (Schedule)	L (ft)	H (ft)	W (ft)
2" SCH 160/XXS	100	4	2
2-1/2" SCH 80	100	4	2
2-1/2" SCH 160/XXS	100	4	2
3" SCH 80	100	4	2
3" SCH 160/XXS	100	4	2
4" SCH 80	200	6	3
4" SCH160/XXS	200	6	3
5" SCH160/XXS	200	6	3
6" SCH160/XXS	300	8	4
8" SCH160/XXS	300	8	4

Metric Pipe Size (OD x Wall)	L (m)	H (mm)	W (mm)
60 x 8.0mm	30	1200	610
66 x 8.5mm	30	1200	610
73 x 7.0mm	30	1200	610
80 x 10mm	30	1200	610
90 x 9.0mm	30	1200	610
97 x 12mm	60	1829	914
115 x 15mm	60	1829	914
130 x 15mm	60	1829	914
150 x 15mm	60	1829	914
190 x 20mm	90	2439	1219
250 x 25mm	90	2439	1219

Note: The recommendation for using an expansion loop:

- Carbon steel pipes, every 100 feet (30 meters)
- Stainless steel pipes, every 65 feet (20 meters)

Temperature and Pressure Conversion

Temperature Conversion Table			
Celsius to Fahrenheit		Fahrenheit to Celsius	
°C	°F	°F	°C
150	302	340	171
145	293	330	166
140	284	320	160
135	275	310	154
130	266	300	149
125	257	290	143
120	248	280	138
115	239	270	132
110	230	260	127
105	221	250	121
100	212	240	116
95	203	230	110
90	194	220	104
85	185	210	99
80	176	200	93
75	167	190	88
70	158	180	82
65	149	170	77
60	140	160	71
55	131	150	66
50	122	140	60
45	113	130	54
40	104	120	49
35	95	110	43
30	86	100	38
25	77	90	32
20	68	80	27
15	59	70	21
10	50	60	16
5	41	50	10
0	32	40	4
-5	23	30	-1
-10	14	20	-7
-15	5	10	-12
-20	-4	0	-18
-25	-13	-10	-23
-30	-22	-20	-29
-35	-31	-30	-34
-40	-40	-40	-40
-45	-49	-50	-46
-50	-58	-60	-51

Pressure Conversion Table			
bar to psi		psi to bar	
bar	psi	psi	bar
1000	14505	10000	689
800	11604	9000	620
600	8703	7000	483
500	7253	6000	414
400	5802	4000	276
250	3626	3000	207
160	2321	2500	172
100	1451	1000	69
60	870	900	62
40	580	600	41
35	508	500	34
25	363	400	28
16	232	250	17
10	145	150	10.3
6	87	100	6.9
4	58	90	6.2
2.5	36	60	4.1
1.6	23	40	2.8
1	15	25	1.7
		19	0.7

Temperature Conversion Factor

Degree Celsius (°C x 9/5) + 32 = Fahrenheit °F

Pressure Conversion Factor

bars x 14.5 = PSI

3D step models available upon request

TMI® Flange Systems

Fluid Conditioning and Cleanliness

The cleanliness of the hydraulic piping is a key factor in the overall success of any system. Approximately 75% of operational failures of a hydraulic system is related to contaminants in the system. Impurities introduced into the system by welding is the number one cause of system failures.

The cleanliness of the hydraulic fluid (oil) directly affects the reliability and longevity of the hydraulic system and components. Contaminants in the oil accelerates component wear and fatigue. Performance is comprised and valves can malfunction. Components with small bores can become blocked if the fluid has particles of debris within it. Clearing a blockage can be difficult, time consuming and very expensive. Therefore it is common to specify that the hydraulic fluid used in the system is cleaned to a measurable degree of cleanliness.

Types of Contaminates

There are various types of contaminants, such as;

- Particulates (dirt, sand, rust, dust, fibres, elastomer pieces and paint chips)
- Water
- Sealants (Teflon tape and pastes)
- Wear metals from pumps and valves
- Sludge, oxidation, and other corrosion particulates
- Acids and other chemicals

Sources of Contamination

Contaminants can be introduced into the hydraulic system from various sources such as:

- Fabrication and Assembly of the hydraulic piping system
- New hydraulic fluid (oil)
- Induced during routine maintenance of the system
- Externally ingested from the surrounding environment
- Internally generated from wear and tear of components

Fabrication and Assembly: During the fabrication and assembly of the hydraulic piping contamination may be introduced into the system such as:

- Dust and dirt from storage and handling
- Burrs, chips and weld splatter –
- Fibres from rags
- Sandblasting residue
- Paint chips or overspray
- Pipe sealants and tape from assembly
- Other lubricants such as Never Seez used when torquing up the bolts during assembly

Welded pipe joints or flanges is not recommended by Tube-Mac. Only a non-welded piping solution should be used for hydraulic piping systems along with cold drawn, seamless, carbon steel pipe, phosphate and oiled inside and outside. Stainless Steel pipe is recommended for corrosive environments. Deburr all sharp edges of the cut pipe ends prior to flaring or grooving the pipe. To protect contaminants from entering the pipe, caps or plugs on the end of each pipe or heat shrink bags over the flanged ends of each pipe is recommended. These are to be removed just prior to installation. Tube-Mac's Installation and Hydraulic Oil Flushing Procedures will aid in the elimination of these contaminants.

TMI® Flange Systems

Fluid Conditioning and Cleanliness

New Hydraulic Fluid: new hydraulic fluid (referred herein as “oil”) supplied from a tote or drum may not be necessarily clean. Typically, new oils have a cleanliness level of approximately ISO 23/21/18.

Before the oil is extracted, an oil sample from each supplied tote or drum must be taken for analysis to establish the cleanliness of the supplied oil.

Flushing New Systems: Whenever a new hydraulic piping system is installed, or a repair/modification is performed, the system must be flushed with oil prior to start-up. Tube-Mac recommends the “system oil” be used for flushing a Tube-Mac non-welded piping system and upon completion the “system oil” remains in the piping for the operation of the equipment.

ISO 4406 Cleanliness Code		
ISO Code Number	No. of Particles per ml	
	More Than	Up to and Including
24	80 000	160 000
23	40 000	80 000
22	20 000	40 000
21	10 000	20 000
20	5 000	10 000
19	2 500	5 000
18	1 300	2 500
17	640	1 300
16	320	640
15	160	320
14	80	160
13	40	80
12	20	40
11	10	20
10	5	10
9	2.5	5
8	1.3	2.5
7	0.64	1.3
6	0.32	0.64

The use of Tube-Mac’s **Pressure Testing and Oil Flushing Unit** along with a Tube-Mac fully trained Flushing Technician is highly recommended. Prior to filling the pipes, the hoses are disconnected at the major equipment such as hydraulic motors, cylinders, valve stands and power units. They are then temporarily looped together at each end. Then the oil can be transferred from the tote or drum to fill the reservoir and pipes using the Oil Flushing Unit with filtration. The system is then pressurized to 1.5 times normal operating pressure and checked for any leaks. Once confirmed, the oil is then circulated throughout the system for several hours taking oil samples at various intervals for analysis until the desire cleanliness level is reached.

Upon completion the hoses are reconnected to all major equipment and the system is ready for commissioning.

The cleanliness level is predetermined by the system designer or OEM to maximize component life. Many OEMs have established guidelines on the allowable contamination levels at start-up that range from 20 – 1000 particles/milliliter.

The two most common cleanliness measuring standards in the oil & gas, and process industries are The ISO 4406, and The NAS 1638 cleanliness standards. The ISO Cleanliness Code, ISO 4406:2021 is perhaps the most widely used international standard for representing the particle contamination level of industrial fluid power systems. The contamination code consists of three (3) numbers. The first number represents the

number of particles per milliliter that are 4 micrometres or larger. The second number 6 micrometres or larger and the third number 14 micrometres or larger.

For example, 18/16/13. Using the ISO particle count table above, an oil with a cleanliness rating of 18/16/13 would mean that it contained:

- 1300 - 2500 particles greater than 4 micron in size
- 320 - 640 particles greater than 6 micron in size, and
- 40 - 80 particles greater than 14 microns in size.

3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

TMI® Flange Systems

Fluid Conditioning and Cleanliness

NAS 1638 Cleanliness Code					
Class	Maximum No. of Particles / 100 ml				
	5 - 15	15 - 25	25 - 50	50 - 100	> 100
00	125	22	4	1	0
0	250	44	8	2	0
1	500	89	16	3	1
2	1 000	178	32	6	1
3	2 000	356	63	11	2
4	4 000	712	126	22	4
5	8 000	1 425	253	45	8
6	16 000	2 850	506	90	16
7	32 000	5 700	1 012	180	32
8	64 000	11 400	2 025	360	64
9	128 000	22 800	4 050	720	128
10	256 000	45 600	8 100	1 440	256
11	512 000	91 200	16 200	2 880	512
12	102 400	182 400	32 400	5 760	1 024

The **NAS 1638 Cleanliness Standard** was originally developed for aerospace components in the US but is still widely used for industrial fluid power applications. NAS 1638 is comprised of fluid cleanliness classes, each class defined in terms of maximum allowed particle counts per 100ml for designated particle size ranges.

In **NAS 1638** classification the code number refers to a maximum quantity of particles within a specific size class. Most users use a single code number based on the highest particle count in any of the size ranges.

See the NAS 1638 Cleanliness Code chart for the various cleanliness levels.

Converting Oil Cleanliness Standards - ISO to NAS

In many situations, there is a requirement to be able to compare these cleanliness classification codes. The chart below provides a good comparison between the NAS and ISO cleanliness codes as related to particle count data.

Example: ISO 18/16/13 is equivalent to NAS 7.

Since 2001, however, the official Aerospace Standard used to measure the degree of fluid cleanliness is SAE AS4059. As such, the NAS 1638 standard is now considered obsolete; however, it is still widely used.

SAE AS4059, which supplied the old standard, is considered more accurate.

In fact, the quality of the new standard has made it widely accepted by companies in the sector, especially on the European continent. Additional information on understanding how SAE AS4059 works can be found at www.sae.org/standards/content/as4059/.

Cleanliness Code Comparisons	
ISO Code	NAS Class
23/21/18	12
22/20/18	-
22/20/17	11
22/20/16	-
21/19/16	10
19/17/14	8
18/16/13	7
17/15/12	6
16/14/12	-
16/14/11	5
15/13/10	4
14/12/09	3
13/11/08	2
12/10/08	-
12/10/07	1
12/10/06	-

ISO Certification of Registration



Tube-Mac® Piping Technologies Ltd. operates a Quality Management System compliant to ISO 9001:2015 and certified by SAI GLOBAL an ANAB* Accredited Management Certification Company.

*(ANAB) The ANSI National Accreditation Board

Offshore and Marine Type Approvals

IACS Members



ABS American Bureau of Shipping



LR Lloyd's Register



DNV Det Norske Veritas



CCS China Classification Society



RMRS Russian Maritime Register of Shipping

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

Pipes & Tubes

Tube-Mac maintains a large stock of Carbon Steel NPS pipes and METRIC tubes in strategic locations around the world for use on hydraulic oil, lubrication, and many other piping systems. Tube-Mac also has a vast supply chain for stainless steel type 316, duplex and super duplex.



Material
Carbon steel
EN 10305-4 E235+N (ST37.4)
EN 10305-4 E355+N (ST52.4)
*ASTM A106 Grade B
Stainless steel
ASTM A269 TP316L / DIN 2391
ASTM A312 / A530 Grade TP316L
DUPLEX UNS S32205

Other specifications

Tube-Mac recommends the use of carbon steel, **Cold Drawn, Seamless** pipes, and tubes according to EN 10305-4. This standard specifies the technical delivery conditions for the pipes and tubes used in high pressure hydraulic and pneumatic power systems. Tubes according to EN 10305-4 are characterised by having precisely defined tolerances on dimensions and a specified surface roughness. These cold formed pipes and tubes are normalized without oxygen so there is no mill scale inside or outside surfaces. The pipes and tubes are clean and have an excellent surface for 37° roll flaring. As a comparison, hot rolled tubes will always have some mill scale both inside and out due to the manufacturing process.

All Tube-Mac precision carbon steel pipes and tubes are supplied with MTR's (Material Test Reports). Trace or heat numbers, pipe size by Schedule or OD x Wall and Tube-Mac's name are stencilled along the outside diameter of each pipe and tube. If an MTR certificate is required, the customer must specify at the time of order.

To further ensure quality and traceability Tube-Mac delivers the pipes and tubes with EN-10204.3.2 certificates in accordance with EU standard EN 10204 – DIN 50049.

Welded Pipe and Tubes according to the above specification and have been re-drawn over a mandrel are acceptable however seamless pipes and tubes are recommended. Note the pressure capability may be reduced due to the welding seam and the quality of the weld may affect the roll flaring.

Hot Rolled Pipes and Tubes are not recommended for roll flaring as the tolerances are much broader and the pipe or tube may slip in the flaring dies. Also, there is mill scale inside and outside of the pipe and tube which damage the flaring pin, cause a poor flare, and contaminate the fluid of the system.

*ASTM A106 Grade B are mechanically cleaned & oiled. Recommended for Retain Ring piping connection system only

3D step models available upon request

Designers Guide

Pipe Type, Size, Schedule or OD x Wall Selection

1. Given: The system design pressure (PSI) or (bar).
2. Given: The flow rate through the pipe in US gal/min. or ltr./min.
3. Recommended line velocity in Table 1. FPS (ft/sec.) or Table 2. (m/s)

Recommended Oil Velocities Table 1. (FPS)								
Suction Lines	Return Lines	Pressure Lines						
		150-375 psi	375-750psi	750-1500 psi	1500-2250 psi	2250-3000 psi	3000-5000 psi	5000-6000 psi
≤ 5 FPS	≤10 FPS	≤12 FPS	≤13 FPS	≤14 FPS	≤16 FPS	≤18 FPS	≤20 FPS	≤22 FPS

Recommended Oil Velocities Table 2. (m/s)								
Suction Lines	Return Lines	Pressure Lines						
		10-30 bar	30-50 bar	50-100 bar	100-155 bar	155-210 bar	210-350 bar	350-420 bar
≤ 1.5 m/s	≤ 3.0 m/s	≤ 3.7 m/s	≤ 4.0 m/s	≤ 4.3 m/s	≤ 4.9 m/s	≤ 5.5 m/s	≤ 6.0 m/s	≤ 6.7 m/s

4. Go to Table 3. (NPS)
Under the selected line velocity column (FPS) read down until the approximate flow rate (GPM) is found.
Read across to the left column showing the nominal pipe size and schedule required.
5. Go to Table 4. (Metric)
Under the selected line velocity column (m/s) read down until the approximate flow rate (ltr./min.) is found.
Read across to the left column showing the pipe OD x wall required.
6. Go to Pressure Rating Guide Pages below for NPS Pipe.
Page C5 for Carbon Steel, E235+N (ST 37.4), E355+N (ST 52.4) and A106 Grade B.
Page C6 for Stainless Steel Types 304/316.
Page C7 for Duplex Stainless steel UNS S32205.

For the NPS (nominal pipe size) and schedule selected, read down the Working Pressure column showing the corresponding pressure rating to meet the design criteria. The connection type is also provided based on the pipe size and schedule.

7. Go to Pressure Rating Guide Pages below for METRIC Pipe.
Page C8 for Carbon Steel E235+N (ST 37.4) acc to DNV Rules for Marine and Offshore.
Page C9 for Carbon Steel E235+N (ST 37.4) acc to DIN Rules for Land Based and Industrial Applications.
Page C10 for Carbon Steel E355+N (ST 52.4) acc to DNV Rules for Marine and Offshore.
Page C11 for Carbon Steel E355+N (ST 52.4) acc to DIN Rules for Land Based and Industrial Applications.
Page C12 for Stainless Steel 316/316L acc to DNV Rules for Marine and Offshore.
Page C13 for Stainless Steel 316/316L acc to DIN Rules for Land Based and Industrial Applications.

For the METRIC pipe OD x wall selected, read down the Working Pressure column showing the corresponding pressure rating to meet the design criteria. The connection type is also provided based on the pipe OD and wall.

Example:

System delivering 250 GPM at 3500 PSI with a design velocity of around 20 FPS using carbon steel pipe.

Selection:

TMP52CD pipe, flared, schedule 80, 2-1 /2" size would meet the design requirement of this example.

Pipe Flow/Velocity Guide, NPS

Table 3 (NPS)

Nominal Pipe Size (in)	Wall Schedule	Internal Area (in ²)	Bore Dia. (in)	Flow (GPM)						
				2 FPS	5 FPS	10 FPS	15 FPS	20 FPS	25 FPS	30 FPS
1/2"	SCH40	0.304	0.622	1.9	4.7	9.5	14.2	18.9	23.7	28.4
	SCH80	0.234	0.546	1.5	3.6	7.3	10.9	14.6	18.2	21.9
	SCH160	0.171	0.466	1.1	2.7	5.3	8.0	10.6	13.3	15.9
	SCHXXS	0.050	0.252	0.3	0.8	1.6	2.3	3.1	3.9	4.7
3/4"	SCH40	0.533	0.824	3.3	8.3	16.6	24.9	33.2	41.5	49.8
	SCH80	0.432	0.742	2.7	6.7	13.5	20.2	26.9	33.7	40.4
	SCH160	0.296	0.614	1.8	4.6	9.2	13.8	18.4	23.1	27.7
	SCHXXS	0.148	0.434	0.9	2.3	4.6	6.9	9.2	11.5	13.8
1"	SCH40	0.864	1.049	5.4	13.5	26.9	40.4	53.8	67.3	80.7
	SCH80	0.719	0.957	4.5	11.2	22.4	33.6	44.8	56.0	67.2
	SCH160	0.522	0.815	3.3	8.1	16.3	24.4	32.5	40.6	48.8
	SCHXXS	0.282	0.599	1.8	4.4	8.8	13.2	17.6	21.9	26.3
1-1/4"	SCH40	1.496	1.380	9.3	23.3	46.6	69.9	93.2	116.5	139.8
	SCH80	1.283	1.278	8.0	20.0	40.0	60.0	79.9	99.9	119.9
	SCH160	1.057	1.160	6.6	16.5	32.9	49.4	65.8	82.3	98.8
	SCHXXS	0.593	0.869	3.7	9.2	18.5	27.7	37.0	46.2	55.4
1-1/2"	SCH40	2.036	1.610	12.7	31.7	63.4	95.1	126.9	158.6	190.3
	SCH80	1.767	1.500	11.0	27.5	55.0	82.6	110.1	137.6	165.1
	SCH160	1.406	1.338	8.8	21.9	43.8	65.7	87.6	109.5	131.4
	SCHXXS	0.950	1.100	5.9	14.8	29.6	44.4	59.2	74.0	88.8
2"	SCH40	3.356	2.067	20.9	52.3	104.5	156.8	209.1	261.4	313.6
	SCH80	2.953	1.939	18.4	46.0	92.0	138.0	184.0	230.0	276.0
	SCH160	2.235	1.687	13.9	34.8	69.6	104.4	139.3	174.1	208.9
	SCHXXS	1.774	1.503	11.1	27.6	55.3	82.9	110.5	138.2	165.8
2-1/2"	SCH40	4.788	2.469	29.8	74.6	149.2	223.7	298.3	372.9	447.5
	SCH80	4.238	2.323	26.4	66.0	132.0	198.0	264.0	330.1	396.1
	SCH160	3.547	2.125	22.1	55.2	110.5	165.7	221.0	276.2	331.5
	SCHXXS	2.463	1.771	15.3	38.4	76.7	115.1	153.5	191.8	230.2
3"	SCH40	7.393	3.068	46.1	115.2	230.3	345.5	460.6	575.8	690.9
	SCH80	6.605	2.900	41.2	102.9	205.8	308.6	411.5	514.4	617.3
	SCH160	5.408	2.624	33.7	84.2	168.5	252.7	336.9	421.2	505.4
	SCHXXS	4.155	2.300	25.9	64.7	129.4	194.2	258.9	323.6	388.3
4"	SCH40	12.730	4.026	79.3	198.3	396.6	594.9	793.1	991.4	1,189.7
	SCH80	11.500	3.826	71.7	179.1	358.3	537.4	716.5	895.6	1,074.8
	SCH160	9.283	3.438	57.8	144.6	289.2	433.8	578.4	723.0	867.6
	SCHXXS	7.803	3.152	48.6	121.5	243.1	364.6	486.2	607.7	729.3
5"	SCH40	20.006	5.047	124.6	311.6	623.2	934.9	1,246.5	1,558.1	1,869.7
	SCH160	14.610	4.313	91.0	227.6	455.1	682.7	910.3	1,137.8	1,365.4
	SCHXXS	12.965	4.063	80.8	202.0	403.9	605.9	807.8	1,009.8	1,211.7
6"	SCH40	28.890	6.065	180.0	450.0	900.0	1,350.0	1,800.0	2,250.0	2,700.0
	SCH160	21.147	5.189	131.8	329.4	658.8	988.2	1,317.6	1,647.0	1,976.4
	SCHXXS	18.834	4.897	117.3	293.4	586.7	880.1	1,173.5	1,466.9	1,760.2
8"	SCH40	50.027	7.981	311.7	779.2	1,558.5	2,337.7	3,117.0	3,896.2	4,675.4
	SCH160	36.456	6.813	227.1	567.8	1,135.7	1,703.5	2,271.4	2,839.2	3,407.1
	SCHXXS	37.122	6.875	231.3	578.2	1,156.5	1,734.7	2,312.9	2,891.2	3,469.4
10"	SCH40	78.854	10.020	491.3	1,228.3	2,456.5	3,684.8	4,913.1	6,141.3	7,369.6
	SCH160	56.745	8.500	353.6	883.9	1,767.8	2,651.6	3,535.5	4,419.4	5,303.3

* Flow is shown in US Gallons/min
3D step models available upon request

TMI Pipe Flow/Velocity Guide, Metric

Table 4 (Metric)								
OD x Wall (mm)	Internal Area (mm ²)	Bore Dia. (mm)	Flow (litres/min) based on Line Velocity (m/s)					
			2 m/s	3 m/s	4.5 m/s	6 m/s	8 m/s	10 m/s
20 x 2.0	201.1	16	24.1	36.2	54.3	72.4	95.6	120.6
20 x 2.5	176.7	15	21.2	31.8	47.7	63.6	84.8	106.0
20 x 3.0	153.9	14	18.5	27.7	41.5	55.5	73.9	92.4
25 x 2.5	314.2	20	37.7	56.5	84.8	113.1	150.8	188.5
25 x 3.0	283.5	19	34.0	51.0	76.5	102.1	136.1	170.1
25 x 4.0	227.0	17	27.2	40.8	61.3	81.7	108.9	136.2
30 x 3.0	452.4	24	54.3	81.4	122.1	162.9	217.1	271.4
30 x 4.0	380.1	22	45.6	68.4	102.6	136.8	182.5	228.1
30 x 5.0	314.2	20	37.7	56.5	84.8	113.1	150.8	188.5
38 x 3.0	804.2	32	96.5	144.7	217.1	289.5	386.0	482.5
38 x 4.0	706.9	30	84.8	127.2	190.8	254.5	339.3	424.1
38 x 5.0	615.8	28	73.9	110.8	166.2	221.7	295.5	369.4
42 x 3.0	1017.9	36	122.1	183.2	274.8	366.4	488.6	610.7
42 x 4.0	907.9	34	108.9	163.4	245.1	326.8	435.8	544.7
50 x 3.0	1520.5	44	182.4	273.7	410.5	547.4	729.8	912.3
50 x 5.0	1256.6	40	150.8	226.2	339.3	452.4	603.2	754.0
50 x 6.0	1134.1	38	136.1	204.1	306.2	408.3	544.4	680.5
56 x 8.5	1194.6	39	143.3	215.0	322.5	430.1	573.4	716.7
60 x 3.0	2290.2	54	274.8	412.2	618.4	824.5	1099.3	1374.1
60 x 5.0	1963.5	50	235.6	353.4	530.1	706.9	942.5	1178.1
60 x 6.0	1809.6	48	217.1	325.7	488.6	651.4	868.6	1085.7
60 x 8.0	1520.5	44	182.5	273.7	410.5	547.4	729.8	912.3
66 x 8.5	1885.7	49	226.3	339.4	509.1	680.6	905.1	1131.4
73 x 7.0	2734.0	59	328.1	492.1	738.2	984.2	1312.3	1640.4
75 x 3.0	3739.3	69	448.7	673.1	1009.6	1346.1	1794.8	2243.6
75 x 5.0	3318.3	65	398.2	597.3	895.9	1194.6	1592.8	1991.0
75 x 7.0	2922.5	61	350.7	526.0	789.1	1052.1	1402.8	1753.5
80 x 10	2827.4	60	339.3	508.9	763.4	1017.9	1357.2	1696.5
90 x 3.5	5410.6	83	649.3	973.9	1460.8	1947.8	2597.1	3246.4
90 x 5.0	5026.6	80	603.2	904.8	1357.2	1809.6	2412.7	3015.9
90 x 9.0	4071.5	72	488.6	732.9	1099.3	1465.7	1954.3	2442.9
97 x 12	4185.4	73	502.2	753.4	1130.1	1506.7	2009.0	2511.2
100 x 4.0	6647.6	92	797.7	1196.6	1794.8	2393.1	3190.8	3,988.60
115 x 4.0	8992.0	107	1079.0	1618.6	2427.8	3237.1	4316.2	5395.2
115 x 15	5674.5	85	680.9	1021.4	1532.1	2042.8	2723.7	3404.7
130 x 15	7854.0	100	942.5	1413.7	2120.6	2827.4	3769.9	4712.4
140 x 4.5	13478.2	131	1617.4	2426.1	3639.1	4852.2	6469.5	8086.9
150 x 15	11309.8	120	1357.2	2035.7	3053.6	4071.5	5428.7	6785.8
165 x 5.0	18869.2	155	2264.3	3396.4	5094.7	6792.9	9057.2	11321.5
190 x 20	17671.5	150	2120.6	3180.9	4771.3	6361.7	8482.3	10602.9
220 x 6.0	33979.5	208	4077.5	6116.3	9174.5	12232.6	16310.1	20387.7
220 x 20	25447.0	180	3053.6	4580.4	6870.7	9160.9	12214.5	15268.1
250 x 25	31416.0	200	3769.9	5645.9	8482.3	11309.7	15079.6	18849.6
273 x 6.0	53502.2	261	6420.3	9630.4	14445.6	19260.7	25681.0	32101.3
273 x 28.6	36575.8	215.8	4397.2	6595.8	9893.8	13191.7	17588.9	21986.1

* Flow is shown in litres/min

Pressure Rating Guide, NPS Carbon Steel Pipes, According to ASME B31.3

Nominal Pipe Size (in)	Wall Schedule	Connection Type	Material Type/Grade	Pipe OD x Wall (in)	Pipe OD x Wall (mm)	Working Pressure PSI (bar)	Burst Pressure PSI (bar)	Weight lbs/ft	Weight kg/mtr
1/2"	SCH40	Flare	E235+N (ST37.4 NBK)	0.840 x 0.109	21.34 x 2.77	5410 (373)	16230 (1119)	0.851	1.29
	SCH80	Flare	E235+N (ST37.4 NBK)	0.840 x 0.147	21.34 x 3.73	7570 (522)	22710 (1566)	1.088	1.64
	SCH160	Retain Ring	A106 Grade B	0.840 x 0.187	21.34 x 4.78	9230 (636)	27690 (1909)	1.304	1.95
3/4"	SCH40	Flare	E235+N (ST37.4 NBK)	1.050 x 0.113	26.67 x 2.81	4410 (304)	13230 (912)	1.131	1.71
	SCH80	Flare	E235+N (ST37.4 NBK)	1.050 x 0.154	26.67 x 3.91	6200 (428)	18600 (1283)	1.474	2.22
	SCH160	Retain Ring	A106 Grade B	1.050 x 0.218	26.67 x 5.56	8502 (586)	25506 (1793)	1.937	2.89
1"	SCH40	Flare	E235+N (ST37.4 NBK)	1.315 x 0.133	33.40 x 3.38	4120 (284)	12360 (852)	1.679	2.54
	SCH80	Flare	E235+N (ST37.4 NBK)	1.315 x 0.179	33.40 x 4.55	5700 (393)	17100 (1179)	2.172	3.28
	SCH80	Flare	E355+N (ST52.4 NBK)	1.315 X 0.179	33.40 X 4.55	6500 (448)	19500 (1345)	2.172	3.28
	SCH160	Retain Ring	A106 Grade B	1.315 x 0.250	33.40 x 6.35	7675 (540)	23025 (1588)	2.844	4.23
1-1/4"	SCH40	Flare	E235+N (ST37.4 NBK)	1.660 x 0.140	42.16 x 3.56	3394 (234)	10182 (702)	2.273	3.43
	SCH80	Flare	E355+N (ST52.4 NBK)	1.660 x 0.191	42.16 x 4.85	5400 (372)	16200 (1116)	2.997	4.54
	SCH160	Retain Ring	A106 Grade B	1.660 x 0.250	42.16 x 6.35	5892 (406)	17676 (1219)	3.765	5.60
	SCHXXS	Retain Ring	A106 Grade B	1.660 x 0.382	42.16 x 9.70	9601 (662)	28803 (1986)	5.214	7.75
1-1/2"	SCH40	Flare	E235+N (ST37.4 NBK)	1.900 x 0.145	48.26 x 3.68	3050 (210)	9150 (631)	2.718	4.11
	SCH80	Flare	E355+N (ST52.4 NBK)	1.900 x 0.200	48.26 x 5.08	4900 (338)	14700 (1014)	3.631	5.48
	SCH160	Flare & Retain Ring	E355+N (ST52.4 NBK)	1.900 x 0.281	48.26 x 7.14	6930 (478)	20790 (1434)	4.859	7.23
	SCHXXS	Retain Ring	A106 Grade B	1.900 x 0.400	48.26 x 10.16	8642 (596)	25926 (1788)	6.408	9.54
2"	SCH40	Flare	E235+N (ST37.4 NBK)	2.375 x 0.154	60.30 x 3.91	2570 (177)	7710 (532)	3.653	5.51
	SCH80	Flare	E355+N (ST52.4 NBK)	2.375 x 0.218	60.30 x 5.54	4200 (290)	12600 (870)	5.022	7.58
	SCH160	Flare & Retain Ring	E355+N (ST52.4 NBK)	2.375 x 0.343	60.30 x 8.74	6750 (465)	20250 (1395)	7.444	11.10
	SCHXXS	Retain Ring	A106 Grade B	2.375 x 0.436	60.30 x 11.07	7373 (508)	22119 (1525)	9.029	13.44
2-1/2"	SCH40	Flare	E235+N (ST 37.4 NBK)	2.875 x 0.203	73.00 x 5.16	2810 (194)	8430 (581)	5.793	8.75
	SCH80	Flare	E355+N (ST52.4 NBK)	2.875 x 0.276	73.00 x 7.01	4500 (310)	13500 (930)	7.661	11.57
	SCH160	Flare & Retain Ring	E355+N (ST52.4 NBK)	2.875 x 0.375	73.00 x 9.53	6030 (415)	18090 (1245)	10.01	14.90
	SCHXXS	Retain Ring	A106 Grade B	2.875 x 0.552	73.00 x 14.02	7763 (535)	23289 (1606)	13.69	20.39
3"	SCH40	Flare	E235+N (ST 37.4 NBK)	3.500 x 0.216	88.9 x 5.49	2440 (168)	7320 (505)	7.576	11.45
	SCH80	Flare	E355+N (ST52.4 NBK)	3.500 x 0.300	88.9 x 7.67	3900 (270)	11700 (810)	10.25	15.48
	SCH160	Retain Ring	A106 Grade B	3.500 x 0.438	88.9 x 11.13	4800 (331)	14400 (993)	14.32	21.30
	SCHXXS	Retain Ring	A106 Grade B	3.500 x 0.600	88.9 x 15.24	6818 (470)	20454 (1410)	18.58	27.65
3-1/2"	SCH40	Flare	E235+N (ST 37.4 NBK)	4.0 x 0.226	101.6 x 5.74	2226 (154)	6678 (461)	9.109	13.96
4"	SCH40	Flare	E235+N (ST 37.4 NBK)	4.500 x 0.237	114.3 x 6.07	2069 (143)	6207 (428)	10.79	16.30
	SCH80	Flare	E355+N (ST52.4 NBK)	4.500 x 0.337	114.3 x 8.56	3420 (236)	10260 (708)	14.98	22.62
	SCH160	Retain Ring	A106 Grade B	4.500 x 0.531	114.3 x 13.49	4502 (310)	13500 (931)	22.51	33.51
	SCHXXS	Retain Ring	A106 Grade B	4.500 x 0.674	114.3 x 17.12	5856 (404)	17568 (1211)	27.54	40.99
5"	SCH40	Flare	E235+N (ST 37.4 NBK)	5.563 x 0.258	141.3 x 6.55	1814 (125)	5442 (375)	14.62	22.09
	SCH160	Retain Ring	A106 Grade B	5.563 x 0.625	141.3 x 15.88	4268 (294)	12804 (883)	27.04	49.04
	SCHXXS	Retain Ring	A106 Grade B	5.563 x 0.750	141.3 x 19.05	5210 (359)	15630 (1078)	32.96	57.37
6"	SCH40	Flare	E235+N (ST 37.4 NBK)	6.625 x 0.280	168.3 x 7.11	1648 (114)	4944 (341)	18.97	28.65
	SCH160	Retain Ring	A106 Grade B	6.625 x 0.718	168.3 x 18.26	4105 (283)	12315 (849)	45.30	67.47
	SCHXXS	Retain Ring	A106 Grade B	6.625 x 0.864	168.3 x 21.95	5023 (346)	15069 (1039)	53.16	79.11
8"	SCH40	Flare	E235+N (ST 37.4 NBK)	8.625 x 0.322	219.1 x 8.18	1450 (100)	4350 (300)	28.55	43.12
	SCH160	Retain Ring	A106 Grade B	8.625 x 0.906	219.1 x 23.00	3968 (274)	11904 (821)	74.69	111.18
	SCHXXS	Retain Ring	A106 Grade B	8.625 x 0.875	219.1 x 22.20	3822 (264)	11466 (790)	72.42	107.80
10"	SCH40	Flare	E235+N (ST 37.4 NBK)	10.750 x 0.365	273.0 x 9.27	1316 (91)	3948 (272)	40.48	61.14
	SCHXS	Retain Ring	A106 Grade B	10.750 x 0.500	273.0 x 12.70	2008 (138)	6024 (415)	54.74	82.67
	SCH160	Retain Ring	A106 Grade B	10.750 x 1.125	273.0 x 28.60	3952 (272)	11856 (817)	115.6	172.01

*Other sizes on request

Note:

1. Working Pressure Rating according to ASME B31.3 includes manufacturing tolerance
2. Material Type E355+N (ST52.4 NBK) Allowable Stress - 24,000 PSI per ASME B31.3
3. Material Type E235+N (ST37.4 NBK) Allowable Stress - 21,000 PSI per ASME B31.3
4. Material Type A106 Grade B Allowable Stress - 20,000 PSI per ASME B31.3

3D step models available upon request

Pressure Rating Guide, NPS Stainless Steel Type 304/316 Pipes, According to ASME B31.3

Nominal Pipe Size (in)	Wall Schedule	Connection Type	Pipe OD x Wall (in)	Pipe OD x Wall (mm)	Working Pressure PSI (bar)	Burst Pressure PSI (bar)	Weight lbs/ft	Weight kg/mtr
1/2"	SCH40	Flare	0.840 x 0.109	21.34 x 2.77	4995 (344)	14985 (1033)	0.851	1.29
	SCH80	Flare	0.840 x 0.147	21.34 x 3.73	6980 (481)	20940 (1444)	1.088	1.64
	SCH160	Retain Ring	0.840 x 0.187	21.34 x 4.78	9230 (636)	27690 (1909)	1.304	1.95
	SCHXXS	Retain Ring	0.840 x 0.294	21.34 x 7.47	16302 (1124)	47064 (3245)	1.714	2.55
3/4"	SCH40	Flare	1.050 x 0.113	26.67 x 2.81	4074 (281)	12222 (843)	1.131	1.71
	SCH80	Flare	1.050 x 0.154	26.67 x 3.91	5721 (394)	17163 (1183)	1.474	2.22
	SCH160	Retain Ring	1.050 x 0.218	26.67 x 5.56	8502(586)	25506 (1793)	1.937	2.89
	SCHXXS	Retain Ring	1.050 x 0.308	26.67 x 7.82	12850 (886)	38550 (2658)	2.441	3.64
1"	SCH40	Flare	1.315 x 0.133	33.40 x 3.38	3810 (263)	11430 (788)	1.679	2.54
	SCH80	Flare	1.315 x 0.179	33.40 x 4.55	5266 (363)	15798 (1089)	2.172	3.28
	SCH160	Retain Ring	1.315 x 0.250	33.40 x 6.35	7675 (540)	23025 (1588)	2.844	4.23
	SCHXXS	Retain Ring	1.315 x 0.358	33.40 x 9.09	11675 (805)	35025 (2415)	3.659	5.45
1-1/4"	SCH40	Flare	1.660 x 0.140	42.16 x 3.56	3137 (216)	9411 (649)	2.273	3.43
	SCH80	Flare	1.660 x 0.191	42.16 x 4.85	4380 (302)	13140 (906)	2.997	4.54
	SCH160	Retain Ring	1.660 x 0.250	42.16 x 6.35	5892 (406)	17676 (1219)	3.765	5.60
	SCHXXS	Retain Ring	1.660 x 0.382	42.16 x 9.70	9601 (662)	28803 (1986)	5.214	7.75
1-1/2"	SCH40	Flare	1.900 x 0.145	48.26 x 3.68	2822 (195)	8466 (584)	2.718	4.11
	SCH80	Flare	1.900 x 0.200	48.26 x 5.08	3977 (274)	11931 (823)	3.631	5.48
	SCH160	Flare & Retain Ring	1.900 x 0.281	48.26 x 7.14	5774 (398)	17322 (1194)	4.859	7.23
	SCHXXS	Retain Ring	1.900 x 0.400	48.26 x 10.16	8642 (596)	25926 (1788)	6.408	9.54
2"	SCH40	Flare	2.375 x 0.154	60.30 x 3.91	2377 (164)	7131 (492)	3.653	5.51
	SCH80	Flare	2.375 x 0.218	60.30 x 5.54	3433 (237)	10299 (710)	5.022	7.58
	SCH160	Flare & Retain Ring	2.375 x 0.343	60.30 x 8.74	5623 (388)	16869 (1163)	7.444	11.10
	SCHXXS	Retain Ring	2.375 x 0.436	60.30 x 11.07	7373 (508)	22119 (1525)	9.029	13.44
2-1/2"	SCH40	Flare	2.875 x 0.203	73.00 x 5.16	2600 (180)	7800 (540)	5.793	8.75
	SCH80	Flare	2.875 x 0.276	73.00 x 7.01	3602 (248)	10806 (745)	7.661	11.57
	SCH160	Flare & Retain Ring	2.875 x 0.375	73.00 x 9.53	5024 (346)	15072 (1039)	10.01	14.90
	SCHXXS	Retain Ring	2.875 x 0.552	73.00 x 14.02	7763 (535)	23289 (1606)	13.69	20.39
3"	SCH40	Flare	3.500 x 0.216	88.9 x 5.49	2258 (156)	6774 (467)	7.576	11.45
	SCH80	Flare	3.500 x 0.300	88.9 x 7.67	3191 (220)	9573 (660)	10.25	15.48
	SCH160	Retain Ring	3.500 x 0.438	88.9 x 11.13	4800 (331)	14400 (993)	14.32	21.30
	SCHXXS	Retain Ring	3.500 x 0.600	88.9 x 15.24	6818 (470)	20454 (1410)	18.58	27.65
3-1/2"	SCH40	Flare	4.0 x 0.226	101.6 x 5.74	2059 (142)	6177 (426)	9.109	13.96
4"	SCH40	Flare	4.500 x 0.237	114.3 x 6.07	1914 (132)	5742 (396)	10.79	16.30
	SCH80	Flare	4.500 x 0.337	114.3 x 8.56	2766 (191)	8298 (572)	14.98	22.62
	SCH160	Retain Ring	4.500 x 0.531	114.3 x 13.49	4502 (310)	13500 (931)	22.51	33.51
	SCHXXS	Retain Ring	4.500 x 0.674	114.3 x 17.12	5856 (404)	17568 (1211)	27.54	40.99
5"	SCH40	Flare	5.563 x 0.258	141.3 x 6.55	1678 (116)	5034 (347)	14.62	22.09
	SCH160	Retain Ring	5.563 x 0.625	141.3 x 15.88	4268 (294)	12804 (883)	27.04	49.04
	SCHXXS	Retain Ring	5.563 x 0.750	141.3 x 19.05	5210 (359)	15630 (1078)	32.96	57.37
6"	SCH40	Flare	6.625 x 0.280	168.3 x 7.11	1524 (105)	4572 (315)	18.97	28.65
	SCH160	Retain Ring	6.625 x 0.718	168.3 x 18.26	4105 (283)	12315 (849)	45.30	67.47
	SCHXXS	Retain Ring	6.625 x 0.864	168.3 x 21.95	5023 (346)	15069 (1039)	53.16	79.11
8"	SCH40	Flare	8.625 x 0.322	219.1 x 8.18	1342 (92.5)	4026 (278)	28.55	43.12
	SCH160	Retain Ring	8.625 x 0.906	219.1 x 23.00	3968 (274)	11904 (821)	74.69	111.18
	SCHXXS	Retain Ring	8.625 x 0.875	219.1 x 22.20	3822 (264)	11466 (790)	72.42	107.80
10"	SCH40	Flare	10.750 x 0.365	273.0 x 9.27	1217 (84)	3651 (252)	40.48	61.14
	SCHXS	Retain Ring	10.750 x 0.500	273.0 x 12.70	2008 (138)	6024 (415)	54.74	82.67
	SCH160	Retain Ring	10.750 x 1.125	273.0 x 28.60	3952 (272)	11856 (817)	115.6	172.01

*Other sizes on request **Note:**

- Working Pressure Rating according to ASME B31.3 includes manufacturing tolerance
- Material Grade A312 Type 304 and Type 316 Allowable Stress - 20,000 PSI per ASME B31.3

3D step models available upon request

Pressure Rating Guide, NPS DUPLEX Stainless Steel Pipes, According to ASME B31.3

Nominal Pipe Size (in)	Wall Schedule	Connection Type	Pipe OD x Wall (in)	Pipe OD x Wall (mm)	Working Pressure PSI (bar)	Burst Pressure PSI (bar)	Weight lbs/ft	Weight kg/mtr
1/2"	SCH40	Flare	0.840 x 0.109	21.34 x 2.77	7729 (533)	23187 (1600)	0.851	1.29
	SCH80	Flare	0.840 x 0.147	21.34 x 3.73	10812 (746)	32436 (2237)	1.088	1.64
	SCH160	Retain Ring	0.840 x 0.187	21.34 x 4.78	14316 (987)	42948 (2962)	1.304	1.95
	SCHXXS	Retain Ring	0.840 x 0.294	21.34 x 7.47	25267 (1743)	75801 (5228)	1.714	2.55
3/4"	SCH40	Flare	1.050 x 0.113	26.67 x 2.81	6300 (435)	18900 (1303)	1.131	1.71
	SCH80	Flare	1.050 x 0.154	26.67 x 3.91	8855 (611)	26565 (1832)	1.474	2.22
	SCH160	Retain Ring	1.050 x 0.218	26.67 x 5.56	13182 (909)	39546 (2727)	1.937	2.89
	SCHXXS	Retain Ring	1.050 x 0.308	26.67 x 7.82	20081 (1385)	60243 (4155)	2.441	3.64
1"	SCH40	Flare	1.315 x 0.133	33.40 x 3.38	5891 (406)	17673 (1219)	1.679	2.54
	SCH80	Flare	1.315 x 0.179	33.40 x 4.55	8149 (562)	24447 (1686)	2.172	3.28
	SCH160	Retain Ring	1.315 x 0.250	33.40 x 6.35	11894 (820)	35682 (2461)	2.844	4.23
	SCHXXS	Retain Ring	1.315 x 0.358	33.40 x 9.09	18285 (1261)	54855 (3783)	3.659	5.45
1-1/4"	SCH40	Flare	1.660 x 0.140	42.16 x 3.56	4849 (334)	14547 (1003)	2.273	3.43
	SCH80	Flare	1.660 x 0.191	42.16 x 4.85	6774 (467)	20322 (1402)	2.997	4.54
	SCH160	Retain Ring	1.660 x 0.250	42.16 x 6.35	9122 (629)	27366 (1887)	3.765	5.60
	SCHXXS	Retain Ring	1.660 x 0.382	42.16 x 9.70	14894 (1027)	44682 (3081)	5.214	7.75
1-1/2"	SCH40	Flare	1.900 x 0.145	48.26 x 3.68	4233 (292)	12699 (876)	2.718	4.11
	SCH80	Flare	1.900 x 0.200	48.26 x 5.08	5966 (411)	17898 (1234)	3.631	5.48
	SCH160	Retain Ring	1.900 x 0.281	48.26 x 7.14	8661 (597)	25983 (1792)	4.859	7.23
	SCHXXS	Retain Ring	1.900 x 0.400	48.26 x 10.16	12963 (984)	38889 (2682)	6.408	9.54
2"	SCH40	Flare	2.375 x 0.154	60.30 x 3.91	3566 (245)	10698 (738)	3.653	5.51
	SCH80	Flare	2.375 x 0.218	60.30 x 5.54	5150 (355)	15450 (1065)	5.022	7.58
	SCH160	Retain Ring	2.375 x 0.343	60.30 x 8.74	8435 (582)	25305 (1745)	7.444	11.10
	SCHXXS	Retain Ring	2.375 x 0.436	60.30 x 11.07	11059 (763)	33177 (2288)	9.029	13.44
2-1/2"	SCH40	Flare	2.875 x 0.203	73.00 x 5.16	3900 (269)	11700 (807)	5.793	8.75
	SCH80	Flare	2.875 x 0.276	73.00 x 7.01	5403 (373)	16209 (1118)	7.661	11.57
	SCH160	Retain Ring	2.875 x 0.375	73.00 x 9.53	7536 (520)	22608 (1559)	10.01	14.90
	SCHXXS	Retain Ring	2.875 x 0.552	73.00 x 14.02	11645 (803)	34935 (2409)	13.69	20.39
3"	SCH40	Flare	3.500 x 0.216	88.9 x 5.49	3386 (234)	10158 (700)	7.576	11.45
	SCH80	Flare	3.500 x 0.300	88.9 x 7.67	4787 (330)	14361 (990)	10.25	15.48
	SCH160	Retain Ring	3.500 x 0.438	88.9 x 11.13	7201 (497)	21603 (1490)	14.32	21.30
	SCHXXS	Retain Ring	3.500 x 0.600	88.9 x 15.24	10227 (705)	30681 (2116)	18.58	27.65

*Other sizes on request

Note:

1. Working Pressure Rating according to ASME B31.3 includes manufacturing tolerance
2. Material Type DUPLEX UNS S32205 (EN1.4462) Allowable Stress - 30,000 PSI per ASME B31.3

Pressure Rating Guide, Metric Carbon Steel Tubes Type E235+N (ST 37.4 NBK)

According to DNV Rules for Marine and Offshore Applications

Cr (VI) Free plated or phosphated and oiled inside and outside.

Tube OD x Wall mm	Connection Type	1. DNV Working Pressure bar	2. DNV Working Pressure bar	3. Burst Pressure bar	Weight kg/mtr
20 x 2.0	Flare	185	212	702	0.89
20 x 2.5	Flare	246	282	878	1.08
20 x 3.0	Flare	309	356	1053	1.26
25 x 2.5	Flare	193	221	702	1.39
25 x 3.0	Flare	242	277	842	1.63
25 x 4.0	Flare	344	397	1123	2.07
30 x 3.0	Flare	198	227	702	2.00
30 x 4.0	Flare	281	323	936	2.56
30 x 5.0	Flare	368	425	1170	3.08
38 x 3.0	Flare	154	176	554	2.59
38 x 4.0	Flare	217	248	739	3.35
38 x 5.0	Flare	282	324	924	4.07
42 x 3.0	Flare	139	158	501	2.89
42 x 4.0	Flare	194	223	669	3.75
50 x 3.0	Flare	115	132	421	3.58
60 x 3.0	Flare	95	109	351	4.22
75 x 3.0	Flare	76	86	281	5.32
90 x 3.5	Flare	75	85	273	7.47
100 x 4.0	Flare	78	89	281	9.47
115 x 4.0	Flare	68	77	244	10.98
140 x 4.5	Flare	63	72	226	15.04
165 x 5.0	Flare	60	68	213	19.73
220 x 6.0	Flare	55	62	191	31.66
273 x 6.0	Flare	44	50	154	39.51

*Other sizes on request

Note:

1. Working Pressure for bent pipe including manufacturing and corrosion tolerances.
2. Working Pressure for straight pipe including manufacturing and corrosion tolerances.
3. Burst Pressure including manufacturing tolerances.

Pressure Rating Guide, Metric Carbon Steel Tubes Type E235+N (ST 37.4 NBK)

Pressure Rating according to DIN Rules for Land Based & Industrial Application

Cr (VI) Free plated or phosphated and oiled inside and outside.

Tube OD x Wall mm	Connection Type	1. DIN 2413 I Working Pressure bar	2. DIN 2413 III Working Pressure bar	3. Burst Pressure bar	Weight kg/mtr
20 x 2.0	Flare	282	248	702	0.89
20 x 2.5	Flare	353	303	878	1.08
20 x 3.0	Flare	423	357	1053	1.26
25 x 2.5	Flare	282	248	702	1.39
25 x 3.0	Flare	338	292	842	1.63
25 x 4.0	Flare	451	378	1123	2.07
30 x 3.0	Flare	282	248	702	2.00
30 x 4.0	Flare	376	321	936	2.56
30 x 5.0	Flare	470	391	1170	3.08
38 x 3.0	Flare	223	199	554	2.59
38 x 4.0	Flare	297	260	739	3.35
38 x 5.0	Flare	371	318	924	4.07
42 x 3.0	Flare	201	181	501	2.89
42 x 4.0	Flare	269	237	669	3.75
50 x 3.0	Flare	169	154	421	3.58
60 x 3.0	Flare	141	129	351	4.22
75 x 3.0	Flare	113	104	281	5.32
90 x 3.5	Flare	110	101	273	7.47
100 x 4.0	Flare	113	104	281	9.47
115 x 4.0	Flare	98	91	244	10.98
140 x 4.5	Flare	91	84	226	15.04
165 x 5.0	Flare	85	80	213	19.73
220 x 6.0	Flare	77	72	191	31.66
273 x 6.0	Flare	62	58	154	39.51

*Other sizes on request

Note:

1. Static Working Pressure for straight pipe including manufacturing tolerances.
2. Dynamic Working Pressure for straight pipe including manufacturing tolerances.
3. Burst Pressure including manufacturing tolerances.

3D step models available upon request

Pressure Rating Guide, Metric Carbon Steel Tubes Type E355+N (ST 52.4 NBK)

Pressure Rating according to DNV Rules for Marine and Offshore Applications

Cr (VI) Free plated or phosphated and oiled inside and outside.

Tube OD x Wall mm	Connection Type	1. DNV Working Pressure bar	2. DNV Working Pressure bar	3. Burst Pressure bar	Weight kg/mtr
20 x 2.5	Flare	371	426	1199	1.08
20 x 3.0	Flare	467	537	1439	1.26
25 x 3.0	Flare	365	418	1151	1.63
25 x 4.0	Flare	519	599	1535	2.07
30 x 4.0	Flare	424	487	1279	2.56
30 x 5.0	Flare	555	641	1599	3.08
38 x 3.0	Flare	233	266	757	2.37
38 x 4.0	Flare	327	375	1010	3.35
38 x 5.0	Flare	426	490	1262	4.07
42 x 3.0	Flare	209	239	685	2.89
42 x 4.0	Flare	294	336	914	3.75
50 x 5.0	Flare	315	361	959	5.55
50 x 6.0	Flare	390	448	1151	6.50
56 x 8.5	Flare & Retain Ring	516	595	1456	9.96
60 x 5.0	Flare	259	297	800	6.78
60 x 6.0	Flare	319	366	959	7.97
66 x 8.5	Flare & Retain Ring	429	494	1236	12.05
73 x 7.0	Flare	309	353	920	11.22
75 x 5.0	Flare	205	234	640	8.63
80 x 10	Flare & Retain Ring	418	481	1199	17.21
90 x 5.0	Flare	169	193	533	10.48
90 x 9.0	Flare	326	374	959	17.98
97 x 12	Flare & Retain Ring	416	478	1187	25.15
115 x 15	Retain Ring	444	511	1251	36.95
130 x 15	Retain Ring	388	445	1107	42.54
150 x 15	Retain Ring	332	380	959	49.94
190 x 20	Retain Ring	353	405	1010	83.84
250 x 25	Retain Ring	335	384	959	138.72

*Other sizes on request

Note:

1. Working Pressure for bent pipe including manufacturing and corrosion tolerances.
2. Working Pressure for straight pipe including manufacturing and corrosion tolerances.
3. Burst Pressure including manufacturing tolerances.

Pressure Rating Guide, Metric Carbon Steel Tubes

Type E355+N (ST 52.4 NBK)

Pressure Rating according to DIN Rules for Land Based and Industrial Applications

Cr (VI) Free plated or phosphated and oiled inside and outside.

Tube OD x Wall mm	Connection Type	1. DIN 2413 I Working Pressure bar	2. DIN 2413 III Working Pressure bar	3. Burst Pressure bar	Weight kg/mtr
20 x 2.5	Flare	533	357	1199	1.08
20 x 3.0	Flare	639	420	1439	1.26
25 x 3.0	Flare	511	344	1151	1.63
25 x 4.0	Flare	682	445	1535	2.07
30 x 4.0	Flare	568	379	1279	2.56
30 x 5.0	Flare	710	461	1599	3.08
38 x 3.0	Flare	336	234	757	2.37
38 x 4.0	Flare	448	306	1010	3.35
38 x 5.0	Flare	561	374	1262	4.07
42 x 3.0	Flare	304	213	685	2.89
42 x 4.0	Flare	406	279	914	3.75
50 x 5.0	Flare	426	292	959	5.55
50 x 6.0	Flare	511	344	1151	6.50
56 x 8.5	Flare & Retain Ring	647	425	1456	9.96
60 x 5.0	Flare	355	247	800	6.78
60 x 6.0	Flare	426	292	959	7.97
66 x 8.5	Flare & Retain Ring	549	367	1236	12.05
73 x 7.0	Flare	408	281	920	11.22
75 x 5.0	Flare	284	200	640	8.63
80 x 10	Flare & Retain Ring	533	357	1199	17.21
90 x 5.0	Flare	237	168	533	10.48
90 x 9.0	Flare	426	292	959	17.98
97 x 12	Flare & Retain Ring	527	354	1187	25.15
115 x 15	Retain Ring	556	371	1251	36.95
130 x 15	Retain Ring	492	332	1107	42.54
150 x 15	Retain Ring	426	292	959	49.94
190 x 20	Retain Ring	448	306	1010	83.84
250 x 25	Retain Ring	426	292	959	138.72

*Other sizes on request

Note:

1. Static Working Pressure for straight pipe including manufacturing tolerances.
2. Dynamic Working Pressure for straight pipe including manufacturing tolerances.
3. Burst Pressure including manufacturing tolerances.

3D step models available upon request

Pressure Rating Guide, Metric Stainless Steel Tubes

Type ASTM A269 Type 316/316L

Pressure Rating according to DNV Rules for Marine and Offshore Applications

Tube OD x Wall mm	Connection Type	1. DNV Working Pressure bar	2. Burst Pressure bar	Weight kg/mtr
20 x 2.0	Flare	298	954	0.90
20 x 2.5	Flare	380	1193	1.10
20 x 3.0	Flare	467	1431	1.28
25 x 2.5	Flare	298	954	1.41
25 x 3.0	Flare	363	1145	1.65
25 x 4.0	Flare	476	1524	2.07
30 x 3.0	Flare	298	954	2.03
30 x 4.0	Flare	409	1272	2.60
30 x 5.0	Flare	498	1590	3.08
38 x 3.0	Flare	231	753	2.63
38 x 4.0	Flare	315	1004	3.41
38 x 5.0	Flare	403	1255	4.12
42 x 3.0	Flare	207	681	2.89
42 x 4.0	Flare	277	908	3.75
50 x 3.0	Flare	115	572	3.53
50 x 5.0	Flare	173	954	5.63
50 x 6.0	Flare	363	1145	6.61
56 x 8.5*	Flare & Retain Ring	446	1447	9.97
60 x 3.0	Flare	143	477	4.28
60 x 5.0	Flare	244	795	6.89
60 x 6.0	Flare	297	954	8.00
66 x 8.5*	Flare & Retain Ring	393	1229	12.24
73 x 7.0	Flare	284	915	11.57
75 x 3.0	Flare	113	382	5.41
75 x 5.0	Flare	193	636	8.76
75 x 7.0	Flare	274	889	12.00
80 x 10*	Flare & Retain Ring	380	1193	17.53
90 x 3.5	Flare	110	370	7.48
90 x 5.0	Flare	159	582	10.49
90 x 9.0	Flare	294	954	17.98
97 x 12*	Flare & Retain Ring	376	1180	25.54

Other sizes on request

* Non-stock in stainless steel, special order.

Note:

1. Working Pressure for bent pipe including manufacturing and corrosion tolerances.
2. Burst Pressure including manufacturing tolerances.

Pressure Rating Guide, Metric Stainless Steel Tubes

Type ASTM A269 Type 316/316L

Pressure Rating according to DIN Rules for Land Based and Industrial Applications

Tube OD x Wall mm	Connection Type	1. DIN 2413 I Working Pressure bar	2. Burst Pressure bar	Weight kg/mtr
20 x 2.0	Flare	294	954	0.90
20 x 2.5	Flare	368	1193	1.10
20 x 3.0	Flare	441	1431	1.28
25 x 2.5	Flare	294	954	1.41
25 x 3.0	Flare	353	1145	1.65
25 x 4.0	Flare	470	1524	2.07
30 x 3.0	Flare	294	954	2.03
30 x 4.0	Flare	392	1272	2.60
30 x 5.0	Flare	490	1590	3.08
38 x 3.0	Flare	232	753	2.63
38 x 4.0	Flare	309	1004	3.41
38 x 5.0	Flare	387	1255	4.12
42 x 3.0	Flare	210	681	2.93
42 x 4.0	Flare	280	908	3.75
50 x 3.0	Flare	176	572	3.53
50 x 5.0	Flare	294	954	5.63
50 x 6.0	Flare	353	1145	6.61
56 x 8.5*	Flare & Retain Ring	446	1447	9.97
60 x 3.0	Flare	147	477	4.28
60 x 5.0	Flare	245	795	6.89
60 x 6.0	Flare	294	954	8.00
66 x 8.5*	Flare & Retain Ring	379	1229	12.24
73 x 7.0	Flare	282	915	11.57
75 x 3.0	Flare	118	382	5.41
75 x 5.0	Flare	196	636	8.76
75 x 7.0	Flare	274	889	12.00
80 x 10*	Flare & Retain Ring	368	1193	17.53
90 x 3.5	Flare	114	370	7.48
90 x 5.0	Flare	163	582	10.49
90 x 9.0	Flare	294	954	17.98
97 x 12*	Flare & Retain Ring	364	1180	25.54

Other sizes on request

* Non-stock in stainless steel, special order.

Note:

1. Static Working Pressure for straight pipe including manufacturing tolerances.
2. Burst Pressure including manufacturing tolerances.

3D step models available upon request

Pressure Calculations for Marine & Offshore Applications

According to DNV Rules Part 4, Chapter 6, Section 6.

Working Pressure of Carbon Steel and Stainless Steel tubes acc. to DNV Rules

$$P = \frac{20 \times \delta t \times e \times t_o}{D - t_o}$$

P = permissible working pressure (bar)

t = permissible stress (N/mm²) calculated from the lower value of:

Carbon Steel:

Stainless Steel:

$$\delta t = \frac{R_m}{2.7} \text{ or } \frac{K}{1.8}$$

$$\delta t = \frac{R_m}{2.7} \text{ or } \frac{K}{1.6}$$

t_o = tube wall thickness without allowances (mm)

$$t_o = t_n \times a - c - b$$

where;

t_n = tube wall thickness (mm)

a = factor for wall thickness allowance (mm)

= 0.9 for tubes with an OD ≥ 10 mm

= 0.9 for all stainless steel tubes

b = bending allowance

$$B = 0.1333 \times t_o \text{ (at } R/D=3) \longrightarrow t_o = \frac{t_n \times a - c}{1.13333}$$

c = corrosion tolerance, c = 0.3mm for hydraulic steel tube and c = 0 mm for stainless steel

e = strength ratio. Note for seamless tubes e = 1

D = tube outside diameter (mm)

R_m = minimum tensile strength (N/mm²)

K = minimum yield strength or minimum 0.2% proof stress (N/mm²)

Material Type	Specification	Yield (minimum)	Tensile (minimum)	Permissible Stress
E235+N (St 37.4)	DIN EN 10305-4	235 N/mm ²	340 N/mm ²	126 N/mm ² (tensile strength/2.7)
E355+N (St 52.4)	DIN EN 10305-4	355 N/mm ²	490 N/mm ²	181 N/mm ² (tensile strength/2.7)
Dual Spec 316/316L Metric Tube	DIN EN 10216-5 ASTM 269/A213	210 N/mm ²	500 N/mm ²	131 N/mm ² (0.2% proof stress/1.6) ¹
Dual Spec 316/316L Schedule Pipe	ASTM A312	234 N/mm ²	515 N/mm ²	146 N/mm ² (0.2% proof stress/1.6) ¹

1. Pressure rating calculation based on manufacturers certification according to 3.1 EN 10204 that confirms the mechanical properties.

Pressure Calculations for Land Based & Industrial Applications

According to DIN Rules. Corrosion allowances are not considered in the calculations.

DIN 2413 I, for static load

$$P = \frac{20 \times K \times s \times c}{S \times D}$$

where;

P = permissible working pressure (bar)

K = minimum yield strength (N/mm²)

s = tube wall thickness (mm)

c = factor for wall thickness allowance (mm)

= 0.9 for tubes with an OD ≥ 10 mm

= 0.9 for all stainless steel tubes

S = Safety Factor of 1.5

D = tube outside diameter (mm)

DIN 2413 III, for dynamic load

$$P = \frac{20 \times K \times s \times c}{S \times (D + s \times c)}$$

where;

P = permissible working pressure (bar)

K = fatigue strength (N/mm²)

s = tube wall thickness (mm)

c = factor for wall thickness allowance (mm)

= 0.9 for tubes with an OD ≥ 10 mm

= 0.9 for all stainless steel tubes

S = Safety Factor of 1.5

D = tube outside diameter (mm)

Burst Pressure Calculations

$$BP = \frac{20 \times R_m \times s \times c}{D}$$

where;

BP = Burst Pressure

R_m = minimum tensile strength

s = tube wall thickness

c = factor for wall thickness allowance (mm)

= 0.9 for tubes with an OD ≥ 10 mm

= 0.9 for all stainless steel tubes

D = tube outside diameter (mm)

Material Type	Specification	Yield (minimum)	Tensile (minimum)	Fatigue Strength	Elongation
E235+N (St 37.4)	DIN EN 10305-4	235 N/mm ²	340 N/mm ²	225 N/mm ²	Min. 25%
E355+N (St 52.4)	DIN EN 10305-4	355 N/mm ²	490 N/mm ²	265 N/mm ²	Min. 22%
Dual Spec 316/316L Metric Tube	DIN EN 10216-5 ASTM 269/A213	210 N/mm ²	500 N/mm ²	220 N/mm ²	Min. 35%
Dual Spec 316/316L Schedule Pipe	ASTM A312	234 N/mm ²	515 N/mm ²	146 N/mm ²	Min 40%

Note:

All tube and pipes are cold drawn, seamless, materials.

Pressure Calculations for NPS Pipe

According to ASME B31.3 Rules includes manufacturing tolerance.

Corrosion allowances are not considered in the calculations.

$$P = \frac{2S \times t \times E}{D - (2Y \times t)}$$

where;

P = permissible working pressure (PSI)

S = allowable stress (PSI)

E = quality factor

Y = co-efficient factor

t = nominal wall thickness less manufacturing tolerance (inches)

D = tube outside diameter (inches)

Carbon Steel		
	E235+N (St 37.4)	E355+N (St 52.4)
S = allow stress (PSI)	20000	24000
E = Quality Factor	1.00	1.00
Y = co-efficient factor	0.40	0.40
T = wall thickness (inches) less % manufacturing tolerance	-12.5%	-10%
D = pipe OD (inches)	See Page C5	

Stainless Steel			
ASTM A312 304L & 316L	ASTM A312 304 & 316	Duplex UNS S32205 1/2" up to 1-1/4"	Duplex UNS S32205 1-1/2" and larger
16700	20000	30000	30000
1.00	1.00	1.00	1.00
0.40	0.40	0.40	0.40
-12.5%	-12.5%	-10%	-12.5%
See Page C6 and C7			

Ordering Examples for NPS Carbon Steel Pipe

TMP52 CD-SCH80-150 x 240

37 [E235+N (St 37.4)]
52 [E355+N (St 52.4)]

Cold Drawn

Schedule (wall)

SCH40
SCH80
SCH160

Nominal Pipe Size

1/2"	050
3/4"	075
1"	100
1-1/4"	125
1-1/2"	150
2"	200
2-1/2"	250
3"	300
3-1/2"	350
4"	400
5"	500
6"	600
8"	800
10"	1000

Length in inches

TMP106 HR-SCH160-600 x 240

106 (A106 Grade B)

Hot Rolled

Schedule (wall)

SCH160
SCHXXS

Nominal Pipe Size

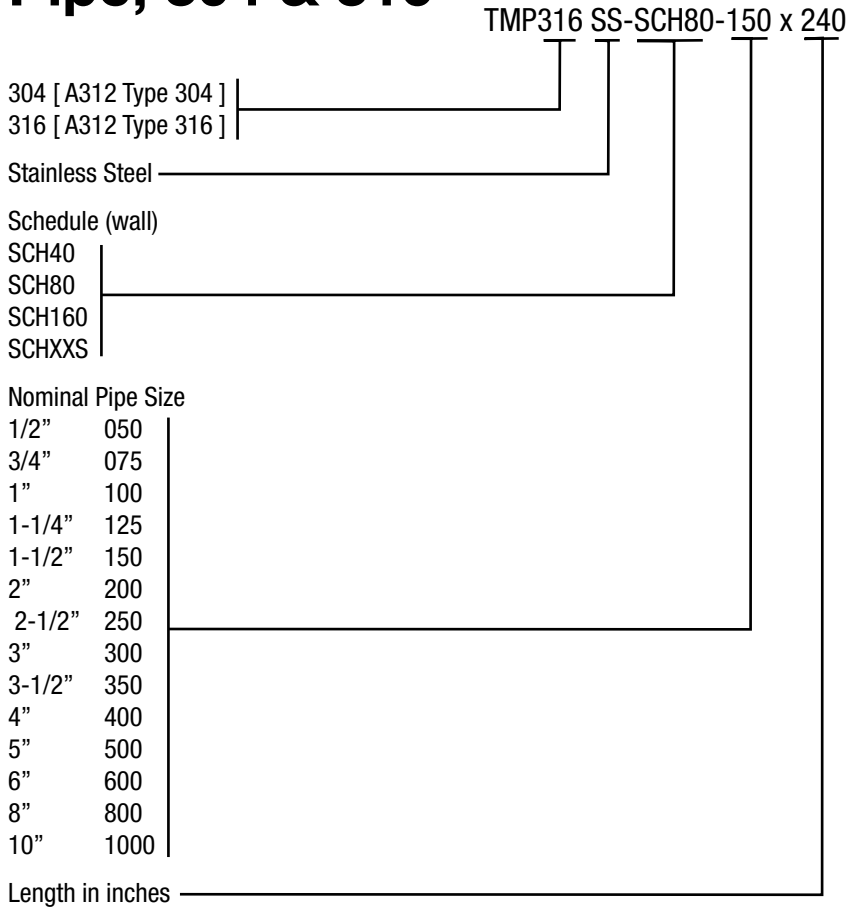
1/2"	050
3/4"	075
1"	100
1-1/4"	125
1-1/2"	150
2"	200
2-1/2"	250
3"	300
4"	400
5"	500
6"	600
8"	800
10"	1000

Length in inches

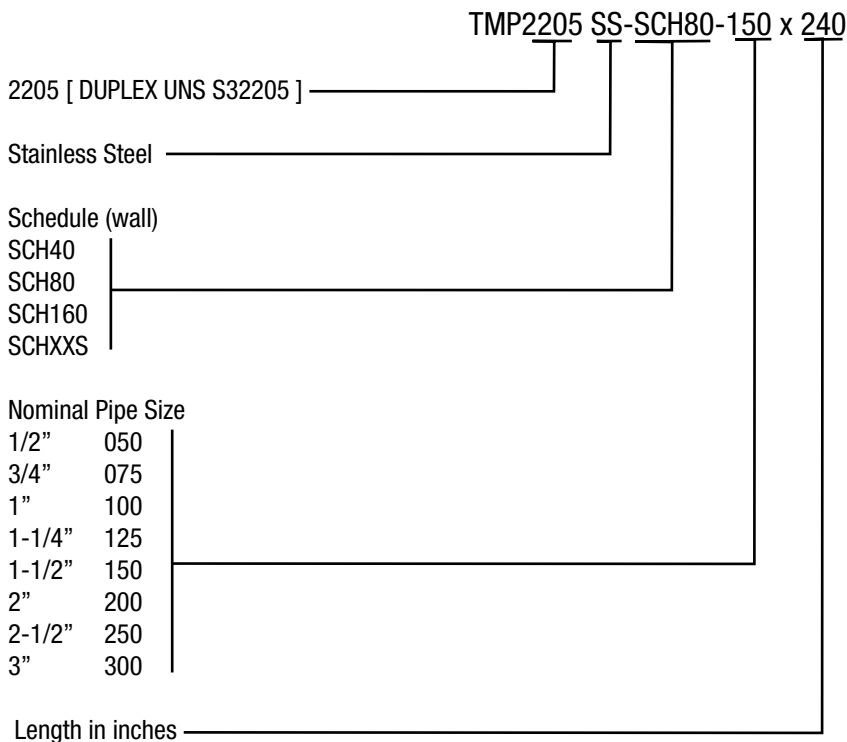
*ASTM A106 Grade B are mechanically cleaned & oiled. Recommended for Retain Ring piping connection system only

3D step models available upon request

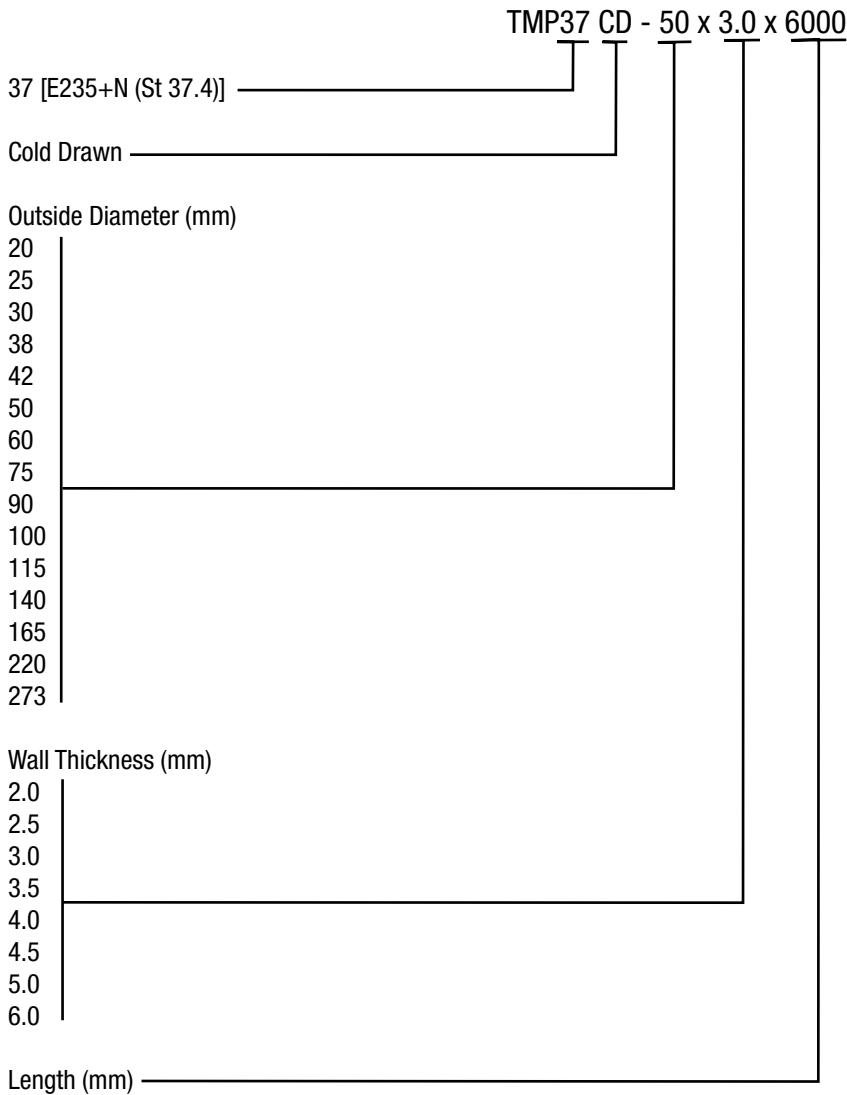
Ordering Examples for NPS Stainless Steel Pipe, 304 & 316



Ordering Examples for NPS Stainless Steel Pipe, DUPLEX



Ordering Examples for Carbon Steel Metric Tubes, St 37.4



Note:

For the correct OD x Wall selection please refer to the Pressure Rating Guide on Pages C8 and C9.

3D step models available upon request

Ordering Examples for NPS Stainless Steel Pipe, 304 & 316

TMP52 CD - 50 x 5.0 x 6000

52 [E355+N (St 52.4)]

Cold Drawn

Outside Diameter (mm)

- 20
- 25
- 30
- 38
- 42
- 50
- 56
- 60
- 66
- 73
- 75
- 80
- 90
- 97
- 115
- 130
- 150
- 190
- 250

Wall Thickness (mm)

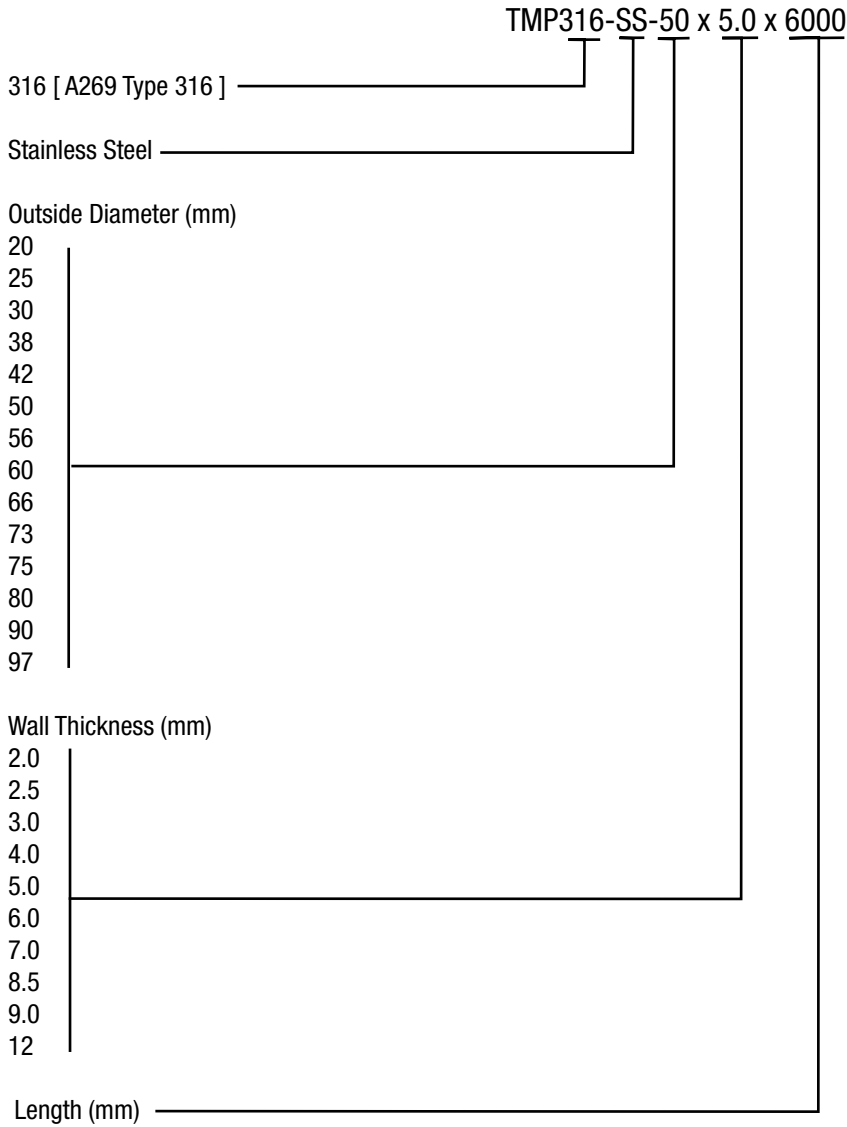
- 2.5
- 3.0
- 4.0
- 5.0
- 6.0
- 7.0
- 8.5
- 6.0
- 9.0
- 10
- 12
- 15
- 20
- 25

Length (mm)

Note:

For the correct OD x Wall selection please refer to the Pressure Rating Guide on Pages C10 and C11.

Ordering Examples for Stainless Steel Metric Tubes Dual Spec 316/316L



Note:

For the correct OD x Wall selection please refer to the Pressure Rating Guide on Page C12.

3D step models available upon request

Notes

Introduction

Technical
Data

Pipe
Selection
Guide

16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

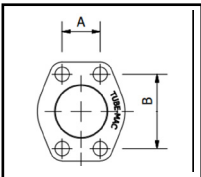
ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

Clamp
Supports -
Heavy Series

Valves, Ball
and Check

16 bar, 90° Flare Reference Guide



**90° Flare Flange
Dimensions**

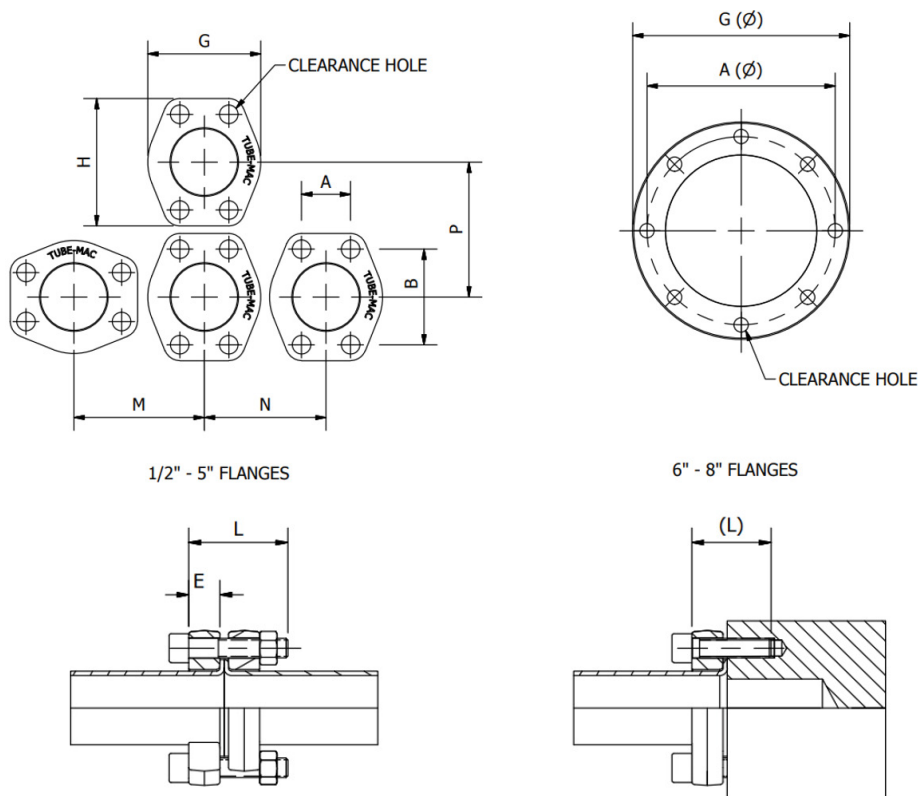
Page D1



**90° Flare Flange
Clearance Holes
Metric only**
FFCN14, FFCN34, FFCN18
Page D2

16 bar 90° Flare Flange Dimensions

1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Metric Flange Dimensions (Millimeters) Only available in Metric Sizes										
Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (bar)
	A	B	G	H	M	N	P	E		
1/2"	17.5	38.1	46.0	56.9	52.1	49.0	58.9	20	M8 x 55 (40)	230 (16)
3/4"	22.4	47.8	52.3	65.0	61.0	55.1	68.1	20	M10 x 60 (40)	230 (16)
1"	26.2	52.3	58.7	70.1	67.1	62.0	72.9	20	M10 x 65 (40)	230 (16)
1-1/4"	30.2	58.7	73.2	79.0	79.0	75.9	82.0	20	M10 x 65 (40)	230 (16)
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	20	M12 x 70 (45)	230 (16)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	20	M12 x 75 (50)	230 (16)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	20	M12 x 80 (55)	230 (16)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	25	M16 x 80 (60)	230 (16)
4"	77.7	130.3	152.4	162.1	160.0	154.9	165.1	30	M16 x 90 (70)	230 (16)
5"	92.1	152.4	180.0	184.0	185.0	183.0	186.0	40	M16 x 110 (70)	230 (16)
6"	208.0	-	236.0	-	249.0	249.0	249.0	40	M16 x 110 (70)	230 (16)
8"	275.0	-	317.0	-	330.0	330.0	330.0	40	M20 x 120 (75)	230 (16)

*** SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8
 316 Stainless Steel: A4-70, DIN 912/ISO 4762

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

16 bar 90° Flare Flange with Clearance Holes, Metric Tube Only

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



1-1/2" – 5" Flanges

6 - 8 Flanges

FFCN14, FFCN34, FFC18 Flare Flange with Clearance Holes, Metric

Size	Tube O.D. x wall mm	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)	Ød Max (mm)	Gasket Part Number
1/2"	25 x 2.0	FFCN34-050-25MM-*	230 (16)	0.44 (0.20)	33.0	08NG
3/4"	30 x 2.0	FFCN34-075-30MM-*	230 (16)	0.44 (0.20)	41.5	12NG
1"	38 x 2.5	FFCN34-100-38MM-*	230 (16)	0.44 (0.20)	47.3	16NG
1-1/4"	42 x 3.0	FFCN34-125-42MM-*	230 (16)	0.88 (0.40)	54.0	20NG
1 1/2"	50 x 3.0	FFCN14-150-50MM-*	230 (16)	1.10 (0.50)	65.3	24NG
2"	60 x 3.0	FFCN14-200-60MM-*	230 (16)	1.54 (0.70)	76.0	32NG
2-1/2"	73 x 3.0	FFCN14-250-73MM-*	230 (16)	1.76 (0.80)	90.0	40NG
3"	90 x 3.0	FFCN14-300-90MM-*	230 (16)	3.08 (1.40)	106.0	48NG
4"	115 x 4.0	FFCN14-400-115MM-*	230 (16)	4.40 (2.00)	135.0	64NG
5"	140 x 3.5	FFCN14-500-140MM-*	230 (16)	7.04 (3.20)	161.5	80NG
6"	165 x 3.5	FFCN18-600-165MM-*	230 (16)	13.64 (6.20)	191.5	96NG
8"	220 x 4.0	FFCN18-800-220MM-*	230 (16)	24.20 (11.00)	254.0	128NG

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFCN14-150-50MM-SS

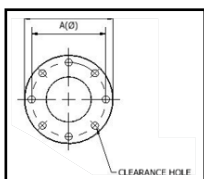
* Insert Material _____

Gasket Material:

KLINGERSIL C-4430 or equivalent, outstanding stress retention, resistance to hot water and steam as well as to oils, gases, salt solutions, fuels, alcohols, hydrocarbons, lubricants and refrigerants.

- Optimum combination of synthetic fibers bonded with NBR. Thickness 3.0mm
- DNV-GL Type Approved
- Fire-Safe according to ISO 19921
- Meets ASTM F104

ANSI 150# and 300# Flare Flange Reference Guide



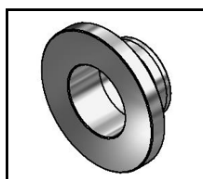
**ANSI Flare Flange
Dimensions**

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**ANSI Flare Flange
Clearance Holes**

NPS only
FFC150, FFC300
Page E2

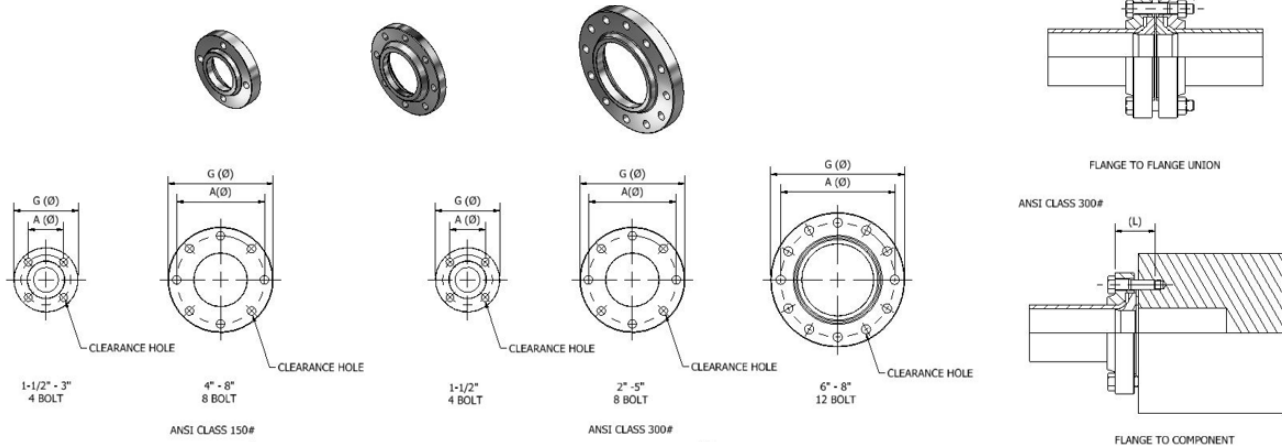


ANSI Flare Cones

NPS only
CFPH-SCH40
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ANSI Flare Flange Dimensions

Flange pattern according to ANSI / ASME B16.5



ANSI Class 150# Flare Flange Dimensions (Inches)

Size	Dimensions (in)				HEX Bolt (in)* L (L)	Number of Bolts	Working Pressure** PSI (bar)
	Bolt Circle A Ø	Outside Diameter G Ø	Flange Thickness E	Hole Diameter			
1 1/2"	3.88	5.00	1.00	0.63	1/2"-13 UNC x 3.00 (2.00)	4	285 (20)
2"	4.75	6.00	0.69	0.75	5/8"-11 UNC x 2.50 (2.00)	4	285 (20)
2 1/2"	5.50	7.00	0.88	0.75	5/8"-11 UNC x 3.00 (2.25)	4	285 (20)
3"	6.00	7.50	1.19	0.75	5/8"-11 UNC x 3.50 (2.50)	4	285 (20)
4"	7.50	9.00	0.94	0.75	5/8"-11 UNC x 3.00 (2.25)	8	285 (20)
5"	8.50	10.00	0.88	0.88	3/4"-10 UNC x 3.00 (2.25)	8	285 (20)
6"	9.50	11.00	0.94	0.88	3/4"-10 UNC x 3.25 (2.50)	8	285 (20)
8"	11.75	13.50	1.10	0.88	3/4"-10 UNC x 3.50 (2.50)	8	285 (20)

*Hex Bolt Specification

Carbon Steel: SAE J429 Grade 8

316 Stainless Steel: ASTM – B8M Class. 1

Note: for 3/4" SS Bolts and larger ASTM – B8M Class. 2

**The flange working pressure is the maximum pressure for flanges of classes 150 and 300 at <100° F (38° C)

ANSI Class 300# Flare Flange Dimensions (Inches)

Size	Dimensions (in)				HEX Bolt (in)* L (L)	Number of Bolts	Working Pressure** PSI (bar)
	Bolt Circle A Ø	Outside Diameter G Ø	Flange Thickness E	Hole Diameter			
1 1/2"	4.50	6.13	1.13	0.88	3/4"-10 UNC x 3.50 (2.50)	4	740 (50)
2"	5.00	6.50	0.88	0.75	5/8"-11 UNC x 3.00 (2.25)	8	740 (50)
2 1/2"	5.88	7.50	1.00	0.88	3/4"-10 UNC x 3.25 (2.50)	8	740 (50)
3"	6.63	8.25	1.19	0.88	3/4"-10 UNC x 3.75 (2.75)	8	740 (50)
4"	7.88	10.00	1.25	0.88	3/4"-10 UNC x 3.75 (2.75)	8	740 (50)
5"	9.25	11.00	1.33	0.88	3/4"-10 UNC x 4.00 (3.00)	8	740 (50)
6"	10.63	12.50	1.38	0.88	3/4"-10 UNC x 4.00 (3.00)	12	740 (50)
8"	13.00	15.00	1.56	1.00	3/4"-10 UNC x 4.50 (3.00)	12	740 (50)

*Hex Bolt Specification

Carbon Steel: SAE J429 Grade 8

316 Stainless Steel: ASTM – B8M Class. 1

Note: for 3/4" SS Bolts and larger ASTM – B8M Class. 2

**The flange working pressure is the maximum pressure for flanges of classes 150 and 300 at <100° F (38° C)

3D step models available upon request

ANSI Flare Flange with Clearance Holes

Flange pattern according to ANSI / ASME B16.5



ANSI Class 150# Flare Flange with Clearance Holes, NPS

Size	Pipe O.D. in. (mm)	Standard Part No.	Working Pressure** PSI (bar)	WT lbs. (kg)
1 1/2"	1.900" (48.26)	FFC-150-ANSI-150	285 (20)	3.91 (1.77)
2"	2.375" (60.33)	FFC-150-ANSI-200	285 (20)	4.17 (1.89)
2 1/2"	2.875" (70.03)	FFC-150-ANSI-250	285 (20)	7.39 (3.35)
3"	3.500" (88.90)	FFC-150-ANSI-300	285 (20)	10.27 (4.66)
4"	4.500" (114.3)	FFC-150-ANSI-400	285 (20)	11.65 (5.28)
5"	5.563" (141.30)	FFC-150-ANSI-500	285 (20)	12.15 (5.51)
6"	6.625" (168.28)	FFC-150-ANSI-600	285 (20)	14.71 (6.67)
8"	8.625" (219.08)	FFC-150-ANSI-800	285 (20)	20.60 (9.34)

*** Materials:**

- Standard, No Designation = Carbon Steel, Zinc Nickel Plated
- HDG = Carbon Steel, Hot Dip Galvanized.
- SS = Stainless Steel, Type 316.

Ordering Example: FFC-150-ANSI-250-SS

* Insert Material _____

**The flange working pressure is the maximum pressure for flanges of class 150# at <100° F (38° C)

ANSI Class 300# Flare Flange with Clearance Holes, NPS

Size	Pipe O.D. in. (mm)	Standard Part No.	Working Pressure** PSI (bar)	WT lbs. (kg)
1 1/2"	1.900" (48.26)	FFC-300-ANSI-150	740 (50)	7.30 (3.31)
2"	2.375" (60.33)	FFC-300-ANSI-200	740 (50)	5.99 (2.72)
2 1/2"	2.875" (70.03)	FFC-300-ANSI-250	740 (50)	9.35 (4.24)
3"	3.500" (88.90)	FFC-300-ANSI-300	740 (50)	12.69 (5.76)
4"	4.500" (114.3)	FFC-300-ANSI-400	740 (50)	20.64 (9.36)
5"	5.563" (141.30)	FFC-300-ANSI-500	740 (50)	25.42 (11.53)
6"	6.625" (168.28)	FFC-300-ANSI-600	740 (50)	30.35 (13.77)
8"	8.625" (219.08)	FFC-300-ANSI-800	740 (50)	45.02 (20.42)

*** Materials:**

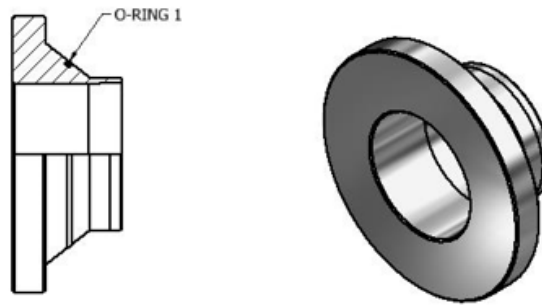
- Standard, No Designation = Carbon Steel, Zinc Nickel Plated
- HDG = Carbon Steel, Hot Dip Galvanized.
- SS = Stainless Steel, Type 316.

Ordering Example: FFC-300-ANSI-250-SS

* Insert Material _____

**The flange working pressure is the maximum pressure for flanges of class 300# at <100° F (38° C) for flanges of classes 150 and 300 at <100° F (38° C)

ANSI Class 150# and 300# Cone Inserts for Flare Flange Connections, NPS



TYPE CFPH

CFPH – ANSI Class 150# and 300# Cone Insert with Phonographic Face, NPS

Size	Pipe Size)	Standard Part No.	O-ring 1 Part Number	WT lbs. (kg)
1 1/2"	1-1/2" SCH40	CFPH-SCH40-150-*	OR^-4315	0.66 (0.30)
2"	2" SCH40	CFPH-SCH40-200-*	OR^-5615	0.94 (0.43)
2 1/2"	2-1/2" SCH40	CFPH-SCH40-250-*	OR^-2-036	1.52 (0.69)
3"	3" SCH40	CFPH-SCH40-300-*	OR^-2-040	2.36 (1.07)
4"	4" SCH40	CFPH-SCH40-400-*	OR^-2-044	3.37 (1.53)
5"	5" SCH40	CFPH-SCH40-500-*	OR^-2-159	4.18 (1.90)
6"	6" SCH40	CFPH-SCH40-600-*	OR^-2-163	6.80 (3.08)
8"	8" SCH40	CFPH-SCH40-800-*	OR^-2-172	10.11 (4.59)



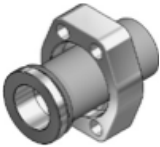

*** Materials:**

- Standard, No Designation = Carbon Steel, Zinc Nickel Plated
- HDG = Carbon Steel, Hot Dip Galvanized.
- SS = Stainless Steel, Type 316.

Ordering Example: CFPH-SCH40-250-SS

* Insert Material _____

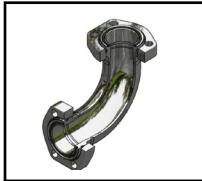
SAE 1000 PSI, 70 bar Reference Guide

					
<p>Flare Flange Dimensions</p> <p>Page F1</p>	<p>Flare Flange Clearance Holes NPS FFC14, FFC34, FFC16, FFC18 Page F2</p>	<p>Flare Flange Clearance Holes Metric FFCM14, FFCM34, FFCM16, FFCM18 Page F2</p>	<p>Flare Flange Threaded Holes NPS, Metric FFT14, FFTM14 Page F3</p>	<p>Flare Flange Set O-Ring Face Cone Clearance Holes NPS FFC14-CO Page F4</p>	<p>Flare Flange Set O-Ring Face Cone Clearance Holes Metric FFCM14-CO Page F5</p>
					
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<p>Low Pressure BSPF Female Thread Adapter A/LFBTA Page F24</p>	<p>Low Pressure Flare Flange Pipe Assembly NPS, Metric LPAR Page F25, F26</p>	<p>Low Pressure Flare Flange Bent Pipe Assembly NPS LBPA F Page F27, F28</p>	<p>Low Pressure Flare Flange Bent Pipe Assembly Metric LBPA F Page F29, F30</p>	<p>Low Pressure Retain Ring Pipe Assembly NPS, Metric LPAR Page F31, F32</p>	<p>Low Pressure Retain Ring Bent Pipe Assembly NPS LPAR Page F33, F34</p>

SAE 1000 PSI, 70 bar Reference Guide



Low Pressure Retain Ring Bent Pipe Assembly Metric BPAF
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Low Pressure Retain Ring Flange Bend Elbow A/LRE
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Block Elbow NPS, Metric BE34, BEM34
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Low Pressure Retain Ring Flange Tee A/LRT
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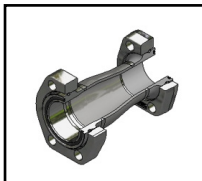
Block Tee NPS, Metric BT34, BTM34
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Reducing Branch Block Tee NPS, Metric BTR34, BTRM34
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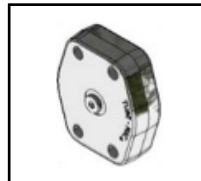
Transition Plate Reducer Manifold Mount NPS, Metric TPRO34, TPROM34
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Low Pressure Retain Ring Flange Reducer A/LLR
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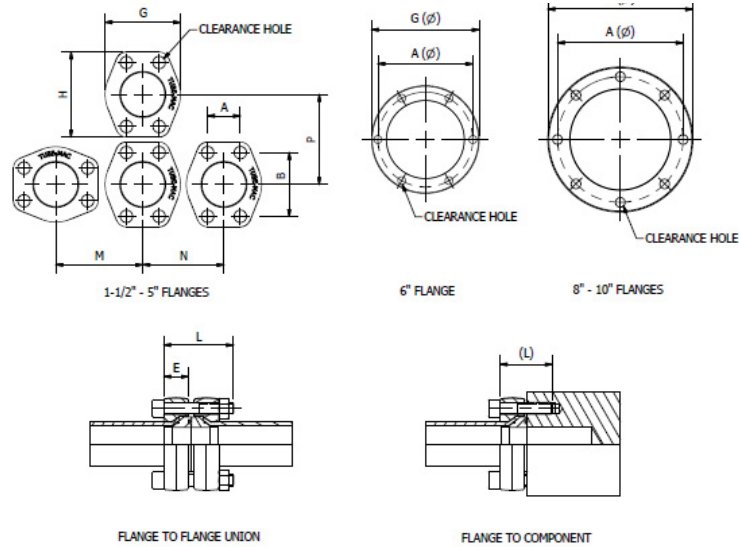
Blanking Flange O-Ring Face with Clearance Holes, NPS, Metric BFO, BFOM
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Blanking Flange Flat Face with Threaded Holes, NPS, Metric BFFO, BFFM
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SAE 1000 PSI Flare Flange Dimensions

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Flare Flange Dimensions, NPS

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	0.79	1/2"-13 UNC x 3.00 (2.00)	1000 (70)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	0.98	1/2"-13 UNC x 3.50 (2.00)	1000 (70)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	1.18	1/2"-13 UNC x 4.00 (2.50)	1000 (70)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.18	5/8"-11 UNC x 4.50 (2.75)	1000 (70)
3-1/2"	2.75	4.75	5.50	6.00	5.85	5.60	6.15	1.18	5/8"-11 UNC x 5.00 (2.50)	1000 (70)
4"	3.06	5.13	6.00	6.38	6.30	6.10	6.50	1.44	5/8"-11 UNC x 4.00 (2.75)	1000 (70)
5"	3.63	6.00	7.12	7.24	7.28	7.20	7.32	1.58	5/8"-11 UNC x 4.75 (2.75)	1000 (70)
6"	8.19	-	9.29	-	9.79	9.79	9.79	1.58	5/8"-11 UNC x 4.75 (2.75)	725 (50)
8"	10.83	-	12.48	-	13.00	13.00	13.00	1.58	3/4"-10 UNC x 4.75 (2.75)	725 (50)
10"	13.58	-	16.14	-	16.60	16.60	16.60	2.00	3/4"-10 UNC x 5.50 (3.00)	725 (50)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 - B8M Class.1

For 3/4" SS Bolts and larger ASTM A-193-B8M Class.2

Flare Flange Dimensions, Metric

Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	20	M12 x 75 (50)	1000 (70)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	25	M12 x 90 (50)	1000 (70)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	30	M12 x 100 (65)	1000 (70)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	30	M16 x 120 (70)	1000 (70)
3-1/2"	69.9	120.7	139.7	152.4	148.6	142.2	156.2	30	M16 x 130 (65)	1000 (70)
4"	77.7	130.3	152.4	162.1	160.0	154.9	165.1	39	M16 x 100 (70)	1000 (70)
5"	92.1	152.4	180.0	184.0	185.0	183.0	186.0	39	M16 x 120 (70)	1000 (70)
6"	208.0	-	236.0	-	249.0	249.0	249.0	39	M16 x 120 (70)	725 (50)
8"	275.0	-	317.0	-	330.0	330.0	330.0	39	M20 x 120 (70)	725 (50)
10"	345.0	-	410.0	-	422.0	422.0	422.0	50	M20 x 140 (80)	725 (50)

* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8

316 Stainless Steel: A4-70, DIN 912/ISO 4762

M16 and M20 SS Bolts, A4-80 DIN 912/ISO 4762

3D step models available upon request

SAE 1000 PSI Flare Flange with Clearance Holes

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



1-1/2" - 5" FLANGES



6" FLANGE



8" - 10" FLANGES

FFC14, FFC34, FFC16, FFC18 - Flare Flange with Clearance Holes, NPS				
Size	Pipe O.D. in. (mm)	Standard Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	1.900" (48.26)	FFC14-150-*	1000 (70)	1.10 (0.50)
2"	2.375" (60.33)	FFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	2.875" (70.03)	FFC14-250-*	1000 (70)	2.17 (0.99)
3"	3.500" (88.90)	FFC14-300-*	1000 (70)	3.80 (1.73)
3-1/2"	4.000" (101.6)	FFC14-350-*	1000 (70)	4.38 (1.99)
4"	4.500" (114.30)	FFC34-400-*	1000 (70)	8.61 (3.91)
5"	5.563" (141.30)	FFC34-500-*	1000 (70)	9.80 (4.45)
6"	6.625" (168.28)	FFC16-600-*	725 (50)	10.50 (4.77)
8"	8.625" (219.08)	FFC18-800-*	725 (50)	23.20 (10.55)
10"	10.750" (273.05)	FFC18-1000-*	725 (50)	51.30 (23.32)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFC14-150-SS

* Insert Material

FFCM14, FFCM34, FFCM16, FFCM18 - Flare Flange with Clearance Holes, Metric				
Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	50	FFCM14-150-50MM-*	1000 (70)	1.10 (0.50)
2"	60	FFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	75	FFCM14-250-75MM-*	1000 (70)	2.17 (0.99)
3"	90	FFCM14-300-90MM-*	1000 (70)	3.80 (1.73)
3-1-2"	100	FFCM14-350-100MM-*	1000 (70)	4.38 (1.99)
4"	115	FFC34-400-*	1000 (70)	8.61 (3.91)
5"	140	FFCM34-500-140MM-*	1000 (70)	9.80 (4.45)
6"	165	FFCM16-600-165MM-*	725 (50)	10.50 (4.77)
8"	220	FFCM18-800-220MM-*	725 (50)	23.20 (10.55)
10"	273	FFC18-1000-*	725 (50)	51.30 (23.32)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

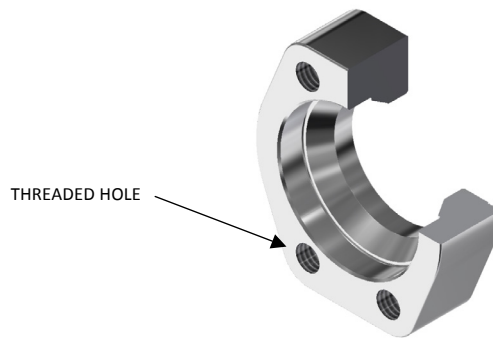
Ordering Example: FFCM14-150-50MM-SS

* Insert Material

3D step models available upon request

SAE 1000 PSI Flare Flange with Threaded Holes

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



FFT14 - Flare Flange with Threaded Holes, NPS

Size	Pipe O.D. in (mm)	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)
1-1/2"	1.900" (48.26)	FFT14-150-*	1000 (70)	1.10 (0.50)
2"	2.375" (60.33)	FFT14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	2.875" (70.03)	FFT14-250-*	1000 (70)	2.17 (0.99)
3"	3.500" (88.90)	FFT14-300-*	1000 (70)	3.80 (1.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFT14-200-SS

* Insert Material

FFTM14 - Flare Flange with Threaded Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)
1-1/2"	50	FFTM14-150-50MM-*	1000 (70)	1.10 (0.50)
2"	60	FFTM14-200-60MM*	1000 (70)	1.90 (0.86)
2-1/2"	75	FFTM14-250-75MM*	1000 (70)	2.17 (0.99)
3"	90	FFTM14-300-90MM*	1000 (70)	3.80 (1.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

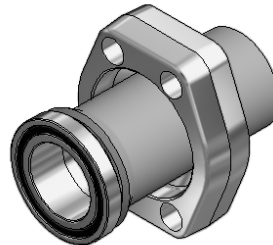
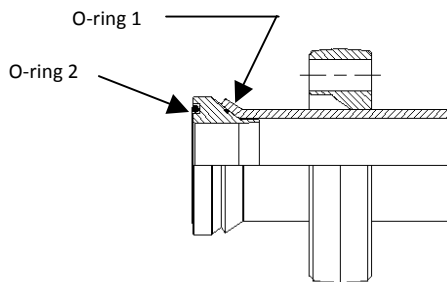
SS = Stainless Steel, Type 316.

Ordering Example: FFTM14-200-60MMSS

* Insert Material

SAE 1000 PSI Flare Flange Set O-Ring Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFC14-CO, FFC34-CO, FFC16-CO, FFC18-CO - Flare Flange Set O-Ring Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH40	FFC14-CO-SCH40-150-*^-^	1.93 (0.88)	FFC14-150-*	CO-SCH40-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH80	FFC14-CO-SCH80-150-*^-^	1.93 (0.88)	FFC14-150-*	CO-SCH80-150-*^-^	ORV-4315	OR^-2-225
2"	2" SCH40	FFC14-CO-SCH40-200-*^-^	2.67 (1.21)	FFC14-200-*	CO-SCH40-200-*^-^	ORV-5615	OR^-2-228
2"	2" SCH80	FFC14-CO-SCH80-200-*^-^	2.67 (1.21)	FFC14-200-*	CO-SCH80-200-*^-^	ORV-5515	OR^-2-228
2-1/2"	2-1/2" SCH40	FFC14-CO-SCH40-250-*^-^	4.01 (1.82)	FFC14-250-*	CO-SCH40-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH80	FFC14-CO-SCH80-250-*^-^	4.01 (1.82)	FFC14-250-*	CO-SCH80-250-*^-^	ORV-2-036	OR^-2-232
3"	3" SCH40	FFC14-CO-SCH40-300-*^-^	6.33 (2.87)	FFC14-300-*	CO-SCH40-300-*^-^	ORV-2-041	OR^-2-237
3"	3" SCH80	FFC14-CO-SCH80-300-*^-^	6.33 (2.87)	FFC14-300-*	CO-SCH80-300-*^-^	ORV-2-041	OR^-2-237
3-1/2"	3-1/2" SCH40	FFC14-CO-SCH40-350-*^-^	6.60 (3.00)	FFC14-350-*	CO-SCH40-350-*^-^	ORV-2-043	OR^-2-241
4"	4" SCH40	FFC34-CO-SCH40-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-SCH40-400-*^-^	ORV-2-044	OR^-2-245
4"	4" SCH80	FFC34-CO-SCH80-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-SCH80-400-*^-^	ORV-2-044	OR^-2-245
5"	5" SCH40	FFC34-CO-SCH40-500-*^-^	12.20 (5.55)	FFC34-500-*	CO-SCH40-500-*^-^	ORV-2-159	OR^-2-253
6"	6" SCH40	FFC16-CO-SCH40-600-*^-^	14.20 (6.45)	FFC16-600-*	CO-SCH40-600-*^-^	ORV-2-163	OR^-2-259
8"	8" SCH40	FFC18-CO-SCH40-800-*^-^	30.30 (13.77)	FFC18-800-*	CO-SCH40-800-*^-^	ORV-2-171	OR^-3-372
10"	10" SCH40	FFC18-CO-SCH40-1000-*^-^	61.00 (27.73)	FFC18-1000-*	CO-SCH40-1000-*^-^	ORV-2-273	OR^-2-377

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: FFC14-CO-SCH40-200-SS-V*

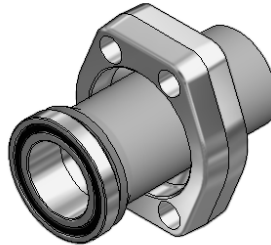
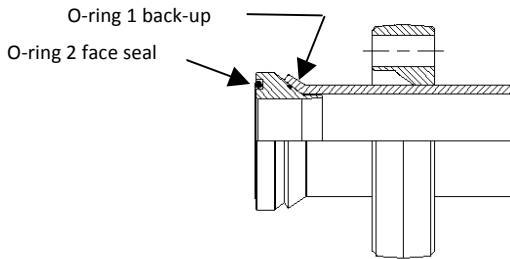
*Insert Material _____

^ Insert O-Ring 2 Type _____

3D step models available upon request

SAE 1000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFCM14-CO, FFCM34-CO, FFCM16-CO, FFCM18-CO - Flare Flange Set O-Ring Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50x3.0	FFCM14-CO-50x3.0-150-*^-^	1.91 (0.87)	FFCM34-150-50MM-*	CO-50x3.0-150-*^-^	ORV-4715	OR^-2-225
2"	60x3.0	FFC14-CO-60x3.0-200-*^-^	2.63 (1.20)	FFC14-200-*	CO-60x3.0-200-*^-^	ORV-5715	OR^-2-228
2-1/2"	75x3.0	FFCM14-CO-75x3.0-250-*^-^	4.07 (1.85)	FFCM14-250-75MM-*	CO-75x3.0-250-*^-^	ORV-2-037	OR^-2-232
3"	90x3.5	FFCM14-CO-90x3.5-300-*^-^	5.92 (2.69)	FFCM14-300-90MM-*	CO-90x3.5-300-*^-^	ORV-2-041	OR^-2-237
3-1/2"	100x4.0	FFCM14-CO-100x4.0-250-*^-^	6.60 (3.00)	FFCM14-350-100MM-*	CO-100x4.0-350-*^-^	ORV-2-043	OR^-2-241
4"	115x4.0	FFC34-CO-115x4.0-400-*^-^	6.90 (3.13)	FFC34-400-*	CO-115x4.0-400-*^-^	ORV-2-044	OR^-2-245
5"	140x4.5	FFCM34-CO-140x4.5-500-*^-^	12.20 (5.55)	FFCM34-500-140MM-*	CO-140x4.5-500-*^-^	ORV-2-159	OR^-2-253
6"	165x5.0	FFCM16-CO-165x5.0-600-*^-^	14.20 (6.45)	FFCM16-600-165MM-*^-^	CO-165x5.0-600-*^-^	ORV-2-163	OR^-2-259
8"	220x6.0	FFCM18-CO-220x6.0-800-*^-^	30.30 (13.77)	FFCM18-800-220MM-*^-^	CO-220x6.0-800-*^-^	ORV-2-171	OR^-3-372
10"	273x6.0	FFC18-CO-273x6.0-1000-*^-^	61.00 (27.73)	FFC18-1000-*^-^	CO-273x6.0-1000-*^-^	ORV-2-273	OR^-2-377

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

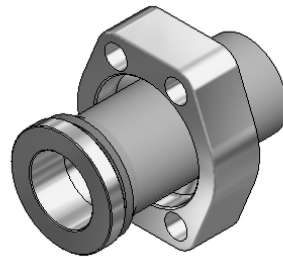
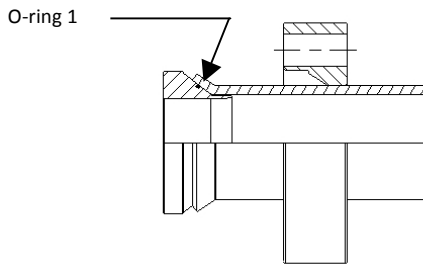
Ordering Example: FFCM14-CO-50x3.0-150-SS-V

*Insert Material _____

^ Insert O-Ring 2 Type _____

SAE 1000 PSI Flare Flange Set Flat Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFC14-CF, FFC34-CF, FFC16-CF, FFC18-CF - Flare Flange Set Flat Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	1-1/2" SCH40	FFC14-CF-SCH40-150-*	1.93 (0.88)	FFC14-150-*	CF-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC14-CF-SCH80-150-*	1.93 (0.88)	FFC14-150-*	CF-SCH80-150-*	ORV-4315
2"	2" SCH40	FFC14-CF-SCH40-200-*	2.67 (1.21)	FFC14-200-*	CF-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC14-CF-SCH80-200-*	2.67 (1.21)	FFC14-200-*	CF-SCH80-200-*	ORV-5515
2-1/2"	2-1/2" SCH40	FFC14-CF-SCH40-250-*	4.01 (1.82)	FFC14-250-*	CF-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC14-CF-SCH80-250-*	4.01 (1.82)	FFC14-250-*	CF-SCH80-250-*	ORV-2-036
3"	3" SCH40	FFC14-CF-SCH40-300-*	6.33 (2.87)	FFC14-300-*	CF-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC14-CF-SCH80-300-*	6.33 (2.87)	FFC14-300-*	CF-SCH80-300-*	ORV-2-041
3-1/2"	3-1/2" SCH 40	FFC14-CF-SCH40-350-*	6.64 (3.02)	FFC14-350-*	CF-SCH40-350-*	ORV-2-043
4"	4" SCH40	FFC34-CF-SCH40-400-*	6.90 (3.13)	FFC34-400-*	CF-SCH40-400-*	ORV-2-044
4"	4" SCH80	FFC34-CF-SCH80-400-*	6.90 (3.13)	FFC34-400-*	CF-SCH80-400-*	ORV-2-044
5"	5" SCH40	FFC34-CF-SCH40-500-*	12.20 (5.55)	FFC34-500-*	CF-SCH40-500-*	ORV-2-159
6"	6" SCH40	FFC16-CF-SCH40-600-*	14.20 (6.45)	FFC16-600-*	CF-SCH40-600-*	ORV-2-163
8"	8" SCH40	FFC18-CF-SCH40-800-*	30.30 (13.77)	FFC18-800-*	CF-SCH40-800-*	ORV-2-171
10"	10" SCH40	FFC18-CF-SCH40-1000-*	61.00 (27.73)	FFC18-1000-*	CF-SCH40-1000-*	ORV-2-273

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

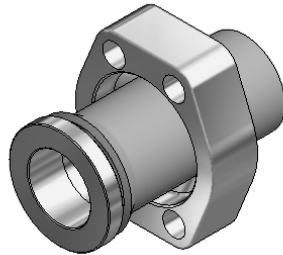
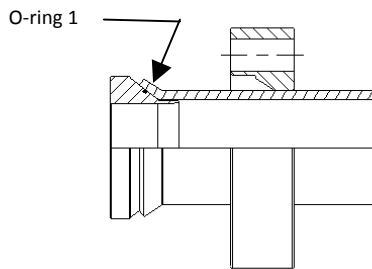
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC14-CF-SCH40-200-SS

* Insert Material _____

SAE 1000 PSI Flare Flange Set Flat Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFCM14-CF, FFCM34-CF, FFCM16-CF, FFCM18-CF - Flare Flange Set Flat Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50x3.0	FFCM14-CF-50x3.0-150-*	1.93 (0.88)	FFCM14-150-50MM-*	CF-50x3.0-150-*	ORV-4715
2"	60x3.0	FFC14-CF-60x3.0-200-*	2.67 (1.21)	FFC14-200-*	CF-60x3.0-200-*	ORV-5715
2-1/2"	75x3.0	FFCM14-CF-75x3.0-250-*	4.01 (1.82)	FFCM14-250-75MM-*	CF-75x3.0-250-*	ORV-2-037
3"	90x3.5	FFCM14-CF-90x3.5-300-*	6.33 (2.87)	FFCM14-300-90MM-*	CF-90x3.5-300-*	ORV-2-041
3-1/2"	100x4.0	FFCM14-CF-100x4.0-350-*	6.64 (3.02)	FFCM14-350-100MM-*	CF-100x4.0-400-*	ORV-2-043
4"	115x4.0	FFC34-CF-115x4.0-400-*	6.93 (3.15)	FFC34-400-*	CF-115x4.0-400-*	ORV-2-044
5"	140x4.5	FFCM34-CF-140x4.5-500-*	12.25 (5.57)	FFCM34-500-140MM-*	CF-140x4.5-500-*	ORV-2-159
6"	165x5.0	FFCM16-CF-165x5.0-600-*	14.25 (6.47)	FFCM16-600-165MM-*	CF-165x5.0-600-*	ORV-2-163
8"	220x6.0	FFCM18-CF-220x6.0-800-*	30.38 (13.81)	FFCM18-800-220MM-*	CF-220x6.0-800-*	ORV-2-171
10"	273x6.0	FFC18-CF-273x6.0-1000-*	61.14 (27.80)	FFC18-1000-*	CF-273x6.0-1000-*	ORV-2-273

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

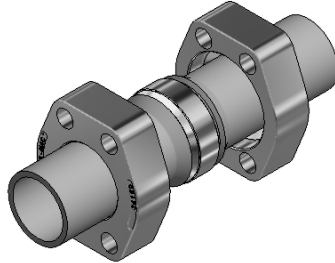
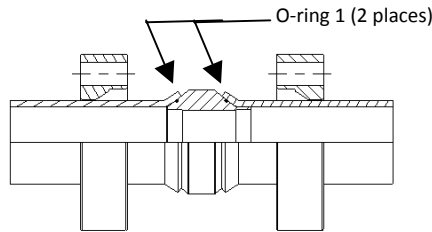
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM14-CF-50x3-150-SS

* Insert Material _____

SAE 1000 PSI Flare Flange Double Cone Union Set with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFC14-CD, FFC34-CD, FFC16-CD, FFC18-CD - Flare Flange Double Cone Union Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	1-1/2" SCH40	FFC14-CD-SCH40-150-*	2.00 (0.91)	FFC14-150-*	CD-SCH40-150-*	ORV-4315
1-1/2"	1- 1/2" SCH80	FFC14-CD-SCH80-150-*	2.00 (0.91)	FFC14-150-*	CD-SCH80-150-*	ORV-4315
2"	2" SCH40	FFC14-CD-SCH40-200-*	2.90 (1.32)	FFC14-200-*	CD-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC14-CD-SCH80-200-*	2.90 (1.32)	FFC14-200-*	CD-SCH80-200-*	ORV-5515
2-1/2"	2-1/2" SCH40	FFC14-CD-SCH40-250-*	4.62 (2.10)	FFC14-250-*	CD-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC14-CD-SCH80-250-*	4.62 (2.10)	FFC14-250-*	CD-SCH80-250-*	ORV-2-036
3"	3" SCH40	FFC14-CD-SCH40-300-*	6.90 (3.13)	FFC14-300-*	CD-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC14-CD-SCH80-300-*	6.90 (3.13)	FFC14-300-*	CD-SCH80-300-*	ORV-2-041
3-1/2"	3-½" SCH40	FFC14-CD-SCH40-350-*	6.94 (3.15)	FFC14-350-*	CD-SCH40-350-*	ORV-2-043
4"	4" SCH40	FFC34-CD-SCH40-400-*	7.86 (3.57)	FFC34-400-*	CD-SCH40-400-*	ORV-2-044
4"	4" SCH80	FFC34-CD-SCH80-400-*	7.86 (3.57)	FFC34-400-*	CD-SCH80-400-*	ORV-2-044
5"	5" SCH40	FFC34-CD-SCH40-500-*	13.40 (6.09)	FFC34-500-*	CD-SCH40-500-*	ORV-2-159
6"	6" SCH40	FFC16-CD-SCH40-600-*	15.90 (7.23)	FFC14-600-*	CD-SCH40-600-*	ORV-2-259
8"	8" SCH40	FFC18-CD-SCH40-800-*	33.80 (15.36)	FFC14-800-*	CD-SCH40-800-*	ORV-2-372
10"	10" SCH40	FFC18-CD-SCH40-1000-*	66.10 (30.04)	FFC14-1000-*	CD-SCH40-1000-*	ORV-2-178

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

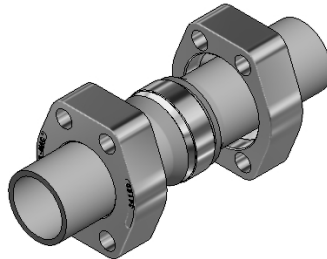
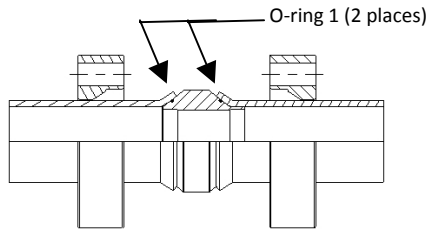
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC14-CD-SCH40-200-SS*

*Insert Material _____

SAE 1000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F1)

FFCM14-CD, FFCM34-CD, FFCM16-CD, FFCM18-CD - Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50x3.0	FFCM14-CD-50x3.0-150-*	2.00 (0.91)	FFCM14-150-*	CD-50x3.0-150-*	ORV-4715
2"	60x3.0	FFC14-CD-60x3.0-200-*	2.90 (1.32)	FFC14-200-*	CD-60x3.0-200-*	ORV-5715
2-1/2"	75x3.0	FFCM14-CD-75x3.0-250-*	4.62 (2.10)	FFCM14-250-*	CD-75x3.0-250-*	ORV-2-037
3"	90x3.5	FFCM14-CD-90x3.5-300-*	6.90 (3.13)	FFCM14-300-*	CD-90x3.5-300-*	ORV-2-041
3-1/2"	100x4.0	FFCM14-CD-100x4.0-350-*	6.94 (3.15)	FFCM14-350-*	CD-100x4.0-350-*	ORV-2-043
4"	115x4.0	FFC34-CD-115x4.0-400-*	7.86 (3.57)	FFC34-400-*	CD-115x4.0-400-*	ORV-2-044
5"	140x4.5	FFCM34-CD-140x4.5-500-*	13.40 (6.09)	FFCM34-500-*	CD-140x4.5-500-*	ORV-2-159
6"	165x5.0	FFCM16-CD-165x5.0-600-*	15.90 (7.23)	FFCM16-600-*	CD-165x5.0-600-*	ORV-2-163
8"	220x6.0	FFCM18-CD-220x6.0-800-*	33.80 (15.36)	FFCM18-800-*	CD-220x6.0-800-*	ORV-2-171
10"	273x6.0	FFC18-CD-273x6.0-1000-*	66.10 (30.04)	FFC18-1000-*	CD-273x6.0-1000-*	ORV-2-273

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

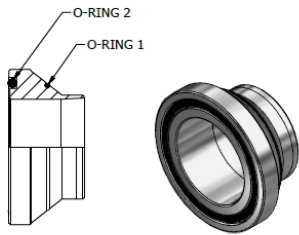
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM14-CD-50x3.0-150-SS

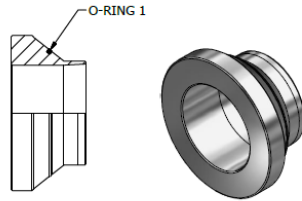
*Insert Material _____

SAE 1000 PSI Cone Inserts for Flare Flange Connections, NPS

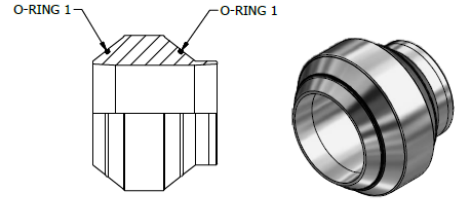
SAE J518 Code 61 (ISO 6162-1)



TYPE CO



TYPE CF



TYPE CD

CO, CF and CD – Cone Inserts for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH40	CO-SCH40-150-*^	0.41 (0.19)	CF-SCH40-150-*	0.45 (0.20)	CD-SCH40-150-*	0.72 (0.33)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH80	CO-SCH80-150-*^	0.41 (0.19)	CF-SCH80-150-*	0.45 (0.20)	CD-SCH80-150-*	0.72 (0.33)	ORV-4315	OR^2-225
2"	2" SCH40	CO-SCH40-200-*^	0.47 (0.21)	CF-SCH40-200-*	0.52 (0.24)	CD-SCH40-200-*	0.84 (0.38)	ORV-5615	OR^2-228
2"	2" SCH80	CO-SCH80-200-*^	0.47 (0.21)	CF-SCH80-200-*	0.52 (0.24)	CD-SCH80-200-*	0.84 (0.38)	ORV-5515	OR^2-228
2-1/2"	2-1/2" SCH40	CO-SCH40-250-*^	0.99 (0.45)	CF-SCH40-250-*	1.01 (0.46)	CD-SCH40-250-*	1.60 (0.73)	ORV-2-036	OR^2-232
2-1/2"	2-1/2" SCH80	CO-SCH80-250-*^	0.99 (0.45)	CF-SCH80-250-*	1.01 (0.46)	CD-SCH80-250-*	1.60 (0.73)	ORV-2-036	OR^2-232
3"	3" SCH40	CO-SCH40-300-*^	1.33 (0.60)	CF-SCH40-300-*	1.39 (0.63)	CD-SCH40-300-*	2.17 (0.99)	ORV-2-041	OR^2-237
3"	3" SCH80	CO-SCH80-300-*^	1.33 (0.60)	CF-SCH80-300-*	1.39 (0.63)	CD-SCH80-300-*	2.17 (0.99)	ORV-2-041	OR^2-237
3-1/2"	3-1/2" SCH40	CO-SCH40-350-*^	1.50 (0.68)	CF-SCH40-350-*	1.60 (0.73)	CD-SCH40-350-*	2.50 (1.14)	ORV-2-043	OR^2-241
4"	4" SCH40	CO-SCH40-400-*^	1.80 (0.82)	CF-SCH40-400-*	1.90 (0.86)	CD-SCH40-400-*	3.00 (1.36)	ORV-2-044	OR^2-245
4"	4" SCH80	CO-SCH80-400-*^	1.80 (0.82)	CF-SCH80-400-*	1.90 (0.86)	CD-SCH80-400-*	3.00 (1.36)	ORV-2-044	OR^2-245
5"	5" SCH40	CO-SCH40-500-*^	2.40 (1.09)	CF-SCH40-500-*	2.50 (1.14)	CD-SCH40-500-*	3.90 (1.77)	ORV-2-159	OR^2-253
6"	6" SCH40	CO-SCH40-600-*^	4.70 (2.14)	CF-SCH40-600-*	4.80 (2.18)	CD-SCH40-600-*	7.40 (3.36)	ORV-2-163	OR^2-259
8"	8" SCH40	CO-SCH40-800-*^	7.10 (3.23)	CF-SCH40-800-*	7.30 (3.32)	CD-SCH40-800-*	11.68 (5.31)	ORV-2-171	OR^2-372
10"	10" SCH40	CO-SCH40-1000-*^	16.80 (7.64)	CF-SCH40-1000-*	17.00 (7.73)	CD-SCH40-1000-*	27.20 (12.36)	ORV-2-178	OR^2-377

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: CO-SCH40-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

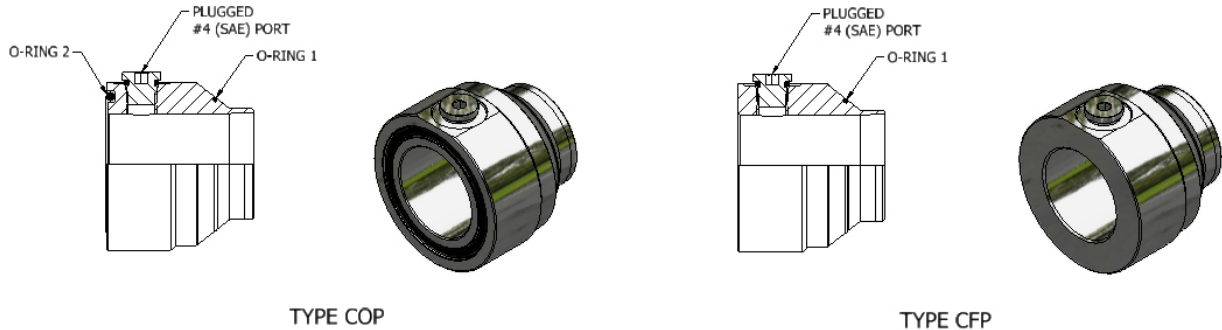
Clamp Supports - Heavy Series

Valves, Ball and Check

F10

SAE 1000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, NPS

SAE J518 Code 61 (ISO 6162-1)



COP and CFP Cone Inserts with Pilot Port for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH40	COP-SCH40-150-*^	1.31 (0.59)	CFP-SCH40-150-*	1.31 (0.59)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH80	COP-SCH80-150-*^	1.31 (0.59)	CFP-SCH80-150-*	1.31 (0.59)	ORV-4315	OR^2-225
2"	2" SCH40	COP-SCH40-200-*^	1.70 (0.77)	CFP-SCH40-200-*	1.70 (0.77)	ORV-5615	OR^2-228
2"	2" SCH80	COP-SCH80-200-*^	1.70 (0.77)	CFP-SCH80-200-*	1.70 (0.77)	ORV-5515	OR^2-228
2-1/2"	2-1/2" SCH40	COP-SCH40-250-*^	2.51 (1.14)	CFP-SCH40-250-*	2.51 (1.14)	ORV-2-036	OR^2-232
2-1/2"	2-1/2" SCH80	COP-SCH80-250-*^	2.51 (1.14)	CFP-SCH80-250-*	2.51 (1.14)	ORV-2-036	OR^2-232
3"	3" SCH40	COP-SCH40-300-*^	3.39 (1.54)	CFP-SCH40-300-*	3.39 (1.54)	ORV-2-041	OR^2-237
3"	3" SCH80	COP-SCH80-300-*^	3.39 (1.54)	CFP-SCH80-300-*	3.39 (1.54)	ORV-2-041	OR^2-237
3-1/2"	3-1/2" SCH40	COP-SCH40-350-*^	3.91 (1.78)	CFP-SCH40-350-*	3.91 (1.78)	ORV-2-043	OR^2-241
4"	4" SCH40	COP-SCH40-400-*^	4.70 (2.14)	CFP-SCH40-400-*	4.70 (2.14)	ORV-2-044	OR^2-245
4"	4" SCH80	COP-SCH80-400-*^	4.70 (2.14)	CFP-SCH80-400-*	4.70 (2.14)	ORV-2-044	OR^2-245
5"	5" SCH40	COP-SCH40-500-*^	6.11 (2.78)	CFP-SCH40-500-*	6.11 (2.78)	ORV-2-159	OR^2-253
6"	6" SCH40	COP-SCH40-600-*^	11.30 (5.14)	CFP-SCH40-600-*	11.30 (5.14)	ORV-2-163	OR^2-259
8"	8" SCH40	COP-SCH40-800-*^	14.85 (6.75)	CFP-SCH40-800-*	14.85 (6.75)	ORV-2-171	OR^3-372
10"	10" SCH40	COP-SCH40-1000-*^	32.29 (14.68)	CFP-SCH40-1000-*	32.29 (14.68)	ORV-2-178	OR^2-377

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring 2 Type

Standard, No Designation = Buna Nitrile.

V = Viton.

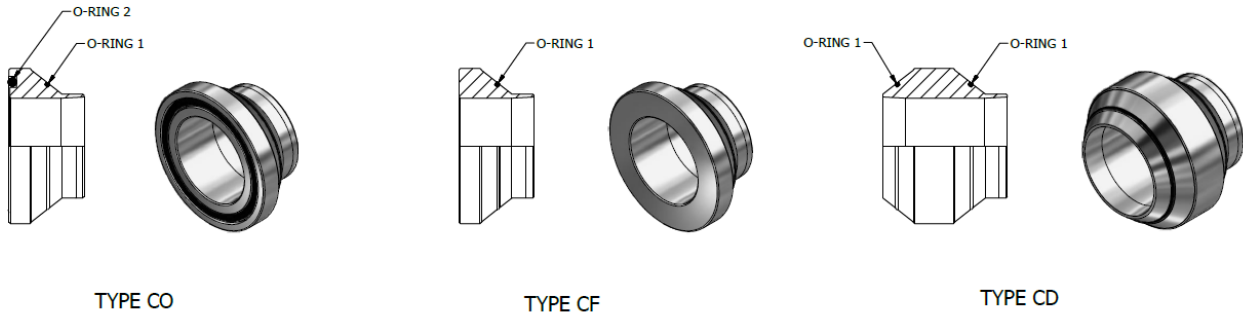
Ordering Example: COP-SCH40-200-SS-V

* Insert Material

^ Insert O-Ring 2 Type

SAE 1000 PSI Cone Inserts for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



CO, CF and CD – Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50x3.0	CO-50x3.0-150-* [^]	0.50 (0.23)	CF-50x3.0-150-*	0.50 (0.23)	CD-50x3.0-150-*	0.98 (0.45)	ORV-4715	OR [^] -2-225
2"	60x3.0	CO-60x3.0-200-* [^]	0.56 (0.25)	CF-60x3.0-200-*	0.56 (0.25)	CD-60x3.0-200-*	1.10 (0.50)	ORV-5715	OR [^] -2-228
2-1/2"	75x3.0	CO-75x3.0-250-* [^]	1.00 (0.45)	CF-75x3.0-250-*	1.00 (0.45)	CD-75x3.0-250-*	1.91 (0.87)	ORV-2-037	OR [^] -2-232
3"	90x3.5	CO-90x3.5-300-* [^]	1.50 (0.68)	CF-90x3.5-300-*	1.50 (0.68)	CD-90x3.5-300-*	2.70 (1.22)	ORV-2-041	OR [^] -2-237
3-1/2"	100x4.0	CO-100x4.0-350-* [^]	1.50 (0.68)	CF-100x4.0-350-*	1.60 (0.73)	CD-100x4.0-350-*	2.50 (1.14)	ORV-2-043	OR [^] -2-241
4"	115x4.0	CO-115x4.0-400-* [^]	1.80 (0.82)	CF-115x4.0-400-*	1.90 (0.86)	CD-115x4.0-400-*	3.00 (1.36)	ORV-2-044	OR [^] -2-245
5"	140x4.5	CO-140x4.5-500-* [^]	2.40 (1.09)	CF-140x4.5-500-*	2.50 (1.14)	CD-140x4.5-500-*	3.90 (1.77)	ORV-2-159	OR [^] -2-253
6"	165x5.0	CO-165x5.0-600-* [^]	4.70 (2.14)	CF-165x5.0-600-*	4.80 (2.18)	CD-165x5.0-600-*	7.40 (3.36)	ORV-2-163	OR [^] -2-259
8"	220x6.0	CO-220x6.0-800-* [^]	7.10 (3.23)	CF-220x6.0-800-*	7.30 (3.32)	CD-220x6.0-800-*	11.68 (5.31)	ORV-2-171	OR [^] -3-372
10"	273x6.0	CO-273x6.0-1000-* [^]	16.80 (7.64)	CF-273x6.0-1000-*	17.00 (7.73)	CD-273x6.0-1000-*	27.20 (12.36)	ORV-2-273	OR [^] -2-377

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

[^] O-Ring 2 Type

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: CO-SCH40-200-SS-V*

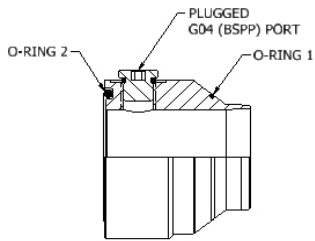
Insert Material _____

[^] Insert O-Ring 2 Type _____

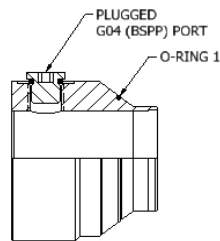
3D step models available upon request

SAE 1000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



TYPE COP



TYPE CFP

COP and CFP Metric Cone Inserts with Pilot Port for Flare Flange Connections

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50x3.0	COP-50x3.0-150-*^-^	1.31 (0.59)	CFP-50x3.0-150-*	1.31 (0.59)	ORV-4715	OR^-2-225
2"	60x3.0	COP-60x3.0-200-*^-^	1.70 (0.77)	CFP-60x3.0-200-*	1.70 (0.77)	ORV-5715	OR^-2-228
2-1/2"	75x3.0	COP-75x3.0-250-*^-^	2.60 (1.18)	CFP-75x3.0-250-*	2.60 (1.18)	ORV-2-037	OR^-2-232
3"	90x3.5	COP-90x3.5-300-*^-^	3.46 (1.57)	CFP-90x3.5-300-*	3.46 (1.57)	ORV-2-041	OR^-2-237
3-1/2"	100x4.0	COP-100x4.0-350-*^-^	3.60 (1.64)	CFP-100x4.0-350-*	3.60 (1.64)	ORV-2-043	OR^-2-241
4"	115x4.0	COP-115x4.0-400-*^-^	4.10 (1.86)	CFP-115x4.0-400-*	4.10 (1.86)	ORV-2-044	OR^-2-245
5"	140x4.5	COP-140x4.5-500-*^-^	5.00 (2.27)	CFP-140x4.5-500-*	5.00 (2.27)	ORV-2-159	OR^-2-253
6"	165x5.0	COP-165x5.0-600-*^-^	9.00 (4.10)	CFP-165x5.0-600-*	9.00 (4.10)	ORV-2-163	OR^-2-259
8"	220x6.0	COP-220x6.0-800-*^-^	13.20 (6.00)	CFP-220x6.0-800-*	13.20 (6.00)	ORV-2-171	OR^-3-372
10"	273x6.0	COP-273x6.0-1000-*^-^	28.70 (13.05)	CFP-273x6.0-1000-*	28.70 (13.05)	ORV-2-273	OR^-3-377

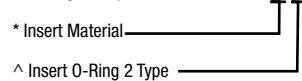
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type

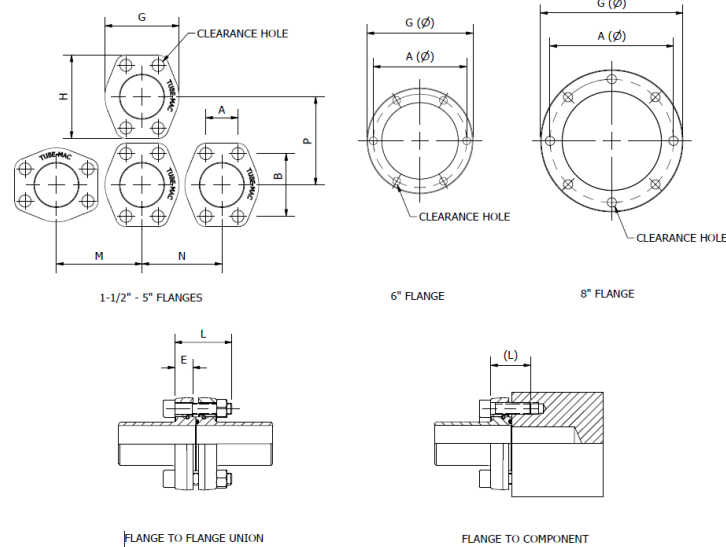
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: COP-50x3.0-200-SS-V



SAE 1000 PSI Retain Ring Flange Dimensions

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Retain Ring Flange Dimensions, NPS										
Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	0.79	1/2"-13 UNC x 3.00 (2.00)	1000 (70)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	0.79	1/2"-13 UNC x 3.50 (2.00)	1000 (70)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	0.79	1/2"-13 UNC x 4.00 (2.50)	1000 (70)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.00	5/8"-11 UNC x 4.50 (2.75)	1000 (70)
4"	3.06	5.13	6.00	6.38	6.30	6.10	6.50	1.18	5/8"-11 UNC x 4.00 (2.75)	1000 (70)
5"	3.63	6.00	7.09	7.24	7.28	7.20	7.32	1.57	5/8"-11 UNC x 4.75 (2.75)	1000 (70)
6"	8.19	-	9.29	-	-	-	-	1.57	5/8"-11 UNC x 4.75 (2.75)	725 (50)
8"	10.83	-	12.48	-	-	-	-	1.57	3/4"-10 UNC x 4.75 (2.75)	725 (50)

*** SHCS Bolt Specification**

Carbon Steel: ASTM A574/ SAE J429 Grade 8

316 Stainless Steel: ASTM A193 - B8M Class.1

Retain Ring Flange Dimensions, Metric										
Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	20	M12 x 75 (50)	1000 (70)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	20	M12 x 90 (50)	1000 (70)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	20	M12 x 100 (65)	1000 (70)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	25	M16 x 120 (70)	1000 (70)
4"	77.7	130.3	152.4	162.1	160.0	154.9	165.1	30	M16 x 100 (70)	1000 (70)
5"	92.1	152.4	180.0	184.0	185.0	183.0	186.0	40	M16 x 120 (70)	1000 (70)
6"	208.0	-	236.0	-	-	-	-	40	M16 x 120 (70)	725 (50)
8"	275.0	-	317.0	-	-	-	-	40	M20 x 120 (70)	725 (50)

*** SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8

316 Stainless Steel: A4-70, DIN 912/ISO 4762

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 1000 PSI Retain Ring Flange with Clearance Holes

1-1/2" through 5" Flange pattern according to SAE J518 Code 61 (ISO 6162-1)

6" Flange Pattern TMI 6-bolt

8" Flange Pattern TMI 8-bolt



1-1/2" - 5" FLANGES



6" FLANGE



8" FLANGES

RFC14, RFC34, RFC16, RFC18 - Flare Flange with Clearance Holes

Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	RFC14-150-*	1000 (70)	1.10 (0.50)
2"	RFC14-200-*	1000 (70)	1.90 (0.86)
2-1/2"	RFC14-250-*	1000 (70)	2.17 (0.99)
3"	RFC14-300-*	1000 (70)	3.80 (1.73)
4"	RFC14-400-*	1000 (70)	8.61 (3.91)
5"	RFC14-500-*	1000 (70)	9.80 (4.45)
6"	RFC16-600-*	725 (50)	10.50 (4.77)
8"	RFC18-800-*	725 (50)	23.20 (10.55)

*** Materials:**

Standard, No Designation = Carbon Steel,
Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

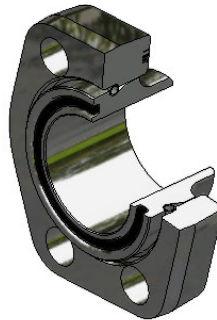
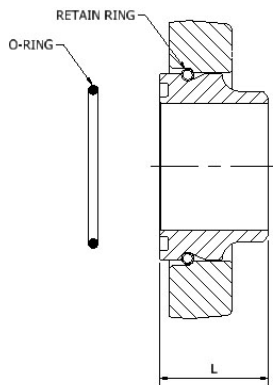
Note: Flanges can be used on NPS and
Metric Low Pressure Butt Weld Adapters.

Ordering Example: RFC14-150-SS

* Insert Material

SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring
- One (1) O-ring

To be Ordered Separately:

- Bolt Kit (See Page F14)

A/LBWAO Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.	"O" Ring (Buna) Part No.
1-1/2"	1-1/2" SCH10	A/LBWAO-SCH10-150-FC14-*	1.75 (0.80)	1.38	LBWAO-SCH10-150-*	RFC14-150-*	LR-150	OR*-2-225
1-1/2"	1-1/2" SCH40	A/LBWAO-SCH40-150-FC14-*	1.90 (0.86)	1.38	LBWAO-SCH40-150-*	RFC14-150-*	LR-150	OR*-2-225
2"	2" SCH10	A/LBWAO-SCH10-200-FC14-*	2.76 (1.25)	1.38	LBWAO-SCH10-200-*	RFC14-200-*	LR-200	OR*-2-228
2"	2" SCH40	A/LBWAO-SCH40-200-FC14-*	2.90 (1.32)	1.38	LBWAO-SCH40-200-*	RFC14-200-*	LR-200	OR*-2-228
2-1/2"	2-1/2" SCH10	A/LBWAO-SCH10-250-FC14-*	3.40 (1.55)	1.38	LBWAO-SCH10-250-*	RFC14-250-*	LR-250	OR*-2-232
2-1/2"	2-1/2" SCH40	A/LBWAO-SCH40-250-FC14-*	3.59 (1.63)	1.38	LBWAO-SCH40-250-*	RFC14-250-*	LR-250	OR*-2-232
3"	3" SCH10	A/LBWAO-SCH10-300-FC14-*	6.00 (2.73)	1.57	LBWAO-SCH10-300-*	RFC14-300-*	LR-300	OR*-2-237
3"	3" SCH40	A/LBWAO-SCH40-300-FC14-*	6.13 (2.79)	1.57	LBWAO-SCH40-300-*	RFC14-300-*	LR-300	OR*-2-237
4"	4" SCH10	A/LBWAO-SCH10-400-FC14-*	10.30 (4.68)	1.58	LBWAO-SCH10-400-*	RFC14-400-*	LR-400	OR*-2-245
4"	4" SCH40	A/LBWAO-SCH40-400-FC14-*	10.84 (4.93)	1.58	LBWAO-SCH40-400-*	RFC14-400-*	LR-400	OR*-2-245
5"	5" SCH10	A/LBWAO-SCH10-500-FC14-*	12.80 (5.82)	1.77	LBWAO-SCH10-500-*	RFC14-500-*	LR-500	OR*-2-253
5"	5" SCH40	A/LBWAO-SCH40-500-FC14-*	13.31 (6.05)	1.77	LBWAO-SCH40-500-*	RFC14-500-*	LR-500	OR*-2-253
6"	6" SCH10	A/LBWAO-SCH10-600-FC16-*	15.75 (15.60)	1.97	LBWAO-SCH10-600-*	RFC16-600-*	LR-600	OR*-2-259
6"	6" SCH40	A/LBWAO-SCH40-600-FC16-*	16.15 (7.34)	1.97	LBWAO-SCH40-600-*	RFC16-600-*	LR-600	OR*-2-259
8"	8" SCH10	A/LBWAO-SCH10-800-FC18-*	32.47 (14.76)	2.36	LBWAO-SCH10-800-*	RFC18-800-*	LR-800	OR*-2-372
8"	8" SCH40	A/LBWAO-SCH40-800-FC18-*	33.77 (15.35)	2.36	LBWAO-SCH40-800-*	RFC18-800-*	LR-800	OR*-2-372

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

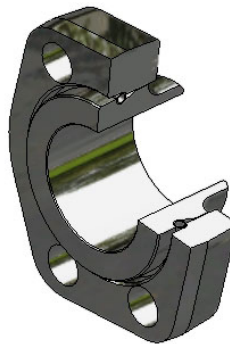
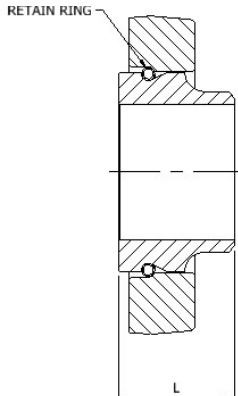
Ordering Example: A/LBWAO-SCH40-200-FC14-SS

* Insert Material

3D step models available upon request

SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, NPS

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page F14)

A/LBWAFLow Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.
1-1/2"	1-1/2" SCH10	A/LBWAFL-SCH10-150-FC14-*	1.87 (0.85)	1.38	LBWAFL-SCH10-150-*	RFC14-150-*	LR-150
1-1/2"	1-1/2" SCH40	A/LBWAFL-SCH40-150-FC14-*	1.93 (0.88)	1.38	LBWAFL-SCH40-150-*	RFC14-150-*	LR-150
2"	2" SCH10	A/LBWAFL-SCH10-200-FC14-*	2.86 (1.30)	1.38	LBWAFL-SCH10-200-*	RFC14-200-*	LR-200
2"	2" SCH40	A/LBWAFL-SCH40-200-FC14-*	2.94 (1.33)	1.38	LBWAFL-SCH40-200-*	RFC14-200-*	LR-200
2-1/2"	2-1/2" SCH10	A/LBWAFL-SCH10-250-FC14-*	3.53 (1.61)	1.38	LBWAFL-SCH10-250-*	RFC14-250-*	LR-250
2-1/2"	2-1/2" SCH40	A/LBWAFL-SCH40-250-FC14-*	3.64 (1.66)	1.38	LBWAFL-SCH40-250-*	RFC14-250-*	LR-250
3"	3" SCH10	A/LBWAFL-SCH10-300-FC14-*	6.05 (2.75)	1.57	LBWAFL-SCH10-300-*	RFC14-300-*	LR-300
3"	3" SCH40	A/LBWAFL-SCH40-300-FC14-*	6.20 (2.82)	1.57	LBWAFL-SCH40-300-*	RFC14-300-*	LR-300
4"	4" SCH10	A/LBWAFL-SCH10-400-FC14-*	10.72 (4.87)	1.58	LBWAFL-SCH10-400-*	RFC14-400-*	LR-400
4"	4" SCH40	A/LBWAFL-SCH40-400-FC14-*	10.95 (4.98)	1.58	LBWAFL-SCH40-400-*	RFC14-400-*	LR-400
5"	5" SCH10	A/LBWAFL-SCH10-500-FC14-*	13.13 (5.97)	1.77	LBWAFL-SCH10-500-*	RFC14-500-*	LR-500
5"	5" SCH40	A/LBWAFL-SCH40-500-FC14-*	13.48 (6.13)	1.77	LBWAFL-SCH40-500-*	RFC14-500-*	LR-500
6"	6" SCH10	A/LBWAFL-SCH10-600-FC16-*	15.85 (7.20)	1.97	LBWAFL-SCH10-600-*	RFC16-600-*	LR-600
6"	6" SCH40	A/LBWAFL-SCH40-600-FC16-*	16.42 (7.46)	1.97	LBWAFL-SCH40-600-*	RFC16-600-*	LR-600
8"	8" SCH10	A/LBWAFL-SCH10-800-FC18-*	33.22 (15.10)	2.36	LBWAFL-SCH10-800-*	RFC18-800-*	LR-800
8"	8" SCH40	A/LBWAFL-SCH40-800-FC18-*	34.27 (15.58)	2.36	LBWAFL-SCH40-800-*	RFC18-800-*	LR-800

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

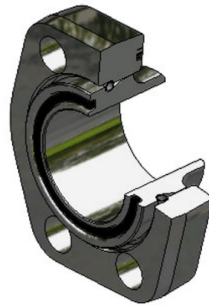
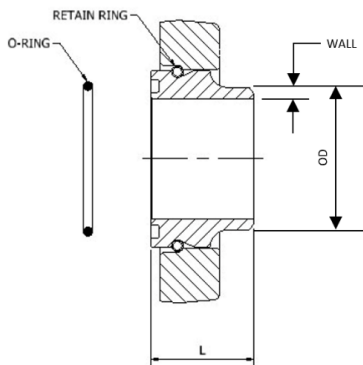
1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

Ordering Example: A/LBWAFL-SCH40-200-FC14-SS

* Insert Material

SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring
- One (1) O-ring

To be Ordered Separately:

- Bolt Kit (See Page F14)

A/LBWAO Low Pressure Butt Weld Adapter Assembly, O-Ring Face with Clearance Holes, Metric

Size	Pipe Size OD x wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.	"O" Ring (Buna) Part No.
1-1/2"	50 x 3.0	A/LBWAO-50x3-150-FC14-*	1.75 (0.80)	35	LBWAO-50x3-150-*	RFC14-150-*	LR-150	OR*-2-225
1-1/2"	50 x 5.0	A/LBWAO-50x5-150-FC14-*	1.90 (0.86)	35	LBWAO-50x5-150-*	RFC14-150-*	LR-150	OR*-2-225
2"	60 x 3.0	A/LBWAO-60x3-200-FC14-*	2.76 (1.25)	35	LBWAO-60x3-200-*	RFC14-200-*	LR-200	OR*-2-228
2"	60 x 5.0	A/LBWAO-60x5-200-FC14-*	2.90 (1.32)	35	LBWAO-60x5-200-*	RFC14-200-*	LR-200	OR*-2-228
2-1/2"	73 x 3.0	A/LBWAO-73x3-250-FC14-*	3.40 (1.55)	35	LBWAO-73x3-250-*	RFC14-250-*	LR-250	OR*-2-232
2-1/2"	75 x 3.0	A/LBWAO-75x3-250-FC14-*	3.59 (1.63)	35	LBWAO-75x3-250-*	RFC14-250-*	LR-250	OR*-2-232
3"	90 x 3.5	A/LBWAO-90x3.5-300-FC14-*	6.00 (2.73)	40	LBWAO-90x3.5-300-*	RFC14-300-*	LR-300	OR*-2-237
3"	90 x 5.0	A/LBWAO-90x5-300-FC14-*	6.13 (2.79)	40	LBWAO-90x5-300-*	RFC14-300-*	LR-300	OR*-2-237
4"	115 x 4.0	A/LBWAO-115x4-400-FC14-*	10.30 (4.68)	40	LBWAO-115x4-400-*	RFC14-400-*	LR-400	OR*-2-245
4"	114.3 x 4.5	A/LBWAO-114.3x4.5-400-FC14-*	10.84 (4.93)	40	LBWAO-114.3x4.5-400-*	RFC14-400-*	LR-400	OR*-2-245
5"	139.7 x 5.6	A/LBWAO-139.7x5.6-500-FC14-*	12.80 (5.82)	45	LBWAO-139.7x5.6-500-*	RFC14-500-*	LR-500	OR*-2-253
5"	140 x 4.5	A/LBWAO-140x4.5-500-FC14-*	13.31 (6.05)	45	LBWAO-140x4.5-500-*	RFC14-500-*	LR-500	OR*-2-253
6"	165 x 5.0	A/LBWAO-165x5-600-FC16-*	15.75 (15.60)	50	LBWAO-165x5-600-*	RFC16-600-*	LR-600	OR*-2-259
6"	168.3 x 7.1	A/LBWAO-SCH40-600-FC16-*	16.15 (7.34)	50	LBWAO-SCH40-600-*	RFC16-600-*	LR-600	OR*-2-259
8"	220 x 6.0	A/LBWAO-220x6-800-FC18-*	32.47 (14.76)	60	LBWAO-220x6-800-*	RFC18-800-*	LR-800	OR*-2-372
8"	219 x 8.18	A/LBWAO-SCH40-800-FC18-*	33.77 (15.35)	60	LBWAO-SCH40-800-*	RFC18-800-*	LR-800	OR*-2-372

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

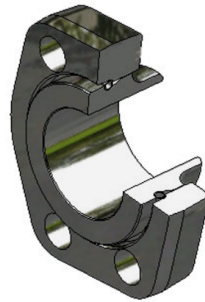
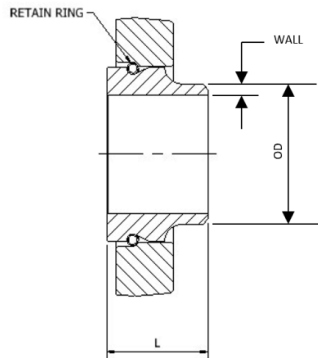
Ordering Example: A/LBWAO-60x3-200-FC14-SS

* Insert Material _____

3D step models available upon request

SAE 1000 PSI Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, Metric

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page F14)

A/LBWF Low Pressure Butt Weld Adapter Assembly, Flat Face with Clearance Holes, Metric

Size	Pipe Size OD x wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part No.
1-1/2"	50 x 3.0	A/LBWF-50x3-150-FC14-*	1.87 (0.85)	35	LBWF-50x3-150-*	RFC14-150-*	LR-150
1-1/2"	50 x 5.0	A/LBWF-50x5-150-FC14-*	1.93 (0.88)	35	LBWF-50x5-150-*	RFC14-150-*	LR-150
2"	60 x 3.0	A/LBWF-60x3-200-FC14-*	2.86 (1.30)	35	LBWF-60x3-200-*	RFC14-200-*	LR-200
2"	60 x 5.0	A/LBWF-60x5-200-FC14-*	2.94 (1.33)	35	LBWF-60x5-200-*	RFC14-200-*	LR-200
2-1/2"	73 x 3.0	A/LBWF-73x3-250-FC14-*	3.53 (1.61)	35	LBWF-73x3-250-*	RFC14-250-*	LR-250
2-1/2"	75 x 3.0	A/LBWF-75x3-250-FC14-*	3.64 (1.66)	35	LBWF-75x3-250-*	RFC14-250-*	LR-250
3"	90 x 3.5	A/LBWAOF-90x3.5-300-FC14-*	6.05 (2.75)	40	LBWF-90x3.5-300-*	RFC14-300-*	LR-300
3"	90 x 5.0	A/LBWF-90x5-300-FC14-*	6.20 (2.82)	40	LBWF-90x5-300-*	RFC14-300-*	LR-300
4"	115 x 4.0	A/LBWF-115x4-400-FC14-*	10.72 (4.87)	40	LBWF-115x4-400-*	RFC14-400-*	LR-400
4"	114.3 x 4.5	A/LBWF-114.3x4.5-400-FC14-*	10.95 (4.98)	40	LBWF-114.3x4.5-400-*	RFC14-400-*	LR-400
5"	139.7 x 5.6	A/LBWF-139.7x5.6-500-FC14-*	13.13 (5.97)	45	LBWF-139.7x5.6-500-*	RFC14-500-*	LR-500
5"	140 x 4.5	A/LBWF-140x4.5-500-FC14-*	13.48 (6.13)	45	LBWF-140x4.5-500-*	RFC14-500-*	LR-500
6"	165 x 5.0	A/LBWF-165x5-600-FC16-*	15.85 (7.20)	50	LBWF-165x5-600-*	RFC16-600-*	LR-600
6"	168.3 x 7.1	A/LBWF-SCH40-600-FC16-*	16.42 (7.46)	50	LBWF-SCH40-600-*	RFC16-600-*	LR-600
8"	220 x 6.0	A/LBWF-220x6-800-FC18-*	33.22 (15.10)	60	LBWF-220x6-800-*	RFC18-800-*	LR-800
8"	219 x 8.18	A/LBWF-SCH40-800-FC18-*	34.27 (15.58)	60	LBWF-SCH40-800-*	RFC18-800-*	LR-800

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

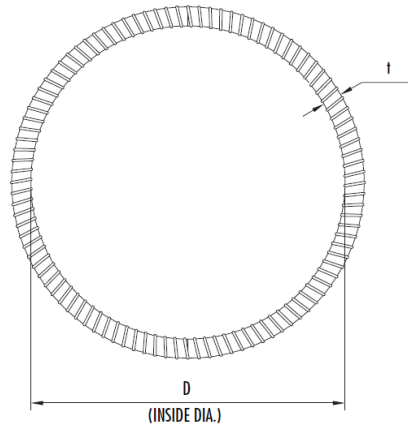
Ordering Example: A/LBWF-60x3-200-FC14-SS

* Insert Material _____

Note:

1. To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.
2. Please refer to pressure rating chart for SCH10 pipe.

SAE 1000 PSI Low Pressure Retain Ring



Flange Dimensions , NPS				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1-1/2"	LR-150	2.165 (55)	.158 (4)	0.02 (0.01)
2"	LR-200	2.560 (65)	.158 (4)	0.03 (0.014)
2-1/2"	LR-250	2.992 (76)	.158 (4)	0.04 (0.02)
3"	LR-300	3.622 (92)	.197 (5)	0.09 (0.04)
4"	LR-400	4.685 (119)	.197 (5)	0.11 (0.05)
5"	LR-500	5.630 (143)	.236 (6)	0.19 (0.09)
6"	LR-600	6.811 (173)	.236 (6)	0.21 (0.10)
8"	LR-800	9.110 (231)	.315 (8)	0.59 (0.27)

Materials:
Stainless Steel –AISI 316 Spring Temper

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

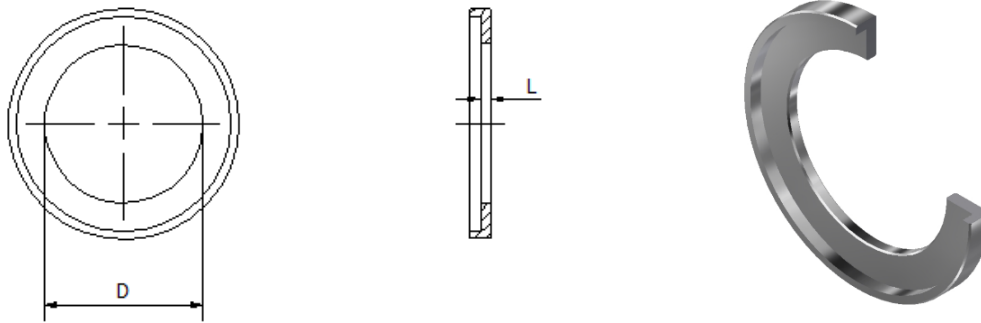
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

F20

SAE 1000 PSI Low Pressure O-Ring Connector Plate



LOCP – Low Pressure O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LOCP-150-*	1.50 (38.1)	0.13 (3.18)	0.13 (0.06)
2"	LOCP-200-*	1.94 (49.3)	0.13 (3.18)	0.15 (0.07)
2-1/2"	LOCP-250-*	2.47 (62.74)	0.13 (3.18)	0.17 (0.08)
3"	LOCP-300-*	3.07 (78.00)	0.13 (3.18)	0.25 (0.11)
4"	LOCP-400-*	4.03 (102.36)	0.13 (3.18)	0.33 (0.15)
5"	LOCP-500-*	4.91 (124.71)	0.19 (4.75)	0.57 (0.26)
6"	LOCP-600-*	5.91 (150.00)	0.19 (4.75)	0.79 (0.36)
8"	LOCP-800-*	7.98 (202.69)	0.19 (4.75)	1.34 (0.61)

*** Materials:**

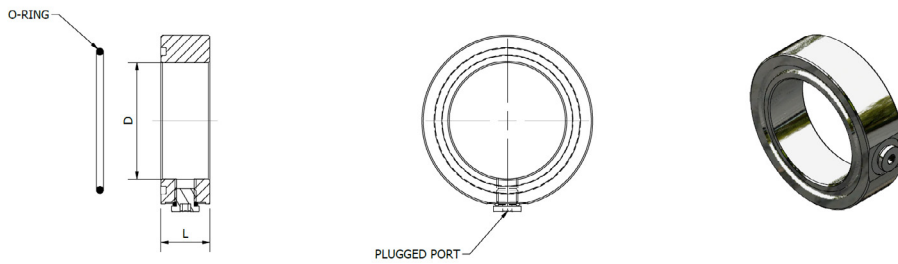
Standard, No Designation = All Carbon Steel,
Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: LOCP-200-SS

* Insert Material

SAE 1000 PSI Low Pressure Pilot Tee Between



LPPT – Low Pressure Pilot Tee Between with #4 SAE Port (Plugged), NPS

Size	Part Number	Dimensions in (mm)		O-Rings (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	LPPT-150-*^-^	1.61 (40.89)	1.00 (25.4)	OR^-3-924	86.9 (39.50)
2"	LPPT-200-*^-^	2.00 (50.08)	1.00 (25.4)	OR^-3-928	1.13 (0.54)
2-1/2"	LPPT-250-*^-^	2.50 (63.50)	1.00 (25.4)	OR^-2-232	1.47 (0.67)
3"	LPPT-300-*^-^	3.00 (76.20)	1.00 (25.4)	OR^-2-237	1.92 (0.87)
4"	LPPT-150-*^-^	4.00 (101.60)	1.00 (25.4)	OR^-2-245	2.69 (1.22)
5"	LPPT-200-*^-^	5.00 (127.00)	1.00 (25.4)	OR^-2-253	3.54 (1.61)
6"	LPPT-250-*^-^	6.00 (152.40)	1.00 (25.4)	OR^-2-259	4.08 (1.85)
8"	LPPT-300-*^-^	8.00 (203.20)	1.25 (31.75)	OR^-2-372	10.55 (4.80)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: LPPT-200-SS-V

* Insert Material

^ Insert O-Ring Type

LPPTM – Low Pressure Pilot Tee Between with G 1/8 Port (Plugged), Metric

Size	Part Number	Dimensions in (mm)		O-Rings (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	LPPTM-150-*^-^	1.61 (40.89)	1.00 (25.4)	OR^-3-924	86.9 (39.50)
2"	LPPTM-200-*^-^	2.00 (50.08)	1.00 (25.4)	OR^-3-928	1.13 (0.54)
2-1/2"	LPPTM-250-*^-^	2.50 (63.50)	1.00 (25.4)	OR^-2-232	1.47 (0.67)
3"	LPPTM-300-*^-^	3.00 (76.20)	1.00 (25.4)	OR^-2-237	1.92 (0.87)
4"	LPPTM-150-*^-^	4.00 (101.60)	1.00 (25.4)	OR^-2-245	2.69 (1.22)
5"	LPPTM-200-*^-^	5.00 (127.00)	1.00 (25.4)	OR^-2-253	3.54 (1.61)
6"	LPPTM-250-*^-^	6.00 (152.40)	1.00 (25.4)	OR^-2-259	4.08 (1.85)
8"	LPPTM-300-*^-^	8.00 (203.20)	1.25 (31.75)	OR^-2-372	10.55 (4.80)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

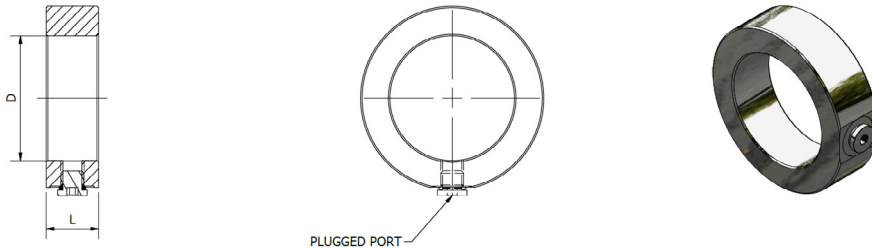
Ordering Example: LPPTM-200-SS-V

* Insert Material

^ Insert O-Ring Type

3D step models available upon request

SAE 1000 PSI Low Pressure Pilot Tee Between Flat Face



LPPTF – Low Pressure Pilot Tee Between Flat Face with #4 SAE Port (Plugged), NPS

Size	Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LPPTF-150-*^-^	1.61 (40.89)	1.00 (25.4)	86.9 (39.50)
2"	LPPTF-200-*^-^	2.00 (50.08)	1.00 (25.4)	1.13 (0.54)
2-1/2"	LPPTF-250-*^-^	2.50 (63.50)	1.00 (25.4)	1.47 (0.67)
3"	LPPTF-300-*^-^	3.00 (76.20)	1.00 (25.4)	1.92 (0.87)
4"	LPPTF-150-*^-^	4.00 (101.60)	1.00 (25.4)	2.69 (1.22)
5"	LPPTF-200-*^-^	5.00 (127.00)	1.00 (25.4)	3.54 (1.61)
6"	LPPTF-250-*^-^	6.00 (152.40)	1.00 (25.4)	4.08 (1.85)
8"	LPPTF-300-*^-^	8.00 (203.20)	1.25 (31.75)	10.55 (4.80)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: LPPTF-200-SS-V

* Insert Material

^ Insert O-Ring Type

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

LPPTFM – Low Pressure Pilot Tee Between Flat Face with G 1/8 Port (Plugged), Metric

Size	Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	LPPTFM-150-*^-^	1.61 (40.89)	1.00 (25.4)	86.9 (39.50)
2"	LPPTFM-200-*^-^	2.00 (50.08)	1.00 (25.4)	1.13 (0.54)
2-1/2"	LPPTFM-250-*^-^	2.50 (63.50)	1.00 (25.4)	1.47 (0.67)
3"	LPPTFM-300-*^-^	3.00 (76.20)	1.00 (25.4)	1.92 (0.87)
4"	LPPTFM-150-*^-^	4.00 (101.60)	1.00 (25.4)	2.69 (1.22)
5"	LPPTFM-200-*^-^	5.00 (127.00)	1.00 (25.4)	3.54 (1.61)
6"	LPPTFM-250-*^-^	6.00 (152.40)	1.00 (25.4)	4.08 (1.85)
8"	LPPTFM-300-*^-^	8.00 (203.20)	1.25 (31.75)	10.55 (4.80)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: LPPTFM-200-SS-V

* Insert Material

^ Insert O-Ring Type

^ O-Ring Type:

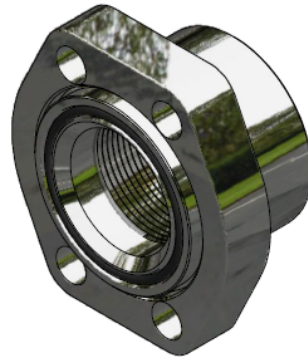
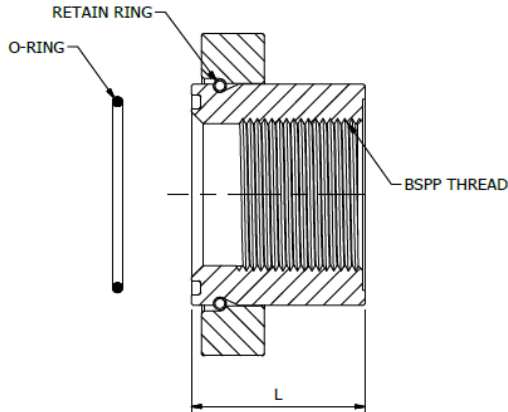
Standard, No Designation = Buna Nitrile.

V = Viton.

3D step models available upon request

SAE 1000 PSI Low Pressure Female Thread Adapter, BSPP Complete Assembly

Flange pattern according to SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Female Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page F14)

A/LFBTA Low Pressure Female Thread Adapter, BSPP – Complete Assembly Complete with Buna O-Ring

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size		O-Ring Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L	R						
1-1/2"x 1-1/4"	A/LFBTA-150x125-FC14-*^-^	1.77 (45.00)	1 1/4"	OR^-2-225	0.99 (0.45)	LFBTA-150x125-*^-^	1.2 (0.54)		
2"x 1-1/2"	A/LFBTA-200x150-FC14-*^-^	2.17 (55.00)	1 1/2"	OR^-2-228	1.65 (0.75)	LFBTA-200x150-*^-^	2.0 (0.92)		
2-1/2"x 2"	A/LFBTA-250x200-FC14-*^-^	3.15 (80.00)	2"	OR^-2-232	3.35 (1.52)	LFBTA-250x200-*^-^	3.5 (1.59)		
3"x 2-1/2"	A/LFBTA-300x250-FC14-*^-^	3.35 (85.00)	2 1/2"	OR^-2-237	4.65 (2.11)	LFBTA-300x250-*^-^	4.8 (2.16)		

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/LFBTA-200x150-FC34-SS-V

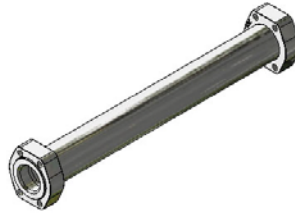
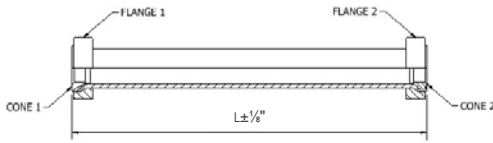


3D step models available upon request

SAE 1000 PSI Flare Flange Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cone inserts
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
Bent Pipe Assembly - Flared		LPAF							
Pipe & Cone Material Carbon Steel	TMP52CD	52							
	◆◆TMP37CD	37							
Pipe & Cone Material Stainless Steel	TMP304SS	304							
	TMP316SS	316							
	◆TMP2205SS	2205							
Pipe Size & Schedule	1-1/2"	SCH40-125							
		SCH80-125							
	2"	SCH40-200							
		SCH80-200							
	2-1/2"	SCH40-250							
		SCH80-250							
	3"	SCH40-300							
		SCH80-300							
	4"	SCH40-400							
		SCH80-400							
5"	SCH40-500								
6"	SCH40-600								
8"	SCH40-800								
10"	SCH40-1000								
End Style	Flat Face	CF							
	'O' Ring Face	CO							
Length	L	Specify (in.)							
Options	Viton	V							
	Painted (Specify)	P							
	Complete Stainless Steel Assembly: (including flanges)	SS							

Note:

TMP52CD (E355+N) PIPE IS AVAILBLE IN 1-1/2" UP TO 3" SCHEDULE 40 PIPE SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN 2 1/2" THROUGH 10" SCHEDULE 40 PIPE SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/52-SCH40150-CF-CO-240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

SAE 1000 PSI Flare Flange Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

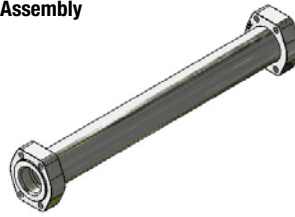
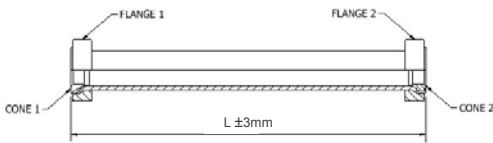
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

F26

Typical LPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cone inserts
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
Bent Pipe Assembly - Flared		LPAF							
Pipe & Cone Material	Carbon Steel	◆◆TMP37CD	37						
Pipe & Cone Material	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		◆TMP2205SS	2205						
Pipe Size & Schedule	1-1/2"		50 x 3.0						
	2"		60 x 3.0						
	2-1/2"		75 x 3.0						
	3"		90 x 3.5						
	4"		115 x 4.0						
	5"		140 x 4.5						
	6"		165 x 5.0						
	8"		220 x 6.0						
10"		273 x 6.0							
End Style	Flat Face		CF						
	'O' Ring Face		CO						
Length	L		(mm)						
Options	Viton		V						
	Painted (Specify)		P						
	Complete Stainless Steel Assembly: (including flanges)		SS						

Note:

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/37-50x 3.0-150-CF-CO-6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

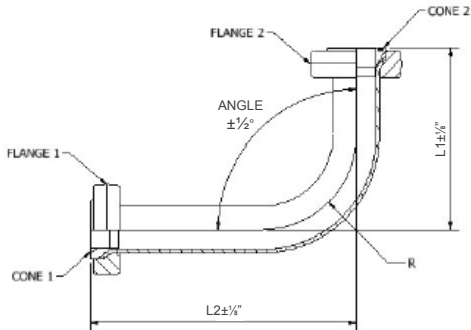
SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

3D step models available upon request

SAE 1000 PSI Flare Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LBPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1-1/2"	7.50	3.80	9.25	5.70	13.50	9.50
2"	8.50	4.75	10.75	7.13	16.00	11.87
2-1/2"	9.75	5.75	12.63	8.63	18.00	14.38
3"	11.00	7.00	14.50	10.50	22.00	17.50
4"	-	-	17.50	13.50	26.50	22.50
5"	-	-	19.00	15.00	29.00	25.00
6"	-	-	22.00	18.00	34.00	30.00
8"	-	-	28.00	24.00	44.00	40.00
10"	-	-	34.00	30.00	54.00	50.00

Note:

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 4" AND ABOVE.
2. SIZES 5", 6", 8" AND 10" ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

Flare Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Flared		BPAF										
Pipe & Cone Material Carbon Steel	TMP52CD	52										
	♦♦TMP37CD	37										
Pipe & Cone Material Stainless Steel	TMP304SS	304										
	TMP316SS	316										
	♦TMP2205SS	2205										
Pipe Size & Schedule	1-1/2"	SCH40-150										
		SCH80-150										
	2"	SCH40-200										
		SCH80-200										
	2-1/2"	SCH40-250										
		SCH80-250										
	3"	SCH40-300										
		SCH80-300										
	4"	SCH40-400										
		SCH80-400										
5"	SCH40-500											
6"	SCH40-600											
8"	SCH40-800											
10"	SCH40-1000											
End Type	Flat Face	CF										
	'O' Ring Face	CO										
Radius	Factory Manufactured	R1										
	Factory Manufactured	R2										
	Field Manufactured	R3										
Length	L1	Specify (in)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (in)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Note:

♦♦TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAF/52-SCH40-150-CO-CF-R1-25-90-11

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

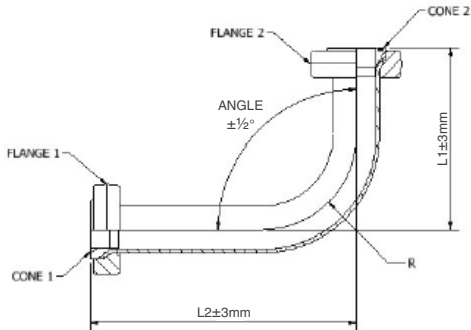
3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

SAE 1000 PSI Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LBPAF Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Pipe Size	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 3.0	1-1/2"	194	100	244	150	294	200
60 x 3.0	2"	215	120	275	180	335	240
75 x 3.0	2-1/2"	264	150	339	225	225	414
90 x 3.5	3"	294	180	384	270	474	360
115 x 4.0	4"	-	-	450	345	675	575
140 x 4.5	5"	-	-	530	420	800	700
165 x 5.0	6"	-	-	600	495	925	825
220 x 6.0	8"	-	-	710	610	1120	1016
273 x 6.0	10"	-	-	865	762	1370	1270

Note:

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 115mm AND ABOVE.
2. SIZES 140mm, 165mm, 220mm AND 273mm ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Flared		BPAF										
Pipe & Cone Material Carbon Steel	TMP52CD	52										
	♦♦TMP37CD	37										
Pipe & Cone Material Stainless Steel	TMP304SS	304										
	TMP316SS	316										
	♦TMP2205SS	2205										
Pipe Size & Schedule	1-1/2"	50x3.0										
	2"	60x3.0										
	2-1/2"	75x3.0										
	3"	90x3.5										
	4"	115x4.0										
	5"	140x4.5										
	6"	165x5.0										
	10"	273x6.0										
End Type	Flat Face	CF										
	'O' Ring Face	CO										
Radius	Factory Manufactured	R1										
	Factory Manufactured	R2										
	Field Manufactured	R3										
Length	L1	Specify (mm)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (mm)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Note:

TMP52CD (E355+N) PIPE IS AVAILABLE IN 50mm UP TO 115mm SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 50mm UP TO 273mm SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAF/52-50x3-CO-CF-R1-3175-90-292

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

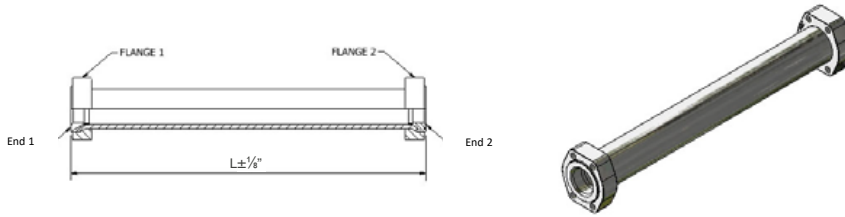
3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

SAE 1000 PSI Retain Ring Flange Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LPAR Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

		Code	LPAF	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
Bent Pipe Assembly - Flared		LPAR							
Pipe & Cone Material	Carbon Steel	TMP52CD	42						
		♦♦TMP37CD	37						
Pipe & Cone Material	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		♦TMP2205SS	2205						
Pipe Size & Schedule	1-1/2"	SCH40-125							
		SCH80-125							
	2"	SCH40-200							
		SCH80-200							
	2-1/2"	SCH40-250							
		SCH80-250							
	3"	SCH40-300							
		SCH80-300							
	4"	SCH40-400							
	SCH80-400								
5"	SCH40-500								
6"	SCH40-600								
8"	SCH40-800								
10"	SCH40-1000								
End Style	Flat Face	LF							
	'O' Ring Face	LO							
Length	L	Specify (in.)							
Options	Viton	V							
	Painted (Specify)	P							
	Complete Stainless Steel Assembly: (including flanges)	SS							

Note:

TMP52CD (E355+N) PIPE IS AVAILBLE IN 1-1/2" UP TO 3" SCHEDULE 40 PIPE SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

♦♦TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAR/52-SCH40-150-LF-LO-240

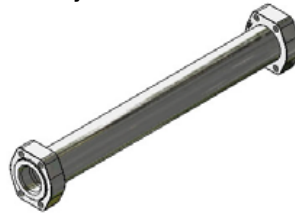
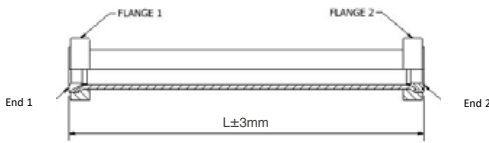
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

SAE 1000 PSI Retain Ring Flange Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LPAR Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

		Code	LPAR	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Lgth	Options
Bent Pipe Assembly - Flared		LPAR							
Pipe & Cone Material	Carbon Steel	◆◆TMP37CD	37						
Pipe & Cone Material	Stainless Steel	TMP304SS	304						
		TMP316SS	316						
		◆TMP2205SS	2205						
Pipe Size & Schedule	1-1/2"		50 x 3.0						
	2"		60 x 3.0						
	2-1/2"		75 x 3.0						
	3"		90 x 3.5						
	4"		115 x 4.0						
	5"		140 x 4.5						
	6"		165 x 5.0						
	8"		220 x 6.0						
10"		273 x 6.0							
End Style	Flat Face		LF						
	'O' Ring Face		LO						
Length	L		(mm)						
Options	Viton		V						
	Painted (Specify)		P						
	Complete Stainless Steel Assembly: (including flanges)		SS						

Note:

◆◆TMP37CD (E235+N) PIPE IS AVAILABLE IN ALL SIZES

◆TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LPAR/37-50x3.0-150-LF-LO-6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

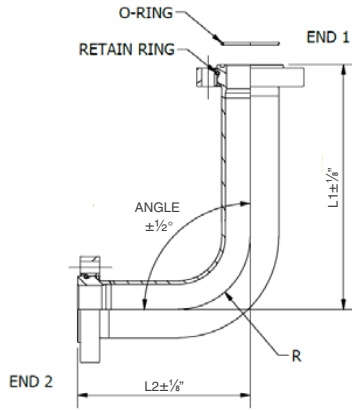
- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

3D step models available upon request

SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Typical LBPARG Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) LP retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1-1/2"	7.50	3.80	9.25	5.70	13.50	9.50
2"	8.50	4.75	10.75	7.13	16.00	11.87
2-1/2"	9.75	5.75	12.63	8.63	18.00	14.38
3"	11.00	7.00	14.50	10.50	22.00	17.50
4"	-	-	17.50	13.50	26.50	22.50
5"	-	-	19.00	15.00	29.00	25.00
6"	-	-	22.00	18.00	34.00	30.00
8"	-	-	28.00	24.00	44.00	40.00

Note:

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 4" AND ABOVE.
2. SIZES 5", 6", 8" AND 10" ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)

Code		LBP <small>AR</small>	Pipe & Cone Material	Pipe Size & Schedule	End 1	End 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Flared		LBP<small>AR</small>									
Pipe & Cone Material Carbon Steel	TMP52CD	52									
	♦♦TMP37CD	37									
Pipe & Cone Material Stainless Steel	TMP304SS	304									
	TMP316SS	316									
	♦TMP2205SS	2205									
Pipe Size & Schedule	1-1/2"	SCH40-150									
		SCH80-150									
	2"	SCH40-200									
		SCH80-200									
	2-1/2"	SCH40-250									
		SCH80-250									
	3"	SCH40-300									
		SCH80-300									
	4"	SCH40-400									
		SCH80-400									
5"	SCH40-500										
6"	SCH40-600										
8"	SCH40-800										
10"	N/A										
End Type	Flat Face	LF									
	'O' Ring Face	LO									
Radius	Factory Manufactured	R1									
	Factory Manufactured	R2									
	Field Manufactured	R3									
Length	L1	Specify (in)									
Angle	Max 90°	Specify (°)									
Length	L2	Specify (in)									
Options	Viton	V									
	Painted (Specify)	P									
	Complete Stainless Steel Assembly: (including flanges)	SS									

Note:

TMP52CD (E355+N) PIPE IS AVAILABLE IN 1-1/2" UP TO 3" SCHEDULE 40 SIZES AND 1-1/2" UP TO 4" SCHEDULE 80 PIPE SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 2-1/2" UP TO 8" SCHEDULE 40 SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAR/52-SCH40-150-LO-LF-R1-125-90-11

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

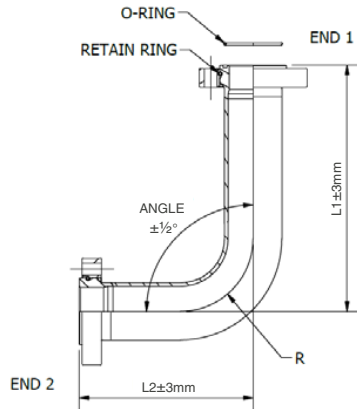
METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

3D step models available upon request

SAE 1000 PSI Retain Ring Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

Typical LBPART Assembly



Complete assembly consists of:

- One (1) length of clean pipe
- Two (2) lp retain ring flanges
- Two (2) LP butt weld adapters
- Two (2) LP retain rings
- Buna O-rings as required

Pipe Size	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 3.0	1-1/2"	194	100	244	150	294	200
60 x 3.0	2"	215	120	275	180	335	240
75 x 3.0	2-1/2"	264	150	339	225	225	414
90 x 3.5	3"	294	180	384	270	474	360
115 x 4.0	4"	-	-	450	345	675	575
140 x 4.5	5"	-	-	530	420	800	700
165 x 5.0	6"	-	-	600	495	925	825
220 x 6.0	8"	-	-	710	610	1120	1016

Note:

1. RADIUS R1 IS NOT AVAILABLE FOR PIPE SIZES 115mm AND ABOVE.
2. SIZES 140mm, 165mm, 220mm AND 273mm ARE FACTORY BENDS ONLY – CANNOT BE DONE WITH PORTABLE BENDERS

Flare Flange Bent Pipe Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)

		Code	LBPAF /	Pipe & Cone Material	Pipe Size & Schedule	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Flared		LBPAF										
Pipe & Cone Material Carbon Steel	TMP52CD	52										
	♦♦TMP37CD	37										
Pipe & Cone Material Stainless Steel	TMP304SS	304										
	TMP316SS	316										
	♦TMP2205SS	2205										
Pipe Size & Schedule	1-1/2"	50x3.0										
	2"	60x3.0										
	2-1/2"	75x3.0										
	3"	90x3.5										
	4"	115x4.0										
	5"	140x4.5										
	6"	165x5.0										
	8"	220x6.0										
10"	N/A											
End Type	Flat Face	LF										
	'O' Ring Face	LO										
Radius	Factory Manufactured	R1										
	Factory Manufactured	R2										
	Field Manufactured	R3										
Length	L1	Specify (mm)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (mm)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Note:

TMP52CD (E355+N) PIPE IS AVAILABLE IN 50mm UP TO 115mm SIZES

♦♦TMP37CD (E235+N) PIPE IS ONLY AVAILABLE IN 50mm UP TO 220mm SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): LBPAF/52-50x3-CO-CF-R1-3175-90-292

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SEE REFERENCE PAGES INDICATED ABOVE FOR PRESSURE RATINGS

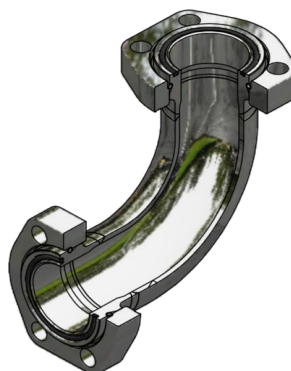
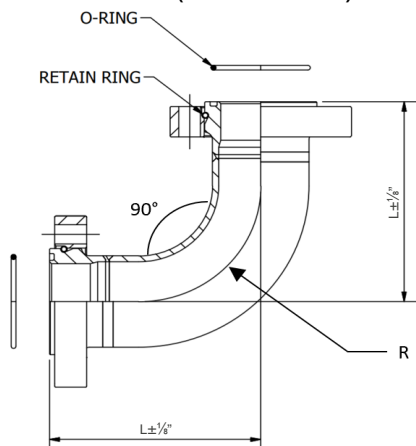
METRIC PIPE BENDING INFORMATION CONSULT FACTORY.

3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

SAE 1000 PSI Low Pressure Retain Ring Flange Elbow Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/LRE – Low Pressure Retain Ring Flange Elbow Complete Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1-1/2"	A/LRE-150-FC14-*^-^	2.98 (75.7)	2.25 (57.1)	OR^-3-924	5.34 (2.43)	LRE-150-*^-^	3.10 (1.41)	1000 (70)
2"	A/LRE-200-FC14-*^-^	4.50 (114.3)	3.00 (76.2)	OR^-3-928	8.26 (3.75)	LRE-200-*^-^	4.40 (2.00)	1000 (70)
2-1/2"	A/LRE-250-FC14-*^-^	5.22 (132.5)	3.75 (95.3)	OR^-2-232	10.48 (4.76)	LRE-250-*^-^	6.06 (2.75)	1000 (70)
3"	A/LRE-300-FC14-*^-^	6.19 (157.2)	4.50 (114.3)	OR^-2-237	16.98 (7.72)	LRE-300-*^-^	9.50 (4.32)	1000 (70)
4"	A/LRE-400-FC14-*^-^	7.69 (195.3)	6.00 (152.4)	OR^-2-245	19.85 (9.02)	LRE-400-*^-^	13.24 (6.02)	1000 (70)
5"	A/LRE-500-FC14-*^-^	9.36 (237.7)	7.50 (190.5)	OR^-2-253	30.75 (13.98)	LRE-500-*^-^	22.14 (10.06)	1000 (70)
6"	A/LRE-600-FC16-*^-^	11.13 (282.7)	9.00 (228.6)	OR^-2-259	45.17 (20.53)	LRE-600-*^-^	35.37 (16.08)	725 (50)
8"	A/LRE-800-FC18-*^-^	14.44 (366.8)	12.00 (304.8)	OR^-2-372	89.20 (40.54)	LRE-800-*^-^	69.95 (31.80)	725 (50)

Flange Option:

FC14 = 1-1/2" Thru 5" SAE Code 61 (ISO 6162-1) Flange Pattern with Clearance Holes.

FC16 = 6" Round Flange with 6 Bolt Clearance Hole Pattern.

FC18 = 8" Round Flange with 8 Bolt Clearance Hole Pattern.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/LRE-200-FC14-SS-V

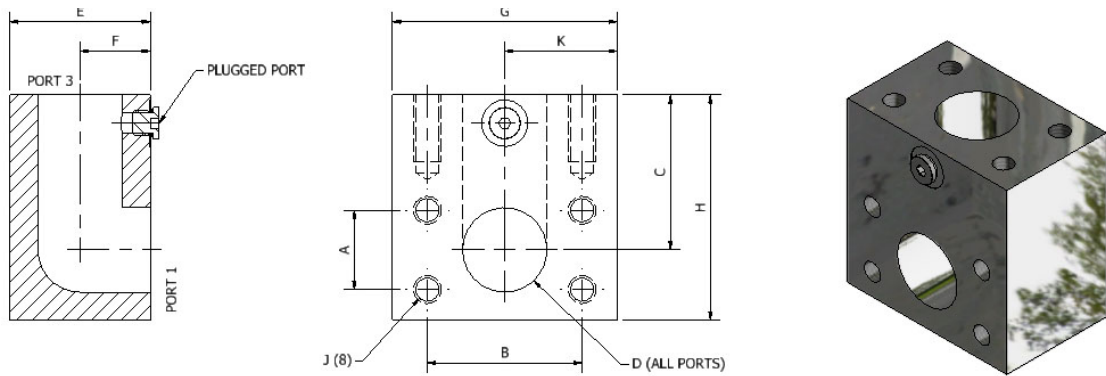
Flange Option _____

* Insert Material _____

^ Insert O-Ring Type _____

Block Elbow

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



BE34 - Block Elbow Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BE34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.60 (3.90)	4000 (280)
2"	BE34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.60 (4.81)	4000 (280)
2-1/2"	BE34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	17.40 (7.89)	3000 (210)
3"	BE34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	25.60 (11.61)	3000 (210)
4"	BE34-400-*	3.06	5.13	4.13	2.88	6.00	3.00	5.50	7.00	3.25	5/8"-11	51.40 (23.30)	1000 (70)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BE34-200-SS

* Insert Material

Note:

The working pressure is dependent upon the flange and pipe selected.

BEM34 - Block Elbow Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BEM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.60 (3.90)	4000 (280)
2"	BEM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.60 (4.81)	4000 (280)
2-1/2"	BEM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	17.40 (7.89)	3000 (210)
3"	BEM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.70	152.4	69.9	M16 x 2.00	25.60 (11.61)	3000 (210)
4"	BEM34-400-*	77.7	130.0	104.9	101.6	152.4	76.2	165.1	177.8	82.5	M16 x 2.00	51.40 (23.30)	1000 (70)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BEM34-200-SS

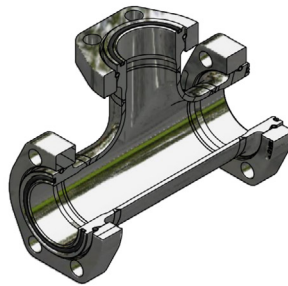
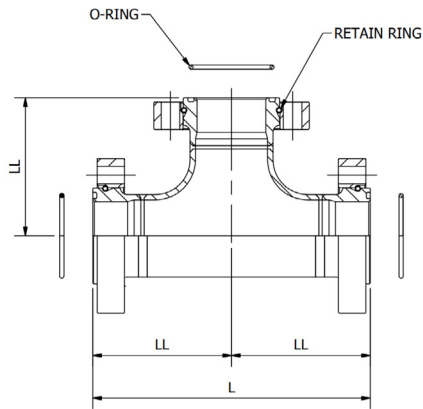
* Insert Material

Note:

The working pressure is dependent upon the flange and pipe selected.

SAE 1000 PSI Low Pressure Retain Ring Flange Tee Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flange Tee
- Three (3) Retain Ring Flanges
- Three (3) Retain Rings
- Three (3) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/LRT - Retain Ring Flange Tee Complete Assembly Complete with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1-1/2"	A/LRT-150-FC14-*-*^	7.44 (189.0)	3.72 (94.5)	OR^3-924	8.30 (3.77)	LRT-150-*-*^	4.90 (2.23)	1000 (70)
2"	A/LRT-200-FC14-*-*^	7.94 (201.7)	4.00 (101.6)	OR^3-928	13.70 (12.05)	LRT-200-*-*^	7.10 (3.23)	1000 (70)
2-1/2"	A/LRT-250-FC14-*-*^	8.95 (227.3)	4.47 (113.5)	OR^2-232	16.77 (7.63)	LRT-250-*-*^	9.06 (4.12)	1000 (70)
3"	A/LRT-300-FC14-*-*^	10.10 (256.5)	5.05 (128.3)	OR^2-237	22.95 (10.45)	LRT-300-*-*^	11.28 (5.13)	1000 (70)
4"	A/LRT-400-FC14-*-*^	11.60 (294.6)	5.80 (147.3)	OR^2-245	44.79 (20.36)	LRT-400-*-*^	18.63 (8.47)	1000 (70)
5"	A/LRT-500-FC14-*-*^	13.48 (342.4)	6.74 (171.2)	OR^2-253	60.96 (27.71)	LRT-500-*-*^	30.96 (14.07)	1000 (70)
6"	A/LRT-600-FC16-*-*^	15.44 (392.2)	7.75 (195.8)	OR^2-260	82.44 (37.47)	LRT-600-*-*^	50.31 (22.87)	725 (50)
8"	A/LRT-800-FC18-*-*^	18.91 (480.3)	9.45 (240.0)	OR^2-372	156.33 (71.06)	LRT-800-*-*^	84.93 (38.60)	725 (50)

Note:

FC16=Round 6-bolt flange and FC18=Round 8-bolt flange

Flange Options:

FC14 = SAE Code 61 (ISO 6162-1) Clearance Flange
 FT14 = SAE Code 61 (ISO 6162-1) UNC Threaded Flange
 FTM14 = SAE Code 61 (ISO 6162-1) Metric Threaded Flange

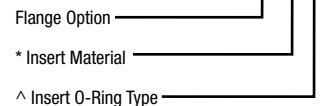
Materials:

No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

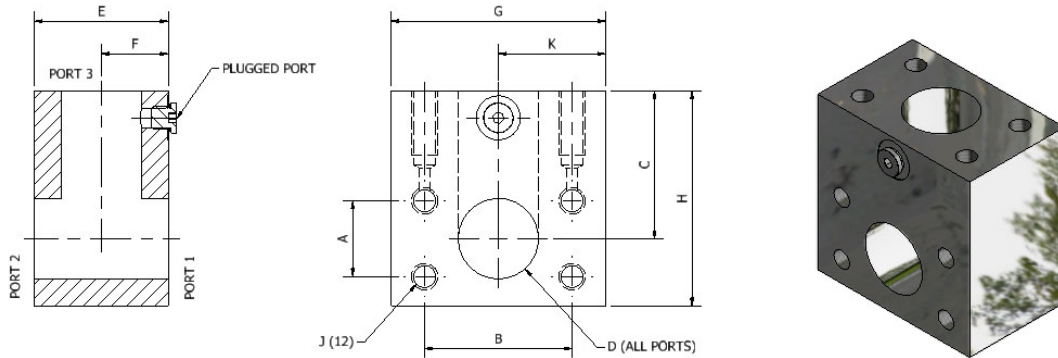
No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/LRT-200-FC14-SS-V



Block Tee

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



BT34 - Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BT34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.20 (3.72)	4000 (280)
2"	BT34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.00 (4.54)	4000 (280)
2-1/2"	BT34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	16.30 (7.39)	3000 (210)
3"	BT34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	23.70 (10.75)	3000 (210)
4"	BT34-400-*	3.06	5.13	4.13	4.00	6.00	3.00	6.50	7.00	3.25	5/8"-11	45.80 (20.60)	1000 (70)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BT34-200-SS

* Insert Material _____

Note:

The working pressure is dependent upon the flange and pipe selected.

BTM34 - Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (inch)	Block Tee Part No	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1-1/2"	BTM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.20 (3.72)	4000 (280)
2"	BTM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.00 (4.54)	4000 (280)
2-1/2"	BTM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	16.30 (7.39)	3000 (210)
3"	BTM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.7	152.4	69.9	M16 x 2.00	23.70 (10.75)	3000 (210)
4"	BTM34-400-*	77.7	130.3	104.9	101.6	152.4	76.2	165.1	177.8	82.5	M16 x 2.00	45.80 (20.60)	1000 (70)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTM34-200-SS

* Insert Material _____

Note:

The working pressure is dependent upon the flange and pipe selected.

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

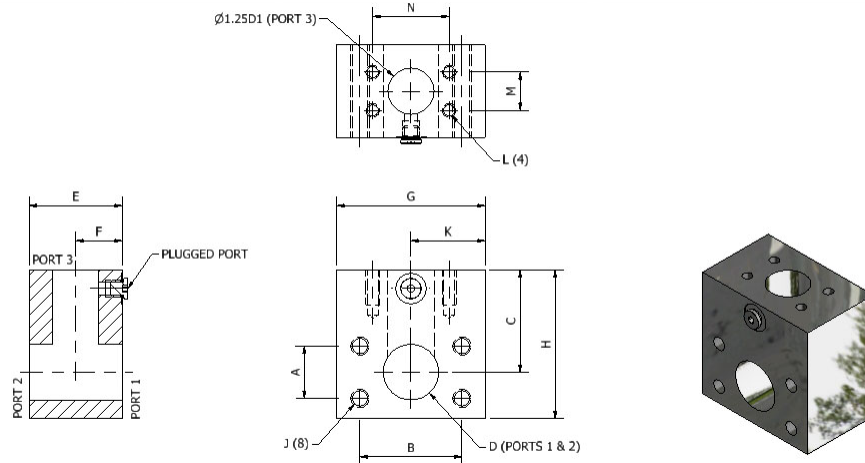
Clamp Supports - Heavy Series

Valves, Ball and Check

F40

Reducing Branch Block Tee

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



BTR34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Tee Part Number	Dimensions (in)												Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
2"x1-1/2"	BTR34-200x150-*	1.69	3.06	3.00	1.94	1.50	3.00	1.50	4.00	4.50	2.00	1.41	2.75	1/2"-13	1/2"-13	11.60 (5.26)	4000 (280)
2-1/2"x1/2"	BTR34-250x050-*	2.00	3.50	3.25	2.38	0.50	3.50	1.75	5.00	5.00	2.50	0.69	1.50	1/2"-13	5/16"-18	19.40 (8.80)	3000 (210)
2-1/2"x1-1/2"	BTR34-250x150-*	2.00	3.50	3.25	2.38	1.50	3.50	1.75	5.00	5.00	2.50	1.41	2.75	1/2"-13	1/2"-13	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTR34-250x200-*	2.00	3.50	3.25	2.38	1.94	3.50	1.75	5.00	5.00	2.50	1.69	3.06	1/2"-13	1/2"-13	17.56 (7.97)	3000 (210)
3"x1-1/2"	BTR34-300x150-*	2.44	4.19	3.75	2.88	1.50	4.00	2.00	5.50	6.00	2.75	1.41	2.75	5/8"-11	1/2"-13	27.67 (12.55)	3000 (210)
3"x2"	BTR34-300x200-*	2.44	4.19	3.75	2.88	1.94	4.00	2.00	5.50	6.00	2.75	1.69	3.06	5/8"-11	1/2"-13	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTR34-300x250-*	2.44	4.19	3.75	2.88	2.38	4.00	2.00	5.50	6.00	2.75	2.00	3.50	5/8"-11	1/2"-13	25.30 (11.48)	3000 (210)
4"x1-1/2"	BTR34-400x150-*	3.06	5.13	3.75	4.00	1.50	3.50	1.75	6.50	7.00	3.25	1.41	2.75	5/8"-11	1/2"-13	29.20 (13.25)	1000 (70)
2"x2"	BTR34-400x200-*	3.06	5.13	3.75	4.00	1.94	6.00	3.00	6.50	7.00	3.25	1.69	3.06	5/8"-11	1/2"-13	52.60 (23.85)	1000 (70)
4"x2-1/2"	BTR34-400x250-*	3.06	5.13	3.75	4.00	2.38	6.00	3.00	6.50	7.00	3.25	2.00	3.50	5/8"-11	1/2"-13	51.80 (23.50)	1000 (70)
4"x3"	BTR34-400x300-*	3.06	5.13	3.75	4.00	2.88	6.00	3.00	6.50	7.00	3.25	2.44	2.44	5/8"-11	5/8"-11	50.40 (22.91)	1000 (70)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTR34-200x050-SS

* Insert Material

BTRM34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)												Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
2"x1-1/2"	BTRM34-200x150-*	42.9	77.7	76.2	49.3	38.1	76.2	38.1	101.6	114.3	50.8	35.8	69.9	M12 X 1.75	M12 X 1.75	11.60 (5.26)	4000 (280)
2-1/2"x1-1/2"	BTRM34-250x150-*	50.8	88.9	82.6	60.5	38.1	88.9	44.5	127.0	127.0	63.5	35.8	69.9	M12 X 1.75	M12 X 1.75	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTRM34-250x200-*	50.8	88.9	82.6	60.5	49.3	88.9	44.5	127.0	127.0	63.5	42.9	77.7	M12 X 1.75	M12 X 1.75	17.56 (7.97)	3000 (210)
3"x1-1/2"	BTRM34-300x150-*	62.0	106.4	95.3	73.2	38.1	101.6	50.8	139.7	152.4	69.9	35.8	69.9	M16 X 2.00	M12 X 1.75	27.67 (12.55)	3000 (210)
3"x2"	BTRM34-300x200-*	62.0	106.4	95.3	73.2	49.3	101.6	50.8	139.7	152.4	69.9	42.9	77.7	M16 X 2.00	M12 X 1.75	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTRM34-300x250-*	62.0	106.4	95.3	73.2	60.5	101.6	50.8	139.7	152.4	69.9	50.8	88.9	M16 X 2.00	M12 X 1.75	25.30 (11.48)	3000 (210)
4"x1-1/2"	BTRM34-400x150-*	77.7	130.3	105.0	101.6	38.1	88.9	44.4	165.1	177.8	82.5	35.8	69.9	M12 X 2.00	M12 X 1.75	29.20 (13.25)	1000 (70)
2"x2"	BTRM34-400x200-*	77.7	130.3	105.0	101.6	49.3	152.4	76.2	165.1	177.8	82.5	43.0	77.7	M16 X 2.00	M12 X 1.75	52.60 (23.85)	1000 (70)
4"x2-1/2"	BTRM34-400x250-*	77.7	130.3	105.0	101.6	60.5	152.4	76.2	165.1	177.8	82.5	50.8	88.9	M16 X 2.00	M12 X 1.75	51.80 (23.50)	1000 (70)
4"x3"	BTRM34-400x300-*	77.7	130.3	105.0	101.6	73.2	152.4	76.2	165.1	177.8	82.5	62.0	106.4	M16 X 2.00	M16 X 2.00	50.40 (22.91)	1000 (70)

*** Materials:**

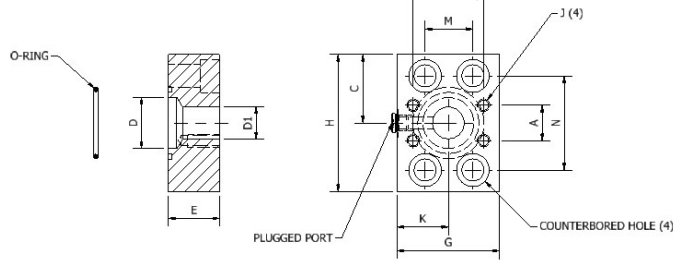
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTRM34-200x050-SS

* Insert Material

Transition Plate Reducer with O-Ring Face and Countersunk Holes

Drilled to SAE J518 Code 61 (ISO 6162-1) Flange Style



Note:

5" Transition plate is round.
Larger sizes available upon request

TPRO34 – Transition Plate Reducer with O-Ring Face, Countersunk Holes and #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	J Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
2" x 1-1/2"	TPRO34-200x150-*^	1.41	2.75	2.00	1.94	1.50	1.75	4.00	4.00	2.00	1.69	3.06	1/2"-13	1/2"-13	OR^-2-228	5.90 (2.68)	4000 (280)
2-1/2" x 1-1/2"	TPRO34-250x150-*^	1.41	2.75	2.50	2.38	1.50	2.00	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	8.80 (3.99)	4000 (280)
2-1/2" x 2"	TPRO34-250x200-*^	1.69	3.06	2.50	2.38	1.94	1.75	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	7.30 (3.31)	4000 (280)
3" x 2"	TPRO34-300x200-*^	1.69	3.06	3.00	2.88	1.94	2.00	4.00	6.00	2.00	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.80 (4.45)	4000 (280)
3" x 2-1/2"	TPRO34-300x250-*^	2.00	3.50	3.00	2.88	2.38	1.75	4.50	6.00	2.25	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.50 (4.31)	3000 (210)
4" x 1-1/2"	TPRO34-400x150-*^	1.41	2.75	3.50	4.00	1.50	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	30.30 (13.77)	1000 (70)
4" x 2"	TPRO34-400x200-*^	1.69	3.06	3.50	4.00	1.94	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	26.50 (12.02)	1000 (70)
4" x 2-1/2"	TPRO34-400x250-*^	2.00	3.50	3.50	4.00	2.38	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	1/2"-13	OR^-2-245	25.40 (11.50)	1000 (70)
4" x 3"	TPRO34-400x300-*^	2.44	4.19	3.50	4.00	2.88	2.75	6.00	7.00	3.00	3.06	5.13	5/8"-11	5/8"-11	OR^-2-245	24.00 (10.90)	1000 (70)
5" x 4"	TPRO34-500x400-*^	3.06	5.13	4.13	5.00	4.00	2.00	8.25 dia.	4.13	3.63	6.00	5/8"-11	5/8"-11	OR^-2-253	20.40 (9.25)	1000 (70)	

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO34-200x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

TPROM34 – Transition Plate Reducer with O-Ring Face, Countersunk Holes and G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	J Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
2" x 1-1/2"	TPROM34-200x150-*^	35.8	69.9	50.8	49.3	38.1	44.5	101.6	101.6	50.8	42.9	77.7	M12x1.75	M12x1.75	OR^-2-228	5.90 (2.68)	4000 (280)
2-1/2" x 1-1/2"	TPROM34-250x150-*^	35.8	69.9	63.5	60.5	38.1	50.8	101.6	127.0	50.8	50.8	88.9	M12x1.75	M12x1.75	OR^-2-232	8.80 (3.99)	4000 (280)
2-1/2" x 2"	TPROM34-250x200-*^	42.9	77.7	63.5	60.5	49.3	44.5	101.6	127.0	50.8	50.8	88.9	M12x1.75	M12x1.75	OR^-2-232	7.30 (3.31)	4000 (280)
3" x 2"	TPROM34-300x200-*^	42.9	77.78	76.2	73.2	49.3	50.8	101.6	152.4	50.8	62.0	106.4	M16x2.00	M12x1.75	OR^-2-237	9.80 (4.45)	4000 (280)
3" x 2-1/2"	TPROM34-300x250-*^	50.8	88.9	76.2	73.2	60.5	44.5	114.3	152.4	57.2	62.0	106.4	M16x2.00	M12x1.75	OR^-2-237	9.50 (4.31)	3000 (210)
4" x 1-1/2"	TPROM34-400x150-*^	35.8	69.9	88.9	101.6	38.1	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	30.30 (13.77)	1000 (70)
4" x 2"	TPROM34-400x200-*^	42.9	77.7	88.9	101.6	49.3	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	26.50 (12.02)	1000 (70)
4" x 2-1/2"	TPROM34-400x250-*^	50.8	88.9	88.9	101.6	60.5	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M12x1.75	OR^-2-245	25.40 (11.50)	1000 (70)
4" x 3"	TPROM34-400x300-*^	62.0	106.4	88.9	101.6	73.2	69.9	152.4	177.8	76.2	77.7	130.3	M16x2.00	M16x2.00	OR^-2-245	24.00 (10.90)	1000 (70)
5" x 4"	TPROM34-500x400-*^	77.7	130.3	104.9	127.0	101.6	50.8	209.5 dia.	104.9	92.2	152.4	M16x2.00	M16x2.00	OR^-2-253	20.40 (9.25)	1000 (70)	

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPROM34-200x150-SS-V

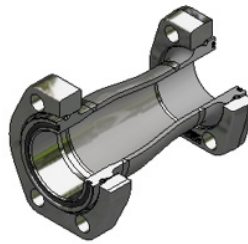
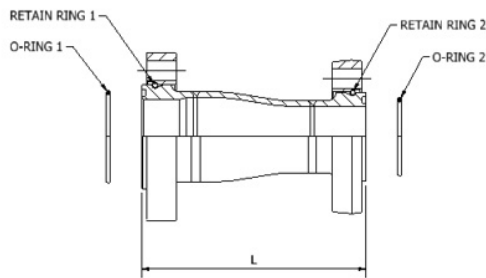
* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

Introduction
Technical Data
Pipe Selection Guide
16 bar, 90° Flare
ANSI 150#, 300# Flare
SAE 1000, 70 bar
SAE 3000, 210 bar
SAE 6000, 420 bar
SAE 10000, 690 bar
ISO 6164, 400 bar
ISO 6164, 400 bar F10° Flare
Clamp Supports - Heavy Series
Valves, Ball and Check
F42

SAE 1000 PSI Low Pressure Retain Ring Flange Reducer Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Assembly Consists Of:

- One (1) Concentric Reducer Body
- Two (2) Retain Ring Flanges
- Two (2) Retain Ring
- Two (2) Buna O-Rings (Standard)

To be Ordered Separately:

- Bolt Kit

SAE 1000 PSI Low Pressure Retain Ring Flange Reducer

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L						
2" x 1-1/2"	A/LRR-200x150-FC14-FC14-*^-^	5.94 (150.9)	OR^-2-228	OR^-2-225	5.29 (2.4)	LRR-200x150-*^-^	2.24 (1.0)	4000 (280)
2-1/2" x 1-1/2"	A/LRR-250x150-FC14-FC14-*^-^	6.44 (163.6)	OR^-2-232	OR^-2-225	6.16 (2.8)	LRR-250x100-*^-^	2.83 (1.3)	3000 (210)
2-1/2" x 2"	A/LRR-250x200-FC14-FC14-*^-^	6.44 (163.6)	OR^-2-232	OR^-2-228	7.38 (3.4)	LRR-250x200-*^-^	3.24 (1.5)	3000 (210)
3" x 2"	A/LRR-300x200-FC14-FC14-*^-^	6.64 (168.7)	OR^-2-237	OR^-2-228	9.83 (4.5)	LRR-300x200-*^-^	4.01 (1.8)	3000 (210)
3" x 2-1/2"	A/LRR-300x250-FC14-FC14-*^-^	6.64 (168.7)	OR^-2-237	OR^-2-232	10.41 (4.7)	LRR-300x250-*^-^	4.45 (2.0)	3000 (210)
4" x 2-1/2"	A/LRR-400x250-FC14-FC14-*^-^	7.14 (181.4)	OR^-2-245	OR^-2-232	13.23 (6.0)	LRR-400x250-*^-^	6.39 (2.9)	1000 (70)
4" x 3"	A/LRR-400x300-FC14-FC14-*^-^	7.35 (186.7)	OR^-2-245	OR^-2-237	17.34 (7.9)	LRR-400x300-*^-^	6.93 (3.2)	1000 (70)
5" x 3"	A/LRR-500x300-FC14-FC14-*^-^	8.54 (216.9)	OR^-2-253	OR^-2-237	22.65 (10.3)	LRR-500x300-*^-^	10.25 (4.7)	1000 (70)
5" x 4"	A/LRR-500x400-FC14-FC14-*^-^	8.54 (216.9)	OR^-2-253	OR^-2-245	26.66 (12.1)	LRR-500x400-*^-^	11.44 (5.2)	1000 (70)
6" x 4"	A/LRR-600x400-FC16-FC14-*^-^	9.24 (234.7)	OR^-2-259	OR^-2-245	32.22 (14.6)	LRR-600x400-*^-^	15.81 (7.2)	725 (50)
6" x 5"	A/LRR-600x500-FC16-FC14-*^-^	9.43 (239.5)	OR^-2-259	OR^-2-253	35.66 (16.2)	LRR-600x500-*^-^	17.26 (7.9)	725 (50)
8" x 5"	A/LRR-800x500-FC18-FC14-*^-^	10.32 (262.1)	OR^-2-372	OR^-2-253	53.16 (24.2)	LRR-800x500-*^-^	25.30 (11.5)	725 (50)
8" x 6"	A/LRR-800x600-FC18-FC16-*^-^	10.52 (267.2)	OR^-2-372	OR^-2-259	57.71 (26.2)	LRR-800x600-*^-^	28.66 (13.0)	725 (50)

Flange Options:

1-1/2" thru 5", RFC14 = SAE Code 61 (ISO 6162-1) Flange Pattern with clearance holes.

6", RFC16 = Round 6-bolt Flange Pattern with clearance holes.

8", RFC18 = Round 8-bolt Flange Pattern with clearance holes.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

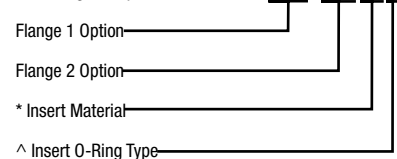
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

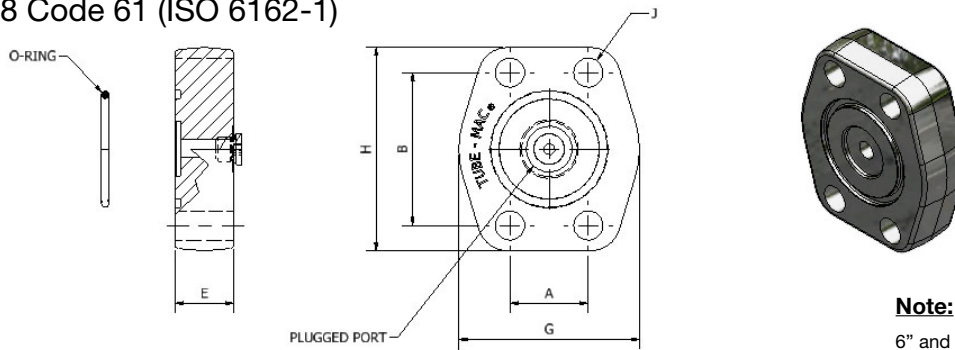
Ordering Example: A/LRR-200x150-FC14-FC14-SS-V



3D step models available upon request

SAE 1000 PSI Low Pressure Blanking Flange O-Ring Face with Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



Note:

6" and 8" Blanking Flanges are Round

BF014, BF016, BF018 – Blanking Flange O-Ring Face, Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1-1/2"	BF014-150-*^	1.41	2.75	3.25	3.66	0.79	1/2" – 13 UNC	OR^ -2-225	4000 (280)	2.1 (0.9)
2"	BF014-200-*^	1.69	3.06	3.81	4.02	0.79	1/2" – 13 UNC	OR^ -2-228	4000 (280)	2.6 (1.2)
2-1/2"	BF014-250-*^	2.00	3.50	4.28	4.49	0.79	1/2" – 13 UNC	OR^ -2-232	3000 (210)	3.4 (1.6)
3"	BF014-300-*^	2.44	4.19	5.16	5.28	1.00	5/8" – 11 UNC	OR^ -2-237	3000 (210)	6.0 (2.7)
4"	BF014-400-*^	3.06	5.13	6.00	6.38	1.18	5/8" – 11 UNC	OR^ -2-245	1000 (70)	10.4 (4.7)
5"	BF014-500-*^	3.63	6.00	7.09	7.24	1.57	5/8" – 11 UNC	OR^ -2-253	1000 (70)	18.9 (8.5)
6"	BF016-600-*^	8.19	-	9.29	-	1.57	5/8" – 11 UNC	OR^ -2-259	725 (50)	25.2 (11.5)
8"	BF018-800-*^	10.83	-	12.48	-	1.57	3/4" – 10 UNC	OR^ -2-372	725 (50)	51.2 (23.3)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BF014-200-SS-V*

Insert Material _____
 ^ Insert O-Ring 2 Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

BFOM14, BFOM16, BFOM18 – Blanking Flange O-Ring Face, Clearance Holes and G1/8 Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1-1/2"	BFOM14-150-*^	35.8	69.9	82.6	93.0	20	M12 x 1.75	OR^ -2-225	4000 (280)	2.1 (0.9)
2"	BFOM14-200-*^	42.9	77.7	96.8	102.1	20	M12 x 1.75	OR^ -2-228	4000 (280)	2.6 (1.2)
2-1/2"	BFOM14-250-*^	50.8	88.9	108.7	114.0	20	M12 x 1.75	OR^ -2-232	3000 (210)	3.4 (1.6)
3"	BFOM14-300-*^	62.0	106.4	131.1	134.1	25	M16 x 2.00	OR^ -2-237	3000 (210)	6.0 (2.7)
4"	BFOM14-400-*^	77.7	130.3	152.4	162.1	30	M16 x 2.00	OR^ -2-245	1000 (70)	10.4 (4.7)
5"	BFOM14-500-*^	92.2	152.4	180.0	184.0	40	M16 x 2.00	OR^ -2-253	1000 (70)	18.9 (8.5)
6"	BFOM16-600-*^	208.0	-	236.0	-	40	M16 x 2.00	OR^ -2-259	725 (50)	25.2 (11.5)
8"	BFOM18-800-*^	275.0	-	317.0	-	40	M20 x 2.50	OR^ -2-372	725 (50)	51.2 (23.3)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BFOM14-200-SS-V*

Insert Material _____
 ^ Insert O-Ring 2 Type _____

^ O-Ring Type:

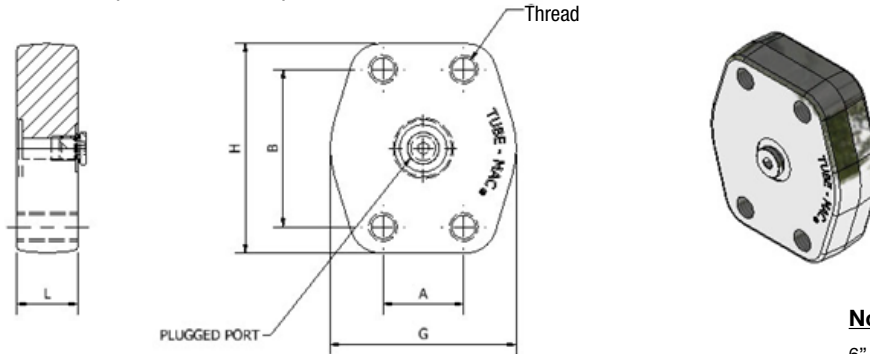
Standard, No Designation = Buna Nitrile.
 V = Viton.

3D step models available upon request

SAE 1000 PSI Low Pressure Blanking Flange

Flat Face with Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



Note:

6" and 8" Blanking Flanges are Round

BFF14, BFF16, BFF18 – Blanking Flange Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Thread	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1-1/2"	BFF14-150-*^	1.41	2.75	3.25	3.66	0.79	1/2" – 13 UNC	4000 (280)	2.1 (0.9)
2"	BFF14-200-*^	1.69	3.06	3.81	4.02	0.79	1/2" – 13 UNC	4000 (280)	2.7 (1.2)
2-1/2"	BFF14-250-*^	2.00	3.50	4.28	4.49	0.79	1/2" – 13 UNC	3000 (210)	3.5 (1.6)
3"	BFF14-300-*^	2.44	4.19	5.16	5.28	1.00	5/8" – 11 UNC	3000 (210)	6.2 (2.8)
4"	BFF14-400-*^	3.06	5.13	6.00	6.38	1.18	5/8" – 11 UNC	1000 (70)	10.4 (4.7)
5"	BFF14-500-*^	3.63	6.00	7.09	7.24	1.57	5/8" – 11 UNC	1000 (70)	19.0 (8.6)
6"	BFF16-600-*^	8.19	-	9.29	-	1.57	5/8" – 11 UNC	725 (50)	25.9 (11.7)
8"	BFF18-800-*^	10.83	-	12.48	-	1.57	3/4" – 10 UNC	725 (50)	52.2 (23.7)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BFF14-200-SS-V

* Insert Material
 ^ Insert O-Ring Type

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

BFFM14, BFFM16, BFFM18 – Blanking Flange Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Thread	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1-1/2"	BFFM14-150-*^	35.8	69.9	82.6	93.0	20	M12 x 1.75	4000 (280)	2.1 (0.9)
2"	BFFM14-200-*^	42.9	77.7	96.8	102.1	20	M12 x 1.75	4000 (280)	2.7 (1.2)
2-1/2"	BFFM14-250-*^	50.8	88.9	108.7	114.0	20	M12 x 1.75	3000 (210)	3.5 (1.6)
3"	BFFM14-300-*^	62.0	106.4	131.1	134.1	25	M16 x 2.00	3000 (210)	6.2 (2.8)
4"	BFFM14-400-*^	77.7	130.3	152.4	162.1	30	M16 x 2.00	1000 (70)	10.4 (4.7)
5"	BFFM14-500-*^	92.2	152.4	180.0	184.0	40	M16 x 2.00	1000 (70)	19.0 (8.6)
6"	BFFM16-600-*^	208.0	-	236.0	-	40	M16 x 2.00	725 (50)	25.9 (11.7)
8"	BFFM18-800-*^	275.0	-	317.0	-	40	M20 x 2.50	725 (50)	52.2 (23.7)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BFFM14-200-SS-V

* Insert Material
 ^ Insert O-Ring Type

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

3D step models available upon request

SAE 3000 PSI, 210 bar Reference Guide

					
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SAE Female Thread Flange Flat Face, Threaded Holes
STFF34
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NPT Female Thread Flange O-Ring Face, Clearance Holes
NTF034
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NPT Female Thread Flange Flat Face, Threaded Holes
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Flare Flange Bent Pipe Assembly NPS, Metric BPAF
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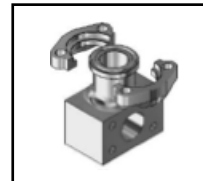
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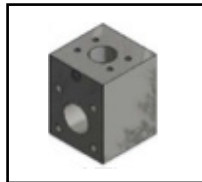
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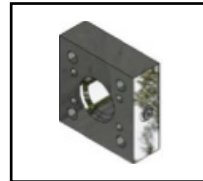
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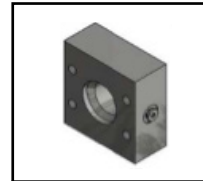
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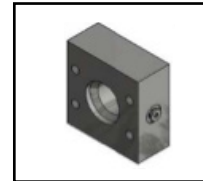
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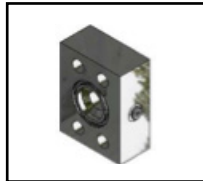
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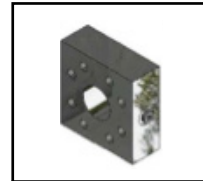
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**O-Ring Spacer
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**O-Ring Spacer
RR Pipe
to Hose End**

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**O-Ring Spacer
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Split Flange Plug

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**Non-Conductive
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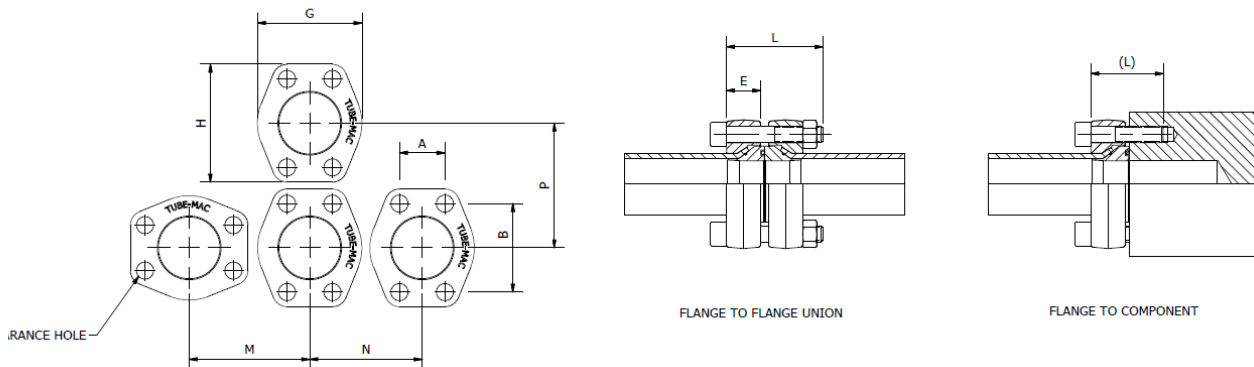


**Non-Return
Check Valve**

NPS, Metric
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SAE 3000 PSI Flare Flange Dimensions

SAE J518 Code 61 (ISO 6162-1)



Flare Flange Dimensions, NPS

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	0.69	1.50	1.81	2.22	2.05	1.93	2.32	0.81	5/16"-18 UNC x 2.25 (1.50)	5000 (350)
3/4"	0.88	1.88	2.06	2.56	2.40	2.17	2.68	0.82	3/8"-16 UNC x 2.50 (1.50)	5000 (350)
1"	1.03	2.06	2.31	2.76	2.64	2.44	2.87	0.87	3/8"-16 UNC x 2.50 (1.50)	5000 (350)
1-1/4"	1.19	2.31	2.88	3.11	3.11	2.99	3.23	0.91	7/16"-14 UNC x 2.50 (1.75)	4000 (280)
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	1.06	1/2"-13 UNC x 3.00 (2.00)	4000 (280)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	1.22	1/2"-13 UNC x 3.50 (2.00)	4000 (280)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	1.40	1/2"-13 UNC x 4.00 (2.50)	3000 (210)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.67	5/8"-11 UNC x 4.50 (2.75)	3000 (210)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 - B8M Class.1

Flare Flange Dimensions, Metric

Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	17.5	38.1	46.0	56.9	52.1	49.0	58.9	20.6	M8 x 60 (40)	5000 (350)
3/4"	22.4	47.8	52.3	65.0	61.0	55.1	68.1	20.8	M10 x 65 (40)	5000 (350)
1"	26.2	52.3	58.7	70.1	67.1	62.0	72.9	22.1	M10 x 65(40)	5000 (350)
1-1/4"	30.2	58.7	73.2	79.0	79.0	75.9	82.0	23.1	M10 x 65 (45)	4000 (280)
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	26.9	M12 x 75 (50)	4000 (280)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	31.0	M12 x 90 (50)	4000 (280)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	35.6	M12 x 100 (65)	3000 (210)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	42.4	M16 x 120 (70)	3000 (210)

* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 4762

- Minimum Grade 8.8

316 Stainless Steel: A4-70, DIN 912/ISO 4762

- For M16 SS Bolts A4-80, DIN 912/ISO 4762

3D step models available upon request

TUBE-MAC.com

Introduction

Technical
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16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

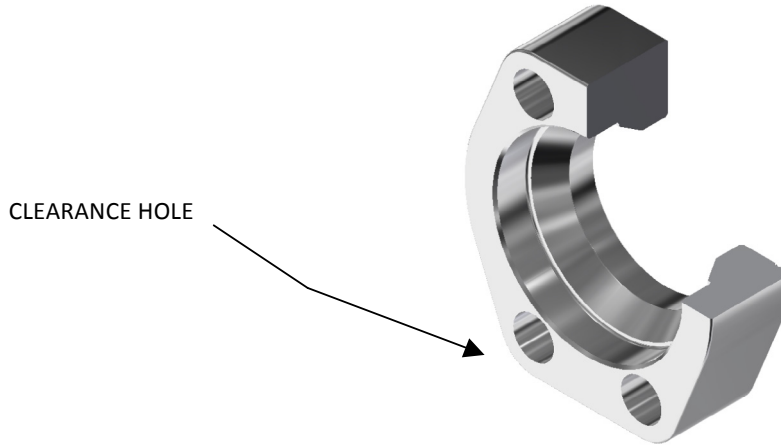
Clamp
Supports -
Heavy Series

Valves, Ball
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SAE 3000 PSI Flare Flange with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



FFC34 - Flare Flange with Clearance Holes, NPS				
Size	Pipe O.D. (in)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	0.840	FFC34-050-*	5000 (350)	0.44 (0.20)
3/4"	1.050	FFC34-075-*	5000 (350)	0.63 (0.29)
1"	1.315	FFC34-100-*	5000 (350)	0.72 (0.33)
1-1/4"	1.660	FFC34-125-*	4000 (280)	1.05 (0.48)
1-1/2"	1.900	FFC34-150-*	4000 (280)	1.59 (0.72)
2"	2.375	FFC34-200-*	4000 (280)	2.31 (1.05)
2-1/2"	2.875	FFC34-250-*	3000 (210)	3.02 (1.37)
3"	3.500	FFC34-300-*	3000 (210)	4.96 (2.25)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

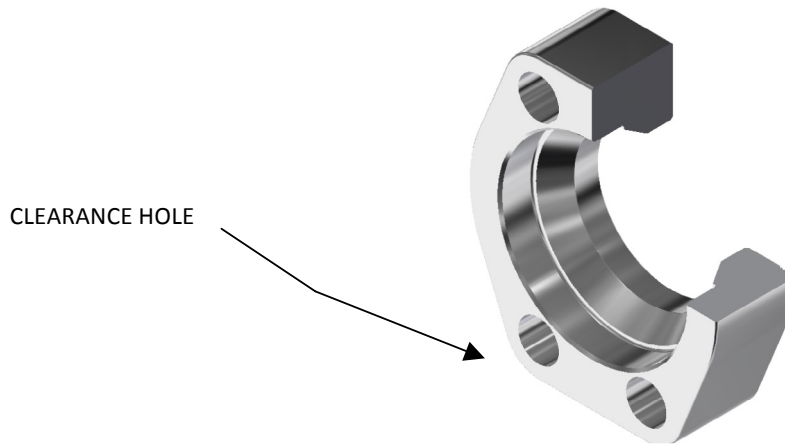
SS = Stainless Steel, Type 316.

Ordering Example: FFC34-200-SS

* Insert Material

SAE 3000 PSI Flare Flange with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



FFCM34 – Flare Flange with Clearance Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	16	FFCM34-050-16MM-*	5000 (350)	0.50 (0.23)
1/2"	18	FFCM34-050-18MM-*	5000 (350)	0.48 (0.22)
1/2"	20	FFCM34-050-20MM-*	5000 (350)	0.45 (0.20)
1/2"	25	FFCM34-050-25MM-*	5000 (350)	0.43 (0.20)
3/4"	20	FFCM34-075-20MM-*	5000 (350)	0.66 (0.30)
3/4"	25	FFCM34-075-25MM-*	5000 (350)	0.64 (0.29)
3/4"	30	FFCM34-075-30MM-*	5000 (350)	0.59 (0.27)
1"	25	FFCM34-100-25MM-*	5000 (350)	0.81 (0.37)
1"	30	FFCM34-100-30MM-*	5000 (350)	0.74 (0.34)
1"	38	FFCM34-100-38MM-*	5000 (350)	0.67 (0.30)
1-1/4"	30	FFCM34-125-30MM-*	4000 (280)	1.23 (0.56)
1-1/4"	38	FFCM34-125-38MM-*	4000 (280)	1.13 (0.51)
1-1/4"	42	FFC34-125-*	4000 (280)	1.07 (0.49)
1-1/2"	30	FFCM34-150-30MM-*	4000 (280)	2.06 (0.93)
1-1/2"	38	FFCM34-150-38MM-*	4000 (280)	1.90 (0.86)
1-1/2"	42	FFCR34-150x125-*	4000 (280)	1.94 (0.88)
1-1/2"	50	FFCM34-150-50MM-*	4000 (280)	1.55 (0.70)
2"	50	FFCM34-200-50MM-*	4000 (280)	2.61 (1.18)
2"	60	FFC34-200-*	4000 (280)	2.32 (1.05)
2-1/2"	60	FFCR34-250-200-*	3000 (210)	3.59 (1.63)
2-1/2"	73	FFC34-250-*	3000 (210)	3.03 (1.37)
2-1/2"	75	FFCM34-250-75MM-*	3000 (210)	2.97 (1.35)
3"	75	FFCM34-300-75MM-*	3000 (210)	5.95 (2.70)
3"	90	FFCM34-300-90MM-*	3000 (210)	4.91 (2.23)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

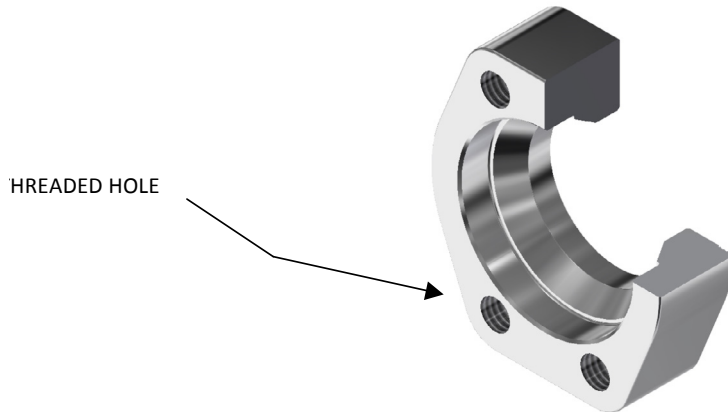
Ordering Example: FFCM34-200-50MM-SS

* Insert Material

3D step models available upon request

SAE 3000 PSI Flare Flange with Threaded Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



FFT34 - Flare Flange with Threaded Holes, NPS				
Size	Pipe O.D. (in)	Standard Part Number	Working Pressure PSI (bar)	Weight lbs (kg)
1/2"	0.840	FFT34-050-*	5000 (350)	0.49 (0.22)
3/4"	1.050	FFT34-075-*	5000 (350)	0.70 (0.32)
1"	1.315	FFT34-100-*	5000 (350)	0.79 (0.36)
1-1/4"	1.660	FFT34-125-*	4000 (280)	1.12 (0.51)
1-1/2"	1.900	FFT34-150-*	4000 (280)	1.70 (0.77)
2"	2.375	FFT34-200-*	4000 (280)	2.42 (1.10)
2-1/2"	2.875	FFT34-250-*	3000 (210)	3.16 (1.43)
3"	3.500	FFT34-300-*	3000 (210)	5.21 (2.36)

*** Materials:**

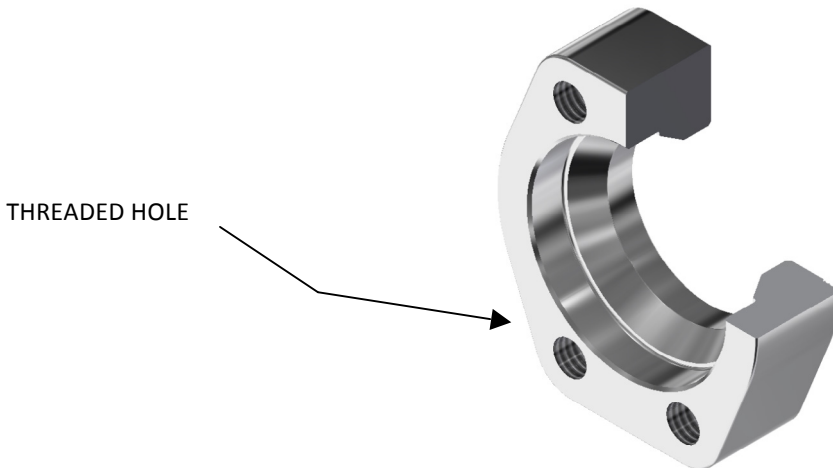
Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: FFT34-200-SS

* Insert Material

SAE 3000 PSI Flare Flange with Threaded Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



FFTM34 - Flare Flange with Threaded Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	16	FFTM34-050-16MM-*	5000 (350)	0.54 (0.24)
1/2"	18	FFTM34-050-18MM-*	5000 (350)	0.52 (0.24)
1/2"	20	FFTM34-050-20MM-*	5000 (350)	0.49 (0.22)
1/2"	25	FFTM34-050-25MM-*	5000 (350)	0.47 (0.21)
3/4"	20	FFTM34-075-20MM-*	5000 (350)	0.72 (0.33)
3/4"	25	FFTM34-075-25MM-*	5000 (350)	0.70 (0.32)
3/4"	30	FFTM34-075-30MM-*	5000 (350)	0.64 (0.29)
1"	25	FFTM34-100-25MM-*	5000 (350)	0.87 (0.39)
1"	30	FFTM34-100-30MM-*	5000 (350)	0.81 (0.37)
1"	38	FFTM34-100-38MM-*	5000 (350)	0.73 (0.33)
1-1/4"	30	FFTM34-125-30MM-*	4000 (280)	1.29 (0.59)
1-1/4"	38	FFTM34-125-38MM-*	4000 (280)	1.20 (0.54)
1-1/4"	42	FFTM34-125-42MM-*	4000 (280)	1.15 (0.52)
1-1/2"	30	FFTM34-150-30MM-*	4000 (280)	2.18 (0.99)
1-1/2"	38	FFTM34-150-38MM-*	4000 (280)	2.01 (0.91)
1-1/2"	42	FFTM34-150-42MM-*	4000 (280)	1.82 (0.83)
1-1/2"	50	FFTM34-150-50MM-*	4000 (280)	1.67 (0.76)
2"	50	FFTM34-200-50MM-*	4000 (280)	2.68 (1.22)
2"	60	FFTM34-200-60MM-*	4000 (280)	2.45 (1.11)
2-1/2"	60	FFTM34-250-60MM-*	3000 (210)	3.75 (1.70)
2-1/2"	73	FFTM34-250-73MM-*	3000 (210)	3.18 (1.44)
2-1/2"	75	FFTM34-250-75MM-*	3000 (210)	3.18 (1.44)
3"	75	FFTM34-300-75MM-*	3000 (210)	6.17 (2.80)
3"	90	FFTM34-300-90MM-*	3000 (210)	5.13 (2.33)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

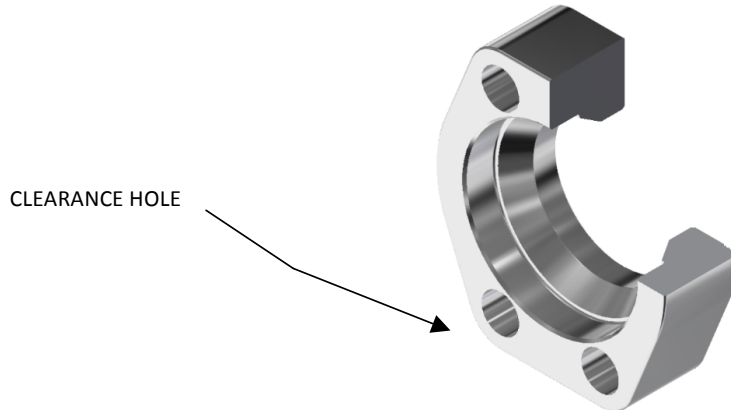
Ordering Example: FFTM34-200-50MM-SS

* Insert Material

3D step models available upon request

SAE 3000 PSI Flare Flange - Reducing with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Note:
Reducing Flanges
for NPS Pipe Only

FFCR34 - Flare Flange - Reducing with Clearance Holes, NPS			
Size (flange x pipe)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
3/4" x 1/2"	FFCR34-075 x 050	5000 (350)	0.63 (0.28)
1" x 3/4"	FFCR34-100 x 075	5000 (350)	0.73 (0.33)
1-1/4" x 1"	FFCR34-125 x 100	5000 (350)	1.10 (0.50)
1-1/2" x 1-1/4"	FFCR34-150 x 125	4000 (280)	1.53 (0.69)
2" x 1-1/2"	FFCR34-200 x 150	4000 (280)	2.22 (1.01)
2-1/2" x 2"	FFCR34-250 x 200	4000 (280)	3.60 (1.60)
3" x 2-1/2"	FFCR34-300 x 250	3000 (210)	5.90 (2.68)

*** Materials:**

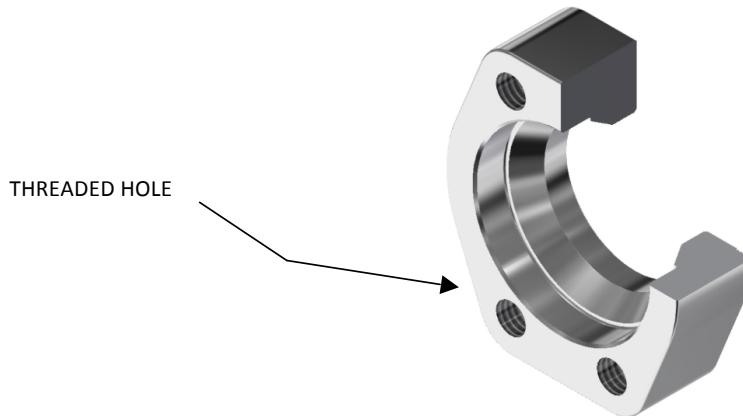
Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: FFCR34-075 x 050-SS

* Insert Material _____

SAE 3000 PSI Flare Flange - Reducing with Threaded Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Note:
Reducing Flanges
for NPS Pipe Only

FFTR34 - Flare Flange - Reducing with Threaded Holes, NPS			
Size (flange x pipe)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
3/4" x 1/2"	FFTR34-075 x 050	5000 (350)	0.63 (0.28)
1" x 3/4"	FFTR34-100 x 075	5000 (350)	0.73 (0.33)
1-1/4" x 1"	FFTR34-125 x 100	5000 (350)	1.10 (0.50)
1-1/2" x 1-1/4"	FFTR34-150 x 125	4000 (280)	1.53 (0.69)
2" x 1-1/2"	FFTR34-200 x 150	4000 (280)	2.22 (1.01)
2-1/2" x 2"	FFTR34-250 x 200	4000 (280)	3.60 (1.60)
3" x 2-1/2"	FFTR34-300 x 250	3000 (210)	5.90 (2.68)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

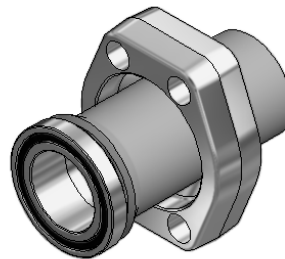
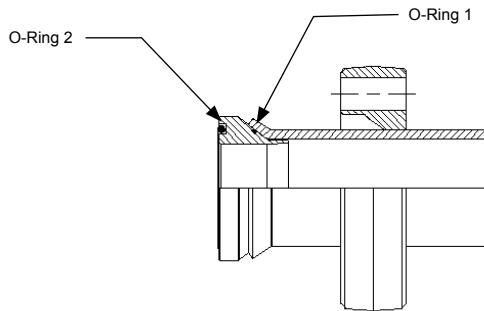
Ordering Example: FFTR34-075 x 050-SS

* Insert Material _____

3D step models available upon request

SAE 3000 PSI Flare Flange Set O-Ring Face with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFC34 - CO Flare Flange Set - O-Ring Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	FFC34-CO-SCH40-050-*^	0.60 (0.27)	FFC34-050-*	CO-SCH40-050-*^	ORV-1915	OR^2-2-210
1/2"	1/2" SCH80	FFC34-CO-SCH80-050-*^	0.59 (0.27)	FFC34-050-*	CO-SCH80-050-*^	ORV-1715	OR^2-2-210
3/4"	3/4" SCH40	FFC34-CO-SCH40-075-*^	0.72 (0.33)	FFC34-075-*	CO-SCH40-075-*^	ORV-2515	OR^2-2-214
3/4"	3/4" SCH80	FFC34-CO-SCH80-075-*^	0.72 (0.33)	FFC34-075-*	CO-SCH80-075-*^	ORV-2315	OR^2-2-214
1"	1" SCH40	FFC34-CO-SCH40-100-*^	0.94 (0.43)	FFC34-100-*	CO-SCH40-100-*^	ORV-3015	OR^2-2-219
1"	1" SCH80	FFC34-CO-SCH80-100-*^	0.94 (0.43)	FFC34-100-*	CO-SCH80-100-*^	ORV-2815	OR^2-2-219
1-1/4"	1-1/4" SCH40	FFC34-CO-SCH40-125-*^	1.26 (0.57)	FFC34-125-*	CO-SCH40-125-*^	ORV-3815	OR^2-2-222
1-1/4"	1-1/4" SCH80	FFC34-CO-SCH80-125-*^	1.26 (0.57)	FFC34-125-*	CO-SCH80-125-*^	ORV-3815	OR^2-2-222
1-1/2"	1-1/2" SCH40	FFC34-CO-SCH40-150-*^	1.93 (0.88)	FFC34-150-*	CO-SCH40-150-*^	ORV-4315	OR^2-2-225
1-1/2"	1-1/2" SCH80	FFC34-CO-SCH80-150-*^	1.95 (0.88)	FFC34-150-*	CO-SCH80-150-*^	ORV-4315	OR^2-2-225
1-1/2"	1-1/2" SCH160	FFC34-CO-SCH160-150-*^	2.03 (0.92)	FFC34-150-*	CO-SCH160-150-*^	ORV-3815	OR^2-2-225
2"	2" SCH40	FFC34-CO-SCH40-200-*^	2.67 (1.21)	FFC34-200-*	CO-SCH40-200-*^	ORV-5615	OR^2-2-228
2"	2" SCH80	FFC34-CO-SCH80-200-*^	2.70 (1.22)	FFC34-200-*	CO-SCH80-200-*^	ORV-5515	OR^2-2-228
2"	2" SCH160	FFC34-CO-SCH160-200-*^	2.90 (1.32)	FFC34-200-*	CO-SCH160-200-*^	ORV-5015	OR^2-2-228
2-1/2"	2-1/2" SCH40	FFC34-CO-SCH40-250-*^	4.01 (1.82)	FFC34-250-*	CO-SCH40-250-*^	ORV-2-036	OR^2-2-232
2-1/2"	2-1/2" SCH80	FFC34-CO-SCH80-250-*^	4.05 (1.84)	FFC34-250-*	CO-SCH80-250-*^	ORV-2-036	OR^2-2-232
2-1/2"	2-1/2" SCH160	FFC34-CO-SCH160-250-*^	4.47 (2.03)	FFC34-250-*	CO-SCH160-250-*^	ORV-5615	OR^2-2-232
3"	3" SCH40	FFC34-CO-SCH40-300-*^	6.33 (2.87)	FFC34-300-*	CO-SCH40-300-*^	ORV-2-041	OR^2-2-237
3"	3" SCH80	FFC34-CO-SCH80-300-*^	6.40 (2.90)	FFC34-300-*	CO-SCH80-300-*^	ORV-2-041	OR^2-2-237

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

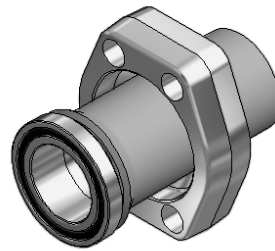
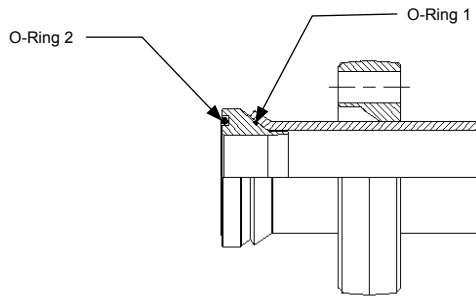
Ordering Example: FFC34-CO-SCH80-200-SS-V

* Insert Material

^ Insert O-Ring 2 Type

SAE 3000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34 - CO - Flare Flange Set O-Ring Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	FFCM34-CO-20x2.0-050-*^-^	0.67 (0.30)	FFCM34-050-20MM-*	CO-20x2.0-050-*^-^	ORV-1715	OR^-2-210
1/2"	20x3.0	FFCM34-CO-20x3.0-050-*^-^	0.67 (0.30)	FFCM34-050-20MM-*	CO-20x3.0-050-*^-^	ORV-1715	OR^-2-210
1/2"	25x2.5	FFCM34-CO-25x2.5-050-*^-^	0.67 (0.30)	FFCM34-050-25MM-*	CO-25x2.5-050-*^-^	ORV-2315	OR^-2-210
1/2"	25x3.0	FFCM34-CO-25x3.0-050-*^-^	0.67 (0.30)	FFCM34-050-25MM-*	CO-25x3.0-050-*^-^	ORV-2315	OR^-2-210
3/4"	20x2.0	FFCM34-CO-20x2.0-075-*^-^	0.70 (0.32)	FFCM34-075-20MM-*	CO-20x2.0-075-*^-^	ORV-1715	OR^-2-214
3/4"	20x2.5	FFCM34-CO-20x2.5-075-*^-^	0.70 (0.32)	FFCM34-075-20MM-*	CO-20x2.5-075-*^-^	ORV-1715	OR^-2-214
3/4"	20x3.0	FFCM34-CO-20x3.0-075-*^-^	0.70 (0.32)	FFCM34-075-20MM-*	CO-20x3.0-075-*^-^	ORV-1715	OR^-2-214
3/4"	25x2.5	FFCM34-CO-25x2.5-075-*^-^	0.70 (0.32)	FFCM34-075-25MM-*	CO-25x2.5-075-*^-^	ORV-2315	OR^-2-214
3/4"	25x3.0	FFCM34-CO-25x3.0-075-*^-^	0.70 (0.32)	FFCM34-075-25MM-*	CO-25x3.0-075-*^-^	ORV-2315	OR^-2-214
3/4"	25x4.0	FFCM34-CO-25x4.0-075-*^-^	0.70 (0.32)	FFCM34-075-25MM-*	CO-25x4.0-075-*^-^	ORV-2315	OR^-2-214
3/4"	30x3.0	FFCM34-CO-30x3.0-075-*^-^	0.72 (0.33)	FFCM34-075-30MM-*	CO-30x3.0-075-*^-^	ORV-2515	OR^-2-214
1"	25x2.5	FFCM34-CO-25x2.5-100-*^-^	0.82 (0.37)	FFCM34-100-25MM-*	CO-25x2.5-100-*^-^	ORV-2315	OR^-2-219
1"	25x3.0	FFCM34-CO-25x3.0-100-*^-^	0.82 (0.37)	FFCM34-100-25MM-*	CO-25x3.0-100-*^-^	ORV-2315	OR^-2-219
1"	25x4.0	FFCM34-CO-25x4.0-100-*^-^	0.82 (0.37)	FFCM34-100-25MM-*	CO-25x4.0-100-*^-^	ORV-2315	OR^-2-219
1"	30x3.0	FFCM34-CO-30x3.0-100-*^-^	0.84 (0.38)	FFCM34-100-30MM-*	CO-30x3.0-100-*^-^	ORV-2815	OR^-2-219
1"	30x4.0	FFCM34-CO-30x4.0-100-*^-^	0.84 (0.38)	FFCM34-100-30MM-*	CO-30x4.0-100-*^-^	ORV-2815	OR^-2-219
1"	30x5.0	FFCM34-CO-30x5.0-100-*^-^	0.84 (0.38)	FFCM34-100-30MM-*	CO-30x5.0-100-*^-^	ORV-2815	OR^-2-219
1"	38x3.0	FFCM34-CO-38x3.0-100-*^-^	0.85 (0.38)	FFCM34-100-38MM-*	CO-38x3.0-100-*^-^	ORV-3515	OR^-2-219
1"	38x4.0	FFCM34-CO-38x4.0-100-*^-^	0.86 (0.39)	FFCM34-100-38MM-*	CO-38x4.0-100-*^-^	ORV-3515	OR^-2-219
1"	38x5.0	FFCM34-CO-38x5.0-100-*^-^	0.86 (0.39)	FFCM34-100-38MM-*	CO-38x6.0-100-*^-^	ORV-3215	OR^-2-219
1-1/4"	30x3.0	FFCM34-CO-30x3.0-125-*^-^	1.07 (0.49)	FFCM34-125-30MM-*	CO-30x3.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4"	30x4.0	FFCM34-CO-30x4.0-125-*^-^	1.07 (0.49)	FFCM34-125-30MM-*	CO-30x4.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4"	30x5.0	FFCM34-CO-30x5.0-125-*^-^	1.07 (0.49)	FFCM34-125-30MM-*	CO-30x5.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4"	38x4.0	FFCM34-CO-38x4.0-125-*^-^	1.09 (0.50)	FFCM34-125-38MM-*	CO-38x4.0-125-*^-^	ORV-3515	OR^-2-222
1-1/4"	38x5.0	FFCM34-CO-38x5.0-125-*^-^	1.09 (0.50)	FFCM34-125-38MM-*	CO-38x5.0-125-*^-^	ORV-3015	OR^-2-222
1-1/4"	42x3.0	FFCM34-CO-42x3.0-125-*^-^	1.14 (0.52)	FFC34-125-*	CO-42x3.0-125-*^-^	ORV-3815	OR^-2-222
1-1/4"	42x4.0	FFCM34-CO-42x4.0-125-*^-^	1.14 (0.52)	FFC34-125-*	CO-42x4.0-125-*^-^	ORV-3815	OR^-2-222

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: FFCM34-CO-SCH80-200-SS-V

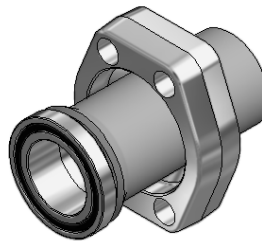
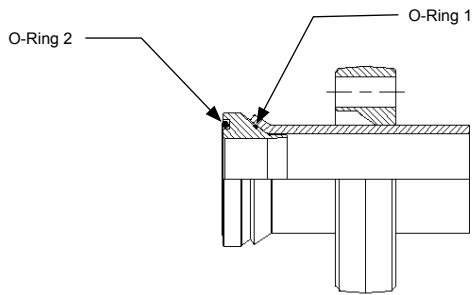
* Insert Material

^ Insert O-Ring 2 Type

3D step models available upon request

SAE 3000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34-CO Flare Flange Set - O-Ring Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	30x3.0	FFCM34-CO-30x3.0-150-*^-^	1.86 (0.85)	FFCM34-150-30MM-*	CO-30x3.0-150-*^-^	ORV-2815	OR^-2-225
1-1/2"	38x4.0	FFCM34-CO-38x4.0-150-*^-^	1.89 (0.86)	FFCM34-150-38MM-*	CO-38x4.0-150-*^-^	ORV-3215	OR^-2-225
1-1/2"	38x6.0	FFCM34-CO-38x6.0-150-*^-^	1.89 (0.86)	FFCM34-150-38MM-*	CO-38x6.0-150-*^-^	ORV-3215	OR^-2-225
1-1/2"	42x3.0	FFCM34-CO-42x3.0-150-*^-^	1.89 (0.86)	FFCM34-150-42MM-*	CO-42x3.0-150-*^-^	ORV-3815	OR^-2-225
1-1/2"	42x4.0	FFCM34-CO-42x4.0-150-*^-^	1.89 (0.86)	FFCM34-150-42MM-*	CO-42x4.0-150-*^-^	ORV-3815	OR^-2-225
1-1/2"	50x3.0	FFCM34-CO-50x3.0-150-*^-^	1.91 (0.87)	FFCM34-150-50MM-*	CO-50x3.0-150-*^-^	ORV-4715	OR^-2-225
1-1/2"	50x5.0	FFCM34-CO-50x5.0-150-*^-^	1.91 (0.87)	FFCM34-150-50MM-*	CO-50x5.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50x6.0	FFCM34-CO-50x6.0-150-*^-^	1.91 (0.87)	FFCM34-150-50MM-*	CO-50x6.0-150-*^-^	ORV-4515	OR^-2-225
2"	50x3.0	FFCM34-CO-50x3.0-200-*^-^	2.61 (1.19)	FFCM34-200-50MM-*	CO-50x3.0-200-*^-^	ORV-4515	OR^-2-228
2"	50x5.0	FFCM34-CO-50x5.0-200-*^-^	2.61 (1.19)	FFCM34-200-50MM-*	CO-50x5.0-200-*^-^	ORV-4515	OR^-2-228
2"	50x6.0	FFCM34-CO-50x6.0-200-*^-^	2.61 (1.19)	FFCM34-200-50MM-*	CO-50x6.0-200-*^-^	ORV-4515	OR^-2-228
2"	60x3.0	FFCM34-CO-60x3.0-200-*^-^	2.63 (1.20)	FFC34-200-*	CO-60x3.0-200-*^-^	ORV-5715	OR^-2-228
2"	60x5.0	FFCM34-CO-60x5.0-200-*^-^	2.63 (1.20)	FFCM4-200-*	CO-60x5.0-200-*^-^	ORV-5615	OR^-2-228
2"	60x6.0	FFCM34-CO-60x6.0-200-*^-^	2.63 (1.20)	FFCM3-200-*	CO-60x6.0-200-*^-^	ORV-5615	OR^-2-228
2-1/2"	60x5.0	FFCM34-CO-60x5.0-250-*^-^	4.03 (1.83)	FFCM34-250-60MM-*	CO-60x5.0-250-*^-^	ORV-5615	OR^-2-232
2-1/2"	60x6.0	FFCM34-CO-60x6.0-250-*^-^	4.03 (1.83)	FFCM34-250-60MM-*	CO-60x6.0-250-*^-^	ORV-5615	OR^-2-232
2-1/2"	73x7.0	FFC34-CO-SCH80-250-*^-^	4.07 (1.85)	FFC34-250-*	CO-SCH80-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	75x3.0	FFCM34-CO-75x3.0-250-*^-^	4.07 (1.85)	FFCM34-250-75MM-*	CO-75x3.0-250-*^-^	ORV-6915	OR^-2-232
2-1/2"	75x5.0	FFCM34-CO-75x5.0-250-*^-^	4.07 (1.85)	FFCM34-250-75MM-*	CO-75x5.0-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	75x7.0	FFCM34-CO-75x7.0-250-*^-^	4.07 (1.85)	FFCM34-250-75MM-*	CO-75x7.0-250-*^-^	ORV-6715	OR^-2-232
3"	75x5.0	FFCM34-CO-75x5.0-300-*^-^	5.83 (2.65)	FFCM34-300-75MM-*	CO-75x5.0-300-*^-^	ORV-2-237	OR^-2-237
3"	90x3.5	FFCM34-CO-90x3.5-300-*^-^	5.92 (2.69)	FFCM34-300-90MM-*	CO-90x3.5-300-*^-^	ORV-8515	OR^-2-237
3"	90x5.0	FFCM34-CO-90x5.0-300-*^-^	5.92 (2.69)	FFCM34-300-90MM-*	CO-90x5.0-300-*^-^	ORV-2-040	OR^-2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: FFCM34-CO-50x3.0-200-SS-V

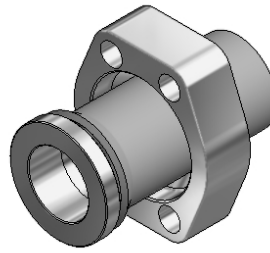
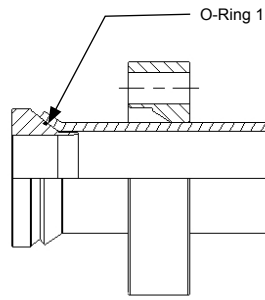
* Insert Material _____

^ Insert O-Ring 2 Type _____

3D step models available upon request

SAE 3000 PSI Flare Flange Set Flat Face with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFC34-CF - Flare Flange Set Flat Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	1/2" SCH40	FFC34-CF-SCH40-050-*	0.67 (0.30)	FFC34-050-*	CF-SCH40-050-*	ORV-1915
1/2"	1/2" SCH80	FFC34-CF-SCH80-050-*	0.66 (0.30)	FFC34-050-*	CF-SCH80-050-*	ORV-1715
3/4"	3/4" SCH40	FFC34-CF-SCH40-075-*	0.73 (0.33)	FFC34-075-*	CF-SCH40-075-*	ORV-2515
3/4"	3/4" SCH80	FFC34-CF-SCH80-075-*	0.73 (0.33)	FFC34-075-*	CF-SCH80-075-*	ORV-2315
1"	1" SCH40	FFC34-CF-SCH40-100-*	0.87 (0.39)	FFC34-100-*	CF-SCH40-100-*	ORV-3015
1"	1" SCH80	FFC34-CF-SCH80-100-*	0.87 (0.39)	FFC34-100-*	CF-SCH80-100-*	ORV-2815
1-1/4"	1-1/4" SCH40	FFC34-CF-SCH40-125-*	1.12 (0.51)	FFC34-125-*	CF-SCH40-125-*	ORV-3815
1-1/4"	1-1/4" SCH80	FFC34-CF-SCH80-125-*	1.12 (0.51)	FFC34-125-*	CF-SCH80-125-*	ORV-3815
1-1/2"	1-1/2" SCH40	FFC34-CF-SCH40-150-*	1.94 (0.88)	FFC34-150-*	CF-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC34-CF-SCH80-150-*	1.95 (0.88)	FFC34-150-*	CF-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC34-CF-SCH160-150-*	1.94 (0.88)	FFC34-150-*	CF-SCH160-150-*	ORV-3815
2"	2" SCH40	FFC34-CF-SCH40-200-*	2.69 (1.22)	FFC34-200-*	CF-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC34-CF-SCH80-200-*	2.70 (1.22)	FFC34-200-*	CF-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC34-CF-SCH160-200-*	2.88 (1.31)	FFC34-200-*	CF-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH40	FFC34-CF-SCH40-250-*	4.09 (1.86)	FFC34-250-*	CF-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC34-CF-SCH80-250-*	4.14 (1.88)	FFC34-250-*	CF-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC34-CF-SCH160-250-*	4.58 (2.08)	FFC34-250-*	CF-SCH160-250-*	ORV-5615
3"	3" SCH40	FFC34-CF-SCH40-300-*	5.99 (2.72)	FFC34-300-*	CF-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC34-CF-SCH80-300-*	5.88 (2.67)	FFC34-300-*	CF-SCH80-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC34-CF-SCH80-200-SS

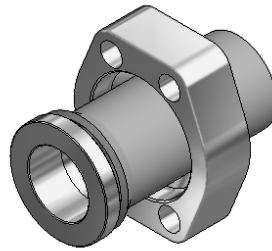
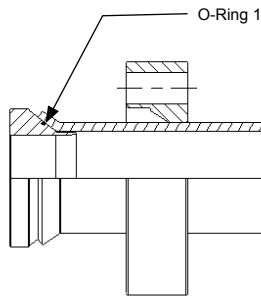
* Insert Material _____

3D step models available upon request

SAE 3000 PSI Flare Flange Set

Flat Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34-CF - Flare Flange Set - Flat Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	20x2.0	FFCM34-CF-20x2.0-050-*	0.67 (0.30)	FFCM34-050-20MM-*	CF-20x2.0-050-*	ORV-1715
1/2"	20x3.0	FFCM34-CF-20x3.0-050-*	0.67 (0.30)	FFCM34-050-20MM-*	CF-20x3.0-050-*	ORV-1715
1/2"	25x2.5	FFCM34-CF-25x2.5-050-*	0.67 (0.30)	FFCM34-050-25MM-*	CF-25x2.5-050-*	ORV-2315
1/2"	25x3.0	FFCM34-CF-25x3.0-050-*	0.67 (0.30)	FFCM34-050-25MM-*	CF-25x3.0-050-*	ORV-2315
3/4"	20x2.0	FFCM34-CF-20x2.0-075-*	0.70 (0.32)	FFCM34-075-20MM-*	CF-20x2.0-075-*	ORV-1715
3/4"	20x2.5	FFCM34-CF-20x2.5-075-*	0.70 (0.32)	FFCM34-075-20MM-*	CF-20x2.5-075-*	ORV-1715
3/4"	20x3.0	FFCM34-CF-20x3.0-075-*	0.70 (0.32)	FFCM34-075-20MM-*	CF-20x3.0-075-*	ORV-1715
3/4"	25x2.5	FFCM34-CF-25x2.5-075-*	0.70 (0.32)	FFCM34-075-25MM-*	CF-25x2.5-075-*	ORV-2315
3/4"	25x3.0	FFCM34-CF-25x3.0-075-*	0.70 (0.32)	FFCM34-075-25MM-*	CF-25x3.0-075-*	ORV-2315
3/4"	25x4.0	FFCM34-CF-25x4.0-075-*	0.70 (0.32)	FFCM34-075-25MM-*	CF-25x4.0-075-*	ORV-2315
3/4"	30x3.0	FFCM34-CF-30x3.0-075-*	0.73 (0.33)	FFCM34-075-30MM-*	CF-30x3.0-075-*	ORV-2515
1"	25x2.5	FFCM34-CF-25x2.5-100-*	0.83 (0.37)	FFCM34-100-25MM-*	CF-25x2.5-100-*	ORV-2315
1"	25x3.0	FFCM34-CF-25x3.0-100-*	0.83 (0.37)	FFCM34-100-25MM-*	CF-25x3.0-100-*	ORV-2315
1"	25x4.0	FFCM34-CF-25x4.0-100-*	0.83 (0.37)	FFCM34-100-25MM-*	CF-25x4.0-100-*	ORV-2315
1"	30x3.0	FFCM34-CF-30x3.0-100-*	0.85 (0.38)	FFCM34-100-30MM-*	CF-30x3.0-100-*	ORV-2815
1"	30x4.0	FFCM34-CF-30x4.0-100-*	0.85 (0.38)	FFCM34-100-30MM-*	CF-30x4.0-100-*	ORV-2815
1"	30x5.0	FFCM34-CF-30x5.0-100-*	0.85 (0.38)	FFCM34-100-30MM-*	CF-30x5.0-100-*	ORV-2815
1"	38x3.0	FFCM34-CF-38x3.0-100-*	0.86 (0.38)	FFCM34-100-38MM-*	CF-38x3.0-100-*	ORV-4515
1"	38x4.0	FFCM34-CF-38x4.0-100-*	0.87 (0.39)	FFCM34-100-38MM-*	CF-38x4.0-100-*	ORV-3515
1"	38x6.0	FFCM34-CF-38x6.0-100-*	0.87 (0.39)	FFCM34-100-38MM-*	CF-38x6.0-100-*	ORV-3215
1-1/4"	30x3.0	FFCM34-CF-30x3.0-125-*	1.08 (0.49)	FFCM34-125-30MM-*	CF-30x3.0-125-*	ORV-2815
1-1/4"	30x4.0	FFCM34-CF-30x4.0-125-*	1.08 (0.49)	FFCM34-125-30MM-*	CF-30x4.0-125-*	ORV-2815
1-1/4"	30x5.0	FFCM34-CF-30x5.0-125-*	1.08 (0.49)	FFCM34-125-30MM-*	CF-30x5.0-125-*	ORV-2815
1-1/4"	38x4.0	FFCM34-CF-38x4.0-125-*	1.10 (0.50)	FFCM34-125-38MM-*	CF-38x4.0-125-*	ORV-3515
1-1/4"	38x5.0	FFCM34-CF-38x5.0-125-*	1.10 (0.50)	FFCM34-125-38MM-*	CF-38x5.0-125-*	ORV-3215
1-1/4"	38x6.0	FFCM34-CF-38x6.0-125-*	1.10 (0.50)	FFCM34-125-38MM-*	CF-38x6.0-125-*	ORV-3215
1-1/4"	42x3.0	FFCM34-CF-42x3.0-125-*	1.15 (0.53)	FFC34-125-*	CF-42x3.0-125-*	ORV-3815
1-1/4"	42x4.0	FFCM34-CF-42x4.0-125-*	1.15 (0.53)	FFC34-125-*	CF-42x4.0-125-*	ORV-3815

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

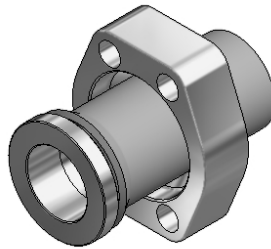
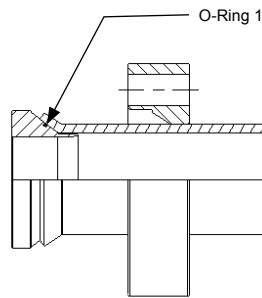
Ordering Example: FFCM34-CF-50x3.0-200-SS

* Insert Material

SAE 3000 PSI Flare Flange Set

Flat Face with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34-CF - Flare Flange Set - Flat Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	30x3.0	FFCM34-CF-30x3.0-150-*	1.87 (0.85)	FFCM34-150-30MM-*	CF-30x3.0-150-*	ORV-2815
1-1/2"	38x4.0	FFCM34-CF-38x4.0-150-*	1.91 (0.87)	FFCM34-150-38MM-*	CF-38x4.0-150-*	ORV-3215
1-1/2"	38x6.0	FFCM34-CF-38x6.0-150-*	1.91 (0.87)	FFCM34-150-38MM-*	CF-38x6.0-150-*	ORV-3215
1-1/2"	42x3.0	FFCM34-CF-42x3.0-150-*	1.91 (0.87)	FFCM34-150-42MM-*	CF-42x3.0-150-*	ORV-3815
1-1/2"	42x4.0	FFCM34-CF-42x4.0-150-*	1.91 (0.87)	FFCM34-150-42MM-*	CF-42x4.0-150-*	ORV-3815
1-1/2"	50x3.0	FFCM34-CF-50x3.0-150-*	1.93 (0.88)	FFCM34-150-50MM-*	CF-50x3.0-150-*	ORV-4715
1-1/2"	50x5.0	FFCM34-CF-50x5.0-150-*	1.93 (0.88)	FFCM34-150-50MM-*	CF-50x5.0-150-*	ORV-4515
2"	50x3.0	FFCM34-CF-50x3.0-200-*	2.63 (1.20)	FFCM34-200-50MM-*	CF-50x3.0-200-*	ORV-4515
2"	50x5.0	FFCM34-CF-50x5.0-200-*	2.63 (1.20)	FFCM34-200-50MM-*	CF-50x5.0-200-*	ORV-4515
2"	50x6.0	FFCM34-CF-50x6.0-200-*	2.63 (1.20)	FFCM34-200-50MM-*	CF-50x6.0-200-*	ORV-4515
2"	60x3.0	FFCM34-CF-60x3.0-200-*	2.65 (1.21)	FFC34-200-*	CF-60x3.0-200-*	ORV-5715
2"	60x5.0	FFCM34-CF-60x5.0-200-*	2.65 (1.21)	FFC34-200-*	CF-60x5.0-200-*	ORV-5615
2"	60x6.0	FFCM34-CF-60x6.0-200-*	2.65 (1.21)	FFC34-200-*	CF-60x6.0-200-*	ORV-5615
2-1/2"	60x5.0	FFCM34-CF-60x5.0-250-*	4.07 (1.85)	FFCM34-250-60MM-*	CF-60x5.0-250-*	ORV-5615
2-1/2"	60x6.0	FFCM34-CF-60x6.0-250-*	4.07 (1.85)	FFCM34-250-60MM-*	CF-60x6.0-250-*	ORV-5615
2-1/2"	73x7.0	FFC34-CF-SCH80-250-*^	4.11 (1.87)	FFC34-250-*	CF-SCH80-250-*^	ORV-2-036
2-1/2"	75x3.0	FFCM34-CF-75x3.0-250-*	4.11 (1.87)	FFCM34-250-75MM-*	CF-75x3.0-250-*	ORV-6915
2-1/2"	75x5.0	FFCM34-CF-75x5.0-250-*	4.11 (1.87)	FFCM34-250-75MM-*	CF-75x5.0-250-*	ORV-2-036
2-1/2"	75x7.0	FFCM34-CF-75x7.0-250-*	4.11 (1.87)	FFCM34-250-75MM-*	CF-75x7.0-250-*	ORV-6715
3"	75x5.0	FFCM34-CF-75x5.0-300-*	5.88 (2.67)	FFCM34-300-75MM-*	CF-75x5.0-300-*	ORV-2-237
3"	90x3.5	FFCM34-CF-90x3.5-300-*	5.97 (2.71)	FFCM34-300-90MM-*	CF-90x3.5-300-*	ORV-8515
3"	90x5.0	FFCM34-CF-90x5.0-300-*	5.97 (2.71)	FFCM34-300-90MM-*	CF-90x5.0-300-*	ORV-2-040

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

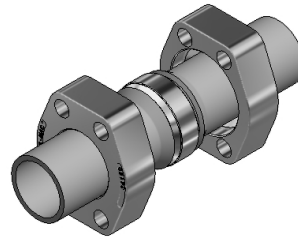
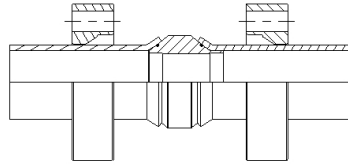
Ordering Example: FFCM34-CF-50x3.0-200-SS

* Insert Material

3D step models available upon request

SAE 3000 PSI Flare Flange Double Cone Union Set with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFC34-CD - Flare Flange Double Cone Union Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	1/2" SCH40	FFC34-CD-SCH40-050-*	1.32 (0.59)	FFC34-050-*	CD-SCH40-050-*	ORV-1915
1/2"	1/2" SCH80	FFC34-CD-SCH80-050-*	1.30 (0.58)	FFC34-050-*	CD-SCH80-050-*	ORV-1715
3/4"	3/4" SCH40	FFC34-CD-SCH40-075-*	1.37 (0.61)	FFC34-075-*	CD-SCH40-075-*	ORV-2515
3/4"	3/4" SCH80	FFC34-CD-SCH80-075-*	1.37 (0.61)	FFC34-075-*	CD-SCH80-075-*	ORV-2315
1"	1" SCH40	FFC34-CD-SCH40-100-*	1.53 (0.69)	FFC34-100-*	CD-SCH40-100-*	ORV-3015
1"	1" SCH80	FFC34-CD-SCH80-100-*	1.54 (0.69)	FFC34-100-*	CD-SCH80-100-*	ORV-2815
1-1/4"	1-1/4" SCH40	FFC34-CD-SCH40-125-*	1.61 (0.72)	FFC34-125-*	CD-SCH40-125-*	ORV-3815
1-1/4"	1-1/4" SCH80	FFC34-CD-SCH80-125-*	1.66 (0.76)	FFC34-125-*	CD-SCH80-125-*	ORV-3815
1-1/2"	1-1/2" SCH40	FFC34-CD-SCH40-150-*	2.00 (0.91)	FFC34-150-*	CD-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC34-CD-SCH80-150-*	2.02 (0.92)	FFC34-150-*	CD-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC34-CD-SCH160-150-*	2.01 (0.91)	FFC34-150-*	CD-SCH160-150-*	ORV-3815
2"	2" SCH40	FFC34-CD-SCH40-200-*	2.12 (0.97)	FFC34-200-*	CD-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC34-CD-SCH80-200-*	2.15 (0.98)	FFC34-200-*	CD-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC34-CD-SCH160-200-*	2.49 (1.13)	FFC34-200-*	CD-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH40	FFC34-CD-SCH40-250-*	3.18 (1.44)	FFC34-250-*	CD-SCH40-250-*	ORV-2-036
2-1/2"	2-1/2" SCH80	FFC34-CD-SCH80-250-*	3.23 (1.46)	FFC34-250-*	CD-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC34-CD-SCH160-250-*	4.05 (1.84)	FFC34-250-*	CD-SCH160-250-*	ORV-5615
3"	3" SCH40	FFC34-CD-SCH40-300-*	3.86 (1.75)	FFC34-300-*	CD-SCH40-300-*	ORV-2-041
3"	3" SCH80	FFC34-CD-SCH80-300-*	3.65 (1.65)	FFC34-300-*	CD-SCH80-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

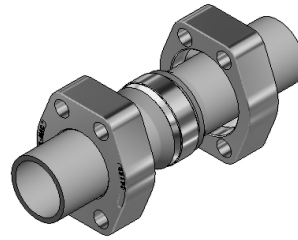
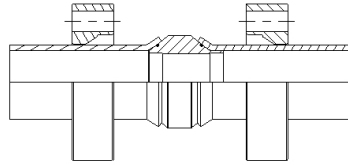
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM34-CD-50x3.0-200-SS

* Insert Material

SAE 3000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34-CD - Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	20x2.0	FFCM34-CD-20x2.0-050-*	1.33 (0.60)	FFCM34-050-20MM-*	CD-20x2.0-050-*	ORV-1715
1/2"	20x3.0	FFCM34-CD-20x3.0-050-*	1.33 (0.60)	FFCM34-050-20MM-*	CD-20x3.0-050-*	ORV-1715
1/2"	25x2.5	FFCM34-CD-25x2.5-050-*	1.33 (0.60)	FFCM34-050-25MM-*	CD-25x2.5-050-*	ORV-2315
1/2"	25x3.0	FFCM34-CD-25x3.0-050-*	1.33 (0.60)	FFCM34-050-25MM-*	CD-25x3.0-050-*	ORV-2315
3/4"	20x2.0	FFCM34-CD-20x2.0-075-*	1.39 (0.64)	FFCM34-075-20MM-*	CD-20x2.0-075-*	ORV-1715
3/4"	20x2.5	FFCM34-CD-20x2.5-075-*	1.39 (0.64)	FFCM34-075-20MM-*	CD-20x2.5-075-*	ORV-1715
3/4"	20x3.0	FFCM34-CD-20x3.0-075-*	1.39 (0.64)	FFCM34-075-20MM-*	CD-20x3.0-075-*	ORV-1715
3/4"	25x2.5	FFCM34-CD-25x2.5-075-*	1.39 (0.64)	FFCM34-075-25MM-*	CD-25x2.5-075-*	ORV-2315
3/4"	25x3.0	FFCM34-CD-25x3.0-075-*	1.39 (0.64)	FFCM34-075-25MM-*	CD-25x3.0-075-*	ORV-2315
3/4"	25x4.0	FFCM34-CD-25x4.0-075-*	1.39 (0.64)	FFCM34-075-25MM-*	CD-25x4.0-075-*	ORV-2315
3/4"	30x3.0	FFCM34-CD-30x3.0-075-*	1.43 (0.65)	FFCM34-075-30MM-*	CD-30x3.0-075-*	ORV-2515
1"	25x2.5	FFCM34-CD-25x2.5-100-*	1.63 (0.74)	FFCM34-100-25MM-*	CD-25x2.5-100-*	ORV-2315
1"	25x3.0	FFCM34-CD-25x3.0-100-*	1.63 (0.74)	FFCM34-100-25MM-*	CD-25x3.0-100-*	ORV-2315
1"	25x4.0	FFCM34-CD-25x4.0-100-*	1.63 (0.74)	FFCM34-100-25MM-*	CD-25x4.0-100-*	ORV-2315
1"	30x3.0	FFCM34-CD-30x3.0-100-*	1.67 (0.76)	FFCM34-100-30MM-*	CD-30x3.0-100-*	ORV-2815
1"	30x4.0	FFCM34-CD-30x4.0-100-*	1.67 (0.76)	FFCM34-100-30MM-*	CD-30x4.0-100-*	ORV-2815
1"	30x5.0	FFCM34-CD-30x5.0-100-*	1.67 (0.76)	FFCM34-100-30MM-*	CD-30x5.0-100-*	ORV-2815
1"	38x3.0	FFCM34-CD-38x3.0-100-*	1.69 (0.77)	FFCM34-100-30MM-*	CD-38x3.0-100-*	ORV-4515
1"	38x4.0	FFCM34-CD-38x4.0-100-*	1.71 (0.77)	FFCM34-100-38MM-*	CD-38x4.0-100-*	ORV-3515
1"	38x5.0	FFCM34-CD-38x5.0-100-*	1.71 (0.77)	FFCM34-100-38MM-*	CD-38x5.0-100-*	ORV-3215
1-1/4"	30x3.0	FFCM34-CD-30x3.0-125-*	2.13 (0.97)	FFCM34-125-30MM-*	CD-30x3.0-125-*	ORV-2815
1-1/4"	30x4.0	FFCM34-CD-30x4.0-125-*	2.13 (0.97)	FFCM34-125-30MM-*	CD-30x4.0-125-*	ORV-2815
1-1/4"	30x5.0	FFCM34-CD-30x5.0-125-*	2.13 (0.97)	FFCM34-125-30MM-*	CD-30x5.0-125-*	ORV-2815
1-1/4"	38x4.0	FFCM34-CD-38x4.0-125-*	2.17 (0.99)	FFCM34-125-38MM-*	CD-38x4.0-125-*	ORV-3515
1-1/4"	38x5.0	FFCM34-CD-38x5.0-125-*	2.17 (0.99)	FFCM34-125-38MM-*	CD-38x5.0-125-*	ORV-3215
1-1/4"	38x5.0	FFCM34-CD-38x5.0-125-*	2.17 (0.99)	FFCM34-125-38MM-*	CD-38x5.0-125-*	ORV-3215
1-1/4"	42x3.0	FFCM34-CD-42x3.0-125-*	2.26 (1.03)	FFC34-125-*	CD-42x3.0-125-*	ORV-3815
1-1/4"	42x4.0	FFCM34-CD-42x4.0-125-*	2.26 (1.03)	FFC34-125-*	CD-42x4.0-125-*	ORV-3815

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM34-CD-50x3.0-200-SS

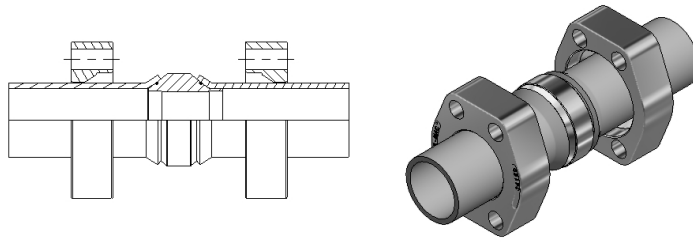
* Insert Material _____

3D step models available upon request

Introduction
 Technical Data
 Pipe Selection Guide
 16 bar, 99° Flare
 ANSI 150#, 300# Flare
 SAE 1000, 70 bar
 SAE 3000, 210 bar
 SAE 6000, 420 bar
 SAE 10000, 690 bar
 ISO 6164, 400 bar
 ISO 6164, 400 bar F10° Flare
 Clamp Supports - Heavy Series
 Valves, Ball and Check
 G15

SAE 3000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G1)

FFCM34-CD - Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	30x3.0	FFCM34-CD-30x3.0-150-*	3.70 (1.69)	FFCM34-150-30MM-*	CD-30x3.0-150-*	ORV-2815
1-1/2"	38x4.0	FFCM34-CD-38x4.0-150-*	3.76 (1.71)	FFCM34-150-38MM-*	CD-38x4.0-150-*	ORV-3215
1-1/2"	38x5.0	FFCM34-CD-38x5.0-150-*	3.76 (1.71)	FFCM34-150-38MM-*	CD-38x5.0-150-*	ORV-3215
1-1/2"	42x3.0	FFCM34-CD-42x3.0-150-*	3.76 (1.71)	FFCM34-150-42MM-*	CD-42x3.0-150-*	ORV-3815
1-1/2"	42x4.0	FFCM34-CD-42x4.0-150-*	3.76 (1.71)	FFCM34-150-42MM-*	CD-42x4.0-150-*	ORV-3815
1-1/2"	50x3.0	FFCM34-CD-50x3.0-150-*	3.79 (1.73)	FFCM34-150-50MM-*	CD-50x3.0-150-*	ORV-4715
1-1/2"	50x5.0	FFCM34-CD-50x5.0-150-*	3.79 (1.73)	FFCM34-150-50MM-*	CD-50x5.0-150-*	ORV-4515
2"	50x3.0	FFCM34-CD-50x3.0-200-*	5.19 (2.37)	FFCM34-200-50MM-*	CD-50x3.0-200-*	ORV-4515
2"	50x5.0	FFCM34-CD-50x5.0-200-*	5.19 (2.37)	FFCM34-200-50MM-*	CD-50x5.0-200-*	ORV-4515
2"	50x6.0	FFCM34-CD-50x6.0-200-*	5.19 (2.37)	FFCM34-200-50MM-*	CD-50x6.0-200-*	ORV-4515
2"	60x3.0	FFCM34-CD-60x3.0-200-*	5.23 (2.38)	FFC34-200-*	CD-60x3.0-200-*	ORV-5715
2"	60x5.0	FFCM34-CD-60x5.0-200-*	5.23 (2.38)	FFC34-200-*	CD-60x5.0-200-*	ORV-5615
2"	60x6.0	FFCM34-CD-60x6.0-200-*	5.23 (2.38)	FFC34-200-*	CD-60x6.0-200-*	ORV-5615
2-1/2"	60x5.0	FFCM34-CD-60x5.0-250-*	8.00 (3.63)	FFCM34-250-60MM-*	CD-60x5.0-250-*	ORV-5615
2-1/2"	60x6.0	FFCM34-CD-60x6.0-250-*	8.00 (3.63)	FFCM34-250-60MM-*	CD-60x6.0-250-*	ORV-5615
2-1/2"	73x7.0	FFC34-CD-SCH80-250-*^-^	8.08 (3.67)	FFC34-250-*	CD-SCH80-250-*^-^	ORV-2-036
2-1/2"	75x3.0	FFCM34-CD-75x3.0-250-*	8.08 (3.67)	FFCM34-250-75MM-*	CD-75x3.0-250-*	ORV-6915
2-1/2"	75x5.0	FFCM34-CD-75x5.0-250-*	8.08 (3.67)	FFCM34-250-75MM-*	CD-75x5.0-250-*	ORV-2-036
2-1/2"	75x7.0	FFCM34-CD-75x7.0-250-*	8.08 (3.67)	FFCM34-250-75MM-*	CD-75x7.0-250-*	ORV-6715
3"	75x5.0	FFCM34-CD-75x5.0-300-*	11.58 (5.26)	FFCM34-300-75MM-*	CD-75x5.0-300-*	ORV-2-237
3"	90x3.5	FFCM34-CD-90x3.5-300-*	11.76 (5.34)	FFCM34-300-90MM-*	CD-90x3.5-300-*	ORV-8515
3"	90x5.0	FFCM34-CD-90x5.0-300-*	11.76 (5.34)	FFCM34-300-90MM-*	CD-90x5.0-300-*	ORV-2-040

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

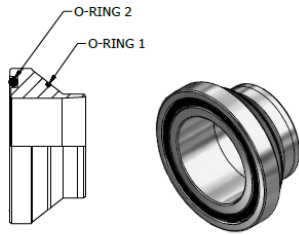
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM34-CD-50x3.0-200-SS

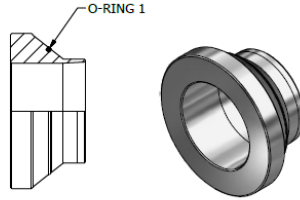
* Insert Material

SAE 3000 PSI Cone Inserts for Flare Flange Connections, NPS

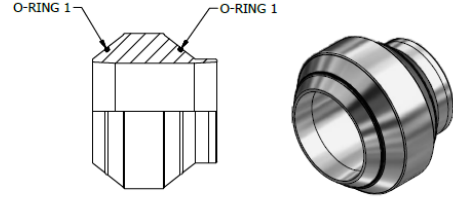
SAE J518 Code 61 (ISO 6162-1)



TYPE CO



TYPE CF



TYPE CD

CO, CF, CD - Cone Inserts for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT/Set lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT/Set lbs (kg)	Double Cone Insert Part Number (Type CD)	WT/Set lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	CO-SCH40-050-* [^]	0.10 (0.50)	CF-SCH40-050-*	0.11 (0.05)	CD-SCH40-050-*	0.20 (0.09)	ORV-1915	OR [^] -2-210
1/2"	1/2" SCH80	CO-SCH80-050-* [^]	0.09 (0.04)	CF-SCH80-050-*	0.10 (0.05)	CD-SCH80-050-*	0.18 (0.08)	ORV-1715	OR [^] -2-210
3/4"	3/4" SCH40	CO-SCH40-075-* [^]	0.12 (0.05)	CF-SCH40-075-*	0.14 (0.06)	CD-SCH40-075-*	0.25 (0.11)	ORV-2515	OR [^] -2-214
3/4"	3/4" SCH80	CO-SCH80-075-* [^]	0.12 (0.05)	CF-SCH80-075-*	0.14 (0.06)	CD-SCH80-075-*	0.25 (0.11)	ORV-2315	OR [^] -2-214
1"	1" SCH40	CO-SCH40-100-* [^]	0.20 (0.09)	CF-SCH40-100-*	0.23 (0.10)	CD-SCH40-100-*	0.41 (0.19)	ORV-3015	OR [^] -2-219
1"	1" SCH80	CO-SCH80-100-* [^]	0.21 (0.10)	CF-SCH80-100-*	0.23 (0.10)	CD-SCH80-100-*	0.42 (0.19)	ORV-2815	OR [^] -2-219
1-1/4"	1-1/4" SCH40	CO-SCH40-125-* [^]	0.25 (0.11)	CF-SCH40-125-*	0.27 (0.12)	CD-SCH40-125-*	0.49 (0.22)	ORV-3815	OR [^] -2-222
1-1/4"	1-1/4" SCH80	CO-SCH80-125-* [^]	0.24 (0.11)	CF-SCH80-125-*	0.27 (0.12)	CD-SCH80-125-*	0.48 (0.22)	ORV-3815	OR [^] -2-222
1-1/2"	1-1/2" SCH40	CO-SCH40-150-* [^]	0.41 (0.19)	CF-SCH40-150-*	0.45 (0.20)	CD-SCH40-150-*	0.82 (0.37)	ORV-4315	OR [^] -2-225
1-1/2"	1-1/2" SCH80	CO-SCH80-150-* [^]	0.42 (0.19)	CF-SCH80-150-*	0.46 (0.21)	CD-SCH80-150-*	0.84 (0.38)	ORV-4315	OR [^] -2-225
1-1/2"	1-1/2" SCH160	CO-SCH160-150-* [^]	0.42 (0.19)	CF-SCH160-150-*	0.45 (0.20)	CD-SCH160-150-*	0.83 (0.37)	ORV-3815	OR [^] -2-225
2"	2" SCH40	CO-SCH40-200-* [^]	0.47 (0.21)	CF-SCH40-200-*	0.52 (0.24)	CD-SCH40-200-*	0.94 (0.43)	ORV-5615	OR [^] -2-228
2"	2" SCH80	CO-SCH80-200-* [^]	0.49 (0.22)	CF-SCH80-200-*	0.53 (0.24)	CD-SCH80-200-*	0.97 (0.44)	ORV-5515	OR [^] -2-228
2"	2" SCH160	CO-SCH160-200-* [^]	0.67 (0.30)	CF-SCH160-200-*	0.71 (0.32)	CD-SCH160-200-*	1.31 (0.59)	ORV-5015	OR [^] -2-228
2-1/2"	2-1/2" SCH40	CO-SCH40-250-* [^]	0.99 (0.45)	CF-SCH40-250-*	1.01 (0.46)	CD-SCH40-250-*	1.90 (0.86)	ORV-2-036	OR [^] -2-232
2-1/2"	2-1/2" SCH80	CO-SCH80-250-* [^]	0.99 (0.45)	CF-SCH80-250-*	1.06 (0.48)	CD-SCH80-250-*	1.95 (0.88)	ORV-2-036	OR [^] -2-232
2-1/2"	2-1/2" SCH160	CO-SCH160-250-* [^]	1.42 (0.64)	CF-SCH160-250-*	1.50 (0.68)	CD-SCH160-250-*	2.77 (1.26)	ORV-5615	OR [^] -2-232
3"	3" SCH40	CO-SCH40-300-* [^]	1.33 (0.60)	CF-SCH40-300-*	1.39 (0.63)	CD-SCH40-300-*	2.58 (1.17)	ORV-2-040	OR [^] -2-237
3"	3" SCH80	CO-SCH80-300-* [^]	1.21 (0.55)	CF-SCH80-300-*	1.28 (0.58)	CD-SCH80-300-*	2.37 (1.07)	ORV-2-040	OR [^] -2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: CO-SCH80-200-SS-V

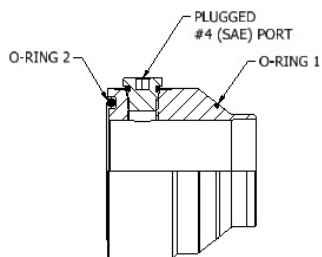
* Insert Material

^ Insert O-Ring 2 Type

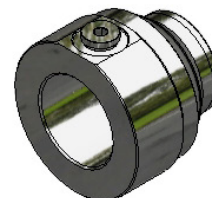
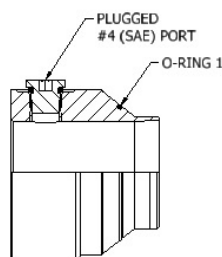
3D step models available upon request

SAE 3000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, NPS

SAE J518 Code 61 (ISO 6162-1)



TYPE COP



TYPE CFP

COP, CFP - Cone Inserts with Pilot Port for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT/Set lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT/Set lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	COP-SCH40-050-*^-^	0.40 (0.18)	CFP-SCH40-050-*	0.40 (0.18)	ORV-1915	OR^-2-210
1/2"	1/2" SCH80	COP-SCH80-050-*^-^	0.40 (0.18)	CFP-SCH80-050-*	0.40 (0.18)	ORV-1715	OR^-2-210
3/4"	3/4" SCH40	COP-SCH40-075-*^-^	0.62 (0.28)	CFP-SCH40-075-*	0.62 (0.28)	ORV-2515	OR^-2-214
3/4"	3/4" SCH80	COP-SCH80-075-*^-^	0.62 (0.28)	CFP-SCH80-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
1"	1" SCH40	COP-SCH40-100-*^-^	0.77 (0.35)	CFP-SCH40-100-*	0.77 (0.35)	ORV-3015	OR^-2-219
1"	1" SCH80	COP-SCH80-100-*^-^	0.77 (0.35)	CFP-SCH80-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1-1/4"	1-1/4" SCH40	COP-SCH40-125-*^-^	0.93 (0.42)	CFP-SCH40-125-*	0.93 (0.42)	ORV-3815	OR^-2-222
1-1/4"	1-1/4" SCH80	COP-SCH80-125-*^-^	0.93 (0.42)	CFP-SCH80-125-*	0.93 (0.42)	ORV-3815	OR^-2-222
1-1/2"	1-1/2" SCH40	COP-SCH40-150-*^-^	1.31 (0.59)	CFP-SCH40-150-*	1.31 (0.59)	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH80	COP-SCH80-150-*^-^	1.31 (0.59)	CFP-SCH80-150-*	1.31 (0.59)	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH160	COP-SCH160-150-*^-^	1.20 (0.54)	CFP-SCH160-150-*	1.20 (0.54)	ORV-3815	OR^-2-225
2"	2" SCH40	COP-SCH40-200-*^-^	1.70 (0.77)	CFP-SCH40-200-*	1.70 (0.77)	ORV-5615	OR^-2-228
2"	2" SCH80	COP-SCH80-200-*^-^	1.70 (0.77)	CFP-SCH80-200-*	1.70 (0.77)	ORV-5515	OR^-2-228
2"	2" SCH160	COP-SCH160-200-*^-^	1.64 (0.74)	CFP-SCH160-200-*	1.64 (0.74)	ORV-5015	OR^-2-228
2-1/2"	2-1/2" SCH40	COP-SCH40-250-*^-^	2.51 (1.14)	CFP-SCH40-250-*	2.51 (1.14)	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH80	COP-SCH80-250-*^-^	2.51 (1.14)	CFP-SCH80-250-*	2.51 (1.14)	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH160	COP-SCH160-250-*^-^	2.43 (1.10)	CFP-SCH160-250-*	2.43 (1.10)	ORV-5615	OR^-2-232
3"	3" SCH40	COP-SCH40-300-*^-^	3.40 (1.54)	CFP-SCH40-300-*	3.40 (1.54)	ORV-2-041	OR^-2-237
3"	3" SCH80	COP-SCH80-300-*^-^	3.40 (1.54)	CFP-SCH80-300-*	3.40 (1.54)	ORV-2-041	OR^-2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

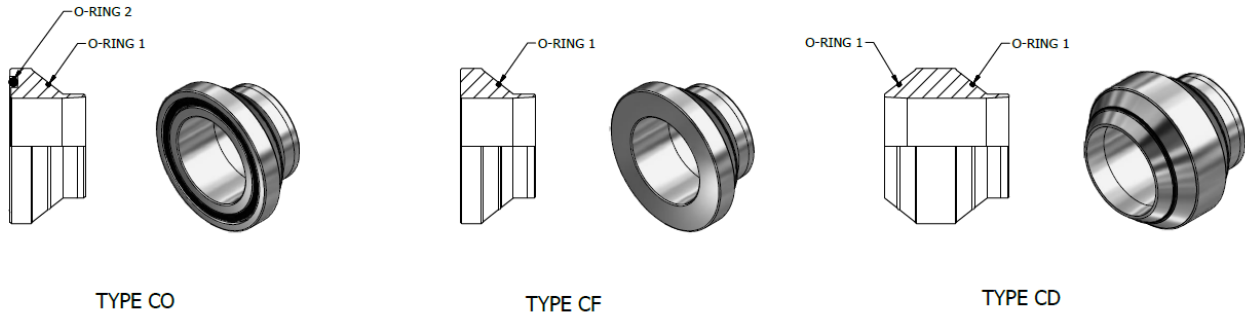
Ordering Example: COP-SCH80-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

SAE 3000 PSI Cone Inserts for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



CO, CF, CD - Cone Inserts for Flare Flange Connections, Metric									
Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	Weight lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	CO-20x2.0-050-*^-^	0.11 (0.05)	CF-20x2.0-050-*	0.11 (0.05)	CD-20x2.0-050-*	0.20 (0.09)	ORV-1715	OR^-2-210
1/2"	20x3.0	CO-20x3.0-050-*^-^	0.11 (0.05)	CF-20x3.0-050-*	0.11 (0.05)	CD-20x3.0-050-*	0.20 (0.09)	ORV-1715	OR^-2-210
1/2"	25x2.5	CO-25x2.5-050-*^-^	0.09 (0.04)	CF-25x2.5-050-*	0.09 (0.04)	CD-25x2.5-050-*	0.17 (0.08)	ORV-2315	OR^-2-210
1/2"	25x3.0	CO-25x3.0-050-*^-^	0.09 (0.04)	CF-25x3.0-050-*	0.09 (0.04)	CD-25x3.0-050-*	0.17 (0.08)	ORV-2315	OR^-2-210
3/4"	20x2.0	CO-20x2.0-075-*^-^	0.14 (0.07)	CF-20x2.0-075-*	0.14 (0.07)	CD-20x2.0-075-*	0.26 (0.12)	ORV-1715	OR^-2-214
3/4"	20x2.5	CO-20x2.5-075-*^-^	0.14 (0.07)	CF-20x2.5-075-*	0.14 (0.07)	CD-20x2.5-075-*	0.26 (0.12)	ORV-1715	OR^-2-214
3/4"	20x3.0	CO-20x3.0-075-*^-^	0.14 (0.07)	CF-20x3.0-075-*	0.14 (0.07)	CD-20x3.0-075-*	0.26 (0.12)	ORV-1715	OR^-2-214
3/4"	25x2.5	CO-25x2.5-075-*^-^	0.15 (0.07)	CF-25x2.5-075-*	0.15 (0.07)	CD-25x2.5-075-*	0.29 (0.13)	ORV-2315	OR^-2-214
3/4"	25x3.0	CO-25x3.0-075-*^-^	0.15 (0.07)	CF-25x3.0-075-*	0.15 (0.07)	CD-25x3.0-075-*	0.29 (0.13)	ORV-2315	OR^-2-214
3/4"	25x4.0	CO-25x4.0-075-*^-^	0.15 (0.07)	CF-25x4.0-075-*	0.15 (0.07)	CD-25x4.0-075-*	0.29 (0.13)	ORV-2315	OR^-2-214
3/4"	30x3.0	CO-30x3.0-075-*^-^	0.15 (0.07)	CF-30x3.0-075-*	0.15 (0.07)	CD-30x3.0-075-*	0.29 (0.13)	ORV-2515	OR^-2-214
1"	25x2.5	CO-25x2.5-100-*^-^	0.14 (0.07)	CF-25x2.5-100-*	0.14 (0.07)	CD-25x2.5-100-*	0.26 (0.12)	ORV-2315	OR^-2-219
1"	25x3.0	CO-25x3.0-100-*^-^	0.14 (0.07)	CF-25x3.0-100-*	0.14 (0.07)	CD-25x3.0-100-*	0.26 (0.12)	ORV-2315	OR^-2-219
1"	25x4.0	CO-25x4.0-100-*^-^	0.14 (0.07)	CF-25x4.0-100-*	0.14 (0.07)	CD-25x4.0-100-*	0.26 (0.12)	ORV-2315	OR^-2-219
1"	30x3.0	CO-30x3.0-100-*^-^	0.14 (0.07)	CF-30x3.0-100-*	0.14 (0.07)	CD-30x3.0-100-*	0.26 (0.12)	ORV-2815	OR^-2-219
1"	30x4.0	CO-30x4.0-100-*^-^	0.27 (0.12)	CF-30x4.0-100-*	0.27 (0.07)	CD-30x4.0-100-*	0.52 (0.24)	ORV-2815	OR^-2-219
1"	30x5.0	CO-30x5.0-100-*^-^	0.27 (0.12)	CF-30x5.0-100-*	0.27 (0.12)	CD-30x5.0-100-*	0.52 (0.24)	ORV-2815	OR^-2-219
1"	38x4.0	CO-38x4.0-100-*^-^	0.21 (0.09)	CF-38x4.0-100-*	0.24 (0.11)	CD-38x4.0-100-*	0.43 (0.20)	ORV-3015	OR^-2-219
1"	38x5.0	CO-38x5.0-100-*^-^	0.21 (0.09)	CF-38x5.0-100-*	0.24 (0.11)	CD-38x5.0-100-*	0.43 (0.20)	ORV-3215	OR^-2-219
1-1/4"	30x3.0	CO-30x3.0-125-*^-^	0.24 (0.11)	CF-30x3.0-125-*	0.24 (0.11)	CD-30x3.0-125-*	0.46 (0.21)	ORV-2815	OR^-2-222
1-1/4"	30x4.0	CO-30x4.0-125-*^-^	0.24 (0.11)	CF-30x4.0-125-*	0.24 (0.11)	CD-30x4.0-125-*	0.46 (0.21)	ORV-2815	OR^-2-222
1-1/4"	30x5.0	CO-30x5.0-125-*^-^	0.24 (0.11)	CF-30x5.0-125-*	0.24 (0.11)	CD-30x5.0-125-*	0.46 (0.21)	ORV-2815	OR^-2-222
1-1/4"	38x4.0	CO-38x4.0-125-*^-^	0.32 (0.14)	CF-38x4.0-125-*	0.35 (0.16)	CD-38x4.0-125-*	0.64 (0.29)	ORV-3515	OR^-2-222
1-1/4"	38x5.0	CO-38x5.0-125-*^-^	0.27 (0.12)	CF-38x5.0-125-*	0.27 (0.12)	CD-38x5.0-125-*	0.52 (0.24)	ORV-3215	OR^-2-222
1-1/4"	42x3.0	CO-42x3.0-125-*^-^	0.27 (0.12)	CF-42x3.0-125-*	0.27 (0.12)	CD-42x3.0-125-*	0.52 (0.24)	ORV-3815	OR^-2-222
1-1/4"	42x4.0	CO-42x4.0-125-*^-^	0.27 (0.12)	CF-42x4.0-125-*	0.27 (0.12)	CD-42x4.0-125-*	0.52 (0.24)	ORV-3815	OR^-2-222

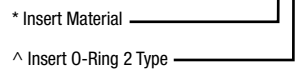
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: CO-50x3.0-200-SS-V



3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

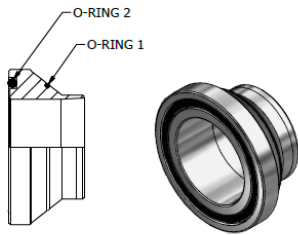
Clamp Supports - Heavy Series

Valves, Ball and Check

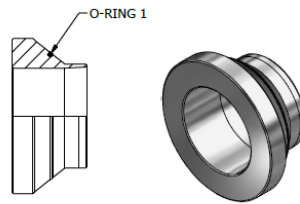
G19

SAE 3000 PSI Cone Inserts for Flare Flange Connections, Metric

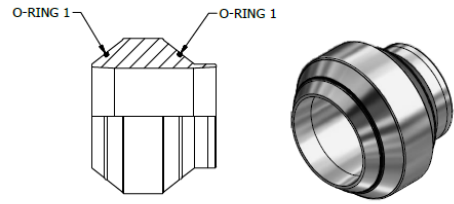
SAE J518 Code 61 (ISO 6162-1)



TYPE CO



TYPE CF



TYPE CD

CO, CF, CD - Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	Weight lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	Weight lbs (kg)	Double Cone Insert Part Number (Type CD)	Weight lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	30x3.0	CO-30x3.0-150-* [^]	0.50 (0.23)	CF-30x3.0-150-*	0.50 (0.23)	CD-30x3.0-150-*	0.98 (0.45)	ORV-2815	OR [^] -2-225
1-1/2"	38x4.0	CO-38x4.0-150-* [^]	0.50 (0.23)	CF-38x4.0-150-*	0.50 (0.23)	CD-38x4.0-150-*	0.98 (0.45)	ORV-3215	OR [^] -2-225
1-1/2"	38x5.0	CO-38x5.0-150-* [^]	0.48 (0.22)	CF-38x5.0-150-*	0.49 (0.22)	CD-38x5.0-150-*	0.95 (0.43)	ORV-3215	OR [^] -2-225
1-1/2"	42x3.0	CO-42x3.0-150-* [^]	0.40 (0.18)	CF-42x3.0-150-*	0.40 (0.18)	CD-42x3.0-150-*	0.78 (0.35)	ORV-3815	OR [^] -2-225
1-1/2"	42x4.0	CO-42x4.0-150-* [^]	0.50 (0.23)	CF-42x4.0-150-*	0.50 (0.23)	CD-42x4.0-150-*	0.78 (0.35)	ORV-3815	OR [^] -2-225
1-1/2"	50x3.0	CO-50x3.0-150-* [^]	0.50 (0.23)	CF-50x3.0-150-*	0.50 (0.23)	CD-50x3.0-150-*	0.98 (0.45)	ORV-4715	OR [^] -2-225
1-1/2"	50x5.0	CO-50x5.0-150-* [^]	0.40 (0.18)	CF-50x5.0-150-*	0.40 (0.18)	CD-50x5.0-150-*	0.78 (0.35)	ORV-4515	OR [^] -2-225
1-1/2"	50x6.0	CO-50x6.0-150-* [^]	0.39 (0.18)	CF-50x6.0-150-*	0.39 (0.18)	CD-50x6.0-150-*	0.76 (0.35)	ORV-4515	OR [^] -2-225
2"	50x3.0	CO-50x3.0-200-* [^]	0.50 (0.23)	CF-50x3.0-200-*	0.50 (0.23)	CD-50x3.0-200-*	0.98 (0.45)	ORV-4515	OR [^] -2-228
2"	50x5.0	CO-50x5.0-200-* [^]	0.50 (0.23)	CF-50x5.0-200-*	0.50 (0.23)	CD-50x5.0-200-*	0.98 (0.45)	ORV-4515	OR [^] -2-228
2"	50x6.0	CO-50x6.0-200-* [^]	0.50 (0.23)	CF-50x6.0-200-*	0.50 (0.23)	CD-50x6.0-200-*	0.98 (0.45)	ORV-4515	OR [^] -2-228
2"	60x3.0	CO-60x3.0-200-* [^]	0.56 (0.25)	CF-60x3.0-200-*	0.56 (0.25)	CD-60x3.0-200-*	1.10 (0.50)	ORV-5715	OR [^] -2-228
2"	60x5.0	CO-60x5.0-200-* [^]	0.50 (0.23)	CF-60x5.0-200-*	0.50 (0.23)	CD-60x5.0-200-*	0.98 (0.45)	ORV-5615	OR [^] -2-228
2"	60x6.0	CO-60x6.0-200-* [^]	0.50 (0.23)	CF-60x6.0-200-*	0.50 (0.23)	CD-60x6.0-200-*	0.98 (0.45)	ORV-5015	OR [^] -2-228
2-1/2"	60x5.0	CO-60x5.0-250-* [^]	1.00 (0.45)	CF-60x5.0-250-*	1.10 (0.50)	CD-60x5.0-250-*	2.02 (0.92)	ORV-5615	OR [^] -2-232
2-1/2"	60x6.0	CO-60x6.0-250-* [^]	1.00 (0.45)	CF-60x6.0-250-*	1.10 (0.50)	CD-60x6.0-250-*	2.02 (0.98)	ORV-5015	OR [^] -2-232
2-1/2"	73x7.0	CO-SCH80-250-* [^]	1.00 (0.45)	CF-SCH80-250-*	1.08 (0.49)	CD-SCH80-250-*	2.00 (0.90)	ORV-2-036	OR [^] -2-232
2-1/2"	75x3.0	CO-75x3.0-250-* [^]	1.00 (0.45)	CF-75x3.0-250-*	1.00 (0.45)	CD-75x3.0-250-*	1.91 (0.87)	ORV-2-037	OR [^] -2-232
2-1/2"	75x5.0	CO-75x5.0-250-* [^]	0.97 (0.44)	CF-75x5.0-250-*	1.00 (0.45)	CD-75x5.0-250-*	1.90 (0.86)	ORV-2-036	OR [^] -2-232
2-1/2"	75x7.0	CO-75x7.0-250-* [^]	0.95 (0.43)	CF-75x7.0-250-*	0.98 (0.44)	CD-75x7.0-250-*	1.89 (0.86)	ORV-6715	OR [^] -2-232
3"	75x5.0	CO-75x5.0-300-* [^]	1.50 (0.68)	CF-75x5.0-300-*	1.50 (0.68)	CD-75x5.0-300-*	2.70 (1.23)	ORV-2-037	OR [^] -2-237
3"	90x3.5	CO-90x3.5-300-* [^]	1.50 (0.68)	CF-90x3.5-300-*	1.50 (0.68)	CD-90x3.5-300-*	2.70 (1.23)	ORV-2-041	OR [^] -2-237
3"	90x5.0	CO-90x5.0-300-* [^]	1.45 (0.66)	CF-90x5.0-300-*	1.48 (0.67)	CD-90x5.0-300-*	2.60 (1.18)	ORV-2-040	OR [^] -2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

[^] O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

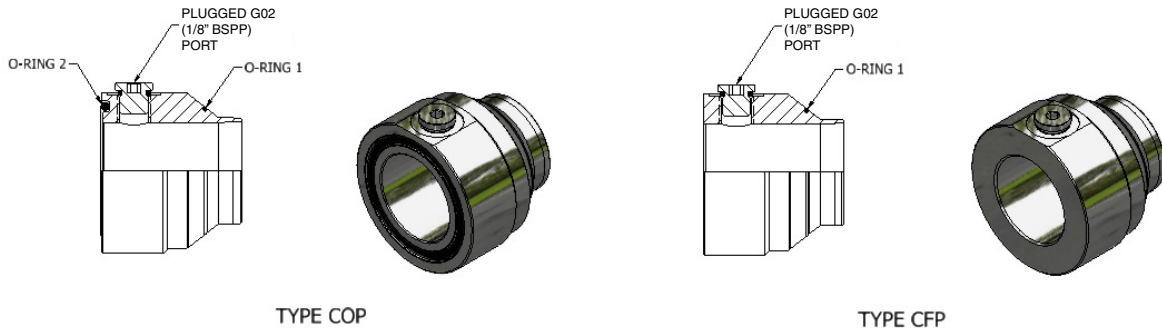
Ordering Example: CO-50x3.0-200-SS-V

* Insert Material _____

[^] Insert O-Ring 2 Type _____

SAE 3000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



COP, CFP - Cone Inserts with Pilot Port for Flare Flange Connections, Metric							
Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	COP-20x2.0-050-*^	0.40 (0.18)	CFP-20x2.0-050-*	0.40 (0.18)	ORV-1715	OR^-2-210
1/2"	20x3.0	COP-20x3.0-050-*^	0.40 (0.18)	CFP-20x3.0-050-*	0.40 (0.18)	ORV-1715	OR^-2-210
1/2"	25x2.5	COP-25x2.5-050-*^	0.51 (0.23)	CFP-25x2.5-050-*	0.51 (0.23)	ORV-2315	OR^-2-210
1/2"	25x3.0	COP-25x3.0-050-*^	0.51 (0.23)	CFP-25x3.0-050-*	0.51 (0.23)	ORV-2315	OR^-2-210
3/4"	20x2.0	COP-20x2.0-075-*^	0.55 (0.25)	CFP-20x2.0-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	20x2.5	COP-20x2.5-075-*^	0.55 (0.25)	CFP-20x2.5-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	20x3.0	COP-20x3.0-075-*^	0.55 (0.25)	CFP-20x3.0-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	25x2.5	COP-25x2.5-075-*^	0.62 (0.28)	CFP-25x2.5-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	25x3.0	COP-25x3.0-075-*^	0.62 (0.28)	CFP-25x3.0-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	25x4.0	COP-25x4.0-075-*^	0.62 (0.28)	CFP-25x4.0-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	30x3.0	COP-30x3.0-075-*^	0.68 (0.31)	CFP-30x3.0-075-*	0.68 (0.31)	ORV-2515	OR^-2-214
1"	25x2.5	COP-25x2.5-100-*^	0.70 (0.32)	CFP-25x2.5-100-*	0.70 (0.32)	ORV-2315	OR^-2-219
1"	25x3.0	COP-25x3.0-100-*^	0.70 (0.32)	CFP-25x3.0-100-*	0.70 (0.32)	ORV-2315	OR^-2-219
1"	25x4.0	COP-25x4.0-100-*^	0.70 (0.32)	CFP-25x4.0-100-*	0.70 (0.32)	ORV-2315	OR^-2-219
1"	30x3.0	COP-30x3.0-100-*^	0.77 (0.35)	CFP-30x3.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	30x4.0	COP-30x4.0-100-*^	0.77 (0.35)	CFP-30x4.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	30x5.0	COP-30x5.0-100-*^	0.77 (0.35)	CFP-30x5.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	38x4.0	COP-38x4.0-100-*^	0.81 (0.37)	CFP-38x4.0-100-*	0.81 (0.37)	ORV-3015	OR^-2-219
1"	38x5.0	COP-38x5.0-100-*^	0.79 (0.36)	CFP-38x5.0-100-*	0.79 (0.36)	ORV-3215	OR^-2-219
1-1/4"	30x3.0	COP-30x3.0-125-*^	0.82 (0.37)	CFP-30x3.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	30x4.0	COP-30x4.0-125-*^	0.82 (0.37)	CFP-30x4.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	30x5.0	COP-30x5.0-125-*^	0.82 (0.37)	CFP-30x5.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	38x4.0	COP-38x4.0-125-*^	0.86 (0.39)	CFP-38x4.0-125-*	0.86 (0.39)	ORV-3515	OR^-2-222
1 1/4"	38x5.0	COP-38x5.0-125-*^	0.86 (0.39)	CFP-38x5.0-125-*	0.86 (0.39)	ORV-3215	OR^-2-222
1-1/4"	42x3.0	COP-42x3.0-125-*^	0.93 (0.42)	CFP-42x3.0-125-*	0.93 (0.42)	ORV-3815	OR^-2-222
1-1/4"	42x4.0	COP-42x4.0-125-*^	0.93 (0.42)	CFP-42x4.0-125-*	0.93 (0.42)	ORV-3815	OR^-2-222

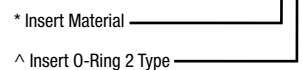
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: COP-50x3.0-200-SS-V



3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

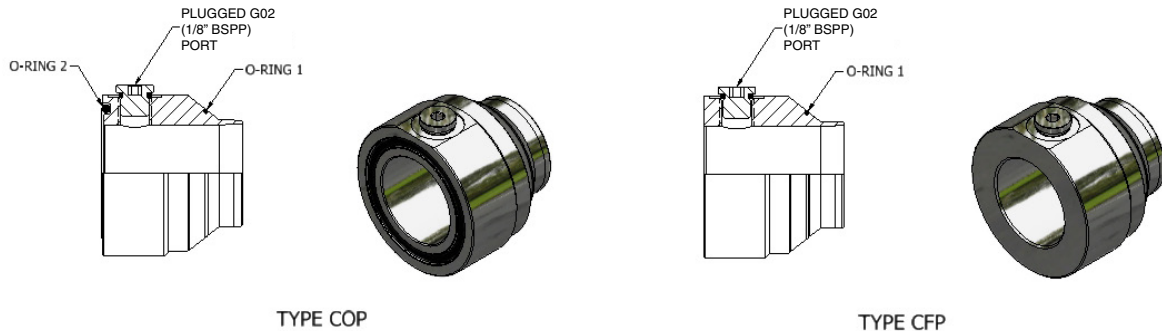
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 3000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 61 (ISO 6162-1)



COP, CFP - Cone Inserts with Pilot Port for Flare Flange Connections, Metric							
Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	30x3.0	COP-30x3.0-150*-^	1.02 (0.46)	CFP-30x3.0-150*	1.02 (0.46)	ORV-2815	OR^-2-225
1-1/2"	38x4.0	COP-38x4.0-150*-^	1.02 (0.46)	CFP-38x4.0-150*	1.02 (0.46)	ORV-3215	OR^-2-225
1-1/2"	38x5.0	COP-38x5.0-150*-^	1.10 (0.50)	CFP-38x5.0-150*	1.10 (0.50)	ORV-3215	OR^-2-225
1-1/2"	42x3.0	COP-42x3.0-150*-^	1.21 (0.55)	CFP-42x3.0-150*	1.21 (0.55)	ORV-3815	OR^-2-225
1-1/2"	42x4.0	COP-42x4.0-150*-^	1.21 (0.55)	CFP-42x4.0-150*	1.21 (0.55)	ORV-3815	OR^-2-225
1-1/2"	50x3.0	COP-50x3.0-150*-^	1.31 (0.59)	CFP-50x3.0-150*	1.31 (0.59)	ORV-4715	OR^-2-225
1-1/2"	50x5.0	COP-50x5.0-150*-^	1.31 (0.59)	CFP-50x5.0-150*	1.31 (0.59)	ORV-4515	OR^-2-225
1-1/2"	50x6.0	COP-50x6.0-150*-^	1.28 (0.58)	CFP-50x6.0-150*	1.28 (0.58)	ORV-4515	OR^-2-225
2"	50x3.0	COP-50x3.0-200*-^	1.58 (0.72)	CFP-50x3.0-200*	1.58 (0.72)	ORV-4515	OR^-2-228
2"	50x5.0	COP-50x5.0-200*-^	1.58 (0.72)	CFP-50x5.0-200*	1.58 (0.72)	ORV-4515	OR^-2-228
2"	50x6.0	COP-50x6.0-200*-^	1.55 (0.70)	CFP-50x6.0-200*	1.55 (0.70)	ORV-4515	OR^-2-228
2"	60x3.0	COP-60x3.0-200*-^	1.70 (0.77)	CFP-60x3.0-200*	1.70 (0.77)	ORV-5715	OR^-2-228
2"	60x5.0	COP-60x5.0-200*-^	1.70 (0.77)	CFP-60x5.0-200*	1.70 (0.77)	ORV-5615	OR^-2-228
2"	60x6.0	COP-60x6.0-200*-^	1.62 (0.73)	CFP-60x6.0-200*	1.62 (0.73)	ORV-5015	OR^-2-228
2-1/2"	60x5.0	COP-60x5.0-250*-^	2.39 (1.08)	CFP-60x5.0-250*	2.39 (1.08)	ORV-5615	OR^-2-232
2-1/2"	60x6.0	COP-60x6.0-250*-^	2.39 (1.08)	CFP-60x6.0-250*	2.39 (1.08)	ORV-5015	OR^-2-232
2-1/2"	73x7.0	COP-SCH80-250*-^	2.51 (1.14)	CFP-SCH80-250*-^	2.51 (1.14)	ORV-2-036	OR^-2-232
2-1/2"	75x3.0	COP-75x3.0-250*-^	2.60 (1.18)	CFP-75x3.0-250*	2.60 (1.18)	ORV-2-037	OR^-2-232
2-1/2"	75x5.0	COP-75x5.0-250*-^	2.60 (1.18)	CFP-75x5.0-250*	2.60 (1.18)	ORV-2-036	OR^-2-232
2-1/2"	75x7.0	COP-75x7.0-250*-^	2.55 (1.16)	CFP-75x7.0-250*	2.55 (1.16)	ORV-6715	OR^-2-232
3"	75x5.0	COP-75x5.0-300*-^	3.18 (1.44)	CFP-75x5.0-300*	3.18 (1.44)	ORV-2-037	OR^-2-237
3"	90x3.5	COP-90x3.5-300*-^	3.46 (1.57)	CFP-90x3.5-300*	3.46 (1.57)	ORV-2-041	OR^-2-237
3"	90x5.0	COP-90x5.0-300*-^	3.40 (1.54)	CFP-90x5.0-300*	3.40 (1.54)	ORV-2-040	OR^-2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

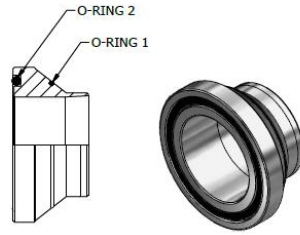
Ordering Example: COP-50x3.0-200-SS-V

* Insert Material

^ Insert O-Ring 2 Type

SAE 3000 PSI Cone Inserts Reducer for Flare Flange Connections with O-Ring Face, NPS

SAE J518 Code 61 (ISO 6162-1)



TYPE COR

COR – Cone Inserts Reducer for Flare Flange Connections with O-Ring Face, NPS					
Flange Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COR)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
3/4"	1/2" SCH40	COR-SCH40-075x050-*^-^	0.13 (0.06)	ORV-1915	OR^-2-214
3/4"	1/2" SCH80	COR-SCH80-075x050-*^-^	0.09 (0.04)	ORV-1715	OR^-2-214
1"	3/4" SCH40	COR-SCH40-100x075-*^-^	0.15 (0.07)	ORV-2515	OR^-2-219
1"	3/4" SCH80	COR-SCH80-100x075-*^-^	0.11 (0.05)	ORV-2315	OR^-2-219
1-1/4"	1" SCH40	COR-SCH40-125x100-*^-^	0.27 (0.12)	ORV-3015	OR^-2-222
1-1/4"	1" SCH80	COR-SCH80-125x100-*^-^	0.21 (0.10)	ORV-2815	OR^-2-222
1-1/2"	1-1/4" SCH40	COR-SCH40-150x125-*^-^	0.40 (0.18)	ORV-3815	OR^-2-225
1-1/2"	1-1/4" SCH80	COR-SCH80-150x125-*^-^	0.30 (0.15)	ORV-3815	OR^-2-225
2"	1-1/2" SCH40	COR-SCH40-200x150-*^-^	0.53 (0.24)	ORV-4315	OR^-2-228
2"	1-1/2" SCH80	COR-SCH80-200x150-*^-^	0.45 (0.20)	ORV-4315	OR^-2-228
2-1/2"	2" SCH40	COR-SCH40-250x200-*^-^	0.92 (0.42)	ORV-5615	OR^-2-232
2-1/2"	2" SCH80	COR-SCH80-250x200-*^-^	0.49 (0.22)	ORV-5515	OR^-2-232
3"	2-1/2" SCH40	COR-SCH40-300x250-*^-^	1.40 (0.65)	ORV-2-036	OR^-2-237
3"	2-1/2" SCH80	COR-SCH80-300x250-*^-^	1.29 (0.58)	ORV-2-036	OR^-2-237

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: COR-SCH80-100-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

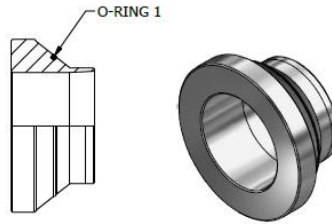
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 3000 PSI Cone Inserts Reducer for Flare Flange Connections with Flat Face, NPS

SAE J518 Code 61 (ISO 6162-1)



CFR – Cone Inserts Reducer for Flare Flange Connections with Flat Face, NPS

Flange Size	Pipe Size	Flat Face Cone Insert Part Number (Type CFR)	WT lbs (kg)	O-Ring 1 (VITON) Part Number
3/4"	1/2" SCH40	CFR-SCH40-075x050-*^-^	0.13 (0.06)	ORV-1915
3/4"	1/2" SCH80	CFR-SCH80-075x050-*^-^	0.09 (0.04)	ORV-1715
1"	3/4" SCH40	CFR-SCH40-100x075-*^-^	0.15 (0.07)	ORV-2515
1"	3/4" SCH80	CFR-SCH80-100x075-*^-^	0.11 (0.05)	ORV-2315
1-1/4"	1" SCH40	CFR-SCH40-125x100-*^-^	0.27 (0.12)	ORV-3015
1-1/4"	1" SCH80	CFR-SCH80-125x100-*^-^	0.21 (0.10)	ORV-2815
1-1/2"	1-1/4" SCH40	CFR-SCH40-150x125-*^-^	0.40 (0.18)	ORV-3815
1-1/2"	1-1/4" SCH80	CFR-SCH80-150x125-*^-^	0.30 (0.15)	ORV-3815
2"	1-1/2" SCH40	CFR-SCH40-200x150-*^-^	0.53 (0.24)	ORV-4315
2"	1-1/2" SCH80	CFR-SCH80-200x150-*^-^	0.45 (0.20)	ORV-4315
2-1/2"	2" SCH40	CFR-SCH40-250x200-*^-^	0.92 (0.42)	ORV-5615
2-1/2"	2" SCH80	CFR-SCH80-250x200-*^-^	0.49 (0.22)	ORV-5515
3"	2-1/2" SCH40	CFR-SCH40-300x250-*^-^	1.40 (0.65)	ORV-2-036
3"	2-1/2" SCH80	CFR-SCH80-300x250-*^-^	1.29 (0.58)	ORV-2-036

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

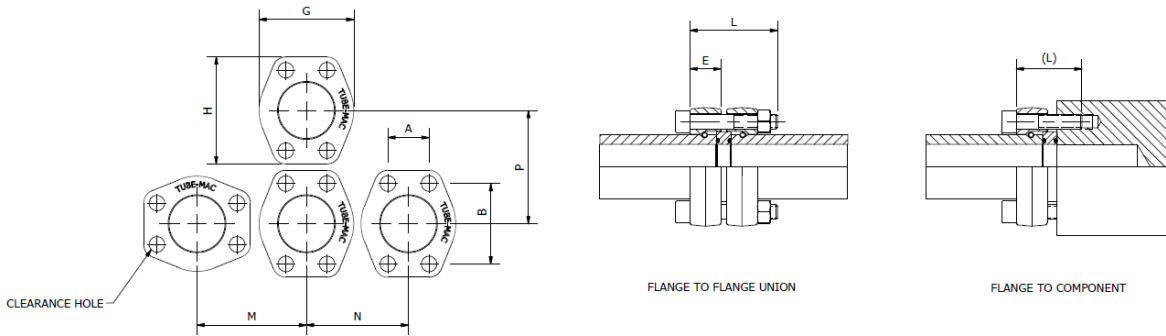
Ordering Example: CFR-SCH80-100-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

SAE 3000 PSI Retain Ring Flange Dimensions

SAE J518 Code 61 (ISO 6162-1)



Retain Ring Flange Dimensions, NPS

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1-1/2"	1.41	2.75	3.25	3.66	3.58	3.35	3.78	1.06	1/2"-13 UNC x 3.00 (2.00)	4000 (280)
2"	1.69	3.06	3.81	4.02	4.02	3.94	4.13	1.22	1/2"-13 UNC x 3.50 (2.00)	4000 (280)
2-1/2"	2.00	3.50	4.28	4.49	4.49	4.37	4.61	1.40	1/2"-13 UNC x 4.00 (2.50)	3000 (210)
3"	2.44	4.19	5.16	5.28	5.35	5.24	5.39	1.67	5/8"-11 UNC x 4.50 (2.75)	3000 (210)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 B8M Class 2

Retain Ring Flange Dimensions, Metric

Size	Dimensions (mm)								SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	17.5	38.1	46.0	54.9	52.1	49.0	58.9	20.6	M8 x 60 (40)	5000 (350)
3/4"	22.4	47.8	52.3	65.0	61.0	55.1	68.1	20.8	M10 x 65 (40)	5000 (350)
1"	26.2	52.3	58.7	70.1	67.1	62.0	72.9	22.1	M10 x 65(40)	5000 (350)
1-1/4"	30.2	58.7	73.2	79.0	79.0	75.9	82.0	23.1	M10 x 65 (45)	4000 (280)
1-1/2"	35.8	69.9	82.6	93.0	90.9	85.1	96.0	26.9	M12 x 75 (50)	4000 (280)
2"	42.9	77.7	96.8	102.1	102.1	100.1	104.9	31.0	M12 x 90 (50)	4000 (280)
2-1/2"	50.8	88.9	108.7	114.0	114.0	111.0	117.1	35.6	M12 x 100 (65)	3000 (210)
3"	62.0	106.4	131.1	134.1	135.9	133.1	136.9	42.4	M16 x 120 (70)	3000 (210)

* SHCS Bolt Specification

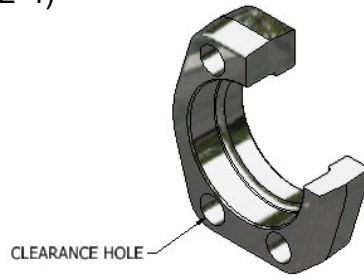
Carbon Steel: DIN912 / ISO4762 Grade 8.8

316 Stainless Steel: DIN912 / ISO4762 A480

3D step models available upon request

SAE 3000 PSI Retain Ring Flange with Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



RFAC34 – Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

Size	Pipe O.D. (in)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	1-1/2" SCHXXS	RFAC34-150-*	4000 (280)	1.41 (0.64)
2"	2" SCH160/XXS	RFAC34-200-*	4000 (280)	2.01 (0.91)
2-1/2"	2-1/2" SCH160/XXS	RFAC34-250-*	3000 (210)	3.28 (1.49)
3"	3" SCH160/XXS	RFAC34-300-*	3000 (210)	5.14 (2.33)

RFC34 – Retain Ring Flange with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFC34-050-*	5000 (350)	0.40 (0.18)
3/4"	36X8.0	RFC34-075-*	5000 (350)	0.46 (0.21)
1"	39X7.5	RFC34-100-*	5000 (350)	0.58 (0.26)
1-1/4"	46X8.0	RFCM34-125-*	4000 (280)	0.79 (0.36)
1-1/2"	56X8.5	RFC34-150-*	4000 (280)	1.41 (0.64)
2"	66X8.5	RFC34-200-*	4000 (280)	2.01 (0.91)
2-1/2"	80X10	RFC34-250-*	3000 (210)	3.28 (1.49)
3"	97X12	RFC34-300-*	3000 (210)	5.14 (2.33)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

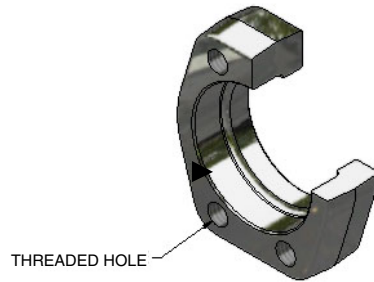
SS = Stainless Steel, Type 316.

Ordering Example: RFAC34-200-SS

* Insert Material

3000 PSI Retain Ring Flange with Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



RFAT34 – Retain Ring Flange with UNC Threaded Holes, for Grooved NPS Pipe Only

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	1-1/2" SCHXXS	RFAT34-150-*	4000 (280)	2.15 (0.98)
2"	2" SCH160/XXS	RFAT34-200-*	4000 (280)	2.65 (1.20)

RFT34 – Retain Ring Flange with UNC Threaded Holes, for Metric Pipe

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFT34-050-*	5000 (350)	0.44 (0.20)
3/4"	36X8.0	RFT34-075-*	5000 (350)	0.62 (0.28)
1"	39X7.5	RFT34-100-*	5000 (350)	0.75 (0.34)
1-1/4"	46X8.0	RFT34-125-*	4000 (280)	1.15 (0.52)
1-1/2"	56X8.5	RFT34-150-*	4000 (280)	2.15 (0.98)
2"	66X8.5	RFT34-200-*	4000 (280)	2.65 (1.20)
2-1/2"	80X10	RFT34-250-*	3000 (210)	3.75 (1.70)
3"	97X12	RFT34-300-*	3000 (210)	6.10 (2.77)

RFTM34 – Retain Ring Flange with Metric Threaded Holes, for Metric Pipe

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFTM34-050-*	5000 (350)	0.44 (0.20)
3/4"	36X8.0	RFTM34-075-*	5000 (350)	0.62 (0.28)
1"	39X7.5	RFTM34-100-*	5000 (350)	0.75 (0.34)
1-1/4"	46X8.0	RFTM34-125-*	4000 (280)	1.15 (0.52)
1-1/2"	56X8.5	RFTM34-150-*	4000 (280)	2.15 (0.98)
2"	66X8.5	RFTM34-200-*	4000 (280)	2.65 (1.20)
2-1/2"	80X10	RFTM34-250-*	3000 (210)	3.75 (1.70)
3"	97X12	RFTM34-300-*	3000 (210)	6.10 (2.77)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

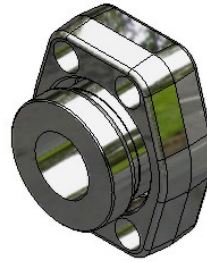
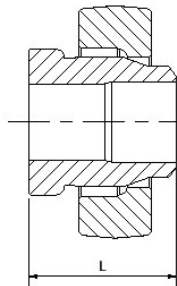
Ordering Example: RFT34-200-SS

* Insert Material _____

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	1/2" SCH80	A/BWA-SCH80-050-FC34-*	0.64 (0.29)	1.25	BWA-SCH80-050-*	RFC34-050-*
1/2"	1/2" SCH160	A/BWA-SCH160-050-FC34-*	0.65 (0.29)	1.25	BWA-SCH160-050-*	RFC34-050-*
1/2"	1/2" SCHXXS	A/BWA-SCHXXS-050-FC34-*	0.66 (0.30)	1.25	BWA-SCHXXS-050-*	RFC34-050-*
3/4"	3/4" SCH80	A/BWA-SCH80-075-FC34-*	0.92 (0.42)	1.75	BWA-SCH80-075-*	RFC34-075-*
3/4"	3/4" SCH160	A/BWA-SCH160-075-FC34-*	1.00 (0.45)	1.75	BWA-SCH160-075-*	RFC34-075-*
3/4"	3/4" SCHXXS	A/BWA-SCHXXS-075-FC34-*	1.03 (0.48)	1.75	BWA-SCHXXS-075-*	RFC34-075-*
1"	1" SCH80	A/BWA-SCH80-100-FC34-*	1.08 (0.49)	1.75	BWA-SCH80-100-*	RFC34-100-*
1"	1" SCH160	A/BWA-SCH160-100-FC34-*	1.19 (0.54)	1.75	BWA-SCH160-100-*	RFC34-100-*
1"	1" SCHXXS	A/BWA-SCHXXS-100-FC34-*	1.23 (0.56)	1.75	BWA-SCHXXS-100-*	RFC34-100-*
1-1/4"	1-1/4" SCH80	A/BWA-SCH80-125-FC34-*	1.62 (0.73)	2.00	BWA-SCH80-125-*	RFCM34-125-*
1-1/4"	1-1/4" SCH160	A/BWA-SCH160-125-FC34-*	1.65 (0.75)	2.00	BWA-SCH160-125-*	RFCM34-125-*
1-1/4"	1-1/4" SCHXXS	A/BWA-SCHXXS-125-FC34-*	1.76 (0.80)	2.00	BWA-SCHXXS-125-*	RFCM34-125-*
1-1/2"	1-1/2" SCH80	A/BWA-SCH80-150-FC34-*	2.06 (0.93)	2.25	BWA-SCH80-150-*	RFC34-150-*
1-1/2"	1-1/2" SCH160	A/BWA-SCH160-150-FC34-*	2.70 (1.22)	2.25	BWA-SCH160-150-*	RFC34-150-*
1-1/2"	1-1/2" SCHXXS	A/BWA-SCHXXS-150-FC34-*	2.72 (1.23)	2.25	BWA-SCHXXS-150-*	RFC34-150-*
2"	2" SCH80	A/BWA-SCH80-200-FC34-*	3.69 (1.67)	2.50	BWA-SCH80-200-*	RFC34-200-*
2"	2" SCH160	A/BWA-SCH160-200-FC34-*	3.86 (1.75)	2.50	BWA-SCH160-200-*	RFC34-200-*
2"	2" SCHXXS	A/BWA-SCHXXS-200-FC34-*	3.90 (1.77)	2.50	BWA-SCHXXS-200-*	RFC34-200-*
2-1/2"	2-1/2" SCH80	A/BWA-SCH80-250-FC34-*	5.12 (2.32)	2.63	BWA-SCH80-250-*	RFC34-250-*
2-1/2"	2-1/2" SCH160	A/BWA-SCH160-250-FC34-*	5.35 (2.43)	2.63	BWA-SCH160-250-*	RFC34-250-*
2-1/2"	2-1/2" SCHXXS	A/BWA-SCHXXS-250-FC34-*	5.70 (2.59)	2.63	BWA-SCHXXS-250-*	RFC34-250-*
3"	3" SCH80	A/BWA-SCH80-300-FC34-*	8.05 (3.50)	2.75	BWA-SCH80-300-*	RFC34-300-*
3"	3" SCH160	A/BWA-SCH160-300-FC34-*	7.89 (3.72)	2.75	BWA-SCH160-300-*	RFC34-300-*
3"	3" SCHXXS	A/BWA-SCHXXS-300-FC34-*	9.20 (3.95)	2.75	BWA-SCHXXS-300-*	RFC34-300-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWA-SCH80-200-FC34-SS

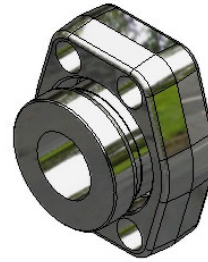
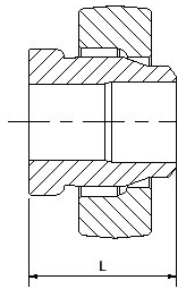
* Insert Material _____

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

SAE 3000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	12.0X1.5	A/BWA-12.0X1.5-050-FC34-*	0.65 (0.29)	38.1	BWA-12.0X1.5-050-*	RFC34-050-*
1/2"	16.0X2.0	A/BWA-16.0X2.0-050-FC34-*	0.65 (0.29)	38.1	BWA-16.0X2.0-050-*	RFC34-050-*
1/2"	16.0X2.5	A/BWA-16.0X2.5-050-FC34-*	0.65 (0.29)	38.1	BWA-16.0X2.5-050-*	RFC34-050-*
1/2"	18.0X2.0	A/BWA-18.0X2.0-050-FC34-*	0.65 (0.29)	38.1	BWA-18.0X2.0-050-*	RFC34-050-*
1/2"	20.0X2.0	A/BWA-20.0X2.0-050-FC34-*	0.67 (0.30)	38.1	BWA-20.0X2.0-050-*	RFC34-050-*
1/2"	20.0X2.5	A/BWA-20.0X2.5-050-FC34-*	0.67 (0.30)	38.1	BWA-20.0X2.5-050-*	RFC34-050-*
1/2"	20.0X3.0	A/BWA-20.0X3.0-050-FC34-*	0.67 (0.30)	38.1	BWA-20.0X3.0-050-*	RFC34-050-*
1/2"	21.3X2.8	A/BWA-SCH40-050-FC34-*	0.63 (0.29)	31.8	BWA-SCH40-050-*	RFC34-050-*
1/2"	21.3X3.7	A/BWA-SCH80-050-FC34-*	0.64 (0.29)	31.8	BWA-SCH80-050-*	RFC34-050-*
1/2"	21.3X4.8	A/BWA-SCH160-050-FC34-*	0.65 (0.29)	31.8	BWA-SCH160-050-*	RFC34-050-*
1/2"	21.3X7.5	A/BWA-SCHXXS-050-FC34-*	0.66 (0.30)	31.8	BWA-SCHXXS-050-*	RFC34-050-*
1/2"	25.0X2.5	A/BWA-25.0X2.5-050-FC34-*	0.66 (0.30)	38.1	BWA-25.0X2.5-050-*	RFC34-050-*
1/2"	25.0X3.0	A/BWA-25.0X3.0-050-FC34-*	0.66 (0.30)	38.1	BWA-25.0X3.0-050-*	RFC34-050-*
1/2"	26.0X6.0	A/BWA-26.0X6.0-050-FC34-*	0.71 (0.32)	38.1	BWA-26.0X6.0-050-*	RFC34-050-*
3/4"	20.0X2.0	A/BWA-20.0X2.0-075-FC34-*	0.95 (0.43)	44.5	BWA-20.0X2.0-075-*	RFC34-075-*
3/4"	20.0X2.5	A/BWA-20.0X2.5-075-FC34-*	0.97 (0.44)	44.5	BWA-20.0X2.5-075-*	RFC34-075-*
3/4"	20.0X3.0	A/BWA-20.0X3.0-075-FC34-*	0.97 (0.44)	44.5	BWA-20.0X3.0-075-*	RFC34-075-*
3/4"	25.0X2.5	A/BWA-25.0X2.5-075-FC34-*	0.94 (0.43)	44.5	BWA-25.0X2.5-075-*	RFC34-075-*
3/4"	25.0X3.0	A/BWA-25.0X3.0-075-FC34-*	0.95 (0.43)	44.5	BWA-25.0X3.0-075-*	RFC34-075-*
3/4"	25.0X4.0	A/BWA-25.0X4.0-075-FC34-*	0.97 (0.44)	44.5	BWA-25.0X4.0-075-*	RFC34-075-*
3/4"	26.7X2.9	A/BWA-SCH40-075-FC34-*	0.90 (0.41)	44.5	BWA-SCH40-075-*	RFC34-075-*
3/4"	26.7X3.9	A/BWA-SCH80-075-FC34-*	0.92 (0.42)	44.5	BWA-SCH80-075-*	RFC34-075-*
3/4"	26.7X5.5	A/BWA-SCH160-075-FC34-*	1.00 (0.45)	44.5	BWA-SCH160-075-*	RFC34-075-*
3/4"	26.7X7.8	A/BWA-SCHXXS-075-FC34-*	1.03 (0.47)	44.5	BWA-SCHXXS-075-*	RFC34-075-*
3/4"	30.0X3.0	A/BWA-30.0X3.0-075-FC34-*	0.85 (0.39)	44.5	BWA-30.0X3.0-075-*	RFC34-075-*
3/4"	30.0X4.0	A/BWA-30.0X4.0-075-FC34-*	0.88 (0.40)	44.5	BWA-30.0X4.0-075-*	RFC34-075-*
3/4"	36.0X8.0	A/BWA-36.0X8.0-075-FC34-*	1.03 (0.47)	44.5	BWA-36.0X8.0-075-*	RFC34-075-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: A/BWA-50.0X3.0-200-FC34-SS

* Insert Material _____

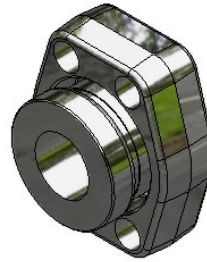
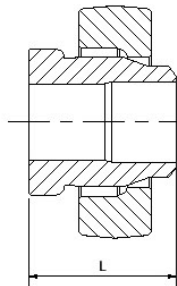
Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1"	25.0X2.5	A/BWA-25.0X2.5-100-FC34-*	1.06 (0.48)	44.5	BWA-25.0X2.5-100-*	RFC34-100-*
1"	25.0X3.0	A/BWA-25.0X3.0-100-FC34-*	1.06 (0.48)	44.5	BWA-25.0X3.0-100-*	RFC34-100-*
1"	25.0X4.0	A/BWA-25.0X4.0-100-FC34-*	1.09 (0.49)	44.5	BWA-25.0X4.0-100-*	RFC34-100-*
1"	30.0X3.0	A/BWA-30.0X3.0-100-FC34-*	1.10 (0.50)	44.5	BWA-30.0X3.0-100-*	RFC34-100-*
1"	30.0X4.0	A/BWA-30.0X4.0-100-FC34-*	1.08 (0.49)	44.5	BWA-30.0X4.0-100-*	RFC34-100-*
1"	30.0X5.0	A/BWA-30.0X5.0-100-FC34-*	1.15 (0.52)	44.5	BWA-30.0X5.0-100-*	RFC34-100-*
1"	33.4X3.4	A/BWA-SCH40-100-FC34-*	1.08 (0.49)	44.5	BWA-SCH40-100-*	RFC34-100-*
1"	33.4X4.6	A/BWA-SCH80-100-FC34-*	1.08 (0.49)	44.5	BWA-SCH80-100-*	RFC34-100-*
1"	33.4X6.4	A/BWA-SCH160-100-FC34-*	1.19 (0.54)	44.5	BWA-SCH160-100-*	RFC34-100-*
1"	33.4X9.1	A/BWA-SCHXXS-100-FC34-*	1.23 (0.56)	44.5	BWA-SCHXXS-100-*	RFC34-100-*
1"	38.0X4.0	A/BWA-38.0X4.0-100-FC34-*	1.08 (0.49)	44.5	BWA-38.0X4.0-100-*	RFC34-100-*
1"	38.0X5.0	A/BWA-38.0X5.0-100-FC34-*	1.08 (0.49)	44.5	BWA-38.0X5.0-100-*	RFC34-100-*
1"	38.0X6.0	A/BWA-38.0X6.0-100-FC34-*	1.17 (0.53)	44.5	BWA-38.0X6.0-100-*	RFC34-100-*
1"	39.0X7.5	A/BWA-39.0X7.5-100-FC34-*	1.20 (0.54)	44.5	BWA-39.0X7.5-100-*	RFC34-100-*
1-1/4"	30.0X3.0	A/BWA-30.0X3.0-125-FCM34-*	1.60 (0.73)	50.8	BWA-30.0X3.0-125-*	RFCM34-125-*
1-1/4"	30.0X4.0	A/BWA-30.0X4.0-125-FCM34-*	1.63 (0.74)	50.8	BWA-30.0X4.0-125-*	RFCM34-125-*
1-1/4"	30.0X5.0	A/BWA-30.0X5.0-125-FCM34-*	1.65 (0.75)	50.8	BWA-30.0X5.0-125-*	RFCM34-125-*
1-1/4"	38.0X4.0	A/BWA-38.0X4.0-125-FCM34-*	1.59 (0.72)	50.8	BWA-38.0X4.0-125-*	RFCM34-125-*
1-1/4"	38.0X5.0	A/BWA-38.0X5.0-125-FCM34-*	1.62 (0.73)	50.8	BWA-38.0X5.0-125-*	RFCM34-125-*
1-1/4"	38.0X6.0	A/BWA-38.0X6.0-125-FCM34-*	1.65 (0.75)	50.8	BWA-38.0X6.0-125-*	RFCM34-125-*
1-1/4"	42.0X3.0	A/BWA-42.0X3.0-125-FCM34-*	1.60 (0.72)	50.8	BWA-42.0X3.0-125-*	RFCM34-125-*
1-1/4"	42.0X4.0	A/BWA-42.0X4.0-125-FCM34-*	1.61 (0.73)	50.8	BWA-42.0X4.0-125-*	RFCM34-125-*
1-1/4"	42.2X3.6	A/BWA-SCH40-125-FCM34-*	1.61 (0.73)	50.8	BWA-SCH40-125-*	RFCM34-125-*
1-1/4"	42.2X4.9	A/BWA-SCH80-125-FCM34-*	1.61 (0.73)	50.8	BWA-SCH80-125-*	RFCM34-125-*
1-1/4"	42.2X6.4	A/BWA-SCH160-125-FCM34-*	1.61 (0.73)	50.8	BWA-SCH160-125-*	RFCM34-125-*
1-1/4"	42.2X9.7	A/BWA-SCHXXS-125-FCM34-*	1.76 (0.80)	50.8	BWA-SCHXXS-125-*	RFCM34-125-*
1-1/4"	46.0X8.5	A/BWA-46.0X8.5-125-FCM34-*	1.76 (0.80)	50.8	BWA-46.0X8.5-125-*	RFCM34-125-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWA-50.0X3.0-200-FC34-SS

* Insert Material _____

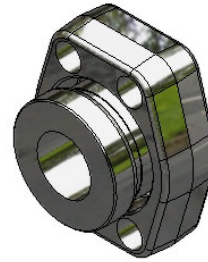
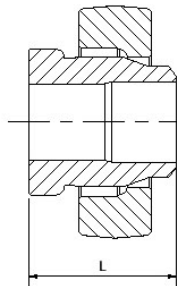
Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	30.0X3.0	A/BWA-30.0X3.0-150-FC34-*	2.45 (1.11)	57.2	BWA-30.0X3.0-150-*	RFC34-150-*
1-1/2"	38.0X4.0	A/BWA-38.0X4.0-150-FC34-*	2.40 (1.09)	57.2	BWA-38.0X4.0-150-*	RFC34-150-*
1-1/2"	38.0X5.0	A/BWA-38.0X5.0-150-FC34-*	2.35 (1.07)	57.2	BWA-38.0X5.0-150-*	RFC34-150-*
1-1/2"	38.0X6.0	A/BWA-38.0X6.0-150-FC34-*	2.48 (1.12)	57.2	BWA-38.0X6.0-150-*	RFC34-150-*
1-1/2"	42.0X3.0	A/BWA-42.0X3.0-150-FC34-*	2.30 (1.04)	57.2	BWA-42.0X3.0-150-*	RFC34-150-*
1-1/2"	42.0X4.0	A/BWA-42.0X4.0-150-FC34-*	2.35 (1.07)	57.2	BWA-42.0X4.0-150-*	RFC34-150-*
1-1/2"	48.3X3.7	A/BWA-SCH40-150-FC34-*	2.45 (1.11)	57.2	BWA-SCH40-150-*	RFC34-150-*
1-1/2"	48.3X5.1	A/BWA-SCH80-150-FC34-*	2.38 (1.08)	57.2	BWA-SCH80-150-*	RFC34-150-*
1-1/2"	48.3X7.1	A/BWA-SCH160-150-FC34-*	2.70 (1.22)	57.2	BWA-SCH160-150-*	RFC34-150-*
1-1/2"	48.3X10.2	A/BWA-SCHXXS-150-FC34-*	2.64 (1.20)	57.2	BWA-SCHXXS-150-*	RFC34-150-*
1-1/2"	50.0X3.0	A/BWA-50.0X3.0-150-FC34-*	2.32 (1.05)	57.2	BWA-50.0X3.0-150-*	RFC34-150-*
1-1/2"	50.0X5.0	A/BWA-50.0X5.0-150-FC34-*	2.25 (1.20)	57.2	BWA-50.0X5.0-150-*	RFC34-150-*
1-1/2"	56.0X8.5	A/BWA-56.0X8.5-150-FC34-*	2.68 (1.22)	57.2	BWA-56.0X8.5-150-*	RFC34-150-*
2"	50.0X3.0	A/BWA-50.0X3.0-200-FC34-*	3.54 (1.61)	63.5	BWA-50.0X3.0-200-*	RFC34-200-*
2"	50.0X5.0	A/BWA-50.0X5.0-200-FC34-*	3.67 (1.66)	63.5	BWA-50.0X5.0-200-*	RFC34-200-*
2"	50.0X6.0	A/BWA-50.0X6.0-200-FC34-*	3.74 (1.70)	63.5	BWA-50.0X6.0-200-*	RFC34-200-*
2"	60.0X3.0	A/BWA-60.0X3.0-200-FC34-*	3.43 (1.56)	63.5	BWA-60.0X3.0-200-*	RFC34-200-*
2"	60.0X5.0	A/BWA-60.0X5.0-200-FC34-*	3.16 (1.43)	63.5	BWA-60.0X5.0-200-*	RFC34-200-*
2"	60.0X6.0	A/BWA-60.0X6.0-200-FC34-*	3.61 (1.64)	63.5	BWA-60.0X6.0-200-*	RFC34-200-*
2"	60.0X8.0	A/BWA-60.0X8.0-200-FC34-*	3.80 (1.72)	63.5	BWA-60.0X8.0-200-*	RFC34-200-*
2"	60.3X3.9	A/BWA-SCH40-200-FC34-*	3.59 (1.63)	63.5	BWA-SCH40-200-*	RFC34-200-*
2"	60.3X5.5	A/BWA-SCH80-200-FC34-*	3.69 (1.67)	63.5	BWA-SCH80-200-*	RFC34-200-*
2"	60.3X8.7	A/BWA-SCH160-200-FC34-*	3.86 (1.75)	63.5	BWA-SCH160-200-*	RFC34-200-*
2"	60.3X11.1	A/BWA-SCHXXS-200-FC34-*	3.90 (1.77)	63.5	BWA-SCHXXS-200-*	RFC34-200-*
2"	66.0X8.5	A/BWA-66.0X8.5-200-FC34-*	3.75 (1.70)	63.5	BWA-66.0X8.5-200-*	RFC34-200-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: A/BWA-50.0X3.0-200-FC34-SS

* Insert Material _____

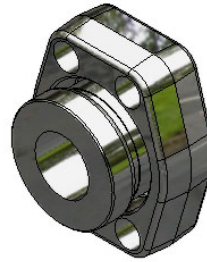
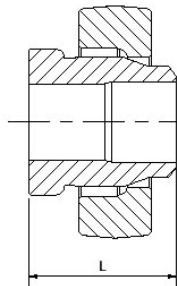
Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
2-1/2"	60.0X5.0	A/BWA-60.0X5.0-250-FC34-*	4.87 (2.21)	66.7	BWA-60.0X5.0-250-*	RFC34-250-*
2-1/2"	60.0X6.0	A/BWA-60.0X6.0-250-FC34-*	4.95 (2.25)	66.7	BWA-60.0X6.0-250-*	RFC34-250-*
2-1/2"	65.0X8.0	A/BWA-65.0X8.0-250-FC34-*	5.02 (2.28)	66.7	BWA-65.0X8.0-250-*	RFC34-250-*
2-1/2"	73.0X5.2	A/BWA-SCH40-250-FC34-*	4.61 (2.09)	66.7	BWA-SCH40-250-*	RFC34-250-*
2-1/2"	73.0X7.0	A/BWA-SCH80-250-FC34-*	4.91 (2.23)	66.7	BWA-SCH80-250-*	RFC34-250-*
2-1/2"	73.0X9.5	A/BWA-SCH160-250-FC34-*	5.13 (2.33)	66.7	BWA-SCH160-250-*	RFC34-250-*
2-1/2"	73.0X14.0	A/BWA-SCHXXS-250-FC34-*	5.49 (2.49)	66.7	BWA-SCHXXS-250-*	RFC34-250-*
2-1/2"	75.0X5.0	A/BWA-75.0X5.0-250-FC34-*	4.41 (2.00)	66.7	BWA-75.0X5.0-250-*	RFC34-250-*
2-1/2"	75.0X7.0	A/BWA-75.0X7.0-250-FC34-*	4.85 (2.20)	66.7	BWA-75.0X7.0-250-*	RFC34-250-*
2-1/2"	76.1X6.3	A/BWA-76.1X6.3-250-FC34-*	4.66 (2.11)	66.7	BWA-76.1X6.3-250-*	RFC34-250-*
2-1/2"	76.1X12.5	A/BWA-76.1X12.5-250-FC34-*	5.15 (2.36)	66.7	BWA-76.1X12.5-250-*	RFC34-250-*
2-1/2"	80.0X10.0	A/BWA-80.0X10.0-250-FC34-*	5.02 (2.28)	66.7	BWA-80.0X10.0-250-*	RFC34-250-*
3"	75.0X5.0	A/BWA-75.0X5.0-300-FC34-*	7.73 (3.50)	69.9	BWA-75.0X5.0-300-*	RFC34-300-*
3"	80.0X10.0	A/BWA-80.0X10.0-300-FC34-*	8.08 (3.67)	69.9	BWA-80.0X10.0-300-*	RFC34-300-*
3"	88.9X5.5	A/BWA-SCH40-300-FC34-*	7.63 (3.46)	69.9	BWA-SCH40-300-*	RFC34-300-*
3"	88.9X7.6	A/BWA-SCH80-300-FC34-*	8.05 (3.65)	69.9	BWA-SCH80-300-*	RFC34-300-*
3"	88.9X11.1	A/BWA-SCH160-300-FC34-*	7.89 (3.58)	69.9	BWA-SCH160-300-*	RFC34-300-*
3"	88.9X15.2	A/BWA-SCHXXS-300-FC34-*	9.24 (4.19)	69.9	BWA-SCHXXS-300-*	RFC34-300-*
3"	90.0X3.5	A/BWA-90X3.5-300-FC34-*	7.45 (3.38)	69.9	BWA-90X3.5-300-*	RFC34-300-*
3"	90.0X5.0	A/BWA-90X5.0-300-FC34-*	7.60 (3.45)	69.9	BWA-90X5.0-300-*	RFC34-300-*
3"	97.0X12.0	A/BWA-97.0X12.0-300-FC34-*	8.29 (3.76)	69.9	BWA-97.0X12.0-300-*	RFC34-300-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWA-50.0X3.0-200-FC34-SS

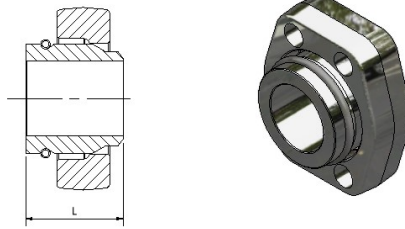
* Insert Material

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

SAE 3000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1/2"	1/2" SCH80	A/BWAR-SCH80-050-FC34-*	0.64 (0.29)	1.25	BWAR-SCH80-050-*	RFC34-050-*	R-050
1/2"	1/2" SCH160	A/BWAR-SCH160-050-FC34-*	0.65 (0.29)	1.25	BWAR-SCH160-050-*	RFC34-050-*	R-050
1/2"	1/2" SCHXXS	A/BWAR-SCHXXS-050-FC34-*	0.66 (0.30)	1.25	BWAR-SCHXXS-050-*	RFC34-050-*	R-050
3/4"	3/4" SCH80	A/BWAR-SCH80-075-FC34-*	0.92 (0.42)	1.75	BWAR-SCH80-075-*	RFC34-075-*	R-075
3/4"	3/4" SCH160	A/BWAR-SCH160-075-FC34-*	1.00 (0.45)	1.75	BWAR-SCH160-075-*	RFC34-075-*	R-075
3/4"	3/4" SCHXXS	A/BWAR-SCHXXS-075-FC34-*	1.03 (0.48)	1.75	BWAR-SCHXXS-075-*	RFC34-075-*	R-075
1"	1" SCH80	A/BWAR-SCH80-100-FC34-*	1.08 (0.49)	1.75	BWAR-SCH80-100-*	RFC34-100-*	R-100
1"	1" SCH160	A/BWAR-SCH160-100-FC34-*	1.19 (0.54)	1.75	BWAR-SCH160-100-*	RFC34-100-*	R-100
1"	1" SCHXXS	A/BWAR-SCHXXS-100-FC34-*	1.23 (0.56)	1.75	BWAR-SCHXXS-100-*	RFC34-100-*	R-100
1-1/4"	1-1/4" SCH80	A/BWAR-SCH80-125-FC34-*	1.62 (0.73)	2.00	BWAR-SCH80-125-*	RFCM34-125-*	R-125
1-1/4"	1-1/4" SCH160	A/BWAR-SCH160-125-FC34-*	1.65 (0.75)	2.00	BWAR-SCH160-125-*	RFCM34-125-*	R-125
1-1/4"	1-1/4" SCHXXS	A/BWAR-SCHXXS-125-FC34-*	1.76 (0.80)	2.00	BWAR-SCHXXS-125-*	RFCM34-125-*	R-125
1-1/2"	1-1/2" SCH80	A/BWAR-SCH80-150-FC34-*	2.06 (0.93)	2.25	BWAR-SCH80-150-*	RFC34-150-*	R-150
1-1/2"	1-1/2" SCH160	A/BWAR-SCH160-150-FC34-*	2.70 (1.22)	2.25	BWAR-SCH160-150-*	RFC34-150-*	R-150
1-1/2"	1-1/2" SCHXXS	A/BWAR-SCHXXS-150-FC34-*	2.72 (1.23)	2.25	BWAR-SCHXXS-150-*	RFC34-150-*	R-150
2"	2" SCH80	A/BWAR-SCH80-200-FC34-*	3.69 (1.67)	2.50	BWAR-SCH80-200-*	RFC34-200-*	R-200
2"	2" SCH160	A/BWAR-SCH160-200-FC34-*	3.86 (1.75)	2.50	BWAR-SCH160-200-*	RFC34-200-*	R-200
2"	2" SCHXXS	A/BWAR-SCHXXS-200-FC34-*	3.90 (1.77)	2.50	BWAR-SCHXXS-200-*	RFC34-200-*	R-200
2-1/2"	2-1/2" SCH80	A/BWAR-SCH80-250-FC34-*	5.12 (2.32)	2.63	BWAR-SCH80-250-*	RFC34-250-*	R-250
2-1/2"	2-1/2" SCH160	A/BWAR-SCH160-250-FC34-*	5.35 (2.43)	2.63	BWAR-SCH160-250-*	RFC34-250-*	R-250
2-1/2"	2-1/2" SCHXXS	A/BWAR-SCHXXS-250-FC34-*	5.70 (2.59)	2.63	BWAR-SCHXXS-250-*	RFC34-250-*	R-250
3"	3" SCH80	A/BWAR-SCH80-300-FC34-*	8.05 (3.50)	2.75	BWAR-SCH80-300-*	RFC34-300-*	R-300
3"	3" SCH160	A/BWAR-SCH160-300-FC34-*	7.89 (3.72)	2.75	BWAR-SCH160-300-*	RFC34-300-*	R-300
3"	3" SCHXXS	A/BWAR-SCHXXS-300-FC34-*	9.20 (3.95)	2.75	BWAR-SCHXXS-300-*	RFC34-300-*	R-300

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number

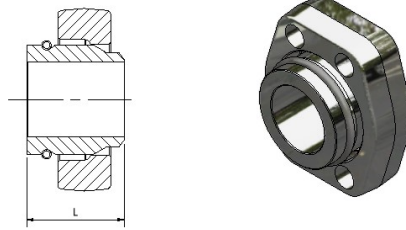
Ordering Example: A/BWAR-SCH80-200-FC34-SS

* Insert Material _____

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1/2"	12.0X1.5	A/BWAR-12.0X1.5-050-FC34-*	0.65 (0.29)	38.1	BWAR-12.0X1.5-050-*	RFC34-050-*	R-050
1/2"	16.0X2.0	A/BWAR-16.0X2.0-050-FC34-*	0.65 (0.29)	38.1	BWAR-16.0X2.0-050-*	RFC34-050-*	R-050
1/2"	16.0X2.5	A/BWAR-16.0X2.5-050-FC34-*	0.65 (0.29)	38.1	BWAR-16.0X2.5-050-*	RFC34-050-*	R-050
1/2"	18.0X2.0	A/BWAR-18.0X2.0-050-FC34-*	0.65 (0.29)	38.1	BWAR-18.0X2.0-050-*	RFC34-050-*	R-050
1/2"	20.0X2.0	A/BWAR-20.0X2.0-050-FC34-*	0.67 (0.30)	38.1	BWAR-20.0X2.0-050-*	RFC34-050-*	R-050
1/2"	20.0X2.5	A/BWAR-20.0X2.5-050-FC34-*	0.67 (0.30)	38.1	BWAR-20.0X2.5-050-*	RFC34-050-*	R-050
1/2"	20.0X3.0	A/BWAR-20.0X3.0-050-FC34-*	0.67 (0.30)	38.1	BWAR-20.0X3.0-050-*	RFC34-050-*	R-050
1/2"	21.3X2.8	A/BWAR-SCH40-050-FC34-*	0.63 (0.29)	31.8	BWAR-SCH40-050-*	RFC34-050-*	R-050
1/2"	21.3X3.7	A/BWAR-SCH80-050-FC34-*	0.64 (0.29)	31.8	BWAR-SCH80-050-*	RFC34-050-*	R-050
1/2"	21.3X4.8	A/BWAR-SCH160-050-FC34-*	0.65 (0.29)	31.8	BWAR-SCH160-050-*	RFC34-050-*	R-050
1/2"	21.3X7.5	A/BWAR-SCHXXS-050-FC34-*	0.66 (0.30)	31.8	BWAR-SCHXXS-050-*	RFC34-050-*	R-050
1/2"	25.0X2.5	A/BWAR-25.0X2.5-050-FC34-*	0.66 (0.30)	38.1	BWAR-25.0X2.5-050-*	RFC34-050-*	R-050
1/2"	25.0X3.0	A/BWAR-25.0X3.0-050-FC34-*	0.66 (0.30)	38.1	BWAR-25.0X3.0-050-*	RFC34-050-*	R-050
1/2"	26.0X6.0	A/BWAR-26.0X6.0-050-FC34-*	0.71 (0.32)	38.1	BWAR-26.0X6.0-050-*	RFC34-050-*	R-050
3/4"	20.0X2.0	A/BWAR-20.0X2.0-075-FC34-*	0.95 (0.43)	44.5	BWAR-20.0X2.0-075-*	RFC34-075-*	R-075
3/4"	20.0X2.5	A/BWAR-20.0X2.5-075-FC34-*	0.97 (0.44)	44.5	BWAR-20.0X2.5-075-*	RFC34-075-*	R-075
3/4"	20.0X3.0	A/BWAR-20.0X3.0-075-FC34-*	0.97 (0.44)	44.5	BWAR-20.0X3.0-075-*	RFC34-075-*	R-075
3/4"	25.0X2.5	A/BWAR-25.0X2.5-075-FC34-*	0.94 (0.43)	44.5	BWAR-25.0X2.5-075-*	RFC34-075-*	R-075
3/4"	25.0X3.0	A/BWAR-25.0X3.0-075-FC34-*	0.95 (0.43)	44.5	BWAR-25.0X3.0-075-*	RFC34-075-*	R-075
3/4"	25.0X4.0	A/BWAR-25.0X4.0-075-FC34-*	0.97 (0.44)	44.5	BWAR-25.0X4.0-075-*	RFC34-075-*	R-075
3/4"	26.7X2.9	A/BWAR-SCH40-075-FC34-*	0.90 (0.41)	44.5	BWAR-SCH40-075-*	RFC34-075-*	R-075
3/4"	26.7X3.9	A/BWAR-SCH80-075-FC34-*	0.92 (0.42)	44.5	BWAR-SCH80-075-*	RFC34-075-*	R-075
3/4"	26.7X5.5	A/BWAR-SCH160-075-FC34-*	1.00 (0.45)	44.5	BWAR-SCH160-075-*	RFC34-075-*	R-075
3/4"	26.7X7.8	A/BWAR-SCHXXS-075-FC34-*	1.03 (0.47)	44.5	BWAR-SCHXXS-075-*	RFC34-075-*	R-075
3/4"	30.0X3.0	A/BWAR-30.0X3.0-075-FC34-*	0.85 (0.39)	44.5	BWAR-30.0X3.0-075-*	RFC34-075-*	R-075
3/4"	30.0X4.0	A/BWAR-30.0X4.0-075-FC34-*	0.88 (0.40)	44.5	BWAR-30.0X4.0-075-*	RFC34-075-*	R-075
3/4"	36.0X8.0	A/BWAR-36.0X8.0-075-FC34-*	1.03 (0.47)	44.5	BWAR-36.0X8.0-075-*	RFC34-075-*	R-075

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWAR-50.0X3.0-200-FC34-SS

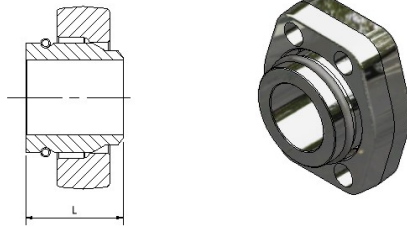
* Insert Material

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

SAE 3000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1"	25.0X2.5	A/BWAR-25.0X2.5-100-FC34-*	1.06 (0.48)	44.5	BWAR-25.0X2.5-100-*	RFC34-100-*	R-100
1"	25.0X3.0	A/BWAR-25.0X3.0-100-FC34-*	1.06 (0.48)	44.5	BWAR-25.0X3.0-100-*	RFC34-100-*	R-100
1"	25.0X4.0	A/BWAR-25.0X4.0-100-FC34-*	1.09 (0.49)	44.5	BWAR-25.0X4.0-100-*	RFC34-100-*	R-100
1"	30.0X3.0	A/BWAR-30.0X3.0-100-FC34-*	1.10 (0.50)	44.5	BWAR-30.0X3.0-100-*	RFC34-100-*	R-100
1"	30.0X4.0	A/BWAR-30.0X4.0-100-FC34-*	1.08 (0.49)	44.5	BWAR-30.0X4.0-100-*	RFC34-100-*	R-100
1"	30.0X5.0	A/BWAR-30.0X5.0-100-FC34-*	1.15 (0.52)	44.5	BWAR-30.0X5.0-100-*	RFC34-100-*	R-100
1"	33.4X3.4	A/BWAR-SCH40-100-FC34-*	1.08 (0.49)	44.5	BWAR-SCH40-100-*	RFC34-100-*	R-100
1"	33.4X4.6	A/BWAR-SCH80-100-FC34-*	1.08 (0.49)	44.5	BWAR-SCH80-100-*	RFC34-100-*	R-100
1"	33.4X6.4	A/BWAR-SCH160-100-FC34-*	1.19 (0.54)	44.5	BWAR-SCH160-100-*	RFC34-100-*	R-100
1"	33.4X9.1	A/BWAR-SCHXXS-100-FC34-*	1.23 (0.56)	44.5	BWAR-SCHXXS-100-*	RFC34-100-*	R-100
1"	38.0X4.0	A/BWAR-38.0X4.0-100-FC34-*	1.08 (0.49)	44.5	BWAR-38.0X4.0-100-*	RFC34-100-*	R-100
1"	38.0X5.0	A/BWAR-38.0X5.0-100-FC34-*	1.08 (0.49)	44.5	BWAR-38.0X5.0-100-*	RFC34-100-*	R-100
1"	38.0X6.0	A/BWAR-38.0X6.0-100-FC34-*	1.17 (0.53)	44.5	BWAR-38.0X6.0-100-*	RFC34-100-*	R-100
1"	39.0X7.5	A/BWAR-39.0X7.5-100-FC34-*	1.20 (0.54)	44.5	BWAR-39.0X7.5-100-*	RFC34-100-*	R-100
1-1/4"	30.0X3.0	A/BWAR-30.0X3.0-125-FCM34-*	1.60 (0.73)	50.8	BWAR-30.0X3.0-125-*	RFCM34-125-*	R-125
1-1/4"	30.0X4.0	A/BWAR-30.0X4.0-125-FCM34-*	1.63 (0.74)	50.8	BWAR-30.0X4.0-125-*	RFCM34-125-*	R-125
1-1/4"	30.0X5.0	A/BWAR-30.0X5.0-125-FCM34-*	1.65 (0.75)	50.8	BWAR-30.0X5.0-125-*	RFCM34-125-*	R-125
1-1/4"	38.0X4.0	A/BWAR-38.0X4.0-125-FCM34-*	1.59 (0.72)	50.8	BWAR-38.0X4.0-125-*	RFCM34-125-*	R-125
1-1/4"	38.0X5.0	A/BWAR-38.0X5.0-125-FCM34-*	1.62 (0.73)	50.8	BWAR-38.0X5.0-125-*	RFCM34-125-*	R-125
1-1/4"	38.0X6.0	A/BWAR-38.0X6.0-125-FCM34-*	1.65 (0.75)	50.8	BWAR-38.0X6.0-125-*	RFCM34-125-*	R-125
1-1/4"	42.0X3.0	A/BWAR-42.0X3.0-125-FCM34-*	1.60 (0.72)	50.8	BWAR-42.0X3.0-125-*	RFCM34-125-*	R-125
1-1/4"	42.0X4.0	A/BWAR-42.0X4.0-125-FCM34-*	1.61 (0.73)	50.8	BWAR-42.0X4.0-125-*	RFCM34-125-*	R-125
1-1/4"	42.2X3.6	A/BWAR-SCH40-125-FCM34-*	1.61 (0.73)	50.8	BWAR-SCH40-125-*	RFCM34-125-*	R-125
1-1/4"	42.2X4.9	A/BWAR-SCH80-125-FCM34-*	1.61 (0.73)	50.8	BWAR-SCH80-125-*	RFCM34-125-*	R-125
1-1/4"	42.2X6.4	A/BWAR-SCH160-125-FCM34-*	1.61 (0.73)	50.8	BWAR-SCH160-125-*	RFCM34-125-*	R-125
1-1/4"	42.2X9.7	A/BWAR-SCHXXS-125-FCM34-*	1.76 (0.80)	50.8	BWAR-SCHXXS-125-*	RFCM34-125-*	R-125
1-1/4"	46.0X8.5	A/BWAR-46.0X8.5-125-FCM34-*	1.76 (0.80)	50.8	BWAR-46.0X8.5-125-*	RFCM34-125-*	R-125

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWAR-50.0X3.0-200-FC34-SS

* Insert Material _____

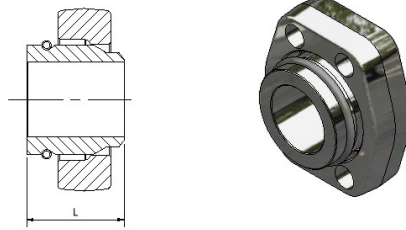
Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

3D step models available upon request

SAE 3000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1-1/2"	30.0X3.0	A/BWAR-30.0X3.0-150-FC34-*	2.45 (1.11)	57.2	BWAR-30.0X3.0-150-*	RFC34-150-*	R-150
1-1/2"	38.0X4.0	A/BWAR-38.0X4.0-150-FC34-*	2.40 (1.09)	57.2	BWAR-38.0X4.0-150-*	RFC34-150-*	R-150
1-1/2"	38.0X5.0	A/BWAR-38.0X5.0-150-FC34-*	2.35 (1.07)	57.2	BWAR-38.0X5.0-150-*	RFC34-150-*	R-150
1-1/2"	38.0X6.0	A/BWAR-38.0X6.0-150-FC34-*	2.48 (1.12)	57.2	BWAR-38.0X6.0-150-*	RFC34-150-*	R-150
1-1/2"	42.0X3.0	A/BWAR-42.0X3.0-150-FC34-*	2.30 (1.04)	57.2	BWAR-42.0X3.0-150-*	RFC34-150-*	R-150
1-1/2"	42.0X4.0	A/BWAR-42.0X4.0-150-FC34-*	2.35 (1.07)	57.2	BWAR-42.0X4.0-150-*	RFC34-150-*	R-150
1-1/2"	48.3X3.7	A/BWAR-SCH40-150-FC34-*	2.45 (1.11)	57.2	BWAR-SCH40-150-*	RFC34-150-*	R-150
1-1/2"	48.3X5.1	A/BWAR-SCH80-150-FC34-*	2.38 (1.08)	57.2	BWAR-SCH80-150-*	RFC34-150-*	R-150
1-1/2"	48.3X7.1	A/BWAR-SCH160-150-FC34-*	2.70 (1.22)	57.2	BWAR-SCH160-150-*	RFC34-150-*	R-150
1-1/2"	48.3X10.2	A/BWAR-SCHXXS-150-FC34-*	2.64 (1.20)	57.2	BWAR-SCHXXS-150-*	RFC34-150-*	R-150
1-1/2"	50.0X3.0	A/BWAR-50.0X3.0-150-FC34-*	2.32 (1.05)	57.2	BWAR-50.0X3.0-150-*	RFC34-150-*	R-150
1-1/2"	50.0X5.0	A/BWAR-50.0X5.0-150-FC34-*	2.25 (1.20)	57.2	BWAR-50.0X5.0-150-*	RFC34-150-*	R-150
1-1/2"	56.0X8.5	A/BWAR-56.0X8.5-150-FC34-*	2.68 (1.22)	57.2	BWAR-56.0X8.5-150-*	RFC34-150-*	R-150
2"	50.0X3.0	A/BWAR-50.0X3.0-200-FC34-*	3.54 (1.61)	63.5	BWAR-50.0X3.0-200-*	RFC34-200-*	R-200
2"	50.0X5.0	A/BWAR-50.0X5.0-200-FC34-*	3.67 (1.66)	63.5	BWAR-50.0X5.0-200-*	RFC34-200-*	R-200
2"	50.0X6.0	A/BWAR-50.0X6.0-200-FC34-*	3.74 (1.70)	63.5	BWAR-50.0X6.0-200-*	RFC34-200-*	R-200
2"	60.0X3.0	A/BWAR-60.0X3.0-200-FC34-*	3.43 (1.56)	63.5	BWAR-60.0X3.0-200-*	RFC34-200-*	R-200
2"	60.0X5.0	A/BWAR-60.0X5.0-200-FC34-*	3.16 (1.43)	63.5	BWAR-60.0X5.0-200-*	RFC34-200-*	R-200
2"	60.0X6.0	A/BWAR-60.0X6.0-200-FC34-*	3.61 (1.64)	63.5	BWAR-60.0X6.0-200-*	RFC34-200-*	R-200
2"	60.0X8.0	A/BWAR-60.0X8.0-200-FC34-*	3.80 (1.72)	63.5	BWAR-60.0X8.0-200-*	RFC34-200-*	R-200
2"	60.3X3.9	A/BWAR-SCH40-200-FC34-*	3.59 (1.63)	63.5	BWAR-SCH40-200-*	RFC34-200-*	R-200
2"	60.3X5.5	A/BWAR-SCH80-200-FC34-*	3.69 (1.67)	63.5	BWAR-SCH80-200-*	RFC34-200-*	R-200
2"	60.3X8.7	A/BWAR-SCH160-200-FC34-*	3.86 (1.75)	63.5	BWAR-SCH160-200-*	RFC34-200-*	R-200
2"	60.3X11.1	A/BWAR-SCHXXS-200-FC34-*	3.90 (1.77)	63.5	BWAR-SCHXXS-200-*	RFC34-200-*	R-200
2"	66.0X8.5	A/BWAR-66.0X8.5-200-FC34-*	3.75 (1.70)	63.5	BWAR-66.0X8.5-200-*	RFC34-200-*	R-200

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWAR-50.0X3.0-200-FC34-SS

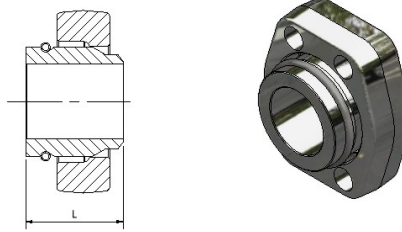
* Insert Material _____

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

SAE 3000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page G25)
- O-Ring Spacer (See Page G80)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
2-1/2"	60.0X5.0	A/BWAR-60.0X5.0-250-FC34-*	4.87 (2.21)	66.7	BWAR-60.0X5.0-250-*	RFC34-250-*	R-250
2-1/2"	60.0X6.0	A/BWAR-60.0X6.0-250-FC34-*	4.95 (2.25)	66.7	BWAR-60.0X6.0-250-*	RFC34-250-*	R-250
2-1/2"	65.0X8.0	A/BWAR-65.0X8.0-250-FC34-*	5.02 (2.28)	66.7	BWAR-65.0X8.0-250-*	RFC34-250-*	R-250
2-1/2"	73.0X5.2	A/BWAR-SCH40-250-FC34-*	4.61 (2.09)	66.7	BWAR-SCH40-250-*	RFC34-250-*	R-250
2-1/2"	73.0X7.0	A/BWAR-SCH80-250-FC34-*	4.91 (2.23)	66.7	BWAR-SCH80-250-*	RFC34-250-*	R-250
2-1/2"	73.0X9.5	A/BWAR-SCH160-250-FC34-*	5.13 (2.33)	66.7	BWAR-SCH160-250-*	RFC34-250-*	R-250
2-1/2"	73.0X14.0	A/BWAR-SCHXXS-250-FC34-*	5.49 (2.49)	66.7	BWAR-SCHXXS-250-*	RFC34-250-*	R-250
2-1/2"	75.0X5.0	A/BWAR-75.0X5.0-250-FC34-*	4.41 (2.00)	66.7	BWAR-75.0X5.0-250-*	RFC34-250-*	R-250
2-1/2"	75.0X7.0	A/BWAR-75.0X7.0-250-FC34-*	4.85 (2.20)	66.7	BWAR-75.0X7.0-250-*	RFC34-250-*	R-250
2-1/2"	76.1X6.3	A/BWAR-76.1X6.3-250-FC34-*	4.66 (2.11)	66.7	BWAR-76.1X6.3-250-*	RFC34-250-*	R-250
2-1/2"	76.1X12.5	A/BWAR-76.1X12.5-250-FC34-*	5.15 (2.36)	66.7	BWAR-76.1X12.5-250-*	RFC34-250-*	R-250
2-1/2"	80.0X10.0	A/BWAR-80.0X10.0-250-FC34-*	5.02 (2.28)	66.7	BWAR-80.0X10.0-250-*	RFC34-250-*	R-250
3"	75.0X5.0	A/BWAR-75.0X5.0-300-FC34-*	7.73 (3.50)	69.9	BWAR-75.0X5.0-300-*	RFC34-300-*	R-300
3"	80.0X10.0	A/BWAR-80.0X10.0-300-FC34-*	8.08 (3.67)	69.9	BWAR-80.0X10.0-300-*	RFC34-300-*	R-300
3"	88.9X5.5	A/BWAR-SCH40-300-FC34-*	7.63 (3.46)	69.9	BWAR-SCH40-300-*	RFC34-300-*	R-300
3"	88.9X7.6	A/BWAR-SCH80-300-FC34-*	8.05 (3.65)	69.9	BWAR-SCH80-300-*	RFC34-300-*	R-300
3"	88.9X11.1	A/BWAR-SCH160-300-FC34-*	7.89 (3.58)	69.9	BWAR-SCH160-300-*	RFC34-300-*	R-300
3"	88.9X15.2	A/BWAR-SCHXXS-300-FC34-*	9.24 (4.19)	69.9	BWAR-SCHXXS-300-*	RFC34-300-*	R-300
3"	90.0X3.5	A/BWAR-90X3.5-300-FC34-*	7.45 (3.38)	69.9	BWAR-90X3.5-300-*	RFC34-300-*	R-300
3"	90.0X5.0	A/BWAR-90X5.0-300-FC34-*	7.60 (3.45)	69.9	BWAR-90X5.0-300-*	RFC34-300-*	R-300
3"	97.0X12.0	A/BWAR-97.0X12.0-300-FC34-*	8.29 (3.76)	69.9	BWAR-97.0X12.0-300-*	RFC34-300-*	R-300

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: A/BWAR-50.0X3.0-200-FC34-SS

* Insert Material _____

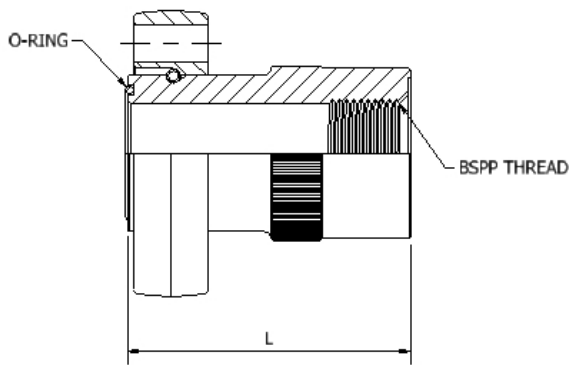
Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

3D step models available upon request

SAE 3000 PSI BSPP Female Thread Adapter Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Female Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/FBTA - BSPP Female Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring (Buna Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L	R					
1/2" x 1/4"	A/FBTA-050x025-FC34-*^-^	1.38 (35.0)	1/4"	OR^-3-909	1.05 (0.48)	FBTA-050x025-*^-^	0.64 (0.29)	
1/2" x 1/2"	A/FBTA-050x050-FC34-*^-^	2.50 (63.5)	1/2"	OR^-3-909	1.51 (0.69)	FBTA-050x050-*^-^	1.10 (0.50)	
3/4" x 1/2"	A/FBTA-075x050-FC34-*^-^	1.57 (40.0)	1/2"	OR^-3-913	1.43 (0.65)	FBTA-075x050-*^-^	0.95 (0.43)	
3/4" x 3/4"	A/FBTA-075x075-FC34-*^-^	2.88 (73.0)	3/4"	OR^-3-913	2.13 (0.97)	FBTA-075x075-*^-^	1.65 (0.75)	
1" x 3/4"	A/FBTA-100x075-FC34-*^-^	1.57 (40.0)	3/4"	OR^-3-916	1.67 (0.76)	FBTA-100x075-*^-^	1.06 (0.48)	
1" x 1"	A/FBTA-100x100-FC34-*^-^	3.75 (95.3)	1"	OR^-3-916	2.41 (1.10)	FBTA-100x100-*^-^	1.80 (0.82)	
1-1/4" x 1"	A/FBTA-125x100-FC34-*^-^	1.65 (42.0)	1"	OR^-3-918	2.30 (1.05)	FBTA-125x100-*^-^	1.47 (0.67)	
1-1/4" x 1-1/4"	A/FBTA-125x125-FC34-*^-^	3.88 (98.6)	1-1/4"	OR^-3-918	3.33 (1.51)	FBTA-125x125-*^-^	2.50 (1.14)	
1-1/2" x 1-1/4"	A/FBTA-150x125-FC34-*^-^	1.77 (45.0)	1-1/4"	OR^-3-924	3.77 (1.71)	FBTA-150x125-*^-^	2.31 (1.05)	
1-1/2" x 1-1/2"	A/FBTA-150x150-FC34-*^-^	4.00 (101.6)	1-1/2"	OR^-3-924	5.51 (2.50)	FBTA-150x150-*^-^	4.05 (1.84)	
2" x 1-1/2"	A/FBTA-200x150-FC34-*^-^	2.16 (55.0)	1-1/2"	OR^-3-928	5.74 (2.61)	FBTA-200x150-*^-^	3.67 (1.67)	
2" x 2"	A/FBTA-200x200-FC34-*^-^	4.50 (114.3)	2"	OR^-3-928	8.52 (3.87)	FBTA-200x200-*^-^	6.45 (2.93)	

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

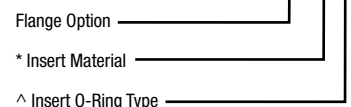
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

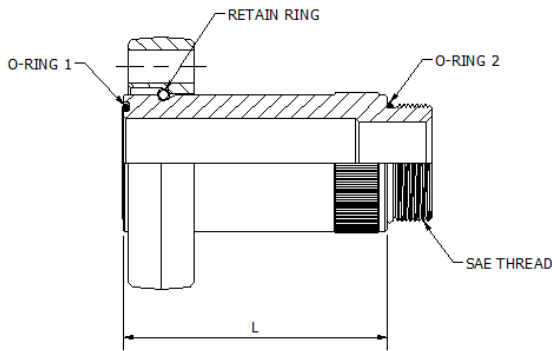
V = Viton.

Ordering Example: A/FBTA-200x150-FC34-SS-V



SAE 3000 PSI SAE Male Thread Adapter Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread O-Ring (O-Ring 2)

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/STA – SAE Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size UNF/ UN-2A	O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L							
1/2" x 3/8"	A/STA-050x038-FC34-*^-^	2.63 (66.80)		9/16"-18	OR^3-909	OR^3-906	0.96 (0.44)	STA-050x038-*	0.50 (0.23)
1/2" x 1/2"	A/STA-050x050-FC34-*^-^	2.63 (66.80)		3/4"-16	OR^3-909	OR^3-908	0.94 (0.43)	STA-050x050-*	0.52 (0.24)
1/2" x 5/8"	A/STA-050x063-FC34-*^-^	2.63 (66.80)		7/8"-14	OR^3-909	OR^3-910	1.00 (0.45)	STA-050x063-*	0.57 (0.26)
1/2" x 3/4"	A/STA-050x075-FC34-*^-^	2.63 (66.80)		1-1/16"-12	OR^3-909	OR^3-912	1.12 (0.50)	STA-050x075-*	0.66 (0.30)
3/4" x 1/2"	A/STA-075x050-FC34-*^-^	2.75 (69.85)		3/4"-16	OR^3-913	OR^3-908	1.50 (0.68)	STA-075x050-*	1.00 (0.45)
3/4" x 3/4"	A/STA-075x075-FC34-*^-^	2.75 (69.85)		1-1/16"-12	OR^3-913	OR^3-912	1.57 (0.71)	STA-075x075-*	1.07 (0.49)
3/4" x 1"	A/STA-075x100-FC34-*^-^	2.75 (69.85)		1-5/16"-12	OR^3-913	OR^3-916	1.78 (0.81)	STA-075x100-*	1.15 (0.52)
1" x 3/4"	A/STA-100x075-FC34-*^-^	3.00 (76.20)		1-1/16"-12	OR^3-916	OR^3-912	1.88 (0.85)	STA-100x075-*	1.25 (0.57)
1" x 1"	A/STA-100x100-FC34-*^-^	3.00 (76.20)		1-5/16"-12	OR^3-916	OR^3-916	1.93 (0.88)	STA-100x100-*	1.30 (0.59)
1" x 1-1/4"	A/STA-100x125-FC34-*^-^	3.00 (76.20)		1-5/8"-12	OR^3-916	OR^3-920	2.12 (0.96)	STA-100x125-*	1.49 (0.68)
1-1/4" x 1"	A/STA-125x100-FC34-*^-^	3.25 (82.55)		1-5/16"-12	OR^3-918	OR^3-916	2.65 (1.20)	STA-125x100-*	1.75 (0.79)
1-1/4" x 1-1/4"	A/STA-125x125-FC34-*^-^	3.25 (82.55)		1-5/8"-12	OR^3-918	OR^3-920	2.72 (1.23)	STA-125x125-*	1.82 (0.83)
1-1/4" x 1-1/2"	A/STA-125x150-FC34-*^-^	3.25 (82.55)		1-7/8"-12	OR^3-918	OR^3-924	2.93 (1.33)	STA-125x150-*	2.03 (0.92)
1-1/2" x 1-1/4"	A/STA-150x125-FC34-*^-^	4.25 (107.95)		1-5/8"-12	OR^3-924	OR^3-920	3.84 (1.74)	STA-150x125-*	2.94 (1.33)
1-1/2" x 1-1/2"	A/STA-150x150-FC34-*^-^	4.25 (107.95)		1-7/8"-12	OR^3-924	OR^3-924	4.32 (1.96)	STA-150x150-*	2.97 (1.35)
1-1/2" x 2"	A/STA-150x200-FC34-*^-^	4.25 (107.95)		2-1/2"-12	OR^3-924	OR^3-932	4.89 (2.22)	STA-150x200-*	3.54 (1.61)
2" x 1-1/2"	A/STA-200x150-FC34-*^-^	4.38 (111.25)		1-7/8"-12	OR^3-928	OR^3-924	5.78 (2.62)	STA-200x150-*	3.76 (1.71)
2" x 2"	A/STA-200x200-FC34-*^-^	4.38 (111.25)		2-1/2"-12	OR^3-928	OR^3-932	5.98 (2.71)	STA-200x200-*	3.96 (1.80)

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

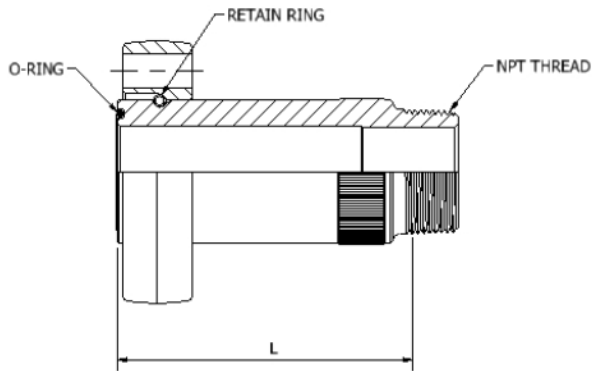
Ordering Example: A/STA-200x150-FC34-SS-V



3D step models available upon request

SAE 3000 PSI NPT Male Thread Adapter Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/NTA – NPT Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		NPTF Thread (Dryseal)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L						
1/2" x 1/2"	A/NTA-050x050-FC34-*^-^	2.88 (73.15)		1/2"-14	OR^-3-909	1.07 (0.49)	NTA-050x050-*	0.57 (0.26)
1/2" x 3/4"	A/NTA-050x075-FC34-*^-^	2.86 (72.64)		3/4"-14	OR^-3-909	1.24 (0.56)	NTA-050x075-*	0.74 (0.34)
3/4" x 1/2"	A/NTA-075x050-FC34-*^-^	3.00 (76.2)		1/2"-14	OR^-3-913	1.57 (0.71)	NTA-075x050-*	1.07 (0.49)
3/4" x 3/4"	A/NTA-075x075-FC34-*^-^	2.98 (75.69)		3/4"-14	OR^-3-913	1.57 (0.71)	NTA-075x075-*	1.07 (0.49)
3/4" x 1"	A/NTA-075x100-FC34-*^-^	3.07 (77.98)		1"-11-1/2	OR^-3-913	1.64 (0.74)	NTA-075x100-*	1.19 (0.54)
1" x 3/4"	A/NTA-100x075-FC34-*^-^	3.23 (82.04)		3/4"-14	OR^-3-916	1.91 (0.87)	NTA-100x075-*	1.28 (0.58)
1" x 1"	A/NTA-100x100-FC34-*^-^	3.32 (84.33)		1"-11-1/2	OR^-3-916	1.97 (0.89)	NTA-100x100-*	1.34 (0.61)
1" x 1-1/4"	A/NTA-100x125-FC34-*^-^	3.33 (84.58)		1-1/4"-11-1/2	OR^-3-916	2.25 (1.02)	NTA-100x125-*	1.62 (0.73)
1-1/4" x 1"	A/NTA-125x100-FC34-*^-^	3.57 (90.68)		1"-11-1/2	OR^-3-918	2.74 (1.24)	NTA-125x100-*	1.84 (0.83)
1-1/4" x 1-1/4"	A/NTA-125x125-FC34-*^-^	3.58 (90.93)		1-1/4"-11-1/2	OR^-3-918	2.77 (1.26)	NTA-125x125-*	1.87 (0.85)
1-1/4" x 1-1/2"	A/NTA-125x150-FC34-*^-^	3.61 (91.69)		1-1/2"-11-1/2	OR^-3-918	3.12 (1.42)	NTA-125x150-*	2.18 (0.99)
1-1/2" x 1-1/4"	A/NTA-150x125-FC34-*^-^	4.58 (116.33)		1-1/4"-11-1/2	OR^-3-924	3.90 (1.77)	NTA-150x125-*	3.00 (1.56)
1-1/2" x 1-1/2"	A/NTA-150x150-FC34-*^-^	4.61 (117.09)		1-1/2"-11-1/2	OR^-3-924	4.45 (2.02)	NTA-150x150-*	3.10 (1.41)
1-1/2" x 2"	A/NTA-150x200-FC34-*^-^	4.63 (117.60)		2"-11-1/2	OR^-3-924	4.95 (2.25)	NTA-150x200-*	3.60 (1.36)
2" x 1-1/2"	A/NTA-200x150-FC34-*^-^	4.61 (117.09)		1-1/2"-11-1/2	OR^-3-928	5.98 (2.71)	NTA-200x150-*	3.96 (1.80)
2" x 2"	A/NTA-200x200-FC34-*^-^	4.63 (117.60)		2"-11-1/2	OR^-3-928	6.02 (2.73)	NTA-200x200-*	4.00 (1.81)

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

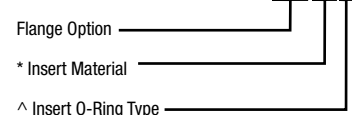
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

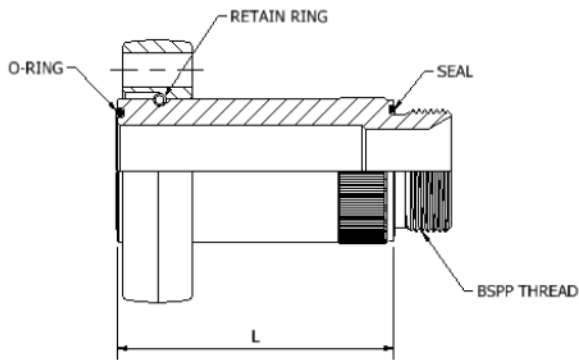
Ordering Example: A/NTA-200x150-FC34-SS-V



3D step models available upon request

SAE 3000 PSI BSPP Male Thread Adapter Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread Seal (Seal 2)

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/BTA – BSPP Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring 1 (Buna) Part Number	Seal 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L							
1/2" x 1/2"	A/BTA-050x050-FC34-*^-^	2.63 (66.80)		1/2"-14	OR^-3-909	DR^-G050	1.06 (0.48)	BTA-050x050-*	0.60 (0.27)
1/2" x 3/4"	A/BTA-050x075-FC34-*^-^	2.63 (66.80)		3/4"-14	OR^-3-909	DR^-G075	1.16 (0.53)	BTA-050x075-*	0.70 (0.32)
3/4" x 1/2"	A/BTA-075x050-FC34-*^-^	2.75 (69.85)		1/2"-14	OR^-3-913	DR^-G050	1.57 (0.71)	BTA-075x050-*	1.07 (0.49)
3/4" x 3/4"	A/BTA-075x075-FC34-*^-^	2.75 (69.85)		3/4"-14	OR^-3-913	DR^-G075	1.57 (0.71)	BTA-075x075-*	1.07 (0.49)
3/4" x 1"	A/BTA-075x100-FC34-*^-^	2.75 (69.85)		1"-11	OR^-3-913	DR^-G100	1.57 (0.71)	BTA-075x100-*	1.07 (0.49)
1" x 3/4"	A/BTA-100x075-FC34-*^-^	3.00 (76.20)		3/4"-14	OR^-3-916	DR^-G075	1.82 (0.83)	BTA-100x075-*	1.21 (0.55)
1" x 1"	A/BTA-100x100-FC34-*^-^	3.00 (76.20)		1"-11	OR^-3-916	DR^-G100	1.93 (0.88)	BTA-100x100-*	1.30 (0.59)
1" x 1-1/4"	A/BTA-100x125-FC34-*^-^	3.00 (76.20)		1-1/4"-11	OR^-3-916	DR^-G125	2.16 (0.98)	BTA-100x125-*	1.55 (0.70)
1-1/4" x 1"	A/BTA-125x100-FC34-*^-^	3.25 (82.55)		1"-11	OR^-3-918	DR^-G100	2.70 (1.22)	BTA-125x100-*	1.80 (0.82)
1-1/4" x 1-1/4"	A/BTA-125x125-FC34-*^-^	3.25 (82.55)		1-1/4"-11	OR^-3-918	DR^-G125	2.81 (1.27)	BTA-125x125-*	1.87 (0.85)
1-1/4" x 1-1/2"	A/BTA-125x150-FC34-*^-^	3.25 (82.55)		1-1/2"-11	OR^-3-918	DR^-G150	2.90 (1.32)	BTA-125x150-*	2.00 (0.91)
1-1/2" x 1-1/4"	A/BTA-150x125-FC34-*^-^	4.25 (107.95)		1-1/4"-11	OR^-3-924	DR^-G125	4.45 (2.02)	BTA-150x125-*	3.02 (1.37)
1-1/2" x 1-1/2"	A/BTA-150x150-FC34-*^-^	4.25 (107.95)		1-1/2"-11	OR^-3-924	DR^-G150	4.35 (1.97)	BTA-150x150-*	3.00 (1.36)
1-1/2" x 2"	A/BTA-150x200-FC34-*^-^	4.25 (107.95)		2"-11	OR^-3-924	BS^-3236	4.95 (2.25)	BTA-150x200-*	3.60 (1.63)
2" x 1-1/2"	A/BTA-200x150-FC34-*^-^	4.38 (111.25)		1-1/2"-11	OR^-3-928	DR^-G150	5.98 (2.71)	BTA-200x150-*	3.94 (1.79)
2" x 2"	A/BTA-200x200-FC34-*^-^	4.38 (111.25)		2"-11	OR^-3-928	BS^-3236	6.02 (2.73)	BTA-200x200-*	4.00 (1.81)

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

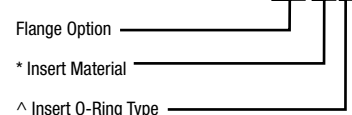
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

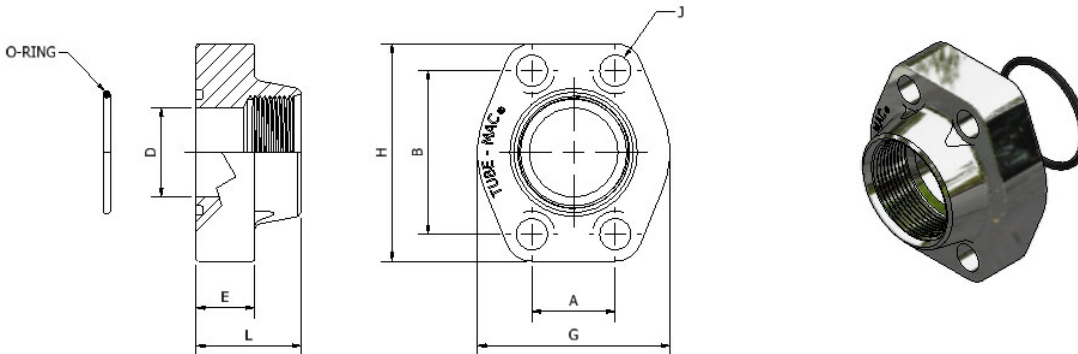
Ordering Example: A/BTA-200x150-FC34-SS-V



3D step models available upon request

SAE 3000 PSI SAE Female Thread Flange with O-Ring Face and Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



STFO34 - Female Thread Flange with O-Ring Face and Clearance Holes

Size	Flange Part Number	Dimensions (in)							SAE Thread UNF-2A	Drill Dia. (in) J	Bolt Minimum Grade 8	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H							
1/2"	STFO34-050-*^-^	0.69	1.50	0.51	0.63	1.42	1.81	2.16	3/4"-16	0.35	5/16" UNC	OR^-2-210	0.55 (0.25)	5000 (350)	15-18
3/4"	STFO34-075-*^-^	0.88	1.88	0.75	0.71	1.42	2.06	2.56	1-1/16"-12	0.43	3/8" UNC	OR^-2-214	0.86 (0.39)	5000 (350)	20-30
1"	STFO34-100-*^-^	1.03	2.06	0.98	0.71	1.50	2.31	2.76	1-5/16"-12	0.43	3/8" UNC	OR^-2-219	1.00 (0.45)	5000 (350)	20-30
1-1/4"	STFO34-125-*^-^	1.19	2.31	1.26	0.83	1.61	2.88	3.11	1-5/8"-12	0.45	7/16" UNC	OR^-2-222	1.46 (0.66)	4000 (275)	40-50
1-1/2"	STFO34-150-*^-^	1.41	2.75	1.50	0.98	1.77	3.25	3.66	1-7/8"-12	0.53	1/2" UNC	OR^-2-225	2.31 (1.05)	3000 (210)	80-90

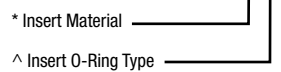
*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

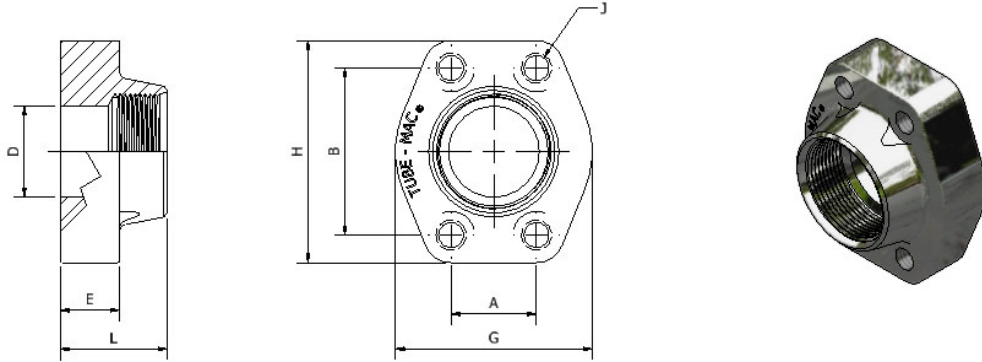
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: SFT034-150-SS-V



SAE 3000 PSI SAE Female Thread Flange with Flat Face and Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



STFF34 - Female Thread Flange with Flat Face and Threaded Holes

Size	Flange Part Number	Dimensions (in)							SAE Thread UNF-2A	Bolt Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H					
1/2"	STFF34-050-*^-^	0.69	1.50	0.51	0.63	1.42	1.81	2.16	3/4"-16	5/16"	0.55 (0.25)	5000 (350)	15-18
3/4"	STFF34-075-*^-^	0.88	1.88	0.75	0.71	1.42	2.06	2.56	1 1/16"-12	3/8"	0.86 (0.39)	5000 (350)	20-30
1"	STFF34-100-*^-^	1.03	2.06	0.98	0.71	1.50	2.31	2.76	1 5/16"-12	3/8"	1.00 (0.45)	5000 (350)	20-30
1-1/4"	STFF34-125-*^-^	1.19	2.31	1.26	0.83	1.61	2.88	3.11	1 5/8"-12	7/16"	1.46 (0.66)	4000 (275)	40-50
1-1/2"	STFF34-150-*^-^	1.41	2.75	1.50	0.98	1.77	3.25	3.66	1 7/8"-12	1/2"	2.31 (1.05)	3000 (210)	80-90

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: STFF34-150-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

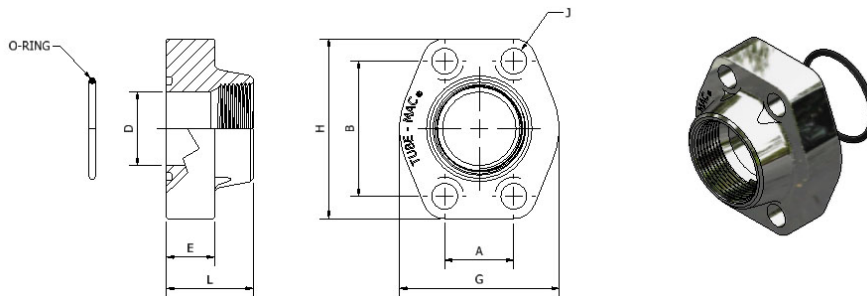
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 3000 PSI NPT Female Thread Flange with O-Ring Face and Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



NTF034 - NPT Female Thread Flange with O-Ring Face and Clearance Holes

Size	Flange Part Number	Dimensions (in)							NPTF Thread	Drill Dia. (in) J	Bolt Minimum Grade 8	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H							
1/2"	NTF034-050-*-*^	0.69	1.50	0.51	0.63	1.42	1.81	2.16	1/2"-14	0.35	5/16" UNC	OR^-2-210	0.55 (0.25)	5000 (350)	15-18
3/4"	NTF034-075-*-*^	0.88	1.88	0.75	0.71	1.42	2.06	2.56	3/4"-14	0.43	3/8" UNC	OR^-2-214	0.86 (0.39)	5000 (350)	20-30
1"	NTF034-100-*-*^	1.03	2.06	0.98	0.71	1.50	2.31	2.76	1"-11-1/2	0.43	3/8" UNC	OR^-2-219	1.00 (0.45)	5000 (350)	20-30
1-1/4"	NTF034-125-*-*^	1.19	2.31	1.26	0.83	1.61	2.88	3.11	1-1/4"-11-1/2	0.45	7/16" UNC	OR^-2-222	1.46 (0.66)	4000 (275)	40-50
1-1/2"	NTF034-150-*-*^	1.41	2.75	1.50	0.98	1.77	3.25	3.66	1-1/2"-11-1/2	0.53	1/2" UNC	OR^-2-225	2.31 (1.05)	3000 (210)	80-90
2"	NTF034-200-*-*^	1.69	3.06	2.01	0.98	1.77	3.81	4.02	2"-11-1/2	0.53	1/2" UNC	OR^-2-228	2.62 (1.19)	3000 (210)	80-90
2-1/2"	NTF034-250-*-*^	2.00	3.50	2.48	0.98	1.97	4.28	4.49	2-1/2"-8	0.53	1/2" UNC	OR^-2-232	3.09 (1.40)	2500 (175)	80-90
3"	NTF034-300-*-*^	2.44	4.19	2.87	1.06	1.97	5.16	5.28	3"-8	0.69	5/8" UNC	OR^-2-237	4.74 (2.15)	2000 (140)	110-120

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

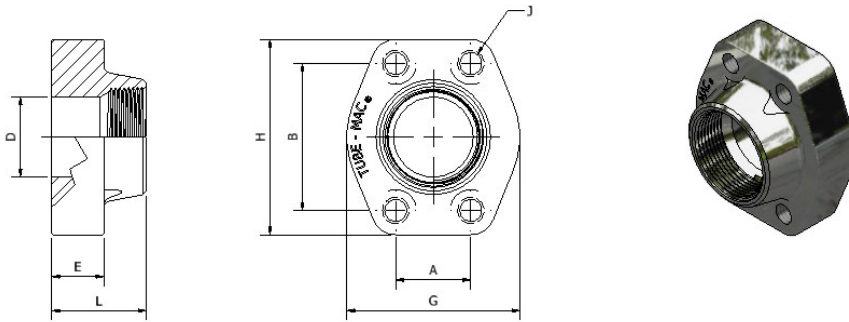
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: NTF034-200-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

SAE 3000 PSI NPT Female Thread Flange with Flat Face and Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



NTFF34 - NPT Female Thread Flange with Flat Face and Threaded Holes

Size	Flange Part Number	Dimensions (in)							NPTF Thread	Bolt Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H					
1/2"	NTFF34-050-* [^]	0.69	1.50	0.51	0.63	1.42	1.81	2.16	1/2"-14	5/16"	0.55 (0.25)	5000 (350)	15-18
3/4"	NTFF34-075-* [^]	0.88	1.88	0.75	0.71	1.42	2.06	2.56	3/4"-14	3/8"	0.86 (0.39)	5000 (350)	20-30
1"	NTFF34-100-* [^]	1.03	2.06	0.98	0.71	1.50	2.31	2.76	1"-11-1/2	3/8"	1.00 (0.45)	5000 (350)	20-30
1-1/4"	NTFF34-125-* [^]	1.19	2.31	1.26	0.83	1.61	2.88	3.11	1-1/4"-11-1/2	7/16"	1.46 (0.66)	4000 (275)	40-50
1-1/2"	NTFF34-150-* [^]	1.41	2.75	1.50	0.98	1.77	3.25	3.66	1-1/2"-11-1/2	1/2"	2.31 (1.05)	3000 (210)	80-90
2"	NTFF34-200-* [^]	1.69	3.06	2.01	0.98	1.77	3.81	4.02	2"-11-1/2	1/2"	2.62 (1.19)	3000 (210)	80-90
2-1/2"	NTFF34-250-* [^]	2.00	3.50	2.48	0.98	1.97	4.28	4.49	2-1/2"-8	1/2"	3.09 (1.40)	2500 (175)	80-90
3"	NTFF34-300-* [^]	2.44	4.19	2.87	1.06	1.97	5.16	5.28	3"-8	5/8"	4.74 (2.15)	2000 (140)	110-120

* Materials:

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: NTFF34-200-SS-V

* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

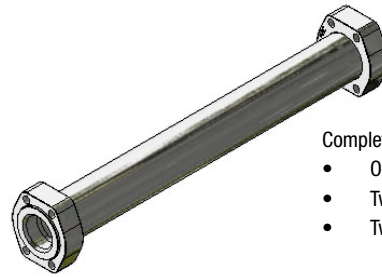
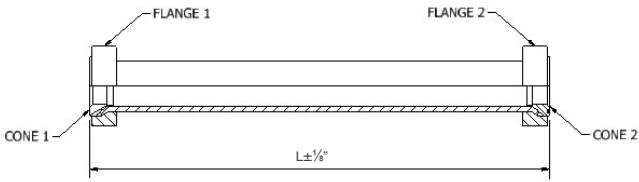
Clamp Supports - Heavy Series

Valves, Ball and Check

G45

SAE 3000 PSI Flare Flange Pipe Assembly, NPS

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

	Code	PAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Bent Pipe Assembly - Flared		PAF								
Pipe & Cone Material Carbon Steel	TMP52CD	52								
	♦♦TMP37CD	37								
Pipe & Cone Material Stainless Steel	TMP304SS	304								
	TMP316SS	316								
	♦TMP2205SS	2205								
Pipe Size & Schedule	1/2"	SCH40-050								
		SCH80-050								
	3/4"	SCH40-075								
		SCH80-075								
	1"	SCH40-100								
		SCH80-100								
	1-1/4"	SCH40-125								
		SCH80-125								
	1-1/2"	SCH40-150								
		SCH80-150								
2"	SCH40-200									
	SCH80-200									
2-1/2"	SCH40-250									
	SCH80-250									
3"	SCH40-300									
	SCH80-300									
Flange Type Carbon Steel	FFC34 SAE Code 61 W/Clearance Holes	FC34								
	*FFT34 SAE Code 61 W/Tapped Holes	FT34								
Cone Type	Cone - Flat Face	CF								
	Cone - 'O' Ring Face	CO								
Length	L2	Specify (in.)								
Options	Viton	V								
	Painted (Specify)	P								
	Complete Stainless Steel Assembly: (including flanges)	SS								

♦♦TMP37CD PIPE IS ONLY AVAILABLE IN 2-1/2" & 3" SCHEDULE 40 SIZES

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

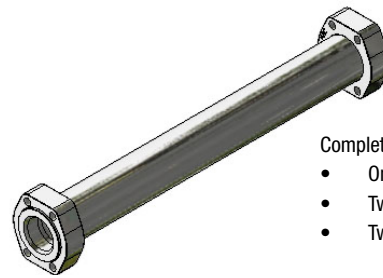
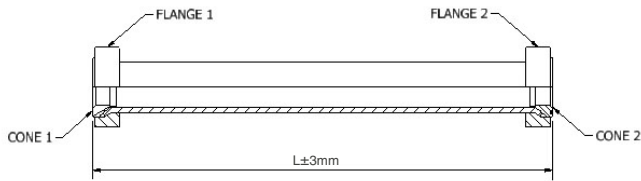
* NORMALLY USED FOR CONNECTION TO SPLIT FLANGE TYPE ENDS

PART Number (EXAMPLE): PAF/52 - SCH80-100 - FC34 - FC34 - CO - CF - 240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SAE 3000 PSI Flare Flange Pipe Assembly, Metric

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Code		PAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Bent Pipe Assembly - Flared		PAF								
Pipe & Cone Material Carbon Steel	TMP52CD	52								
	TMP37CD	37								
Pipe & Cone Material Stainless Steel	TMP304SS	304								
	TMP316SS	316								
	♦TMP2205SS	2205								
Pipe Size & Schedule	1/2"	20x3.0-050								
		25x3.0-050								
	3/4"	25x3.0-075								
		30x3.0-075								
	1"	30x4.0-100								
		38x4.0-100								
	1-1/4"	38x4.0-125								
		42x4.0-125								
	1-1/2"	50x3.0-150								
		50x5.0-150								
2"	60x3.0-200									
	60x5.0-200									
2-1/2"	73x7.0-250									
	75x5.0-250									
3"	75x5.0-300									
	90x5.0-300									
Flange Type Carbon Steel	FFCM34 SAE Code 61 W/Clearance Holes	FCM34								
	*FTM34 SAE Code 61 W/Tapped Holes	FTM34								
Cone Type	Cone - Flat Face	CF								
	Cone - 'O' Ring Face	CO								
Length	L2	Specify (mm)								
Options	Viton	V								
	Painted (Specify)	P								
	Complete Stainless Steel Assembly: (including flanges)	SS								

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

* NORMALLY USED FOR CONNECTION TO SPLIT FLANGE TYPE ENDS

PART Number (EXAMPLE): PAF/52 - 30x4.0 - 100 - FCM34 - FCM34 - CO - CF - 6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

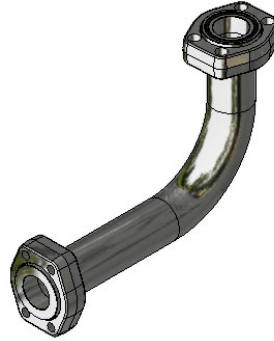
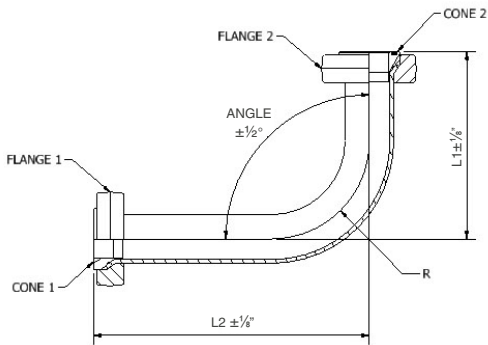
3D step models available upon request

SAE 3000 PSI Flare Flange Bent Pipe Assembly, NPS

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1/2"	4.50	1.68	5.50	2.52	6.75	3.88
3/4"	5.00	2.10	6.00	3.15	7.00	4.25
1"	5.50	2.63	7.00	3.95	7.75	4.88
1-1/4"	6.38	3.32	8.00	4.98	8.63	5.63
1-1/2"	7.50	3.80	9.25	5.70	11.75	8.19
2"	8.50	4.75	10.75	7.13	13.00	9.44
2-1/2"	9.75	5.75	12.63	8.63	17.00	12.50
3"	11.00	7.00	14.50	10.50	19.50	15.00

Note:

OTHER RADII AVAILABLE (CONSULT FACTORY)

SAE 3000 PSI Flare Flange Bent Pipe Assembly, NPS

Code		BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options
Bent Pipe Assembly - Flared		BPAF											
Pipe & Cone Material Carbon Steel	TMP52CD	52											
	♦♦TMP37CD	37											
Pipe & Cone Material Stainless Steel	TMP304SS	304											
	TMP316SS	316											
	♦TMP2205SS	2205											
Pipe Size & Schedule	1/2"	SCH40-050											
		SCH80-050											
	3/4"	SCH40-075											
		SCH80-075											
	1"	SCH40-100											
		SCH80-100											
	1-1/4"	SCH40-125											
		SCH80-125											
	1-1/2"	SCH40-150											
		SCH80-150											
2"	SCH40-200												
	SCH80-200												
2-1/2"	SCH40-250												
	SCH80-250												
3"	SCH40-300												
	SCH80-300												
Flange Type Carbon Steel	FFC34 SAE Code 61 W/Clearance Holes	FC34											
	FFT34 SAE Code 61 W/Threaded Holes	FT34											
Cone Type	Cone - Flat Face	CF											
	Cone - 'O' Ring Face	CO											
Radius	Field Manufactured	R1											
	Factory Manufactured	R2											
Length	L1	Specify (in.)											
Angle	Max 90°	Specify (°)											
Length	L2	Specify (in.)											
Options	Viton	V											
	Painted (Specify)	P											
	Complete Stainless Steel Assembly: (including flanges)	SS											

♦♦TMP37CD PIPE IS ONLY AVAILABLE IN 2-1/2" & 3" SCHEDULE 40 SIZES
 ♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-SCH80-100-FC34-FC34-CO-CF-R1-125-90-115

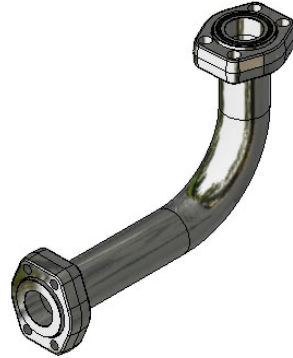
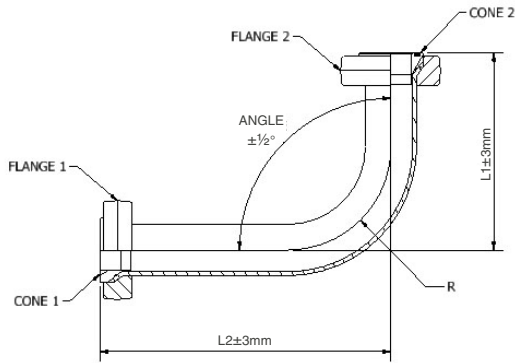
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

SAE 3000 PSI Flare Flange Bent Pipe Assembly, Metric

Typical BPAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Size	R1		R2		R3	
	Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
	L(min.)	R	L(min.)	R	L(min.)	R
1/2"	126	50	151	75	176	100
3/4"	134	60	164	90	194	120
1"	153	76	191	114	229	152
1-1/4"	162	84	204	126	246	168
1-1/2"	194	100	244	150	294	200
2"	215	120	275	180	335	240
2-1/2"	264	150	339	225	414	300
3"	294	180	384	270	474	360

Note:

OTHER RADII AVAILABLE (CONSULT FACTORY)

SAE 3000 PSI Flare Flange Bent Pipe Assembly, Metric

Code		BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Angle	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF												
Pipe & Cone Material Carbon Steel	TMP52CD	52												
	TMP37CD	37												
Pipe & Cone Material Stainless Steel	TMP304SS	304												
	TMP316SS	316												
	♦TMP2205SS	2205												
Pipe Size & Schedule	1/2"	20x3.0-050												
		25x3.0-050												
	3/4"	25x3.0-075												
		30x3.0-075												
	1"	30x4.0-100												
		38x4.0-100												
	1-1/4"	38x4.0-125												
		42x4.0-125												
	1-1/2"	50x3.0-150												
		50x5.0-150												
2"	60x3.0-200													
	60x5.0-200													
2-1/2"	73x7.0-250													
	75x5.0-250													
3"	75x5.0-300													
	90x5.0-300													
Flange Type Carbon Steel	FFCM34 SAE Code 61 W/Clearance Holes	FCM34												
	*FTM34 SAE Code 61 W/Tapped Holes	FTM34												
Cone Type	Cone - Flat Face	CF												
	Cone - 'O' Ring Face	CO												
Radius	Field Manufactured	R1												
	Factory Manufactured	R2												
Length	L1	Specify (mm)												
Angle	Max 90°	Specify (°)												
Length	L2	Specify (mm)												
Options	Viton	V												
	Painted (Specify)	P												
	Complete Stainless Steel Assembly: (including flanges)	SS												

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

* NORMALLY USED FOR CONNECTION TO SPLIT FLANGE TYPE ENDS

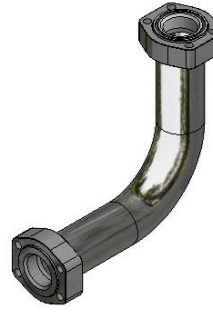
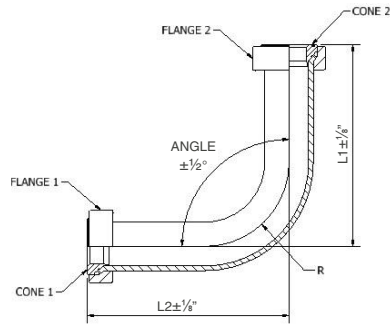
PART Number (EXAMPLE): BPAF/52 - 30x4.0-100 - FCM34 - FCM34 - CO - CF - R1 - 125 - 90 - 115

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

SAE 3000 PSI Flare Flange Bend Elbow Complete Assembly, NPS

SAE J518 Code 61 (ISO 6162-1)



A/FFE - Flare Flange Bend Elbow Complete Assembly, NPS								
Size	Complete Assembly Part Number	R1 Bend Radius (in)		R2 Bend Radius (in)		R3 Bend Radius (in)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1/2"	A/FFE-SCH40-050-FC34-FC34-CO-CO-•-•-^	1.68	4.5	2.52	5.5	3.875	6.75	5000 (350)
1/2"	A/FFE-SCH80-050-FC34-FC34-CO-CO-•-•-^	1.68	4.5	2.52	5.5	3.875	6.75	5000 (350)
3/4"	A/FFE-SCH40-075-FC34-FC34-CO-CO-•-•-^	2.1	5.0	3.15	6.0	4.25	7.0	5000 (350)
3/4"	A/FFE-SCH80-075-FC34-FC34-CO-CO-•-•-^	2.1	5.0	3.15	6.0	4.25	7.0	5000 (350)
1"	A/FFE-SCH40-100-FC34-FC34-CO-CO-•-•-^	2.63	5.5	3.95	7.0	4.875	7.75	4700 (325)
1"	A/FFE-SCH80-100-FC34-FC34-CO-CO-•-•-^	2.63	5.5	3.95	7.0	4.875	7.75	5000 (350)
1-1/4"	A/FFE-SCH40-125-FC34-FC34-CO-CO-•-•-^	3.32	6.375	4.98	8.0	5.625	8.625	4000 (280)
1-1/4"	A/FFE-SCH80-125-FC34-FC34-CO-CO-•-•-^	3.32	6.375	4.98	8.0	5.625	8.625	4000 (280)
1-1/2"	A/FFE-SCH40-150-FC34-FC34-CO-CO-•-•-^	3.8	7.5	5.7	9.25	8.1875	11.75	3500 (240)
1-1/2"	A/FFE-SCH80-150-FC34-FC34-CO-CO-•-•-^	3.8	7.5	5.7	9.25	8.1875	11.75	4000 (280)
1-1/2"	A/FFE-SCH160-150-FC34-FC34-CO-CO-•-•-^	3.8	7.5	5.7	9.25	8.1875	11.75	4000 (280)
2"	A/FFE-SCH40-200-FC34-FC34-CO-CO-•-•-^	4.75	8.5	7.125	10.75	9 7/16	13	2900 (200)
2"	A/FFE-SCH80-200-FC34-FC34-CO-CO-•-•-^	4.75	8.5	7.125	10.75	9 7/16	13	4000 (280)
2"	A/FFE-SCH160-200-FC34-FC34-CO-CO-•-•-^	4.75	8.5	7.125	10.75	9 7/16	13	4000 (280)
2-1/2"	A/FFE-SCH40-250-FC34-FC34-CO-CO-•-•-^	5.75	9.75	8.625	12.625	12.5	17	2600 (180)
2-1/2"	A/FFE-SCH80-250-FC34-FC34-CO-CO-•-•-^	5.75	9.75	8.625	12.625	12.5	17	3000 (210)
2-1/2"	A/FFE-SCH160-250-FC34-FC34-CO-CO-•-•-^	5.75	9.75	8.625	12.625	12.5	17	3000 (210)
3"	A/FFE-SCH40-300-FC34-FC34-CO-CO-•-•-^	7.0	11.0	10.5	14.5	15	19.5	2300 (160)
3"	A/FFE-SCH80-300-FC34-FC34-CO-CO-•-•-^	7.0	11.0	10.5	14.5	15	19.5	3000 (210)

Flange Options:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange
 FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange

Cone Options:

Standard, CO = O-Ring Faced Cone
 CF = Flat Faced Cone

Bend Radius Options:

- R1
- R2
- R3

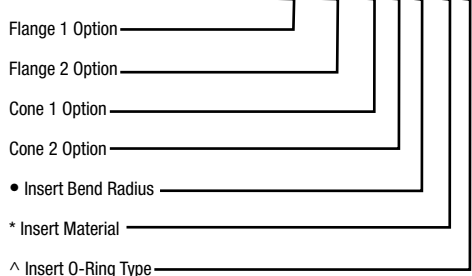
*** Materials**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

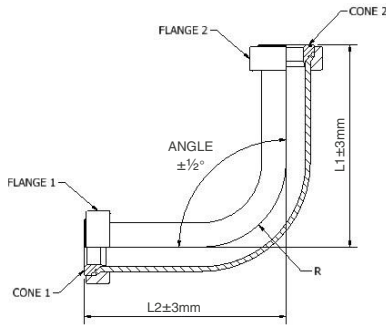
Ordering Example: A/FFE-SCH40-200-FC34-FC34-CO-CO-R1-SS-V



3D step models available upon request

SAE 3000 PSI Flare Flange Bend Elbow Complete Assembly, Metric

SAE J518 Code 61 (ISO 6162-1)



COMPLETE ASSEMBLY CONSISTS OF:

- FLARE FLANGE 90° ELBOW BODY
- TWO (2) FLARE FLANGES
- TWO (2) CONES

A/FFEM - Flare Flange Bend Elbow Complete Assembly, Metric

Size	Complete Assembly Part Number	R1 Bend Radius (mm)		R2 Bend Radius (mm)		R3 Bend Radius (mm)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1/2"	A/FFEM-20x3.0-050-FCM34-FCM34-CO-CO- *-^	40	116	60	136	80	156	5000 (350)
1/2"	A/FFEM-25x3.0-050-FCM34-FCM34-CO-CO- *-^	50	126	75	151	100	176	5000 (350)
3/4"	A/FFEM-25x3.0-075-FCM34-FCM34-CO-CO- *-^	50	124	75	149	100	174	5000 (350)
3/4"	A/FFEM-30x3.0-075-FCM34-FCM34-CO-CO- *-^	60	134	90	164	120	194	5000 (350)
1"	A/FFEM-30x4.0-100-FCM34-FCM34-CO-CO- *-^	60	137	90	167	120	197	4700 (325)
1"	A/FFEM-38x4.0-100-FCM34-FCM34-CO-CO- *-^	76	153	114	191	152	229	5000 (350)
1-1/4"	A/FFEM-38x4.0-125-FCM34-FCM34-CO-CO- *-^	76	154	114	192	152	230	4000 (280)
1-1/4"	A/FFEM-42x4.0-125-FCM34-FCM34-CO-CO- *-^	84	162	126	204	168	246	4000 (280)
1-1/2"	A/FFEM-42x4.0-150-FCM34-FCM34-CO-CO- *-^	84	178	126	220	168	262	3500 (240)
1-1/2"	A/FFEM-50x3.0-150-FCM34-FCM34-CO-CO- *-^	100	194	150	244	200	294	4000 (280)
1-1/2"	A/FFEM-50x5.0-150-FCM34-FCM34-CO-CO- *-^	100	194	150	244	200	294	4000 (280)
2"	A/FFEM-50x5.0-200-FCM34-FCM34-CO-CO- *-^	100	195	150	245	200	295	4000 (280)
2"	A/FFEM-60x5.0-200-FCM34-FCM34-CO-CO- *-^	120	215	180	275	240	335	4000 (280)
2"	A/FFEM-60x6.0-200-FCM34-FCM34-CO-CO- *-^	120	215	180	275	240	335	4000 (280)
2-1/2"	A/FFEM-73x7.0-250-FCM34-FCM34-CO-CO- *-^	146	260	219	333	292	406	3000 (210)
2-1/2"	A/FFEM-75x5.0-250-FCM34-FCM34-CO-CO- *-^	150	264	225	339	300	414	3000 (210)
3"	A/FFEM-75x5.0-300-FCM34-FCM34-CO-CO- *-^	150	264	225	339	300	414	3000 (210)
3"	A/FFEM-90x5.0-300-FCM34-FCM34-CO-CO- *-^	180	294	270	384	360	474	2800 (193)

Flange Options:

Standard, FCM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange
FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange

Cone Options:

CO = O-Ring Faced Cone
CF = Flat Faced Cone

Bend Radius Options:

R1
R2
R3

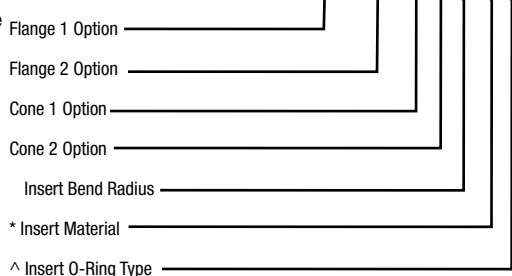
* Materials

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316

^ O-Ring Type:

No Designation = Buna Nitrile.
V = Viton

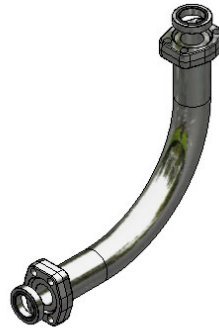
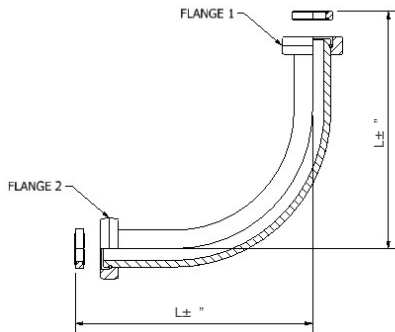
Ordering Example: A/FFEM-60x5.0-200-FCM34-FCM34-CO-CO-R1-SS-V



3D step models available upon request

SAE 3000 PSI Retain Ring Flange Bend Elbow

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Retain Ring Flange Bend Elbow Body
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) O-Ring Spacers

A/RFE - Retain Ring Flange Bend Elbow						
Size	Complete Assembly Part Number	Dimensions in (mm)	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L				
1-1/2"	A/RFE-150-FC34-*^-^	13.00 (330.20)	14.98 (6.80)	RFE-150-*^-^	11.50 (5.22)	4000 (280)
2"	A/RFE-200-FC34-*^-^	14.50 (368.30)	20.47 (9.30)	RFE-200-*^-^	15.59 (7.07)	4000 (280)
2-1/2"	A/RFE-250-FC34-*^-^	18.00 (457.20)	35.57 (16.17)	RFE-250-*^-^	26.26 (11.91)	3000 (210)
3"	A/RFE-300-FC34-*^-^	21.00 (533.40)	59.48 (27.04)	RFE-300-*^-^	45.80 (20.77)	3000 (210)

Flange Options:

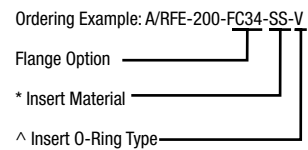
FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance
 FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded
 FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded

***Materials:**

No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

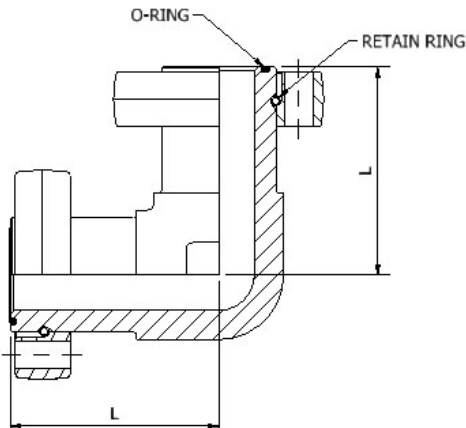
No Designation = Buna Nitrile.
 V = Viton.



SAE 3000 PSI Retain Ring Flange Elbow

Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) Face O-Rings

To be Ordered Separately:

- Bolt Kit
- See Section

A/RRFE - Retain Ring Flange Elbow Complete Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L						
1/2"	A/RRFE-050-FC34-*^-^	2.41 (61.2)		OR^-3-909	1.95 (0.88)	RRFE-050-*^-^	1.09 (0.49)	5000 (350)
3/4"	A/RRFE-075-FC34-*^-^	2.61 (66.2)		OR^-3-913	2.83 (1.28)	RRFE-075-*^-^	1.93 (0.88)	5000 (350)
1"	A/RRFE-100-FC34-*^-^	2.81 (71.4)		OR^-3-916	3.36 (1.52)	RRFE-100-*^-^	2.10 (0.95)	5000 (350)
1-1/4"	A/RRFE-125-FC34-*^-^	3.22 (81.8)		OR^-3-918	4.22 (1.91)	RRFE-125-*^-^	3.28 (1.45)	4000 (280)
1-1/2"	A/RRFE-150-FC34-*^-^	4.01 (101.9)		OR^-3-924	8.70 (3.95)	RRFE-150-*^-^	6.00 (2.72)	4000 (280)
2"	A/RRFE-200-FC34-*^-^	4.40 (111.8)		OR^-3-928	11.74 (5.33)	RRFE-200-*^-^	7.70 (3.49)	4000 (280)
2-1/2"	A/RRFE-250-FC34-*^-^	5.19 (131.9)		OR^-2-232	16.30 (7.39)	RRFE-250-*^-^	11.30 (5.13)	3000 (210)

Flange Options:

FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance
 FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded
 FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded

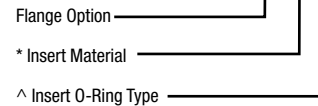
Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.
 V = Viton.

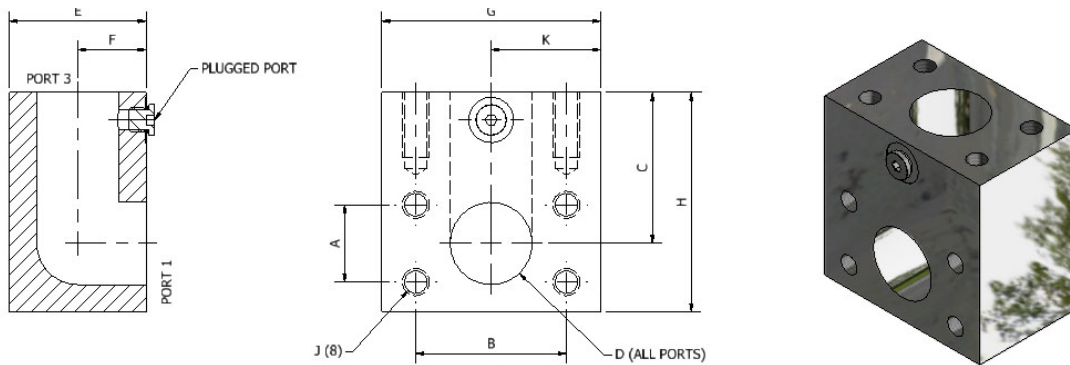
Ordering Example: A/RRFE-200-FC34-SS-V



3D step models available upon request

SAE 3000 PSI Block Elbow

SAE J518 Code 61 (ISO 6162-1) Flange Style



BE34 - Block Elbow Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BE34-050-*	0.69	1.50	1.88	0.50	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.30 (1.50)	5000 (350)
3/4"	BE34-075-*	0.88	1.88	2.25	0.75	2.00	1.00	3.00	3.25	1.50	3/8"-16	5.00 (2.27)	5000 (350)
1"	BE34-100-*	1.03	2.06	2.25	0.94	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.50 (2.04)	5000 (350)
1-1/4"	BE34-125-*	1.19	2.31	2.75	1.25	2.25	1.13	3.00	4.00	1.50	7/16"-14	5.70 (2.59)	4000 (280)
1-1/2"	BE34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.60 (3.90)	4000 (280)
2"	BE34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.60 (4.81)	4000 (280)
2-1/2"	BE34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	17.40 (7.89)	3000 (210)
3"	BE34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	25.60 (11.61)	3000 (210)

BEM34 - Block Elbow Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BEM34-050-*	17.5	38.1	47.8	12.7	50.8	25.4	63.5	63.5	31.8	M8 x 1.25	3.30 (1.50)	5000 (350)
3/4"	BEM34-075-*	22.4	47.8	57.2	19.1	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	5.00 (2.27)	5000 (350)
1"	BEM34-100-*	26.2	52.3	57.2	23.9	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	4.50 (2.04)	5000 (350)
1-1/4"	BEM34-125-*	30.2	58.7	69.9	31.8	57.2	28.7	76.2	101.6	38.1	M10 x 1.50	5.70 (2.59)	4000 (280)
1-1/2"	BEM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.60 (3.90)	4000 (280)
2"	BEM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.60 (4.81)	4000 (280)
2-1/2"	BEM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	17.40 (7.89)	3000 (210)
3"	BEM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.70	152.4	69.9	M16 x 2.00	25.60 (11.61)	3000 (210)

Materials:

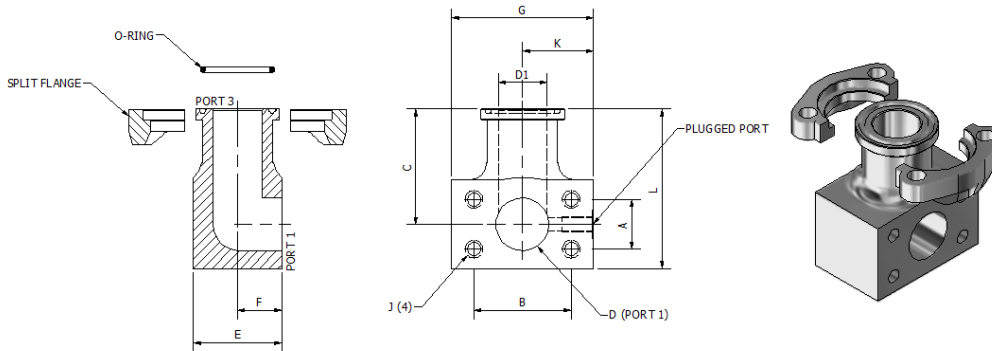
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BEM34-200-SS

* Insert Material _____

SAE 3000 PSI Split Flange Elbow

SAE J518 Code 61 (ISO 6162-1) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Elbow
- One (1) Set (2 Halves) Split Flange
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFE34 - Split Flange Elbow Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFE34-050-*^	0.69	1.50	2.50	0.50	0.38	2.00	1.00	2.50	1.25	3.50	5/16"-18	OR^2-210	3.37 (1.59)	SFE34-050-*^	2.95 (1.34)	5000 (350)
3/4"	A/SFE34-075-*^	0.88	1.88	2.75	0.75	0.63	2.00	1.00	3.00	1.50	3.75	3/8"-16	OR^2-214	4.01 (1.82)	SFE34-075-*^	3.50 (1.59)	5000 (350)
1"	A/SFE34-100-*^	1.03	2.06	2.75	0.94	0.88	2.00	1.00	3.00	1.50	3.75	3/8"-16	OR^2-219	4.05 (1.84)	SFE34-100-*^	3.40 (1.54)	5000 (350)
1-1/4"	A/SFE34-125-*^	1.19	2.31	3.13	1.25	1.13	2.25	1.13	3.00	1.50	4.25	7/16"-14	OR^2-222	5.19 (2.35)	SFE34-125-*^	4.30 (1.95)	4000 (280)
1-1/2"	A/SFE34-150-*^	1.41	2.75	3.25	1.50	1.38	2.50	1.25	4.00	2.00	4.50	1/2"-13	OR^2-225	8.14 (3.69)	SFE34-150-*^	6.70 (3.04)	4000 (280)
2"	A/SFE34-200-*^	1.69	3.06	3.50	1.94	1.88	3.50	1.75	4.00	2.00	5.00	1/2"-13	OR^2-228	10.66 (4.84)	SFE34-200-*^	9.10 (4.13)	4000 (280)
2-1/2"	A/SFE34-250-*^	2.00	3.50	4.00	2.38	2.38	3.50	1.75	4.50	2.25	5.75	1/2"-13	OR^2-232	14.93 (6.77)	SFE34-250-*^	12.80 (5.81)	3000 (210)
3"	A/SFE34-300-*^	2.44	4.19	4.50	2.88	2.88	4.00	2.00	5.50	2.75	6.50	5/8"-11	OR^2-237	24.15 (10.95)	SFE34-300-*^	20.50 (9.30)	3000 (210)

A/SFEM34 - Split Flange Elbow Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFEM34-050-*^	17.5	38.1	63.5	12.7	9.7	50.8	25.4	63.5	31.8	88.9	M8 x 1.25	OR^2-210	3.37 (1.59)	SFEM34-050-*^	2.95 (1.34)	5000 (350)
3/4"	A/SFEM34-075-*^	22.4	47.8	69.9	19.1	16.0	50.8	25.4	76.2	38.1	95.3	M10 x 1.50	OR^2-214	4.01 (1.82)	SFEM34-075-*^	3.50 (1.59)	5000 (350)
1"	A/SFEM34-100-*^	26.2	52.3	69.9	23.9	22.4	50.8	25.4	76.2	38.1	95.3	M10 x 1.50	OR^2-219	4.05 (1.84)	SFEM34-100-*^	3.40 (1.54)	5000 (350)
1-1/4"	A/SFEM34-125-*^	30.2	58.7	79.5	31.8	28.7	57.2	28.7	76.2	38.1	108.0	M10 x 1.50	OR^2-222	5.19 (2.35)	SFEM34-125-*^	4.30 (1.95)	4000 (280)
1-1/2"	A/SFEM34-150-*^	35.8	69.9	82.6	38.1	34.9	63.5	31.8	101.6	50.8	114.3	M12 x 1.75	OR^2-225	8.14 (3.69)	SFEM34-150-*^	6.70 (3.04)	4000 (280)
2"	A/SFEM34-200-*^	42.9	77.7	88.9	49.3	47.8	76.2	38.1	101.6	50.8	127.0	M12 x 1.75	OR^2-228	10.66 (4.84)	SFEM34-200-*^	9.10 (4.13)	4000 (280)
2-1/2"	A/SFEM34-250-*^	50.8	88.9	101.6	60.5	60.5	88.9	44.5	114.3	57.2	146.1	M12 x 1.75	OR^2-232	14.93 (6.77)	SFEM34-250-*^	12.80 (5.81)	3000 (210)
3"	A/SFEM34-300-*^	62.0	106.4	114.3	73.2	73.2	101.6	50.8	139.7	69.9	165.1	M16 x 2.00	OR^2-237	24.15 (10.95)	SFEM34-300-*^	20.50 (9.30)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/SFE34-200-SS-V

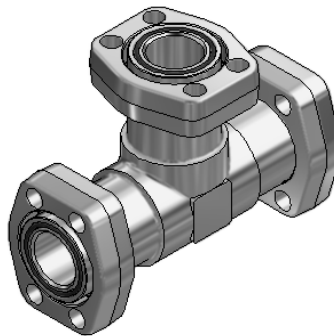
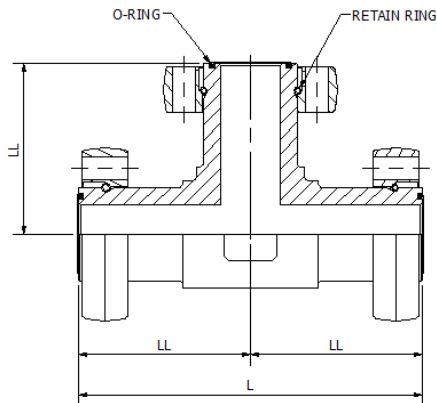
* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

SAE 3000 PSI Retain Ring Flange Tee Complete Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Flange Set Includes:

- One (1) Flange Tee
- Three (3) Retain Ring Flanges
- Three (3) Retain Rings
- Three (3) Face O-Rings

To be Ordered Separately:

- Bolt Kit
- See Section

A/RRFT - Retain Ring Flange Tee Complete Assembly Complete with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1/2"	A/RRFT-050-FC34-*^-^	4.81 (122.2)	2.41 (112.0)	OR^3-909	2.75 (1.25)	RRFT-050-*^-^	1.46 (0.66)	5000 (350)
3/4"	A/RRFT-075-FC34-*^-^	5.22 (132.6)	2.61 (66.3)	OR^3-913	3.96 (1.50)	RRFT-075-*^-^	2.61 (1.18)	5000 (350)
1"	A/RRFT-100-FC34-*^-^	5.62 (142.7)	2.81 (71.4)	OR^3-916	4.74 (2.15)	RRFT-100-*^-^	2.91 (1.32)	5000 (350)
1-1/4"	A/RRFT-125-FC34-*^-^	6.45 (163.8)	3.21 (81.6)	OR^3-918	7.71 (3.50)	RRFT-125-*^-^	4.89 (2.22)	4000 (280)
1-1/2"	A/RRFT-150-FC34-*^-^	8.02 (183.3)	4.01 (101.9)	OR^3-924	9.48 (4.30)	RRFT-150-*^-^	8.10 (3.76)	4000 (280)
2"	A/RRFT-200-FC34-*^-^	8.81 (223.8)	4.40 (111.8)	OR^3-928	13.94 (6.32)	RRFT-200-*^-^	9.90 (4.44)	4000 (280)
2-1/2"	A/RRFT-250-FC34-*^-^	10.38 (263.7)	5.19 (131.8)	OR^2-232	23.55(10.68)	RRFT-250-*^-^	15.36 (6.97)	3000 (210)

Flange Options:

FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded

Materials:

No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/RRFT-200-FC34-SS-V

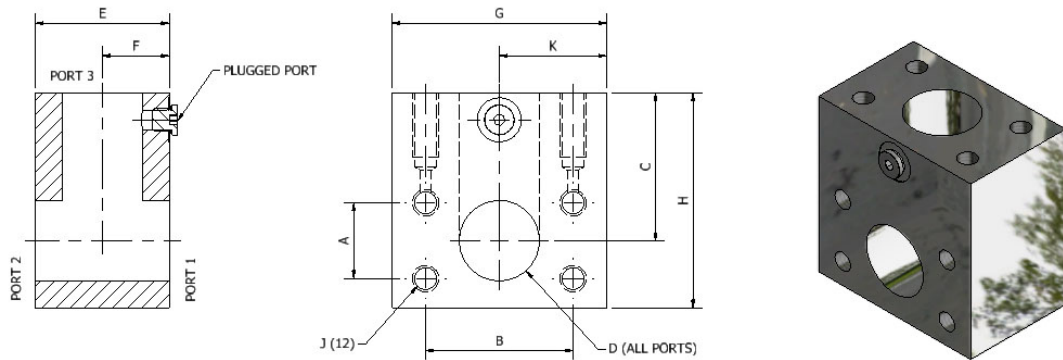
Flange Option _____

* Insert Material _____

^ Insert O-Ring Type _____

SAE 3000 PSI Block Tee

SAE J518 Code 61 (ISO 6162-1) Flange Style



BT34 - Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BT34-050-*	0.69	1.50	1.88	0.50	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.10 (1.41)	5000 (350)
3/4"	BT34-075-*	0.88	1.88	2.25	0.75	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.60 (2.09)	5000 (350)
1"	BT34-100-*	1.03	2.06	2.25	0.94	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.30 (1.95)	5000 (350)
1-1/4"	BT34-125-*	1.19	2.31	2.75	1.25	2.25	1.13	3.00	4.00	1.50	7/16"-14	5.70 (2.59)	4000 (280)
1-1/2"	BT34-150-*	1.41	2.75	2.75	1.50	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.20 (3.72)	4000 (280)
2"	BT34-200-*	1.69	3.06	3.00	1.94	3.00	1.50	4.00	4.50	2.00	1/2"-13	10.00 (4.54)	4000 (280)
2-1/2"	BT34-250-*	2.00	3.50	3.25	2.38	3.50	1.75	5.00	5.00	2.50	1/2"-13	16.30 (7.39)	3000 (210)
3"	BT34-300-*	2.44	4.19	3.75	2.88	4.00	2.00	5.50	6.00	2.75	5/8"-11	23.70 (10.75)	3000 (210)

BTM34 - Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (inch)	Block Tee Part No	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BTM34-050-*	17.5	38.1	47.8	12.7	50.8	25.4	63.5	63.5	31.8	M8 x 1.25	3.10 (1.41)	5000 (350)
3/4"	BTM34-075-*	22.4	47.8	57.2	19.1	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	4.60 (2.09)	5000 (350)
1"	BTM34-100-*	26.2	52.3	57.2	23.9	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	4.30 (1.95)	5000 (350)
1-1/4"	BTM34-125-*	30.2	58.7	69.9	31.8	57.2	28.7	76.2	101.6	38.1	M10 x 1.50	5.70 (2.59)	4000 (280)
1-1/2"	BTM34-150-*	35.8	69.9	69.9	38.1	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	8.20 (3.72)	4000 (280)
2"	BTM34-200-*	42.9	77.7	76.2	49.3	76.2	38.1	101.6	114.3	50.8	M12 x 1.75	10.00 (4.54)	4000 (280)
2-1/2"	BTM34-250-*	50.8	88.9	82.6	60.5	88.9	44.5	127.0	127.0	63.5	M12 x 1.75	16.30 (7.39)	3000 (210)
3"	BTM34-300-*	62.0	106.4	95.3	73.2	101.6	50.8	139.7	152.4	69.9	M16 x 2.00	23.70 (10.75)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BT34-200-SS

* Insert Material

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

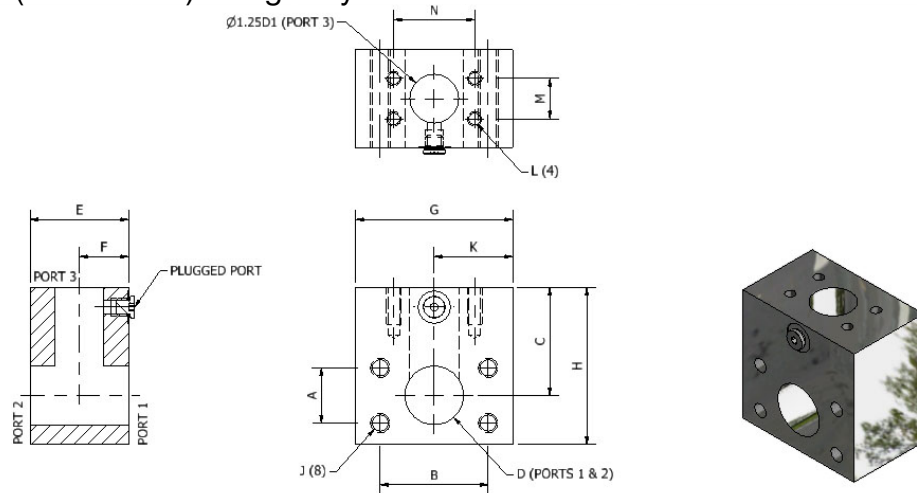
Clamp Supports - Heavy Series

Valves, Ball and Check

G59

SAE 3000 PSI Reducing Branch Block Tee - NPS

SAE J518 Code 61 (ISO 6162-1) Flange Style



BTR34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Tee Part Number	Dimensions (in)												Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
3/4"x1/2"	BTR34-075x050-*	0.88	1.88	2.25	0.75	0.50	2.00	1.00	3.00	3.25	1.50	0.69	1.50	3/8"-16	5/16"-18	4.80 (2.18)	5000 (350)
1"x1/2"	BTR34-100x050-*	1.03	2.06	2.25	0.94	0.50	2.00	1.00	3.00	3.25	1.50	0.69	1.50	3/8"-16	5/16"-18	4.70 (2.13)	5000 (350)
1"x3/4"	BTR34-100x075-*	1.03	2.06	2.25	0.94	0.75	2.00	1.00	3.00	3.25	1.50	0.88	1.88	3/8"-16	3/8"-16	4.60 (2.09)	5000 (350)
1-1/4"x1/2"	BTR34-125x050-*	1.19	2.31	2.75	1.25	0.50	2.25	1.13	3.00	4.00	1.50	0.69	1.50	7/16"-14	5/16"-18	5.80 (2.63)	4000 (280)
1-1/4"x3/4"	BTR34-125x075-*	1.19	2.31	2.75	1.25	0.75	2.25	1.13	3.00	4.00	1.50	0.88	1.88	7/16"-14	3/8"-16	5.80 (2.63)	4000 (280)
1-1/4"x1"	BTR34-125x100-*	1.19	2.31	2.75	1.25	0.94	2.25	1.13	3.00	4.00	1.50	1.03	2.06	7/16"-14	3/8"-16	5.80 (2.63)	4000 (280)
1-1/2"x1/2"	BTR34-150x050-*	1.41	2.75	2.75	1.50	0.50	2.50	1.25	4.00	4.00	2.00	0.69	1.50	1/2"-13	5/16"-18	9.25 (4.20)	4000 (280)
1-1/2"x3/4"	BTR34-150x075-*	1.41	2.75	2.75	1.50	0.75	2.50	1.25	4.00	4.00	2.00	0.88	1.88	1/2"-13	3/8"-16	9.20 (4.17)	4000 (280)
1-1/2"x1"	BTR34-150x100-*	1.41	2.75	2.75	1.50	0.94	2.50	1.25	4.00	4.00	2.00	1.03	2.06	1/2"-13	3/8"-16	9.00 (4.08)	4000 (280)
1-1/2"x1-1/4"	BTR34-150x125-*	1.41	2.75	2.75	1.50	1.25	2.50	1.25	4.00	4.00	2.00	1.19	2.31	1/2"-13	7/16"-14	8.65 (3.92)	4000 (280)
2"x1/2"	BTR34-200x050-*	1.69	3.06	3.00	1.94	0.50	3.00	1.50	4.00	4.50	2.00	0.69	1.50	1/2"-13	5/16"-18	11.70 (5.31)	4000 (280)
2"x3/4"	BTR34-200x075-*	1.69	3.06	3.00	1.94	0.75	3.00	1.50	4.00	4.50	2.00	0.88	1.88	1/2"-13	3/8"-16	11.60 (5.26)	4000 (280)
2"x1"	BTR34-200x100-*	1.69	3.06	3.00	1.94	0.94	3.00	1.50	4.00	4.50	2.00	1.03	2.06	1/2"-13	3/8"-16	11.60 (5.26)	4000 (280)
2"x1-1/4"	BTR34-200x125-*	1.69	3.06	3.00	1.94	1.25	3.00	1.50	4.00	4.50	2.00	1.19	2.31	1/2"-13	7/16"-14	11.60 (5.26)	4000 (280)
2"x1-1/2"	BTR34-200x150-*	1.69	3.06	3.00	1.94	1.50	3.00	1.50	4.00	4.50	2.00	1.41	2.75	1/2"-13	1/2"-13	11.60 (5.26)	4000 (280)
2-1/2"x1/2"	BTR34-250x050-*	2.00	3.50	3.25	2.38	0.50	3.50	1.75	5.00	5.00	2.50	0.69	1.50	1/2"-13	5/16"-18	19.40 (8.80)	3000 (210)
2-1/2"x3/4"	BTR34-250x075-*	2.00	3.50	3.25	2.38	0.75	3.50	1.75	5.00	5.00	2.50	0.88	1.88	1/2"-13	3/8"-16	19.20 (8.71)	3000 (210)
2-1/2"x1"	BTR34-250x100-*	2.00	3.50	3.25	2.38	0.94	3.50	1.75	5.00	5.00	2.50	1.03	2.06	1/2"-13	3/8"-16	19.00 (8.62)	3000 (210)
2-1/2"x1-1/4"	BTR34-250x125-*	2.00	3.50	3.25	2.38	1.25	3.50	1.75	5.00	5.00	2.50	1.19	2.31	1/2"-13	7/16"-14	18.80 (8.53)	3000 (210)
2-1/2"x1-1/2"	BTR34-250x150-*	2.00	3.50	3.25	2.38	1.50	3.50	1.75	5.00	5.00	2.50	1.41	2.75	1/2"-13	1/2"-13	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTR34-250x200-*	2.00	3.50	3.25	2.38	1.94	3.50	1.75	5.00	5.00	2.50	1.69	3.06	1/2"-13	1/2"-13	17.56 (7.97)	3000 (210)
3"x1/2"	BTR34-300x050-*	2.44	4.19	3.75	2.88	0.50	4.00	2.00	5.50	6.00	2.75	0.69	1.50	5/8"-11	5/16"-18	28.20 (12.80)	3000 (210)
3"x3/4"	BTR34-300x075-*	2.44	4.19	3.75	2.88	0.75	4.00	2.00	5.50	6.00	2.75	0.88	1.88	5/8"-11	3/8"-16	26.00 (11.79)	3000 (210)
3"x1"	BTR34-300x100-*	2.44	4.19	3.75	2.88	0.94	4.00	2.00	5.50	6.00	2.75	1.03	2.06	5/8"-11	3/8"-16	26.00 (11.79)	3000 (210)
3"x1-1/4"	BTR34-300x125-*	2.44	4.19	3.75	2.88	1.25	4.00	2.00	5.50	6.00	2.75	1.19	2.31	5/8"-11	7/16"-14	28.13 (12.78)	3000 (210)
3"x1-1/2"	BTR34-300x150-*	2.44	4.19	3.75	2.88	1.50	4.00	2.00	5.50	6.00	2.75	1.41	2.75	5/8"-11	1/2"-13	27.67 (12.55)	3000 (210)
3"x2"	BTR34-300x200-*	2.44	4.19	3.75	2.88	1.94	4.00	2.00	5.50	6.00	2.75	1.69	3.06	5/8"-11	1/2"-13	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTR34-300x250-*	2.44	4.19	3.75	2.88	2.38	4.00	2.00	5.50	6.00	2.75	2.00	3.50	5/8"-11	1/2"-13	25.30 (11.48)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: BTR34-200x050-SS

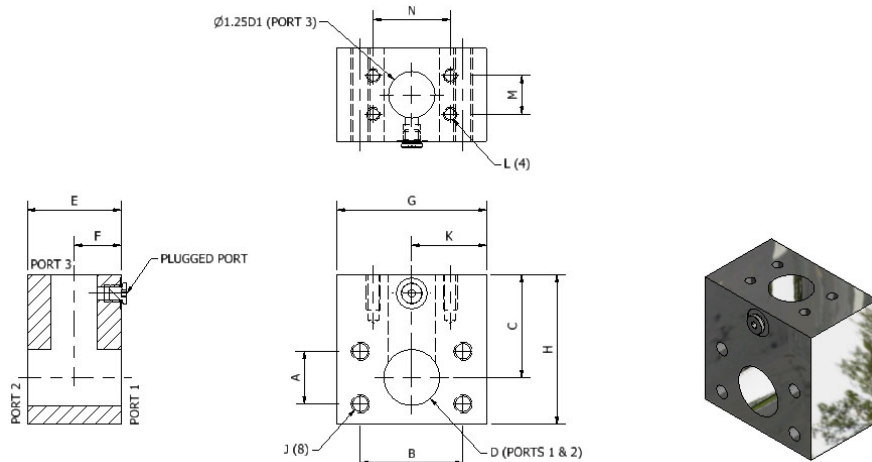
* Insert Material _____



3D step models available upon request

SAE 3000 PSI Reducing Branch Block Tee - Metric

SAE J518 Code 61 (ISO 6162-1) Flange Style



BTRM34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)	
		A	B	C	D	D1	E	F	G	H	K	M					N
3/4"x1/2"	BTRM34-075x050-*	22.4	47.8	57.2	19.1	12.7	50.8	25.4	76.2	82.6	38.1	17.5	38.1	M10 X 1.50	M8 X 1.25	4.80 (2.18)	5000 (350)
1"x1/2"	BTRM34-100x050-*	26.2	52.3	57.2	23.9	12.7	50.8	25.4	76.2	82.6	38.1	17.5	38.1	M10 X 1.50	M8 X 1.25	4.70 (2.13)	5000 (350)
1"x3/4"	BTRM34-100x075-*	26.2	52.3	57.2	23.9	19.1	50.8	25.4	76.2	82.6	38.1	22.4	47.8	M10 X 1.50	M10 X 1.50	4.60 (2.09)	5000 (350)
1-1/4"x1/2"	BTRM34-125x050-*	30.2	58.7	69.9	31.8	12.7	57.2	28.7	76.2	101.6	38.1	17.5	38.1	M10 X 1.50	M8 X 1.25	5.80 (2.63)	4000 (280)
1-1/4"x3/4"	BTRM34-125x075-*	30.2	58.7	69.9	31.8	19.1	57.2	28.7	76.2	101.6	38.1	22.4	47.8	M10 X 1.50	M10 X 1.50	5.80 (2.63)	4000 (280)
1-1/4"x1"	BTRM34-125x100-*	30.2	58.7	69.9	31.8	23.9	57.2	28.7	76.2	101.6	38.1	26.2	52.3	M10 X 1.50	M10 X 1.50	5.80 (2.63)	4000 (280)
1-1/2"x1/2"	BTRM34-150x050-*	35.8	69.9	69.9	38.1	12.7	63.5	31.8	101.6	101.6	50.8	17.5	38.1	M12 X 1.75	M8 X 1.25	9.25 (4.20)	4000 (280)
1-1/2"x3/4"	BTRM34-150x075-*	35.8	69.9	69.9	38.1	19.1	63.5	31.8	101.6	101.6	50.8	22.4	47.8	M12 X 1.75	M10 X 1.50	9.20 (4.17)	4000 (280)
1-1/2"x1"	BTRM34-150x100-*	35.8	69.9	69.9	38.1	23.9	63.5	31.8	101.6	101.6	50.8	26.2	52.3	M12 X 1.75	M10 X 1.50	9.00 (4.08)	4000 (280)
1-1/2"x1-1/4"	BTRM34-150x125-*	35.8	69.9	69.9	38.1	31.8	63.5	31.8	101.6	101.6	50.8	30.2	58.7	M12 X 1.75	M10 X 1.50	8.65 (3.92)	4000 (280)
2"x1/2"	BTRM34-200x050-*	42.9	77.7	76.2	49.3	12.7	76.2	38.1	101.6	114.3	50.8	17.5	38.1	M12 X 1.75	M8 X 1.25	11.70 (5.31)	4000 (280)
2"x3/4"	BTRM34-200x075-*	42.9	77.7	76.2	49.3	19.1	76.2	38.1	101.6	114.3	50.8	22.4	47.8	M12 X 1.75	M10 X 1.50	11.60 (5.26)	4000 (280)
2"x1"	BTRM34-200x100-*	42.9	77.7	76.2	49.3	23.9	76.2	38.1	101.6	114.3	50.8	26.2	52.3	M12 X 1.75	M10 X 1.50	11.60 (5.26)	4000 (280)
2"x1-1/4"	BTRM34-200x125-*	42.9	77.7	76.2	49.3	31.8	76.2	38.1	101.6	114.3	50.8	30.2	58.7	M12 X 1.75	M10 X 1.50	11.60 (5.26)	4000 (280)
2"x1-1/2"	BTRM34-200x150-*	42.9	77.7	76.2	49.3	38.1	76.2	38.1	101.6	114.3	50.8	35.8	69.9	M12 X 1.75	M12 X 1.75	11.60 (5.26)	4000 (280)
2-1/2"x1/2"	BTRM34-250x050-*	50.8	88.9	82.6	60.5	12.7	88.9	44.5	127.0	127.0	63.5	17.5	38.1	M12 X 1.75	M8 X 1.25	19.40 (8.80)	3000 (210)
2-1/2"x3/4"	BTRM34-250x075-*	50.8	88.9	82.6	60.5	19.1	88.9	44.5	127.0	127.0	63.5	22.4	47.8	M12 X 1.75	M10 X 1.50	19.20 (8.71)	3000 (210)
2-1/2"x1"	BTRM34-250x100-*	50.8	88.9	82.6	60.5	23.9	88.9	44.5	127.0	127.0	63.5	26.2	52.3	M12 X 1.75	M10 X 1.50	19.00 (8.62)	3000 (210)
2-1/2"x1-1/4"	BTRM34-250x125-*	50.8	88.9	82.6	60.5	31.8	88.9	44.5	127.0	127.0	63.5	30.2	58.7	M12 X 1.75	M10 X 1.50	18.80 (8.53)	3000 (210)
2-1/2"x1-1/2"	BTRM34-250x150-*	50.8	88.9	82.6	60.5	38.1	88.9	44.5	127.0	127.0	63.5	35.8	69.9	M12 X 1.75	M12 X 1.75	18.30 (8.30)	3000 (210)
2-1/2"x2"	BTRM34-250x200-*	50.8	88.9	82.6	60.5	49.3	88.9	44.5	127.0	127.0	63.5	42.9	77.7	M12 X 1.75	M12 X 1.75	17.56 (7.97)	3000 (210)
3"x1/2"	BTRM34-300x050-*	62.0	106.4	95.3	73.2	12.7	101.6	50.8	139.7	152.4	69.9	17.5	38.1	M16 X 2.00	M8 X 1.25	28.20 (12.80)	3000 (210)
3"x3/4"	BTRM34-300x075-*	62.0	106.4	95.3	73.2	19.1	101.6	50.8	139.7	152.4	69.9	22.4	47.8	M16 X 2.00	M10 X 1.50	26.00 (11.79)	3000 (210)
3"x1"	BTRM34-300x100-*	62.0	106.4	95.3	73.2	23.9	101.6	50.8	139.7	152.4	69.9	26.2	52.3	M16 X 2.00	M10 X 1.50	26.00 (11.79)	3000 (210)
3"x1-1/4"	BTRM34-300x125-*	62.0	106.4	95.3	73.2	31.8	101.6	50.8	139.7	152.4	69.9	30.2	58.7	M16 X 2.00	M10 X 1.50	28.13 (12.78)	3000 (210)
3"x1-1/2"	BTRM34-300x150-*	62.0	106.4	95.3	73.2	38.1	101.6	50.8	139.7	152.4	69.9	35.8	69.9	M16 X 2.00	M12 X 1.75	27.67 (12.55)	3000 (210)
3"x2"	BTRM34-300x200-*	62.0	106.4	95.3	73.2	49.3	101.6	50.8	139.7	152.4	69.9	42.9	77.7	M16 X 2.00	M12 X 1.75	26.87 (12.19)	3000 (210)
3"x2-1/2"	BTRM34-300x250-*	62.0	106.4	95.3	73.2	60.5	101.6	50.8	139.7	152.4	69.9	50.8	88.9	M16 X 2.00	M12 X 1.75	25.30 (11.48)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

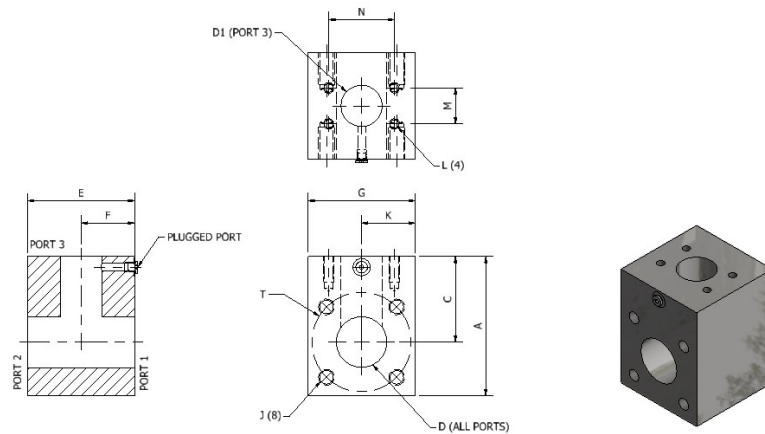
3D step models available upon request

Ordering Example: BTRM34-200x050-SS

* Insert Material _____

SAE 3000 PSI Reducing Branch Block Tee

ISO 6164/SAE J518 Code 61 (ISO 6162-1) Flange Style



BTR7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-34-250x200-*	4.65	4.00	2.38	1.94	5.00	2.50	5.00	6.50	2.50	1.69	3.06	3/4"-10	1/2"-13	35.60 (16.15)	3000 (210)
3"x2"	BTR7-34-300x200-*	5.71	5.00	2.88	1.94	6.00	3.00	6.00	8.00	3.00	1.69	3.06	1"-8	1/2"-13	63.40 (28.76)	3000 (210)
4"x2"	BTR7-34-400x200-*	6.89	5.50	3.50	1.94	7.00	3.50	7.00	9.00	3.50	1.69	3.06	1-1/8"-7	1/2"-13	97.60 (44.27)	3000 (210)

BTRM7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G 1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-34-250x200-*	118.1	101.6	60.5	49.3	127.0	63.5	127.0	165.1	63.5	42.9	77.7	M20 x 2.50	M12 x 1.75	35.60 (16.15)	3000 (210)
3"x2"	BTRM7-34-300x200-*	145.0	127.0	73.2	49.3	152.4	76.2	152.4	203.2	76.2	42.9	77.7	M24 x 3.00	M12 x 1.75	63.40 (28.76)	3000 (210)
4"x2"	BTRM7-34-400x200-*	175.0	139.7	88.9	49.3	177.8	88.9	177.8	228.6	88.9	42.9	77.7	M30 x 3.50	M12 x 1.75	97.60 (44.27)	3000 (210)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

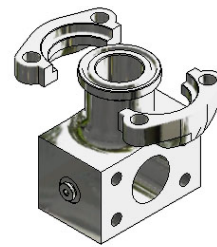
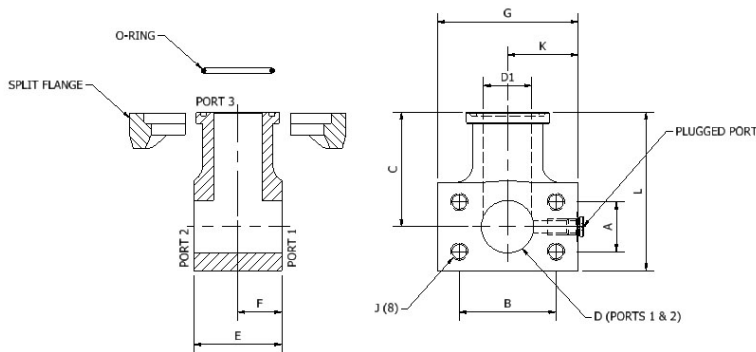
Ordering Example: BTR7-34-250x200-SS

* Insert Material

SAE 3000 PSI Split Flange Branch Tee

Complete Assembly

SAE J518 Code 61 (ISO 6162-1) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Tee
- One (1) Sets (2 Halves) Split Flanges
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFBT34 - Split Flange Branch Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFBT34-050-*^-^	0.69	1.50	2.50	0.50	0.38	2.00	1.00	2.50	1.25	3.50	5/16"-18	OR^-2-210	3.37 (1.53)	SFBT34-050-*^-^	2.95 (1.34)	5000 (350)
3/4"	A/SFBT34-075-*^-^	0.88	1.88	2.75	0.75	0.63	2.00	1.00	3.00	1.50	3.75	3/8"-16	OR^-2-214	3.81 (1.73)	SFBT34-075-*^-^	3.30 (1.50)	5000 (350)
1"	A/SFBT34-100-*^-^	1.03	2.06	2.75	0.94	0.88	2.00	1.00	3.00	1.50	3.75	3/8"-16	OR^-2-219	4.03 (1.83)	SFBT34-100-*^-^	3.38 (1.53)	5000 (350)
1-1/4"	A/SFBT34-125-*^-^	1.19	2.31	3.13	1.25	1.13	2.25	1.13	3.00	1.50	4.25	7/16"-14	OR^-2-222	4.69 (2.13)	SFBT34-125-*^-^	3.80 (1.72)	4000 (280)
1-1/2"	A/SFBT34-150-*^-^	1.41	2.75	3.25	1.50	1.38	2.50	1.25	4.00	2.00	4.50	1/2"-13	OR^-2-225	7.63 (3.46)	SFBT34-150-*^-^	6.19 (2.81)	4000 (280)
2"	A/SFBT34-200-*^-^	1.69	3.06	3.50	1.94	1.88	3.00	1.50	4.00	2.00	5.00	1/2"-13	OR^-2-228	9.46 (4.29)	SFBT34-200-*^-^	7.90 (3.58)	4000 (280)
2-1/2"	A/SFBT34-250-*^-^	2.00	3.50	4.00	2.38	2.38	3.50	1.75	4.50	2.25	5.75	1/2"-13	OR^-2-232	13.43 (6.09)	SFBT34-250-*^-^	11.30 (5.13)	3000 (210)
3"	A/SFBT34-300-*^-^	2.44	4.19	4.50	2.88	2.88	4.00	2.00	5.50	2.75	6.50	5/8"-11	OR^-2-237	21.35 (9.68)	SFBT34-300-*^-^	17.70 (8.03)	3000 (210)

A/SFBTM34 - Split Flange Branch Tee Assembly Flat Face with Threaded Holes Complete With Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFBTM34-050-*^-^	17.5	38.1	63.5	12.7	9.7	50.8	25.4	63.5	31.8	88.9	M8 x 1.25	OR^-2-210	3.37 (1.53)	SFBTM34-050-*^-^	2.95 (1.34)	5000 (350)
3/4"	A/SFBTM34-075-*^-^	22.4	47.8	69.9	19.1	16.0	50.8	25.4	76.2	38.1	95.3	M10 x 1.50	OR^-2-214	3.81 (1.73)	SFBTM34-075-*^-^	3.30 (1.50)	5000 (350)
1"	A/SFBTM34-100-*^-^	26.2	52.3	69.9	23.9	22.4	50.8	25.4	76.2	38.1	95.3	M10 x 1.50	OR^-2-219	4.03 (1.83)	SFBTM34-100-*^-^	3.38 (1.53)	5000 (350)
1-1/4"	A/SFBTM34-125-*^-^	30.2	58.7	79.5	31.8	28.7	57.2	28.7	76.2	38.1	108.0	M10 x 1.50	OR^-2-222	4.69 (2.13)	SFBTM34-125-*^-^	3.80 (1.72)	4000 (280)
1-1/2"	A/SFBTM34-150-*^-^	35.8	69.9	82.6	38.1	35.1	63.5	31.8	101.6	50.8	114.3	M12 x 1.75	OR^-2-225	7.63 (3.46)	SFBTM34-150-*^-^	6.19 (2.81)	4000 (280)
2"	A/SFBTM34-200-*^-^	42.9	77.7	88.9	49.3	47.8	76.2	38.1	101.6	50.8	127.0	M12 x 1.75	OR^-2-228	9.46 (4.29)	SFBTM34-200-*^-^	7.90 (3.58)	4000 (280)
2-1/2"	A/SFBTM34-250-*^-^	50.8	88.9	101.6	60.5	60.5	88.9	44.5	114.3	57.2	146.1	M12 x 1.75	OR^-2-232	13.43 (6.09)	SFBTM34-250-*^-^	11.30 (5.13)	3000 (210)
3"	A/SFBTM34-300-*^-^	62.0	106.4	114.3	73.2	73.2	101.6	50.8	139.7	69.9	165.1	M16 x 2.00	OR^-2-237	21.35 (9.68)	SFBTM34-300-*^-^	17.70 (8.03)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/SFBT34-200-SS-V

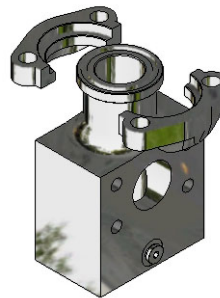
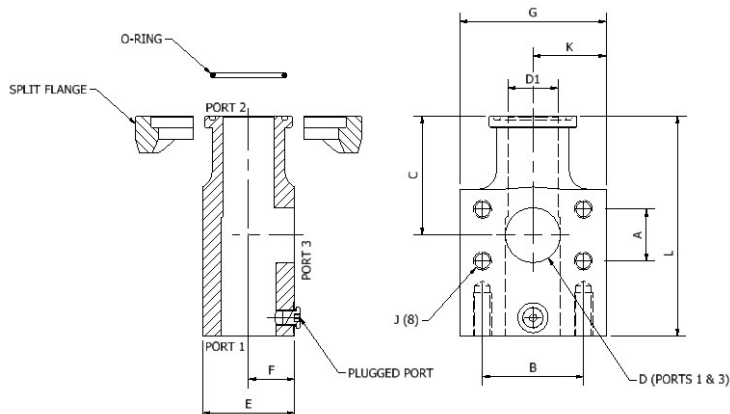
* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

SAE 3000 PSI Split Flange Run Tee Complete Assembly

SAE J518 Code 61 (ISO 6162-1) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Tee
- One (1) Sets (2 Halves) Split Flanges
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFRT34 - Split Flange Run Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFRT34-050-*-^	0.69	1.50	2.12	0.50	0.38	2.00	1.00	2.50	1.25	4.00	5/16"-18	OR^2-210	3.97 (1.80)	SFRT34-050-*-^	3.55 (1.61)	5000 (350)
3/4"	A/SFRT34-075-*-^	0.88	1.88	2.75	0.75	0.63	2.00	1.00	3.00	1.50	5.00	3/8"-16	OR^2-214	5.81 (2.64)	SFRT34-075-*-^	5.30 (2.41)	5000 (350)
1"	A/SFRT34-100-*-^	1.03	2.06	2.75	0.94	0.88	2.00	1.00	3.00	1.50	5.00	3/8"-16	OR^2-219	5.85 (2.65)	SFRT34-100-*-^	5.20 (2.36)	5000 (350)
1-1/4"	A/SFRT34-125-*-^	1.19	2.31	3.25	1.25	1.13	2.25	1.13	3.00	1.50	6.00	7/16"-14	OR^2-222	7.06 (3.20)	SFRT34-125-*-^	6.17 (2.80)	4000 (280)
1-1/2"	A/SFRT34-150-*-^	1.41	2.75	3.25	1.50	1.38	2.50	1.25	4.00	2.00	6.00	1/2"-13	OR^2-225	11.04 (5.01)	SFRT34-150-*-^	9.60 (4.35)	4000 (280)
2"	A/SFRT34-200-*-^	1.69	3.06	3.50	1.94	1.88	3.00	1.50	4.00	2.00	6.50	1/2"-13	OR^2-228	13.36 (6.06)	SFRT34-200-*-^	11.80 (5.35)	4000 (280)
2-1/2"	A/SFRT34-250-*-^	2.00	3.50	4.00	2.38	2.38	3.50	1.75	4.50	2.25	7.25	1/2"-13	OR^2-232	18.33 (8.31)	SFRT34-250-*-^	16.20 (7.35)	3000 (210)
3"	A/SFRT34-300-*-^	2.44	4.19	4.75	2.88	2.88	4.00	2.00	5.50	2.75	8.50	5/8"-11	OR^2-237	30.66 (13.91)	SFRT34-300-*-^	27.01 (12.25)	3000 (210)

A/SFRTM34 - Split Flange Run Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFRTM34-050-*-^	17.5	38.1	53.8	12.7	9.7	50.8	25.4	63.5	31.8	101.6	M8 x 1.25	OR^2-210	3.97 (1.80)	SFRTM34-050-*-^	3.55 (1.61)	5000 (350)
3/4"	A/SFRTM34-075-*-^	22.4	47.8	69.9	19.1	16.0	50.8	25.4	76.2	38.1	127.0	M10 x 1.50	OR^2-214	5.81 (2.64)	SFRTM34-075-*-^	5.30 (2.41)	5000 (350)
1"	A/SFRTM34-100-*-^	26.2	52.3	69.9	23.9	22.4	50.8	25.4	76.2	38.1	127.0	M10 x 1.50	OR^2-219	5.85 (2.65)	SFRTM34-100-*-^	5.20 (2.36)	5000 (350)
1-1/4"	A/SFRTM34-125-*-^	30.2	58.7	82.6	31.8	28.7	57.2	28.7	76.2	38.1	152.4	M10 x 1.50	OR^2-222	7.06 (3.20)	SFRTM34-125-*-^	6.17 (2.80)	4000 (280)
1-1/2"	A/SFRTM34-150-*-^	35.8	69.9	82.6	38.1	35.1	63.5	31.8	101.6	50.8	152.4	M12 x 1.75	OR^2-225	11.04 (5.01)	SFRTM34-150-*-^	9.60 (4.35)	4000 (280)
2"	A/SFRTM34-200-*-^	42.9	77.7	88.9	49.3	47.8	76.2	38.1	101.6	50.8	165.1	M12 x 1.75	OR^2-228	13.36 (6.06)	SFRTM34-200-*-^	11.80 (5.35)	4000 (280)
2-1/2"	A/SFRTM34-250-*-^	50.8	88.9	101.6	60.5	60.5	88.9	44.5	114.3	57.2	184.2	M12 x 1.75	OR^2-232	18.33 (8.31)	SFRTM34-250-*-^	16.20 (7.35)	3000 (210)
3"	A/SFRTM34-300-*-^	62.0	106.4	120.7	73.2	73.2	101.6	50.8	139.7	69.9	215.9	M16 x 2.00	OR^2-237	30.66 (13.91)	SFRTM34-300-*-^	27.01 (12.25)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/SFRT34-200-SS-V

* Insert Material

^ Insert O-Ring Type

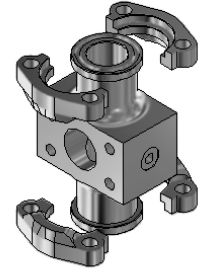
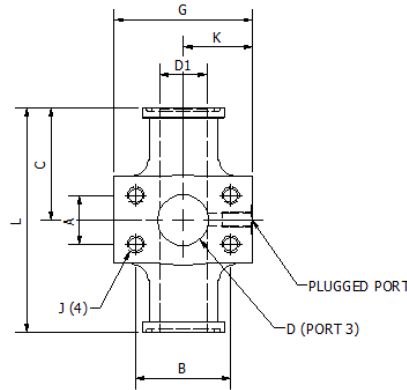
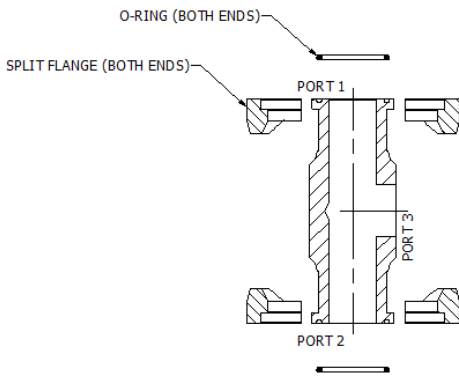
SAE 3000 PSI Split Flange Tee

Complete Assembly

SAE J518 Code 61 (ISO 6162-1) Flange Style

Complete Flange Set Includes:

- One (1) Split Flange Tee
- Two (2) Sets (4 Halves) Split Flanges
- Two (2) O-Rings
- Two (2) Component Bolt Kits



A/SFT34 - Split Flange Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFT34-050-*-^	0.69	1.50	2.50	0.50	0.38	2.00	1.00	2.50	1.25	5.00	5/16"-18	OR^-2-210	3.51 (1.59)	SFT34-050-*-^	2.67 (1.21)	5000 (350)
3/4"	A/SFT34-075-*-^	0.88	1.88	2.75	0.75	0.63	2.00	1.00	3.00	1.50	5.50	3/8"-16	OR^-2-214	4.82 (2.19)	SFT34-075-*-^	3.80 (1.72)	5000 (350)
1"	A/SFT34-100-*-^	1.03	2.06	2.75	0.94	0.88	2.00	1.00	3.00	1.50	5.50	3/8"-16	OR^-2-219	5.40 (2.45)	SFT34-100-*-^	4.10 (1.86)	5000 (350)
1-1/4"	A/SFT34-125-*-^	1.19	2.31	3.13	1.25	1.13	2.25	1.13	3.00	1.50	6.25	7/16"-14	OR^-2-222	6.63 (3.01)	SFT34-125-*-^	4.85 (2.20)	4000 (280)
1-1/2"	A/SFT34-150-*-^	1.41	2.75	3.25	1.50	1.38	2.50	1.25	4.00	2.00	6.50	1/2"-13	OR^-2-225	10.38 (4.71)	SFT34-150-*-^	7.50 (3.41)	4000 (280)
2"	A/SFT34-200-*-^	1.69	3.06	3.50	1.94	1.88	3.00	1.50	4.00	2.00	7.00	1/2"-13	OR^-2-228	12.72 (5.77)	SFT34-200-*-^	9.60 (4.35)	4000 (280)
2-1/2"	A/SFT34-250-*-^	2.00	3.50	4.00	2.38	2.38	3.50	1.75	4.50	2.25	8.00	1/2"-13	OR^-2-232	19.58 (8.88)	SFT34-250-*-^	15.32 (6.95)	3000 (210)
3"	A/SFT34-300-*-^	2.44	4.19	4.50	2.88	2.88	4.00	2.00	5.50	2.75	9.00	5/8"-11	OR^-2-237	28.40 (12.88)	SFT34-300-*-^	21.10 (9.57)	3000 (210)

A/SFTM34 - Split Flange Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFTM34-050-*-^	17.5	38.1	63.5	12.7	9.7	50.8	25.4	63.5	31.8	127.0	M8 x 1.25	OR^-2-210	3.51 (1.59)	SFTM34-050-*-^	2.67 (1.21)	5000 (350)
3/4"	A/SFTM34-075-*-^	22.4	47.8	69.9	19.1	16.0	50.8	25.4	76.2	38.1	139.7	M10 x 1.50	OR^-2-214	4.82 (2.19)	SFTM34-075-*-^	3.80 (1.72)	5000 (350)
1"	A/SFTM34-100-*-^	26.2	52.3	69.9	23.9	22.4	50.8	25.4	76.2	38.1	139.7	M10 x 1.50	OR^-2-219	5.40 (2.45)	SFTM34-100-*-^	4.10 (1.86)	5000 (350)
1-1/4"	A/SFTM34-125-*-^	30.2	58.7	79.5	31.8	28.7	57.2	28.7	76.2	38.1	158.8	M10 x 1.50	OR^-2-222	6.63 (3.01)	SFTM34-125-*-^	4.85 (2.20)	4000 (280)
1-1/2"	A/SFTM34-150-*-^	35.8	69.9	82.6	38.1	34.9	63.5	31.8	101.6	50.8	165.1	M12 x 1.75	OR^-2-225	10.38 (4.71)	SFTM34-150-*-^	7.50 (3.41)	4000 (280)
2"	A/SFTM34-200-*-^	42.9	77.7	88.9	49.3	47.8	76.2	38.1	101.6	50.8	177.8	M12 x 1.75	OR^-2-228	12.72 (5.77)	SFTM34-200-*-^	9.60 (4.35)	4000 (280)
2-1/2"	A/SFTM34-250-*-^	50.8	88.9	101.6	60.5	60.5	88.9	44.5	114.3	57.2	203.2	M12 x 1.75	OR^-2-232	19.58 (8.88)	SFTM34-250-*-^	15.32 (6.95)	3000 (210)
3"	A/SFTM34-300-*-^	62.0	106.4	114.3	73.2	73.2	101.6	50.8	139.7	69.9	228.6	M16 x 2.00	OR^-2-237	28.40 (12.88)	SFTM34-300-*-^	21.10 (9.57)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/SFT34-200-SS-V

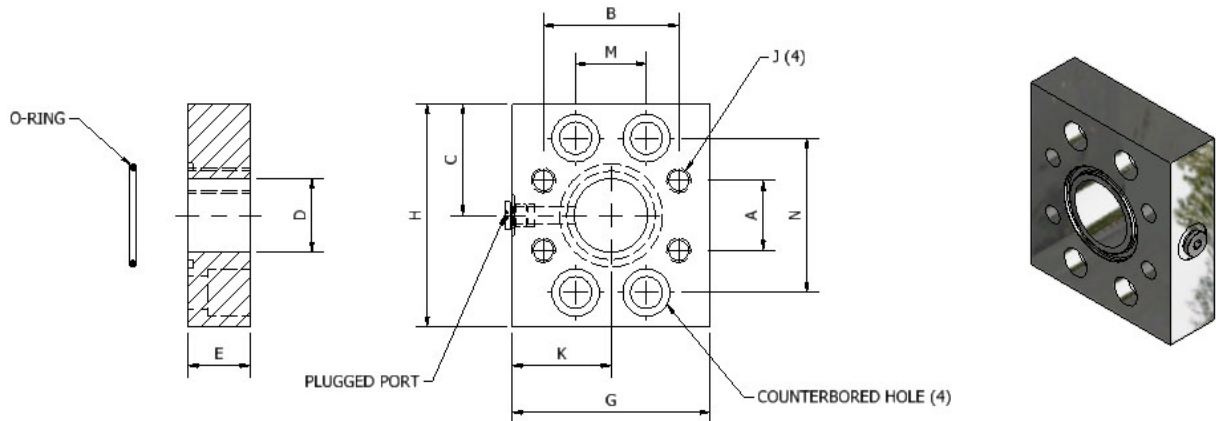
* Insert Material

^ Insert O-Ring Type

3D step models available upon request

SAE 3000 PSI Transition Plate

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Manifold Mount Style



TPO6-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Transition Plate Part Number	Dimensions (in)										C'T Bore Bolt	Thread 1 UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K	M	N					
1/2"	TP06-34-050-*^-^	0.69	1.50	1.25	0.50	1.00	2.50	2.50	1.50	0.72	1.60	5/16"	5/16"-18	OR^-2-210	1.40 (0.64)	5000 (350)
3/4"	TP06-34-075-*^-^	0.88	1.88	1.50	0.75	1.00	3.00	3.00	1.75	0.94	2.00	3/8"	3/8"-16	OR^-2-214	2.00 (0.91)	5000 (350)
1"	TP06-34-100-*^-^	1.03	2.06	1.50	0.94	1.00	3.00	3.00	1.50	1.10	2.24	7/16"	3/8"-16	OR^-2-219	1.90 (0.86)	5000 (350)
1-1/4"	TP06-34-125-*^-^	1.19	2.31	2.00	1.25	1.25	3.00	4.00	1.50	1.24	2.62	1/2"	7/16"-14	OR^-2-222	3.59 (1.63)	4000 (275)
1-1/2"	TP06-34-150-*^-^	1.41	2.75	2.25	1.50	1.25	4.00	4.50	2.00	1.44	3.13	31/32"	1/2"-13	OR^-2-225	4.56 (2.07)	3000 (210)
2"	TP06-34-200-*^-^	1.69	3.06	2.75	1.94	1.75	4.00	5.50	2.00	1.75	3.81	3/4"	1/2"-13	OR^-2-228	7.40 (3.36)	3000 (210)

TPOM6-34 - Transition Plate O-Ring Face with Counterbored Hole Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Transition Plate Part Number	Dimensions (mm)										C'T Bore Bolt	Thread 1	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K	M	N					
1/2"	TPOM6-34-050-*^-^	17.5	38.1	31.8	12.7	25.4	63.5	63.5	38.1	18.3	40.6	M8	M8 x 1.25	OR^-2-210	1.40 (0.64)	5000 (350)
3/4"	TPOM6-34-075-*^-^	22.4	47.8	38.1	19.1	25.4	76.2	76.2	44.5	23.9	50.8	M10	M10 x 1.50	OR^-2-214	2.00 (0.91)	5000 (350)
1"	TPOM6-34-100-*^-^	26.2	52.3	38.1	23.9	25.4	76.2	76.2	38.1	27.9	56.9	M12	M10 x 1.50	OR^-2-219	1.90 (0.86)	5000 (350)
1-1/4"	TPOM6-34-125-*^-^	30.2	58.7	50.8	31.8	31.8	76.2	101.6	38.1	31.5	66.5	M12	M10 x 1.50	OR^-2-222	3.59 (1.63)	4000 (275)
1-1/2"	TPOM6-34-150-*^-^	35.8	69.9	57.2	38.1	31.8	101.6	114.3	50.8	36.6	79.5	M16	M12 x 1.75	OR^-2-225	4.56 (2.07)	3000 (210)
2"	TPOM6-34-200-*^-^	42.9	77.7	69.9	49.3	44.5	101.6	139.7	50.8	44.5	96.8	M20	M12 x 1.75	OR^-2-228	7.40 (3.36)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

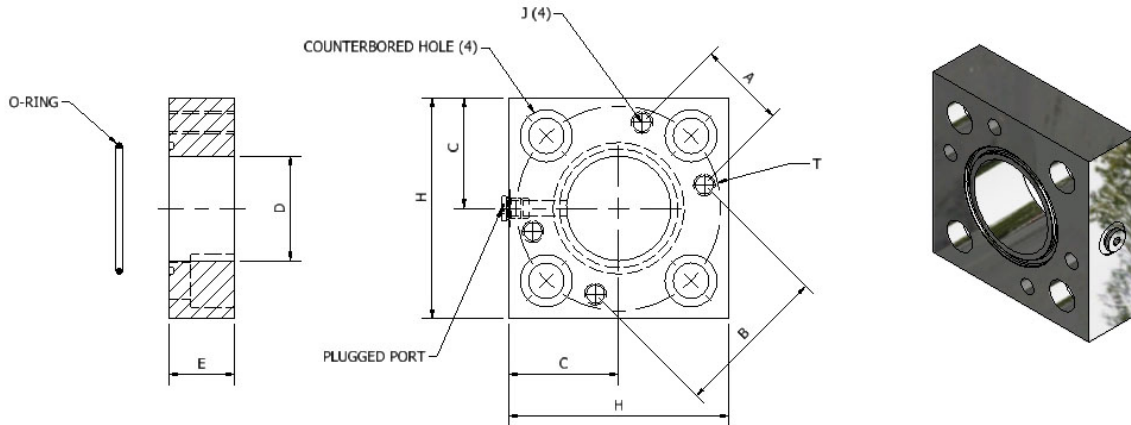
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TP06-34-200-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

SAE 3000 PSI Transition Plate

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Manifold Mount Style



TPO7-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Transition Plate Part Number	Dimensions (in)							C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TP07-34-250-*^-^	2.00	3.50	2.50	2.38	1.50	5.00	4.65	3/4"	1/2"-13	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TP07-34-300-*^-^	2.44	4.19	3.00	2.88	1.75	6.00	5.71	1"	5/8"-11	OR^-2-237	10.85 (4.92)	2000 (140)

TPOM7-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Transition Plate Part Number	Dimensions (mm)							C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TPOM7-34-250-*^-^	50.8	88.9	63.5	60.5	31.8	127.0	118.1	M20	M12 x 1.75	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TPOM7-34-300-*^-^	62.0	106.4	76.2	73.2	44.5	152.4	145.0	M24	M16 x 2.00	OR^-2-237	10.85 (4.92)	2000 (140)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TP07-34-250-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

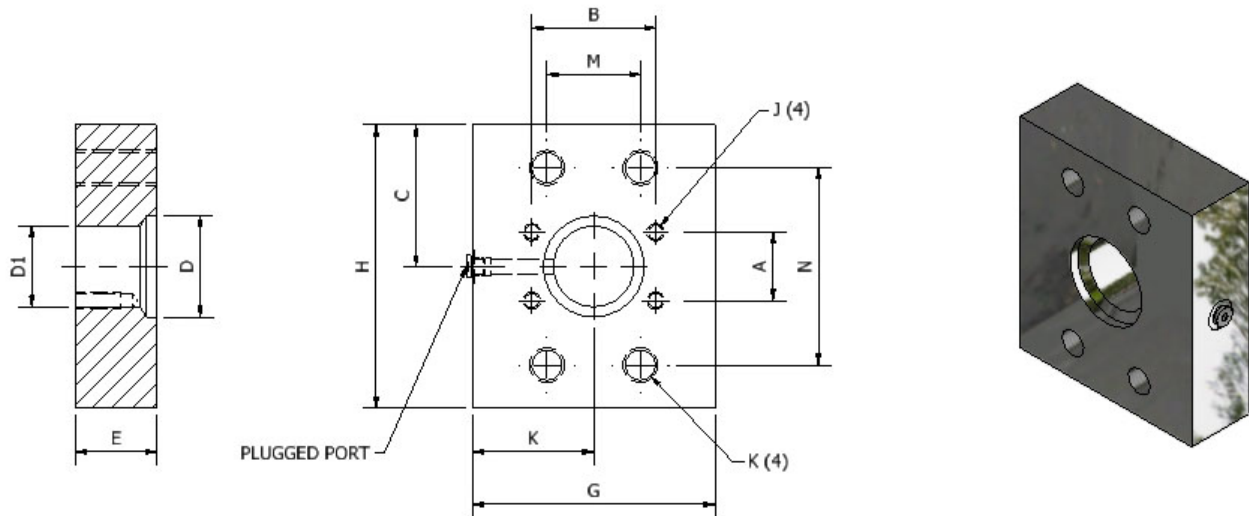
Clamp Supports - Heavy Series

Valves, Ball and Check

G67

SAE 3000 PSI Transition Plate Reducer

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Union Style



TPR6-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (SAE Code 62 x SAE Code 61)	Reducer Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPR6-34-075x050-*	0.69	1.50	1.25	0.75	0.50	1.00	2.50	3.00	1.25	0.94	2.00	3/8"-16	5/16"-18	1.87 (0.85)	5000 (350)
1" x 1/2"	TPR6-34-100x050-*	0.69	1.50	1.50	0.94	0.50	1.50	3.00	3.00	1.50	1.09	2.25	7/16"-14	5/16"-18	3.42 (1.55)	5000 (350)
1" x 3/4"	TPR6-34-100x075-*	0.88	1.88	1.50	0.94	0.75	1.25	3.00	3.00	1.50	1.09	2.25	7/16"-14	3/8"-16	2.70 (1.22)	5000 (350)
1-1/4" x 3/4"	TPR6-34-125x075-*	0.88	1.88	1.50	1.25	0.75	1.50	3.00	3.50	1.50	1.25	2.62	1/2"-13	3/8"-16	3.80 (1.72)	5000 (350)
1-1/4" x 1"	TPR6-34-125x100-*	1.03	2.06	1.50	1.25	0.94	1.25	3.00	3.50	1.50	1.25	2.62	1/2"-13	3/8"-16	3.00 (1.36)	5000 (350)
1-1/2" x 1"	TPR6-34-150x100-*	1.03	2.06	1.50	1.50	0.94	1.50	3.00	4.00	1.50	1.44	3.13	5/8"-11	3/8"-16	4.10 (1.86)	5000 (350)
1-1/2" x 1-1/4"	TPR6-34-150x125-*	1.19	2.31	2.00	1.50	1.25	1.50	4.00	4.00	2.00	1.44	3.13	5/8"-11	7/16"-14	55.50 (2.49)	4000 (280)
2" x 1-1/4"	TPR6-34-200x125-*	1.19	2.31	2.00	1.94	1.25	1.75	4.00	5.00	2.00	1.76	3.82	3/4"-10	7/16"-14	8.27 (3.75)	4000 (280)
2" x 1-1/2"	TPR6-34-200x150-*	1.41	2.75	2.50	1.94	1.50	1.50	5.00	5.00	2.50	1.75	3.81	3/4"-10	1/2"-13	8.93 (4.05)	4000 (280)

TPRM6-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6162-2 x ISO 6162-1)	Reducer Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPRM6-34-075x050-*	17.5	38.1	31.8	19.1	12.7	25.4	63.5	76.2	31.8	23.9	50.8	M10 x 1.50	M8 x 1.25	1.87 (0.85)	5000 (350)
1" x 1/2"	TPRM6-34-100x050-*	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M8 x 1.25	3.42 (1.55)	5000 (350)
1" x 3/4"	TPRM6-34-100x075-*	22.4	47.8	38.1	23.9	19.1	31.8	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M10 x 1.50	2.70 (1.22)	5000 (350)
1-1/4" x 3/4"	TPRM6-34-125x075-*	22.4	47.8	38.1	31.8	19.1	38.1	76.2	88.9	38.1	31.8	66.5	M12 x 1.75	M10 x 1.50	3.80 (1.72)	5000 (350)
1-1/4" x 1"	TPRM6-34-125x100-*	26.2	52.3	38.1	31.8	23.9	31.8	76.2	88.9	38.1	31.8	66.5	M12 x 1.75	M10 x 1.50	3.00 (1.36)	5000 (350)
1-1/2" x 1"	TPRM6-34-150x100-*	26.2	52.3	38.1	38.1	23.9	38.1	76.2	101.6	38.1	36.6	79.5	M16 x 2.00	M10 x 1.50	4.10 (1.86)	5000 (350)
1-1/2" x 1-1/4"	TPRM6-34-150x125-*	30.2	58.7	50.8	38.1	31.8	38.1	101.6	101.6	50.8	36.6	79.5	M16 x 2.00	M10 x 1.50	55.50 (2.49)	4000 (280)
2" x 1-1/4"	TPRM6-34-200x125-*	30.2	58.7	50.8	49.3	31.8	44.5	101.6	127.0	50.8	44.7	97.0	M20 x 2.50	M10 x 1.50	8.27 (3.75)	4000 (280)
2" x 1-1/2"	TPRM6-34-200x150-*	35.8	69.9	63.5	49.3	38.1	38.1	127.0	127.0	63.5	44.5	96.8	M20 x 2.50	M12 x 1.75	8.93 (4.05)	4000 (280)

*** Materials:**

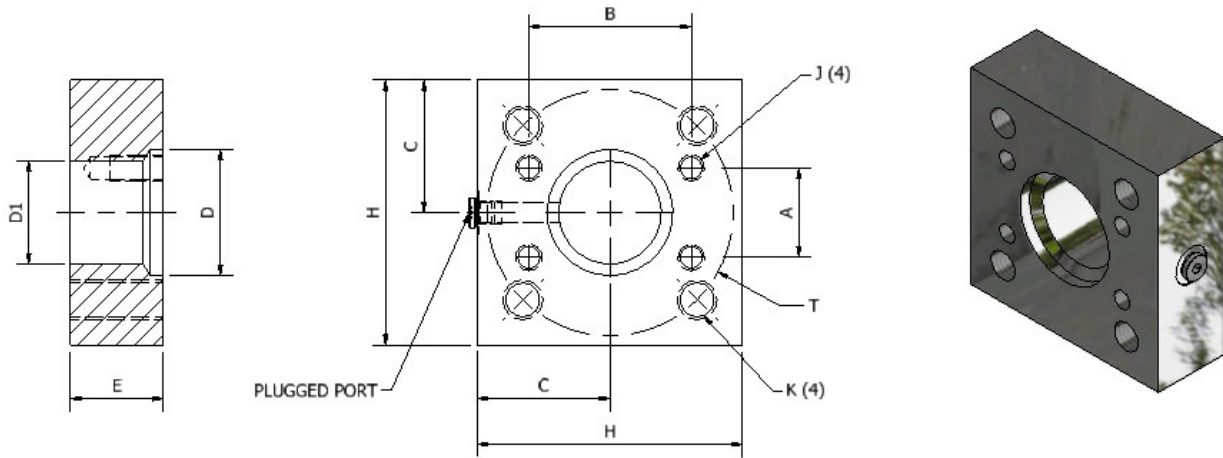
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPR6-34-200x125-SS

* Insert Material _____

SAE 3000 PSI Transition Plate Reducer

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Union Style



TPR7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 61)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-34-250x150-*	4.65	1.41	2.75	2.50	2.38	1.50	1.75	5.00	3/4"-10	1/2"-13	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPR7-34-250x200-*	4.65	1.69	3.06	2.50	2.38	1.94	1.75	5.00	3/4"-10	1/2"-13	10.30 (4.67)	3000 (210)
3" x 2"	TPR7-34-300x200-*	5.71	1.69	3.06	3.00	2.88	1.94	2.00	6.00	1"-8	1/2"-13	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPR7-34-300x250-*	5.71	2.00	3.50	3.00	2.88	2.38	2.00	6.00	1"-8	1/2"-13	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPR7-34-400x250-*	6.89	2.00	3.50	3.50	3.50	2.38	2.00	7.00	1-1/8"-7	1/2"-13	22.70 (10.30)	2500 (175)
4" x 3"	TPR7-34-400x300-*	6.89	2.44	4.19	3.50	3.50	2.88	2.00	7.00	1-1/8"-7	5/8"-11	22.20 (10.07)	2000 (140)

TPRM7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x ISO 6162-1)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-34-250x150-*	118.1	35.8	69.9	63.5	60.5	38.1	44.5	127.0	M20 x 2.50	M12 x 1.75	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPRM7-34-250x200-*	118.1	42.9	77.7	63.5	60.5	49.3	44.5	127.0	M20 x 2.50	M12 x 1.75	10.30 (4.67)	3000 (210)
3" x 2"	TPRM7-34-300x200-*	145.0	42.9	77.7	76.2	73.2	49.3	50.8	152.4	M24 x 3.00	M12 x 1.75	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPRM7-34-300x250-*	145.0	50.8	88.9	76.2	73.2	60.5	50.8	152.4	M24 x 3.00	M12 x 1.75	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPRM7-34-400x250-*	175.0	50.8	88.9	88.9	88.9	60.5	50.8	177.8	M30 x 3.50	M12 x 1.75	22.70 (10.30)	2500 (175)
4" x 3"	TPRM7-34-400x300-*	175.0	62.0	106.4	88.9	88.9	73.2	50.8	177.8	M30 x 3.50	M16 x 2.00	22.20 (10.07)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

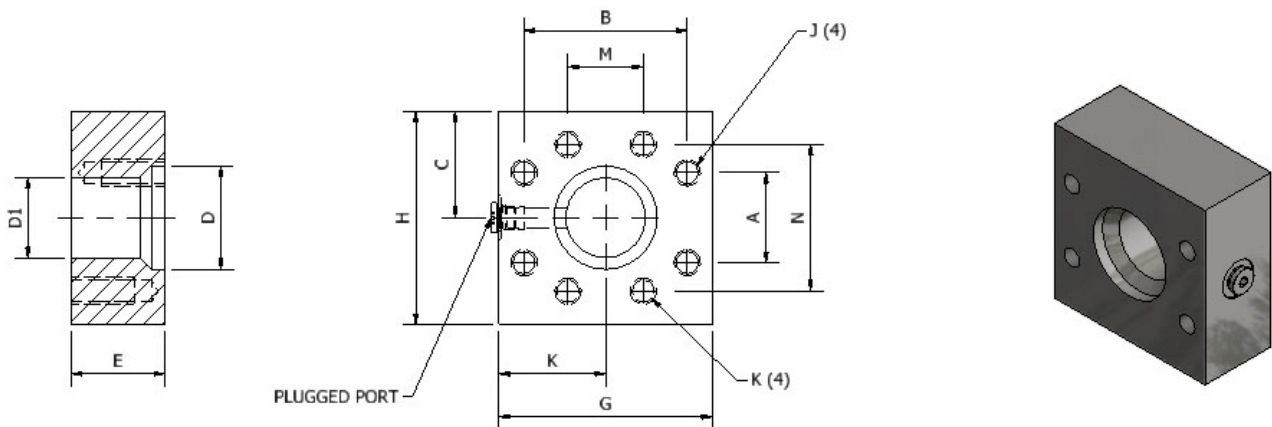
Ordering Example: TPR7-34-250x150-SS

* Insert Material

3D step models available upon request

SAE 3000 PSI Transition Plate Reducer - NPS

SAE J518 Code 61 (ISO 6162-1) Flange Style



TPR34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPR34-075x050-*	0.69	1.50	1.69	0.75	0.50	1.00	3.00	3.00	1.50	0.88	1.88	3/8"-16	5/16"-18	2.50 (1.59)	5000 (350)
1" x 1/2"	TPR34-100x050-*	0.69	1.50	1.50	0.94	0.50	1.50	3.00	3.00	1.50	1.03	2.06	3/8"-16	5/16"-18	3.44 (1.56)	5000 (350)
1" x 3/4"	TPR34-100x075-*	0.88	1.88	1.50	0.94	0.75	1.50	3.00	3.00	1.50	1.03	2.06	3/8"-16	3/8"-16	3.30 (1.50)	5000 (350)
1-1/4" x 3/4"	TPR34-125x075-*	0.88	1.88	1.50	1.25	0.75	1.50	3.00	3.00	1.50	1.19	2.31	7/16"-14	3/8"-16	3.20 (1.45)	5000 (350)
1-1/4" x 1"	TPR34-125x100-*	1.03	2.06	1.50	1.25	0.94	1.25	3.00	3.00	1.50	1.19	2.31	7/16"-14	3/8"-16	2.60 (1.18)	5000 (350)
1-1/2" x 1"	TPR34-150x100-*	1.03	2.06	2.00	1.50	0.94	1.50	3.00	4.00	1.50	1.41	2.75	1/2"-13	3/8"-16	4.26 (1.93)	5000 (350)
1-1/2" x 1-1/4"	TPR34-150x125-*	1.19	2.31	2.00	1.50	1.25	1.50	3.00	4.00	1.50	1.41	2.75	1/2"-13	7/16"-14	4.20 (1.91)	4000 (280)
2" x 1-1/4"	TPR34-200x125-*	1.19	2.31	2.00	1.94	1.25	1.75	3.00	4.00	1.50	1.69	3.06	1/2"-13	7/16"-14	4.70 (2.13)	4000 (280)
2" x 1-1/2"	TPR34-200x150-*	1.41	2.75	2.00	1.94	1.50	1.75	4.00	4.00	2.00	1.69	3.06	1/2"-13	1/2"-13	6.40 (2.91)	4000 (280)
2-1/2" x 1-1/2"	TPR34-250x150-*	1.41	2.75	2.50	2.38	1.50	2.00	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	8.90 (4.04)	4000 (280)
2-1/2" x 2"	TPR34-250x200-*	1.69	3.06	2.50	2.38	1.94	1.75	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	7.65 (3.47)	4000 (280)
3" x 2"	TPR34-300x200-*	1.69	3.06	3.00	2.88	1.94	2.00	4.00	6.00	2.00	2.44	4.19	5/8"-11	1/2"-13	10.60 (4.81)	4000 (280)
3" x 2-1/2"	TPR34-300x250-*	2.00	3.50	3.00	2.88	2.38	1.75	4.50	6.00	2.25	2.44	4.19	5/8"-11	1/2"-13	10.10 (4.58)	3000 (210)

*** Materials:**

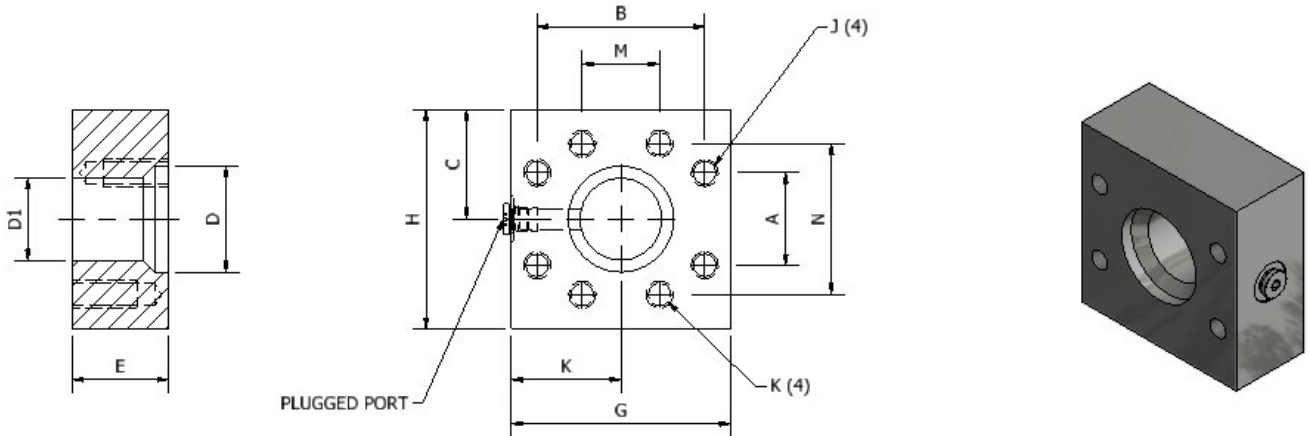
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: TPR34-200x125-SS

* Insert Material _____

SAE 3000 PSI Transition Plate Reducer - Metric

SAE J518 Code 61 (ISO 6162-1) Flange Style



TPRM34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)										Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)	
		A	B	C	D	D1	E	G	H	K	M					N
3/4" x 1/2"	TPRM34-075x050-*	17.5	38.1	42.9	19.1	12.7	25.4	76.2	76.2	38.1	22.4	47.8	M10 x 1.50	M8 x 1.25	3.50 (1.59)	5000 (350)
1" x 1/2"	TPRM34-100x050-*	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	38.1	26.2	52.3	M10 x 1.50	M8 x 1.25	3.44 (1.56)	5000 (350)
1" x 3/4"	TPRM34-100x075-*	22.4	47.8	38.1	23.9	19.1	38.1	76.2	76.2	38.1	26.2	52.3	M10 x 1.50	M10 x 1.50	3.30 (1.50)	5000 (350)
1-1/4" x 3/4"	TPRM34-125x075-*	22.4	47.8	38.1	31.8	19.1	38.1	76.2	76.2	38.1	30.2	58.7	M10 x 1.50	M10 x 1.50	3.20 (1.45)	5000 (350)
1-1/4" x 1"	TPRM34-125x100-*	26.2	52.3	38.1	31.8	23.9	31.8	76.2	76.2	38.1	30.2	58.7	M10 x 1.50	M10 x 1.50	2.60 (1.18)	5000 (350)
1-1/2" x 1"	TPRM34-150x100-*	26.2	52.3	50.8	38.1	23.9	38.1	76.2	101.6	38.1	35.8	69.9	M12 x 1.75	M10 x 1.50	4.26 (1.93)	5000 (350)
1-1/2" x 1-1/4"	TPRM34-150x125-*	30.2	58.7	50.8	38.1	31.8	38.1	76.2	101.6	38.1	35.8	69.9	M12 x 1.75	M10 x 1.50	4.20 (1.91)	4000 (280)
2" x 1-1/4"	TPRM34-200x125-*	30.2	58.7	50.8	49.3	31.8	44.5	76.2	101.6	38.1	42.9	77.7	M12 x 1.75	M10 x 1.50	4.70 (2.13)	4000 (280)
2" x 1-1/2"	TPRM34-200x150-*	35.8	69.9	50.8	49.3	38.1	44.5	101.6	101.6	50.8	42.9	77.7	M12 x 1.75	M12 x 1.75	6.40 (2.91)	4000 (280)
2-1/2" x 1-1/2"	TPRM34-250x150-*	35.8	69.9	63.5	60.5	38.1	50.8	101.6	127.0	50.8	50.8	88.9	M12 x 1.75	M12 x 1.75	8.90 (4.04)	4000 (280)
2-1/2" x 2"	TPRM34-250x200-*	42.9	77.7	63.5	60.5	49.3	44.5	101.6	127.0	50.8	50.8	88.9	M12 x 1.75	M12 x 1.75	7.65 (3.47)	4000 (280)
3" x 2"	TPRM34-300x200-*	42.9	77.7	76.2	73.2	49.3	50.8	101.6	152.4	50.8	62.0	106.4	M16 x 2.00	M12 x 1.75	10.60 (4.81)	4000 (280)
3" x 2-1/2"	TPRM34-300x250-*	50.8	88.9	76.2	73.2	60.5	44.5	114.3	152.4	57.2	62.0	106.4	M16 x 2.00	M12 x 1.75	10.10 (4.48)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: TPRM34-200x125-SS

* Insert Material _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

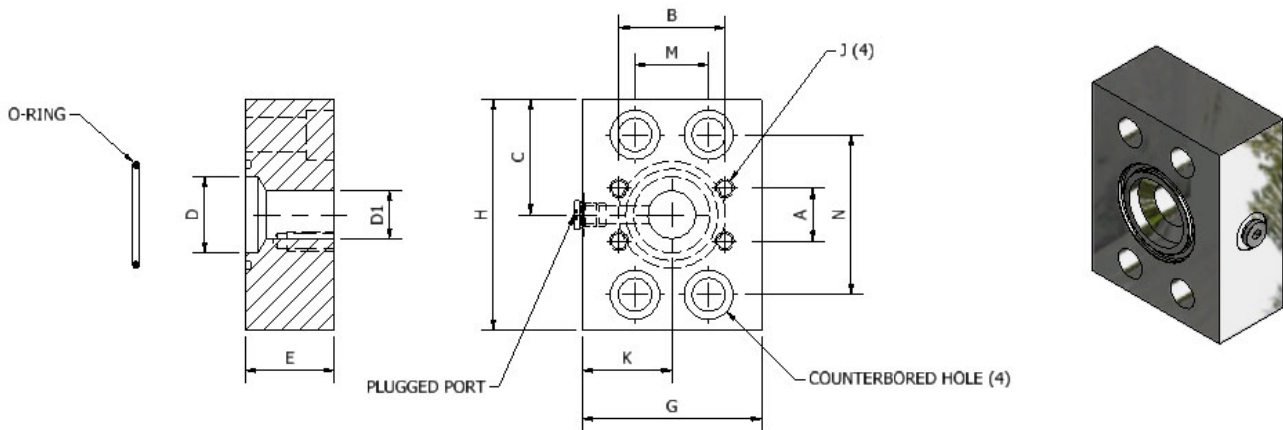
Clamp Supports - Heavy Series

Valves, Ball and Check

G71

SAE 3000 PSI Transition Plate Reducer

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Manifold Mount Style



TPRO6-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (SAE Code 62 x SAE Code 61)	Reducer Part Number	Dimensions (in)										C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)	
		A	B	C	D	D1	E	G	H	K	M						N
3/4" x 1/2"	TPRO6-34-075x050-*^	0.69	1.50	1.38	0.75	0.50	1.50	3.00	2.75	1.25	0.94	2.00	3/8"-16	5/16"-18	OR^2-214	2.99 (1.36)	5000 (350)
1" x 1/2"	TPRO6-34-100x050-*^	0.69	1.50	1.50	0.94	0.50	1.50	3.00	3.00	1.75	1.09	2.25	7/16"-14	5/16"-18	OR^2-219	3.16 (1.43)	5000 (350)
1" x 3/4"	TPRO6-34-100x075-*^	0.88	1.88	1.50	0.94	0.75	1.50	3.00	3.00	1.75	1.09	2.25	7/16"-14	3/8"-16	OR^2-219	3.04 (1.38)	5000 (350)
1-1/4" x 3/4"	TPRO6-34-125x075-*^	0.88	1.88	1.75	1.25	0.75	1.50	3.00	3.50	1.75	1.25	2.62	1/2"-13	3/8"-16	OR^2-222	3.40 (1.54)	5000 (350)
1-1/4" x 1"	TPRO6-34-125x100-*^	1.03	2.06	1.75	1.25	0.94	1.50	3.00	3.50	1.75	1.25	2.62	1/2"-13	3/8"-16	OR^2-222	4.03 (1.83)	5000 (350)
1-1/2" x 1"	TPRO6-34-150x100-*^	1.03	2.06	2.25	1.50	0.94	1.75	3.50	4.50	2.00	1.44	3.13	5/8"-11	3/8"-16	OR^2-225	6.10 (2.77)	5000 (350)
1-1/2" x 1-1/4"	TPRO6-34-150x125-*^	1.19	2.31	2.25	1.50	1.25	1.75	3.00	4.50	1.50	1.44	3.13	5/8"-11	7/16"-14	OR^2-225	4.70 (2.13)	4000 (280)
2" x 1-1/4"	TPRO6-34-200x125-*^	1.19	2.31	2.63	1.94	1.25	1.75	4.00	5.25	2.00	1.75	3.81	3/4"-10	7/16"-14	OR^2-228	7.60 (3.45)	4000 (280)
2" x 1-1/2"	TPRO6-34-200x150-*^	1.41	2.75	2.63	1.94	1.50	1.75	4.00	5.25	2.00	1.75	3.81	3/4"-10	1/2"-13	OR^2-228	7.30 (3.31)	4000 (280)

TPROM6-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G 1/8 Port (Plugged), Metric

Size (ISO 6162-2 x ISO 6162-1)	Reducer Part Number	Dimensions (mm)										C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)	
		A	B	C	D	D1	E	G	H	K	M						N
3/4" x 1/2"	TPROM6-34-075x050-*^	17.5	38.1	35.1	19.1	12.7	38.1	76.2	69.9	44.5	23.9	50.8	M10	M8 x 1.25	OR^2-214	2.99 (1.36)	5000 (350)
1" x 1/2"	TPROM6-34-100x050-*^	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	44.5	27.7	57.2	M12	M8 x 1.25	OR^2-219	3.16 (1.43)	5000 (350)
1" x 3/4"	TPROM6-34-100x075-*^	22.4	47.8	38.1	23.9	19.1	38.1	76.2	76.2	44.5	27.7	57.2	M12	M10 x 1.50	OR^2-219	3.04 (1.38)	5000 (350)
1-1/4" x 3/4"	TPROM6-34-125x075-*^	22.4	47.8	44.5	31.8	19.1	38.1	76.2	88.9	44.5	31.8	66.8	M12	M10 x 1.50	OR^2-222	3.40 (1.54)	5000 (350)
1-1/4" x 1"	TPROM6-34-125x100-*^	26.2	52.3	44.5	31.8	23.9	25.4	76.2	88.9	38.1	31.8	66.8	M12	M10 x 1.50	OR^2-222	4.03 (1.83)	5000 (350)
1-1/2" x 1"	TPROM6-34-150x100-*^	26.2	52.3	57.2	38.1	23.9	44.5	88.9	114.3	50.8	36.6	79.5	M16	M10 x 1.50	OR^2-225	6.10 (2.77)	5000 (350)
1-1/2" x 1-1/4"	TPROM6-34-150x125-*^	30.2	58.7	57.2	38.1	31.8	44.5	76.2	114.3	38.1	36.6	79.5	M16	M10 x 1.50	OR^2-225	4.70 (2.13)	4000 (280)
2" x 1-1/4"	TPROM6-34-200x125-*^	30.2	58.7	66.8	49.3	31.8	44.5	101.6	133.4	50.8	44.5	96.8	M20	M10 x 1.50	OR^2-228	7.60 (3.45)	4000 (280)
2" x 1-1/2"	TPROM6-34-200x150-*^	35.8	69.9	66.8	49.3	38.1	44.5	101.6	133.4	50.8	44.5	96.8	M20	M12 x 1.75	OR^2-228	7.30 (3.31)	4000 (280)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: TPRO6-34-200x125-SS-V

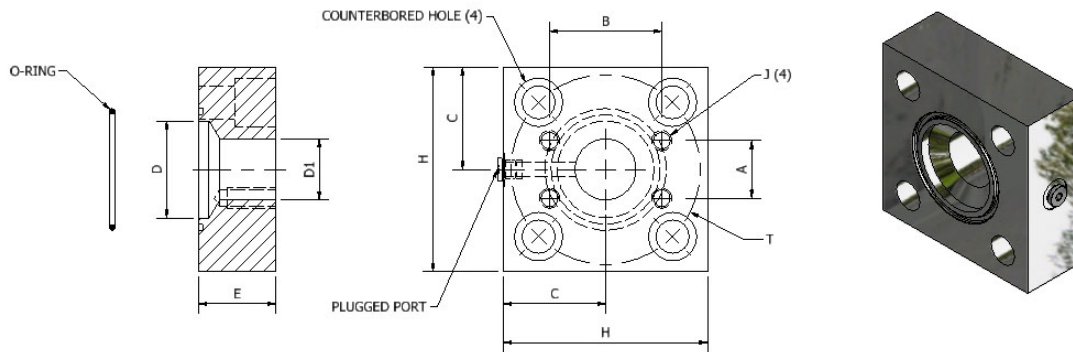
* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

SAE 3000 PSI Transition Plate Reducer

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Manifold Mount Style



TPRO7-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 61)	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPRO7-34-250x150-*^-^	4.65	1.41	2.75	2.50	2.38	1.50	1.75	5.00	3/4"-10	1/2"-13	OR^-2-232	9.20 (4.17)	3000 (210)
2-1/2" x 2"	TPRO7-34-250x200-*^-^	4.65	1.69	3.06	2.75	2.38	1.94	1.75	5.00	3/4"-10	1/2"-13	OR^-2-232	9.90 (4.49)	3000 (210)
3" x 2"	TPRO7-34-300x200-*^-^	5.71	1.69	3.06	3.00	2.88	1.94	2.00	6.00	1"-8	1/2"-13	OR^-2-237	14.20 (6.44)	3000 (210)
3" x 2-1/2"	TPRO7-34-300x250-*^-^	5.71	2.00	3.50	3.00	2.88	2.38	2.00	6.00	1"-8	1/2"-13	OR^-2-237	15.40 (6.99)	2500 (175)
4" x 2-1/2"	TPRO7-34-400x250-*^-^	6.89	2.00	3.50	3.50	3.50	2.38	2.00	7.00	1-1/8"-7	1/2"-13	OR^-2-241	22.20 (10.07)	2500 (175)
4" x 3"	TPRO7-34-400x300-*^-^	6.89	2.44	4.19	3.75	3.50	2.88	2.00	7.00	1-1/8"-7	5/8"-11	OR^-2-241	21.70 (9.84)	2000 (140)

TPROM7-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size (ISO 6164 x 6162-1)	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPROM7-34-250x150-*^-^	118.1	35.8	69.9	63.5	60.5	38.1	44.5	127.0	M20	M12 x 1.75	OR^-2-232	9.20 (4.17)	3000 (210)
2-1/2" x 2"	TPROM7-34-250x200-*^-^	118.1	42.9	77.7	69.9	60.5	49.3	44.5	127.0	M20	M12 x 1.75	OR^-2-232	9.90 (4.49)	3000 (210)
3" x 2"	TPROM7-34-300x200-*^-^	145.0	42.9	77.7	76.2	73.2	49.3	50.8	152.4	M24	M12 x 1.75	OR^-2-237	14.20 (6.44)	3000 (210)
3" x 2-1/2"	TPROM7-34-300x250-*^-^	145.0	50.8	88.9	76.2	73.2	60.5	50.8	152.4	M24	M12 x 1.75	OR^-2-237	15.40 (6.99)	2500 (175)
4" x 2-1/2"	TPROM7-34-400x250-*^-^	175.0	50.8	88.9	88.9	88.9	60.5	50.8	177.8	M30	M12 x 1.75	OR^-2-241	22.20 (10.07)	2500 (175)
4" x 3"	TPROM7-34-400x300-*^-^	175.0	62.0	106.4	95.3	88.9	73.2	50.8	177.8	M30	M16 x 2.00	OR^-2-241	21.70 (9.84)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO7-34-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

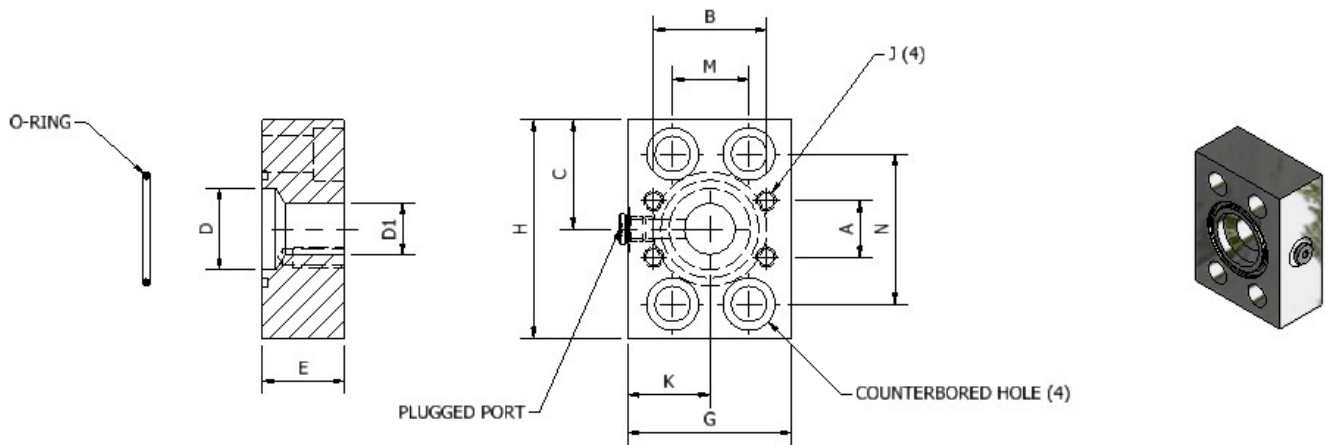
Clamp Supports - Heavy Series

Valves, Ball and Check

G73

SAE 3000 PSI Transition Plate Reducer - NPS

SAE J518 Code 61 (ISO 6162-1) Flange Manifold Mount Style



TPRO34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPRO34-075x050-*^-^	0.69	1.50	1.50	0.75	0.50	1.50	3.00	3.00	1.69	0.88	1.88	3/8"-16	5/16"-18	OR^-2-214	3.30 (1.50)	5000 (350)
1" x 1/2"	TPRO34-100x050-*^-^	0.69	1.50	1.50	0.94	0.50	1.50	3.00	3.00	1.69	1.03	2.06	3/8"-16	5/16"-18	OR^-2-219	3.20 (1.45)	5000 (350)
1" x 3/4"	TPRO34-100x075-*^-^	0.88	1.88	1.50	0.94	0.75	1.50	3.00	3.00	1.69	1.03	2.06	3/8"-16	3/8"-16	OR^-2-219	3.20 (1.45)	5000 (350)
1-1/4" x 3/4"	TPRO34-125x075-*^-^	0.88	1.88	1.63	1.25	0.75	1.50	3.00	3.25	1.69	1.19	2.31	7/16"-14	3/8"-16	OR^-2-222	3.30 (1.50)	5000 (350)
1-1/4" x 1"	TPRO34-125x100-*^-^	1.03	2.06	1.63	1.25	0.94	1.25	3.00	3.25	1.50	1.19	2.31	7/16"-14	3/8"-16	OR^-2-222	2.58 (1.17)	5000 (350)
1-1/2" x 1"	TPRO34-150x100-*^-^	1.03	2.06	2.00	1.50	0.94	1.50	3.00	4.00	1.50	1.41	2.75	1/2"-13	3/8"-16	OR^-2-225	4.00 (1.81)	5000 (350)
1-1/2" x 1-1/4"	TPRO34-150x125-*^-^	1.19	2.31	2.00	1.50	1.25	1.50	3.00	4.00	1.50	1.41	2.75	1/2"-13	7/16"-14	OR^-2-225	3.70 (1.68)	4000 (280)
2" x 1-1/4"	TPRO34-200x125-*^-^	1.19	2.31	2.00	1.94	1.25	1.75	3.00	4.00	1.50	1.69	3.06	1/2"-13	7/16"-14	OR^-2-228	4.20 (1.91)	4000 (280)
2" x 1-1/2"	TPRO34-200x150-*^-^	1.41	2.75	2.00	1.94	1.50	1.75	4.00	4.00	2.00	1.69	3.06	1/2"-13	1/2"-13	OR^-2-228	5.90 (2.68)	4000 (280)
2-1/2" x 1-1/2"	TPRO34-250x150-*^-^	1.41	2.75	2.50	2.38	1.50	2.00	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	8.80 (3.99)	4000 (280)
2-1/2" x 2"	TPRO34-250x200-*^-^	1.69	3.06	2.50	2.38	1.94	1.75	4.00	5.00	2.00	2.00	3.50	1/2"-13	1/2"-13	OR^-2-232	7.30 (3.31)	4000 (280)
3" x 2"	TPRO34-300x200-*^-^	1.69	3.06	3.00	2.88	1.94	2.00	4.00	6.00	2.00	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.80 (4.45)	4000 (280)
3" x 2-1/2"	TPRO34-300x250-*^-^	2.00	3.50	3.00	2.88	2.38	1.75	4.50	6.00	2.25	2.44	4.19	5/8"-11	1/2"-13	OR^-2-237	9.50 (4.31)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

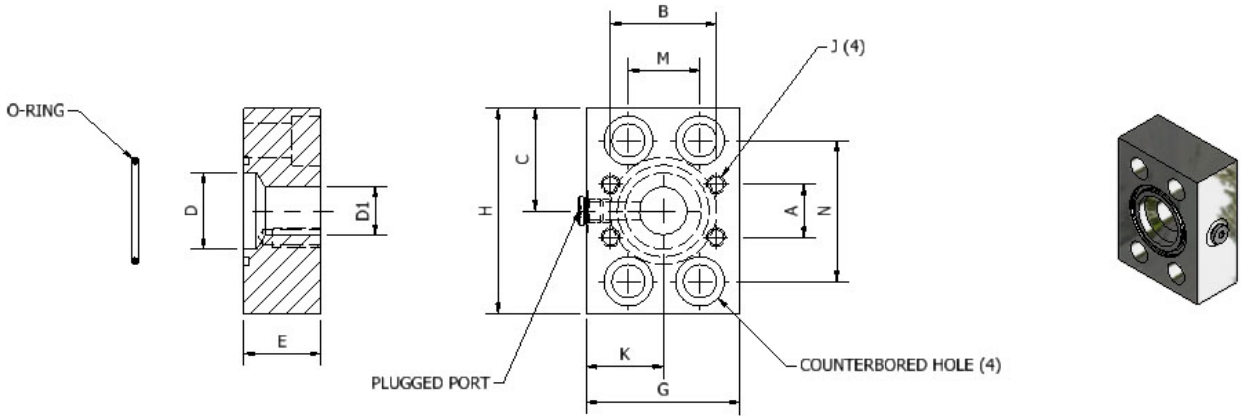
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPRO34-200x150-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

SAE 3000 PSI Transition Plate Reducer - Metric

SAE J518 Code 61 (ISO 6162-1) Flange Manifold Mount Style



TPROM34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)											C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPROM34-075x050-*^-^	17.5	38.1	38.1	19.1	12.7	38.1	76.2	76.2	42.9	22.4	47.8	M10	M8 x 1.25	OR^-2-214	3.20 (1.45)	5000 (350)
1" x 1/2"	TPROM34-100x050-*^-^	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	38.1	26.2	52.3	M10	M8 x 1.25	OR^-2-219	3.20 (1.45)	5000 (350)
1" x 3/4"	TPROM34-100x075-*^-^	22.4	47.8	38.1	23.9	19.1	38.1	76.2	76.2	38.1	26.2	52.3	M10	M10 x 1.50	OR^-2-219	3.30 (1.50)	5000 (350)
1-1/4" x 3/4"	TPROM34-125x075-*^-^	22.4	47.8	41.4	31.8	19.1	38.1	76.2	82.6	38.1	30.2	58.7	M10	M10 x 1.50	OR^-2-222	2.58 (1.17)	5000 (350)
1-1/4" x 1"	TPROM34-125x100-*^-^	26.2	52.3	41.4	31.8	23.9	31.8	76.2	82.6	38.1	30.2	58.7	M10	M10 x 1.50	OR^-2-222	4.00 (1.81)	5000 (350)
1-1/2" x 1"	TPROM34-150x100-*^-^	26.2	52.3	50.8	38.1	23.9	38.1	76.2	101.6	38.1	35.8	69.9	M12	M10 x 1.50	OR^-2-225	3.70 (1.68)	5000 (350)
1-1/2" x 1-1/4"	TPROM34-150x125-*^-^	30.2	58.7	50.8	38.1	31.8	38.1	76.2	101.6	38.1	35.8	69.9	M12	M10 x 1.50	OR^-2-225	4.20 (1.91)	4000 (280)
2" x 1-1/4"	TPROM34-200x125-*^-^	30.2	58.7	50.8	49.3	31.8	44.5	76.2	101.6	38.1	42.9	77.7	M12	M10 x 1.50	OR^-2-228	5.90 (2.68)	4000 (280)
2" x 1-1/2"	TPROM34-200x150-*^-^	35.8	69.9	50.8	49.3	38.1	44.5	101.6	101.6	50.8	42.9	77.7	M12	M12 x 1.75	OR^-2-228	8.80 (3.99)	4000 (280)
2-1/2" x 1-1/2"	TPROM34-250x150-*^-^	35.8	69.9	63.5	60.5	38.1	50.8	101.6	127.0	50.8	50.8	88.9	M12	M12 x 1.75	OR^-2-232	7.30 (3.31)	4000 (280)
2-1/2" x 2"	TPROM34-250x200-*^-^	42.9	77.7	63.5	60.5	49.3	44.5	101.6	127.0	50.8	50.8	88.9	M12	M12 x 1.75	OR^-2-232	9.80 (4.45)	4000 (280)
3" x 2"	TPROM34-300x200-*^-^	42.9	77.7	76.2	73.2	49.3	50.8	101.6	152.4	50.8	62.0	106.4	M16	M12 x 1.75	OR^-2-237	9.50 (4.31)	4000 (280)
3" x 2-1/2"	TPROM34-300x250-*^-^	50.8	88.9	76.2	73.2	60.5	44.5	114.3	152.4	57.2	62.0	106.4	M16	M12 x 1.75	OR^-2-237	3.30 (1.50)	3000 (210)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPROM34-200x150-SS-V

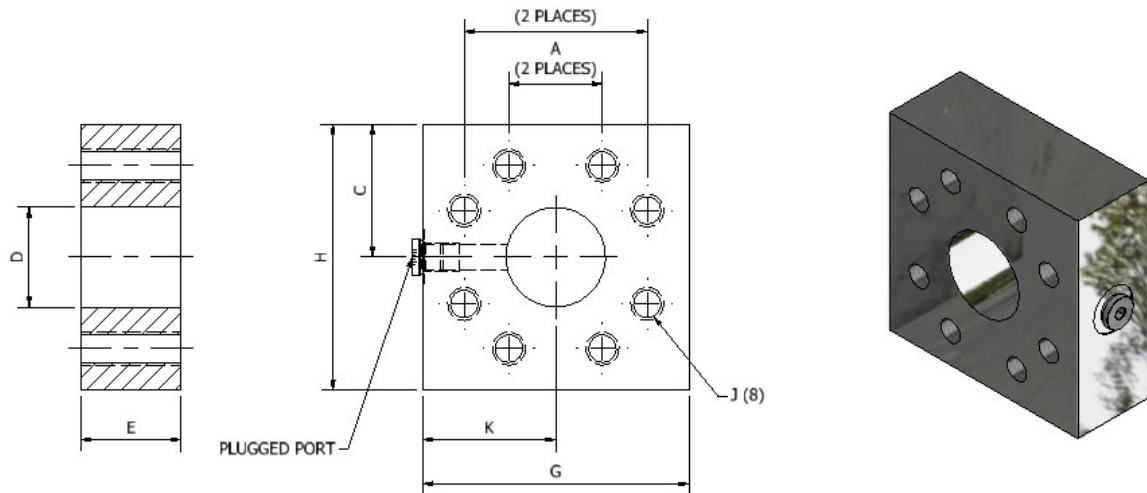
* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

SAE 3000 PSI Adapter Plate

SAE J518 Code 61 (ISO 6162-1) Flange Style



AP34 - Adapter Plate Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Adapter Plate Part Number	Dimensions (in)								Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K			
1/2"	AP34-050-*	0.69	1.50	1.25	0.50	1.00	2.75	2.50	1.63	5/16"-18	1.70 (0.77)	5000 (350)
3/4"	AP34-075-*	0.88	1.88	1.50	0.75	1.00	3.00	3.00	1.69	3/8"-16	2.20 (1.00)	5000 (350)
1"	AP34-100-*	1.03	2.06	1.50	0.94	1.00	3.00	3.00	1.50	3/8"-16	2.10 (0.95)	5000 (350)
1-1/4"	AP34-125-*	1.19	2.31	1.50	1.25	1.25	3.00	3.00	1.50	7/16"-14	2.40 (1.09)	4000 (280)
1-1/2"	AP34-150-*	1.41	2.75	2.00	1.50	1.50	4.00	4.00	2.00	1/2"-13	5.40 (2.45)	4000 (280)
2"	AP34-200-*	1.69	3.06	2.00	1.94	1.50	4.00	4.00	2.00	1/2"-13	4.90 (2.22)	4000 (280)

APM34 - Adapter Plate Flat Face with Threaded Holes Complete with G 1/8 Port (Plugged), Metric

Size	Adapter Plate Part Number	Dimensions (mm)								Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K			
1/2"	APM34-050-*	17.5	38.1	31.8	12.7	25.4	69.9	63.5	41.4	M8 x 1.25	1.70 (0.77)	5000 (350)
3/4"	APM34-075-*	22.4	47.8	38.1	19.1	25.4	76.2	76.2	42.9	M10 x 1.50	2.20 (1.00)	5000 (350)
1"	APM34-100-*	26.2	52.3	38.1	23.9	25.4	76.2	76.2	38.1	M10 x 1.50	2.10 (0.95)	5000 (350)
1-1/4"	APM34-125-*	30.2	58.7	38.1	31.8	31.8	76.2	76.2	38.1	M10 x 1.50	2.40 (1.09)	4000 (280)
1-1/2"	APM34-150-*	35.8	69.9	50.8	38.1	38.1	101.6	101.6	50.8	M12 x 1.75	5.40 (2.45)	4000 (280)
2"	APM34-200-*	42.9	77.7	50.8	49.3	38.1	101.6	101.6	50.8	M12 x 1.75	4.90 (2.22)	4000 (280)

*** Materials:**

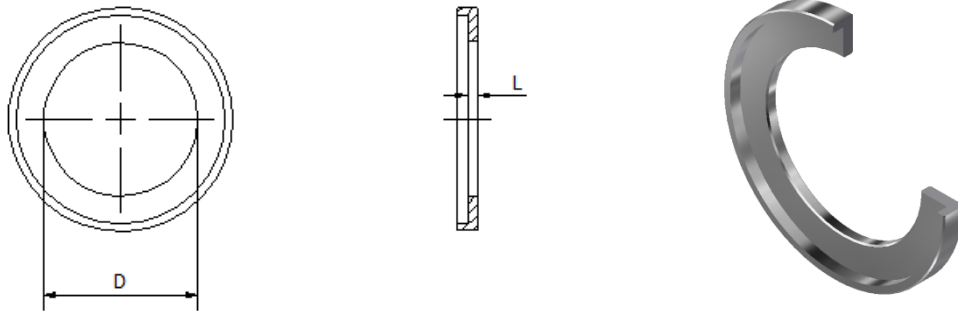
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: AP34-200-SS

* Insert Material

SAE 3000 PSI O-Ring Connector Plate

SAE J518 Code 61 (ISO 6162-1)



OCP - O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1/2"	OCP-050-*	0.50 (12.7)	0.13 (3.3)	0.04 (0.02)
3/4"	OCP-075-*	0.75 (19.1)	0.13 (3.3)	0.07 (0.03)
1"	OCP-100-*	0.94 (23.9)	0.13 (3.3)	0.08 (0.04)
1-1/4"	OCP-125-*	1.20 (30.5)	0.13 (3.3)	0.09 (0.04)
1-1/2"	OCP-150-*	1.50 (38.1)	0.13 (3.3)	0.17 (0.08)
2"	OCP-200-*	1.94 (49.3)	0.13 (3.3)	0.15 (0.07)
2-1/2"	OCP-250-*	2.36 (59.9)	0.13 (3.3)	0.17 (0.08)
3"	OCP-300-*	2.88 (73.2)	0.13 (3.3)	0.25 (0.11)

*** Materials:**

Standard, No Designation = Carbon Steel,
Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: OCP-200-SS

* Insert Material

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

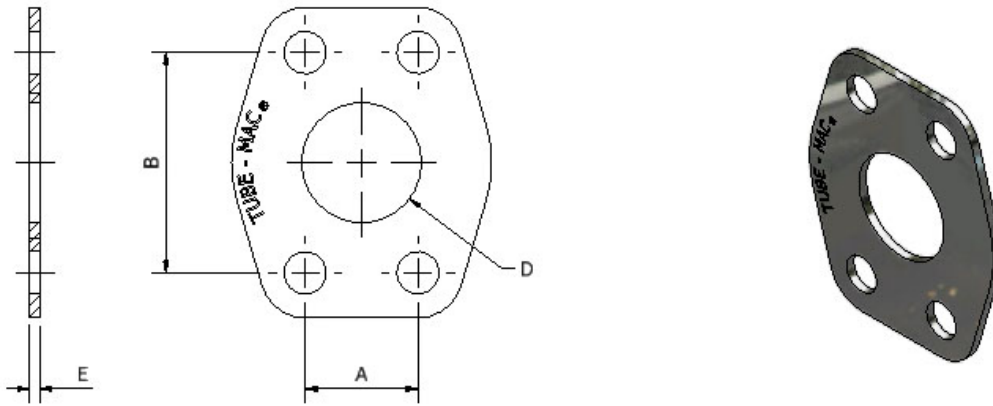
Clamp Supports - Heavy Series

Valves, Ball and Check

3D step models available upon request

SAE 3000 PSI Connector Plate

SAE J518 Code 61 (ISO 6162-1)



CP - Connector Plate						
Size	Part Number	Dimensions in (mm)				WT lbs (kg)
		A	B	D	E	
1/2"	CP34-050	0.69 (17.53)	1.50 (38.10)	0.50 (12.70)	0.12 (3.05)	0.09 (0.04)
3/4"	CP34-075	0.88 (22.35)	1.88 (47.75)	0.75 (19.05)	0.12 (3.05)	0.12 (0.05)
1"	CP34-100	1.03 (26.16)	2.06 (52.32)	0.94 (23.88)	0.12 (3.05)	0.14 (0.06)
1-1/4"	CP34-125	1.19 (30.23)	2.31 (58.67)	1.25 (31.75)	0.12 (3.05)	0.20 (0.09)
1-1/2"	CP34-150	1.41 (35.81)	2.75 (69.85)	1.50 (38.10)	0.12 (3.05)	0.28 (0.13)
2"	CP34-200	1.69 (42.93)	3.06 (77.72)	1.94 (49.28)	0.12 (3.05)	0.33 (0.15)

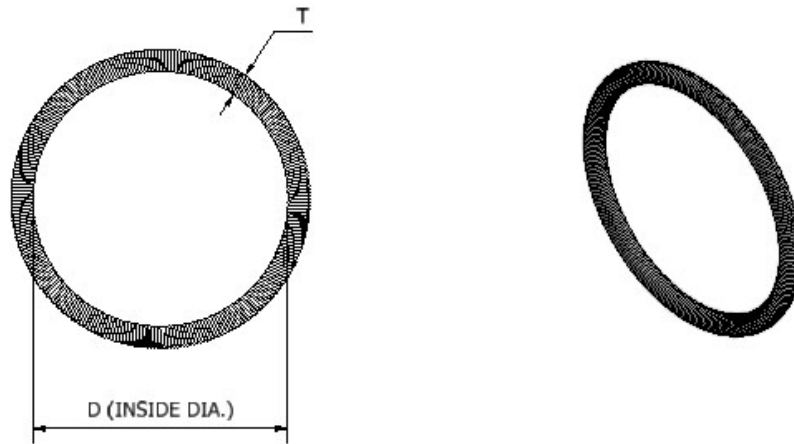
*** Materials:**

Stainless Steel, Type 316.

Not available in Carbon Steel.

SAE 3000 PSI Retain Ring

SAE J518 Code 61 (ISO 6162-1)



R – Retain Ring				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1/2"	R-050	0.85 (21.6)	0.16 (4.0)	0.01 (0.005)
3/4"	R-075	1.24 (31.5)	0.16 (4.0)	0.02 (0.009)
1"	R-100	1.32 (33.5)	0.20 (5.0)	0.03 (0.014)
1-1/4"	R-125	1.59 (40.4)	0.20 (5.0)	0.04 (0.018)
1-1/2"	R-150	1.99 (50.5)	0.20 (5.0)	0.05 (0.023)
2"	R-200	2.38 (60.5)	0.20 (5.0)	0.06 (0.027)
2-1/2"	R-250	2.93 (74.4)	0.20 (5.0)	0.07 (0.032)
3"	R-300	3.56 (90.4)	0.24 (6.0)	0.12 (0.054)

RA - Retain Ring for Grooved NPS Pipe				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1-1/2"	RA-150	1.69 (42.93)	0.20 (5.0)	0.04 (0.018)
2"	RA-200	2.16 (54.86)	0.20 (5.0)	0.05 (0.023)
2-1/2"	RA-250	2.66 (67.50)	0.20 (5.0)	0.07 (0.032)
3"	RA-300	3.24 (82.4)	0.24 (6.0)	0.11 (0.050)

*** Materials:**

Stainless Steel - AISI 316 Spring Temper

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

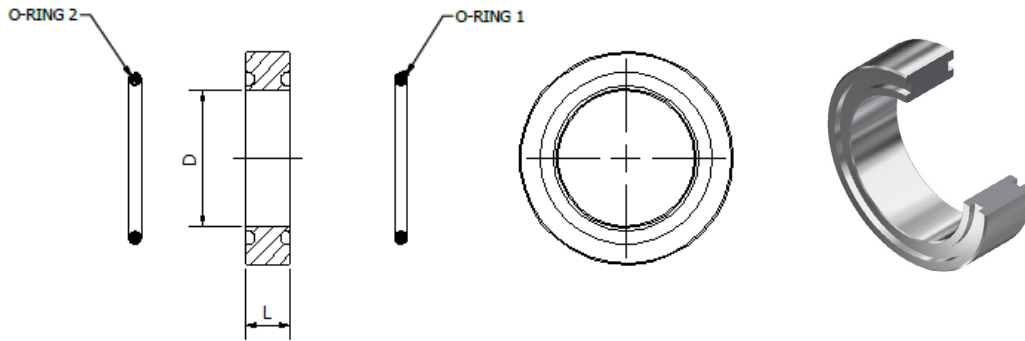
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 3000 PSI O-Ring Spacer for Retain Ring Pipe Flange Connection

SAE J518 Code 61 (ISO 6162-1)



OS – O-Ring Spacer for Retain Ring Pipe Flange Connection

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OS-050-*^-^	0.55 (14.0)	0.50 (12.7)	OR^-3-909	0.11 (0.05)
3/4"	OS-075-*^-^	0.79 (20.1)	0.50 (12.7)	OR^-3-913	0.18 (0.08)
1"	OS-100-*^-^	0.91 (23.1)	0.50 (12.7)	OR^-3-916	0.21 (0.10)
1-1/4"	OS-125-*^-^	1.18 (30.0)	0.50 (12.7)	OR^-3-918	0.26 (0.12)
1-1/2"	OS-150-*^-^	1.54 (39.1)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
2"	OS-200-*^-^	1.91 (48.5)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
2-1/2"	OS-250-*^-^	2.36 (59.9)	1.00 (25.4)	OR^-2-232	1.17 (0.53)
3"	OS-300-*^-^	2.88 (73.2)	1.00 (25.4)	OR^-2-237	1.68 (0.77)

OSA – O-Ring Spacer for NPS Retain Ring Pipe Flange Connection

	Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
			D	L		
OSA-SCH160	1-1/2"	OSA-SCH160-150-*^-^	1.10 (27.19)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
	2"	OSA-SCH160-200-*^-^	1.69 (42.9)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
	2-1/2"	OSA-SCH160-250-*^-^	2.13 (54.1)	1.00 (25.4)	OR^-2-232	1.17 (0.53)
	3"	OSA-SCH160-300-*^-^	2.63 (66.8)	1.00 (25.4)	OR^-2-237	1.68 (0.77)
OSA-SCHXXS	1-1/2"	OSA-SCHXXS-150-*^-^	1.10 (27.9)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
	2"	OSA-SCHXXS-200-*^-^	1.50 (38.1)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
	2-1/2"	OSA-SCHXXS-250-*^-^	1.78 (45.2)	1.00 (25.4)	OR^-2-232	1.17 (0.53)
	3"	OSA-SCHXXS-300-*^-^	2.30 (58.4)	1.00 (25.4)	OR^-2-237	1.68 (0.77)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

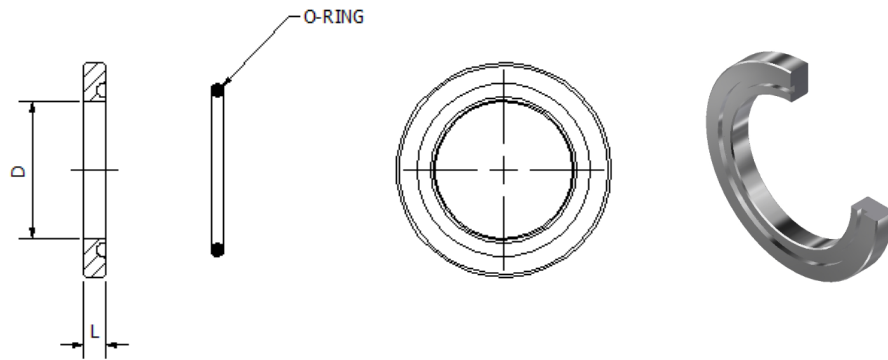
Ordering Example: OSA-SCH160-200-SS-V

* Insert Material

^ Insert O-Ring Type

SAE 3000 PSI O-Ring Spacer for Retain Ring Pipe to Hose End

SAE J518 Code 61 (ISO 6162-1)



OSH – O-Ring Spacer for Retain Ring Pipe to Hose End

Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSH-050-*^-^	0.55 (14.0)	0.25 (6.4)	OR^-3-909	0.04 (0.02)
3/4"	OSH-075-*^-^	0.79 (20.1)	0.25 (6.4)	OR^-3-913	0.07 (0.03)
1"	OSH-100-*^-^	0.91 (23.1)	0.25 (6.4)	OR^-3-916	0.08 (0.04)
1-1/4"	OSH-125-*^-^	1.18 (30.0)	0.25 (6.4)	OR^-3-918	0.09 (0.04)
1-1/2"	OSH-150-*^-^	1.54 (39.1)	0.25 (6.4)	OR^-3-924	0.12 (0.05)
2"	OSH-200-*^-^	1.91 (48.5)	0.25 (6.4)	OR^-3-928	0.20 (0.09)
2-1/2"	OSH-250-*^-^	2.36 (59.9)	0.50 (12.7)	OR^-2-232	0.58 (0.26)
3"	OSH-300-*^-^	2.88 (73.2)	0.50 (12.7)	OR^-2-237	0.85 (0.39)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

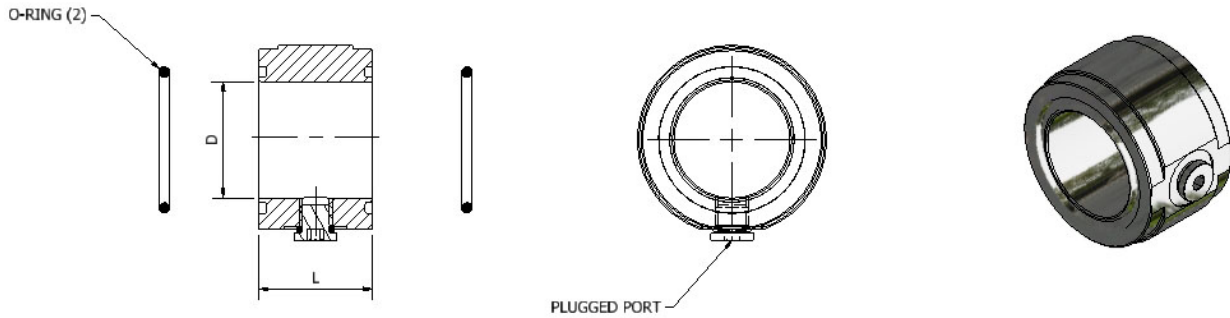
V = Viton.

Ordering Example: OSH-200-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

SAE 3000 PSI O-Ring Spacer with Pilot Port

SAE J518 Code 61 (ISO 6162-1)



OSP - O-Ring Spacer with Pilot Port for Retain Ring Pipe - 1/2" - 3" Complete with Buna O-Rings (Standard) and #4 SAE Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSP-050-*^-^	0.55 (14.0)	1.50 (38.1)	OR^-3-909	0.37 (0.17)
3/4"	OSP-075-*^-^	0.79 (20.1)	1.50 (38.1)	OR^-3-913	0.64 (0.29)
1"	OSP-100-*^-^	0.91 (23.1)	1.50 (38.1)	OR^-3-916	0.78 (0.35)
1-1/4"	OSP-125-*^-^	1.18 (30.0)	1.50 (38.1)	OR^-3-918	0.86 (0.39)
1-1/2"	OSP-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.40 (0.64)
2"	OSP-200-*^-^	1.91 (48.5)	1.50 (38.1)	OR^-3-928	1.49 (0.68)
2-1/2"	OSP-250-*^-^	2.36 (59.9)	1.50 (38.1)	OR^-2-232	1.98 (0.90)
3"	OSP-300-*^-^	2.88 (73.2)	1.50 (38.1)	OR^-2-237	2.50 (1.13)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: OSP-200-SS-V

* Insert Material

^ Insert O-Ring Type

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

OSPM - O-Ring Spacer with Metric Pilot Port for Retain Ring Pipe - 1/2" - 3" Complete with Buna O-Rings (Standard) and G1/8 Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSPM-050-*^-^	0.55 (14.0)	1.50 (38.1)	OR^-3-909	0.37 (0.17)
3/4"	OSPM-075-*^-^	0.79 (20.1)	1.50 (38.1)	OR^-3-913	0.64 (0.29)
1"	OSPM-100-*^-^	0.91 (23.1)	1.50 (38.1)	OR^-3-916	0.78 (0.35)
1-1/4"	OSPM-125-*^-^	1.18 (30.0)	1.50 (38.1)	OR^-3-918	0.86 (0.39)
1-1/2"	OSPM-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.40 (0.64)
2"	OSPM-200-*^-^	1.91 (48.5)	1.50 (38.1)	OR^-3-928	1.49 (0.68)
2-1/2"	OSPM-250-*^-^	2.36 (59.9)	1.50 (38.1)	OR^-2-232	1.98 (0.90)
3"	OSPM-300-*^-^	2.88 (73.2)	1.50 (38.1)	OR^-2-237	2.50 (1.13)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: OSPM-200-SS-V

* Insert Material

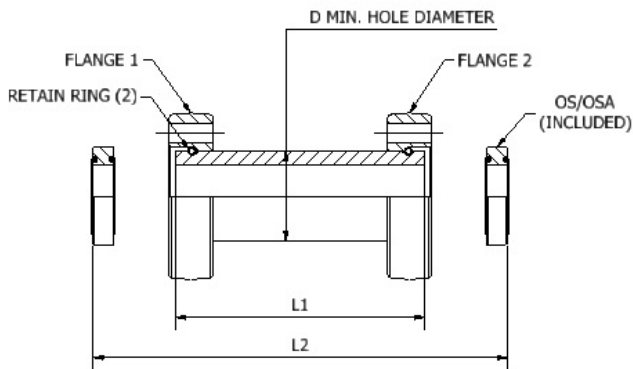
^ Insert O-Ring Type

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

SAE 3000 PSI Retain Ring Flange Bulkhead

SAE J518 Code 61 (ISO 6162-1)



Complete Assembly Consists Of:

- One (1) retain ring flange bulkhead body
- Two (2) retain ring flanges
- Two (2) retain rings
- Two (2) o-ring spacers

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/RFBH - Retain Ring Flange Bulkhead

Size	Complete Part Number	Dimensions in (mm)			Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L1	L2	D				
1/2"	A/RFBH-050-FC34-FC34-*^-^	5.69 (144.6)	6.69 (170)	1.02 (26)	2.16 (0.98)	RFBH-050-*^-^	1.08 (0.49)	5000 (350)
3/4"	A/RFBH-075-FC34-FC34-*^-^	5.69 (144.6)	6.69 (170)	1.42 (36)	3.36 (1.52)	RFBH-075-*^-^	2.00 (0.91)	5000 (350)
1"	A/RFBH-100-FC34-FC34-*^-^	5.69 (144.6)	6.69 (170)	1.54 (39)	3.45 (1.56)	RFBH-100-*^-^	1.80 (0.82)	5000 (350)
1-1/4"	A/RFBH-125-FC34-FC34-*^-^	6.09 (154.6)	7.09 (180)	1.81 (46)	4.92 (2.23)	RFBH-125-*^-^	2.60 (1.18)	4000 (280)
1-1/2"	A/RFBH-150-FC34-FC34-*^-^	6.09 (154.6)	7.09 (180)	2.20 (56)	6.67 (3.03)	RFBH-150-*^-^	3.31 (1.50)	4000 (280)
2"	A/RFBH-200-FC34-FC34-*^-^	7.27 (184.6)	8.27 (210)	2.60 (66)	9.70 (4.40)	RFBH-200-*^-^	4.80 (2.18)	4000 (280)
2-1/2"	A/RFBH-250-FC34-FC34-*^-^	6.66 (169.2)	8.66 (220)	3.15 (80)	14.80 (6.71)	RFBH-250-*^-^	7.00 (3.18)	3000 (210)
3"	A/RFBH-300-FC34-FC34-*^-^	7.45 (189.2)	9.45 (240)	3.82 (97)	22.48 (10.20)	RFBH-300-*^-^	10.30 (4.67)	3000 (210)

Flange Options:

FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

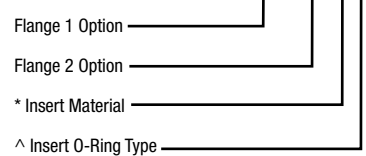
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

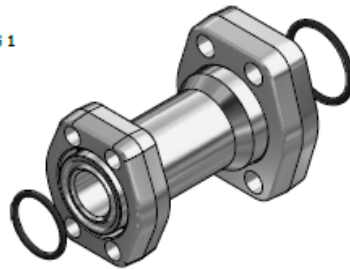
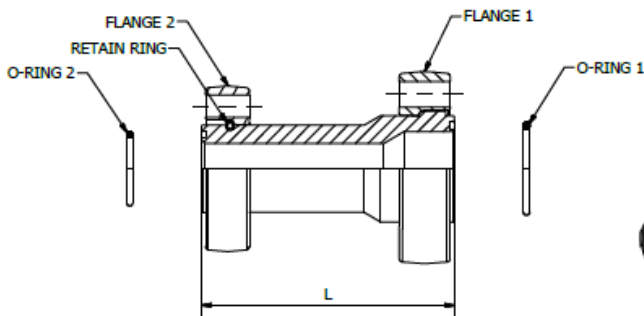
Ordering Example: A/RFBH-050-FC34-FC34-SS-V



3D step models available upon request

SAE 3000 PSI Retain Ring Flange Concentric Reducer Assembly

SAE J518 Code 61 (ISO 6162-1)



Complete Assembly Consists Of:

- One (1) Concentric Reducer Body
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

To be Ordered Separately:

- Bolt Kit (See Page G25)

A/CR – Retain Ring Flange Concentric Reducer Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L						
3/4" x 1/2"	A/CR-075x050-FC34-FC34-*^	3.72 (94.5)	OR^3-913	OR^3-909	1.84 (0.83)	CR-075x050-*^	0.88 (0.40)	5000 (350)
1" x 1/2"	A/CR-100x050-FC34-FC34-*^	3.72 (94.5)	OR^3-916	OR^3-909	2.06 (0.93)	CR-100x050-*^	0.97 (0.44)	5000 (350)
1" x 3/4"	A/CR-100x075-FC34-FC34-*^	4.50 (114.3)	OR^3-916	OR^3-913	2.49 (1.13)	CR-100x075-*^	1.49 (0.68)	5000 (350)
1-1/4" x 3/4"	A/CR-125x075-FC34-FC34-*^	4.50 (114.3)	OR^3-918	OR^3-913	3.11 (1.41)	CR-125x075-*^	1.71 (0.78)	4000 (280)
1-1/4" x 1"	A/CR-125x100-FC34-FC34-*^	4.50 (114.3)	OR^3-918	OR^3-916	3.43 (1.56)	CR-125x100-*^	1.90 (0.86)	4000 (280)
1-1/2" x 1"	A/CR-150x100-FC34-FC34-*^	4.50 (114.3)	OR^3-924	OR^3-916	4.04 (1.86)	CR-150x100-*^	2.11 (0.96)	4000 (280)
1-1/2" x 1 1/4"	A/CR-150x125-FC34-FC34-*^	5.26 (133.6)	OR^3-924	OR^3-918	4.81 (2.18)	CR-150x125-*^	2.56 (1.16)	4000 (280)
2" x 1 1/4"	A/CR-200x125-FC34-FC34-*^	5.26 (133.6)	OR^3-928	OR^3-918	6.42 (2.91)	CR-200x125-*^	3.50 (1.59)	4000 (280)
2" x 1 1/2"	A/CR-200x150-FC34-FC34-*^	5.26 (133.6)	OR^3-928	OR^3-924	7.22 (3.27)	CR-200x150-*^	3.74 (1.70)	4000 (280)
2 1/2" x 1 1/2"	A/CR-250x150-FC34-FC34-*^	6.06 (153.9)	OR^2-232	OR^2-924	8.01 (3.63)	CR-250x100-*^	4.67 (2.12)	3000 (210)
2 1/2" x 2"	A/CR-250x200-FC34-FC34-*^	6.06 (153.9)	OR^2-232	OR^2-928	9.72 (4.41)	CR-250x200-*^	5.20 (2.36)	3000 (210)
3" x 2"	A/CR-300x200-FC34-FC34-*^	6.98 (177.3)	OR^2-237	OR^2-928	14.11 (6.40)	CR-300x200-*^	7.70 (3.49)	3000 (210)
3" x 2 1/2"	A/CR-300x250-FC34-FC34-*^	6.98 (177.3)	OR^2-237	OR^2-232	15.39 (6.98)	CR-300x250-*^	8.50 (3.86)	3000 (210)

Flange Options:

FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

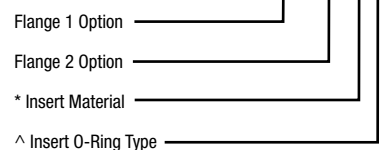
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

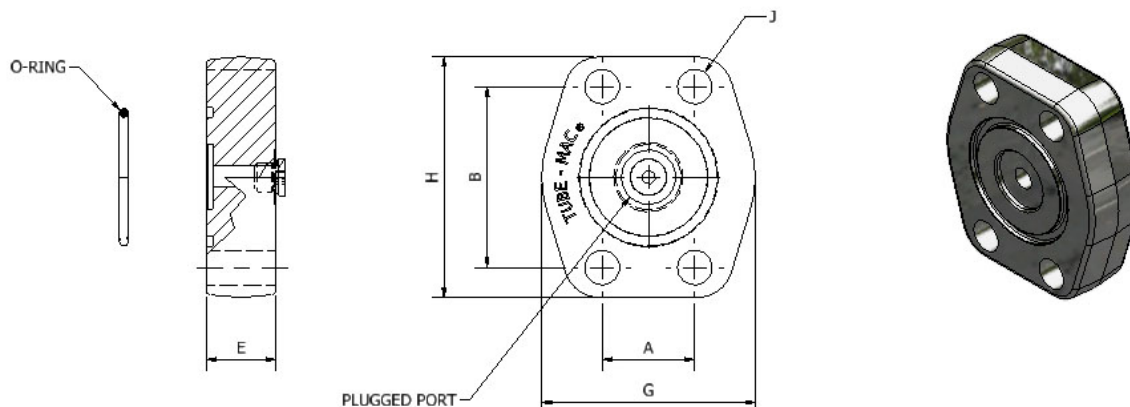
V = Viton.

Ordering Example: A/CR-200x125-FC34-FC34-SS-V



SAE 3000 PSI Blanking Flange O-Ring Face with Clearance Holes

SAE J518 Code 61 (ISO 6162-1)



BF034 – Blanking Flange O-Ring Face with Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BF034-050-*^-^	0.69	1.50	1.88	2.23	0.81	5/16"	OR^-2-210	5000 (350)	0.64 (0.29)
3/4"	BF034-075-*^-^	0.88	1.88	2.06	2.56	0.82	3/8"	OR^-2-214	5000 (350)	0.80 (0.36)
1"	BF034-100-*^-^	1.03	2.06	2.31	2.76	0.87	3/8"	OR^-2-219	5000 (350)	1.10 (0.50)
1-1/4"	BF034-125-*^-^	1.19	2.31	2.88	3.11	0.91	7/16"	OR^-2-222	4000 (280)	1.84 (0.83)
1-1/2"	BF034-150-*^-^	1.41	2.75	3.25	3.66	1.06	1/2"	OR^-2-225	4000 (280)	2.57 (1.17)
2"	BF034-200-*^-^	1.69	3.06	3.81	4.02	1.22	1/2"	OR^-2-228	4000 (280)	3.89 (1.76)
2-1/2"	BF034-250-*^-^	2.00	3.50	4.28	4.49	1.40	1/2"	OR^-2-232	3000 (210)	5.98 (2.71)
3"	BF034-300-*^-^	2.44	4.19	5.16	5.28	1.67	5/8"	OR^-2-237	3000 (210)	10.00 (4.54)

BFOM34 – Blanking Flange O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BFOM34-050-*^-^	17.5	38.1	47.8	56.6	20.6	M8	OR^-2-210	5000 (350)	0.64 (0.29)
3/4"	BFOM34-075-*^-^	22.4	47.8	52.3	65.0	20.8	M10	OR^-2-214	5000 (350)	0.80 (0.36)
1"	BFOM34-100-*^-^	26.2	52.3	58.7	70.1	22.1	M10	OR^-2-219	5000 (350)	1.10 (0.50)
1-1/4"	BFOM34-125-*^-^	30.2	58.7	73.2	79.0	23.1	M10	OR^-2-222	4000 (280)	1.84 (0.83)
1-1/2"	BFOM34-150-*^-^	35.8	69.9	82.6	93.0	26.9	M12	OR^-2-225	4000 (280)	2.59 (1.17)
2"	BFOM34-200-*^-^	42.9	77.7	96.8	102.1	31.0	M12	OR^-2-228	4000 (280)	3.89 (1.76)
2-1/2"	BFOM34-250-*^-^	50.8	88.9	108.7	114.0	35.6	M12	OR^-2-232	3000 (210)	5.98 (2.71)
3"	BFOM34-300-*^-^	62.0	106.4	131.1	134.1	42.4	M16	OR^-2-237	3000 (210)	10.00 (4.54)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: BF034-200-SS-V

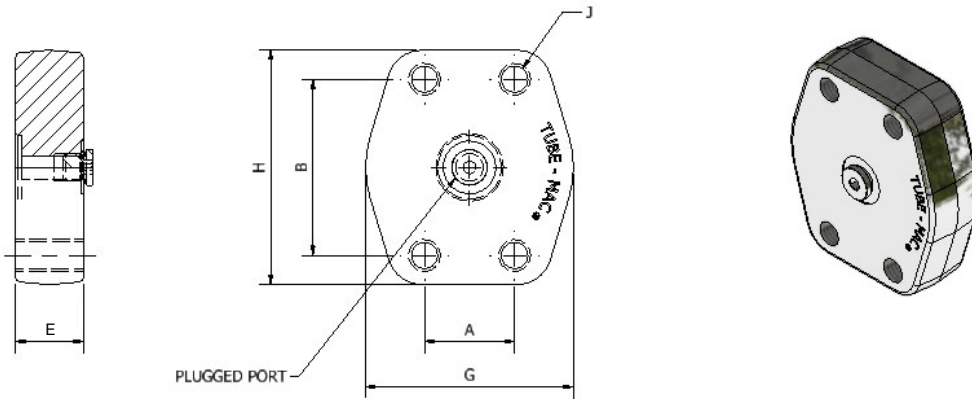
* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

SAE 3000 PSI Blanking Flange

Flat Face with Threaded Holes

SAE J518 Code 61 (ISO 6162-1)



BFF34 – Blanking Flange Flat Face with #4 SAE Port (Plugged) and UNC Threaded Holes, NPS

Size	Blanking Flange Part Number	Dimensions (in)					Thread UNC-2B J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFF34-050-*^-^	0.69	1.50	1.88	2.23	0.81	5/16"-18	5000 (350)	0.64 (0.29)
3/4"	BFF34-075-*^-^	0.88	1.88	2.06	2.56	0.82	3/8"-16	5000 (350)	0.80 (0.36)
1"	BFF34-100-*^-^	1.03	2.06	2.31	2.76	0.87	3/8"-16	5000 (350)	1.10 (0.50)
1-1/4"	BFF34-125-*^-^	1.19	2.31	2.88	3.11	0.91	7/16"-14	4000 (280)	1.84 (0.83)
1-1/2"	BFF34-150-*^-^	1.41	2.75	3.25	3.66	1.06	1/2"-13	4000 (280)	2.57 (1.17)
2"	BFF34-200-*^-^	1.69	3.06	3.81	4.02	1.22	1/2"-13	4000 (280)	3.89 (1.76)
2-1/2"	BFF34-250-*^-^	2.00	3.50	4.28	4.49	1.40	1/2"-13	3000 (210)	6.23 (2.83)
3"	BFF34-300-*^-^	2.44	4.19	5.16	5.28	1.67	5/8"-11	3000 (210)	10.00 (4.54)

BFFM34 – Blanking Flange Flat Face with G1/8 BSPP Port (Plugged) and Threaded Holes, Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Thread J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFFM34-050-*^-^	17.5	38.1	47.8	56.6	20.6	M8X1.25	5000 (350)	0.64 (0.29)
3/4"	BFFM34-075-*^-^	22.4	47.8	52.3	65.0	20.8	M10X1.50	5000 (350)	0.80 (0.36)
1"	BFFM34-100-*^-^	26.2	52.3	58.7	70.1	22.1	M10X1.50	5000 (350)	1.10 (0.50)
1-1/4"	BFFM34-125-*^-^	30.2	58.7	73.2	79.0	23.1	M10X1.50	4000 (280)	1.84 (0.83)
1-1/2"	BFFM34-150-*^-^	35.8	69.9	82.6	93.0	26.9	M12X1.75	4000 (280)	2.57 (1.17)
2"	BFFM34-200-*^-^	42.9	77.7	96.8	102.1	31.0	M12X1.75	4000 (280)	3.89 (1.76)
2-1/2"	BFFM34-250-*^-^	50.8	88.9	108.7	114.0	35.6	M12X1.75	3000 (210)	6.23 (2.83)
3"	BFFM34-300-*^-^	62.0	106.4	131.1	134.1	42.4	M16X2.00	3000 (210)	10.00 (4.54)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFF34-200-SS

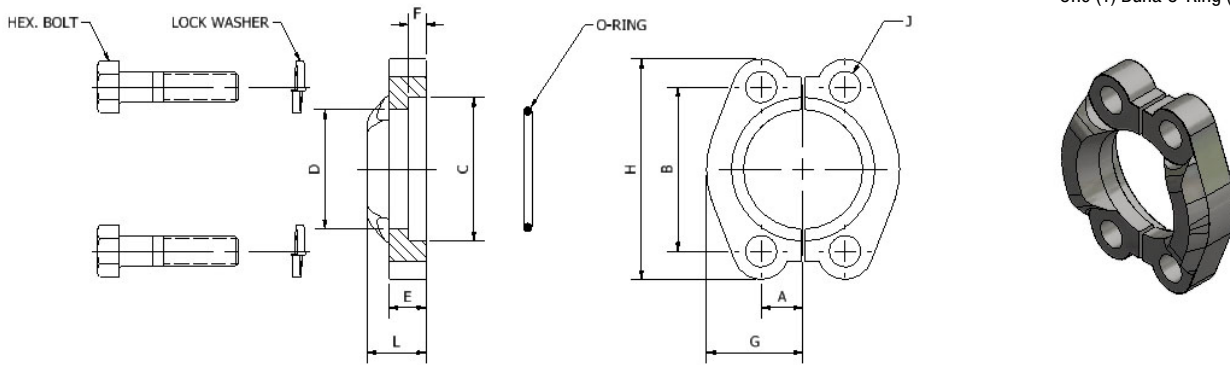
* Insert Material _____

SAE 3000 PSI Split Flange Kits

SAE J518 Code 61 (ISO 6162-1)

Complete Flange Set Includes:

- One (1) Split Flange (2 Halves)
- Four (4) Hex Head Bolts
- Four (4) Lock Washers
- One (1) Buna O-Ring (Standard)



SFK34 - Split Flange Kit, NPS

Size	Complete Assembly Part Number	Dimensions (in)									Drill Dia. (in) J	HHCS Min. Grade 5 UNC-2A	O-Ring (Buna) Part Number	WT (lbs)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	L					
1/2"	SFK34-050-*^-^	0.34	1.50	1.21	0.96	0.51	0.24	0.90	2.12	0.75	0.34	5/16"-18 x 1.25	OR^-2-210	0.42	5000 (350)
3/4"	SFK34-075-*^-^	0.44	1.88	1.53	1.26	0.55	0.24	1.03	2.56	0.87	0.42	3/8"-16 x 1.25	OR^-2-214	0.51	5000 (350)
1"	SFK34-100-*^-^	0.51	2.06	1.78	1.51	0.63	0.29	1.15	2.75	0.94	0.42	3/8"-16 x 1.25	OR^-2-219	0.65	5000 (350)
1-1/4"	SFK34-125-*^-^	0.59	2.31	2.03	1.72	0.55	0.29	1.44	3.12	0.87	0.47	7/16"-14 x 1.50	OR^-2-222	0.89	4000 (280)
1-1/2"	SFK34-150-*^-^	0.70	2.75	2.41	2.00	0.63	0.29	1.62	3.69	0.98	0.53	1/2"-13 x 1.50	OR^-2-225	1.44	3000 (210)
2"	SFK34-200-*^-^	0.84	3.06	2.84	2.47	0.63	0.36	1.90	4.00	1.02	0.53	1/2"-13 x 1.50	OR^-2-228	1.56	3000 (210)
2-1/2"	SFK34-250-*^-^	1.00	3.50	3.34	2.95	0.75	0.36	2.14	4.50	1.50	0.53	1/2"-13 x 1.75	OR^-2-232	2.13	2500 (175)
3"	SFK34-300-*^-^	1.22	4.19	4.03	3.58	0.87	0.36	2.58	5.31	1.61	0.66	5/8"-11 x 1.75	OR^-2-237	3.65	2000 (140)

SFKM34 - Split Flange Kit Metric

Size	Complete Assembly Part Number	Dimensions (mm)									Drill Dia. (mm) J	HHCS Min. 10.9	O-Ring (Nitrile) Part Number	WT (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	L					
1/2"	SFKM34-050-*^-^	8.6	38.1	30.7	24.4	13.0	6.1	22.9	53.8	19.1	8.6	M8 x 30	OR^-2-210	0.19	5000 (350)
3/4"	SFKM34-075-*^-^	11.2	47.8	38.9	32.0	14.0	6.1	26.2	65.0	22.1	10.7	M10 x 30	OR^-2-214	0.23	5000 (350)
1"	SFKM34-100-*^-^	13.0	52.3	45.2	38.4	16.0	7.4	29.2	69.9	23.9	10.7	M10 x 30	OR^-2-219	0.30	5000 (350)
1-1/4"	SFKM34-125-*^-^	15.0	58.7	51.6	43.7	14.0	7.4	36.6	79.2	22.1	11.9	M10 x 40	OR^-2-222	0.40	4000 (280)
1-1/2"	SFKM34-150-*^-^	17.8	69.9	61.2	50.8	16.0	7.4	41.1	93.7	24.9	13.5	M12 x 40	OR^-2-225	0.65	3000 (210)
2"	SFKM34-200-*^-^	21.3	77.7	72.1	62.7	16.0	9.1	48.3	101.6	25.9	13.5	M12 x 40	OR^-2-228	0.71	3000 (210)
2-1/2"	SFKM34-250-*^-^	25.4	88.9	84.8	74.9	19.1	9.1	54.4	114.3	38.1	13.5	M12 x 45	OR^-2-232	0.97	2500 (175)
3"	SFKM34-300-*^-^	31.0	106.4	102.4	90.9	22.1	9.1	65.5	134.9	40.9	16.8	M16 x 45	OR^-2-237	1.66	2000 (140)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: SFK34-100-SS-V

* Insert Material

^ Insert O-Ring Type

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

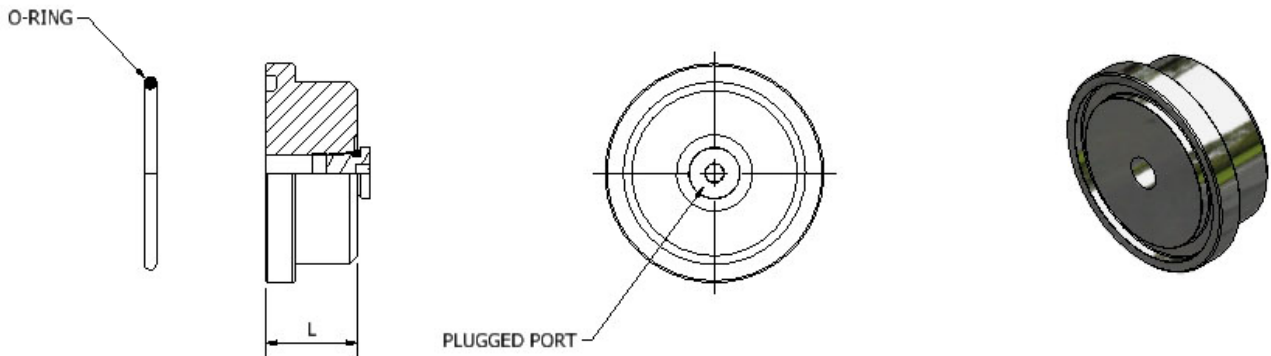
Clamp Supports - Heavy Series

Valves, Ball and Check

G87

SAE 3000 PSI Split Flange Plugs

SAE J518 Code 61 (ISO 6162-1)



SFP34 - Complete with Buna O-Ring (Standard) and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		L			
1/2"	SFP34-050-^	0.75	OR^2-210	5000 (350)	0.13 (0.06)
3/4"	SFP34-075-^	0.88	OR^2-214	5000 (350)	0.28 (0.13)
1"	SFP34-100-^	1.00	OR^2-219	5000 (350)	0.50 (0.23)
1-1/4"	SFP34-125-^	0.88	OR^2-222	4000 (280)	0.57 (0.26)
1-1/2"	SFP34-150-^	1.00	OR^2-225	4000 (280)	0.91 (0.41)
2"	SFP34-200-^	1.00	OR^2-228	4000 (280)	1.40 (0.64)
2-1/2"	SFP34-250-^	1.00	OR^2-232	3000 (210)	2.00 (0.91)
3"	SFP34-300-^	1.00	OR^2-237	3000 (210)	2.90 (1.32)

SFPM34 - Complete with Nitrile O-Ring (Standard) and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)	O-Ring (Nitrile) Part Number	Working Pressure PSI (bar)	WT (kg)
		L			
1/2"	SFPM34-050-^	19.1	OR^2-210	5000 (350)	0.13 (0.06)
3/4"	SFPM34-075-^	22.4	OR^2-214	5000 (350)	0.28 (0.13)
1"	SFPM34-100-^	25.4	OR^2-219	5000 (350)	0.50 (0.23)
1-1/4"	SFPM34-125-^	22.4	OR^2-222	4000 (280)	0.57 (0.26)
1-1/2"	SFPM34-150-^	25.4	OR^2-225	4000 (280)	0.91 (0.41)
2"	SFPM34-200-^	25.4	OR^2-228	4000 (280)	1.40 (0.64)
2-1/2"	SFPM34-250-^	25.4	OR^2-232	3000 (210)	2.00 (0.91)
3"	SFPM34-300-^	25.4	OR^2-237	3000 (210)	2.90 (1.32)

^ O-Ring Type:

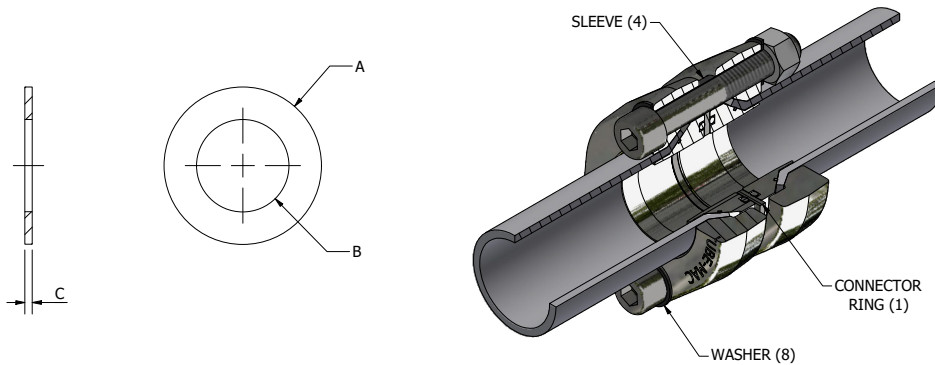
Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: SFP34-200-V

^ Insert O-Ring Type _____

SAE 3000 PSI Non-Conductive Connector Plate with Bolt Isolation

SAE J518 Code 61 (ISO 6162-1)



Complete Set Includes:

- One (1) Non-Conductive Plate
- Four (4) Sleeves for Bolts
- Eight (8) Washers for Bolts

NCCR – Non-Conductive Connector Plate

Size	Part Number	Dimensions in (mm)			WT lbs (kg)
		A	B	C	
1/2"	NCCR34-050	1.30 (33.0)	0.50 (12.70)	0.16 (4.00)	0.09 (0.04)
3/4"	NCCR34-075	1.65 (42.0)	0.75 (19.0)	0.16 (4.00)	0.12 (0.05)
1"	NCCR34-100	1.87 (47.6)	0.98 (25.00)	0.16 (4.00)	0.14 (0.06)
1-1/4"	NCCR34-125	2.13 (54.0)	1.25 (31.7)	0.16 (4.00)	0.20 (0.09)
1-1/2"	NCCR34-150	2.56 (65.0)	1.50 (38.1)	0.16 (4.00)	0.28 (0.13)
2"	NCCR34-200	2.95 (75.0)	2.00 (50.88)	0.16 (4.00)	0.33 (0.15)

Notes:

Flanges, Cone Inserts and Bolts Sold Separately
Must use Two (2) O-Ring Face Cone Inserts

3D step models available upon request

TUBE-MAC.com

Introduction

Technical
Data

Pipe
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16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

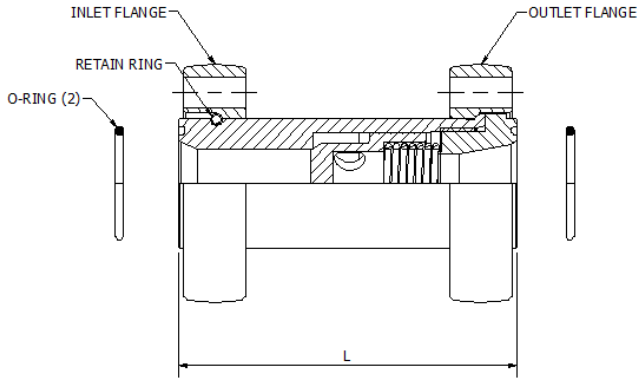
Clamp
Supports -
Heavy Series

Valves, Ball
and Check

G89

SAE 3000 PSI Check Valve Retain Ring Flange Style

SAE J518 Code 61 (ISO 6162-1)



Complete Assembly Consists Of:

- One (1) Check Valve Body – Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CV Check Valve Complete with Buna O-Rings (Standard)

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring 1 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
3/4"	A/CV-075-FC34-FC34-07-*^-^	3.60 (91.4)	OR^3-913	2.70 (1.22)	CV-075-07-*^-^	1.50 (0.68)	5000 (350)
1"	A/CV-100-FC34-FC34-07-*^-^	4.40 (111.8)	OR^3-916	3.19 (1.45)	CV-100-07-*^-^	1.73 (0.78)	5000 (350)
1-1/4"	A/CV-125-FC34-FC34-07-*^-^	5.18 (131.6)	OR^3-918	4.13 (1.87)	CV-125-07-*^-^	2.15 (0.98)	4000 (280)
1-1/2"	A/CV-150-FC34-FC34-07-*^-^	5.76 (146.3)	OR^3-924	7.11 (3.23)	CV-150-07-*^-^	4.05 (1.84)	4000 (280)
2"	A/CV-200-FC34-FC34-07-*^-^	6.74 (171.2)	OR^3-928	9.60 (4.35)	CV-200-07-*^-^	5.20 (2.36)	4000 (280)
2-1/2"	A/CV-250-FC34-FC34-07-*^-^	7.14 (181.4)	OR^2-232	13.15 (5.96)	CV-250-07-*^-^	5.30 (2.40)	3000 (210)
3"	A/CV-300-FC34-FC34-07-*^-^	7.53 (191.3)	OR^2-237	22.30 (10.12)	CV-300-07-*^-^	12.30 (5.58)	3000 (210)

Flange Option:

Standard, FC34 = SAE 3000 PSI Code 61 (ISO 6162-1) Clearance Flange.

FT34 = SAE 3000 PSI Code 61 (ISO 6162-1) UNC Threaded Flange.

FTM34 = SAE 3000 PSI Code 61 (ISO 6162-1) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

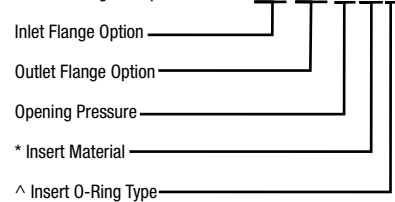
Standard, No Designation = Buna Nitrile.

V = Viton.

Opening Pressure

	PSI (bar)
Standard	07 (0.5)
Optional	21 (1.5)
Optional	43 (3.0)

Ordering Example: A/CV-200-FC34-FC34-07-SS-V

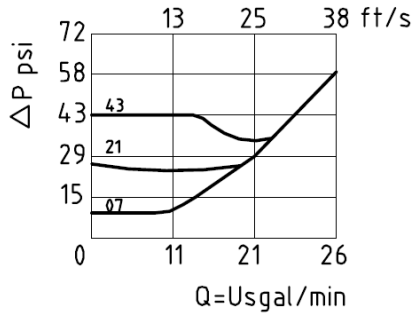


SAE 3000 PSI Check Valve Retain Ring Flange Style

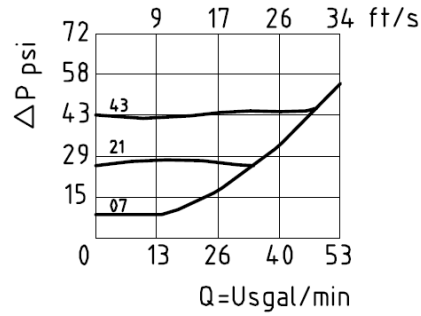
SAE J518 Code 61 (ISO 6162-1)

Performance Curves: Measured using oil at 190SUS and 122° F

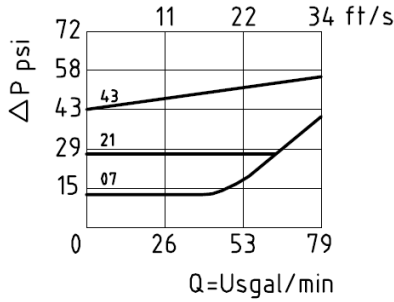
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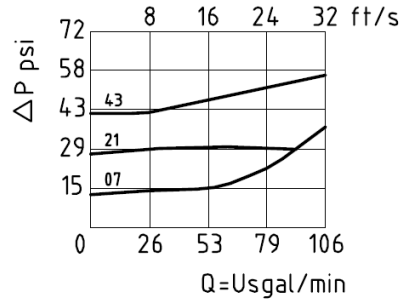
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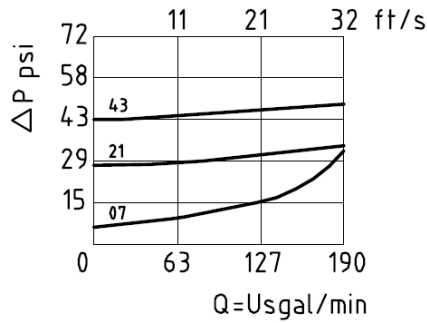
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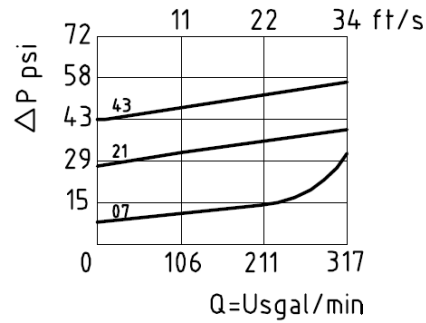
1-1/2"



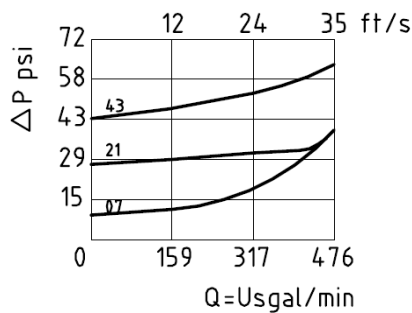
2"



2-1/2"



3"

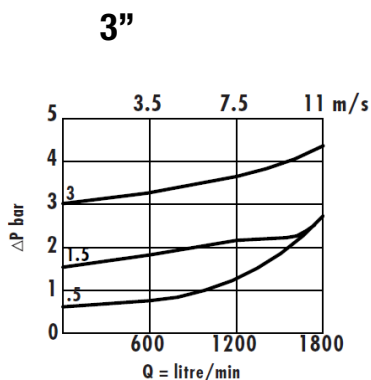
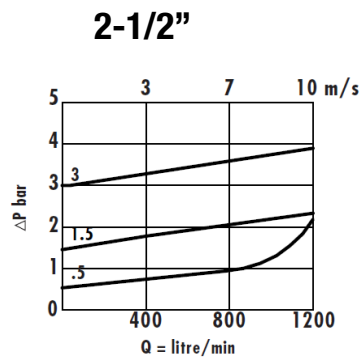
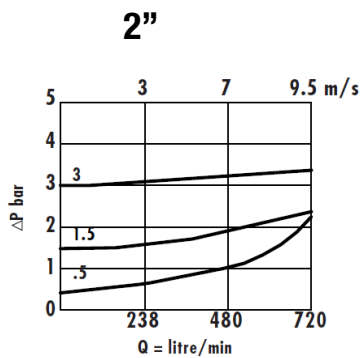
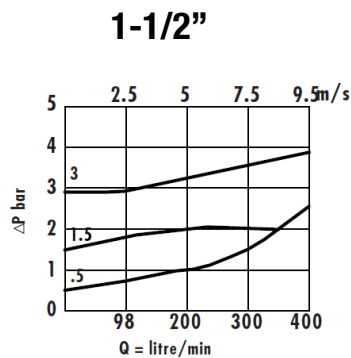
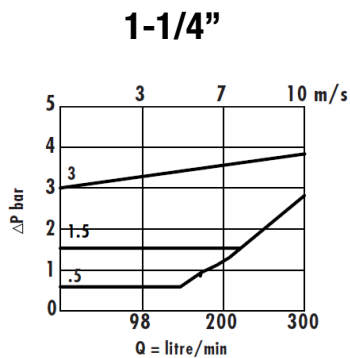
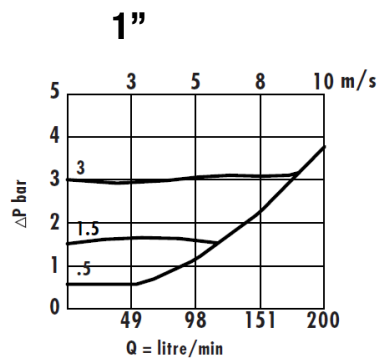
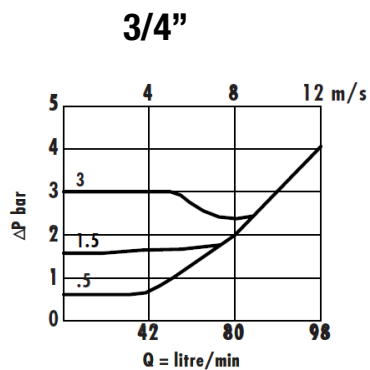


3D step models available upon request


SAE 3000 PSI Check Valve Retain Ring Flange Style

SAE J518 Code 61 (ISO 6162-1)






















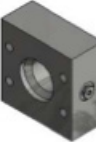








Performance Curves: Measured using oil at 190SUS and 50° C



SAE 6000 PSI, 420 bar Reference Guide

					
<p>Flare Flange Dimensions</p> <p>Page H1</p>	<p>Flare Flange Clearance Holes NPS FFC64 Page H2</p>	<p>Flare Flange Clearance Holes Metric FFCM64 Page H3</p>	<p>Flare Flange Threaded Holes NPS FFT64 Page H4</p>	<p>Flare Flange Threaded Holes Metric FFTM64 Page H5</p>	<p>Flare Flange Reducing Clearance Holes NPS FFCR64 Page H6</p>
					
<p>Flare Flange Reducing Threaded Holes NPS FFTR64 Page H7</p>	<p>Flare Flange Set O-Ring Face Cone Clearance Holes NPS FFC64-CO Page H8</p>	<p>Flare Flange Set O-Ring Face Cone Clearance Holes Metric FFCM64-CO Page H9</p>	<p>Flare Flange Set Flat Face Cone Clearance Holes NPS FFC64-CF Page H11</p>	<p>Flare Flange Set Flat Face Cone Clearance Holes Metric FFCM64-CF Page H12</p>	<p>Flare Flange Set Double Cone Clearance Holes NPS FFC64-CD Page H14</p>
					
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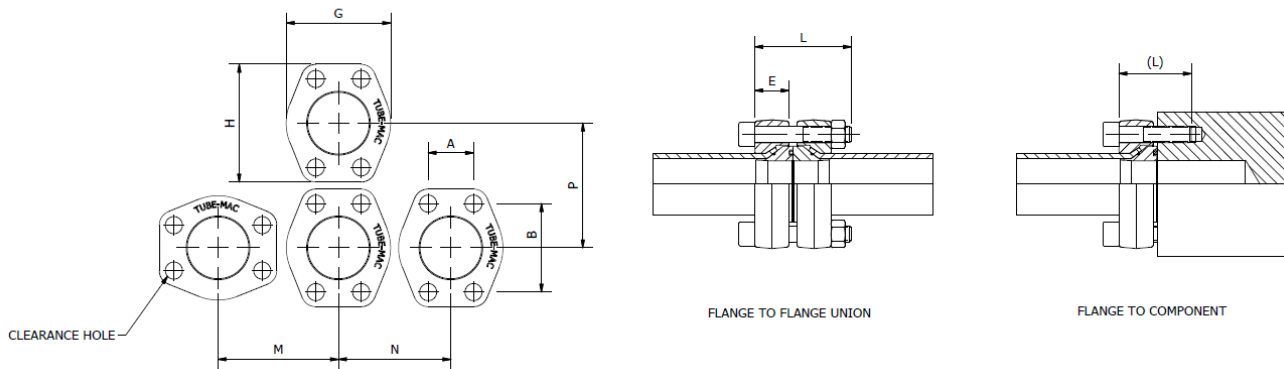
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SAE 6000 PSI Flare Flange Dimensions

SAE J518 Code 62 (ISO 6162-2)



Flare Flange Dimensions (Inches)

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	0.72	1.59	1.88	2.22	2.20	2.09	2.32	0.81	5/16"-18 UNC x 2.25 (1.50)	6000 (420)
3/4"	0.94	2.00	2.38	2.81	2.76	2.68	2.95	1.02	3/8"-16 UNC x 2.75 (1.75)	6000 (420)
1"	1.09	2.25	2.75	3.19	3.19	2.99	3.35	1.03	7/16"-14 UNC x 2.75 (1.75)	6000 (420)
1-1/4"	1.25	2.63	3.06	3.75	3.58	3.27	3.90	1.25	1/2"-13 UNC x 3.25 (2.00)	6000 (420)
1-1/2"	1.44	3.13	3.75	4.44	4.25	3.98	4.57	1.38	5/8"-11 UNC x 4.00 (2.50)	6000 (420)
2"	1.75	3.81	4.50	5.25	5.04	4.72	5.39	1.68	3/4"-10 UNC x 4.50 (2.75)	6000 (420)

Special Bolt Lengths for SCH 160 Pipe

Size	SHCS Bolt (in)* L (L)
1-1/4" SCH160	1/2"-13 UNC x 3.50 (2.00)
1-1/2" SCH160	5/8"-11 UNC x 4.25 (2.50)
2" SCH160	3/4"-10 UNC x 5.00 (2.75)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

Flare Flange Dimensions (Millimeters)

Size	Dimensions (mm)								SHCS Bolt* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	18.3	40.4	47.8	56.4	55.9	53.1	58.9	20.6	M8 x 60 (40)	6000 (420)
3/4"	23.9	50.8	60.5	71.4	70.1	68.1	74.9	25.9	M10 x 70 (45)	6000 (420)
1"	27.7	57.2	69.9	81.0	81.0	75.9	85.1	26.2	M12 x 70 (45)	6000 (420)
1-1/4"	31.8	66.8	77.7	95.3	90.9	83.1	99.1	31.8	M12 x 80 (50)	6000 (420)
1-1/4" ⁽²⁾	31.8	66.8	77.7	95.3	90.9	83.1	99.1	31.8	M14 x 80 (50)	6000 (420)
1-1/2"	36.6	79.5	95.3	112.8	108.0	101.1	116.1	35.1	M16 x 100 (65)	6000 (420)
2"	44.5	96.8	114.3	133.4	128.0	119.9	136.9	42.7	M20 x 120 (70)	6000 (420)

⁽²⁾ Designates M14 Bolt - Special Order

* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 4762, Minimum Grade 8.8

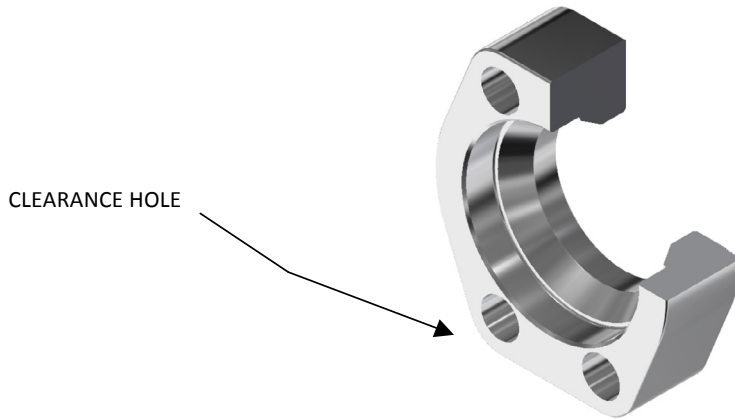
316 Stainless Steel: A4-70, DIN 912/ISO 4762

- For M16 SS Bolts and larger A4-80, DIN 912/ISO 4762

3D step models available upon request

SAE 6000 PSI Flare Flange with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



FFC64 - Flare Flange with Clearance Holes, NPS				
Size	Pipe O.D. (in)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	0.840	FFC64-050-*	6000 (420)	0.56 (0.25)
3/4"	1.050	FFC64-075-*	6000 (420)	0.97 (0.44)
1"	1.315	FFC64-100-*	6000 (420)	1.27 (0.58)
1-1/4"	1.660	FFC64-125-*	6000 (420)	1.89 (0.86)
1-1/2"	1.900	FFC64-150-*	6000 (420)	3.32 (1.51)
2"	2.375	FFC64-200-*	6000 (420)	5.00 (2.27)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

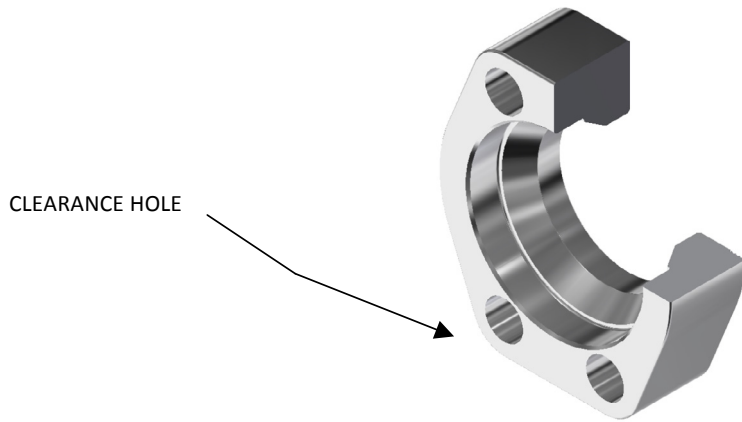
SS = Stainless Steel, Type 316.

Ordering Example: FFC64-200-SS

* Insert Material

SAE 6000 PSI Flare Flange with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



FFCM64 - Flare Flange with Clearance Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	16	FFCM64-050-16MM-*	6000 (420)	0.56 (0.25)
1/2"	18	FFCM64-050-18MM-*	6000 (420)	0.56 (0.25)
1/2"	20	FFCM64-050-20MM-*	6000 (420)	0.56 (0.25)
1/2"	25	FFCM64-050-25MM-*	6000 (420)	0.56 (0.25)
3/4"	20	FFCM64-075-20MM-*	6000 (420)	0.97 (0.44)
3/4"	25	FFCM64-075-25MM-*	6000 (420)	0.97 (0.44)
3/4"	30	FFCM64-075-30MM-*	6000 (420)	0.97 (0.44)
1"	25	FFCM64-100-25MM-*	6000 (420)	1.27 (0.58)
1"	30	FFCM64-100-30MM-*	6000 (420)	1.27 (0.58)
1"	38	FFCM64-100-38MM-*	6000 (420)	1.27 (0.58)
1-1/4"	30	FFCM64-125-30MM-*	6000 (420)	1.89 (0.86)
1-1/4"	38	FFCM64-125-38MM-*	6000 (420)	1.89 (0.86)
1-1/4"	42	FFC64-125-*	6000 (420)	1.89 (0.86)
1-1/4" (2)	30	FFCM64-125-M14-30MM-*	6000 (420)	1.89 (0.86)
1-1/4" (2)	38	FFCM64-125-M14-38MM-*	6000 (420)	1.89 (0.86)
1-1/4" (2)	42	FFC64-125-M14-*	6000 (420)	1.89 (0.86)
1-1/2"	30	FFCM64-150-30MM-*	6000 (420)	3.32 (1.51)
1-1/2"	38	FFCM64-150-38MM-*	6000 (420)	3.32 (1.51)
1-1/2"	42	FFCR64-150X125-*	6000 (420)	3.32 (1.51)
1-1/2"	50	FFCM64-150-50MM-*	6000 (420)	3.32 (1.51)
1-1/2"	56	FFCM64-150-56MM-*	6000 (420)	3.14 (1.43)
2"	50	FFCM64-200-50MM-*	6000 (420)	5.00 (2.27)
2"	60	FFC64-200-*	6000 (420)	5.00 (2.27)
2"	66	FFCM64-200-66MM-*	6000 (420)	4.82 (2.19)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

(2) Designates M14 Bolt – Special Order

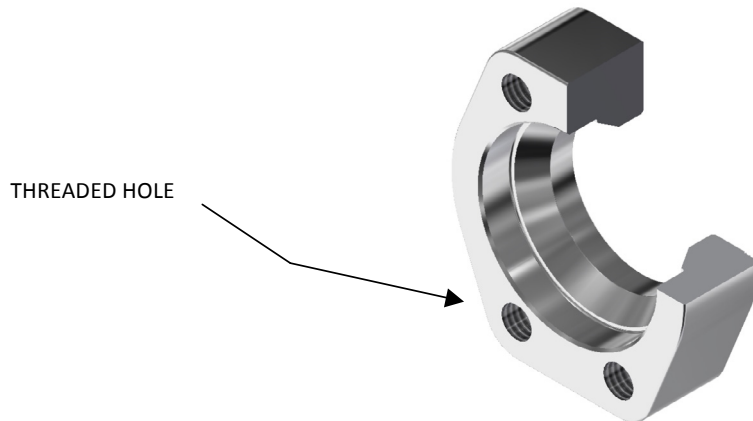
Ordering Example: FFCM64-200-50MM-SS

* Insert Material

3D step models available upon request

SAE 6000 PSI Flare Flange with Threaded Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



FFT64 - Flare Flange with Threaded Holes, NPS				
Size	Pipe O.D. (in)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	0.840	FFT64-050-*	6000 (420)	0.56 (0.25)
3/4"	1.050	FFT64-075-*	6000 (420)	1.03 (0.47)
1"	1.315	FFT64-100-*	6000 (420)	1.39 (0.63)
1-1/4"	1.660	FFT64-125-*	6000 (420)	2.09 (0.95)
1-1/2"	1.900	FFT64-150-*	6000 (420)	3.85 (1.75)
2"	2.375	FFT64-200-*	6000 (420)	6.04 (2.75)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

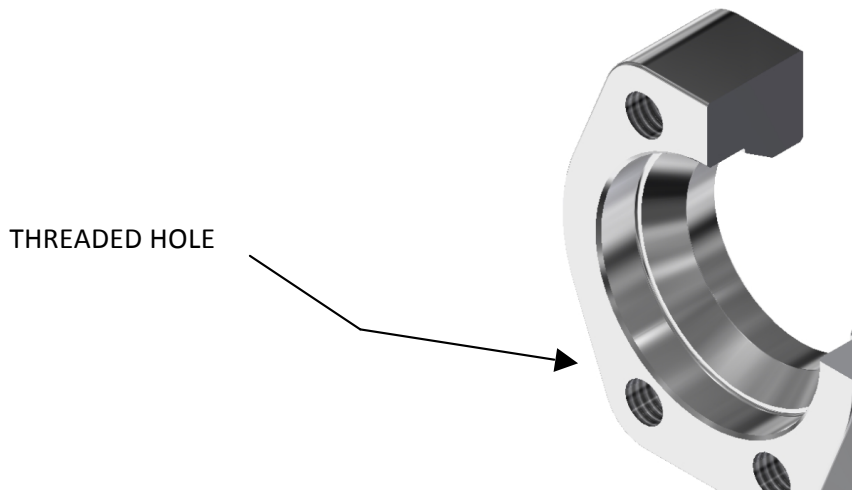
SS = Stainless Steel, Type 316.

Ordering Example: FFT64-200-SS

* Insert Material _____

SAE 6000 PSI Flare Flange with Threaded Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



FFTM64 - Flare Flange with Threaded Holes, Metric

Size	Pipe O.D. (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	16	FFTM64-050-16MM-*	6000 (420)	0.56 (0.25)
1/2"	18	FFTM64-050-18MM-*	6000 (420)	0.56 (0.25)
1/2"	20	FFTM64-050-20MM-*	6000 (420)	0.56 (0.25)
1/2"	25	FFTM64-050-25MM-*	6000 (420)	0.56 (0.25)
3/4"	20	FFTM64-075-20MM-*	6000 (420)	1.03 (0.47)
3/4"	25	FFTM64-075-25MM-*	6000 (420)	1.03 (0.47)
3/4"	30	FFTM64-075-30MM-*	6000 (420)	1.03 (0.47)
1"	25	FFTM64-100-25MM-*	6000 (420)	1.39 (0.63)
1"	30	FFTM64-100-30MM-*	6000 (420)	1.39 (0.63)
1"	38	FFTM64-100-38MM-*	6000 (420)	1.39 (0.63)
1-1/4"	30	FFTM64-125-30MM-*	6000 (420)	2.09 (0.95)
1-1/4"	38	FFTM64-125-38MM-*	6000 (420)	2.09 (0.95)
1-1/4"	42	FFTM64-125-42MM-*	6000 (420)	2.09 (0.95)
1-1/4" (2)	30	FFTM64-125-M14-30MM-*	6000 (420)	2.09 (0.95)
1-1/4" (2)	38	FFTM64-125-M14-38MM-*	6000 (420)	2.09 (0.95)
1-1/4" (2)	42	FFTM64-125-M14-42MM-*	6000 (420)	2.09 (0.95)
1-1/2"	30	FFTM64-150-30MM-*	6000 (420)	3.85 (1.75)
1-1/2"	38	FFTM64-150-38MM-*	6000 (420)	3.85 (1.75)
1-1/2"	42	FFTM64-150-42MM-*	6000 (420)	3.85 (1.75)
1-1/2"	50	FFTM64-150-50MM-*	6000 (420)	3.85 (1.75)
1-1/2"	56	FFTM64-150-56MM-*	6000 (420)	3.14 (1.43)
2"	50	FFTM64-200-50MM-*	6000 (420)	6.04 (2.75)
2"	60	FFTM64-200-60MM-*	6000 (420)	6.04 (2.75)
2"	66	FFTM64-200-66MM-*	6000 (420)	4.82 (2.19)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

(2) Designates M14 Bolt – Special Order

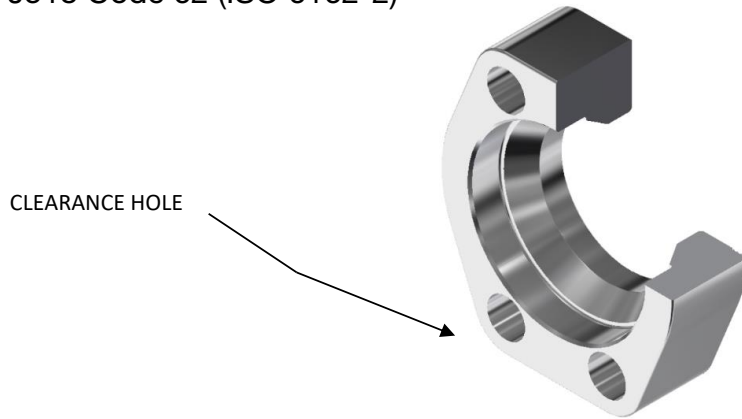
Ordering Example: FFTM64-200-50MM-SS

* Insert Material

3D step models available upon request

SAE 6000 PSI Flare Flange - Reducing with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Note:
Reducing Flanges
for NPS Pipe Only

FFCR64 - Flare Flange - Reducing with Clearance Holes, NPS			
Size (flange x pipe)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
3/4" x 1/2"	FFCR64-075 x 050	6000 (420)	0.56 (0.25)
1" x 3/4"	FFCR64-100 x 075	6000 (420)	0.97 (0.44)
1-1/4" x 1"	FFCR64-125 x 100	6000 (420)	1.27 (0.58)
1-1/2" x 1-1/4"	FFCR64-150 x 125	6000 (420)	1.89 (0.86)
2" x 1-1/2"	FFCR64-200 x 150	6000 (420)	3.32 (1.51)
2-1/2" x 2"	FFCR64-250 x 200	6000 (420)	5.00 (2.27)

*** Materials:**

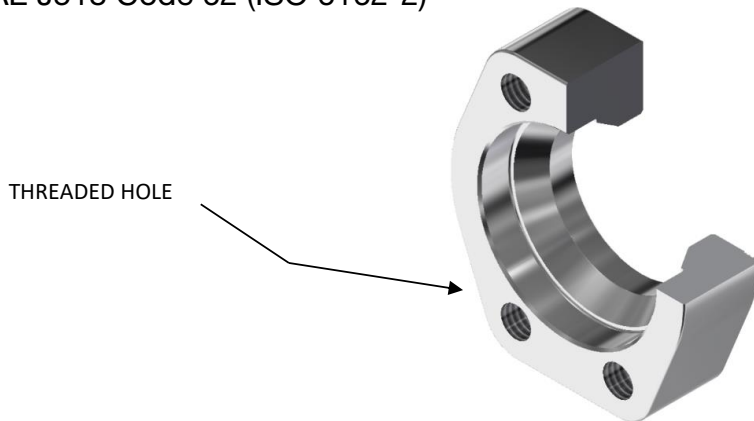
Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: FFCR64-075 x 050-SS

* Insert Material

SAE 6000 PSI Flare Flange - Reducing with Threaded Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Note:
Reducing Flanges
for NPS Pipe Only

FFTR64 - Flare Flange - Reducing with Threaded Holes, NPS			
Size (flange x pipe)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
3/4" x 1/2"	FFTR64-075 x 050	6000 (420)	0.56 (0.25)
1" x 3/4"	FFTR64-100 x 075	6000 (420)	1.03 (0.47)
1-1/4" x 1"	FFTR64-125 x 100	6000 (420)	1.39 (0.63)
1-1/2" x 1-1/4"	FFTR64-150 x 125	6000 (420)	2.09 (0.95)
2" x 1-1/2"	FFTR64-200 x 150	6000 (420)	3.85 (1.75)
2-1/2" x 2"	FFTR64-250 x 200	6000 (420)	6.04(2.75)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: FFTR64-075 x 050-SS

* Insert Material

3D step models available upon request

TUBE-MAC.com

Introduction

Technical
Data

Pipe
Selection
Guide

16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

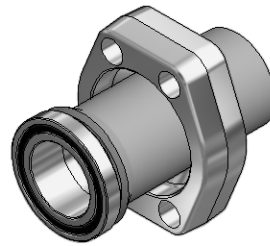
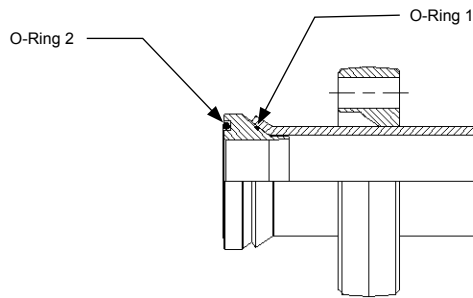
Clamp
Supports -
Heavy Series

Valves, Ball
and Check

H7

SAE 6000 PSI Flare Flange Set O-Ring Face with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFC64-CO - Flare Flange Set O-Ring Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	FFC64-CO-SCH40-050-*^-^	0.66 (0.30)	FFC64-050-*	CO-SCH40-050-*^-^	ORV-1915	OR^-2-210
1/2"	1/2" SCH80	FFC64-CO-SCH80-050-*^-^	0.65 (0.30)	FFC64-050-*	CO-SCH80-050-*^-^	ORV-1715	OR^-2-210
3/4"	3/4" SCH40	FFC64-CO-SCH40-075-*^-^	1.09 (0.50)	FFC64-075-*	CO-SCH40-075-*^-^	ORV-2515	OR^-2-214
3/4"	3/4" SCH80	FFC64-CO-SCH80-075-*^-^	1.07 (0.49)	FFC64-075-*	CO-SCH80-075-*^-^	ORV-2315	OR^-2-214
1"	1" SCH40	FFC64-CO-SCH40-100-*^-^	1.47 (0.67)	FFC64-100-*	CO-SCH40-100-*^-^	ORV-3015	OR^-2-219
1"	1" SCH80	FFC64-CO-SCH80-100-*^-^	1.46 (0.66)	FFC64-100-*	CO-SCH80-100-*^-^	ORV-2815	OR^-2-219
1-1/4"	1-1/4" SCH40	FFC64-CO-SCH40-125-*^-^	2.14 (0.97)	FFC64-125-*	CO-SCH40-125-*^-^	ORV-3815	OR^-2-222
1-1/4"	1-1/4" SCH80	FFC64-CO-SCH80-125-*^-^	2.13 (0.97)	FFC64-125-*	CO-SCH80-125-*^-^	ORV-3815	OR^-2-222
1-1/4"	1-1/4" SCH160	FFC64-CO-SCH160-125-*^-^	2.14 (0.97)	FFC64-125-*	CO-SCH160-125-*^-^	ORV-3515	OR^-2-222
1-1/2"	1-1/2" SCH40	FFC64-CO-SCH40-150-*^-^	3.73 (1.70)	FFC64-150-*	CO-SCH40-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH80	FFC64-CO-SCH80-150-*^-^	3.72 (1.69)	FFC64-150-*	CO-SCH80-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH160	FFC64-CO-SCH160-150-*^-^	3.72 (1.69)	FFC64-150-*	CO-SCH160-150-*^-^	ORV-3815	OR^-2-225
2"	2" SCH40	FFC64-CO-SCH40-200-*^-^	5.47 (2.49)	FFC64-200-*	CO-SCH40-200-*^-^	ORV-5615	OR^-2-228
2"	2" SCH80	FFC64-CO-SCH80-200-*^-^	5.49 (2.50)	FFC64-200-*	CO-SCH80-200-*^-^	ORV-5515	OR^-2-228
2"	2" SCH160	FFC64-CO-SCH160-200-*^-^	5.67 (2.57)	FFC64-200-*	CO-SCH160-200-*^-^	ORV-5015	OR^-2-228

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

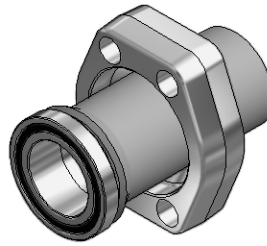
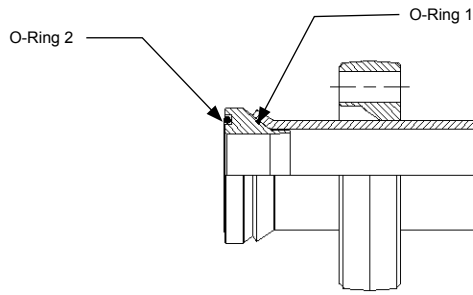
Ordering Example: FFC64-CO-SCH80-200-SS-V

* Insert Material

^ Insert O-Ring 2 Type

SAE 6000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CO - Flare Flange Set O-Ring Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	FFCM64-CO-20x2.0-050-*^	0.67 (0.31)	FFCM64-050-20MM-*	CO-20x2.0-050-*^	ORV-1715	OR^-2-210
1/2"	20x3.0	FFCM64-CO-20x3.0-050-*^	0.67 (0.31)	FFCM64-050-20MM-*	CO-20x3.0-050-*^	ORV-1715	OR^-2-210
1/2"	25x2.5	FFCM64-CO-25x2.5-050-*^	0.67 (0.31)	FFCM64-050-25MM-*	CO-25x2.5-050-*^	ORV-2315	OR^-2-210
1/2"	25x3.0	FFCM64-CO-25x3.0-050-*^	0.67 (0.31)	FFCM64-050-25MM-*	CO-25x3.0-050-*^	ORV-2315	OR^-2-210
3/4"	20x2.0	FFCM64-CO-20x2.0-075-*^	1.08 (0.49)	FFCM64-075-20MM-*	CO-20x2.0-075-*^	ORV-1715	OR^-2-214
3/4"	20x2.5	FFCM64-CO-20x2.5-075-*^	1.08 (0.49)	FFCM64-075-20MM-*	CO-20x2.5-075-*^	ORV-1715	OR^-2-214
3/4"	20x3.0	FFCM64-CO-20x3.0-075-*^	1.08 (0.49)	FFCM64-075-20MM-*	CO-20x3.0-075-*^	ORV-1715	OR^-2-214
3/4"	25x2.5	FFCM64-CO-25x2.5-075-*^	1.08 (0.49)	FFCM64-075-25MM-*	CO-25x2.5-075-*^	ORV-2315	OR^-2-214
3/4"	25x3.0	FFCM64-CO-25x3.0-075-*^	1.08 (0.49)	FFCM64-075-25MM-*	CO-25x3.0-075-*^	ORV-2315	OR^-2-214
3/4"	25x4.0	FFCM64-CO-25x4.0-075-*^	1.08 (0.49)	FFCM64-075-25MM-*	CO-25x4.0-075-*^	ORV-2315	OR^-2-214
3/4"	30x3.0	FFCM64-CO-30x3.0-075-*^	1.10 (0.50)	FFCM64-075-30MM-*	CO-30x3.0-075-*^	ORV-2515	OR^-2-214
1"	25x2.5	FFCM64-CO-25x2.5-100-*^	1.45 (0.66)	FFCM64-100-25MM-*	CO-25x2.5-100-*^	ORV-2315	OR^-2-219
1"	25x3.0	FFCM64-CO-25x3.0-100-*^	1.45 (0.66)	FFCM64-100-25MM-*	CO-25x3.0-100-*^	ORV-2315	OR^-2-219
1"	25x4.0	FFCM64-CO-25x4.0-100-*^	1.45 (0.66)	FFCM64-100-25MM-*	CO-25x4.0-100-*^	ORV-2315	OR^-2-219
1"	30x3.0	FFCM64-CO-30x3.0-100-*^	1.47 (0.67)	FFCM64-100-30MM-*	CO-30x3.0-100-*^	ORV-2815	OR^-2-219
1"	30x4.0	FFCM64-CO-30x4.0-100-*^	1.47 (0.67)	FFCM64-100-30MM-*	CO-30x4.0-100-*^	ORV-2815	OR^-2-219
1"	30x5.0	FFCM64-CO-30x5.0-100-*^	1.47 (0.67)	FFCM64-100-30MM-*	CO-30x5.0-100-*^	ORV-2815	OR^-2-219
1"	38x4.0	FFCM64-CO-38x4.0-100-*^	1.49 (0.68)	FFCM64-100-38MM-*	CO-38x4.0-100-*^	ORV-3515	OR^-2-219
1"	38x5.0	FFCM64-CO-38x5.0-100-*^	1.49 (0.68)	FFCM64-100-38MM-*	CO-38x5.0-100-*^	ORV-3215	OR^-2-219
1-1/4"	30x3.0	FFCM64-CO-30x3.0-125-*^	2.11 (0.96)	FFCM64-125-30MM-*	CO-30x3.0-125-*^	ORV-2815	OR^-2-222
1-1/4"	30x4.0	FFCM64-CO-30x4.0-125-*^	2.11 (0.96)	FFCM64-125-30MM-*	CO-30x4.0-125-*^	ORV-2815	OR^-2-222
1-1/4"	30x5.0	FFCM64-CO-30x5.0-125-*^	2.11 (0.96)	FFCM64-125-30MM-*	CO-30x5.0-125-*^	ORV-2815	OR^-2-222
1-1/4"	38x4.0	FFCM64-CO-38x4.0-125-*^	2.13 (0.97)	FFCM64-125-38MM-*	CO-38x4.0-125-*^	ORV-3515	OR^-2-222
1-1/4"	38x5.0	FFCM64-CO-38x5.0-125-*^	2.13 (0.97)	FFCM64-125-38MM-*	CO-38x5.0-125-*^	ORV-3215	OR^-2-222
1-1/4"	42x3.0	FFCM64-CO-42x3.0-125-*^	2.18 (0.99)	FFC64-125-*	CO-42x3.0-125-*^	ORV-3815	OR^-2-222
1-1/4"	42x4.0	FFCM64-CO-42x4.0-125-*^	2.18 (0.99)	FFC64-125-*	CO-42x4.0-125-*^	ORV-3815	OR^-2-222

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: FFCM64-CO-50x3.0-200-SS-V

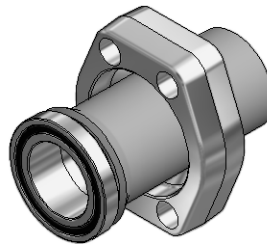
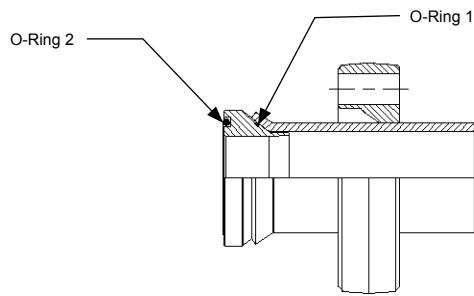
* Insert Material

^ Insert O-Ring 2 Type

3D step models available upon request

SAE 6000 PSI Flare Flange Set O-Ring Face with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CO - Flare Flange Set O-Ring Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/4" (2)	30x3.0	FFCM64-CO-30x3.0-125-M14-*^-^	2.11 (0.96)	FFCM64-125-M14-30MM-*	CO-30x3.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4" (2)	30x4.0	FFCM64-CO-30x4.0-125-M14-*^-^	2.11 (0.96)	FFCM64-125-M14-30MM-*	CO-30x4.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4" (2)	30x5.0	FFCM64-CO-30x5.0-125-M14-*^-^	2.11 (0.96)	FFCM64-125-M14-30MM-*	CO-30x5.0-125-*^-^	ORV-2815	OR^-2-222
1-1/4" (2)	38x4.0	FFCM64-CO-38x4.0-125-M14-*^-^	2.13 (0.97)	FFCM64-125-M14-38MM-*	CO-38x4.0-125-*^-^	ORV-3515	OR^-2-222
1-1/4" (2)	38x5.0	FFCM64-CO-38x5.0-125-M14-*^-^	2.13 (0.97)	FFCM64-125-M14-38MM-*	CO-38x5.0-125-*^-^	ORV-3215	OR^-2-222
1-1/4" (2)	42x3.0	FFCM64-CO-42x3.0-125-M14-*^-^	2.18 (0.99)	FFCM64-125-M14-42MM-*	CO-42x3.0-125-*^-^	ORV-3815	OR^-2-222
1-1/4" (2)	42x4.0	FFCM64-CO-42x4.0-125-M14-*^-^	2.18 (0.99)	FFCM64-125-M14-42MM-*	CO-42x4.0-125-*^-^	ORV-3815	OR^-2-222
1-1/2"	30x3.0	FFCM64-CO-30x3.0-150-*^-^	3.69 (1.68)	FFCM64-150-30MM-*	CO-30x3.0-150-*^-^	ORV-2815	OR^-2-225
1-1/2"	38x4.0	FFCM64-CO-38x4.0-150-*^-^	3.72 (1.69)	FFCM64-150-38MM-*	CO-38x4.0-150-*^-^	ORV-3215	OR^-2-225
1-1/2"	42x3.0	FFCM64-CO-42x3.0-150-*^-^	3.72 (1.69)	FFCM64-150-42MM-*	CO-42x3.0-150-*^-^	ORV-3815	OR^-2-225
1-1/2"	42x4.0	FFCM64-CO-42x4.0-150-*^-^	3.72 (1.69)	FFCM64-150-42MM-*	CO-42x4.0-150-*^-^	ORV-3815	OR^-2-225
1-1/2"	50x3.0	FFCM64-CO-50x3.0-150-*^-^	3.74 (1.70)	FFCM64-150-50MM-*	CO-50x3.0-150-*^-^	ORV-4715	OR^-2-225
1-1/2"	50x5.0	FFCM64-CO-50x5.0-150-*^-^	3.74 (1.70)	FFCM64-150-50MM-*	CO-50x5.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50x6.0	FFCM64-CO-50x6.0-150-*^-^	3.74 (1.70)	FFCM64-150-50MM-*	CO-50x6.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	56x8.5	FFCM64-CO-56x8.5-150-*^-^	3.75 (1.70)	FFCM64-150-56MM-*	CO-56x8.5-150-*^-^	ORV-4315	OR^-2-225
2"	50x3.0	FFCM64-CO-50x3.0-200-*^-^	5.44 (2.47)	FFCM64-200-50MM-*	CO-50x3.0-200-*^-^	ORV-4515	OR^-2-228
2"	50x5.0	FFCM64-CO-50x5.0-200-*^-^	5.44 (2.47)	FFCM64-200-50MM-*	CO-50x5.0-200-*^-^	ORV-4515	OR^-2-228
2"	50x6.0	FFCM64-CO-50x6.0-200-*^-^	5.44 (2.47)	FFCM64-200-50MM-*	CO-50x6.0-200-*^-^	ORV-4515	OR^-2-228
2"	60x3.0	FFCM64-CO-60x3.0-200-*^-^	5.46 (2.48)	FFC64-200-*	CO-60x3.0-200-*^-^	ORV-5715	OR^-2-228
2"	60x5.0	FFCM64-CO-60x5.0-200-*^-^	5.46 (2.48)	FFC64-200-*	CO-60x5.0-200-*^-^	ORV-5615	OR^-2-228
2"	60x6.0	FFCM64-CO-60x6.0-200-*^-^	5.46 (2.48)	FFC64-200-*	CO-60x6.0-200-*^-^	ORV-5615	OR^-2-228
2"	60x8.0	FFCM64-CO-60x8.0-200-*^-^	5.46 (2.48)	FFC64-200-*	CO-60x8.0-200-*^-^	ORV-5015	OR^-2-228
2"	66x8.5	FFCM64-CO-66x8.5-200-*^-^	5.46 (2.48)	FFCM64-200-66MM-*	CO-66x8.5-200-*^-^	ORV-5615	OR^-2-228

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

(2) Designates M14 Bolt - Special Order

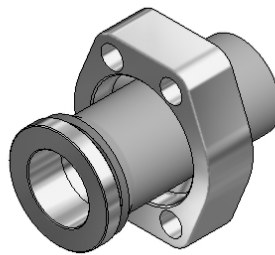
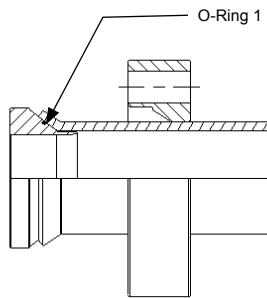
Ordering Example: FFCM64-CO-50x3.0-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

SAE 6000 PSI Flare Flange Set Flat Face with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFC64-CF - Flare Flange Set Flat Face with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	1/2" SCH40	FFC64-CF-SCH40-050-*	0.67 (0.30)	FFC64-050-*	CF-SCH40-050-*	ORV-1915
1/2"	1/2" SCH80	FFC64-CF-SCH80-050-*	0.66 (0.30)	FFC64-050-*	CF-SCH80-050-*	ORV-1715
3/4"	3/4" SCH40	FFC64-CF-SCH40-075-*	1.10 (0.50)	FFC64-075-*	CF-SCH40-075-*	ORV-2515
3/4"	3/4" SCH80	FFC64-CF-SCH80-075-*	1.08 (0.49)	FFC64-075-*	CF-SCH80-075-*	ORV-2315
1"	1" SCH40	FFC64-CF-SCH40-100-*	1.48 (0.67)	FFC64-100-*	CF-SCH40-100-*	ORV-3015
1"	1" SCH80	FFC64-CF-SCH80-100-*	1.47 (0.66)	FFC64-100-*	CF-SCH80-100-*	ORV-2815
1-1/4"	1-1/4" SCH40	FFC64-CF-SCH40-125-*	2.16 (0.98)	FFC64-125-*	CF-SCH40-125-*	ORV-3815
1-1/4"	1-1/4" SCH80	FFC64-CF-SCH80-125-*	2.14 (0.97)	FFC64-125-*	CF-SCH80-125-*	ORV-3815
1-1/4"	1-1/4" SCH160	FFC64-CF-SCH160-125-*	2.16 (0.98)	FFC64-125-*	CF-SCH160-125-*	ORV-3515
1-1/2"	1-1/2" SCH40	FFC64-CF-SCH40-150-*	3.75 (1.71)	FFC64-150-*	CF-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC64-CF-SCH80-150-*	3.73 (1.70)	FFC64-150-*	CF-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC64-CF-SCH160-150-*	3.73 (1.70)	FFC64-150-*	CF-SCH160-150-*	ORV-3815
2"	2" SCH40	FFC64-CF-SCH40-200-*	5.49 (2.50)	FFC64-200-*	CF-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC64-CF-SCH80-200-*	5.48 (2.49)	FFC64-200-*	CF-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC64-CF-SCH160-200-*	5.45 (2.48)	FFC64-200-*	CF-SCH160-200-*	ORV-5015

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

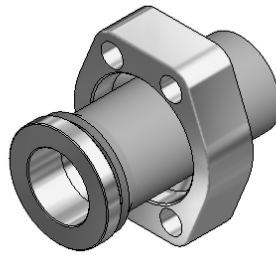
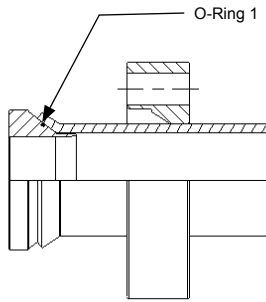
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC64-CF-SCH80-200-SS

* Insert Material _____

SAE 6000 PSI Flare Flange Set Flat Face with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CF - Flare Flange Set Flat Face with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	20x2.0	FFCM64-CF-20x2.0-050-*	0.67 (0.30)	FFCM64-050-20MM-*	CF-20x2.0-050-*	ORV-1715
1/2"	20x3.0	FFCM64-CF-20x3.0-050-*	0.67 (0.30)	FFCM64-050-20MM-*	CF-20x3.0-050-*	ORV-1715
1/2"	25x2.5	FFCM64-CF-25x2.5-050-*	0.67 (0.30)	FFCM64-050-25MM-*	CF-25x2.5-050-*	ORV-2315
1/2"	25x3.0	FFCM64-CF-25x3.0-050-*	0.67 (0.30)	FFCM64-050-25MM-*	CF-25x3.0-050-*	ORV-2315
3/4"	20x2.0	FFCM64-CF-20x2.0-075-*	1.08 (0.49)	FFCM64-075-20MM-*	CF-20x2.0-075-*	ORV-1715
3/4"	20x2.5	FFCM64-CF-20x2.5-075-*	1.08 (0.49)	FFCM64-075-20MM-*	CF-20x2.5-075-*	ORV-1715
3/4"	20x3.0	FFCM64-CF-20x3.0-075-*	1.08 (0.49)	FFCM64-075-20MM-*	CF-20x3.0-075-*	ORV-1715
3/4"	25x2.5	FFCM64-CF-25x2.5-075-*	1.08 (0.49)	FFCM64-075-25MM-*	CF-25x2.5-075-*	ORV-2315
3/4"	25x3.0	FFCM64-CF-25x3.0-075-*	1.08 (0.49)	FFCM64-075-25MM-*	CF-25x3.0-075-*	ORV-2315
3/4"	25x4.0	FFCM64-CF-25x4.0-075-*	1.08 (0.49)	FFCM64-075-25MM-*	CF-25x4.0-075-*	ORV-2315
3/4"	30x3.0	FFCM64-CF-30x3.0-075-*	1.11 (0.50)	FFCM64-075-30MM-*	CF-30x3.0-075-*	ORV-2515
1"	25x2.5	FFCM64-CF-25x2.5-100-*	1.46 (0.66)	FFCM64-100-25MM-*	CF-25x2.5-100-*	ORV-2315
1"	25x3.0	FFCM64-CF-25x3.0-100-*	1.46 (0.66)	FFCM64-100-25MM-*	CF-25x3.0-100-*	ORV-2315
1"	25x4.0	FFCM64-CF-25x4.0-100-*	1.46 (0.66)	FFCM64-100-25MM-*	CF-25x4.0-100-*	ORV-2315
1"	30x3.0	FFCM64-CF-30x3.0-100-*	1.48 (0.67)	FFCM64-100-30MM-*	CF-30x3.0-100-*	ORV-2815
1"	30x4.0	FFCM64-CF-30x4.0-100-*	1.48 (0.67)	FFCM64-100-30MM-*	CF-30x4.0-100-*	ORV-2815
1"	30x5.0	FFCM64-CF-30x5.0-100-*	1.48 (0.67)	FFCM64-100-30MM-*	CF-30x5.0-100-*	ORV-2815
1"	38x4.0	FFCM64-CF-38x4.0-100-*	1.50 (0.68)	FFCM64-100-38MM-*	CF-38x4.0-100-*	ORV-3515
1"	38x5.0	FFCM64-CF-38x5.0-100-*	1.50 (0.68)	FFCM64-100-38MM-*	CF-38x5.0-100-*	ORV-3215
1-1/4"	30x3.0	FFCM64-CF-30x3.0-125-*	2.12 (0.96)	FFCM64-125-30MM-*	CF-30x3.0-125-*	ORV-2815
1-1/4"	30x4.0	FFCM64-CF-30x4.0-125-*	2.12 (0.96)	FFCM64-125-30MM-*	CF-30x4.0-125-*	ORV-2815
1-1/4"	30x5.0	FFCM64-CF-30x5.0-125-*	2.12 (0.96)	FFCM64-125-30MM-*	CF-30x5.0-125-*	ORV-2815
1-1/4"	38x4.0	FFCM64-CF-38x4.0-125-*	2.14 (0.97)	FFCM64-125-38MM-*	CF-38x4.0-125-*	ORV-3515
1-1/4"	38x5.0	FFCM64-CF-38x5.0-125-*	2.14 (0.97)	FFCM64-125-38MM-*	CF-38x5.0-125-*	ORV-3215
1-1/4"	42x3.0	FFCM64-CF-42x3.0-125-*	2.19 (1.00)	FFC64-125-*	CF-42x3.0-125-*	ORV-3815
1-1/4"	42x4.0	FFCM64-CF-42x4.0-125-*	2.19 (1.00)	FFC64-125-*	CF-42x4.0-125-*	ORV-3815

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

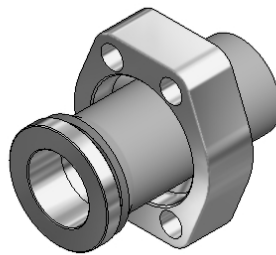
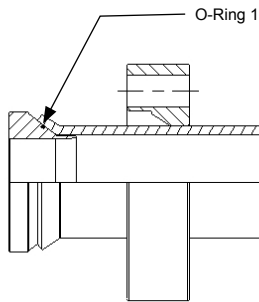
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM64-CF-50x3.0-200-SS

* Insert Material

SAE 6000 PSI Flare Flange Set Flat Face with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CF - Flare Flange Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/4" (2)	30x3.0	FFCM64-CF-30x3.0-125-M14-*	2.12 (0.96)	FFCM64-125-M14-30MM-*	CF-30x3.0-125-*	ORV-2815
1-1/4" (2)	30x4.0	FFCM64-CF-30x4.0-125-M14-*	2.12 (0.96)	FFCM64-125-M14-30MM-*	CF-30x4.0-125-*	ORV-2815
1-1/4" (2)	30x5.0	FFCM64-CF-30x5.0-125-M14-*	2.12 (0.96)	FFCM64-125-M14-30MM-*	CF-30x5.0-125-*	ORV-2815
1-1/4" (2)	38x4.0	FFCM64-CF-38x4.0-125-M14-*	2.14 (0.97)	FFCM64-125-M14-38MM-*	CF-38x4.0-125-*	ORV-3515
1-1/4" (2)	38x5.0	FFCM64-CF-38x5.0-125-M14-*	2.14 (0.97)	FFCM64-125-M14-38MM-*	CF-38x5.0-125-*	ORV-3215
1-1/4" (2)	42x3.0	FFCM64-CF-42x3.0-125-M-14-*	2.19 (1.00)	FFCM64-125-M14-42MM-*	CF-42x3.0-125-*	ORV-3815
1-1/4" (2)	42x4.0	FFCM64-CF-42x4.0-125-M14-*	2.19 (1.00)	FFCM64-125-M14-42MM-*	CF-42x4.0-125-*	ORV-3815
1-1/2"	30x3.0	FFCM64-CF-30x3.0-150-*	3.70 (1.68)	FFCM64-150-30MM-*	CF-30x3.0-150-*	ORV-2815
1-1/2"	38x4.0	FFCM64-CF-38x4.0-150-*	3.74 (1.70)	FFCM64-150-38MM-*	CF-38x4.0-150-*	ORV-3215
1-1/2"	42x3.0	FFCM64-CF-42x3.0-150-*	3.74 (1.70)	FFCM64-150-42MM-*	CF-42x3.0-150-*	ORV-3215
1-1/2"	42x4.0	FFCM64-CF-42x4.0-150-*	3.74 (1.70)	FFCM64-150-42MM-*	CF-42x4.0-150-*	ORV-3815
1-1/2"	50x3.0	FFCM64-CF-50x3.0-150-*	3.76 (1.71)	FFCM64-150-50MM-*	CF-50x3.0-150-*	ORV-3815
1-1/2"	50x5.0	FFCM64-CF-50x5.0-150-*	3.76 (1.71)	FFCM64-150-50MM-*	CF-50x5.0-150-*	ORV-4515
1-1/2"	50x6.0	FFCM64-CF-50x6.0-150-*	3.76 (1.71)	FFCM64-150-50MM-*	CF-50x6.0-150-*	ORV-4515
1-1/2"	56x8.5	FFCM64-CF-56x8.5-150-*	3.76 (1.71)	FFCM64-150-56MM-*	CF-56x8.5-150-*	ORV-4315
2"	50x3.0	FFCM64-CF-50x3.0-200-*	5.46 (2.48)	FFCM64-200-50MM-*	CF-50x3.0-200-*	ORV-4515
2"	50x5.0	FFCM64-CF-50x5.0-200-*	5.46 (2.48)	FFCM64-200-50MM-*	CF-50x5.0-200-*	ORV-4515
2"	50x6.0	FFCM64-CF-50x6.0-200-*	5.46 (2.48)	FFCM64-200-50MM-*	CF-50x6.0-200-*	ORV-4515
2"	60x3.0	FFCM64-CF-60x3.0-200-*	5.48 (2.49)	FFC64-200-*	CF-60x3.0-200-*	ORV-5715
2"	60x5.0	FFCM64-CF-60x5.0-200-*	5.48 (2.49)	FFC64-200-*	CF-60x5.0-200-*	ORV-5615
2"	60x6.0	FFCM64-CF-60x6.0-200-*	5.48 (2.49)	FFC64-200-*	CF-60x6.0-200-*	ORV-5615
2"	60x8.0	FFCM64-CF-60x8.0-200-*	5.48 (2.49)	FFC64-200-*	CF-60x8.0-200-*	ORV-5015
2"	66x8.5	FFCM64-CF-66x8.5-200-*	5.48 (2.49)	FFCM64-200-66MM-*	CF-66x8.5-200-*	ORV-5615

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

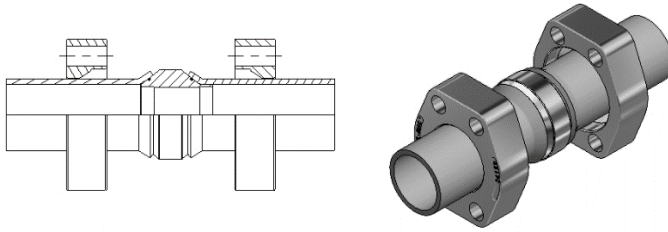
(2) Designates M14 Bolt - Special Order

Ordering Example: FFCM64-CF-50x3.0-200-SS

* Insert Material _____

SAE 6000 PSI Flare Flange Double Cone Union Set with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFC64-CD - Flare Flange Double Cone Union Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	1/2" SCH40	FFC64-CD-SCH40-050-*	1.32 (0.60)	FFC64-050-*	CD-SCH40-050-*	ORV-1915
1/2"	1/2" SCH80	FFC64-CD-SCH80-050-*	1.30 (0.59)	FFC64-050-*	CD-SCH80-050-*	ORV-1715
3/4"	3/4" SCH40	FFC64-CD-SCH40-075-*	2.19 (1.00)	FFC64-075-*	CD-SCH40-075-*	ORV-2515
3/4"	3/4" SCH80	FFC64-CD-SCH80-075-*	2.19 (1.00)	FFC64-075-*	CD-SCH80-075-*	ORV-2315
1"	1" SCH40	FFC64-CD-SCH40-100-*	2.95 (1.34)	FFC64-100-*	CD-SCH40-100-*	ORV-3015
1"	1" SCH80	FFC64-CD-SCH80-100-*	2.96 (1.35)	FFC64-100-*	CD-SCH80-100-*	ORV-2815
1-1/4"	1-1/4" SCH40	FFC64-CD-SCH40-125-*	4.27 (1.94)	FFC64-125-*	CD-SCH40-125-*	ORV-3815
1-1/4"	1-1/4" SCH80	FFC64-CD-SCH80-125-*	4.26 (1.94)	FFC64-125-*	CD-SCH80-125-*	ORV-3815
1-1/4"	1-1/4" SCH160	FFC64-CD-SCH160-125-*	4.27 (1.94)	FFC64-125-*	CD-SCH160-125-*	ORV-3515
1-1/2"	1-1/2" SCH40	FFC64-CD-SCH40-150-*	7.46 (3.39)	FFC64-150-*	CD-SCH40-150-*	ORV-4315
1-1/2"	1-1/2" SCH80	FFC64-CD-SCH80-150-*	7.48 (3.40)	FFC64-150-*	CD-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC64-CD-SCH160-150-*	7.47 (3.40)	FFC64-150-*	CD-SCH160-150-*	ORV-3815
2"	2" SCH40	FFC64-CD-SCH40-200-*	10.94 (4.97)	FFC64-200-*	CD-SCH40-200-*	ORV-5615
2"	2" SCH80	FFC64-CD-SCH80-200-*	10.94 (4.97)	FFC64-200-*	CD-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC64-CD-SCH160-200-*	11.31 (5.14)	FFC64-200-*	CD-SCH160-200-*	ORV-5015

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

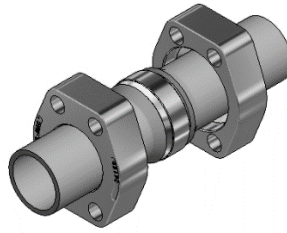
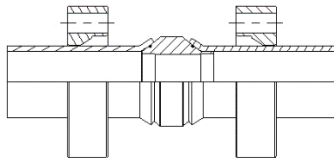
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC64-CD-SCH80-200-SS

* Insert Material _____

SAE 6000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CD - Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1/2"	20x2.0	FFCM64-CD-20x2.0-050-*	1.33 (0.60)	FFCM64-050-20MM-*	CD-20x2.0-050-*	ORV-1715
1/2"	20x3.0	FFCM64-CD-20x3.0-050-*	1.33 (0.60)	FFCM64-050-20MM-*	CD-20x3.0-050-*	ORV-1715
1/2"	25x2.5	FFCM64-CD-25x2.5-050-*	1.33 (0.60)	FFCM64-050-25MM-*	CD-25x2.5-050-*	ORV-2315
1/2"	25x3.0	FFCM64-CD-25x3.0-050-*	1.33 (0.60)	FFCM64-050-25MM-*	CD-25x3.0-050-*	ORV-2315
3/4"	20x2.0	FFCM64-CD-20x2.0-075-*	2.15 (0.98)	FFCM64-075-20MM-*	CD-20x2.0-075-*	ORV-1715
3/4"	20x2.5	FFCM64-CD-20x2.5-075-*	2.15 (0.98)	FFCM64-075-20MM-*	CD-20x2.5-075-*	ORV-1715
3/4"	20x3.0	FFCM64-CD-20x3.0-075-*	2.15 (0.98)	FFCM64-075-20MM-*	CD-20x3.0-075-*	ORV-1715
3/4"	25x2.5	FFCM64-CD-25x2.5-075-*	2.15 (0.98)	FFCM64-075-25MM-*	CD-25x2.5-075-*	ORV-2315
3/4"	25x3.0	FFCM64-CD-25x3.0-075-*	2.15 (0.98)	FFCM64-075-25MM-*	CD-25x3.0-075-*	ORV-2315
3/4"	25x4.0	FFCM64-CD-25x4.0-075-*	2.15 (0.98)	FFCM64-075-25MM-*	CD-25x4.0-075-*	ORV-2315
3/4"	30x3.0	FFCM64-CD-30x3.0-075-*	2.19 (1.00)	FFCM64-075-30MM-*	CD-30x3.0-075-*	ORV-2515
1"	25x2.5	FFCM64-CD-25x2.5-100-*	2.89 (1.31)	FFCM64-100-25MM-*	CD-25x2.5-100-*	ORV-2315
1"	25x3.0	FFCM64-CD-25x3.0-100-*	2.89 (1.31)	FFCM64-100-25MM-*	CD-25x3.0-100-*	ORV-2315
1"	25x4.0	FFCM64-CD-25x4.0-100-*	2.89 (1.31)	FFCM64-100-25MM-*	CD-25x4.0-100-*	ORV-2315
1"	30x3.0	FFCM64-CD-30x3.0-100-*	2.93 (1.33)	FFCM64-100-30MM-*	CD-30x3.0-100-*	ORV-2815
1"	30x4.0	FFCM64-CD-30x4.0-100-*	2.93 (1.33)	FFCM64-100-30MM-*	CD-30x4.0-100-*	ORV-2815
1"	30x5.0	FFCM64-CD-30x5.0-100-*	2.93 (1.33)	FFCM64-100-30MM-*	CD-30x5.0-100-*	ORV-2815
1"	38x4.0	FFCM64-CD-38x4.0-100-*	2.97 (1.35)	FFCM64-100-38MM-*	CD-38x4.0-100-*	ORV-3515
1"	38x5.0	FFCM64-CD-38x5.0-100-*	2.97 (1.35)	FFCM64-100-38MM-*	CD-38x5.0-100-*	ORV-3215
1-1/4"	30x3.0	FFCM64-CD-30x3.0-125-*	4.21 (1.91)	FFCM64-125-30MM-*	CD-30x3.0-125-*	ORV-2815
1-1/4"	30x4.0	FFCM64-CD-30x4.0-125-*	4.21 (1.91)	FFCM64-125-30MM-*	CD-30x4.0-125-*	ORV-2815
1-1/4"	30x5.0	FFCM64-CD-30x5.0-125-*	4.21 (1.91)	FFCM64-125-30MM-*	CD-30x5.0-125-*	ORV-2815
1-1/4"	38x4.0	FFCM64-CD-38x4.0-125-*	4.25 (1.93)	FFCM64-125-38MM-*	CD-38x4.0-125-*	ORV-3515
1-1/4"	38x5.0	FFCM64-CD-38x5.0-125-*	4.25 (1.93)	FFCM64-125-38MM-*	CD-38x5.0-125-*	ORV-3215
1-1/4"	42x3.0	FFCM64-CD-42x3.0-125-*	4.34 (1.97)	FFC64-125-*	CD-42x3.0-125-*	ORV-3815
1-1/4"	42x4.0	FFCM64-CD-42x4.0-125-*	4.34 (1.97)	FFC64-125-*	CD-42x4.0-125-*	ORV-3815

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

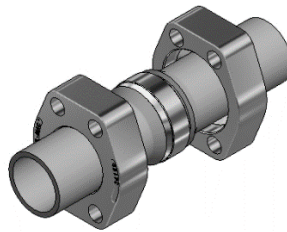
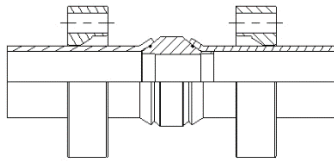
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFCM64-CD-50x3.0-200-SS

* Insert Material

SAE 6000 PSI Flare Flange Double Cone Union Set with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H1)

FFCM64-CD - Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/4" ⁽²⁾	30x3.0	FFCM64-CD-30x3.0-125-M14-*	4.21 (1.91)	FFCM64-125-M14-30MM-*	CD-30x3.0-125-*	ORV-2815
1-1/4" ⁽²⁾	30x4.0	FFCM64-CD-30x4.0-125-M14-*	4.21 (1.91)	FFCM64-125-M14-30MM-*	CD-30x4.0-125-*	ORV-2815
1-1/4" ⁽²⁾	30x5.0	FFCM64-CD-30x5.0-125-M14-*	4.21 (1.91)	FFCM64-125-M14-30MM-*	CD-30x5.0-125-*	ORV-2815
1-1/4" ⁽²⁾	38x4.0	FFCM64-CD-38x4.0-125-M14-*	4.25 (1.93)	FFCM64-125-M14-38MM-*	CD-38x4.0-125-*	ORV-3515
1-1/4" ⁽²⁾	38x5.0	FFCM64-CD-38x5.0-125-M14-*	4.25 (1.93)	FFCM64-125-M14-38MM-*	CD-38x5.0-125-*	ORV-3215
1-1/4" ⁽²⁾	42x3.0	FFCM64-CD-42x3.0-125-M14-*	4.34 (1.97)	FFCM64-125-M14-42MM-*	CD-42x3.0-125-*	ORV-3815
1-1/4" ⁽²⁾	42x4.0	FFCM64-CD-42x4.0-125-M14-*	4.34 (1.97)	FFCM64-125-M14-42MM-*	CD-42x4.0-125-*	ORV-3815
1-1/2"	30x3.0	FFCM64-CD-30x3.0-150-*	7.36 (3.35)	FFCM64-150-30MM-*	CD-30x3.0-150-*	ORV-2815
1-1/2"	38x4.0	FFCM64-CD-38x4.0-150-*	7.42 (3.37)	FFCM64-150-38MM-*	CD-38x4.0-150-*	ORV-3215
1-1/2"	42x3.0	FFCM64-CD-42x3.0-150-*	7.42 (3.37)	FFCM64-150-42MM-*	CD-42x3.0-150-*	ORV-3815
1-1/2"	42x4.0	FFCM64-CD-42x4.0-150-*	7.42 (3.37)	FFCM64-150-42MM-*	CD-42x4.0-150-*	ORV-3815
1-1/2"	50x3.0	FFCM64-CD-50x3.0-150-*	7.45 (3.39)	FFCM64-150-50MM-*	CD-50x3.0-150-*	ORV-4715
1-1/2"	50x5.0	FFCM64-CD-50x5.0-150-*	7.45 (3.39)	FFCM64-150-50MM-*	CD-50x5.0-150-*	ORV-4515
1-1/2"	50x6.0	FFCM64-CD-50x6.0-150-*	7.45 (3.39)	FFCM64-150-50MM-*	CD-50x6.0-150-*	ORV-4515
1-1/2"	56x8.5	FFCM64-CD-56x8.5-150-*	7.45 (3.39)	FFCM64-150-56MM-*	CD-56x8.5-150-*	ORV-4315
2"	50x3.0	FFCM64-CD-50x3.0-200-*	10.85 (4.93)	FFCM64-200-50MM-*	CD-50x3.0-200-*	ORV-4515
2"	50x5.0	FFCM64-CD-50x5.0-200-*	10.85 (4.93)	FFCM64-200-50MM-*	CD-50x5.0-200-*	ORV-4515
2"	50x6.0	FFCM64-CD-50x6.0-200-*	10.85 (4.93)	FFCM64-200-50MM-*	CD-50x6.0-200-*	ORV-4515
2"	60x3.0	FFCM64-CD-60x3.0-200-*	10.89 (4.95)	FFC64-200-*	CD-60x3.0-200-*	ORV-5715
2"	60x5.0	FFCM64-CD-60x5.0-200-*	10.89 (4.95)	FFC64-200-*	CD-60x5.0-200-*	ORV-5615
2"	60x6.0	FFCM64-CD-60x6.0-200-*	10.89 (4.95)	FFC64-200-*	CD-60x6.0-200-*	ORV-5615
2"	60x8.0	FFCM64-CD-60x8.0-200-*	10.89 (4.95)	FFC64-200-*	CD-60x8.0-200-*	ORV-5015
2"	66x8.5	FFCM64-CD-66x8.5-200-*	1089 (4.95)	FFCM64-200-66MM-*	CD-66x8.5-200-*	ORV-5615

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

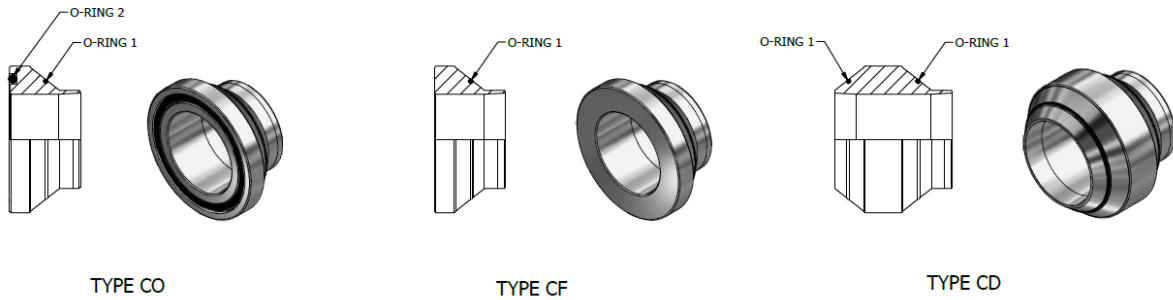
(2) Designates M14 Bolt - Special Order

Ordering Example: FFCM64-CD-50x3.0-200-SS

* Insert Material _____

SAE 6000 PSI Cone Inserts for Flare Flange Connections, NPS

SAE J518 Code 62 (ISO 6162-2)



CO, CF and CD - Cone Inserts for Flare Flange Connections, NPS									
Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	CO-SCH40-050-*^-^	0.10 (0.50)	CF-SCH40-050-*	0.11 (0.05)	CD-SCH40-050-*	0.20 (0.09)	ORV-1915	OR^-2-210
1/2"	1/2" SCH80	CO-SCH80-050-*^-^	0.09 (0.04)	CF-SCH80-050-*	0.10 (0.05)	CD-SCH80-050-*	0.18 (0.08)	ORV-1715	OR^-2-210
3/4"	3/4" SCH40	CO-SCH40-075-*^-^	0.12 (0.05)	CF-SCH40-075-*	0.14 (0.06)	CD-SCH40-075-*	0.25 (0.11)	ORV-2515	OR^-2-214
3/4"	3/4" SCH80	CO-SCH80-075-*^-^	0.12 (0.05)	CF-SCH80-075-*	0.14 (0.06)	CD-SCH80-075-*	0.25 (0.11)	ORV-2315	OR^-2-214
1"	1" SCH40	CO-SCH40-100-*^-^	0.20 (0.09)	CF-SCH40-100-*	0.23 (0.10)	CD-SCH40-100-*	0.41 (0.19)	ORV-3015	OR^-2-219
1"	1" SCH80	CO-SCH80-100-*^-^	0.21 (0.10)	CF-SCH80-100-*	0.23 (0.10)	CD-SCH80-100-*	0.42 (0.19)	ORV-2815	OR^-2-219
1-1/4"	1-1/4" SCH40	CO-SCH40-125-*^-^	0.25 (0.11)	CF-SCH40-125-*	0.27 (0.12)	CD-SCH40-125-*	0.49 (0.22)	ORV-3815	OR^-2-222
1-1/4"	1-1/4" SCH80	CO-SCH80-125-*^-^	0.24 (0.11)	CF-SCH80-125-*	0.27 (0.12)	CD-SCH80-125-*	0.48 (0.22)	ORV-3815	OR^-2-222
1-1/4"	1-1/4" SCH160	CO-SCH160-125-*^-^	0.25 (0.11)	CF-SCH160-125-*	0.28 (0.12)	CD-SCH160-125-*	0.49 (0.22)	ORV-3515	OR^-2-222
1-1/2"	1-1/2" SCH40	CO-SCH40-150-*^-^	0.41 (0.19)	CF-SCH40-150-*	0.45 (0.20)	CD-SCH40-150-*	0.82 (0.37)	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH80	CO-SCH80-150-*^-^	0.42 (0.19)	CF-SCH80-150-*	0.46 (0.21)	CD-SCH80-150-*	0.84 (0.38)	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH160	CO-SCH160-150-*^-^	0.42 (0.19)	CF-SCH160-150-*	0.45 (0.20)	CD-SCH160-150-*	0.83 (0.37)	ORV-3815	OR^-2-225
2"	2" SCH40	CO-SCH40-200-*^-^	0.47 (0.21)	CF-SCH40-200-*	0.52 (0.24)	CD-SCH40-200-*	0.94 (0.43)	ORV-5615	OR^-2-228
2"	2" SCH80	CO-SCH80-200-*^-^	0.49 (0.22)	CF-SCH80-200-*	0.53 (0.24)	CD-SCH80-200-*	0.97 (0.44)	ORV-5515	OR^-2-228
2"	2" SCH160	CO-SCH160-200-*^-^	0.67 (0.30)	CF-SCH160-200-*	0.71 (0.32)	CD-SCH160-200-*	1.31 (0.59)	ORV-5015	OR^-2-228

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: CO-SCH80-200-SS-V

* Insert Material

^ Insert O-Ring 2 Type

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

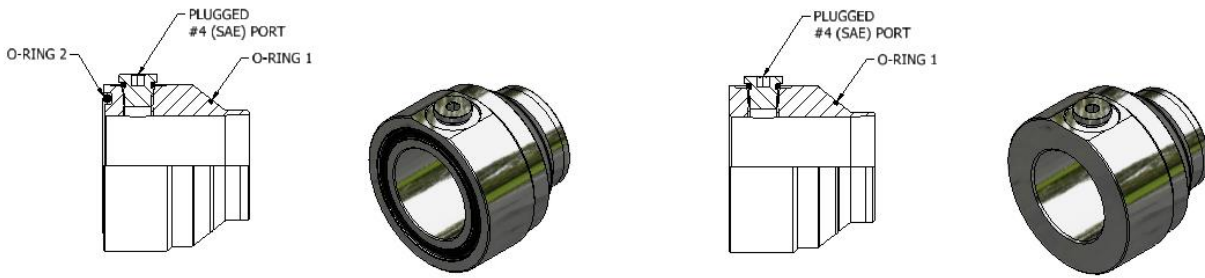
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 6000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, NPS

SAE J518 Code 61 (ISO 6162-2)



COP and CFP - Cone Inserts with Pilot Port for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	1/2" SCH40	COP-SCH40-050-*^	0.40 (0.18)	CFP-SCH40-050-*	0.40 (0.18)	ORV-1915	OR^2-210
1/2"	1/2" SCH80	COP-SCH80-050-*^	0.40 (0.18)	CFP-SCH80-050-*	0.40 (0.18)	ORV-1715	OR^2-210
3/4"	3/4" SCH40	COP-SCH40-075-*^	0.62(0.28)	CFP-SCH40-075-*	0.62(0.28)	ORV-2515	OR^2-214
3/4"	3/4" SCH80	COP-SCH80-075-*^	0.62 (0.28)	CFP-SCH80-075-*	0.62 (0.28)	ORV-2315	OR^2-214
1"	1" SCH40	COP-SCH40-100-*^	0.77 (0.35)	CFP-SCH40-100-*	0.77 (0.35)	ORV-3015	OR^2-219
1"	1" SCH80	COP-SCH80-100-*^	0.77 (0.35)	CFP-SCH80-100-*	0.77 (0.35)	ORV-2815	OR^2-219
1-1/4"	1-1/4" SCH40	COP-SCH40-125-*^	0.93 (0.42)	CFP-SCH40-125-*	0.93 (0.42)	ORV-3815	OR^2-222
1-1/4"	1-1/4" SCH80	COP-SCH80-125-*^	0.93 (0.42)	CFP-SCH80-125-*	0.93 (0.42)	ORV-3815	OR^2-222
1-1/4"	1-1/4" SCH160	COP-SCH160-125-*^	0.93 (0.42)	CFP-SCH160-125-*	0.93 (0.42)	ORV-3515	OR^2-222
1-1/2"	1-1/2" SCH40	COP-SCH40-150-*^	1.31 (0.59)	CFP-SCH40-150-*	1.31 (0.59)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH80	COP-SCH80-150-*^	1.31 (0.59)	CFP-SCH80-150-*	1.31 (0.59)	ORV-4315	OR^2-225
1-1/2"	1-1/2" SCH160	COP-SCH160-150-*^	1.20 (0.54)	CFP-SCH160-150-*	1.20 (0.54)	ORV-3815	OR^2-225
2"	2" SCH40	COP-SCH40-200-*^	1.70 (0.77)	CFP-SCH40-200-*	1.70 (0.77)	ORV-5615	OR^2-228
2"	2" SCH80	COP-SCH80-200-*^	1.70 (0.77)	CFP-SCH80-200-*	1.70 (0.77)	ORV-5515	OR^2-228
2"	2" SCH160	COP-SCH160-200-*^	1.64 (0.74)	CFP-SCH160-200-*	1.64 (0.74)	ORV-5015	OR^2-228

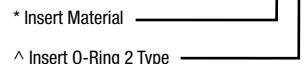
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

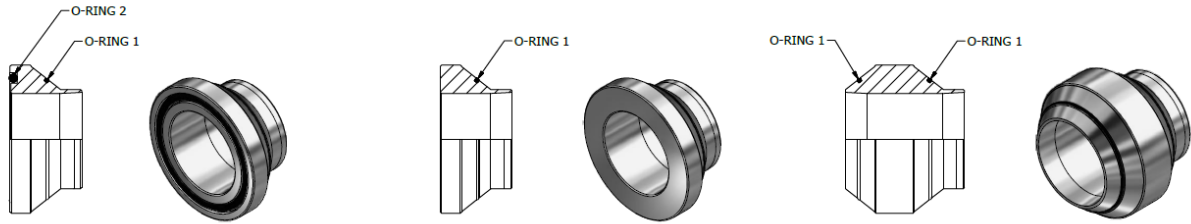
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: COP-SCH80-200-SS-V



SAE 6000 PSI Cone Inserts for Flare Flange Connections, Metric

SAE J518 Code 62 (ISO 6162-2)



TYPE CO

TYPE CF

TYPE CD

CO, CF and CD - Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	CO-20x2.0-050-* [^]	0.11 (0.05)	CF-20x2.0-050-*	0.11 (0.05)	CD-20x2.0-050-*	0.21 (0.10)	ORV-1715	OR [^] -2-210
1/2"	20x3.0	CO-20x3.0-050-* [^]	0.11 (0.05)	CF-20x3.0-050-*	0.11 (0.05)	CD-20x3.0-050-*	0.21 (0.10)	ORV-1715	OR [^] -2-210
1/2"	25x2.5	CO-25x2.5-050-* [^]	0.11 (0.05)	CF-25x2.5-050-*	0.11 (0.05)	CD-25x2.5-050-*	0.21 (0.10)	ORV-2315	OR [^] -2-210
1/2"	25x3.0	CO-25x3.0-050-* [^]	0.11 (0.05)	CF-25x3.0-050-*	0.11 (0.05)	CD-25x3.0-050-*	0.21 (0.10)	ORV-2315	OR [^] -2-210
3/4"	20x2.0	CO-20x2.0-075-* [^]	0.11 (0.05)	CF-20x2.0-075-*	0.11 (0.05)	CD-20x2.0-075-*	0.21 (0.10)	ORV-1715	OR [^] -2-214
3/4"	20x2.5	CO-20x2.5-075-* [^]	0.11 (0.05)	CF-20x2.5-075-*	0.11 (0.05)	CD-20x2.5-075-*	0.21 (0.10)	ORV-1715	OR [^] -2-214
3/4"	20x3.0	CO-20x3.0-075-* [^]	0.11 (0.05)	CF-20x3.0-075-*	0.11 (0.05)	CD-20x3.0-075-*	0.21 (0.10)	ORV-1715	OR [^] -2-214
3/4"	25x2.5	CO-25x2.5-075-* [^]	0.11 (0.05)	CF-25x2.5-075-*	0.11 (0.05)	CD-25x2.5-075-*	0.21 (0.10)	ORV-2315	OR [^] -2-214
3/4"	25x3.0	CO-25x3.0-075-* [^]	0.11 (0.05)	CF-25x3.0-075-*	0.11 (0.05)	CD-25x3.0-075-*	0.21 (0.10)	ORV-2315	OR [^] -2-214
3/4"	25x4.0	CO-25x4.0-075-* [^]	0.11 (0.05)	CF-25x4.0-075-*	0.11 (0.05)	CD-25x4.0-075-*	0.21 (0.10)	ORV-2315	OR [^] -2-214
3/4"	30x3.0	CO-30x3.0-075-* [^]	0.13 (0.06)	CF-30x3.0-075-*	0.14 (0.06)	CD-30x3.0-075-*	0.25 (0.11)	ORV-2315	OR [^] -2-214
1"	25x2.5	CO-25x2.5-100-* [^]	0.18 (0.08)	CF-25x2.5-100-*	0.19 (0.08)	CD-25x2.5-100-*	0.35 (0.16)	ORV-2315	OR [^] -2-219
1"	25x3.0	CO-25x3.0-100-* [^]	0.18 (0.08)	CF-25x3.0-100-*	0.19 (0.08)	CD-25x3.0-100-*	0.35 (0.16)	ORV-2315	OR [^] -2-219
1"	25x4.0	CO-25x4.0-100-* [^]	0.18 (0.08)	CF-25x4.0-100-*	0.19 (0.08)	CD-25x4.0-100-*	0.35 (0.16)	ORV-2315	OR [^] -2-219
1"	30x3.0	CO-30x3.0-100-* [^]	0.20 (0.09)	CF-30x3.0-100-*	0.21 (0.09)	CD-30x3.0-100-*	0.39 (0.18)	ORV-2815	OR [^] -2-219
1"	30x4.0	CO-30x4.0-100-* [^]	0.20 (0.09)	CF-30x4.0-100-*	0.21 (0.09)	CD-30x4.0-100-*	0.39 (0.18)	ORV-2815	OR [^] -2-219
1"	30x5.0	CO-30x5.0-100-* [^]	0.20 (0.09)	CF-30x5.0-100-*	0.21 (0.09)	CD-30x5.0-100-*	0.39 (0.18)	ORV-2815	OR [^] -2-219
1"	38x4.0	CO-38x4.0-100-* [^]	0.22 (0.10)	CF-38x4.0-100-*	0.23 (0.10)	CD-38x4.0-100-*	0.43 (0.19)	ORV-3015	OR [^] -2-219
1"	38x5.0	CO-38x5.0-100-* [^]	0.22 (0.10)	CF-38x5.0-100-*	0.23 (0.10)	CD-38x5.0-100-*	0.43 (0.19)	ORV-3215	OR [^] -2-219

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

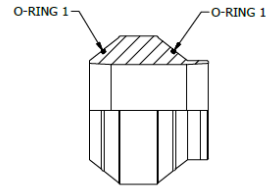
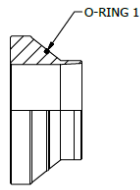
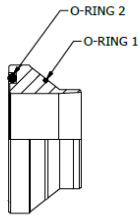
Ordering Example: CO-50x3.0-200-SS-V

* Insert Material _____
^ Insert O-Ring 2 Type _____

3D step models available upon request

SAE 6000 PSI Cone Inserts for Flare Flange Connections, Metric

SAE J518 Code 62 (ISO 6162-2)



TYPE CO

TYPE CF

TYPE CD

CO, CF and CD - Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/4"	30x3.0	CO-30x3.0-125-*^	0.22 (0.10)	CF-30x3.0-125-*	0.23 (0.10)	CD-30x3.0-125-*	0.43 (0.19)	ORV-2815	OR^2-222
1-1/4"	30x4.0	CO-30x4.0-125-*^	0.22 (0.10)	CF-30x4.0-125-*	0.23 (0.10)	CD-30x4.0-125-*	0.43 (0.19)	ORV-2815	OR^2-222
1-1/4"	30x5.0	CO-30x5.0-125-*^	0.22 (0.10)	CF-30x5.0-125-*	0.23 (0.10)	CD-30x5.0-125-*	0.43 (0.19)	ORV-2815	OR^2-222
1-1/4"	38x4.0	CO-38x4.0-125-*^	0.24 (0.11)	CF-38x4.0-125-*	0.25 (0.11)	CD-38x4.0-125-*	0.47 (0.21)	ORV-3515	OR^2-222
1-1/4"	38x5.0	CO-38x5.0-125-*^	0.24 (0.11)	CF-38x5.0-125-*	0.25 (0.11)	CD-38x5.0-125-*	0.47 (0.21)	ORV-3215	OR^2-222
1-1/4"	42x3.0	CO-42x3.0-125-*^	0.29 (0.13)	CF-42x3.0-125-*	0.30 (0.14)	CD-42x3.0-125-*	0.56 (0.25)	ORV-3815	OR^2-222
1-1/4"	42x4.0	CO-42x4.0-125-*^	0.29 (0.13)	CF-42x4.0-125-*	0.30 (0.14)	CD-42x4.0-125-*	0.56 (0.25)	ORV-3815	OR^2-222
1-1/2"	30x3.0	CO-30x3.0-150-*^	0.37 (0.17)	CF-30x3.0-150-*	0.38 (0.17)	CD-30x3.0-150-*	0.72 (0.33)	ORV-2815	OR^2-225
1-1/2"	38x4.0	CO-38x4.0-150-*^	0.40 (0.18)	CF-38x4.0-150-*	0.42 (0.19)	CD-38x4.0-150-*	0.78 (0.35)	ORV-3215	OR^2-225
1-1/2"	38x5.0	CO-38x5.0-150-*^	0.40 (0.18)	CF-38x5.0-150-*	0.42 (0.19)	CD-38x5.0-150-*	0.78 (0.35)	ORV-3215	OR^2-225
1-1/2"	42x3.0	CO-42x3.0-150-*^	0.40 (0.18)	CF-42x3.0-150-*	0.42 (0.19)	CD-42x3.0-150-*	0.78 (0.35)	ORV-3815	OR^2-225
1-1/2"	42x4.0	CO-42x4.0-150-*^	0.40 (0.18)	CF-42x4.0-150-*	0.42 (0.19)	CD-42x4.0-150-*	0.78 (0.35)	ORV-3815	OR^2-225
1-1/2"	50x3.0	CO-50x3.0-150-*^	0.42 (0.19)	CF-50x3.0-150-*	0.44 (0.20)	CD-50x3.0-150-*	0.81 (0.37)	ORV-4715	OR^2-225
1-1/2"	50x5.0	CO-50x5.0-150-*^	0.42 (0.19)	CF-50x5.0-150-*	0.44 (0.20)	CD-50x5.0-150-*	0.81 (0.37)	ORV-4515	OR^2-225
1-1/2"	50X6.0	CO-50X6.0-150-*^	0.42 (0.19)	CF-50X6.0-150-*	0.44 (0.20)	CD-50X6.0-150-*	0.81 (0.37)	ORV-4515	OR^2-225
1-1/2"	56X8.5	CO-56X8.5-150-*^	0.42 (0.19)	CF-56X8.5-150-*	0.44 (0.20)	CD-56X8.5-150-*	0.81 (0.37)	ORV-4315	OR^2-225
2"	50x3.0	CO-50x3.0-200-*^	0.44 (0.20)	CF-50x3.0-200-*	0.46 (0.21)	CD-50x3.0-200-*	0.85 (0.39)	ORV-4515	OR^2-228
2"	50x5.0	CO-50x5.0-200-*^	0.44 (0.20)	CF-50x5.0-200-*	0.46 (0.21)	CD-50x5.0-200-*	0.85 (0.39)	ORV-4515	OR^2-228
2"	50x6.0	CO-50x6.0-200-*^	0.44 (0.20)	CF-50x6.0-200-*	0.46 (0.21)	CD-50x6.0-200-*	0.85 (0.39)	ORV-4515	OR^2-228
2"	60x3.0	CO-60x3.0-200-*^	0.46 (0.21)	CF-60x3.0-200-*	0.48 (0.22)	CD-60x3.0-200-*	0.89 (0.40)	ORV-5715	OR^2-228
2"	60x5.0	CO-60x5.0-200-*^	0.46 (0.21)	CF-60x5.0-200-*	0.48 (0.22)	CD-60x5.0-200-*	0.89 (0.40)	ORV-5615	OR^2-228
2"	60x6.0	CO-60x6.0-200-*^	0.46 (0.21)	CF-60x6.0-200-*	0.48 (0.22)	CD-60x6.0-200-*	0.89 (0.40)	ORV-5615	OR^2-228
2"	60X8.0	CO-60X8.0-200-*^	0.46 (0.21)	CF-60X8.0-200-*	0.48 (0.22)	CD-60X8.0-200-*	0.89 (0.40)	ORV-5015	OR^2-228
2"	66X8.5	CO-66X8.5-200-*^	0.46 (0.21)	CF-66X8.5-200-*	0.48 (0.22)	CD-66X8.5-200-*	0.89 (0.40)	ORV-5615	OR^2-228

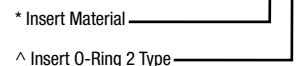
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

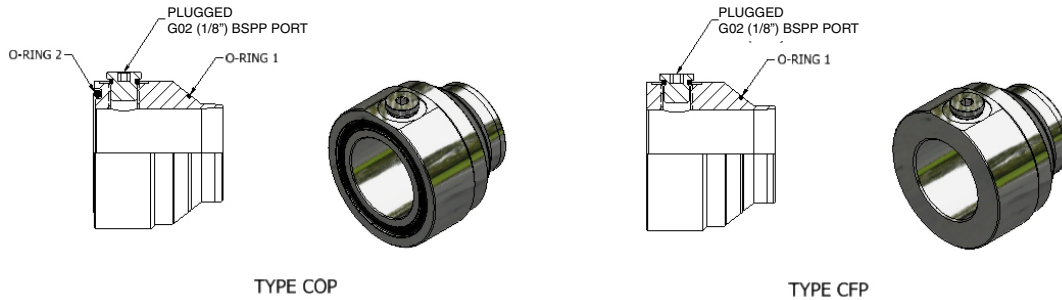
Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: CO-50x3.0-200-SS-V



SAE 6000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 62 (ISO 6162-2)



COP and CFP - Cone Inserts with Pilot Port for Flare Flange Connections, Metric							
Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1/2"	20x2.0	COP-20x2.0-050-*^-^	0.40 (0.18)	CFP-20x2.0-050-*	0.40 (0.18)	ORV-1715	OR^-2-210
1/2"	20x3.0	COP-20x3.0-050-*^-^	0.40 (0.18)	CFP-20x3.0-050-*	0.40 (0.18)	ORV-1715	OR^-2-210
1/2"	25x2.5	COP-25x2.5-050-*^-^	0.51 (0.23)	CFP-25x2.5-050-*	0.51 (0.23)	ORV-2315	OR^-2-210
1/2"	25x3.0	COP-25x3.0-050-*^-^	0.51 (0.23)	CFP-25x3.0-050-*	0.51 (0.23)	ORV-2315	OR^-2-210
3/4"	20x2.0	COP-20x2.0-075-*^-^	0.55 (0.25)	CFP-20x2.0-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	20x2.5	COP-20x2.5-075-*^-^	0.55 (0.25)	CFP-20x2.5-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	20x3.0	COP-20x3.0-075-*^-^	0.55 (0.25)	CFP-20x3.0-075-*	0.55 (0.25)	ORV-1715	OR^-2-214
3/4"	25x2.5	COP-25x2.5-075-*^-^	0.62 (0.28)	CFP-25x2.5-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	25x3.0	COP-25x3.0-075-*^-^	0.62 (0.28)	CFP-25x3.0-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	25x4.0	COP-25x4.0-075-*^-^	0.62 (0.28)	CFP-25x4.0-075-*	0.62 (0.28)	ORV-2315	OR^-2-214
3/4"	30x3.0	COP-30x3.0-075-*^-^	0.68 (0.31)	CFP-30x3.0-075-*	0.68 (0.31)	ORV-2515	OR^-2-214
1"	25x2.5	COP-25x2.5-100-*^-^	0.70 (0.32)	CFP-25x2.5-100-*	0.70 (0.32)	ORV-2315	OR^-2-219
1"	25x3.0	COP-25x3.0-100-*^-^	0.70 (0.32)	CFP-25x3.0-100-*	0.70 (0.32)	ORV-2815	OR^-2-219
1"	25x4.0	COP-25x4.0-100-*^-^	0.70 (0.32)	CFP-25x4.0-100-*	0.70 (0.32)	ORV-2315	OR^-2-219
1"	30x3.0	COP-30x3.0-100-*^-^	0.77 (0.35)	CFP-30x3.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	30x4.0	COP-30x4.0-100-*^-^	0.77 (0.35)	CFP-30x4.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	30x5.0	COP-30x5.0-100-*^-^	0.77 (0.35)	CFP-30x5.0-100-*	0.77 (0.35)	ORV-2815	OR^-2-219
1"	38x4.0	COP-38x4.0-100-*^-^	0.81 (0.37)	CFP-38x4.0-100-*	0.81 (0.37)	ORV-3515	OR^-2-219
1"	38x5.0	COP-38x5.0-100-*^-^	0.79 (0.36)	CFP-38x5.0-100-*	0.79 (0.36)	ORV-3215	OR^-2-219
1-1/4"	30x3.0	COP-30x3.0-125-*^-^	0.82 (0.37)	CFP-30x3.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	30x4.0	COP-30x4.0-125-*^-^	0.82 (0.37)	CFP-30x4.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	30x5.0	COP-30x5.0-125-*^-^	0.82 (0.37)	CFP-30x5.0-125-*	0.82 (0.37)	ORV-2815	OR^-2-222
1-1/4"	38x4.0	COP-38x4.0-125-*^-^	0.86 (0.39)	CFP-38x4.0-125-*	0.86 (0.39)	ORV-3515	OR^-2-222
1-1/4"	38x5.0	COP-38x5.0-125-*^-^	0.86 (0.39)	CFP-38x5.0-125-*	0.86 (0.39)	ORV-3215	OR^-2-222
1-1/4"	42x3.0	COP-42x3.0-125-*^-^	0.93 (0.42)	CFP-42x3.0-125-*	0.93 (0.42)	ORV-3815	OR^-2-222
-1/4"	42x4.0	COP-42x4.0-125-*^-^	0.93 (0.42)	CFP-42x4.0-125-*	0.93 (0.42)	ORV-3815	OR^-2-222

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: COP-50x3.0-200-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

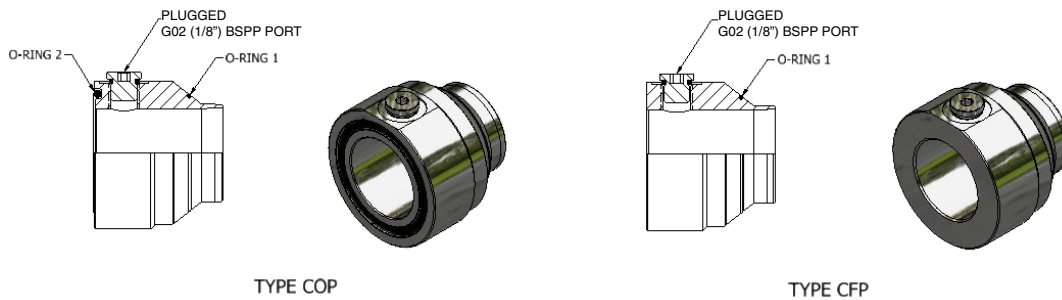
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 6000 PSI Cone Inserts with Pilot Port for Flare Flange Connections, Metric

SAE J518 Code 62 (ISO 6162-2)



TYPE COP

TYPE CFP

COP and CFP - Cone Inserts with Pilot Port for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COP)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CFP)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	30x3.0	COP-30x3.0-150-*^	1.02 (0.46)	CFP-30x3.0-150-*	1.02 (0.46)	ORV-2815	OR^~2-225
1-1/2"	38x4.0	COP-38x4.0-150-*^	1.02 (0.46)	CFP-38x4.0-150-*	1.02 (0.46)	ORV-3215	OR^~2-225
1-1/2"	42x3.0	COP-42x3.0-150-*^	1.21 (0.55)	CFP-42x3.0-150-*	1.21 (0.55)	ORV-3815	OR^~2-225
1-1/2"	42x4.0	COP-42x4.0-150-*^	1.21 (0.55)	CFP-42x4.0-150-*	1.21 (0.55)	ORV-3815	OR^~2-225
1-1/2"	50x3.0	COP-50x3.0-150-*^	1.31 (0.59)	CFP-50x3.0-150-*	1.31 (0.59)	ORV-4715	OR^~2-225
1-1/2"	50x5.0	COP-50x5.0-150-*^	1.31 (0.59)	CFP-50x5.0-150-*	1.31 (0.59)	ORV-4515	OR^~2-225
1-1/2"	50x6.0	COP-50x6.0-150-*^	1.28 (0.58)	CFP-50x6.0-150-*	1.28 (0.58)	ORV-4515	OR^~2-225
1-1/2"	56X8.5	COP-56X8.5-150-*^	1.28 (0.58)	CFP-56X8.5-150-*	1.28 (0.58)	ORV-4315	OR^~2-225
2"	50x3.0	COP-50x3.0-200-*^	1.58 (0.72)	CFP-50x3.0-200-*	1.58 (0.72)	ORV-4515	OR^~2-228
2"	50x5.0	COP-50x5.0-200-*^	1.58 (0.72)	CFP-50x5.0-200-*	1.58 (0.72)	ORV-4515	OR^~2-228
2"	50x6.0	COP-50x6.0-200-*^	1.55 (0.70)	CFP-50x6.0-200-*	1.55 (0.70)	ORV-4515	OR^~2-228
2"	60x3.0	COP-60x3.0-200-*^	1.70 (0.77)	CFP-60x3.0-200-*	1.70 (0.77)	ORV-5715	OR^~2-228
2"	60x5.0	COP-60x5.0-200-*^	1.70 (0.77)	CFP-60x5.0-200-*	1.70 (0.77)	ORV-5615	OR^~2-228
2"	60x6.0	COP-60x6.0-200-*^	1.62 (0.73)	CFP-60x6.0-200-*	1.62 (0.73)	ORV-5615	OR^~2-228
2"	60X8.0	COP-60X8.0-200-*^	1.62 (0.73)	CFP-60X8.0-200-*	1.62 (0.73)	ORV-5015	OR^~2-228
2"	66X8.5	COP-66X8.5-200-*^	1.62 (0.73)	CFP-66X8.5-200-*	1.62 (0.73)	ORV-5615	OR^~2-228

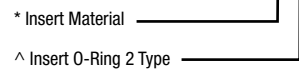
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

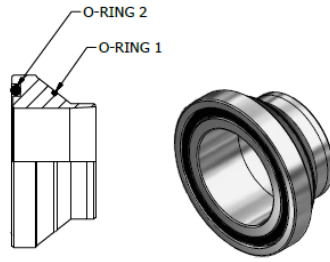
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: COP-50x3.0-200-SS-V



SAE 6000 PSI Cone Inserts Reducer for Flare Flange Connections with O-Ring Face, NPS

SAE J518 Code 62 (ISO 6162-2)



TYPE COR

COR - Cone Inserts Reducer for Flare Flange Connections with O Ring Face, NPS

Flange Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type COR)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
3/4"	1/2" SCH40	COR-SCH40-075x050-*^-^	0.15 (0.07)	ORV-1715	OR^-2-214
3/4"	1/2" SCH80	COR-SCH80-075x050-*^-^	0.16 (0.07)	ORV-1715	OR^-2-214
1"	3/4" SCH40	COR-SCH40-100x075-*^-^	0.25 (0.11)	ORV-2315	OR^-2-219
1"	3/4" SCH80	COR-SCH80-100x075-*^-^	0.27 (0.12)	ORV-2315	OR^-2-219
1-1/4"	1" SCH40	COR-SCH40-125x100-*^-^	0.34 (0.15)	ORV-2815	OR^-2-222
1-1/4"	1" SCH80	COR-SCH80-125x100-*^-^	0.37 (0.17)	ORV-2815	OR^-2-222
1-1/2"	1 1/4" SCH40	COR-SCH40-150x125-*^-^	0.51 (0.23)	ORV-3815	OR^-2-225
1-1/2"	1 1/4" SCH80	COR-SCH80-150x125-*^-^	0.56 (0.25)	ORV-3815	OR^-2-225
2"	1 1/2" SCH40	COR-SCH40-200x150-*^-^	0.59 (0.27)	ORV-4515	OR^-2-228
2"	1 1/2" SCH80	COR-SCH80-200x150-*^-^	0.66 (0.30)	ORV-4515	OR^-2-228

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

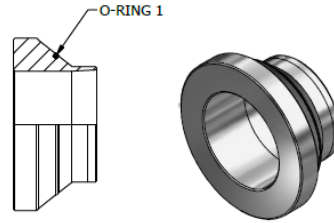
Ordering Example: COR-SCH80-100x075-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

SAE 6000 PSI Cone Inserts Reducer for Flare Flange Connections with Flat Face, NPS

SAE J518 Code 62 (ISO 6162-2)



TYPE CFR

CFR Cone Inserts Reducer for Flare Flange Connections with Flat Face, NPS

Flange Size	Pipe Size	Flat Face Cone Insert Part Number (Type CFR)	WT lbs (kg)	O-Ring 1 (VITON) Part Number
3/4"	1/2" SCH40	CFR-SCH40-075x050-*^-^	0.17 (0.08)	ORV-1915
3/4"	1/2" SCH80	CFR-SCH80-075x050-*^-^	0.18 (0.08)	ORV-1715
1"	3/4" SCH40	CFR-SCH40-100x075-*^-^	0.28 (0.13)	ORV-2515
1"	3/4" SCH80	CFR-SCH80-100x075-*^-^	0.30 (0.14)	ORV-2315
1-1/4"	1" SCH40	CFR-SCH40-125x100-*^-^	0.37 (0.17)	ORV-3015
1-1/4"	1" SCH80	CFR-SCH80-125x100-*^-^	0.40 (0.18)	ORV-2815
1-1/2"	1 1/4" SCH40	CFR-SCH40-150x125-*^-^	0.55 (0.25)	ORV-3815
1-1/2"	1 1/4" SCH80	CFR-SCH80-150x125-*^-^	0.60 (0.27)	ORV-3815
2"	1 1/2" SCH40	CFR-SCH40-200x150-*^-^	0.64 (0.29)	ORV-4315
2"	1 1/2" SCH80	CFR-SCH80-200x150-*^-^	0.71 (0.32)	ORV-4315

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

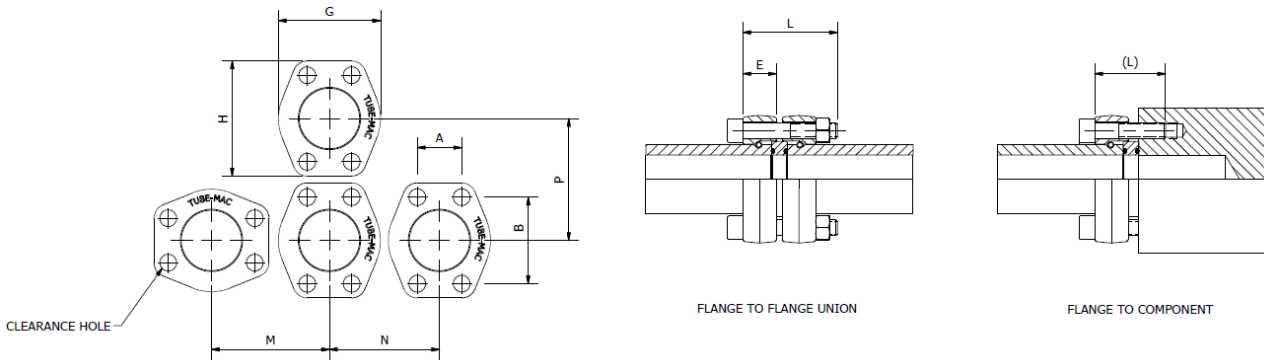
Ordering Example: COR-SCH80-100-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

SAE 6000 PSI Retain Ring Flange Dimensions

SAE J518 Code 62 (ISO 6162-2)



Retain Ring Flange Dimensions (Inches)

Size	Dimensions (in)								SHCS Bolt* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	0.72	1.59	1.88	2.22	2.20	2.09	2.32	0.81	5/16"-18 UNC x 2.25 (1.50)	6000 (420)
3/4"	0.94	2.00	2.38	2.81	2.76	2.68	2.95	1.02	3/8"-16 UNC x 2.75 (1.75)	6000 (420)
1"	1.09	2.25	2.75	3.19	3.19	2.99	3.35	1.03	7/16"-14 UNC x 2.75 (1.75)	6000 (420)
1-1/4"	1.25	2.63	3.06	3.75	3.58	3.27	3.90	1.25	1/2"-13 UNC x 3.25 (2.00)	6000 (420)
1-1/2"	1.44	3.13	3.75	4.44	4.25	3.98	4.57	1.38	5/8"-11 UNC x 4.00 (2.50)	6000 (420)
2"	1.75	3.81	4.50	5.25	5.04	4.72	5.39	1.68	3/4"-10 UNC x 4.50 (2.75)	6000 (420)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 B8M Class 2

Retain Ring Flange Dimensions (Millimeters)

Size	Dimensions (mm)								SHCS Bolt* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	18.3	40.4	47.8	56.4	55.9	53.1	58.9	20.6	M8 x 60 (40)	6000 (420)
3/4"	23.9	50.8	60.5	71.4	70.1	68.1	74.9	25.9	M10 x 70 (45)	6000 (420)
1"	27.7	57.2	69.9	81.0	81.0	75.9	85.1	26.2	M12 x 70 (45)	6000 (420)
1-1/4"	31.8	66.8	77.7	95.3	90.9	83.1	99.1	31.8	M12 x 80 (50)	6000 (420)
1-1/4" (2)	31.8	66.8	77.7	95.3	90.9	83.1	99.1	31.8	M14 x 80 (50)	6000 (420)
1-1/2"	36.6	79.5	95.3	112.8	108.0	101.1	116.1	35.1	M16 x 100 (65)	6000 (420)
2"	44.5	96.8	114.3	133.4	128.0	119.9	136.9	42.7	M20 x 120 (70)	6000 (420)

* SHCS Bolt Specification

Carbon Steel: DIN912 / ISO4762 Grade 8.8

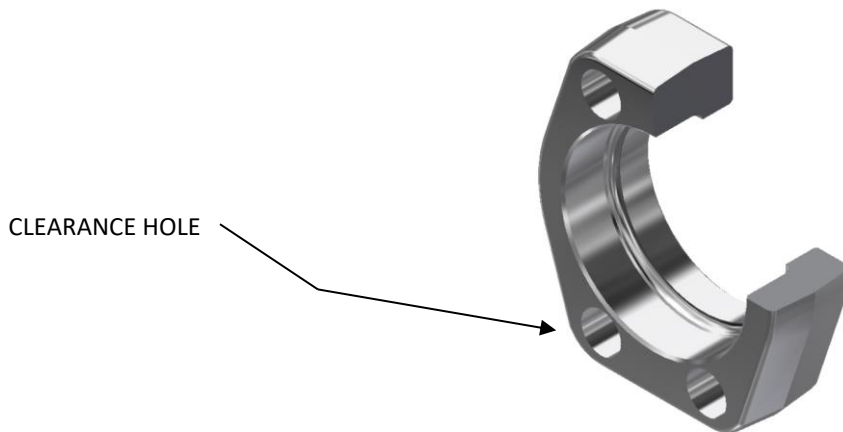
316 Stainless Steel: DIN912 / ISO4762 A480

(2) Designates M14 Bolt – Special Order

3D step models available upon request

SAE 6000 PSI Retain Ring Flange with Clearance Holes

SAE J518 Code 62 (ISO 6162-2)



RFAC64 – Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	1 1/2" SCHXXS	RFAC64-150-*	6000 (420)	3.14 (1.43)
2"	2" SCH160/XXS	RFAC64-200-*	6000 (420)	4.82 (2.19)

RFC64 - Retain Ring Flange with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFC64-050-*	6000 (420)	0.43 (0.20)
3/4"	36X8.0	RFC64-075-*	6000 (420)	0.83 (0.38)
1"	39X7.5	RFC64-100-*	6000 (420)	1.16 (0.51)
1-1/4"	46X8.0	RFC64-125-*	6000 (420)	1.86 (0.85)
1-1/4" ⁽²⁾	46X8.0	RFC64-125-M14-*	6000 (420)	1.86 (0.85)
1-1/2"	56X8.5	RFC64-150-*	6000 (420)	3.14 (1.43)
2"	66X8.5	RFC64-200-*	6000 (420)	4.82 (2.19)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

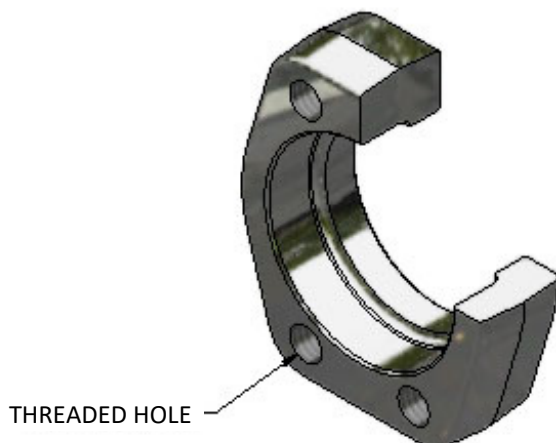
(2) Designates M14 Bolt – Special Order

Ordering Example: RFAC64-200-SS

* Insert Material _____

SAE 6000 PSI Retain Ring Flange with Threaded Holes

SAE J518 Code 62 (ISO 6162-2)



RFAT64 – Retain Ring Flange with UNC Threaded Holes, for Grooved NPS Pipe Only

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1-1/2"	1 1/2" SCHXXS	RFAT64-150-*	6000 (420)	3.14 (1.43)
2"	2" SCH160/XXS	RFAT64-200-*	6000 (420)	4.82 (2.19)

RFT64 - Retain Ring Flange with UNC Threaded Holes, Metric Pipe

Size	Pipe Size	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFT64-050-*	6000 (420)	0.43 (0.20)
3/4"	36X8.0	RFT64-075-*	6000 (420)	0.83 (0.38)
1"	39X7.5	RFT64-100-*	6000 (420)	1.16 (0.51)
1-1/4"	46X8.0	RFT64-125-*	6000 (420)	1.86 (0.85)
1-1/2"	56X8.5	RFT64-150-*	6000 (420)	3.14 (1.43)
2"	66X8.5	RFT64-200-*	6000 (420)	4.82 (2.19)

RFTM64 - Retain Ring Flange with Metric Threaded Holes, Metric Pipe

Size	Pipe Size OD x Wall	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	26X6.0	RFTM64-050-*	6000 (420)	0.43 (0.20)
3/4"	36X8.0	RFTM64-075-*	6000 (420)	0.83 (0.38)
1"	39X7.5	RFTM64-100-*	6000 (420)	1.16 (0.51)
1-1/4"	46X8.0	RFTM64-125-*	6000 (420)	1.86 (0.85)
1-1/4" (2)	46X8.0	RFTM64-125-M14-*	6000 (420)	1.86 (0.85)
1-1/2"	56X8.5	RFTM64-150-*	6000 (420)	3.14 (1.43)
2"	66X8.5	RFTM64-200-*	6000 (420)	4.82 (2.19)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

(2) Designates M14 Bolt – Special Order

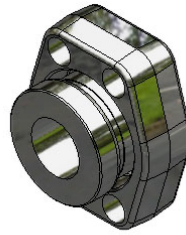
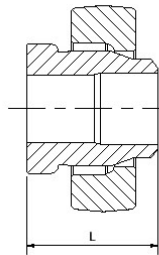
Ordering Example: RFAT64-200-SS

* Insert Material _____

3D step models available upon request

SAE 6000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	1/2" SCH80	A/BWA-SCH80-050-FC64-*	0.67 (0.30)	1.25	BWA-SCH80-050-*	RFC64-050-*
1/2"	1/2" SCH160	A/BWA-SCH160-050-FC64-*	0.68 (0.31)	1.25	BWA-SCH160-050-*	RFC64-050-*
1/2"	1/2" SCHXXS	A/BWA-SCHXXS-050-FC64-*	0.69 (0.31)	1.25	BWA-SCHXXS-050-*	RFC64-050-*
3/4"	3/4" SCH80	A/BWA-SCH80-075-FC64-*	1.29 (0.59)	1.75	BWA-SCH80-075-*	RFC64-075-*
3/4"	3/4" SCH160	A/BWA-SCH160-075-FC64-*	1.37 (0.62)	1.75	BWA-SCH160-075-*	RFC64-075-*
3/4"	3/4" SCHXXS	A/BWA-SCHXXS-075-FC64-*	1.40 (0.64)	1.75	BWA-SCHXXS-075-*	RFC64-075-*
1"	1" SCH80	A/BWA-SCH80-100-FC64-*	1.66 (0.75)	1.75	BWA-SCH80-100-*	RFC64-100-*
1"	1" SCH160	A/BWA-SCH160-100-FC64-*	1.77 (0.80)	1.75	BWA-SCH160-100-*	RFC64-100-*
1"	1" SCHXXS	A/BWA-SCHXXS-100-FC64-*	1.81 (0.82)	1.75	BWA-SCHXXS-100-*	RFC64-100-*
1-1/4"	1-1/4" SCH80	A/BWA-SCH80-125-FC64-*	2.69 (1.22)	2.00	BWA-SCH80-125-*	RFC64-125-*
1-1/4"	1-1/4" SCH160	A/BWA-SCH160-125-FC64-*	2.72 (1.24)	2.00	BWA-SCH160-125-*	RFC64-125-*
1-1/4"	1-1/4" SCHXXS	A/BWA-SCHXXS-125-FC64-*	2.83 (1.29)	2.00	BWA-SCHXXS-125-*	RFC64-125-*
1-1/2"	1-1/2" SCH80	A/BWA-SCH80-150-FC64-*	3.79 (1.72)	2.25	BWA-SCH80-150-*	RFC64-150-*
1-1/2"	1-1/2" SCH160	A/BWA-SCH160-150-FC64-*	4.43 (2.01)	2.25	BWA-SCH160-150-*	RFC64-150-*
1-1/2"	1-1/2" SCHXXS	A/BWA-SCHXXS-150-FC64-*	4.45 (2.02)	2.25	BWA-SCHXXS-150-*	RFC64-150-*
2"	2" SCH80	A/BWA-SCH80-200-FC64-*	6.50 (2.95)	2.50	BWA-SCH80-200-*	RFC64-200-*
2"	2" SCH160	A/BWA-SCH160-200-FC64-*	6.67 (3.03)	2.50	BWA-SCH160-200-*	RFC64-200-*
2"	2" SCHXXS	A/BWA-SCHXXS-200-FC64-*	6.71 (3.05)	2.50	BWA-SCHXXS-200-*	RFC64-200-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

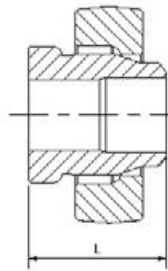
To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

Ordering Example: A/BWA-SCH80-200-FC64-SS

* Insert Material

SAE 6000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	16.0x2.0	A/BWA-16.0X2.0-050-FC64-*	0.68 (0.31)	38.1	BWA-16.0X2.0-050-*	RFC64-050-*
1/2"	18.0x2.0	A/BWA-18.0X2.0-050-FC64-*	0.68 (0.31)	38.1	BWA-18.0X2.0-050-*	RFC64-050-*
1/2"	20.0x2.0	A/BWA-20.0X2.0-050-FC64-*	0.70 (0.35)	38.1	BWA-20.0X2.0-050-*	RFC64-050-*
1/2"	20.0x2.5	A/BWA-20.0X2.5-050-FC64-*	0.70 (0.35)	38.1	BWA-20.0X2.5-050-*	RFC64-050-*
1/2"	20.0x3.0	A/BWA-20.0X3.0-050-FC64-*	0.70 (0.35)	38.1	BWA-20.0X3.0-050-*	RFC64-050-*
1/2"	21.3x2.8	A/BWA-SCH40-050-FC64-*	0.66 (0.30)	31.8	BWA-SCH40-050-*	RFC64-050-*
1/2"	21.3X3.7	A/BWA-SCH80-050-FC64-*	0.67 (0.30)	31.8	BWA-SCH80-050-*	RFC64-050-*
1/2"	21.3x4.8	A/BWA-SCH160-050-FC64-*	0.68 (0.31)	31.8	BWA-SCH160-050-*	RFC64-050-*
1/2"	21.3X7.5	A/BWA-SCHXXS-050-FC64-*	0.69 (0.31)	31.8	BWA-SCHXXS-050-*	RFC64-050-*
1/2"	25.0X2.5	A/BWA-25.0X2.5-050-FC64-*	0.69 (0.31)	38.1	BWA-25.0X2.5-050-*	RFC64-050-*
1/2"	25.0X3.0	A/BWA-25.0X3.0-050-FC64-*	0.69 (0.31)	38.1	BWA-25.0X3.0-050-*	RFC64-050-*
1/2"	26.0X6.0	A/BWA-26.0X6.0-050-FC64-*	0.74 (0.34)	38.1	BWA-26.0X6.0-050-*	RFC64-050-*
3/4"	20.0X2.0	A/BWA-20.0X2.0-075-FC64-*	1.32 (0.60)	44.5	BWA-20.0X2.0-075-*	RFC64-075-*
3/4"	20.0X2.5	A/BWA-20.0X2.5-075-FC64-*	1.34 (0.61)	44.5	BWA-20.0X2.5-075-*	RFC64-075-*
3/4"	20.0X3.0	A/BWA-20.0X3.0-075-FC64-*	1.34 (0.61)	44.5	BWA-20.0X3.0-075-*	RFC64-075-*
3/4"	25.0X2.5	A/BWA-25.0X2.5-075-FC64-*	1.31 (0.60)	44.5	BWA-25.0X2.5-075-*	RFC64-075-*
3/4"	25.0X3.0	A/BWA-25.0X3.0-075-FC64-*	1.32 (0.60)	44.5	BWA-25.0X3.0-075-*	RFC64-075-*
3/4"	25.0X4.0	A/BWA-25.0X4.0-075-FC64-*	1.34 (0.61)	44.5	BWA-25.0X4.0-075-*	RFC64-075-*
3/4"	26.7X2.9	A/BWA-SCH40-075-FC64-*	1.27 (0.58)	44.5	BWA-SCH40-075-*	RFC64-075-*
3/4"	26.7X3.9	A/BWA-SCH80-075-FC64-*	1.29 (0.59)	44.5	BWA-SCH80-075-*	RFC64-075-*
3/4"	26.7X5.5	A/BWA-SCH160-075-FC64-*	1.37 (0.62)	44.5	BWA-SCH160-075-*	RFC64-075-*
3/4"	26.7X7.8	A/BWA-SCHXXS-075-FC64-*	2.02 (0.92)	44.5	BWA-SCHXXS-075-*	RFC64-075-*
3/4"	30.0X3.0	A/BWA-30.0X3.0-075-FC64-*	1.22 (0.55)	44.5	BWA-30.0X3.0-075-*	RFC64-075-*
3/4"	30.0X4.0	A/BWA-30.0X4.0-075-FC64-*	1.25 (0.57)	44.5	BWA-30.0X4.0-075-*	RFC64-075-*
3/4"	36.0X8.0	A/BWA-36.0X8.0-075-FC64-*	1.40 (0.64)	44.5	BWA-36.0X8.0-075-*	RFC64-075-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

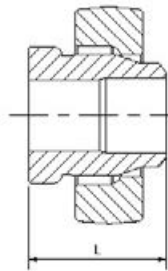
Ordering Example: A/BWA-50.0X3.0-200-FC64-SS

* Insert Material _____

3D step models available upon request

SAE 6000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1"	25.0X2.5	A/BWA-25.0X2.5-100-FC64-*	1.64 (0.75)	44.5	BWA-25.0X2.5-100-*	RFC64-100-*
1"	25.0x3.0	A/BWA-25.0X3.0-100-FC64-*	1.64 (0.75)	44.5	BWA-25.0X3.0-100-*	RFC64-100-*
1"	25.0X4.0	A/BWA-25.0X4.0-100-FC64-*	1.67 (0.76)	44.5	BWA-25.0X4.0-100-*	RFC64-100-*
1"	30.0X3.0	A/BWA-30.0X3.0-100-FC64-*	1.68 (0.76)	44.5	BWA-30.0X3.0-100-*	RFC64-100-*
1"	30.0X4.0	A/BWA-30.0X4.0-100-FC64-*	1.66 (0.75)	44.5	BWA-30.0X4.0-100-*	RFC64-100-*
1"	30.0X5.0	A/BWA-30.0X5.0-100-FC64-*	1.73 (0.79)	44.5	BWA-30.0X5.0-100-*	RFC64-100-*
1"	33.4X3.4	A/BWA-SCH40-100-FC64-*	1.66 (0.75)	44.5	BWA-SCH40-100-*	RFC64-100-*
1"	33.4X4.6	A/BWA-SCH80-100-FC64-*	1.66 (0.75)	44.5	BWA-SCH80-100-*	RFC64-100-*
1"	33.4X6.4	A/BWA-SCH160-100-FC64-*	1.77 (0.80)	44.5	BWA-SCH160-100-*	RFC64-100-*
1"	33.4X9.1	A/BWA-SCHXXS-100-FC64-*	1.81 (0.82)	44.5	BWA-SCHXXS-100-*	RFC64-100-*
1"	38.0X4.0	A/BWA-38.0X4.0-100-FC64-*	1.66 (0.75)	44.5	BWA-38.0X4.0-100-*	RFC64-100-*
1"	38.0X5.0	A/BWA-38.0X5.0-100-FC64-*	1.66 (0.75)	44.5	BWA-38.0X5.0-100-*	RFC64-100-*
1"	38.0X6.0	A/BWA-38.0X6.0-100-FC64-*	1.75 (0.80)	44.5	BWA-38.0X6.0-100-*	RFC64-100-*
1"	39.0X7.5	A/BWA-39.0X7.5-100-FC64-*	1.78 (0.81)	44.5	BWA-39.0X7.5-100-*	RFC64-100-*
1-1/4"	30.0X3.0	A/BWA-30.0X3.0-125-FC64-*	2.67 (1.21)	50.8	BWA-30.0X3.0-125-*	RFC64-125-*
1-1/4"	30.0X4.0	A/BWA-30.0X4.0-125-FC64-*	2.70 (1.23)	50.8	BWA-30.0X4.0-125-*	RFC64-125-*
1-1/4"	30.0X5.0	A/BWA-30.0X5.0-125-FC64-*	2.72 (1.24)	50.8	BWA-30.0X5.0-125-*	RFC64-125-*
1-1/4"	38.0X4.0	A/BWA-38.0X4.0-125-FC64-*	2.66 (1.21)	50.8	BWA-38.0X4.0-125-*	RFC64-125-*
1-1/4"	38.0X5.0	A/BWA-38.0X5.0-125-FC64-*	2.69 (1.22)	50.8	BWA-38.0X5.0-125-*	RFC64-125-*
1-1/4"	38.0X6.0	A/BWA-38.0X6.0-125-FC64-*	2.72 (1.24)	50.8	BWA-38.0X6.0-125-*	RFC64-125-*
1-1/4"	42.0X3.0	A/BWA-42.0X3.0-125-FC64-*	2.67 (1.21)	50.8	BWA-42.0X3.0-125-*	RFC64-125-*
1-1/4"	42.0X4.0	A/BWA-42.0X4.0-125-FC64-*	2.68 (1.22)	50.8	BWA-42.0X4.0-125-*	RFC64-125-*
1-1/4"	42.2X3.6	A/BWA-SCH40-125-FC64-*	2.68 (1.22)	50.8	BWA-SCH40-125-*	RFC64-125-*
1-1/4"	42.2X4.9	A/BWA-SCH80-125-FC64-*	2.68 (1.22)	50.8	BWA-SCH80-125-*	RFC64-125-*
1-1/4"	42.2X6.4	A/BWA-SCH160-125-FC64-*	2.68 (1.22)	50.8	BWA-SCH160-125-*	RFC64-125-*
1-1/4"	42.2X9.7	A/BWA-SCHXXS-125-FC64-*	2.83 (1.29)	50.8	BWA-SCHXXS-125-*	RFC64-125-*
1-1/4"	46.0X8.5	A/BWA-46.0X8.5-125-FC64-*	2.83 (1.29)	50.8	BWA-46.0X8.5-125-*	RFC64-125-*

IMPORTANT NOTE: For 1-1/4" SAE 6000 PSI (ISO 6162-2) Flanges with M14 bolt requirements please add -M14 to the end of the part numbers above

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

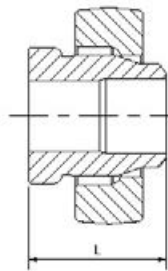
Ordering Example: A/BWA-50.0X3.0-200-FC64-SS

* Insert Material

3D step models available upon request

SAE 6000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWA - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	38.0X4.0	A/BWA-38.0X4.0-150-FC64-*	4.13 (1.88)	57.2	BWA-38.0X4.0-150-*	RFC64-150-*
1-1/2"	38.0X5.0	A/BWA-38.0X5.0-150-FC64-*	4.08 (1.85)	57.2	BWA-38.0X5.0-150-*	RFC64-150-*
1-1/2"	38.0X6.0	A/BWA-38.0X6.0-150-FC64-*	4.21 (1.91)	57.2	BWA-38.0X6.0-150-*	RFC64-150-*
1-1/2"	42.0X3.0	A/BWA-42.0X3.0-150-FC64-*	4.03 (1.83)	57.2	BWA-42.0X3.0-150-*	RFC64-150-*
1-1/2"	42.0X4.0	A/BWA-42.0X4.0-150-FC64-*	4.08 (1.85)	57.2	BWA-42.0X4.0-150-*	RFC64-150-*
1-1/2"	48.3X3.7	A/BWA-SCH40-150-FC64-*	4.18 (1.90)	57.2	BWA-SCH40-150-*	RFC64-150-*
1-1/2"	48.3X5.1	A/BWA-SCH80-150-FC64-*	4.11 (1.87)	57.2	BWA-SCH80-150-*	RFC64-150-*
1-1/2"	48.3X7.1	A/BWA-SCH160-150-FC64-*	4.43 (2.01)	57.2	BWA-SCH160-150-*	RFC64-150-*
1-1/2"	48.3X10.2	A/BWA-SCHXXS-150-FC64-*	4.37 (1.99)	57.2	BWA-SCHXXS-150-*	RFC64-150-*
1-1/2"	50.0X3.0	A/BWA-50.0X3.0-150-FC64-*	4.05 (1.84)	57.2	BWA-50.0X3.0-150-*	RFC64-150-*
1-1/2"	50.0X5.0	A/BWA-50.0X5.0-150-FC64-*	3.98 (1.81)	57.2	BWA-50.0X5.0-150-*	RFC64-150-*
1-1/2"	56.0X8.5	A/BWA-56.0X8.5-150-FC64-*	4.41 (2.00)	57.2	BWA-56.0X8.5-150-*	RFC64-150-*
2"	50.0X3.0	A/BWA-50.0X3.0-200-FC64-*	6.35 (2.89)	63.5	BWA-50.0X3.0-200-*	RFC64-200-*
2"	50.0X5.0	A/BWA-50.0X5.0-200-FC64-*	6.48 (2.95)	63.5	BWA-50.0X5.0-200-*	RFC64-200-*
2"	50.0X6.0	A/BWA-50.0X6.0-200-FC64-*	6.55 (2.98)	63.5	BWA-50.0X6.0-200-*	RFC64-200-*
2"	60.0X3.0	A/BWA-60.0X3.0-200-FC64-*	6.24 (2.84)	63.5	BWA-60.0X3.0-200-*	RFC64-200-*
2"	60.0X5.0	A/BWA-60.0X5.0-200-FC64-*	5.97 (2.71)	63.5	BWA-60.0X5.0-200-*	RFC64-200-*
2"	60.0X6.0	A/BWA-60.0X6.0-200-FC64-*	6.44 (2.92)	63.5	BWA-60.0X6.0-200-*	RFC64-200-*
2"	60.0X8.0	A/BWA-60.0X8.0-200-FC64-*	6.61 (3.00)	63.5	BWA-60.0X8.0-200-*	RFC64-200-*
2"	60.3X3.9	A/BWA-SCH40-200-FC64-*	6.40 (2.91)	63.5	BWA-SCH40-200-*	RFC64-200-*
2"	60.3X5.5	A/BWA-SCH80-200-FC64-*	6.50 (2.95)	63.5	BWA-SCH80-200-*	RFC64-200-*
2"	60.3X8.7	A/BWA-SCH160-200-FC64-*	6.67 (3.03)	63.5	BWA-SCH160-200-*	RFC64-200-*
2"	60.3X11.1	A/BWA-SCHXXS-200-FC64-*	6.71 (3.05)	63.5	BWA-SCHXXS-200-*	RFC64-200-*
2"	66.0X8.5	A/BWA-66.0X8.5-200-FC64-*	6.56 (2.98)	63.5	BWA-66.0X8.5-200-*	RFC64-200-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

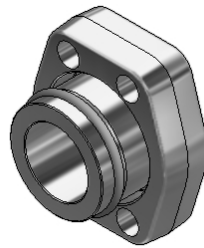
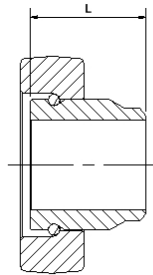
To Order A Retain Ring Flange with Threaded Holes, Replace FC with FTM in the Part Number.

Ordering Example: A/BWA-50.0X3.0-200-FC64-SS

* Insert Material _____

SAE 6000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1/2"	1/2" SCH80	A/BWAR-SCH80-050-FC64-*	0.67 (0.30)	1.25	BWAR-SCH80-050-*	RFC64-050-*	R-050
1/2"	1/2" SCH160	A/BWAR-SCH160-050-FC64-*	0.68 (0.31)	1.25	BWAR-SCH160-050-*	RFC64-050-*	R-050
1/2"	1/2" SCHXXS	A/BWAR-SCHXXS-050-FC64-*	0.69 (0.31)	1.25	BWAR-SCHXXS-050-*	RFC64-050-*	R-050
3/4"	3/4" SCH80	A/BWAR-SCH80-075-FC64-*	1.29 (0.59)	1.75	BWAR-SCH80-075-*	RFC64-075-*	R-075
3/4"	3/4" SCH160	A/BWAR-SCH160-075-FC64-*	1.37 (0.62)	1.75	BWAR-SCH160-075-*	RFC64-075-*	R-075
3/4"	3/4" SCHXXS	A/BWAR-SCHXXS-075-FC64-*	1.40 (0.64)	1.75	BWAR-SCHXXS-075-*	RFC64-075-*	R-075
1"	1" SCH80	A/BWAR-SCH80-100-FC64-*	1.66 (0.75)	1.75	BWAR-SCH80-100-*	RFC64-100-*	R-100
1"	1" SCH160	A/BWAR-SCH160-100-FC64-*	1.77 (0.80)	1.75	BWAR-SCH160-100-*	RFC64-100-*	R-100
1"	1" SCHXXS	A/BWAR-SCHXXS-100-FC64-*	1.81 (0.82)	1.75	BWAR-SCHXXS-100-*	RFC64-100-*	R-100
1-1/4"	1-1/4" SCH80	A/BWAR-SCH80-125-FC64-*	2.69 (1.22)	2.00	BWAR-SCH80-125-*	RFC64-125-*	R-125
1-1/4"	1-1/4" SCH160	A/BWAR-SCH160-125-FC64-*	2.72 (1.24)	2.00	BWAR-SCH160-125-*	RFC64-125-*	R-125
1-1/4"	1-1/4" SCHXXS	A/BWAR-SCHXXS-125-FC64-*	2.83 (1.29)	2.00	BWAR-SCHXXS-125-*	RFC64-125-*	R-125
1-1/2"	1-1/2" SCH80	A/BWAR-SCH80-150-FC64-*	3.79 (1.72)	2.25	BWAR-SCH80-150-*	RFC64-150-*	R-150
1-1/2"	1-1/2" SCH160	A/BWAR-SCH160-150-FC64-*	4.43 (2.01)	2.25	BWAR-SCH160-150-*	RFC64-150-*	R-150
1-1/2"	1-1/2" SCHXXS	A/BWAR-SCHXXS-150-FC64-*	4.45 (2.02)	2.25	BWAR-SCHXXS-150-*	RFC64-150-*	R-150
2"	2" SCH80	A/BWAR-SCH80-200-FC64-*	6.50 (2.95)	2.50	BWAR-SCH80-200-*	RFC64-200-*	R-200
2"	2" SCH160	A/BWAR-SCH160-200-FC64-*	6.67 (3.03)	2.50	BWAR-SCH160-200-*	RFC64-200-*	R-200
2"	2" SCHXXS	A/BWAR-SCHXXS-200-FC64-*	6.71 (3.05)	2.50	BWAR-SCHXXS-200-*	RFC64-200-*	R-200

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Ordering Example: A/BWAR-SCH80-200-FC64-SS

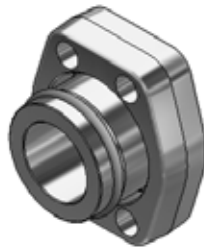
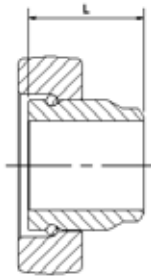
* Insert Material

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

SAE 6000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1/2"	16.0x2.0	A/BWAR-16.0X2.0-050-FC64-*	0.68 (0.31)	38.1	BWAR-16.0X2.0-050-*	RFC64-050-*	R-050
1/2"	18.0x2.0	A/BWAR-18.0X2.0-050-FC64-*	0.68 (0.31)	38.1	BWAR-18.0X2.0-050-*	RFC64-050-*	R-050
1/2"	20.0x2.0	A/BWAR-20.0X2.0-050-FC64-*	0.70 (0.35)	38.1	BWAR-20.0X2.0-050-*	RFC64-050-*	R-050
1/2"	20.0x2.5	A/BWAR-20.0X2.5-050-FC64-*	0.70 (0.35)	38.1	BWAR-20.0X2.5-050-*	RFC64-050-*	R-050
1/2"	20.0x3.0	A/BWAR-20.0X3.0-050-FC64-*	0.70 (0.35)	38.1	BWAR-20.0X3.0-050-*	RFC64-050-*	R-050
1/2"	21.3x2.8	A/BWAR-SCH40-050-FC64-*	0.66 (0.30)	31.8	BWAR-SCH40-050-*	RFC64-050-*	R-050
1/2"	21.3X3.7	A/BWAR-SCH80-050-FC64-*	0.67 (0.30)	31.8	BWAR-SCH80-050-*	RFC64-050-*	R-050
1/2"	21.3x4.8	A/BWAR-SCH160-050-FC64-*	0.68 (0.31)	31.8	BWAR-SCH160-050-*	RFC64-050-*	R-050
1/2"	21.3X7.5	A/BWAR-SCHXXS-050-FC64-*	0.69 (0.31)	31.8	BWAR-SCHXXS-050-*	RFC64-050-*	R-050
1/2"	25.0X2.5	A/BWAR-25.0X2.5-050-FC64-*	0.69 (0.31)	38.1	BWAR-25.0X2.5-050-*	RFC64-050-*	R-050
1/2"	25.0X3.0	A/BWAR-25.0X3.0-050-FC64-*	0.69 (0.31)	38.1	BWAR-25.0X3.0-050-*	RFC64-050-*	R-050
1/2"	26.0X6.0	A/BWAR-26.0X6.0-050-FC64-*	0.74 (0.34)	38.1	BWAR-26.0X6.0-050-*	RFC64-050-*	R-050
3/4"	20.0X2.0	A/BWAR-20.0X2.0-075-FC64-*	1.32 (0.60)	44.5	BWAR-20.0X2.0-075-*	RFC64-075-*	R-075
3/4"	20.0X2.5	A/BWAR-20.0X2.5-075-FC64-*	1.34 (0.61)	44.5	BWAR-20.0X2.5-075-*	RFC64-075-*	R-075
3/4"	20.0X3.0	A/BWAR-20.0X3.0-075-FC64-*	1.34 (0.61)	44.5	BWAR-20.0X3.0-075-*	RFC64-075-*	R-075
3/4"	25.0X2.5	A/BWAR-25.0X2.5-075-FC64-*	1.31 (0.60)	44.5	BWAR-25.0X2.5-075-*	RFC64-075-*	R-075
3/4"	25.0X3.0	A/BWAR-25.0X3.0-075-FC64-*	1.32 (0.60)	44.5	BWAR-25.0X3.0-075-*	RFC64-075-*	R-075
3/4"	25.0X4.0	A/BWAR-25.0X4.0-075-FC64-*	1.34 (0.61)	44.5	BWAR-25.0X4.0-075-*	RFC64-075-*	R-075
3/4"	26.7X2.9	A/BWAR-SCH40-075-FC64-*	1.27 (0.58)	44.5	BWAR-SCH40-075-*	RFC64-075-*	R-075
3/4"	26.7X3.9	A/BWAR-SCH80-075-FC64-*	1.29 (0.59)	44.5	BWAR-SCH80-075-*	RFC64-075-*	R-075
3/4"	26.7X5.5	A/BWAR-SCH160-075-FC64-*	1.37 (0.62)	44.5	BWAR-SCH160-075-*	RFC64-075-*	R-075
3/4"	26.7X7.8	A/BWAR-SCHXXS-075-FC64-*	2.02 (0.92)	44.5	BWAR-SCHXXS-075-*	RFC64-075-*	R-075
3/4"	30.0X3.0	A/BWAR-30.0X3.0-075-FC64-*	1.22 (0.55)	44.5	BWAR-30.0X3.0-075-*	RFC64-075-*	R-075
3/4"	30.0X4.0	A/BWAR-30.0X4.0-075-FC64-*	1.25 (0.57)	44.5	BWAR-30.0X4.0-075-*	RFC64-075-*	R-075
3/4"	36.0X8.0	A/BWAR-36.0X8.0-075-FC64-*	1.40 (0.64)	44.5	BWAR-36.0X8.0-075-*	RFC64-075-*	R-075

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

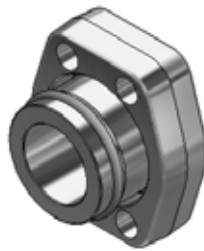
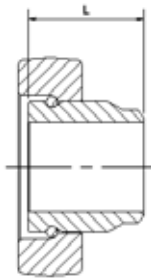
Ordering Example: A/BWAR-50.0X3.0-200-FC64-SS

* Insert Material _____

3D step models available upon request

SAE 6000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1"	25.0X2.5	A/BWAR-25.0X2.5-100-FC64-*	1.64 (0.75)	44.5	BWAR-25.0X2.5-100-*	RFC64-100-*	R-100
1"	25.0x3.0	A/BWAR-25.0X3.0-100-FC64-*	1.64 (0.75)	44.5	BWAR-25.0X3.0-100-*	RFC64-100-*	R-100
1"	25.0X4.0	A/BWAR-25.0X4.0-100-FC64-*	1.67 (0.76)	44.5	BWAR-25.0X4.0-100-*	RFC64-100-*	R-100
1"	30.0X3.0	A/BWAR-30.0X3.0-100-FC64-*	1.68 (0.76)	44.5	BWAR-30.0X3.0-100-*	RFC64-100-*	R-100
1"	30.0X4.0	A/BWAR-30.0X4.0-100-FC64-*	1.66 (0.75)	44.5	BWAR-30.0X4.0-100-*	RFC64-100-*	R-100
1"	30.0X5.0	A/BWAR-30.0X5.0-100-FC64-*	1.73 (0.79)	44.5	BWAR-30.0X5.0-100-*	RFC64-100-*	R-100
1"	33.4X3.4	A/BWAR-SCH40-100-FC64-*	1.66 (0.75)	44.5	BWAR-SCH40-100-*	RFC64-100-*	R-100
1"	33.4X4.6	A/BWAR-SCH80-100-FC64-*	1.66 (0.75)	44.5	BWAR-SCH80-100-*	RFC64-100-*	R-100
1"	33.4X6.4	A/BWAR-SCH160-100-FC64-*	1.77 (0.80)	44.5	BWAR-SCH160-100-*	RFC64-100-*	R-100
1"	33.4X9.1	A/BWAR-SCHXXS-100-FC64-*	1.81 (0.82)	44.5	BWAR-SCHXXS-100-*	RFC64-100-*	R-100
1"	38.0X4.0	A/BWAR-38.0X4.0-100-FC64-*	1.66 (0.75)	44.5	BWAR-38.0X4.0-100-*	RFC64-100-*	R-100
1"	38.0X5.0	A/BWAR-38.0X5.0-100-FC64-*	1.66 (0.75)	44.5	BWAR-38.0X5.0-100-*	RFC64-100-*	R-100
1"	38.0X6.0	A/BWAR-38.0X6.0-100-FC64-*	1.75 (0.80)	44.5	BWAR-38.0X6.0-100-*	RFC64-100-*	R-100
1"	39.0X7.5	A/BWAR-39.0X7.5-100-FC64-*	1.78 (0.81)	44.5	BWAR-39.0X7.5-100-*	RFC64-100-*	R-100
1-1/4"	30.0X3.0	A/BWAR-30.0X3.0-125-FC64-*	2.67 (1.21)	50.8	BWAR-30.0X3.0-125-*	RFC64-125-*	R-125
1-1/4"	30.0X4.0	A/BWAR-30.0X4.0-125-FC64-*	2.70 (1.23)	50.8	BWAR-30.0X4.0-125-*	RFC64-125-*	R-125
1-1/4"	30.0X5.0	A/BWAR-30.0X5.0-125-FC64-*	2.72 (1.24)	50.8	BWAR-30.0X5.0-125-*	RFC64-125-*	R-125
1-1/4"	38.0X4.0	A/BWAR-38.0X4.0-125-FC64-*	2.66 (1.21)	50.8	BWAR-38.0X4.0-125-*	RFC64-125-*	R-125
1-1/4"	38.0X5.0	A/BWAR-38.0X5.0-125-FC64-*	2.69 (1.22)	50.8	BWAR-38.0X5.0-125-*	RFC64-125-*	R-125
1-1/4"	38.0X6.0	A/BWAR-38.0X6.0-125-FC64-*	2.72 (1.24)	50.8	BWAR-38.0X6.0-125-*	RFC64-125-*	R-125
1-1/4"	42.0X3.0	A/BWAR-42.0X3.0-125-FC64-*	2.67 (1.21)	50.8	BWAR-42.0X3.0-125-*	RFC64-125-*	R-125
1-1/4"	42.0X4.0	A/BWAR-42.0X4.0-125-FC64-*	2.68 (1.22)	50.8	BWAR-42.0X4.0-125-*	RFC64-125-*	R-125
1-1/4"	42.2X3.6	A/BWAR-SCH40-125-FC64-*	2.68 (1.22)	50.8	BWAR-SCH40-125-*	RFC64-125-*	R-125
1-1/4"	42.2X4.9	A/BWAR-SCH80-125-FC64-*	2.68 (1.22)	50.8	BWAR-SCH80-125-*	RFC64-125-*	R-125
1-1/4"	42.2X6.4	A/BWAR-SCH160-125-FC64-*	2.68 (1.22)	50.8	BWAR-SCH160-125-*	RFC64-125-*	R-125
1-1/4"	42.2X9.7	A/BWAR-SCHXXS-125-FC64-*	2.83 (1.29)	50.8	BWAR-SCHXXS-125-*	RFC64-125-*	R-125
1-1/4"	46.0X8.5	A/BWAR-46.0X8.5-125-FC64-*	2.83 (1.29)	50.8	BWAR-46.0X8.5-125-*	RFC64-125-*	R-125

IMPORTANT NOTE: For 1-1/4" SAE 6000 PSI (ISO 6162-2) Flanges with M14 bolt requirements please add -M14 to the end of the part numbers above

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Ordering Example: A/BWAR-50.0X3.0-200-FC64-SS

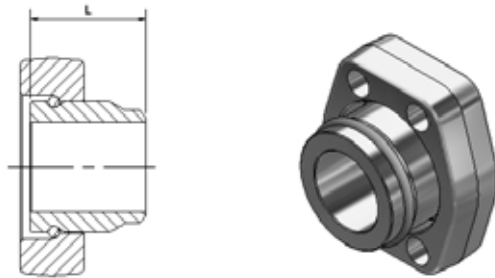
* Insert Material

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number. 3D step models available upon request

SAE 6000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page H25)
- O-Ring Spacer (See Page H75)

A/BWAR - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size OD x Wall	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number	Retain Ring (Stainless Steel) Part Number
1-1/2"	38.0X4.0	A/BWAR-38.0X4.0-150-FC64-*	4.13 (1.88)	57.2	BWAR-38.0X4.0-150-*	RFC64-150-*	R-150
1-1/2"	38.0X5.0	A/BWAR-38.0X5.0-150-FC64-*	4.08 (1.85)	57.2	BWAR-38.0X5.0-150-*	RFC64-150-*	R-150
1-1/2"	38.0X6.0	A/BWAR-38.0X6.0-150-FC64-*	4.21 (1.91)	57.2	BWAR-38.0X6.0-150-*	RFC64-150-*	R-150
1-1/2"	42.0X3.0	A/BWAR-42.0X3.0-150-FC64-*	4.03 (1.83)	57.2	BWAR-42.0X3.0-150-*	RFC64-150-*	R-150
1-1/2"	42.0X4.0	A/BWAR-42.0X4.0-150-FC64-*	4.08 (1.85)	57.2	BWAR-42.0X4.0-150-*	RFC64-150-*	R-150
1-1/2"	48.3X3.7	A/BWAR-SCH40-150-FC64-*	4.18 (1.90)	57.2	BWAR-SCH40-150-*	RFC64-150-*	R-150
1-1/2"	48.3X5.1	A/BWAR-SCH80-150-FC64-*	4.11 (1.87)	57.2	BWAR-SCH80-150-*	RFC64-150-*	R-150
1-1/2"	48.3X7.1	A/BWAR-SCH160-150-FC64-*	4.43 (2.01)	57.2	BWAR-SCH160-150-*	RFC64-150-*	R-150
1-1/2"	48.3X10.2	A/BWAR-SCHXXS-150-FC64-*	4.37 (1.99)	57.2	BWAR-SCHXXS-150-*	RFC64-150-*	R-150
1-1/2"	50.0X3.0	A/BWAR-50.0X3.0-150-FC64-*	4.05 (1.84)	57.2	BWAR-50.0X3.0-150-*	RFC64-150-*	R-150
1-1/2"	50.0X5.0	A/BWAR-50.0X5.0-150-FC64-*	3.98 (1.81)	57.2	BWAR-50.0X5.0-150-*	RFC64-150-*	R-150
1-1/2"	56.0X8.5	A/BWAR-56.0X8.5-150-FC64-*	4.41 (2.00)	57.2	BWAR-56.0X8.5-150-*	RFC64-150-*	R-150
2"	50.0X3.0	A/BWAR-50.0X3.0-200-FC64-*	6.35 (2.89)	63.5	BWAR-50.0X3.0-200-*	RFC64-200-*	R-200
2"	50.0X5.0	A/BWAR-50.0X5.0-200-FC64-*	6.48 (2.95)	63.5	BWAR-50.0X5.0-200-*	RFC64-200-*	R-200
2"	50.0X6.0	A/BWAR-50.0X6.0-200-FC64-*	6.55 (2.98)	63.5	BWAR-50.0X6.0-200-*	RFC64-200-*	R-200
2"	60.0X3.0	A/BWAR-60.0X3.0-200-FC64-*	6.24 (2.84)	63.5	BWAR-60.0X3.0-200-*	RFC64-200-*	R-200
2"	60.0X5.0	A/BWAR-60.0X5.0-200-FC64-*	5.97 (2.71)	63.5	BWAR-60.0X5.0-200-*	RFC64-200-*	R-200
2"	60.0X6.0	A/BWAR-60.0X6.0-200-FC64-*	6.44 (2.92)	63.5	BWAR-60.0X6.0-200-*	RFC64-200-*	R-200
2"	60.0X8.0	A/BWAR-60.0X8.0-200-FC64-*	6.61 (3.00)	63.5	BWAR-60.0X8.0-200-*	RFC64-200-*	R-200
2"	60.3X3.9	A/BWAR-SCH40-200-FC64-*	6.40 (2.91)	63.5	BWAR-SCH40-200-*	RFC64-200-*	R-200
2"	60.3X5.5	A/BWAR-SCH80-200-FC64-*	6.50 (2.95)	63.5	BWAR-SCH80-200-*	RFC64-200-*	R-200
2"	60.3X8.7	A/BWAR-SCH160-200-FC64-*	6.67 (3.03)	63.5	BWAR-SCH160-200-*	RFC64-200-*	R-200
2"	60.3X11.1	A/BWAR-SCHXXS-200-FC64-*	6.71 (3.05)	63.5	BWAR-SCHXXS-200-*	RFC64-200-*	R-200
2"	66.0X8.5	A/BWAR-66.0X8.5-200-FC64-*	6.56 (2.98)	63.5	BWAR-66.0X8.5-200-*	RFC64-200-*	R-200

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

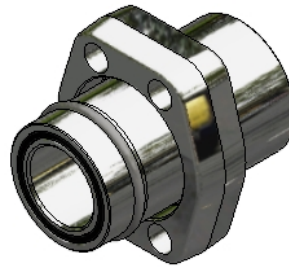
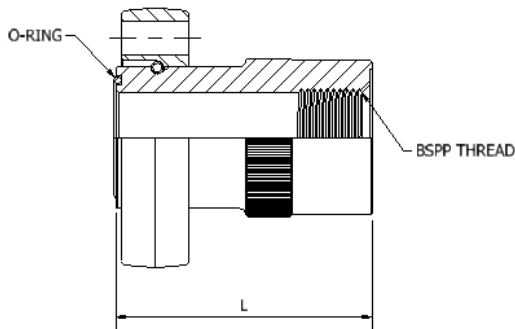
Ordering Example: A/BWAR-50.0X3.0-200-FC64-SS

* Insert Material _____

3D step models available upon request

SAE 6000 PSI BSPP Female Thread Adapter Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Female Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H25)

A/FBTA - BSPP Female Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L	R					
1/2"x 1/4"	A/FBTA-050x025-FC64-*^-^	1.38 (35.0)	1/4"	OR^3-909	1.08 (0.49)	FBTA-050x025-*^-^	0.52 (0.24)	
1/2"x1/2"	A/FBTA-050x050-FC64-*^-^	2.50 (63.5)	1/2"	OR^3-909	1.54 (0.70)	FBTA-050x050-*^-^	1.10 (0.50)	
3/4"x1/2"	A/FBTA-075x050-FC64-*^-^	1.57 (40.0)	1/2"	OR^3-913	1.80 (0.82)	FBTA-075x050-*^-^	0.95 (0.43)	
3/4"x3/4"	A/FBTA-075x075-FC64-*^-^	2.88 (73.0)	3/4"	OR^3-913	2.50 (1.14)	FBTA-075x075-*^-^	1.65 (0.75)	
1"x 3/4"	A/FBTA-100x075-FC64-*^-^	1.57 (40.0)	3/4"	OR^3-916	2.25 (1.02)	FBTA-100x075-*^-^	1.06 (0.48)	
1"x1"	A/FBTA-100x100-FC64-*^-^	3.75 (95.3)	1"	OR^3-916	2.99 (1.36)	FBTA-100x100-*^-^	1.80 (0.82)	
1-1/4"x 1"	A/FBTA-125x100-FC64-*^-^	1.65 (42.0)	1"	OR^3-918	3.37 (1.53)	FBTA-125x100-*^-^	1.47 (0.67)	
1-1/4"x 1-1/4"	A/FBTA-125x125-FC64-*^-^	3.88 (98.6)	1-1/4"	OR^3-918	4.40 (2.06)	FBTA-125x125-*^-^	2.50 (1.14)	
1-1/2"x 1-1/4"	A/FBTA-150x125-FC64-*^-^	1.77 (45.0)	1-1/4"	OR^3-924	5.50 (2.50)	FBTA-150x125-*^-^	2.31 (1.05)	
1-1/2"x 1-1/2"	A/FBTA-150x150-FC64-*^-^	4.00 (101.6)	1-1/2"	OR^3-924	7.24 (3.29)	FBTA-150x150-*^-^	4.05 (1.84)	
2"x 1-1/2"	A/FBTA-200x150-FC64-*^-^	2.16 (55.0)	1-1/2"	OR^3-928	8.55 (3.89)	FBTA-200x150-*^-^	3.67 (1.67)	
2"x 2"	A/FBTA-200x200-FC64-*^-^	4.50 (114.3)	2"	OR^3-928	11.33 (5.15)	FBTA-200x200-*^-^	6.45 (2.93)	

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

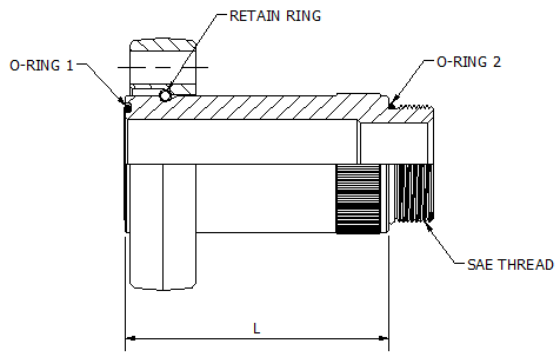
V = Viton.

Ordering Example: A/FBTA-200x200-FC64-SS-V



SAE 6000 PSI SAE Male Thread Adapter Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread O-Ring (O-Ring 2)

To be Ordered Separately:

- Bolt Kit (See Page H25)

A/STA - SAE Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size UNF/UN-2A	O-Ring 1 (Buna) Part No.	O-Ring 2 (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L							
1/2"x 3/8"	A/STA-050x038-FC64-*^-^	2.63 (66.80)		9/16"-18	OR^-3-909	OR^-3-906	0.94 (0.43)	STA-050x038-*	0.50 (0.23)
1/2"x 1/2"	A/STA-050x050-FC64-*^-^	2.63 (66.80)		3/4"-16	OR^-3-909	OR^-3-908	0.96 (0.44)	STA-050x050-*	0.52 (0.24)
1/2"x 5/8"	A/STA-050x063-FC64-*^-^	2.63 (66.80)		7/8"-14	OR^-3-909	OR^-3-910	1.01 (0.46)	STA-050x063-*	0.57 (0.26)
1/2"x 3/4"	A/STA-050x075-FC64-*^-^	2.63 (66.80)		1 1/16"-12	OR^-3-909	OR^-3-912	1.10 (0.50)	STA-050x075-*	0.66 (0.30)
3/4"x 1/2"	A/STA-075x050-FC64-*^-^	2.75 (69.85)		3/4"-16	OR^-3-913	OR^-3-908	1.85 (0.84)	STA-075x050-*	1.00 (0.45)
3/4"x 3/4"	A/STA-075x075-FC64-*^-^	2.75 (69.85)		1 1/16"-12	OR^-3-913	OR^-3-912	1.92 (0.87)	STA-075x075-*	1.07 (0.49)
3/4"x 1"	A/STA-075x100-FC64-*^-^	2.75 (69.85)		1 5/16"-12	OR^-3-913	OR^-3-916	2.00 (0.91)	STA-075x100-*	1.15 (0.52)
1"x 3/4"	A/STA-100x075-FC64-*^-^	3.00 (76.20)		1 1/16"-12	OR^-3-916	OR^-3-912	2.44 (1.11)	STA-100x075-*	1.25 (0.57)
1"x 1"	A/STA-100x100-FC64-*^-^	3.00 (76.20)		1 5/16"-12	OR^-3-916	OR^-3-916	2.49 (1.13)	STA-100x100-*	1.30 (0.59)
1"x 1-1/4"	A/STA-100x125-FC64-*^-^	3.00 (76.20)		1 5/8"-12	OR^-3-916	OR^-3-920	2.68 (1.22)	STA-100x125-*	1.49 (0.68)
1-1/4"x 1"	A/STA-125x100-FC64-*^-^	3.25 (82.55)		1 5/16"-12	OR^-3-918	OR^-3-916	3.65 (1.66)	STA-125x100-*	1.75 (0.79)
1-1/4"x 1-1/4"	A/STA-125x125-FC64-*^-^	3.25 (82.55)		1 5/8"-12	OR^-3-918	OR^-3-920	3.72 (1.69)	STA-125x125-*	1.82 (0.83)
1-1/4"x 1-1/2"	A/STA-125x150-FC64-*^-^	3.25 (82.55)		1 7/8"-12	OR^-3-918	OR^-3-924	3.93 (1.79)	STA-125x150-*	2.03 (0.92)
1-1/2"x 1-1/4"	A/STA-150x125-FC64-*^-^	4.25 (107.95)		1 5/8"-12	OR^-3-924	OR^-3-920	6.13 (2.79)	STA-150x125-*	2.94 (1.33)
1-1/2"x 1-1/2"	A/STA-150x150-FC64-*^-^	4.25 (107.95)		1 7/8"-12	OR^-3-924	OR^-3-924	6.16 (2.80)	STA-150x150-*	2.97 (1.35)
1-1/2" x 2"	A/STA-150x200-FC64-*^-^	4.25 (107.95)		2 1/2"-12	OR^-3-924	OR^-3-932	6.73 (3.06)	STA-150x200-*	3.54 (1.61)
2"x 1-1/2"	A/STA-200x150-FC64-*^-^	4.38 (111.25)		1 7/8"-12	OR^-3-928	OR^-3-924	8.64 (3.93)	STA-200x150-*	3.76 (1.71)
2" x 2"	A/STA-200x200-FC64-*^-^	4.38 (111.25)		2 1/2"-12	OR^-3-928	OR^-3-932	8.84 (4.02)	STA-200x200-*	3.96 (1.80)

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

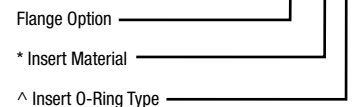
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

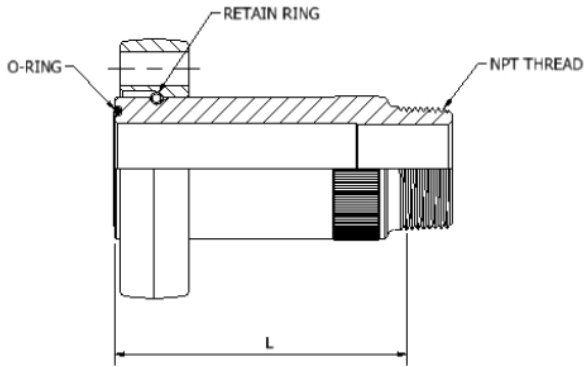
Ordering Example: A/STA-200x150-FC64-SS-V



3D step models available upon request

SAE 6000 PSI NPT Male Thread Adapter Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page H25)

A/NTA - NPT Male Thread Adapter – Complete Assembly with Buna O-Ring

Size (flange x thread)	Complete Assembly Part Number	Dimension in (mm) L	NPTF Thread (Dryseal)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
1/2"x 1/2"	A/NTA-050x050-FC64-*^-^	2.88 (73.15)	1/2"-14	OR*-3-909	1.01 (0.46)	NTA-050x050-*^-^	0.57 (0.26)
1/2"x 3/4"	A/NTA-050x075-FC64-*^-^	2.86 (72.64)	3/4"-14	OR*-3-909	1.18 (0.54)	NTA-050x075-*^-^	0.74 (0.34)
3/4"x 1/2"	A/NTA-075x050-FC64-*^-^	3.00 (76.20)	1/2"-14	OR*-3-913	1.92 (0.87)	NTA-075x050-*^-^	1.07 (0.49)
3/4"x 3/4"	A/NTA-075x075-FC64-*^-^	2.98 (75.69)	3/4"-14	OR*-3-913	1.92 (0.87)	NTA-075x075-*^-^	1.07 (0.49)
3/4"x 1"	A/NTA-075x100-FC64-*^-^	3.07 (77.98)	1"-11-1/2	OR*-3-913	2.04 (0.93)	NTA-075x100-*^-^	1.19 (0.54)
1"x 3/4"	A/NTA-100x075-FC64-*^-^	3.23 (82.04)	3/4"-14	OR*-3-916	2.47 (1.12)	NTA-100x075-*^-^	1.28 (0.58)
1"x 1"	A/NTA-100x100-FC64-*^-^	3.32 (84.33)	1"-11-1/2	OR*-3-916	2.53 (1.15)	NTA-100x100-*^-^	1.34 (0.61)
1"x 1-1/4"	A/NTA-100x125-FC64-*^-^	3.33 (84.58)	1-1/4"-11-1/2	OR*-3-916	2.81 (1.28)	NTA-100x125-*^-^	1.62 (0.74)
1-1/4"x 1"	A/NTA-125x100-FC64-*^-^	3.57 (90.68)	1"-11-1/2	OR*-3-918	3.74 (1.70)	NTA-125x100-*^-^	1.84 (0.84)
1-1/4"x 1-1/4"	A/NTA-125x125-FC64-*^-^	3.58 (90.93)	1-1/4"-11-1/2	OR*-3-918	3.77 (1.71)	NTA-125x125-*^-^	1.87 (0.85)
1-1/4"x 1-1/2"	A/NTA-125x150-FC64-*^-^	3.61 (91.69)	1-1/2"-11-1/2	OR*-3-918	4.08 (1.85)	NTA-125x150-*^-^	2.18 (0.99)
1-1/2"x 1-1/4"	A/NTA-150x125-FC64-*^-^	4.58 (116.33)	1-1/4"-11-1/2	OR*-3-924	6.19 (2.81)	NTA-150x125-*^-^	3.00 (1.36)
1-1/2"x 1-1/2"	A/NTA-150x150-FC64-*^-^	4.61 (117.09)	1-1/2"-11-1/2	OR*-3-924	6.29 (2.86)	NTA-150x150-*^-^	3.10 (1.41)
1-1/2" x 2"	A/NTA-150x200-FC64-*^-^	4.63 (117.60)	2"-11-1/2	OR*-3-924	6.79 (3.09)	NTA-150x200-*^-^	3.60 (1.64)
2"x 1-1/2"	A/NTA-200x150-FC64-*^-^	4.61 (117.09)	1-1/2"-11-1/2	OR*-3-928	8.84 (4.02)	NTA-200x150-*^-^	3.96 (1.80)
2"x 2"	A/NTA-200x200-FC64-*^-^	4.63 (117.60)	2"-11-1/2	OR*-3-928	8.88 (4.04)	NTA-200x200-*^-^	4.00 (1.82)

The seal for the 2" BSPP thread consists of a self-centering bonded seal.

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

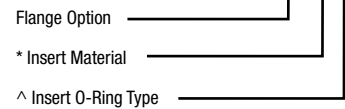
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

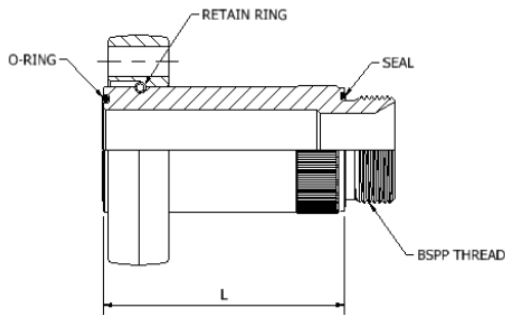
Ordering Example: A/NTA-200x150-FC64-SS-V



3D step models available upon request

SAE 6000 PSI BSPP Male Thread Adapter Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread Seal (Seal 2)

To be Ordered Separately:

- Bolt Kit (See Page H25)

A/BTA - BSPP Male Thread Adapter Complete Assembly with Buna O-Rings

Size (flange x thread)	Complete Assembly Part Number	Dimension in (mm) L	Thread Size	O-Ring 1 (Buna) Part Number	Seal 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
1/2" x 1/2"	A/BTA-050x050-FC64-*^	2.63 (66.80)	1/2"-14	OR*-3-909	DR*-G050	1.04 (0.47)	BTA-050x050-*^	0.60 (0.27)
1/2" x 3/4"	A/BTA-050x075-FC64-*^	2.63 (66.80)	3/4"-14	OR*-3-909	DR*-G075	1.14 (0.52)	BTA-050x075-*^	0.70 (0.32)
3/4" x 1/2"	A/BTA-075x050-FC64-*^	2.75 (69.85)	1/2"-14	OR*-3-913	DR*-G050	1.92 (0.87)	BTA-075x050-*^	1.07 (0.49)
3/4" x 3/4"	A/BTA-075x075-FC64-*^	2.75 (69.85)	3/4"-14	OR*-3-913	DR*-G075	1.92 (0.87)	BTA-075x075-*^	1.07 (0.49)
3/4" x 1"	A/BTA-075x100-FC64-*^	2.75 (69.85)	1"-11 1/2	OR*-3-913	DR*-G100	1.95 (0.89)	BTA-075x100-*^	1.10 (0.50)
1" x 3/4"	A/BTA-100x075-FC64-*^	3.00 (76.20)	3/4"-14	OR*-3-916	DR*-G075	2.40 (1.09)	BTA-100x075-*^	1.21 (0.55)
1" x 1"	A/BTA-100x100-FC64-*^	3.00 (76.20)	1"-11 1/2	OR*-3-916	DR*-G100	2.49 (1.13)	BTA-100x100-*^	1.30 (0.59)
1" x 1-1/4"	A/BTA-100x125-FC64-*^	3.00 (76.20)	1-1/4"-11 1/2	OR*-3-916	DR*-G125	2.74 (1.25)	BTA-100x125-*^	1.55 (0.70)
1-1/4" x 1"	A/BTA-125x100-FC64-*^	3.25 (82.55)	1"-11 1/2	OR*-3-918	DR*-G100	3.70 (1.68)	BTA-125x100-*^	1.80 (0.82)
1-1/4" x 1-1/4"	A/BTA-125x125-FC64-*^	3.25 (82.55)	1-1/4"-11 1/2	OR*-3-918	DR*-G125	3.77 (1.71)	BTA-125x125-*^	1.87 (0.85)
1-1/4" x 1-1/2"	A/BTA-125x150-FC64-*^	3.25 (82.55)	1-1/2"-11 1/2	OR*-3-918	DR*-G150	3.90 (1.77)	BTA-125x150-*^	2.00 (0.91)
1-1/2" x 1-1/4"	A/BTA-150x125-FC64-*^	4.25 (107.95)	1-1/4"-11 1/2	OR*-3-924	DR*-G125	6.21 (2.82)	BTA-150x125-*^	3.02 (1.37)
1-1/2" x 1-1/2"	A/BTA-150x150-FC64-*^	4.25 (107.95)	1-1/2"-11 1/2	OR*-3-924	DR*-G150	6.19 (2.81)	BTA-150x150-*^	3.00 (1.36)
1-1/2" x 2"	A/BTA-150x200-FC64-*^	4.25 (107.95)	2"-11 1/2	OR*-3-924	BS*-3236	6.79 (3.09)	BTA-150x200-*^	3.60 (1.64)
2" x 1-1/2"	A/BTA-200x150-FC64-*^	4.38 (111.25)	1-1/2"-11 1/2	OR*-3-928	DR*-G150	8.82 (4.01)	BTA-200x150-*^	3.94 (1.79)
2" x 2"	A/BTA-200x200-FC64-*^	4.38 (111.25)	2"-11 1/2	OR*-3-928	BS*-3236	8.88 (4.04)	BTA-200x200-*^	4.00 (1.82)

The seal for the 2" BSPP thread consists of a self-centering bonded seal.

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

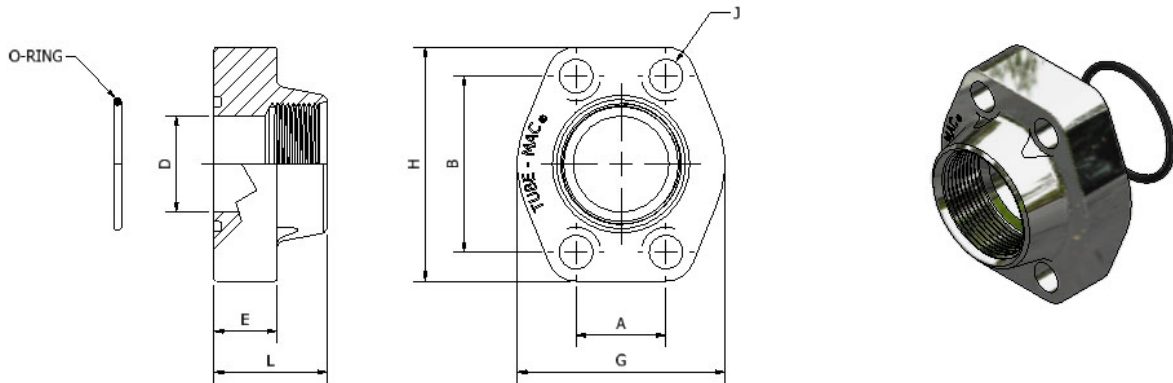
Ordering Example: A/BTA-200x150-FC64-SS-V



3D step models available upon request

SAE 6000 PSI SAE Female Thread Flange with O-Ring Face and Clearance Holes

SAE J518 Code 62 (ISO 6162-2)



STF064 - SAE Female Thread Flange - O-Ring Face with Clearance Holes with Buna O-Ring

Size	Flange Part Number	Dimensions (in)							SAE Thread UNF-2A	Drill Dia. (in) J	Bolt Minimum Grade 8	O-Ring (Buna) Part No.	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H							
1/2"	STF064-050-*~^	0.72	1.59	0.51	0.63	1.42	1.88	2.22	3/4"-16	0.35	5/16" UNC	OR*-2-210	0.57	6000 (420)	15-18
3/4"	STF064-075-*~^	0.94	2.00	0.75	0.83	1.34	2.38	2.81	1-1/16"-12	0.43	3/8" UNC	OR*-2-214	1.10	6000 (420)	20-30
1"	STF064-100-*~^	1.09	2.25	0.98	0.98	1.65	2.7	3.19	1-5/16"-12	0.51	7/16" UNC	OR*-2-219	1.68	6000 (420)	40-50
1-1/4"	STF064-125-*~^	1.25	2.63	1.26	1.06	1.77	3.06	3.75	1-5/8"-12	0.53	1/2" UNC	OR*-2-222	2.65	6000 (420)	80-90
1-1/2"	STF064-150-*~^	1.44	3.13	1.50	1.18	1.97	3.75	4.44	1-7/8"-12	0.67	5/8" UNC	OR*-2-225	3.64	6000 (420)	110-120

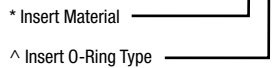
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

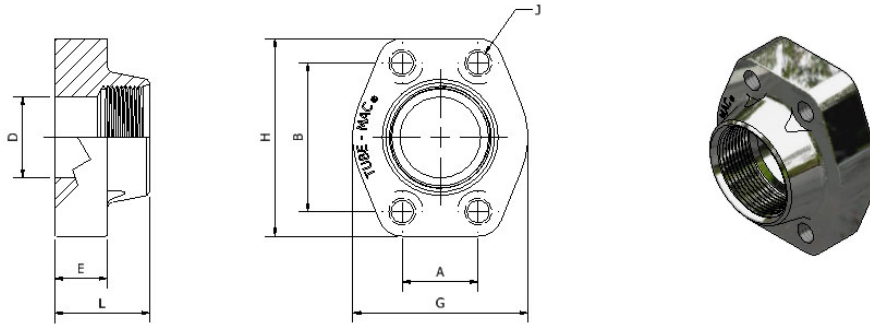
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: SFT064-150-SS-V



SAE 6000 PSI SAE Female Thread Flange with Flat Face and Threaded Holes

SAE J518 Code 62 (ISO 6162-2)



STFF64 - SAE Female Thread Flange Flat Face with Threaded Holes													
Size	Flange Part Number	Dimensions (in)						SAE Thread UNF-2A	Bolt Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.	
		A	B	D	E	L	G						H
1/2"	STFF64-050-*-*^	0.72	1.59	0.51	0.63	1.42	1.88	2.22	3/4"-16	5/16"	0.57	6000 (420)	15-18
3/4"	STFF64-075-*-*^	0.94	2.00	0.75	0.83	1.34	2.38	2.81	1 1/16"-12	3/8"	1.10	6000 (420)	20-30
1"	STFF64-100-*-*^	1.09	2.25	0.98	0.98	1.65	2.75	3.19	1 5/16"-12	7/16"	1.68	6000 (420)	40-50
1-1/4"	STFF64-125-*-*^	1.25	2.63	1.26	1.06	1.77	3.06	3.75	1 5/8"-12	1/2"	2.65	6000 (420)	80-90
1-1/2"	STFF64-150-*-*^	1.44	3.13	1.50	1.18	1.97	3.75	4.44	1 7/8"-12	5/8"	3.64	6000 (420)	110-120

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: STFF64-150-SS-V

* Insert Material

^ Insert O-Ring Type

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

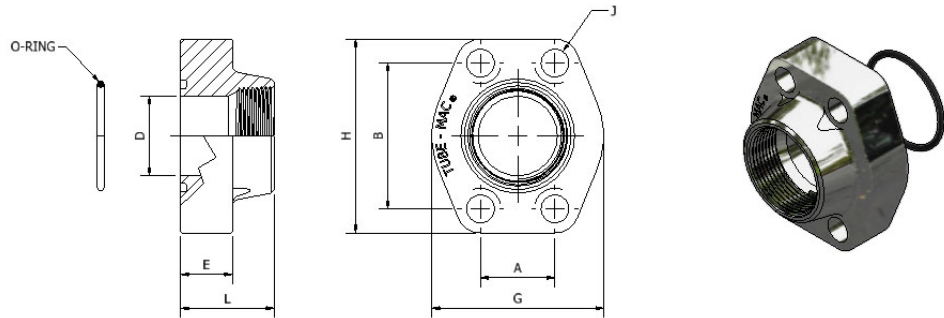
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 6000 PSI NPT Female Thread Flange with O-Ring Face and Clearance Holes

SAE J518 Code 62 (ISO 6162-2)



NTF064 - NPT Female Thread Flange - O-Ring Face with Clearance Holes with Buna O-Ring

Size	Flange Part Number	Dimensions (in)							NPTF Thread	Drill Dia. (in) J	Bolt Minimum Grade 8	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H							
1/2"	NTF064-050-*^-^	0.72	1.59	0.51	0.63	1.42	1.88	2.22	1/2"-14	0.35	5/16"	OR*-2-210	0.57	6000 (420)	15-18
3/4"	NTF064-075-*^-^	0.94	2.00	0.75	0.83	1.34	2.38	2.81	3/4"-14	0.43	3/8"	OR*-2-214	1.10	6000 (420)	20-30
1"	NTF064-100-*^-^	1.09	2.25	0.98	0.98	1.65	2.75	3.19	1"-11-1/2	0.51	7/16"	OR*-2-219	1.68	6000 (420)	40-50
1-1/4"	NTF064-125-*^-^	1.25	2.63	1.26	1.06	1.77	3.06	3.75	1-1/4"-11-1/2	0.53	1/2"	OR*-2-222	2.65	6000 (420)	80-90
1-1/2"	NTF064-150-*^-^	1.44	3.13	1.50	1.18	1.97	3.75	4.44	1-1/2"-11-1/2	0.67	5/8"	OR*-2-225	3.64	6000 (420)	110-120
2"	NTF064-200-*^-^	1.75	3.81	2.01	1.46	2.56	4.50	5.25	2"-11-1/2	0.83	3/4"	OR*-2-228	5.40	6000 (420)	120-130

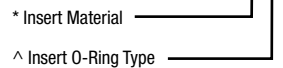
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

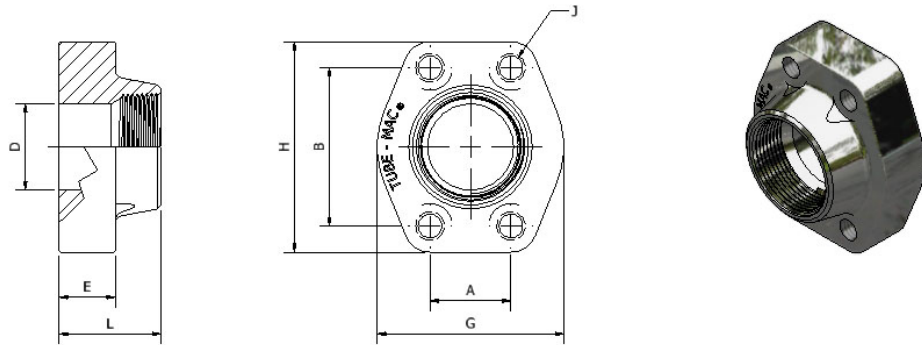
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: NTF064-200-SS-V



SAE 6000 PSI NPT Female Thread Flange with Flat Face and Threaded Holes

SAE J518 Code 62 (ISO 6162-2)



NTFF64 NPT Female Thread Flange - SAE Code 62 Flat Face with Threaded Holes

Size	Flange Part Number	Dimensions (in)							NPTF Thread	Bolt Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)	Bolt Torque ft.lbs.
		A	B	D	E	L	G	H					
1/2"	NTFF64-050-*^-^	0.72	1.59	0.51	0.63	1.42	1.88	2.22	1/2"-14	5/16"	0.57	6000 (420)	15-18
3/4"	NTFF64-075-*^-^	0.94	2.00	0.75	0.83	1.34	2.38	2.81	3/4"-14	3/8"	1.10	6000 (420)	20-30
1"	NTFF64-100-*^-^	1.09	2.25	0.98	0.98	1.65	2.75	3.19	1"-11 1/2	7/16"	1.68	6000 (420)	40-50
1-1/4"	NTFF64-125-*^-^	1.25	2.63	1.26	1.06	1.77	3.06	3.75	1-1/4"-11-1/2	1/2"	2.65	6000 (420)	80-90
1-1/2"	NTFF64-150-*^-^	1.44	3.13	1.50	1.18	1.97	3.75	4.44	1-1/2"-11-1/2	5/8"	3.64	6000 (420)	110-120
2"	NTFF64-200-*^-^	1.75	3.81	2.01	1.46	2.56	4.50	5.25	2"-11-1/2	3/4"	5.40	6000 (420)	120-130

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: NTFF64-200-SS-V

* Insert Material

^ Insert O-Ring Type

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

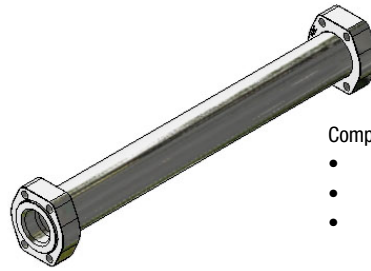
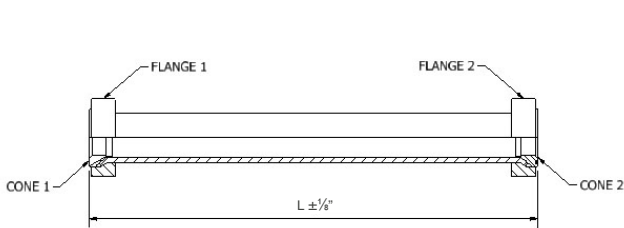
Valves, Ball and Check

H43

SAE 6000 PSI Flare Flange Pipe Assembly, NPS

SAE J518 Code 62 (ISO 6162-2)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

		Code	PAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Bent Pipe Assembly - Flared		PAF									
Pipe & Cone Material Carbon Steel	TMP52CD	52									
	TMP304SS	304									
	TMP316SS	316									
	♦TMP2205SS	2205									
Pipe Size	1/2"	SCH40-050									
		SCH80-050									
	3/4"	SCH40-075									
		SCH80-075									
	1"	SCH40-100									
		SCH80-100									
	1-1/4"	SCH40-125									
		SCH80-125									
	1-1/2"	SCH40-150									
		SCH80-150									
		SCH160-150									
	2"	SCH40-200									
SCH80-200											
SCH160-200											
Flange Type Carbon Steel	FFC64 SAE Code 62 W/Clearance Holes	FC64									
	FFT64 SAE Code 62 W/Threaded Holes	FT64									
Cone Type	Cone - Flat Face	CF									
	Cone - 'O' Ring Face	CO									
Length	L2	Specify (in.)									
Options	Viton	V									
	Painted (Specify)	P									
	Complete Stainless Steel Assembly: (including flanges)	SS									

TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

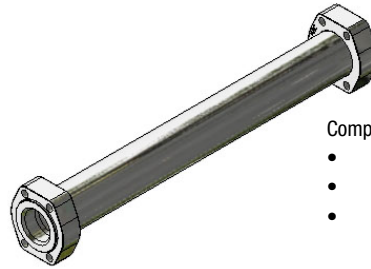
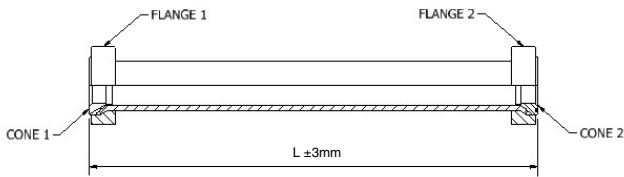
PART Number (EXAMPLE): PAF/52 - SCH80-100 - FC64 - FC64 - CO - CF - 240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

SAE 6000 PSI Flare Flange Pipe Assembly, Metric

SAE J518 Code 62 (ISO 6162-2)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

		Code	PAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Bent Pipe Assembly - Flared		PAF									
Pipe & Cone Material Carbon Steel	TMP52CD	52									
	TMP37CD	37									
Pipe & Cone Material Stainless Steel	TMP304SS	304									
	TMP316SS	316									
	◆TMP2205SS	2205									
Pipe Size	1/2"	20x3.0-050									
		25x3.0-050									
	3/4"	30x3.0-075									
		30x4.0-075									
	1"	38x4.0-100									
		38x5.0-100									
	1-1/4"	42x4.0-125									
42x5.0-125											
1-1/2"	50x3.0-150										
	50x5.0-150										
2"	60x5.0-200										
	60x6.0-200										
Flange Type Carbon Steel	FFCM34 SAE Code 62 W/Clearance Holes	FCM64									
	FTM64 SAE Code 62 W/Threaded Holes	FTM64									
Cone Type	Cone - Flat Face	CF									
	Cone - 'O' Ring Face	CO									
Length	L2	Specify (mm)									
Options	Viton	V									
	Painted (Specify)	P									
	Complete Stainless Steel Assembly: (including flanges)	SS									

□TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): PAF/52 - 38x4.0 - 100 - FCM64 - FCM64 - CO - CF - 6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

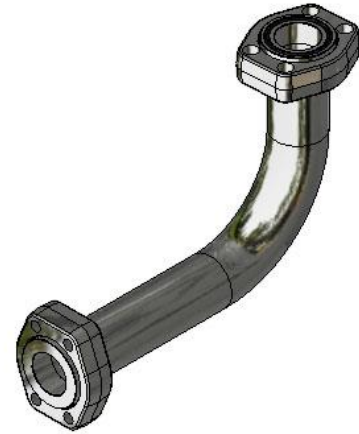
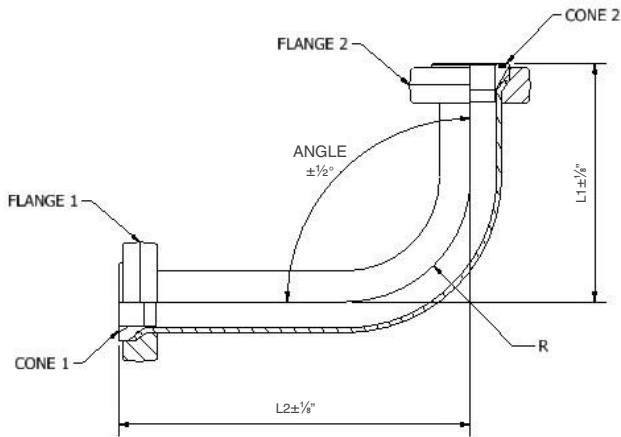
3D step models available upon request

SAE 6000 PSI Flare Flange Bent Pipe Assembly, NPS

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1/2"	4.50	1.68	5.50	2.52	6.75	3.88
3/4"	5.00	2.10	6.00	3.15	7.00	4.25
1"	5.50	2.63	7.00	3.95	7.75	4.88
1-1/4"	6.38	3.32	8.00	4.98	8.63	5.63
1-1/2"	7.50	3.80	9.25	5.70	11.75	8.19
2"	8.50	4.75	10.75	7.13	13.00	9.44

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

SAE 6000 PSI Flare Flange Bent Pipe Assembly, NPS

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF													
Pipe & Cone Material Carbon Steel	TMP52CD	52													
	TMP304SS	304													
Pipe & Cone Material Stainless Steel	TMP316SS	316													
	♦TMP2205SS	2205													
Pipe Size & Schedule	1/2"	SCH40-050													
		SCH80-050													
	3/4"	SCH40-075													
		SCH80-075													
	1"	SCH40-100													
		SCH80-100													
	1-1/4"	SCH40-125													
		SCH80-125													
	1-1/2"	SCH40-150													
		SCH80-150													
SCH160-150															
2"	SCH40-200														
	SCH80-200														
Flange Type Carbon Steel	FFC64 SAE Code 62 W/Clearance Holes	FC64													
	FFT64 SAE Code 62 W/Threaded Holes	FT64													
Cone Type	Cone - Flat Face	CF													
	Cone - 'O' Ring Face	CO													
Radius	Field Manufactured	R1													
	Factory Manufactured	R2													
Length	L1	Specify (in.)													
Angle	Max 90°	Specify (°)													
Length	L2	Specify (in.)													
Options	Viton	V													
	Painted (Specify)	P													
	Complete Stainless Steel Assembly: (including flanges)	SS													

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-SCH80-100 -FC64-FC64-CO-CF-R1-125-90-115

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

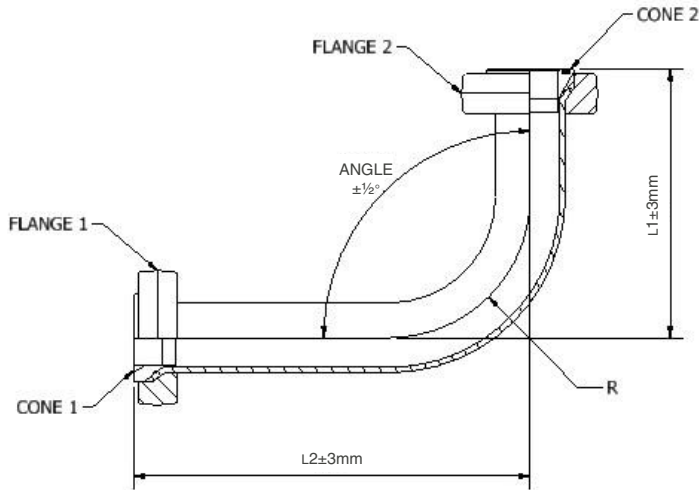
3D step models available upon request

SAE 6000 PSI Flare Flange Bent Pipe Assembly, Metric

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size	R1		R2		R3	
	Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
	L(min.)	R	L(min.)	R	L(min.)	R
1/2"	126	50	151	75	176	100
3/4"	134	60	164	90	194	120
1"	153	76	191	114	229	152
1-1/4"	162	84	204	126	246	168
1-1/2"	194	100	244	150	294	200
2"	215	120	275	180	335	240

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

SAE 6000 PSI Flare Flange Bent Pipe Assembly, Metric

Code		BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF												
Pipe & Cone Material Carbon Steel	TMP52CD	52												
	TMP37CD	37												
Pipe & Cone Material Stainless Steel	TMP304SS	304												
	TMP316SS	316												
	♦TMP2205SS	2205												
Pipe Size	1/2"	20x3.0-050												
		25x3.0-050												
	3/4"	25x3.0-075												
		30x3.0-075												
	1"	30x4.0-100												
		38x4.0-100												
	1-1/4"	38x4.0-125												
		42x4.0-125												
	1-1/2"	50x5.0-150												
		50x6.0-150												
		56x8.5-150												
	2"	60x5.0-200												
60x6.0-200														
60x8.0-200														
	66x8.5-200													
Flange Type Carbon Steel	FFCM64 SAE Code 62 W/Clearance Holes	FCM64												
	FFTM64 SAE Code 62 W/Threaded Holes	FTM64												
Cone Type	Cone - Flat Face	CF												
	Cone - 'O' Ring Face	CO												
Radius	Field Manufactured	R1												
	Factory Manufactured	R2												
Length	L1	Specify (mm)												
Angle	Max 90°	Specify (°)												
Length	L2	Specify (mm)												
Options	Viton	V												
	Painted (Specify)	P												
	Complete Stainless Steel Assembly: (including flanges)	SS												

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-38x4.0-100-FCM64-FCM64-CO-CF-R1-3000-90-2500

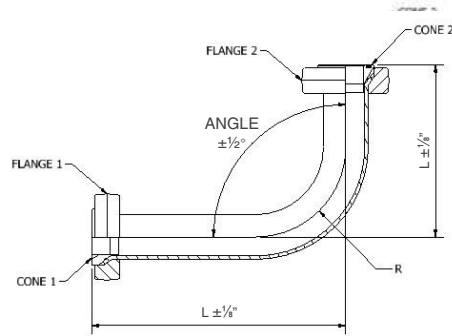
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

SAE 6000 PSI Flare Flange Bend Elbow Complete Assembly, NPS

SAE J518 Code 61 (ISO 6162-2)



A/FFE - Flare Flange Bend Elbow – Complete Assembly, NPS

Size	Complete Assembly Part Number	R1 Bend Radius (in)		R2 Bend Radius (in)		R3 Bend Radius (in)	
		R	L1	R	L1	R	L1
1/2"	A/FFE-SCH40-050-FC64-FC64-CO-CO-•-*-^	1.68	4.5	2.52	5.5	3.875	6.75
1/2"	A/FFE-SCH80-050-FC64-FC64-CO-CO-•-*-^	1.68	4.5	2.52	5.5	3.875	6.75
3/4"	A/FFE-SCH40-075-FC64-FC64-CO-CO-•-*-^	2.1	5.0	3.15	6.0	4.25	7.0
3/4"	A/FFE-SCH80-075-FC64-FC64-CO-CO-•-*-^	2.1	5.0	3.15	6.0	4.25	7.0
1"	A/FFE-SCH40-100-FC64-FC64-CO-CO-•-*-^	2.63	5.5	3.95	7.0	4.875	7.75
1"	A/FFE-SCH80-100-FC64-FC64-CO-CO-•-*-^	2.63	5.5	3.95	7.0	4.875	7.75
1-1/4"	A/FFE-SCH40-125-FC64-FC64-CO-CO-•-*-^	3.32	6.375	4.98	8.0	5.625	8.625
1-1/4"	A/FFE-SCH80-125-FC64-FC64-CO-CO-•-*-^	3.32	6.375	4.98	8.0	5.625	8.625
1-1/2"	A/FFE-SCH40-150-FC64-FC64-CO-CO-•-*-^	3.8	7.5	5.7	9.25	8.1875	11.75
1-1/2"	A/FFE-SCH80-150-FC64-FC64-CO-CO-•-*-^	3.8	7.5	5.7	9.25	8.1875	11.75
1-1/2"	A/FFE-SCH160-150-FC64-F634-CO-CO-•-*-^	3.8	7.5	5.7	9.25	8.1875	11.75
2"	A/FFE-SCH40-200-FC64-FC64-CO-CO-•-*-^	4.75	8.5	7.125	10.75	9 7/16	13
2"	A/FFE-SCH80-200-FC64-FC64-CO-CO-•-*-^	4.75	8.5	7.125	10.75	9 7/16	13
2"	A/FFE-SCH160-200-FC64-FC64-CO-CO-•-*-^	4.75	8.5	7.125	10.75	9 7/16	13

Assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

Flange Options:

FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

Cone Options:

CO = O-Ring Faced Cone.

CF = Flat Faced Cone.

• Bend Radius Options (Other radii available, consult factory):

R1

R2

R3

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

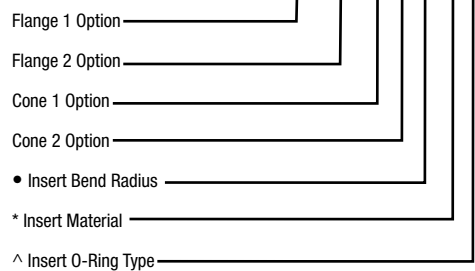
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

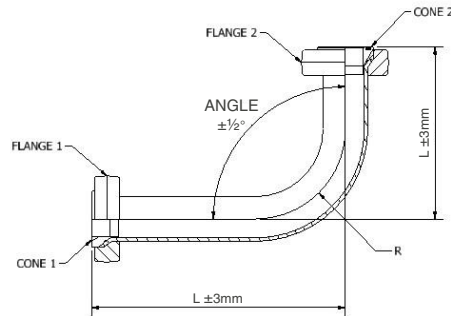
Ordering Example: A/FFE-SCH40-200-FC64-FC64-CO-CO-R1-SS-V



SAE 6000 PSI Flare Flange Bend Elbow

Complete Assembly, Metric

SAE J518 Code 62 (ISO 6162-2)



- COMPLETE ASSEMBLY CONSISTS OF:
- FLARE FLANGE 90° ELBOW BODY
 - TWO (2) FLARE FLANGES
 - TWO (2) CONES

A/FFEM - Flare Flange Bend Elbow Complete Assembly, Metric

Size	Complete Assembly Part Number	R1 Bend Radius (mm)		R2 Bend Radius (mm)		R3 Bend Radius (mm)	
		R	L1	R	L1	R	L1
1/2"	A/FFEM-20x3.0-050- FCM64-FCM64-CO-CO-•-•-^	40	116	60	136	80	156
1/2"	A/FFEM-25x3.0-050- FCM64-FCM64-CO-CO-•-•-^	50	126	75	151	100	176
3/4"	A/FFEM-30x3.0-075- FCM64-FCM64-CO-CO-•-•-^	50	134	90	149	120	194
3/4"	A/FFEM-30x4.0-075- FCM64-FCM64-CO-CO-•-•-^	60	134	90	164	120	194
1"	A/FFEM-38x4.0-100- FCM64-FCM64-CO-CO-•-•-^	76	153	114	167	152	229
1"	A/FFEM-38x5.0-100- FCM64-FCM64-CO-CO-•-•-^	76	153	114	191	152	229
1-1/4"	A/FFEM-42x4.0-125- FCM64-FCM64-CO-CO-•-•-^	84	162	126	192	168	246
1-1/4"	A/FFEM-42x5.0-125- FCM64-FCM64-CO-CO-•-•-^	84	162	126	204	168	246
1-1/2"	A/FFEM-50x5.0-150- FCM64-FCM64-CO-CO-•-•-^	100	194	150	220	200	294
1-1/2"	A/FFEM-50x6.0-150- FCM64-FCM64-CO-CO-•-•-^	100	194	150	244	200	294
1-1/2"	A/FFEM-56x8.5-150- FCM64-FCM64-CO-CO-•-•-^	100	194	150	244	200	294
2"	A/FFEM-60x5.0-200- FCM64-FCM64-CO-CO-•-•-^	120	215	180	245	240	335
2"	A/FFEM-60x6.0-200- FCM64-FCM64-CO-CO-•-•-^	120	215	180	275	240	335
2"	A/FFEM-66x8.5-200- FCM64-FCM64-CO-CO-•-•-^	120	215	180	275	240	335

Flange Options:

FCM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.
FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

Cone Options:

CO = O-Ring Faced Cone.
CF = Flat Faced Cone.

•Bend Radius Options (Other radii available, consult factory):

R1
R2
R3

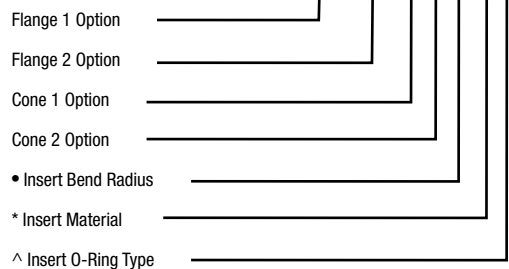
* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

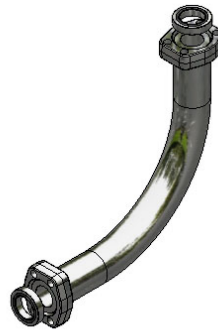
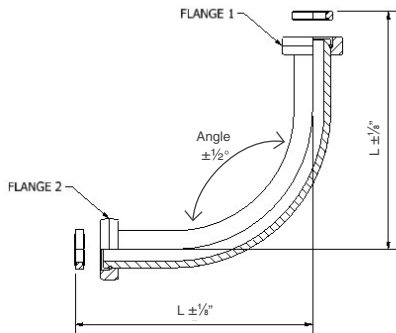
Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/FFEM-60x5.0-200-FCM64-FCM64-CO-CO-R1-SS-V



SAE 6000 PSI Retain Ring Flange Bend Elbow Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Retain Ring Flange Bend Elbow Body
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) O-Ring Spacers

A/RFE - Retain Ring Flange Bend Elbow – Complete Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L				
1-1/2"	A/RFE-150-FC64-*-*^	13.00 (330.20)	14.98 (6.80)	RFE-150-*-*^	11.50 (5.22)	6000 (420)
2"	A/RFE-200-FC64-*-*^	14.50 (368.30)	20.47 (9.30)	RFE-200-*-*^	15.59 (7.07)	6000 (420)

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 61 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

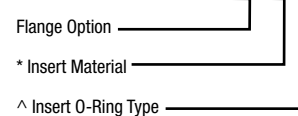
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

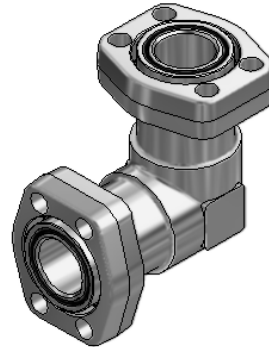
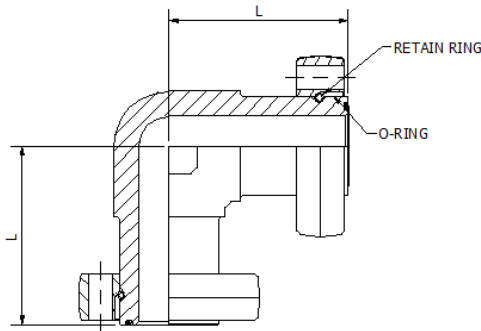
V = Viton.

Ordering Example: A/RFE-200-FC64-SS-V



SAE 6000 PSI Retain Ring Flange Elbow Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) Face O-Rings

To be Ordered Separately:

- Bolt Kit
- See page H25

A/RRFE - Retain Ring Flange Elbow – Complete Assembly with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
1/2"	A/RRFE-050-FC64-*^-^	2.40 (61.0)	OR^-3-909	2.02 (0.92)	RRFE-050-*^-^	1.10 (0.50)	6000 (420)
3/4"	A/RRFE-075-FC64-*^-^	2.61 (66.2)	OR^-3-913	3.68 (1.67)	RRFE-075-*^-^	1.94 (0.88)	6000 (420)
1"	A/RRFE-100-FC64-*^-^	2.81 (71.4)	OR^-3-916	4.73 (2.15)	RRFE-100-*^-^	2.26 (1.03)	6000 (420)
1-1/4"	A/RRFE-125-FC64-*^-^	3.22 (81.8)	OR^-3-918	7.26 (3.29)	RRFE-125-*^-^	3.29 (1.49)	6000 (420)
1-1/2"	A/RRFE-150-FC64-*^-^	4.01 (101.9)	OR^-3-924	12.18 (5.52)	RRFE-150-*^-^	6.08 (2.76)	6000 (420)
2"	A/RRFE-200-FC64-*^-^	4.40 (111.8)	OR^-3-928	18.74 (8.5)	RRFE-200-*^-^	7.62 (3.46)	6000 (420)

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

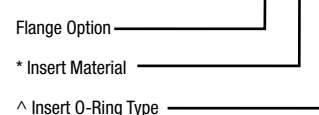
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

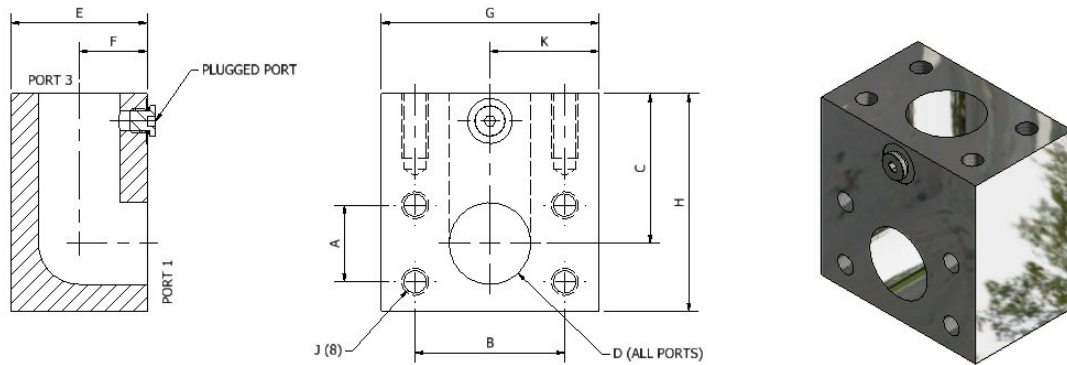
V = Viton.

Ordering Example: A/RRFE-200-FC64-SS-V



SAE 6000 PSI Block Elbow

SAE J518 Code 62 (ISO 6162-2) Flange Style



BE64 - Block Elbow Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BE64-050-*	0.72	1.59	1.88	0.50	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.10	6000 (420)
3/4"	BE64-075-*	0.94	2.00	2.25	0.75	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.74	6000 (420)
1"	BE64-100-*	1.09	2.25	2.50	0.94	2.25	1.13	3.00	4.00	1.50	7/16"-14	6.42	6000 (420)
1-1/4"	BE64-125-*	1.25	2.63	2.75	1.25	2.50	1.25	4.00	4.00	2.00	1/2"-13	9.18	6000 (420)
1-1/2"	BE64-150-*	1.44	3.13	3.00	1.50	3.00	1.50	4.00	4.50	2.00	5/8"-11	11.66	6000 (420)
2"	BE64-200-*	1.75	3.81	3.38	1.94	3.00	1.50	5.00	5.00	2.50	3/4"-10	14.97	6000 (420)

BEM64 - Block Elbow Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BEM64-050-*	18.3	40.4	47.8	12.7	50.8	25.4	63.5	63.5	31.8	M8 x 1.25	1.41	6000 (420)
3/4"	BEM64-075-*	23.9	50.8	57.2	19.1	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	2.15	6000 (420)
1"	BEM64-100-*	27.7	57.2	63.5	23.9	57.2	28.7	76.2	101.6	38.1	M12 x 1.75	2.92	6000 (420)
1-1/4"	BEM64-125-*	31.8	66.8	69.9	31.8	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	4.17	6000 (420)
1-1/4" ⁽²⁾	BEM64-125-M14-*	31.8	66.8	69.9	31.8	63.5	31.8	101.6	101.6	50.8	M14 x 2.00	4.17	6000 (420)
1-1/2"	BEM64-150-*	36.6	79.5	76.2	38.1	76.2	38.1	101.6	114.3	50.8	M16 x 2.00	5.30	6000 (420)
2"	BEM64-200-*	44.5	96.8	85.9	49.3	76.2	38.1	127.0	127.0	63.5	M20 x 2.50	6.80	6000 (420)

Materials:

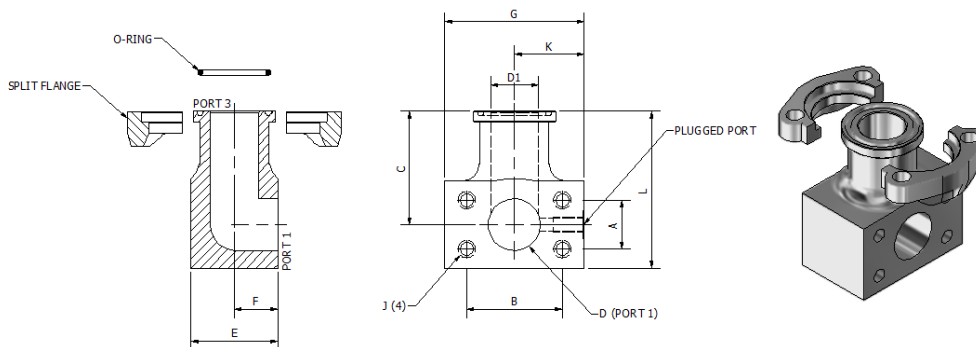
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE64-200-SS

* Insert Material

SAE 6000 PSI Split Flange Elbow

SAE J518 Code 62 (ISO 6162-2) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Elbow
- One (1) Set (2 Halves) Split Flange
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFE64 - Split Flange Elbow Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFE64-050-*^	0.72	1.59	2.75	0.50	0.38	2.00	1.00	2.50	1.25	3.75	5/16"-18	OR*-2-210	3.46 (1.57)	SFE64-050-*	2.91 (1.32)	6000 (420)
3/4"	A/SFE64-075-*^	0.94	2.00	3.00	0.75	0.63	2.00	1.00	3.00	1.50	4.00	3/8"-16	OR*-2-214	4.46 (2.02)	SFE64-075-*	3.53 (1.60)	6000 (420)
1"	A/SFE64-100-*^	1.09	2.25	3.38	0.94	0.88	2.25	1.13	3.00	1.50	4.50	7/16"-14	OR*-2-219	5.86(2.66)	SFE64-100-*	4.40 (2.00)	6000 (420)
1-1/4"	A/SFE64-125-*^	1.25	2.63	3.50	1.25	1.13	2.50	1.25	4.00	2.00	4.75	1/2"-13	OR*-2-222	8.78 (3.98)	SFE64-125-*	6.52 (2.96)	6000 (420)
1-1/2"	A/SFE64-150-*^	1.44	3.13	4.25	1.50	1.38	3.00	1.50	4.00	2.00	5.75	5/8"-11	OR*-2-225	13.31 (6.04)	SFE64-150-*	9.40 (4.26)	6000 (420)
2"	A/SFE64-200-*^	1.75	3.81	4.75	1.94	1.88	3.00	1.50	5.00	2.50	6.25	3/4"-10	OR*-2-228	18.26 (8.28)	SFE64-200-*	11.78 (5.34)	6000 (420)

A/SFEM64 - Split Flange Elbow Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFEM64-050-*^	18.3	38.1	69.9	12.7	9.7	50.8	25.4	63.5	31.8	95.3	M8 x 1.25	OR*-2-210	3.46 (1.57)	SFEM64-050-*	2.91 (1.32)	6000 (420)
3/4"	A/SFEM64-075-*^	23.9	50.8	76.2	19.1	16.0	50.8	25.4	76.2	38.1	101.6	M10 x 1.50	OR*-2-214	4.48 (2.03)	SFEM64-075-*	3.53 (1.60)	6000 (420)
1"	A/SFEM64-100-*^	27.7	57.2	85.9	23.9	22.4	57.2	28.7	76.2	38.1	114.3	M12 x 1.75	OR*-2-219	5.86 (2.66)	SFEM64-100-*	4.41 (2.00)	6000 (420)
1-1/4"	A/SFEM64-125-*^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	120.7	M12 x 1.75	OR*-2-222	8.80 (3.99)	SFEM64-125-*	6.53 (2.96)	6000 (420)
1-1/4" (2)	A/SFEM64-125-M14-*^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	120.7	M14 x 2.00	OR*-2-222	8.80 (3.99)	SFEM64-125-M14-*	6.53 (2.96)	6000 (420)
1-1/2"	A/SFEM64-150-*^	36.6	79.5	108.0	38.1	34.9	76.2	38.1	101.6	50.8	146.1	M16 x 2.00	OR*-2-225	13.34 (6.05)	SFEM64-150-*	9.41(4.27)	6000 (420)
2"	A/SFEM64-200-*^	44.5	96.8	120.7	49.3	47.8	88.9	44.5	127.0	63.5	158.8	M20 x 2.50	OR*-2-228	18.30 (8.30)	SFEM64-200-*	11.79 (5.35)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/SFE64-200-SS-V

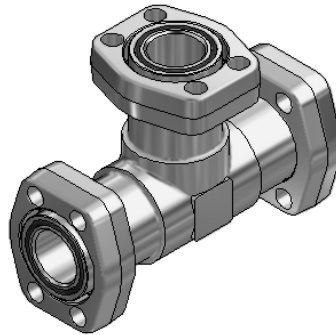
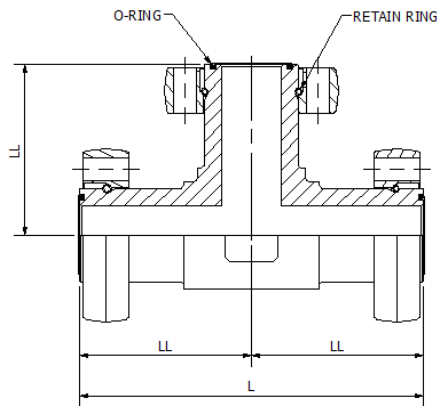
* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

Introduction
 Technical Data
 Pipe Selection Guide
 16 bar, 90° Flare
 ANSI 150#, 300# Flare
 SAE 1000, 70 bar
 SAE 3000, 210 bar
 SAE 6000, 420 bar
 SAE 10000, 690 bar
 ISO 6164, 400 bar
 ISO 6164, 400 bar F10° Flare
 Clamp Supports - Heavy Series
 Valves, Ball and Check
 H55

SAE 6000 PSI Flange Tee Complete Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Flange Set Includes:

- One (1) Flange Tee
- Three (3) Retain Ring Flanges
- Three (3) Retain Rings
- Three (3) Face O-Rings

To be Ordered Separately:

- Bolt Kit
- See page H25

A/RRFT - Flange Tee Complete Assembly Complete with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1/2"	A/RRFT-050-FC64-*^-^	4.81 (122.2)	2.41 (112.01)	OR^3-909	3.02 (1.37)	RRFT-050-*^-^	1.46 (0.66)	6000 (420)
3/4"	A/RRFT-075-FC64-*^-^	5.22 (132.6)	2.61 (66.30)	OR^3-913	5.85 (2.65)	RRFT-075-*^-^	2.61 (1.18)	6000 (420)
1"	A/RRFT-100-FC64-*^-^	5.62 (142.7)	2.81 (71.4)	OR^3-916	6.96 (3.16)	RRFT-100-*^-^	2.91 (1.32)	6000 (420)
1 1/4"	A/RRFT-125-FC64-*^-^	6.45 (163.8)	3.22 (81.8)	OR^3-918	11.55 (5.24)	RRFT-125-*^-^	4.89 (2.22)	6000 (420)
1 1/2"	A/RRFT-150-FC64-*^-^	8.02 (203.7)	4.01 (101.9)	OR^3-924	18.30 (8.30)	RRFT-150-*^-^	8.10 (3.67)	6000 (420)
2"	A/RRFT-200-FC64-*^-^	8.81 (223.8)	4.40 (111.8)	OR^3-928	27.30 (12.38)	RRFT-200-*^-^	9.90 (4.49)	6000 (420)

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

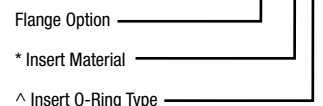
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

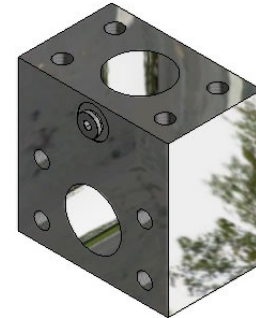
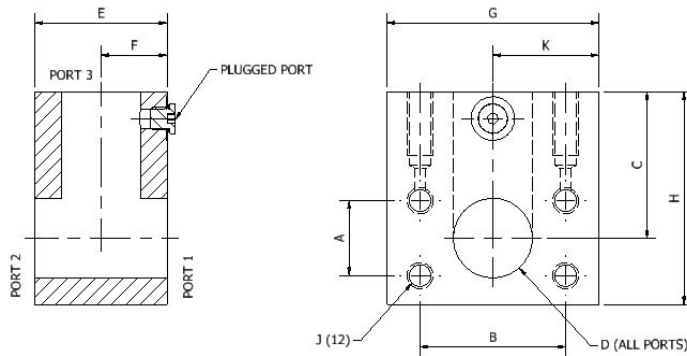
V = Viton.

Ordering Example: A/RRFT-200-FC64-SS-V



SAE 6000 PSI Block Tee

SAE J518 Code 62 (ISO 6162-2) Flange Style



BT64 - Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BT64-050-*	0.72	1.59	1.88	0.50	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.05 (1.38)	6000 (420)
3/4"	BT64-075-*	0.94	2.00	2.25	0.75	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.66 (2.11)	6000 (420)
1"	BT64-100-*	1.09	2.25	2.50	0.94	2.25	1.13	3.00	4.00	1.50	7/16"-14	6.20 (2.81)	6000 (420)
1-1/4"	BT64-125-*	1.25	2.63	2.75	1.25	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.86 (4.02)	6000 (420)
1-1/2"	BT64-150-*	1.44	3.13	3.00	1.50	3.00	1.50	4.00	4.50	2.00	5/8"-11	11.04 (5.01)	6000 (420)
2"	BT64-200-*	1.75	3.81	3.38	1.94	3.00	1.50	5.00	5.00	2.50	3/4"-10	14.41 (6.54)	6000 (420)

BTM64 - Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (inch)	Block Tee Part No	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BTM64-050-*	18.3	40.4	47.8	12.7	50.8	25.4	63.5	63.5	31.8	M8 X 1.25	3.07 (1.39)	6000 (420)
3/4"	BTM64-075-*	23.9	50.8	57.2	19.1	50.8	25.4	76.2	82.6	38.1	M10 X 1.50	4.67 (2.12)	6000 (420)
1"	BTM64-100-*	27.7	57.2	63.5	23.9	57.2	28.7	76.2	101.6	38.1	M12 X 1.75	6.22 (2.82)	6000 (420)
1-1/4"	BTM64-125-*	31.8	66.8	69.9	31.8	63.5	31.8	101.6	101.6	50.8	M12 X 1.75	8.88 (4.03)	6000 (420)
1-1/4" ⁽²⁾	BTM64-125-M14-*	31.8	66.8	69.9	31.8	63.5	31.8	101.6	101.6	50.8	M14 x 2.00	8.88 (4.03)	6000 (420)
1-1/2"	BTM64-150-*	36.6	79.5	76.2	38.1	76.2	38.1	101.6	114.3	50.8	M16 X 2.00	11.07 (5.02)	6000 (420)
2"	BTM64-200-*	44.5	96.8	85.9	49.3	76.2	38.1	127.0	127.0	63.5	M20 X 2.50	14.44(6.55)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

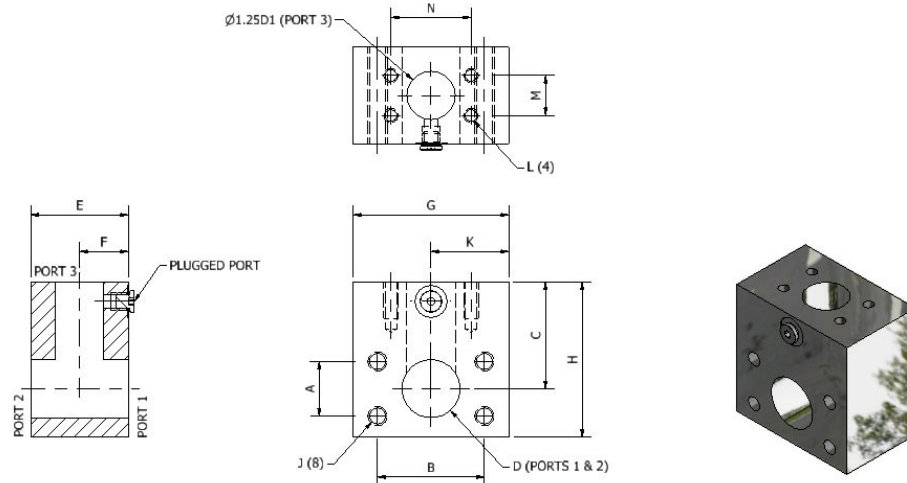
Ordering Example: BT64-200-SS

* Insert Material

3D step models available upon request

SAE 6000 PSI Reducing Branch Block Tee - NPS

SAE J518 Code 62 (ISO 6162-2) Flange Style



BTR64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Tee Part Number	Dimensions (in)												Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
3/4"x1/2"	BTR64-075x050-*	0.94	2.00	2.25	0.75	0.50	2.00	1.00	3.00	3.25	1.50	0.72	1.59	3/8"-16	5/16"-18	5.20 (2.36)	6000 (420)
1"x1/2"	BTR64-100x050-*	1.09	2.25	2.50	0.94	0.50	2.25	1.13	3.00	4.00	1.50	0.72	1.59	7/16"-14	5/16"-18	5.20 (2.36)	6000 (420)
1"x3/4"	BTR64-100x075-*	1.09	2.25	2.50	0.94	0.75	2.25	1.13	3.00	4.00	1.50	0.94	2.00	7/16"-14	3/8"-16	5.20 (2.36)	6000 (420)
1-1/4"x1/2"	BTR64-125x050-*	1.25	2.63	2.75	1.25	0.50	2.50	1.25	4.00	4.00	2.00	0.72	1.59	1/2"-13	5/16"-18	10.00 (4.54)	6000 (420)
1-1/4"x3/4"	BTR64-125x075-*	1.25	2.63	2.75	1.25	0.75	2.50	1.25	4.00	4.00	2.00	0.94	2.00	1/2"-13	3/8"-16	10.00 (4.54)	6000 (420)
1-1/4"x1"	BTR64-125x100-*	1.25	2.63	2.75	1.25	0.94	2.50	1.25	4.00	4.00	2.00	1.09	2.25	1/2"-13	7/16"-14	10.00 (4.54)	6000 (420)
1-1/2"x1/2"	BTR64-150x050-*	1.44	3.13	3.00	1.50	0.50	3.00	1.50	4.00	4.50	2.00	0.72	1.59	5/8"-11	5/16"-18	11.30 (5.13)	6000 (420)
1-1/2"x3/4"	BTR64-150x075-*	1.44	3.13	3.00	1.50	0.75	3.00	1.50	4.00	4.50	2.00	0.94	2.00	5/8"-11	3/8"-16	11.30 (5.13)	6000 (420)
1-1/2"x1"	BTR64-150x100-*	1.44	3.13	3.00	1.50	0.94	3.00	1.50	4.00	4.50	2.00	1.09	2.25	5/8"-11	7/16"-14	11.30 (5.13)	6000 (420)
1-1/2"x1-1/4"	BTR64-150x125-*	1.44	3.13	3.00	1.50	1.25	3.00	1.50	4.00	4.50	2.00	1.25	2.63	5/8"-11	1/2"-13	11.30 (5.13)	6000 (420)
2"x1/2"	BTR64-200x050-*	1.75	3.81	3.38	1.94	0.50	3.00	1.50	5.00	5.00	2.50	0.72	1.59	3/4"-10	5/16"-18	14.80 (6.71)	6000 (420)
2"x3/4"	BTR64-200x075-*	1.75	3.81	3.38	1.94	0.75	3.00	1.50	5.00	5.00	2.50	0.94	2.00	3/4"-10	3/8"-16	14.80 (6.71)	6000 (420)
2"x1"	BTR64-200x100-*	1.75	3.81	3.38	1.94	0.94	3.00	1.50	5.00	5.00	2.50	1.09	2.25	3/4"-10	7/16"-14	14.80 (6.71)	6000 (420)
2"x1-1/4"	BTR64-200x125-*	1.75	3.81	3.38	1.94	1.25	3.00	1.50	5.00	5.00	2.50	1.25	2.63	3/4"-10	1/2"-13	14.80 (6.71)	6000 (420)
2"x1-1/2"	BTR64-200x150-*	1.75	3.81	3.38	1.94	1.50	3.00	1.50	5.00	5.00	2.50	1.44	3.13	3/4"-10	5/8"-11	14.80 (6.71)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

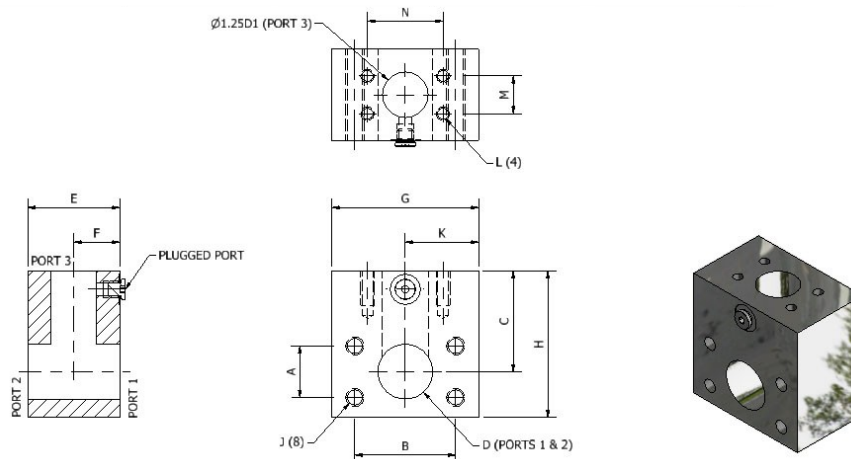
SS = Stainless Steel, Type 316.

Ordering Example: BTR64-200x050-SS

* Insert Material

SAE 6000 PSI Reducing Branch Block Tee - Metric

SAE J518 Code 62 (ISO 6162-2) Flange Style



BTRM64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)												Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
3/4"x1/2"	BTRM64-075x050-*	23.9	50.8	57.2	19.1	12.7	50.8	25.4	76.2	82.6	38.1	18.3	40.4	M10 x 1.50	M8 x 1.25	5.20 (2.36)	6000 (420)
1"x1/2"	BTRM64-100x050-*	27.7	57.2	63.5	23.9	12.7	57.2	28.7	76.2	101.6	38.1	18.3	40.4	M12 x 1.75	M8 x 1.25	5.20 (2.36)	6000 (420)
1"x3/4"	BTRM64-100x075-*	27.7	57.2	63.5	23.9	19.1	57.2	28.7	76.2	101.6	38.1	23.9	50.8	M12 x 1.75	M10 x 1.50	5.20 (2.36)	6000 (420)
1-1/4"x1/2"	BTRM64-125x050-*	31.8	66.8	69.9	31.8	12.7	63.5	31.8	101.6	101.6	50.8	18.3	40.4	M12 x 1.75	M8 x 1.25	10.00 (4.54)	6000 (420)
1-1/4"x1/2"	BTRM64-125-M14x050*	31.8	66.8	69.9	31.8	12.7	63.5	31.8	101.6	101.6	50.8	18.3	40.4	M14 x 2.00	M8 x 1.25	10.00 (4.54)	6000 (420)
1-1/4"x3/4"	BTRM64-125x075-*	31.8	66.8	69.9	31.8	19.1	63.5	31.8	101.6	101.6	50.8	23.9	50.8	M12 x 1.75	M10 x 1.50	10.00 (4.54)	6000 (420)
1-1/4" (2) x3/4"	BTRM64-125-M14x075*	31.8	66.8	69.9	31.8	19.1	63.5	31.8	101.6	101.6	50.8	23.9	50.8	M14 x 2.00	M10 x 1.50	10.00 (4.54)	6000 (420)
1-1/4"x1"	BTRM64-125x100-*	31.8	66.8	69.9	31.8	23.9	63.5	31.8	101.6	101.6	50.8	27.7	57.2	M12 x 1.75	M12 x 1.75	10.00 (4.54)	6000 (420)
1-1/4" (2) x1"	BTRM64-125-M14x100*	31.8	66.8	69.9	31.8	23.9	63.5	31.8	101.6	101.6	50.8	27.7	57.2	M14 x 2.00	M12 x 1.75	10.00 (4.54)	6000 (420)
1-1/2"x1/2"	BTRM64-150x050-*	36.6	79.5	76.2	38.1	12.7	76.2	38.1	101.6	114.3	50.8	18.3	40.4	M16 x 2.00	M8 x 1.25	11.30 (5.13)	6000 (420)
1-1/2"x3/4"	BTRM64-150x075-*	36.6	79.5	76.2	38.1	19.1	76.2	38.1	101.6	114.3	50.8	23.9	50.8	M16 x 2.00	M10 x 1.50	11.30 (5.13)	6000 (420)
1-1/2"x1"	BTRM64-150x100-*	36.6	79.5	76.2	38.1	23.9	76.2	38.1	101.6	114.3	50.8	27.7	57.2	M16 x 2.00	M12 x 1.75	11.30 (5.13)	6000 (420)
1-1/2"x1-1/4"	BTRM64-150x125-*	36.6	79.5	76.2	38.1	31.8	76.2	38.1	101.6	114.3	50.8	31.8	66.8	M16 x 2.00	M12 x 1.75	11.30 (5.13)	6000 (420)
1-1/2"x1-1/4" (2)	BTRM64-150x125-M14-*	36.6	79.5	76.2	38.1	31.8	76.2	38.1	101.6	114.3	50.8	31.8	66.8	M16 x 2.00	M14 x 2.00	11.30 (5.13)	6000 (420)
2"x1/2"	BTRM64-200x050-*	44.5	96.8	85.9	49.3	12.7	76.2	38.1	127.0	127.0	63.5	18.3	40.4	M20 x 2.50	M8 x 1.25	14.80 (6.71)	6000 (420)
2"x3/4"	BTRM64-200x075-*	44.5	96.8	85.9	49.3	19.1	76.2	38.1	127.0	127.0	63.5	23.9	50.8	M20 x 2.50	M10 x 1.50	14.80 (6.71)	6000 (420)
2"x1"	BTRM64-200x100-*	44.5	96.8	85.9	49.3	23.9	76.2	38.1	127.0	127.0	63.5	27.7	57.2	M20 x 2.50	M12 x 1.75	14.80 (6.71)	6000 (420)
2"x1-1/4"	BTRM64-200x125-*	44.5	96.8	85.9	49.3	31.8	76.2	38.1	127.0	127.0	63.5	31.8	66.8	M20 x 2.50	M12 x 1.75	14.80 (6.71)	6000 (420)
2"x1-1/4" (2)	BTRM64-200x125-M14-*	44.5	96.8	85.9	49.3	31.8	76.2	38.1	127.0	127.0	63.5	31.8	66.8	M20 x 2.50	M14 x 2.00	14.80 (6.71)	6000 (420)
2"x1-1/2"	BTRM64-200x150-*	44.5	96.8	85.9	49.3	38.1	76.2	38.1	127.0	127.0	63.5	36.6	79.5	M20 x 2.50	M16 x 2.00	14.80 (6.71)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTRM64-200x050-SS

* Insert Material _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

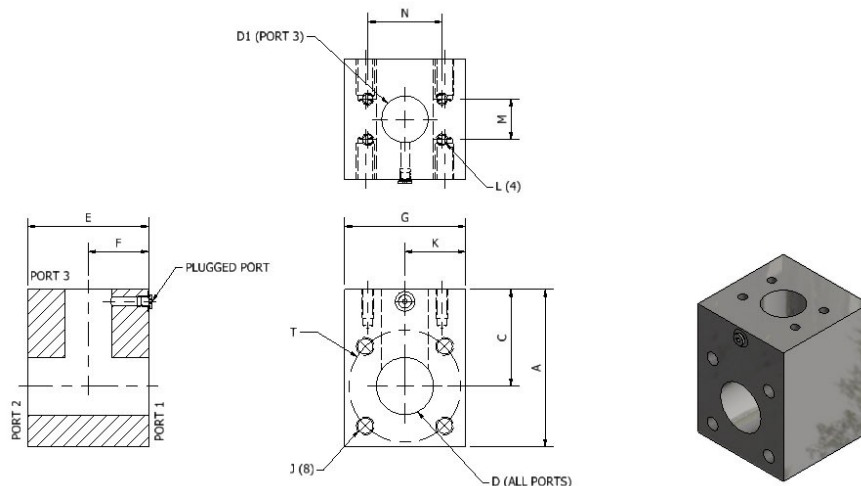
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 6000 PSI Reducing Branch Block Tee

ISO 6164/SAE J518 Code 62 (ISO 6162-2) Flange Style



BTR7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-64-250x200-*	4.65	4.13	2.38	1.94	3.50	1.75	5.00	6.50	2.50	1.75	3.81	3/4"-10	3/4"-10	32.19 (14.60)	5800 (400)
3"x2"	BTR7-64-300x200-*	5.71	4.75	2.88	1.94	4.00	2.00	6.00	7.75	3.00	1.75	3.81	1"-8	3/4"-10	49.50 (22.45)	5800 (400)
4"x2"	BTR7-64-400x200-*	6.89	5.00	3.50	1.94	4.00	2.00	7.00	8.50	3.50	1.75	3.81	1-1/8"-7	3/4"-10	67.35 (30.55)	5800 (400)

BTRM7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-64-250x200-*	118.1	104.9	60.5	49.3	88.9	44.5	127.0	165.1	63.5	44.5	96.8	M20 x 2.50	M20 x 2.50	32.25 (14.63)	5800 (400)
3"x2"	BTRM7-64-300x200-*	145.0	120.7	73.2	49.3	101.6	50.8	152.4	196.9	76.2	44.5	96.8	M24 x 3.00	M20 x 2.50	49.60 (22.50)	5800 (400)
4"x2"	BTRM7-64-400x200-*	175.0	127.0	88.9	49.3	101.6	50.8	177.8	215.9	88.9	44.5	96.8	M30 x 3.50	M20 x 2.50	67.48 (30.61)	5800 (400)

Materials:

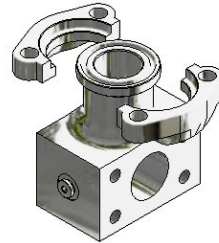
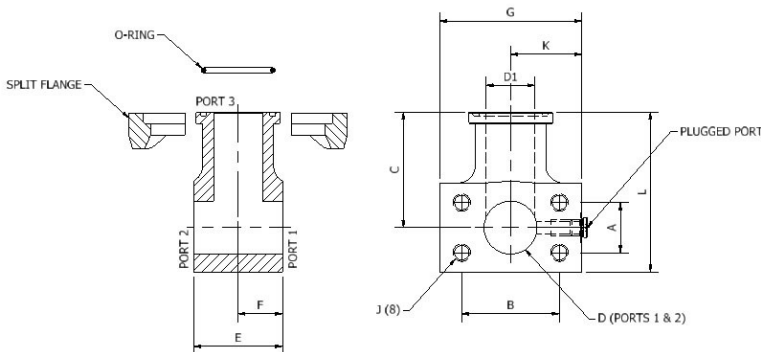
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR7-64-250x200-SS

* Insert Material

SAE 6000 PSI Split Flange Branch Tee Complete Assembly

SAE J518 Code 62 (ISO 6162-2) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Tee
- One (1) Sets (2 Halves) Split Flanges
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFBT64 - Split Flange Branch Tee Assembly with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFBT64-050-*^	0.72	1.59	2.75	0.50	0.38	2.00	1.00	2.50	1.25	3.75	5/16"-18	OR*-2-210	3.45 (1.56)	SFBT64-050-*	2.90 (1.32)	6000 (420)
3/4"	A/SFBT64-075-*^	0.94	2.00	3.00	0.75	0.63	2.00	1.00	3.00	1.50	4.00	3/8"-16	OR*-2-214	4.43 (2.01)	SFBT64-075-*	3.50 (1.59)	6000(420)
1"	A/SFBT64-100-*^	1.09	2.25	3.38	0.94	0.88	2.25	1.13	3.00	1.50	4.50	7/16"-14	OR*-2-219	5.81 (2.64)	SFBT64-100-*	4.35 (1.97)	6000 (420)
1-1/4"	A/SFBT64-125-*^	1.25	2.63	3.50	1.25	1.13	2.50	1.25	4.00	2.00	4.75	1/2"-13	OR*-2-222	8.76 (3.97)	SFBT64-125-*	6.50 (2.95)	6000 (420)
1-1/2"	A/SFBT64-150-*^	1.44	3.13	4.25	1.50	1.38	3.00	1.50	4.00	2.00	5.75	5/8"-11	OR*-2-225	13.26 (6.01)	SFBT64-150-*	9.35 (4.24)	6000 (420)
2"	A/SFBT64-200-*^	1.75	3.81	4.75	1.94	1.88	3.00	1.50	5.00	2.50	6.25	3/4"-10	OR*-2-228	18.48 (8.38)	SFBT64-200-*	12.00 (5.44)	6000 (420)

A/SFBTM64 - Split Flange Branch Tee Assembly Flat Face with Threaded Holes, Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFBTM64-050-*^	18.3	40.4	69.9	12.7	9.7	50.8	25.4	63.5	31.8	95.3	M8 x 1.25	OR*-2-210	3.45 (1.56)	SFBTM64-050-*	2.90 (1.32)	6000 (420)
3/4"	A/SFBTM64-075-*^	23.9	50.8	76.2	19.1	16.0	50.8	25.4	76.2	38.1	101.6	M10 x 1.50	OR*-2-214	4.43 (2.01)	SFBTM64-075-*	3.50 (1.59)	6000 (420)
1"	A/SFBTM64-100-*^	27.7	57.2	85.9	23.9	22.4	57.2	28.7	76.2	38.1	114.3	M12 x 1.75	OR*-2-219	5.81 (2.64)	SFBTM64-100-*	4.35 (1.97)	6000 (420)
1-1/4"	A/SFBTM64-125-*^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	120.7	M12 x 1.75	OR*-2-222	8.76 (3.97)	SFBTM64-125-*	6.50 (2.95)	6000 (420)
1-1/4" ²⁰	A/SFBTM64-125-M14-*^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	120.7	M14 x 2.00	OR*-2-222	8.76 (3.97)	SFBTM64-125-M14-*	6.50 (2.95)	6000 (420)
1-1/2"	A/SFBTM64-150-*^	36.6	79.5	108.0	38.1	34.9	76.2	38.1	101.6	50.8	146.1	M16 x 2.00	OR*-2-225	13.26 (6.01)	SFBTM64-150-*	9.35 (4.24)	6000 (420)
2"	A/SFBTM64-200-*^	44.5	96.8	120.7	49.3	47.8	88.9	44.5	127.0	63.5	158.8	M20 x 2.50	OR*-2-228	18.48 (8.38)	SFBTM64-200-*	12.00 (5.44)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/SFBT64-200-SS-V

* Insert Material

^ Insert O-Ring Type

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

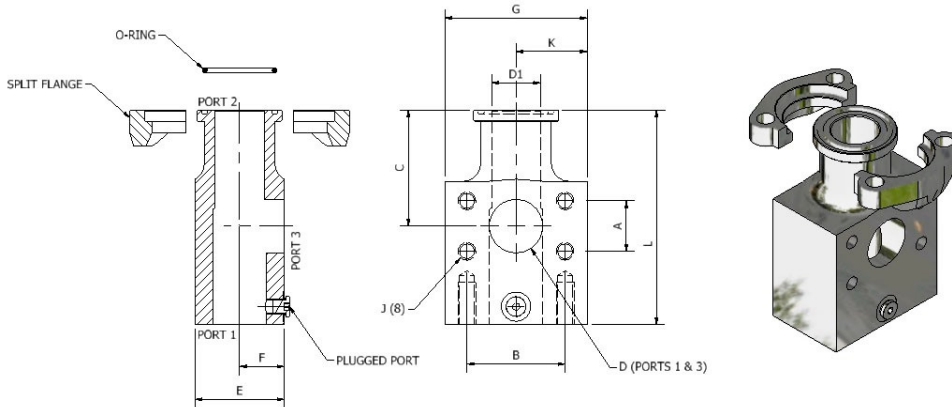
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

SAE 6000 PSI Split Flange Run Tee Complete Assembly

SAE J518 Code 62 (ISO 6162-2) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Tee
- One (1) Sets (2 Halves) Split Flanges
- One (1) O-Ring
- One (1) Component Bolt Kit

A/SFRT64 - Split Flange Run Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFRT64-050-*~^	0.72	1.59	2.37	0.50	0.38	2.00	1.00	2.50	1.25	4.25	5/16"-18	OR*-2-210	3.85 (1.75)	SFRT64-050-*	3.30 (1.50)	6000 (420)
3/4"	A/SFRT64-075-*~^	0.94	2.00	3.00	0.75	0.63	2.00	1.00	3.00	1.50	5.25	3/8"-16	OR*-2-214	6.33 (2.87)	SFRT64-075-*	5.40 (2.45)	6000 (420)
1"	A/SFRT64-100-*~^	1.09	2.25	3.75	0.94	0.88	2.25	1.13	3.00	1.50	6.25	7/16"-14	OR*-2-219	8.46 (3.84)	SFRT64-100-*	7.00 (3.18)	6000 (420)
1-1/4"	A/SFRT64-125-*~^	1.25	2.63	3.50	1.25	1.13	2.50	1.25	4.00	2.00	6.25	1/2"-13	OR*-2-222	11.81 (5.36)	SFRT64-125-*	9.55 (4.33)	6000 (420)
1-1/2"	A/SFRT64-150-*~^	1.44	3.13	4.25	1.50	1.38	3.00	1.50	4.00	2.00	7.25	5/8"-11	OR*-2-225	16.91 (7.67)	SFRT64-150-*	13.00 (5.90)	6000 (420)
2"	A/SFRT64-200-*~^	1.75	3.81	4.87	1.94	1.88	3.00	1.50	5.00	2.50	8.25	3/4"-10	OR*-2-228	24.23 (10.99)	SFRT64-200-*	17.75 (8.05)	6000 (420)

A/SFRM64 - Split Flange Run Tee Assembly Flat Face with Threaded Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFRM64-050-*~^	18.3	40.4	60.2	12.7	9.7	50.8	25.4	63.5	31.8	108.0	M8 x 1.25	OR*-2-210	3.85 (1.75)	SFRM64-050-*	3.30 (1.50)	6000 (420)
3/4"	A/SFRM64-075-*~^	23.9	50.8	76.2	19.1	16.0	50.8	25.4	76.2	38.1	133.4	M10 x 1.50	OR*-2-214	6.33 (2.87)	SFRM64-075-*	5.40 (2.45)	6000 (420)
1"	A/SFRM64-100-*~^	27.7	57.2	95.3	23.9	22.4	57.2	28.7	76.2	38.1	158.8	M12 x 1.75	OR*-2-219	8.46 (3.84)	SFRM64-100-*	7.00 (3.18)	6000 (420)
1-1/4"	A/SFRM64-125-*~^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	158.8	M12 x 1.75	OR*-2-222	11.81 (5.36)	SFRM64-125-*	9.55 (4.33)	6000 (420)
1-1/4" ⁽²⁾	A/SFRM64-125-M14-*~^	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	158.8	M14 x 2.00	OR*-2-222	11.81 (5.36)	SFRM64-125-M14-*	9.55 (4.33)	6000 (420)
1-1/2"	A/SFRM64-150-*~^	36.6	79.5	108.0	38.1	34.9	76.2	38.1	101.6	50.8	184.2	M16 x 2.00	OR*-2-225	16.91 (7.67)	SFRM64-150-*	13.00 (5.90)	6000 (420)
2"	A/SFRM64-200-*~^	44.5	96.8	120.7	49.3	47.8	88.9	44.5	127.0	63.5	209.6	M20 x 2.50	OR*-2-228	24.23 (10.99)	SFRM64-200-*	17.75 (8.05)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

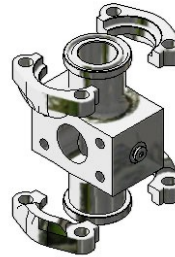
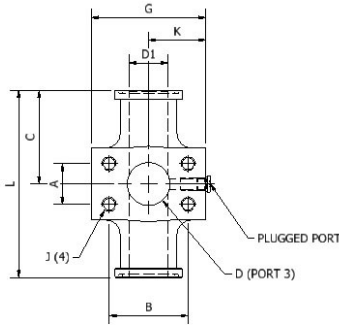
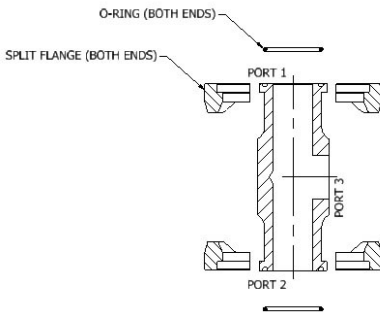
Ordering Example: A/SFRT64-200-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

SAE 6000 PSI Split Flange Tee

Complete Assembly

SAE J518 Code 62 (ISO 6162-2) Flange Style



Complete Flange Set Includes:

- One (1) Split Flange Tee
- Two (2) Sets (4 Halves) Split Flanges
- Two (2) O-Rings
- Two (2) Component Bolt Kits

A/SFT64 - Split Flange Tee Assembly - Flat Face with Threaded Holes Complete with Buna O-Rings and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)										Thread UNC-2B	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFT64-050-* [^]	0.72	1.59	2.75	0.50	0.38	2.00	1.00	3.00	1.50	5.50	5/16"-18	OR*-2-210	4.90 (2.22)	SFT64-050-*	3.80 (1.72)	6000 (420)
3/4"	A/SFT64-075-* [^]	0.94	2.00	3.00	0.75	0.63	2.00	1.00	3.50	1.75	6.00	3/8"-16	OR*-2-214	6.56 (2.98)	SFT64-075-*	4.70 (2.13)	6000 (420)
1"	A/SFT64-100-* [^]	1.09	2.25	3.38	0.94	0.88	2.25	1.13	3.00	1.50	6.75	7/16"-14	OR*-2-219	8.22 (3.73)	SFT64-100-*	5.30 (2.40)	6000 (420)
1-1/4"	A/SFT64-125-* [^]	1.25	2.63	3.50	1.25	1.13	2.50	1.25	4.00	2.00	7.00	1/2"-13	OR*-2-222	12.07 (5.47)	SFT64-125-*	7.55 (3.42)	6000 (420)
1-1/2"	A/SFT64-150-* [^]	1.44	3.13	4.20	1.50	1.38	3.00	1.50	4.00	2.00	8.50	5/8"-11	OR*-2-225	18.87 (8.56)	SFT64-150-*	11.05 (5.01)	6000 (420)
2"	A/SFT64-200-* [^]	1.75	3.81	4.75	1.94	1.88	3.00	1.50	5.00	2.50	9.50	3/4"-10	OR*-2-228	28.01 (12.71)	SFT64-200-*	15.05 (6.83)	6000 (420)

A/SFTM64 - Split Flange Tee Assembly - Flat Face with Threaded Holes Complete with Buna O-Rings and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)										Thread	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	K	L						
1/2"	A/SFTM64-050-* [^]	18.3	40.4	69.9	12.7	9.7	50.8	25.4	76.2	38.1	139.7	M8 x 1.25	OR*-2-210	4.90 (2.22)	SFTM64-050-*	3.80 (1.72)	6000 (420)
3/4"	A/SFTM64-075-* [^]	23.9	50.8	76.2	19.1	16.0	50.8	25.4	88.9	44.5	152.4	M10 x 1.50	OR*-2-214	6.56 (2.98)	SFTM64-075-*	4.70 (2.13)	6000 (420)
1"	A/SFTM64-100-* [^]	27.7	57.2	85.9	23.9	22.4	57.2	28.7	76.2	38.1	171.5	M12 x 1.75	OR*-2-219	8.22 (3.73)	SFTM64-100-*	5.30 (2.40)	6000 (420)
1-1/4"	A/SFTM64-125-* [^]	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	177.8	M12 x 1.75	OR*-2-222	12.07 (5.47)	SFTM64-125-*	7.55 (3.42)	6000 (420)
1-1/4" ⁽²⁾	A/SFTM64-125-M14-* [^]	31.8	66.8	88.9	31.8	28.7	63.5	31.8	101.6	50.8	177.8	M14 x 2.00	OR*-2-222	12.07 (5.47)	SFTM64-125-M14-*	7.55 (3.42)	6000 (420)
1-1/2"	A/SFTM64-150-* [^]	36.6	79.5	108.0	38.1	34.9	76.2	38.1	101.6	50.8	215.9	M16 x 2.00	OR*-2-225	18.87 (8.56)	SFTM64-150-*	11.05 (5.01)	6000 (420)
2"	A/SFTM64-200-* [^]	44.5	96.8	120.7	49.3	47.8	88.9	44.5	127.0	63.5	241.3	M20 x 2.50	OR*-2-228	28.01 (12.71)	SFTM64-200-*	15.05 (6.83)	6000 (420)

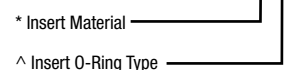
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

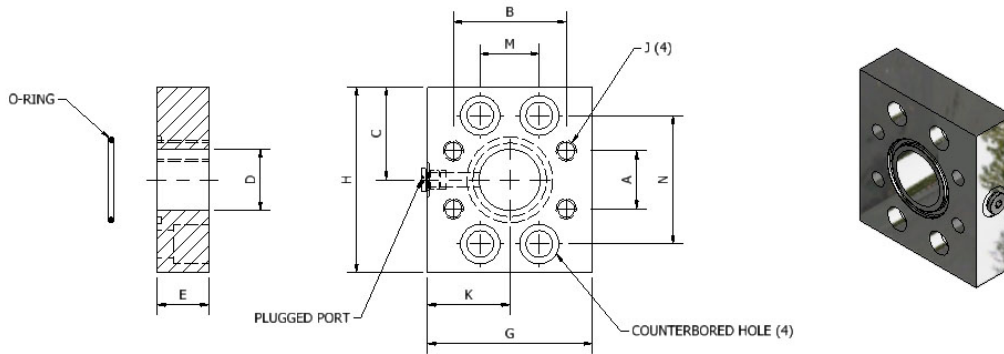
Ordering Example: A/SFT64-200-SS-V



3D step models available upon request

SAE 6000 PSI Transition Plate

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Manifold Mount Style



TPO6-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Transition Plate Part Number	Dimensions (in)										C'T Bore Bolt	Thread 1 UNC-2B	O-Ring (Buna) Part No.	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K	M	N					
1/2"	TP06-34-050-*^-^	0.69	1.50	1.25	0.50	1.00	2.50	2.50	1.50	0.72	1.60	5/16"	5/16"-18	OR^-2-210	1.40 (0.64)	5000 (350)
3/4"	TP06-34-075-*^-^	0.88	1.88	1.50	0.75	1.00	3.00	3.00	1.75	0.94	2.00	3/8"	3/8"-16	OR^-2-214	2.00 (0.91)	5000 (350)
1"	TP06-34-100-*^-^	1.03	2.06	1.50	0.94	1.00	3.00	3.00	1.50	1.10	2.24	7/16"	3/8"-16	OR^-2-219	1.90 (0.86)	5000 (350)
1-1/4"	TP06-34-125-*^-^	1.19	2.31	2.00	1.25	1.25	3.00	4.00	1.50	1.24	2.62	1/2"	7/16"-14	OR^-2-222	3.59 (1.63)	4000 (275)
1-1/2"	TP06-34-150-*^-^	1.41	2.75	2.25	1.50	1.25	4.00	4.50	2.00	1.44	3.13	31/32"	1/2"-13	OR^-2-225	4.56 (2.07)	3000 (210)
2"	TP06-34-200-*^-^	1.69	3.06	2.75	1.94	1.75	4.00	5.50	2.00	1.75	3.81	3/4"	1/2"-13	OR^-2-228	7.40 (3.36)	3000 (210)

TPOM6-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G 1/8 Port (Plugged), Metric

Size	Transition Plate Part Number	Dimensions (mm)										C'T Bore	Thread	O-Ring (Buna) Part No.	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K	M	N					
1/2"	TPOM6-34-050-*^-^	17.5	38.10	31.8	12.7	25.4	63.5	63.5	38.1	18.3	40.6	M8	M8x1.25	OR^-2-210	1.40 (0.64)	5000 (350)
3/4"	TPOM6-34-075-*^-^	22.4	47.8	38.1	19.1	25.4	76.2	76.2	44.5	23.9	50.8	M10	M10x1.50	OR^-2-214	2.00 (0.91)	5000 (350)
1"	TPOM6-34-100-*^-^	26.2	52.3	38.1	23.9	25.4	76.2	76.2	38.1	27.9	56.9	M12	M12x1.50	OR^-2-219	1.90 (0.86)	5000 (350)
1-1/4"	TPOM6-34-125-*^-^	30.2	58.7	50.8	31.8	31.8	76.2	101.6	38.1	31.5	66.5	M12	M12x1.50	OR^-2-222	3.59 (1.63)	4000 (275)
1-1/4" ⁽²⁾	TPOM6-34-125-M14-*^-^	30.2	58.7	50.8	31.8	31.8	76.2	101.6	38.1	31.5	66.5	M14	M12x1.50	OR^-2-222	3.59 (1.63)	4000 (275)
1-1/2"	TPOM6-34-150-*^-^	35.8	69.9	57.2	38.1	31.8	101.6	114.3	50.8	36.6	79.5	M16	M16x1.75	OR^-2-225	4.56 (2.07)	3000 (210)
2"	TPOM6-34-200-*^-^	42.9	77.7	69.9	49.3	44.5	101.6	139.7	50.8	44.5	96.8	M20	M20x1.75	OR^-2-228	7.40 (3.36)	3000 (210)

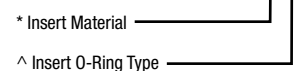
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

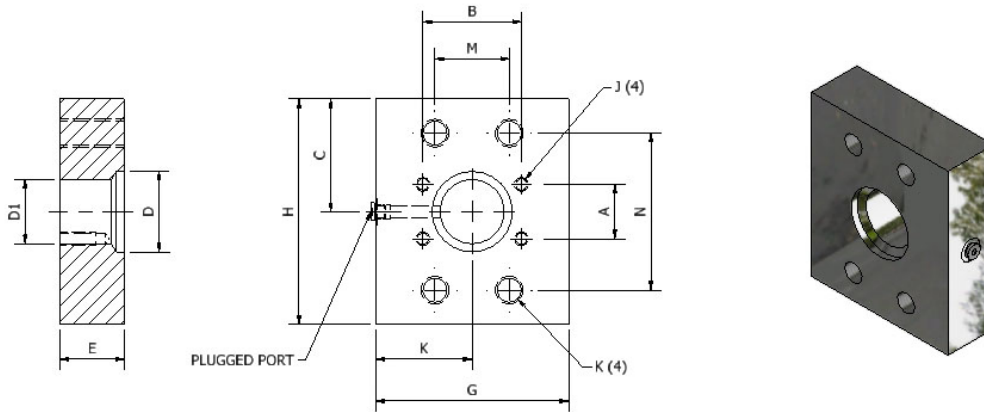
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TP06-34-200-SS-V



SAE 6000 PSI Transition Plate Reducer

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Union Style



TPR6-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (SAE Code 62 x Code 61)	Reducer Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPR6-34-075x050-	0.69	1.50	1.25	0.75	0.50	1.00	2.50	3.00	1.25	0.94	2.00	3/8"-16	5/16"-18	1.87 (0.85)	5000 (350)
1" x 1/2"	TPR6-34-100x050-	0.69	1.50	1.25	0.94	0.50	1.50	3.00	3.00	1.50	1.09	2.25	7/16"-14	5/16"-18	3.42 (1.55)	5000 (350)
1" x 3/4"	TPR6-34-100x075-	0.88	1.88	1.50	0.94	0.75	1.25	3.00	3.00	1.50	1.09	2.25	7/16"-14	3/8"-16	2.70 (1.22)	5000 (350)
1-1/4" x 3/4"	TPR6-34-125x075-	0.88	1.88	1.50	1.25	0.75	1.50	3.00	3.50	1.50	1.25	2.62	1/2"-13	3/8"-16	3.80 (1.72)	5000 (350)
1-1/4" x 1"	TPR6-34-125x100-	1.03	2.06	1.50	1.25	0.94	1.25	3.00	3.50	1.50	1.25	2.62	1/2"-13	3/8"-16	3.00 (1.36)	5000 (350)
1-1/2" x 1"	TPR6-34-150x100-	1.03	2.06	1.50	1.50	0.94	1.50	3.00	4.00	1.50	1.44	3.13	5/8"-11	3/8"-16	4.10 (1.86)	5000 (350)
1-1/2" x 1-1/4"	TPR6-34-150x125-	1.19	2.31	2.00	1.50	1.25	1.50	4.00	4.00	2.00	1.44	3.13	5/8"-11	7/16"-14	55.50 (2.49)	4000 (280)
2" x 1-1/4"	TPR6-34-200x125-	1.19	2.31	2.00	1.94	1.25	1.75	4.00	5.00	2.00	1.75	3.82	3/4"-10	7/16"-14	8.27 (3.75)	4000 (280)
2" x 1-1/2"	TPR6-34-200x150-	1.41	2.75	2.50	1.94	1.50	1.50	5.00	5.00	2.50	1.75	3.81	3/4"-10	1/2"-13	8.93 (4.05)	4000 (280)

TPRM6-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (SAE Code 62 x Code 61)	Reducer Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPRM6-34-075x050-*	17.5	38.1	31.8	19.1	12.7	25.4	63.5	76.2	31.8	23.9	50.8	M10 x 1.50	M8 x 1.25	1.87 (0.85)	5000 (350)
1" x 1/2"	TPRM6-34-100x050-*	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M8 x 1.25	3.42 (1.55)	5000 (350)
1" x 3/4"	TPRM6-34-100x075-*	22.4	47.8	38.1	23.9	19.1	31.8	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M10 x 1.50	2.70 (1.22)	5000 (350)
1-1/4" x 3/4"	TPRM6-34-125x075-*	22.4	47.8	38.1	31.8	19.1	38.1	76.2	88.9	38.1	31.8	66.5	M12 x 1.75	M10 x 1.50	3.80 (1.72)	5000 (350)
1-1/4" ⁽²⁾ x 3/4"	TPRM6-34-125-M14x075-*	22.4	47.8	38.1	31.8	19.1	38.1	76.2	88.9	38.1	31.8	66.5	M14 x 2.00	M10 x 1.50	3.80 (1.72)	5000 (350)
1-1/4" x 1"	TPRM6-34-125x100-*	26.2	52.3	38.1	31.8	23.9	31.8	76.2	88.9	38.1	31.8	66.5	M12 x 1.75	M10 x 1.50	3.00 (1.36)	5000 (350)
1-1/4" ⁽²⁾ x 1"	TPRM6-34-125-M14x100-	26.2	52.3	38.1	31.8	23.9	31.8	76.2	88.9	38.1	31.8	66.5	M14 x 2.00	M10 x 1.50	3.00 (1.36)	5000 (350)
1-1/2" x 1"	TPRM6-34-150x100-*	26.2	52.3	38.1	38.1	23.9	38.1	76.2	101.6	38.1	36.6	79.5	M16 x 2.00	M10 x 1.50	4.10 (1.86)	5000 (350)
1-1/2" x 1-1/4"	TPRM6-34-150x125-*	30.2	58.7	50.8	38.1	31.8	38.1	101.6	101.6	50.8	36.6	79.5	M16 x 2.00	M10 x 1.50	55.50 (2.49)	4000 (280)
2" x 1-1/4"	TPRM6-34-200x125-*	30.2	58.7	50.8	49.3	31.8	44.5	101.6	127.0	50.8	44.7	97.0	M20x2.50	M10 x 1.50	8.27 (3.75)	4000 (280)
2" x 1-1/2"	TPRM6-34-200x150-*	35.8	69.9	63.5	49.3	38.1	38.1	127.0	127.0	63.5	44.5	96.8	M20x2.50	M12 x 1.75	8.93 (4.05)	4000 (280)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = All Stainless Steel, Type 316.

Ordering Example: TPR6-34-200x125-SS

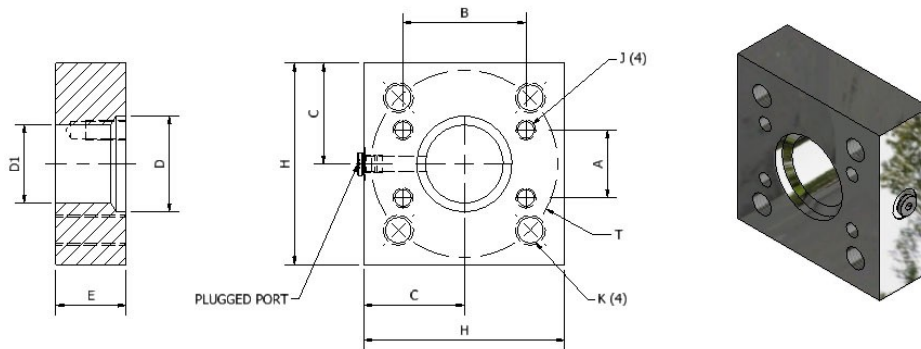
* Insert Material _____

3D step models available upon request

Introduction
 Technical Data
 Pipe Selection Guide
 16 bar, 90° Flare
 ANSI 150#, 300# Flare
 SAE 1000, 70 bar
 SAE 3000, 210 bar
 SAE 6000, 420 bar
 SAE 10000, 690 bar
 ISO 6164, 400 bar
 ISO 6164, 400 bar F10° Flare
 Clamp Supports - Heavy Series
 Valves, Ball and Check
 H65

SAE 6000 PSI Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/ISO 6162-2) Flange Union Style



TPR7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"-10	5/8"-11	11.46 (5.20)	5800 (400)
2-1/2" x 2"	TPR7-64-250x200-*	4.65	1.75	3.81	3.00	2.38	1.94	1.50	6.00	3/4"-10	3/4"-10	8.65 (3.92)	5800 (400)
3" x 2"	TPR7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"-8	3/4"-10	17.80 (8.07)	5800 (400)
4" x 2"	TPR7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	1 1/8"-7	3/4"-10	25.54 (11.58)	5800 (400)

TPRM7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20 x 2.50	M16 x 2.00	11.49 (5.21)	5800 (400)
2-1/2" x 2"	TPRM7-64-250x200-*	118.1	44.5	96.8	76.2	60.5	49.3	38.1	152.4	M20 x 2.50	M20 x 2.50	8.66 (3.93)	5800 (400)
3" x 2"	TPRM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24 x 3.00	M20 x 2.50	17.84 (8.09)	5800 (400)
4" x 2"	TPRM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30 x 3.50	M20 x 2.50	25.60 (11.61)	5800 (420)

*** Materials:**

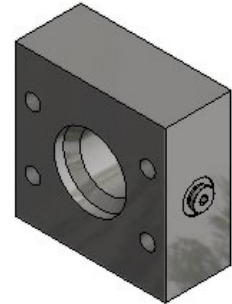
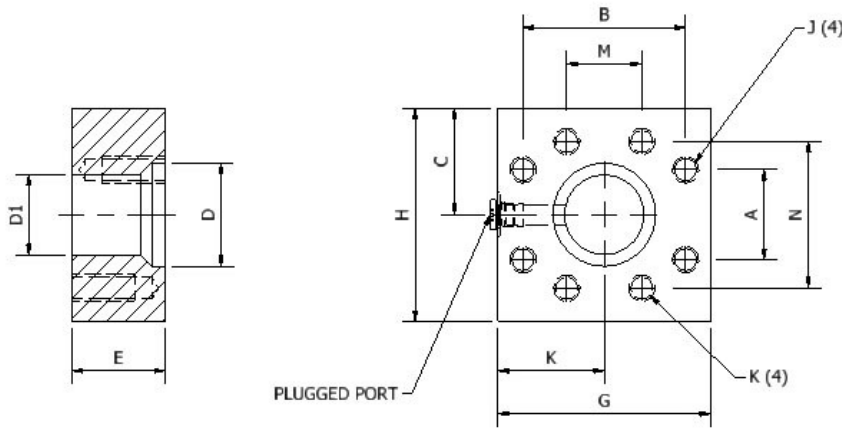
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPR7-64-250x150-SS

* Insert Material _____

SAE 6000 PSI Transition Plate Reducer

SAE J518 Code 62 (ISO 6162-2) Flange Style



TPR64 Transition Plate Reducer Flat Face with UNC Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPR64-075x050-*	0.72	1.59	1.88	0.75	0.50	1.38	3.00	3.25	1.50	0.94	2.00	3/8"-16	5/16"-18	3.43 (1.56)	6000 (420)
1" x 1/2"	TPR64-100x050-*	0.72	1.59	1.50	0.94	0.50	1.38	3.00	3.00	1.50	1.09	2.25	7/16"-14	5/16"-18	3.09 (1.40)	6000 (420)
1" x 3/4"	TPR64-100x075-*	0.94	2.00	1.50	0.94	0.75	1.25	3.00	3.00	1.50	1.09	2.25	7/16"-14	3/8"-16	2.66 (1.21)	6000 (420)
1-1/4" x 3/4"	TPR64-125x075-*	0.94	2.00	2.00	1.25	0.75	1.50	3.00	4.00	1.50	1.25	2.63	1/2"-13	3/8"-16	3.11 (1.41)	6000 (420)
1-1/4" x 1"	TPR64-125x100-*	1.09	2.25	2.00	1.25	0.94	1.25	3.00	4.00	1.50	1.25	2.63	1/2"-13	7/16"-14	3.37 (1.53)	6000 (420)
1-1/2" x 1"	TPR64-150x100-*	1.09	2.25	2.25	1.50	0.94	1.50	3.00	4.50	1.50	1.44	3.13	5/8"-11	7/16"-14	4.62 (2.10)	6000 (420)
1-1/2" x 1-1/4"	TPR64-150x125-*	1.25	2.63	2.25	1.50	1.25	1.50	4.00	4.50	2.00	1.44	3.13	5/8"-11	1/2"-13	6.27 (2.84)	6000 (420)
2" x 1-1/4"	TPR64-200x125-*	1.25	2.63	2.50	1.94	1.25	1.75	4.00	5.00	2.00	1.75	3.81	3/4"-10	1/2"-13	8.03 (3.64)	6000 (420)
2" x 1-1/2"	TPR64-200x150-*	1.44	3.13	2.50	1.94	1.50	1.75	4.00	5.00	2.00	1.75	3.81	3/4"-10	5/8"-11	7.55 (3.42)	6000 (420)

TPRM64 - Transition Plate Reducer Flat Face with Metric Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N				
3/4" x 1/2"	TPRM64-075x050-*	18.3	40.4	47.8	19.1	12.7	38.1	76.2	82.6	38.1	23.9	50.8	M10 x 1.50	M8 x 1.25	3.44 (1.56)	6000 (420)
1" x 1/2"	TPRM64-100x050-*	18.3	40.4	38.1	23.9	12.7	38.1	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M8 x 1.25	3.09 (1.40)	6000 (420)
1" x 3/4"	TPRM64-100x075-*	23.9	50.8	38.1	23.9	19.1	38.1	76.2	76.2	38.1	27.7	57.2	M12 x 1.75	M10 x 1.50	2.67 (1.21)	6000 (420)
1-1/4" x 3/4"	TPRM64-125x075-*	23.9	50.8	50.8	31.8	19.1	38.1	76.2	101.6	38.1	31.8	66.8	M12 x 1.75	M10 x 1.50	3.11 (1.41)	6000 (420)
1-1/4" ⁽²⁾ x 3/4"	TPRM64-125-M14x075-*	23.9	50.8	50.8	31.8	19.1	38.1	76.2	101.6	38.1	31.8	66.8	M14 x 2.00	M10 x 1.50	3.11 (1.41)	6000 (420)
1-1/4" x 1"	TPRM64-125x100-*	27.7	57.2	50.8	31.8	23.9	31.8	76.2	101.6	38.1	31.8	66.8	M12 x 1.75	M12 x 1.75	3.37 (1.53)	6000 (420)
1-1/4" ⁽²⁾ x 1"	TPRM64-125-M14x100-*	27.7	57.2	50.8	31.8	23.9	31.8	76.2	101.6	38.1	31.8	66.8	M14 x 2.00	M12 x 1.75	3.37 (1.53)	6000 (420)
1-1/2" x 1"	TPRM64-150x100-*	27.7	57.2	57.2	38.1	23.9	38.1	76.2	114.3	38.1	36.6	79.5	M16 x 2.00	M12 x 1.75	4.63 (2.10)	6000 (420)
1-1/2" x 1-1/4"	TPRM64-150x125-*	31.8	66.8	57.2	38.1	31.8	38.1	101.6	114.3	50.8	36.6	79.5	M16 x 2.00	M12 x 1.75	6.28 (2.85)	6000 (420)
1-1/2" x 1-1/4" ⁽²⁾	TPRM64-150x125-M14-*	31.8	66.8	57.2	38.1	31.8	38.1	101.6	114.3	50.8	36.6	79.5	M16 x 2.00	M14 x 2.00	6.28 (2.85)	6000 (420)
2" x 1-1/4"	TPRM64-200x125-*	31.8	66.8	63.5	49.3	31.8	44.5	101.6	127.0	50.8	44.5	96.8	M20 x 2.50	M12 x 1.75	8.05 (3.65)	6000 (420)
2" x 1-1/4" ⁽²⁾	TPRM64-200x125-M14-*	31.8	66.8	63.5	49.3	31.8	44.5	101.6	127.0	50.8	44.5	96.8	M20 x 2.50	M14 x 2.00	8.05 (3.65)	6000 (420)
2" x 1-1/2"	TPRM64-200x150-*	36.6	79.5	63.5	49.3	38.1	44.5	101.6	127.0	50.8	44.5	96.8	M20 x 2.50	M16 x 2.00	7.56 (3.43)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPRM64-200x125-SS

* Insert Material _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

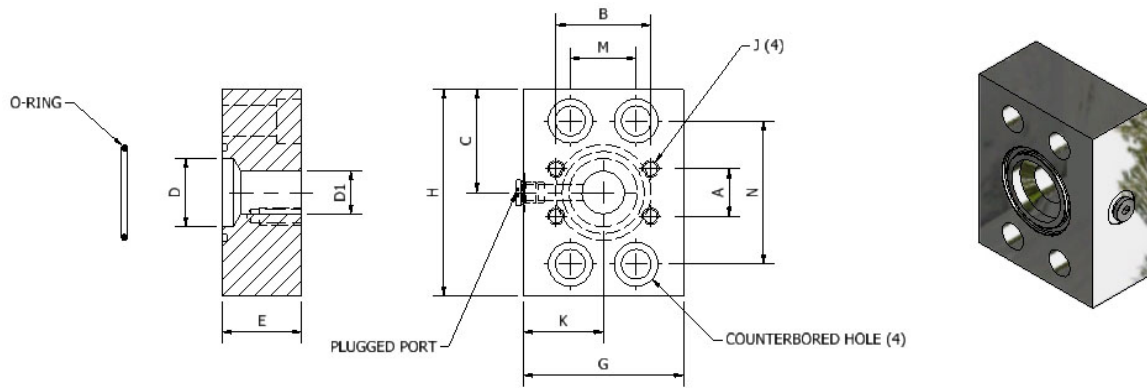
Clamp Supports - Heavy Series

Valves, Ball and Check

H67

SAE 6000 PSI Transition Plate Reducer

SAE J518 Code 62/Code 61 (ISO 6162-2/6162-1) Flange Manifold Mount Style



TPRO6-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (SAE Code 62 x Code 61)	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPRO6-34-075x050*-^	0.69	1.50	1.38	0.75	0.50	1.00	3.00	2.75	1.25	0.94	2.00	3/8"-16	5/16"-18	OR^2-214	2.99 (1.36)	5000 (350)
1" x 1/2"	TPRO6-34-100x050*-^	0.69	1.50	1.50	0.94	0.50	1.50	3.00	3.00	1.75	1.09	2.25	7/16"-14	5/16"-18	OR^2-219	3.16 (1.43)	5000 (350)
1" x 3/4"	TPRO6-34-100x0750*-^	0.88	1.88	1.50	0.94	0.75	1.25	3.00	3.00	1.75	1.09	2.25	7/16"-14	3/8"-16	OR^2-219	3.04 (1.38)	5000 (350)
1-1/4" x 3/4"	TPRO6-34-125x075*-^	0.88	1.88	1.75	1.25	0.75	1.50	3.00	3.50	1.75	1.25	2.62	1/2"-13	3/8"-16	OR^2-222	3.40 (1.54)	5000 (350)
1-1/4" x 1"	TPRO6-34-125x100*-^	1.03	2.06	1.75	1.25	0.94	1.25	3.00	3.50	1.75	1.25	2.62	1/2"-13	3/8"-16	OR^2-222	4.03 (1.83)	5000 (350)
1-1/2" x 1"	TPRO6-34-150x100*-^	1.03	2.06	2.25	1.50	0.94	1.75	3.50	4.50	2.00	1.44	3.13	5/8"-11	3/8"-16	OR^2-225	6.10 (2.77)	5000 (350)
1-1/2" x 1-1/4"	TPRO6-34-150x125*-^	1.19	2.31	2.25	1.50	1.25	1.75	3.00	4.50	1.50	1.44	3.13	5/8"-11	7/16"-14	OR^2-225	4.70 (2.13)	4000 (280)
2" x 1-1/4"	TPRO6-34-200x125*-^	1.19	2.31	2.63	1.94	1.25	1.75	4.00	5.25	2.00	1.75	3.82	3/4"-10	7/16"-14	OR^2-228	7.60 (3.45)	4000 (280)
2" x 1-1/2"	TPRO6-34-200x150*-^	1.41	2.75	2.63	1.94	1.50	1.75	4.00	5.25	2.00	1.75	3.81	3/4"-10	1/2"-13	OR^2-228	7.30 (3.31)	4000 (280)

TPROM6-34 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with G1/8 Port (Plugged) - Metric

Size (SAE Code 62 x Code 61)	Reducer Part Number	Dimensions (mm)											C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPROM6-34-075x050*-^	17.5	38.1	35.1	19.1	12.7	38.1	76.2	69.9	44.5	23.9	50.8	M10	M8 x 1.25	OR^2-214	2.99 (1.36)	5000 (350)
1" x 1/2"	TPROM6-34-100x050*-^	17.5	38.1	38.1	23.9	12.7	38.1	76.2	76.2	44.5	27.7	57.2	M12	M8 x 1.25	OR^2-219	3.16 (1.43)	5000 (350)
1" x 3/4"	TPROM6-34-100x0750*-^	22.4	47.8	38.1	23.9	19.1	38.1	76.2	76.2	44.5	27.7	57.2	M12	M10 x 1.50	OR^2-219	3.04 (1.38)	5000 (350)
1-1/4" x 3/4"	TPROM6-34-125x075*-^	22.4	47.8	44.5	31.8	19.1	38.1	76.2	88.9	44.5	31.8	66.8	M12	M10 x 1.50	OR^2-222	3.40 (1.54)	5000 (350)
1-1/4" (2) x 3/4"	TPROM6-34-125-M14x075*-^	22.4	47.8	44.5	31.8	19.1	38.1	76.2	88.9	44.5	31.8	66.8	M14	M10 x 1.50	OR^2-222	3.40 (1.54)	5000 (350)
1-1/4" x 1"	TPROM6-34-125x100*-^	26.2	52.3	44.5	31.8	23.9	25.4	76.2	88.9	38.1	31.8	66.8	M12	M10 x 1.50	OR^2-222	4.03 (1.83)	5000 (350)
1-1/4" (2) x 1"	TPROM6-34-125-M14x100*-^	26.2	52.3	44.5	31.8	23.9	25.4	76.2	88.9	38.1	31.8	66.8	M14	M10 x 1.50	OR^2-222	4.03 (1.83)	5000 (350)
1-1/2" x 1"	TPROM6-34-150x100*-^	26.2	52.3	57.2	38.1	23.9	44.5	88.9	114.3	50.8	36.6	79.5	M16	M10 x 1.50	OR^2-225	6.10 (2.77)	5000 (350)
1-1/2" x 1-1/4"	TPROM6-34-150x125*-^	30.2	58.7	57.2	38.1	31.8	44.5	76.2	114.3	38.1	36.6	79.5	M16	M10 x 1.50	OR^2-225	4.70 (2.13)	4000 (280)
2" x 1-1/4"	TPROM6-34-200x125*-^	30.2	58.7	66.8	49.3	31.8	44.5	101.6	133.4	50.8	44.5	96.8	M20	M10 x 1.50	OR^2-228	7.60 (3.45)	4000 (280)
2" x 1-1/2"	TPROM6-34-200x150*-^	35.8	69.9	66.8	49.3	38.1	44.5	101.6	133.4	50.8	44.5	96.8	M20	M12 x 1.75	OR^2-228	7.30 (3.31)	4000 (280)

*** Materials:**

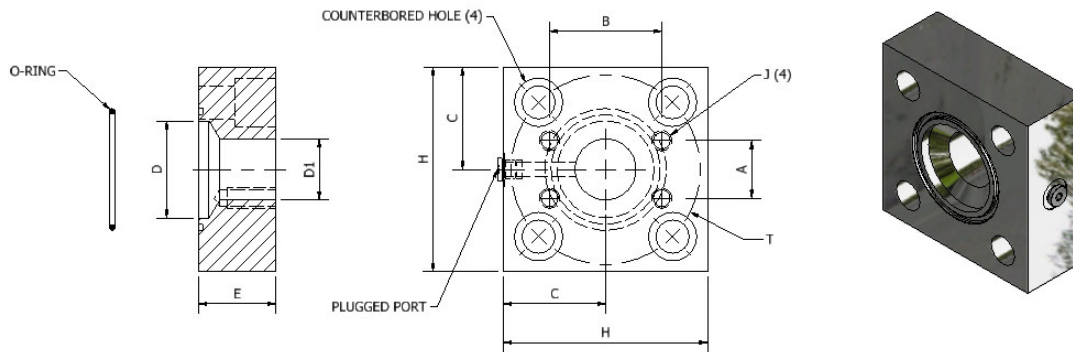
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPRO6-34-200x125-SS

* Insert Material _____

SAE 6000 PSI Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/ISO 6162-2) Flange Manifold Mount Style



TPRO7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread C'T Bore Bolt UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPRO7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"-10	5/8"-11	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPRO7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"-8	3/4"-10	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPRO7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	11-1/8"-7	3/4"-10	OR^-2-241	23.09 (10.50)	5800 (400)

TPRMO7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPROM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20 x 2.50	M16 x 2.00	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPROM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24 x 3.00	M20 x 2.50	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPRM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30 x 3.50	M20 x 2.50	OR^-2-241	23.09 (10.50)	5800 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO7-64-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

Introduction

Technical
Data

Pipe
Selection
Guide

16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

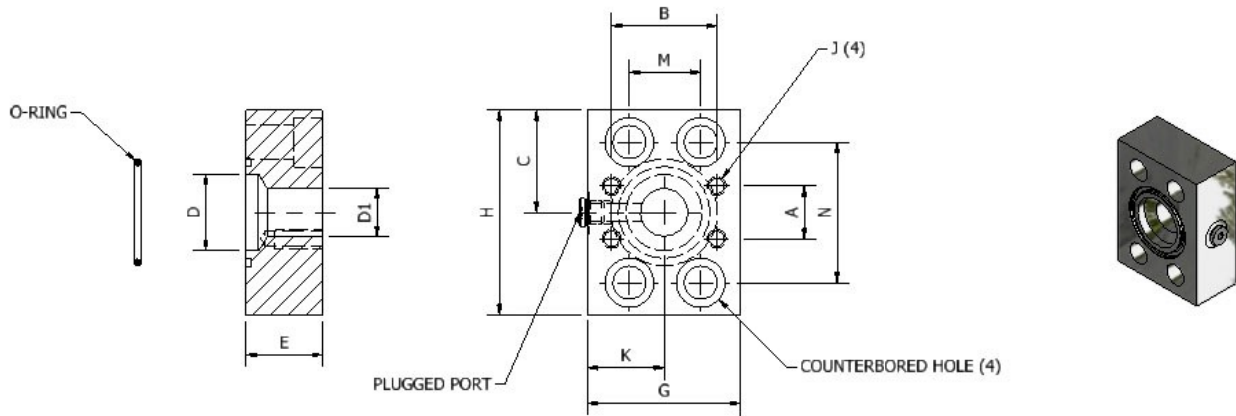
ISO 6164,
400 bar
F10° Flare

Clamp
Supports -
Heavy Series

Valves, Ball
and Check

SAE 6000 PSI Transition Plate Reducer

SAE J518 Code 62 (ISO 6162-2) Flange Manifold Mount Style



TPR064 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)											C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPR064-075x050-*^-^	0.72	1.59	1.50	0.75	0.50	1.00	2.50	3.00	1.25	0.94	2.00	3/8"-16	5/16"-18	OR*-2-214	1.75 (0.79)	6000 (420)
1" x 1/2"	TPR064-100x050-*^-^	0.72	1.59	1.50	0.94	0.50	1.50	2.50	3.00	1.25	1.09	2.25	7/16"-14	5/16"-18	OR*-2-219	2.34 (1.06)	6000 (420)
1" x 3/4"	TPR064-100x075-*^-^	0.94	2.00	1.50	0.94	0.75	1.25	3.00	3.00	1.50	1.09	2.25	7/16"-14	3/8"-16	OR*-2-219	2.49 (1.13)	6000 (420)
1-1/4" x 3/4"	TPR064-125x075-*^-^	0.94	2.00	2.00	1.25	0.75	1.50	3.00	4.00	1.50	1.25	2.63	1/2"-13	3/8"-16	OR*-2-222	4.14 (1.88)	6000 (420)
1-1/4" x 1"	TPR064-125x100-*^-^	1.09	2.25	2.00	1.25	0.94	1.25	3.00	4.00	1.50	1.25	2.63	1/2"-13	7/16"-14	OR*-2-222	3.24 (1.47)	6000 (420)
1-1/2" x 1"	TPR064-150x100-*^-^	1.09	2.25	2.25	1.50	0.94	1.50	3.00	4.50	1.50	1.44	3.13	5/8"-11	7/16"-14	OR*-2-225	4.18 (1.90)	6000 (420)
1-1/2" x 1-1/4"	TPR064-150x125-*^-^	1.25	2.63	2.25	1.50	1.25	1.50	4.00	4.50	2.00	1.44	3.13	5/8"-11	1/2"-13	OR*-2-225	5.12 (2.32)	6000 (420)
2" x 1-1/4"	TPR064-200x125-*^-^	1.25	2.63	2.50	1.94	1.25	1.75	4.00	5.50	2.00	1.75	3.81	3/4"-10	1/2"-13	OR*-2-228	7.21 (3.27)	6000 (420)
2" x 1-1/2"	TPR064-200x150-*^-^	1.44	3.13	2.50	1.94	1.50	1.75	5.00	5.50	2.00	1.75	3.81	3/4"-10	5/8"-11	OR*-2-228	7.28 (3.30)	6000 (420)

TPROM64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)											C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	G	H	K	M	N					
3/4" x 1/2"	TPROM64-075x050-*^-^	18.3	40.4	38.1	19.1	12.7	24.5	63.5	76.2	31.8	23.9	50.8	M10	M8 x 1.25	OR*-2-214	1.75 (0.79)	6000 (420)
1" x 1/2"	TPROM64-100x050-*^-^	18.3	40.4	38.1	23.9	12.7	38.1	63.5	76.2	31.8	27.7	57.2	M12	M8 x 1.25	OR*-2-219	2.34 (1.06)	6000 (420)
1" x 3/4"	TPROM64-100x075-*^-^	23.9	50.8	38.1	23.9	19.1	31.8	76.2	76.2	38.1	27.7	57.2	M12	M10 x 1.50	OR*-2-219	2.49 (1.13)	6000 (420)
1-1/4" x 3/4"	TPROM64-125x075-*^-^	23.9	50.8	50.8	31.8	19.1	38.1	76.2	101.6	38.1	31.8	66.8	M12	M10 x 1.50	OR*-2-222	4.14 (1.88)	6000 (420)
1-1/4" ⁽²⁾ x 3/4"	TPROM64-125-M14x075-*	23.9	50.8	50.8	31.8	19.1	38.1	76.2	101.6	38.1	31.8	66.8	M14	M10 x 1.50	OR*-2-222	4.14 (1.88)	6000 (420)
1-1/4" x 1"	TPROM64-125x100-*^-^	27.7	57.2	50.8	31.8	23.9	31.8	76.2	101.6	38.1	31.8	66.8	M12	M12 x 1.75	OR*-2-222	3.24 (1.47)	6000 (420)
1-1/4" ⁽²⁾ x 1"	TPROM64-125-M14x100-*	27.7	57.2	50.8	31.8	23.9	31.8	76.2	101.6	38.1	31.8	66.8	M14	M12 x 1.75	OR*-2-222	3.24 (1.47)	6000 (420)
1-1/2" x 1"	TPROM64-150x100-*^-^	27.7	57.2	57.2	38.1	23.9	38.1	76.2	114.3	38.1	36.6	79.5	M16	M12 x 1.75	OR*-2-225	4.18 (1.90)	6000 (420)
1-1/2" x 1-1/4"	TPROM64-150x125-*^-^	31.8	66.8	57.2	38.1	31.8	38.1	101.6	114.3	50.8	36.6	79.5	M16	M12 x 1.75	OR*-2-225	5.12 (2.32)	6000 (420)
1-1/2" x 1-1/4" ⁽²⁾	TPROM64-150x125-M14-*	31.8	66.8	57.2	38.1	31.8	38.1	101.6	114.3	50.8	36.6	79.5	M16	M14 x 2.00	OR*-2-225	5.12 (2.32)	6000 (420)
2" x 1-1/4"	TPROM64-200x125-*^-^	31.8	66.8	63.5	49.3	31.8	44.5	101.6	139.7	50.8	44.5	96.8	M20	M12 x 1.75	OR*-2-228	7.21 (3.27)	6000 (420)
2" x 1-1/4" ⁽²⁾	TPROM64-200x125-M14-*	31.8	66.8	63.5	49.3	31.8	44.5	101.6	139.7	50.8	44.5	96.8	M20	M14 x 2.00	OR*-2-228	7.21 (3.27)	6000 (420)
2" x 1-1/2"	TPROM64-200x150-*^-^	36.6	79.5	63.5	49.3	38.1	44.5	127.0	139.7	63.5	44.5	96.8	M20	M16 x 2.00	OR*-2-228	7.28 (3.30)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

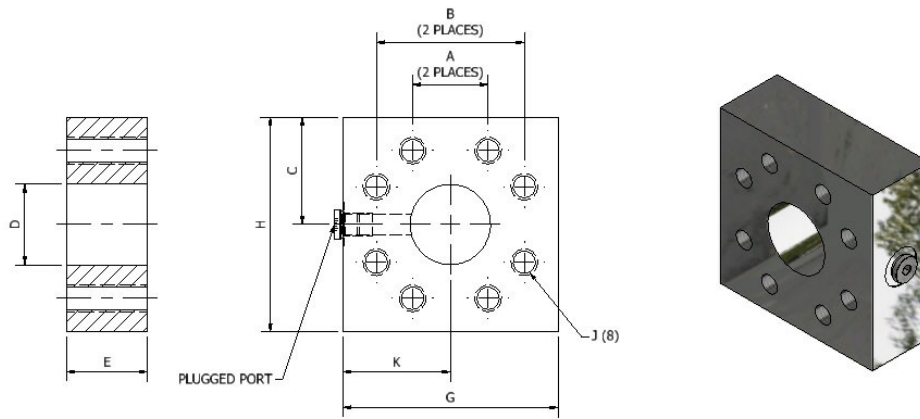
Ordering Example: TPROM64-200x150-SS-V

* Insert Material
 ^ Insert O-Ring Type

3D step models available upon request

SAE 6000 PSI Adapter Plate

SAE J518 Code 62 (ISO 6162-2) Flange Style



AP64 - Adapter Plate Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Adapter Plate Part No	Dimensions (in)								Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K			
1/2"	AP64-050-*	0.72	1.59	1.25	0.50	1.00	2.75	2.50	1.38	5/16"-18	1.66 (0.75)	6000 (420)
3/4"	AP64-075-*	0.94	2.00	1.50	0.75	1.00	3.00	3.00	1.50	3/8"-16	2.19 (1.00)	6000 (420)
1"	AP64-100-*	1.098	2.25	1.50	0.94	1.25	3.00	3.00	1.50	7/16"-14	2.10 (0.95)	6000 (420)
1-1/4"	AP64-125-*	1.25	2.63	2.00	1.25	1.25	4.00	4.00	2.00	1/2"-13	5.40 (2.45)	6000 (420)
1-1/2"	AP64-150-*	1.44	3.13	2.00	1.50	1.50	4.00	4.00	2.00	5/8"-1	5.08 (2.31)	6000 (420)
2"	AP64-200-*	1.75	3.81	2.50	1.94	1.50	5.00	5.00	2.50	3/4"-10	8.10 (3.68)	6000 (420)

APM64 - Adapter Plate Flat Face with Threaded Holes Complete with G 1/8 Port (Plugged), Metric

Size (inch)	Adapter Plate Part No	Dimensions (mm)								Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	G	H	K			
1/2"	APM64-050-*	18.3	40.4	31.8	12.7	25.4	69.9	63.5	35.1	M8 x 1.25	1.66 (0.75)	6000 (420)
3/4"	APM64-075-*	23.9	50.8	38.1	19.1	25.4	76.2	76.2	38.1	M10 x 1.50	2.19 (1.00)	6000 (420)
1"	APM64-100-*	27.7	57.2	38.1	23.9	31.8	76.2	76.2	38.1	M12 x 1.75	2.10 (0.95)	6000 (420)
1-1/4"	APM64-125-*	31.8	66.8	50.8	31.8	31.8	101.6	101.6	50.8	M12 x 1.75	5.40 (2.45)	6000 (420)
1-1/4" ⁽²⁾	APM64-125-M14-*	31.8	66.8	50.8	31.8	31.8	101.6	101.6	50.8	M14 x 2.00"	5.40 (2.45)	6000 (420)
1-1/2"	APM64-150-*	36.6	79.5	50.8	38.1	38.1	101.6	101.6	50.8	M16 x 2.00	5.08 (2.31)	6000 (420)
2"	APM64-200-*	44.5	96.8	63.5	49.3	38.1	127.0	127.0	63.5	M20 x 2.50	8.10 (3.68)	6000 (420)

*** Materials:**

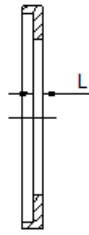
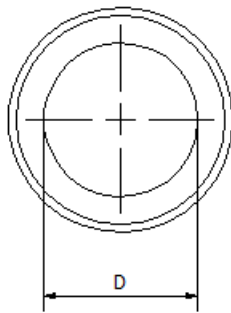
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: AP64-200-SS

* Insert Material

SAE 6000 PSI O-Ring Connector Plate

SAE J518 Code 62 (ISO 6162-2)



OCP - O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1/2"	OCP-050-*	0.50 (12.7)	0.13 (3.3)	0.04 (0.02)
3/4"	OCP-075-*	0.75 (19.1)	0.13 (3.3)	0.06 (0.03)
1"	OCP-100-*	0.94 (23.9)	0.13 (3.3)	0.07 (0.03)
1-1/4"	OCP-125-*	1.20 (30.5)	0.13 (3.3)	0.08 (0.04)
1-1/2"	OCP-150-*	1.50 (38.1)	0.13 (3.3)	0.11 (0.05)
2"	OCP-200-*	1.94 (49.3)	0.13 (3.3)	0.13 (0.06)

*** Materials:**

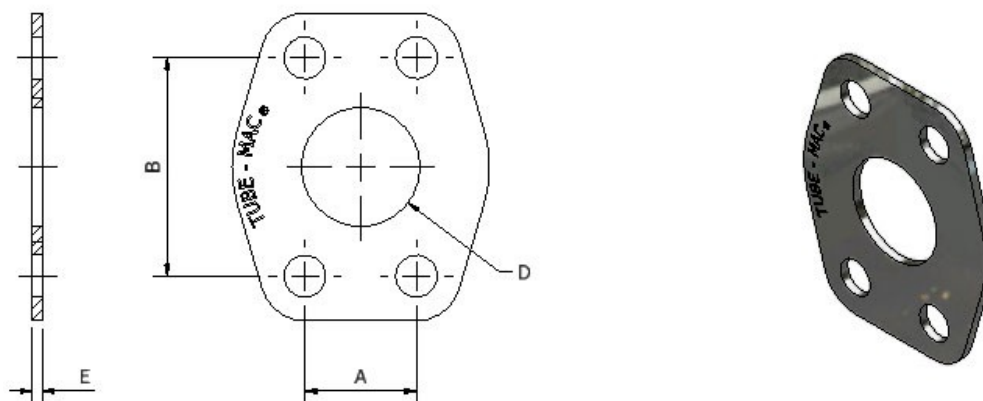
Standard, No Designation = Carbon Steel, Zinc* Insert Material _____
 Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: OCP-200-SS

SAE 6000 PSI Connector Plate

SAE J518 Code 62 (ISO 6162-2)



CP - Connector Plate						
Size	Part Number	Dimensions in (mm)				WT lbs (kg)
		A	B	D	E	
1/2"	CP64-050	0.72 (18.28)	1.59 (40.39)	0.50 (12.70)	0.12 (3.05)	0.09 (0.04)
3/4"	CP64-075	0.94 (23.88)	2.00 (50.80)	0.75 (19.05)	0.12 (3.05)	0.15 (0.07)
1"	CP64-100	1.09 (27.69)	2.25 (57.15)	1.00 (25.40)	0.12 (3.05)	0.20 (0.09)
1-1/4"	CP64-125	1.25 (31.75)	2.63 (66.80)	1.25 (31.75)	0.12 (3.05)	0.25 (0.11)
1-1/4" ⁽¹⁾	CP64-125-M14	1.25 (31.75)	2.63 (66.80)	1.25 (31.75)	0.12 (3.05)	0.25 (0.11)
1-1/2"	CP64-150	1.44 (36.58)	3.13 (79.50)	1.50 (38.10)	0.12 (3.05)	0.36 (0.16)
2"	CP64-200	1.75 (44.45)	3.81 (96.77)	2.00 (50.80)	0.12 (3.05)	0.49 (0.22)

Note: ⁽¹⁾ Designates M14 Bolt – Special Order

*** Materials:**

Stainless Steel, Type 316.

Not available in Carbon Steel.

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

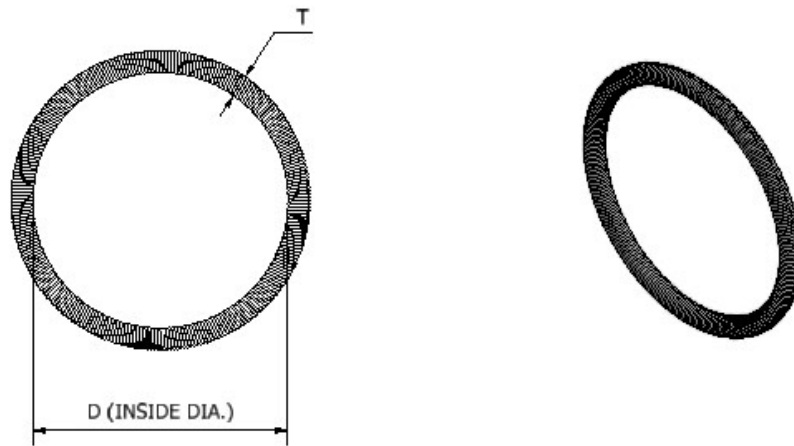
Clamp Supports - Heavy Series

Valves, Ball and Check

3D step models available upon request

SAE 6000 PSI Retain Ring

SAE J518 Code 62 (ISO 6162-2)



R - Retain Ring				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1/2"	R-050	0.85 (21.6)	0.16 (4.1)	0.01 (0.005)
3/4"	R-075	1.24 (31.5)	0.16 (4.1)	0.02 (0.009)
1"	R-100	1.32 (33.5)	0.20 (5.1)	0.03 (0.014)
1-1/4"	R-125	1.59 (40.4)	0.20 (5.1)	0.04 (0.018)
1-1/2"	R-150	1.99 (50.5)	0.20 (5.1)	0.05 (0.023)
2"	R-200	2.38 (60.5)	0.20 (5.1)	0.06 (0.027)

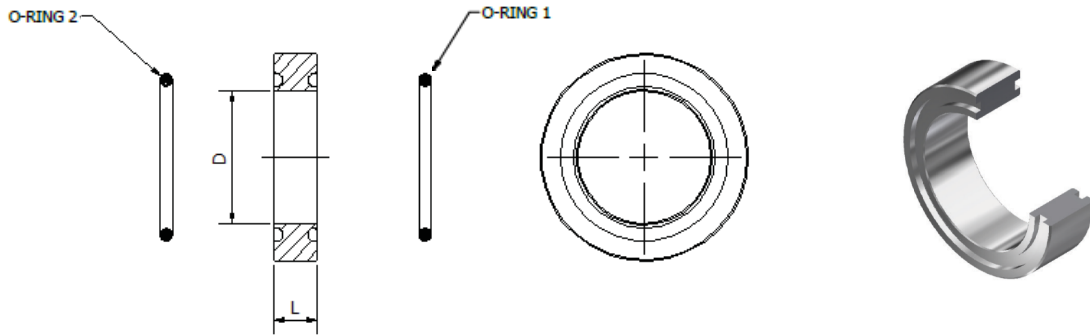
RA - Retain Ring for Grooved NPS Pipe				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1-1/2"	RA-150	1.69 (42.93)	0.20 (5.0)	0.04 (0.018)
2"	RA-200	2.16 (54.86)	0.20 (5.0)	0.05 (0.023)

*** Materials:**

Stainless steel – AISI 316 Spring Temper

SAE 6000 PSI O-Ring Spacer

SAE J518 Code 62 (ISO 6162-2)



OS - O-Ring Spacer for Retain Ring Pipe – 1/2” - 2” Complete with Buna O-Rings

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OS-050-*^-^	0.55 (14.0)	0.50 (12.7)	OR^-3-909	0.11 (0.05)
3/4"	OS-075-*^-^	0.79 (20.1)	0.50 (12.7)	OR^-3-913	0.18 (0.08)
1"	OS-100-*^-^	0.91 (23.1)	0.50 (12.7)	OR^-3-916	0.21 (0.10)
1-1/4"	OS-125-*^-^	1.18 (30.0)	0.50 (12.7)	OR^-3-918	0.26 (0.12)
1-1/2"	OS-150-*^-^	1.54 (39.1)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
2"	OS-200-*^-^	1.93 (49.0)	0.50 (12.7)	OR^-3-928	0.43 (0.20)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: OS-200-SS-V

* Insert Material _____

^ Insert O-Ring Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

OSA – O-Ring Spacer for NPS Retain Ring Pipe Flange Connection

	Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
			D	L		
OSA-SCH160	1-1/2"	OSA-SCH160-150-*^-^	1.10 (27.19)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
	2"	OSA-SCH160-200-*^-^	1.69 (42.9)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
OSA-SCHXXS	1-1/2"	OSA-SCHXXS-150-*^-^	1.10 (27.9)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
	2"	OSA-SCHXXS-200-*^-^	1.50 (38.1)	0.50 (12.7)	OR^-3-928	0.43 (0.20)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: OSA-SCH160-200-SS-V

* Insert Material _____

^ Insert O-Ring Type _____

^ O-Ring Type:

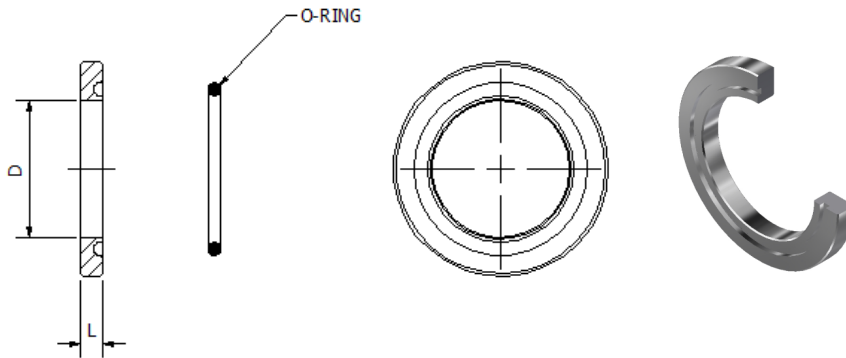
Standard, No Designation = Buna Nitrile.

V = Viton.

3D step models available upon request

SAE 6000 PSI O-Ring Spacer for Retain Ring Pipe to Hose End

SAE J518 Code 62 (ISO 6162-2)



OSH – O-Ring Spacer for Retain Ring Pipe to Hose End

Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSH-050-*^-^	0.55 (14.0)	0.25 (6.4)	OR^-3-909	0.04 (0.02)
3/4"	OSH-075-*^-^	0.79 (20.1)	0.25 (6.4)	OR^-3-913	0.07 (0.03)
1"	OSH-100-*^-^	0.91 (23.1)	0.25 (6.4)	OR^-3-916	0.08 (0.04)
1-1/4"	OSH-125-*^-^	1.18 (30.0)	0.25 (6.4)	OR^-3-918	0.09 (0.04)
1-1/2"	OSH-150-*^-^	1.54 (39.1)	0.25 (6.4)	OR^-3-924	0.12 (0.05)
2"	OSH-200-*^-^	1.91 (48.5)	0.25 (6.4)	OR^-3-928	0.20 (0.09)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

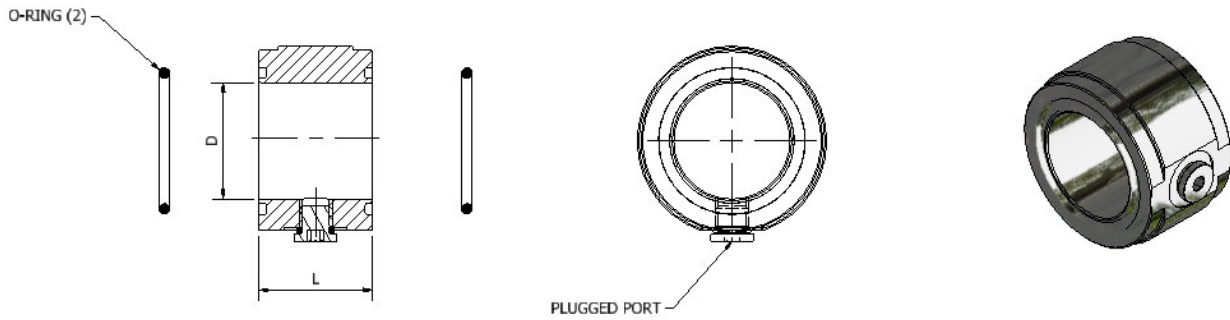
Ordering Example: OSH-200-SS-V

* Insert Material

^ Insert O-Ring Type

SAE 6000 PSI O-Ring Spacer with Pilot Port

SAE J518 Code 62 (ISO 6162-2)



OSP - O-Ring Spacer with Pilot Port for Retain Ring Pipe - 1/2" - 2" Complete with Buna O-Rings (Standard) and #4 SAE Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSP-050-*^-^	0.55 (14.0)	1.50 (38.1)	OR^-3-909	0.37 (0.17)
3/4"	OSP-075-*^-^	0.79 (20.1)	1.50 (38.1)	OR^-3-913	0.64 (0.29)
1"	OSP-100-*^-^	0.91 (23.1)	1.50 (38.1)	OR^-3-916	0.78 (0.35)
1-1/4"	OSP-125-*^-^	1.18 (30.0)	1.50 (38.1)	OR^-3-918	0.86 (0.39)
1-1/2"	OSP-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.40 (0.64)
2"	OSP-200-*^-^	1.91 (48.5)	1.50 (38.1)	OR^-3-928	1.49 (0.68)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: OSP-200-SS-V

* Insert Material

^ Insert O-Ring Type

OSPM - O-Ring Spacer with Metric Pilot Port for Retain Ring Pipe - 1/2" - 2" Complete with Buna O-Rings (Standard) and G1/8 Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSPM-050-*^-^	0.55 (14.0)	1.50 (38.1)	OR^-3-909	0.37 (0.17)
3/4"	OSPM-075-*^-^	0.79 (20.1)	1.50 (38.1)	OR^-3-913	0.64 (0.29)
1"	OSPM-100-*^-^	0.91 (23.1)	1.50 (38.1)	OR^-3-916	0.78 (0.35)
1-1/4"	OSPM-125-*^-^	1.18 (30.0)	1.50 (38.1)	OR^-3-918	0.86 (0.39)
1-1/2"	OSPM-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.40 (0.64)
2"	OSPM-200-*^-^	1.91 (48.5)	1.50 (38.1)	OR^-3-928	1.49 (0.68)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: OSPM-200-SS-V

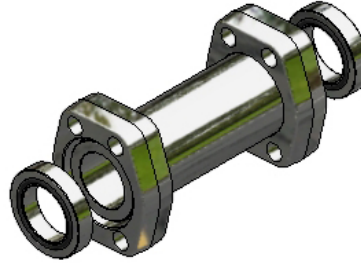
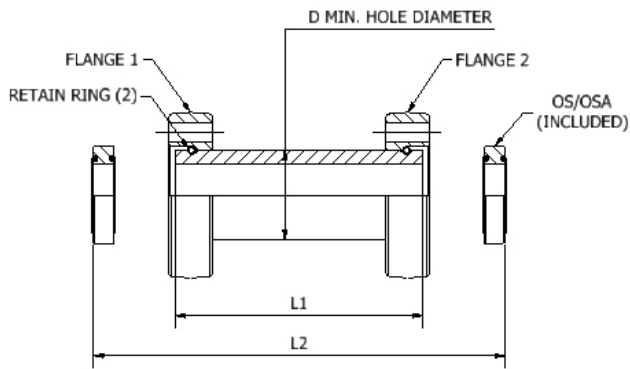
* Insert Material

^ Insert O-Ring Type

3D step models available upon request

SAE 6000 PSI Retain Ring Bulkhead

SAE J518 Code 62 (ISO 6162-2)



Complete Assembly Consists Of:

- One (1) retain ring flange bulkhead body
- Two (2) retain ring flanges
- Two (2) retain rings
- Two (2) o-ring spacers

To be Ordered Separately:

- Bolt Kit
- See page H25

A/RFBH - Retain Ring Flange Bulkhead

Size	Complete Part Number	Dimensions in (mm)			Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L1	L2	D				
1/2"	A/RFBH-050-FC64-FC64-*^-^	5.69 (144.6)	6.69 (170)	1.02 (26)	2.16 (0.98)	RFBH-050-*^-^	1.08 (0.49)	6000 (420)
3/4"	A/RFBH-075-FC64-FC64-*^-^	5.69 (144.6)	6.69 (170)	1.42 (36)	4.06 (1.85)	RFBH-075-*^-^	2.00 (0.91)	6000 (420)
1"	A/RFBH-100-FC64-FC64-*^-^	5.69 (144.6)	6.69 (170)	1.54 (39)	4.60 (2.09)	RFBH-100-*^-^	1.80 (0.82)	6000 (420)
1-1/4"	A/RFBH-125-FC64-FC64-*^-^	6.09 (154.6)	7.09 (180)	1.81 (46)	6.92 (3.15)	RFBH-125-*^-^	2.60 (1.18)	6000 (420)
1-1/2"	A/RFBH-150-FC64-FC64-*^-^	6.09 (154.6)	7.09 (180)	2.20 (56)	10.35 (4.70)	RFBH-150-*^-^	3.31 (1.50)	6000 (420)
2"	A/RFBH-200-FC64-FC64-*^-^	7.27 (184.6)	8.27 (210)	2.60 (66)	15.42 (7.00)	RFBH-200-*^-^	4.80 (2.18)	6000 (420)

Flange Options:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.
 FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.
 FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

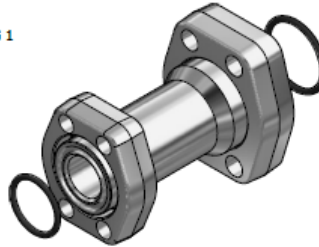
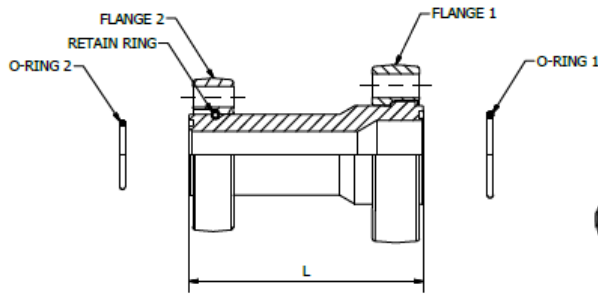
No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/RFBH-050-FC64-FC64-SS-V



SAE 6000 PSI Retain Ring Flange Concentric Reducer Assembly

SAE J518 Code 62 (ISO 6162-2)



Complete Assembly Consists Of:

- One (1) Concentric Reducer Body
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

To be Ordered Separately:

- Bolt Kit
- See page H25

A/CR – Retain Ring Flange Concentric Reducer Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L							
3/4" x 1/2"	A/CR-075x050-FC64-FC64-*^	3.72 (94.5)		OR^3-913	OR^3-909	2.15 (0.98)	CR-075x050-*^	0.88 (0.40)	6000 (420)
1" x 1/2"	A/CR-100x050-FC64-FC64-*^	3.72 (94.5)		OR^3-916	OR^3-909	2.57 (1.17)	CR-100x050-*^	0.97 (0.44)	6000 (420)
1" x 3/4"	A/CR-100x075-FC64-FC64-*^	4.50 (114.3)		OR^3-916	OR^3-913	3.50 (1.59)	CR-100x075-*^	1.49 (0.68)	6000 (420)
1-1/4" x 3/4"	A/CR-125x075-FC64-FC64-*^	4.50 (114.3)		OR^3-918	OR^3-913	4.42 (2.00)	CR-125x075-*^	1.71 (0.78)	6000 (420)
1-1/4" x 1"	A/CR-125x100-FC64-FC64-*^	4.50 (114.3)		OR^3-918	OR^3-916	4.95 (2.25)	CR-125x100-*^	1.90 (0.86)	6000 (420)
1-1/2" x 1"	A/CR-150x100-FC64-FC64-*^	4.50 (114.3)		OR^3-924	OR^3-916	6.44 (2.93)	CR-150x100-*^	2.11 (0.96)	6000 (420)
1-1/2" x 1-1/4"	A/CR-150x125-FC64-FC64-*^	5.26 (133.6)		OR^3-924	OR^3-918	7.60 (3.45)	CR-150x125-*^	2.56 (1.16)	6000 (420)
2" x 1-1/4"	A/CR-200x125-FC64-FC64-*^	5.26 (133.6)		OR^3-928	OR^3-918	10.22 (4.65)	CR-200x125-*^	3.50 (1.59)	6000 (420)
2" x 1-1/2"	A/CR-200x150-FC64-FC64-*^	5.26 (133.6)		OR^3-928	OR^3-924	11.75 (5.34)	CR-200x150-*^	3.74 (1.70)	6000 (420)

Flange Options:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.
 FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.
 FTM64 = SAE 6000 PSI Code 62 (ISO 6162-2) Metric Threaded Flange.

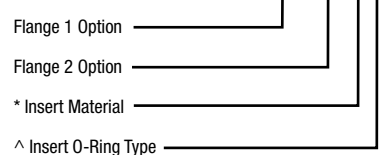
Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.
 V = Viton.

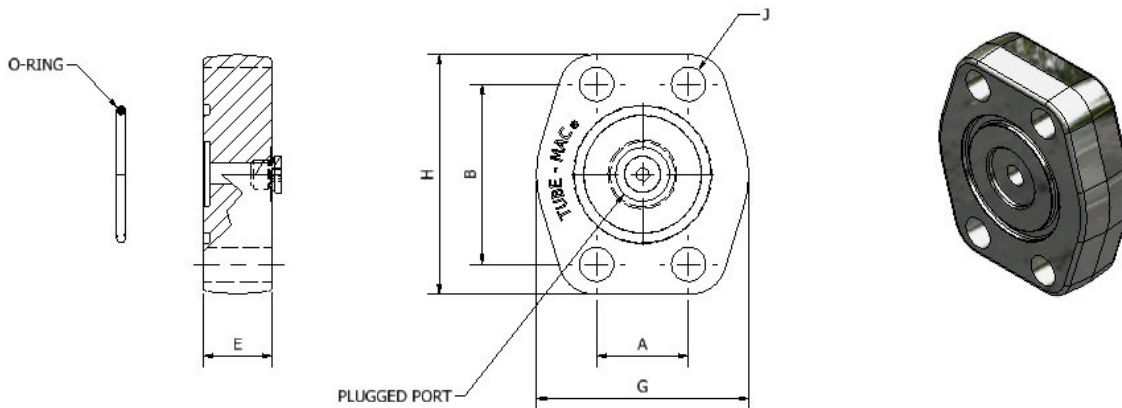
Ordering Example: A/CR-200x125-FC64-FC64-SS-V



3D step models available upon request

SAE 6000 PSI Blanking Flange O-Ring Face with Clearance Holes

SAE J518 Code 62 (ISO 6162-2)



BF064 – Blanking Flange Complete with O-Ring and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BF064-050-*^-^	0.72	1.59	1.88	2.22	0.81	5/16"	OR*-2-210	6000 (420)	0.53 (0.24)
3/4"	BF064-075-*^-^	0.94	2.00	2.38	2.81	1.02	3/8"	OR*-2-214	6000 (420)	1.08 (0.49)
1"	BF064-100-*^-^	1.09	2.25	2.75	3.19	1.03	7/16"	OR*-2-219	6000 (420)	1.70 (0.77)
1-1/4"	BF064-125-*^-^	1.25	2.63	3.06	3.75	1.25	1/2"	OR*-2-222	6000 (420)	2.63 (1.20)
1-1/2"	BF064-150-*^-^	1.44	3.13	3.75	4.44	1.38	5/8"	OR*-2-225	6000 (420)	3.90 (1.77)
2"	BF064-200-*^-^	1.75	3.81	4.50	5.25	1.68	3/4"	OR*-2-228	6000 (420)	5.66 (2.57)

BFOM64 – Blanking Flange Complete with O-Ring and G1/8 BSPP Port (Plugged,) Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BFOM64-050-*^-^	18.3	40.4	47.8	56.4	20.6	M8	OR*-2-210	6000 (420)	0.53 (0.24)
3/4"	BFOM64-075-*^-^	23.9	50.8	60.5	71.4	25.9	M10	OR*-2-214	6000 (420)	1.08 (0.49)
1"	BFOM64-100-*^-^	27.7	57.2	69.9	81.0	26.2	M12	OR*-2-219	6000 (420)	1.70 (0.77)
1-1/4"	BFOM64-125-*^-^	31.8	66.8	77.7	95.3	31.8	M12	OR*-2-222	6000 (420)	2.63 (1.20)
1-1/2"	BFOM64-150-*^-^	36.6	79.5	95.3	112.8	35.1	M16	OR*-2-225	6000 (420)	3.90 (1.77)
2"	BFOM64-200-*^-^	44.5	96.8	114.3	133.4	42.7	M20	OR^-2-228	6000 (420)	5.66 (2.57)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

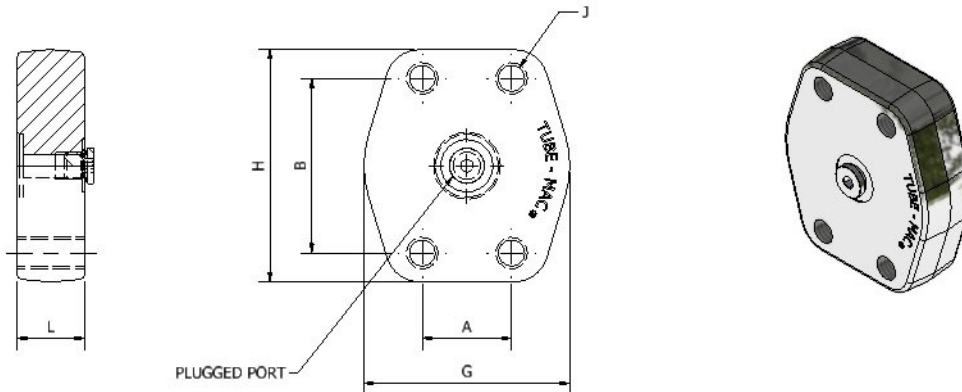
Ordering Example: BF064-200-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

SAE 6000 PSI Blanking Flange

Flat Face with Threaded Holes

SAE J518 Code 62 (ISO 6162-2)



BFF64 – Blanking Flange Flat Face with #4 SAE Port (Plugged) and UNC Threaded Holes, NPS

Size	Blanking Flange Part Number	Dimensions (in)					Thread UNC-2B J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFF64-050-*	.72	1.59	1.88	2.22	0.81	5/16"-18	6000 (420)	0.56 (0.25)
3/4"	BFF64-075-*	.94	2.00	2.38	2.81	1.02	3/8"-16	6000 (420)	1.08 (0.49)
1"	BFF64-100-*	1.09	2.25	2.75	3.19	1.03	7/16"-14	6000 (420)	1.79 (0.81)
1-1/4"	BFF64-125-*	1.25	2.63	3.06	3.75	1.25	1/2"-13	6000 (420)	2.74 (1.25)
1-1/2"	BFF64-150-*	1.44	3.13	3.75	4.44	1.38	5/8"-11	6000 (420)	4.01 (1.82)
2"	BFF64-200-*	1.75	3.81	4.50	5.25	1.68	3/4"-10	6000 (420)	5.82 (2.65)

BFFM64 – Blanking Flange Flat Face with G1/8 BSPP Port (Plugged) and Threaded Holes, Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Thread J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFFM64-050-*	18.3	40.4	47.8	56.4	20.6	M8 x 1.25	6000 (420)	0.56 (0.25)
3/4"	BFFM64-075-*	23.9	50.8	60.5	71.4	25.9	M10 x 1.50	6000 (420)	1.08 (0.49)
1"	BFFM64-100-*	27.7	57.2	69.9	81.0	26.2	M12 x 1.75	6000 (420)	1.79 (0.81)
1-1/4"	BFFM64-125-*	31.8	66.8	77.7	95.3	31.8	M12 x 1.75	6000 (420)	2.74 (1.25)
1-1/2"	BFFM64-150-*	36.6	79.5	95.3	112.8	35.1	M16 x 2.00	6000 (420)	4.01 (1.82)
2"	BFFM64-200-*	44.5	96.8	114.3	133.4	42.7	M20 x 2.50	6000 (420)	5.82 (2.65)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFF64-200-SS

* Insert Material _____

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

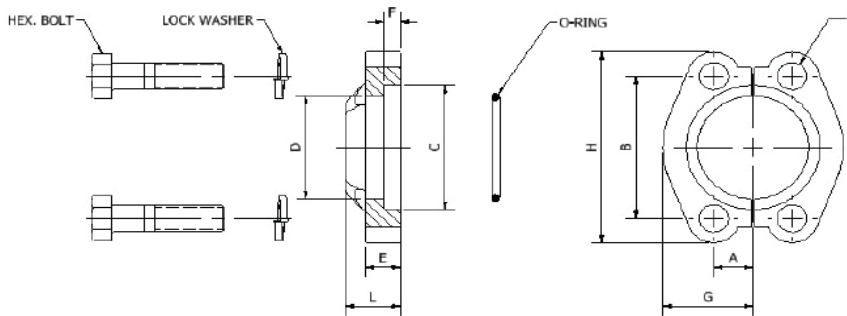
H81

SAE 6000 PSI Split Flange Kits

SAE J518 Code 62 (ISO 6162-2)

Complete Flange Set Includes:

- One (1) Split Flange (2 Halves)
- Four (4) Hex Head Bolts
- Four (4) Lock Washers
- One (1) Buna O-Ring (Standard)



SFK64 - Split Flange Kit, NPS

Size	Complete Assembly Part Number	Dimensions (in)									Drill Dia. (in) J	HHCS Min. Grade 5 UNC-2A	O-Ring (Buna) Part Number	WT (lbs)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	L					
1/2"	SFK64-050-*^-^	0.36	1.59	1.28	0.97	0.63	0.29	0.94	2.22	0.87	0.34	5/16"-18 x 1.50	OR*-2-210	0.55 (0.25)	6000 (420)
3/4"	SFK64-075-*^-^	0.47	2.00	1.66	1.28	0.75	0.33	1.19	2.81	1.10	0.43	3/8"-16 x 1.50	OR*-2-214	0.93 (0.42)	6000 (420)
1"	SFK64-100-*^-^	0.55	2.25	1.91	1.53	0.94	0.36	1.37	3.19	1.30	0.51	7/16"-14 1.75	OR*-2-219	1.46 (0.66)	6000 (420)
1-1/4"	SFK64-125-*^-^	0.63	2.63	2.16	1.75	1.06	0.39	1.53	3.75	1.50	0.59	1/2"-13 x 1.75	OR*-2-222	2.26 (1.03)	6000 (420)
1-1/2"	SFK64-150-*^-^	0.72	3.13	2.53	2.03	1.18	0.48	1.87	4.44	1.69	0.67	5/8"-11 x 2.25	OR*-2-225	3.91 (1.78)	6000 (420)
2"	SFK64-200-*^-^	0.88	3.81	3.16	2.66	1.46	0.48	2.25	5.25	2.05	0.83	3/4"-10 x 2.75	OR*-2-228	6.48 (2.95)	6000 (420)

SFKM64 - Split Flange Kit, Metric

Size	Complete Assembly Part Number	Dimensions (mm)									Drill Dia. (mm) J	HHCS Min. 10.9	O-Ring (Nitrile) Part Number	WT (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	L					
1/2"	SFKM64-050-*^-^	9.1	40.4	32.5	24.6	16.0	7.4	23.9	56.4	22.1	8.6	M8 x 40	OR*-2-210	0.55 (0.25)	6000 (420)
3/4"	SFKM64-075-*^-^	11.9	50.8	42.2	32.5	19.0	8.4	30.2	71.4	27.9	10.9	M10 x 40	OR*-2-214	0.93 (0.42)	6000 (420)
1"	SFKM64-100-*^-^	14.0	57.2	48.5	38.9	23.9	9.1	34.8	81.0	33.0	13.0	M12 x 45	OR*-2-219	1.46 (0.66)	6000 (420)
1-1/4"	SFKM64-125-*^-^	16.0	66.8	54.9	44.5	26.9	9.9	38.9	95.3	38.1	15.0	M12 x 45	OR*-2-222	2.26 (1.03)	6000 (420)
1-1/2"	SFKM64-150-*^-^	18.3	79.5	64.3	51.6	30.0	12.2	47.5	112.8	42.9	17.0	M16 x 55	OR*-2-225	3.91 (1.78)	6000 (420)
2"	SFKM64-200-*^-^	22.4	96.8	80.3	67.6	37.0	12.2	57.2	133.4	42.1	21.1	M20 x 70	OR*-2-228	6.48 (2.95)	6000 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

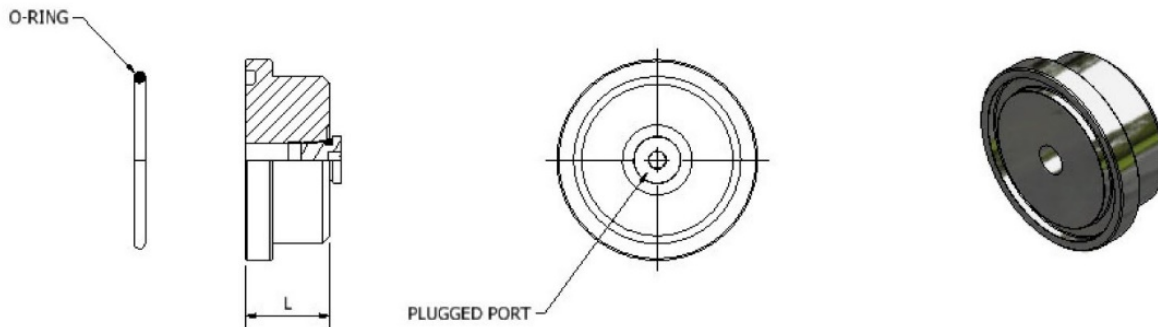
Ordering Example: SFK64-100-SS-V

* Insert Material

^ Insert O-Ring Type

SAE 6000 PSI Split Flange Plugs

SAE J518 Code 62 (ISO 6162-2)



SFP64 - Complete with Buna O-Ring (Standard) and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		L			
1/2"	SFP64-050-^	0.88	OR*-2-210	6000 (420)	0.14 (0.06)
3/4"	SFP64-075-^	1.12	OR*-2-214	6000 (420)	0.42 (0.19)
1"	SFP64-100-^	1.38	OR*-2-219	6000 (420)	0.44 (0.2.0)
1-1/4"	SFP64-125-^	1.44	OR*-2-222	6000 (420)	0.96 (0.44)
1-1/2"	SFP64-150-^	1.62	OR*-2-225	6000 (420)	1.58 (0.75)
2"	SFP64-200-^	1.51	OR*-2-228	6000 (420)	2.53 (1.15)

SFPM64 - Complete with Nitrile O-Ring (Standard) and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)	O-Ring (Nitrile) Part Number	Working Pressure PSI (bar)	WT (kg)
		L			
1/2"	SFPM64-050-^	22.4	OR*-2-210	6000 (420)	0.14 (0.06)
3/4"	SFPM64-075-^	28.4	OR*-2-214	6000 (420)	0.42 (0.19)
1"	SFPM64-100-^	35.1	OR*-2-219	6000 (420)	0.44 (0.2.0)
1-1/4"	SFPM64-125-^	36.6	OR*-2-222	6000 (420)	0.96 (0.44)
1-1/2"	SFPM64-150-^	41.1	OR*-2-225	6000 (420)	1.58 (0.75)
2"	SFPM64-200-^	38.4	OR*-2-228	6000 (420)	2.53 (1.15)

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: SFP64-200-V

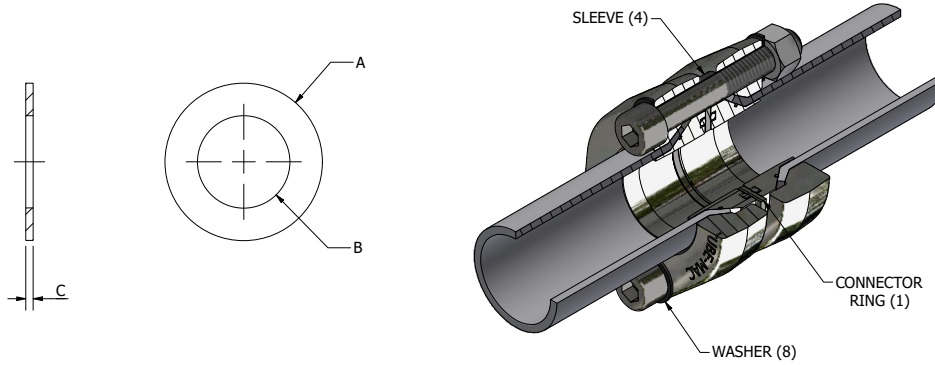
^ Insert O-Ring Type

3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

SAE 6000 PSI Non-Conductive Connector Plate with Bolt Isolation

SAE J518 Code 62 (ISO 6162-2)



Complete Set Includes:

- One (1) Non-Conductive Plate
- Four (4) Sleeves for Bolts
- Eight (8) Washers for Bolts

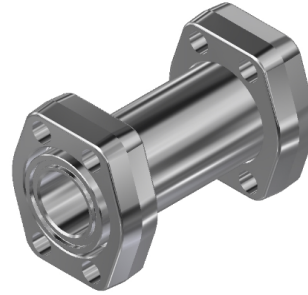
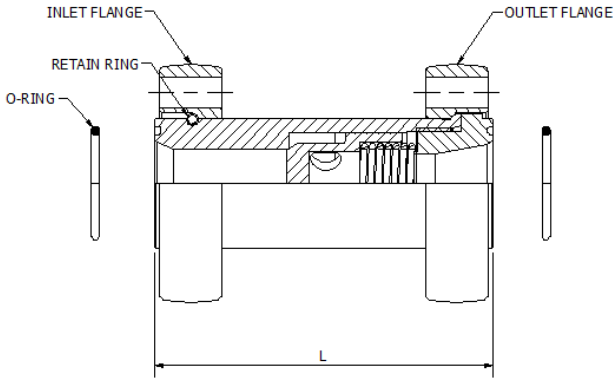
NCCR – Non-Conductive Connector Plate					
Size	Part Number	Dimensions in (mm)			WT lbs (kg)
		A	B	C	
1/2"	NCCR64-050	1.40 (35.5)	0.50 (12.70)	0.16 (4.00)	0.09 (0.04)
3/4"	NCCR64-075	1.80 (45.5)	0.75 (19.05)	0.16 (4.00)	0.12 (0.05)
1"	NCCR64-100	2.00 (50.8)	0.98 (25.0)	0.16 (4.00)	0.14 (0.06)
1-1/4"	NCCR64-125	2.36 (60.0)	1.25 (31.7)	0.16 (4.00)	0.20 (0.09)
1-1/2"	NCCR64-150	2.76 (70.3)	1.50 (38.10)	0.16 (4.00)	0.28 (0.13)
2"	NCCR34-200	3.37 (85.5)	2.00 (50.8)	0.16 (4.00)	0.33 (0.15)

Notes:

Flanges, Cone Inserts and Bolts Sold Separately
 Must use Two (2) O-Ring Face Cone Inserts

SAE 6000 PSI Check Valve Retain Ring Flange Style

SAE J518 Code 62 (ISO 6162-2)



Complete Assembly Consists Of:

- One (1) Check Valve Body – Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CV Check Valve Complete with Buna O-Rings (Standard)

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring 1 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
3/4"	A/CV-075-FC64-FC64-07-*^-^	3.60 (91.4)	OR^-3-913	3.18 (1.45)	CV-075-07-*^-^	1.50 (0.68)	5000 (350)
1"	A/CV-100-FC64-FC64-07-*^-^	4.40 (111.8)	OR^-3-916	4.08 (1.85)	CV-100-07-*^-^	1.73 (0.78)	5000 (350)
1-1/4"	A/CV-125-FC64-FC64-07-*^-^	5.18 (131.6)	OR^-3-918	5.91 (2.69)	CV-125-07-*^-^	2.15 (0.98)	5000 (350)
1-1/2"	A/CV-150-FC64-FC64-07-*^-^	5.76 (146.3)	OR^-3-924	10.38 (4.72)	CV-150-07-*^-^	4.05 (1.84)	5000 (350)
2"	A/CV-200-FC64-FC64-07-*^-^	6.74 (171.2)	OR^-3-928	14.90 (6.77)	CV-200-07-*^-^	5.20 (2.36)	5000 (350)

Flange Option:

Standard, FC64 = SAE 6000 PSI Code 62 (ISO 6162-2) Clearance Flange.

FT64 = SAE 6000 PSI Code 62 (ISO 6162-2) UNC Threaded Flange.

FTM64 = SAE 6000 PSI Code 621 (ISO 6162-2) Metric Threaded Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

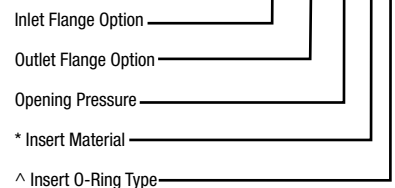
Standard, No Designation = Buna Nitrile.

V = Viton.

Opening Pressure

	PSI (bar)
Standard	07 (0.5)
Optional	21 (1.5)
Optional	43 (3.0)

Ordering Example: A/CV-200-FC64-FC64-07-SS-V

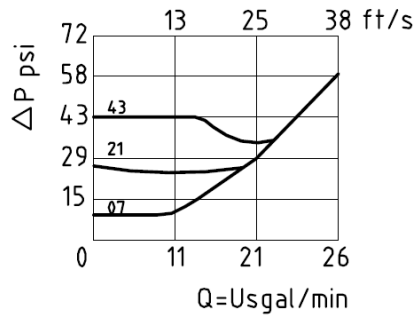


SAE 6000 PSI Check Valve Retain Ring Flange Style

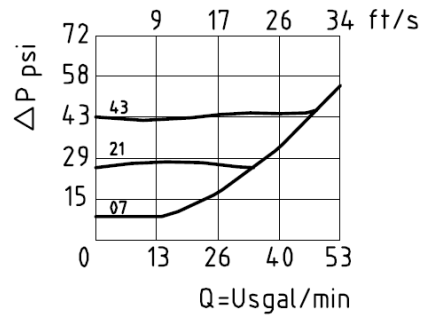
SAE J518 Code 62 (ISO 6162-2)

Performance Curves: Measured using oil at 190SUS and 122° F

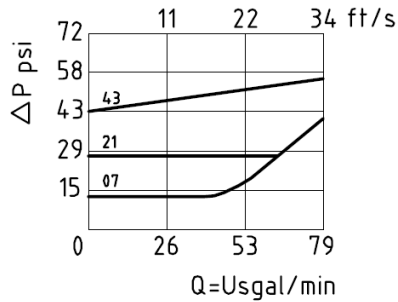
3/4"



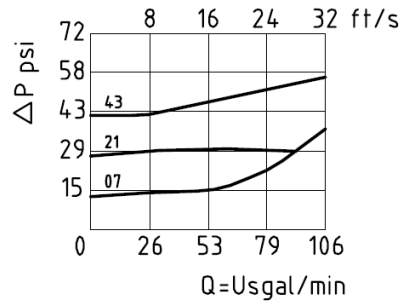
1"



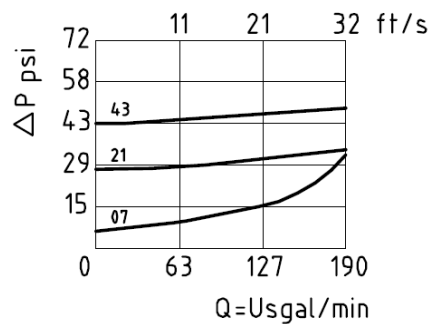
1-1/4"



1-1/2"



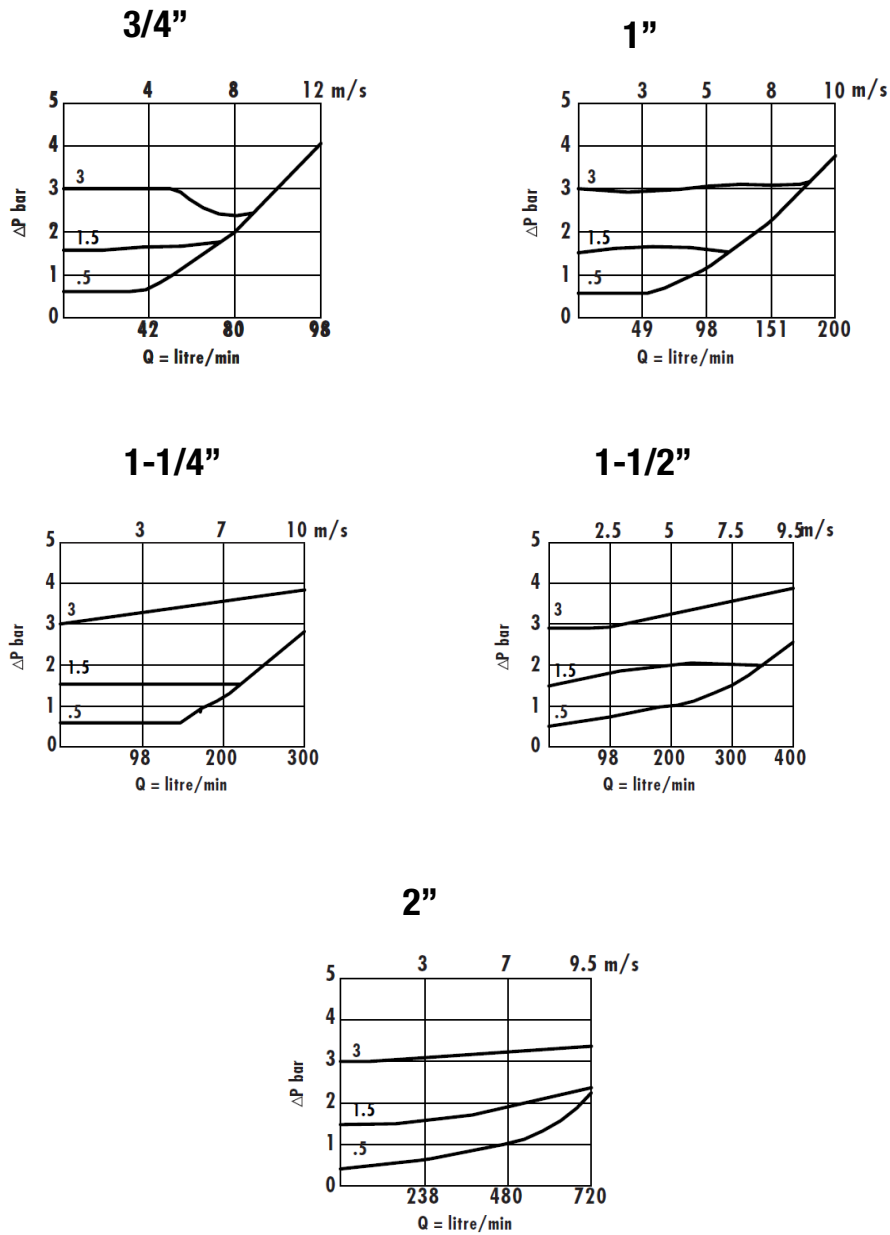
2"



SAE 6000 PSI Check Valve Retain Ring Flange Style,

SAE J518 Code 62 (ISO 6162-2)

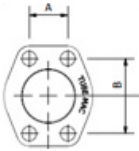










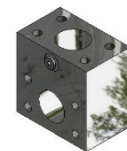



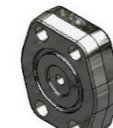
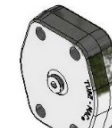
Performance Curves: Measured using oil at 190SUS and 50° C



3D step models available upon request

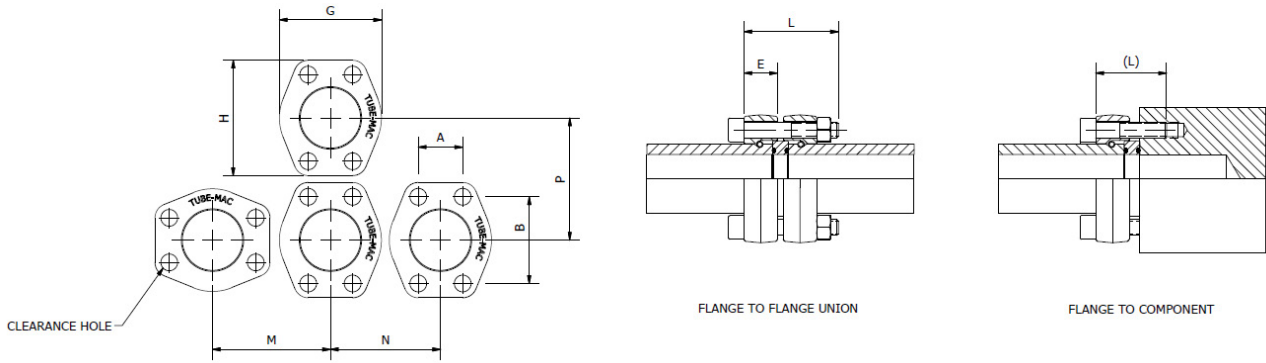
SAE 10000 PSI, 690 bar Reference Guide

(only available for SCHXXS NPS Duplex Pipe)

					
<p>Retain Ring Flange Dimensions</p> <p>Page I1</p>	<p>Retain Ring Flange Clearance Holes NPS RFAC204 Page I2</p>	<p>Retain Ring Flange Threaded Holes NPS RFAT1-4 Page I3</p>	<p>Retain Ring RA Page I4</p>	<p>O-Ring Spacer RR Pipe Flange Connection OS Page I5</p>	<p>O-Ring Spacer RR Pipe to Hose End OSH Page I6</p>
					
<p>O-Ring Spacer With Pilot Port NPS, Metric OSP, OSPM Page I7</p>	<p>Bump Style Butt Weld Adapter Assembly, NPS A/BWAHP Page I8</p>	<p>Retain Ring Style Butt Weld Adapter Assembly, NPS A/BWARHP Page I9</p>	<p>Retain Ring Flange Pipe Assembly SCHXXS Duplex Pipe PAR Page I10</p>	<p>Retain Ring Flange Bent Pipe Assembly SCHXXS Duplex Pipe BPAR Page I11</p>	<p>Block Elbow NPS, Metric BE104, BEM104 Page I12</p>
					
<p>Block Tee NPS, Metric BT104, BTM104 Page I13</p>	<p>Reducing Branch Block Tee NPS BTR104 Page I14</p>	<p>Reducing Branch Block Tee Metric BTRM104 Page I15</p>	<p>Blanking Flange O-Ring Face with Clearance Holes BR0104, BF0104M Page I16</p>	<p>Blanking Flange Flat Face with Threaded Holes BFF104, BFFM104 Page I17</p>	

SAE 10000 PSI Retain Ring Flange Dimensions

SAE J518 Code 62 (ISO 6162-2) Bolt Pattern



Retain Ring Flange Dimensions (Inches)

Size	Dimensions (in)								SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	0.72	1.59	1.88	2.22	2.20	2.09	2.32	1.20	5/16"-18 UNC x 3.00 (2.00)	10000 (690)
3/4"	0.94	2.00	2.38	2.81	2.76	2.17	2.95	1.40	3/8"-16 UNC x 3.50 (2.25)	10000 (690)
1"	1.09	2.25	2.75	3.19	3.19	2.44	3.35	1.40	7/16"-14 UNC x 3.50 (2.25)	10000 (690)
1-1/4"	1.25	2.63	3.06	3.75	3.58	2.99	3.90	1.60	1/2"-13 UNC x 4.00 (2.50)	10000 (690)
1-1/2"	1.44	3.13	3.75	4.44	4.25	3.35	4.57	1.60	5/8"-11 UNC x 4.50 (2.75)	10000 (690)
2"	1.75	3.81	3.81	5.25	5.04	3.94	5.39	2.40	3/4"-10 UNC x 6.00 (3.50)	10000 (690)
2-1/2"	2.31	4.87	4.87	6.89	6.65	4.37	7.20	2.40	1"-8 UNC x 6.75 (4.38)	10000 (690)
3"	2.81	6.00	6.00	8.50	8.00	5.24	8.58	2.75	1-1/8"-7 UNC x 7.50 (5.00)	10000 (690)

* SHCS Bolt Specification

Carbon Steel: ASTM A574

316 Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

Retain Ring Flange Dimensions (Millimeters)

Size	Dimensions (mm)								SHCS Bolt* L (L)	Working Pressure PSI (Bar)
	A	B	G	H	M	N	P	E		
1/2"	18.3	40.4	47.8	56.4	55.9	53.1	58.9	30	M8 x 80 (50)	10000 (690)
3/4"	23.9	50.8	60.5	71.4	70.1	68.1	74.9	35	M10 x 90 (60)	10000 (690)
1"	27.7	57.2	69.9	81.0	81.0	75.9	85.1	35	M12 x 90 (60)	10000 (690)
1-1/4"	31.8	66.8	77.7	95.3	90.9	83.1	99.1	40	M12 x 100 (65)	10000 (690)
1-1/4" ⁽²⁾	31.8	66.8	77.7	95.3	90.9	83.1	99.1	40	M14 x 100 (65)	10000 (690)
1-1/2"	36.6	79.5	95.3	112.8	108.0	101.1	116.1	40	M16 x 115 (70)	10000 (690)
2"	44.5	96.8	114.3	133.4	128.0	119.9	136.9	60	M20 x 150 (90)	10000 (690)
2-1/2"	58.7	123.8	150.0	175.0	169.0	156.0	183.0	60	M24 x 170 (110)	10000 (690)
3"	71.4	152.4	178.0	215.0	202.0	184.0	218.0	70	M30 x 190 (130)	10000 (690)

⁽²⁾ Designates special order to suit M14 bolts

* SHCS Bolt Specification

Carbon Steel: DIN 912/ISO 476, Minimum Grade 8.8

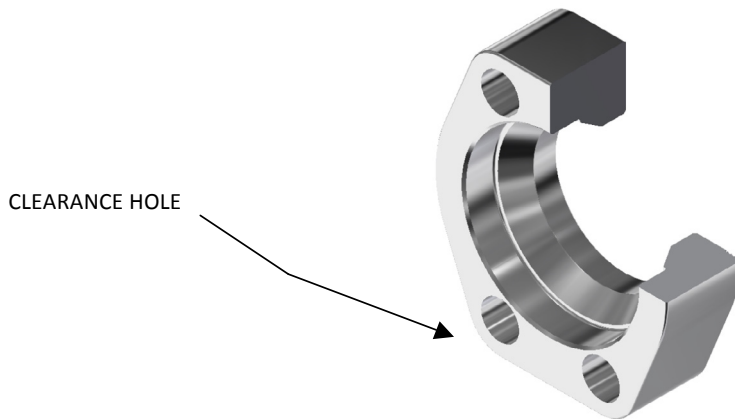
316 Stainless Steel: A4-70, DIN 912/ISO 4762

- For M16 SS Bolts and larger A4-80, DIN 912/ISO 4762

3D step models available upon request

SAE 10000 PSI Retain Ring Flange with Clearance Holes

SAE J518 Code 62 (ISO 6162-2) Bolt Pattern



RFAC104 - Retain Ring Flange with Clearance Hole, for Grooved Schedule XXS Pipe Only, NPS

Size	Schedule	OD x Wall (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	XXS	21.3 x 7.47	RFAC104-050-*	10000 (690)	0.62 (0.28)
3/4"	XXS	26.7 x 7.82	RFAC104-075-*	10000 (690)	1.01 (0.46)
1"	XXS	33.4 x 9.09	RFAC104-100-*	10000 (690)	1.56 (0.71)
1-1/4"	XXS	42.2 x 9.70	RFAC104-125-*	10000 (690)	2.20 (1.00)
1-1/4" ⁽¹⁾	XXS	42.2 x 9.70	RFAC104-125-M14*	10000 (690)	2.20 (1.00)
1-1/2"	XXS	48.3 x 10.20	RFAC104-150-*	10000 (690)	3.96 (1.80)
2"	XXS	60.3 x 11.10	RFAC104-200-*	10000 (690)	6.67 (3.03)
2-1/2"	XXS	73.0 x 14.02	RFAC104-250-*	10000 (690)	14.88 (6.76)
3"	XXS	88.9 x 15.20	RFAC104-300-*	10000 (690)	25.15 (11.43)

⁽¹⁾ Designates Clearance Hole for M14 bolt - special order

Ordering Example: RFAC104-200-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

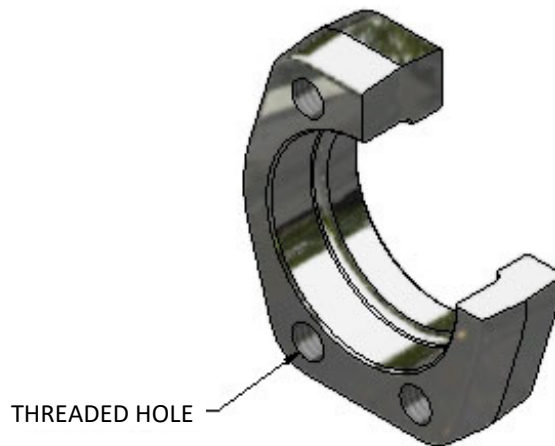
HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

* Insert Material _____

SAE 10000 PSI Retain Ring Flange with Threaded Holes

SAE J518 Code 62 (ISO 6162-2) Bolt Pattern



RFAC104 - Retain Ring Flange with Threaded Hole, for Grooved Schedule XXS Pipe, NPS, with UNC Threaded Holes

Size	Schedule	OD x Wall (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	XXS	21.3 x 7.47	RFAT104-050-*	10000 (690)	0.62 (0.28)
3/4"	XXS	26.7 x 7.82	RFAT104-075-*	10000 (690)	1.01 (0.46)
1"	XXS	33.4 x 9.09	RFAT104-100-*	10000 (690)	1.56 (0.71)
1-1/4"	XXS	42.2 x 9.70	RFAT104-125-*	10000 (690)	2.20 (1.00)
1-1/2"	XXS	48.3 x 10.20	RFAT104-150-*	10000 (690)	3.96 (1.80)
2"	XXS	60.3 x 11.10	RFAT104-200-*	10000 (690)	6.67 (3.03)
2-1/2"	XXS	73.0 x 14.02	RFAT104-250-*	10000 (690)	14.88 (6.76)
3"	XXS	88.9 x 15.20	RFAT104-300-*	10000 (690)	25.15 (11.43)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: RFAT104-200-SS

* Insert Material _____

RFATM104 - Retain Ring Flange with Threaded Hole, for Grooved Schedule XXS Pipe, NPS, with Metric Threaded Holes

Size	Schedule	OD x Wall (mm)	Standard Part Number	Working Pressure PSI (Bar)	Weight lbs (kg)
1/2"	XXS	21.3 x 7.47	RFATM104-050-*	10000 (690)	0.62 (0.28)
3/4"	XXS	26.7 x 7.82	RFATM104-075-*	10000 (690)	1.01 (0.46)
1"	XXS	33.4 x 9.09	RFATM104-100-*	10000 (690)	1.56 (0.71)
1-1/4"	XXS	42.2 x 9.70	RFATM104-125-*	10000 (690)	2.20 (1.00)
1-1/4 ⁽¹⁾ "	XXS	42.2 x 9.70	RFATM104-125-M14-*	10000 (690)	2.20 (1.00)
1-1/2"	XXS	48.3 x 10.20	RFATM104-150-*	10000 (690)	3.96 (1.80)
2"	XXS	60.3 x 11.10	RFATM104-200-*	10000 (690)	6.67 (3.03)
2-1/2"	XXS	73.0 x 14.02	RFATM104-250-*	10000 (690)	14.88 (6.76)
3"	XXS	88.9 x 15.20	RFATM104-300-*	10000 (690)	25.15 (11.43)

⁽¹⁾ Designates Threaded Holes for M14 bolts - special order

Ordering Example: RFATM104-200-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

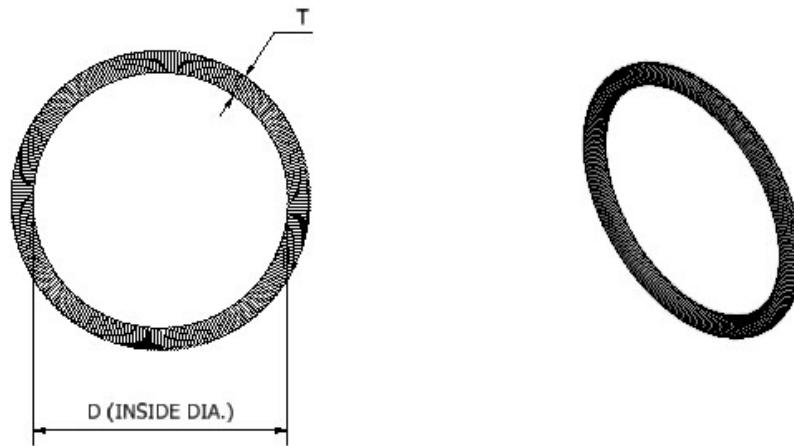
HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

* Insert Material _____

3D step models available upon request

SAE 10000 PSI Retain Ring

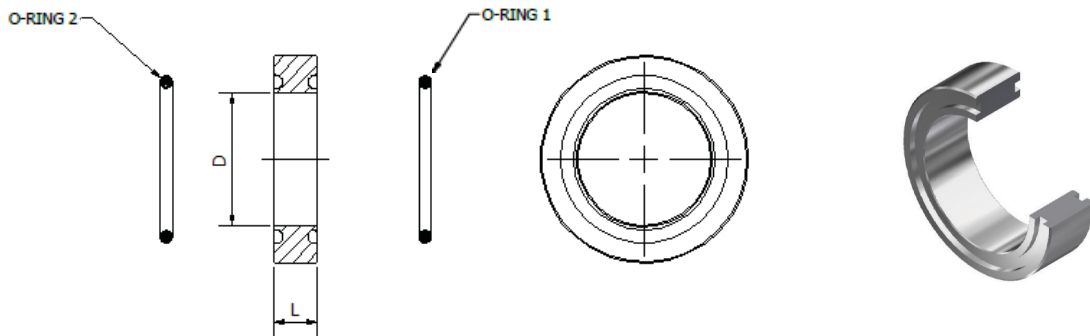


RA - Retain Ring				
Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
		D	t	
1/2"	RA-050	0.85 (21.6)	0.16 (4.0)	0.01 (0.005)
3/4"	RA-075	1.24 (31.5)	0.16 (4.0)	0.02 (0.009)
1"	RA-100	1.32 (33.5)	0.20 (5.0)	0.03 (0.014)
1-1/4"	RA-125	1.59 (40.4)	0.20 (5.0)	0.04 (0.018)
1-1/2"	RA-150	1.99 (50.5)	0.20 (5.0)	0.05 (0.023)
2"	RA-200-6	2.38 (60.5)	0.20 (6.0)	0.07 (0.032)
2-1/2"	RA-250-7	2.93 (74.4)	0.28 (7.0)	0.08 (0.036)
3"	RA-300-8	3.56 (90.4)	0.31 (8.0)	0.14 (0.064)

Note:

Retain Ring 2", 2-1/2" and 3" have larger cross section

SAE 10000 PSI O-Ring Spacer for Retain Ring Pipe Flange Connection



OSA – O-Ring Spacer for Retain Ring Pipe Flange Connection

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSA-SCHXXS-050-*^-^	0.25 (6.4)	0.50 (12.7)	OR^~3-909	0.11 (0.05)
3/4"	OSA-SCHXXS-075-*^-^	0.43 (10.9)	0.50 (12.7)	OR^~3-913	0.18 (0.08)
1"	OSA-SCHXXS-100-*^-^	0.60 (15.2)	0.50 (12.7)	OR^~3-916	0.21 (0.10)
1-1/4"	OSA-SCHXXS-125-*^-^	0.90 (22.9)	0.50 (12.7)	OR^~3-918	0.26 (0.12)
1-1/2"	OSA-SCHXXS-150-*^-^	1.10 (27.9)	0.50 (12.7)	OR^~3-924	0.33 (0.15)
2"	OSA-SCHXXS-200-*^-^	1.50 (38.1)	0.50 (12.7)	OR^~3-928	0.43 (0.20)
2-1/2"	OSA-SCHXXS-250-*^-^	1.77 (49.9)	1.00 (26.4)	OR^~2-232	1.17 (0.53)
3"	OSA-SCHXXS-300-*^-^	2.30 (58.4)	1.00 (25.4)	OR^~2-232	1.68 (0.77)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

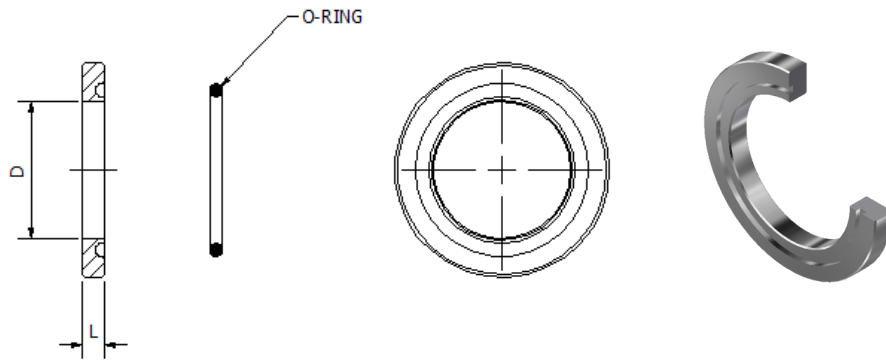
V = Viton.

Ordering Example: OSA-SCHXXS-200-SS-V

* Insert Material

^ Insert O-Ring Type

SAE 10000 PSI O-Ring Spacer for Retain Ring Pipe to Hose End



OSH – O-Ring Spacer for Retain Ring Pipe to Hose End					
Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSH-SCHXXS-050-*^-^	0.25 (6.4)	0.25 (6.4)	OR^-3-909	0.04 (0.02)
3/4"	OSH-SCHXXS-075-*^-^	0.43 (10.9)	0.25 (6.4)	OR^-3-913	0.07 (0.03)
1"	OSH-SCHXXS-100-*^-^	0.60 (15.2)	0.25 (6.4)	OR^-3-916	0.08 (0.04)
1-1/4"	OSH-SCHXXS-125-*^-^	0.90 (22.9)	0.25 (6.4)	OR^-3-918	0.09 (0.04)
1-1/2"	OSH-SCHXXS-150-*^-^	1.10 (27.9)	0.25 (6.4)	OR^-3-924	0.12 (0.05)
2"	OSH-SCHXXS-200-*^-^	1.50 (38.1)	0.25 (6.4)	OR^-3-928	0.20 (0.09)
2-1/2"	OSH-SCHXXS-250-*^-^	1.77 (49.9)	0.50 (12.7)	OR^-2-232	0.58 (0.26)
3"	OSH-SCHXXS-300-*^-^	2.30 (58.4)	0.50 (12.7)	OR^-2-237	0.85 (0.39)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

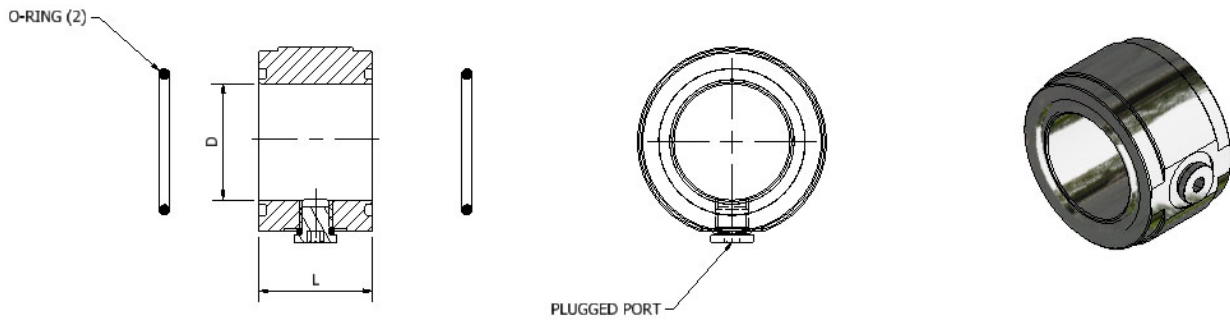
V = Viton.

Ordering Example: OSH-SCHXXS-200-SS-V

* Insert Material

^ Insert O-Ring Type

SAE 10000 PSI O-Ring Spacer with Pilot Port



OSP - O-Ring Spacer with Pilot Port for Retain Ring Pipe - 1/2" - 3" Complete with Buna O-Rings (Standard) and #4 SAE Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSP-SCHXXS-050-*^-^	0.25 (6.4)	1.50 (38.1)	OR^-3-909	0.44 (0.20)
3/4"	OSP-SCHXXS-075-*^-^	0.43 (10.9)	1.50 (38.1)	OR^-3-913	0.68 (0.31)
1"	OSP-SCHXXS-100-*^-^	0.60 (15.2)	1.50 (38.1)	OR^-3-916	0.82 (0.37)
1-1/4"	OSP-SCHXXS-125-*^-^	0.90 (22.9)	1.50 (38.1)	OR^-3-918	0.90 (0.41)
1-1/2"	OSP-SCHXXS-150-*^-^	1.10 (27.9)	1.50 (38.1)	OR^-3-924	1.47 (0.67)
2"	OSP-SCHXXS-200-*^-^	1.50 (38.1)	1.50 (38.1)	OR^-3-928	1.59 (0.72)
2-1/2"	OSP-SCHXXS-250-*^-^	1.77 (49.9)	1.50 (38.1)	OR^-2-232	2.11 (0.96)
3"	OSP-SCHXXS-300-*^-^	2. (.)	1.50 (38.1)	OR^-2-237	2.60 (1.18)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: OSP-SCHXXS-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

OSPM - O-Ring Spacer with Metric Pilot Port for Retain Ring Pipe - 1/2" - 3" Complete with Buna O-Rings (Standard) and G1/8 Port (Plugged)

Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
		D	L		
1/2"	OSPM-SCHXXS-050-*^-^	0.25 (6.4)	1.50 (38.1)	OR^-3-909	0.44 (0.20)
3/4"	OSPM-SCHXXS-075-*^-^	0.43 (10.9)	1.50 (38.1)	OR^-3-913	0.68 (0.31)
1"	OSPM-SCHXXS-100-*^-^	0.60 (15.2)	1.50 (38.1)	OR^-3-916	0.82 (0.37)
1-1/4"	OSPM-SCHXXS-125-*^-^	0.90 (22.9)	1.50 (38.1)	OR^-3-918	0.90 (0.41)
1-1/2"	OSPM-SCHXXS-150-*^-^	1.10 (27.9)	1.50 (38.1)	OR^-3-924	1.47 (0.67)
2"	OSPM-SCHXXS-200-*^-^	1.50 (38.1)	1.50 (38.1)	OR^-3-928	1.59 (0.72)
2-1/2"	OSPM-SCHXXS-250-*^-^	1.77 (49.9)	1.50 (38.1)	OR^-2-232	2.11 (0.96)
3"	OSPM-SCHXXS-300-*^-^	2.30 (58.4)	1.50 (38.1)	OR^-2-237	2.60 (1.18)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

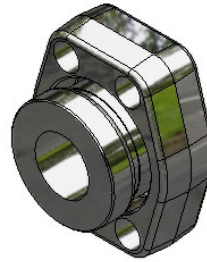
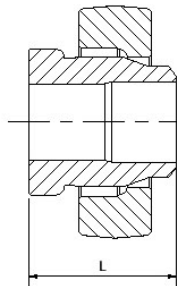
Ordering Example: OSPM-SCHXXS-200-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

SAE 10000 PSI Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page I1)
- O-Ring Spacer (See Page I5)

A/BWAHP - Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS						
Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	1/2" SCHXXS	A/BWAHP-SCHXXS-050-FAC104-*	0.69 (0.31)	1.50 (38.1)	BWAHP-SCHXXS-050-SS	RFAC104-050-*
3/4"	3/4" SCHXXS	A/BWAHP-SCHXXS-075-FAC104-*	1.40 (0.64)	2.00 (50.8)	BWAHP-SCHXXS-075-SS	RFAC104-075-*
1"	1" SCHXXS	A/BWAHP-SCHXXS-100-FAC104-*	1.81 (0.82)	2.00 (50.8)	BWAHP-SCHXXS-100-SS	RFAC104-100-*
1-1/4"	1-1/4" SCHXXS	A/BWAHP-SCHXXS-125-FAC104-*	2.83 (1.29)	2.50 (63.5)	BWAHP-SCHXXS-125-SS	RFAC104-125-*
1-1/4" ⁽¹⁾	1-1/4" SCHXXS	A/BWAHP-SCHXXS-125-FAC104-M14-*	2.83 (1.29)	2.50 (63.5)	BWAHP-SCHXXS-125-SS	RFAC104-125-M14-*
1-1/2"	1-1/2" SCHXXS	A/BWAHP-SCHXXS-150-FAC104-*	4.45 (2.02)	2.75 (69.8)	BWAHP-SCHXXS-150-SS	RFAC104-150-*
2"	2" SCHXXS	A/BWAHP-SCHXXS-200-FAC34-*	6.71 (3.05)	3.00 (76.2)	BWAHP-SCHXXS-200-SS	RFAC104-200-*
2-1/2"	2-1/2" SCHXXS	A/BWAHP-SCHXXS-250-FAC34-*	17.30 (7.86)	3.50 (88.9)	BWAHP-SCHXXS-250-SS	RFAC104-250-*
3"	3" SCHXXS	A/BWAHP-SCHXXS-300-FAC34-*	29.21 (13.28)	3.75 (95.3)	BWAHP-SCHXXS-300-SS	RFAC104-300-*

⁽¹⁾Designates Clearance Holes for M14 bolts - special order

Ordering Example: A/BWAHP-SCHXXS-200-FC104-SS

* Insert Material

^ Note:

Weld Adapter Body is only available in Duplex UNS S32205 (EN1.4462)

*** Flange Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

HDG = Carbon Steel, Hot Dip Galvanized Flange

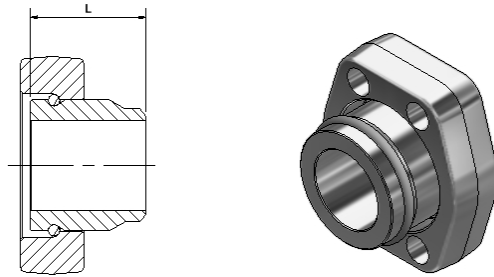
Note:

To Order A Retain Ring Flange with UNC Threaded Holes, Replace FAC with FAT

To Order a Retain Ring Flange with Metric Threads, Replace FAC with FATM

SAE 10000 PSI Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body
- One (1) Retain Ring

To be Ordered Separately:

- Bolt Kit (See Page I1)
- O-Ring Spacer (See Page I5)

A/BWARHP - Butt Weld Adapter Assembly Retain Ring Style with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1/2"	1/2" SCHXXS	A/BWARHP-SCHXXS-050-FAC104-*	0.69 (0.31)	1.50 (38.1)	BWARHP-SCHXXS-050-SS	RFAC104-050-*
3/4"	3/4" SCHXXS	A/BWARHP-SCHXXS-075-FAC104-*	1.40 (0.64)	2.00 (50.8)	BWARHP-SCHXXS-075-SS	RFAC104-075-*
1"	1" SCHXXS	A/BWARHP-SCHXXS-100-FAC104-*	1.81 (0.82)	2.00 (50.8)	BWARHP-SCHXXS-100-SS	RFAC104-100-*
1-1/4"	1-1/4" SCHXXS	A/BWARHP-SCHXXS-125-FAC104-*	2.83 (1.29)	2.50 (63.5)	BWARHP-SCHXXS-125-SS	RFAC104-125-*
1-1/4" ⁽¹⁾	1-1/4" SCHXXS	A/BWARHP-SCHXXS-125-FAC104-M14-*	2.83 (1.29)	2.50 (63.5)	BWARHP-SCHXXS-125-SS	RFAC104-125-M14-*
1-1/2"	1-1/2" SCHXXS	A/BWARHP-SCHXXS-150-FAC104-*	4.45 (2.02)	2.75 (69.8)	BWARHP-SCHXXS-150-SS	RFAC104-150-*
2"	2" SCHXXS	A/BWARHP-SCHXXS-200-FAC104-*	6.71 (3.05)	3.00 (76.2)	BWARHP-SCHXXS-200-SS	RFAC104-200-*
2-1/2"	2-1/2" SCHXXS	A/BWARHP-SCHXXS-250-FAC104-*	17.30 (7.86)	3.50 (88.9)	BWARHP-SCHXXS-250-SS	RFAC104-250-*
3"	3" SCHXXS	A/BWARHP-SCHXXS-300-FAC104-*	29.21 (13.28)	3.75 (95.3)	BWARHP-SCHXXS-300-SS	RFAC104-300-*

⁽¹⁾ Designates Clearance Holes for M14 bolts - special order

Ordering Example: A/BWARHP-SCHXXS-150-FAC104-SS

^ Note:

Weld Adapter Body is only available in Duplex UNS S32205 (EN1.4462)

* Insert Material _____

*** Flange Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

HDG = Carbon Steel, Hot Dip Galvanized Flange

Note:

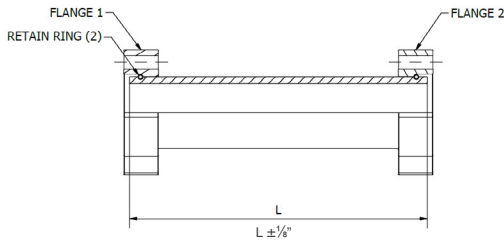
To Order A Retain Ring Flange with UNC Threaded Holes, Replace FAC with FAT

To Order a Retain Ring Flange with Metric Threads, Replace FAC with FATM

3D step models available upon request

ISO 10000 Retain Ring Flange Pipe Assembly, NPS

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



- Complete assembly consists of:
- One (1) length of clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

- To be Ordered Separately:
- O-Ring Seal Spacers

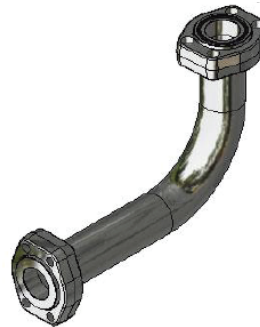
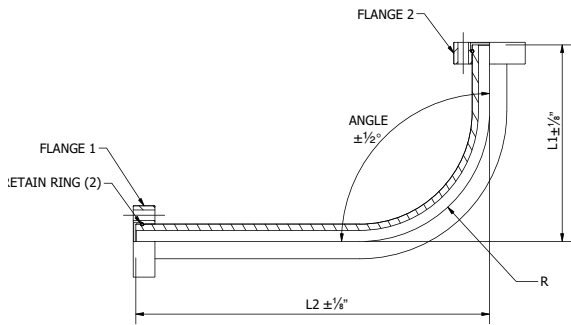
		Code	PAR	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Length	Options
Bent Pipe Assembly - Retain Ring		PAR							
Pipe Material	Duplex UNS S32205 TMP2205SS	2205							
Pipe Size	1/2"	SCHXXS-050							
	3/4"	SCHXXS-075							
	1"	SCHXXS-100							
	1-1/4"	SCHXXS-125							
	1-1/2"	SCHXXS-150							
	2"	SCHXXS-200							
	2-1/2"	SCHXXS-250							
	3"	SCHXXS-300							
Flange Type Carbon Steel	RFAC104 with Clearance Holes	FAC104							
	RFAT104 with Threaded Holes	FAT104							
	RFATM104 with Metric Threaded Holes	FATM104							
Length	L	Specify (in.)							
Flange Options	Flange Stainless Steel Type 316	SS							
	Flange Hot Dip Galvanized	HDG							

♦TMP2205SS PIPE IS THE ONLY PIPE MATERIAL AVAILABLE FOR THIS PRESSURE RATING
Standard No designation = Flanges Carbon Steel Flanges, Zinc Nickel Plated

PART Number (EXAMPLE): PAR/2205-SCHXXS-250-FAC104-240

SAE 10000 PSI, Retain Ring Flare Flange Bent Pipe Assembly, NPS

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) retain ring flare flanges
- Two (2) retain rings

To be Ordered Separately:

- O-ring Seal Spacers

Bent Pipe Assembly - Retain Ring			Code	BPAR	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Rad 1	Rad.	Lgth L1	Ang	Lgth L2	Options
Pipe Material	Duplex UNS S32205 TMP2205SS	2205												
Pipe Size	1/2"	SCHXXS-050												
	3/4"	SCHXXS-075												
	1"	SCHXXS-100												
	1-1/4"	SCHXXS-125												
	1-1/2"	SCHXXS-150												
	2"	SCHXXS-200												
	2-1/2"	SCHXXS-250												
	3"	SCHXXS-300												
Flange Type Carbon Steel	RFAC104 with Clearance Holes	FAC104												
	RFAT104 with Threaded Holes	FAT104												
	RFATM104 with Metric Threaded Holes	FATM104												
Radius	R	Specify (in.)												
Length	L1	Specify (in.)												
Angle	Max 90°	Specify (°)												
Length	L2	Specify (in.)												
Options	Flange Stainless Steel Type 316	SS												
	Flange Hot Dip Galvanized	HDG												

Pipe Size	Flange Size	Dimensions	
Schedule	(in)	L(in.)	R
1/2" SCHXXS	1/2"	6.75	3.9
3/4" SCHXXS	3/4"	7.00	4.3
1" SCHXXS	1"	7.75	4.9
1-1/4" SCHXXS	1-1/4"	8.63	5.6
1-1/2" SCHXXS	1-1/2"	11.75	8.2
2" SCHXXS	2"	13.00	9.5
2-1/2" SCHXXS	2-1/2"	16.00	12.5
3" SCHXXS	3"	20.00	15

Note:

♦TMP2205SS PIPE IS THE ONLY PIPE MATERIAL AVAILABLE FOR THIS PRESSURE RATING

Flange Standard No designation = Carbon Steel, Zinc Nickel Plated

PART Number (EXAMPLE): BPAR/2205-SCHXXS-200-FAC104-FAC104-9.5-60-90-144

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

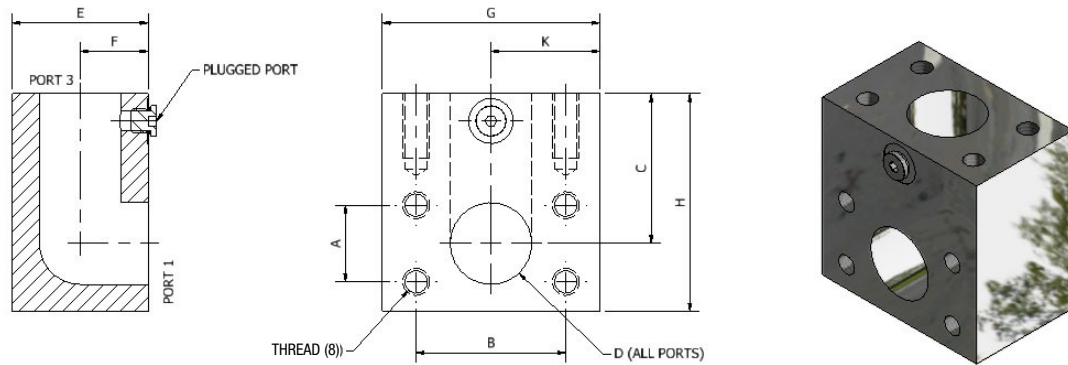
Clamp Supports - Heavy Series

Valves, Ball and Check



SAE 10000 PSI Block Elbow

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BE104 - Block Elbow Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BE104-050-*	0.72	1.59	1.88	0.25	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.30 (1.50)	10000 (690)
3/4"	BE104-075-*	0.94	2.00	2.25	0.43	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.94 (2.25)	10000 (690)
1"	BE104-100-*	1.09	2.25	2.50	0.60	2.25	1.13	3.00	4.00	1.50	7/16"-14	6.72 (3.05)	10000 (690)
1-1/4"	BE104-125-*	1.25	2.63	2.75	0.90	2.50	1.25	4.00	4.00	2.00	1/2"-13	9.58 (4.36)	10000 (690)
1-1/2"	BE104-150-*	1.44	3.13	3.00	1.10	3.00	1.50	4.00	4.50	2.00	5/8"-11	12.06 (5.48)	10000 (690)
2"	BE104-200-*	1.75	3.81	3.38	1.50	3.00	1.50	5.00	5.00	2.50	3/4"-10	15.40 (7.00)	10000 (690)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE104-200-SS

* Insert Material

BEM104 - Block Elbow Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BEM104-050-*	18.3	40.4	47.8	6.4	50.8	25.4	63.5	63.5	31.8	M8 x 1.25	3.30 (1.50)	10000 (690)
3/4"	BEM104-075-*	23.9	50.8	57.2	10.9	50.8	25.4	76.2	82.6	38.1	M10 x 1.50	4.94 (2.25)	10000 (690)
1"	BEM104-100-*	27.7	57.2	63.5	15.2	57.2	28.7	76.2	101.6	38.1	M12 x 1.75	6.72 (3.05)	10000 (690)
1-1/4"	BEM104-125-*	31.8	66.8	69.9	22.9	63.5	31.8	101.6	101.6	50.8	M12 x 1.75	9.58 (4.36)	10000 (690)
1-1/4" ⁽¹⁾	BEM104-125-M14-*	31.8	66.8	69.9	22.9	63.5	31.8	101.6	101.6	50.8	M14 x 2.00	9.58 (4.36)	10000 (690)
1-1/2"	BEM104-150-*	36.6	79.5	76.2	27.9	76.2	38.1	101.6	114.3	50.8	M16 x 2.00	12.06 (5.48)	10000 (690)
2"	BEM104-200-*	44.5	96.8	85.9	38.1	76.2	38.1	127.0	127.0	63.5	M20 x 2.50	15.40 (7.00)	10000 (690)

⁽¹⁾Designates Threaded Holes for M14 bolts - special order

Ordering Example: BEM104-200-SS

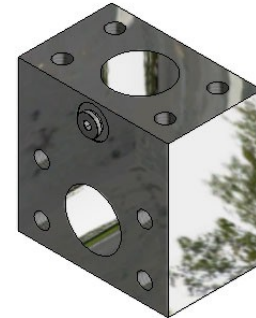
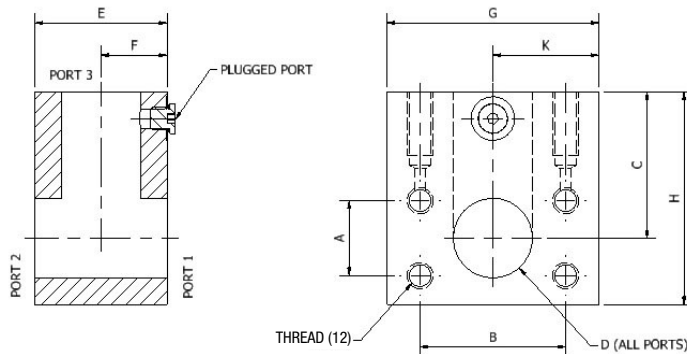
Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

* Insert Material

SAE 10000 PSI Block Tee

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BT104 - Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)									Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BT104-050-*	0.72	1.59	1.88	0.25	2.00	1.00	2.50	2.50	1.25	5/16"-18	3.05 (1.38)	10000 (690)
3/4"	BT104-075-*	0.94	2.00	2.25	0.43	2.00	1.00	3.00	3.25	1.50	3/8"-16	4.66 (2.11)	10000 (690)
1"	BT104-100-*	1.09	2.25	2.50	0.60	2.25	1.13	3.00	4.00	1.50	7/16"-14	6.20 (2.81)	10000 (690)
1-1/4"	BT104-125-*	1.25	2.63	2.75	0.90	2.50	1.25	4.00	4.00	2.00	1/2"-13	8.86 (4.02)	10000 (690)
1-1/2"	BT104-150-*	1.44	3.13	3.00	1.10	3.00	1.50	4.00	4.50	2.00	5/8"-11	11.04 (5.01)	10000 (690)
2"	BT104-200-*	1.75	3.81	3.38	1.50	3.00	1.50	5.00	5.00	2.50	3/4"-10	14.41 (6.54)	10000 (690)

BTM104 - Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (inch)	Block Tee Part No	Dimensions (mm)									Thread	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	F	G	H	K			
1/2"	BTM104-050-*	18.3	40.4	47.8	6.40	50.8	25.4	63.5	63.5	31.8	M8 X 1.25	3.07 (1.39)	10000 (690)
3/4"	BTM104-075-*	23.9	50.8	57.2	10.9	50.8	25.4	76.2	82.6	38.1	M10 X 1.50	4.67 (2.12)	10000 (690)
1"	BTM104-100-*	27.7	57.2	63.5	15.2	57.2	28.7	76.2	101.6	38.1	M12 X 1.75	6.22 (2.82)	10000 (690)
1-1/4"	BTM104-125-*	31.8	66.8	69.9	22.9	63.5	31.8	101.6	101.6	50.8	M12 X 1.75	8.88 (4.03)	10000 (690)
1-1/4" ⁽¹⁾	BTM104-125-M14-*	31.8	66.8	69.9	22.9	63.5	31.8	101.6	101.6	50.8	M14 x 2.00	8.88 (4.03)	10000 (690)
1-1/2"	BTM104-150-*	36.6	79.5	76.2	27.9	76.2	38.1	101.6	114.3	50.8	M16 X 2.00	11.07 (5.02)	10000 (690)
2"	BTM104-200-*	44.5	96.8	85.9	38.1	76.2	38.1	127.0	127.0	63.5	M20 X 2.50	14.44(6.55)	10000 (690)

⁽¹⁾Designates Threaded Holes for M14 bolts - special order

Ordering Example: BTM104-200-SS

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

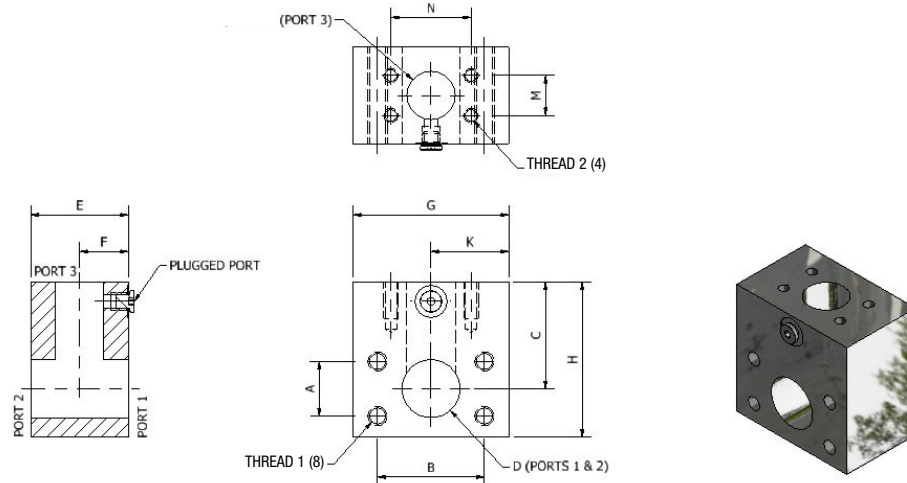
SS = Stainless Steel, Type 316.

* Insert Material

3D step models available upon request

SAE 10000 PSI Reducing Branch Block Tee - NPS

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BTR104 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Tee Part Number	Dimensions (in)												Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
3/4"x1/2"	BTR104-075x050-*	0.94	2.00	2.25	0.75	0.50	2.00	1.00	3.00	3.25	1.50	0.72	1.59	3/8"-16	5/16"-18	5.20 (2.36)	10000 (690)
1"x1/2"	BTR104-100x050-*	1.09	2.25	2.50	0.94	0.50	2.25	1.13	3.00	4.00	1.50	0.72	1.59	7/16"-14	5/16"-18	5.20 (2.36)	10000 (690)
1"x3/4"	BTR104-100x075-*	1.09	2.25	2.50	0.94	0.75	2.25	1.13	3.00	4.00	1.50	0.94	2.00	7/16"-14	3/8"-16	5.20 (2.36)	10000 (690)
1-1/4"x1/2"	BTR104-125x050-*	1.25	2.63	2.75	1.25	0.50	2.50	1.25	4.00	4.00	2.00	0.72	1.59	1/2"-13	5/16"-18	10.00 (4.54)	10000 (690)
1-1/4"x3/4"	BTR104-125x075-*	1.25	2.63	2.75	1.25	0.75	2.50	1.25	4.00	4.00	2.00	0.94	2.00	1/2"-13	3/8"-16	10.00 (4.54)	10000 (690)
1-1/4"x1"	BTR104-125x100-*	1.25	2.63	2.75	1.25	0.94	2.50	1.25	4.00	4.00	2.00	1.09	2.25	1/2"-13	7/16"-14	10.00 (4.54)	10000 (690)
1-1/2"x1/2"	BTR104-150x050-*	1.44	3.13	3.00	1.50	0.50	3.00	1.50	4.00	4.50	2.00	0.72	1.59	5/8"-11	5/16"-18	11.30 (5.13)	10000 (690)
1-1/2"x3/4"	BTR104-150x075-*	1.44	3.13	3.00	1.50	0.75	3.00	1.50	4.00	4.50	2.00	0.94	2.00	5/8"-11	3/8"-16	11.30 (5.13)	10000 (690)
1-1/2"x1"	BTR104-150x100-*	1.44	3.13	3.00	1.50	0.94	3.00	1.50	4.00	4.50	2.00	1.09	2.25	5/8"-11	7/16"-14	11.30 (5.13)	10000 (690)
1-1/2"x1-1/4"	BTR104-150x125-*	1.44	3.13	3.00	1.50	1.25	3.00	1.50	4.00	4.50	2.00	1.25	2.63	5/8"-11	1/2"-13	11.30 (5.13)	10000 (690)
2"x1/2"	BTR104-200x050-*	1.75	3.81	3.38	1.94	0.50	3.00	1.50	5.00	5.00	2.50	0.72	1.59	3/4"-10	5/16"-18	14.80 (6.71)	10000 (690)
2"x3/4"	BTR104-200x075-*	1.75	3.81	3.38	1.94	0.75	3.00	1.50	5.00	5.00	2.50	0.94	2.00	3/4"-10	3/8"-16	14.80 (6.71)	10000 (690)
2"x1"	BTR104-200x100-*	1.75	3.81	3.38	1.94	0.94	3.00	1.50	5.00	5.00	2.50	1.09	2.25	3/4"-10	7/16"-14	14.80 (6.71)	10000 (690)
2"x1-1/4"	BTR104-200x125-*	1.75	3.81	3.38	1.94	1.25	3.00	1.50	5.00	5.00	2.50	1.25	2.63	3/4"-10	1/2"-13	14.80 (6.71)	10000 (690)
2"x1-1/2"	BTR104-200x150-*	1.75	3.81	3.38	1.94	1.50	3.00	1.50	5.00	5.00	2.50	1.44	3.13	3/4"-10	5/8"-11	14.80 (6.71)	10000 (690)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

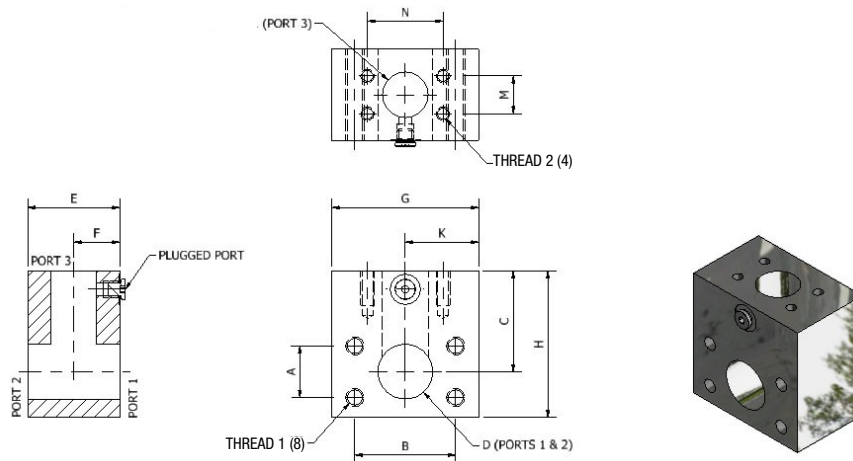
SS = Stainless Steel, Type 316.

Ordering Example: BTR104-200x050-SS

* Insert Material

SAE 10000 PSI Reducing Branch Block Tee - Metric

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BTRM104 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)												Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	D1	E	F	G	H	K	M	N				
3/4"x1/2"	BTRM104-075x050-*	23.9	50.8	57.2	19.1	12.7	50.8	25.4	76.2	82.6	38.1	18.3	40.4	M10 x 1.50	M8 x 1.25	5.20 (2.36)	10000 (690)
1"x1/2"	BTRM104-100x050-*	27.7	57.2	63.5	23.9	12.7	57.2	28.7	76.2	101.6	38.1	18.3	40.4	M12 x 1.75	M8 x 1.25	5.20 (2.36)	10000 (690)
1"x3/4"	BTRM104-100x075-*	27.7	57.2	63.5	23.9	19.1	57.2	28.7	76.2	101.6	38.1	23.9	50.8	M12 x 1.75	M10 x 1.50	5.20 (2.36)	10000 (690)
1-1/4"x1/2"	BTRM104-125x050-*	31.8	66.8	69.9	31.8	12.7	63.5	31.8	101.6	101.6	50.8	18.3	40.4	M12 x 1.75	M8 x 1.25	10.00 (4.54)	10000 (690)
1-1/4" ⁽²⁾ x1/2"	BTRM104-125-M14x050*	31.8	66.8	69.9	31.8	12.7	63.5	31.8	101.6	101.6	50.8	18.3	40.4	M14 x 2.00	M8 x 1.25	10.00 (4.54)	10000 (690)
1-1/4"x3/4"	BTRM104-125x075-*	31.8	66.8	69.9	31.8	19.1	63.5	31.8	101.6	101.6	50.8	23.9	50.8	M12 x 1.75	M10 x 1.50	10.00 (4.54)	10000 (690)
1-1/4" ⁽²⁾ x3/4"	BTRM104-125-M14x075*	31.8	66.8	69.9	31.8	19.1	63.5	31.8	101.6	101.6	50.8	23.9	50.8	M14 x 2.00	M10 x 1.50	10.00 (4.54)	10000 (690)
1-1/4"x1"	BTRM104-125x100-*	31.8	66.8	69.9	31.8	23.9	63.5	31.8	101.6	101.6	50.8	27.7	57.2	M12 x 1.75	M12 x 1.75	10.00 (4.54)	10000 (690)
1-1/4" ⁽²⁾ x1"	BTRM104-125-M14x100*	31.8	66.8	69.9	31.8	23.9	63.5	31.8	101.6	101.6	50.8	27.7	57.2	M14 x 2.00	M12 x 1.75	10.00 (4.54)	10000 (690)
1-1/2"x1/2"	BTRM104-150x050-*	36.6	79.5	76.2	38.1	12.7	76.2	38.1	101.6	114.3	50.8	18.3	40.4	M16 x 2.00	M8 x 1.25	11.30 (5.13)	10000 (690)
1-1/2"x3/4"	BTRM104-150x075-*	36.6	79.5	76.2	38.1	19.1	76.2	38.1	101.6	114.3	50.8	23.9	50.8	M16 x 2.00	M10 x 1.50	11.30 (5.13)	10000 (690)
1-1/2"x1"	BTRM104-150x100-*	36.6	79.5	76.2	38.1	23.9	76.2	38.1	101.6	114.3	50.8	27.7	57.2	M16 x 2.00	M12 x 1.75	11.30 (5.13)	10000 (690)
1-1/2"x1-1/4"	BTRM104-150x125-*	36.6	79.5	76.2	38.1	31.8	76.2	38.1	101.6	114.3	50.8	31.8	66.8	M16 x 2.00	M12 x 1.75	11.30 (5.13)	10000 (690)
1-1/2"x1-1/4" ⁽¹⁾	BTRM104-150x125-M14-*	36.6	79.5	76.2	38.1	31.8	76.2	38.1	101.6	114.3	50.8	31.8	66.8	M16 x 2.00	M14 x 2.00	11.30 (5.13)	10000 (690)
2"x1/2"	BTRM6104-200x050-*	44.5	96.8	85.9	49.3	12.7	76.2	38.1	127.0	127.0	63.5	18.3	40.4	M20 x 2.50	M8 x 1.25	14.80 (6.71)	10000 (690)
2"x3/4"	BTRM104-200x075-*	44.5	96.8	85.9	49.3	19.1	76.2	38.1	127.0	127.0	63.5	23.9	50.8	M20 x 2.50	M10 x 1.50	14.80 (6.71)	10000 (690)
2"x1"	BTRM104-200x100-*	44.5	96.8	85.9	49.3	23.9	76.2	38.1	127.0	127.0	63.5	27.7	57.2	M20 x 2.50	M12 x 1.75	14.80 (6.71)	10000 (690)
2"x1-1/4"	BTRM104-200x125-*	44.5	96.8	85.9	49.3	31.8	76.2	38.1	127.0	127.0	63.5	31.8	66.8	M20 x 2.50	M12 x 1.75	14.80 (6.71)	10000 (690)
2"x1-1/4" ⁽²⁾	BTRM104-200x125-M14-*	44.5	96.8	85.9	49.3	31.8	76.2	38.1	127.0	127.0	63.5	31.8	66.8	M20 x 2.50	M14 x 2.00	14.80 (6.71)	10000 (690)
2"x1-1/2"	BTRM104-200x150-*	44.5	96.8	85.9	49.3	38.1	76.2	38.1	127.0	127.0	63.5	36.6	79.5	M20 x 2.50	M16 x 2.00	14.80 (6.71)	10000 (690)

⁽¹⁾Designates Threaded Holes for M14 bolts - special order

Ordering Example: BTRM104-200x050-SS

* Materials:

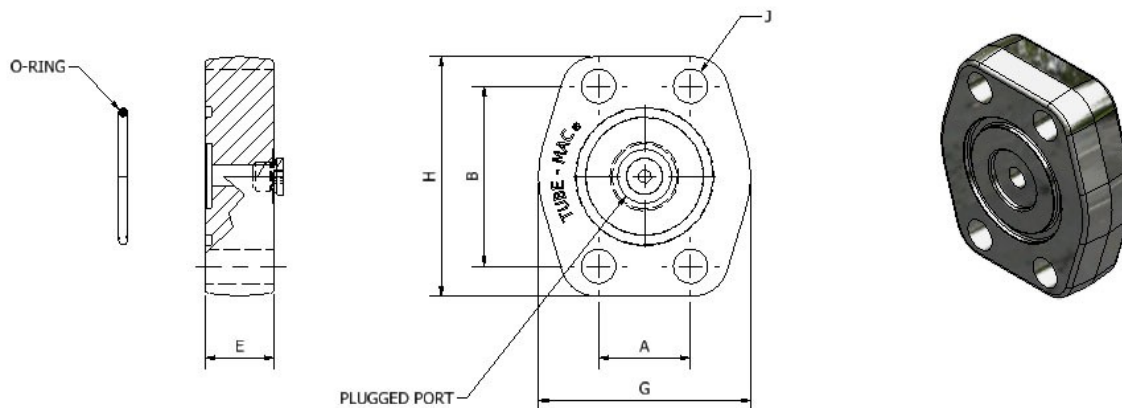
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

* Insert Material _____

3D step models available upon request

SAE 10000 PSI Blanking Flange O-Ring Face with Clearance Holes

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BF0104 – Blanking Flange Complete with O-Ring and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BF0104-050-*^-^	0.72	1.59	1.88	2.22	1.20	5/16"	OR*-2-210	10000 (690)	0.90 (0.41)
3/4"	BF0104-075-*^-^	0.94	2.00	2.38	2.81	1.40	3/8"	OR*-2-214	10000 (690)	1.78 (0.81)
1"	BF0104-100-*^-^	1.09	2.25	2.75	3.19	1.40	7/16"	OR*-2-219	10000 (690)	2.11 (0.96)
1-1/4"	BF0104-125-*^-^	1.25	2.63	3.06	3.75	1.60	1/2"	OR*-2-222	10000 (690)	3.08 (1.40)
1-1/2"	BF0104-150-*^-^	1.44	3.13	3.75	4.44	1.60	5/8"	OR*-2-225	10000 (690)	5.24 (2.38)
2"	BF0104-200-*^-^	1.75	3.81	4.50	5.25	2.40	3/4"	OR*-2-228	10000 (690)	10.40 (4.73)
2-1/2"	BF0104-250-*^-^	2.31	4.87	5.90	6.89	2.40	1"	OR*-2-232	10000 (690)	19.16 (8.71)
3"	BF0104-300-*^-^	2.81	6.00	7.00	8.50	2.75	1-1/8"	OR*-2-237	10000 (690)	32.63 (14.83)

BFOM104 – Blanking Flange Complete with O-Ring and G1/8 BSPP Port (Plugged,) Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Bolt Size J	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E				
1/2"	BFOM104-050-*^-^	18.3	40.4	47.8	56.4	30	M8	OR*-2-210	10000 (690)	0.90 (0.41)
3/4"	BFOM104-075-*^-^	23.9	50.8	60.5	71.4	35	M10	OR*-2-214	10000 (690)	1.78 (0.81)
1"	BFOM104-100-*^-^	27.7	57.2	69.9	81.0	35	M12	OR*-2-219	10000 (690)	2.11 (0.96)
1-1/4"	BFOM104-125-*^-^	31.8	66.8	77.7	95.3	40	M12	OR*-2-222	10000 (690)	3.08 (1.40)
1-1/4" ⁽¹⁾	BFOM104-125-M14*^-^	31.8	66.8	77.7	95.3	40	M14	OR*-2-222	10000 (690)	3.08 (1.40)
1-1/2"	BFOM104-150-*^-^	36.6	79.5	95.3	112.8	40	M16	OR*-2-225	10000 (690)	5.24 (2.38)
2"	BFOM104-200-*^-^	44.5	96.8	114.3	133.4	60	M20	OR^-2-228	10000 (690)	10.40 (4.73)
2-1/2"	BFOM104-250-*^-^	58.7	123.8	150.0	175.0	60	M24	OR^-2-232	10000 (690)	19.16 (8.71)
3"	BFOM104-300-*^-^	71.4	152.4	178.0	215.0	70	M30	OR^-2-237	10000 (690)	32.63 (14.83)

⁽¹⁾ Designates Clearance Holes for M14 bolts - special order

* Materials:

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: BFOM104-200-SS-V

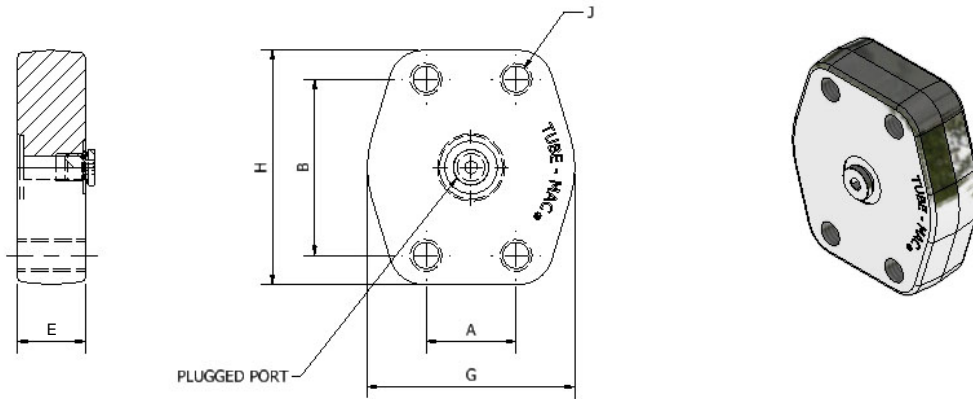
* Insert Material

^ Insert O-Ring 2 Type

SAE 10000 PSI Blanking Flange

Flat Face with Threaded Holes

SAE J518 Code 62 (ISO 6162-2) Flange Pattern



BFF104 – Blanking Flange Flat Face with #4 SAE Port (Plugged) and UNC Threaded Holes, NPS

Size	Blanking Flange Part Number	Dimensions (in)					Thread UNC-2B J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFF104-050-*	.72	1.59	1.88	2.22	1.20	5/16"-18	10000 (690)	0.90 (0.41)
3/4"	BFF104-075-*	.94	2.00	2.38	2.81	1.40	3/8"-16	10000 (690)	1.78 (0.81)
1"	BFF104-100-*	1.09	2.25	2.75	3.19	1.40	7/16"-14	10000 (690)	2.11 (0.96)
1-1/4"	BFF104-125-*	1.25	2.63	3.06	3.75	1.60	1/2"-13	10000 (690)	3.08 (1.40)
1-1/2"	BFF104-150-*	1.44	3.13	3.75	4.44	1.60	5/8"-11	10000 (690)	5.24 (2.38)
2"	BFF104-200-*	1.75	3.81	4.50	5.25	2.40	3/4"-10	10000 (690)	10.40 (4.73)
2-1/2"	BFF104-250-*	2.31	4.87	5.90	6.89	2.40	1"	10000 (690)	19.16 (8.71)
3"	BFF104-300-*	2.81	6.00	7.00	8.50	2.75	1-1/8"	10000 (690)	32.63 (14.83)

BFFM64 – Blanking Flange Flat Face with G1/8 BSPP Port (Plugged) and Threaded Holes, Metric

Size	Blanking Flange Part Number	Dimensions (mm)					Thread J	Working Pressure PSI (bar)	WT lbs (kg)
		A	B	G	H	E			
1/2"	BFFM104-050-*	18.3	40.4	47.8	56.4	30	M8 x 1.25	10000 (690)	0.90 (0.41)
3/4"	BFFM104-075-*	23.9	50.8	60.5	71.4	35	M10 x 1.50	10000 (690)	1.78 (0.81)
1"	BFFM104-100-*	27.7	57.2	69.9	81.0	35	M12 x 1.75	10000 (690)	2.11 (0.96)
1-1/4"	BFFM104-125-*	31.8	66.8	77.7	95.3	40	M12 x 1.75	10000 (690)	3.08 (1.40)
1-1/4" ⁽¹⁾	BFFM104-125-M14-*	31.8	66.8	77.7	95.3	40	M14 x 2.00	10000 (690)	3.08 (1.40)
1-1/2"	BFFM104-150-*	36.6	79.5	95.3	112.8	40	M16 x 2.00	10000 (690)	5.24 (2.38)
2"	BFFM104-200-*	44.5	96.8	114.3	133.4	60	M20 x 2.50	10000 (690)	10.40 (4.73)
2-1/2"	BFFM104-250-*	58.7	123.8	150.0	175.0	60	M24 x 2.50	10000 (690)	19.16 (8.71)
3"	BFFM104-300-*	71.4	152.4	178.0	215.0	70	M30 x 2.50	10000 (690)	32.63 (14.83)

⁽¹⁾ Designates Threaded Holes for M14 bolts - special order

Ordering Example: BFFM104-200-SS

* Materials:

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

* Insert Material

3D step models available upon request

TUBE-MAC.com

Introduction

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16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

Notes

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16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

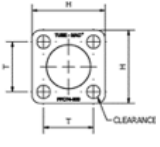










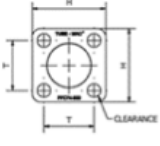
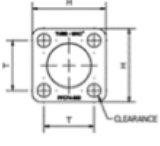








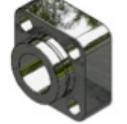






ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare












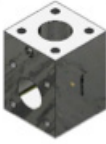
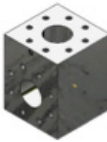


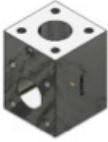
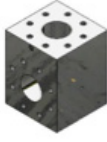
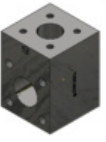
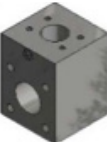
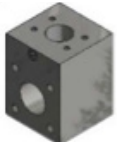
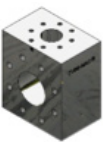
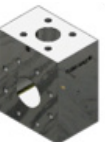



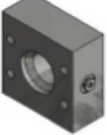




Clamp
Supports -
Heavy Series

Valves, Ball
and Check








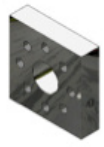








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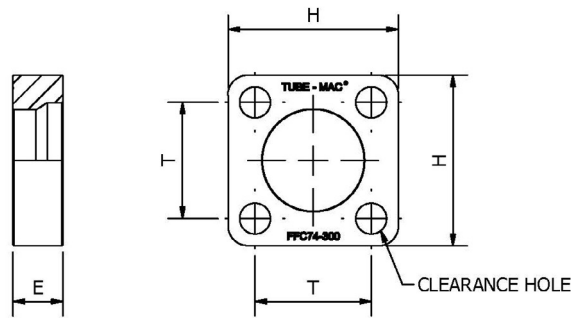
					
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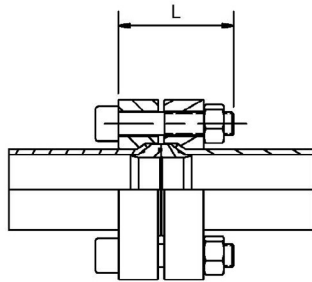
					
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ISO 6164, 400 bar Flare Flange Dimensions, NPS

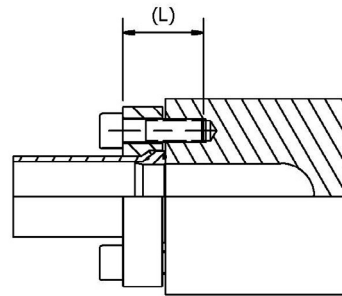
Flange Pattern Drilled to ISO 6164



1-1/2" - 4" FLANGES



FLANGE TO FLANGE UNION



FLANGE TO COMPONENT

Flare Flange Dimensions, NPS						
Flange Size	Pipe Size	Dimensions (in)			SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
		T	H	E		
1-1/2"	1-1/2" SCH80	2.37	3.50	1.38	5/8" UNC x 4.00" (2.50")	4920 (339)*
1-1/2"	1-1/2" SCH160	2.37	3.50	1.38	5/8" UNC x 4.25" (2.75")	5800 (400)
2"	2" SCH80	2.73	4.00	1.48	5/8" UNC x 3.75" (2.25")	4246 (293)*
2"	2" SCH160	2.73	4.00	1.48	5/8" UNC x 4.00" (2.50")	5800 (400)
2-1/2"	2-1/2" SCH80	3.29	4.72	1.48	3/4" UNC x 4.50" (3.00")	4455 (307)*
2-1/2"	2-1/2" SCH160	3.29	4.72	1.48	3/4" UNC x 5.00" (3.25")	5800 (400)
3"	3" SCH80	4.04	5.91	1.73	1" UNC x 5.00" (3.50")	3946 (272)*
3"	3" SCH160	4.04	5.91	1.73	1" UNC x 5.50" (4.50")	5800 (400)
4"	4" SCH80	4.87	7.00	1.98	1-1/8" UNC x 6.75" (4.00")	3420 (236)*

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

***SHCS Bolt Specification**

Carbon Steel: ASTM A574

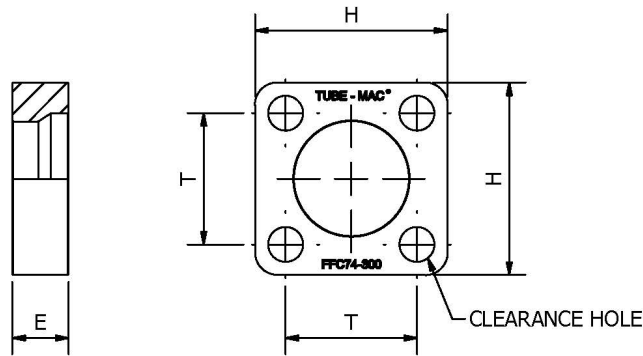
316 Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

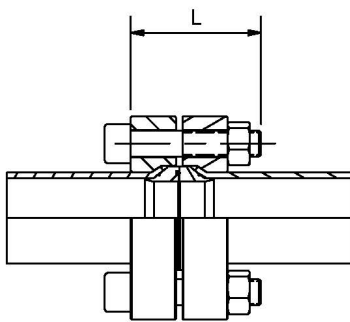
3D step models available upon request

ISO 6164, 400 bar Flare Flange Dimensions, Metric

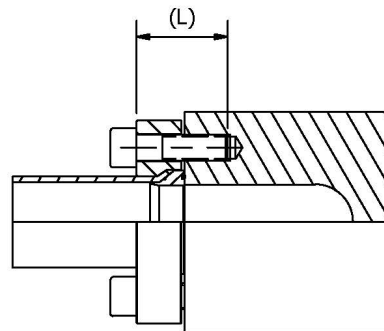
Flange Pattern Drilled to ISO 6164



1-1/2" - 3" FLANGES



FLANGE TO FLANGE UNION



FLANGE TO COMPONENT

Flare Flange Dimensions, Metric

Size	Pipe Size (mm)	Dimensions (mm)			SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
		T	H	E		
1-1/2"	50 x 5	60.1	88.9	35.0	M16 x 100 (60)	5235 (361)*
1-1/2"	50 x 6	60.1	88.9	35.0	M16 x 100 (60)	5800 (400)
1-1/2"	50 x 8	60.1	88.9	35.0	M16 x 100 (60)	5800 (400)
1-1/2"	56 x 8.5	60.1	88.9	35.0	M16 x 110 (70)	5800 (400)
2"	60 x 5	69.3	101.6	37.6	M16 x 100 (60)	4307 (297)
2"	60 x 6	69.3	101.6	37.6	M16 x 100 (60)	5307 (366)*
2"	60 x 8	69.3	101.6	37.6	M16 x 100 (60)	5800 (400)
2"	66 x 8.5	69.3	101.6	37.6	M16 x 100 (60)	5800 (400)
2-1/2"	73 x 7	83.5	119.9	37.6	M20 x 120 (75)	5119 (353)*
2-1/2"	80 x 10	83.5	119.9	37.6	M20 x 130 (85)	5800 (400)
3"	90 x 9	102.5	150.1	43.9	M24 x 130 (90)	5800 (400)
3"	97 x 12	102.5	150.1	60.3	M24 x 155 (120)	5800 (400)

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

***SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762

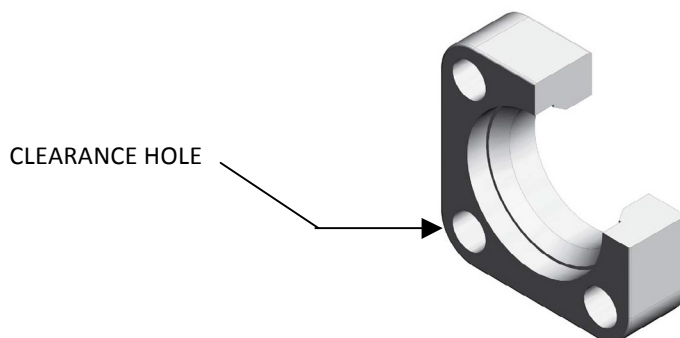
- Minimum Grade 8.8

316 Stainless Steel: A4-70 DIN 912/ISO 4762

- For M16 SS Bolts and larger A4-80, DIN 912/ISO 4762

ISO 6164, 400 bar Flare Flange with Clearance Holes

DIN 400 bar (ISO 6164)



FFC74 Flare Flange with Clearance Holes, NPS

Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (Bar)	WT lbs (kg)
1-1/2"	1-1/2" SCH80/160	FFC74-150	FFC74-150-HDG	FFC74-150-SS	5800 (400)	2.75 (1.25)
2"	2" SCH80/160	FFC74-200	FFC74-200-HDG	FFC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	2-1/2" SCH80/160	FFC74-250	FFC74-250-HDG	FFC74-250-SS	5800 (400)	5.06 (2.30)
3"	3" SCH80/160	FFC74-300	FFC74-300-HDG	FFC74-300-SS	5800 (400)	8.79 (4.00)
4"	4" SCH80	FFC74-400	FFC74-400-HDG	FFC74-400-SS	5800 (400)	14.80 (6.71)

FFCM74 Flare Flange with Clearance Holes, Metric

Size	Pipe OD (mm)	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (Bar)	WT lbs (kg)
1-1/2"	50	FFCM74-150-50MM	FFCM74-150-50MM-HDG	FFCM74-150-50MM-SS	5800 (400)	2.75 (1.25)
1-1/2"	56	FFCM74-150-56MM	FFCM74-150-56MM-HDG	FFCM74-150-56MM-SS	5800 (400)	2.75 (1.25)
2"	60	FFC74-200	FFC74-200-HDG	FFC74-200-SS	5800 (400)	3.10 (1.41)
2"	66	FFCM74-200-66MM	FFCM74-200-66MM-HDG	FFCM74-200-66MM-SS	5800 (400)	3.10 (1.41)
2-1/2"	73	FFC74-250	FFC74-250-HDG	FFC74-250-SS	5800 (400)	5.06 (2.30)
2-1/2"	75	FFCM74-250-75MM	FFCM74-250-75MM-HDG	FFCM74-250-75MM-SS	5800 (400)	4.80 (2.18)
2-1/2"	80	FFCM74-250-80MM	FFCM74-250-80MM-HDG	FFCM74-250-80MM-SS	5800 (400)	4.80 (2.18)
3"	90	FFCM74-300-90MM	FFCM74-300-90MM-HDG	FFCM74-300-90MM-SS	5800 (400)	8.79 (4.00)
3"	97	FFCM74-300-97MM	FFCM74-300-97MM-HDG	FFCM74-300-97MM-SS	5800 (400)	12.70 (5.80)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

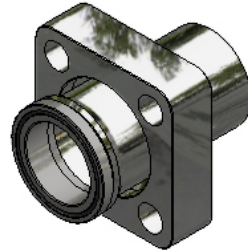
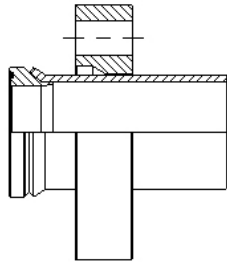
The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

3D step models available upon request

ISO 6164, 400 bar Flare Flange Set O-Ring Face with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) O-Ring Face Cone
- One (1) Face O-Ring (O-Ring 2)
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CO Flare Flange O-Ring Face Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	1-1/2" SCH80	FFC74-CO-SCH80-150-*^-^	3.17 (1.44)	FFC74-150-*	CO-SCH80-150-*^-^	ORV-4315	OR^-2-225
1-1/2"	1-1/2" SCH160	FFC74-CO-SCH160-150-*^-^	3.17 (1.44)	FFC74-150-*	CO-SCH160-150-*^-^	ORV-3815	OR^-2-225
2"	2" SCH80	FFC74-CO-SCH80-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-SCH80-200-*^-^	ORV-5515	OR^-2-228
2"	2" SCH160	FFC74-CO-SCH160-200-*^-^	3.77 (1.71)	FFC74-200-*	CO-SCH160-200-*^-^	ORV-5015	OR^-2-228
2-1/2"	2-1/2" SCH80	FFC74-CO-SCH80-250-*^-^	6.05 (2.75)	FFC74-250-*	CO-SCH80-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	2-1/2" SCH160	FFC74-CO-SCH160-250-*^-^	6.48 (2.95)	FFC74-250-*	CO-SCH160-250-*^-^	ORV-5615	OR^-2-232
3"	3" SCH80	FFC74-CO-SCH80-300-*^-^	10.00 (4.55)	FFC74-300-*	CO-SCH80-300-*^-^	ORV-2-040	OR^-2-237
3"	3" SCH160	FFC74-CO-SCH160-300-*^-^	10.69 (4.86)	FFC74-300-*	CO-SCH160-300-*^-^	ORV-2-037	OR^-2-237
4"	4" SCH80	FFC74-CO-SCH80-400-*^-^	16.85 (7.66)	FFC74-400-*	CO-SCH80-400-*^-^	ORV-2-044	OR^-2-245

FFCM74-CO Flare Flange O-Ring Face Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	O-Ring Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part Number
1-1/2"	50 x 5.0	FFCM74-CO-50x5.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x5.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50 x 6.0	FFCM74-CO-50x6.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x6.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	50 x 8.0	FFCM74-CO-50x8.0-150-*^-^	3.17 (1.44)	FFCM74-150-50MM-*	CO-50x8.0-150-*^-^	ORV-4515	OR^-2-225
1-1/2"	56 x 8.5	FFCM74-CO-56x8.5-150-*^-^	3.17 (1.44)	FFCM74-150-56MM-*	CO-56x8.5-150-*^-^	ORV-4315	OR^-2-225
2"	60 x 5.0	FFCM74-CO-60x5.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x5.0-200-*^-^	ORV-5615	OR^-2-228
2"	60 x 6.0	FFCM74-CO-60x6.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x6.0-200-*^-^	ORV-5015	OR^-2-228
2"	60 x 8.0	FFCM74-CO-60x8.0-200-*^-^	3.59 (1.63)	FFC74-200-*	CO-60x8.0-200-*^-^	ORV-5015	OR^-2-228
2"	66 x 8.5	FFCM74-CO-66x8.5-200-*^-^	3.77 (1.71)	FFCM74-200-66MM-*	CO-66x8.5-200-*^-^	ORV-5615	OR^-2-228
2-1/2"	73 x 7.0	FFCM74-CO-73x7.0-250-*^-^	6.05 (2.75)	FFC74-250-*	CO-73x7.0-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	75 x 5.0	FFCM74-CO-75x5.0-250-*^-^	6.48 (2.95)	FFCM74-250-75MM-*	CO-75x5.0-250-*^-^	ORV-2-036	OR^-2-232
2-1/2"	80 x 10.0	FFCM74-CO-80x10-250-*^-^	5.75 (2.61)	FFCM74-250-80MM-*	CO-80x10-250-*^-^	ORV-6715	OR^-2-232
3"	90 x 9.0	FFCM74-CO-90x9.0-300-*^-^	10.11 (4.60)	FFCM74-300-90MM-*	CO-90x9.0-300-*^-^	ORV-2-041	OR^-2-237
3"	97 x 12.0	FFCM74-CO-97x12-300-*^-^	15.30 (6.95)	FFCM74-300-97MM-*	CO-97x12-300-*^-^	ORV-2-041	OR^-2-237

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC74-CO-SCH80-200-SS-V

*Insert Material

^ Insert O-Ring 2 Type

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.

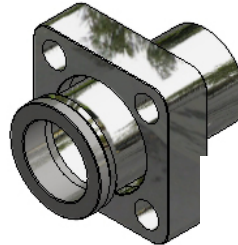
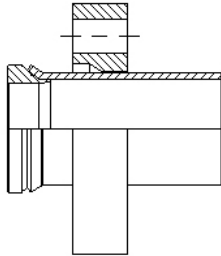
V = Viton.

3D step models available upon request

ISO 6164, 400 bar Flare Flange Set

Flat Face with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flare Flange
- One (1) Flat Face Cone
- One (1) Back Up O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CF Flare Flange Flat Face Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	1-1/2" SCH80	FFC74-CF-SCH80-150-*	3.21 (1.46)	FFC74-150-*	CF-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC74-CF-SCH160-150-*	3.21 (1.46)	FFC74-150-*	CF-SCH160-150-*	ORV-3815
2"	2" SCH80	FFC74-CF-SCH80-200-*	3.63 (1.65)	FFC74-200-*	CF-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC74-CF-SCH160-200-*	3.81 (1.73)	FFC74-200-*	CF-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH80	FFC74-CF-SCH80-250-*	6.12 (2.78)	FFC74-250-*	CF-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC74-CF-SCH160-250-*	6.56 (2.98)	FFC74-250-*	CF-SCH160-250-*	ORV-5615
3"	3" SCH80	FFC74-CF-SCH80-300-*	10.07 (4.58)	FFC74-300-*	CF-SCH80-300-*	ORV-2-040
3"	3" SCH160	FFC74-CF-SCH160-300-*	10.76 (4.89)	FFC74-300-*	CF-SCH160-300-*	ORV-2.037
4"	4" SCH80	FFC74-CF-SCH80-400-*	16.85 (7.66)	FFC74-400-*	CF-SCH80-400-*	ORV-2.044

FFCM74-CF Flare Flange Flat Face Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Flat Face Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50 x 5.0	FFCM74-CF-50x5.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x5.0-150-*	ORV-4515
1-1/2"	50 x 6.0	FFCM74-CF-50x6.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x6.0-150-*	ORV-4515
1-1/2"	50 x 8.0	FFCM74-CF-50x8.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CF-50x8.0-150-*	ORV-4515
1-1/2"	56 x 8.5	FFCM74-CF-56x8.5-150-*	3.22 (1.46)	FFCM74-150-56MM-*	CF-56x8.5-150-*	ORV-4315
2"	60 x 5.0	FFCM74-CF-60x5.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x5.0-200-*	ORV-5615
2"	60 x 6.0	FFCM74-CF-60x6.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x6.0-200-*	ORV-5015
2"	60 x 8.0	FFCM74-CF-60x8.0-200-*	3.65 (1.66)	FFC74-200-*	CF-60x8.0-200-*	ORV-5015
2"	66 x 8.5	FFCM74-CF-66x8.5-200-*	3.84 (1.75)	FFCM74-200-66MM-*	CF-66x8.5-200-*	ORV-5615
2-1/2"	73 x 7.0	FFCM74-CF-73x7.0-250-*	6.14 (2.80)	FFC74-250-*	CF-73x7.0-250-*	ORV-2-036
2-1/2"	75 x 5.0	FFCM74-CF-75x5.0-250-*	6.64 (3.02)	FFCM74-250-75MM-*	CF-75x5.0-250-*	ORV-2-036
2-1/2"	80 x 10.0	FFCM74-CF-80x10-250-*	5.79 (2.63)	FFCM74-250-80MM-*	CF-80x10-250-*	ORV-6715
3"	90 x 9.0	FFCM74-CF-90x9.0-300-*	10.15 (4.61)	FFCM74-300-90MM-*	CF-90x9.0-300-*	ORV-2-041
3"	97 x 12.0	FFCM74-CF-97x12-300-*	15.40 (7.00)	FFCM74-300-97MM-*	CF-97x12-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

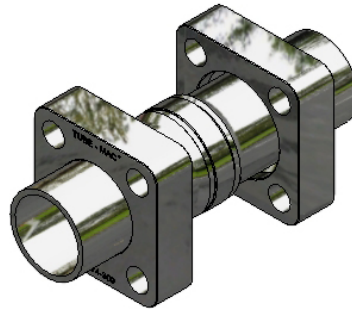
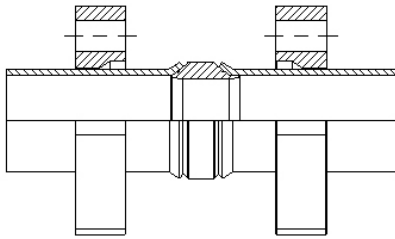
Ordering Example: FFC74-CF-SCH80-200-SS

*Insert Material _____

3D step models available upon request

ISO 6164, 400 bar Flare Flange Double Cone Union Set with Clearance Holes

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- Two (2) Flare Flanges
- One (1) Double Cone
- Two (2) Back Up O-Rings (O-Ring 1)

To be Ordered Separately:

- Bolt Kit (See Page J1)
- Metric Bolt Kit (See Page J2)

FFC74-CD Flare Flange Double Cone Union Set with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1- 1/2"	1-1/2" SCH80	FFC74-CD-SCH80-150-*	6.34 (2.88)	FFC74-150-*	CD-SCH80-150-*	ORV-4315
1-1/2"	1-1/2" SCH160	FFC74-CD-SCH160-150-*	6.34 (2.88)	FFC74-150-*	CD-SCH160-150-*	ORV-3815
2"	2" SCH80	FFC74-CD-SCH80-200-*	7.17 (3.26)	FFC74-200-*	CD-SCH80-200-*	ORV-5515
2"	2" SCH160	FFC74-CD-SCH160-200-*	7.51 (3.41)	FFC74-200-*	CD-SCH160-200-*	ORV-5015
2-1/2"	2-1/2" SCH80	FFC74-CD-SCH80-250-*	12.07 (5.49)	FFC74-250-*	CD-SCH80-250-*	ORV-2-036
2-1/2"	2-1/2" SCH160	FFC74-CD-SCH160-250-*	12.89 (5.86)	FFC74-250-*	CD-SCH160-250-*	ORV-5615
3"	3" SCH80	FFC74-CD-SCH80-300-*	19.95 (9.07)	FFC74-300-*	CD-SCH80-300-*	ORV-2-040
3"	3" SCH160	FFC74-CD-SCH160-300-*	21.26 (9.66)	FFC74-300-*	CD-SCH160-300-*	ORV-2.037
4"	4" SCH80	FFC74-CD-SCH80-400-*	34.07 (15.49)	FFC74-400-*	CD-SCH80-400-*	ORV-2.044

FFCM74-CD Flare Flange Double Cone Union Set with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Reference Number	WT/Set lbs (kg)	Flange Part Number	Double Cone Insert Part Number	O-Ring 1 (VITON) Part Number
1-1/2"	50 x 5.0	FFCM74-CD-50x5.0-150-*	6.31 (2.87)	FFCM74-150-50MM-*	CD-50x5.0-150-*	ORV-4515
1-1/2"	50 x 6.0	FFCM74-CD-50x6.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CD-50x6.0-150-*	ORV-4515
1-1/2"	50 x 8.0	FFCM74-CD-50x8.0-150-*	3.22 (1.46)	FFCM74-150-50MM-*	CD-50x8.0-150-*	ORV-4515
1-1/2"	56 x 8.5	FFCM74-CD-56x8.5-150-*	6.31 (2.87)	FFCM74-150-56MM-*	CD-56x8.5-150-*	ORV-4315
2"	60 x 5.0	FFCM74-CD-60x5.0-200-*	3.65 (1.66)	FFC74-200-*	CD-60x5.0-200-*	ORV-5615
2"	60 x 6.0	FFCM74-CD-60x6.0-200-*	7.09 (3.22)	FFC74-200-*	CD-60x6.0-200-*	ORV-5015
2"	60 x 8.0	FFCM74-CD-60x8.0-200-*	3.65 (1.66)	FFC74-200-*	CD-60x8.0-200-*	ORV-5015
2"	66 x 8.5	FFCM74-CD-66x8.5-200-*	7.09 (3.22)	FFCM74-200-66MM-*	CD-66x8.5-200-*	ORV-5615
2-1/2"	73 x 7.0	FFCM74-CD-73x7.0-250-*	12.12 (5.51)	FFC74-250-*	CD-73x7.0-250-*	ORV-2-036
2-1/2"	75 x 5.0	FFCM74-CD-75x5.0-250-*	11.60 (5.27)	FFCM74-250-75MM-*	CD-75x5.0-250-*	ORV-2-036
2-1/2"	80 x 10.0	FFCM74-CD-80x10-250-*	11.48 (5.23)	FFCM74-250-80MM-*	CD-80x10-250-*	ORV-6715
3"	90 x 9.0	FFCM74-CD-90x9.0-300-*	20.18 (9.17)	FFCM74-300-90MM-*	CD-90x9.0-300-*	ORV-2-041
3"	97 x 12.0	FFCM74-CD-97x12-300-*	30.50 (13.86)	FFCM74-300-97MM-*	CD-97x12-300-*	ORV-2-041

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Cone, Type 316.

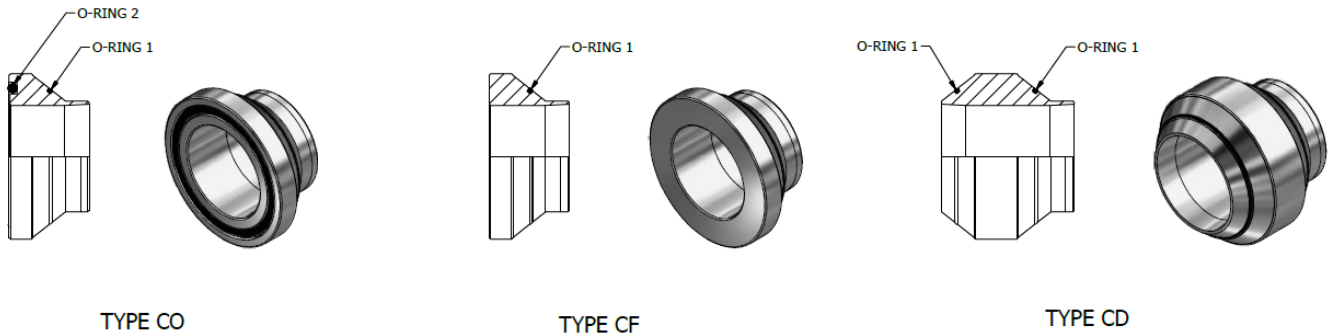
HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Cone, Type 316.

Ordering Example: FFC74-CD-SCH80-200-SS

*Insert Material _____

ISO 6164, 400 bar Cone Inserts for Flare Flange Connections

DIN 400 bar (ISO 6164)



CO, CF and CD Cone Inserts for Flare Flange Connections, NPS

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part No.
1-1/2"	1-1/2" SCH80	CO-SCH80-150-* [^]	0.42 (0.19)	0.42 (0.19)	0.46 (0.21)	CD-SCH80-150-*	0.84 (0.38)	ORV-4315	OR [^] -2-225
1-1/2"	1-1/2" SCH160	CO-SCH160-150-* [^]	0.42 (0.19)	0.42 (0.19)	0.45 (0.20)	CD-SCH160-150-*	0.83 (0.37)	ORV-3815	OR [^] -2-225
2"	2" SCH80	CO-SCH80-200-* [^]	0.49 (0.22)	0.49 (0.22)	0.53 (0.24)	CD-SCH80-200-*	0.97 (0.44)	ORV-5515	OR [^] -2-228
2"	2" SCH160	CO-SCH160-200-* [^]	0.67 (0.30)	0.67 (0.30)	0.71 (0.32)	CD-SCH160-200-*	1.31 (0.59)	ORV-5015	OR [^] -2-228
2-1/2"	2-1/2" SCH80	CO-SCH80-250-* [^]	0.99 (0.45)	0.99 (0.45)	1.06 (0.48)	CD-SCH80-250-*	1.95 (0.88)	ORV-2-036	OR [^] -2-232
2-1/2"	2-1/2" SCH160	CO-SCH160-250-* [^]	1.42 (0.64)	1.42 (0.64)	1.50 (0.68)	CD-SCH160-250-*	2.77 (1.26)	ORV-5615	OR [^] -2-232
3"	3" SCH80	CO-SCH80-300-* [^]	1.21 (0.55)	1.21 (0.55)	1.28 (0.58)	CD-SCH80-300-*	2.37 (1.07)	ORV-2-040	OR [^] -2-237
3"	3" SCH160	CO-SCH160-300-* [^]	1.86 (0.85)	1.86 (0.85)	1.93 (0.88)	CD-SCH160-300-*	3.68 (1.67)	ORV-2-037	OR [^] -2-237
4"	4" SCH80	CO-SCH80-400-* [^]	2.05 (0.93)	2.05 (0.93)	2.12 (0.96)	CD-SCH80-400-*	4.47 (2.03)	ORV-2-044	OR [^] -2-245

CO, CF and CD Cone Inserts for Flare Flange Connections, Metric

Size	Pipe Size	O-Ring Face Cone Insert Part Number (Type CO)	WT lbs (kg)	Flat Face Cone Insert Part Number (Type CF)	WT lbs (kg)	Double Cone Insert Part Number (Type CD)	WT lbs (kg)	O-Ring 1 (VITON) Part Number	O-Ring 2 (Buna) Part No.
1-1/2"	50x5.0	CO-50x5.0-150-* [^]	0.42 (0.19)	CF-50x5.0-150-*	0.44 (0.20)	CD-50x5.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	50x6.0	CO-50x6.0-150-* [^]	0.42 (0.19)	CF-50x6.0-150-*	0.44 (0.20)	CD-50x6.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	50x8.0	CO-50x8.0-150-* [^]	0.42 (0.19)	CF-50x8.0-150-*	0.44 (0.20)	CD-50x8.0-150-*	0.81 (0.37)	ORV-4515	OR [^] -2-225
1-1/2"	56x8.5	CO-56x8.5-150-* [^]	0.42 (0.19)	CF-56x8.5-150-*	0.44 (0.20)	CD-56x8.5-150-*	0.81 (0.37)	ORV-4315	OR [^] -2-225
2"	60x5.0	CO-60x5.0-200-* [^]	0.46 (0.21)	CF-60x5.0-200-*	0.48 (0.22)	CD-60x5.0-200-*	0.89 (0.40)	ORV-5615	OR [^] -2-228
2"	60x6.0	CO-60x6.0-200-* [^]	0.46 (0.21)	CF-60x6.0-200-*	0.48 (0.22)	CD-60x6.0-200-*	0.89 (0.40)	ORV-5015	OR [^] -2-228
2"	60x8.0	CO-60x8.0-200-* [^]	0.46 (0.21)	CF-60x8.0-200-*	0.48 (0.22)	CD-60x8.0-200-*	0.89 (0.40)	ORV-5015	OR [^] -2-228
2"	66x8.5	CO-66x8.5-200-* [^]	0.46 (0.21)	CF-66x8.5-200-*	0.48 (0.22)	CD-66x8.5-200-*	0.89 (0.40)	ORV-5615	OR [^] -2-228
2-1/2"	73x7.0	CO-73x7.0-250-* [^]	1.00 (0.45)	CF-73x7.0-250-*	1.08 (0.49)	CD-73x7.0-250-*	2.00 (0.90)	ORV-2-036	OR [^] -2-232
2-1/2"	75 x 5.0	CO-75x5.0-250-* [^]	1.00 (0.45)	CF-75x5.0-250-*	1.08 (0.49)	CD-75x5.0-250-*	2.00 (0.90)	ORV-2-036	OR [^] -2-232
2-1/2"	80x10	CO-80x10-250-* [^]	0.95 (0.43)	CF-80x10-250-*	0.98 (0.44)	CD-80x10-250-*	1.88 (0.86)	ORV-6715	OR [^] -2-232
3"	90x9.0	CO-90x9.0-300-* [^]	1.32 (0.60)	CF-90x9.0-300-*	1.36 (0.62)	CD-90x9.0-300-*	2.60 (1.18)	ORV-2-041	OR [^] -2-237
3"	97x12	CO-97x12-300-* [^]	2.60 (1.18)	CF-97x12-300-*	2.70 (1.23)	CD-97x12-300-*	5.10 (2.32)	ORV-2-041	OR [^] -2-237

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring 2 Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: CO-SCH80-200-SS-V

*Insert Material

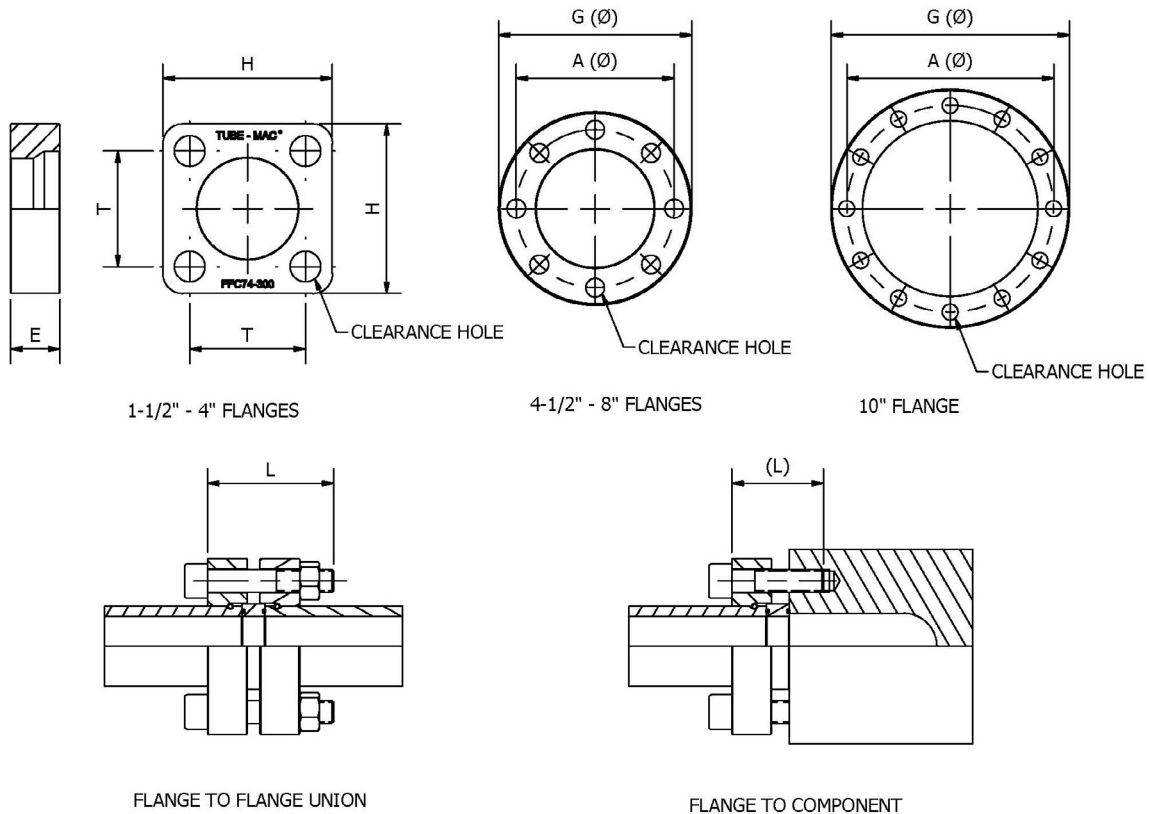
^ Insert O-Ring 2 Type

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange

Dimensions, NPS

Flange Pattern Drilled to ISO 6164 up to 4"



Retain Ring Flange Dimensions, NPS							
Size	Dimensions (in)					SHCS Bolt (in)* L (L)	Working Pressure PSI (Bar)
	T	H	E	AØ	GØ		
1-1/2"	2.37	3.50	1.38	-	-	5/8" UNC x 3 3/4" (2 3/4")	5800 (400)
2"	2.73	4.00	1.48	-	-	5/8" UNC x 3 1/2" (2 1/2")	5800 (400)
2-1/2"	3.29	4.72	1.48	-	-	3/4" UNC x 4 1/2" (3 1/2")	5800 (400)
3"	4.04	5.91	1.73	-	-	1" UNC x 5" (4")	5800 (400)
4"	4.87	7.00	1.98	-	-	1 1/8" UNC x 5 3/4" (4 1/2")	5800 (400)
4-1/2"	-	-	1.97	6.89	8.43	3/4" UNC x 6" (4 1/4")	5000 (350)
5"	-	-	2.00	8.07	9.65	1" UNC x 6" (5")	5000 (350)
6"	-	-	2.31	9.65	11.81	1 1/8" UNC x 7" (5")	5000 (350)
8 ⁽¹⁾	-	-	3.00	11.42	13.78	1 1/8" UNC x 8 1/2" (6")	5000 (350)
8"	-	-	3.00	12.40	15.13	1 1/2" UNC x 8 1/2" (6")	5000 (350)
10"	-	-	3.80	14.76	17.75	1 1/2" UNC x 10" (7")	3600 (250)

***SHCS Bolt Specification**

Carbon Steel: ASTM A574/ SAE J429 Grade 8

Stainless Steel: ASTM A193 - B8M

- For 5/8" SS Bolts and smaller ASTM A193 - B8M Class.1
- For 3/4" SS Bolts and larger ASTM A193 - B8M Class.2

Note:

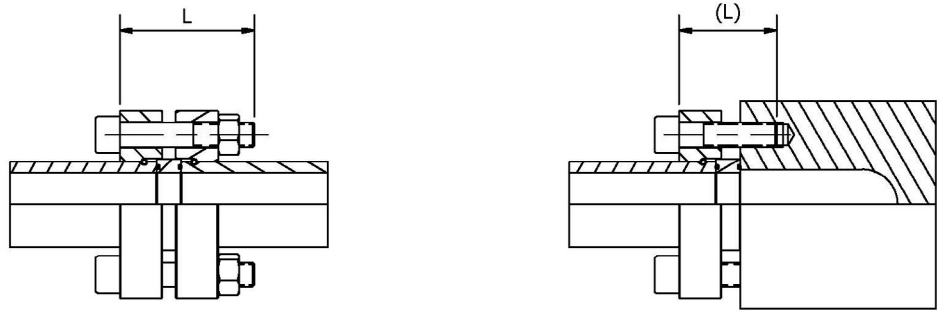
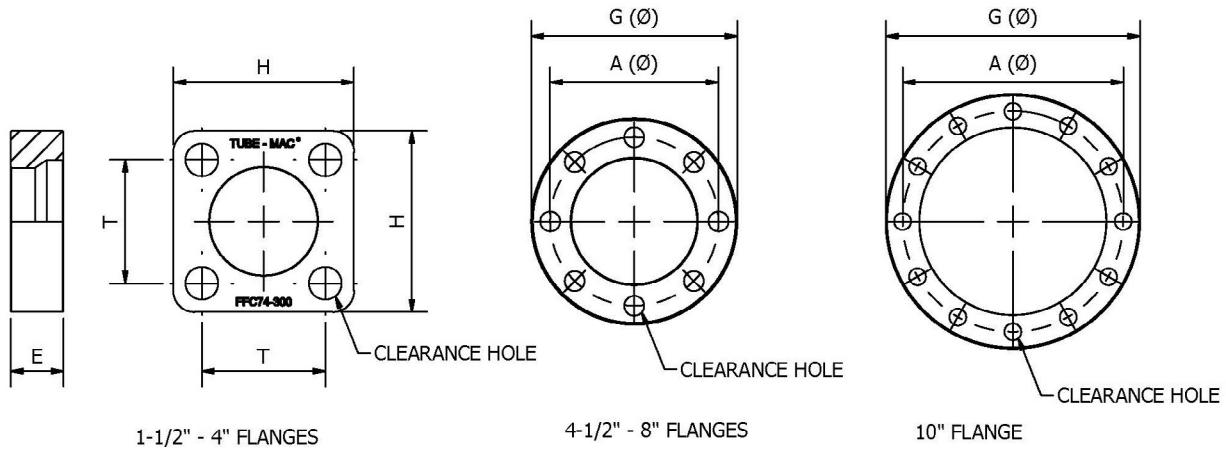
The working pressure ratings are subject to the lesser of the flange or pipe rating.

(1) Special Flange Size

ISO 6164, 400 bar Retain Ring Flange

Dimensions, Metric

Flange Pattern Drilled to ISO 6164 up to 4"



FLANGE TO FLANGE UNION

FLANGE TO COMPONENT

Retain Ring Flange Dimensions, Metric							
Size	Dimensions (mm)					SHCS Bolt (mm)* L (L)	Working Pressure PSI (Bar)
	T	H	E	AØ	GØ		
1-1/2"	60.1	88.9	35.0	-	-	M16 x 100 (60)	5800 (400)
2"	69.3	101.6	37.6	-	-	M16 x 90 (60)	5800 (400)
2-1/2"	83.5	119.9	37.6	-	-	M20 x 115 (90)	5800 (400)
3"	102.5	150.1	43.9	-	-	M24 x 130 (100)	5800 (400)
4"	123.7	177.8	50.3	-	-	M30 x 150 (115)	5800 (400)
4-1/2"	-	-	50.0	175	214	M20 x 160 (115)	5000 (350)
5"	-	-	50.8	205	245	M24 x 160 (120)	5000 (350)
6"	-	-	58.7	245	300	M30 x 180 (130)	5000 (350)
8 ⁽¹⁾	-	-	76.2	290	350	M30 X 220 (160)	5000 (350)
8"	-	-	76.2	315	385	M36 X 220 (160)	5000 (350)
10"	-	-	96.5	375	450	M36 x 250 (180)	3600 (250)

***SHCS Bolt Specification**

Carbon Steel: DIN 912/ISO 4762

- Minimum Grade 8.8

Stainless Steel: A4 DIN 912/ISO 4762

- For M16 SS Bolts and smaller A4-70, DIN 912/ISO 4762
- For M20 SS Bolts and larger A4-80, DIN 912/ISO 4762

Note:

The working pressure ratings are subject to the lesser of the flange or pipe rating.

(1) Special Flange Size

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

ISO 6164, 400 bar Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

DIN 400 bar (ISO 6164)



1 1/2"- 4" Flanges



5" – 8" Flanges



10" Flange

RFAC74, RFAC48, RFAC412 Retain Ring Flange with Clearance Holes, for Grooved NPS Pipe Only

Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	1-1/2"SCHXXS	RFAC74-150	RFAC74-150-HDG	RFAC74-150-SS	5800 (400)	2.75 (1.25)
2"	2"SCH160/XXS	RFAC74-200	RFAC74-200-HDG	RFAC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	2-1/2"SCH160/XXS	RFAC74-250	RFAC74-250-HDG	RFAC74-250-SS	5800 (400)	5.06 (2.30)
3"	3"SCH160/XXS	RFAC74-300	RFAC74-300-HDG	RFAC74-300-SS	5800 (400)	8.79 (4.00)
4"	4"SCH160/XXS	RFC74-400	RFC74-400-HDG	RFC74-400-SS	5800 (400)	14.80 (6.71)
5"	5"SCH160/XXS	RFAC48-500	RFAC48-500-HDG	RFAC48-500-SS	5100 (350)	20.85 (9.48)
6"	6"SCH160/XXS	RFAC48-600	RFAC48-600-HDG	RFAC48-600-SS	5100 (350)	44.25 (20.11)
8" ⁽¹⁾	8"SCH160/XXS	RFAC48-800-290BC	RFAC48-800-290BC-HDG	RFAC48-800-290BC-SS	5100 (350)	65.30 (29.68)
8"	8"SCH160/XXS	RFAC48-800	RFAC48-800-HDG	RFAC48-800-SS	5100 (350)	87.06 (39.57)
10"	10"SCH160	RFAC412-1000	RFAC412-1000-HDG	RFAC412-1000-SS	3600 (250)	138.00 (62.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

(1) Special Flange Size

ISO 6164, 400 bar Retain Ring Flange with Clearance Holes, for Grooved Metric Pipe Only

DIN 400 bar (ISO 6164)



1 1/2" – 4" Flanges



4 1/2" – 8" Flanges



10" Flange

RFC74 Retain Ring Flange with Clearance Holes, for Grooved Metric Pipe Only						
Size	Pipe Size	Standard Part Number	HDG Part Number	SS Part Number	Working Pressure PSI (bar)	WT lbs (kg)
1-1/2"	56x8.5	RFC74-150	RFC74-150-HDG	RFC74-150-SS	5800 (400)	2.75 (1.25)
2"	66x8.5	RFC74-200	RFC74-200-HDG	RFC74-200-SS	5800 (400)	3.10 (1.41)
2-1/2"	80x10	RFC74-250	RFC74-250-HDG	RFC74-250-SS	5800 (400)	5.06 (2.30)
3"	97x12	RFC74-300	RFC74-300-HDG	RFC74-300-SS	5800 (400)	8.79 (4.00)
4"	115x15	RFC74-400	RFC74-400-HDG	RFC74-400-SS	5800 (400)	14.80 (6.71)
4-1/2"	130x15	RFAC48-450-130MM	RFAC48-450-130MM-HDG	RFAC48-450-130MM-SS	5100 (350)	16.40 (7.45)
5"	150x15	RFAC48-500-150MM	RFAC48-500-150MM-HDG	RFAC48-500-150MM-SS	5100 (350)	20.85 (9.48)
6"	190x20	RFAC48-600-190MM	RFAC48-600-190MM-HDG	RFAC48-600-190MM-SS	5100 (350)	44.25 (20.11)
8" ⁽¹⁾	220x20	RFAC48-800-290BC	RFAC48-800-290BC-HDG	RFAC48-800-290BC-SS	5100 (350)	65.30 (29.68)
8"	250x25	RFAC48-800-250MM	RFAC48-800-250MM-HDG	RFAC48-800-250MM-SS	5100 (350)	87.06 (39.57)
10"	273x28.6	RFAC412-1000	RFAC412-1000-HDG	RFAC412-1000-SS	3600 (250)	138.00 (62.73)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated

HDG = Carbon Steel, Hot Dip Galvanized

SS = Stainless Steel, Type 316

Note:

The working pressure shown is for the flange connection only. Refer to pipe section for allowable working pressure of the pipe.

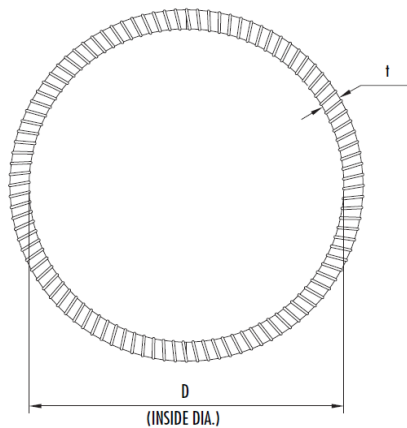
The complete assembly working pressure ratings are subject to the lesser of the flange or pipe ratings.

(1) Special Flange Size with 290 mm Bolt Circle

3D step models available upon request

ISO 6164, 400 bar Retain Ring

DIN 400 bar (ISO 6164)



R – Retain Ring, Metric

Size	Pipe Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
			D	t	
1-1/2"	56x8.5	R-150	1.99 (50.5)	0.20 (5.0)	0.05 (0.023)
2"	66x8.5	R-200	2.38 (60.5)	0.20 (5.0)	0.06 (0.027)
2-1/2"	80x10	R-250	2.93 (74.4)	0.20 (5.0)	0.07 (0.032)
3"	97x12	R-300	3.56 (90.4)	0.24 (6.0)	0.12 (0.054)
4"	115x15	R-400	4.19 (106.4)	0.31 (8.0)	0.27 (0.123)
4-1/2"	130x15	R-450	4.72 (120.0)	0.31 (8.0)	0.30 (0.136)
5"	150x15	R-500	5.51 (140.0)	0.31 (8.0)	0.34 (0.155)
6"	190x20	R-600	7.12 (181.0)	0.39 (10.0)	0.73 (0.330)
8"	220x20	RA-800	8.13 (206.6)	0.47 (12.0)	1.19 (0.540)
8"	250x25	R-800	9.35 (237.5)	0.47 (12.0)	1.31 (0.595)
10	273x28.6	RA-1000	10.01 (255.0)	0.47 (12.0)	1.43 (0.650)

RA – Retain Ring

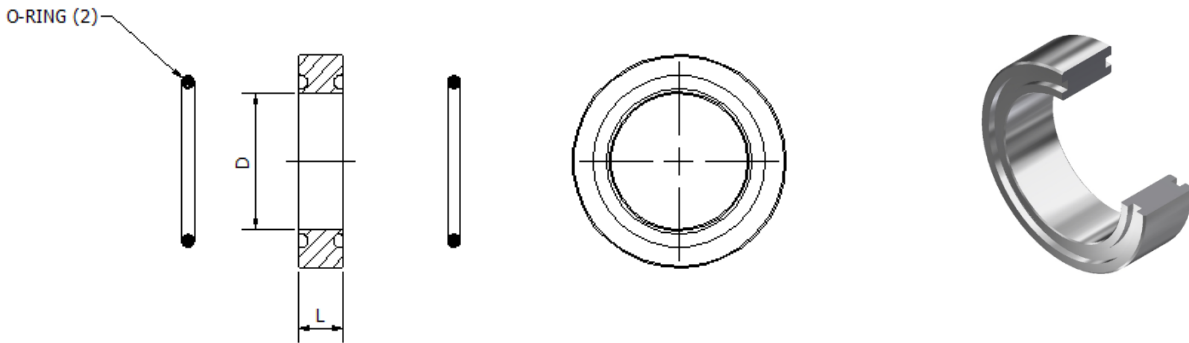
Size	Pipe Size	Retain Ring Part Number	Dimensions in (mm)		WT lbs (kg)
			D	t	
1-1/2"	1-1/2" SCHXXS	RA-150	1.68 (42.8)	0.20 (5.0)	0.05 (0.023)
2"	2" SCH160/XXS	RA-200	2.16 (54.8)	0.20 (5.0)	0.06 (0.027)
2-1/2"	2-1/2" SCH160/XXS	RA-250	2.66 (67.5)	0.20 (5.0)	0.07 (0.032)
3"	3" SCH160/XXS	RA-300	3.24 (82.4)	0.24 (6.0)	0.12 (0.054)
4"	4" SCH160/XXS	R-400	4.19 (106.4)	0.31 (8.0)	0.27 (0.123)
5"	5" SCH160/XXS	RA-500	5.23 (132.8)	0.31 (8.0)	0.33 (0.155)
6"	6" SCH160/XXS	RA-600	6.21 (157.8)	0.39 (10.0)	0.64 (0.290)
8"	8" SCH160/XXS	RA-800	8.13 (206.6)	0.47 (12.0)	1.19 (0.540)
10	10" SCH160	RA-1000	10.01 (255.0)	0.47 (12.0)	1.43 (0.650)

*** Materials:**

Stainless Steel – AISI 316 Spring Temper

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe, NPS

DIN 400 (ISO 6164)



OSA – O-Ring Spacer for Retain Ring Pipe, NPS						
Size	Pipe Size	Part Number	Dimensions in (mm)		O-Rings 1&2 (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	1-1/2" SCH160	OSA-SCH160-150-*-*^	1.34 (34.0)	0.50 (12.7)	OR^3-924	0.30 (0.14)
1-1/2"	1-1/2" SCHXXS	OSA-SCHXXS-150-*-*^	1.10 (27.9)	0.50 (12.7)	OR^3-924	0.33 (0.15)
2"	2" SCH160	OSA-SCH160-200-*-*^	1.69 (42.9)	0.50 (12.7)	OR^3-928	0.43 (0.20)
2"	2" SCHXXS	OSA-SCHXXS-200-*-*^	1.50 (38.1)	0.50 (12.7)	OR^2-225	0.40 (0.18)
2-1/2"	2-1/2" SCH160	OSA-SCH160-250-*-*^	2.13 (54.1)	1.00 (25.4)	OR^2-230	1.17 (0.53)
2-1/2"	2-1/2" SCHXXS	OSA-SCHXXS-250-*-*^	1.77 (44.9)	1.00 (25.4)	OR^2-230	1.30 (0.59)
3"	3" SCH160	OSA-SCH160-300-*-*^	2.62 (66.5)	1.00 (25.4)	OR^2-234	1.40 (0.64)
3"	3" SCHXXS	OSA-SCHXXS-300-*-*^	2.30 (58.4)	1.00 (25.4)	OR^2-234	1.80 (0.82)
4"	4" SCH160	OS-400-*-*^	3.35 (85.0)	1.00 (25.4)	OR^2-241	2.60 (1.18)
4"	4" SCHXXS	OSA-SCHXXS-400-*-*^	3.15 (80.0)	1.00 (25.4)	OR^2-241	2.90 (1.32)
5"	5" SCH160	OSA-SCH160-500-*-*^	4.31 (109.5)	1.50 (38.1)	OR^2-353	4.40 (2.00)
5"	5" SCHXXS	OSA-SCHXXS-500-*-*^	4.06 (103.1)	1.50 (38.1)	OR^2-353	5.50 (2.50)
6"	6" SCH160	OSA-SCH160-600-*-*^	5.19 (131.8)	1.50 (38.1)	OR^2-359	6.90 (3.14)
6"	6" SCHXXS	OSA-SCHXXS-600-*-*^	4.90 (124.5)	1.50 (38.1)	OR^2-359	7.70 (3.50)
8"	8" SCH160	OSA-SCH160-800-*-*^	6.81 (173.0)	1.50 (38.1)	OR^2-368	10.70 (4.86)
8"	8" SCHXXS	OSA-SCHXXS-800-*-*^	6.88 (174.8)	1.50 (38.1)	OR^2-368	11.30 (5.14)
10"	10" SCH160	OSA-SCH160-1000-*-*^	8.50 (215.9)	2.00 (50.8)	OR^2-377	21.60 (9.82)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: OSA-SCH160-200-SS-V

*Insert Material

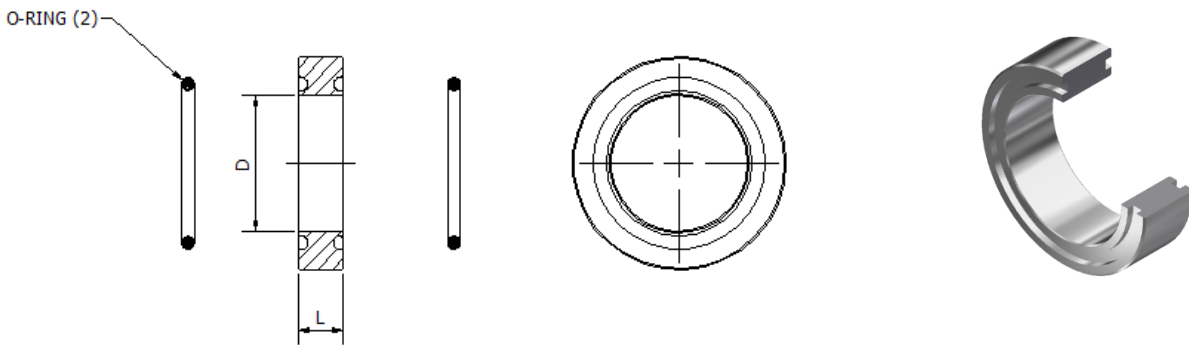
^ Insert O-Ring Type

3D step models available upon request

- Introduction
- Technical Data
- Pipe Selection Guide
- 16 bar, 90° Flare
- ANSI 150#, 300# Flare
- SAE 1000, 70 bar
- SAE 3000, 210 bar
- SAE 6000, 420 bar
- SAE 10000, 690 bar
- ISO 6164, 400 bar
- ISO 6164, 400 bar F10° Flare
- Clamp Supports - Heavy Series
- Valves, Ball and Check

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe, Metric

DIN 400 (ISO 6164)



OS – O-Ring Spacer for Retain Ring Pipe, Metric						
Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	56x8.5	OS-150-*^-^	1.54 (39.1)	0.50 (12.7)	OR^-3-924	0.33 (0.15)
2"	66x8.5	OS-200-*^-^	1.93 (49.0)	0.50 (12.7)	OR^-3-928	0.43 (0.20)
2-1/2"	80x10	OS-250-*^-^	2.36 (59.9)	1.00 (25.4)	OR^-2-232	1.17 (0.53)
3"	97x12	OS-300-*^-^	2.88 (73.2)	1.00 (25.4)	OR^-2-237	1.70 (0.77)
4"	115x15	OS-400-*^-^	3.35 (85.1)	1.00 (25.4)	OR^-2-241	2.60 (1.18)
4-1/2"	130x15	OS-450-*^-^	3.94 (100.1)	1.50 (38.1)	OR^-2-245	4.40 (2.00)
5"	150x15	OS-500-*^-^	4.70 (119.4)	1.50 (38.1)	OR^-2-353	5.10 (2.32)
6"	190x20	OS-600-*^-^	5.91 (150.1)	1.50 (38.1)	OR^-2-362	8.50 (3.86)
8"	220x20	OSA-SCHXS-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	10.70 (4.86)
8"	250x25	OS-800-*^-^	---	---	---	---
10"	273x28.6	OSA-SCH160-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	21.60 (9.82)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

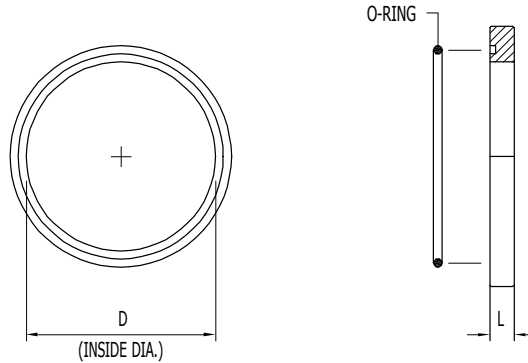
Ordering Example: OS-200-SS-V

*Insert Material

^ Insert O-Ring Type

ISO 6164, 400 bar O-Ring Spacer for Retain Ring Pipe to Hose End

DIN 400 (ISO 6164)



OSH O-Ring Spacer for Retain Ring Pipe to Hose End, 1-1/2" - 4" Complete with Buna O-Rings

Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
		D	L		
1-1/2"	OSH-150-*^-^	1.54 (39.10)	0.25 (6.35)	OR^-3-924	0.12 (0.05)
2"	OSH-200-*^-^	1.93 (49.00)	0.25 (6.35)	OR^-3-928	0.15 (0.07)
2-1/2"	OSH-250-*^-^	2.36 (60.00)	0.50 (12.70)	OR^-2-232	0.26 (0.12)
3"	OSH-300-*^-^	2.88 (73.20)	0.50 (12.70)	OR^-2-237	0.39 (0.18)
4"	OSH-400-*^-^	3.35 (85.10)	0.50 (12.70)	OR^-2-241	0.60 (0.27)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: OSH-200-SS-V

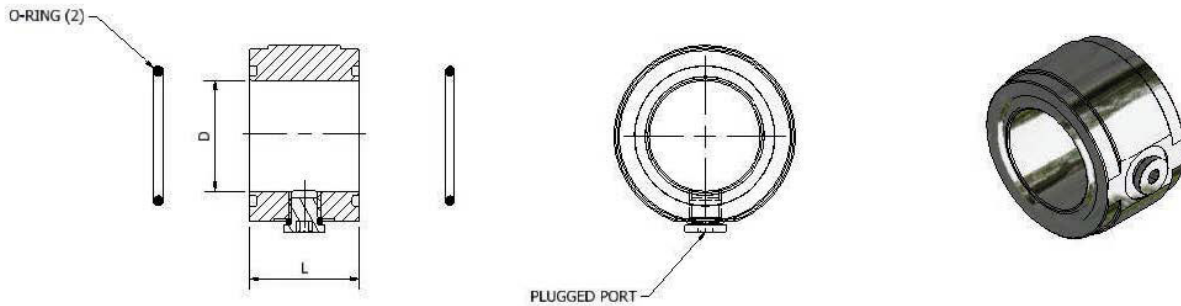
*Insert Material

^ Insert O-Ring Type

3D step models available upon request

ISO 6164, 400 bar O-Ring Spacer with Pilot Port for Retain Ring Pipe, NPS

DIN 400 (ISO 6164)



OSAP – O-Ring Spacer with Pilot Port for Retain Ring Pipe, NPS Complete with Buna O-rings (Standard) and #4 SAE Port (Plugged)

Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	1-1/2" SCH160	OSAP-SCH160-150-*^-^	1.54 (39.10)	0.25 (6.35)	OR^-3-924	0.12 (0.05)
1-1/2"	1-1/2" SCHXXS	OSAP-SCHXXS-150-*^-^	1.93 (49.00)	0.25 (6.35)	OR^-3-928	0.15 (0.07)
2"	2" SCH160	OSAP-SCH160-200-*^-^	2.36 (60.00)	0.50 (12.70)	OR^-2-232	0.26 (0.12)
2"	2" SCHXXS	OSAP-SCHXXS-200-*^-^	2.88 (73.20)	0.50 (12.70)	OR^-2-237	0.39 (0.18)
2-1/2"	2-1/2" SCH160	OSAP-SCH160-250-*^-^	3.35 (85.10)	0.50 (12.70)	OR^-2-241	0.60 (0.27)
2-1/2"	2-1/2" SCHXXS	OSAP-SCHXXS-250-*^-^	1.77 (44.9)	1.50 (38.1)	OR^-2-230	2.10 (0.95)
3"	3" SCH160	OSAP-SCH160-300-*^-^	2.62 (66.5)	1.50 (38.1)	OR^-2-234	2.80 (1.27)
3"	3" SCHXXS	OSAP-SCHXXS-300-*^-^	2.30 (58.4)	1.50 (38.1)	OR^-2-234	3.20 (1.45)
4"	4" SCH160	OSP-400-*^-^	3.35 (85.0)	1.50 (38.1)	OR^-2-241	6.21 (2.82)
4"	4" SCHXXS	OSAP-SCHXXS-400-*^-^	3.15 (80.0)	1.50 (38.1)	OR^-2-241	6.80 (3.09)
5"	5" SCH160	OSAP-SCH160-500-*^-^	4.31 (109.5)	1.50 (38.1)	OR^-2-353	8.76 (3.98)
5"	5" SCHXXS	OSAP-SCHXXS-500-*^-^	4.06 (103.1)	1.50 (38.1)	OR^-2-353	9.40 (4.27)
6"	6" SCH160	OSAP-SCH160-600-*^-^	5.19 (131.8)	1.50 (38.1)	OR^-2-359	12.62 (5.74)
6"	6" SCHXXS	OSAP-SCHXXS-600-*^-^	4.90 (124.5)	1.50 (38.1)	OR^-2-359	13.30 (6.04)
8"	8" SCH160	OSAP-SCH160-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	19.70 (8.95)
8"	8" SCHXXS	OSAP-SCHXXS-800-*^-^	6.88 (174.8)	1.50 (38.1)	OR^-2-368	21.30 (9.68)
10"	10" SCH160	OSAP-SCH160-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	35.60 (16.18)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

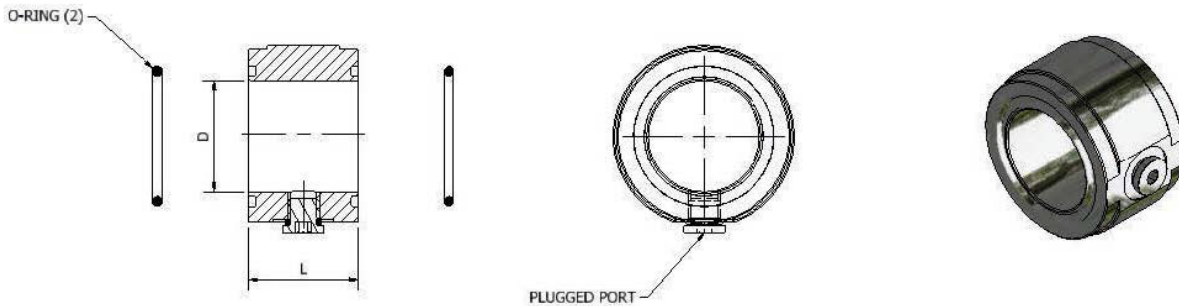
Ordering Example: OSAP-SCH160-200-SS-V

*Insert Material _____

^ Insert O-Ring Type _____

ISO 6164, 400 bar O-Ring Spacer with Pilot Port for Retain Ring Pipe, Metric

DIN 400 (ISO 6164)



OSPM – O-Ring Spacer for Retain Ring Pipe, Metric Complete with Buna O-ring (standard) and G 1/8 Port (Plugged)

Size	Pipe Size	Part Number	Dimensions in (mm)		O-Ring (Buna) Part Number	WT lbs (kg)
			D	L		
1-1/2"	56x8.5	OSPM-150-*^-^	1.54 (39.1)	1.50 (38.1)	OR^-3-924	1.25 (0.57)
2"	66x8.5	OSPM-200-*^-^	1.93 (49.0)	1.50 (38.1)	OR^-3-928	1.54 (0.70)
2-1/2"	80x10	OSPM-250-*^-^	2.36 (59.9)	1.50 (38.1)	OR^-2-232	1.98 (0.90)
3"	97x12	OSPM-300-*^-^	2.88 (73.2)	1.50 (38.1)	OR^-2-237	2.80 (1.27)
4"	115x15	OSPM-400-*^-^	3.35 (85.1)	1.50 (38.1)	OR^-2-241	6.20 (2.82)
4-1/2"	130x15	OSPM-450-*^-^	3.94 (100.1)	1.50 (38.1)	OR^-2-245	7.48 (3.40)
5"	150x15	OSPM-500-*^-^	4.70 (119.4)	1.50 (38.1)	OR^-2-353	8.76 (3.98)
6"	190x20	OSPM-600-*^-^	5.91 (150.1)	1.50 (38.1)	OR^-2-362	12.63 (5.74)
8"	220x20	OSPM-800-*^-^	6.81 (173.0)	1.50 (38.1)	OR^-2-368	19.70 (8.95)
8"	250x25	OSPM-800-*^-^	---	---	---	---
10"	273x28.6	OSPM-1000-*^-^	8.50 (215.9)	2.00 (50.8)	OR^-2-377	35.60 (16.18)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: OSPM-200-SS-V

*Insert Material
 ^ Insert O-Ring Type

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

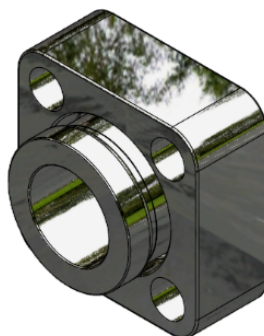
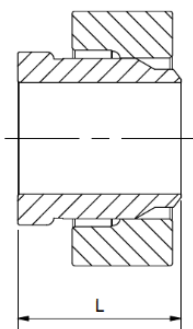
Clamp Supports - Heavy Series

Valves, Ball and Check

J17

ISO 6164, 400 bar Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J8)
- O-Ring Spacer (See Page J13)

A/BWA, A/BWAA Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	1-1/2" SCH80	A/BWA-SCH80-150-FC74-*	3.71 (1.67)	2.25	BWA-SCH80-150-*	RFC74-150-*
1-1/2"	1-1/2" SCH160	A/BWA-SCH160-150-FC74-*	3.95 (1.80)	2.25	BWA-SCH160-150-*	RFC74-150-*
1-1/2"	1-1/2" SCHXXS	A/BWA-SCHXXS-150-FC74-*	4.11 (1.89)	2.25	BWA-SCHXXS-150-*	RFC74-150-*
2"	2" SCH80	A/BWA-SCH80-200-FC74-*	4.30 (1.95)	2.50	BWA-SCH80-200-*	RFC74-200-*
2"	2" SCH160	A/BWA-SCH160-200-FC74-*	4.60 (2.10)	2.50	BWA-SCH160-200-*	RFC74-200-*
2"	2" SCHXXS	A/BWA-SCHXXS-200-FC74-*	4.80 (2.18)	2.50	BWA-SCHXXS-200-*	RFC74-200-*
2-1/2"	2-1/2" SCH80	A/BWA-SCH80-250-FC74-*	6.76 (3.07)	2.50	BWA-SCH80-250-*	RFC74-250-*
2-1/2"	2-1/2" SCH160	A/BWA-SCH160-250-FC74-*	7.06 (3.21)	2.50	BWA-SCH160-250-*	RFC74-250-*
2-1/2"	2-1/2" SCHXXS	A/BWA-SCHXXS-250-FC74-*	7.46 (3.39)	2.50	BWA-SCHXXS-250-*	RFC74-250-*
3"	3" SCH160	A/BWA-SCH160-300-FC74-*	12.39 (5.63)	2.75	BWA-SCH160-300-*	RFC74-300-*
3"	3" SCHXXS	A/BWA-SCHXXS-300-FC74-*	12.99 (5.90)	2.75	BWA-SCHXXS-300-*	RFC74-300-*
4"	4" SCH160	A/BWA-SCH160-400-FC74-*	21.50 (9.77)	4.00	BWA-SCH160-400-*	RFC74-400-*
4"	4" SCHXXS	A/BWA-SCHXXS-400-FC74-*	22.80 (10.36)	4.00	BWA-SCHXXS-400-*	RFC74-400-*
5"	5" SCH160	A/BWAA-SCH160-500-FAC48-*	39.05 (17.75)	6.00	BWAA-SCH160-500-*	RFAC48-500-*
5"	5" SCHXXS	A/BWAA-SCH1XXS-500-FAC48-*	40.25 (18.30)	6.00	BWAA-SCHXXS-500-*	RFAC48-500-*
6"	6" SCH160	A/BWAA-SCH160-600-FAC48-*	68.45 (31.11)	6.00	BWAA-SCH160-600-*	RFAC48-600-*
6"	6" SCHXXS	A/BWAA-SCHXXS-600-FAC48-*	70.25 (31.93)	6.00	BWAA-SCHXXS-600-*	RFAC48-600-*
8" ⁽¹⁾	8" SCH160	A/BWAA-SCH160-800-FAC48-290BC-*	102.50 (46.60)	6.00	BWAA-SCH160-800-*	RFAC48-800-*
8" ⁽¹⁾	8" SCHXXS	A/BWAA-SCHXXS-800-FAC48-290BC-*	103.00 (46.80)	6.00	BWAA-SCHXXS-800-*	RFAC48-800-*
8"	8" SCH160	A/BWAA-SCH160-800-FAC48-*	124.26 (56.48)	6.00	BWAA-SCH160-800-*	RFAC48-800-*
8"	8" SCHXXS	A/BWAA-SCHXXS-800-FAC48-*	125.76 (57.16)	6.00	BWAA-SCHXXS-800-*	RFAC48-800-*
10"	10" SCH160	A/BWAA-SCH160-1000-FAC412-*	241.40 (103.40)	8.00	BWAA-SCH160-1000-*	RFAC412-1000-*
10"	10" SCHXXS	A/BWAA-SCHXXS-1000-FAC412-*	243.80 (110.81)	8.00	BWAA-SCHXXS-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

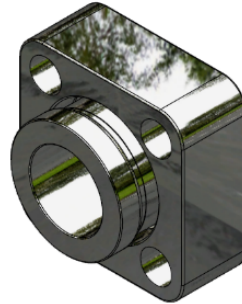
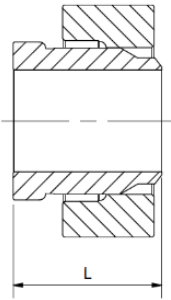
(1) Special Flange Size

Ordering Example: A/BWA-SCH160-200-FC74-SS

* Insert Material _____

ISO 6164, 400 bar Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J9)
- O-Ring Spacer (See Page J14)

A/BWA Butt Weld Adapter Assembly (Bump Style) with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	56 x 8.5	A/BWA-56x8.5-150-FC74-*	3.72 (1.69)	57.2	BWA-56x8.5-150-*	RFC74-150-*
2"	66 x 8.5	A/BWA-66x8.5-200-FC74-*	4.31 (1.96)	63.5	BWA-66x8.5-200-*	RFC74-200-*
2-1/2"	80 x 10	A/BWA-80x10-250-FC74-*	6.76 (3.07)	63.5	BWA-80x10-250-*	RFC74-250-*
3"	97 x 12	A/BWA-97x12-300-FC74-*	11.79 (5.36)	69.9	BWA-97x12-300-*	RFC74-300-*
4"	115 x 15	A/BWA-115x15-400-FC74-*	20.57 (9.35)	101.6	BWA-115x15-400-*	RFC74-400-*
4-1/2"	130 x 15	A/BWA-130x15-450-FAC48-*	31.40 (14.27)	101.6	BWA-130x15-450-*	RFAC48-450-*
5"	150 x 15	A/BWA-150x15-500-FAC48-*	43.25 (19.66)	152.5	BWA-150x15-500-*	RFAC48-500-*
6"	190 x 20	A/BWA-190x20-600-FAC48-*	96.38 (43.80)	152.5	BWA-190x20-600-*	RFAC48-600-*
8" ⁽¹⁾	220 x 20	A/BWA-220x20-800-FAC48-290BC-*	102.04 (46.38)	152.5	BWA-220x20-800-*	RFAC48-800-290BC-*
8"	250 x 25	A/BWA-250x25-800-FAC48-*	123.80 (56.27)	152.5	BWA-250x25-800-*	RFAC48-800-*
10"	273 x 28.6	A/BWA-273x28.6-1000-FAC412-*	241.40 (109.73)	203.2	BWA-273x28.6-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

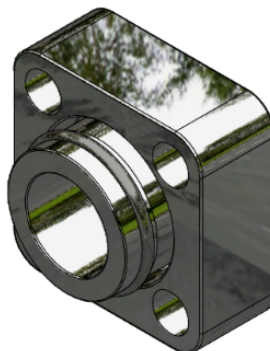
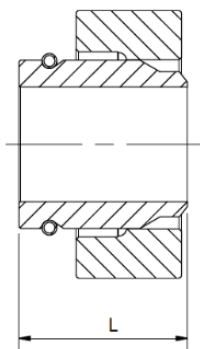
(1) Special Flange Size

Ordering Example: A/BWA-66x8.5-200-FC74-SS

* Insert Material _____

ISO 6164, 400 bar Butt Weld Adapter Assembly, Retain Ring with Clearance Holes, NPS

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J8)
- O-Ring Spacer (See Page J13)

A/BWAR, A/BWAAR Butt Weld Adapter Assembly, Retain Ring Style with Clearance Holes, NPS

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (in) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	1-1/2" SCH80	A/BWAR-SCH80-150-FC74-*	3.71 (1.67)	2.25	BWAR-SCH80-150-*	RFC74-150-*
1-1/2"	1-1/2" SCH160	A/BWAR-SCH160-150-FC74-*	3.95 (1.80)	2.25	BWAR-SCH160-150-*	RFC74-150-*
1-1/2"	1-1/2" SCHXXS	A/BWAR-SCHXXS-150-FC74-*	4.11 (1.89)	2.25	BWAR-SCHXXS-150-*	RFC74-150-*
2"	2" SCH80	A/BWAR-SCH80-200-FC74-*	4.30 (1.95)	2.50	BWAR-SCH80-200-*	RFC74-200-*
2"	2" SCH160	A/BWAR-SCH160-200-FC74-*	4.60 (2.10)	2.50	BWAR-SCH160-200-*	RFC74-200-*
2"	2" SCHXXS	A/BWAR-SCHXXS-200-FC74-*	4.80 (2.18)	2.50	BWAR-SCHXXS-200-*	RFC74-200-*
2-1/2"	2-1/2" SCH80	A/BWAR-SCH80-250-FC74-*	6.76 (3.07)	2.50	BWAR-SCH80-250-*	RFC74-250-*
2-1/2"	2-1/2" SCH160	A/BWAR-SCH160-250-FC74-*	7.06 (3.21)	2.50	BWAR-SCH160-250-*	RFC74-250-*
2-1/2"	2-1/2" SCHXXS	A/BWAR-SCHXXS-250-FC74-*	7.46 (3.39)	2.50	BWAR-SCHXXS-250-*	RFC74-250-*
3"	3" SCH160	A/BWAR-SCH160-300-FC74-*	12.39 (5.63)	2.75	BWAR-SCH160-300-*	RFC74-300-*
3"	3" SCHXXS	A/BWAR-SCHXXS-300-FC74-*	12.99 (5.90)	2.75	BWAR-SCHXXS-300-*	RFC74-300-*
4"	4" SCH160	A/BWAR-SCH160-400-FC74-*	21.50 (9.77)	4.00	BWAR-SCH160-400-*	RFC74-400-*
4"	4" SCHXXS	A/BWAR-SCHXXS-400-FC74-*	22.80 (10.36)	4.00	BWAR-SCHXXS-400-*	RFC74-400-*
5"	5" SCH160	A/BWAAR-SCH160-500-FAC48-*	39.05 (17.75)	6.00	BWAAR-SCH160-500-*	RFAC48-500-*
5"	5" SCHXXS	A/BWAAR-SCH1XXS-500-FAC48-*	40.25 (18.30)	6.00	BWAAR-SCHXXS-500-*	RFAC48-500-*
6"	6" SCH160	A/BWAAR-SCH160-600-FAC48-*	68.45 (31.11)	6.00	BWAAR-SCH160-600-*	RFAC48-600-*
6"	6" SCHXXS	A/BWAAR-SCHXXS-600-FAC48-*	70.25 (31.93)	6.00	BWAAR-SCHXXS-600-*	RFAC48-600-*
8" ⁽¹⁾	8" SCH160	A/BWAAR-SCH160-800-FAC48-290BC-*	102.50 (46.60)	6.00	BWAAR-SCH160-800-*	RFAC48-800-*
8" ⁽¹⁾	8" SCHXXS	A/BWAAR-SCHXXS-800-FAC48-290BC-*	103.00 (46.80)	6.00	BWAAR-SCHXXS-800-*	RFAC48-800-*
8"	8" SCH160	A/BWAAR-SCH160-800-FAC48-*	124.26 (56.48)	6.00	BWAAR-SCH160-800-*	RFAC48-800-*
8"	8" SCHXXS	A/BWAAR-SCHXXS-800-FAC48-*	125.76 (57.16)	6.00	BWAAR-SCHXXS-800-*	RFAC48-800-*
10"	10" SCH160	A/BWAAR-SCH160-1000-FAC412-*	241.40 (109.73)	8.00	BWAAR-SCH160-1000-*	RFAC412-1000-*
10"	10" SCHXXS	A/BWAAR-SCHXXS-1000-FAC412-*	243.80 (110.81)	8.00	BWAAR-SCHXXS-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

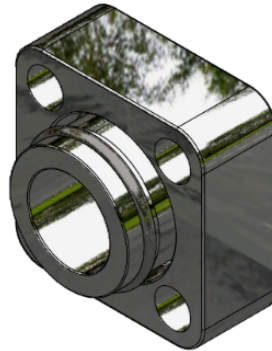
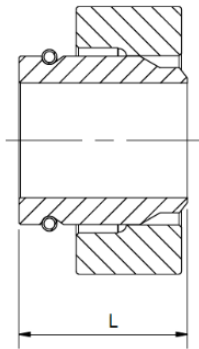
(1) Special Flange Size

Ordering Example: A/BWAR-SCH160-200-FC74-SS

* Insert Material

ISO 6164, 400 bar Butt Weld Adapter Assembly, Retain Ring with Clearance Holes, Metric

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Weld Adapter Body

To be Ordered Separately:

- Bolt Kit (See Page J9)
- O-Ring Spacer (See Page J14)

A/BWAR Butt Weld Adapter Assembly, Retain Ring Style with Clearance Holes, Metric

Size	Pipe Size	Complete Flange Set Part Number	WT/Set lbs (kg)	Dimension (mm) L	Weld Adapter Body Part Number	Flange Part Number
1-1/2"	56 x 8.5	A/BWAR-56x8.5-150-FC74-*	3.72 (1.69)	57.2	BWAR-56x8.5-150-*	RFC74-150-*
2"	66 x 8.5	A/BWAR-66x8.5-200-FC74-*	4.31 (1.96)	63.5	BWAR-66x8.5-200-*	RFC74-200-*
2-1/2"	80 x 10	A/BWAR-80x10-250-FC74-*	6.76 (3.07)	63.5	BWAR-80x10-250-*	RFC74-250-*
3"	97 x 12	A/BWAR-97x12-300-FC74-*	11.79 (5.36)	69.9	BWAR-97x12-300-*	RFC74-300-*
4"	115 x 15	A/BWAR-115x15-400-FC74-*	20.57 (9.35)	101.6	BWAR-115x15-400-*	RFC74-400-*
4-1/2"	130 x 15	A/BWAR-130x15-450-FAC48-*	31.40 (14.27)	101.6	BWAR-130x15-450-*	RFAC48-450-*
5"	150 x 15	A/BWAR-150x15-500-FAC48-*	43.25 (19.66)	152.5	BWAR-150x15-500-*	RFAC48-500-*
6"	190 x 20	A/BWAR-190x20-600-FAC48-*	96.38 (43.80)	152.5	BWAR-190x20-600-*	RFAC48-600-*
8" ⁽¹⁾	220 x 20	A/BWAR-220x20-800-FAC48-290BC-*	102.04 (46.38)	152.5	BWAR-220x20-800-*	RFAC48-800-290BC-*
8"	250 x 25	A/BWAR-250x25-800-FAC48-*	123.80 (56.27)	152.5	BWAR-250x25-800-*	RFAC48-800-*
10"	273 x 28.6	A/BWAR-273x28.6-1000-FAC412-*	241.40 (109.73)	203.2	BWAR-273x28.6-1000-*	RFAC412-1000-*

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

ZSS = Carbon Steel Flange with Stainless Steel Adapter Body, Type 316.

HDGSS = Carbon Steel, Hot Dip Galvanized Flange with Stainless Steel Adapter Body, Type 316.

Note:

To Order A Retain Ring Flange with Threaded Holes, Replace FC with FT in the Part Number.

(1) Special Flange Size

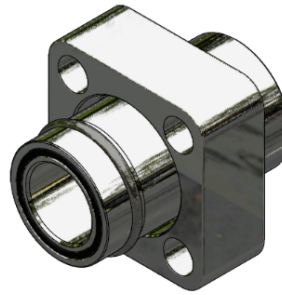
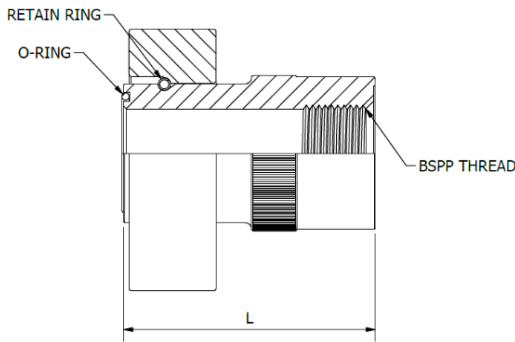
Ordering Example: A/BWAR-66x8.5-200-FC74-SS

* Insert Material _____

3D step models available upon request

ISO 6164, 400 bar BSPP Female Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Female Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit

A/FBTA Female Thread Adapter, BSPP – Complete Assembly Complete with Buna O-Ring

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L	R					
1-1/2" x 1-1/4"	A/FBTA-150x125-FC74-*^-^	2.00 (50.80)	1-1/4"	1-1/4"	OR^-3-924	4.27 (1.94)	FBTA-150x125-*^-^	1.52 (0.69)
1-1/2" x 1-1/2"	A/FBTA-150-150-FC74-*^-^	4.00 (101.60)	1-1/2"	1-1/2"	OR^-3-924	5.58 (2.54)	FBTA-150x150-*^-^	2.83 (1.28)
2" x 1-1/2"	A/FBTA-200x150-FC74-*^-^	2.17 (55.00)	1-1/2"	1-1/2"	OR^-3-928	4.75 (2.16)	FBTA-200x150-*^-^	1.65 (0.75)
2" x 2"	A/FBTA-200x200-FC74-*^-^	4.50 (114.30)	2"	2"	OR^-3-928	8.49 (3.86)	FBTA-200x200-*^-^	3.67 (1.66)
2-1/2" x 2"	A/FBTA-250x200-FC74-*^-^	3.15 (80.00)	2"	2"	OR^-2-232	8.40 (3.82)	FBTA-250x200-*^-^	3.34 (1.52)
2-1/2" x 2-1/2"	A/FBTA-250x250-FC74-*^-^	5.00 (127.00)	2-1/2"	2-1/2"	OR^-2-232	12.16 (5.53)	FBTA-250x250-*^-^	7.10 (3.23)
3" x 2-1/2"	A/FBTA-300x250-FC74-*^-^	3.35 (85.00)	2-1/2"	2-1/2"	OR^-2-237	13.43 (6.10)	FBTA-300x250-*^-^	4.64 (2.11)
3" x 3"	A/FBTA-300x300-FC74-*^-^	5.75 (146.05)	3"	3"	OR^-2-237	19.35 (8.80)	FBTA-300x300-*^-^	10.56 (4.80)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

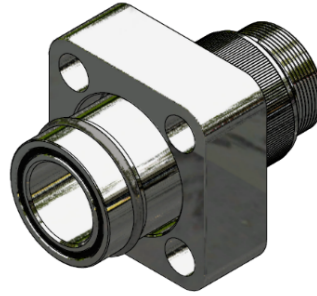
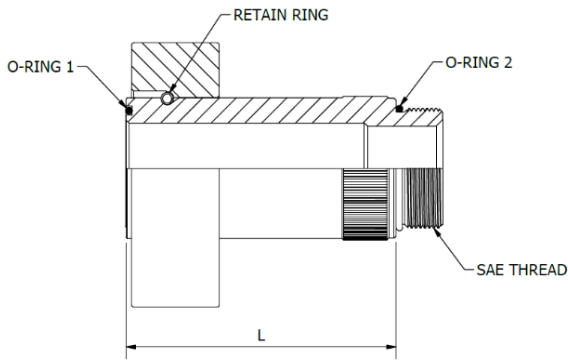
Ordering Example: A/FBTA-200x150-FC74-SS-V

*Insert Material _____

^ Insert O-Ring Type _____

ISO 6164, 400 bar SAE Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread O-Ring (O-Ring 2)

To be Ordered Separately:

- Bolt Kit

A/STA – SAE Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)	Thread Size UNF/UN-2A	O-Ring 1 (Buna) Part No.	O-Ring 2 (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L						
1-1/2" x 1-1/4"	A/STA-150x125-FC74-*^-^	4.25 (107.95)	1-5/8"-12	OR^-3-924	OR^-3-920	5.74 (2.61)	STA-150x125-*	2.94 (1.33)
1-1/2" x 1-1/2"	A/STA-150x150-FC74-*^-^	4.25 (107.95)	1-7/8"-12	OR^-3-924	OR^-3-924	5.77 (2.62)	STA-150x150-*	2.97 (1.35)
1-1/2" x 2"	A/STA-150x200-FC74-*^-^	4.25 (107.95)	2-1/2"-12	OR^-3-924	OR^-3-932	6.34 (2.88)	STA-150x200-*	3.54 (1.61)
2" x 1-1/2"	A/STA-200x150-FC74-*^-^	4.38 (111.25)	1-7/8"-12	OR^-3-928	OR^-3-924	6.92 (3.15)	STA-200x150-*	3.76 (1.71)
2" x 2"	A/STA-200x200-FC74-*^-^	4.38 (111.25)	2-1/2"-12	OR^-3-928	OR^-3-932	7.12 (3.24)	STA-200x200-*	3.96 (1.80)
2-1/2" x 2"	A/STA-250x200-FC74-*^-^	3.60 (91.44)	2-1/2"-12	OR^-2-232	OR^-3-932	9.31 (4.23)	STA-250-200-*	4.18 (1.90)
2-1/2" x 2-1/2"	A/STA-250x250-FC74-*^-^	3.60 (91.44)	3"-12	OR^-2-232	OR^-2-230	9.93 (4.51)	STA-250-250-*	4.80 (2.18)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/STA-200x150-FC74-SS-V

*Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

TUBE-MAC.com

Introduction

Technical
Data

Pipe
Selection
Guide

16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

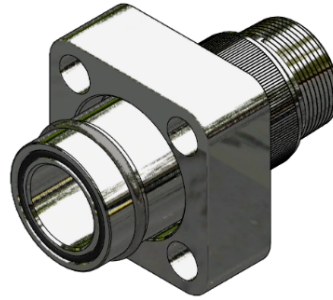
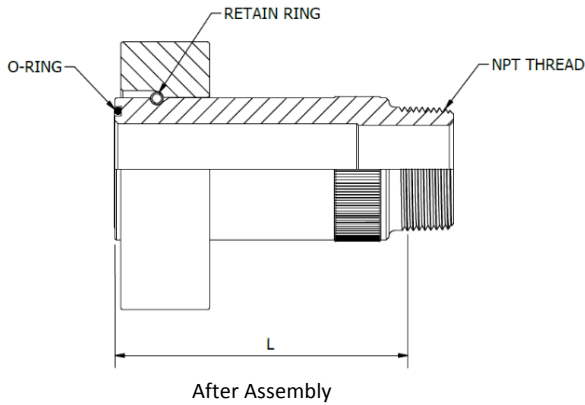
Clamp
Supports -
Heavy Series

Valves, Ball
and Check

J23

ISO 6164, 400 bar NPT Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)

To be Ordered Separately:

- Bolt Kit

A/NTA – NPT Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)	NPTF Thread (Dryseal)	O-Ring (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L					
1-1/2" x 1-1/4"	A/NTA-150x125-FC74-*^-^	4.51 (114.58)	1-1/4"-11-1/2	OR^-3-924	5.82 (2.65)	NTA-150x125-*	3.02 (1.37)
1-1/2" x 1-1/2"	A/NTA-150x150-FC74-*^-^	4.51 (114.58)	1-1/2"-11-1/2	OR^-3-924	5.90(2.68)	NTA-150x150-*	3.10 (1.41)
1-1/2" x 2"	A/NTA-150x200-FC74-*^-^	4.51 (114.58)	2"-11-1/2	OR^-3-924	6.40 (2.91)	NTA-150x200-*	3.60 (1.64)
2" x 1-1/2"	A/NTA-200x150-FC74-*^-^	4.51 (114.58)	1-1/2"-11-1/2	OR^-3-928	7.12 (3.24)	NTA-200x150-*	3.96 (1.80)
2" x 2"	A/NTA-200x200-FC74-*^-^	4.51 (114.58)	2"-11-1/2	OR^-3-928	7.16 (3.25)	NTA-200x200-*	4.00 (1.82)

Flange Option:

Standard, FC74 = DIN 400 (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

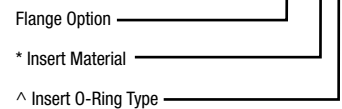
SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

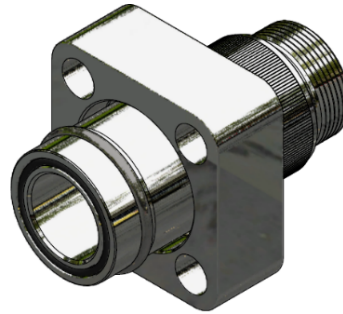
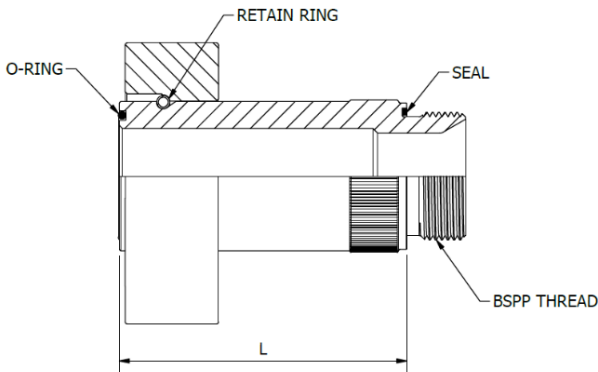
V = Viton.

Ordering Example: A/NTA-200x150-FC74-SS-V



ISO 6164, 400 bar BSPP Male Thread Adapter Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Male Thread Adapter
- One (1) Retain Ring Flange
- One (1) Retain Ring
- One (1) Face O-Ring (O-Ring 1)
- One (1) Thread Seal (Seal 2)

To be Ordered Separately:

- Bolt Kit

A/BTA – BSPP Male Thread Adapter Complete Assembly

Size (flange x thread)	Complete Assembly Part Number	Dimensions in (mm)		Thread Size	O-Ring (Buna) Part No.	Seal (Buna) Part No.	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)
		L							
1-1/2" x 1-1/4"	A/BTA-150x125-FC74-*^-^	4.25 (108.0)		1-1/4"-11	OR^-3-924	DR^-G125	5.82 (2.65)	BTA-150x125-*	3.02 (1.37)
1-1/2" x 1-1/2"	A/BTA-150x150-FC74-*^-^	4.25 (108.0)		1-1/2"-11	OR^-3-924	DR^-G150	5.80 (2.64)	BTA-150x150-*	3.00 (1.36)
1-1/2" x \diamond 2"	A/BTA-150x200-FC74-*^-^	4.25 (108.0)		2"-11	OR^-3-924	BS^-3236	6.40 (2.90)	BTA-150x200-*	3.60 (1.63)
2" x 1-1/2"	A/BTA-200x150-FC74-*^-^	4.25 (108.0)		1-1/2"-11	OR^-3-928	DR^-G150	7.10 (3.23)	BTA-200x150-*	3.94 (1.79)
2" x \diamond 2"	A/BTA-200x200-FC74-*^-^	4.35 (110.5)		2"-11	OR^-3-928	BS^-3236	7.16 (3.25)	BTA-200x200-*	4.00 (1.81)
2-1/2" x \diamond 2"	A/BTA-250x200-FC74-*^-^	4.33 (110.0)		2"-11	OR^-2-232	BS^-3236	10.03 (4.56)	BTA-250x200-*	4.90 (2.25)
2-1/2" x \diamond 2 1/2"	A/BTA-250x250-FC74-*^-^	4.11 (104.4)		2-1/2" - 11	OR^-2-232	BS^-4037	10.33 (4.70)	BTA-250x250-*	5.20 (2.36)
3" x \diamond 2"	A/BTA-300x200-FC74-*^-^	4.17 (106.0)		2"-11	OR^-2-237	BS^-3236	15.86 (7.21)	BTA-300x200-*	6.95 (3.16)
3" x \diamond 2-1/2"	A/BTA-300x250-FC74-*^-^	4.41 (112.0)		2-1/2" - 11	OR^-2-237	BS^-4037	16.21 (7.37)	BTA-300x250-*	7.30 (3.32)
3" x \diamond 3"	A/BTA-300x300-FC74-*^-^	4.41 (112.0)		3" - 11	OR^-2-237	BS^-4839	16.41 (7.46)	BTA-300x300-*	7.50 (3.41)

♦The seal for the 2", 2-1/2" and 3" BSPP thread consists of a self-centering bonded seal included in dimension "L".

Flange Option:

Standard, FC74 = 400 bar (ISO 6164) Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated

SS = Stainless Steel, Type 316. Body Only

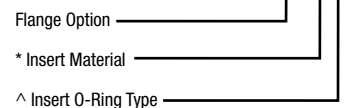
SSA = Stainless Steel, Type 316. All SS including flange

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/BTA-200x150-FC74-SS-V

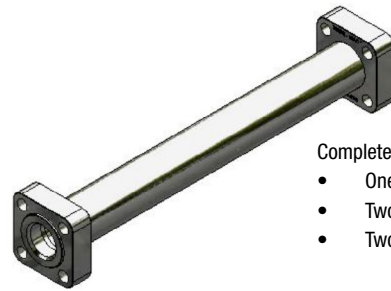
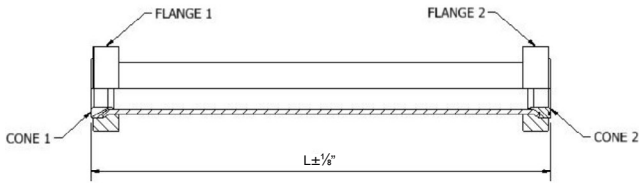


3D step models available upon request

ISO 6164, 400 bar Flare Flange Pipe Assembly, NPS

DIN 400 bar (ISO 6164)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

		Code	PAF	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Pipe Assembly - Flared		PAF									
Pipe Material	Carbon Steel	TMP52CD	52								
Pipe Material	Stainless Steel	TMP304SS	304								
		TMP316SS	316								
		♦TMP2205SS	2205								
Pipe Size	1-1/2"	SCH80-150									
		SCH160-150									
	2"	SCH80-200									
		SCH160-200									
	2-1/2"	SCH80-250									
		SCH160-250									
3"	SCH80-300										
	SCH160-300										
4"	SCH80-400										
Flange Type	Carbon Steel	FFC74 ISO 6164 W/Clearance Holes	FC74								
Cone Type		Cone - Flat Face	CF								
		Cone - 'O' Ring Face	CO								
Length		L	Specify (in.)								
Options		Viton	V								
		Painted (Specify)	P								
		Complete Stainless Steel Assembly: (including flanges)	SS								

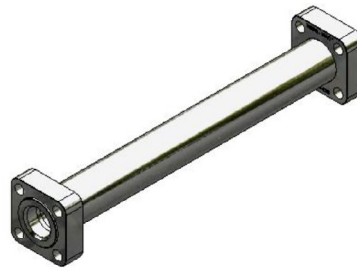
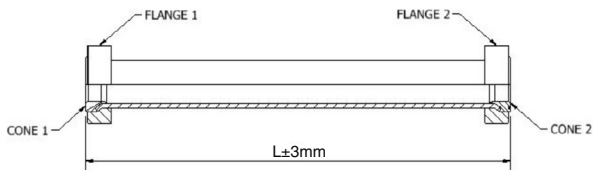
♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAF/52 - SCH160-200 - FC74 - FC74 - CO - CF - 240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

ISO 6164, 400 bar Flare Flange Pipe Assembly, Metric

DIN 400 bar (ISO 6164)

Typical PAF Assembly



Complete Flange Set Includes:

- One (1) length of clean pipe
- Two (2) flare flanges
- Two (2) cones

Code		PAF	Pipe Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Length	Options
Pipe Assembly - Flared		PAF								
Pipe Material Carbon Steel	TMP52CD	52								
Pipe Material Stainless Steel	TMP304SS	304								
	TMP316SS	316								
	♦TMP2205SS	2205								
Pipe Size	1-1/2"	50 x 5.0								
		56 x 8.5								
	2"	60 x 6.0								
		66 x 8.5								
	2-1/2"	73 x 7.0								
		80 x 10								
3"	90 x 9.0									
	97 x 12									
4" and above		not available								
Flange Type Carbon Steel	FFCM74 ISO 6164 W/Clearance Holes	FCM74								
	*FFC74 ISO 6164 *2" (60mm) and 2-1.2" (73mm)	FC74								
Cone Type	Cone - Flat Face	CF								
	Cone - 'O' Ring Face	CO								
Length	L	Specify (mm)								
Options	Viton	V								
	Painted (Specify)	P								
	Complete Stainless Steel Assembly: (including flanges)	SS								

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAF/52 - 50x5 -150 - FCM74 - FCM74 - CO - CF - 6000

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

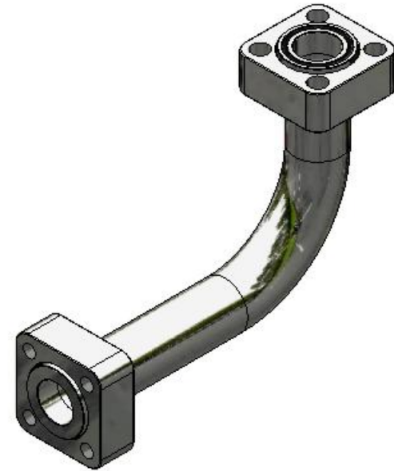
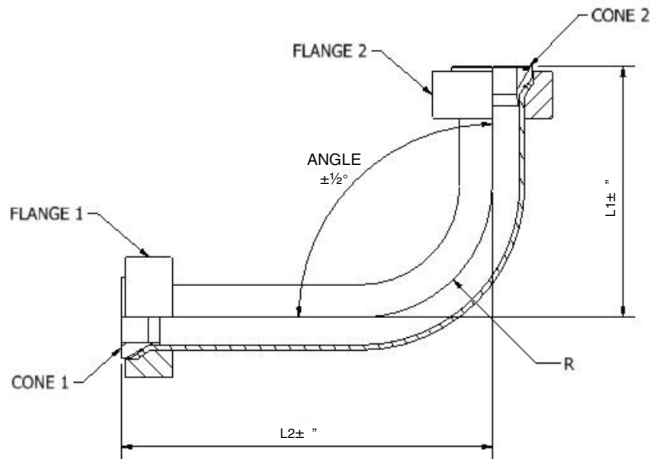
ISO 6164, 400 bar PSI Flare Flange Bent Pipe Assembly, NPS

DIN 400 (ISO 6164)

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size	R1		R2		R3	
	Dimensions (in)		Dimensions (in)		Dimensions (in)	
	L(min.)	R	L(min.)	R	L(min.)	R
1-1/2"	7.50	3.80	9.25	5.70	11.25	8.25
2"	8.50	4.75	10.75	7.13	13.00	9.50
2-1/2"	9.75	5.75	12.63	8.63	17.00	12.50
3"	11.00	7.00	14.50	10.50	19.50	15.00
4"	-	-	17.50	13.50	26.50	22.50

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

ISO 6164, 400 bar Flare Flange Bent Pipe Assembly, NPS

DIN 400 (ISO 6164)

Typical BPAF Assembly

		Code	BPAF	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options
Bent Pipe Assembly - Flared		BPAF												
Pipe & Cone Material Carbon Steel	TMP52CD	52												
	TMP304SS	304												
Pipe & Cone Material Stainless Steel	TMP316SS	316												
	♦TMP2205SS	2205												
Pipe Size & Schedule	1-1/2"	SCH80-150												
		SCH160-150												
	2"	SCH80-200												
		SCH160-200												
	2-1/2"	SCH80-250												
		SCH160-250												
3"	SCH80-300													
	SCH160-300													
4"	SCH80-400													
Flange Type Carbon Steel	FFC74 SAE Code 62 W/Clearance Holes	FC74												
Cone Type	Cone - Flat Face	CF												
	Cone - 'O' Ring Face	CO												
Radius	Field Manufactured	R1												
	Factory Manufactured	R2												
		R3												
Length	L1	Specify (in.)												
Angle	Max 90°	Specify (°)												
Length	L2	Specify (in.)												
Options	Viton	V												
	Painted (Specify)	P												
	Complete Stainless Steel Assembly: (including flanges)	SS												

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-SCH160-200 -FC74-FC74-CO-CF-R1-160-90-120

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

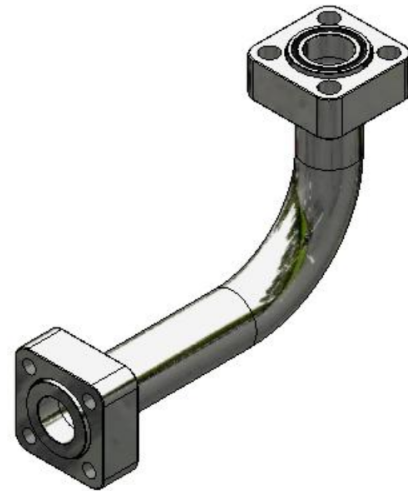
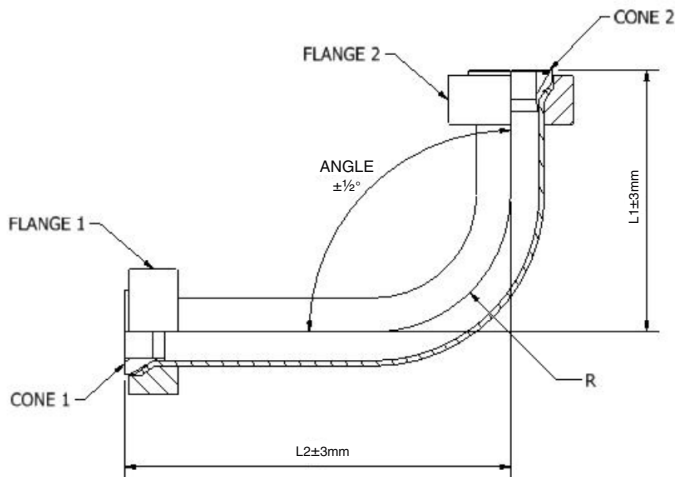
ISO 6164 Flare Flange Bent Pipe Assembly, Metric

DIN 400 bar (ISO 6164)

Typical BPAF Assembly

Complete assembly consists of:

- One (1) length of bent clean pipe
- Two (2) flare flanges
- Two (2) cones



Size OD x wall	Flange Size	R1		R2		R3	
		Dimensions (mm)		Dimensions (mm)		Dimensions (mm)	
		L(min.)	R	L(min.)	R	L(min.)	R
50 x 5.0	1-1/2"	194	100	244	150	294	200
60 x 6.0	2"	215	120	275	180	335	240
73 x 7.0	2-1/2"	264	150	339	225	225	414
90 x 9.0	3"	294	180	384	270	474	360
Heavy Wall Pipe							
56 x 8.5	1-1/2"	-	-	-	-	368	210
66 x 8.5	2"	-	-	-	-	406	241
80 x 10	2-1/2"	-	-	-	-	483	318
97 x 12	3"	-	-	-	-	560	381

Note: OTHER RADII AVAILABLE (CONSULT FACTORY)

ISO 6164 Flare Flange Bent Pipe Assembly, Metric

DIN 400 (ISO 6164)

Typical BPAF Assembly

		Code	BPAF	Pipe & Cone Material	Pipe Size & OD x wall	Flange 1	Flange 2	Cone 1	Cone 2	Rad.	Lgth L1	Ang	Lgth L2	Options	
Bent Pipe Assembly - Flared		BPAF													
Pipe & Cone Material Carbon Steel	TMP52CD	52													
Pipe & Cone Material Stainless Steel	TMP304SS	304													
	TMP316SS	316													
	♦TMP2205SS	2205													
Pipe Size	1-1/2"	50x5.0-150													
		56x8.5-150													
	2"	60x6.0-200													
		66x8.5-200													
	2-1/2"	73x7.0-250													
		80x10-250													
3"	90x9.0-300														
	97x12-300														
4" and above		not available													
Flange Type Carbon Steel	FFCM74 ISO 6164 W/Clearance Holes	FCM74													
	*FFC74 ISO 6164 *2" (60mm) and 2-1.2" (73mm)	FC74													
Cone Type	Cone - Flat Face	CF													
	Cone - 'O' Ring Face	CO													
Radius	Field Manufactured	R1													
		R2													
	Factory Manufactured	R3													
Length	L1	Specify (mm)													
Angle	Max 90°	Specify (°)													
Length	L2	Specify (mm)													
Options	Viton	V													
	Painted (Specify)	P													
	Complete Stainless Steel Assembly: (including flanges)	SS													

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART Number (EXAMPLE): BPAF/52-50x5.0-150-FCM74-FCM74-CO-CF-R1-3000-90-2500

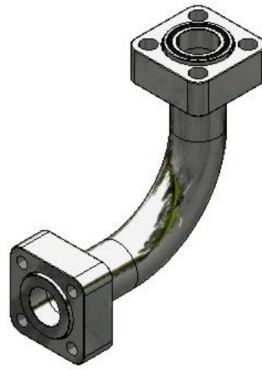
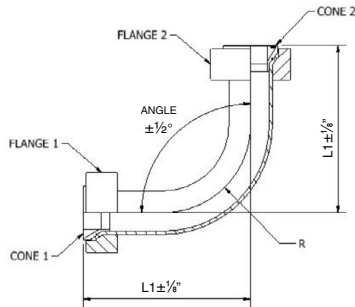
ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

Consult factory for ordering assistance

3D step models available upon request

ISO 6164, 400 bar Flare Flange Bend Elbow Complete Assembly, NPS

DIN 400 bar (ISO 6164)



COMPLETE ASSEMBLY CONSISTS OF:

- FLARE FLANGE 90° ELBOW BODY
- TWO (2) FLARE FLANGES
- TWO (2) CONES

A/FFE - Flare Flange Bend Elbow Complete Assembly, NPS

Size	Complete Assembly Part Number	R1 Bend Radius (in)		R2 Bend Radius (in)		R3 Bend Radius (in)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1-1/2"	A/FFE-SCH80-050-FC34-FC34-CO-CO-•-•-^	3.80	7.50	5.70	9.25	8.25	11.75	4920 (339)
1-1/2"	A/FFE-SCH160-075-FC34-FC34-CO-CO-•-•-^	3.80	7.50	5.70	9.25	8.25	11.75	5800 (400)
2"	A/FFE-SCH80-200-FC74-FC74-CO-CO-•-•-^	4.75	8.50	7.13	10.75	9.50	13.00	4246 (293)
2"	A/FFE-SCH160-200-FC74-FC74-CO-CO-•-•-^	4.75	8.50	7.13	10.75	9.50	13.00	5800 (400)
2-1/2"	A/FFE-SCH80-100-FC74-FC74-CO-CO-•-•-^	5.75	9.75	8.63	12.63	12.50	17.00	4455 (307)
2-1/2"	A/FFE-SCH160-100-FC74-FC74-CO-CO-•-•-^	5.75	9.75	8.63	12.63	12.50	17.00	5800 (400)
3"	A/FFE-SCH80-125-FC74-FC74-CO-CO-•-•-^	7.00	11.00	10.50	14.50	15.00	19.50	3946 (272)
3"	A/FFE-SCH160-125-FC74-FC74-CO-CO-•-•-^	7.00	11.00	10.50	14.50	15.00	19.50	5800 (400)
4"	A/FFE-SCH80-150-FC74-FC74-CO-CO-•-•-^	-	-	13.50	17.50	22.50	26.50	3420 (236)

Flange Options:

FC74 = 5800 PSI (ISO 6164) Clearance Flange

Cone Options:

CO = O-Ring Faced Cone.

CF = Flat Faced Cone.

• Bend Radius Options (Other radii available, consult factory):

R1

R2

R3

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

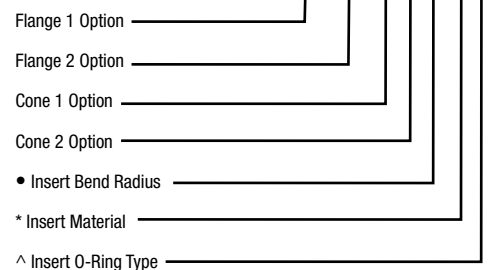
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

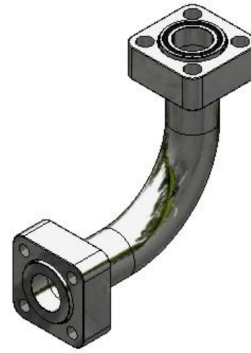
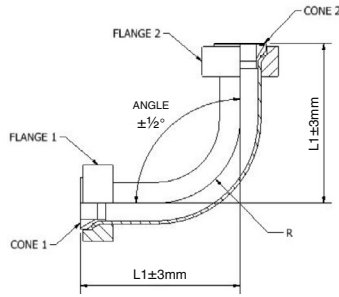
Ordering Example: A/FFE-SCH80-200-FC74-FC74-CO-CO-R1-SS-V



ISO 6164, 400 bar Flare Flange Bend Elbow

Complete Assembly, Metric

DIN 400 bar (ISO 6164)



- COMPLETE ASSEMBLY CONSISTS OF:
- FLARE FLANGE 90° ELBOW BODY
 - TWO (2) FLARE FLANGES
 - TWO (2) CONES

A/FFEM - Flare Flange Bend Elbow Complete Assembly, Metric

Size	Complete Assembly Part Number	R1 Bend Radius (mm)		R2 Bend Radius (mm)		R3 Bend Radius (mm)		Working Pressure PSI (bar)
		R	L1	R	L1	R	L1	
1-1/2"	A/FFEM-50x5.0-150-FCM74-FCM74-CO-CO-□-*^-^	100	194	150	244	200	294	5235 (361)
1-1/2"	A/FFEM-56x8.5-150-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	210	368	5800 (400)
2"	A/FFEM-60x6.0-200-FC74-FC74-CO-CO-□-*^-^	120	215	180	275	240	335	5307 (366)
2"	A/FFEM-66x8.5-200-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	240	406	5800 (400)
2-1/2"	A/FFEM-73x7.0-250-FC74-FC74-CO-CO-□-*^-^	150	264	225	339	300	414	5119 (353)
2-1/2"	A/FFEM-80x10.0-250-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	318	483	5800 (400)
3"	A/FFEM-90x9.0-300-FCM74-FCM74-CO-CO-□-*^-^	180	294	270	384	360	474	5800 (400)
3"	A/FFEM-97x12.0-300-FCM74-FCM74-CO-CO-□-*^-^	-	-	-	-	381	560	5800 (400)

Flange Options:

FC74 = 5800 PSI (ISO 6164) Clearance Flange

Cone Options:

CO = O-Ring Faced Cone.
CF = Flat Faced Cone.

Bend Radius Options (Other radii available, consult factory):

- R1
- R2
- R3

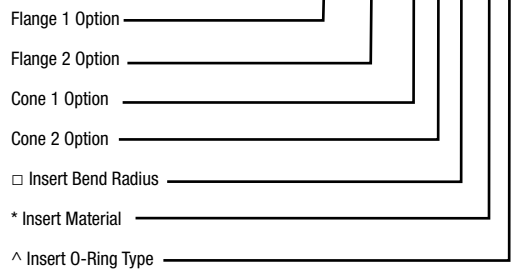
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/FFEM-66x8.5-200-FCM74-FCM74-CO-CO-R1-SS-V



3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

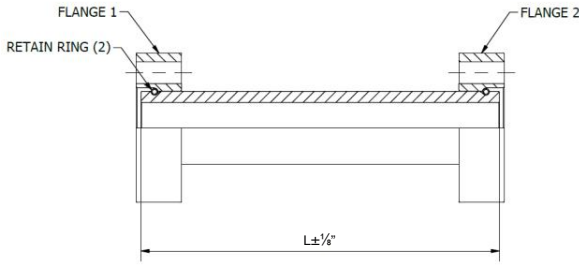
Clamp Supports - Heavy Series

Valves, Ball and Check

J33

ISO 6164, 400 bar Retain Ring Flange Pipe Assembly, NPS

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

- To be Ordered Separately:
- O-Ring Seal Spacers

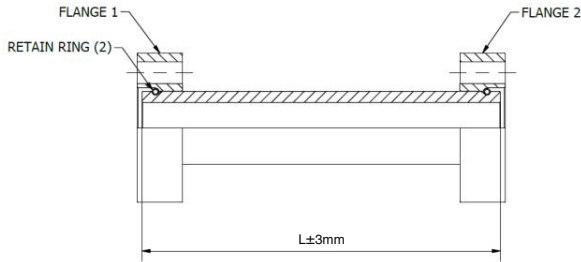
	Code	PAR	Pipe & Cone Material	Pipe Size & Schedule	Flange 1	Flange 2	Length	Options
Bent Pipe Assembly - Retain Ring		PAR						
Pipe & Cone Material Carbon Steel	No Designation Required							
Pipe & Cone Material Stainless Steel	TMP304SS	304						
	TMP316SS	316						
	♦TMP2205SS	2205						
Pipe Size	1-1/2"	SCH160-150						
		SCHXXS-150						
	2"	SCH160-200						
		SCHXXS-200						
	2-1/2"	SCH160-250						
		SCHXXS-250						
	3"	SCH160-300						
		SCHXXS-300						
	4"	SCH160-400						
		SCHXXS-400						
5"	SCH160-500							
	SCHXXS-500							
6"	SCH160-600							
	SCHXXS-600							
8"	SCH160-800							
	SCHXXS-800							
10"	SCH160-1000							
	SCHXXS-1000							
Flange Type Depending on Size	RFA74 1-1/2" up to 3"	FAC74						
	RFC74 4" only	FC74						
	RFA48 5" up to 8"	FAC48						
	RFC412 10" only	FAC412						
Length	L	Specify (in.)						
Options	Viton	V						
	Painted (Specify)	P						
	Complete Stainless Steel Assembly: (including flanges)	SS						

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAR/SCH160-250-FAC74-FAC74-240

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

ISO 6164, 400 bar Retain Ring Flange Pipe Assembly, Metric

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

- To be Ordered Separately:
- O-Ring Seal Spacers

Code		PAR	Pipe & Cone Material	Pipe OD & Wall	Flange 1	Flange 2	Length	Options
Bent Pipe Assembly - Retain Ring		PAR						
Pipe & Cone Material Carbon Steel	No Designation Required							
Pipe & Cone Material Stainless Steel	TMP304SS	304						
	TMP316SS	316						
	♦TMP2205SS	2205						
Flange Size & Metric Tube OD x Wall	1-1/2"	56 x 8.5						
	2"	66 x 8.5						
	2-1/2"	80 x 10						
	3"	97 x 12						
	4"	115x15						
	4-1/2"	130 x 15						
	5"	150 x 15						
	6"	190 x 20						
	8" ¹	220 x 20						
	8"	250 x 25						
10"	273 x 28.6							
Flange Type Depending on Size	RFAC74 1-1/2" up to 4" W/Clearance Holes	FC74						
	RFAC48 4-1/2" up to 8" W/Clearance Holes	FAC48						
	RFAC412 10" only W/Clearance Holes	FAC412						
Length	L	Specify (mm)						
Options	Viton	V						
	Painted (Specify)	P						
	Complete Stainless Steel Assembly: (including flanges)	SS						

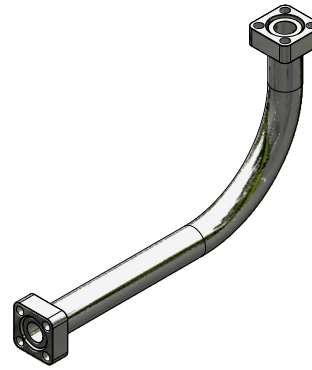
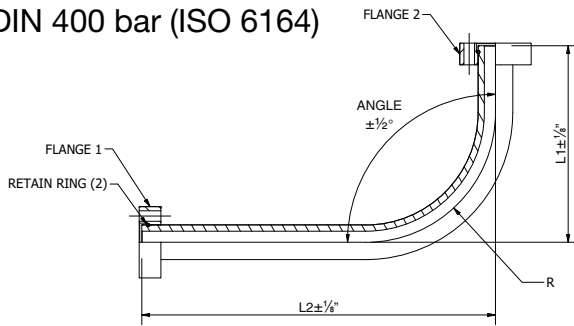
♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST
PART Number (EXAMPLE): PAR/97x12-300-FC74-FC74-6000-P

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Bent Pipe Assembly, NPS

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of bent clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

		Code	BPAR /	Pipe & Cone Material	Pipe Schedule & Flange Size	Flange 1	Flange 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Retain Ring		BPAR										
Pipe & Cone Material	No Designation Required											
Pipe & Cone Material	TMP304SS	304										
Pipe & Cone Material	TMP316SS	316										
Pipe & Cone Material	♦TMP2205SS	2205										
Flange Size & Schedule	1-1/2"	SCHXX-150										
	2"	SCH160-200										
		SCHXXS-200										
	2-1/2"	SCH160-250										
		SCHXXS-250										
	3"	SCH160-300										
		SCHXXS-300										
	4"	SCH160-400										
		SCHXXS-400										
	5"	SCH160-500										
		SCHXXS500										
	6"	SCH160-600										
SCHXXS-600												
8"	SCH160-800											
	SCHXXS-800											
10"	SCH160-1000											
	SCHXXS-1000											
Flange Type	RFC74 1-1/2" up to 4"	FC74										
	RFAC48 4-1/2" up to 8"	FAC48										
	RFAC412 10" only	FAC412										
Radius	R	Specify (in)										
Length	L1	Specify (in)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (in)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Pipe Size	Flange Size	Dimensions	
Schedule	(in)	L (in)	R
1-1/2" SCHXXS	1-1/2"	11.5	8.2
2" SCH160/XXS	2"	13	9.5
2-1/2" SCH160/XXS	2-1/2"	16	12.5
3" SCH160/XXS	3"	20	15
4" SCH160/XXS	4"	25	20
5" SCH160/XXS	5"	25	20
6" SCH160/XXS	6"	30	24
8" SCH160/XXS	8"	40	32
10" SCH160/XXS	10"	50	40

Note:
OTHER RADII AVAILABLE (CONSULT FACTORY)

Note:

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

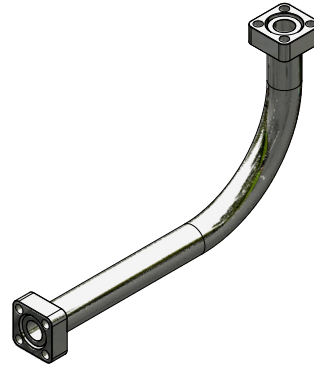
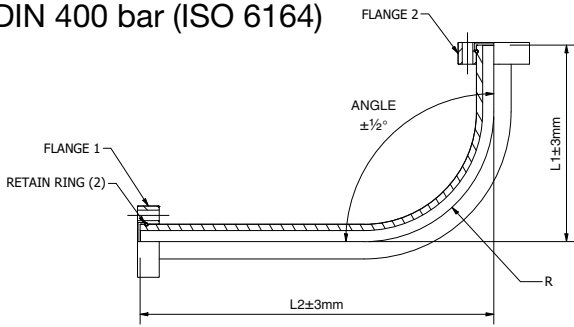
PART NO. (EXAMPLE): BPAR/SCH160-200-FC74-FC74-9.5-60-90-144

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Bent Pipe Assembly, Metric

DIN 400 bar (ISO 6164)



- Complete assembly consists of:
- One (1) length of bent clean pipe
 - Two (2) retain ring flanges
 - Two (2) retain rings

Bent Pipe Assembly - Retain Ring		Code	BPAR	Pipe & Cone Material	OD x Wall & Flange Size	Flange 1	Flange 2	Rad.	Lgth L1	Angle	Lgth L2	Options
Bent Pipe Assembly - Retain Ring		BPAR										
Pipe & Cone Material Carbon Steel	TMP52CD	52										
	Pipe & Cone Material Stainless Steel	TMP304SS	304									
		TMP316SS	316									
		♦TMP2205SS	2205									
Flange Size & Metric Tube OD x Wall	1-1/2"	56x8.5-150										
	2"	66x8.5-200										
	2-1/2"	80x10-250										
	3"	97x12-300										
	4"	115x15-400										
	4-1/2"	130x15-450										
	5"	150x15-500										
	6"	190x20-600										
	8"¹	220x20-800-290BC										
	8"	250x25-100										
	10"	273x28.6-100										
Flange Type	RFC74 1-1/2" up to 4"	FC74										
	RFAC48 4-1/2" up to 8"	FAC48										
	RFAC412 10" only	FAC412										
Radius	R	Specify (mm)										
Length	L1	Specify (mm)										
Angle	Max 90°	Specify (°)										
Length	L2	Specify (mm)										
Options	Viton	V										
	Painted (Specify)	P										
	Complete Stainless Steel Assembly: (including flanges)	SS										

Pipe Size	Flange Size	Dimensions (mm)	
Schedule	(in)	L (min)	R
56 x 8.5	1-1/2"	318	210
66 x 8.5	2"	355	241
80 x 10	2-1/2"	432	318
97 x 12	3"	508	381
115 x 15	4"	635	508
130 x 15	4-1/2"	650	520
150 x 15	5"	730	600
190 x 20	6"	910	760
220 x 20	8" ¹	1016	813
250 x 25	8"	1200	1000
273 x 28.6	10"	1270	1016

Note:
OTHER RADII AVAILABLE (CONSULT FACTORY)

Note:

♦TMP2205SS PIPE IS ONLY AVAILABLE UPON REQUEST

PART NO. (EXAMPLE): BPAR/52-66x8.5-200-FC74-FC74-241-125-90-115

ASSEMBLY WORKING PRESSURE RATINGS ARE SUBJECT TO THE LESSER OF THE FLANGE OR PIPE RATINGS

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

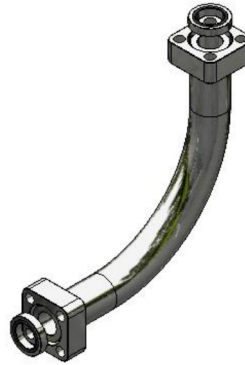
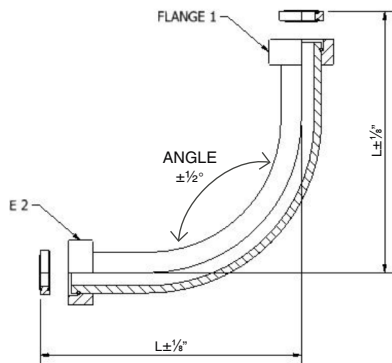
Clamp Supports - Heavy Series

Valves, Ball and Check

J37

ISO 6164, 400 bar Retain Ring Flange Bend Elbow Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Retain Ring Flange Bend Elbow Body
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) O-Ring Spacers

A/RFE - Retain Ring Flange Bend Elbow – Complete Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L				
1-1/2"	A/RFE-150-FC74-*-*^	13.00 (330.20)	17.76 (8.07)	RFE-150-*-*^	11.50 (5.22)	5800 (400)
2"	A/RFE-200-FC74-*-*^	14.50 (368.30)	22.71 (10.32)	RFE-200-*-*^	15.59 (7.07)	5800 (400)
2-1/2"	A/RFE-250-FC74-*-*^	18.00 (457.20)	39.53 (17.97)	RFE-250-*-*^	26.67 (12.12)	5800 (400)
3"	A/RFE-300-FC74-*-*^	21.00 (533.40)	67.22 (30.55)	RFE-300-*-*^	45.80 (20.82)	5800 (400)
4"	A/RFE-400-FC74-*-*^	26.00 (660.40)	119.45 (54.30)	RFE-400-*-*^	83.51 (37.96)	5800 (400)
4-1/2"	A/RFE-450-FAC48-*-*^	26.00 (660.40)	138.24 (62.84)	RFE-450-*-*^	96.04 (43.65)	5000 (350)
5"	A/RFE-500-FAC48-*-*^	26.50 (673.10)	174.98 (6.80)	RFE-500-*-*^	121.48 (55.22)	5000 (350)
6"	A/RFE-500-FAC48-*-*^	31.50 (800.10)	313.28 (142.40)	RFE-600-*-*^	206.32 (93.78)	5000 (350)
8" ⁽¹⁾	A/RFE-800-FAC48-290BC*-*^	41.50 (1054.10)	453.21 (206.00)	RFE-800-*-*^	298.83 (135.83)	5000 (350)
8"	A/RFE-800-FAC48-*-*^	41.50 (1054.10)	596.88 (271.31)	RFE-800-*-*^	391.34 (177.88)	5000 (350)
10"	A/RFE-1000-FAC412-*-*^	48.00 (1219.20)	786.46 (357.48)	RFE-1000-*-*^	464.40 (211.10)	3600 (250)

(1) Special 8" size flange and bot circle.

Flange Option:

Standard, Flange with Clearance Holes

FC74 = 5800 PSI (400 bar) ISO 6164, 4-Bolt Square Flange

Above 4" FAC48 = 5100 PSI (350 bar), 8-Bolt Round Flange

Size 10" FAC412 = 3600 PSI (250 bar), 12-Bolt Round Flange

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

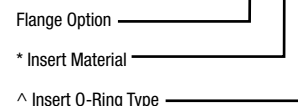
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

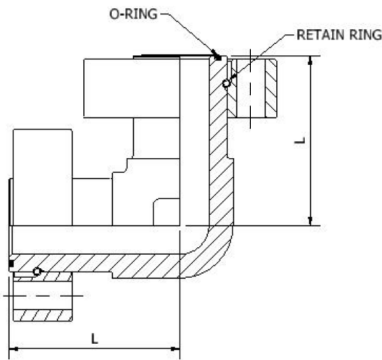
Ordering Example: A/RFE-200-FC74-SS-V



ISO 6164, 400 bar Retain Ring Flange Elbow

Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Two (2) Retain Ring Flanges
- Two (2) Retain Rings
- Two (2) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/RRFE - Retain Ring Flange Elbow – Complete Assembly with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
1-1/2"	A/RRFE-150-FC74-*^-^	4.00 (101.6)	OR^3-924	11.68 (5.31)	RRFE-150-*^-^	6.08 (2.76)	5800 (400)
2"	A/RRFE-200-FC74-*^-^	4.40 (111.8)	OR^3-928	13.94 (6.34)	RRFE-200-*^-^	7.62 (3.46)	5800 (400)
2-1/2"	A/RRFE-250-FC74-*^-^	5.19 (131.8)	OR^2-232	21.56 (9.80)	RRFE-250-*^-^	11.30 (5.14)	5800 (400)
3"	A/RRFE-300-FC74-*^-^	6.30 (160.0)	OR^2-237	38.28 (17.40)	RRFE-300-*^-^	20.15 (9.16)	5800 (400)
4"	A/RRFE-400-FC74-*^-^	7.87 (200.0)	OR^2-241	71.06 (32.30)	RRFE-400-*^-^	41.00 (18.64)	5800 (400)

Note:

3" and 4" are welded assemblies - Larger sizes are available upon request

Flange Option:

Standard, Flange with Clearance Holes

FC74 = 5800 PSI (400 bar) ISO 6164 Square 4-Bolt Flange

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

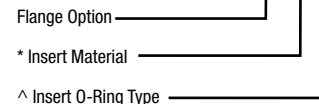
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

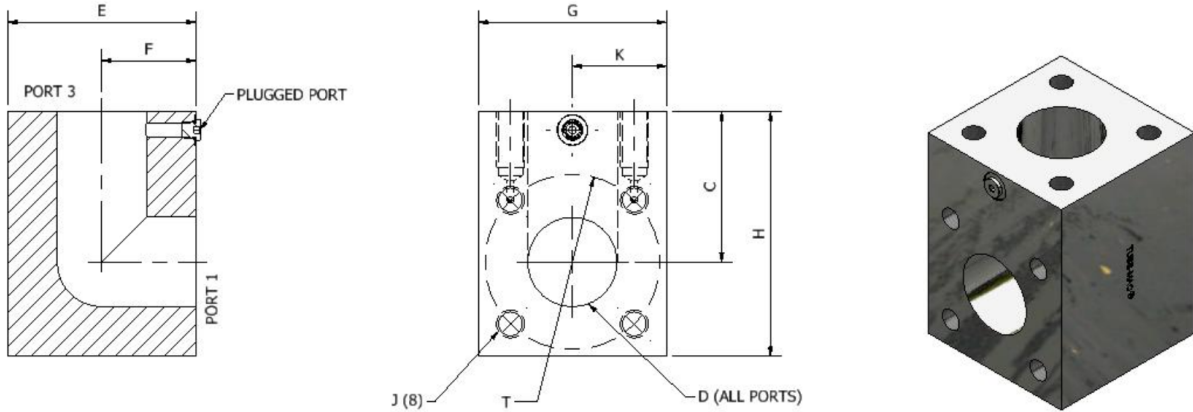
Ordering Example: A/RRFE-200-FC74-SS-V



3D step models available upon request

ISO 6164, 400 bar Block Elbow with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BE74 – Block Elbow with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part Number	Dimensions (in)								Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BE74-150-*	3.35	3.50	1.50	3.50	1.75	3.50	5.25	1.75	5/8"- 11	14.60 (6.64)	5800 (400)
2"	BE74-200-*	3.86	3.50	1.94	4.00	2.00	4.00	5.50	2.00	5/8"- 11	19.40 (8.82)	5800 (400)
2-1/2"	BE74-250-*	4.65	4.13	2.38	5.00	2.50	5.00	6.50	2.50	3/4"-10	36.82 (16.74)	5800 (400)
3"	BE74-300-*	5.71	5.00	2.88	6.00	3.00	6.00	8.00	3.00	1"-8	65.40 (29.73)	5800 (400)
4"	BE74-400-*	6.89	5.50	3.50	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	92.60 (42.10)	5800 (400)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE74-200-SS

* Insert Material _____

BEM74 – Block Elbow with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part Number	Dimensions (mm)								Thread	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BEM74-150-*	85.1	88.9	38.1	88.9	44.5	88.9	133.4	44.5	M16 x 2.00	14.60 (6.64)	5800 (400)
2"	BEM74-200-*	98.0	88.9	49.2	101.6	50.8	101.6	139.7	50.8	M16 x 2.00	19.40 (8.82)	5800 (400)
2-1/2"	BEM74-250-*	118.1	104.9	60.5	127.0	63.5	127.0	165.1	63.5	M20 x 2.50	36.82 (16.74)	5800 (400)
3"	BEM74-300-*	145.0	127.0	73.2	152.4	76.2	152.4	202.3	76.2	M24 x 3.00	65.40 (29.73)	5800 (400)
4"	BEM74-400-*	175.0	139.7	88.9	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	92.60 (42.10)	5800 (400)

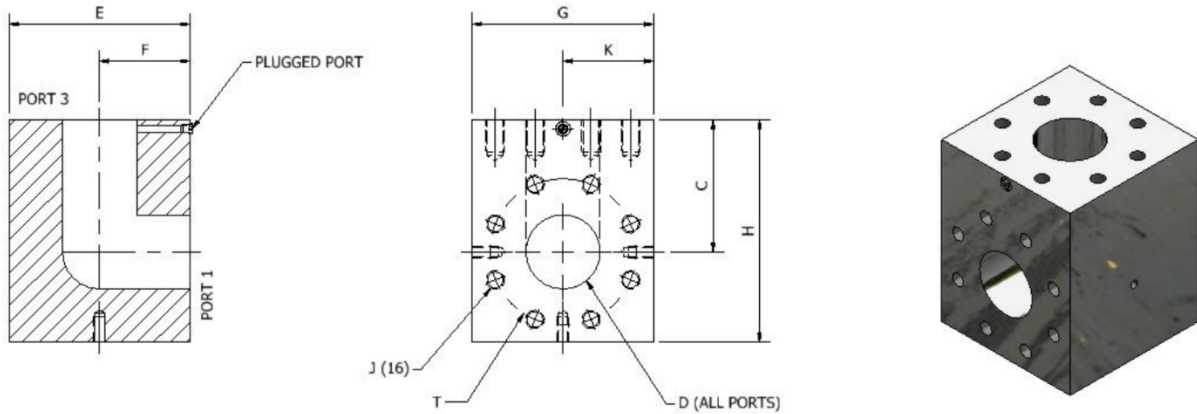
Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE64-200-SS

* Insert Material _____

Block Elbow, TMI 8-Bolt with Flat Face and Threaded Holes



BE48 – Block Elbow, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS												
Size	Block Elbow Part Number	Dimensions (in)								J - Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
5"	BE48-500-*	8.07	7.13	4.00	9.75	4.88	9.75	12.00	4.88	1"-8	274.5 (124.8)	5000 (350)
6"	BE48-600-*	9.65	8.00	4.90	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BE48-800-290BC-*	11.42	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/8" -7	990.0 (450.0)	5000 (350)
8"	BE48-800-*	12.40	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1007.0 (458.0)	5000 (350)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BE48-600-SS

* Insert Material _____

BEM48 – Block Elbow, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric												
Size	Block Elbow Part Number	Dimensions (mm)								J - Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
4 1/2"	BEM48-450-*	175.0	160.0	100.0	214.0	107.0	214.0	267.0	107.0	M20 x 2.5	157.0 (71.4)	5000 (350)
5"	BEM48-500-*	205.0	181.1	101.6	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	274.5 (124.8)	5000 (350)
6"	BEM48-600-*	245.1	203.2	124.5	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BEM48-800-290BC-*	209.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	990.0 (450.0)	5000 (350)
8"	BEM48-800-*	315.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	1007.0 (458.0)	5000 (350)

Materials:

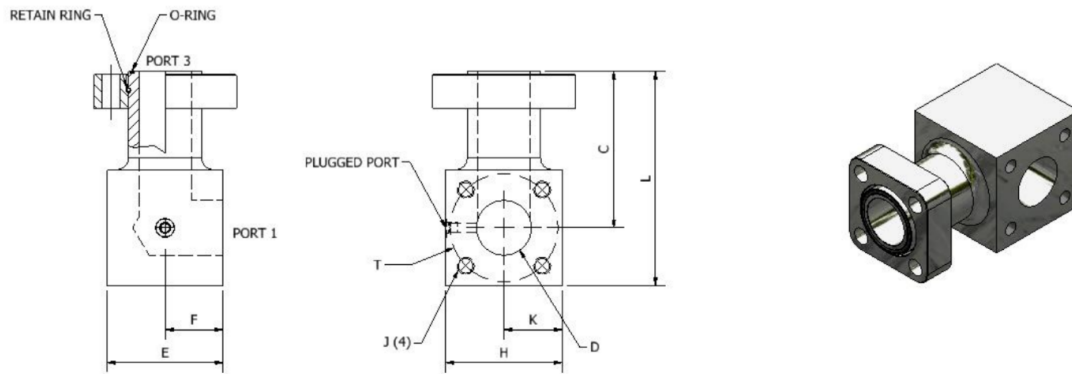
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BEM48-600-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Elbow

DIN 400 bar (ISO 6164)



A/RE74 – Retain Ring Elbow Assembly with #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part No.	Dimensions (in)								Thread UNC-2B	Assembly WT lbs (kg)	Body Only Part No.	Working Pressure PSI (bar)
		T	C	D	E	F	H	L	K				
1-1/2"	A/RE74-150-*	3.35	5.50	1.50	3.50	1.75	3.50	7.25	1.75	5/8" - 11	17.40 (7.90)	RE74-150-*	5800 (400)
2"	A/RE74-200-*	3.86	5.50	1.94	4.00	2.00	4.00	7.50	2.00	5/8" - 11	22.60 (10.27)	RE74-200-*	5800 (400)
2-1/2"	A/RE74-250-*	4.65	6.75	2.38	5.00	2.50	5.00	9.25	2.50	3/4" - 10	41.88 (19.04)	RE74-250-*	5800 (400)
3"	A/RE74-300-*	5.71	8.00	2.88	6.00	3.00	6.00	11.00	3.00	1" - 8	74.19 (33.72)	RE74-300-*	5800 (400)
4"	A/RE74-400-*	6.89	8.50	3.50	7.00	3.50	7.00	12.00	3.50	1-1/8" - 7	107.60 (48.90)	RE74-400-*	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: A/RE74-200-SS

* Insert Material

A/REM74 – Retain Ring Elbow Assembly with G1/8 Port (Plugged), Metric

Size	Complete Assembly Part No.	Dimensions (mm)								Thread UNC-2B	Assembly WT lbs (kg)	Body Only Part No.	Working Pressure PSI (bar)
		T	C	D	E	F	H	L	K				
1-1/2"	A/REM74-150-*	85.1	139.7	38.1	88.9	44.5	88.9	184.2	44.5	M16 x 2.00	17.40 (7.90)	REM74-150-*	5800 (400)
2"	A/REM74-200-*	98.0	139.7	49.2	101.6	50.8	101.6	190.5	50.8	M16 x 2.00	22.60 (10.27)	REM74-200-*	5800 (400)
2-1/2"	A/REM74-250-*	118.1	171.5	60.5	127.0	63.5	127.0	234.9	63.5	M20 x 2.50	41.88 (19.04)	REM74-250-*	5800 (400)
3"	A/REM74-300-*	145.0	203.2	73.2	152.4	76.2	152.4	279.4	76.2	M24 x 3.00	74.19 (33.72)	REM74-300-*	5800 (400)
4"	A/REM74-400-*	175.0	215.9	88.9	177.8	88.9	177.8	304.8	88.9	M30 x 3.50	107.60 (48.90)	REM74-400-*	5800 (400)

*** Materials:**

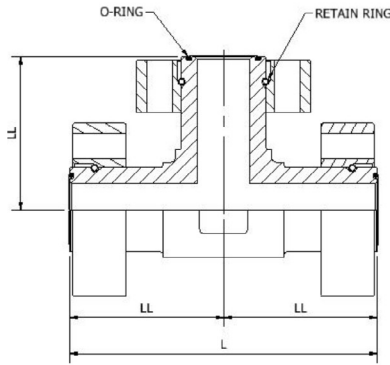
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: A/REM74-200-SS

* Insert Material

ISO 6164, 400 bar Retain Ring Flange Tee Complete Assembly

DIN 400 bar (ISO 6164)



Complete Flange Set Includes:

- One (1) Flange Elbow
- Three (3) Retain Ring Flanges
- Three (3) Retain Rings
- Three (3) Face O-Rings

To be Ordered Separately:

- Bolt Kit

A/RRFT - Retain Ring Flange Tee – Complete Assembly with Buna O-Ring

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L	LL					
1-1/2"	A/RRFT-150-FC74-*^-^	8.00 (203.0)	4.00 (101.6)	OR^-3-924	16.50 (7.50)	RRFT-150-*^-^	8.10 (3.76)	5800 (400)
2"	A/RRFT-200-FC74-*^-^	8.80 (223.5)	4.40 (111.8)	OR^-3-928	19.38 (8.81)	RRFT-200-*^-^	9.90 (4.44)	5800 (400)
2-1/2"	A/RRFT-250-FC74-*^-^	10.38 (263.7)	5.19 (131.8)	OR^-2-232	30.75 (13.98)	RRFT-250-*^-^	15.36 (6.97)	5800 (400)
3"	A/RRFT-300-FC74-*^-^	12.60 (320.0)	6.30 (160.0)	OR^-2-237	50.82 (23.10)	RRFT-300-*^-^	24.09 (10.95)	5800 (400)
4"	A/RRFT-400-FC74-*^-^	15.74 (399.8)	7.87 (200.0)	OR^-2-241	91.74 (41.70)	RRFT-400-*^-^	46.53 (21.15)	5800 (400)

Note:

3" and 4" are welded assemblies - Larger sizes are available upon request

Flange Options:

Standard with Clearance Holes

FC74 = 5800 PSI (400 bar) ISO 6164 Square 4-Bolt Flange

Materials:

No Designation = All Carbon Steel, Zinc Nickel Plated.

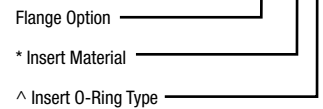
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

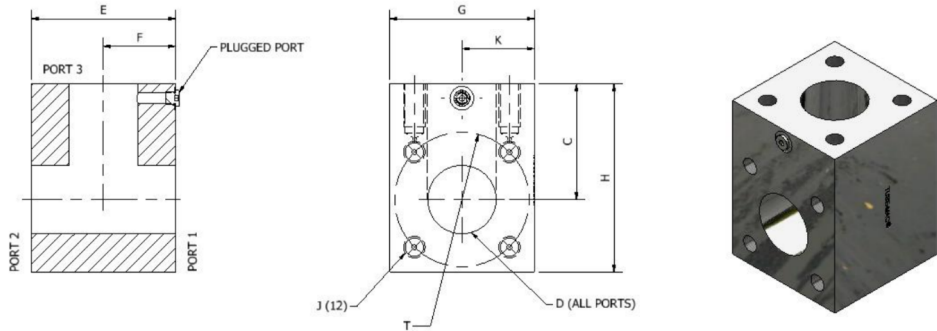
Ordering Example: A/RRFT-200-FC74-SS-V



3D step models available upon request

ISO 6164, 400 bar Block Tee with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BT74 – Block Tee with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Tee Part No	Dimensions (in)								J Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BT74-150-*	3.35	3.50	1.50	3.50	1.75	3.50	5.25	1.75	5/8" - 11	13.39 (6.08)	5800 (400)
2"	BT74-200-*	3.86	3.50	1.94	4.00	2.00	4.00	5.50	2.00	5/8" - 11	16.40 (7.45)	5800 (400)
2-1/2"	BT74-250-*	4.65	4.13	2.38	5.00	2.50	5.00	6.50	2.50	3/4" - 10	33.60 (15.27)	5800 (400)
3"	BT74-300-*	5.71	5.00	2.88	6.00	3.00	6.00	8.00	3.00	1" - 8	58.30 (26.50)	5800 (400)
4"	BT74-400-*	6.89	5.50	3.50	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	86.00 (39.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BT74-200-SS

* Insert Material _____

BTM74 – Block Tee with Flat Face, Threaded Holes with G 1/8" Port (Plugged), Metric

Size	Block Tee Part No	Dimensions (mm)								J Thread	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
1-1/2"	BTM74-150-*	85.1	88.9	38.1	88.9	44.5	88.9	133.4	44.5	M16x2.00	13.39 (6.08)	5800 (400)
2"	BTM74-200-*	98.0	88.9	49.2	101.6	50.8	101.6	139.7	50.8	M16x2.00	16.40 (7.45)	5800 (400)
2-1/2"	BTM74-250-*	118.1	104.9	60.5	127.0	63.5	127.0	165.1	63.5	M20x2.50	33.60 (15.27)	5800 (400)
3"	BTM74-300-*	145.0	127.0	73.2	152.4	76.2	152.4	202.3	76.2	M24x3.00	58.30 (26.50)	5800 (400)
4"	BTM74-400-*	175.0	139.7	88.9	177.8	88.9	177.8	228.6	88.9	M30x3.50	86.00 (39.10)	5800 (400)

*** Materials:**

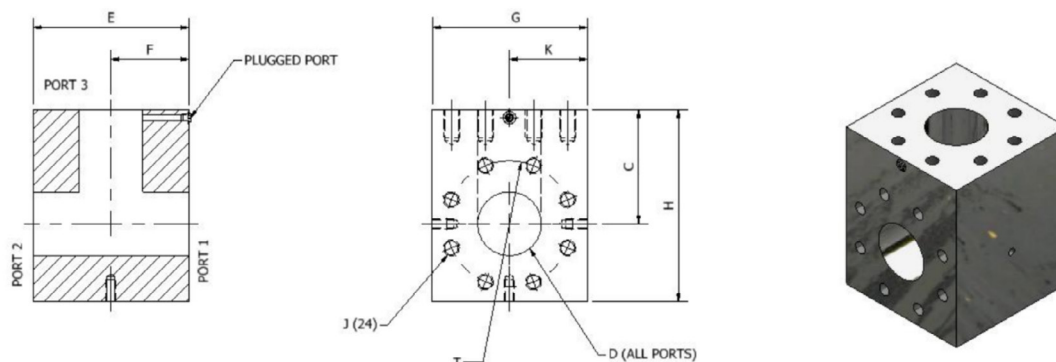
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTM74-200-SS

* Insert Material _____

Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt Flange Style



BT48 – Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No	Dimensions (in)								J Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
5"	BT48-500-*	8.07	7.13	4.00	9.75	4.88	9.75	12.00	4.88	1"-8	274.5 (124.8)	5000 (350)
6"	BT48-600-*	9.65	8.00	4.90	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BT48-800-290BC-*	11.42	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/8" - 7	990.0 (450.0)	5000 (350)
8"	BT48-800-*	12.40	10.25	6.81	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1007.0 (458.0)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BT48-600-SS

* Insert Material _____

BTM48 – Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No	Dimensions (mm)								J Thread Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	E	F	G	H	K			
4 1/2"	BTM48-450-*	175.0	160.0	100.0	214.0	107.0	214.0	267.0	107.0	M20 x 2.5	157.0 (71.4)	5000 (350)
5"	BTM48-500-*	205.0	181.1	101.6	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	274.5 (124.8)	5000 (350)
6"	BTM48-600-*	245.1	203.2	124.5	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	475.0 (216.0)	5000 (350)
8" ⁽¹⁾	BTM48-800-290BC-*	209.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	990.0 (450.0)	5000 (350)
8"	BTM48-800-*	315.0	260.4	173.0	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	1007.0 (458.0)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTM48-600-SS

* Insert Material _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

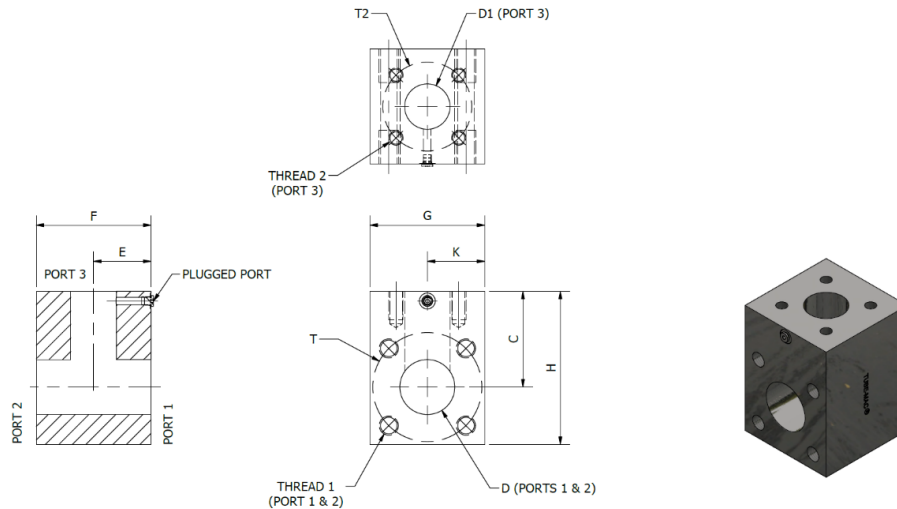
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

ISO 6164, 400 bar Reducing Branch Block Tee with Flat Face and Threaded Holes

DIN 400 bar (ISO 6164)



BTR74 – Reducing Branch Block Tee, Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Tee Part Number	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
2" x 1-1/2"	BTR74-200x150-*	3.86	3.35	3.50	1.94	1.50	4.00	2.00	4.00	5.50	2.00	5/8"- 11	5/8"- 11	16.40 (7.45)	5800 (400)
2-1/2" x 2"	BTR74-250x200-*	4.65	3.86	4.13	2.38	1.94	5.00	2.50	5.00	6.50	2.50	3/4"-10	5/8"- 11	33.60 (15.27)	5800 (400)
3" x 2 -1/2"	BTR74-300x250-*	5.71	4.65	5.00	2.88	2.38	6.00	3.00	6.00	8.00	3.00	1"-8	3/4"-10	58.30 (26.50)	5800 (400)
4" x 2-1/2"	BTR74-400x250-*	6.89	4.65	5.50	3.50	2.38	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	3/4"-10	93.40 (42.45)	5800 (400)
4" x 3"	BTR74-400x300-*	6.89	5.71	5.50	3.50	2.88	7.00	3.50	7.00	9.00	3.50	1-1/8" - 7	1"-8	92.60 (42.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

Ordering Example: BTR74-200-SS

* Insert Material _____

BTRM74 – Reducing Branch Block Tee, Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Tee Part Number	Dimensions (mm)										Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
2" x 1-1/2"	BTRM74-200x150-*	98.0	85.1	88.9	49.2	38.1	101.6	50.8	101.6	139.7	50.8	M16 x 2.00	M16 x 2.00	16.40 (7.45)	5800 (400)
2-1/2" x 2"	BTRM74-250-200*	118.1	98.0	104.9	60.5	49.2	127.0	63.5	127.0	165.1	63.5	M20 x 2.50	M16 x 2.00	33.60 (15.27)	5800 (400)
3" x 2-1/2"	BTRM74-300-250*	145.0	118.1	127.0	73.2	60.5	152.4	76.2	152.4	202.3	76.2	M24 x 3.00	M20 x 2.50	58.30 (26.50)	5800 (400)
4" x 2-1/2"	BTRM74-400-250*	175.0	118.1	139.7	88.9	60.5	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	M20 x 2.50	93.40 (42.45)	5800 (400)
4" x 3"	BTRM74-400-300*	175.0	145.0	139.7	88.9	73.2	177.8	88.9	177.8	228.6	88.9	M30 x 3.50	M24 x 3.00	92.60 (42.10)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

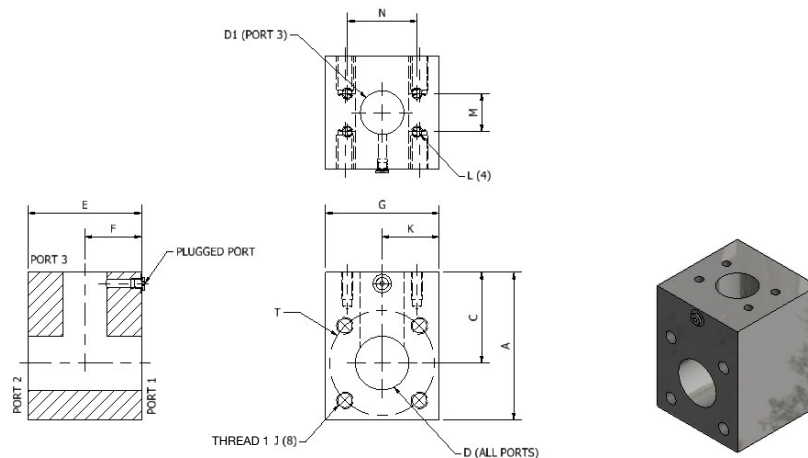
SS = Stainless Steel, Type 316.

Ordering Example: BTRM74-200-SS

* Insert Material _____

ISO 6164, 400 bar Reducing Branch Block Tee, Code 61

ISO 6164/SAE J518 Code 61 (ISO 6162-1) Flange Style



BTR7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-34-250x200-*	4.65	4.00	2.38	1.94	3.50	2.50	5.00	6.50	2.50	1.69	3.06	3/4"-10	1/2"-13	35.60 (16.15)	3000 (210)
3"x2"	BTR7-34-300x200-*	5.71	5.00	2.88	1.94	4.00	3.00	6.00	8.00	3.00	1.69	3.06	1"-8	1/2"-13	63.40 (28.76)	3000 (210)
4"x2"	BTR7-34-400x200-*	6.89	5.50	3.50	1.94	4.00	3.50	7.00	9.00	3.50	1.69	3.06	1-1/8"-7	1/2"-13	97.60 (44.27)	3000 (210)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR7-34-250x200-SS

* Insert Material

BTRM7-34 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-34-250x200-*	118.1	101.6	60.5	49.3	127.0	63.5	127.0	165.1	63.5	42.9	77.7	M20 x 2.50	M12 x 175	35.60 (16.15)	3000 (210)
3"x2"	BTRM7-34-300x200-*	145.0	127.0	73.2	49.3	152.4	76.2	152.4	203.2	76.2	42.9	77.7	M24 x 3.00	M12 x 175	63.40 (28.76)	3000 (210)
4"x2"	BTRM7-34-400x200-*	175.0	139.7	88.9	49.3	177.8	88.9	177.8	228.6	88.9	42.9	77.7	M30 x 3.50	M12 x 175	97.60 (44.27)	3000 (210)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTRM7-34-250x200-SS

* Insert Material

3D step models available upon request

TUBE-MAC.com

Introduction

Technical
Data

Pipe
Selection
Guide

16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

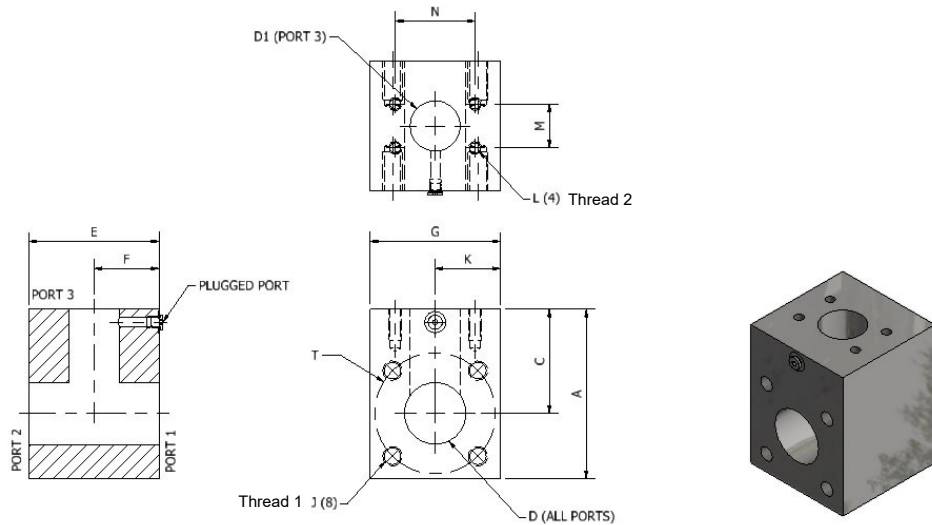
Clamp
Supports -
Heavy Series

Valves, Ball
and Check

J47

ISO 6164, 400 bar Reducing Branch Block Tee, Code 62

ISO 6164/SAE J518 Code 62 (ISO 6162-2) Flange Style



BTR7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with #4 SAE Port (Plugged), NPS

Size (run x branch)	Block Tee Part Number	Dimensions (in)											Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTR7-64-250x200-*	4.65	4.13	2.38	1.94	3.50	1.75	5.00	6.50	2.50	1.75	3.81	3/4"-10	3/4"-10	32.19 (14.60)	5800 (400)
3"x2"	BTR7-64-300x200-*	5.71	4.75	2.88	1.94	4.00	2.00	6.00	7.75	3.00	1.75	3.81	1"-8	3/4"-10	49.50 (22.45)	5800 (400)
4"x2"	BTR7-64-400x200-*	6.89	5.00	3.50	1.94	4.00	2.00	7.00	8.50	3.50	1.75	3.81	1-1/8"-7	3/4"-10	67.35 (30.55)	5800 (400)

Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR7-64-250x200-SS

* Insert Material

BTRM7-64 - Reducing Branch Block Tee Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (run x branch)	Block Tee Part Number	Dimensions (mm)											Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	H	K	M	N				
2-1/2"x2"	BTRM7-64-250x200-*	118.1	104.9	60.5	49.3	88.9	44.5	127.0	165.1	63.5	44.5	96.8	M20 x 2.50	M20 x 2.50	32.25 (14.63)	5800 (400)
3"x2"	BTRM7-64-300x200-*	145.0	120.7	73.2	49.3	101.6	50.8	152.4	196.9	76.2	44.5	96.8	M24 x 3.00	M20 x 2.50	49.60 (22.50)	5800 (400)
4"x2"	BTRM7-64-400x200-*	175.0	127.0	88.9	49.3	101.6	50.8	177.8	215.9	88.9	44.5	96.8	M30 x 3.50	M20 x 2.50	67.48 (30.61)	5800 (400)

Materials:

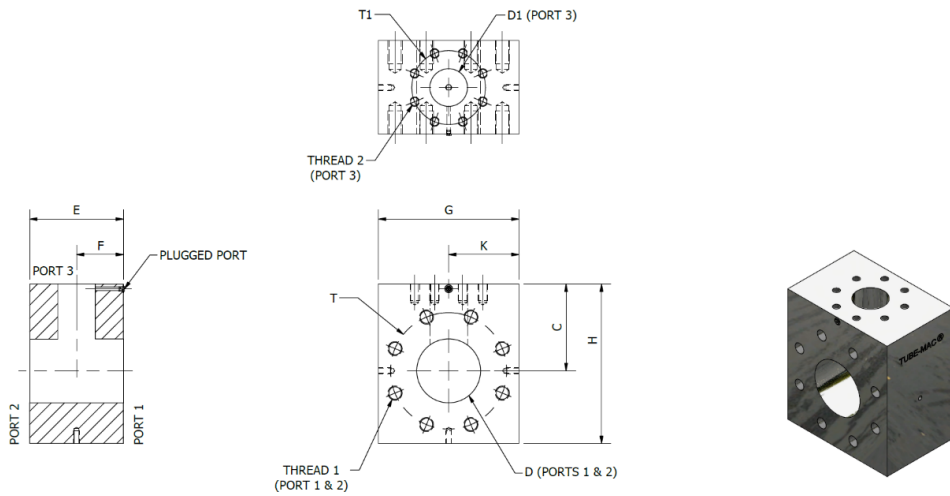
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTRM7-64-250x200-SS

* Insert Material

Reducing Branch Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt Flange Style



BTR48 – Reducer Branch Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No.	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
6" x 5"	BTR48-600x500-*	9.65	8.07	8.00	4.90	4.00	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1"-8	480.0 (218.2)	5000 (350)
8" ⁽¹⁾ x 5"	BTR48-800-290BCx500-*	11.42	8.07	10.25	6.81	4.00	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1"-8	999.0 (454.1)	5000 (350)
8" x 5"	BTR48-800x500-*	12.40	8.07	10.25	6.81	4.00	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1"-8	1015.0 (461.4)	5000 (350)
8" ⁽¹⁾ x 6"	BTR48-800-290BCx600-*	11.42	9.65	10.25	6.81	4.90	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1-1/8"-7	994.0 (451.8)	5000 (350)
8" x 6"	BTR48-800x600-*	12.40	9.65	10.25	6.81	4.90	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1011.0 (459.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: BTR48-600x500-SS

* Insert Material _____

BTRM48 – Reducer Branch Block Tee, TMI 8-Bolt with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No.	Dimensions (mm)										Thread 1 Metric	Thread 2 Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 4 1/2"	BTRM48-500x450-*	205.0	175.0	181.1	101.6	100.0	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M20 x 2.5	280.0 (127.4)	5000 (350)
6" x 5"	BTRM48-600x500-*	245.1	205.0	203.2	124.5	101.6	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M24 x 3.0	480.0 (218.2)	5000 (350)
8" ⁽¹⁾ x 5"	BTRM48-800-290BCx500-*	209.0	205.0	260.4	173.0	101.6	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M24 x 3.0	999.0 (454.1)	5000 (350)
8" x 5"	BTRM48-800x500-*	315.0	205.0	260.4	173.0	101.6	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M24 x 3.0	1015.0 (461.4)	5000 (350)
8" ⁽¹⁾ x 6"	BTRM48-800-290BCx600-*	209.0	245.1	260.4	173.0	124.5	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M30 x 4.0	994.0 (451.8)	5000 (350)
8" x 6"	BTRM48-800x600-*	315.0	245.1	260.4	173.0	124.5	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M30 x 4.0	1011.0 (459.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

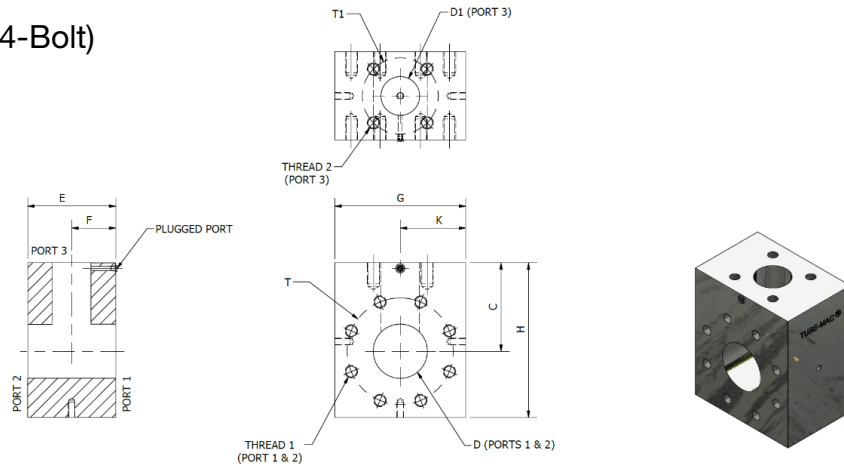
Ordering Example: BTRM48-600x500-SS

* Insert Material _____

3D step models available upon request

ISO 6164, 400 bar Reducing Branch Block Tee, TMI 8-Bolt with Flat Face and Threaded Holes

TMI 8-Bolt x ISO 6164 (4-Bolt)



BTR4-74 – Reducer Branch Block Tee, TMI 8-Bolt x ISO 6164 with Flat Face, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Block Elbow Part No.	Dimensions (in)										Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 3"	BTR4-74-500x300-*	8.07	5.71	7.13	4.00	2.88	9.75	4.88	9.75	12.00	4.88	1"-8	1"-8	295.0 (134.1)	5000 (350)
5" x 4"	BTR4-74-500x400-*	8.07	6.89	7.13	4.00	3.50	9.75	4.88	9.75	12.00	4.88	1"-8	1-1/8"-7	284.0 (129.1)	5000 (350)
6" x 3"	BTR4-74-600x300-*	9.65	5.71	8.00	4.90	2.88	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1"-8	499.0 (226.8)	5000 (350)
6" x 4"	BTR4-74-600x400-*	9.65	6.89	8.00	4.90	3.50	11.88	5.94	11.88	14.00	5.94	1-1/8"-7	1-1/8"-7	486.0 (220.9)	5000 (350)
8" ⁽¹⁾ x 4"	BTR4-74-800-290BCx400-*	11.42	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/8"-7	1-1/8"-7	999.0 (454.1)	5000 (350)
8" x 4"	BTR4-74-800x400-*	12.40	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1015.0 (461.4)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTR4-74-600x400-SS

* Insert Material _____

BTRM4-74 – Reducer Branch Block Tee, TMI 8-Bolt x ISO 6164 with Flat Face, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Block Elbow Part No.	Dimensions (mm)										Thread 1 Metric	Thread 2 Metric	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	F	G	H	K				
5" x 3"	BTRM4-74-500x300-*	205.0	145.0	181.1	101.6	73.2	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M24 x 3.0	295.0 (134.1)	5000 (350)
5" x 4"	BTRM4-74-500x400-*	205.0	175.0	181.1	101.6	88.9	247.7	124.0	247.7	304.8	124.0	M24 x 3.0	M30 x 3.5	284.0 (129.1)	5000 (350)
6" x 3"	BTRM4-74-600x300-*	245.0	145.0	203.2	124.5	73.2	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M24 x 3.0	499.0 (226.8)	5000 (350)
6" x 4"	BTRM4-74-600x400-*	245.0	175.0	203.2	124.5	88.9	301.8	150.9	301.8	355.6	150.9	M30 x 4.0	M30 x 3.5	486.0 (220.9)	5000 (350)
8" ⁽¹⁾ x 4"	BTRM4-74-800-290BCx400-*	209.0	175.0	260.4	173.0	88.9	393.7	196.9	393.7	457.2	196.9	M30 x 4.0	M30 x 3.5	999.0 (454.1)	5000 (350)
8" x 4"	BTRM4-74-800x400-*	315.0	175.0	260.4	173.0	88.9	393.7	196.9	393.7	457.2	196.9	M36 x 4.0	M30 x 3.5	1015.0 (461.4)	5000 (350)
8" x 4"	BTR4-74-800x400-*	12.40	6.89	10.25	6.81	3.50	15.00	7.50	15.00	18.00	7.50	1-1/2" - 6	1-1/8"-7	1015.0 (461.4)	5000 (350)

*** Materials:**

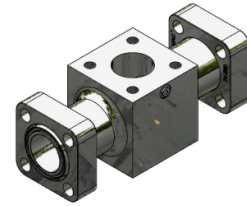
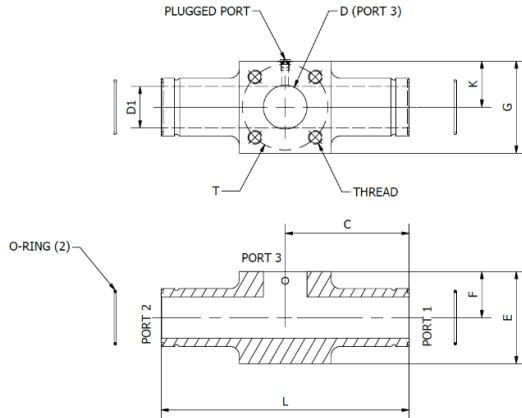
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: BTRM4-74-600x400-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Flange Tee Flat Face on the Branch, Complete Assembly

DIN 400 bar (ISO 6164)



A/RT74 – Retain Ring Flange Tee with ISO 6164 Flat Face on the Branch, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RT74-250-*-*^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	13.50	OR^~2-232	44.31 (20.2)	3/4"-10	RT74-250	34.05 (15.5)	5800 (400)
3"	A/RT74-300-*-*^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	16.00	OR^~2-237	66.58 (30.7)	1"-8	RT74-300	48.76 (22.2)	5800 (400)
4"	A/RT74-400-*-*^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	17.00	OR^~2-241	115.88 (52.7)	1-1/8" - 7	RT74-400	85.74 (39.0)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/RT74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

A/RTM74 – Retain Ring Flange Tee with ISO 6164 Flat Face on the Branch, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RTM74-250-*-*^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	342.9	OR^~2-232	44.31 (20.2)	M20 x 2.50	RTM74-250	34.05 (15.5)	5800 (400)
3"	A/RTM74-300-*-*^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	406.4	OR^~2-237	66.58 (30.7)	M24 x 3.00	RTM74-300	48.76 (22.2)	5800 (400)
4"	A/RTM74-400-*-*^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	431.8	OR^~2-241	115.88 (52.7)	M30 x 3.50	RTM74-400	85.74 (39.0)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

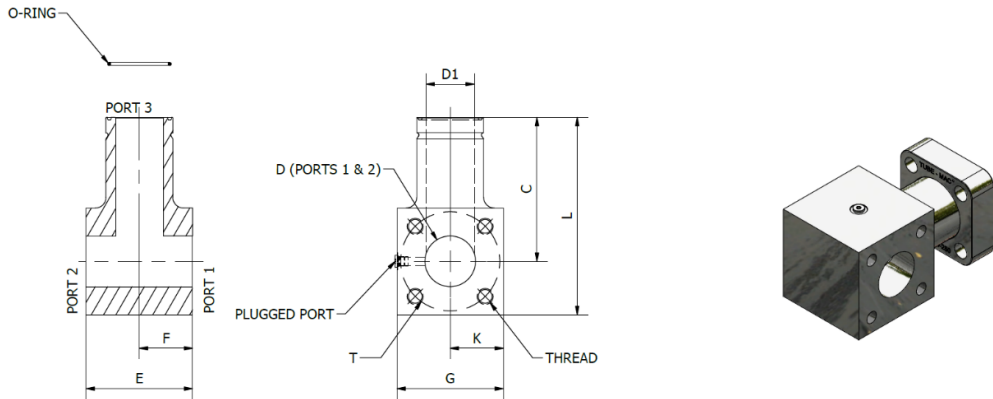
Ordering Example: A/RTM74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Branch Tee Flat Face on the Runs, Complete Assembly

DIN 400 bar (ISO 6164)



A/RBT74 – Retain Ring Flange Branch Tee with ISO 6164 Flat Face on the Runs, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RBT74-250-*^-^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	9.25	OR^-2-232	35.23 (16.0)	3/4"-10	RBT74-250	30.10 (13.7)	5800 (400)
3"	A/RBT74-300-*^-^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	11.00	OR^-2-237	49.27 (22.4)	1"-8	RBT74-300	40.36 (18.3)	5800 (400)
4"	A/RBT74-400-*^-^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	12.00	OR^-2-241	81.43 (37.0)	1-1/8" - 7	RBT74-400	66.36 (30.2)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/RBT74-200-SS-V

*Insert Material _____
^ Insert O-Ring Type _____

A/RBTM74 – Retain Ring Flange Branch Tee with ISO 6164 Flat Face on the Runs, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RBTM74-250-*^-^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	235.0	OR^-2-232	35.23 (16.0)	M20 x 2.50	RBTM74-250	30.10 (13.7)	5800 (400)
3"	A/RBTM74-300-*^-^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	279.4	OR^-2-237	49.27 (22.4)	M24 x 3.00	RBTM74-300	40.36 (18.3)	5800 (400)
4"	A/RBTM74-400-*^-^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	304.8	OR^-2-241	81.43 (37.0)	M30 x 3.50	RBTM74-400	66.36 (30.2)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

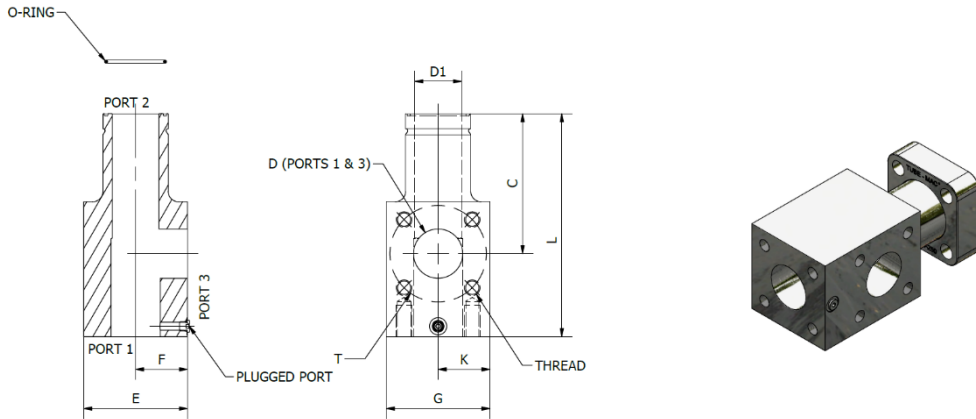
Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: A/RBTM74-200-SS-V

*Insert Material _____
^ Insert O-Ring Type _____

ISO 6164, 400 bar Retain Ring Flange Run Tee Flat Face on the Run and Branch, Complete Assembly

DIN 400 bar (ISO 6164)



A/RRT74 – Retain Ring Flange Run Tee with ISO 6164 Flat Face on the Run and Branch, Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Complete Assembly Part Number	Dimensions (in)									O-ring Part Number	WT lbs (kg)	Thread UNC-2B	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RRT74-250-*^-^	4.65	6.75	2.38	2.25	5.00	2.50	5.00	2.50	10.75	OR^-2-232	42.26 (19.2)	3/4"-10	RRT74-250	37.13 (16.9)	5800 (400)
3"	A/RRT74-300-*^-^	5.71	8.00	2.88	2.75	6.00	3.00	6.00	3.00	13.00	OR^-2-237	73.87 (33.6)	1"-8	RRT74-300	64.96 (29.5)	5800 (400)
4"	A/RRT74-400-*^-^	6.89	8.50	3.50	3.25	7.00	3.50	7.00	3.50	14.00	OR^-2-241	110.26 (50.1)	1-1/8" - 7	RRT74-400	95.19 (43.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: A/RRT74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

A/RRTM74 – Retain Ring Flange Run Tee with ISO 6164 Flat Face on the Run and Branch, Threaded Holes and G1/8 Port (Plugged), Metric

Size	Complete Assembly Part Number	Dimensions (mm)									O-ring Part Number	WT lbs (kg)	Thread	Body only Part Number	Body WT lbs (kg)	Working Pressure PSI (bar)
		T	C	D	D1	E	F	G	K	L						
2-1/2"	A/RRTM74-250-*^-^	118.1	171.5	60.5	57.2	127.0	63.5	127.0	63.5	235.0	OR^-2-232	42.26 (19.2)	M20 x 2.50	RRTM74-250	37.13 (16.9)	5800 (400)
3"	A/RRTM74-300-*^-^	145.0	203.2	73.2	69.9	152.4	76.2	152.4	76.2	279.4	OR^-2-237	73.87 (33.6)	M24 x 3.00	RRTM74-300	64.96 (29.5)	5800 (400)
4"	A/RRTM74-400-*^-^	175.0	215.9	88.9	82.6	177.8	88.9	177.8	88.9	304.8	OR^-2-241	110.26 (50.1)	M30 x 3.50	RRTM74-400	95.19 (43.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated
 SS = Stainless Steel, Type 316. Body Only

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

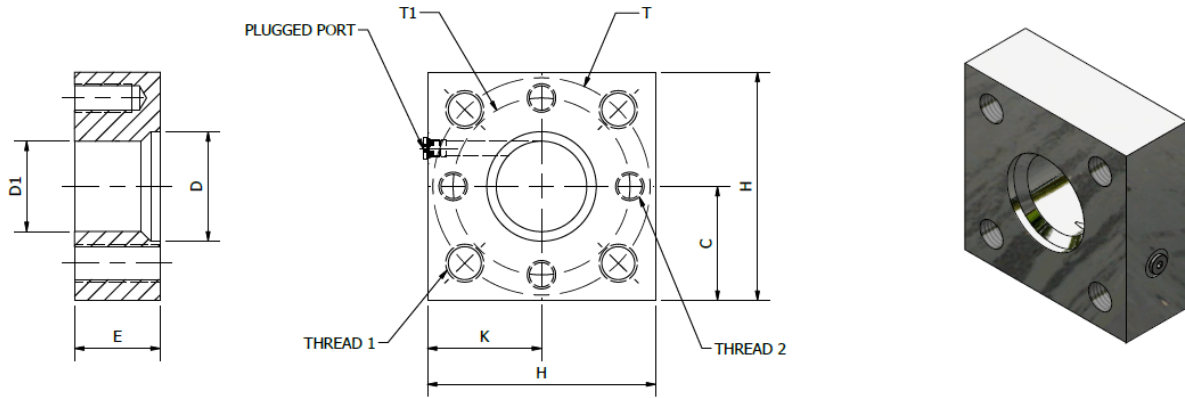
Ordering Example: A/RRTM74-200-SS-V

*Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Transition Plate Reducer

DIN 400 bar (ISO 6164) Flange Union Style



TPR74 Transition Plate Reducer – ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K				
2" x 1-1/2"	TPR74-200x150-*	3.86	3.35	2.00	1.94	1.50	2.00	4.00	2.00	5/8"-11	5/8"-11	11.5 (5.2)	5800 (400)
2-1/2" x 2"	TPR74-250x200-*	4.65	3.86	2.50	2.38	1.94	2.00	5.00	2.50	3/4"-10	5/8"-11	12.9 (5.7)	5800 (400)
3" x 2"	TPR74-300x200-*	5.71	3.86	3.00	2.88	1.94	2.25	6.00	3.00	1"-8	5/8"-11	17.40 (7.9)	5800 (400)
3" x 2-1/2"	TPR74-300x250-*	5.71	4.65	3.00	2.88	2.38	2.25	6.00	3.00	1"-8	3/4"-10	16.63 (7.6)	5800 (400)
4" x 2-1/2"	TPR74-400x250-*	6.89	4.65	3.50	3.50	2.38	2.25	7.00	3.50	1 1/8"-7	3/4"-10	24.10 (11.0)	5800 (400)
4" x 3"	TPR74-400x300-*	6.89	5.71	3.75	3.50	2.88	2.50	7.50	3.75	1 1/8" - 7	1" - 8	30.70 (13.9)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPR74-200x150-SS

* Insert Material _____

TPRM74 Transition Plate Reducer - ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K				
2" x 1-1/2"	TPRM74-200x150-*	98.0	85.1	50.8	49.3	38.1	50.8	101.6	50.8	M16x2.0	M16x2.0	11.5 (5.2)	5800 (400)
2-1/2" x 2"	TPRM74-250x200-*	118.1	98.0	63.5	60.5	49.3	50.8	127.0	63.5	M20 x2.5	M16x2.0	12.9 (5.7)	5800 (400)
3" x 2"	TPRM74-300x200-*	145.0	98.0	76.2	73.2	49.3	57.2	152.4	76.2	M24 x 3.0	M16x2.0	17.40 (7.9)	5800 (400)
3" x 2-1/2"	TPRM74-300x250-*	145.0	118.1	76.2	73.2	60.5	57.2	152.4	76.2	M24 x 3.0	M20 x2.5	16.63 (7.6)	5800 (400)
4" x 2-1/2"	TPRM74-400x250-*	175.0	118.1	88.9	88.9	60.5	57.2	177.8	88.9	M30 x 3.5	M20 x2.5	24.10 (11.0)	5800 (400)
4" x 3"	TPRM74-400x300-*	175.0	145.0	95.3	88.9	73.2	63.5	190.5	95.3	M30 x 3.5	M24 x3.0	30.70 (13.9)	5800 (400)

*** Materials:**

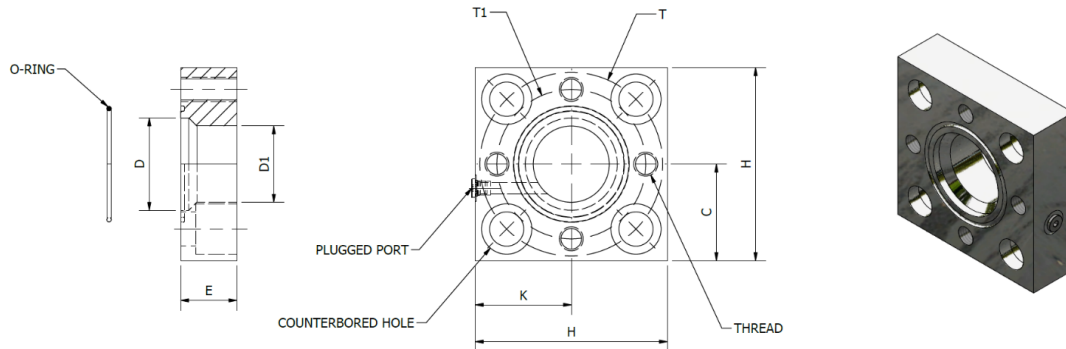
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPRM74-200x150-SS

* Insert Material _____

ISO 6164, 400 bar Transition Plate Reducer

DIN 400 bar (ISO 6164) Flange Manifold Mount Style



TPR074 Transition Plate Reducer – ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K					
2" x 1-1/2"	TPR074-200x150-*~^	3.86	3.35	2.00	1.94	1.50	1.50	4.00	2.00	5/8"	5/8"-11	OR-3-928	4.91 (2.2)	5800 (400)
2-1/2" x 2"	TPR074-250x200-*~^	4.65	3.86	2.50	2.38	1.94	1.50	5.00	2.50	3/4"	5/8"-11	OR-2-232	6.60 (3.0)	5800 (400)
3" x 2"	TPR074-300x200-*~^	5.71	3.86	3.00	2.88	1.94	2.25	6.00	3.00	1" - 8	5/8"-11	OR-2-237	11.74 (5.3)	5800 (400)
3" x 2-1/2"	TPR074-300x250-*~^	5.71	4.65	3.00	2.88	2.38	2.25	6.00	3.00	1" - 8	3/4"-10	OR-2-237	11.27 (5.1)	5800 (400)
4" x 2-1/2"	TPR074-400x250-*~^	6.89	4.65	3.50	3.50	2.38	2.25	7.00	3.50	1 1/8"	3/4"-10	OR-2-241	12.26 (5.6)	5800 (400)
4" x 3"	TPR074-400x300-*~^	6.89	5.71	3.75	3.50	2.88	2.50	7.50	3.75	1 1/8"	1" - 8	OR-2-241	21.39 (9.7)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPR074-200x150-SS-V
 * Insert Material _____
 ^ Insert O-Ring Type _____

TPROM74 Transition Plate Reducer - ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	C	D	D1	E	H	K					
2" x 1-1/2"	TPROM74-200x150-*~^	98.0	85.1	50.8	49.3	38.1	38.1	101.6	50.8	M16	M16x2.0	OR-3-928	4.91 (2.2)	5800 (400)
2 -1/2" x 2"	TPROM74-250x200-*~^	118.1	98.0	63.5	60.5	49.3	38.1	127.0	63.5	M20	M16x2.0	OR-2-232	6.60 (3.0)	5800 (400)
3" x 2"	TPROM74-300x200-*~^	145.0	98.0	76.2	73.2	49.3	57.2	152.4	76.2	M24	M16x2.0	OR-2-237	11.74 (5.3)	5800 (400)
3" x 2-1/2"	TPROM74-300x250-*~^	145.0	118.1	76.2	73.2	60.5	57.2	152.4	76.2	M24	M20 x2.5	OR-2-237	11.27 (5.1)	5800 (400)
4" x 2-1/2"	TPROM74-400x250-*~^	175.0	118.1	88.9	88.9	60.5	57.2	177.8	88.9	M30	M20 x2.5	OR-2-241	12.26 (5.6)	5800 (400)
4" x 3"	TPROM74-400x300-*~^	175.0	145.0	95.3	88.9	73.2	63.5	190.5	95.3	M30	M24 x3.0	OR-2-241	21.39 (9.7)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPROM74-200x150-SS-V
 * Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

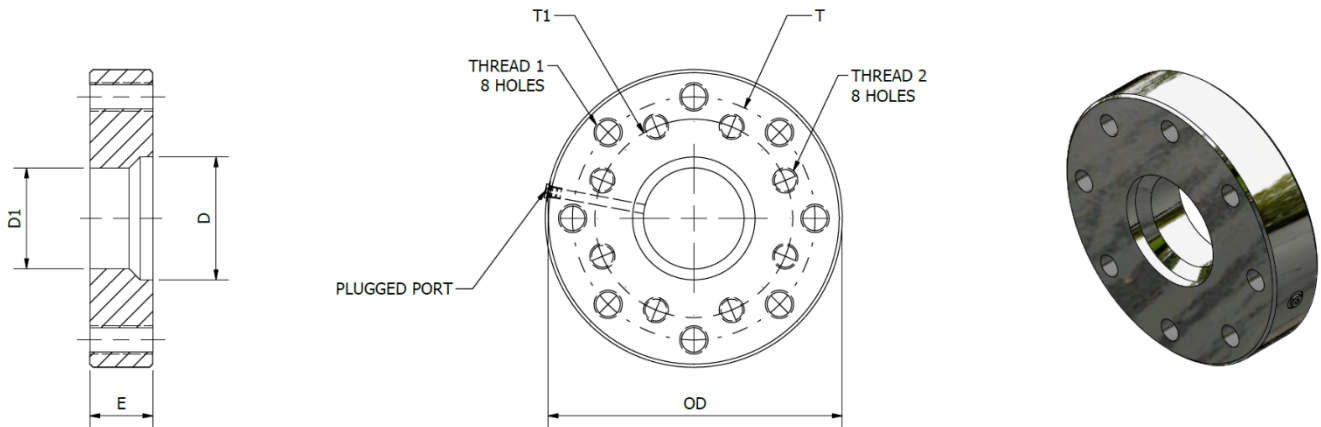
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

Transition Plate Reducer, TMI 8-Bolt

5000 PSI (350 bar) Flange Union Style



TPR48 Transition Plate Reducer – TMI 8-Bolt Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4-1/2"	TPR48-500x450-*	8.07	6.89	4.00	3.94	9.88	2.00	1"-8	3/4"-10	35.50 (16.1)	5000 (350)
6" x 4-1/2"	TPR48-600x450-*	9.65	6.89	4.90	3.94	11.81	2.50	1-1/8"-7	3/4"-10	62.90 (28.6)	5000 (350)
6" x 5"	TPR48-600x500-*	9.65	8.07	4.90	4.00	11.81	2.50	1-1/8"-7	1"-8	59.10 (26.9)	5000 (350)
8" x 5"	TPR48-800x500-*	12.40	8.07	6.81	4.00	15.50	2.50	1-1/2"-6	1"-8	132.19 (60.1)	5000 (350)
8" x 6"	TPR48-800x600-*	12.409	9.65	6.81	4.90	15.50	2.50	1-1/2"-6	1 1/8"-7	104.53 (47.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPR48-600x500-SS

* Insert Material _____

TPRM48 Transition Plate Reducer – TMI 8-Bolt Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4-1/2"	TPRM48-500x450-*	205.0	175.0	101.6	100.0	250.0	50.8	M24 x 3.0	M20 x 2.5	35.50 (16.1)	5000 (350)
6" x 4-1/2"	TPRM48-600x450-*	245.0	175.0	124.5	100.0	300.0	63.5	M30 x 3.5	M20 x 2.5	62.90 (28.6)	5000 (350)
6" x 5"	TPRM48-600x500-*	245.0	205.0	124.5	101.6	300.0	63.5	M30 x 3.5	M24 x 3.0	59.10 (26.9)	5000 (350)
8" x 5"	TPRM48-800x500-*	315.0	205.0	173.0	101.6	394.0	63.5	M36 x 4.0	M24 x 3.0	132.19 (60.1)	5000 (350)
8" x 6"	TPRM48-800x600-*	315.0	245.0	173.0	124.5	394.0	63.5	M36 x 4.0	M30 x 3.5	104.53 (47.5)	5000 (350)

*** Materials:**

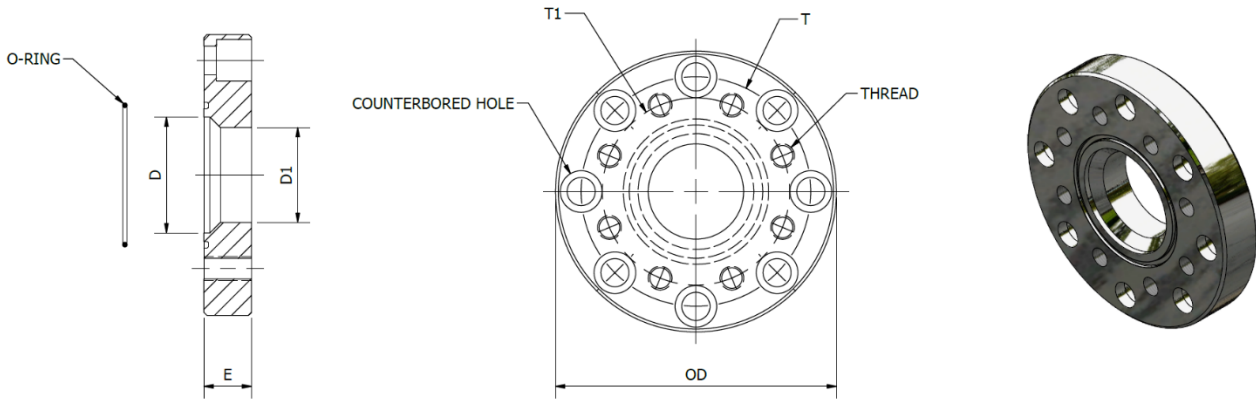
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = All Stainless Steel, Type 316.

Ordering Example: TPRM48-600x500-SS

* Insert Material _____

Transition Plate Reducer, TMI 8-Bolt

5000 PSI (350 bar) Flange Manifold Mount Style



TPRO48 Transition Plate Reducer – TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	C'Tbore Bolt	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4 1/2"	TPRO48-500x450-*^-^	8.07	6.89	4.00	3.94	9.88	2.00	1"	3/4"-10	OR^-2-353	32.91 (15.0)	5000 (350)
6" x 4 1/2"	TPRO48-600x450-*^-^	9.65	6.89	4.90	3.94	11.81	2.50	1 1/8"	3/4"-10	OR^-2-359	46.20 (21.0)	5000 (350)
6" x 5"	TPRO48-600x500-*^-^	9.65	8.07	4.90	4.00	11.81	2.00	1 1/8"	1"-8	OR^-2-359	42.00 (19.1)	5000 (350)
8" x 5"	TPRO48-800x500-*^-^	12.401	8.07	6.81	4.00	15.50	3.00	1 1/2"	1"-8	OR^-2-368	120.30 (54.7)	5000 (350)
8" x 6"	TPRO48-800x600-*^-^	12.40	9.65	6.81	4.90	15.50	2.50	1 1/2"	1 1/8"-7	OR^-2-368	93.81 (42.6)	5000 (350)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO48-600x500-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

TPROM48 Transition Plate Reducer – TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	C'Tbore Bolt	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4 1/2"	TPROM48-500x450-*^-^	205.0	175.0	101.6	100.0	250.0	50.8	M24	M20x2.5	OR^-2-353	32.91 (15.0)	5000 (350)
6" x 4 1/2"	TPROM48-600x450-*^-^	245.1	175.0	124.5	100.0	300.0	63.5	M30	M20x2.5	OR^-2-359	46.20 (21.0)	5000 (350)
6" x 5"	TPROM48-600x500-*^-^	245.1	205.0	124.5	101.6	300.0	50.8	M30	M24x3.0	OR^-2-359	42.00 (19.1)	5000 (350)
8" x 5"	TPROM48-800x500-*^-^	315.0	205.0	173.0	101.6	393.7	76.2	M36	M24 x3.0	OR^-2-368	120.30 (54.7)	5000 (350)
8" x 6"	TPROM48-800x600-*^-^	315.0	245.0	173.0	124.5	393.7	63.5	M36	M30 x3.5	OR^-2-368	93.81 (42.6)	5000 (350)

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

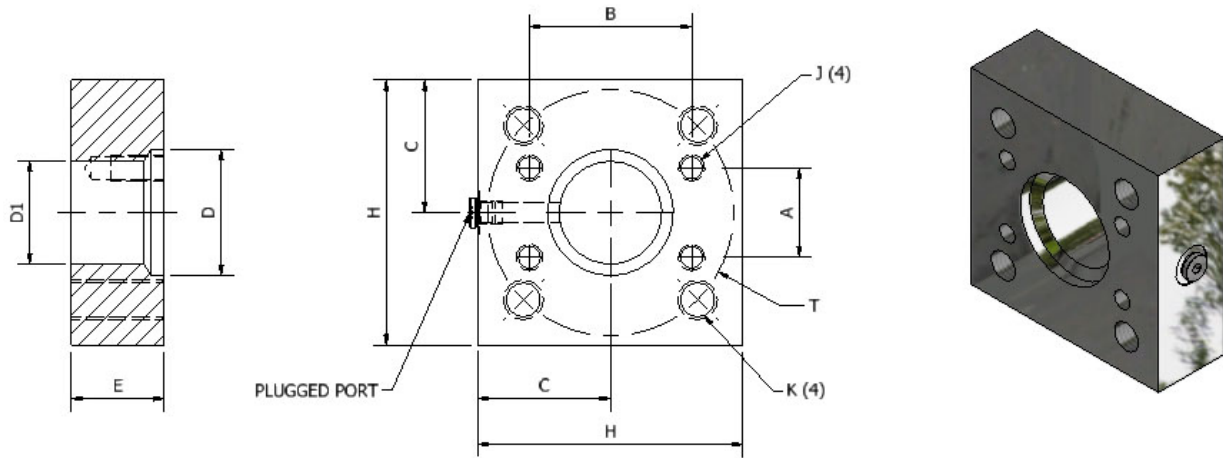
Ordering Example: TPROM48-600x500-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Union Style



TPR7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 61)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-34-250x150-*	4.65	1.41	2.75	2.50	2.38	1.50	1.75	5.00	3/4"-10	1/2"-13	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPR7-34-250x200-*	4.65	1.69	3.06	2.50	2.38	1.94	1.75	5.00	3/4"-10	1/2"-13	10.30 (4.67)	3000 (210)
3" x 2"	TPR7-34-300x200-*	5.71	1.69	3.06	3.00	2.88	1.94	2.00	6.00	1"-8	1/2"-13	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPR7-34-300x250-*	5.71	2.00	3.50	3.00	2.88	2.38	2.00	6.00	1"-8	1/2"-13	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPR7-34-400x250-*	6.89	2.00	3.50	3.50	3.50	2.38	2.00	7.00	1-1/8"-7	1/2"-13	22.70 (10.30)	2500 (175)
4" x 3"	TPR7-34-400x300-*	6.89	2.44	4.19	3.50	3.50	2.88	2.00	7.00	1-1/8"-7	5/8"-11	22.20 (10.07)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPR7-34-250x150-SS

* Insert Material _____

TPRM7-34 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x ISO 6162-1)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-34-250x150-*	118.1	35.8	69.9	63.5	60.5	38.1	44.5	127.0	M20 x 2.50	M12 x 1.75	10.40 (4.72)	3000 (210)
2-1/2" x 2"	TPRM7-34-250x200-*	118.1	42.9	77.7	63.5	60.5	49.3	44.5	127.0	M20 x 2.50	M12 x 1.75	10.30 (4.67)	3000 (210)
3" x 2"	TPRM7-34-300x200-*	145.0	42.9	77.7	76.2	73.2	49.3	50.8	152.4	M24 x 3.00	M12 x 1.75	16.50 (7.48)	3000 (210)
3" x 2-1/2"	TPRM7-34-300x250-*	145.0	50.8	88.9	76.2	73.2	60.5	50.8	152.4	M24 x 3.00	M12 x 1.75	15.50 (7.03)	2500 (175)
4" x 2-1/2"	TPRM7-34-400x250-*	175.0	50.8	88.9	88.9	88.9	60.5	50.8	177.8	M30 x 3.50	M12 x 1.75	22.70 (10.30)	2500 (175)
4" x 3"	TPRM7-34-400x300-*	175.0	62.0	106.4	88.9	88.9	73.2	50.8	177.8	M30 x 3.50	M16 x 2.00	22.20 (10.07)	2000 (140)

*** Materials:**

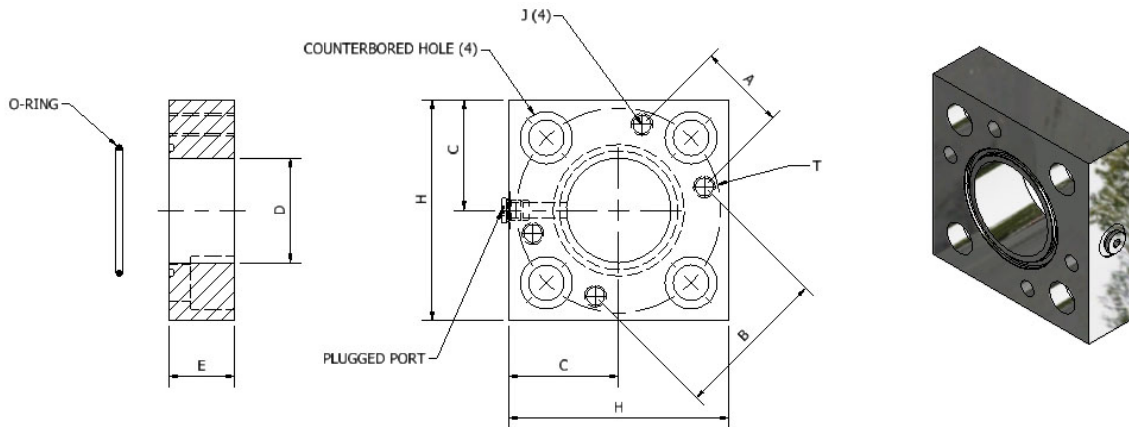
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPRM7-34-250x150-SS

* Insert Material _____

ISO 6164, 400 bar Transition Plate

ISO 6164/SAE Code 61 (ISO6164/6162-1) Flange Manifold Mount Style



TPO7-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size	Transition Plate Part Number	Dimensions (in)							C'T Bore Bolt	Thread UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TP07-34-250-*^-^	2.00	3.50	2.50	2.38	1.50	5.00	4.65	3/4"	1/2"-13	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TP07-34-300-*^-^	2.44	4.19	3.00	2.88	1.75	6.00	5.71	1"	5/8"-11	OR^-2-237	10.85 (4.92)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

Ordering Example: TP07-34-250-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

TPOM7-34 - Transition Plate O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size	Transition Plate Part Number	Dimensions (mm)							C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		A	B	C	D	E	H	T					
2-1/2"	TPOM7-34-250-*^-^	50.8	88.9	63.5	60.5	31.8	127.0	118.1	M20	M12 x 1.75	OR^-2-232	5.50 (2.49)	2500 (175)
3"	TPOM7-34-300-*^-^	62.0	106.4	76.2	73.2	44.5	152.4	145.0	M24	M16 x 2.00	OR^-2-237	10.85 (4.92)	2000 (140)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.

V = Viton.

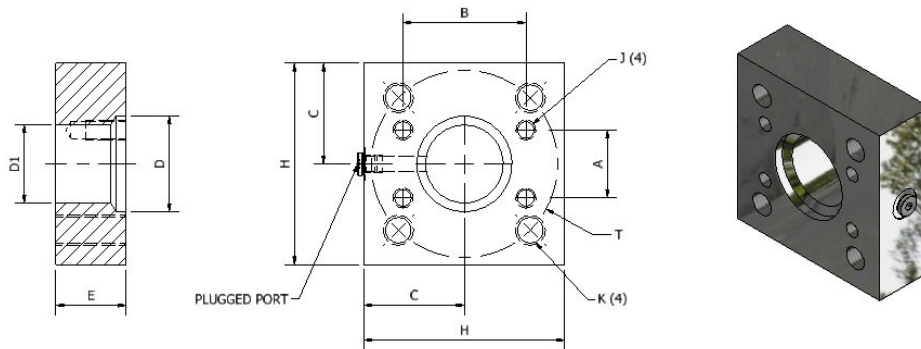
Ordering Example: TPOM7-34-250-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/6162-2) Flange Union Style



TPR7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete With #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPR7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"-10	5/8"-11	11.46 (5.20)	5800 (400)
2-1/2" x 2"	TPR7-64-250x200-*	4.65	1.75	3.81	3.00	2.38	1.94	1.50	6.00	3/4"-10	3/4"-10	8.65 (3.92)	5800 (400)
3" x 2"	TPR7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"-8	3/4"-10	17.80 (8.07)	5800 (400)
4" x 2"	TPR7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	1 1/8"-7	3/4"-10	25.54 (11.58)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPR7-64-250x150-SS

* Insert Material _____

TPRM7-64 - Transition Plate Reducer Flat Face with Threaded Holes Complete with G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H				
2-1/2" x 1-1/2"	TPRM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20 x 2.50	M16 x 2.00	11.49 (5.21)	5800 (400)
2-1/2" x 2"	TPRM7-64-250x200-*	118.1	44.5	96.8	76.2	60.5	49.3	38.1	152.4	M20 x 2.50	M20 x 2.50	8.66 (3.93)	5800 (400)
3" x 2"	TPRM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24 x 3.00	M20 x 2.50	17.84 (8.09)	5800 (400)
4" x 2"	TPRM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30 x 3.50	M20 x 2.50	25.60 (11.61)	5800 (420)

*** Materials:**

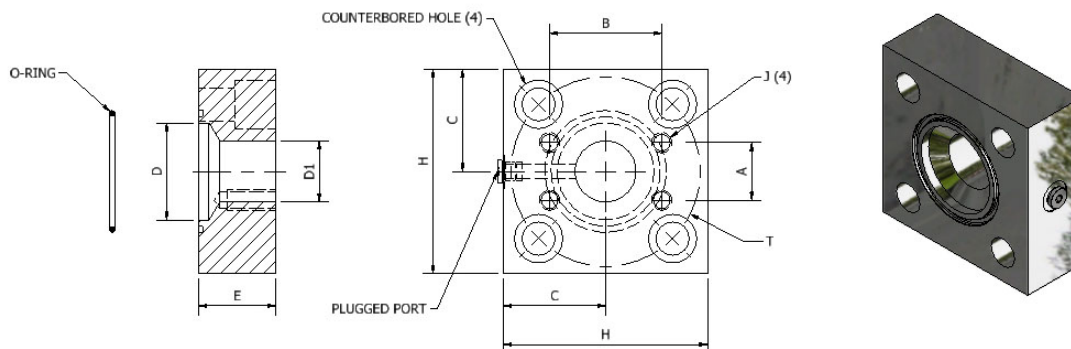
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPRM7-64-250x150-SS

* Insert Material _____

ISO 6164, 400 bar Transition Plate Reducer

ISO 6164/SAE Code 62 (ISO 6164/6162/2) Flange Manifold Mount Style



TPRO7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and #4 SAE Port (Plugged), NPS

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (in)								C'T Bore Bolt	Thread C'T Bore Bolt UNC-2B	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPRO7-64-250x150-*	4.65	1.44	3.13	2.50	2.38	1.50	2.00	5.00	3/4"	5/8"-11	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPRO7-64-300x200-*	5.71	1.75	3.81	3.00	2.88	1.94	2.25	6.00	1"	3/4"-10	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPRO7-64-400x200-*	6.89	1.75	3.81	3.50	3.50	1.94	2.25	7.00	1-1/8"	3/4"-10	OR^-2-241	23.09 (10.50)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPRO7-64-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

TPROM7-64 - Transition Plate Reducer O-Ring Face with Counterbored Holes Complete with Buna O-Ring and G1/8 Port (Plugged), Metric

Size (ISO 6164 x SAE Code 62)	Reducer Part Number	Dimensions (mm)								C'T Bore Bolt	Thread	O-Ring (Buna) Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	A	B	C	D	D1	E	H					
2-1/2" x 1-1/2"	TPROM7-64-250x150-*	118.1	36.6	79.5	63.5	60.5	38.1	50.8	127.0	M20	M16 x 2.00	OR^-2-232	10.61 (4.82)	5800 (400)
3" x 2"	TPROM7-64-300x200-*	145.0	44.5	96.8	76.2	73.2	49.3	57.2	152.4	M24	M20 x 2.50	OR^-2-237	16.05 (7.30)	5800 (400)
4" x 2"	TPROM7-64-400x200-*	175.0	44.5	96.8	88.9	88.9	49.3	57.2	177.8	M30	M20 x 2.50	OR^-2-241	23.09 (10.50)	5800 (420)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

Ordering Example: TPROM7-64-250x150-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

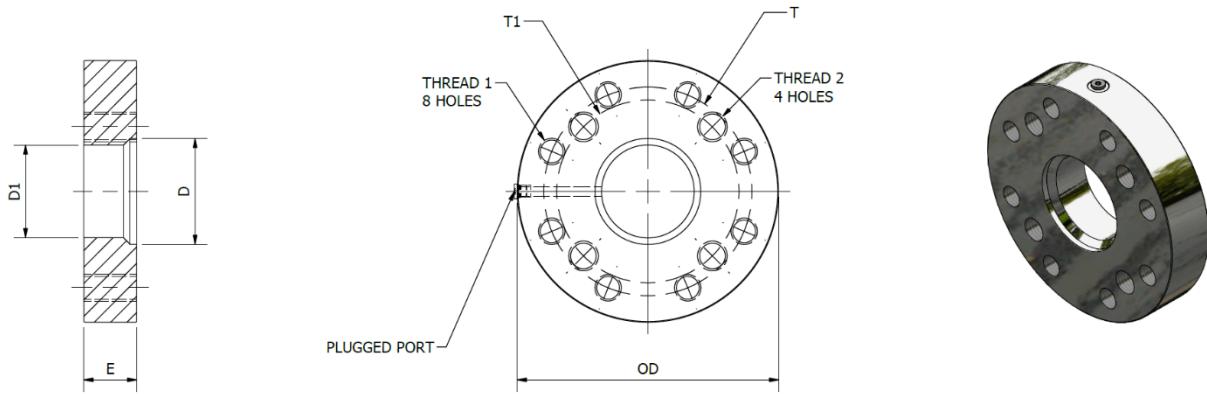
Clamp Supports - Heavy Series

Valves, Ball and Check

J61

Transition Plate Reducer, TMI 8-Bolt/ISO 6164

5000 PSI (350 bar) Flange Union Style



TPR4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
5" x 4"	TPR4-74-500x400-*	8.07	6.89	4.00	3.50	9.88	2.00	1" - 8	1-1/8"-7	31.67 (14.4)	5000 (350)
6" x 4"	TPR4-74-600x400-*	9.65	6.89	4.90	3.50	11.81	2.00	1 1/8"-7	1-1/8"-7	52.19 (23.7)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPR4-74-500x400-SS

* Insert Material _____

TPRM4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
4-1/2" x 3"	TPRM4-74-450x300-*	175.0	145.0	100.0	73.0	216.0	63.5	M20 x 2.5	M24 x 3.0	29.90 (13.6)	5000 (350)
4-1/2" x 4"	TPRM4-74-450x400-*	175.0	175.0	100.0	88.9	216.0	50.8	M20 x 2.5	M30 x 3.5	28.40 (12.9)	5000 (350)
5" x 4"	TPRM4-74-500x400-*	205.0	175.0	101.6	88.9	250.9	50.8	M24 x 3.0	M30 x 3.5	31.67 (14.4)	5000 (350)
6" x 4"	TPRM4-74-600x400-*	245.0	175.0	124.5	88.9	300.0	50.8	M30 x 3.5	M30 x 3.5	52.19 (23.7)	5000 (350)

*** Materials:**

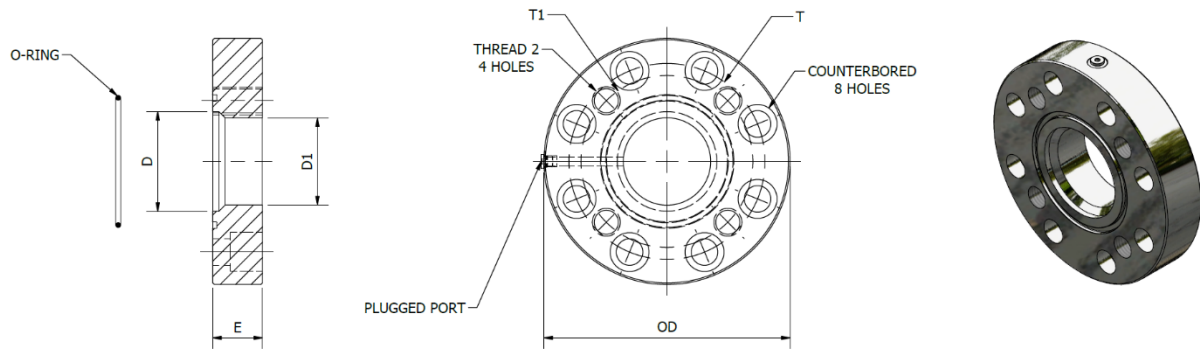
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

Ordering Example: TPRM4-74-500x400-SS

* Insert Material _____

Transition Plate Reducer, TMI 8-Bolt/ISO 6164

5000 PSI (350 bar) Flange Manifold Mount Style



TPRO4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
5" x 4"	TPRO4-74-500x400-*^-^	8.07	6.89	4.00	3.50	9.88	2.00	1"	1-1/8"-7	OR^-2-353	28.70 (13.0)	5000 (350)
6" x 4"	TPRO4-74-600x400-*^-^	9.65	6.89	4.90	3.50	11.81	3.00	1-1/8"	1-1/8"-7	OR^-2-359	56.20 (25.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

Ordering Example: TPRO4-74-600x400-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

TPROM4-74 Transition Plate Reducer – TMI 8-Bolt/ISO 6164 O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
4-1/2" x 3"	TPROM4-74-450x300-*^-^	175.0	145.0	100.0	73.0	216.0	63.5	M20	M24x3.0	OR^-2- 245	27.60 (12.5)	5000 (350)
4-1/2" x 4"	TPROM4-74-450x400-*^-^	175.0	175.0	100.0	88.9	216.0	50.4	M20	M30x3.5	OR^-2-245	24.20 (11.0)	5000 (350)
5" x 4"	TPROM4-74-500x400-*^-^	205.0	175.0	101.6	88.9	250.9	50.8	M24	M30x3.5	OR^-2-353	28.70 (13.0)	5000 (350)
6" x 4"	TPROM4-74-600x400-*^-^	245.0	175.0	124.5	88.9	300.0	76.2	M30	M30 x3.5	OR^-2-359	56.20 (25.5)	5000 (350)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
V = Viton.

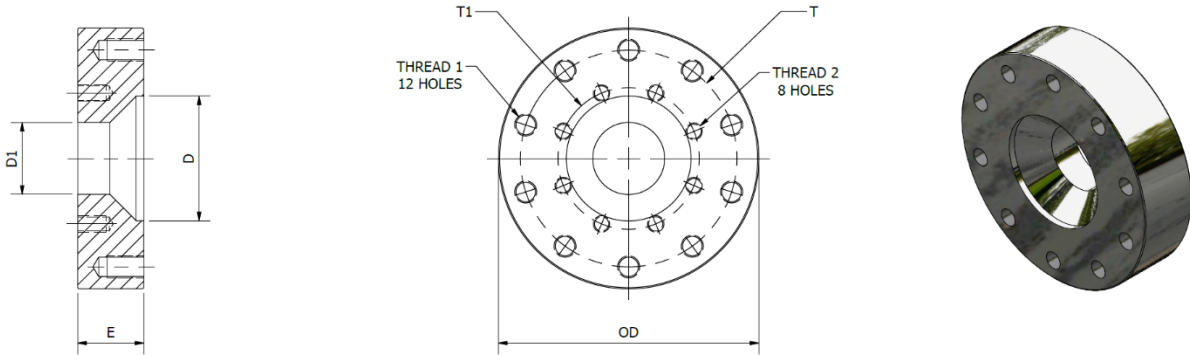
Ordering Example: TPROM4-74-600x400-SS-V

* Insert Material _____
^ Insert O-Ring Type _____

3D step models available upon request

Transition Plate Reducer, TMI 12-Bolt/TMI 8-Bolt

3600 PSI (250 bar) Flange Union Style



TPR412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						Thread 1 UNC-2B	Thread 2 UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
10" x 6"	TPR412-48-1000x600-*	14.76	9.65	8.46	4.90	17.75	4.50	1-1/2"-6	1-1/8"-7	266.0 (121.0)	3600 (250)
10" x 8" ⁽¹⁾	TPR412-48-1000x800-290BC-*	14.76	11.42	8.46	6.81	17.75	6.00	1-1/2"-6	1-1/8"-7	319.0 (145.0)	3600 (250)
10" x 8"	TPR412-48-1000x800-*	14.76	12.40	8.46	6.81	17.75	6.50	1-1/2"-6	1-1/2"-6	339.0 (154.1)	3600 (250)

(1) Special Bolt Circle

Ordering Example: TPR412-48-1000x600-SS

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

* Insert Material _____

TPRM412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt Flat Face with Threaded Holes, Complete with G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						Thread 1	Thread 2	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E				
10" x 6"	TPRM412-48-1000x600-*	375.0	245.0	215.0	125.0	450.0	114.3	M36 x 4.0	M30 x 3.5	266.0 (121.0)	3600 (250)
10" x 8" ⁽¹⁾	TPRM412-48-1000x800-290BC-*	375.0	290.0	215.0	173.0	450.0	152.4	M36 x 4.0	M30 x 3.5	319.0 (145.0)	3600 (250)
10" x 8"	TPRM412-48-1000x800-*	375.0	315.0	215.0	173.0	450.0	165.0	M36 x 4.0	M36 x 4.0	339.0 (154.1)	3600 (250)

(1) Special Bolt Circle

Ordering Example: TPRM412-48-1000x600-SS

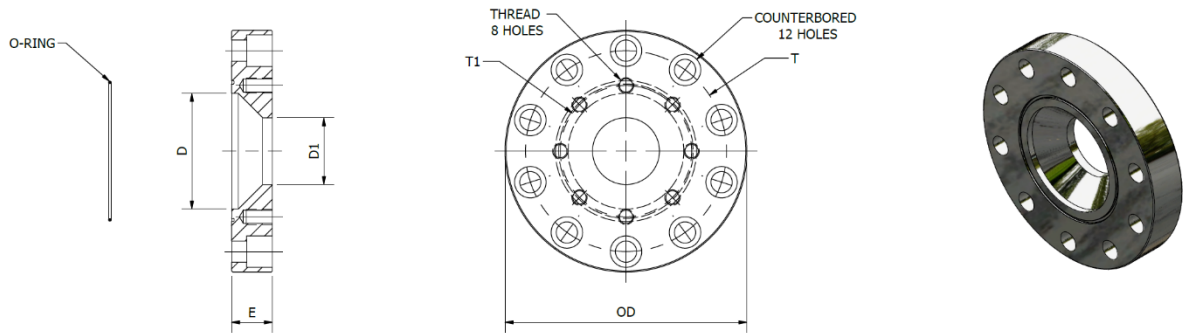
*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
SS = All Stainless Steel, Type 316.

* Insert Material _____

Transition Plate Reducer, TMI 12-Bolt/TMI 8-Bolt

3600 PSI (250 bar) Flange Manifold Mount Style



TPRO412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, #4 SAE Port (Plugged), NPS

Size	Reducer Part Number	Dimensions (in)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
10" x 6"	TPRO412-48-1000x600-*~^	14.76	9.65	8.46	4.90	17.75	4.50	1-1/2"	1-1/8"-7	OR^~2-377	155.0 (70.5)	3600 (250)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: TPRO412-48-1000x600-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

TPROM412-48 Transition Plate Reducer – TMI 12-Bolt/TMI 8-Bolt O-ring Face, Manifold Mount with Countersunk Holes, Complete with Buna O-ring, G1/8 Port (Plugged), Metric

Size	Reducer Part Number	Dimensions (mm)						C'Tbore Bolt	Thread UNC-2B	O-Ring Part Number	WT lbs (kg)	Working Pressure PSI (bar)
		T	T1	D	D1	OD	E					
10" x 6"	TPROM412-48-1000x600-*~^	375.0	245.0	215.0	125.0	450.0	114.3	M36	M30 x 3.5	OR^~2-377	155.0 (70.5)	3600 (250)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

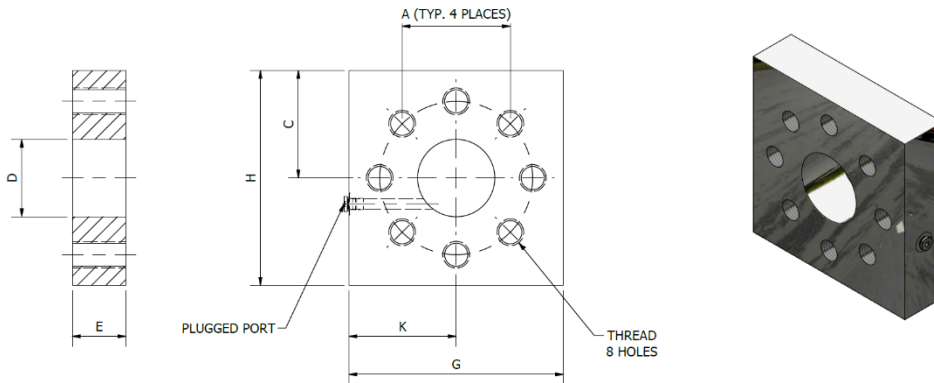
Ordering Example: TPROM4-74-600x400-SS-V

* Insert Material _____
 ^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Adapter Plate

DIN 400 bar (ISO 6164)



AP74 Adapter Plate –ISO 6164 Flat Face with Threaded Holes, Complete with #4 SAE Port (Plugged), NPS

Size	Adapter Plate Part Number	Dimensions (in)							Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	C	D	E	G	H	K			
1-1/2"	AP74-150-*	2.37	2.50	1.50	1.25	5.00	5.00	2.50	5/8"- 11	7.25 (3.3)	5800 (400)
2"	AP74-200-*	2.73	2.50	1.94	1.25	5.00	5.00	2.50	5/8"- 11	8.10 (3.7)	5800 (400)
2-1/2"	AP74-250-*	3.29	3.00	2.38	1.50	6.00	6.00	3.00	3/4"- 10	12.50 (5.7)	5800 (400)
3"	AP74-300-*	4.04	4.00	2.88	2.00	8.00	8.00	4.00	1"- 8	21.00 (9.5)	5800 (400)
4"	AP74-400-*	4.87	4.25	3.50	2.00	8.50	8.50	4.25	1-1/8"-7	22.70 (10.3)	5800 (400)

*** Materials:**

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: AP74-200-SS

* Insert Material _____

APM74 Adapter Plate – ISO 6164 Flat Face with Threaded Holes Complete with G 1/8 Port (Plugged), Metric

Size	Adapter Plate Part Number	Dimensions (mm)							Thread UNC-2B	WT lbs (kg)	Working Pressure PSI (bar)
		A	C	D	E	G	H	K			
1-1/2"	APM74-150-*	60.1	63.5	38.1	31.8	127.0	127.0	63.5	M16 x 2.00	7.25 (3.3)	5800 (400)
2"	APM74-200-*	69.3	63.5	49.2	31.8	127.0	127.0	63.5	M16 x 2.00	8.10 (3.7)	5800 (400)
2-1/2"	APM74-250-*	83.5	76.2	60.5	38.1	152.4	152.4	76.2	M20 x 2.50	12.50 (5.7)	5800 (400)
3"	APM74-300-*	102.5	101.6	73.2	50.8	203.2	203.2	101.6	M24 x 3.00	21.00 (9.5)	5800 (400)
4"	APM74-400-*	123.7	108.0	88.9	50.8	216.0	216.0	108.0	M30 x 3.50	22.70 (10.3)	5800 (400)

*** Materials:**

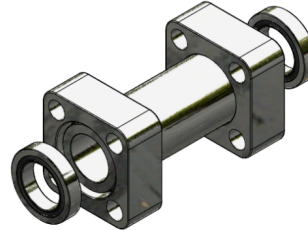
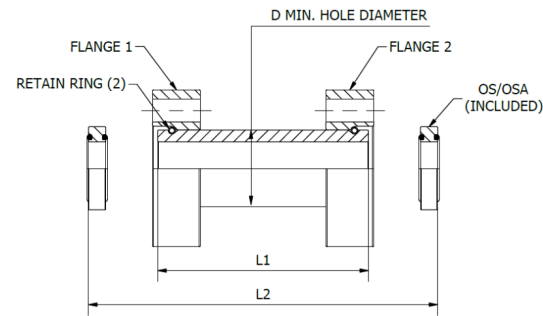
Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.
 SS = Stainless Steel, Type 316.

Ordering Example: AP74-200-SS

* Insert Material _____

ISO 6164, 400 bar Retain Ring Bulkhead Complete Assembly

DIN 400 bar (ISO 6164)



Complete Assembly Consists Of:

- One (1) retain ring flange bulkhead body
- Two (2) retain ring flanges
- Two (2) retain rings
- Two (2) o-ring spacers

A/RFBH – Retain Ring Flange Bulkhead, Complete Assembly

Size	Complete Part Number	Dimensions in (mm)			Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L1	L2	D				
1-1/2"	A/RFBH-150-FC74-FC74-*^-^	6.09 (154.6)	7.09 (180.0)	2.20 (56.0)	13.30 (6.05)	RFBH-150-*^-^	7.04 (3.2)	5800 (400)
2"	A/RFBH-200-FC74-FC74-*^-^	7.27 (184.6)	8.27 (210.0)	2.60 (66.0)	16.20 (7.36)	RFBH-200-*^-^	9.02 (4.1)	5800 (400)
2-1/2"	A/RFBH-250-FC74-FC74-*^-^	6.66 (169.2)	8.66 (220.0)	3.15 (80.0)	25.80 (11.73)	RFBH-250-*^-^	13.20 (6.0)	5800 (400)
3"	A/RFBH-300-FC74-FC74-*^-^	7.45 (189.2)	9.45 (240.0)	3.82 (97.0)	40.36 (18.35)	RFBH-300-*^-^	19.14 (8.7)	5800 (400)
4"	A/RFBH-400-FC74-FC74-*^-^	9.00 (229.2)	11.00 (280.0)	4.53 (115.0)	58.22 (26.46)	RFBH-400-*^-^	22.88 (10.4)	5800 (400)

Flange Options:

Standard, FC74 = (ISO 6164) Clearance Flange.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

V = Viton.

Ordering Example: A/RFBH-150-FC74-FC74-SS-V

Flange 1 Option _____

Flange 2 Option _____

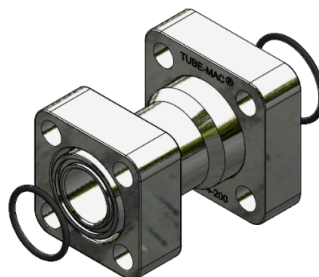
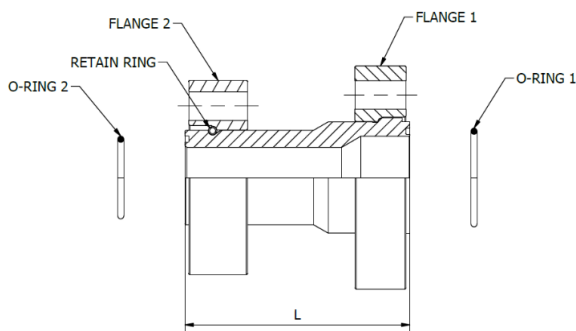
* Insert Material _____

^ Insert O-Ring Type _____

3D step models available upon request

ISO 6164, 400 bar Retain Ring Flange Concentric Reducer Assembly

DIN 400 bar (ISO 6164)



Complete Assembly Consists Of:

- One (1) Concentric Reducer Body
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CR – Retain Ring Flange Concentric Reducer Assembly

Size	Complete Assembly Part Number	Dimensions in (mm)		O-Ring 1 (Buna) Part Number	O-Ring 2 (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L							
2" x 1-1/2"	A/CR-200x150-FC74-FC74-*^-^	5.26 (133.6)		OR^-3-928	OR^-3-924	9.64 (4.38)	CR-200x150-*^-^	3.74 (1.70)	5800 (400)
2-1/2" x 1-1/2"	A/CR-250x150-FC74-FC74-*^-^	6.06 (153.9)		OR^-2-232	OR^-2-924	12.53 (5.70)	CR-250x150-*^-^	4.67 (2.12)	5800 (400)
2-1/2" x 2"	A/CR-250x200-FC74-FC74-*^-^	6.06 (153.9)		OR^-2-232	OR^-2-928	13.42 (6.10)	CR-250x200-*^-^	5.20 (2.36)	5800 (400)
3" x 1-1/2"	A/CR-300x150-FC74-FC74-*^-^	6.50 (165.1)		OR^-2-237	OR^-2-924	18.17 (8.26)	CR-300x150-*^-^	6.58 (2.99)	5800 (400)
3" x 2"	A/CR-300x200-FC74-FC74-*^-^	6.98 (177.3)		OR^-2-237	OR^-2-928	19.65 (8.93)	CR-300x200-*^-^	7.70 (3.49)	5800 (400)
3" x 2-1/2"	A/CR-300x250-FC74-FC74-*^-^	6.98 (177.3)		OR^-2-237	OR^-2-232	22.42 (10.198)	CR-300x250-*^-^	8.50 (3.86)	5800 (400)
4" x 2"	A/CR-400x200-FC74-FC74-*^-^	7.76 (197.1)		OR^-2-241	OR^-2-928	30.91 (14.05)	CR-400x200-*^-^	12.95 (20.7)	5800 (400)
4" x 2-1/2"	A/CR-400x250-FC74-FC74-*^-^	7.76 (197.1)		OR^-2-241	OR^-2-232	34.03 (15.47)	CR-400x250-*^-^	14.10 (6.40)	5800 (400)
4" x 3"	A/CR-400x300-FC74-FC74-*^-^	7.76 (197.1)		OR^-2-241	OR^-2-237	38.21 (17.37)	CR-400x300-*^-^	14.50 (6.58)	5800 (400)

Flange Options:

Standard, FC74 = ISO 6164 Clearance Flange.

Materials

No Designation = All Carbon Steel, Zinc Nickel Plated.

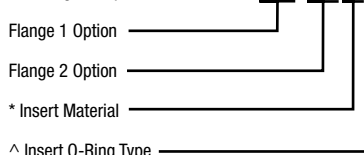
SS = Stainless Steel, Type 316.

^ O-Ring Type:

No Designation = Buna Nitrile.

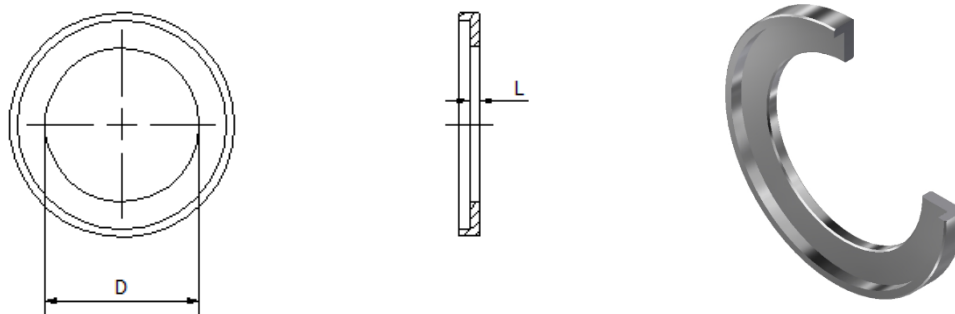
V = Viton.

Ordering Example: A/CR-200x150-FC74-FC74-SS-V



ISO 6164, 400 bar O-Ring Connector Plate

DIN 400 (ISO 6164)



OCP - O-Ring Connector Plate				
Size	Connector Plate Part Number	Dimensions in (mm)		WT lbs (kg)
		D	L	
1-1/2"	OCP-150-*	1.50 (38.1)	0.13 (3.3)	0.11 (0.05)
2"	OCP-200-*	1.94 (49.3)	0.13 (3.3)	0.13 (0.06)
2-1/2"	OCP-250-*	2.36 (59.9)	0.13 (3.3)	0.18 (0.08)
3"	OCP-300-*	2.88 (73.2)	0.13 (3.3)	0.26 (0.12)
4"	OCP-400-*	3.35 (85.1)	0.13 (3.3)	0.34 (0.15)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc * Insert Material _____
 Nickel Plated.

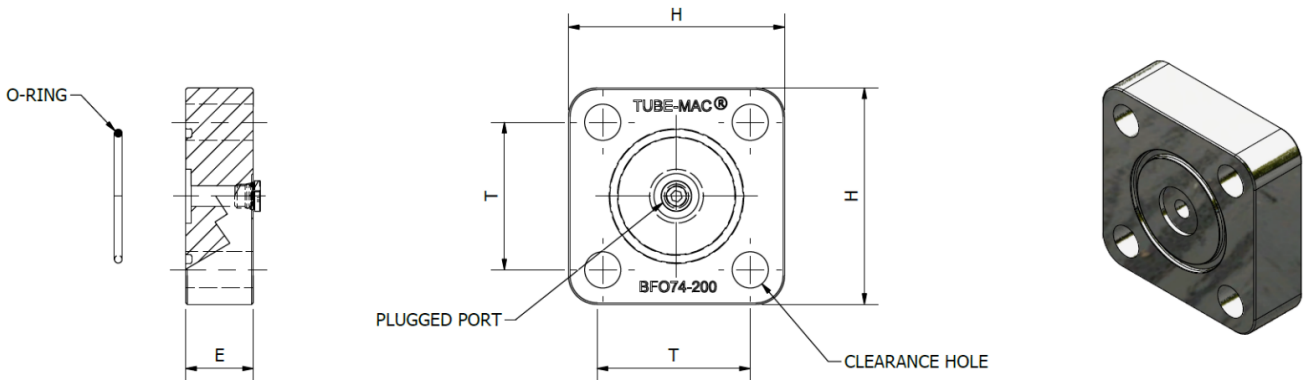
SS = Stainless Steel, Type 316.

Ordering Example: OCP-200-SS

3D step models available upon request

ISO 6164, 400 bar Blanking Flange O-Ring Face with Clearance Holes

DIN 400 (ISO 6164)



BF074 – Blanking Flange O-Ring Face with Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Bolt Size UNC	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E				
1-1/2"	BF074-150-*^-^	2.37	3.50	1.38	5/8"	OR^-3-924	5800 (400)	3.79 (1.72)
2"	BF074-200-*^-^	2.73	4.00	1.18	5/8"	OR^-3-928	5800 (400)	4.34 (1.97)
2-1/2"	BF074-250-*^-^	3.29	4.72	1.48	3/4"	OR^-2-232	5800 (400)	8.71 (3.96)
3"	BF074-300-*^-^	4.04	5.91	1.73	1"	OR^-2-237	5800 (400)	16.00 (7.28)
4"	BF074-400-*^-^	4.87	7.00	1.98	1 1/8"	OR^-2-241	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BF074-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

BFOM74 – Blanking Flange O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Bolt Size	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E				
1-1/2"	BFOM74-150-*^-^	60.1	88.9	35.0	M16	OR^-3-924	5800 (400)	3.79 (1.72)
2"	BFOM74-200-*^-^	69.3	101.6	29.9	M16	OR^-3-928	5800 (400)	4.34 (1.97)
2-1/2"	BFOM74-250-*^-^	83.5	119.9	37.6	M20	OR^-2-232	5800 (400)	8.71 (3.96)
3"	BFOM74-300-*^-^	102.5	150.1	43.9	M24	OR^-2-237	5800 (400)	16.00 (7.28)
4"	BFOM74-400-*^-^	123.7	177.8	50.3	M30	OR^-2-241	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

Ordering Example: BFOM74-200-SS-V

* Insert Material _____

^ Insert O-Ring 2 Type _____

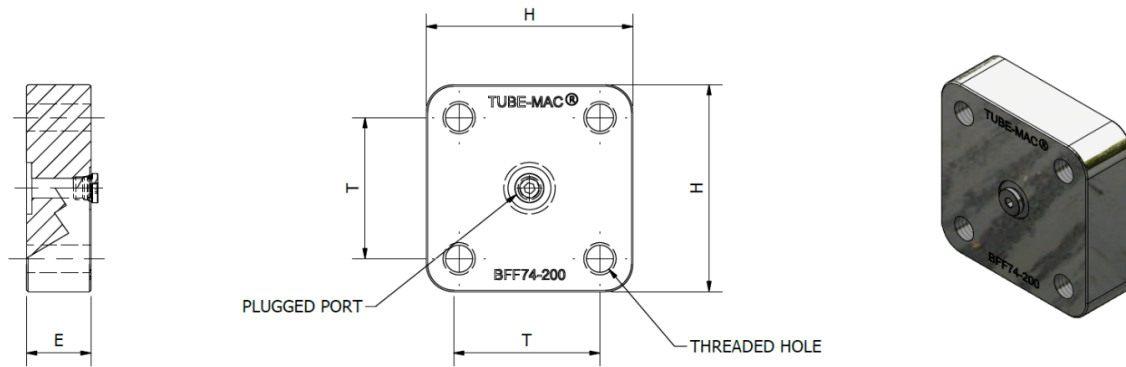
^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

ISO 6164, 400 bar Blanking Flange

Flat Face with Threaded Holes

DIN 400 (ISO 6164)



BFF74 – Blanking Flange Flat Face with Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Thread UNC-2B	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E			
1-1/2"	BFF74-150-*	2.37	3.50	1.38	5/8"-11	5800 (400)	3.79 (1.72)
2"	BFF74-200-*	2.73	4.00	1.18	5/8"-11	5800 (400)	4.34 (1.97)
2-1/2"	BFF74-250-*	3.29	4.72	1.48	3/4"-10	5800 (400)	8.71 (3.96)
3"	BFF74-300-*	4.04	5.91	1.73	1"-8	5800 (400)	16.00 (7.28)
4"	BFF74-400-*	4.87	7.00	1.98	1 1/8"-7	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFF74-200-SS

* Insert Material _____

BFFM74 – Blanking Flange O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Thread	Working Pressure PSI (bar)	WT lbs (kg)
		T	H	E			
1-1/2"	BFFM74-150-*	60.1	88.9	35.0	M16x2.00	5800 (400)	3.79 (1.72)
2"	BFFM74-200-*	69.3	101.6	29.9	M16x2.00	5800 (400)	4.34 (1.97)
2-1/2"	BFFM74-250-*	83.5	119.9	37.6	M20x2.50	5800 (400)	8.71 (3.96)
3"	BFFM74-300-*	102.5	150.1	43.9	M24x3.00	5800 (400)	16.00 (7.28)
4"	BFFM74-400-*	123.7	177.8	50.3	M30x3.50	5800 (400)	25.23 (11.47)

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.

HDG = Carbon Steel, Hot Dip Galvanized.

SS = Stainless Steel, Type 316.

Ordering Example: BFFM74-200-SS

* Insert Material _____

3D step models available upon request

TUBE-MAC.com

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16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

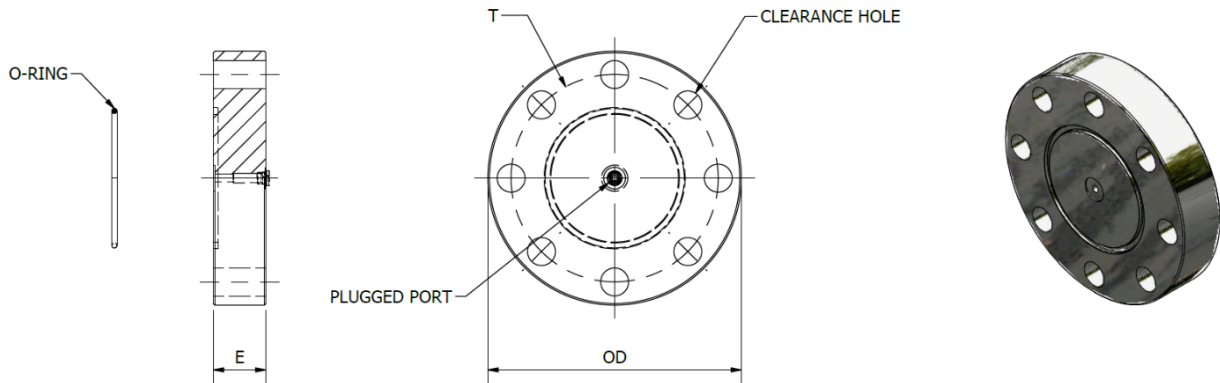
Clamp Supports - Heavy Series

Valves, Ball and Check

J71

Blanking Flange O-Ring Face with Clearance Holes

TMI® 8-Bolt and 10" TMI® 12-Bolt



BFO48 – Blanking Flange TMI® 8-Bolt O-Ring Face with Clearance Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Bolt Size UNC	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E				
4-1/2"	BFO48-450-*~^	6.89	8.43	1.97	3/4"	OR^~2-245	5000 (350)	28.90 (13.14)
5"	BFO48-500-*~^	8.07	9.65	2.00	1"	OR^~2-353	5000 (350)	37.84 (17.20)
6"	BFO48-600-*~^	9.65	11.81	2.31	1-1/8"	OR^~2-359	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFO48-800-290BC-*~^	11.42	13.78	3.00	1-1/8"	OR^~2-368	5000 (350)	122.76 (55.80)
8"	BFO48-800-*~^	12.40	15.13	3.00	1-1/2"	OR^~2-368	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BF0412-1000-*~^	14.76	17.75	3.80	1-1/2"	OR^~2-241	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: BFO48-600-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

BFOM48 – Blanking Flange TMI® 8-Bolt O-Ring Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Bolt Size	O-Ring (Buna) Part Number	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E				
4-1/2"	BFOM48-450-*~^	175.0	214.0	50.0	M20	OR^~2-245	5000 (350)	28.90 (13.14)
5"	BFOM48-500-*~^	205.0	245.0	50.8	M24	OR^~2-353	5000 (350)	37.84 (17.20)
6"	BFOM48-600-*~^	245.0	300.0	58.7	M30	OR^~2-359	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFOM48-800-290BC*~^	290.0	350.0	76.2	M30	OR^~2-368	5000 (350)	122.76 (55.80)
8"	BFOM48-800-*~^	315.0	385.0	76.2	M36	OR^~2-368	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFOM412-1000-*~^	375.0	450.0	96.5	M36	OR^~2-241	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

^ O-Ring Type:

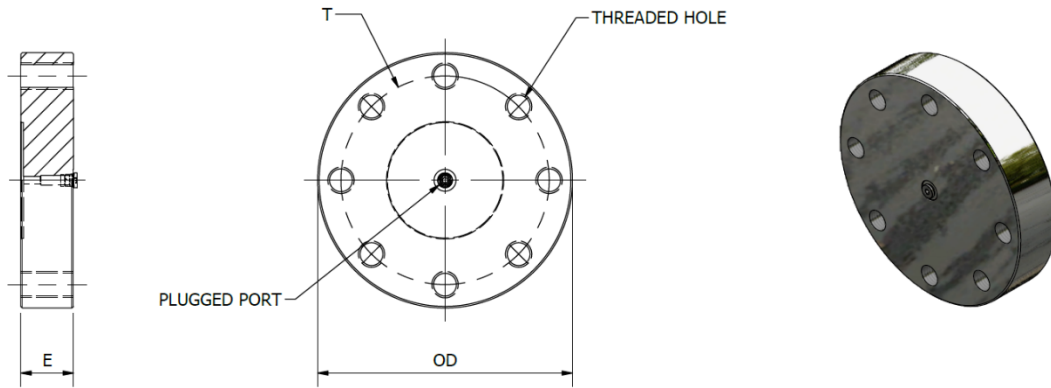
Standard, No Designation = Buna Nitrile.
 V = Viton.

Ordering Example: BFOM48-600-SS-V

* Insert Material _____
 ^ Insert O-Ring 2 Type _____

Blanking Flange O-Ring Face with Threaded Holes

TMI® 8-Bolt and 10" TMI® 12-Bolt



BFF48 – Blanking Flange TMI® 8-Bolt Flat Face with Threaded Holes and #4 SAE Port (Plugged), NPS

Size	Blanking Flange Part Number	Dimensions (in)			Thread UNC	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E			
4-1/2"	BFF48-450-*	6.89	8.43	1.97	3/4"-10	5000 (350)	28.90 (13.14)
5"	BFF48-500-*	8.07	9.65	2.00	1"-8	5000 (350)	37.84 (17.20)
6"	BFF48-600-*	9.65	11.81	2.31	1-1/8"-7	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFF48-800-290BC-*	11.42	13.78	3.00	1-1/8"-7	5000 (350)	122.76 (55.80)
8"	BFF48-800-*	12.40	15.13	3.00	1-1/2"-6	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFF412-1000-*	14.76	17.75	3.80	1-1/2"-6	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

Ordering Example: BFF48-600-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

* Insert Material

BFFM48 – Blanking Flange TMI® 8-Bolt Flat Face with Clearance Holes and G1/8 BSPP Port (Plugged), Metric

Size	Blanking Flange Part Number	Dimensions (mm)			Thread	Working Pressure PSI (bar)	WT lbs (kg)
		T	OD	E			
4-1/2"	BFFM48-450-*	175.0	214.0	50.0	M20x2.5	5000 (350)	28.90 (13.14)
5"	BFFM48-500-*	205.0	245.0	50.8	M24x3.0	5000 (350)	37.84 (17.20)
6"	BFFM48-600-*	245.0	300.0	58.7	M30x3.5	5000 (350)	71.30 (32.41)
8" ⁽¹⁾	BFFM48-800-290BC*	290.0	350.0	76.2	M30x3.5	5000 (350)	122.76 (55.80)
8"	BFFM48-800-*	315.0	385.0	76.2	M36x4.0	5000 (350)	138.60 (63.00)
10" ⁽²⁾	BFFM412-1000-*	375.0	450.0	96.5	M36x4.0	3600 (250)	239.00 (108.64)

Notes: (1) Special Flange Size, (2) 12-Bolt Flange

Ordering Example: BFFM48-600-SS

*** Materials:**

Standard, No Designation = Carbon Steel, Zinc Nickel Plated.
 HDG = Carbon Steel, Hot Dip Galvanized.
 SS = Stainless Steel, Type 316.

* Insert Material

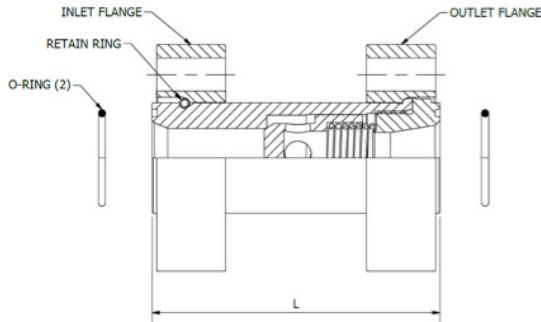
^ O-Ring Type:

Standard, No Designation = Buna Nitrile.
 V = Viton.

3D step models available upon request

ISO 6164, 400 bar Check Valve Retain Ring Flange Style Complete Assembly

DIN 400 (ISO 6164)



Complete Assembly Consists Of:

- One (1) Check Valve Body – Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Two (2) Buna O-Rings (Standard)

CV Check Valve Complete with Buna O-Rings (Standard)

Size	Complete Assembly Part Number	Dimensions in (mm)	O-Ring (Buna) Part Number	Assembly WT lbs (kg)	Body Only Part Number	Body Only WT lbs (kg)	Working Pressure PSI (bar)
		L					
1-1/2"	A/CV-150-FC74-FC74-07-*-*^	5.76 (146.3)	OR^3-924	9.80 (4.45)	CV-150-07-*-*^	4.25 (1.93)	5800 (400)
2"	A/CV-200-FC74-FC74-07-*-*^	6.74 (171.2)	OR^3-928	11.88 (5.40)	CV-200-07-*-*^	5.62 (2.55)	5800 (400)
2-1/2"	A/CV-250-FC74-FC74-07-*-*^	7.14 (181.4)	OR^2-232	19.18(8.72)	CV-250-07-*-*^	8.99 (2.45)	5800 (400)
3"	A/CV-300-FC74-FC74-07-*-*^	7.53 (191.3)	OR^2-237	31.36 (14.25)	CV-300-07-*-*^	13.66 (6.21)	5800 (400)

Flange Option:

Standard, FC74 = ISO 6164 Clearance Flange.

* Materials:

Standard, No Designation = All Carbon Steel, Zinc Nickel Plated.

SS = Stainless Steel, Type 316.

^ O-Ring Type:

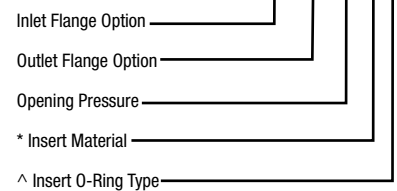
Standard, No Designation = Buna Nitrile.

V = Viton.

Opening Pressure

	PSI (bar)
Standard	07 (0.5)
Optional	21 (1.5)
Optional	43 (3.0)

Ordering Example: A/CV-200-FC74-FC74-07-SS-V



ISO 6164, 400 bar Check Valve Performance Curves

DIN 400 (ISO 6164)

Chart 1: Measured using oil at 190SUS and 122° F

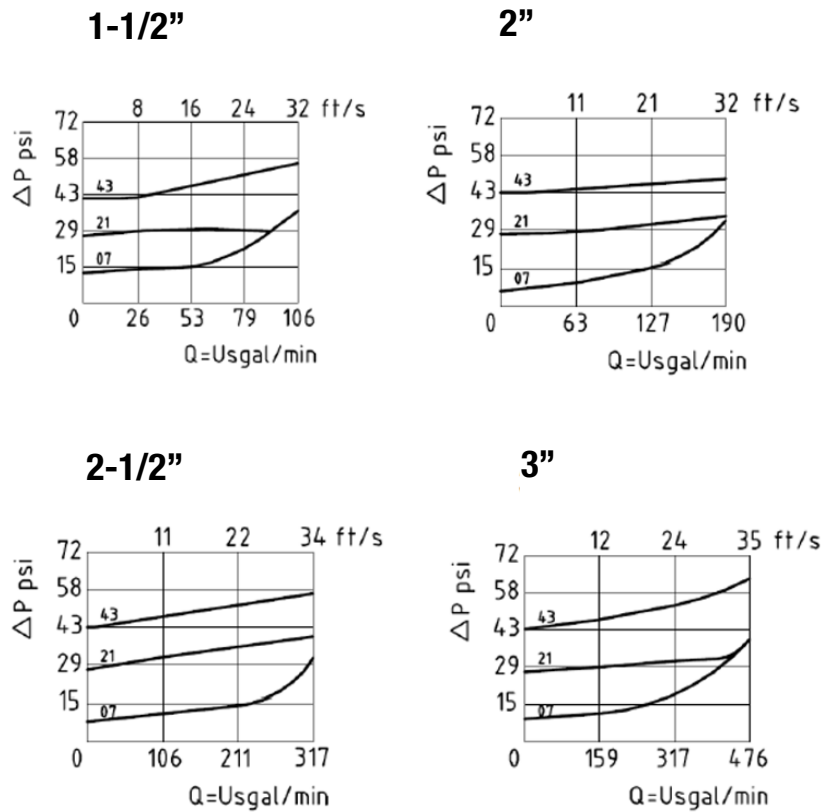
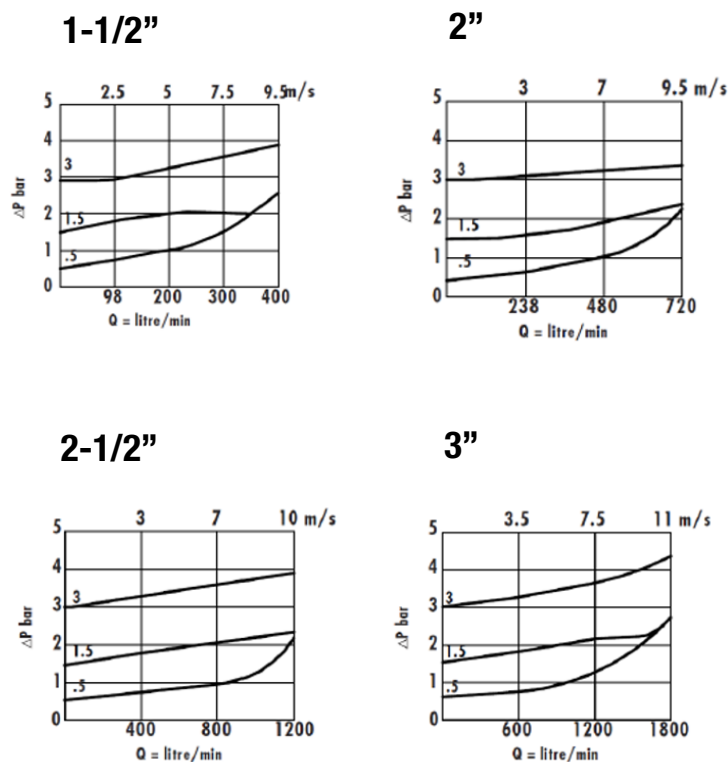
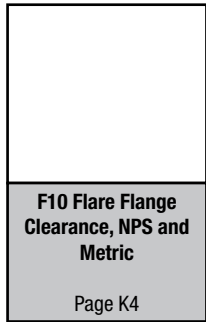
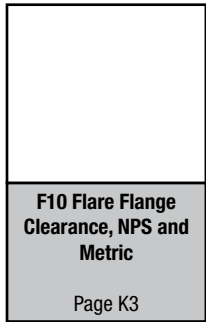
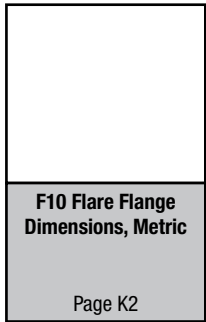
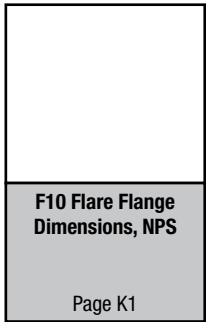


Chart 2: Measured using oil at 190SUS and 50° C



3D step models available upon request

ISO 6164, 400 bar F10° Flare



3D step models available upon request

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16 bar,
90° Flare

ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

ISO 6164,
400 bar
F10° Flare

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ANSI 150#,
300# Flare

SAE 1000,
70 bar

SAE 3000,
210 bar

SAE 6000,
420 bar

SAE 10000,
690 bar

ISO 6164,
400 bar

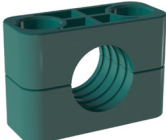
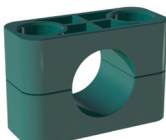
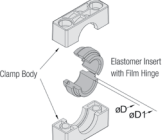
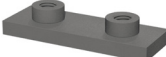
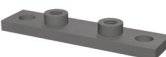
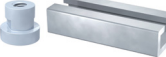
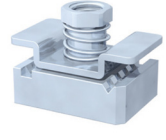



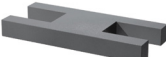
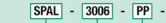
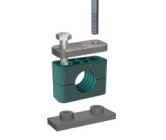
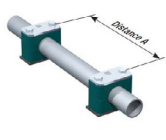
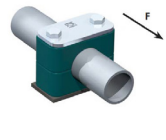
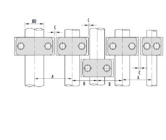
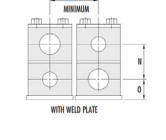
ISO 6164,
400 bar
F10° Flare

Clamp
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Clamp Supports – Heavy Series Reference Guide

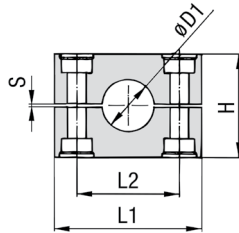
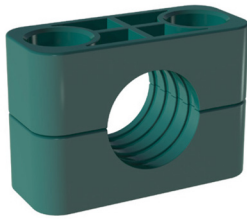
					
<p>Clamp Body Type H</p> <p>Page L1, L2</p>	<p>Clamp Body Type H Smooth Inside</p> <p>Page L3</p>	<p>Clamp Body Type RI Rubber Insert</p> <p>Page L4</p>	<p>Weld Plates Types SPAL and SPAS</p> <p>Page L5</p>	<p>Elongated Weld Plates Types SPAL-DUEB SPAS-DUEB</p> <p>Page L6</p>	<p>Rail Nuts RNH Mounting Rail Types STSV</p> <p>Page L7</p>
					
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Notes:

1. Heavy Series Clamp Supports according to DIN 3015 Part 2.
2. Other sizes available, consult factory.
3. Lights Series and Twin Series Clamp Supports are available, consult factory.

Clamp Body - Profiled Design Profiled Inside Surface With Tension Clearance

Heavy Series According to DIN 3015, Part 2



Ordering Codes:

- Clamp Body** ***3*006-PP**
 One clamp body consisting of two clamp halves
- 1st part of Group Series 3
 - Exact outside diameter Ø D1 (mm) 006
 - Material code (see below) PP

Clamp Body - Profiled Design - Profiled Inside Surface with Tension Clearance

Series	DIN	Outside Diameter Pipe/Tube Ø D1		Nominal Bore		Ordering Codes (2 Clamp Halves) (**=material)	Dimensions (mm/in)					
		(mm)	(in)	Pipe (in)	Copper Tube ASTM 888 (in)		L1 PP/PA/SA	L1 AL	L2	H	S min.	Width
3S	1	6				3006-**	55	56	33	32	0,6	30,5
		6,4	1/4			3006.4-**						
		8	5/16			3008-**						
		9,5	3/8		1/4	3009.5-**						
		10		1/8		3010-**						
		12				3012-**						
		12,7	1/2		3/8	3012.7-**						
		13,5		1/4		3013.5-**						
		14				3014-**						
		15				3015-**						
		16	5/8		1/2	3016-**						
		17,2		3/8		3017.2-**						
		18				3018-**						
20				3020-**	2.16	2.20	1.30	1.26	.02	1.20		
19	3/4			4019-**								
20				4020-**								
21,3		1/2		4021.3-**								
22	7/8		3/4	4022-**								
25				4025-**								
25,4	1			4025.4-**								
26,9		3,4		4026.9-**								
28				4028-**								
30				4030-**								
30				5030-**								
32	1-1/4			5032-**								
33,7		1		5033.7-**								
35			1-1/4	5035-**	70	70	45	48	0,6	30,5		
38	1-1/2			5038-**								
40				5040-**								
41,3			1-1/2	5041.3-**								
42		1-1/4		5042-**								
38	1-1/2			6038-**								
42		1-1/4		6042-**								
44,5	1-3/4			6044.5-**								
48,3		1-1/2		6048.3-**								
50,8	2			6050.8-**								
54			2	6054-**								
55				6055-**								
57				6057-**								
57,2	2-1/4			6057.2-**								
60,3		2		6060.3-**								
63,5	2-1/2			6063.5-**								
65				6065-**								
70	2-3/4			6070-**								

Standard Materials

- Polypropylene**
Colour: Green
Material Code: **PP**
- Polypropylene**
Colour: Black
Material Code: **PP-BK**
- Polyamide**
Colour: Black
Material Code: **PA**
- Thermoplastic Elastomer**
(87 Shore-A)
Colour: Black
Material Code: **SA**
- Aluminum**
Colour: Self-Colour
Material Code: **AL**

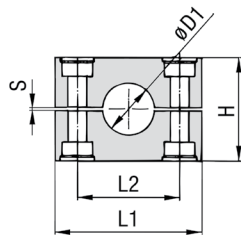
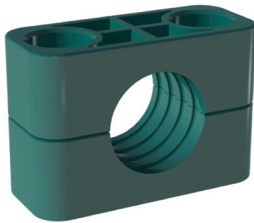
Product Features:

- Proven, tested and trusted product in various markets
- Recommended for the safe installation of rigid pipes and tubes
- Available for all commonly used pipe and tube outside diameters
- Environmental protection due to vibration/noise reducing design
- Excellent weathering resistance, even under extreme conditions

3D step models available upon request

Clamp Body - Profiled Design Profiled Inside Surface With Tension Clearance

Heavy Series According to DIN 3015, Part 2



Ordering Codes:

- Clamp Body** ***7*060.3-PP**
 One clamp body consisting of two clamp halves
- 1st part of Group Series 7
 - Exact outside diameter Ø D1 (mm) 060.3
 - Material code (see below) PP

Clamp Body - Profiled Design - Profiled Inside Surface with Tension Clearance											
Group		Outside Diameter Pipe/Tube Ø D1		Nominal Bore Pipe (in)	Ordering Codes (2 Clamp Halves) (**=material)	Dimensions (mm/in)					
						L1 PP/PA/SA	L1 AL	L2	H	S min.	Width
Series	DIN	(mm)	(in)								
7S	5	60.3			7060.3-**	6.06	5.98	4.80	4.72	.08	2.36
		65			7065-**						
		70	2-3/4		7070-**						
		73		2-1/2 (ANSI B 36-10)	7073-**						
		75			7075-**						
		76,1	3	2-1/2 (DIN EN 10220)	7076.1-**						
		80			7080-**						
		82,5			7082.5-**						
8S	6	88,9	3-1/2	3	7088.9-**	8.11	8.19	6.61	6.61	.08	3.15
		88,9	3-1/2	3	8088.9-**						
		100			8100-**						
		102	4	3-1/2	8102-**						
		108			8108-**						
		114	4-1/2	4	8114-**						
		127	5		8127-**						
		133			8133-**						
9S	7	127	5		9127-**	9.88	10.04	8.07	7.87	.12	3.58
		133			9133-**						
		140		5	9140-**						
		152	6		9152-**						
		159			9159-**						
		165			9165-**						
		168		6	9168-**						
		168		6	10168-**						
10S	8	177,8			10177.8-**	13.22	12.83	10.43	10.63	.12	4.72
		193,7			10193.7-**						
		203	8		10203-**						
		216			10216-**						
		219		8	10219-**						
		219		8	11219-**						
11S	9	273		10	11273-**	18.50	18.50	15.55	16.14	.31	6.38
		324		12	11324-**						
		356		14	12356-**						
12S	10	406		16	12406-**	4.80	4.80	21.02	20.87	.79	7.16

Standard Materials

 **Polypropylene**
 Colour: Green
 Material Code: PP

 **Polypropylene**
 Colour: Black
 Material Code: PP-BK

 **Polyamide**
 Colour: Black
 Material Code: PA

 **Aluminum**
 Colour: Self-Colour
 Material Code: AL

Product Features:

Proven, tested and trusted product in various markets

Recommended for the safe installation of rigid pipes and tubes

Available for all commonly used pipe and tube outside diameters

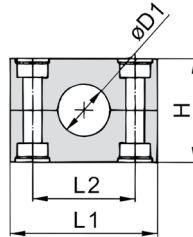
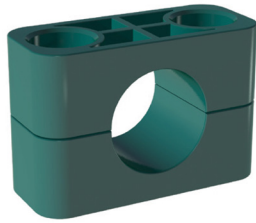
Environmental protection due to vibration/noise reducing design

Excellent weathering resistance, even under extreme conditions

3D step models available upon request

Clamp Body - Type H Smooth Inside Surface Without Tension Clearance

Heavy Series According to DIN 3015, Part 2



Ordering Codes:

Clamp Body *3*006-*PP-H

One clamp body consisting of two clamp halves

- 1st part of Group Series 3
- Exact outside diameter Ø D1 (mm) 006
- Material code (see below) PP-H

Clamp Body - Type H - Smooth Inside Surface without Tension Clearance

Group		Outside Diameter Hose Ø D1		Ordering Codes (2 Clamp Halves) (**-H=material)	Dimensions (mm/in)			
					L1	L2	H	Width
Series	DIN	(mm)	(in)					
3S	1	6		3006-**-H	55	33	30,5	30,5
		6,4	1/4	3006.4-**-H				
		8	5/16	3008-**-H				
		9,5	3/8	3009.5-**-H				
		10		3010-**-H				
		12		3012-**-H				
		12,7	1/2	3012.7-**-H				
		13,5		3013.5-**-H				
		14		3014-**-H				
		15		3015-**-H				
16	5/8	3016-**-H	2.16	1.30	1.20	1.20		
17,2		3017.2-**-H						
18		3018-**-H						
19	3/4	4019-**-H						
20		4020-**-H						
21,3		4021.3-**-H						
22	7/8	4022-**-H						
25		4025-**-H						
25,4	1	4025.4-**-H						
26,9		4026.9-**-H						
28		4028-**-H	2.76	1.77	1.83	1.20		
30		4030-**-H						
30		5030-**-H						
32	1-1/4	5032-**-H						
33,7		5033.7-**-H						
35		5035-**-H						
38	1-1/2	5038-**-H						
40		5040-**-H						
41,3		5041.3-**-H						
42		5042-**-H						
38	1-1/2	6038-**-H	3.35	2.36	2.28	1.20		
42		6042-**-H						
44,5	1-3/4	6044.5-**-H						
48,3		6048.3-**-H						
50,8	2	6050.8-**-H						
54		6054-**-H						
55		6055-**-H						
57		6057-**-H						
57,2	2-1/4	6057.2-**-H						
60,3		6060.3-**-H						
63,5	2-1/2	6063.5-**-H	4.53	3.54	3.43	1.77		
65		6065-**-H						
70	2-3/4	6070-**-H						

Standard Materials



Polypropylene
Colour: Green
Material Code: **PP-H**



Polypropylene
Colour: Black
Material Code: **PP-H-BK**



Polyamide
Colour: Black
Material Code: **PA-H**



Thermoplastic Elastomer
(87 Shore-A)
Colour: Black
Material Code: **SA-H**

Product Features:

Proven, tested and trusted product in various markets

Recommended for the safe installation of hoses and cables

Chamfered edges avoid damaging of the hose or cable

Available for all commonly used hose and cable outside diameters

Excellent weathering resistance, even under extreme conditions

3D step models available upon request

TUBE-MAC.com

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

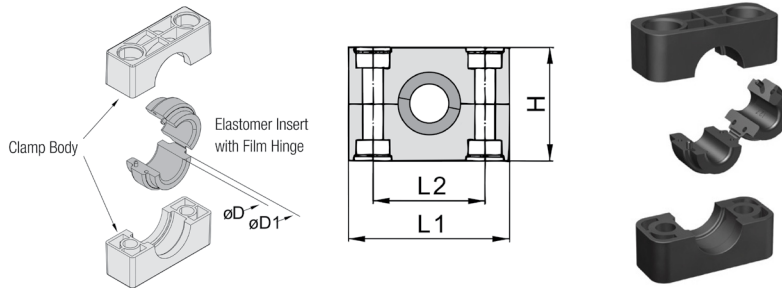
Clamp Supports - Heavy Series

Valves, Ball and Check



Clamp Body with Elastomer Insert Type RI

Heavy Series According to DIN 3015, Part 2



Ordering Codes:

Clamp Assembly ***4006-*PP-R**
One assembly consisting of one clamp body and one insert

- 1st part of Group Series 3
- Exact outside diameter Ø D1 (mm) 006
- Material code (see below) PP-R

Clamp Body ***4S-*PP-R**

One clamp body consisting of two clamp halves

- Group Series 4S
- Material code (see below) PP-R

Elastomer Insert ***RI-*06-*4/4S**

- Elastomer Insert RI
- Exact Outside Diameter Ø D (mm) 06
- Group Series 4S (Heavy) and 4 (Standard) 4/4S
5S (Heavy) and 6 (Standard) 6/5S
6S (Heavy) 6S
7S (Heavy) 7S
8S (Heavy) 8S
9S (Heavy) 9S
10S (Heavy) 10S

Standard Materials

Polypropylene
Colour: Green
Material Code: **PP-R**

Polyamide
Colour: Black
Material Code: **PA-R**

Elastomer Insert
4S to 6S: Thermoplastic Elastomer (73 Shore-A)
7S to 10S: EPDM (70 Shore-A)
Colour: Black

Product Features:

Proven, tested and trusted product in various markets

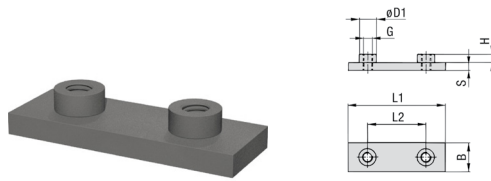
Either for the extra vibration/noise reducing installation of pipes and tubes or the extra gentle installation of hoses and cables

Clamp Body with Elastomer Insert - Type RI											
Group		Outside Diameter Pipe/Tube/ Hose Ø D1		Ordering Codes (**R=Clamp Body Material)			Dimensions (mm/in)				
Series	DIN	(mm)	(in)	Clamp Assembly (Clamp Body + Insert)	Clamp Body (2 Clamp Halves)	Insert*	Ø D1	L1	L2	H	Width
4S	2	6		4006-**R	4S-**R	RI-06-4/4S	25	70	45	46,5	30,5
		8	5/16	4008-**R		RI-08-4/4S					
		10		4010-**R		RI-10-4/4S					
		12		4012-**R		RI-12-4/4S					
		12,7	1/2	4012.7-**R		RI-12.7-4/4S					
		14		4014-**R		RI-14-4/4S					
		15		4015-**R		RI-15-4/4S					
		16	5/8	4016-**R		RI-16-4/4S					
		17,2		4017.2-**R		RI-17.2-4/4S					
		18		4018-**R		RI-18-4/4S					
5S	3	19	3/4	4020-**R	5S-**R	RI-19-4/4S	.98	2.76	1.77	4.83	1.20
		20		5020-**R		RI-20-6/5S					
		21,3		5021.3-**R		RI-21.3-6/5S					
		22	7/8	5022-**R		RI-22-6/5S					
		25		5025-**R		RI-25-6/5S					
		26,9		5026.9-**R		RI-26.9-6/5S					
		28		5028-**R		RI-28-6/5S					
		30		5030-**R		RI-30-6/5S					
		32	1-1/4	5032-**R		RI-32-6/5S					
		6S	4	32		1-1/4					
33,7				6033.7-**R	RI-33.7-6S						
35				6035-**R	RI-35-6S						
38,7				6038-**R	RI-38-6S						
40				6040-**R	RI-40-6S						
42				6042-**R	RI-42-6S						
45,5				6045.5-**R	RI-45.5-6S						
48				6048-**R	RI-48-6S						
51	2			6051-**R	RI-51-6S						
53,4				6053.4**R	RI-53.4-6S						
56,4		6056.4**R	RI-56.4-6S								
7S	5	55		7055-**R	7S-**R	RI-55-7S	88	154	122	120	60
		57	2-1/4	7057-**R		RI-57-7S					
		60		7060-**R		RI-60-7S					
		63,5	2-1/2	7063.5-**R		RI-63.5-7S					
		65		7065-**R		RI-65-7S					
		70	2-3/4	7070-**R		RI-70-7S					
		72		7072-**R		RI-72-7S					
		76	3	7076-**R		RI-76-7S					
8S	6	80		8080-**R	8S-**R	RI-80-8S	114	208	168	168	80
		88,9	3-1/2	8088.9**R		RI-88.9-8S					
		102		8102-**R		RI-102-8S					
9S	7	114		9114-**R	9S-**R	RI-114-9S	150	251	205	200	91
		133	5-1/4	9133-**R		RI-133-9S					
		140		9140-**R		RI-140-9S					
10S	8	150		10150-**R	10S-**R	RI-150-10S	200	336	265	270	120
		165		10165-**R		RI-165-10S					
		168		10168-**R		RI-168-10S					
		172		10172-**R		RI-172-10S					

3D step models available upon request

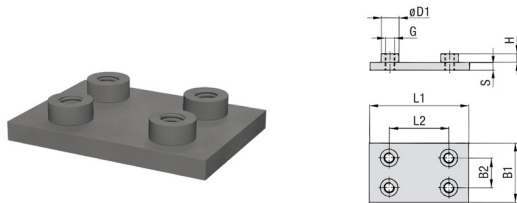
Weld Plates Type SPAL and Type SPAS

Heavy Series According to DIN 3015, Part 2



Weld Plate for Single Clamps - Type SPAL									
Group		Dimensions (mm/in)							Ordering Codes (Standard Options)
Series	DIN	L1	L2	B	S	H	Thread G	Ø D1	
3S	1	74	33	30	8	8	M10	18	SPAL-3S-M-W2
		2.91	1.30	1.18	.31	.31	3/8-16 UNC	.71	SPAL-3S-U-W2
4S	2	86	45	30	8	8	M10	18	SPAL-4S-M-W2
		3.39	1.77	1.18	.31	.31	3/8-16 UNC	.71	SPAL-4S-U-W2
5S	3	100	60	30	8	8	M10	18	SPAL-5S-M-W2
		3.94	2.36	1.18	.31	.31	3/8-16 UNC	.71	SPAL-5S-U-W2
6S	4	140	90	45	10	8	M12	20	SPAL-6S-M-W2
		5.51	3.54	1.77	.39	.31	7/16-14 UNC	.78	SPAL-6S-U-W2
7S	5	180	122	60	10	12	M16	24	SPAL-7S-M-W2
		7.09	4.8	2.36	.39	.47	5/8-11 UNC	.94	SPAL-7S-U-W2
8S	6	226	168	80	15	18	M20	30	SPAL-8S-M-W2
		8.90	6.61	3.15	.59	.71	3/4-10 UNC	1.18	SPAL-8S-U-W2
9S	7	270	205	90	15	21	M24	35	SPAL-9S-M-W2
		10.63	8.07	3.54	.59	.83	7/8-9 UNC	1.38	SPAL-9S-U-W2
10S	8	340	265	120	25	21	M30	45	SPAL-10S-M-W2
		13.39	10.43	4.72	.98	.83	1-1/8-7 UNC	1.77	SPAL-10S-U-W2
11S	9	520	395	160	30	38	M30	50	SPAL-11S-M-W2
		20.47	15.55	6.30	1.18	1.50	1-1/4-7 UNC	1.97	SPAL-11S-U-W2
12S	10	680	534	180	30	38	M30	50	SPAL-12S-M-W2
		27.16	21.02	7.09	1.18	1.50	1-1/4-7 UNC	1.97	SPAL-12S-U-W2

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.



Weld Plate for Double Clamps - Type SPAS									
Group		Dimensions (mm/in)							Ordering Codes (Standard Options)
Series	DIN	L1	L2	B	S	H	Thread G	Ø D1	
3S	1	74	33	30	8	8	M10	18	SPAS-3S-M-W2
		2.91	1.30	1.18	.31	.31	3/8-16 UNC	.71	SPAS-3S-U-W2
4S	2	86	45	30	8	8	M10	18	SPAS-4S-M-W2
		3.39	1.77	1.18	.31	.31	3/8-16 UNC	.71	SPAS-4S-U-W2
5S	3	100	60	30	8	8	M10	18	SPAS-5S-M-W2
		3.94	2.36	1.18	.31	.31	3/8-16 UNC	.71	SPAS-5S-U-W2
6S	4	140	90	45	10	8	M12	20	SPAS-6S-M-W2
		5.51	3.54	1.77	.39	.31	7/16-14 UNC	.78	SPAS-6S-U-W2
7S	5	180	122	60	10	12	M16	24	SPAS-7S-M-W2
		7.09	4.8	2.36	.39	.47	5/8-11 UNC	.94	SPAS-7S-U-W2
8S	6	226	168	80	15	18	M20	30	SPAS-8S-M-W2
		8.90	6.61	3.15	.59	.71	3/4-10 UNC	1.18	SPAS-8S-U-W2
9S	7	270	205	90	15	21	M24	35	SPAS-9S-M-W2
		10.63	8.07	3.54	.59	.83	7/8-9 UNC	1.38	SPAS-9S-U-W2
10S	8	340	265	120	25	21	M30	45	SPAS-10S-M-W2
		13.39	10.43	4.72	.98	.83	1-1/8-7 UNC	1.77	SPAS-10S-U-W2
11S	9	520	395	160	30	38	M30	50	SPAS-11S-M-W2
		20.47	15.55	6.30	1.18	1.50	1-1/4-7 UNC	1.97	SPAS-11S-U-W2
12S	10	680	534	180	30	38	M30	50	SPAS-12S-M-W2
		27.16	21.02	7.09	1.18	1.50	1-1/4-7 UNC	1.97	SPAS-12S-U-W2

3D step models available upon request

Ordering Codes:

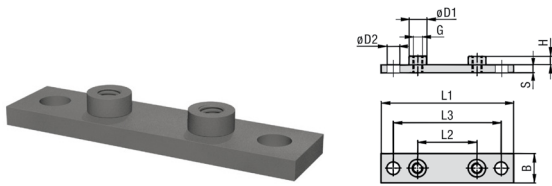
Weld Plate	*SPAL-*3S-*M-W2
• Weld Plate for Single Clamps	SPAL
• Group Series	3S
• Thread	Metric ISO thread M
Code	Unified coarse (UNC) thread U
• Material	Carbon Steel, uncoated W1
Code	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A W5
	1.4401/1.4571 (AISI 316/316 TI)

Ordering Codes:

Weld Plate	*SPAS-*3S-*M-W2
• Weld Plate for Double Clamps	SPAS
• Group Series	3S
• Thread	Metric ISO thread M
Code	Unified coarse (UNC) thread U
• Material	Carbon Steel, uncoated W1
Code	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A W5
	1.4401/1.4571 (AISI 316/316 TI)

Elongated Weld Plates Type SPAL-DUEB and Type SPAS-DUEB

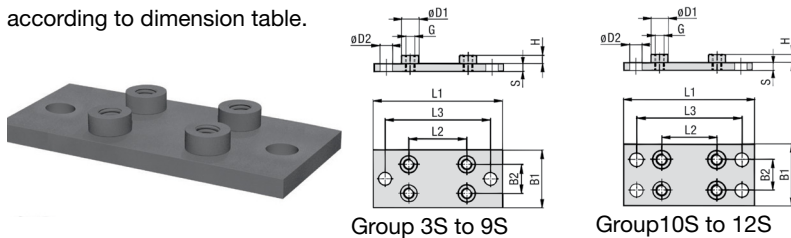
Heavy Series According to DIN 3015, Part 2



Elongated Weld Plate for Single Clamps - Type SPAL-DUEB

Group		Dimensions (mm/in)							Ordering Codes (Standard Options)		
Series	DIN	L1	L2	L3	B	S	H	Thread G	Ø D1	Ø D2	
3S	1	113	33	85	30	8	8	M10	18	13	SPAL-DUEB-3S-M-W2
		4.45	1.30	3.35	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-3S-U-W2
4S	2	125	45	97	30	8	8	M10	18	13	SPAL-DUEB-4S-M-W2
		4.92	1.77	3.82	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-4S-U-W2
5S	3	1440	60	112	30	8	8	M10	18	13	SPAL-DUEB-5S-M-W2
		5.51	2.36	4.41	1.18	.31	.31	3/8-16 UNC	.71	.51	SPAL-DUEB-5S-U-W2
6S	4	187	90	155	45	10	8	M12	20	16	SPAL-DUEB-6S-M-W2
		7.36	3.54	6.10	1.77	.39	.31	7/16-14 UNC	.78	.62	SPAL-DUEB-6S-U-W2
7S	5	238	122	198	60	10	12	M16	24	21	SPAL-DUEB-7S-M-W2
		9.37	4.80	7.80	2.36	.39	.47	5/8-11 UNC	.94	.83	SPAL-DUEB-7S-U-W2
8S	6	309	168	259	80	15	18	M20	30	26	SPAL-DUEB-8S-M-W1
		12.17	6.61	10.20	3.15	.59	.71	3/4-10 UNC	1.18	1.02	SPAL-DUEB-8S-U-W1
9S	7	370	205	310	90	15	21	M24	35	31	SPAL-DUEB-9S-M-W1
		14.57	8.07	12.20	3.54	.59	.83	7/8-9 UNC	1.38	1.22	SPAL-DUEB-9S-U-W1
10S	8	460	265	400	120	25	21	M30	45	31	SPAL-DUEB-10S-M-W1
		18.11	10.43	15.75	4.72	.98	.83	1-1/8-7 UNC	1.77	1.22	SPAL-DUEB-10S-U-W1
11S	9	590	395	530	160	30	38	M30	50	31	SPAL-DUEB-11S-M-W1
		23.23	15.55	20.87	6.30	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAL-DUEB-11S-U-W1
12S	10	750	534	690	180	30	38	M30	50	31	SPAL-DUEB-12S-M-W1
		29.53	21.02	27.17	7.09	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAL-DUEB-12S-U-W1

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.



Group 3S to 9S

Group 10S to 12S

Elongated Weld Plate for Double Clamps - Type SPAS-DUEB

Group		Dimensions (mm/in)							Ordering Codes (Standard Options)			
Series	DIN	L1	L2	L3	B1	B2	S	H	Thread G	Ø D1	Ø D2	
3S	1	113	33	85	60	30,5	8	8	M10	18	13	SPAS-DUEB-3S-M-W2
		4.45	1.30	3.35	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-3S-U-W2
4S	2	125	45	97	60	30,5	8	8	M10	18	13	SPAS-DUEB-4S-M-W2
		4.92	1.77	3.82	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-4S-U-W2
5S	3	1440	60	112	60	30,5	8	8	M10	18	13	SPAS-DUEB-5S-M-W2
		5.51	2.36	4.41	2.36	1.20	.31	.31	3/8-16 UNC	.71	.51	SPAS-DUEB-5S-U-W2
6S	4	187	90	155	90	46	10	8	M12	20	16	SPAS-DUEB-6S-M-W2
		7.36	3.54	6.10	3.54	1.81	.39	.31	7/16-14 UNC	.78	.62	SPAS-DUEB-6S-U-W2
7S	5	238	122	198	120	61	10	12	M16	24	21	SPAS-DUEB-7S-M-W2
		9.37	4.80	7.80	4.72	2.40	.39	.47	5/8-11 UNC	.94	.83	SPAS-DUEB-7S-U-W2
8S	6	309	168	259	160	81	15	8	M20	30	26	SPAS-DUEB-8S-M-W1
		12.17	6.61	10.20	6.61	3.19	.59	.71	3/4-10 UNC	1.18	1.02	SPAS-DUEB-8S-U-W1
9S	7	370	205	310	180	91	15	21	M24	35	31	SPAS-DUEB-9S-M-W1
		14.57	8.07	12.20	7.09	3.58	.59	.83	7/8-9 UNC	1.38	1.22	SPAS-DUEB-9S-U-W1
10S	8	460	265	400	240	121	25	21	M30	45	31	SPAS-DUEB-10S-M-W1
		18.11	10.43	15.75	9.45	4.78	.98	.83	1-1/8-7 UNC	1.77	1.22	SPAS-DUEB-10S-U-W1
11S	9	590	395	530	324	166	30	38	M30	50	31	SPAS-DUEB-11S-M-W1
		23.23	15.55	20.87	12.76	6.54	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAS-DUEB-11S-U-W1
12S	10	750	534	690	364	186	30	38	M30	50	31	SPAS-DUEB-12S-M-W1
		29.53	21.02	27.17	14.33	7.32	1.18	1.50	1-1/4-7 UNC	1.97	1.22	SPAS-DUEB-12S-U-W1

Ordering Codes:

Weld Plate *SPAL-DUEB-*3S-*M-W2

- Elongated Weld Plate for Single Clamps SPAL-DUEB
- Group Series 3S
- Thread Metric ISO thread M
- Code Unified coarse (UNC) thread U
- Material Carbon Steel, uncoated W1
- Code Carbon Steel, phosphated W2
- Carbon Steel, zinc/nickel-plated W3
- Stainless Steel V2A W4
- 1.4301/1.4305 (AISI 304/303)
- Stainless Steel V4A W5
- 1.4401/1.4571 (AISI 316/ 316 TI)

Ordering Codes:

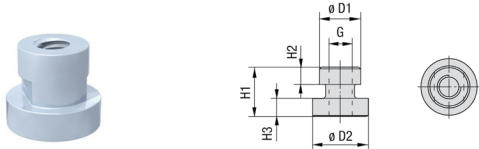
Weld Plate *SPAS-DUEB-*3S-*M-W2

- Elongated Weld Plate for Double Clamps SPAS-DUEB
- Group Series 3S
- Thread Metric ISO thread M
- Code Unified coarse (UNC) thread U
- Material Carbon Steel, uncoated W1
- Code Carbon Steel, phosphated W2
- Carbon Steel, zinc/nickel-plated W3
- Stainless Steel V2A W4
- 1.4301/1.4305 (AISI 304/303)
- Stainless Steel V4A W5
- 1.4401/1.4571 (AISI 316/ 316 TI)

3D step models available upon request

Rail Nuts Heavy RNH, Mounting Rail

Heavy Series According to DIN 3015, Part 2



Mounting Rail Nut (for Use with Mounting Rail STSV) Type RNH

Group		Dimensions (mm/in)						Ordering Codes (Standard Options)
Series	DIN	Ø D1	Ø D2	H1	H2	H3	Thread G	
3S	1	17.8	24	21	7,6	7,4	M10	RNH345-M-*
4S	2	.70	.94	.83	.30	.29	3/8-16 UNC	RNH345-*
5S	3							
6S	4	19.8	24	23	8.8	8.8	M12	RNH6-M-*
		.78	.94	.91	.35	.35	3/8-16 UNC	RNH6-*
7S	5	24.1	28.7	38.8	23.6	8.8	M16	RNH7-M-*
		.95	1.13	1.53	.93	.35	5/8-11 UNC	RNH7-*

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.



Mounting Rail (for Use with Mounting Rail Nut RNH) Type STSV

Group		Dimensions (mm/in)				Ordering Codes (Standard Options)	
Series	DIN	B1	B2	H	S	Length of Rail: 1m/3.28 ft.	Length of Rail: 2m/6.56 ft.
3S	1	40	13	22	5	STSV-100/3-*	STSV-100/6-*
4S	2						
5S	3						
6S	4	1.57	.51	.86	.19		
7S	5						



Rail Nut Plate, Type RNP for use with Rail and Group 7 Rail Nut

Group		Dimensions (mm/in)					Ordering Codes (Standard Options)
Series	DIN	L1	LB2	B	S	Ø D1	
7S	5	152.4	122.2	63.5	12.7	25	RNP-7-*
		6.00	4.81	2.50	0.50	0.98	

Ordering Codes:

Mounting Rail Nut		RNH345-SS
• Mounting Rail Nut		RNH
• Group Series	3S to 5S (DIN Group 1 to 3)	345
	6S (DIN Group 4)	6
	7S (DIN Group 5)	7
• Thread Code	Metric ISO thread	M
	Unified coarse (UNC) thread	Standard
• Material Code	Carbon Steel, zinc/nickel-plated	Standard
	* Stainless Steel Type 316	SS

Ordering Codes:

Mounting Rail		STSV 100/6
• Mounting Rail		STSV
• Length of Rail	1 m / 3.28 ft.	3
	2 m / 6.56 ft.	6
	Alternative lengths available upon request.	
• Material Code	Carbon Steel, uncoated	Standard
	*Stainless Steel Type 316	SS

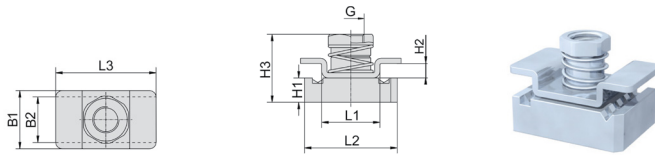
Ordering Codes:

Rail Nut Plate		RNP-7
• Rail Nut Plate		RNP
• Group Series		7S
• Material Code	Carbon Steel, uncoated	Standard
	*Stainless Steel Type 316	SS

3D step models available upon request

Channel Rail Adaptors, Type CRA

Heavy Series According to DIN 3015, Part 2



Channel Rail Adaptor (for Use with Various Channel Rails) Type CRA

Group		Dimensions (mm/in)									Ordering Codes (Standard Options)
Series	DIN	Thread G	L1	L2	L3	B1	B2	H1	H2	H3	
3S	1	M10	22	35	38	22	20,5	9,2	5,5	27,5	CRA-3-5S-M-W3
4S	2										
5S	3	3/8-16 UNC	.87	1.38	1.50	.87	.81	.36	.22	1.08	CRA-3-5S-U-W3
6S	4	M12	21,5	35	45	25	19	9,2	5	27,5	CRA-3-5S-M-W3
		7/16-14 UNC	.85	1.38	1.77	.98	.75	.36	.20	1.08	CRA-3-5S-U-W3

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.



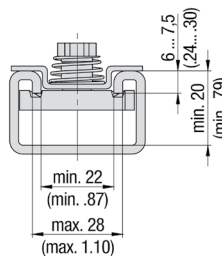
Ordering Codes:

Adaptor	*CRA-*3-5S-*M-*W3	
• Channel Rail Adaptor		CRA
• Group Series	3S to 5S (DIN Group 1 to 3)	3-5S
	6S (DIN Group 4)	6S
• Thread Code	Metric ISO thread	M
	Unified coarse (UNC) thread	U
• Material Code	Carbon Steel, zinc/nickel-plated	W3
	Stainless Steel V4A	W5
	1.4401/1.4571 (AISI 316 /316 Ti)	

Compatibility with Channel Rails

The Channel Rail Adaptor, type CRA is suitable for various channel rails, including the following types:

HALFEN	HILTI	UNISTRUT®	Series (Cushion Clamp Series)
HM 41/41	MQ-21, MQ-41, MQ-52	P1000, P1000T, P1000V, P1001	SCS-048-1-PL, SCS-048-1-GR
HZA-41/22	MQ-21U, MQ-41U, MQ-72U	P2000, P2000T	SCS-120-1-PL, SCS-120-1-GR
HZM 41/41	MQ-21D, MQ-41D, MQ-52-72D	03993, P3003T, P3300V, P3300VT, P3301	See page 149 for technical information
HZM 41/22		P4000, P4000T	
HL 41/41, HL 41/B2		P5000, P5000T, P5001, P5500, P5500T, P5501	



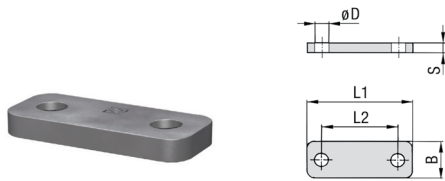
Basic dimensional requirements for channel rails to be used with STAUFF Channel Rail Adaptors, Type CRA

Recommended Bolt Lengths when using the Channel Rail Adaptor, Type CRA

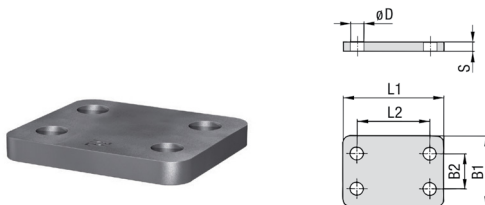
Group		Hexagon Head Bolts AS (used with Cover Plates DPAL or DPAS)		Socket Cap Screws (used without Cover Plates DPAL or DPAS)	
Series	DIN	Metric ISO Thread	Unified Coarse (UNC) Thread	Metric ISO Thread	Unified Coarse (UNC) Thread
3S	1	M10x40	3/8-16 UNC x 1-1/2	M10 x 25	3/8-16 UNC x 1
4S	2	M10x55	3/8-16 UNC x 2-1/4	M10 x 40	3/8-16 UNC x 1-1/2
5S	3	M10x65	3/8-16 UNC x 2-3/4	M10 x 50	3/8-16 UNC x 2
6S	4	M12x100	7/16-14 UNC x 3-3/4	M12 x 75	7/16-14 UNC x 3

Cover Plates Type DPAL and DPAS

Heavy Series According to DIN 3015, Part 2



Cover Plate for Single Clamps, Type DPAL							
Group		Dimensions (mm/in)					Ordering Codes (Standard Options)
Series	DIN	L1	L2	B	S	ØD	
3S	1	55	33	30	8	11	DPAL-3S-W2
		2.16	1.30	1.18	.31	.43	
4S	2	70	45	30	8	11	DPAL-4S-W2
		2.76	1.77	1.18	.31	.43	
5S	3	85	60	30	8	11	DPAL-5S-W2
		3.35	2.36	1.18	.31	.43	
6S	4	115	90	45	10	14	DPAL-6S-W2
		4.53	3.54	1.77	.39	.55	
7S	5	152	122	60	15	19	DPAL-7S-W2
		5.98	4.80	2.36	.59	.75	
8S	6	206	168	80	15	22	DPAL-8S-W1
		8.11	6.61	3.15	.59	.87	
9S	7	251	205	90	15	26	DPAL-9S-W1
		9.88	8.07	3.54	.59	1.02	
10S	8	320	265	120	25	35	DPAL-10S-W1
		12.60	10.43	4.72	.98	1.38	
11S	9	470	395	160	30	35	DPAL-11S-W1
		18.50	15.55	6.30	1.18	1.38	
12S	10	630	534	180	30	35	DPAL-12S-W1
		24.80	21.02	7.09	1.18	1.38	



Cover Plate for Double Clamps, Type DPAS								
Group		Dimensions (mm/in)					Ordering Codes (Standard Options)	
Series	DIN	L1	L2	B1	B2	S		ØD
3S	1	55	33	60	30,5	8	11	DPAS-3S-W2
		2.16	1.30	2.36	120	.31	.43	
4S	2	70	45	60	30,5	8	11	DPAS-4S-W2
		2.76	1.77	2.36	120	.31	.43	
5S	3	85	60	60	30,5	8	11	DPAS-5S-W2
		3.35	2.36	2.36	120	.31	.43	
6S	4	115	90	90	46	10	14	DPAS-6S-W2
		4.53	3.54	3.54	1.81	.39	.55	
7S	5	152	122	120	61	15	19	DPAS-7S-W2
		5.98	4.80	4.72	2.40	.59	.75	
8S	6	206	168	160	81	15	22	DPAS-8S-W1
		8.11	6.61	6.61	3.19	.59	.87	
9S	7	251	205	180	91	15	26	DPAS-9S-W1
		9.88	8.07	7.09	3.58	.59	1.02	
10S	8	320	265	240	121	25	35	DPAS-10S-W1
		12.60	10.43	9.45	4.78	.98	1.38	
11S	9	470	395	321	166	30	35	DPAS-11S-W1
		18.50	15.55	12.64	6.54	1.18	1.38	
12S	10	630	534	361	186	30	35	DPAS-12S-W1
		24.80	21.02	14.21	7.32	1.18	1.38	

3D step models available upon request

Ordering Codes:

Cover Plate	*DPAL-*3S-*W2
• Cover Plate for Single Clamps	DPAL
• Group Series	3S
• Material Code	Carbon Steel, uncoated W1
	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A W5
	1.4401/1.4571 (AISI 316 /316 Ti)
	Aluminum EN AW-6060 W85
	(for group sizes 3S to 5S only)

Ordering Codes:

Cover Plate	*DPAS-*3S-*W2
• Cover Plate for Double Clamps	DPAS
• Group Series	3S
• Material Code	Carbon Steel, uncoated W1
	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A W5
	1.4401/1.4571 (AISI 316 /316 Ti)

Hex Bolt Type AS and Screw Cap Type IS

Heavy Series According to DIN 3015, Part 2



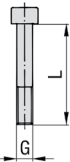
Hexagon Head Bolt AS

(according to DIN 931/933 or ANSI/ASME B18.2.1)

Dimensions applicable only when used with Cover Plates DPAL or DPAS

Hexagon Head Bolt, Type AS			
Group	Dimensions (mm/in)		Ordering Codes (Standard Options)
Series	DIN	Thread GxL	
3S	1	M10x45	AS-M10x45-W1
		3/8-16 UNC x 1-3/4	AS-3/8-16UNCx1-3/4-W3*
4S	2	M10x60	AS-M10x45-W1
		3/8-16 UNC x 2-1/4	AS-3/8-16UNCx2-1/4-W3*
5S	3	M10x70	AS-M10x70-W1
		3/8-16 UNC x 2-3/4	AS-3/8-16UNCx2-3/4-W3*
6S	4	M12x100	AS-M12x100-W1
		7/16-14 UNC x 4	AS-7/16-14UNCx4-W3*
7S	5	M16x130	AS-M16x130-W1
		5/8-11 UNC x 5-1/4	AS-5/8-11UNCx5-1/4-W3*
8S	6	M20x190	AS-M20x190-W1
		3/4-10 UNC x 5-1/4	AS-3/4-10UNCx5-1/4-W1
9S	7	M24x220	AS-M24x220-W1
		7/8-9 UNC x 8-3/4	AS-7/8-9UNCx8-3/4-W1
10S	8	M30x300	AS-M30x300-W1
		1-1/8-7 UNC x 12	AS-1-1/8-7UNCx12-W1
11S	9	M30x450	AS-M30x450-W1
		1-1/4-7 UNC x 17-1/2	AS-1-1/5-7UNCx17-1/2-W1
12S	10	M30x560	AS-M30x560-W1
		1-1/4-7 UNC x 22	AS-1-1/4-7UNCx22-W1

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.



Socket Cap Screw Type IS

(according to ISO 4762 or ANSI/ASME B18.3)

Dimensions applicable only when used without Cover Plates

Socket Cap Screw, Type IS			
Group	Dimensions (mm/in)		Ordering Codes (Standard Options)
Series	DIN	Thread GxL	
3S	1	M10x30	IS-M10x30-W1
		3/8-16 UNC x 1	IS-3/8-16UNCx1-W3
4S	2	M10x40	IS-M10x40-W1
		3/8-16 UNC x 1-3/4	IS-3/8-16UNCx1-3/4-W3
5S	3	M10x50	IS-M10x50-W1
		3/8-16 UNC x 2	IS-3/8-16UNCx2-W3
6S	4	M12x80	IS-M12x80-W1
		7/16-14 UNC x 3-1/4	IS-7/16-14UNCx3-1/4-W3

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.

Ordering Codes:

Hexagon Head Bolt		*AS-*M10x70-*W1
• Type of bolt	Hexagon Head Bolt (according to DIN 931/933 or ANSI/SME B18.2.1)	AS
• Thread type and size acc. to dimension table	M10x70	
• Material Code	Carbon Steel, uncoated	W1
	Carbon Steel, zinc/nickel-plated	W3
	Stainless Steel V2A	W4
	1.4301/1.4305 (AISI 304/303)	W5
	Stainless Steel V4A	
	1.4401/1.4571 (AISI 316 /316 Ti)	

* Standard finishing option for Heavy Group Series sizes 3S to 7S in North America is W3 (Carbon Steel, zinc/nickel plated).

Ordering Codes:

Socket Cap Screw		*IS-*M10x50-*W1
• Type of bolt	Socket Cap Screw (according to ISO 4762 or ANSI/ASME B18.3)	IS
• Thread type and size acc. to dimension table	M10x50	
• Material Code	Carbon Steel, uncoated	W1
	Carbon Steel, zinc/nickel-plated	W3
	Stainless Steel V2A	W4
	1.4301/1.4305 (AISI 304/303)	W5
	Stainless Steel V4A	
	1.4401/1.4571 (AISI 316 /316 Ti)	

3D step models available upon request

Safety Washer Type SI

Heavy Series According to DIN 3015, Part 2



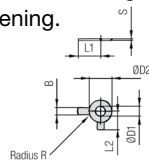
Safety Washer SI

(Bend longer tab down towards the side of the clamp body and one side up towards one of the flats of the hexagon head bolt)

Safety Washer (for Use with Hexagon Head Bolt AS), Type SI (DIN 93)

Group		Dimensions (mm/in)						Ordering Codes (Standard Options)
Series	DIN	ØD1	B	ØD2	L	R	S	
3S	1	10.5	10	26	22	4	0.75	SI-10.5-DIN93-W3
		.41	.39	1.02	.87	.16	.03	
4S	2	10.5	10	26	22	4	0.75	SI-10.5-DIN93-W3
		.41	.39	1.02	.87	.16	.03	
5S	3	10.5	10	26	22	4	0.75	SI-10.5-DIN93-W3
		.41	.39	1.02	.87	.16	.03	
6S	4	13	12	30	28	6	1	SI-13-DIN93-W3
		.51	.47	1.18	1.10	.24	.04	
7S	5	17	15	36	32	6	1	SI-17-DIN93-W3
		.67	.59	1.42	1.26	.24	.04	
8S	6	21	18	42	36	6	1	SI-21-DIN93-W3
		.83	.71	1.65	1.42	.24	.04	
9S	7	25	20	50	42	6	1	SI-25-DIN93-W3
		.98	.79	1.97	1.65	.24	.04	
10S	8	31	26	63	52	10	1.6	SI-31-DIN93-W3
		1.22	1.02	2.48	2.05	.39	.06	
11S	9	31	26	63	52	10	1.6	SI-31-DIN93-W3
		1.22	1.02	2.48	2.05	.39	.06	
12S	10	31	26	63	52	10	1.6	SI-31-DIN93-W3
		1.22	1.02	2.48	2.05	.39	.06	

Safety Washers, type SI are used as locking devices to prevent Hexagon Head Bolts, type AS from loosening.



Safety Washer SI

(Bend longer tab down towards the side of the clamp body and shorter tab up towards one of the flats of the hexagon head bolt)

Safety Washer (for Use with Hexagon Head Bolt AS), Type SI (DIN 463)

Group		Dimensions (mm/in)						Ordering Codes (Standard Options)	
Series	DIN	ØD1	B	ØD2	L	L2	R		S
3S	1	10.5	10	21	22	13	4	0.75	SI-10.5-DIN463-W3
		.41	.39	.83	.87	.51	.16	.03	
4S	2	10.5	10	21	22	13	4	0.75	SI-10.5-DIN463-W3
		.41	.39	.83	.87	.51	.16	.03	
5S	3	10.5	10	21	22	13	4	0.75	SI-10.5-DIN463-W3
		.41	.39	.83	.87	.51	.16	.03	
6S	4	13	12	24	28	15	6	1	SI-13-DIN463-W3
		.51	.47	.94	1.10	.59	.24	.04	
7S	5	17	15	30	32	18	6	1	SI-17-DIN463-W3
		.67	.59	1.18	1.26	.71	.24	.04	
8S	6	21	18	37	36	21	6	1	SI-21-DIN463-W3
		.83	.71	1.46	1.42	.83	.24	.04	
9S	7	25	20	44	42	25	6	1	SI-25-DIN463-W3
		.98	.79	1.73	1.65	.98	.24	.04	
10S	8	31	26	56	52	32	10	1.6	SI-31-DIN463-W3
		1.22	1.02	2.20	2.05	1.26	.39	.06	
11S	9	31	26	56	52	32	10	1.6	SI-31-DIN463-W3
		1.22	1.02	2.20	2.05	1.26	.39	.06	
12S	10	31	26	56	52	32	10	1.6	SI-31-DIN463-W3
		1.22	1.02	2.20	2.05	1.26	.39	.06	

3D

Ordering Codes:

- Safety Washer** ***SI-*10.5-*DIN93-*W3**
- Safety Washer SI
 - Exact Inner Diameter ØD1 (mm) 10.5
 - Type of Washer DIN 93
Safety Washer with 2 tabs (according to DIN 93)
 - Material Code W3
Carbon Steel, zinc/nickel-plated
 - W5
Stainless Steel V4A
1.4401/1.4571 (AISI 316 /316 TI)

Ordering Codes:

- Safety Washer** ***SI-*10.5-*DIN463-*W3**
- Safety Washer SI
 - Exact Inner Diameter ØD1 (mm) 10.5
 - Type of Washer DIN 463
Safety Washer with 2 tabs (according to DIN 463)
 - Material Code W3
Carbon Steel, zinc/nickel-plated
 - W5
Stainless Steel V4A
1.4401/1.4571 (AISI 316 /316 TI)

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

ISO 6164, 400 bar

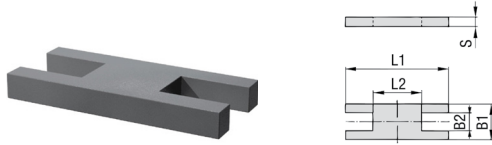
ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

Safety Plate Type SIP and Stacking Bolt Type AF

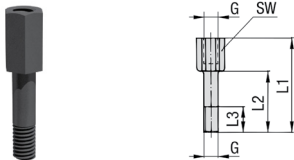
Heavy Series According to DIN 3015, Part 2



Safety Locking Plate (for Use with Stacking Bolt AF), Type SIP							
Group		Dimensions (mm/in)					Ordering Codes (Standard Options)
Series	DIN	L1	L2	B1	B2	S	
3S	1	57	13	30	15,2	8	SIP-3S-W2
		2.24	.51	1.18	.60	.31	
4S	2	70	26	30	15,2	8	SIP-4S-W2
		2.76	1.02	1.18	.60	.31	
5S	3	85	40	30	15,2	8	SIP-5S-W2
		3.35	1.57	1.18	.60	.31	
6S	4	116	68	45	17,2	10	SIP-6S-W2
		4.57	2.68	1.77	.68	.39	
7S	5	153	96	60	22	10	SIP-7S-W2
		6.02	3.78	2.36	.87	.39	
8S	6	206	130	80	28	15	SIP-8S-W1
		8.11	5.12	3.15	1.10	.59	
9S	7	251	166	90	31	15	SIP-9S-W1
		9.88	6.54	3.54	1.22	.59	
10S	8	317	205	120	49	25	SIP-10S-W1
		12.48	8.07	4.72	1.02	.98	

Ordering Codes:

Safety Locking Plate	*SIP-*3S-*W2
• Safety Locking Plate	SIP
• Group Series	3S
• Material Code	Carbon Steel, uncoated W1
	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A
	1.4401/1.4571 (AISI 316 /316 TI) W5



Stacking Bolt (for Use with Safety Locking Plate SIP), Type AF							
Group		Dimensions (mm/in)					Ordering Codes (Standard Options)
Series	DIN	L1	L2	L3 min.	Hex	Thread G	
3S	1	49	25	15	15	M-10	AF-3S-M-W2
		1.93	.98	.59	.59	3/8-16 UNC	AF-3S-U-W3*
4S	2	65	40	15	15	M-10	AF-4S-M-W2
		2.56	1.57	.59	.59	3/8-16 UNC	AF-4S-U-W3*
5S	3	77	51	15	15	M-10	AF-5S-M-W2
		3.03	2.01	.59	.59	3/8-16 UNC	AF-5S-U-W3*
6S	4	110	82	18	17	M12	AF-6S-M-W2
		4.33	3.23	.71	.67	7/16-14 UNC	AF-6S-U-W3*
7S	5	144	110	24	22	M16	AF-7S-M-W2
		5.67	4.33	.94	.87	5/8-11 UNC	AF-7S-U-W3*
8S	6	200	150	30	27	M20	AF-8S-M-W2
		7.87	5.91	1.18	1.06	3/4-10 UNC	AF-8S-U-W1*
9S	7	240	180	50	30	M24	AF-9S-M-W2
		9.45	7.09	1.97	1.18	7/8-9 UNC	AF-9S-U-W1*
10S	8	331	256	62	46	M30	AF-10S-M-W2
		13.03	10.08	2.44	1.81	1-1/8-7 UNC	AF-10S-U-W1*

Ordering Codes:

Stacking Bolt	*AF-*3S-*M-*W2
• Stacking Bolt	AF
• Group Series	3S
• Thread Code	Metric ISO thread M
	Unified coarse (UNC) thread U
• Material Code	Carbon Steel, uncoated W1
	Carbon Steel, phosphated W2
	Carbon Steel, zinc/nickel-plated W3
	Stainless Steel V2A W4
	1.4301/1.4305 (AISI 304/303)
	Stainless Steel V4A
	1.4401/1.4571 (AISI 316 /316 TI) W5

All threaded parts are available with Metric ISO thread or unified course (UNC) thread according to dimension table.

3D step models available upon request

Clamp Assembly Ordering Code

SPAL
3006
PP
DPAL-AS
M
W12
K

1
2
3
4
5
6
7

① Type of Installation

Please select the type of installation (e.g. Weld Plates, Rail Nuts, etc.) and add the corresponding Code to position ① of the order code for your clamp assembly.



Without Installation Equipment
Code: none

Installation on Weld Plate



Weld Plate for Single Clamps
Code: **SPAL**



Weld Plate for Double Clamps
Code: **SPAS**



Elongated Weld Plate for Single Clamps
Code: **SPAL-DUEB**



Elongated Weld Plate for Double Clamps
Code: **SPAS-DUEB**

Installation on Mounting/Channel Rail



Mounting Rail Nut
Code: **RNH** (for Group 3S to 6S only)
Code: **RNH-RNP** (for Group 7S only)



Channel Rail Adaptor
Code: **CRA** (for Group 3S to 6S only)

② Group Size & Diameter

Please select the required group size and diameter and add the corresponding Code to Position ② of the order code for your clamp assembly.

Group	Outside Diameter	Availability of Clamp Body Materials & Designs			Code
		Series (DIN)	P/T/H (mm)	Profiled Design	
3S (1)	6	•	•	○	3006
	6,4	•	•	○	3006.4
	8	•	•	○	3008
	9,5	•	•	○	3009.5
	10	•	•	○	3010
	12	•	•	○	3012
	12,7	•	•	○	3012.7
	13,5	•	•	○	3013.5
	14	•	•	○	3014
	15	•	•	○	3015
	16	•	•	○	3016
	17,2	•	•	○	3017.2
18	•	•	○	3018	
20	•	○	○	3020	

② Group Size & Diameter Continuation

Group	Outside Diameter	Availability of Clamp Body Materials & Designs			Code
		Series (DIN)	P/T/H (mm)	Profiled Design	
4S (2)	8	○	○	•	4006
	8	○	○	•	4008
	10	○	○	•	4010
	12	○	○	•	4012
	12,7	○	○	•	4012.7
	14	○	○	•	4014
	15	○	○	•	4015
	16	○	○	•	4016
	17,2	○	○	•	4017.2
	18	○	○	•	4018
	19	•	•	•	4019
	20	•	•	○	4020
	21,3	•	•	○	4021.3
	22	•	•	○	4022
	25	•	•	○	4025
	25,4	•	•	○	4025.4
	28	•	•	○	4028
	30	•	•	○	4030
20	○	○	•	5020	
5S (3)	21,3	○	○	•	5021.3
	22	○	○	•	5022
	25	○	○	•	5025
	25,4	○	○	•	5025.4
	26,9	○	○	•	5026.9
	28	○	○	•	5028
	30	•	•	•	5030
	32	•	•	•	5032
	33,7	•	•	○	5033.7
	35	•	•	○	5035
	38	•	•	○	5038
	40	•	•	○	5040
41,3	•	•	○	5041.3	
42	•	•	○	5042	
32	○	○	•	6032	
6S (4)	33,7	○	○	•	6033.7
	35	○	○	•	6035
	38	•	•	○	6038
	38,7	○	○	•	6038.7
	40	○	○	•	6040
	42	•	•	•	6042
	44,5	•	•	•	6044.5
	35,5	○	○	•	6035.5
	48	○	○	•	6048
	48,3	•	•	○	6048.3
	50,8	•	•	○	6050.8
	51	○	○	•	6051
	53,4	○	○	•	6053.4
	54	•	•	○	6054
	55	•	•	○	6055
	56,4	○	○	•	6056.4
	57	•	•	○	6057
	57,2	•	•	○	6057.2

② Group Size & Diameter Continuation

Group	Outside Diameter	Availability of Clamp Body Materials & Designs			Code
		Series (DIN)	P/T/H (mm)	Profiled Design	
6S (4)	60,3	•	•	○	6060.3
	63,5	•	•	○	6063.5
	65	•	•	○	6065
	70	•	•	○	6070
7S (5)	55	○	○	•	7055
	57	○	○	•	7057
	60	○	○	•	7060
	60,3	•	•	○	7060.3
	63,5	○	○	•	7063.5
	65	•	•	•	7065
	70	•	•	•	7070
	72	○	○	•	7072
	73	•	•	○	7073
	75	•	•	○	7075
	76	○	○	•	7076
	76,1	•	•	○	7076.1
8S (6)	80	•	•	○	7080
	82,5	•	•	○	7082.5
	88,9	•	•	○	7088.9
	80	○	○	•	8080
	88,9	•	•	•	8088.9
	100	•	•	○	8100
	102	•	•	•	8102
	108	•	•	○	8108
	114	•	•	○	8114
	127	•	•	○	8127
	133	•	•	○	8133
	9S (7)	114	○	○	•
127		•	•	○	9127
133		•	•	•	9133
140		•	•	•	9140
153		•	•	○	9153
159		•	•	○	9159
165		•	•	○	9165
168		•	•	○	9168
150		○	○	•	10150
165		○	○	•	10165
168		•	•	•	10168
172		○	○	•	10172
10 (S)	177,8	•	•	○	10177.8
	193,7	•	•	○	10193.7
	203	•	•	○	10203
	216	•	•	○	10216
	219	•	•	○	10219
	219	•	•	○	11219
	273	•	•	○	11273
	324	•	•	○	11324
11 (S)	356	•	•	○	12356
	406	•	•	○	12406

• Standard Option

3D step models available upon request

Clamp Assembly Ordering Code

Please see pages K15 and K16 with detailed order examples for some of the most popular Heavy Series clamp assemblies.

③ Clamp Body Design & Material

Please select the design and material of your clamp body and add the corresponding Code to position ③ of the order code for your clamp assembly.

Please check the availability of the selected clamp body design and material according to the matrix table in ②.

Profiled Design



Polypropylene
Code: **PP**



Polypropylene (Colour: Black)
Code: **PP-BK**



Polyamide
Code: **PA**



Thermoplastic Elastomer (87 Shore-A)
Code: **SA** (Group 3S to 6S only)



Aluminum
Code: **AL**

Type H (Smooth)



Polypropylene
Code: **PP-H** (Group 3S to 6S only)



Polypropylene (Colour: Black, Group 3S to 6S only)
Code: **PP-H-BK**



Polyamide
Code: **PA-H** (Group 3S to 6S only)



Thermoplastic Elastomer (87 Shore-A)
Code: **SA-H** (Group 3S to 6S only)

Type RI (with Elastomer Insert)



Polypropylene
Code: **PP-R** (Group 4S to 10S only)



Polyamide
Code: **PA-R** (Group 4S to 10S only)

④ Mounting & Fitting Combination

Please select the mounting and fitting combination (e.g. bolts, screws, cover plates, etc.) and add the corresponding Code to position ④ of the order code for your clamp assembly.

Installation with Cover Plate and Bolts

Cover Plate for Single Clamps DPAL with Hexagon Head Bolts AS
Code: **DPAL-AS**

Cover Plate for Double Clamps DPAS with Hexagon Head Bolts AS
Code: **DPAS-AS**

Cover Plate for Single Clamps DPAL with Socket Cap Screws IS*
Code: **DPAL-IS** (for STAUFF Group 3S to 6S only)

Installation with Locking Plates and Bolts

Safety Locking Plate SIP with Stacking Bolts AF
Code: **SIP-AF**

Installation with Bolts only

Socket Cap Screws IS
Code: **IS**

*Special lengths of Socket Cap Screws IS required. For exact lengths, please see details of Hexagon Head Bolt, type AS (for use with Cover Plates DPAL or DPAS) on page 45.

⑤ Thread Type

Please select the required thread type and add the corresponding Code to position ⑤ of the order code for your clamp assembly.

Metric ISO thread
Code: **M**

Unified Coarse (UNC) thread
Code: **U**

*All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to dimension table.

⑥ Material & Surface Finishing

Please select the required material & surface finishing of the metal parts and add the corresponding Code to position ⑥ of the order code for your clamp assembly.

Metal parts made of Carbon Steel, uncoated **W1**

Metal parts made of Carbon Steel, phosphated **W2**

Metal parts made of Carbon Steel, zinc/nickel-plated **W3**

Metal parts made of Stainless Steel V4A 1.4301/1.4305 (AISI 304/303) **W4**

Metal parts made of Stainless Steel V4A 1.4401/1.4571 (AISI 316/316 Ti) **W5**

Weld Plate made of Carbon Steel, phosphated; Other metal parts made of Carbon Steel, zinc/nickel-plated **W10**

Weld Plate and Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated **W12**

Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated **W13**

Weld Plate/Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated **W15**

Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated **W16**

Safety Locking Plate made of Carbon Steel, phosphated; Stacking Bolts made of Carbon Steel, zinc/nickel-plated **W17**

Safety Locking Plate made of Carbon Steel, uncoated; Stacking Bolts made of Carbon Steel, phosphated **W18**

Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated **W19**

Individual combinations of alternative materials and surface finishings are available upon request.

⑦ Assembling & Kitting

If required, please select an additional assembling and kitting option and add the corresponding Code to the last position of the order code for your clamp assembly.

Components supplied separately
Code: **none** (standard option)

Components assembled
Code: **A** (special option)

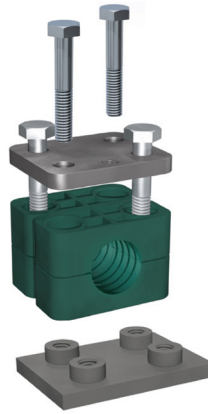
Components packed in kits
Code: **K** (special option) **3D step models available upon request**

Clamp Assemblies, Ordering Examples



- 2x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Single Clamps**
Surface: W2
- 1x **Clamp Body (two halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Weld Plate for Single Clamps**
Surface: W2
Thread: Metric

Order Code
SPAL-3006-PP-DPAL-AS-M-W12
W12 (Group 3S to 7S) and W1 (Group 8S to 12S) are the standard options for this type of installation



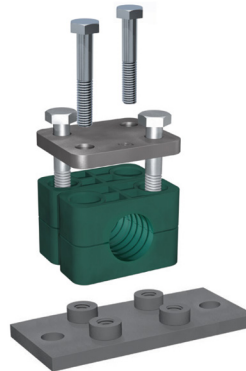
- 4x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Double Clamps**
Surface: W2
- 1x **Clamp Body (four halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Weld Plate for Double Clamps**
Surface: W2
Thread: Metric

Order Code
SPAS-3006-PP-DPAS-AS-M-W12
W12 (Group 3S to 7S) and W1 (Group 8S to 12S) are the standard options for this type of installation



- 2x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Single Clamps**
Surface: W2
- 1x **Clamp Body (two halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Elongated Weld Plate for Single Clamps**
Surface: W2
Thread: Metric

Order Code
SPAL-DUEB-3006-PP-DPAL-AS-M-W12
W12 (Group 3S to 7S) and W1 (Group 8S to 12S) are the standard options for this type of installation



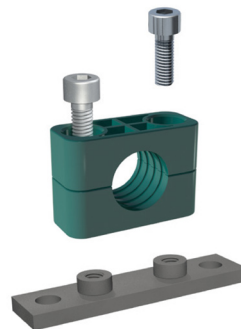
- 4x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Double Clamps**
Surface: W2
- 1x **Clamp Body (four halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Elongated Weld Plate for Double Clamps**
Surface: W2
Thread: Metric

Order Code
SPAS-DUEB-3006-PP-DPAS-AS-M-W12
W12 (Group 3S to 7S) and W1 (Group 8S to 12S) are the standard options for this type of installation



- 2x **Socket Cap Screw**
Surface: W1
Thread: Metric
- 1x **Clamp Body (two halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Weld Plate for Single Clamps**
Surface: W2
Thread: Metric

Order Code
SPAL-3006-PP-IS-M-W12
W12 is the standard option for this type of installation
Available up to Group 6S (DIN Group 4) only.



- 2x **Socket Cap Screw**
Surface: W1
Thread: Metric
- 1x **Clamp Body (two halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Elongated Weld Plate for Single Clamps**
Surface: W2
Thread: Metric

Order Code
SPAL-DUEB-3006-PP-IS-M-W12
W12 is the standard option for this type of installation
Available up to Group 6S (DIN Group 4) only.

3D step models available upon request

Clamp Assemblies, Ordering Examples



- 2x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Single Clamps**
Surface: W2
- 1x **Clamp Body (two halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 1x **Mounting Rail Nut**
Surface: W3
Thread: Metric

Order Code (Mounting Rail STSV not included)
GMV-3006-PP-DPAL-AS-M-W13
W13 is the standard option for this type of installation
Available up to Group 6S (DIN Group 4) only.



- 2x **Socket Cap Screw**
Surface: W1
Thread: Metric
- 1x **Clamp Body (four halves)**
Group 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance
- 2x **Mounting Rail Nut**
Surface: W3
Thread: Metric

Order Code (Mounting Rail STSV not included)
GMV-3006-PP-IS-M-W13
W13 is the standard option for this type of installation
Available up to Group 6S (DIN Group 4) only.

Thread Codes

All threaded parts are available with Metric ISO thread or unified coarse (UNC) thread according to the dimension table.

Metric ISO thread **M**
Unified coarse (UNC) thread **U**

Material Codes

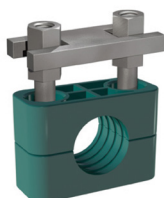
The below listed material codes describe the materials and surface finishings of metal parts that are most relevant for Heavy Series clamp assemblies. Individual combinations of alternative materials and surface finishings are available upon request.

- Metal parts made of Carbon Steel, uncoated **W1**
- Metal parts made of Carbon Steel, phosphated **W2**
- Metal parts made of Carbon Steel, zinc/nickel plated **W3**
- Metal parts made of Stainless Steel V2A: 1.4301/1.4305 (AISI 304/303) **W4**
- Metal parts made of Stainless Steel V2A: 1.4401/1.4571 (AISI 316/316 Ti) **W5**
- Weld Plate made of Carbon Steel, phosphated **W10**
- Other metal parts made of Carbon Steel, zinc/nickel-plated **W10**
- Weld Plate and Cover Plate made of Carbon Steel, phosphated **W12**
- Bolts made of Carbon Steel, uncoated **W12**
- Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, Uncoated **W13**
- Weld Plate and Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated **W15**
- Mounting Rail Nuts made of Carbon Steel, zinc/nickel-plated; Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, zinc/nickel-plated **W16**
- Safety Locking Plate made of Carbon Steel, uncoated, Bolts made of Carbon Steel, zinc/nickel-plated **W17**
- Safety Locking Plate made of Carbon Steel, uncoated, Bolts made of Carbon Steel, phosphated **W18**
- Cover Plate made of Carbon Steel, phosphated; Bolts made of Carbon Steel, uncoated. **W19**



- 2x **Hexagon Head Bolt**
Surface: W1
Thread: Metric
- 1x **Cover Plate for Single Clamps**
Surface: W2
- 1x **Clamp Body (two halves)**
Group Series 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance

Order Code
3006-PP-DPAL-AS-M-W19
W19 (Group 3S to 7S) and W1 (Group 8S to 12S) are the standard options for this type of installation



- 2x **Stacking Bolt**
Surface: W2
Thread: Metric
- 1x **Safety Locking Plate**
Surface: W2
- 1x **Clamp Body (two halves)**
Group Series 3S (DIN 1)
O.D. 6mm/.24 in
Material: Polypropylene
Profiled inside surface with tension clearance

Order Code
3006-PP-SIP-AF-M-W12
W2 (Group 3S to 7S) and W18 (Group 8S to 10S) are the standard options for this type of installation. Available up to Group 10S (DIN Group 8) only.

3D step models available upon request

Installation and Distance Between Clamps

Basic Installation Instructions



Installation on Weld Plate

Different types of weld plates are available for all Clamps according to DIN 3015 as well as for most of the other series and many custom-designed special clamps

- Place weld plates in their designated positions. Please make sure these positions are suitable for the expected loads.
- Mark the positions of the weld plates to ensure best alignment.
- Weld the weld plates into position. Elongated weld plates can also be mounted to their positions by using screws or bolts.
- Push bottom clamp half onto weld plate.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws or bolts.

Unless otherwise stated, the bolt lengths indicated for clamps according to DIN 3015 refer to the installation on the weld plates and mounting rails as well as multi-level (stacking) installation. For direct installation, different lengths may be required.



Installation on Mounting Rail

Rail Nuts are available for all Clamps according to DIN 3015 (Heavy Series up to Group 6S only) as well as for many custom-designed special clamps.

- Place mounting rails in their designated positions. Please make sure these bases are suitable for the expected loads.
- Mark the positions of the mounting rails to ensure best alignment.
- Weld the mounting rails into position. Mounting rails can also be mounted to their positions by using side-mounting brackets with screws or bolts.
- Insert rail nuts into mounting rail and turn until stop to lock (Standard and Twin Series) or slide in rail nut (Heavy Series).
- Push bottom clamp half onto rail nuts
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws and bolts.

The exact positions of the clamp assemblies can still be adjusted before being firmly bolted.



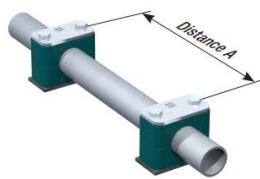
Multi-Level (Stacking) Installation

Stacking bolts permit the multi-level assembly of clamps of identical group sizes. Safety locking plates inserted between the levels prevent the stacking bolts from turning. The Twin Series also allows stacking of different group sizes (Groups 2D to 5D)

- Push bottom clamp half onto weld plate or rail nuts.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half.
- Insert stacking bolts into the clamp assembly and tighten using the following tightening torques (or in a way that the clamp halves are in contact with the line over the entire internal contact surface):
Heavy Series 5N-m/3.75ft-lb
- Place safety locking plate on top of clamp assembly.
- Proceed with next levels. Top level to be assembled with cover plate and hexagon head bolts using the tightening torques as indicated on page K18.

Multi-level clamp assemblies can be mounted both to weld plates or to mounting rails (with rail nuts).

Recommended Distance Between Clamps



Please note: The recommended distances between clamps stated below are standard values and valid for static loads only.

Outside Diameter		Distance A	
(mm)	(in)	(m)	(ft)
6,0 ... 12,7	.2350	1,00	3.28
12,7 ... 22,0	.5086	1,20	3.94
22,0 ... 32,0	.86 ... 1.25	1,50	4.92
32,0 ... 38,0	1.25 ... 1.50	2,00	6.56
38,0 ... 57,0	1.5 ... 2.25	2,00	6.56
57,0 ... 75,0	2.25 ... 2.95	3,00	9.84
75,0 ... 76,1	2.95 ... 3.00	3,50	11.48
76,1 ... 88,9	3.00 ... 3.50	3,70	12,14
88,9 ... 102,0	3.50 ... 4.00	4,00	13.12

Outside Diameter		Distance A	
(mm)	(in)	(m)	(ft)
114,0 ... 168,0	4.50 ... 6.60	5,00	16.40
168,0 ... 219,0	6.60 ... 8.60	6,00	19.68
219,0 ... 324,0	8.60 ... 12.70	6,70	21,98
324,0 ... 356,0	12.70 ... 14.00	7,00	22,96
356,0 ... 406,0	14.00 ... 16.00	7,50	24,60
406,0 ... 419,0	16.00 ... 16.50	8,20	26.90
419,0 ... 508,0	16.50 ... 20.00	8,50	27.88
508,0 ... 521,0	20.00 ... 20.50	9,00	29.52
521,0 ... 558,0	20.50 ... 22.00	10,00	32.80

Installation next to Pipe Bends, Connectors / Couplings and Valves



Please note the following information on the installation of Clamps next to pipe bends, connectors/couplings and valves:

Pipe Bends

Pipe bends should be supported by Clamps as close to the bends as possible. Furthermore, it is recommended to design these clamps as fixed point clamps.

Connection/Couplings

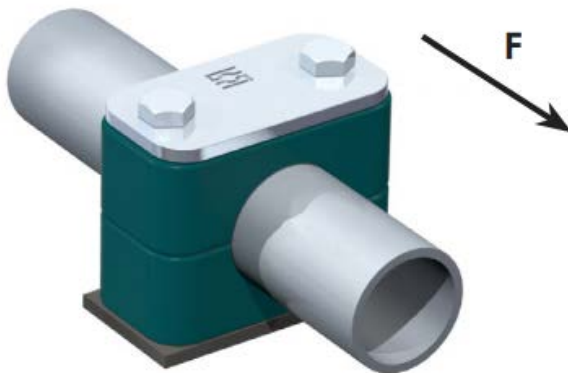
The first clamp should be placed directly next to the connector/coupling. This protects the connector/coupling from vibrations.

Valves

If valves are incorporated in the pipelines, it is recommended that support is provided in front of and behind these valves.

3D step models available upon request

Tightening Torques and Maximum Loads in Pipe Direction



All tightening torques and maximum loads in pipe direction refer to **Clamp Bodies (profiled inside surface with tension clearance) with Cover Plates and Hexagon Head Bolts according to DIN EN ISO 4014/4017 (DIN 931/933)**

The max. load in pipe direction (according to DIN 3015-10.1999) is an average value, determined by three tests at +23°C/+73°F with a steel pipe according to DIN EN 10220, St37 - rolled surface - taking static friction into consideration.

Sliding starts when the shown values (F) are reached.

Group		Hexagon Head Bolt DIN EN ISO 4014.4017 (DIN 931/933)		Polypropylene				Polyamide				Aluminium			
				Tightening Torque		Maximum Load in Pipe Direction F		Tightening Torque		Maximum Load in Pipe Direction F		Tightening Torque		Maximum Load in Pipe Direction F	
				Metric ISO Thread	Unified Coarse (UNC) Thread	(N-m)	(ft-lb)	(kN)	(lbf)	(N-m)	(ft-lb)	(kN)	(lbf)	(N-m)	(ft-lb)
3S	1	M10	3/8-16 UNC	12	9	1,6	360	20	15	4,2	944	30	22	12,1	2720
4S	2	M10	3/8-16 UNC	12	9	2,9	652	20	15	4,5	1044	30	22	15,1	3395
5S	3	M10	3/8-16 UNC	15	11	3,3	742	25	18	5,1	1146	35	26	15,5	3485
6S	4	M12	7/16-14 UNC	30	22	8,2	1843	40	30	9,3	2090	55	41	29,5	6609
7S	5	M16	5/8-11 UNC	45	33	11,0	2472	55	41	15,8	3551	120	86	34,9	7845
8S	6	M20	3/4-10 UNC	80	59	14,0	3147	150	111	21,0	4720	220	162	50,0	11240
9S	7	M24	7/8-9 UNC	110	81	28,0	6300	200	148	32,0	7193	250	184	70,6	15871
10S	8	M30	1-1/8-7 UNC	180	133	40,0	8992	350	258	48,0	10790	500	369	84,5	18966
11S	9	M30	1-1/4 UNC	200	148	119,0	26752	370	273	125,0	27650	500	369	181,5	40802
12S	10	M30	1-1/4 UNC	270	199	168,0	37767	450	332	180,0	40465	600	443	244,5	54965

Pipe and Clamp Spacing

Assumption:

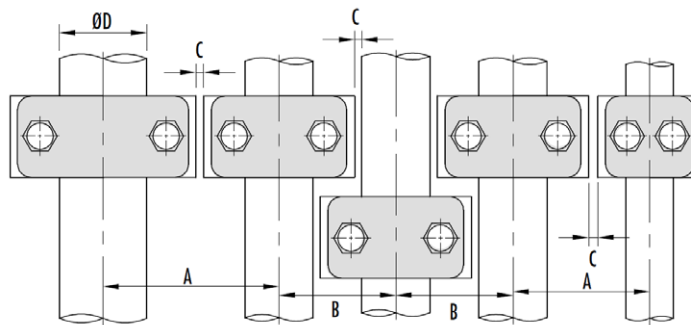
Easy to read center line spacing for side to side and staggered installation when placing same or various size pipe on drawings or installing.

Inline clamping - Minimum spacing C between weld-plates:

- Group 4s to 5s 1/4" (6.5 mm)
- Group 6s to 7s 1/2" (13 mm)
- Group 8s to 9s 5/8" (16 mm)
- Group 10s to 11s 1" (26 mm)

Staggered clamping - Minimum spacing between Tube OD and clamp body:

- Group 4s to 5s 1/4" (6.5 mm)
- Group 6s to 7s 1/2" (13 mm)
- Group 8s to 9s 5/8" (16 mm)
- Group 10s to 11s 1" (26 mm)



Note:

The minimum Center Distances referred to above don't take into account space requirement for union connections, valves and other fittings.

		A= Inline - Side to Side clamping																		
Group	Group	4S		5S	6S			7S		8S		9S		10S		11S				
	d=Size in inch and mm	1/2 21.3	3/4 26.9	1 33.7	1-1/4 42	1-1/2 48.3	2 60.3	2-1/2 73	3 88.9	3-1/2 102	4 114	5 140	6 168	8 219	10 273	12 324				
B = Staggered clamping	4S	1/2 21.3	3-5/8 91.5		3-15/16 99	5 127			6 152		7-1/8 181		9 203		9-9/16 242		12-3/8 314			
		3/4 26.9	2-1/16 52	2-3/16																
	5S	1 33.7	2-5/16 59	61.5	4-3/16 2-9/16	5-9/16 135			6-5/16 160		7-3/8 188		8-1/4 210		9-7/8 25-		12-11/16			
	6S	1-1/4 42					6-7/16 163													
		1-1/2 48.3	3-1/16 78	3-3/16 81	3-5/16 84	3-5/8 95	3-3/4 95		7-1/16 188		8-9/16 217		9-7/16 239		10-15/16 278		13-3/4 350			
		2 60.3					4 101													
	7S	2-1/2 73	3-13/16 96.5	3-1/8 99	4-1/16 103	4-3/8 110	4-1/2 113	4-11/16 119	5 134	8-3/8 213	9-9/16 242		10-7/16 264		11-15/16 303		14-13/16 375			
		3 88.9																		
	8S	3-1/2 102	4-7/8 125	5 128	5-1/8 138	5-7/16 138	5-9/16 141	5-3/4 147	6-1/16 154	6-3/8 161	6-5/8 174		10-5/8 270		11-1/2 292		13-1/16 354		16-3/4 426	
		4 114																		
	9S	5 140	5-13/16 147	5-15/16 150	6-1/16 153	6-3/16 153	6-5/16 160	6-9/16 166	6-13/16 154	7-1/8 181	7-9/16 192	7-13/16 198	8-5/16 225		12-3/8 314		13-15/16 354		16-3/4 426	
		6 168																		
	10S	8 219	7-7/8 200		8-1/8 205	8-5/16 210			8-1/2 216	8-7/8 224	9-1/8 232	9-3/8 238	9-7/8 250	10-7/16 265	15-1/2 11-5/8		18-15/16 465			
	11S	10 273	10-13/16 275		11 280	10-13/16 275	10-15/16 278	11-3/16 284	11-1/2 292	11-13/16 300	12-1/16 306	12-5/16 312	12-13/16 325	13-3/8 339	14-9/16 370	21-3/16 537				
		12 324															16-5/8 422			

3D step models available upon request

Introduction

Technical Data

Pipe Selection Guide

16 bar, 90° Flare

ANSI 150#, 300# Flare

SAE 1000, 70 bar

SAE 3000, 210 bar

SAE 6000, 420 bar

SAE 10000, 690 bar

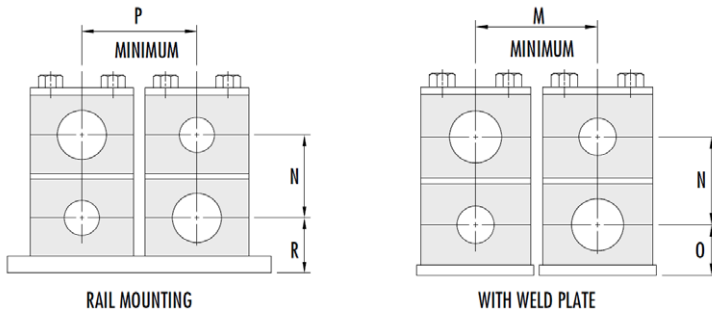
ISO 6164, 400 bar

ISO 6164, 400 bar F10° Flare

Clamp Supports - Heavy Series

Valves, Ball and Check

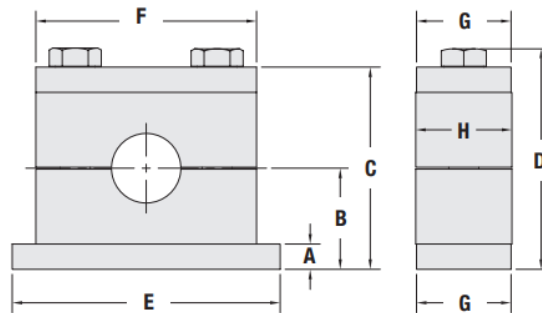
Clamp Stacking



Group	Size Range Ød	Installation Dimensions (in)					WT (lbs)
		M	N	O	P	R	
4S	3/4 - 1-3/16	3-1/2	2-3/16	1-1/4	2-7/8	1-13/16	.92
5S	1-3/16 - 1-37/64	4-1/16	2-11/16	1-1/2	3-7/16	2-1/16	1.12
6S	1-1/2 - 2-3/4	5-7/8	3-7/8	2-1/8	4-5/8	2-5/8	2.86
7S	2-9/16 - 3-1/2	7-1/8	5-1/16	2-3/4	*		5.35
8S	3-1/2 - 5-15/64	10-5/8	7-1/16	3-3/16	N/A		13.11
9S	5-15/64 - 6-5/8	11-1/8	8-3/8	4-7/16	N/A		17.16
10S	6-5/8 - 8-5/8	13-7/8	11-3/8	6-1/16	N/A		46.20
11S	8-5/8 - 12-3/4	21-1/16	17-1/8	9-1/16	N/A		108.90

*For Group 7S Rail Mounting - Contact Factory







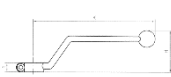




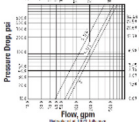



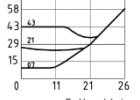
Dimensions and Weights of Clamp Assemblies



Heavy Series (DIN 3015, Part 2)

Group		Dimensions (mm/in)											Weight per 1 pc. SPAL-**-PP-DPAL-AS (kg/lb)	
Series	DIN	A	B		C		D		E	F		G		H
			Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)	Profiled Design	Type H (Smooth)		PP/PA/SA	AL			
3S	1	8	24	23,25	48	46,5	54,4	52,9	74	55	56	30	30,5	0,32
		.31	.94	.92	1.89	1.83	2.14	2.09	2.91	2.16	2.20	1.18	1.20	.70
4S	2	8	32	32,25	64	62,5	70,4	68,9	86	70	70	30	30,5	0,40
		.31	1.26	1.23	2.52	2.46	2.77	2.72	3.39	2.76	2.76	1.18	1.20	.88
5S	3	8	38	37	76	74	82.4	80.4	100	85	85	30	30,5	0,49
		.31	1.50	1.46	2.99	2.91	3.24	3.17	3.94	3.35	3.35	1.18	1.20	1.08
6S	4	10	54,5	53,5	109	107	116,5	114,5	140	115	120	45	45	1,21
		.39	2.15	2.11	4.29	4.21	4.59	4.51	5.51	4.53	4.72	1.77	1.77	2.66
7S	5	10	70		140		150		180	154	152	60	60	2,30
		.39	2.76		5.51		5.91		7.09	6.06	5.98	2.36	2.36	5.06
8S	6	15	99		198		210,5		226	206	208	80	80	5,56
		.59	3.90		7.80		8.29		8.90	8.11	8.19	3.15	3.15	12.26
9S	7	15	115		230		245		270	251	255	90	91	7,97
		.59	4.53		9.06		9.65		10.63	9.88	10.04	3.54	3.58	17.58
10S	8	25	160		320		338,7		340	336	326	120	120	22,16
		.98	6.30		12.60		13.33		13.39	13.22	12.83	4.72	4.72	48.75
11S	9	30	235		470		488,7		520	470	470	160	162	54,11
		1.18	9.25		18.50		19.24		20.47	18.50	18.50	6.30	6.38	119.04

Valves, Ball and Check Reference Guide

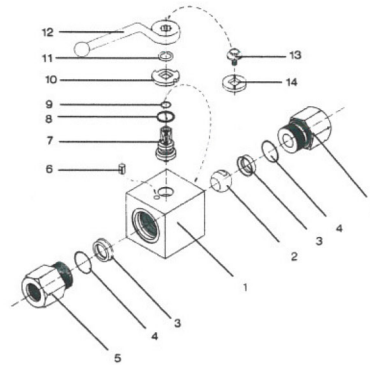
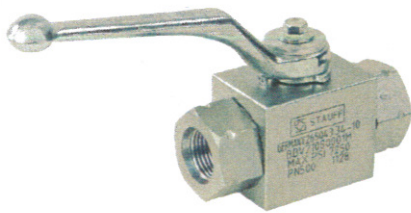
					
<p>Female NPT, SAE, BSP and ORFS Block Body BBV-2 Pages M1, M2, M3</p>	<p>Female NPT, SAE, BPS and ORFS Forged Body FBV-2 Pages M4, M5, M6</p>	<p>Split Flange SAE Code 61 (3000 PSI) Code 62 (6000 PSI) Block Body BBV-2-F Pages M7, M8</p>	<p>Split Flange SAE Code 61 (3000 PSI) Code 62 (6000 PSI) Forged Body BBV-2-F Pages M9, M10</p>	<p>Dual Pattern SAE Code 61 (3000 PSI) Code 62 (6000 PSI) BV-2-C36 Pages M11, M12</p>	<p>Flat Face ISO 6164 250/400/350 bar BV-2-ISO Pages M13, M14</p>
					
<p>Ball Valve Levers/Handles SW Page M15</p>	<p>Ball Valve Locking Devices LD Pages M16, M17, M18</p>	<p>Ball Valve Actuators and Limit Switches Page M19</p>	<p>Female NPT and SAE Low Pressure Ball Valve 2BVL Page M20</p>	<p>Check Valve Inline Female Thread 6C/3C Page M21</p>	<p>Check Valve Pressure Drop Charts Page M22</p>
					
<p>Check Valve Body Only, Retain Ring Style CV Page M23</p>	<p>Check Valve Assembly, Retain Ring Flange Style A/CV Page M24</p>	<p>Check Valve Retain Ring Style Performance Curves PSI - gal/min Page M25</p>	<p>Check Valve Retain Ring Style Performance Curves PSI - litre/min Page M26</p>		

Notes:

Please consult factory for the following:

1. Stainless Steel Ball Valves and Check Valves are available.
2. Other Styles and Sizes of Ball Valves are available such as 3-way, Multi-way and Manifold Mount.
3. Other Pneumatic or Electric Actuators, Limit Switches and Proximity Switches are available.

High-Pressure Block Body Ball Valve - Type BBV-2



List of Components

No .	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector
6	1	Stop Pin
7	1	Stem
8*	1	Thrust Ring
9*	1	Stem O-Ring
10	1	Cam Plate
11	1	Snap Ring
12	1	Lever
13	1	Stem Screw
14	1	Flow Indicator

Characteristics

Two-way high-pressure block body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Block body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 to 24R)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 2208)>G 1-1/2 BSP
- Female NPT thread (ANSI B1.20.1)>1-1/2-11-1/2 NPT
- Female UN/UNF thread (SAE J 514)>1-7/8-12 UN (1-1/2" SAE)
- Male ORFS Connection (ISO 8434-3)>1-11/16-12UN

Pressure Range

- Pressure range: up to 500 bar / 7250 PSI (depending on size and material combination of the ball valve)

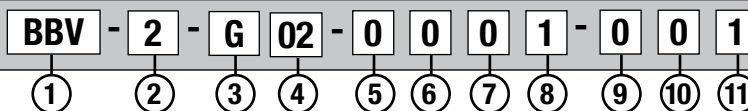
Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes



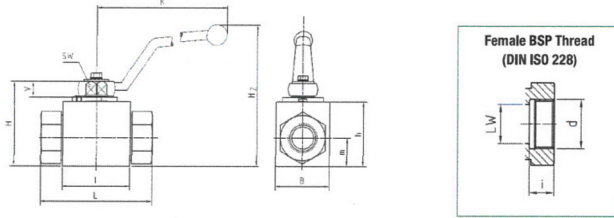
① Type High-Pressure Block Body Ball Valve BBV	⑥ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated 0 Stem: Carbon Steel Ball / Stem: Stainless Steel V4A (AISI 316Ti) 1 Ball: Brass, hard chrome-plated 2 Stem: Carbon Steel Alternative materials / surface finishings are available upon request.	⑨ Manufacturing Code Manufacturing code for all connection Style M Manufacturing code for high-pressure version of connection styles G, N and U. H
② Number of Ports Two Ports (Two-Way Ball Valve) 2	⑦ Ball Seat Material Delrin® 0 Alternative materials are available upon request.	⑩ Lever Options Supplied with standard lever (according to table) - Supplied without lever 0 Alternative levers can be ordered separately.
③ Connection Style Female BSP Thread (DIN ISO 22B) G Female NPT Thread (ANSI B1.20.1) N Female UN/UNF Thread (SAE J 514) U Male ORFS Connection (ISO 8434-3) ORFS	⑧ O-Ring Material NBR (Buna-N®) 0 FKM (Viton®) 1 EPDM 3 Alternative materials are available upon request.	⑪ Accessories / Options Supplied without accessories - Supplied with Locking Device LD1 LD1 Supplied with Locking Device LD2 LD2 Supplied with Locking Device LD3 LD3 Supplied with Locking Device LD4 LD4
④ Connection Size Size (according to dimension table) for connection styles G, N, U and ORFS: 02 04 06 08 10 12 16 20R 24R Tube Size (according to dimension table)		
⑤ Body Material / Surface Finishing Carbon Steel, zinc/iron plated 0 Carbon Steel, zinc/nickel plated 8 Stainless Steel V4A (AISI 316Ti) 1 Alternative materials / surface finishings are available upon request.		

3D step models available upon request

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2

Female BSP Thread (DIN ISO 228)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

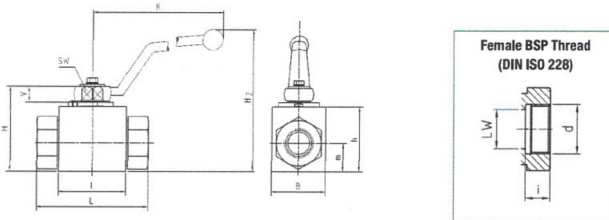
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
02	G 1/8 BSP	4	5	69	40	26	47	33	13,5	11	9	115	10	82	500	0,41	BBV-2-G02-8001-M
			.20	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.39	3.23	7250	.90	
04	G 1/4 BSP	6	6	69	40	26	47	33	13,5	11	9	115	14	82	500	0,40	BBV-2-G04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.55	3.23	7250	.88	
06	G 3/8 BSP	10	10	72	43	32	52	38	17,5	11	9	115	14	87	500	0,54	BBV-2-G06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.55	3.43	7250	1.19	
08	G 1/2 BSP	13	13	83	48	35	54	40	19	11	9	115	16,3	89	500	0,65	BBV-2-G08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	64	3.50	7250	1.43	
10	G 5/8 BSP	16	15	83	48	38	63	46	19	13	12	160	16	106	420	0,70	BBV-2-G10-8001-M
			.59	3.25	1.88	1.49	2.47	1.80	.74	.51	.47	6.26	.63	4.17	6000	1.54	
12	G 3/4 BSP	20	20	95	62	49	75	57	24,5	14	14	170	18	126	420	1,50	BBV-2-G12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.70	4.96	6000	3.31	
16	G 1 BSP	25	25	113	66	58	83	65	29,5	14	14	170	20	134	350	2,20	BBV-2-G16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.78	5.28	5076	4.85	
16	G 1 BSP	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	3,10	BBV-2-G16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	6.83	
20R	G 1-1/4 BSP	25/32	25	120	66	58	83	65	29,5	14	14	170	22	134	315	2,30	BBV-2-G20R-8001-M
			.98	4.70	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.86	5.28	4500	5.07	
24R	G 1-1/2 BSP	25/40	25	130	66	58	83	65	29,5	14	14	170	24	134	250	2,60	BBV-2-G24R-8001-M
			.98	5.09	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.94	5.28	3600	5.73	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2

Female NPT Thread (ANSI B1.20.1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

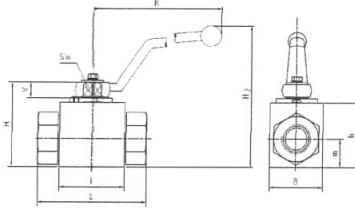
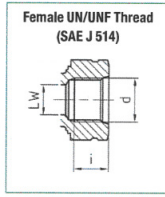
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 02 to 08)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
02	1/8-27 NPT	4	5	69	40	26	47	33	13,5	11	9	115	10,5	82	500	0,33	BBV-2-N02-8001-M
			.20	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.41	3.23	7250	.66	
04	1/4-18 NPT	6	6	69	40	26	47	33	13,5	11	9	115	13,7	82	500	0,40	BBV-2-N04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.54	3.23	7250	.88	
06	3/8-18 NPT	10	10	72	43	32	52	38	17,5	11	9	115	13,5	87	500	0,50	BBV-2-N06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.53	3.43	7250	1.10	
08	1/2-14 NPT	13	13	83	48	35	54	40	19	11	9	115	17	89	500	0,75	BBV-2-N08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	.67	3.50	7250	1.65	
12	3/4-14 NPT	20	20	95	62	49	75	57	24,5	14	14	170	18,3	126	420	1,63	BBV-2-N12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.72	4.96	6000	3.57	
16	1-11-1/2 NPT	25	25	113	66	58	83	65	29,5	14	14	170	21,6	134	350	2,30	BBV-2-N16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.85	5.28	5076	5.06	
16	1-11-1/2 NPT	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	3,16	BBV-2-N16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	6.97	
20R	1-1/4-11-1/2 NPT	25/32	25	120	66	58	83	65	29,5	14	14	170	22,1	134	315	2,51	BBV-2-N20R-8001-M
			.98	4.70	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.87	5.28	4500	5.52	
24R	1-1/2-11-1/2 NPT	25/40	25	130	66	58	83	65	29,5	14	14	170	22,1	134	250	2,70	BBV-2-N24R-8001-M
			.98	5.09	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.87	5.28	3600	5.94	

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2

Female UN/UNF Thread (SAE J 514)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

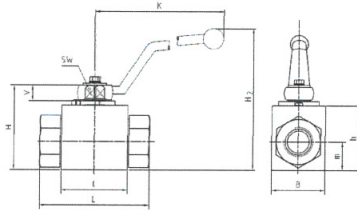
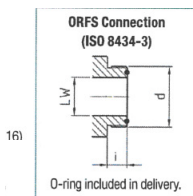
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 04 to 08)
Carbon Steel (Sizes 12 to 24R)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)												Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2			
04	7/16-20 UNF (1/4" SAE)	6	6	69	40	26	47	33	13,5	11	9	115	14	82	500	0,40	BBV-2-U04-8001-M
			.23	2.70	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.55	3.23	7250	.88	
06	9/16-18 UNF (3/8" SAE)	10	10	72	43	32	52	38	17,5	11	9	115	14	87	500	0,50	BBV-2-U06-8001-M
			.39	2.82	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.55	3.43	7250	1.10	
08	3/4-16 UNF (1/2" SAE)	13	13	83	48	35	54	40	19	11	9	115	16,3	89	500	0,70	BBV-2-U08-8001-M
			.51	3.25	1.88	1.37	2.11	1.57	.74	.43	.35	4.50	.64	3.50	7250	1.54	
12	1-1/16-12 UN (3/4" SAE)	20	20	95	62	49	75	57	24,5	14	14	170	18	126	420	1,50	BBV-2-U12-8001-M
			.78	3.72	2.43	1.92	2.94	2.23	.96	.55	.55	6.69	.70	4.96	6000	3.31	
16	1-5/16-12 UN (1" SAE)	25	25	113	66	58	83	65	29,5	14	14	170	20	134	350	2,20	BBV-2-U16-8001-M
			.98	4.42	2.58	2.27	3.25	2.55	1.16	.55	.55	6.69	.78	5.28	5076	4.85	
16	1-5/16-12 UN (1" SAE)	25	25	113	74	70	88	70	34,5	14	14	170	20	139	500	2,20	BBV-2-U16-8001-H
			.98	4.42	2.91	2.76	3.46	2.76	1.36	.55	.55	6.69	.78	5.47	7250	4.85	
20R	1-5/8-12 UN (1-1/4" SAE)	25/32	25	120	66	58	83	65	29,5	14	14	170	22	134	315	2,50	BBV-2-U20R-8001-M
			.98	4.70	2.60	2.28	3.27	2.56	1.16	.55	.55	6.69	.86	5.28	4500	5.50	
24R	1-7/8-12 UN (1-1/2" SAE)	25/40	25	130	66	58	83	65	29,5	14	14	170	24	134	315	2,61	BBV-2-U24R-8001-M
			.98	5.09	2.60	2.28	3.27	2.56	1.16	.55	.55	6.69	.94	5.28	4500	5.74	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2

O-Ring Face Seal Connection - Male Thread (ISO 8434-3)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

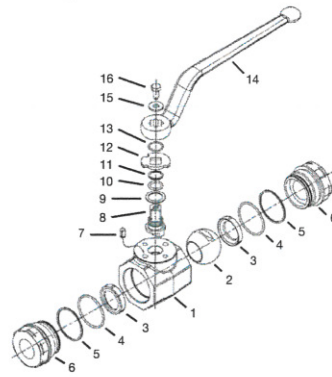
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Sizes 04 to 08)
Aluminium (Size 10)
Carbon Steel (Sizes 12 and 16)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Size	Thread Size d	Dimensions (mm/in)												O-ring	Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
		LW	L	I	B	H	h	m	V	SW	K	I	H2				
04	9/16-18 UNF	4,5	73	40	26	47	33	13,5	11	9	115	10	82	7,65x1,78	500	0,37	BBV-2-ORFS04-8001-M
		.18	2.87	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.39	3.23	7250	.81		
06	11/16-16 UN	6,5	73	40	26	47	33	13,5	11	9	115	11	82	9,25x1,78	500	0,38	BBV-2-ORFS06-8001-M
		.26	2.87	1.57	1.02	1.84	1.29	5.3	.43	.35	4.50	.43	3.23	7250	.83		
08	13/1-16 UN	9,5	78	43	32	52	38	17,5	11	9	115	13	87	12,42x1,78	500	0,50	BBV-2-ORFS08-8001-M
		.37	3.07	1.68	1.25	2.04	1.49	.69	.43	.35	4.50	.51	3.43	7250	1.10		
10	1-14 UNS	12,5	90	48	35	54	40	19	14	9	115	15,5	89	15,60x1,78	420	0,61	BBV-2-ORFS10-8001-M
		.49	3.54	1.88	1.37	2.11	1.57	.74	.55	.35	4.50	.61	3.50	6000	1.34		
12	1-3/16-12 UN	15,5	98	48	35	63	40	19	14	12	160	17	106	18,77x1,78	420	0,80	BBV-2-ORFS12-8001-M
		.61	3.86	1.88	1.37	2.47	1.57	.74	.55	.47	6.26	.67	4.17	6000	1.76		
16	1-7/16-12 UN	20,5	111	62	49	88	57	24,5	14	14	170	17,5	126	23,52x1,78	315	1,55	BBV-2-ORFS16-8001-M
		.81	4.37	2.43	1.92	3.46	2.23	.96	.55	.55	6.69	.69	4.96	4500	3.41		
20	1-11/16-12 UN	26	120	66	58	83	65	29,5	14	14	170	17,5	134	29,87x1,78	315	2,10	BBV-2-ORFS20-8001-M
		1,02	4.72	2.58	2.27	3.27	2.55	1.16	.55	.55	6.69	.69	5.28	4500	4.63		

Please note the pressure ratings of the tube connections.

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2



List of Components

No .	Qty.	Description
1	1	Body
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector Back-Up Ring
6	2	Connector
7	1	Stop Pin
8*	1	Stem
9*	1	Thrust Ring
10	1	Stem O-Ring
11	1	Stem Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Washer
16	1	Stem Bolt

Characteristics

Two-Way high-pressure forged body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Forged body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Carbon Steel
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- Female BSP thread (DIN ISO 228)>G 2 BSP
- Female NPT thread (ANSI B1.20.1)>2-11-1/2 NPT
- Female UN/UNF thread (SAE J 514)>2-1/2-12 UN (1-1/2" SAE)
- Male ORFS Connection (ISO 8434-3)>2-12UN
- 24° Cone Connection (DIN 2353 / ISO 8434-1)>42L
- 24° Cone Connection (DIN 2353 / ISO 8434-1)>38S

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads/holes
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes



① Type

High-Pressure Forged Body Ball Valve **FBV**

② Number of Ports

Two Ports (Two-Way Ball Valve) **2**

③ Connection Style

Female BSP Thread (DIN ISO 22B) **G**
 Female NPT Thread (ANSI B1.20.1) **N**
 Female UN/UNF Thread (SAE J 514) **U**
 Male ORFS Connection (ISO 8434-3) **ORFS**

④ Connection Size

Size (according to dimension table) for connection styles G, N, U and B:
20 24 32
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series): **35L**
 Tube Size (according to dimension table) for 24° Cone Connection (Light Series): **42L**
 Tube Size (according to dimension table) for 24° Cone Connection (Heavy Series): **38S**

⑤ Body Material / Surface Finishing

Carbon Steel, zinc/iron plated **0**
 Stainless Steel V4A (AISI 316Ti) **1**
 Alternative materials / surface finishings are available upon request.

⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated **0**
 Stem: Carbon Steel
 Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**
 Ball: Brass, hard chrome-plated **2**
 Stem: Carbon Steel
 Alternative materials / surface finishings are available upon request.

⑦ Ball Seat Material

Delrin® **0**
 Alternative materials are available upon request.

⑧ O-Ring Material

NBR (Buna-N®) **0**
 FKM (Viton®) **1**
 Alternative materials are available upon request.

⑨ Manufacturing Code

Manufacturing code for all connection Style **M**

⑩ Lever Options

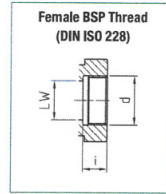
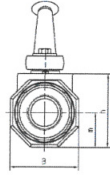
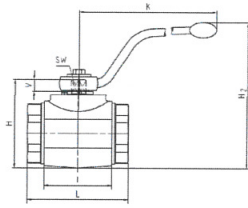
Supplied with standard lever (according to table) **-**
 Supplied without lever **0**
 Alternative levers can be ordered separately. Please see page 114 for further information.

⑪ Accessories / Options

Supplied without accessories **-**
 Supplied with Locking Device LD1 **LD1**
 Supplied with Locking Device LD2 **LD2**
 Supplied with Locking Device LD3 **LD3**
 Supplied with Locking Device LD4 **LD4**
 Supplied with Locking Device LD6 (US version) **LD6**

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2 Female BSP Thread (DIN ISO 228)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

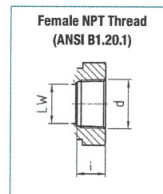
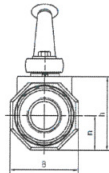
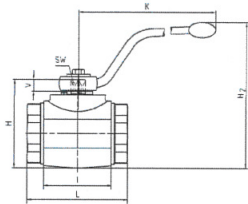
- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
20	G 1-1/4 BSP	32	32	111	80	81	107	86	40,5	16,5	17	306	22	171	420	3,47	FBV-2-G20-0001-M
			1.26	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.87	6.73	6000	7.63	
24	G 1-1/2 BSP	40	38	130	85	100	124	103	50	16,5	17	306	24	188	420	5,67	FBV-2-G24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.94	7.40	6000	12.47	
32	G 2 BSP	50	48	140	100	118	138	117	59	16,5	17	306	26	202	420	8,14	FBV-2-G32-0001-M
			1.89	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	1.02	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2 Female NPT Thread (ANSI B1.20.1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

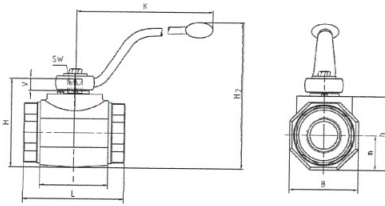
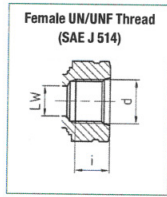
Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)											Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)	
			LW	L	I	B	H	h	m	V	SW	K	I				H2
20	G 1-1/4 BSP	32	32	111	80	81	107	86	40,5	16,5	17	306	22	171	420	3,47	FBV-2-N20-0001-M
			1.26	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.87	6.73	6000	7.63	
24	G 1-1/2 BSP	40	38	130	85	100	124	103	50	16,5	17	306	24	188	420	5,67	FBV-2-N24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.94	7.40	6000	12.47	
32	G 2 BSP	50	48	140	100	118	138	117	59	16,5	17	306	26	202	420	8,14	FBV-2-N32-0001-M
			1.89	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	1.02	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2

Female UN/UNF Thread (SAE J 514)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

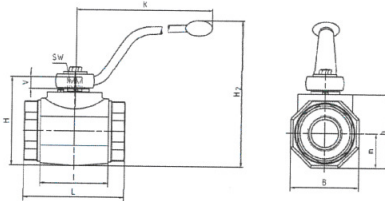
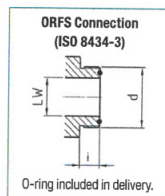
Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)												Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2			
20	1-5/8-12 UN (1-1/4" SAE)	32	30	111	80	81	107	86	40,5	16,5	17	306	20	171	420	3,52	FBV-2-U20-0001-M
			1.18	4.37	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.79	6.73	6000	7.75	
24	1-7/8-12 UN (1-1/2" SAE)	40	38	130	85	100	124	103	50	16,5	17	306	20	188	420	5,69	FBV-2-U24-0001-M
			1.50	5.12	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	.79	7.40	6000	12.52	
32	2-1/2-12 UN (2" SAE)	50	45	140	100	118	138	117	59	16,5	17	306	20	202	420	8,14	FBV-2-U32-0001-M
			1.79	5.51	3.94	4.65	2.43	4.61	2.32	.65	.67	12.05	.79	7.96	6000	17.91	

Please note the pressure ratings of the tube connections.

High-Pressure Forged Body Ball Valve - Type FBV-2

O-Ring Face Seal Connection - Male Thread (ISO 8434-3)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

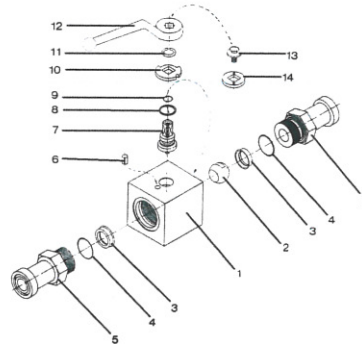
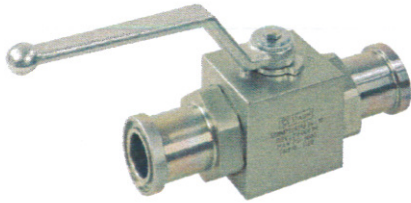
- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

Size	Thread Size d	Nominal Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	I	H2	O-ring			
20	2-12 UN	32	32	139	80	81	107	86	40,5	16,5	17	306	17,5	171	37,82x1,78	320	3,52	FBV-2-ORFS20-0001-M
			1.26	5.47	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	.69	6.73		4600	7.75	

Please note the pressure ratings of the tube connections.

High-Pressure Block Body Ball Valve - Type BBV-2-F



List of Components

No.	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5	2	Connector
6	1	Stop Pin
7	1	Stem
8*	1	Thrust Ring
9*	1	Stem O-Ring
10	1	Cam Plate
11	1	Snap Ring
12	1	Handle
13	1	Stem Screw
14	1	Flow Indicator

Characteristics

Two-way high-pressure block body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Block body design for in-line assembly
- Supplied with lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Zinc (STAUFF Size 8)
Steel (STAUFF Size 12-16)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) SAE split flange connectors
- 6000 PSI (code 62) SAE split flange connectors

Standard and extended adapter lengths

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

BBV - 2 - F3 16 - 0 0 0 1 - M - -

① Type

High-Pressure Block Body Ball Valve **BBV**

② Number of Ports

Two Ports (Two-Way Ball Valve) **2**

③ Connection Style

3000 PSI (Code 61) SAE Split Flange Connectors (Standard Adapter Length) **F3**

3000 PSI (Code 61) SAE Split Flange Connectors (Extended Adapter Length) **F3X**

6000 PSI (Code 62) SAE Split Flange Connectors (Standard Adapter Length) **F6**

6000 PSI (Code 62) SAE Split Flange Connectors (Extended Adapter Length) **F6X**

④ Connection Size

Size (according to dimension table)

08	12	16
-----------	-----------	-----------

⑤ Body Material / Surface Finishing

Carbon Steel, zinc/iron plated **0**

Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials are available upon request.

⑥ Ball / Stem Material

Ball: Carbon Steel, hard chrome-plated
Stem: Carbon Steel **0**

Ball / Stem: Stainless Steel V4A (AISI 316Ti) **1**

Alternative materials / surface finishings are available upon request.

⑦ Ball Seat Material

Delrin® **0**

Alternative materials are available upon request.

⑧ O-Ring Material

NBR (Buna-N®) **0**

FKM (Viton®) **1**

Alternative materials are available upon request.

⑨ Manufacturing Code

Manufacturing code for all connection Style **M**

Manufacturing code for high-pressure version of connection styles G, N and U. **H**

⑩ Lever Options

Supplied with standard lever (according to table) **-**

Supplied without lever **0**

Alternative levers can be ordered separately.

⑪ Accessories / Options

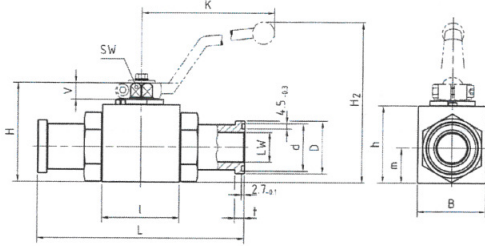
Supplied without accessories **-**

Supplied with Locking Device LD1 **LD1**

Supplied with Locking Device LD2 **LD2**

3D step models available upon request

High-Pressure Block Body Ball Valve - Type BBV-2-F3 3000 PSI SAE Split Flange Connection (ISO 6162-1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

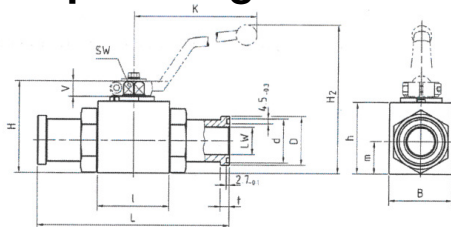
- Body, ball and stem: Carbon Steel
- Lever: Zinc (Size 8)
Steel (Size 12-16)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

3000 PSI Series (Code 61) - Standard Adaptor Length																			
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³	H2			
08	1/2	13	13	151	48	35	54	40	19	11	9	115	25.5	30.2	6.8	89	350	0.85	BBV-2-F308-0001-M
			.51	5.94	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.19	.27	3.50	5000	1.87	
12	3/4	20	19	162	62	49	75	57	24.5	14	14	171	31.9	38.1	6.8	127	350	1.87	BBV-2-F312-0001-M
			.75	6.38	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.50	.27	5	5000	4.11	
16	1	25	25	178	66	58	83	65	29.5	14	14	171	39.8	44.4	8.1	135	350	2.70	BBV-2-F316-0001-M
			.98	7.01	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.75	.32	5.31	5000	5.94	

3000 PSI Series (Code 61) - Extended Adaptor Length																			
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³	H2			
08	1/2	13	13	170	48	35	54	40	19	11	9	115	25.5	30.2	6.8	89	350	0.85	BBV-2-F3X08-0001-M
			.51	6.69	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.19	.27	3.50	5000	1.87	
12	3/4	20	19	200	62	49	75	57	24.5	14	14	171	31.9	38.1	6.8	127	350	1.87	BBV-2-F3X12-0001-M
			.75	7.87	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.50	.27	5	5000	4.11	
16	1	25	25	215	66	58	83	65	29.5	14	14	171	39.8	44.4	8.1	135	350	2.70	BBV-2-F3X16-0001-M
			.98	8.46	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.75	.32	5.31	5000	5.94	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.
¹Dimension d: ±0,1mm/.004 in ²Dimension D: -0,2 mm/.008 in ³Dimension t: -0,2 mm/.008 in

High-Pressure Block Body Ball Valve - Type BBV-2-F6 6000 PSI SAE Split Flange Connection (ISO 6162-2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

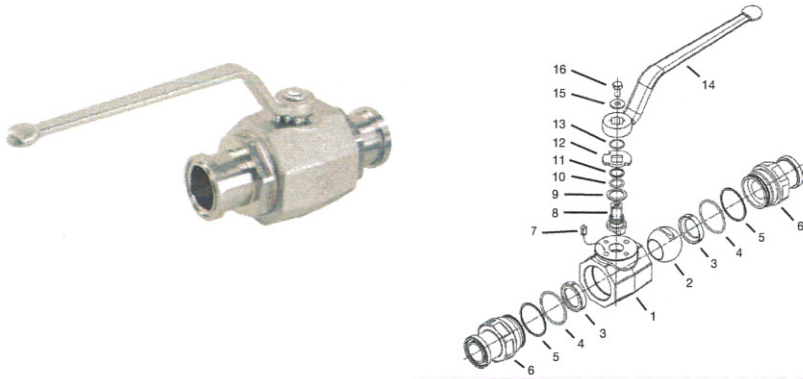
6000 PSI Series (Code 62) - Standard Adaptor Length																			
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³	H2			
08	1/2	13	13	151	48	35	54	40	19	11	9	115	25.5	31.8	7.9	89	420	0.90	BBV-2-F608-0001-M
			.51	5.94	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.25	.31	3.50	6000	1.98	
12	3/4	20	19	174	62	49	75	57	24.5	14	14	171	31.9	41.3	8.9	127	420	1.95	BBV-2-F612-0001-M
			.75	6.85	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.63	.35	5	6000	4.29	
16	1	25	25	198	66	58	83	65	29.5	14	14	171	39.8	47.6	9.6	135	320	3.00	BBV-2-F616-0001-M
			.98	7.80	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.87	.38	5.31	4600	6.60	
16	1	25	25	206	74	70	88	70	34.5	14	14	171	39.8	47.6	9.6	140	420	3.00	BBV-2-F616-0001-M
			.98	8.11	2.91	2.76	3.46	2.76	1.36	.55	.55	6.73	1.70	1.87	.38	5.51	6000	6.60	

6000 PSI Series (Code 62) - Standard Adaptor Length																			
Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³	H2			
08	1/2	13	13	180	48	35	54	40	19	11	9	115	25.5	31.8	7.9	89	420	1.00	BBV-2-F6X08-0001-M
			.51	7.09	1.89	1.38	2.13	1.57	.75	.43	.35	4.53	1.00	1.25	.31	3.50	6000	2.20	
12	3/4	20	19	200	62	49	75	57	24.5	14	14	171	31.9	41.3	8.9	127	420	2.10	BBV-2-F6X12-0001-M
			.75	7.87	2.44	1.93	2.95	2.24	.96	.55	.55	6.73	1.26	1.63	.35	5	6000	4.62	
16	1	25	25	250	66	58	83	65	29.5	14	14	171	39.8	47.6	9.6	135	320	3.15	BBV-2-F6X16-0001-M
			.98	9.84	2.60	2.28	3.27	2.56	1.16	.55	.55	6.73	1.57	1.87	.38	5.31	4600	6.93	
16	1	25	25	250	74	70	88	70	34.5	14	14	171	39.8	47.6	9.6	140	420	3.15	BBV-2-F6X16-0001-M
			.98	9.84	2.91	2.76	3.46	2.76	1.36	.55	.55	6.73	1.70	1.87	.38	5.51	6000	6.93	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.
¹Dimension d: ±0,1mm/.004 in ²Dimension D: -0,2 mm/.008 in ³Dimension t: -0,2 mm/.008 in

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2-F



List of Components

No .	Qty.	Description
1	1	Body
2	1	Ball
3*	2	Seal
4*	2	Connector O-Ring
5*	2	Connector Back-Up Ring
6	2	Connector
7	1	Stop Pin
8	1	Stem
9*	1	Thrust Ring
10*	1	Stem O-Ring
11*	1	Stem Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Washer
16	1	Stem Bolt

Characteristics

Two-Way high-pressure forged body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Forged body design for in-line assembly
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Carbon Steel
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) SAE split flange connectors
- 6000 PSI (code 62) SAE split flange connectors
- Standard and extended adapter lengths

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Additional assembling threads
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

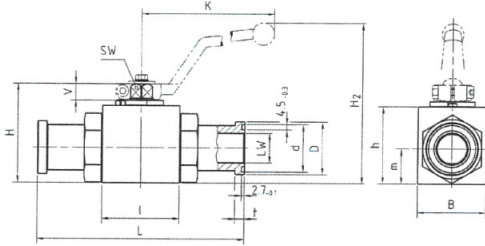
FBV - 2 - F3 20 - 0 0 0 1 - M - -

① Type High-Pressure Forged Body Ball Valve FBV	⑤ Body Material / Surface Finishing Carbon Steel, zinc/iron plated 0 Stainless Steel V4A (AISI 316Ti) 1 Alternative materials are available upon request.	⑨ Manufacturing Code Manufacturing code for all connection Style M
② Number of Ports Two Ports (Two-Way Ball Valve) 2	⑥ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated 0 Stem: Carbon Steel Ball / Stem: Stainless Steel V4A (AISI 316Ti) 1 Alternative materials / surface finishings are available upon request.	⑩ Lever Options Supplied with standard lever (according to table) - Supplied without lever 0 Alternative levers can be ordered separately.
③ Connection Style 3000 PSI (Code 61) SAE Split Flange Connectors (Standard Adapter Length) F3 3000 PSI (Code 61) SAE Split Flange Connectors (Extended Adapter Length) F3X 6000 PSI (Code 62) SAE Split Flange Connectors (Standard Adapter Length) F6 6000 PSI (Code 62) SAE Split Flange Connectors (Extended Adapter Length) F6X	⑦ Ball Seat Material Delrin® 0 Alternative materials are available upon request.	⑪ Accessories / Options Supplied without accessories - Supplied with Locking Device LD1 LD1 Supplied with Locking Device LD2 LD2 Supplied with Locking Device LD6 (US version) LD6
④ Connection Size Size (according to dimension table) 20 24 32	⑧ O-Ring Material NBR (Buna-N®) 0 FKM (Viton®) 1 Alternative materials are available upon request.	

3D step models available upon request

High-Pressure Forged Body Ball Valve - Type FBV-2-F3

3000 PSI SAE Split Flange Connection (ISO 6162-1)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Carbon Steel
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

3000 PSI Series (Code 61) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	191	80	81	107	86	40,5	16,5	17	306	44,6	50,8	8,1	280	4,22	FBV-2-F320-0001-M
			1.18	7.52	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.00	.32	4000	9.28	
24	1-1/2	40	38	231	85	100	124	103	50	16,5	17	306	54,1	60,3	8,1	210	6,54	FBV-2-F324-0001-M
			1.50	9.09	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.37	.32	5000	14.39	
32	2	50	48	232	100	118	138	117	59	16,5	17	306	63,6	71,4	9,6	210	9,29	FBV-2-F332-0001-M
			1.89	9.09	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	2.81	.38	5000	20.44	

3000 PSI Series (Code 61) - Extended Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	275	80	81	107	86	40,5	16,5	17	306	44,6	50,8	8,1	280	5,15	FBV-2-F3X20-0001-M
			1.18	10.83	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.00	.32	4000	11.33	
24	1-1/2	40	38	320	85	100	124	103	50	16,5	17	306	54,1	60,3	8,1	210	7,20	FBV-2-F3X24-0001-M
			1.50	12.60	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.37	.32	5000	15.84	
32	2	50	48	323	100	118	138	117	59	16,5	17	306	63,6	71,4	9,6	210	11,50	FBV-2-F33X2-0001-M
			1.89	12.72	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	2.81	.38	5000	25.30	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

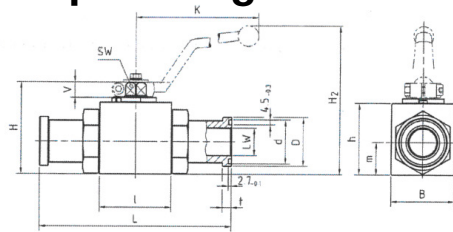
¹Dimension d: ±0,1mm/.004 in

²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in

High-Pressure Block Body Ball Valve - Type FBV-2-F6

6000 PSI SAE Split Flange Connection (ISO 6162-2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Zinc
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dimensions of stainless steel ball valves may vary!

6000 PSI Series (Code 62) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	223	80	81	107	86	40,5	16,5	17	306	44,6	54	10,4	420	4,72	FBV-2-F620-0001-M
			1.18	8.78	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.13	.41	6000	10.38	
24	1-1/2	40	38	281	85	100	124	103	50	16,5	17	306	54,1	63,5	12,7	420	7,49	FBV-2-F624-0001-M
			1.50	11.06	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.50	.50	6000	16.48	
32	2	50	48	316	100	118	138	117	59	16,5	17	306	63,6	79,4	12,7	420	11,39	FBV-2-F632-0001-M
			1.89	12.44	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	3.13	.50	6000	25.06	

6000 PSI Series (Code 62) - Standard Adaptor Length

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)													Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
			LW	L	I	B	H	h	m	V	SW	K	d ¹	D ²	t ³			
20	1-1/4	32	30	322	80	81	107	86	40,5	16,5	17	306	44,6	54	10,4	420	5,55	FBV-2-F6X20-0001-M
			1.18	12.68	3.15	3.19	4.21	3.39	1.59	.65	.67	12.05	1.76	2.13	.41	6000	12.21	
24	1-1/2	40	38	380	85	100	124	103	50	16,5	17	306	54,1	63,5	12,7	420	7,65	FBV-2-F6X24-0001-M
			1.50	14.96	3.35	3.94	4.88	4.06	1.97	.65	.67	12.05	2.13	2.50	.50	6000	16.83	
32	2	50	48	385	100	118	138	117	59	16,5	17	306	63,6	79,4	12,7	420	12,00	FBV-2-F6X32-0001-M
			1.89	15.16	3.94	4.65	5.43	4.61	2.32	.65	.67	12.05	2.50	3.13	.50	6000	26.40	

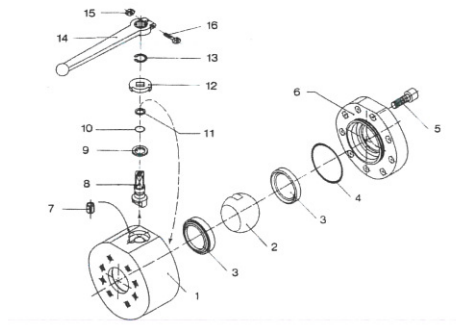
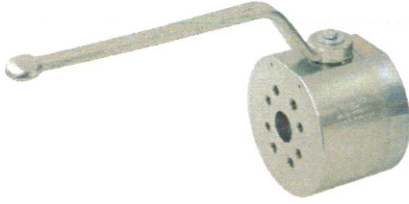
Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

¹Dimension d: ±0,1mm/.004 in

²Dimension D: -0,2 mm/.008 in

³Dimension t: -0,2 mm/.008 in

High-Pressure Round Body Ball Valve - Type BV-2-C36



List of Components

No .	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seat
4*	1	Cover O-Ring
5	7-9**	Cover Screws
6	1	Cover
7	1	Stop Pin
8	1	Stem
9*	1	Thrust Ring
10*	1	Stem O-Ring
11*	1	Back-Up Ring
12	1	Cam Plate
13	1	Snap Ring
14	1	Handle
15	1	Nut
16	1	Screw

** Depending on valve size

Characteristics

Two-Way high-pressure round body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Round body design for in-line assembly
- Designed for direct mount to reduce threads in fluid flow
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (STAUFF Size 08)
Carbon Steel (STAUFF Sizes 12 and 32)
Carbon Steel (STAUFF Sizes 40 and 48)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 3000 PSI (code 61) direct SAE flange connection
- 6000 PSI (code 62) direct SAE flange connection
- Dual pattern: 3000 PSI (code 61) and 6000 PSI (code 62)
- Metric ISO and unified coarse (UNC) threads

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Flanges and flange kits
- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

Order Codes

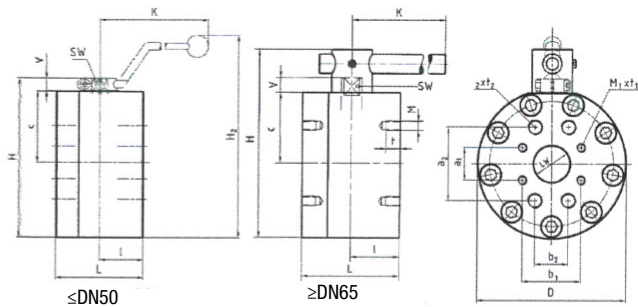
BV	-	2	-	C36	32	M	-	0	0	0	1	-	M	-	-
①		②		③	④	⑤		⑥	⑦	⑧	⑨		⑩	⑪	⑫

① Type High-Pressure Round Body Valve BV	⑥ Body Material / Surface Finishing Carbon Steel, zinc/iron plated 0 Alternative materials are available upon request.	⑩ Manufacturing Code Manufacturing code for all connection styles M
② Number of Ports Two Ports (Two-Way Ball Valve) 2	⑦ Ball / Stem Material Ball: Carbon Steel, hard chrome-plated Stem: Carbon Steel / Duplex (for Stauff Size 48) 0 Alternative materials / surface finishings are available upon request.	⑪ Lever Options Supplied with standard lever (according to table) - Supplied without lever 0
③ Connection Style 3000/6000 PSI (Code 61/62) SAE Direct Flange Connection C36	⑧ Ball Seat Material Delrin® (POM) 0 Alternative materials are available upon request.	⑫ Accessories / Options Supplied without accessories - Supplied with Locking Device up to DN50 LD2 Supplied with Locking Device up to DN50 LD4 Supplied with Locking Device from DN65 LD5 Supplied with Locking Device LD7 (US version) LD7
④ Connection Size STAUFF Size (according to dimension table) 08 12 16 20 24 32 40 48	⑨ O-Ring Material NBR (Buna-N®) 0 FKM (Viton®) 1 Alternative materials are available upon request.	
⑤ Thread Type Flange Connection with metric ISO Threads M Flange Connection with Unified Coarse (UNC) Threads U		

3D step models available upon request

High-Pressure Round Body Ball Valve - Type BV-2-C36

3000 /6000 PSI Flange Connection (ISO 6162-1/2)



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (Size 08)
Carbon Steel (Sizes 12 and 32)
Carbon Steel (Sizes 40 and 48)
Delrin® (POM)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Dual Pattern - 3000/6000 PSI Series (Code 61/62) - Metric ISO Threads

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)															Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)			
			LW	L	I	D	H	c	V	K	SW	a1	b1	M1	t1	a2	b2				M2	t2	H2
08	1/2	15	15	75	35	88	88	31	13	160	12	17.5	38.1	M8	18	40.5	18.2	M8	18	132	420	2.96	BV-2-C3608M-0001-M
			.59	2.95	1.38	3.46	3.46	1.22	.51	6.30	.47	.69	1.50	.71	1.59	.72	.71	5.20	6000	6.51			
12	3/4	20	20	80	35	98	100	36.5	14	171	14	22.2	47.6	M10	18	50.8	23.8	M10	18	151	420	4.20	BV-2-C3612M-0001-M
			.79	3.15	1.38	3.86	3.94	1.44	.55	6.73	.55	.87	1.87	.71	2.00	.94	.71	5.94	6000	9.24			
16	1	25	25	88	38	118	113	39.5	14	171	14	27.8	57.2	M12	20	52.4	26.2	M10	20	164	420	6.00	BV-2-C3616M-0001-M
			.98	3.46	1.50	4.65	4.45	1.56	.55	6.73	.55	1.09	2.25	.79	2.06	1.03	.79	6.46	6000	13.20			
20	1-1/4	32	32	100	50	145	158	68	17	306	17	30.2	58.7	M10	20	66.6	31.8	M12	22	229	420	11.71	BV-2-C3620M-0001-M
			1.26	3.94	1.97	5.71	6.22	2.68	.67	12.05	.67	1.19	2.31	.79	2.62	1.25	.87	9.02	6000	25.76			
24	1-1/2	40	38	110	55	165	178	78	17	306	17	35.7	69.8	M12	20	79.4	36.5	M16	27	249	420	17.10	BV-2-C3624M-0001-M
			1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	1.41	2.75	.79	3.13	1.44	1.06	9.80	6000	37.62			
32	2	50	48	116	58	198	210	94	17	306	17	42.9	77.8	M12	20	96.8	44.5	M20	28	281	420	24.60	BV-2-C3632M-0001-M
			1.89	4.57	2.28	7.80	8.27	3.70	.67	12.05	.67	1.69	3.06	.79	3.81	1.75	1.10	11.06	6000	54.12			
40	2-1/2	65	63	170	75	218	275	100	20	600	16	58.7	123.8	M24	41	88.9	50.8	M12	19	19	420	44.50	BV-2-C3640M-0001-M
			2.48	6.69	2.95	8.58	10.83	3.94	.79	23.62	.63	2.31	4.78	1.61	3.50	2.00	.75	6000	97.90				
48	3	80	76	170	79	258	315	114.5	26	600	19	71.4	152.4	M30	47	106.4	61.9	M16	24	24	420	60.40	BV-2-C3648M-0001-M
			2.99	6.69	3.11	10.16	12.40	4.51	1.02	23.62	.75	2.81	6.00	1.85	4.19	2.44	.95	6000	132.88				

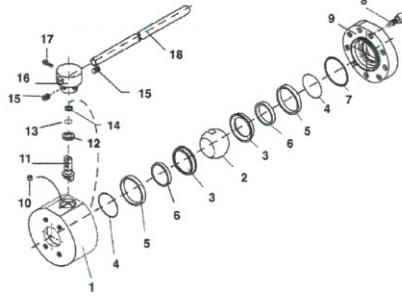
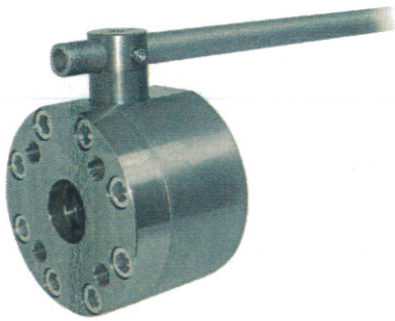
Dual Pattern - 3000/6000 PSI Series (Code 61/62) - Unified Coarse (UNC) Threads

Size	SAE Flange Size	Nom. Size DN	Dimensions (mm/in)															Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)			
			LW	L	I	D	H	c	V	K	SW	a1	b1	M1	t1	a2	b2				M2	t2	H2
08	1/2	15	15	75	35	88	88	31	13	160	12	17.5	38.1	5/16-18	18	40.5	18.2	5/16-18	18	132	420	2.96	BV-2-C3608U-0001-M
			.59	2.95	1.38	3.46	3.46	1.22	.51	6.30	.47	.69	1.50	UNC	.71	1.59	.72	UNC	.71	5.20	6000	6.51	
12	3/4	20	20	80	35	98	100	36.5	14	171	14	22.2	47.6	3/8-16	18	50.8	23.8	3/8-16	18	151	420	4.20	BV-2-C3612U-0001-M
			.79	3.15	1.38	3.86	3.94	1.44	.55	6.73	.55	.87	1.87	UNC	.71	2.00	.94	UNC	.71	5.94	6000	9.24	
16	1	25	25	88	38	118	113	39.5	14	171	14	27.8	57.2	7/16-14	20	52.4	26.2	3/8-16	20	164	420	6.00	BV-2-C3616U-0001-M
			.98	3.46	1.50	4.65	4.45	1.56	.55	6.73	.55	1.09	2.25	UNC	.79	2.06	1.03	UNC	.79	6.46	6000	13.20	
20	1-1/4	32	32	100	50	145	158	68	17	306	17	30.2	58.7	7/16-14	20	66.6	31.8	1/2-13	22	229	420	11.71	BV-2-C3620U-0001-M
			1.26	3.94	1.97	5.71	6.22	2.68	.67	12.05	.67	1.19	2.31	UNC	.79	2.62	1.25	UNC	.87	9.02	6000	25.76	
24	1-1/2	40	38	110	55	165	178	78	17	306	17	35.7	69.8	1/2-13	20	79.4	36.5	5/8-11	27	249	420	17.10	BV-2-C3624U-0001-M
			1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	1.41	2.75	UNC	.79	3.13	1.44	UNC	1.06	9.80	6000	37.62	
32	2	50	48	116	58	198	210	94	17	306	17	42.9	77.8	1/2-13	20	96.8	44.5	3/4-10	28	281	420	24.60	BV-2-C3632U-0001-M
			1.89	4.57	2.28	7.80	8.27	3.70	.67	12.05	.67	1.69	3.06	UNC	.79	3.81	1.75	UNC	1.10	11.06	6000	54.12	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

Lever must be fixed in central position during operation. In case of vibration, the lever may otherwise operate the valve by itself.

High-Pressure Round Body Ball Valve - Type BV-2-ISO



List of Components

No .	Qty.	Description
1	1	Housing
2	1	Ball
3*	2	Seat
4*	2	O-Ring
5	2	Outer S/S Support Ring
6	2	Inner S/S Support Ring
7*	1	Cover O-Ring
8	9	Cover Bolts
9	1	Cover
10	1	Stop Screw
11	1	Stem
12*	1	Thrust Ring
13*	1	Stem O-Ring
14*	1	Back-up Ring
15	2	Set Screws
16	1	Stem/Handle Adaptor
17	1	Screw
18	1	Steel Handle

Characteristics

Two-Way high-pressure round body ball valves designed for use as on/off devices for hydraulic applications

Standard Construction

- Round body design for in-line assembly
- Machined parts for reduced torque operation
- Designed for direct mount to reduce threads in fluid flow
- Supplied with off-set lever

Standard Materials

- Body: Carbon Steel, zinc/iron plated
- Ball: Carbon Steel, hard chrome-plated
- Stem: Carbon Steel
- Lever: Aluminium (Nominal Size DN13)
Carbon Steel (Nominal Sizes DN19 and DN56)
Carbon Steel (Nominal Sizes DN63 and DN200)
- Ball seat: Delrin® (POM)
- O-rings: FKM (Viton®)

Standard Connections Styles / Sizes

- 250 bar / 3600 PSI series ISO 6164 flange connection
- 400 bar / 5800 PSI series ISO 6164 flange connection
- 350 bar / 5000 PSI series ISO 6164 flange connection
- Metric ISO and unified coarse (UNC) threads

Pressure Range

- Pressure range: up to 420 bar / 6000 PSI (depending on size and material combination of the ball valve)

Please note: The final maximum working pressure is determined by the flange and pipe/tubing rating.

Temperature Range

- Operating temperature range: -20°C...+100°C / -4°F... +212°F

Options / Accessories

- Alternative lever designs / materials
- Locking devices
- Actuator packages
- Limit switches
- Stainless Steel body
- Stainless Steel ball and stem
- Special ball seat and O-ring materials available for lower/higher temperatures and more aggressive media
- Seal kits (including items marked by * in the above list)

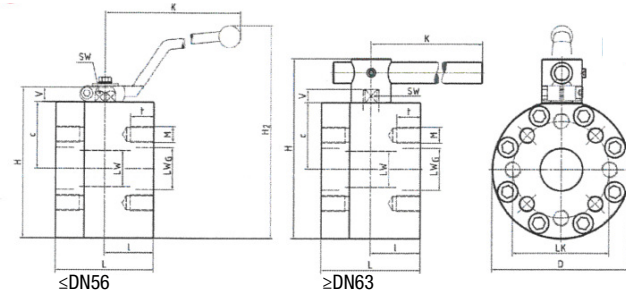
Order Codes

BV - 2 - ISO3 DN19 - 0 0 0 1 - M - -										
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
Type High-Pressure Round Body Ball Valve	BV	Body Material / Surface Finishing Carbon Steel, zinc/iron plated	0	Manufacturing Code Manufacturing code for all connection Style	M	Lever Options Supplied with standard lever (according to table)	-	Accessories / Options Supplied without accessories	-	
Number of Ports Two Ports (Two-Way Ball Valve)	2	Stainless Steel V4A (AISI 316Ti)	1	Supplied without lever	0	Alternative levers can be ordered separately.		Supplied with Locking Device up to DN50	LD2	
Connection Style 250 bar / 3600 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO2	Ball / Stem Material Ball: Carbon Steel, hard chrome-plated Stem: Carbon Steel (from DN63 on)	0	Supplied with Locking Device up to DN50	LD4			Supplied with Locking Device up to DN65	LD5	
400 bar / 5800 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO4	Ball / Stem: Stainless Steel V4A (AISI 316Ti)	1	Alternative levers can be ordered separately.				Supplied with Locking Device LD7 (US Version)	LD7	
350 bar / 5000 PSI Series ISO 6164 Flange Connection with Metric ISO Threads	ISO3	Alternative materials / surface finishings are available upon request.								
Connection Size Nominal Size DN		Ball Seat Material Delrin®	0							
DN13 DN19 DN25 DN32 DN38 DN51		Alternative materials are available upon request.								
DN56 DN63 DN80 DN100 DN125 DN150		O-Ring Material NBR (Buna-N®)	0							
DN200		FKM (Viton®)	1							
		Alternative materials are available upon request.								

3D step models available upon request

High-Pressure Round Body Ball Valve - Type BV-2-ISO

ISO 6164 PSI Flange Connection



When ordering the standard option as indicated in the table below, the following materials will be supplied:

- Body, ball and stem: Carbon Steel
- Lever: Aluminium (Nominal Size DN 13)
Carbon Steel (Nominal Sizes DN12 and DN32)
Carbon Steel (Nominal Sizes DN63 to DN200)
Delrin® (POM)
- Ball Seat: Delrin® (POM)
- O-rings: FKM (Viton®)

250 bar / 3600 PSI Series (ISO 6164) - Metric ISO Threads

Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
		LW	LWG	L	I	D	H	c	V	K	SW	LK	M	t	H2			
08	13	15	15	85	45	78	83	31	13	160	12	42 ¹	4xM8	16	127	350	2.90	BV-2-ISO2DN13-0001-M
		.59	.59	3.35	1.77	3.07	3.27	1.22	.51	6.30	.47	1.65 ¹		.63	5.00	5000	4.84	
12	19	20	20	88	38	119	110	36.5	14	171	14	50	4xM8	15	161	350	6.80	BV-2-ISO2DN19-0001-M
		.79	.79	3.46	1.50	4.69	4.33	1.44	.55	6.73	.55	1.97		.59	6.34	5000	14.96	
16	25	25	25	88	38	126	117	39.5	14	171	14	62	4xM10	20	168	315	7.20	BV-2-ISO2DN25-0001-M
		.98	.98	3.46	1.50	4.96	4.61	1.56	.55	6.73	.55	2.44		.79	6.61	4568	15.84	
20	32	32	32	105	50	145	158	68	17	306	17	73	4xM12	21	229	250	12.50	BV-2-ISO2DN32-0001-M
		1.26	1.26	4.13	1.97	5.71	6.22	2.68	.67	12.05	.67	2.87		.83	9.02	3600	27.50	
24	38	38	38	110	55	165	178	78	17	306	17	85	4xM16	24.5	249	250	16.60	BV-2-ISO2DN38-0001-M
		1.50	1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	3.35		.96	9.80	3600	36.52	
32	51	48	47	116	58	198	210	94	17	306	17	98	4xM16	25.5	281	250	24.90	BV-2-ISO2DN51-0001-M
		1.89	1.85	4.57	2.28	7.80	8.27	3.70	.67	12.05	.67	3.86		1.00	11.06	3600	54.78	
-	56	48	58	123	58	198	210	94	17	306	17	118	4xM20	33	281	250	26.60	BV-2-ISO2DN56-0001-M
		1.89	2.28	4.84	2.28	7.80	8.27	3.70	.67	12.05	.67	4.65		1.30	11.06	3600	58.52	
40	63	63	70	150	75	208	270	100	20	600	16	145	4xM20	33	281	250	36.90	BV-2-ISO2DN63-0001-M
		2.48	2.76	5.9	2.9	8.19	10.6	3.94	.79	23.6	.63	5.71		1.3	11.06	3600	81.18	

400 bar / 5800 PSI Series (ISO 6164) - Metric ISO Threads

Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
		LW	LWG	L	I	D	H	c	V	K	SW	LK	M	t	H2			
08	13	15	14	85	45	78	83	31	13	160	12	42	4xM8	16	127	400	2.90	BV-2-ISO4DN13-0001-M
		.59	.55	3.35	1.77	3.07	3.27	1.22	.51	6.30	.47	1.65		.63	5.00	5800	6.38	
12	19	20	18	88	38	119	110	36.5	14	171	14	50	4xM8	15	161	400	6.80	BV-2-ISO4DN19-0001-M
		.79	.71	3.46	1.50	4.69	4.33	1.44	.55	6.73	.55	1.97		.59	6.34	5800	14.96	
16	25	25	22	88	38	126	117	39.5	14	171	14	62	4xM10	20	168	400	7.20	BV-2-ISO4DN25-0001-M
		.98	.87	3.46	1.50	4.96	4.61	1.56	.55	6.73	.55	2.44		.79	6.61	5800	15.84	
20	32	32	29	105	50	145	158	68	17	306	17	73	4xM12	21	229	400	12.50	BV-2-ISO4DN32-0001-M
		1.26	1.14	4.13	1.97	5.71	6.22	2.68	.67	12.05	.67	2.87		.83	9.02	5800	27.50	
24	38	38	35	110	55	165	178	78	17	306	17	85	4xM16	24.5	249	400	16.60	BV-2-ISO4DN38-0001-M
		1.50	1.38	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	3.35		.96	9.80	5800	36.52	
32	51	48	43	123	58	198	210	94	17	306	17	98	4xM16	25.5	281	400	24.90	BV-2-ISO4DN51-0001-M
		1.89	1.69	4.84	2.28	7.80	8.27	3.70	.67	12.05	.67	3.86		1.00	11.06	5800	54.78	
-	56	48	53	123	58	198	210	94	17	306	17	118	4xM20	31	281	400	26.60	BV-2-ISO4DN56-0001-M
		1.89	2.09	4.84	2.28	7.80	8.27	3.70	.67	12.05	.67	4.65		1.22	11.06	5800	58.52	
40	63	65	58	150	75	224	286	108	20	600	16	145	4xM24	37.5	281	400	42.53	BV-2-ISO4DN63-0001-M
		2.56	2.28	5.91	2.95	8.82	11.26	4.25	.79	23.62	.63	5.71		1.48	11.06	5800	93.57	
-	70	65	63	150	75	224	286	108	20	600	16	160	4xM24	37.5	281	315	43.00	BV-2-ISO4DN70-0001-M
		2.56	2.48	5.91	2.95	8.82	11.26	4.25	.79	23.62	.63	6.30		1.48	11.06	4568	94.60	
48	80	76	76	170	78	258	315	114.5	26	600	19	175	4xM30	35	281	400	63.00	BV-2-ISO4DN80-0001-M
		2.99	2.99	6.69	3.07	10.16	12.40	4.51	1.02	23.62	.75	6.89		1.38	11.06	5800	138.60	

350 bar / 5000 PSI Series (ISO 6164) - Metric ISO Threads

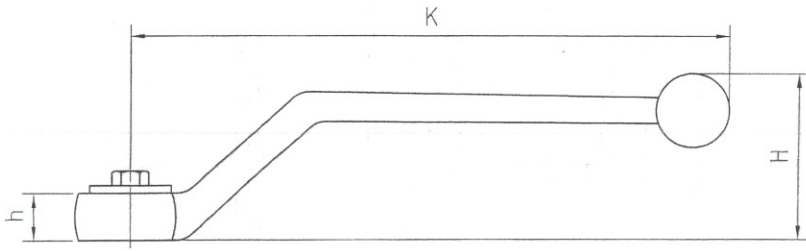
Size	Nom. Size DN	Dimensions (mm/in)														Nom. Pressure (bar/PSI)	Weight (kg/lbs)	Ordering Codes (Standard Option)
		LW	LWG	L	I	D	H	c	V	K	SW	LK	M	t	H2			
12	19	20	20	88	38	119	110	36.5	14	171	14	64	4xM12	22	161	350	6.80	BV-2-ISO3DN19-0001-M
		.79	.79	3.46	1.50	4.69	4.33	1.44	.55	6.73	.55	2.52		.87	6.34	5000	14.96	
16	25	25	25	88	38	126	117	39.5	14	171	14	72	4xM12	20	168	350	7.20	BV-2-ISO3DN25-0001-M
		.98	.98	3.46	1.50	4.96	4.61	1.56	.55	6.73	.55	2.83		.79	6.61	5000	15.84	
20	32	32	32	105	50	145	158	68	17	306	17	80	4xM16	24	229	350	12.50	BV-2-ISO3DN32-0001-M
		1.26	1.26	4.13	1.97	5.71	6.22	2.68	.67	12.05	.67	3.15		.95	9.02	5000	27.50	
24	38	38	38	110	55	165	178	78	17	306	17	98	4xM16	25	249	350	16.60	BV-2-ISO3DN38-0001-M
		1.50	1.50	4.33	2.17	6.50	7.01	3.07	.67	12.05	.67	3.86		.98	9.80	5000	36.52	
32	51	48	48	122	58	198	210	94	17	306	17	118	4xM20	28	281	350	24.90	BV-2-ISO3DN51-0001-M
		1.89	1.89	4.85	2.28	7.80	8.27	3.70	.67	12.05	.67	4.65		1.10	11.06	5000	54.78	
40	63	65	63	150	75	208	270	100	20	600	16	145	4xM24	36	281	350	36.00	BV-2-ISO3DN63-0001-M
		2.56	2.48	5.91	2.95	8.19	10.6	3.94	.79	23.62	.63	5.71		1.42	11.06	5000	79.36	
48	80	Use BV-2-ISO4DN80-0001-M from the 400 bar / 5800 PSI Series (ISO 6164)																BV-2-ISO3DN80-0001-M
64	100	100	100	200	100	260	327	122	26	900	24	200	8xM24	36	281	350	70.00	BV-2-ISO3DN100-0001-M
		3.94	3.94	7.87	3.94	1.24	12.87	4.80	1.02	35.43	.94	7.87		1.42	11.06	5000	154.32	
80	125	118	118	230	110	390	470	185	32	900	36	245	8xM3-	45	281	350	209.00	BV-2-ISO3DN125-0001-M
		4.65	4.65	9.06	4.33	15.35	18.50	7.28	1.26	35.43	1.42	9.65		1.77	11.06	5000	460.77	
96	150	150	150	285	130	390	475	190	32	900	36	245	8xM30	46	281	350	225.00	BV-2-ISO3DN150-0001-M
		5.91	5.91	11.22	5.12	15.35	18.70	7.48	1.26	35.43	1.42	9.65		1.81	11.06	5000	496.04	
128	200	192	200	378	150	456	598	223	61	940	46	315	8xM36	55	281	350	395.00	BV-2-ISO3DN200-0001-M
		7.56	7.87	14.88	5.91	17.95	23.54	8.78	2.40	37.01	1.81	12.40		2.17	11.06	5000	868.62	

Please note: the final maximum working pressure is determined by flange and pipe/tubing rating.

¹Please note: Lever must be fixed in central position during operation. In case of vibration, the lever may otherwise operate the valve by itself. 3D step models available upon request

Spare Parts / Accessories / Options

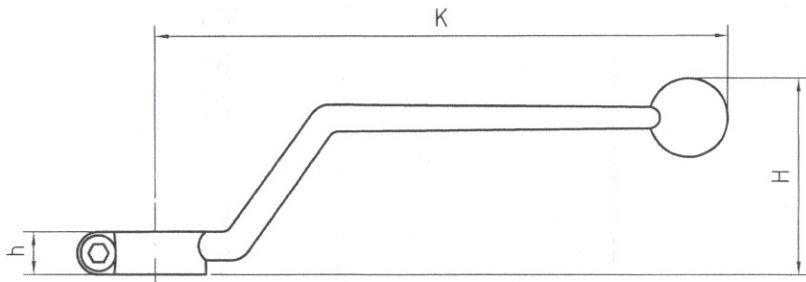
Levers



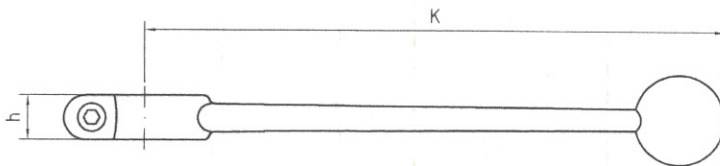
Zinc - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	80	6,5	30	0,03	Lever-SW7-ZNO
	3.15	.26	1.18	.07	
9	115	8,7	45	0,09	Lever-SW9-ZNO
	4.52	.34	1.77	.20	

Carbon Steel - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	80	6,5	30	0,05	Lever-SW7-CSO
	3.15	.26	1.18	.11	
9	115	9	47	0,09	Lever-SW9-CSO
	4.52	.35	1.85	.20	
14	170	12	64	0,23	Lever-SW14-CSO
	6.73	.47	2.52	.51	
17	306	17	80	0,66	Lever-SW17-CSO
	12.04	.69	3.15	1.45	

Stainless Steel V4A - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
7	60	6,5	22	0,04	Lever-SW7-W50
	2.36	.26	.87	.09	
9	115	9	47	0,10	Lever-SW9-W50
	4.52	.35	1.85	.22	
14	173	12	64	0,23	Lever-SW14-W50
	6.80	.47	2.52	.51	
17	227,5	15	90	0,66	SW17-W50
	8.96	.59	3.54	1.45	



Aluminium - Off-Set Design					
SW	Dimensions (mm/in)			Weight (kg/lbs)	Order Codes
	K	h	H		
12	160	12	55	0,07	Lever-SW12-ALO
	6.30	.47	2.17	.16	



Zinc - Straight Design				
SW	Dimensions (mm/in)		Weight (kg/lbs)	Order Codes
	K	h		
9	155	10	0,09	Lever-SW9-ZNS
	6.10	.29	.20	
14	200	14	0,22	Lever-SW14-ZNS
	7.87	.55	.48	

Aluminium - Straight Design				
SW	Dimensions (mm/in)		Weight (kg/lbs)	Order Codes
	K	h		
9	150	11	0,06	Lever-SW9-ALS
	5.91	.43	.13	
14	200	12	0,11	Lever-SW14-ALS
	7.87	.47	.24	
17	320	16	0,27	Lever-SW17-ALS
	12.60	.63	.59	

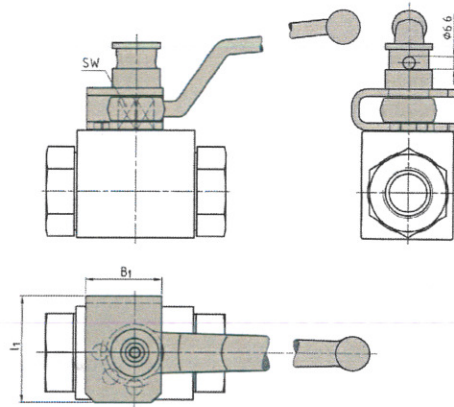
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD1

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)		Order Codes	180° Operation
		B	L1		
4-13	9	9	25	LD1-SW09	LD1S-SW09
		.35	.98		
16	12	12	40	LD1-SW12	LD1S-SW12
		.47	1.57		
20-25	14	14	40	LD1-SW14	LD1S-SW14
		.55	1.57		
32-50	17	17	50	LD1-SW17	LD1S-SW17
		.67	1.97		



Characteristics

Locking kit consisting of shackle, sliding sleeve, link with screw and Steel lever.

Features

- Universal field-installed locking device
- High security: Cannot be dismantled when locked

Ordering Example: BBV-2-G10-0001-M-LD01

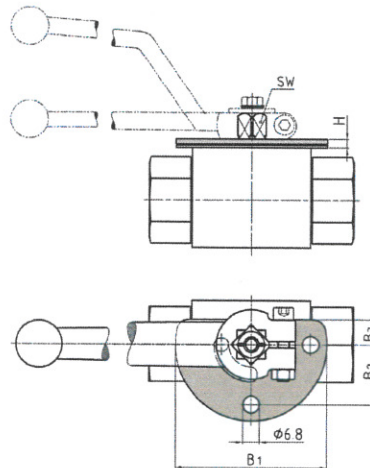
Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections (SW 9-14)	FBV-2-F	Forged Body Valve with SAE Split Flange Connections (SW 17)	MCBVL-3	Block Body Valve (Two-Way Selector) for Manifold Mounting (SW 9-17)
FBV	Forged Body Valve with Threaded Connections (SW 17)	BBV	Block Body Valve with SAE Flange Connections (SW 9-14)	MCBVSL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting (SW 9-17)
HBV	High Pressure Body Block Valve with Threaded Connections (SW 9-14)	FBV	Forged Body Valve with SAE Flange Connections (SW 17)	CBV	Block Body Valve (Three-Way Selector) with Threaded Connections (SW 9-17)
BBV-2-F	Block Body Valve with SAE Split Flange Connections (SW 9-14)	MBBV-2	High Pressure Body Block Valve with Threaded Connections (SW 9-14)	CBVS	Block Body Valve (Three-Way Selector) with Threaded Connections (SW 9-17)

Locking Device - Type LD2

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)				Order Codes Individual Part
		H	B1	B2	B3	
4-8	9	3,5	61	24	10	LD2-SW09-DN4-8
		.14	2.41	.94	.39	
10-13	9	3,5	61	24	10	LD2-SW09-DN10-13
		.14	2.41	.94	.39	
16	12	4,5	64	25,5	12	LD2-SW12
		.18	2.52	1.00	.47	
20-25	14	4,5	84	35,5	14	LD2-SW14
		.18	3.31	1.40	.55	
32-50	17	4,5	136	61,5	15	LD2-SW17
		.18	5.35	2.42	.59	



Characteristics

Locking kit consisting of locking plate, stopping disk and ring.

Features

- Field-installed locking device
- Can be dismantled after disassembly of lever

Ordering Example: BBV-2-G10-0001-M-LD02

Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections (SW 9-14)	BBV-2-F	Block Body Valve with SAE Split Flange Connections (SW 9-14)	CBV (≤DN25)	Block Body Valve (Three-Way Selector) with Threaded Connections
FBV	Forged Body Valve with Threaded Connections (SW 17)	FBV-2-F	Forged Body Valve with SAE Split Flange Connections (SW 17)	BV-2	Round Body Valve with Direct Flange Connections up to DN 50 (acc. to SAE, ISO, CETOP)

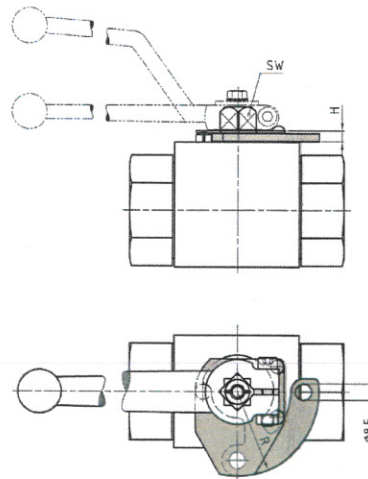
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD3

Dimensions / Order Codes

Nom. Size DN	SW	Dimensions (mm/in)	
		H	R
4-13	9	4	37
		.16	1.47
16	12	4,3	40
		.17	1.57
20-25	14	5,5	43,5
		.22	1.71
32-50	17	6	69,5
		.24	2.74



Characteristics

Only available in combination with suitable ball valve.

Features

- Factory-installed locking device
- High security: Cannot be dismantled when locked

Ordering Example: FBV-2-G20-0001-M-LD03

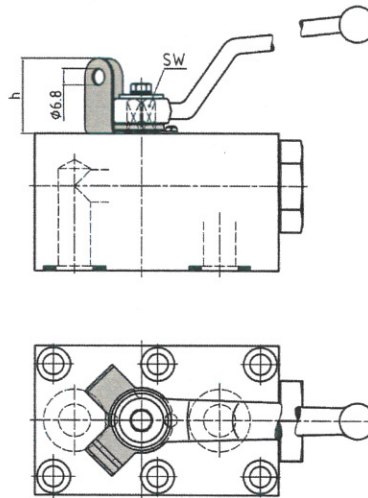
Suitability

Type	Description	Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections	FBV	Forged Body Valve with Threaded Connections	CBV (≤DN25)	Block Body Valve (Three-Way Selector) with Threaded Connections

Locking Device - Type LD3

Dimensions / Order Codes

SW	Dimensions (mm/in)	Order Codes 90° Operation	180° Operation
	H		
7	24	LD4-SW07-SS	LD4S-SW07-SS
	.94		
9*	28	LD4-SW09-SS	LD4S-SW09-SS
	1.10		
14*	34,5	LD4-SW14-SS	LD4S-SW14-SS
	1.36		
17	44	LD4-SW17-SS	LD4S-SW17-SS
	1.73		



Characteristics

Locking kit consisting of locking plate, stopping disk and ring.

Features

- Field-installed locking device
- Can be dismantled after disassembly of lever

Ordering Example: BBV-2-G10-0001-M-LD04

Suitability

Type	Description	Type	Description
BBV	Block Body Valve with Threaded Connections	MBBV-2	Block Body Valve (Two-Way Selector) for Manifold Mounting
FBV	Forged Body Valve with Threaded Connections	MCBVL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting
HBV	High-Pressure Body Valve with Threaded Connections	MCBVSL-3	Block Body Valve (Three-Way Selector) for Manifold Mounting
BV-2-C	Round Body Valve with Direct SAE Flange Connections up to DN50	CBV	Block Body Valve (Three-Way Selector) with Threaded Connections
BV-2-ISO	Round Body Valve with ISO Flange Connections up to DN50	CBV	Block Body Valve (Three-Way Selector) with SAE Flange Connections
BV-2-CET	Round Body Valve with CETOP Flange Connections up to DN50	CBVS	Block Body Valve (Three-Way Selector) with Threaded Connections
		LBV	Block Body Valve (Three-Way Selector) with Threaded Connections
		TBV	Block Body Valve (Three-Way Selector) with Threaded Connections
		TBV	Block Body Valve (Four-Way Selector) with Threaded Connections
		XBV	Block Body Valve (Four-Way Selector) with Threaded Connections

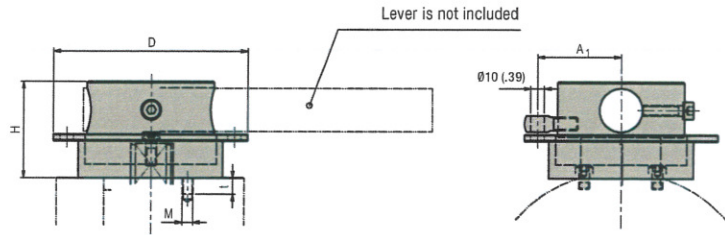
3D step models available upon request

Spare Parts / Accessories / Options

Locking Device - Type LD5

Dimensions

STAUFF Size	Dimensions (mm/in)				
	A1	D	H	M	t
40	62,5	145	71,5	M6	10
	2.46	5.71	2.81		.39
48	62,5	145	71,5	M8	12
	2.46	5.71	2.81		.47
64	67,5	155	74,5	M8	12
	2.66	6.10	2.93		.47
80	72,5	165	104,5	M8	12
	2.85	6.50	4.11		.47



Characteristics

Only available in combination with suitable ball valve.
Locking device requires modification in valve body.

Ordering Example: BV-2-C340U-0001-M-LD5

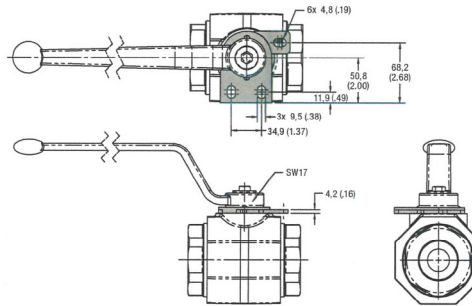
Suitability

Type	Description	Type	Description	Type	Description
BV-2-C	Round Body Valve with Direct SAE Flange Connections	BV-2-CET	Round Body Valve with Direct ISO 6164 Flange Connection	BV-2-ISO	Round Body Valve with Direct CETOP Flange Connection

Locking Device - Type LD6 US Version

Suitability

Type	Description
FBV	Forged Body Valve with Threaded Connections
FBV-2-F	Forged Body Valve with SAE Split Connections
FBV	Forged Body Valve with SAE Flange Connections



Characteristics

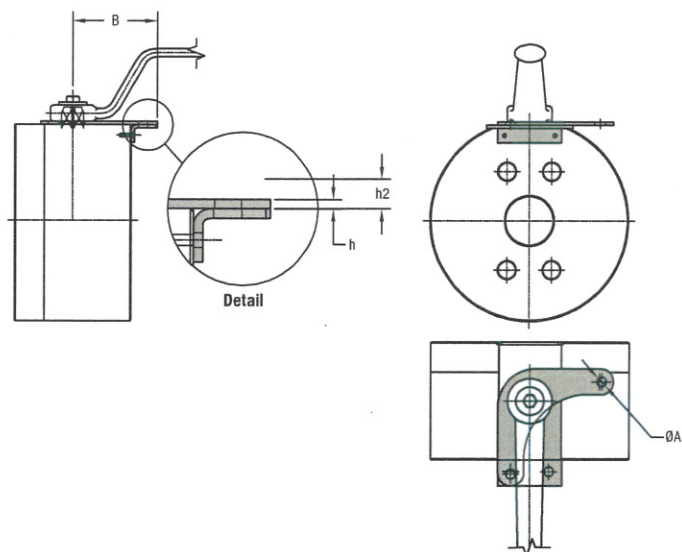
Only available in combination with suitable ball valve.

Ordering Example: FBV-2-G20-0001-M-LD6

Locking Device - Type LD7 US Version

Dimensions

STAUFF Size	SW	Dimensions (mm/in)			
		ØA	B	h	h2
08	12	8,5	59	2	
		.33	2.32	.08	
12-16	14	8,5	64	2	
		.33	2.52	.08	
20-32	17	9,5	83	2	
		.37	3.27	.08	
40	16	9,5	102	3	
		.37	4.01	.12	
48	19	9,5	93		27
		.37	3.66		1.06
64	24	9,5	113	3	
		.37	4.45	.12	
80	36	9,5	134	3	
		.37	5.28	.12	



Suitability

Type	Description
BV-2-C	Round Body Valve with Direct SAE Flange Connections

Characteristics

Only available in combination with suitable ball valve.
Locking device requires modification in valve body.

Ordering Example: BV-2-C3632U-0001-M-L07

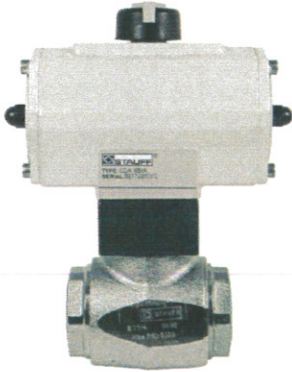
3D step models available upon request

Spare Parts / Accessories / Options

Double-Acting Pneumatic Actuators - Type AD

Single-Acting Pneumatic Actuators - Type AS

Electric Actuators - Type AE

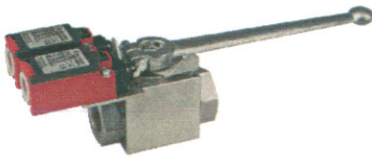


Most ball valves can be factory-mounted to compact and efficient pneumatic or electric actuators for both high-pressure and low-pressure applications.

The actuators feature simple, robust constructions and are suitable for applications with high cycle requirements.

Please note: The minimum air supply for pneumatic actuators is usually 5,5 bar / 80 PSI. They are designed for 90° open / close applications only and should not be used for valve throttling.

Limit / Proximity Switches



Limit Switches

Options / configurations available:

- SO** open
- SC** closed
- SOC** open/closed

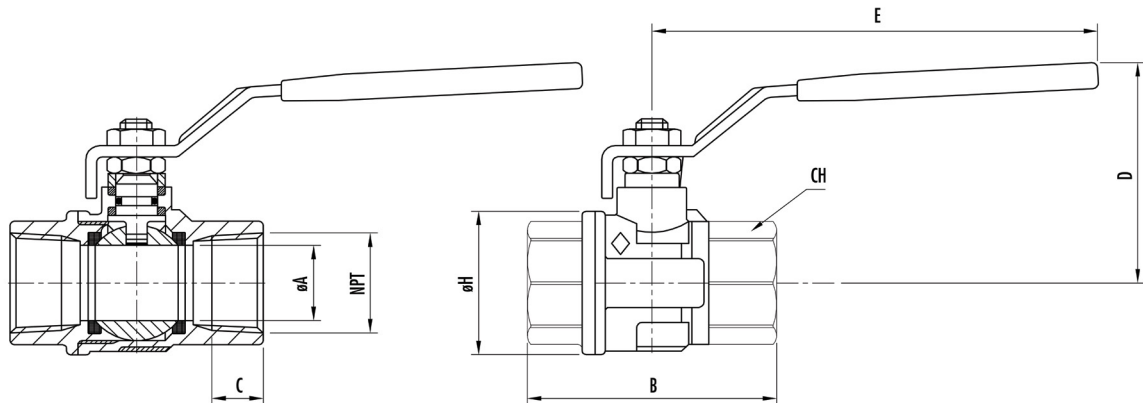
Proximity Switches

Options / configurations available:

- PO** open
- PC** closed
- POC** open/closed

Ball Valves

Low Pressure



2BVL Female Thread Ball Valve - Low Pressure

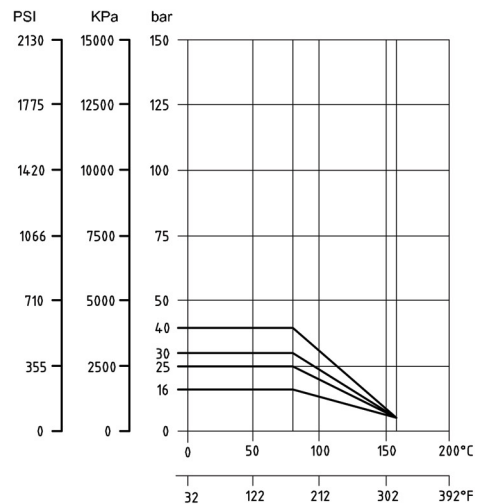
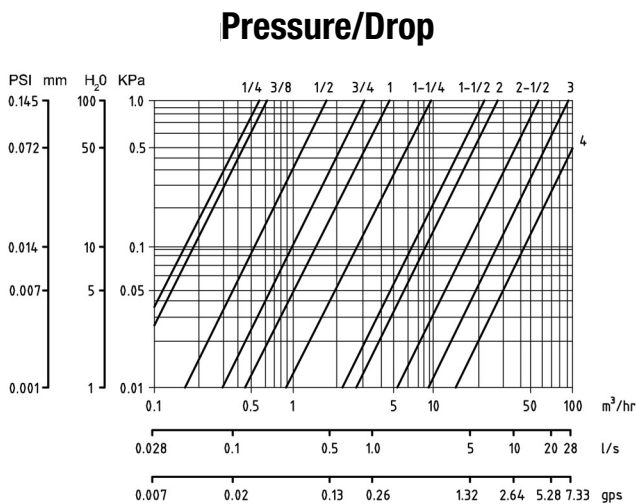
Size	NPT Ball Valve Part Number	SAE Ball Valve Part Number	Dimensions (in)						Cv	WT lbs/pc	Working Pressure PSI (bar)
			A	B	C	D	E	H			
1/4"	2BVL20-04-B*	2BVL21-04-B*	0.39	2.02	0.39	1.75	3.85	0.90	6.29	0.30	600 (40)
3/8"	2BVL20-06-B*	2BVL21-06-B*	0.39	2.02	0.40	1.75	3.85	0.90	6.99	0.28	600 (40)
1/2"	2BVL20-08-B*	2BVL21-08-B*	0.59	2.44	0.53	1.88	3.85	1.25	19.00	0.41	600 (40)
3/4"	2BVL20-12-B*	2BVL21-12-B*	0.78	2.71	0.55	2.28	4.80	1.53	34.42	0.67	600 (40)
1"	2BVL20-16-B*	2BVL21-16-B*	0.98	3.07	0.66	2.44	4.80	1.92	50.18	1.09	600 (40)
1-1/4"	2BVL20-20-B*	2BVL21-20-B*	1.25	3.42	0.68	3.07	6.02	2.32	103.70	2.01	600 (40)
1-1/2"	2BVL20-24-B*	2BVL21-24-B*	1.57	3.89	0.68	3.34	6.02	2.87	268.41	3.08	600 (40)
2"	2BVL20-32-B*	2BVL21-32-B*	1.96	4.33	0.69	3.79	6.37	3.38	309.20	4.18	600 (40)
2-1/2"	2BVL20-40-B*	2BVL21-40-B*	2.56	5.59	1.19	5.02	8.07	4.37	629.00	8.00	600 (40)
3"	2BVL20-48-B*	2BVL21-48-B*	3.15	6.45	1.31	5.45	8.07	5.35	1018.17	12.90	600 (40)
4"	2BVL20-64-B*	2BVL21-64-B*	3.94	7.60	1.55	6.34	10.23	6.35	1622.00	22.04	600 (40)

* Insert 'L' to indicate optional assembled locking device

Valves are full port

Buna seals (standard)

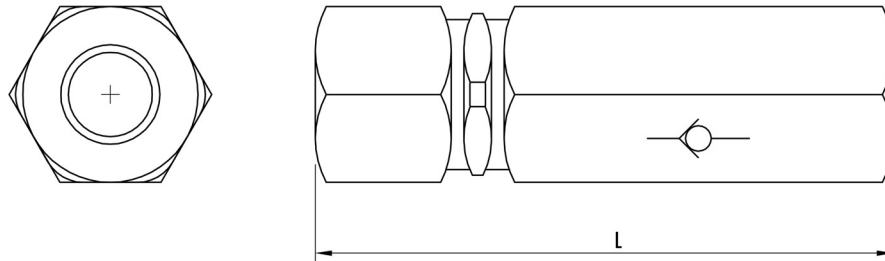
Pressure/Temperature Ratings



3D step models available upon request

Check Valves

Inline Female Thread - Poppet Style 3000-6000 PSI



6C/3C - Inline Check Valve - Female Threaded Port Style, Poppet Style Soft Seat - 3000-6000 PSI (210-420 bar)

Size	*Dimensions (in)		Cv	WT lbs/pc	Flow gpm	Working Pressure PSI (bar)
	L	HEX				
1/4"	2.82	0.75	0.45	0.29	3.00	6000 (420)
3/8"	3.38	1.12	1.80	0.81	8.00	6000 (420)
1/2"	3.73	1.25	3.40	1.20	12.00	6000 (420)
3/4"	4.91	1.62	7.40	2.05	20.00	6000 (420)
1"	6.07	1.88	9.50	3.40	30.00	6000 (420)
1-1/4"	5.76	2.00	12.30	3.75	90.00	3000 (210)
1-1/2"	6.51	2.50	16.15	7.80	125.00	3000 (210)
2"	7.28	3.25	21.80	13.00	175.00	3000 (210)

* Dimensions shown are for NPTF ported valves; for other end-fitting configurations - consult factory.

Complete Part Number

	Code	Valve Body	Port Size	Inlet	Outlet	Spring Pressure	Option
Valve Body	6000 PSI 1/4" - 1"	6C					
	3000 PSI 1-1/4" - 2"	3C					
Port Size	1/4"	4					
	3/8"	6					
	1/2"	8					
	3/4"	12					
	1"	16					
	*1-1/4"	20					
	*1-1/2"	24					
	*2"	32					
Thread Type	Female SAE	EF					
	Female NPTF	F					
	Female British Parallel BS 2779	RP					
Spring Pressure	5 PSI (.35 bar)	05					
	25 PSI (1.75 bar)	25					
	65 PSI (4.5 bar)	65					
Option	Buna	A					

* Only available in 3000 psi
Viton 'O' rings (standard)
For pressure/drop charts reference page p15
Part no. (Example): 6C - 4 - F - F - 05

Material:

Carbon Steel, Clear Zinc Dichromate Plated, (316 Stainless Steel Available)

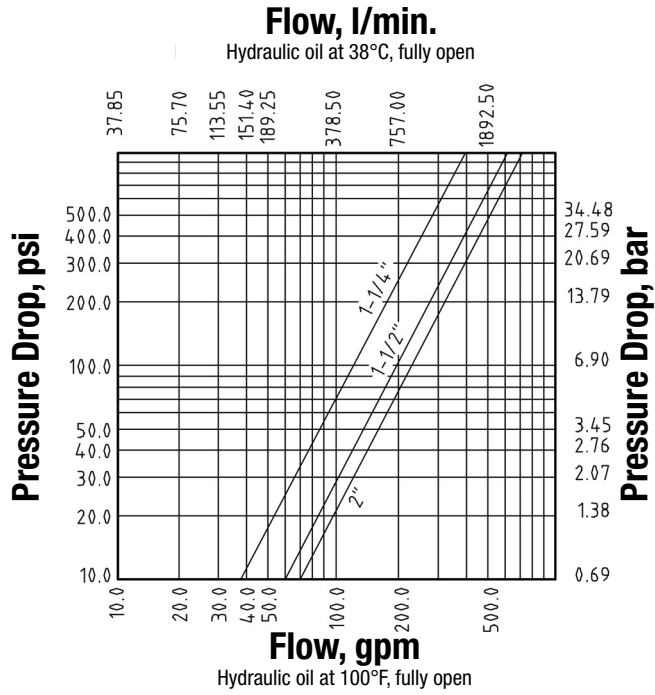
Note:

To order 316 stainless steel check valve insert S into the beginning of the assembly part number PART NO. (EXAMPLE): S 6C - 4 - F - F - 05
3D step models available upon request

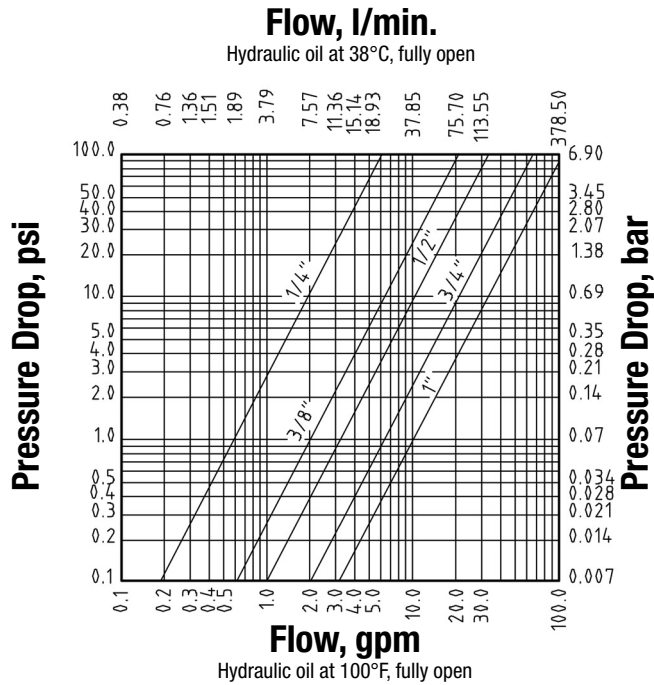
Check Valves

Pressure Drop Charts

3C 3000 PSI

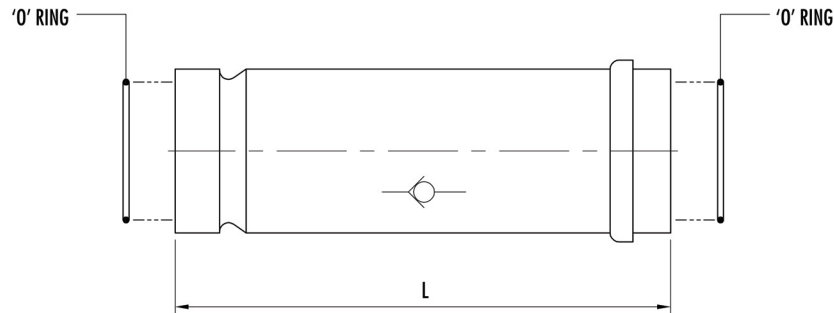


6C 6000 PSI



Check Valves

Retain Ring Flange Style - Body Only



CV - Check Valve Body - Poppet Style Complete with Buna 'O' Rings (Standard)

Size	Check Valve Part Number	*Dimensions (in)	"O" Ring (Buna) Part Number	WT lbs/pc	Working Pressure (Body Only) PSI (bar)
		L			
3/4"	CV-075-07-*	3.60	OR*-3-913	1.30	5000 (350)
1"	CV-100-07-*	4.40	OR*-3-916	1.67	5000 (350)
1-1/4"	CV-125-07-*	5.18	OR*-3-918	2.50	5000 (350)
1-1/2"	CV-150-07-*	5.76	OR*-3-924	4.25	5000 (350)
2"	CV-200-07-*	6.74	OR*-3-928	5.62	5000 (350)
2-1/2"	CV-250-07-*	7.14	OR*-2-232	8.99	5000 (350)
3"	CV-300-07-*	7.53	OR*-2-237	13.66	5000 (350)

* Insert 'V' to indicate optional viton 'O' rings

To order a complete check valve assembly reference page L14

Material:

Carbon Steel, Yellow Zinc Dichromate Plated, (Stainless Steel Available)

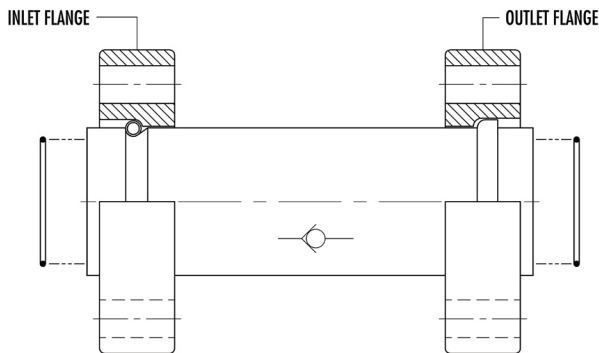
Opening Pressure

	PSI	(bar)
Standard	7	(0.5)
Optional	21	(1.5)
Optional	43	(3.0)

Check Valve Assembly

Complete Assembly Part Number

Typical A/CV Assembly



Complete Assembly Consists of:

- One (1) Check Valve Body - Poppet Style
- Two (2) Retain Ring Flanges
- One (1) Retain Ring
- Buna 'O' Rings (Standard)

		Code	A	CV	Valve Size	Inlet Flange	Outlet Flange	Opening Pressure	Options
Assembly		A							
Valve Body	Check Valve	CV							
Valve Size	3/4"	075							
	1"	100							
	1-1/4"	125							
	1-1/2"	150							
	2"	200							
	2-1/2"	250							
	3"	300							
Flange Type Carbon Steel Yellow Zinc Dicromate Plated	RFC34 SAE Code 61 W/Clearance Holes	FC34							
	*RFT34 SAE Code 61 W/Tapped Holes	FT34							
	RFC64 SAE Code 62 W/Clearance Holes	FC64							
	*RFT64 SAE Code 62 W/Tapped Holes	FT64							
	*RFC74 ISO 6164 W/Clearance Holes	FC74							
Opening Pressure	7 PSI - Standard	07							
	21 PSI - Optional	21							
	43 PSI - Optional	43							
Options	Viton	V							

Opening Pressure

	PSI	(bar)
Standard	7	(0.5)
Optional	21	(1.5)
Optional	43	(3.0)

* FTM34 and FTM64 for Metric Threads

For connection to hose use connector plate OCP (to be ordered separately)

Part no. (Example): A/CV - 075 - FC64 - FT64 - 07

Assembly working pressure ratings are subject to the lesser of the flange or the valve check ratings

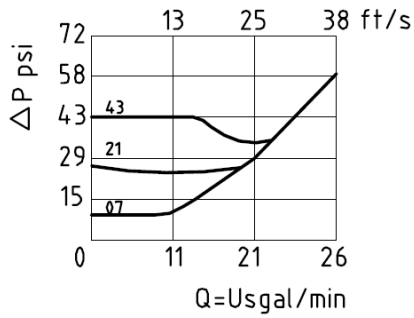
See reference page indicated above for pressure ratings

Other materials are available

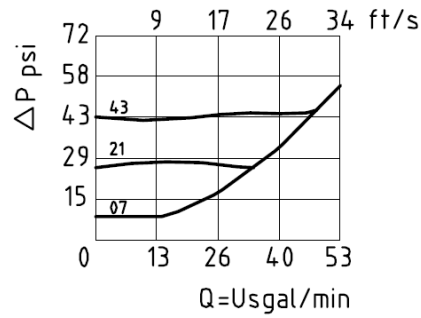
Check Valve Retain Ring Flange Style

Performance Curves: Measured using oil at 190SUS and 122° F

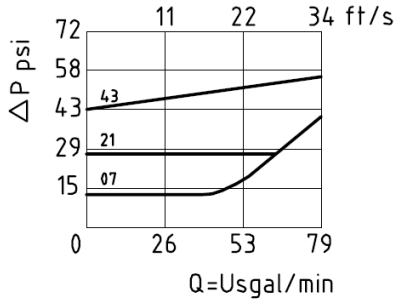
3/4"



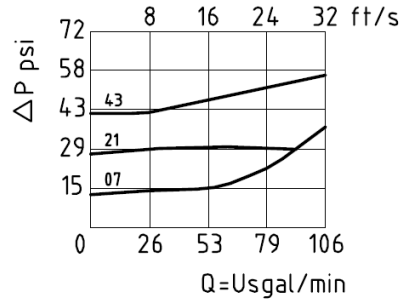
1"



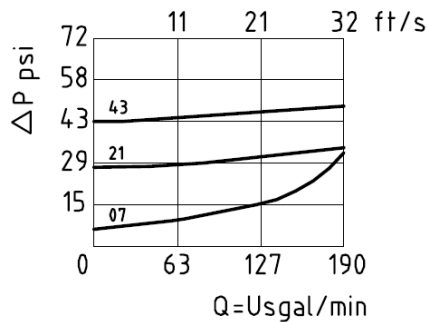
1-1/4"



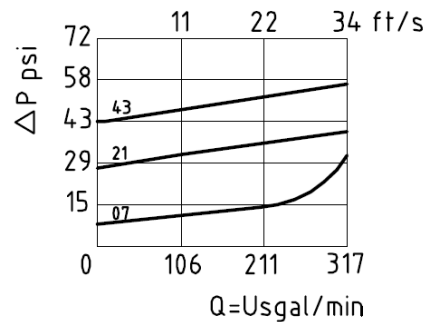
1-1/2"



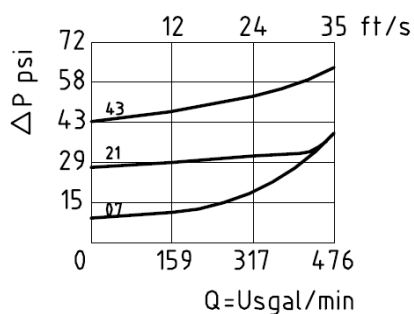
2"



2-1/2"



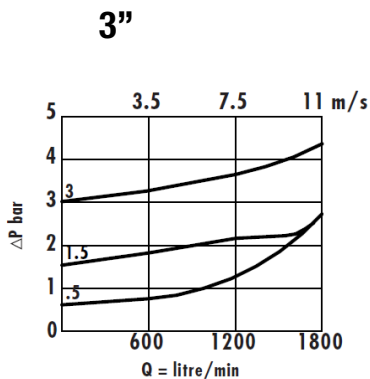
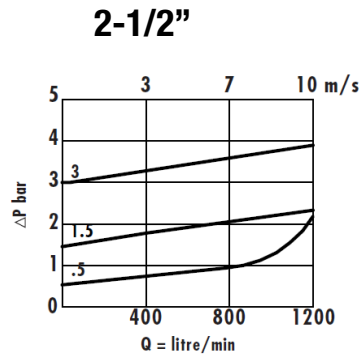
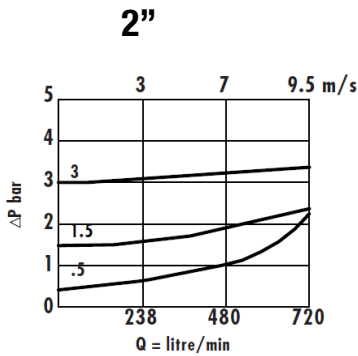
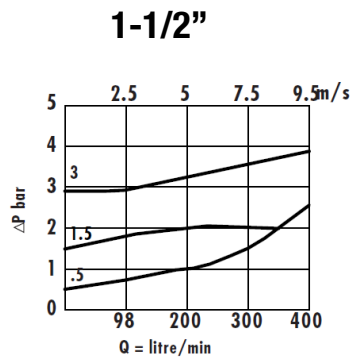
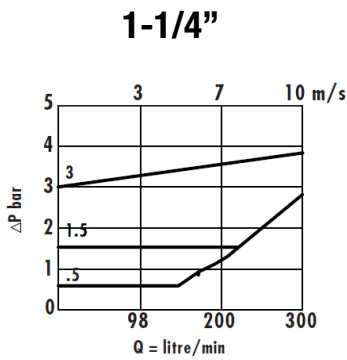
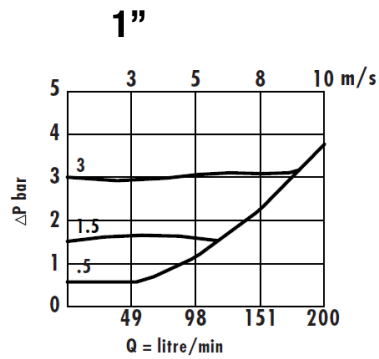
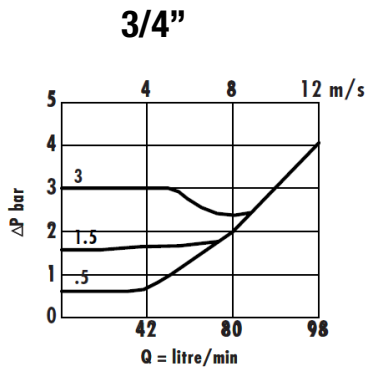
3"



3D step models available upon request

Check Valve Retain Ring Flange Style

Performance Curves: Measured using oil at 190SUS and 50° C



One Year Limited Warranty

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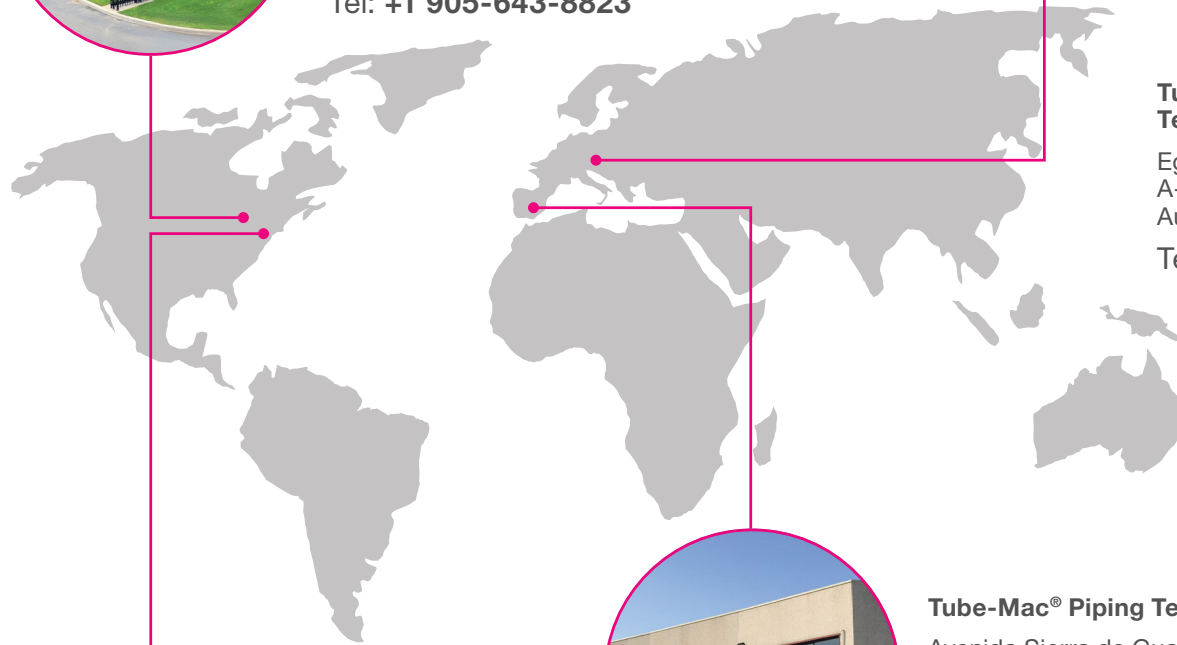
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