



Hydrasearch DEFENSE

Technical Products

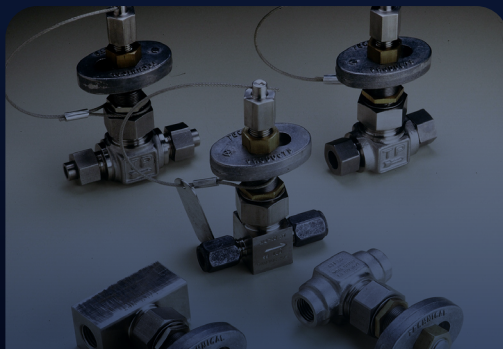


Table of Contents

History	2 - 3	8300 Series Fittings, O-Rings & Sil-Brace Rings.....	80 - 101
Education.....	4 - 7	Fittings, Tube	83-100
Hydrasearch Capabilities.....	4-5	O-Rings.....	101
Legal Policy Information	6-7	Sil-Brace Ring	101
Valves & Accessories	8 - 25	8100 Series Fittings, O-Rings & Sil-Brace Rings.....	102 - 113
Union End, Inline	10-12, 19-21	Fittings, Pipe.....	104-113
Union End, Angle.....	13-14, 19-20	Hose End Fittings & Adapters.....	114 - 121
Union End, Offset	15-16, 19-20	Hose End Fittings	115
Socket Weld, Inline.....	17, 19, 22	Hose Assemblies.....	116
Socket Weld, Angle.....	18-19	Adapters.....	117-121
Female Thread Inline	22	9000 Series Fittings ...	122 - 125
High Pressure Relief	23	Fittings, Tube	122-125
Valve Accessories.....	24-25	Cross Reference	126 - 131
Valves, Instrumentation & Adapters.....	26 - 39	Cross Reference List to CPV-O-SEAL.....	126-131
Instrument Valves	27-32	References.....	131
Adapters.....	33-37	Fraction to Decimal	
Adapter Assemblies	37-39	Conversion Chart	131
6000 Series Fittings, Couplings & Union Assemblies	40 - 79	Product Index.....	132 - 135
Fittings, Pipe Size.....	42-59, 71		
Inserts	60-61		
Fittings, Tube Size	62-70		
Couplings	72-75		
Union Assemblies.....	76-78		

Hydrasearch In The Making

Hydrasearch began in the early 1960s from a growing demand for more “think tank” factories near Washington, D.C. to support our national defense. From hydraulic research and design, to our most recent acquisition of venting solutions, our product offering has been an expanding effort to fulfill the needs of our customers. We are proud to manufacture a trusted product line for almost 60 years.



1962

Hydrasearch founded by Willard G. Triest in Annapolis, MD, specializing in the research and manufacturing of hydraulic valves and component devices.

1970s

Hydrasearch’s primary focus during the 70s was designing hydraulic control systems for the government and fueling at sea equipment for the US Navy.

1994

Hydrasearch relocated to Stevensville, Maryland. The new 30,000 square foot facility allowed Hydrasearch to merge its inventory, machining, testing and offices under one roof.

1960s

Hydrasearch is acquired by Dixon Valve & Coupling Company, a leading innovator in the hose coupling industry for over 100 years.



1980s

Hydrasearch developed and tested a new line of hose and fittings that solved many ongoing leakage problems. This led to Hydrasearch becoming a Qualified Product Listing (QPL) vendor in 1989 by Naval Sea Systems Command.

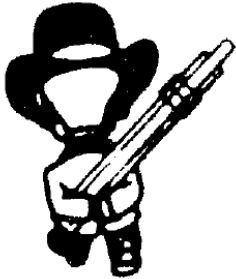


1995

Hydrasearch purchased Technical Products. This acquisition established Hydrasearch as an even larger supplier to the military market.



Hydrasearch In The Making



1998

Hydrasearch acquired the field attachable hose and fitting product line from Deutsch Metal Components of Gardena, CA. The product line consists of hose assemblies and components.



2010

Hydrasearch merged with its sister company Buck Algonquin, under the name Hydrasearch Company, Inc. This merger brought an expansion into the maritime market.



2016

Hydrasearch acquired Arctic Steel and Pro-Mar Maritime Venting Solutions. These acquisitions expanded our product offering into the workboat industry.

2000

Hydrasearch received its first ISO 9001 certification. The registration is recognized as a measure of a supplier's quality assurance process.

ISO 9001:2000



2016

Hydrasearch relocated to its current facility within the same business park in Stevensville, MD. The facility is 65,000 square feet allowing for increased efficiency and production.



Hydrasearch Capabilities



Hydrasearch Company, LLC (Stevensville, MD) has been an established leader in manufacturing for the maritime market since 1962. As an ISO 9001:2015 company, we are proud to supply products and services to the defense market. We specialize in manufacturing high pressure valves and fittings, as well as fluid conveyance products for refueling at sea (RAS), underway replenishment (UNREP) hardware, critical systems hose assemblies and aerospace fittings. Our mission is to provide quality products and excellent customer service.

Advantages of buying Hydrasearch

Quality Assurance

Hydrasearch maintains a mature quality control process that puts us ahead of the competition. In addition, we are a certified International Organization for Standardization (ISO 9001: 2015) company. To ensure our quality we are continuously improving our equipment, processes and training.

Engineering Support

Hydrasearch has an extensive support system that includes the following programs:

- 3D printing and 3D scanning
- Articulating borescope
- CAD software support
- Coordinate Measuring Machines (CMM)
- Finite element analysis
- Flow simulation
- Comprehensive quality department
- Niton x-ray fluorescence analyzer
- Modern machine shop
- Rapid prototyping
- Solidworks capabilities

Tech-O-Seal High Pressure Valves and Fittings

- Leadproof integrity, Tech-O-Seal valves employ a tough yet resilient soft-seat to combat leakage, even after repeated cycling of the valve from vacuum to 6000 PSI.
- Ease of interchangeability, Tech-O-Seal valves are flat-faced for removal and replacement in line, without cutting or altering adjoining piping sections.
- Maintenance free, a flat-faced, O-ring seal actually uses internal pressure to strengthen the sealing capability. Seals simply do not loosen - even with severe vibration - and once made, never need retightening.
- Unlimited versatility, Tech-O-Seal valves and fittings are available in a wide assortment of end connections, pressure and temperature ranges, and materials to suit every need.

Hydrasearch Capabilities

A Knowledge Base Built on Experience

Since our inception, Hydrasearch has focused on the design, development and manufacturing of fluid-conveying products and systems. Our first products were specially designed hydraulic systems and fueling at sea systems for the US Navy. Our in depth knowledge of hose fitting designs for demanding applications soon led to the development of innovative hose and couplings and related products that are now part of many diverse fluid handling and fluid power systems.

We have successfully built our business through strict adherence to product design and quality control, interchangeability with existing products, close attention to customer requirements, close attention to delivery needs and competitive pricing. As a result, we have steadily increased our market presence supporting a full range of equipment from helicopters and jets to missiles and rockets.

Fluid System Solutions for the Defense Industry

Hydrasearch is a leading supplier of fluid system components to the defense industry. We manufacture a complete range of high pressure fittings and valves for a wide variety of systems. Customers around the world use our products because of the superior design and quality.

Quality Control Ensures Reliability

Hydrasearch Company, LLC. is ISO 9001: 2015 certified. The scope of our registration covers the higher Quality Management System for the design, development, manufacture and distribution of fluid systems and components for Military and Commercial customers. Calibration of measuring tools and equipment for final acceptance are traceable to the National Institute of Standards and Technology (NIST) and meet the requirements of ANSI/NCSL Z540-1.


Supplying products that meet strict design and quality standards is only part of our mission. At Hydrasearch, we strive to establish and maintain close relationships with each of our customers. We place an importance on paying attention to details as the needs of our customers depend upon it. When your requirements call for more than a "standard" product, our sales team will work to satisfy those needs.



Legal Policy Information

Limited Warranty Policy

Right to warn

 In order to ensure proper function of products, it is strongly recommended that each part is inspected and serviced monthly. Inspection should include, but is not limited to, visible damage, excessive wear and proper bonding. Failure to properly maintain your product may result in catastrophic failure and/or loss of life.

Limited Warranty

Hydrasearch Company, LLC (herein called "Hydrasearch") warrants the products described herein, and manufactured by Hydrasearch to be free from defects in material and workmanship for a period of one (1) year from the date of invoice by Hydrasearch under normal use and service. Hydrasearch's sole obligation under this warranty is limited to either repairing or replacing, as hereinafter provided, at its option, any product found to Hydrasearch's satisfaction to be defective upon examination by it, provided that such product shall be returned for inspection to Hydrasearch's factory within thirty (30) days after receipt.

The repair or replacement of defective products will be made without charge for parts or labor. This warranty shall not apply to parts or products not manufactured by Hydrasearch, the warranty of such items being limited to the actual warranty extended to Hydrasearch by its supplier.

This warranty shall not apply to any product which has been subject to abuse, negligence, accident or misapplication or to any product which has been altered or repaired by anyone other than Hydrasearch nor to normal maintenance services and the replacement of service items (such as washers, gaskets and lubricants) made in connection with such services.

To the extent permitted by law, this limited warranty shall extend only to the buyer and any other person reasonably expected to use or consume the goods who is injured in person by any breach of warranty. No action may be brought against Hydrasearch for an alleged breach of warranty unless such action is instituted within one (1) year from the date the cause of action accrues. This limited warranty shall be construed and enforced to the fullest extent allowable by applicable law.

Other than the obligation of Hydrasearch expressly set forth herein, Hydrasearch disclaims all warranties, expressed or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose, and any other obligation or liability. The foregoing constitutes Hydrasearch's sole obligation with respect to damages, whether direct, incidental or consequential, resulting from their use or performance of the product.

Proposition 65 Warning

Because you are a company that may sell or distribute Hydrasearch Company, LLC ("Hydrasearch") products to California consumers or to other persons or entities that may sell such items to California consumers, Hydrasearch is obligated to notify you of the following:

Hydrasearch is in compliance with the California Safe Drinking Water and Toxic Enforcement Act of 1986 and its supporting regulations ("Proposition 65"). Accordingly, Hydrasearch will defend and indemnify our customers if there is a claim made under Proposition 65 for listed chemicals being contained in its products, so long as our customers provide the warning per the instructions below. Hydrasearch provides warnings that comply with the current Proposition 65 regulations.

All Hydrasearch products are shipped in cartons with the following warning:

 WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov."

If you sell or distribute Hydrasearch products to California consumers, or to other persons or entities that may sell such items to California consumers, in quantities fewer than a full carton, you must provide this warning to each customer, either by labeling each unit with the above warning or by another method.

If you would like more information about the chemicals contained in Hydrasearch products, please visit our website at www.hydrasearch.com. Many product display pages contain information about the chemicals contained in our products.

Hydrasearch products made of brass may not be sold to California consumers unless such fittings either contain less than 300 ppm of lead when analyzed pursuant to the EPA test method 3050B or equivalent or they are sold or distributed with a clear, reasonable and conspicuous warning. So long as it is prominently displayed on the product or the packaging of the product, the above warning complies.

For internet sales, there must be a warning message displayed by a clearly marked hyperlink on the product display page or other prominent method to the purchaser before the purchaser completes the purchase of the product.

There are significant penalties associated with failure to comply with Proposition 65 requirements. Should you need further explanation or assistance in complying with this notice, please do not hesitate to **contact us at compliance@hydrasearch.com**.

Legal Policy Information

Return Policy

Contact your Hydrasearch Company, LLC customer service representative (information below) to obtain a Return Material Authorization (RMA) form. Original invoice number, purchase order number and date must be provided. Product returned without an RMA number may be refused or returned at the customer's expense. Hydrasearch is not liable for unauthorized returns.

Return Material Authorization (RMA)

- Authorization must be obtained prior to return
- RMA expires thirty (30) days from date issued
- One carton must include a copy of the RMA form to ensure prompt evaluation and possible credit on return
- If credit is applicable, credit may take up to thirty (30) days from receipt of the returned product(s)
- Returned merchandise transportation must be prepaid
- Merchandise must be securely packaged to avoid damage during transit
- All cartons must be marked with authorized RMA number (unmarked shipments will be refused by our receiving department)
- Returned goods should be shipped to the following address:

Hydrasearch Company, LLC
Returns Dept. RMA # _____
203A Log Canoe Circle
Stevensville, MD 21666

Nonconforming Products

- All product will be inspected and processed by our quality department for disposition
- Product(s) shipped in error and/or product(s) deemed nonconforming will be credited at the invoice price paid including freight charges for these items

Restocking/Unwanted Products

- All product will be inspected and processed by our quality department for disposition
- Restocking charge will apply at a minimum of 25% for all product returned for any other reason than Hydrasearch shipping and/or nonconforming errors
- Product(s) may not be returned unless they are in marketable condition. Any cost incurred to put product(s) in marketable condition will be charged to the customer.
- Product returned damaged/broken will be credited at a scrap value only
- Product returned to Hydrasearch must be prepaid freight at the responsibility of the customer
- Non-inventory product may or may not be authorized for return, based solely on the inventory requirements of Hydrasearch
- Special order product(s) or product that do not have standard requirements, are not eligible for return (*unless product is found to be nonconforming by our quality department*)
- Shaft Couplings must be in original, sealed cartons and in salable condition

Claims

- Claims for damage or loss in transit must be made by customer directly against the carrier. Hydrasearch is not responsible for freight damage
- Photographic evidence is required for all claims
- All claims for defective product or deficient orders must be made in writing by customer within thirty (30) days of receipt

Hydrasearch Sales Representatives

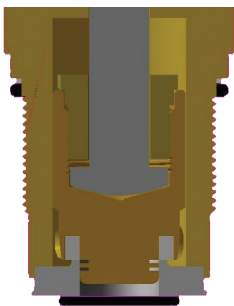
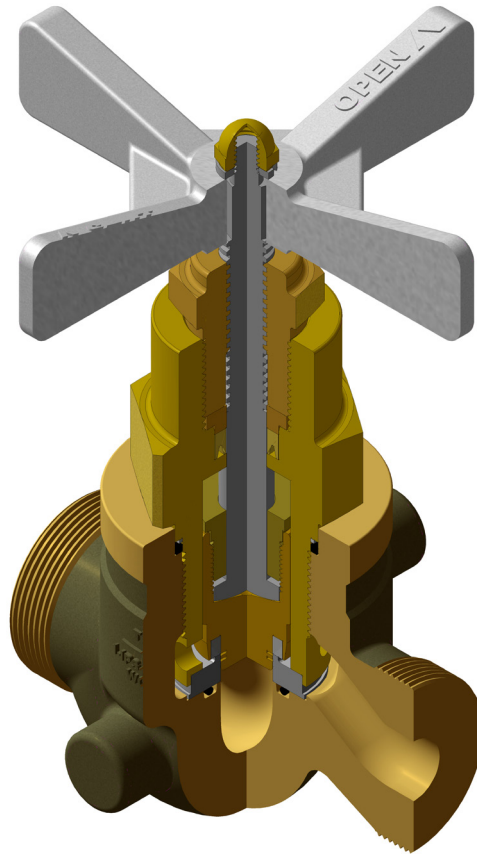
Defense

Phone: 410.643.8900

Email: defense@hydrasearch.com

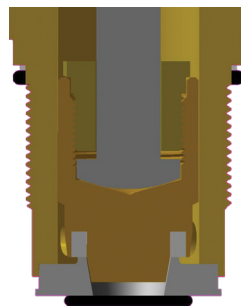
TECH-O-SEAL Valve

A Design for Every Need



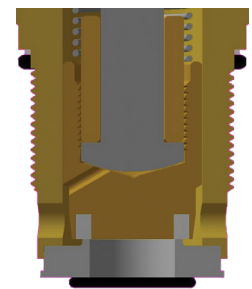
Plug Valve (P)

Groove machined into valve guide prevent heat build-up caused by pressure surge; allow smooth, even flow.



Needle Valve (N)

Tapered configuration of valve guide and seat allows metering of flow.



Stop Check Valve (SC)

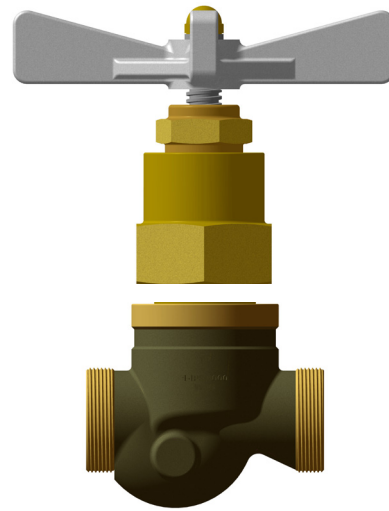
Spring loaded design allows flow in one direction only when valve is open; stops all flow when valve is closed.

As the cross section above demonstrates, TECH-O-SEAL valves are designed to provide a combination of flow requirements, each one incorporating the soft seat, leak-proof seal. In addition, these valves can accommodate different fluids and/or temperatures by simply selecting the appropriate sealing materials.


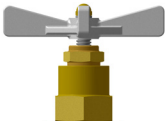







The TECH-O-SEAL Valve System

The TECH-O-SEAL valve system employs the use of a completely removable cartridge assembly which includes the seating portion of the valve. As the photo demonstrates, TECH-O-SEAL valve cartridges, which may be ordered separately, can be placed into any TECH-O-SEAL valve body of the same size and thereby allow complete interchangeability within the system. This unique capability provides design flexibility and saves valuable changeover time, should changes in the system become necessary.

Cartridges, when used with inline, angle, or direct weld bodies, make up the various standard TECH-O-SEAL valves, which are shown below. Other body styles and end configurations are available on request, such as threaded or sil-braze ends. Please consult factory for details. In any case, the user is assured of leak-proof integrity and maintenance free operation with the use of the versatile TECH-O-SEAL system.

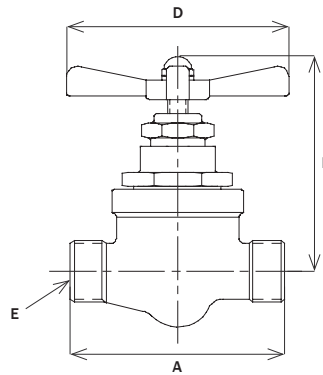
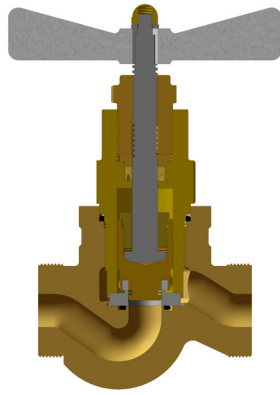
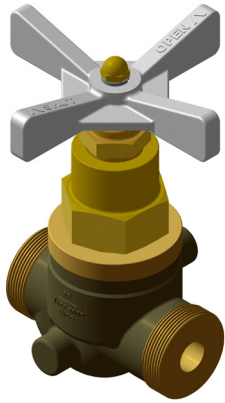


Cartridge Style

when used with	plug  6KP36	needle  6KN46	stop check  6KSC56	check  6KC66
 inline, union end	6GP80	6GN80	6GSC80	6GC80
 angle, union end	6GP81	6GN81	6GSC81	6GC81
 offset, union end	6GP82	6GN82	6GSC82	6GC82
 inline, direct weld	6GPW70	6GNW70	6GSCW70	6GCW70
 angle, direct weld	6GPW71	6GNW71	6GSCW71	6GCW71

Valve, Union End Inline

Plug/Globe, Needle, Stop Check



Notes

- Water, oil and gas service
- Material: Bronze body
- Normal temperature range: -20 °F to +230 °F

Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Plug/Globe Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	MIL spec**	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (thread)	Flow diameter
1/8	6GP80-0	6GN80-0	6GSC80-0	MIL-V-24109	2 3/4	3 3/4	3 15/16	3 1/2	1 - 14	7/32
1/4	6GP80-1	6GN80-1	6GSC80-1	MIL-V-24109	3 3/8	4 1/16	4 13/32	3 1/2	1 3/16 - 12	5/16
3/8	6GP80-2	6GN80-2	6GSC80-2	MIL-V-24109	4	4 7/8	5 5/16	3 1/2	1 3/8 - 12	7/16
1/2	6GP80-3	6GN80-3	6GSC80-3	MIL-V-24109	4 1/4	6 1/8	6 21/32	4 1/2	1 3/4 - 12	1/2
3/4	6GP80-4	6GN80-4	6GSC80-4	MIL-V-24109	4 5/8	6 3/16	6 3/4	5 1/4	2 - 12	5/8
1	6GP80-5	6GN80-5	6GSC80-5	MIL-V-24109	5 1/4	7 9/16	8 5/32	7 1/4	2 5/16 - 12	13/16
1 1/4	6GP80-6	6GN80-6	6GSC80-6	MIL-V-24109	6 1/2	7 5/8	8 7/32	9	2 3/4 - 12	1
1 1/2*	6GP80-7	6GN80-7	6GSC80-7	-	9	10	11	11 1/2	3 1/16 - 12	1 1/4
2*	6GP80-8	6GN80-8	6GSC80-8	-	9 1/2	10 3/8	11 3/8	14	3 3/4 - 12	1 9/16

Note: All dimensions are in inches and are reference only

* Centerline of valve stem is angled approximately 12° from the perpendicular to the piping.

** MIL Spec only applies to Plug/Globe Valve part numbers.

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:

6GP80-3-P

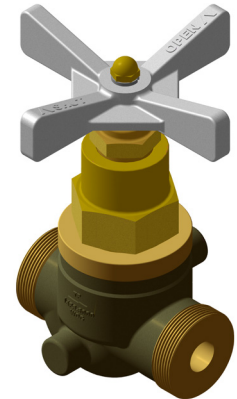
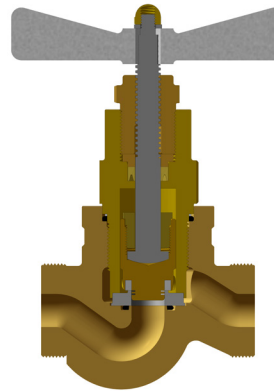
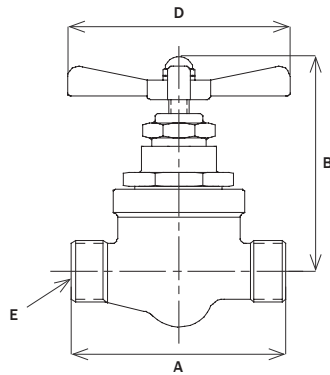


Valve, Union End Inline

Stop, Needle - These valves comply with NAVSEA drawing 803-6397247

Notes

- Water, oil and gas service
- Material: Bronze body
- Maximum temperature: 275 °F



Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

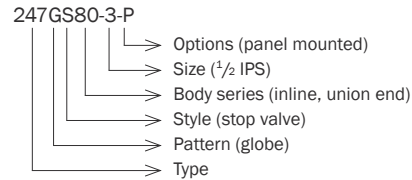
Pipe size	Globe Stop Valve Part No.	Needle Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (thread)	Flow diameter
1/8	247GS80-0	247GN80-0	2 3/4	3 3/4	3 15/16	3 1/2	1 - 14	7/32
1/4	247GS80-1	247GN80-1	3 3/8	4 1/8	4 1/2	3 1/2	1 3/16 - 12	5/16
3/8	247GS80-2	247GN80-2	4	4 7/8	5 5/16	3 1/2	1 3/8 - 12	7/16
1/2	247GS80-3	247GN80-3	4 1/4	6 1/8	6 21/32	4 1/2	1 3/4 - 12	1/2
3/4	247GS80-4	247GN80-4	4 5/8	6 1/4	6 25/32	5 1/4	2 - 12	5/8
1	247GS80-5	247GN80-5	5 1/4	7 21/32	8 1/4	7 1/4	2 5/16 - 12	13/16
1 1/4	247GS80-6	247GN80-6	6 1/2	7 3/4	8 11/32	9	2 3/4 - 12	1
1 1/2	247GS80-7	247GN80-7	9	10 13/32	11 7/32	11 1/2	3 1/16 - 12	1 1/4
2*	247GS80-8	247GN80-8	9 1/2	10 3/8	11 3/8	14	3 3/4 - 12	1 9/16

Note: All dimensions are in inches and are reference only
 * The 2 inch size is not listed on the NAVSEA drawing 803-6397247

Ordering Information for Options

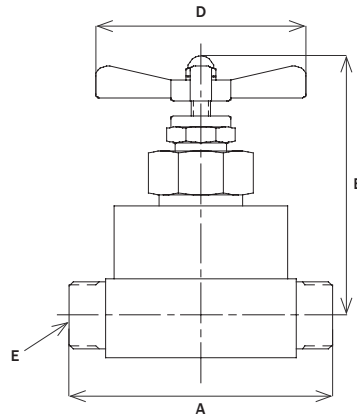
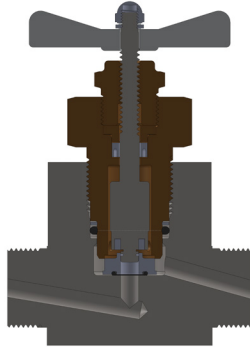
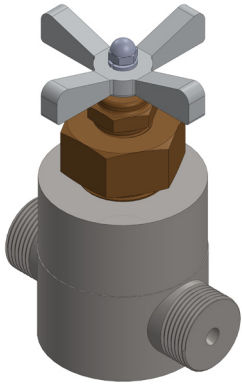
Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:



Valve, Union End Inline

Plug/Globe, Needle, Stop Check



Notes

- Water, oil and gas service
- Material: Steel or Stainless Steel body
- Normal temperature range: -20°F to +230°F

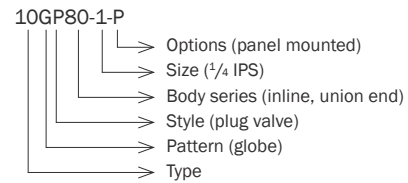
Pipe size	Plug/Globe Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (thread)	Flow diameter
1/4	10GP80-1	10GN80-1	10GSC80-1	4 1/4	5	5 11/32	3 1/2	1 3/8 - 12	5/16

Note: All dimensions are in inches and are reference only

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Vented (above seal)	-VA
Vented (below seal)	-VB
Special materials	please specify

Part Number Example:

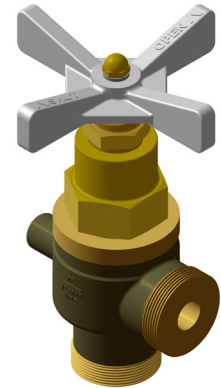
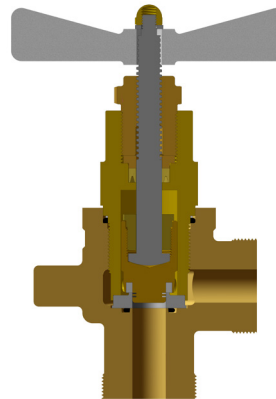
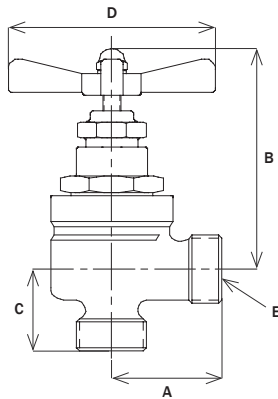


Valve, Union End Angle

Plug/Globe, Needle, Stop Check

Notes

- Water, oil and gas service
- Material: Bronze body
- Normal temperature range: -20° F to +230° F



Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Globe Stop Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	MIL spec*	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. C	Dim. D	Dim. E (thread)	Flow diameter
1/8	6GP81-0	6GN81-0	6GSC81-0	MIL-V-24109	1 3/8	3 17/32	3 23/32	1 1/8	3 1/2	1 - 14	7/32
1/4	6GP81-1	6GN81-1	6GSC81-1	MIL-V-24109	1 11/16	3 25/32	4 1/8	1 1/2	3 1/2	1 3/16 - 12	5/16
3/8	6GP81-2	6GN81-2	6GSC81-2	MIL-V-24109	2	4 15/32	4 29/32	1 5/8	3 1/2	1 3/8 - 12	7/16
1/2	6GP81-3	6GN81-3	6GSC81-3	MIL-V-24109	2 1/8	5 11/16	6 7/32	1 3/4	4 1/2	1 3/4 - 12	1/2
3/4	6GP81-4	6GN81-4	6GSC81-4	MIL-V-24109	2 5/16	5 5/8	6 3/16	2 3/8	5 1/4	2 - 12	5/8
1	6GP81-5	6GN81-5	6GSC81-5	MIL-V-24109	2 5/8	6 29/32	7 1/2	2 3/4	7 1/4	2 5/16 - 12	13/16
1 1/4	6GP81-6	6GN81-6	6GSC81-6	MIL-V-24109	3 1/4	6 13/16	7 13/32	3	9	2 3/4 - 12	1
1 1/2	6GP81-7	6GN81-7	6GSC81-7	-	4	9 1/4	10 1/4	4	11 1/2	3 1/16 - 12	1 1/4
2	6GP81-8	6GN81-8	6GSC81-8	-	4 1/2	9 3/8	10 3/8	4 1/2	14	3 3/4 - 12	1 9/16

Note: All dimensions are in inches and are reference only
 * MIL Spec only applies to Globe Stop Valve part numbers.

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

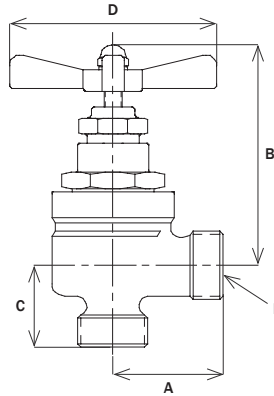
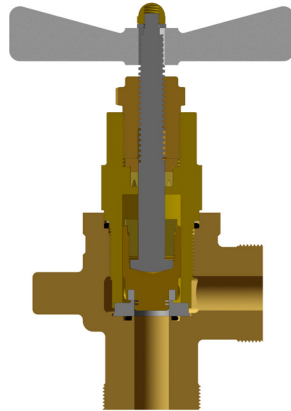
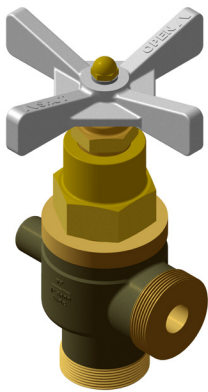
Part Number Example:

6GP81-3-P



Valve, Union End Angle

Stop, Needle - These valves comply with NAVSEA drawing 803-6397247



Notes

- Water, oil and gas service
- Material: Bronze body
- Maximum temperature: 275 °F

Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Plug/Globe Valve Part No.	Needle Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. C	Dim. D	Dim. E (thread)	Flow diameter
1/8	247GS81-0	247GN81-0	1 3/8	3 17/32	3 23/32	1 1/8	3 1/2	1 - 14	7/32
1/4	247GS81-1	247GN81-1	1 11/16	3 27/32	4 3/16	1 1/2	3 1/2	1 3/16 - 12	5/16
3/8	247GS81-2	247GN81-2	2	4 15/32	4 29/32	1 5/8	3 1/2	1 3/8 - 12	7/16
1/2	247GS81-3	247GN81-3	2 1/8	5 11/16	6 7/32	1 3/4	4 1/2	1 3/4 - 12	1/2
3/4	247GS81-4	247GN81-4	2 5/16	5 17/32	6 3/32	2 3/8	5 1/4	2 - 12	5/8
1	247GS81-5	247GN81-5	2 5/8	7 1/32	7 5/8	2 3/4	7 1/4	2 5/16 - 12	13/16
1 1/4	247GS81-6	247GN81-6	3 1/4	6 29/32	7 17/32	3	9	2 3/4 - 12	1
1 1/2	247GS81-7	247GN81-7	4	9 7/16	10 1/4	4	11 1/2	3 1/16 - 12	1 1/4
2*	247GS81-8	247GN81-8	4 1/2	9 3/8	10 3/8	4 1/2	14	3 3/4 - 12	1 9/16

Note: All dimensions are in inches and are reference only
 * The 2 inch size is not listed on the NAVSEA drawing 803-6397247

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:

247GS81-3-P

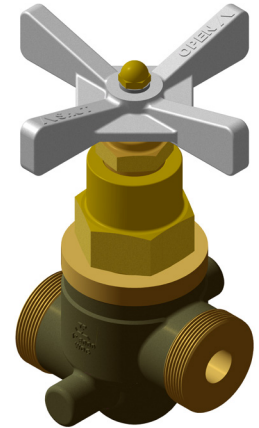
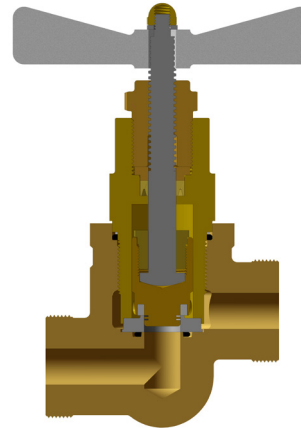
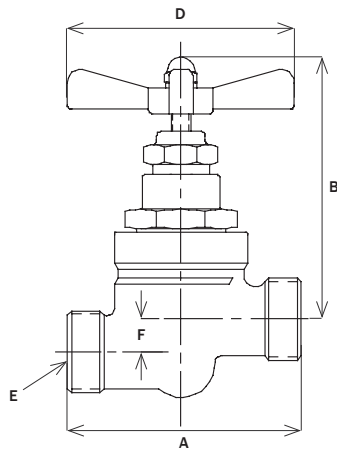


Valve, Union End Offset

Plug/Globe, Needle, Stop Check

Notes

- Water, oil and gas service
- Material: Bronze body
- Normal temperature range:
-20° F to +230° F



Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

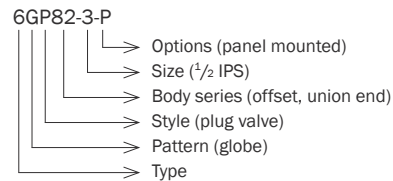
Pipe size	Globe Stop Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (thread)	Dim. F	Flow diameter
1/4	6GP82-1	6GN82-1	6GSC82-1	3 3/8	3 29/32	4 1/4	3 1/2	1 3/16 - 12	1/2	5/16
3/8	6GP82-2	6GN82-2	6GSC82-2	4	4 1/2	4 15/16	3 1/2	1 3/8 - 12	5/8	7/16
1/2	6GP82-3	6GN82-3	6GSC82-3	4 1/4	5 23/32	6 1/4	4 1/2	1 3/4 - 12	25/32	1/2
3/4	6GP82-4	6GN82-4	6GSC82-4	4 5/8	5 25/32	6 11/32	5 1/4	2 - 12	1	5/8
1	6GP82-5	6GN82-5	6GSC82-5	5 1/4	7 3/32	7 21/32	7 1/4	2 5/16 - 12	1 1/4	13/16
1 1/4	6GP82-6	6GN82-6	6GSC82-6	6 1/2	7 1/16	7 9/8	9	2 3/4 - 12	1 7/16	1
1 1/2	6GP82-7	6GN82-7	6GSC82-7	9	9 1/2	10 3/8	11 1/2	3 1/16 - 12	1 3/4	1 1/4

Note: All dimensions are in inches and are reference only

Ordering Information for Options

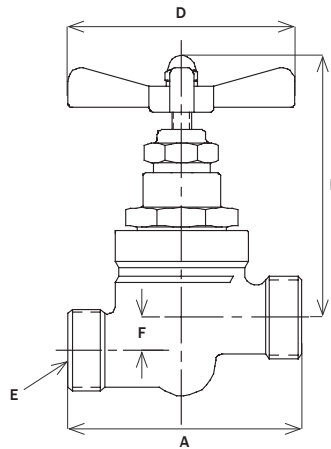
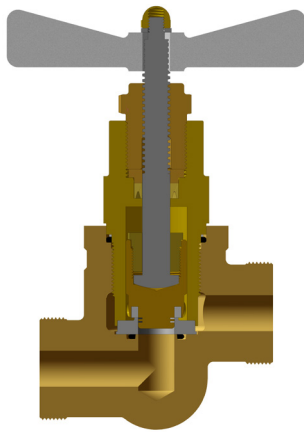
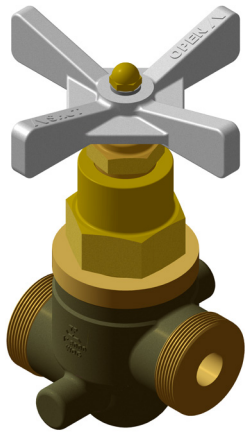
Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:



Valve, Union End Offset

Stop, Needle - These valves comply with NAVSEA drawing 803-6397247



Notes

- Water, oil and gas service
- Material: Bronze body
- Maximum temperature: 275 °F

Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Plug/Globe Valve Part No.	Needle Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (thread)	Dim. F	Flow diameter
1/4	247GS82-1	247GN82-1	3 3/8	3 29/32	4 1/4	3 1/2	1 3/16 - 12	1/2	5/16
3/8	247GS82-2	247GN82-2	4	4 1/2	4 15/16	3 1/2	1 3/8 - 12	5/8	7/16
1/2	247GS82-3	247GN82-3	4 1/4	5 23/32	6 1/4	4 1/2	1 3/4 - 12	25/32	1/2
3/4	247GS82-4	247GN82-4	4 5/8	5 25/32	6 11/32	5 1/4	2 - 12	1	5/8
1	247GS82-5	247GN82-5	5 1/4	7 3/32	7 21/32	7 1/4	2 5/16 - 12	1 1/4	13/16
1 1/4	247GS82-6	247GN82-6	6 1/2	7 1/16	7 5/8	9	2 3/4 - 12	1 7/16	1
1 1/2	247GS82-7	247GN82-7	9	9 1/2	10 3/8	11 1/2	3 1/16 - 12	1 3/4	1 1/4

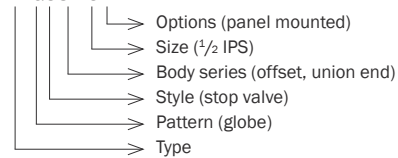
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:

247GS82-3-P

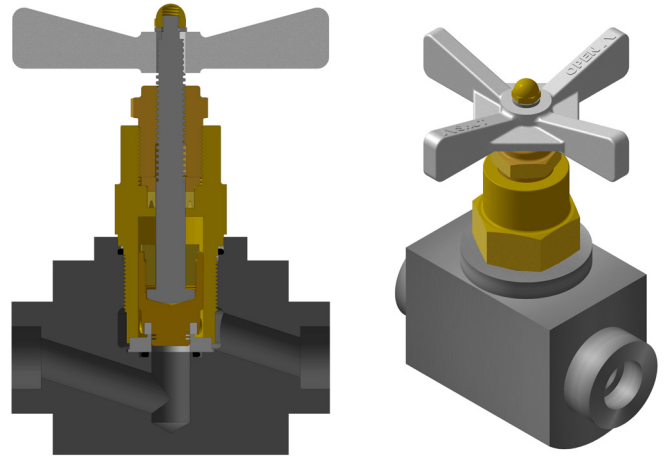
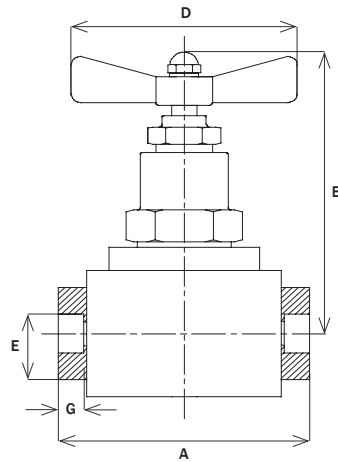


Valve, Socket Weld Inline

Plug/Globe, Needle, Stop Check

Notes

- Water, oil and gas service
- Material: Stainless Steel, Steel and NiCu bodies
- Normal temperature range: -20° F to +230° F



Pipe size	Globe Stop Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (dia. ref.)	Dim. G	Flow diameter
1/8	6GPW70-0	6GNW70-0	6GSCW70-0	3 1/4	3 3/4	3 15/16	3 1/2	0.420	3/8	7/32
1/4	6GPW70-1	6GNW70-1	6GSCW70-1	3 3/4	4 1/16	4 13/32	3 1/2	0.555	3/8	5/16
3/8	6GPW70-2	6GNW70-2	6GSCW70-2	4 3/4	4 7/8	5 5/16	3 1/2	0.690	7/16	7/16
1/2	6GPW70-3	6GNW70-3	6GSCW70-3	5	6 1/8	6 21/32	4 1/2	0.855	1/2	1/2
3/4	6GPW70-4	6GNW70-4	6GSCW70-4	5 3/8	6 3/16	6 3/4	5 1/4	1.065	9/16	5/8
1	6GPW70-5	6GNW70-5	6GSCW70-5	6 3/4	7 9/16	8 5/32	7 1/4	1.330	5/8	13/16
1 1/4	6GPW70-6	6GNW70-6	6GSCW70-6	7	7 5/8	8 7/32	9	1.675	11/16	1
1 1/2	6GPW70-7	6GNW70-7	6GSCW70-7	8 1/4	11 1/8	12 1/8	11 1/2	1.900	3/4	1 1/4
2	6GPW70-8	6GNW70-8	6GSCW70-8	10 3/4	10 7/16	11 7/16	14	2.375	7/8	1 9/16

Note: All dimensions are in inches and are reference only

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

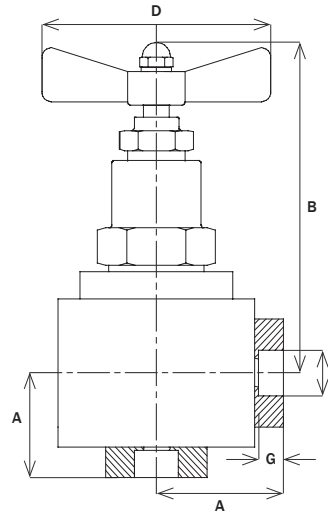
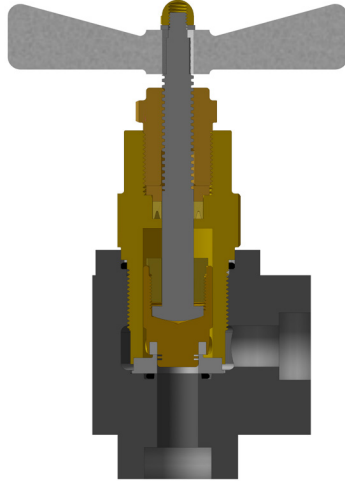
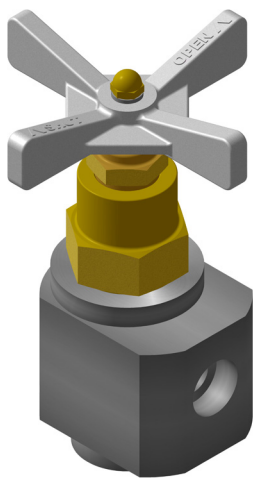
Part Number Example:

6GPW70-3-P



Valve, Socket Weld Angle

Plug/Globe, Needle, Stop Check



Notes

- Water, oil and gas service
- Material: Stainless Steel, Steel and NiCu bodies
- Normal temperature range: -20° F to +230° F

Pipe size	Plug/Globe Valve Part No.	Needle Valve Part No.	Stop Check Valve Part No.	Dim. A	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. E (dia. ref.)	Dim. G	Flow diameter
1/8	6GPW71-0	6GNW71-0	6GSCW71-0	1 3/8	3 9/16	3 3/4	3 1/2	0.420	3/8	7/32
1/4	6GPW71-1	6GNW71-1	6GSCW71-1	1 1/2	3 25/32	4 1/8	3 1/2	0.555	3/8	5/16
3/8	6GPW71-2	6GNW71-2	6GSCW71-2	1 3/4	4 15/32	4 29/32	3 1/2	0.690	7/16	7/16
1/2	6GPW71-3	6GNW71-3	6GSCW71-3	1 7/8	5 11/16	6 7/32	4 1/2	0.855	1/2	1/2
3/4	6GPW71-4	6GNW71-4	6GSCW71-4	2 5/16	5 5/8	6 3/16	5 1/4	1.065	9/16	5/8
1	6GPW71-5	6GNW71-5	6GSCW71-5	2 5/8	6 29/32	7 1/2	7 1/4	1.330	5/8	13/16
1 1/4	6GPW71-6	6GNW71-6	6GSCW71-6	3 1/4	6 13/16	7 13/32	9	1.675	11/16	1
1 1/2	6GPW71-7	6GNW71-7	6GSCW71-7	4	9 1/4	9 13/16	11 1/2	1.900	3/4	1 1/4

Note: All dimensions are in inches and are reference only

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Underwater service	-U
Vented (above seal)	-VA
Vented (below seal)	-VB
Removable handle	-HE
Limit-switch equipped	-LS
Special materials	please specify

Part Number Example:

6GPW71-1-P

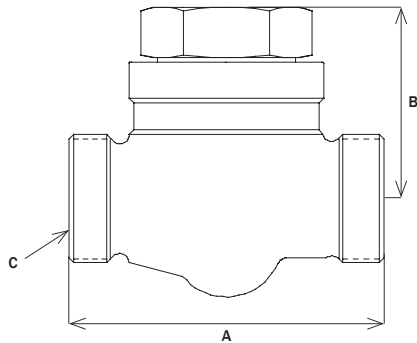


Valve, Globe Check

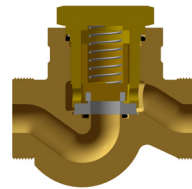
Silent, Angle, Offset, Socket Weld, Angle Socket Weld

Notes

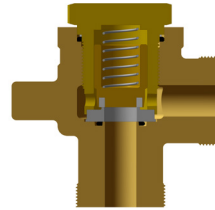
- Water, oil and gas service
- Material: Bronze body
- Normal temperature range:
-20 °F to +230 °F



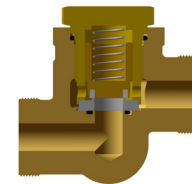
Angle Socket Weld



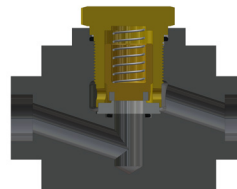
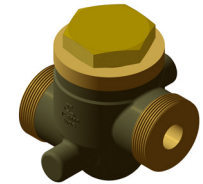
Silent



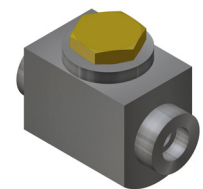
Angle



Offset



Socket Weld



Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Globe Check Silent Valve Part No.	Globe Angle Check Valve Part No.	Globe Offset Check Valve Part No.	Globe Socket Weld Check Valve Part No.	Angle Socket Weld Check Valve Part No.	MIL spec*	Dim. A	Dim. B	Dim. C (thread)	Flow diameter
1/4	6GC80-1	6GC81-1	6GC82-1	6GCW70-1	6GCW71-1	MIL-V-24109	3 3/8	2	1 3/16 - 12	5/16
3/8	6GC80-2	6GC81-2	6GC82-2	6GCW70-2	6GCW71-2	MIL-V-24109	4	2 3/8	1 3/8 - 12	7/16
1/2	6GC80-3	6GC81-3	6GC82-3	6GCW70-3	6GCW71-3	MIL-V-24109	4 1/4	2 11/16	1 3/4 - 12	1/2
3/4	6GC80-4	6GC81-4	6GC82-4	6GCW70-4	6GCW71-4	MIL-V-24109	4 5/8	2 13/16	2 - 12	5/8
1	6GC80-5	6GC81-5	6GC82-5	6GCW70-5	6GCW71-5	MIL-V-24109	5 1/4	3 3/4	2 5/16 - 12	13/16
1 1/4	6GC80-6	6GC81-8	6GC82-6	6GCW70-6	6GCW71-6	MIL-V-24109	6 1/2	3 13/16	2 3/4 - 12	1

Note: All dimensions are in inches and are reference only

* MIL Spec only applies to Globe Check Silent Valve part numbers.

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Vented (above seal)	-VA
Vented (below seal)	-VB
Special materials	please specify

Part Number Example:

6GC80-3-P



Valve, Globe Check

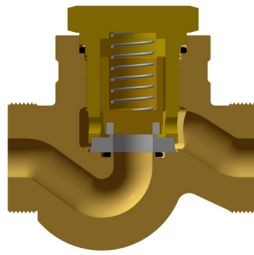
Inline, Angle, Offset - These valves comply with NAVSEA drawing 803-6397247

Notes

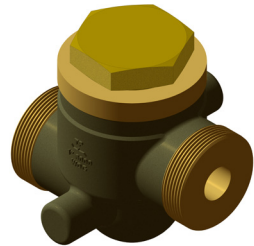
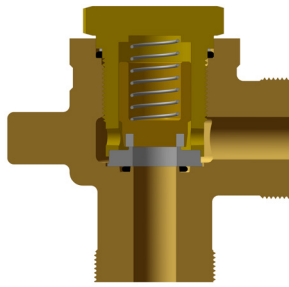
- Water, oil and gas service
- Material: Bronze body
- Maximum temperature: 275 °F



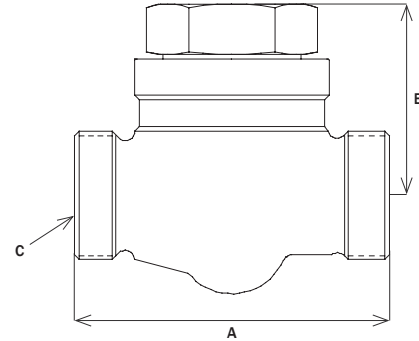
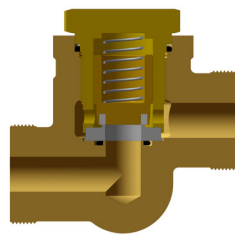
Inline



Angle



Offset



Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Globe Check Inline Valve Part No.	Globe Angle Check Valve Part No.	Globe Offset Check Valve Part No.	Dim. A	Dim. B	Dim. C (thread)	Flow diameter
1/4	247GC80-1	247GC81-1	247GC82-1	3 3/8	2	1 3/16 - 12	5/16
3/8	247GC80-2	247GC81-2	247GC82-2	4	2 3/8	1 3/8 - 12	7/16
1/2	247GC80-3	247GC81-3	247GC82-3	4 1/4	2 11/16	1 3/4 - 12	1/2
3/4	247GC80-4	247GC81-4	247GC82-4	4 5/8	2 13/16	2 - 12	5/8
1	247GC80-5	247GC81-5	247GC82-5	5 1/4	3 1/4	2 5/16 - 12	13/16
1 1/4	247GC80-6	247GC81-6	247GC82-6	6 1/2	3 13/16	2 3/4 - 12	1

Note: All dimensions are in inches and are reference only

Ordering Information for Options

Panel-mounted valve	-P
Oxygen service	-OX
High temperature	-M
Vented (above seal)	-VA
Vented (below seal)	-VB
Special materials	please specify

Part Number Example:

247GC80-3-P



Valve, Union End Inline

Check

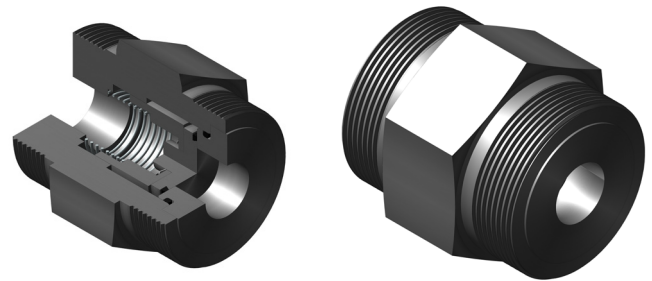
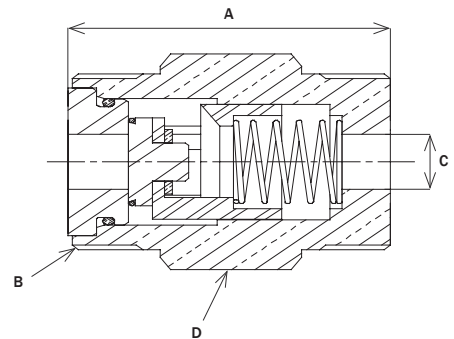
Notes

- Water, oil and gas service
- Material: Bronze/Stainless Steel

Union nuts and tailpieces found on pages 42-72 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

Pipe size	Check Valve Part No.	Dim. A	Dim. B (thread)	Dim. C (dia.)	Dim. D (hex)
1/4	6C23A-1	1.87	1 3/16 - 12	0.31	1.37
3/8	6C23A-2	1.87	1 3/8 - 12	0.44	1.50
1/2	6C23A-3	2.00	1 3/4 - 12	0.50	1.87
3/4	6C23A-4	2.50	2 - 12	0.62	2.12
1	6C23A-5	2.87	2 5/16 - 12	0.81	2.50
1	6C23A-5A	2.87	2 5/16 - 12	0.12	2.50
1 1/4	6C23A-6	3.12	2 3/4 - 12	1.00	2.87
1 1/2	6C23A-7	3.50	3 1/16 - 12	1.25	3.25
2	6C23A-8	4.00	3 3/4 - 12	1.56	3.87

Note: All dimensions are in inches and are reference only



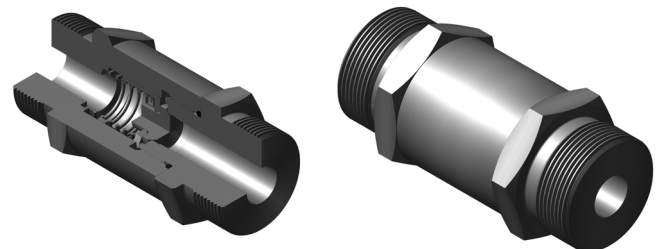
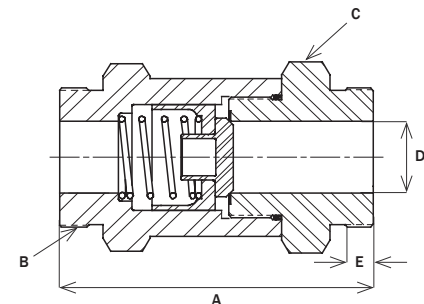
Notes

- Hydraulic fluid service
- Material: Stainless Steel

Union nuts and tailpieces found on pages 42-76 provide sil-braze, socket weld, butt weld, male/female straight and pipe thread connections.

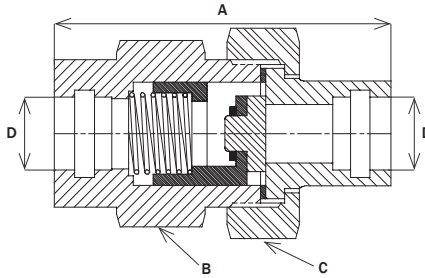
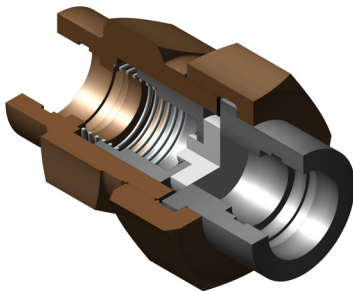
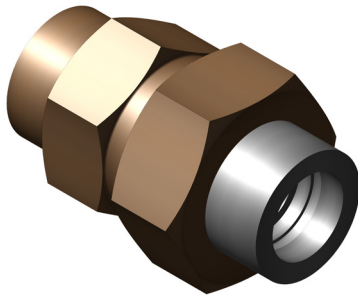
Pipe size	Check Valve Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)	Dim. D (dia.)	Dim. E (min)
1/4	3C231-04	3 7/8	1 3/16 - 12	1 3/8	0.302	1/2
3/8	3C231-06	4 1/16	1 3/8 - 12	1 5/8	0.423	1/2
1/2	3C231-08	4 3/8	1 3/4 - 12	2	0.546	1/2
3/4	3C231-12	5 3/16	2 - 12	2 3/8	0.742	1/2
1	3C231-16	5 7/8	2 5/16 - 12	2 3/4	0.957	5/8
1 1/4	3C231-20	6 7/16	2 3/4 - 12	3 1/4	1.28	5/8
1 1/2	3C231-24	7 5/8	3 1/16 - 12	3 3/4	1.50	3/4
2	3C231-32	8 1/8	3 3/4 - 12	4 3/8	1.94	3/4
2 1/2	3C231-40	9 1/8	4 1/2 - 12	5 1/8	2.32	1

Note: All dimensions are in inches and are reference only



Valve, Sil-Braze Inline

Check



Notes

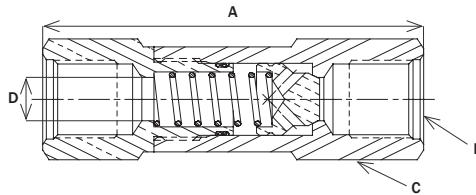
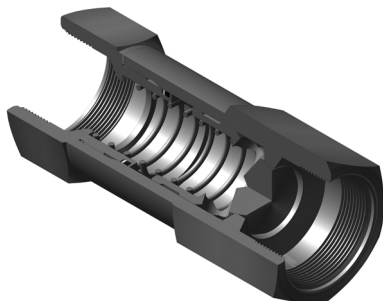
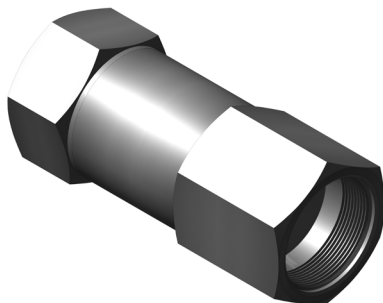
- Water, oil and gas service
- Material: Bronze
- Maximum temperature: 275 °F

Pipe size	Check Valve Part No.	Dim. A	Dim. B (hex)	Dim. C (hex)	Dim. D (dia.)
3/8	4144-2	3.37	1.87	2.00	0.675
1/2	4144-3	3.37	1.87	2.00	0.840
3/4	4144-4	4.00	2.12	2.25	1.050
1	4144-5	4.62	2.37	2.56	1.315
1 1/4	4144-6	5.44	2.87	3.00	1.660
1 1/2	4144-7	5.87	3.25	3.50	1.900
2	4144-8	7.19	4.00	4.12	2.375

Note: All dimensions are in inches and are reference only

Valve, Female Thread Inline

Check



Notes

- Water, oil and gas service
- Material: Stainless Steel
- Normal temperature range: -20 °F to +500 °F

Pipe size	Check Valve Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)	Dim. D (dia.)
1/4	4C793-1	2.75	7/16 - 20	0.687	0.187
3/8	4C793-2	3.00	9/16 - 18	0.813	0.312
1/2	4C793-3	3.63	3/4 - 16	1.06	0.375
3/4	4C793-4	4.50	1 1/16 - 12	1.44	0.593
1	4C793-5	5.13	1 5/16 - 12	1.69	0.812
1 1/4	4C793-6	6.13	1 5/8 - 12	2.50	1.06
1 1/2	4C793-7	6.19	1 7/8 - 12	2.50	1.31
2	4C793-8A	7.63	2 1/2 - 12	3.00	1.63

Note: All dimensions are in inches and are reference only

Valve, High Pressure Relief

Pressure up to 6000 PSI

Material

- Body: Bronze MIL-B-24480
- Disc: Nylon
- Seat: Stainless Steel (304)
- Guide: Stainless Steel (304)
- Spring: Chrome Vanadium

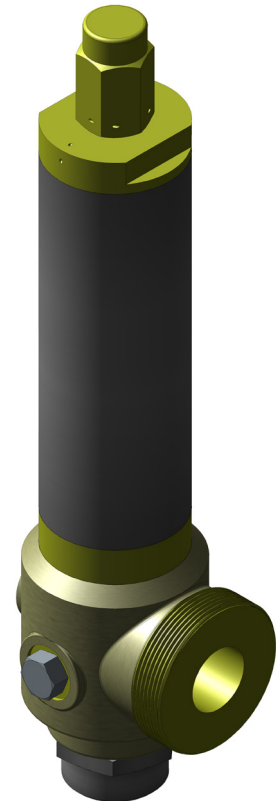
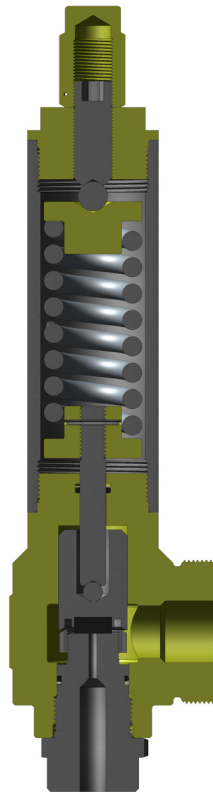
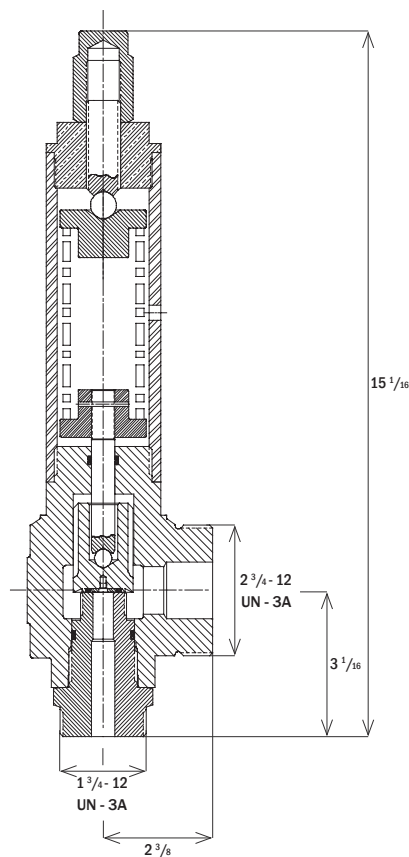
A Tech-O-Seal relief valve can be furnished with any desired pressure setting up to 6000 PSI. The table to the right is presented for your convenience in determining which orifice diameter is best suited for your particular system requirements.

When ordering be sure to include union nuts part number 6N50 and proper tailpieces part number 6R51. (See pages 42-76 for selection.)

When ordering please state desired part number, fluid service, pressure setting and fluid temperature.

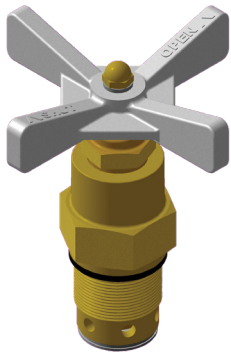
Part No.	Pressure range PSI	Orifice size
6VR57-1	150 - 500	0.438
6VR57-2	400 - 1200	0.438
6VR57-3	750 - 3500	0.313
6VR57-4	3000 - 5000	0.218
6VR57-5	4700 - 6000	0.156
6VR57-6	75 - 300	0.438
6VR57-7	30 - 125	0.438
6VR57-8	10 - 50	0.438

Note: All dimensions are in inches and are reference only

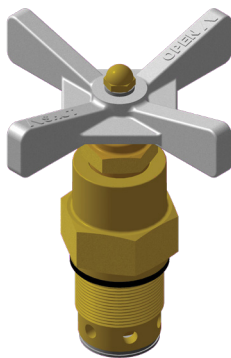
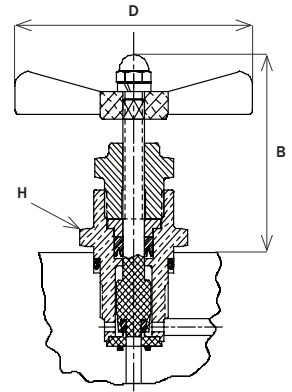
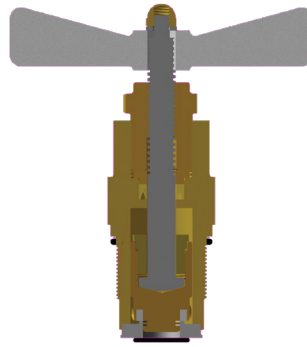


Valve Accessories

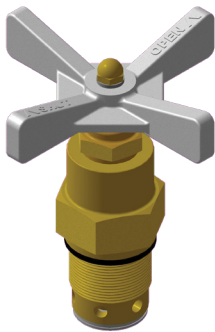
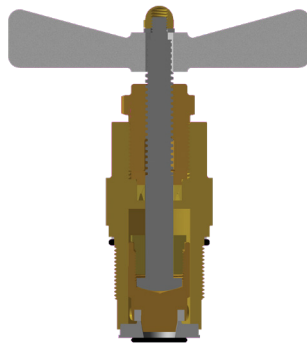
Globe Valve Cartridge



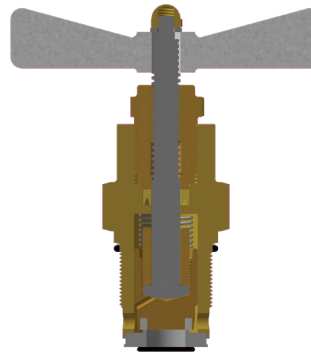
Plug



Needle



Stop Check



Pipe size	Globe Valve Cartridge Part No.	Globe Needle Valve Cartridge Part No.	Globe Stop Check Valve Cartridge Part No.	Dim. B (closed)	Dim. B (open)	Dim. D	Dim. H (hex)	Flow diameter
1/8	6KP36-0	6KN46-0	6KSC56-0	2 1/2	2 11/16	3 1/2	1 3/8	7/32
1/4	6KP36-1	6KN46-1	6KSC56-1	2 1/2	2 27/32	3 1/2	1 1/2	5/16
3/8	6KP36-2	6KN46-2	6KSC56-2	3 1/8	3 9/16	3 1/2	1 7/8	7/16
1/2	6KP36-3	6KN46-3	6KSC56-3	4 1/4	4 25/32	4 1/2	2	1/2
3/4	6KP36-4	6KN46-4	6KSC56-4	4	4 9/16	5 1/4	2 1/8	5/8
1	6KP36-5	6KN46-5	6KSC56-5	5	5 19/32	7 1/4	2 3/8	13/16
1 1/4	6KP36-6	6KN46-6	6KSC56-6	4 11/16	5 9/32	9	2 5/8	1
1 1/2	6KP36-7	6KN46-7	6KSC56-7	6 3/16	7 3/16	11 1/2	3 5/8	1 1/4
2	6KP36-8	6KN46-8	6KSC56-8	6 3/16	7 3/16	14	4	1 9/16

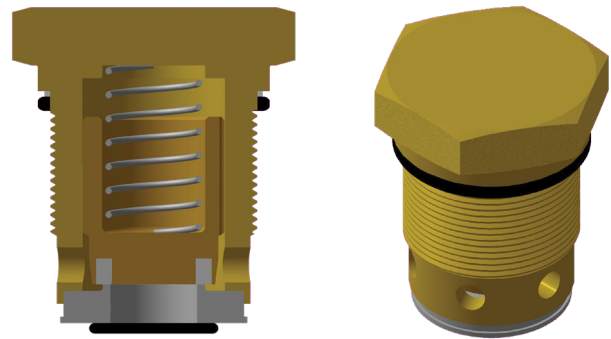
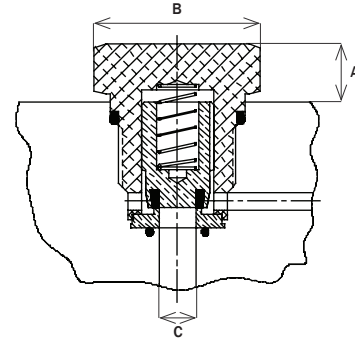
Note: All dimensions are in inches and are reference only

Valve Accessories

Check Valve Cartridge

Pipe size	Check Valve Cartridge Part No.	Dim. A	Dim. B (hex)	Dim C. (flow diameter)
1/4	6KC66-1	13/32	1 1/2	5/16
3/8	6KC66-2	5/8	1 7/8	7/16
1/2	6KC66-3	13/16	2	1/2
3/4	6KC66-4	5/8	2 1/8	5/8
1	6KC66-5	11/16	2 3/8	13/16
1 1/4	6KC66-6	7/8	2 5/8	1

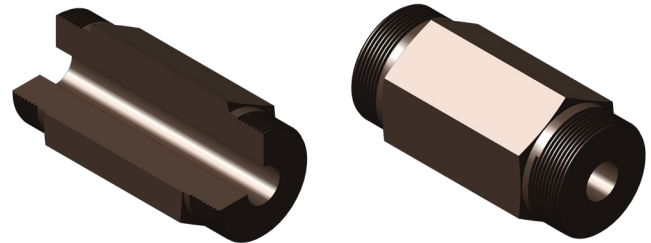
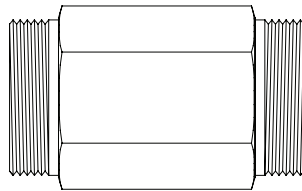
Note: All dimensions are in inches and are reference only



Valve Accessories

Valve Spacers P/N 6F80

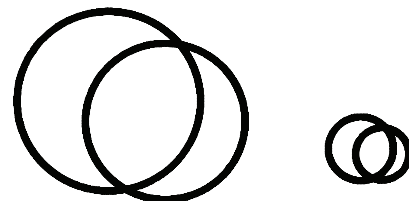
TECH-O-SEAL valve spacers are inserted in the line during welding or brazing to guard against the possibility of damage to the valve. After installation is complete, the spacer is easily removed, and the valve is slipped into the line in its place without springing or shifting the line. Simply tightening the two union nuts completes the valve installation.



Valve Accessories

Soft Goods Kits P/N SGK

Soft goods kits are available for all size TECH-O-SEAL valves. These include O-rings and backup rings required to change the seals in the valve, should this become necessary. Soft goods kits are available for all media and temperatures, and can be easily installed at your facility.



Valve Information

Series 300 pressure instrument valves

Whether your application is in the pharmaceutical, refining, nuclear, petroleum, chemical, power generating, or other liquid or gas control system, the need for valves in pressure instrument monitoring is clear. Equally clear is the fact that the proper calibration and inspection of control systems requires instrument valves that deliver precision engineered performance, reliability and cost efficiency. Also available for commercial industry, Technical Products Series 300 Instrument Valves offer unsurpassed quality as a result of the rigorous and stringent military specification processes demanded for qualification by the US government.

Superior Design and Construction

Technical Products Series 300 Instrument Valves are the product of an advanced third generation design, providing a simplified construction which offers high reliability for liquids or gases at pressures up to 6000 PSI. Each valve is constructed of the highest quality materials, in accordance with military specifications - Standard materials for the body, bonnet and stem are either stainless steel or nickel-copper alloy.

The Series 300 Valve's superior design is evident throughout its construction - The stem moves through the valve body, reducing wear; a metal-to-metal back seat prevents the stem from backing out of the valve body; system pressure causes the o-ring to isolate the bonnet during valve cycling; the ergonomically designed aluminum handle provides for fast and precise opening and closing of the valve; and a straight-bore flow path delivers fluid with minimal turbulence.

Unmatched Cost Effectiveness

Thanks to their advanced, simplified design, Series 300 Instrument Valves are easy to disassemble and are capable of being refurbished. No special tools are required for removal of the valve stem. This capability, unique to Technical Products' instrument valves, can substantially reduce overall costs by decreasing the interval at which valves must be replaced. The Series 300 Instrument Valve's easily removable, keyless/clipless handle greatly simplifies panel installations and removals for refurbishment, further reducing labor costs.

The Instrument Valve for your application

Series 300 Instrument Valves are available in a wide variety of physical and material configurations. Common configuration options include valves constructed of stainless steel or nickel-copper alloys; valves with a globe or angle body configuration; valves provided with standard socket weld union ends, tube flareless ends, double MS threads, or NPT female ends; valves with or without a fitting cap; and valves with or without a panel mounting nut.

Advantages

- Third generation, simplified design delivers precision performance and high reliability.
- Design meets stringent military specifications.
- Availability of replacement parts for refurbishment extends valve life and reduces costs.
- Keyless, clipless handle provides ease of installation and removal.
- Eliminate safety issues, reduces dangerous purging.
- Eliminate unnecessary tube fabrication, installs inline with gauge.

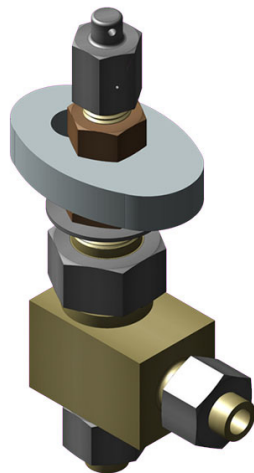
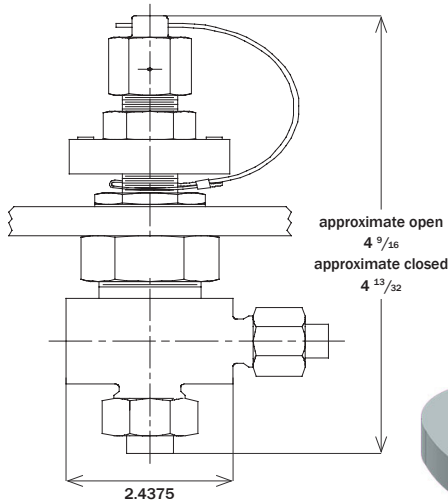
Features

- Performance rated to 6000 PSI at temperatures from 20°F to 600°F.
- Positive back seat prevents the stem from backing out of the body.
- Available in a wide range of materials and configurations, custom configurations as required.
- Available with an extensive range of fittings for virtually any application.

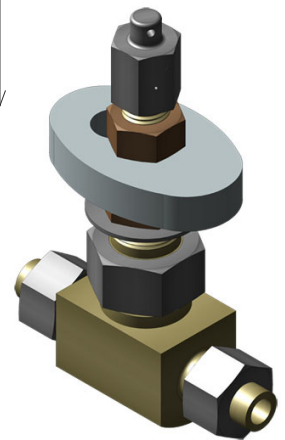
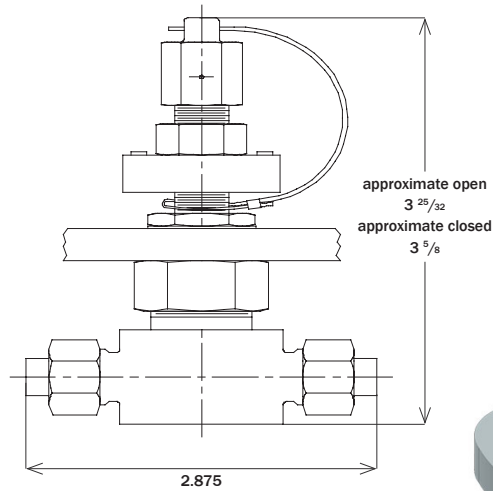
Valve, Instrument

Needle, Vented Stem, 1/4 inch OD Socketweld Tube End

Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI. Additional adapters are available for connection to pipe and straight thread ends, flareless ends and union ends (see pages 33-39 for details).



6GN381 angle



6GN382 inline

Part No.	Body type	Inlet connection	Outlet connection
6GN381	angle	9/16- 18 male union end with nut and tailpiece	9/16- 18 male union end with nut and tailpiece
6GN382	inline	9/16- 18 male union end with nut and tailpiece	9/16- 18 male union end with nut and tailpiece

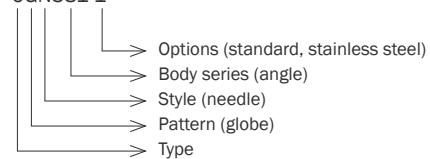
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600° F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600° F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN381-1

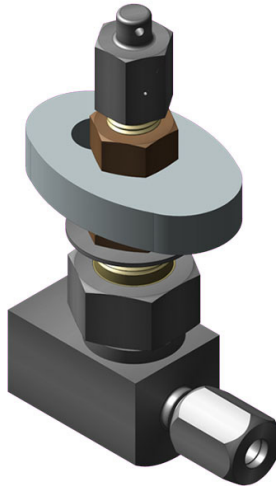


Additional configurations are available for special applications. Please contact our sales team at defense@hydrasearch.com with your requirements.

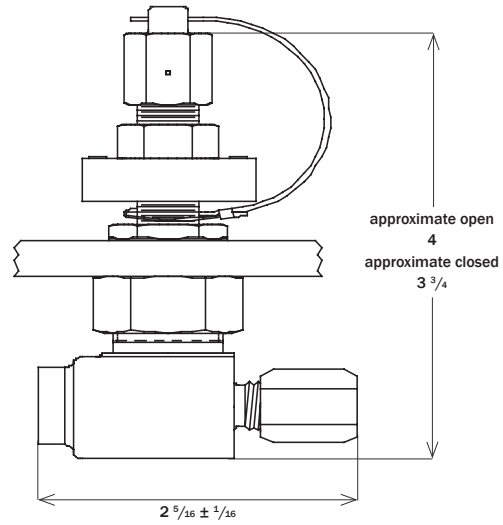
Valve, Instrument

Needle, Vented Stem

Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI.



6GN309 inline



Part No.	Body type	Inlet connection	Outlet connection
6GN309	inline	7/16 - 20 female straight thread	1/4 inch OD flareless with ferrule and nut

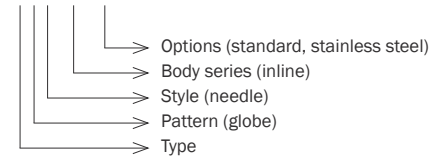
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600 °F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600 °F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN309-1

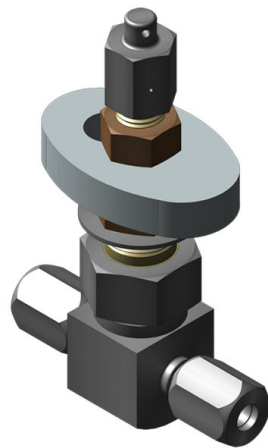
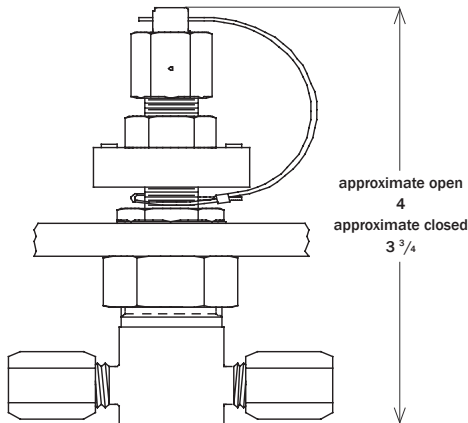


Additional configurations are available for special applications.
Please contact our sales team at defense@hydrasearch.com with your requirements.

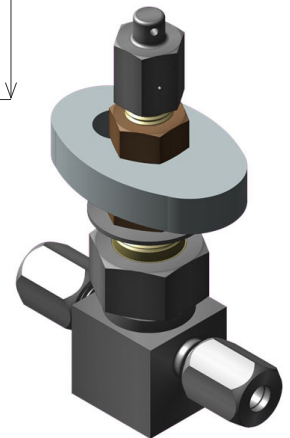
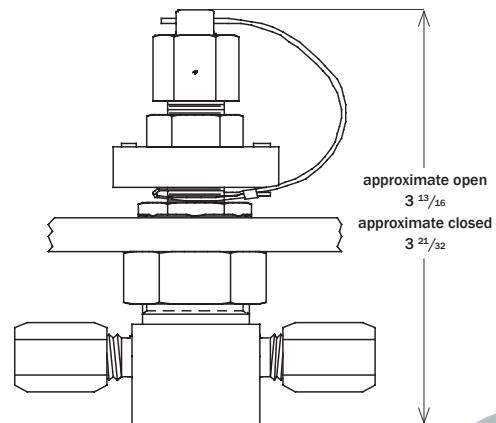
Valve, Instrument

Needle, Vented Stem

Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI.



6GN340 inline



6GN341 inline

Part No.	Body type	Inlet connection	Outlet connection
6GN340	inline	1/4 inch OD flareless with ferrule and nut	1/4 inch OD flareless with ferrule and nut
6GN341	inline	1/4 inch OD flareless with ferrule and nut	1/4 inch OD flareless with ferrule and nut

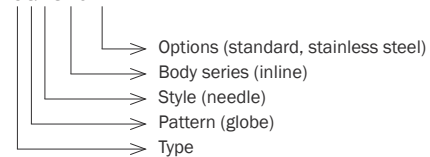
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600° F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600° F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN340-1

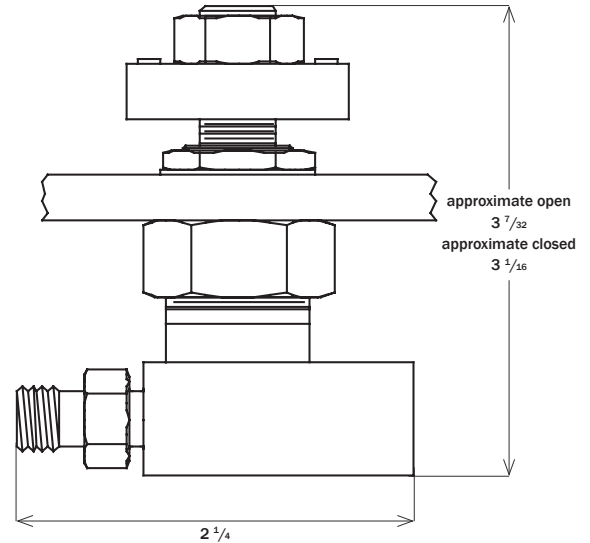
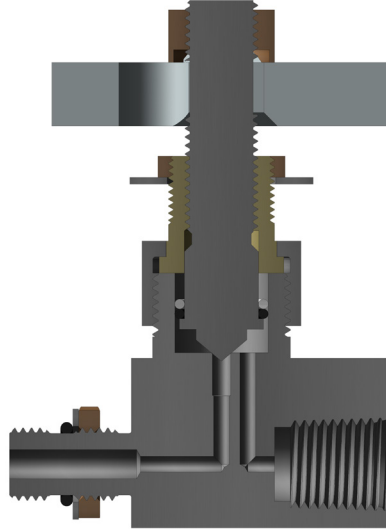
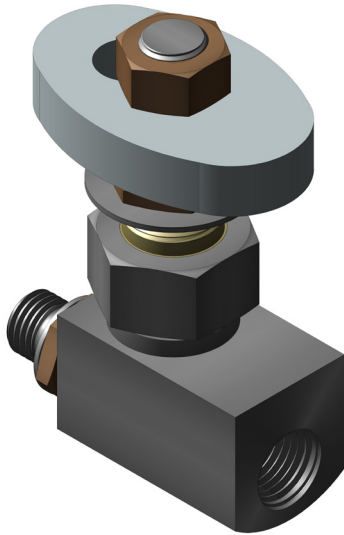


Additional configurations are available for special applications.
Please contact our sales team at defense@hydrasearch.com with your requirements.

Valve, Instrument

Needle, Solid Stem

Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI.



6GN352 inline

Part No.	Body type	Inlet connection	Outlet connection
6GN352	inline	7/16 - 20 double MS straight thread	1/4 NPT female

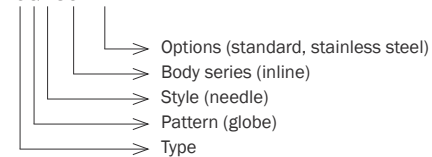
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600 °F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600 °F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN352-1

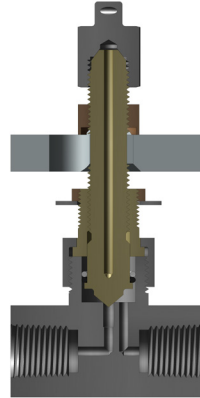
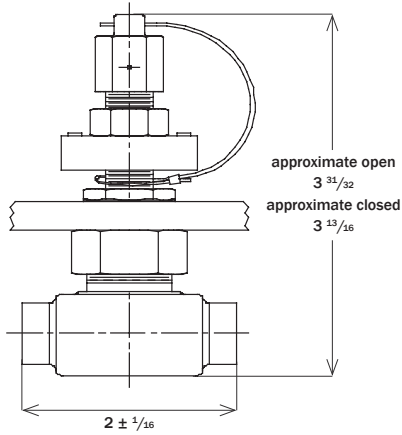


Additional configurations are available for special applications.
Please contact our sales team at defense@hydrasearch.com with your requirements.

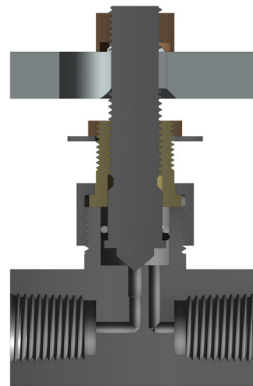
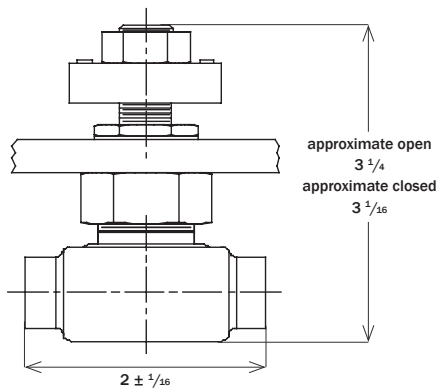
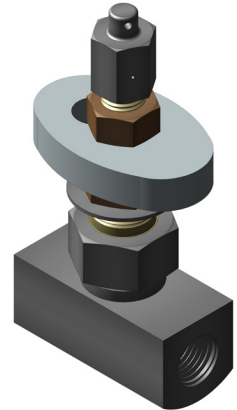
Valve, Instrument

Needle, Vented or Solid Stem

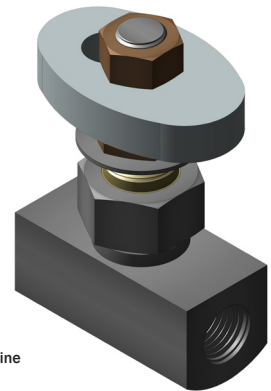
Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI.



6GN301 inline



6GN393 inline



Part No.	Body type	Stem condition	Inlet connection	Outlet connection
6GN301	inline	vented	1/4 NPT female	1/4 NPT female
6GN393	inline	solid	1/4 NPT female	1/4 NPT female

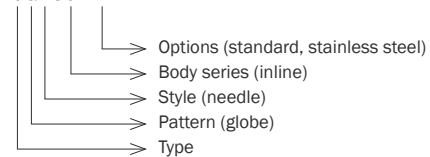
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600° F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600° F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN301-1

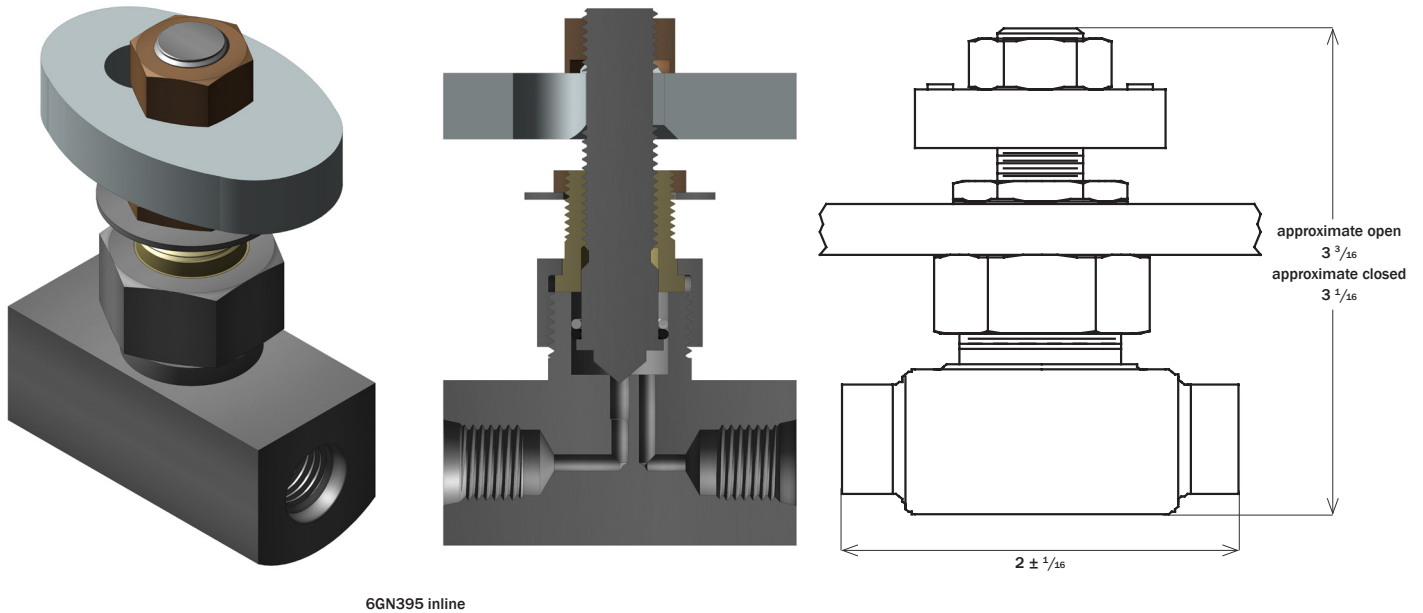


Additional configurations are available for special applications. Please contact our sales team at defense@hydrasearch.com with your requirements.

Valve, Instrument

Needle, Solid Stem

Basic valve configuration works with MIL-DTL-24578. Working pressure is 6000 PSI.



6GN395 inline

Part No.	Body type	Inlet connection	Outlet connection
6GN395	inline	$\frac{7}{16}$ - 20 female straight thread	$\frac{7}{16}$ - 20 female straight thread

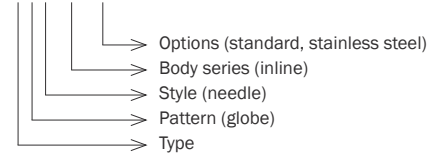
Note: All dimensions are in inches and are reference only

Ordering Information for Options

Dash (-)	System fluid	Application
-1	wog	standard (stainless steel)
-2	wog	high corrosion resistant (monel)
-3	wog	high temperature to 600 °F (stainless steel)
-4	wog	high corrosion resistant/high temp. to 600 °F (monel)
-6	hydraulic	high corrosion resistant (monel)
-7	wog	non-magnetic (stainless steel)
-8	hydraulic	standard (stainless steel)

Part Number Example:

6GN395-1

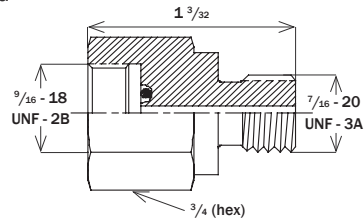


Additional configurations are available for special applications.
Please contact our sales team at defense@hydrasearch.com with your requirements.

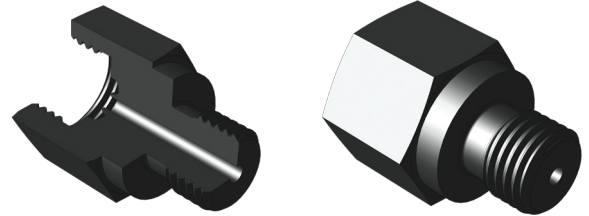
Adapters, Instrumentation

Female Union X Male Straight Thread

Part No. 7808-4-4



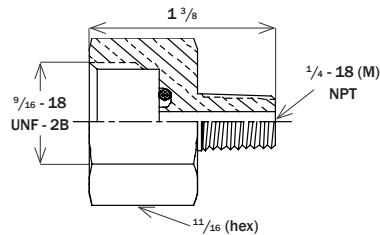
Note: All dimensions are in inches and are reference only



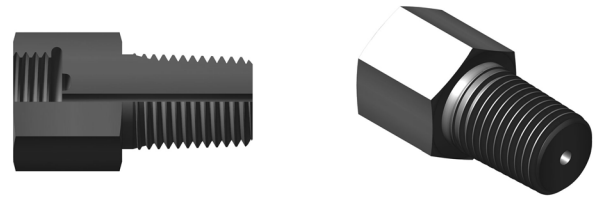
Adapters, Instrumentation

Female Union X NPT Male

Part No. 7817-4-4



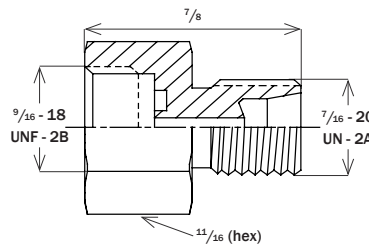
Note: All dimensions are in inches and are reference only



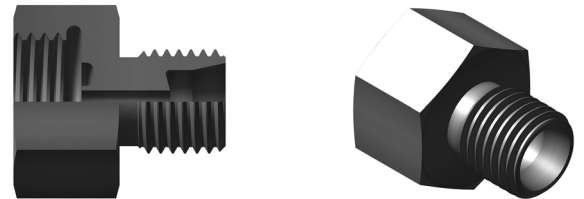
Adapters, Instrumentation

Female Union X Tube Flareless

Part No. 7818-4-4



Note: All dimensions are in inches and are reference only

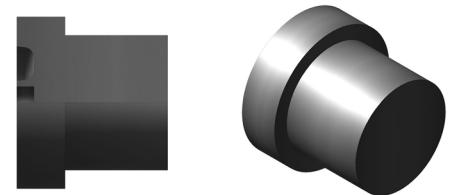
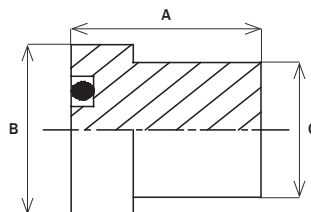


Adapters, Instrumentation

Tube End X Blank Tailpiece

Part No.	Tube size	Dim. A	Dim. B	Dim. C
7804R-4-4	1/4	7/16	0.497	0.390
7804R-6-6	3/8	5/8	0.680	0.562

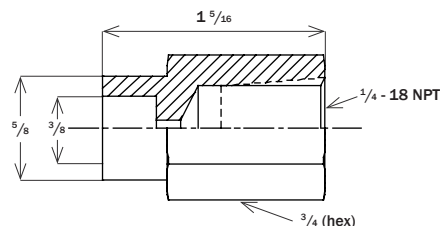
Note: All dimensions are in inches and are reference only



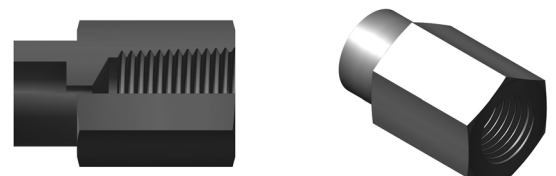
Adapters, Instrumentation

Tube Socketweld X NPT Female

Part No. 7805-6-4

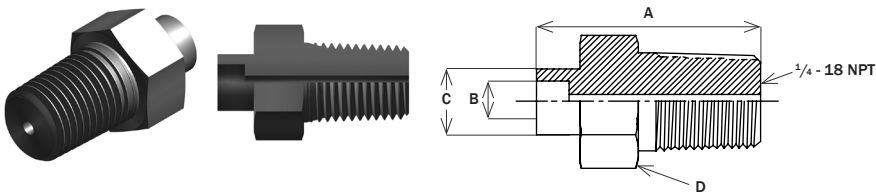


Note: All dimensions are in inches and are reference only



Adapters, Instrumentation

Tube Socketweld X NPT Male

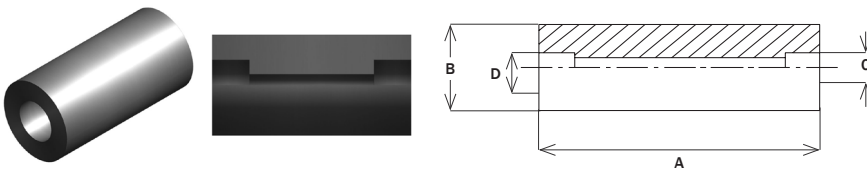


Part No.	Tube size	Dim. A	Dim. B (ID)	Dim. C (OD)	Dim. D (hex)
7806-4-4	1/4	1 5/16	0.252	0.390	11/16
7806-6-4	3/8	1 5/16	0.377	0.562	11/16

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Tube Socketweld X Tube Socketweld

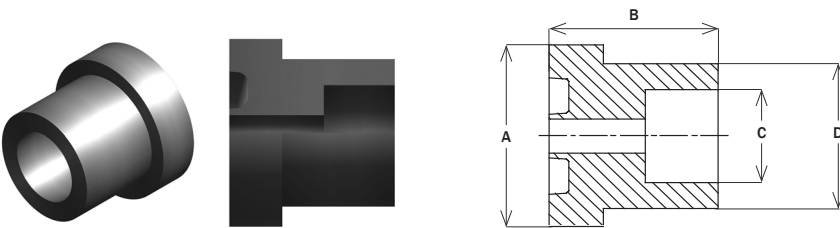


Part No.	Tube size	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D
7847-4-4	1/4 x 1/4	2	0.750	0.250	0.250
7847-4-6	1/4 x 3/8	2	0.875	0.250	0.375
7847-4-8	1/4 x 1/2	2	0.875	0.250	0.500
7847-6-6	3/8 x 3/8	2	0.875	0.375	0.375
7847-8-8	1/2 x 1/2	2	1.000	0.503	0.503

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Tube End X Tube Socketweld Tailpiece

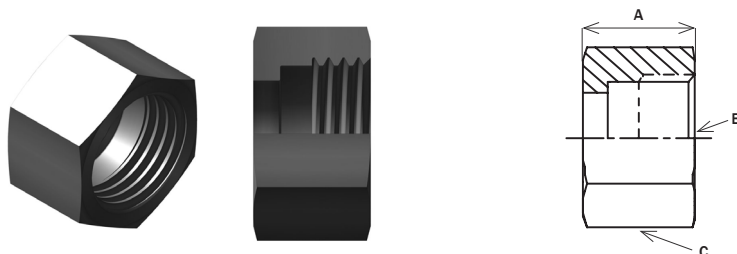


Part No.	Tube size	Dim. A (dia.)	Dim. B	Dim. C (dia.)	Dim. D (dia.)
7849-4	1/4	0.497	7/16	0.252	0.390
7849-8-6	1/2 x 3/8	0.875	3/4	0.377	0.562

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Female Union X Tube End Union Nut



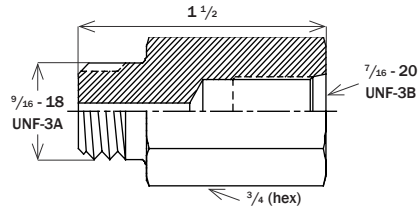
Part No.	Tube size	Dim. A	Dim. B	Dim. C (hex)
7850-4	1/4	7/16	9/16 - 18 UNF-3B	11/16
7850-6	3/8	1/2	3/4 - 16 UNF-3B	7/8

Note: All dimensions are in inches and are reference only

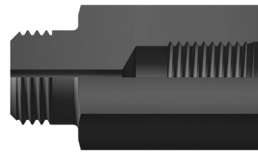
Adapters, Instrumentation

Male Union X Female Straight Thread

Part No. 7864T-4-4



Note: All dimensions are in inches and are reference only

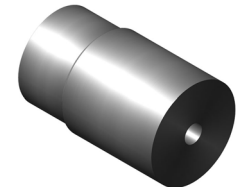
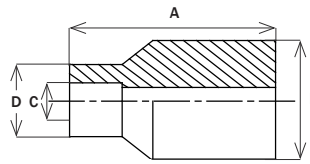


Adapters, Instrumentation

IPS Maleweld X Tube Socketweld Bushing

Part No.	Size	Dim. A	Dim. B (dia.)	Dim. C (ID)	Dim. D (OD)
7867-1-4	1/4 x 1/4	7/8	0.540	0.250	0.500
7867-3-4	1/2 x 1/4	1 1/8	0.840	0.250	0.500

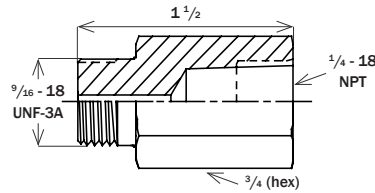
Note: All dimensions are in inches and are reference only



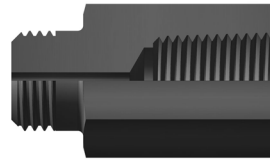
Adapters, Instrumentation

Male Union X Female NPT

Part No. 7853T-4-4



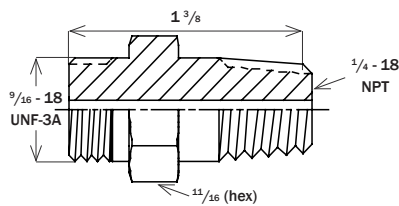
Note: All dimensions are in inches and are reference only



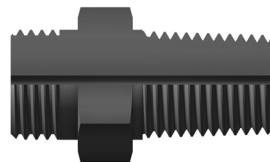
Adapters, Instrumentation

Male Union X Male NPT

Part No. 7854T-4-4



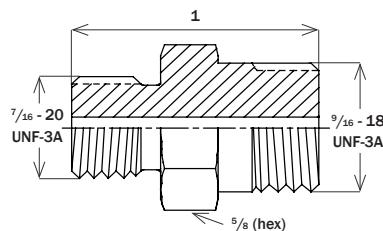
Note: All dimensions are in inches and are reference only



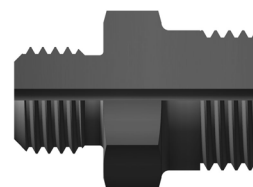
Adapters, Instrumentation

Male Union X Male Straight Thread

Part No. 7859T-4-4

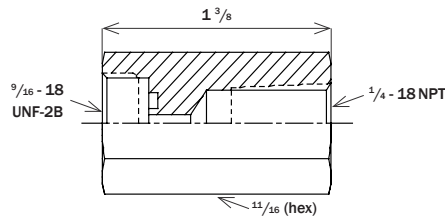
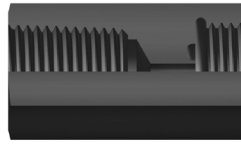
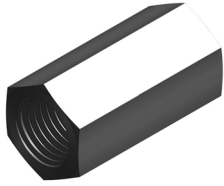


Note: All dimensions are in inches and are reference only



Adapters, Instrumentation

Female Union X NPT Female

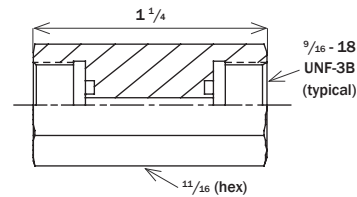
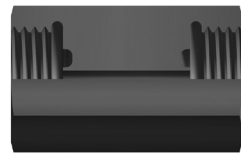


Part No. 7819-4-4

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Female Union X Female Union

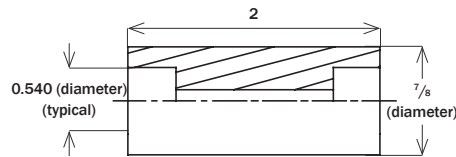
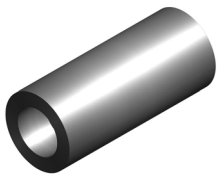


Part No. 7821-4-4

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

IPS Socketweld X IPS Socketweld

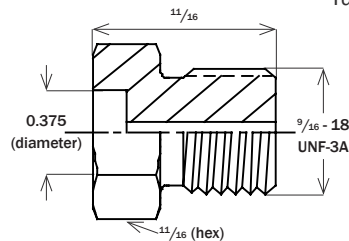
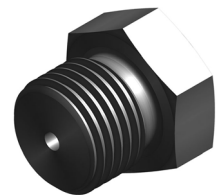


Part No. 7830-1-1

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Tube Socketweld X Male Straight Thread

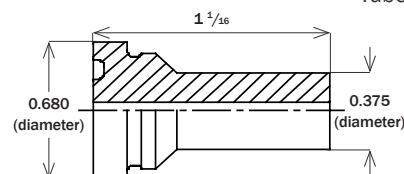


Part No. 7860-6-6

Note: All dimensions are in inches and are reference only

Adapters, Instrumentation

Tube End X Tube Maleweld Tailpiece



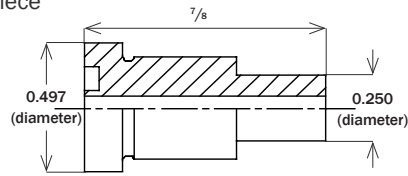
Part No. 7863-6-6

Note: All dimensions are in inches and are reference only

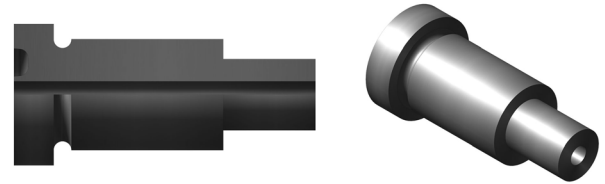
Adapters, Instrumentation

Tube End X Tube Maleweld Tailpiece

Part No. 7863C-4-4



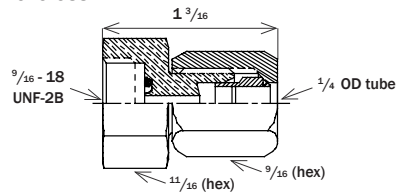
Note: All dimensions are in inches and are reference only



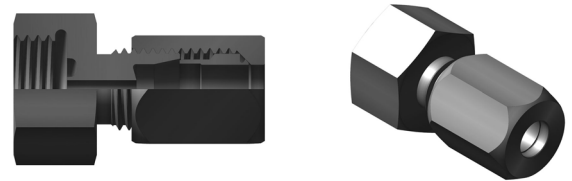
Adapter Assemblies, Instrumentation

9/16 - 18 Female Union X 1/4 Tube Flareless

Part No. 7809-4-4



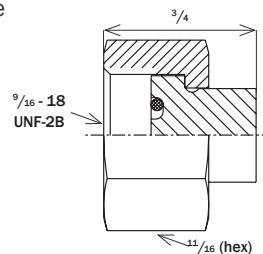
Note: All dimensions are in inches and are reference only



Adapter Assemblies, Instrumentation

9/16 - 18 Female Union X Blank Tailpiece

Part No. 7811-4



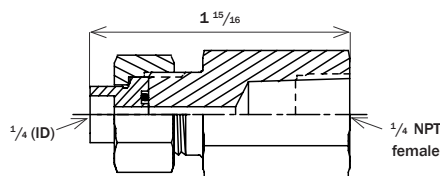
Note: All dimensions are in inches and are reference only



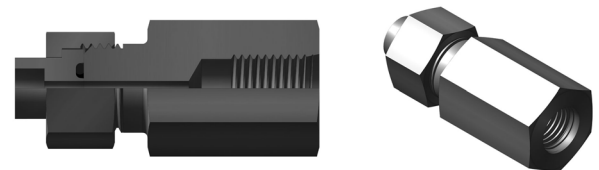
Adapter Assemblies, Instrumentation

1/4 Tube Socketweld X 1/4 NPT Female

Part No. 7853-4-4



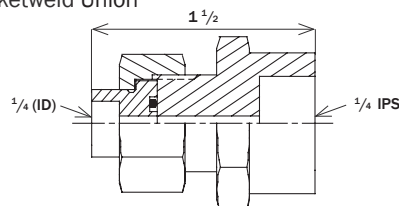
Note: All dimensions are in inches and are reference only



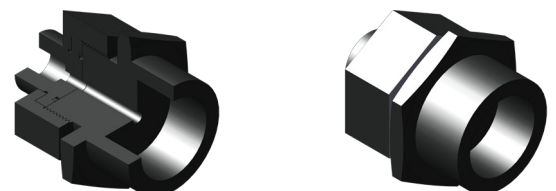
Adapter Assemblies, Instrumentation

1/4 Tube Socketweld X 1/4 IPS Socketweld Union

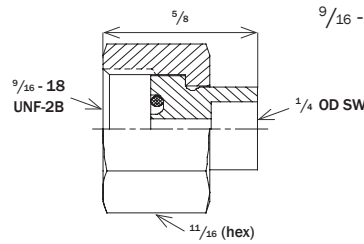
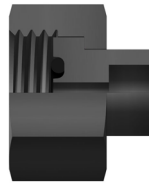
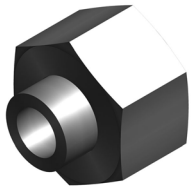
Part No. 7800-4-4



Note: All dimensions are in inches and are reference only



Adapter Assemblies, Instrumentation

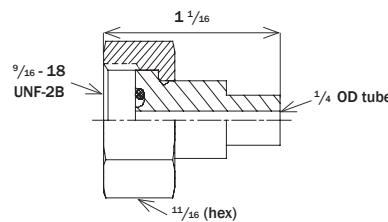
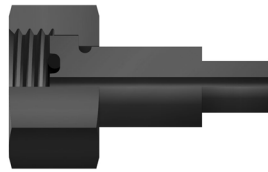
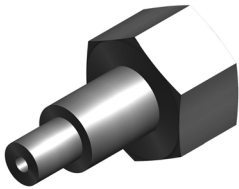


9/16 - 18 Female Union X 1/4 Tube Socketweld

Part No. 7801

Note: All dimensions are in inches and are reference only

Adapter Assemblies, Instrumentation

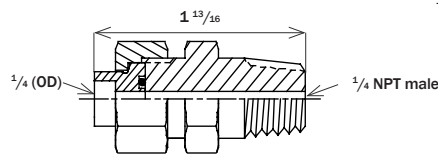
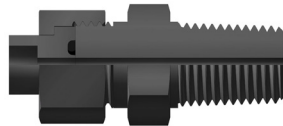


9/16 - 18 Female Union X 1/4 Tube Male

Part No. 7803

Note: All dimensions are in inches and are reference only

Adapter Assemblies, Instrumentation

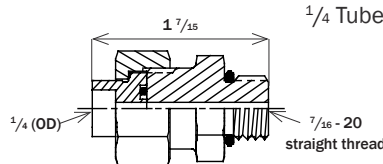
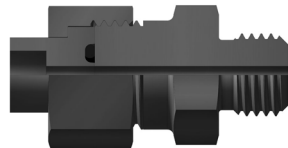
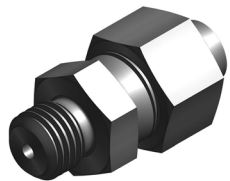


1/4 Tube Socketweld X 1/4 NPT Male

Part No. 7854

Note: All dimensions are in inches and are reference only

Adapter Assemblies, Instrumentation

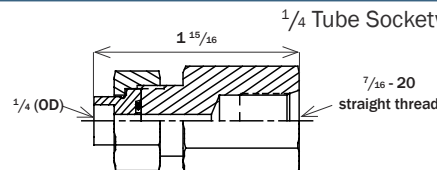
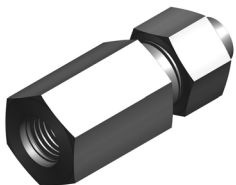


1/4 Tube Socketweld X 7/16 - 20 Male Straight Thread

Part No. 7859

Note: All dimensions are in inches and are reference only

Adapter Assemblies, Instrumentation

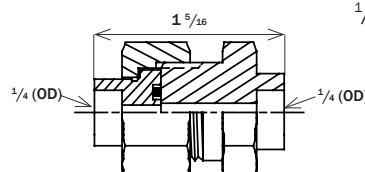
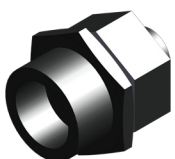


1/4 Tube Socketweld X 7/16 - 20 Female Straight Thread

Part No. 7864

Note: All dimensions are in inches and are reference only

Adapter Assemblies, Instrumentation



1/4 Tube Socketweld X 1/4 Tube Socketweld

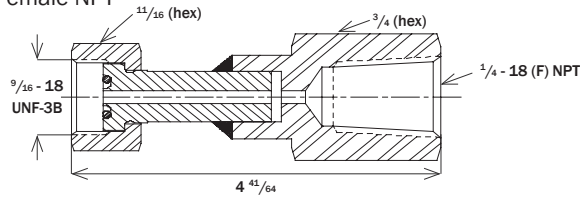
Part No. 7873

Note: All dimensions are in inches and are reference only

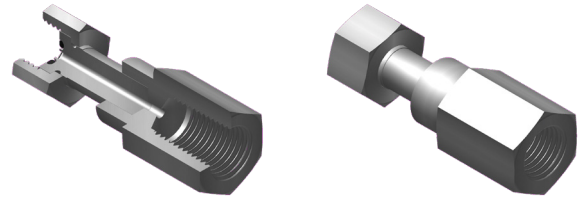
Adapter Assemblies, Instrumentation

1/4 OD Union X 1/4 - 18 Female NPT

Part No. 4898A



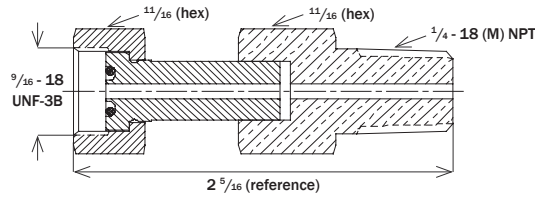
Note: All dimensions are in inches and are reference only



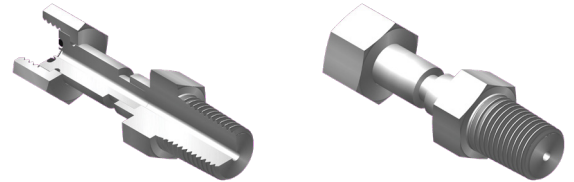
Adapter Assemblies, Instrumentation

1/4 OD Union X 1/4 - 18 Male NPT

Part No. 4898B



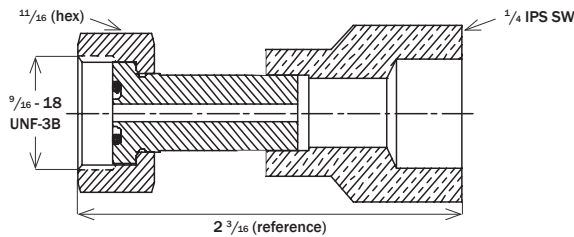
Note: All dimensions are in inches and are reference only



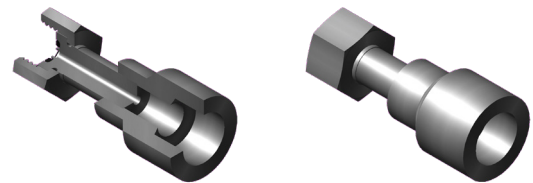
Adapter Assemblies, Instrumentation

1/4 OD Union X 1/4 IPS Socketweld

Part No. 4898C



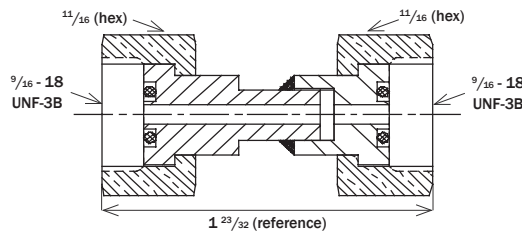
Note: All dimensions are in inches and are reference only



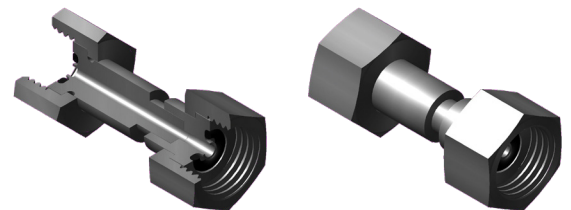
Adapter Assemblies, Instrumentation

1/4 OD Union Thread X 1/4 OD Union Thread

Part No. 4898V



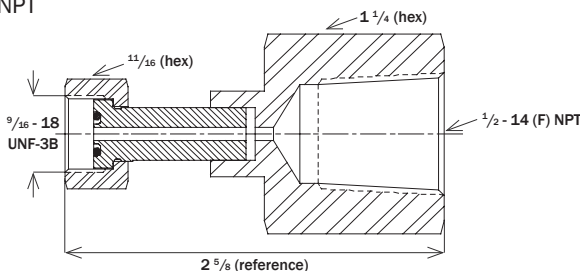
Note: All dimensions are in inches and are reference only



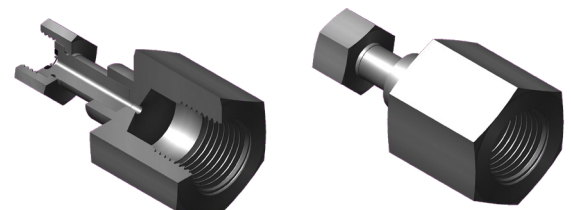
Adapter Assemblies, Instrumentation

1/4 OD Union X 1/2 - 14 NPT

Part No. 4898X



Note: All dimensions are in inches and are reference only



TECH-O-SEAL Fittings

Fitting Information

A Confined O-Ring Eliminates Leaks

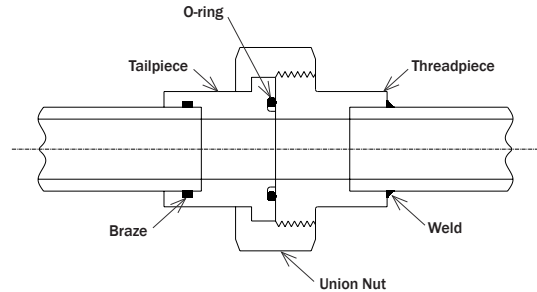
As the figure to the right demonstrates, TECH-O-SEAL fittings utilize the simplicity of containing pressure with an O-ring confined in a groove between two flat surfaces, held together with a union nut. Light wrenching of the nut is all that is required to seal the O-ring, and the resulting seal eliminates leakage caused by vibration or surge in pressure.

The TECH-O-SEAL system is far superior to old bite-type or metal-to-metal seals in that it can be taken apart and reassembled at will with no loss of sealing capability, and will never vibrate loose once it is tightened.

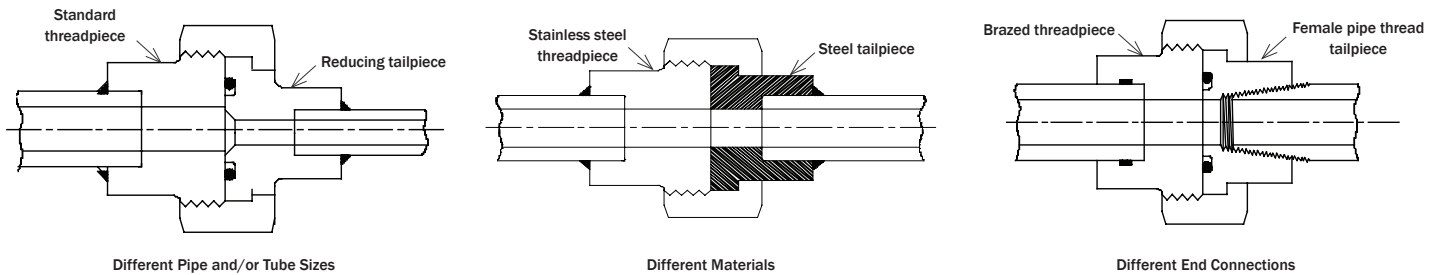
An increase in pressure actually strengthens the O-ring seal, and once assembled it never needs re-tightening.

TECH-O-SEAL fittings are designed for use with TECH-O-SEAL valves or can be used as assemblies (shown to the right). All fittings are available in a wide variety of materials and diverse end configurations, offering complete system flexibility.

The Fittings That Seal Themselves



The figures below demonstrate the ability of the TECH-O-SEAL system to provide one step line changes in various ways:



In all cases, the user is assured of leak-proof integrity and maintenance free operation with the TECH-O-SEAL system. The following pages show most standard TECH-O-SEAL fittings; however, Hydrasearch is always available to design and manufacture fittings to fit your particular needs. You may call 410.643.8900 or email us at defense@hydrasearch.com with your specifications and we will design your fitting for you. In addition, many metric sizes and reducing sizes, although not shown, are available. Please contact our sales team at defense@hydrasearch.com for details and specifications.

TECH-O-SEAL Fittings

Ordering Information

TECH-O-SEAL fittings are categorized and sized by a dash number system for ease of ordering and assembly. The dash numbers for pipe and tube are as follows:

Ordering Information for Options

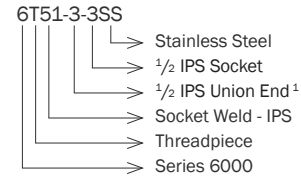
Size	Dash No. (pipe)	Dash No. (OD tube)
1/8	-0	-2
1/4	-1	-4
3/8	-2	-6
1/2	-3	-8
3/4	-4	-12
1	-5	-16
1 1/4	-6	-20
1 1/2	-7	-24
2	-8	-32

Note: All dimensions are in inches

The part number sequence is as follows:

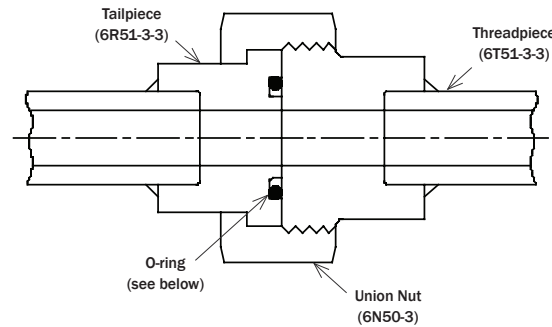
- TP Series — 6000 Series
- Style — Nut, elbow, threadpiece, etc.
- Configuration — Pipe or tube; socket weld, sil-braze, etc.
- Union size — Number designation
- Fitting end size — Pipe or tube size

Part Number Example: A 1/2 inch IPS socket weld thread piece in stainless steel would be ordered as follows:



¹ Please note that all union end sizes must be the same dash number for the components to be assembled.

Below is a typical TECH-O-SEAL union assembly. Please note its component parts. The assembly shown is for 1/2 inch IPS socket weld.



TECH-O-SEAL Engineering Data

O-rings for Union Ends

IPS Union Size	ARP No.
1/8 (-0)	012
1/4 (-1)	114
3/8 (-2)	210
1/2 (-3)	212
3/4 (-4)	214
1 (-5)	217
1 1/4 (-6)	222
1 1/2 (-7)	224
2 (-8)	227

O-rings for Straight Thread Connections

OD Tube Size	Thread Size	ARP No.
1/4 (-4)	7/16 - 20	904
3/8 (-6)	9/16 - 18	906
1/2 (-8)	3/4 - 16	908
3/4 (-12)	1 1/16 - 12	912
1 (-16)	1 5/16 - 12	916
1 1/4 (-20)	1 5/8 - 12	920
1 1/2 (-24)	1 7/8 - 12	924
2 (-32)	2 1/2 - 12	932

Note: All dimensions are in inches

Standard O-ring material is nitrile, others are available upon request

Material Options

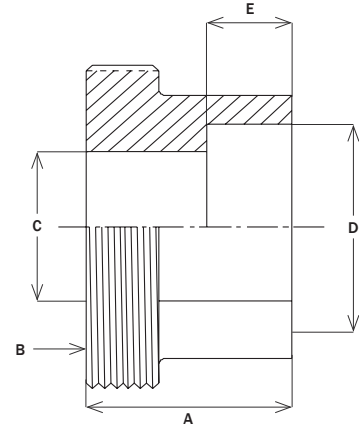
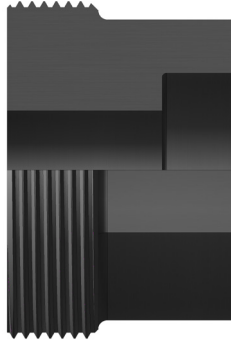
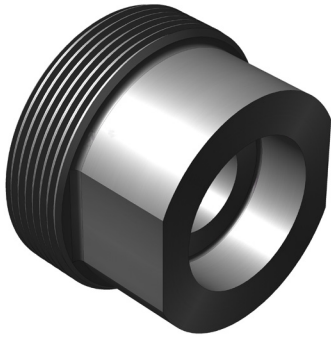
- Steel — S
- Stainless Steel — SS
- Brass — BR
- Bronze — BRZ
- Nickel-Copper (Monel) — NICU
- Copper-Nickel — CUNI

General Notes

- Envelope dimensions on fittings are provided for reference only and are subject to change without notice.
- Socket diameters are provided for reference only.
- Sil-Braze rings are not included with fittings, they are to be purchased separately.

Fitting, Socketweld

Threadpiece, Pipe Size (Reference: NAVSHIP Drawing 803-1385884)

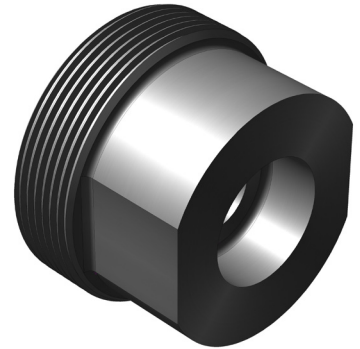
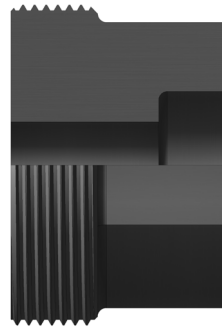
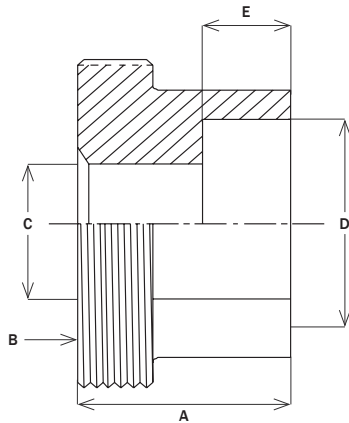


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/8	6T51-0-0	7/8	1 - 14	7/32	0.420	0.380
1/4	6T51-1-1	1 3/16	1 3/16 - 12	5/16	0.555	0.380
3/8	6T51-2-2	1 1/4	1 3/8 - 12	7/16	0.690	0.380
1/2	6T51-3-3	1 5/16	1 3/4 - 12	1/2	0.855	0.380
3/4	6T51-4-4	1 5/16	2 - 12	5/8	1.065	0.500
1	6T51-5-5	1 9/16	2 5/16 - 12	13/16	1.330	0.500
1 1/4	6T51-6-6	1 11/16	2 3/4 - 12	1 3/16	1.675	0.500
1 1/2	6T51-7-7	2	3 1/16 - 12	1 3/8	1.915	0.500
2	6T51-8-8	2 1/8	3 3/4 - 12	1 3/4	2.406	0.620
2 1/2	6T51-9-9	2 9/16	4 1/2 - 12	2 1/8	2.906	0.620

Note: All dimensions are in inches and are reference only

Fitting, Socketweld

Threadpiece, Reducing Pipe Size

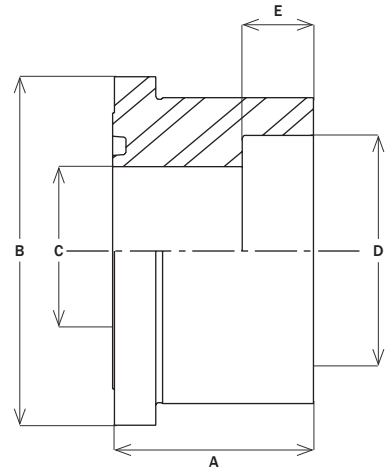
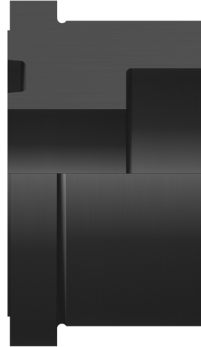


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/4 x 1/8	6T51-1-0	1 3/16	1 3/16 - 12	7/32	0.420	0.380
3/8 x 1/8	6T51-2-0	1 1/4	1 3/8 - 12	7/32	0.420	0.380
3/8 x 1/4	6T51-2-1	1 1/4	1 3/8 - 12	5/16	0.555	0.380
1/2 x 1/8	6T51-3-0	1 5/16	1 3/4 - 12	7/32	0.420	0.380
1/2 x 1/4	6T51-3-1	1 5/16	1 3/4 - 12	5/16	0.555	0.380
1/2 x 3/8	6T51-3-2	1 5/16	1 3/4 - 12	7/16	0.690	0.380
3/4 x 1/8	6T51-4-0	1 5/16	2 - 12	7/32	0.420	0.380
3/4 x 1/4	6T51-4-1	1 5/16	2 - 12	5/16	0.555	0.380
3/4 x 3/8	6T51-4-2	1 5/16	2 - 12	7/16	0.690	0.380
3/4 x 1/2	6T51-4-3	1 5/16	2 - 12	1/2	0.855	0.380
1 x 1/4	6T51-5-1	1 9/16	2 5/16 - 12	5/16	0.555	0.380
1 x 3/8	6T51-5-2	1 9/16	2 5/16 - 12	7/16	0.690	0.380
1 x 1/2	6T51-5-3	1 9/16	2 5/16 - 12	1/2	0.855	0.380
1 x 3/4	6T51-5-4	1 9/16	2 5/16 - 12	5/8	1.065	0.500
1 1/4 x 3/8	6T51-6-2	1 11/16	2 3/4 - 12	7/16	0.690	0.380
1 1/4 x 1/2	6T51-6-3	1 11/16	2 3/4 - 12	1/2	0.855	0.380
1 1/4 x 3/4	6T51-6-4	1 11/16	2 3/4 - 12	5/8	1.065	0.500
1 1/4 x 1	6T51-6-5	1 11/16	2 3/4 - 12	13/16	1.330	0.500
1 1/2 x 1/2	6T51-7-3	2	3 1/16 - 12	1/2	0.855	0.380
1 1/2 x 3/4	6T51-7-4	2	3 1/16 - 12	5/8	1.065	0.500
1 1/2 x 1	6T51-7-5	2	3 1/16 - 12	13/16	1.330	0.500
1 1/2 x 1 1/4	6T51-7-6	2	3 1/16 - 12	1 3/16	1.675	0.500
2 x 3/4	6T51-8-4	2 1/8	3 3/4 - 12	5/8	1.065	0.500
2 x 1	6T51-8-5	2 1/8	3 3/4 - 12	13/16	1.330	0.500
2 x 1 1/4	6T51-8-6	2 1/8	3 3/4 - 12	1 3/16	1.675	0.500
2 x 1 1/2	6T51-8-7	2 1/8	3 3/4 - 12	1 3/8	1.915	0.500

Note: All dimensions are in inches and are reference only

Fitting, Socketweld

Tailpiece, Pipe Size (Reference: NAVSHIP Drawing 803-1385884)

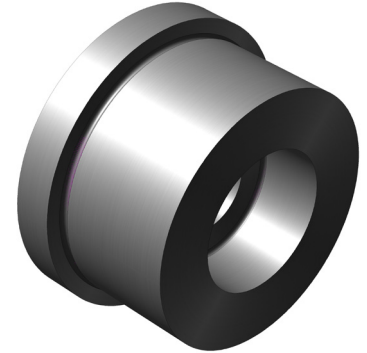
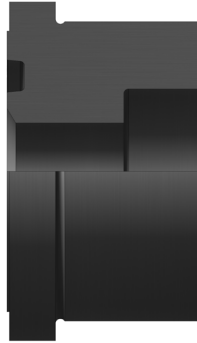
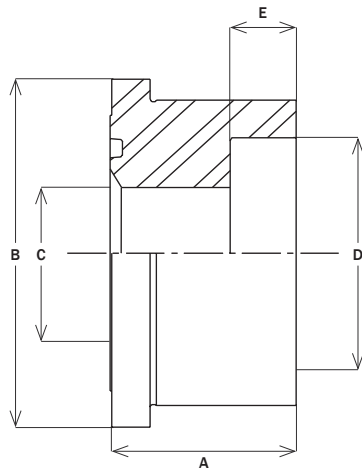


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/8	6R51-0-0	11/16	29/32	7/32	0.420	0.380
1/4	6R51-1-1	1 1/16	1 1/16	5/16	0.555	0.380
3/8	6R51-2-2	1 1/8	1 1/4	7/16	0.690	0.380
1/2	6R51-3-3	1 1/8	1 5/8	1/2	0.855	0.380
3/4	6R51-4-4	1 1/8	1 7/8	5/8	1.065	0.500
1	6R51-5-5	1 1/4	2 3/16	13/16	1.330	0.500
1 1/4	6R51-6-6	1 3/8	2 5/8	1 3/16	1.675	0.500
1 1/2	6R51-7-7	1 5/8	2 15/16	1 3/8	1.915	0.500
2	6R51-8-8	1 3/4	3 5/8	1 3/4	2.406	0.620
2 1/2	6R51-9-9	2	4 5/16	2 1/8	2.906	1.000
3	6R51-10-10	2 1/8	5 1/16	2 5/8	3.531	1.130

Note: All dimensions are in inches and are reference only

Fitting, Socketweld

Tailpiece, Reducing Pipe Size

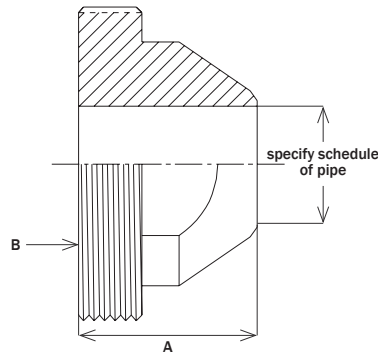
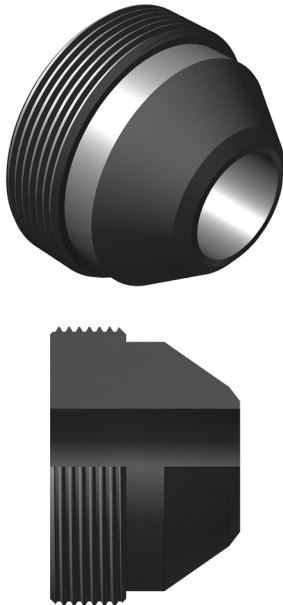


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/4 x 1/8	6R51-1-0	1 1/16	1 1/16	7/32	0.420	0.380
3/8 x 1/8	6R51-2-0	1 1/8	1 1/4	7/32	0.420	0.380
3/8 x 1/4	6R51-2-1	1 1/8	1 1/4	5/16	0.555	0.380
1/2 x 1/8	6R51-3-0	1 1/8	1 5/8	7/32	0.420	0.380
1/2 x 1/4	6R51-3-1	1 1/8	1 5/8	5/16	0.555	0.380
1/2 x 3/8	6R51-3-2	1 1/8	1 5/8	7/16	0.690	0.380
3/4 x 1/8	6R51-4-0	1 1/8	1 7/8	7/32	0.420	0.380
3/4 x 1/4	6R51-4-1	1 1/8	1 7/8	5/16	0.555	0.380
3/4 x 3/8	6R51-4-2	1 1/8	1 7/8	7/16	0.690	0.380
3/4 x 1/2	6R51-4-3	1 1/8	1 7/8	1/2	0.855	0.380
1 x 1/4	6R51-5-1	1 1/4	2 3/16	5/16	0.555	0.380
1 x 3/8	6R51-5-2	1 1/4	2 3/16	7/16	0.690	0.380
1 x 1/2	6R51-5-3	1 1/4	2 3/16	1/2	0.855	0.380
1 x 3/4	6R51-5-4	1 1/4	2 3/16	5/8	1.065	0.500
1 1/4 x 3/8	6R51-6-2	1 3/8	2 5/8	7/16	0.690	0.380
1 1/4 x 1/2	6R51-6-3	1 3/8	2 5/8	1/2	0.855	0.380
1 1/4 x 3/4	6R51-6-4	1 3/8	2 5/8	5/8	1.065	0.380
1 1/4 x 1	6R51-6-5	1 3/8	2 5/8	13/16	1.330	0.500
1 1/2 x 1/2	6R51-7-3	1 5/8	2 15/16	1/2	0.855	0.380
1 1/2 x 3/4	6R51-7-4	1 5/8	2 15/16	5/8	1.065	0.500
1 1/2 x 1	6R51-7-5	1 5/8	2 15/16	13/16	1.330	0.500
1 1/2 x 1 1/4	6R51-7-6	1 5/8	2 15/16	1 3/16	1.675	0.500
2 x 3/4	6R51-8-4	1 3/4	3 5/8	5/8	1.065	0.500
2 x 1	6R51-8-5	1 3/4	3 5/8	13/16	1.330	0.500
2 x 1 1/4	6R51-8-6	1 3/4	3 5/8	1 3/16	1.675	0.500
2 x 1 1/2	6R51-8-7	1 3/4	3 5/8	1 3/8	1.915	0.500
2 1/2 x 1/4	6R51-9-1	2	4 5/16	5/16	0.555	0.380
3 x 2 1/2	6R51-10-9	2 1/8	5 1/16	2 1/8	2.906	1.000

Note: All dimensions are in inches and are reference only

Fitting, Butt Weld

Threadpiece, Pipe Size

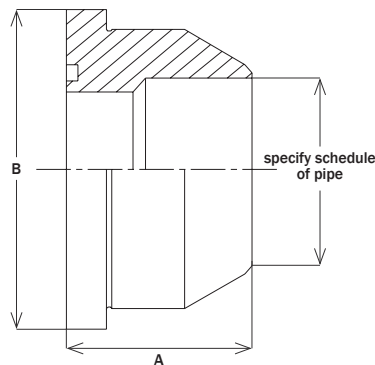
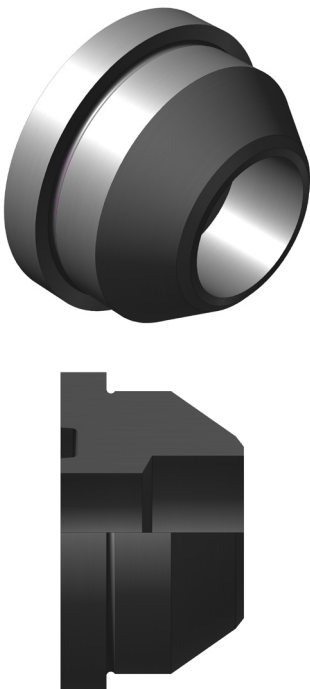


Pipe size	Part No.	Dim. A	Dim. B (thread)
1/8	6T58-0-0	1 3/16	1 - 14
1/4	6T58-1-1	1 3/16	1 3/16 - 12
3/8	6T58-2-2	1 1/4	1 3/8 - 12
1/2	6T58-3-3	1 5/16	1 3/4 - 12
3/4	6T58-4-4	1 5/16	2 - 12
1	6T58-5-5	1 9/16	2 5/16 - 12
1 1/4	6T58-6-6	1 11/16	2 3/4 - 12
1 1/2	6T58-7-7	2	3 1/16 - 12
2	6T58-8-8	2 1/8	3 3/4 - 12
2 1/2	6T58-9-9	2 9/16	4 1/2 - 12

Note: All dimensions are in inches and are reference only

Fitting, Butt Weld

Tailpiece, Pipe Size



Pipe size	Part No.	Dim. A	Dim. B
1/8	6R58-0-0	1 1/16	0.906
1/4	6R58-1-1	1 1/16	1.067
3/8	6R58-2-2	1 1/8	1.255
1/2	6R58-3-3	1 1/8	1.630
3/4	6R58-4-4	1 1/8	1.880
1	6R58-5-5	1 1/4	2.193
1 1/4	6R58-6-6	1 3/8	2.630
1 1/2	6R58-7-7	1 5/8	2.943
2	6R58-8-8	1 3/4	3.630
2 1/2	6R58-9-9	2	4.318

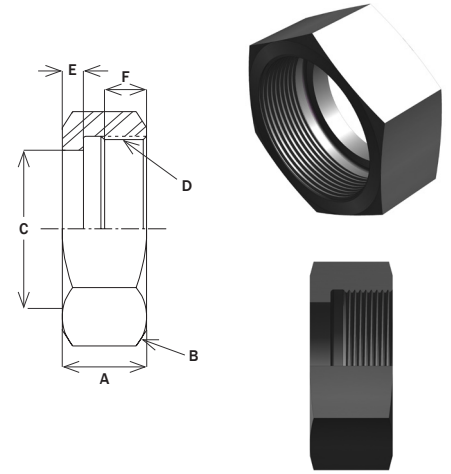
Note: All dimensions are in inches and are reference only

Fitting

Union Nut (Reference: NAVSHIP Drawing 803-1385884)

Pipe size	Part No.	Dim. A	Dim. B (hex)	Dim. C	Dim. D (thread)	Dim. E	Dim. F
1/8	6N50-0	3/4	1 3/16	0.687	1 - 14	3/16	7/16
1/4	6N50-1	1	1 3/8	0.878	1 3/16 - 12	1/4	9/16
3/8	6N50-2	1 1/16	1 5/8	1.003	1 3/8 - 12	1/4	9/16
1/2	6N50-3	1 1/8	2	1.378	1 3/4 - 12	1/4	9/16
3/4	6N50-4	1 3/8	2 3/8	1.628	2 - 12	5/16	9/16
1	6N50-5	1 1/4	2 3/4	1.940	2 5/16 - 12	5/16	11/16
1 1/4	6N50-6	1 3/4	3	2.378	2 3/4 - 12	5/16	11/16
1 1/2	6N50-7	1 7/8	3 1/2	2.565	3 1/16 - 12	3/8	13/16
2	6N50-8	1 7/8	4 1/8	3.190	3 3/4 - 12	3/8	13/16
2 1/2	6N50-9	1 7/8	5 1/8	3.941	4 1/2 - 12	7/16	1 1/16
3	6N50-10	2 1/8	6	4.635	5 1/4 - 12	1/2	1 1/4

Note: All dimensions are in inches and are reference only



Fitting

Tailpiece, Blank, Pipe Size

Pipe size	Part No.	Dim. A	Dim. B
1/8	6R104-0	1 1/16	0.912
1/4	6R104-1	1 1/8	1.068
3/8	6R104-2	1 9/32	1.255
1/2	6R104-3	1 3/8	1.630
3/4	6R104-4	1 1/2	1.880
1	6R104-5	1 11/16	2.193
1 1/4	6R104-6	1 13/16	2.630
1 1/2	6R104-7	2 1/16	2.943
2	6R104-8	2 1/4	3.630
2 1/2	6R104-9	2 7/16	4.318

Note: All dimensions are in inches and are reference only

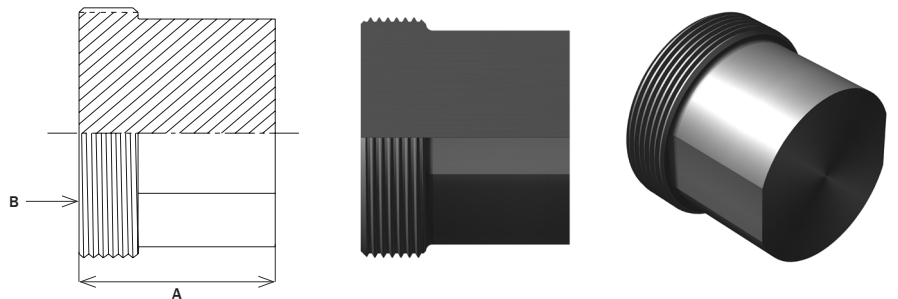


Fitting

Threadpiece, Blank, Pipe Size

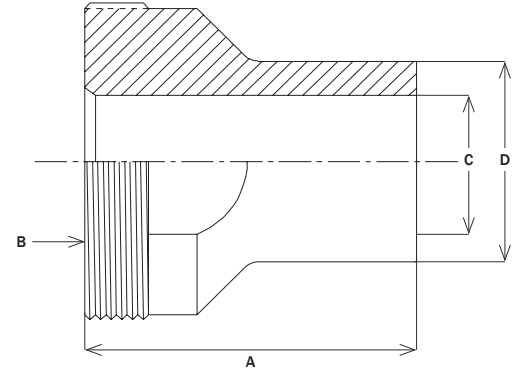
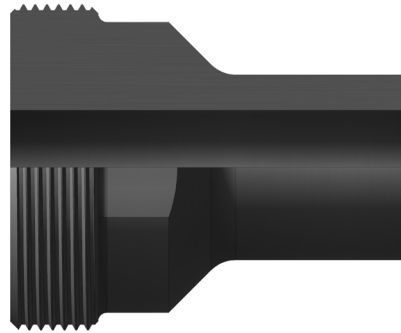
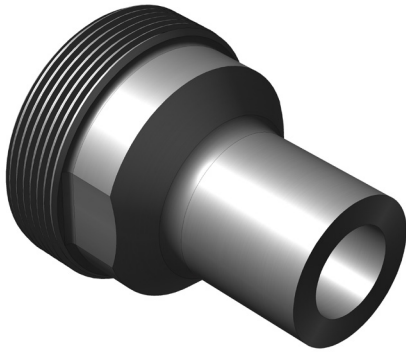
Pipe size	Part No.	Dim. A	Dim. B (thread)
1/8	6T104-0	1 1/4	1 - 14
1/4	6T104-1	1 1/4	1 3/16 - 12
3/8	6T104-2	1 5/16	1 3/8 - 12
1/2	6T104-3	1 1/2	1 3/4 - 12
3/4	6T104-4	1 11/16	2 - 12
1	6T104-5	2	2 5/16 - 12
1 1/4	6T104-6	2	2 3/4 - 12
1 1/2	6T104-7	2 5/16	3 1/16 - 12
2	6T104-8	2 1/2	3 3/4 - 12
2 1/2	6T104-9	2 9/16	4 1/2 - 12

Note: All dimensions are in inches and are reference only



Fitting, Male Weld

Threadpiece, Pipe Size

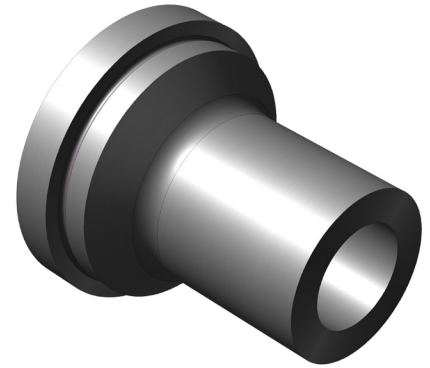
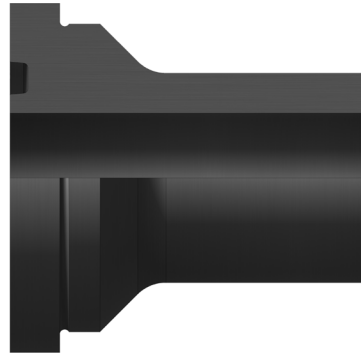
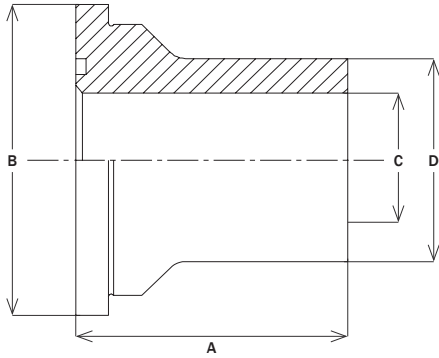


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D
1/8	6T62-0-0	1 5/8	1 - 14	7/32	0.405
1/4 x 1/8	6T62-1-0	1 7/8	1 3/16 - 12	7/32	0.405
1/4	6T62-1-1	1 7/8	1 3/16 - 12	5/16	0.540
3/8 x 1/4	6T62-2-1	2 1/16	1 3/8 - 12	5/16	0.540
3/8	6T62-2-2	2 1/16	1 3/8 - 12	7/16	0.675
1/2 x 3/8	6T62-3-2	2 5/16	1 3/4 - 12	7/16	0.675
1/2	6T62-3-3	2 5/16	1 3/4 - 12	1/2	0.840
3/4 x 1/2	6T62-4-3	2 9/16	2 - 12	1/2	0.840
3/4	6T62-4-4	2 9/16	2 - 12	5/8	1.050
1 x 3/4	6T62-5-4	2 13/16	2 5/16 - 12	5/8	1.050
1	6T62-5-5	2 13/16	2 5/16 - 12	13/16	1.315
1 1/4 x 1	6T62-6-5	3 1/8	2 3/4 - 12	13/16	1.315
1 1/4	6T62-6-6	3 1/8	2 3/4 - 12	1	1.660
1 1/2 x 1 1/4	6T62-7-6	3 1/2	3 1/16 - 12	1	1.660
1 1/2	6T62-7-7	3 1/2	3 1/16 - 12	1 1/4	1.900
2 x 1 1/2	6T62-8-7	3 7/8	3 3/4 - 12	1 1/4	1.900
2	6T62-8-8	3 7/8	3 3/4 - 12	1 9/16	2.375

Note: All dimensions are in inches and are reference only

Fitting, Male Weld

Tailpiece, Pipe Size

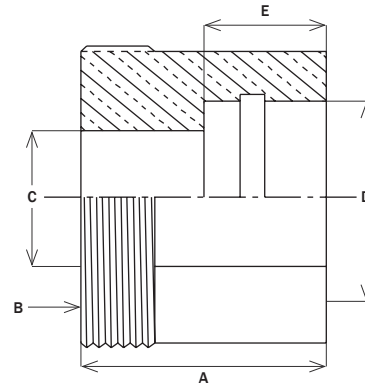
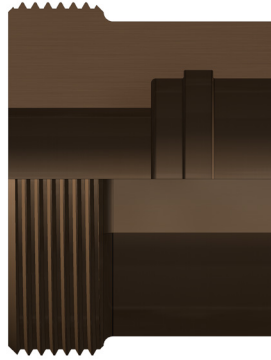
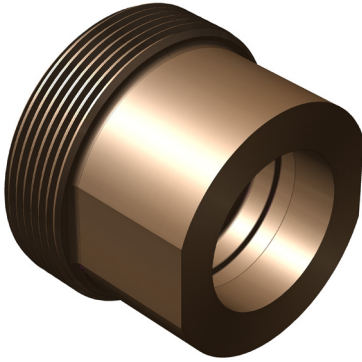


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D
1/8	6R62-0-0	1 3/8	0.910	7/32	0.405
1/8 x 1/4	6R62-0-1	1 3/8	0.910	7/32	0.540
1/4 x 1/8	6R62-1-0	1 1/2	1.067	7/32	0.405
1/4	6R62-1-1	1 1/2	1.067	5/16	0.540
3/8 x 1/4	6R62-2-1	1 3/4	1.255	5/16	0.540
3/8	6R62-2-2	1 3/4	1.255	7/16	0.675
1/2 x 3/8	6R62-3-2	2	1.630	7/16	0.675
1/2	6R62-3-3	2	1.630	1/2	0.840
3/4 x 1/2	6R62-4-3	2 1/8	1.880	1/2	0.840
3/4	6R62-4-4	2 1/8	1.880	5/8	1.050
1 x 3/4	6R62-5-4	2 1/4	2.193	5/8	1.050
1	6R62-5-5	2 1/4	2.193	13/16	1.315
1 1/4 x 1	6R62-6-5	2 1/2	2.630	13/16	1.315
1 1/4	6R62-6-6	2 1/2	2.630	1	1.660
1 1/2 x 1 1/4	6R62-7-6	2 3/4	2.943	1	1.660
1 1/2	6R62-7-7	2 3/4	2.943	1 1/4	1.900
2 x 1 1/2	6R62-8-7	3 1/8	3.630	1 1/4	1.900
2	6R62-8-8	3 1/8	3.630	1 9/16	2.375

Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Threadpiece, Pipe Size

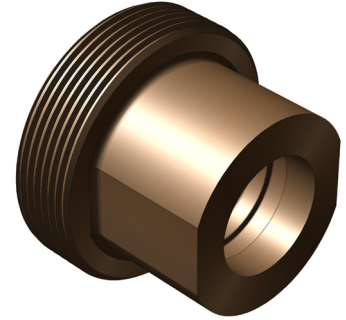
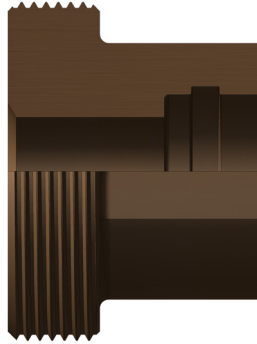
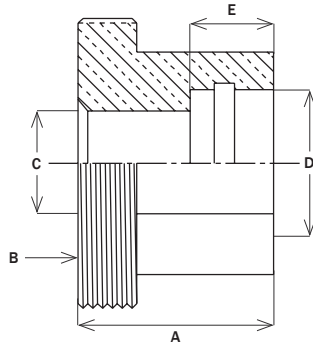


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/8	6T52-0-0	7/8	1 - 14	0.22	0.408	3/8
1/4	6T52-1-1	1 3/16	1 3/16 - 12	0.36	0.543	3/8
3/8	6T52-2-2	1 1/4	1 3/8 - 12	0.47	0.678	15/32
1/2	6T52-3-3	1 5/16	1 3/4 - 12	0.59	0.843	9/16
3/4	6T52-4-4	1 7/16	2 - 12	0.74	1.053	11/16
1	6T52-5-5	1 3/4	2 5/16 - 12	0.93	1.318	13/16
1 1/4	6T52-6-6	1 15/16	2 3/4 - 12	1.17	1.665	15/16
1 1/2	6T52-7-7	2 5/16	3 1/16 - 12	1.35	1.905	1 1/16
2	6T52-8-8	2 1/2	3 3/4 - 12	1.65	2.380	1 1/4
2 1/2	6T52-9-9	2 9/16	4 1/2 - 12	2.05	2.882	1 5/16

Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Threadpiece, Reducing Pipe Size

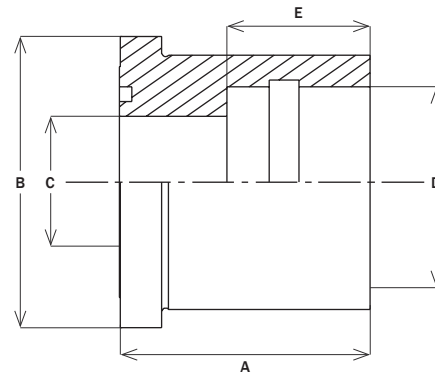
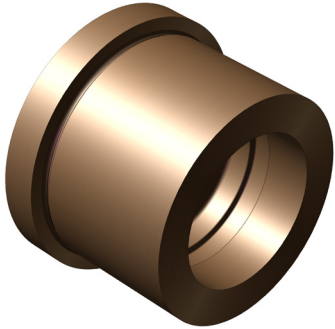


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/4 x 1/8	6T52-1-0	1 3/16	1 3/16 - 12	0.22	0.408	3/8
1/4 x 3/8	6T52-1-2	1 3/16	1 3/16 - 12	0.31	0.677	7/16
3/8 x 1/8	6T52-2-0	1 1/4	1 3/8 - 12	0.22	0.408	3/8
3/8 x 1/4	6T52-2-1	1 1/4	1 3/8 - 12	0.36	0.543	3/8
1/2 x 1/8	6T52-3-0	1 5/16	1 3/4 - 12	0.22	0.408	3/8
1/2 x 1/4	6T52-3-1	1 5/16	1 3/4 - 12	0.36	0.543	3/8
1/2 x 3/8	6T52-3-2	1 5/16	1 3/4 - 12	0.47	0.678	15/32
1/2 x 3/4	6T52-3-4	1 7/16	1 3/4 - 12	0.50	1.053	11/16
3/4 x 1/8	6T52-4-0	1 7/16	2 - 12	0.22	0.408	3/8
3/4 x 1/4	6T52-4-1	1 7/16	2 - 12	0.36	0.543	3/8
3/4 x 3/8	6T52-4-2	1 7/16	2 - 12	0.47	0.678	15/32
3/4 x 1/2	6T52-4-3	1 7/16	2 - 12	0.59	0.843	9/16
1 x 1/4	6T52-5-1	1 3/4	2 5/16 - 12	0.36	0.543	3/8
1 x 3/8	6T52-5-2	1 3/4	2 5/16 - 12	0.47	0.678	15/32
1 x 1/2	6T52-5-3	1 3/4	2 5/16 - 12	0.59	0.843	9/16
1 x 3/4	6T52-5-4	1 3/4	2 5/16 - 12	0.74	1.053	11/16
1 1/4 x 3/8	6T52-6-2	1 15/16	2 3/4 - 12	0.47	0.678	15/32
1 1/4 x 1/2	6T52-6-3	1 15/16	2 3/4 - 12	0.59	0.843	9/16
1 1/4 x 3/4	6T52-6-4	1 15/16	2 3/4 - 12	0.74	1.053	11/16
1 1/4 x 1	6T52-6-5	1 15/16	2 3/4 - 12	0.93	1.318	13/16
1 1/2 x 3/8	6T52-7-2	2 5/16	3 1/16 - 12	0.47	0.678	15/32
1 1/2 x 1/2	6T52-7-3	2 5/16	3 1/16 - 12	0.59	0.843	9/16
1 1/2 x 3/4	6T52-7-4	2 5/16	3 1/16 - 12	0.74	1.053	11/16
1 1/2 x 1	6T52-7-5	2 5/16	3 1/16 - 12	0.93	1.318	13/16
1 1/2 x 1 1/4	6T52-7-6	2 5/16	3 1/16 - 12	1.17	1.665	15/16
2 x 3/4	6T52-8-4	2 1/2	3 3/4 - 12	0.74	1.053	11/16
2 x 1	6T52-8-5	2 1/2	3 3/4 - 12	0.93	1.318	13/16
2 x 1 1/4	6T52-8-6	2 1/2	3 3/4 - 12	1.17	1.665	15/16
2 x 1 1/2	6T52-8-7	2 1/2	3 3/4 - 12	1.35	1.905	1 1/16

Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Tailpiece, Pipe Size

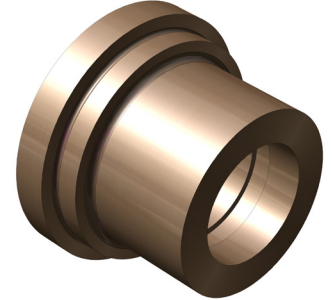
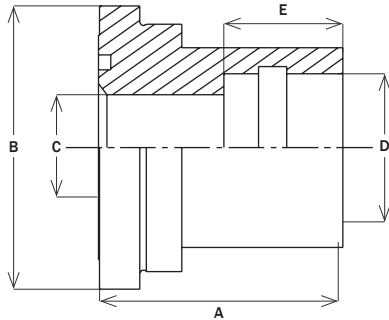


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/8	6R52-0-0	15/16	29/32	0.22	0.408	3/8
1/4	6R52-1-1	1 1/16	1 1/16	0.36	0.543	3/8
3/8	6R52-2-2	1 7/32	1 1/4	0.47	0.678	15/32
1/2	6R52-3-3	1 5/16	1 5/8	0.59	0.843	9/16
3/4	6R52-4-4	1 7/16	1 7/8	0.74	1.053	11/16
1	6R52-5-5	1 9/16	2 3/16	0.93	1.318	13/16
1 1/4	6R52-6-6	1 3/4	2 5/8	1.17	1.665	15/16
1 1/2	6R52-7-7	2	2 15/16	1.35	1.905	1 1/16
2	6R52-8-8	2 3/16	3 5/8	1.65	2.380	1 1/4
2 1/2	6R52-9-9	2 3/8	4 5/16	2.05	2.882	1 5/16

Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Tailpiece, Reducing Pipe Size

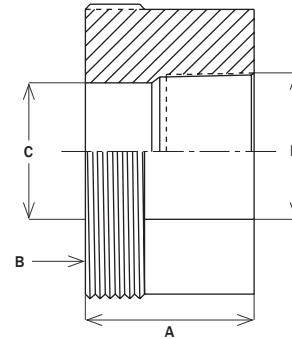
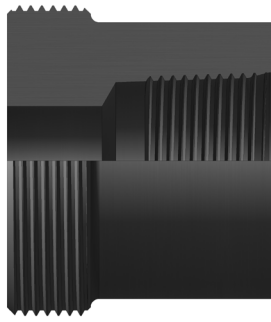
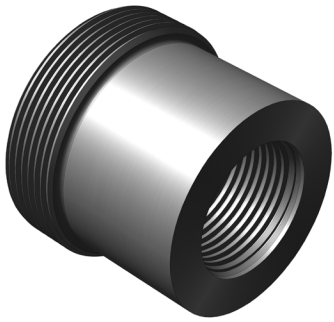


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/4 x 1/8	6R52-1-0	1 1/16	1.067	0.22	0.408	3/8
3/8 x 1/8	6R52-2-0	1 7/32	1.255	0.22	0.408	3/8
3/8 x 1/4	6R52-2-1	1 7/32	1.255	0.36	0.543	3/8
1/2 x 1/8	6R52-3-0	1 5/16	1.630	0.22	0.408	3/8
1/2 x 1/4	6R52-3-1	1 5/16	1.630	0.36	0.543	3/8
1/2 x 3/8	6R52-3-2	1 5/16	1.630	0.47	0.678	15/32
3/4 x 1/8	6R52-4-0	1 7/16	1.880	0.22	0.408	3/8
3/4 x 1/4	6R52-4-1	1 7/16	1.880	0.36	0.543	3/8
3/4 x 3/8	6R52-4-2	1 7/16	1.880	0.47	0.678	15/32
3/4 x 1/2	6R52-4-3	1 7/16	1.880	0.59	0.843	9/16
1 x 1/4	6R52-5-1	1 9/16	2.193	0.36	0.543	3/8
1 x 3/8	6R52-5-2	1 9/16	2.193	0.47	0.678	15/32
1 x 1/2	6R52-5-3	1 9/16	2.193	0.59	0.843	9/16
1 x 3/4	6R52-5-4	1 9/16	2.193	0.74	1.053	11/16
1 1/4 x 3/8	6R52-6-2	1 3/4	2.630	0.47	0.678	15/32
1 1/4 x 1/2	6R52-6-3	1 3/4	2.630	0.59	0.843	9/16
1 1/4 x 3/4	6R52-6-4	1 3/4	2.630	0.74	1.053	11/16
1 1/4 x 1	6R52-6-5	1 3/4	2.630	0.93	1.318	13/16
1 1/2 x 1/4	6R52-7-1	2	2.943	0.36	0.543	3/8
1 1/2 x 3/8	6R52-7-2	2	2.943	0.47	0.678	15/32
1 1/2 x 1/2	6R52-7-3	2	2.943	0.59	0.843	9/16
1 1/2 x 3/4	6R52-7-4	2	2.943	0.74	1.053	11/16
1 1/2 x 1	6R52-7-5	2	2.943	0.93	1.318	13/16
1 1/2 x 1 1/4	6R52-7-6	2	2.943	1.17	1.665	15/16
2 x 3/8	6R52-8-2	2 3/16	3.630	0.47	0.678	15/32
2 x 1/2	6R52-8-3	2 3/16	3.630	0.59	0.843	9/16
2 x 3/4	6R52-8-4	2 3/16	3.630	0.74	1.053	11/16
2 x 1	6R52-8-5	2 3/16	3.630	0.93	1.318	13/16
2 x 1 1/4	6R52-8-6	2 3/16	3.630	1.17	1.665	15/16
2 x 1 1/2	6R52-8-7	2 3/16	3.630	1.35	1.905	1 1/16

Note: All dimensions are in inches and are reference only

Fitting, Female NPT

Threadpiece, Pipe Size

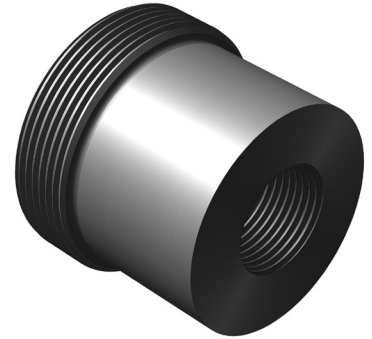
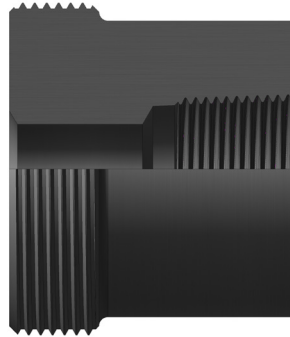
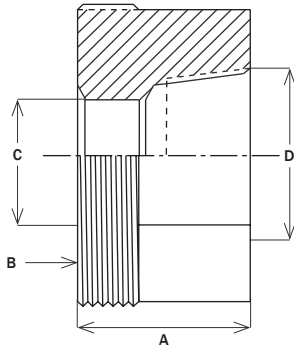


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (NPT)
1/8	6T53-0-0	1 1/4	1 - 14	7/32	1/8 - 27
1/4	6T53-1-1	1 1/4	1 3/16 - 12	5/16	1/4 - 18
3/8	6T53-2-2	1 5/16	1 3/8 - 12	7/16	3/8 - 18
1/2	6T53-3-3	1 1/2	1 3/4 - 12	1/2	1/2 - 14
3/4	6T53-4-4	1 11/16	2 - 12	5/8	3/4 - 14
1	6T53-5-5	2	2 5/16 - 12	13/16	1 - 11 1/2
1 1/4	6T53-6-6	2	2 3/4 - 12	1 3/16	1 1/4 - 11 1/2
1 1/2	6T53-7-7	2 1/8	3 1/16 - 12	1 3/8	1 1/2 - 11 1/2
2	6T53-8-8	2 1/8	3 3/4 - 12	1 3/4	2 - 11 1/2
2 1/2	6T53-9-9	2 1/2	4 1/2 - 12	2 1/8	2 1/2 - 8

Note: All dimensions are in inches and are reference only

Fitting, Female NPT

Threadpiece, Reducing Pipe Size

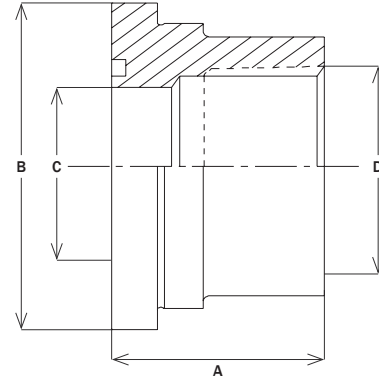
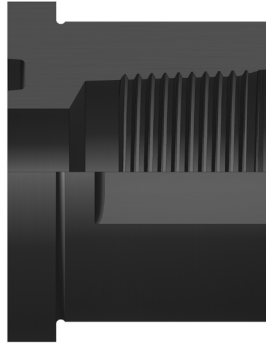
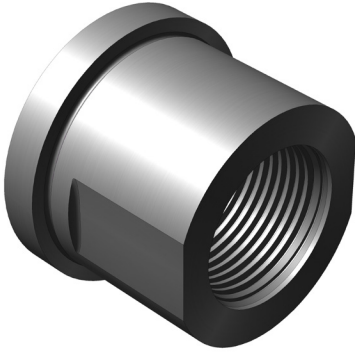


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (NPT)
1/4 x 1/8	6T53-1-0	1 1/4	1 3/16 - 12	7/32	1/8 - 27
3/8 x 1/8	6T53-2-0	1 5/16	1 3/8 - 12	7/32	1/8 - 27
3/8 x 1/4	6T53-2-1	1 5/16	1 3/8 - 12	5/16	1/4 - 18
3/8 x 1/2	6T53-2-3	1 3/4	1 3/8 - 12	7/16	1/2 - 14
1/2 x 1/8	6T53-3-0	1 1/2	1 3/4 - 12	7/32	1/8 - 27
1/2 x 1/4	6T53-3-1	1 1/2	1 3/4 - 12	5/16	1/4 - 18
1/2 x 3/8	6T53-3-2	1 1/2	1 3/4 - 12	7/16	3/8 - 18
3/4 x 1/8	6T53-4-0	1 11/16	2 - 12	7/32	1/8 - 27
3/4 x 1/4	6T53-4-1	1 11/16	2 - 12	5/16	1/4 - 18
3/4 x 3/8	6T53-4-2	1 11/16	2 - 12	7/16	3/8 - 18
3/4 x 1/2	6T53-4-3	1 11/16	2 - 12	1/2	1/2 - 14
1 x 1/4	6T53-5-1	2	2 5/16 - 12	5/16	1/4 - 18
1 x 3/8	6T53-5-2	2	2 5/16 - 12	7/16	3/8 - 18
1 x 1/2	6T53-5-3	2	2 5/16 - 12	1/2	1/2 - 14
1 x 3/4	6T53-5-4	2	2 5/16 - 12	5/8	3/4 - 14
1 1/4 x 3/8	6T53-6-2	2	2 3/4 - 12	7/16	3/8 - 18
1 1/4 x 1/2	6T53-6-3	2	2 3/4 - 12	1/2	1/2 - 14
1 1/4 x 3/4	6T53-6-4	2	2 3/4 - 12	5/8	3/4 - 14
1 1/4 x 1	6T53-6-5	2	2 3/4 - 12	13/16	1 - 11 1/2
1 1/2 x 1/2	6T53-7-3	2 1/8	3 1/16 - 12	1/2	1/2 - 14
1 1/2 x 3/4	6T53-7-4	2 1/8	3 1/16 - 12	5/8	3/4 - 14
1 1/2 x 1	6T53-7-5	2 1/8	3 1/16 - 12	13/16	1 - 11 1/2
1 1/2 x 1 1/4	6T53-7-6	2 1/8	3 1/16 - 12	1 3/16	1 1/4 - 11 1/2
2 x 3/4	6T53-8-4	2 1/8	3 3/4 - 12	5/8	3/4 - 14
2 x 1	6T53-8-5	2 1/8	3 3/4 - 12	13/16	1 - 11 1/2
2 x 1 1/4	6T53-8-6	2 1/8	3 3/4 - 12	1 3/16	1 1/4 - 11 1/2
2 x 1 1/2	6T53-8-7	2 1/8	3 3/4 - 12	1 3/8	1 1/2 - 11 1/2

Note: All dimensions are in inches and are reference only

Fitting, Female NPT

Tailpiece, Pipe Size

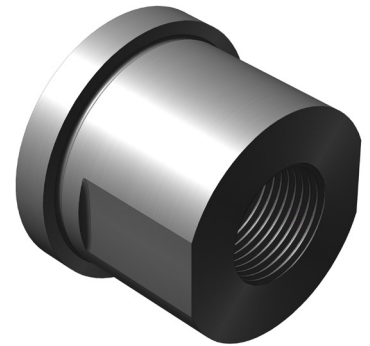
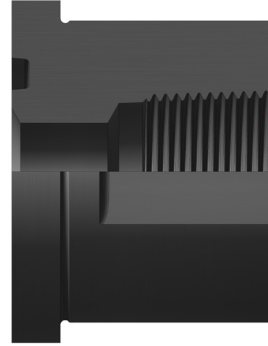
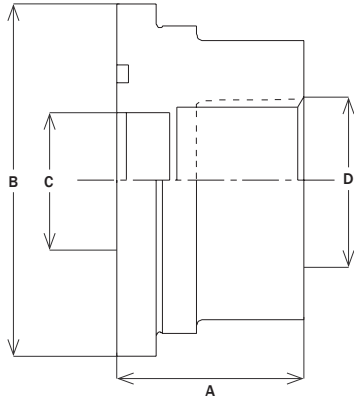


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (NPT)
1/8	6R53-0-0	1 1/16	0.910	7/32	1/8 - 27
1/4	6R53-1-1	1 1/16	1.067	5/16	1/4 - 18
3/8	6R53-2-2	1 1/8	1.255	7/16	3/8 - 18
1/2	6R53-3-3	1 5/16	1.630	1/2	1/2 - 14
3/4	6R53-4-4	1 1/2	1.880	5/8	3/4 - 14
1	6R53-5-5	1 11/16	2.193	13/16	1 - 11 1/2
1 1/4	6R53-6-6	1 11/16	2.630	1 3/16	1 1/4 - 11 1/2
1 1/2	6R53-7-7	1 3/4	2.943	1 3/8	1 1/2 - 11 1/2
2	6R53-8-8	1 3/4	3.630	1 3/4	2 - 11 1/2

Note: All dimensions are in inches and are reference only

Fitting, Female NPT

Tailpiece, Reducing Pipe Size

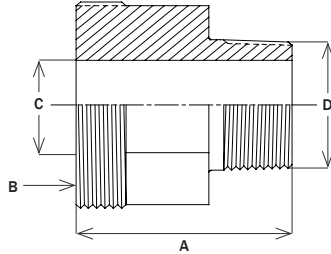
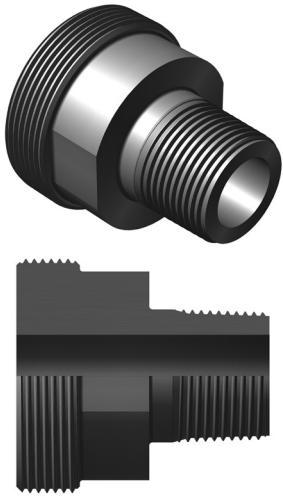


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (NPT)
1/4 x 1/8	6R53-1-0	1 1/16	1.067	7/32	1/8 - 27
3/8 x 1/8	6R53-2-0	1 1/8	1.255	7/32	1/8 - 27
3/8 x 1/4	6R53-2-1	1 1/8	1.255	5/16	1/4 - 18
1/2 x 1/8	6R53-3-0	1 5/16	1.630	7/32	1/8 - 27
1/2 x 1/4	6R53-3-1	1 5/16	1.630	5/16	1/4 - 18
1/2 x 3/8	6R53-3-2	1 5/16	1.630	7/16	3/8 - 18
3/4 x 1/8	6R53-4-0	1 1/2	1.880	7/32	1/8 - 27
3/4 x 1/4	6R53-4-1	1 1/2	1.880	5/16	1/4 - 18
3/4 x 3/8	6R53-4-2	1 1/2	1.880	7/16	3/8 - 18
3/4 x 1/2	6R53-4-3	1 1/2	1.880	1/2	1/2 - 14
1 x 1/4	6R53-5-1	1 11/16	2.193	5/16	1/4 - 18
1 x 3/8	6R53-5-2	1 11/16	2.193	7/16	3/8 - 18
1 x 1/2	6R53-5-3	1 11/16	2.193	1/2	1/2 - 14
1 x 3/4	6R53-5-4	1 11/16	2.193	5/8	3/4 - 14
1 1/4 x 1/4	6R53-6-1	1 11/16	2.630	5/16	1/4 - 18
1 1/4 x 3/8	6R53-6-2	1 11/16	2.630	7/16	3/8 - 18
1 1/4 x 1/2	6R53-6-3	1 11/16	2.630	1/2	1/2 - 14
1 1/4 x 3/4	6R53-6-4	1 11/16	2.630	5/8	3/4 - 14
1 1/4 x 1	6R53-6-5	1 11/16	2.630	13/16	1 - 11 1/2
1 1/2 x 1/2	6R53-7-3	1 3/4	2.943	1/2	1/2 - 14
1 1/2 x 3/4	6R53-7-4	1 3/4	2.943	5/8	3/4 - 14
1 1/2 x 1	6R53-7-5	1 3/4	2.943	13/16	1 - 11 1/2
1 1/2 x 1 1/4	6R53-7-6	1 3/4	2.943	1 3/16	1 1/4 - 11 1/2
2 x 1/4	6R53-8-1	1 3/4	3.630	5/16	1/4 - 18
2 x 3/4	6R53-8-4	1 3/4	3.630	5/8	3/4 - 14
2 x 1	6R53-8-5	1 3/4	3.630	13/16	1 - 11 1/2
2 x 1 1/4	6R53-8-6	1 3/4	3.630	1 3/16	1 1/4 - 11 1/2
2 x 1 1/2	6R53-8-7	1 3/4	3.630	1 3/8	1 1/2 - 11 1/2

Note: All dimensions are in inches and are reference only

Fitting, Male NPT

Threadpiece, Pipe Size

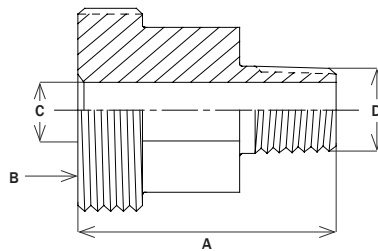
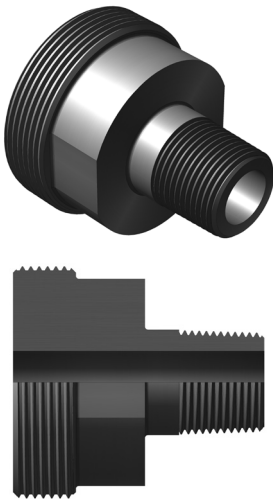


Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (NPT)
1/8	6T54-0-0	1 3/4	1 - 14	7/32	1/8 - 27
1/4	6T54-1-1	1 3/4	1 3/16 - 12	5/16	1/4 - 18
3/8	6T54-2-2	1 7/8	1 3/8 - 12	7/16	3/8 - 18
1/2	6T54-3-3	2	1 3/4 - 12	1/2	1/2 - 14
3/4	6T54-4-4	2 1/4	2 - 12	5/8	3/4 - 14
1	6T54-5-5	2 1/2	2 5/16 - 12	13/16	1 - 11 1/2
1 1/4	6T54-6-6	2 7/8	2 3/4 - 12	1 1/8	1 1/4 - 11 1/2
1 1/2	6T54-7-7	3 1/4	3 1/16 - 12	1 5/16	1 1/2 - 11 1/2
2	6T54-8-8	3 3/4	3 3/4 - 12	1 5/8	2 - 11 1/2

Note: All dimensions are in inches and are reference only

Fitting, Male NPT

Threadpiece, Reducing Pipe Size



Pipe size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (NPT)
1/4 x 1/8	6T54-1-0	1 3/4	1 3/16 - 12	7/32	1/8 - 27
1/4 x 1/2	6T54-1-3	2	1 3/16 - 12	5/16	1/2 - 14
3/8 x 1/4	6T54-2-1	1 7/8	1 3/8 - 12	5/16	1/4 - 18
3/8 x 1/2	6T54-2-3	2	1 3/8 - 12	7/16	1/2 - 14
1/2 x 1/4	6T54-3-1	2	1 3/4 - 12	5/16	1/4 - 18
1/2 x 3/8	6T54-3-2	2	1 3/4 - 12	7/16	3/8 - 18
1/2 x 3/4	6T54-3-4	2 1/4	1 3/4 - 12	1/2	3/4 - 14
3/4 x 1/4	6T54-4-1	1 3/4	2 - 12	5/16	1/4 - 18
3/4 x 3/8	6T54-4-2	2 1/4	2 - 12	7/16	3/8 - 18
3/4 x 1/2	6T54-4-3	2 1/4	2 - 12	1/2	1/2 - 14
1 x 1/2	6T54-5-3	2 1/2	2 5/16 - 12	1/2	1/2 - 14
1 x 3/4	6T54-5-4	2 1/2	2 5/16 - 12	5/8	3/4 - 14

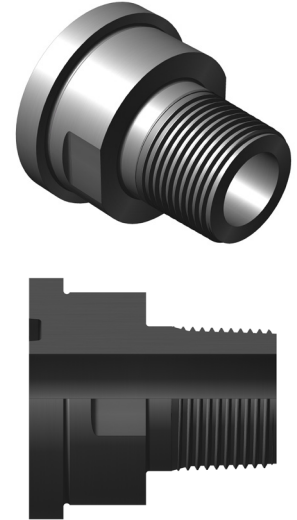
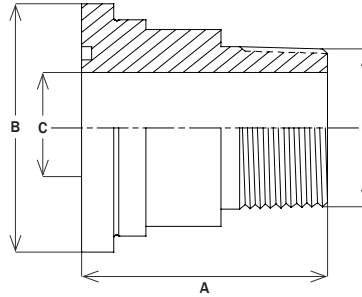
Note: All dimensions are in inches and are reference only

Fitting, Male NPT

Tailpiece, Pipe Size

Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (NPT)
1/8	6R54-0-0	1 5/8	0.910	7/32	1/8 - 27
1/4	6R54-1-1	1 5/8	1.067	5/16	1/4 - 18
3/8	6R54-2-2	1 11/16	1.255	7/16	3/8 - 18
1/2	6R54-3-3	2	1.630	1/2	1/2 - 14
3/4	6R54-4-4	2 1/16	1.880	5/8	3/4 - 14
1	6R54-5-5	2 1/4	2.193	13/16	1 - 11 1/2
1 1/4	6R54-6-6	2 9/16	2.630	1 1/8	1 1/4 - 11 1/2
1 1/2	6R54-7-7	2 7/8	2.943	1 5/16	1 1/2 - 11 1/2
2	6R54-8-8	2 7/8	3.630	1 5/8	2 - 11 1/2

Note: All dimensions are in inches and are reference only

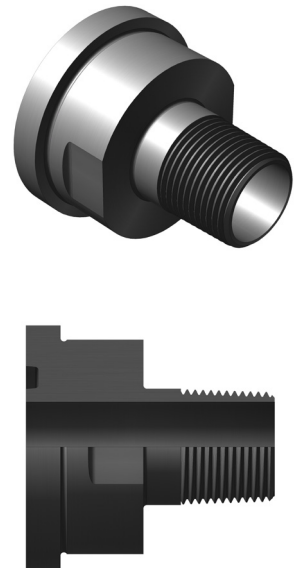
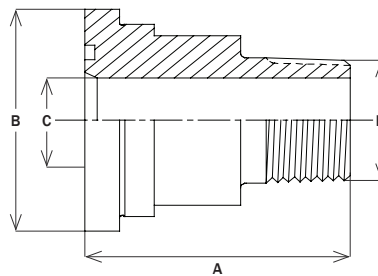


Fitting, Male NPT

Tailpiece, Reducing Pipe Size

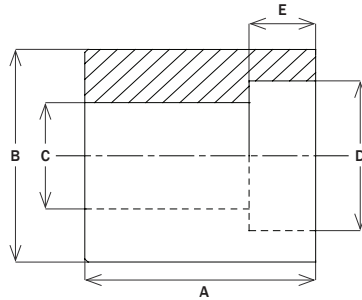
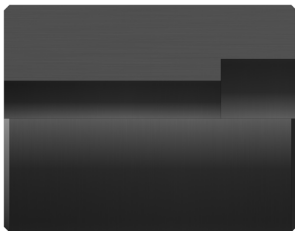
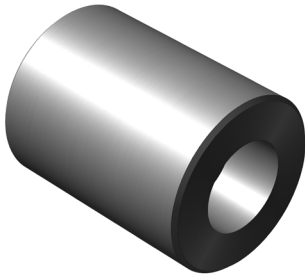
Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (NPT)
1/4 x 1/8	6R54-1-0	1 5/8	1.067	7/32	1/8 - 27
3/8 x 1/4	6R54-2-1	1 11/16	1.255	5/16	1/4 - 18
3/8 x 3/4	6R54-2-4	1 15/16	1.255	7/16	3/4 - 14
1/2 x 1/8	6R54-3-0	2	1.630	7/32	1/8 - 27
1/2 x 1/4	6R54-3-1	2	1.630	5/16	1/4 - 18
1/2 x 3/8	6R54-3-2	2	1.630	7/16	3/8 - 18
1/2 x 3/4	6R54-3-4	2 1/16	1.630	1/2	3/4 - 14
3/4 x 1/4	6R54-4-1	2 1/16	1.880	5/16	1/4 - 18
3/4 x 1/2	6R54-4-3	2 1/16	1.880	1/2	1/2 - 14
1 x 1/4	6R54-5-1	2 1/4	2.193	5/16	1/4 - 18
1 x 3/8	6R54-5-2	2 1/4	2.193	7/16	3/8 - 18
1 x 3/4	6R54-5-4	2 1/4	2.193	13/16	3/4 - 14
1 x 1 1/2	6R54-5-7	2 1/4	2.193	13/16	1 1/2 - 11 1/2
1 1/4 x 1	6R54-6-5	2 9/16	2.630	13/16	1 - 11 1/2
1 1/2 x 1 1/4	6R54-7-6	2 7/8	2.943	1 1/8	1 1/4 - 11 1/2

Note: All dimensions are in inches and are reference only



Fitting, Socket Weld

Reducing Insert, Style 1, Pipe Size

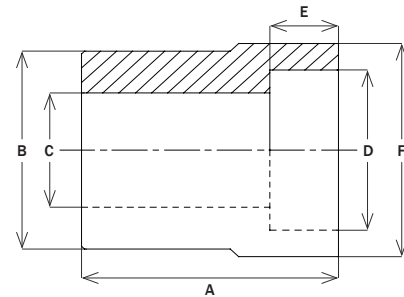
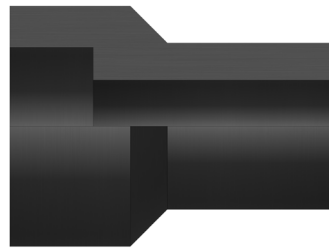
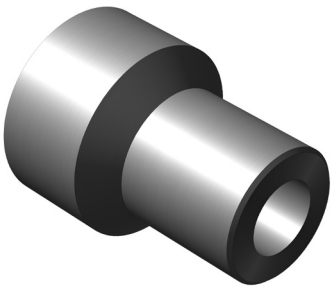


Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/2 x 1/4	6C57-3-1	1 1/2	0.840	5/16	0.555	3/8
3/4 x 1/4	6C57-4-1	1 9/16	1.050	5/16	0.555	3/8
3/4 x 3/8	6C57-4-2	1 5/8	1.050	7/16	0.690	7/16
1 x 1/4	6C57-5-1	1 5/8	1.315	5/16	0.555	3/8
1 x 3/8	6C57-5-2	1 11/16	1.315	7/16	0.690	7/16
1 1/4 x 1/2	6C57-6-3	1 7/8	1.660	1/2	0.855	1/2
1 1/4 x 3/4	6C57-6-4	1 15/16	1.660	5/8	1.065	9/16
1 1/2 x 3/4	6C57-7-4	1 7/8	1.900	5/8	1.065	9/16
1 1/2 x 1	6C57-7-5	2	1.900	13/16	1.330	5/8
2 x 1	6C57-8-5	2 1/4	2.375	13/16	1.330	5/8
2 x 1 1/4	6C57-8-6	2 3/8	2.375	1 3/16	1.675	11/16
2 1/2 x 1	6C57-9-5	3	2.875	13/16	1.330	5/8

Note: All dimensions are in inches and are reference only

Fitting, Socket Weld

Reducing Insert, Style 2, Pipe Size



Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F
1/4 x 3/4	6C57-1-4	1 9/16	0.540	5/16	1.065	3/8	1 5/8
3/8 x 1/4	6C57-2-1	1 5/16	0.675	5/16	0.555	3/8	7/8
1/2 x 3/8	6C57-3-2	1 5/8	0.840	7/16	0.690	7/16	1
3/4 x 1/2	6C57-4-3	2 1/16	1.050	1/2	0.855	1/2	1 3/8
1 x 1/2	6C57-5-3	1 3/4	1.315	1/2	0.855	1/2	1 3/8
1 x 3/4	6C57-5-4	2 3/16	1.315	5/8	1.065	9/16	1 5/8
1 1/4 x 1	6C57-6-5	2 7/16	1.660	13/16	1.330	5/8	1 5/8
1 1/2 x 1 1/4	6C57-7-6	2 11/16	1.900	1 3/16	1.675	11/16	2 3/8
2 x 1 1/2	6C57-8-7	2 13/16	2.375	1 3/8	1.915	3/4	2 9/16

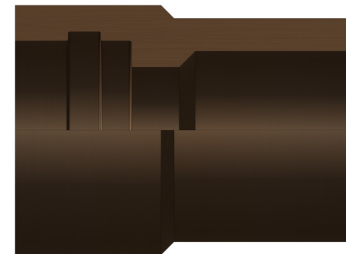
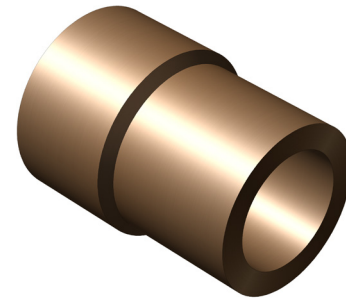
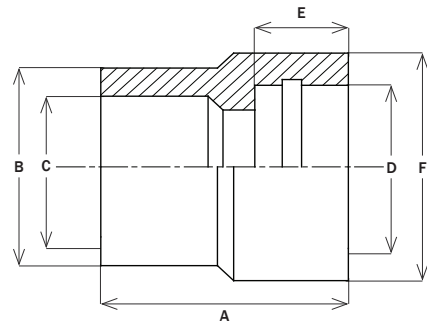
Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Reducing Insert (Reference: Buship Drawing 1385951)

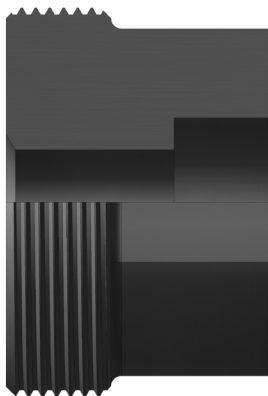
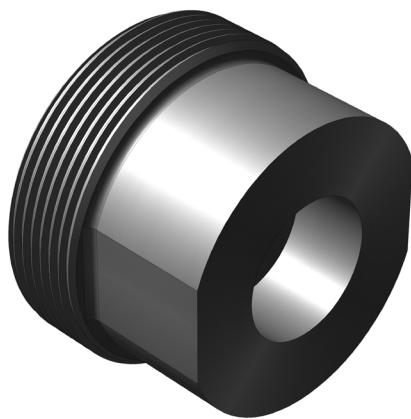
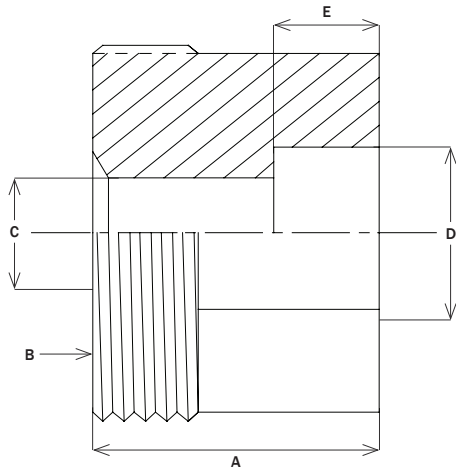
Pipe size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F
1/4 x 3/8	6C67-1-0	1 5/16	0.540	0.36	0.408	3/8	0.766
3/8 x 3/8	6C67-2-0	1 5/16	0.675	0.47	0.408	3/8	0.766
3/8 x 1/4	6C67-2-1	1 5/16	0.675	0.47	0.543	3/8	0.766
1/2 x 3/8	6C67-3-0	1 3/8	0.840	0.59	0.408	3/8	0.766
1/2 x 1/4	6C67-3-1	1 7/16	0.840	0.59	0.543	3/8	0.766
1/2 x 3/8	6C67-3-2	1 1/2	0.840	0.59	0.678	15/32	0.953
3/4 x 1/8	6C67-4-0	1 11/16	1.050	0.74	0.408	3/8	0.766
3/4 x 1/4	6C67-4-1	1 11/16	1.050	0.74	0.543	3/8	0.766
3/4 x 3/8	6C67-4-2	1 5/8	1.050	0.74	0.678	15/32	0.953
3/4 x 1/2	6C67-4-3	1 3/4	1.050	0.74	0.843	9/16	1.172
1 x 1/8	6C67-5-0	1 7/8	1.315	0.93	0.408	3/8	0.766
1 x 1/4	6C67-5-1	2	1.315	0.93	0.543	3/8	0.766
1 x 3/8	6C67-5-2	2	1.315	0.93	0.678	15/32	0.953
1 x 1/2	6C67-5-3	2	1.315	0.93	0.843	9/16	1.172
1 x 3/4	6C67-5-4	2	1.315	0.93	1.053	11/16	1.469
1 1/4 x 1/8	6C67-6-0	2 1/4	1.660	1.17	0.408	3/8	0.766
1 1/4 x 1/4	6C67-6-1	2 1/4	1.660	1.17	0.543	3/8	0.766
1 1/4 x 3/8	6C67-6-2	2 5/16	1.660	1.17	0.678	15/32	0.953
1 1/4 x 1/2	6C67-6-3	2 5/16	1.660	1.17	0.843	9/16	1.172
1 1/4 x 3/4	6C67-6-4	2 1/4	1.660	1.17	1.053	11/16	1.469
1 1/4 x 1	6C67-6-5	2 3/8	1.660	1.17	1.318	13/16	1.844
1 1/2 x 1/8	6C67-7-0	2 9/16	1.902	1.35	0.408	3/8	0.766
1 1/2 x 1/4	6C67-7-1	2 9/16	1.902	1.35	0.543	3/8	0.766
1 1/2 x 3/8	6C67-7-2	2 5/8	1.902	1.35	0.678	15/32	0.953
1 1/2 x 1/2	6C67-7-3	2 1/2	1.902	1.35	0.843	9/16	1.172
1 1/2 x 3/4	6C67-7-4	2 9/16	1.902	1.35	1.053	11/16	1.469
1 1/2 x 1	6C67-7-5	2 7/16	1.902	1.35	1.318	13/16	1.844
1 1/2 x 1 1/4	6C67-7-6	2 11/16	1.902	1.35	1.665	15/16	2.375
2 x 1/8	6C67-8-0	2 7/8	2.377	1.65	0.408	3/8	0.766
2 x 1/4	6C67-8-1	2 7/8	2.377	1.65	0.543	3/8	0.766
2 x 3/8	6C67-8-2	2 7/8	2.377	1.65	0.678	15/32	0.953
2 x 1/2	6C67-8-3	2 7/8	2.377	1.65	0.843	9/16	1.172
2 x 3/4	6C67-8-4	2 15/16	2.377	1.65	1.053	11/16	1.469
2 x 1	6C67-8-5	2 7/8	2.377	1.65	1.318	13/16	1.844
2 x 1 1/2	6C67-8-7	3	2.377	1.65	1.905	1 1/16	2.672
2 1/2 x 1	6C67-9-5	3 1/8	2.877	2.05	1.318	13/16	1.844
2 1/2 x 1 1/4	6C67-9-6	3	2.877	2.05	1.665	15/16	2.375
2 1/2 x 1 1/2	6C67-9-7	3 1/16	2.877	2.05	1.905	1 1/16	2.672
2 1/2 x 2	6C67-9-8	3 5/16	2.877	2.05	2.380	1 1/4	3.313

Note: All dimensions are in inches and are reference only



Fitting, Socket Weld

Threadpiece, Tube Size



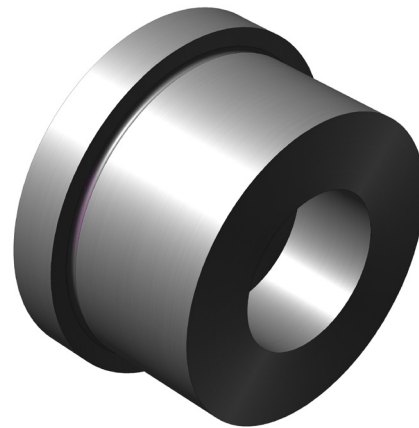
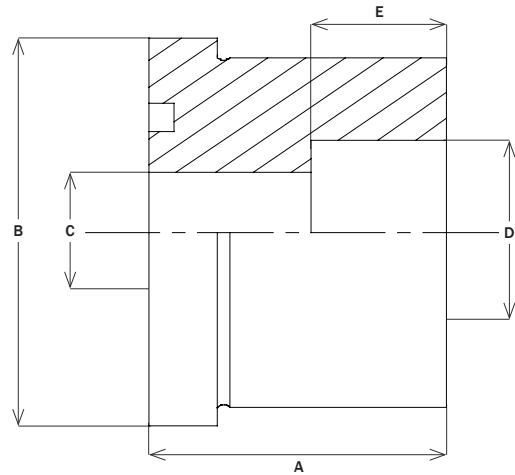
Pipe/Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/8 x 1/8	6T48-0-2	7/8	1 - 14	3/32	0.130	3/16
1/8 x 1/4	6T48-0-4	7/8	1 - 14	3/16	0.255	3/8
1/8 x 3/8	6T48-0-6	7/8	1 - 14	7/32	0.380	3/8
1/4 x 1/8	6T48-1-2	1 3/16	1 3/16 - 12	3/32	0.130	3/16
1/4 x 1/4	6T48-1-4	1 3/16	1 3/16 - 12	3/16	0.255	3/8
1/4 x 3/8	6T48-1-6	1 3/16	1 3/16 - 12	5/16	0.380	3/8
1/4 x 1/2	6T48-1-8	1 3/16	1 3/16 - 12	7/16	0.506	7/16
3/8 x 1/8	6T48-2-2	1 1/4	1 3/8 - 12	3/32	0.130	3/16
3/8 x 1/4	6T48-2-4	1 1/4	1 3/8 - 12	3/16	0.255	3/8
3/8 x 3/8	6T48-2-6	1 1/4	1 3/8 - 12	5/16	0.380	3/8
3/8 x 1/2	6T48-2-8	1 1/4	1 3/8 - 12	7/16	0.506	7/16
3/8 x 5/8	6T48-2-10	1 1/4	1 3/8 - 12	1/2	0.631	1/2
1/2 x 1/8	6T48-3-2	1 5/16	1 3/4 - 12	3/32	0.130	3/16
1/2 x 1/4	6T48-3-4	1 5/16	1 3/4 - 12	3/16	0.255	3/8
1/2 x 3/8	6T48-3-6	1 5/16	1 3/4 - 12	5/16	0.380	3/8
1/2 x 1/2	6T48-3-8	1 5/16	1 3/4 - 12	7/16	0.506	7/16
1/2 x 5/8	6T48-3-10	1 5/16	1 3/4 - 12	1/2	0.631	1/2
1/2 x 3/4	6T48-3-12	1 5/16	1 3/4 - 12	1/2	0.756	1/2
3/4 x 1/8	6T48-4-2	1 5/16	2 - 12	3/32	0.130	3/16
3/4 x 1/4	6T48-4-4	1 5/16	2 - 12	3/16	0.255	3/8
3/4 x 3/8	6T48-4-6	1 5/16	2 - 12	5/16	0.380	3/8
3/4 x 1/2	6T48-4-8	1 5/16	2 - 12	7/16	0.506	7/16
3/4 x 5/8	6T48-4-10	1 5/16	2 - 12	1/2	0.631	1/2
3/4 x 3/4	6T48-4-12	1 5/16	2 - 12	1/2	0.756	1/2
3/4 x 1	6T48-4-16	1 5/16	2 - 12	5/8	1.006	9/16
1 x 1/4	6T48-5-4	1 9/16	2 5/16 - 12	3/16	0.255	3/8
1 x 3/8	6T48-5-6	1 9/16	2 5/16 - 12	5/16	0.380	3/8
1 x 1/2	6T48-5-8	1 9/16	2 5/16 - 12	7/16	0.506	7/16
1 x 5/8	6T48-5-10	1 9/16	2 5/16 - 12	1/2	0.631	1/2
1 x 3/4	6T48-5-12	1 9/16	2 5/16 - 12	1/2	0.756	1/2
1 x 1	6T48-5-16	1 9/16	2 5/16 - 12	5/8	1.006	9/16
1 x 1 1/4	6T48-5-20	1 9/16	2 5/16 - 12	13/16	1.257	5/8
1 1/4 x 3/8	6T48-6-6	1 11/16	2 3/4 - 12	5/16	0.380	3/8
1 1/4 x 1/2	6T48-6-8	1 11/16	2 3/4 - 12	7/16	0.506	7/16
1 1/4 x 5/8	6T48-6-10	1 11/16	2 3/4 - 12	1/2	0.631	1/2
1 1/4 x 3/4	6T48-6-12	1 11/16	2 3/4 - 12	1/2	0.756	1/2
1 1/4 x 1	6T48-6-16	1 11/16	2 3/4 - 12	5/8	1.006	9/16
1 1/4 x 1 1/4	6T48-6-20	1 11/16	2 3/4 - 12	13/16	1.257	5/8
1 1/4 x 1 1/2	6T48-6-24	1 11/16	2 3/4 - 12	1 3/16	1.507	11/16
1 1/2 x 2	6T48-7-32	2	3 1/16 - 12	1 3/8	2.007	3/4

Note: All dimensions are in inches and are reference only

Fitting, Socket Weld

Tailpiece, Tube Size

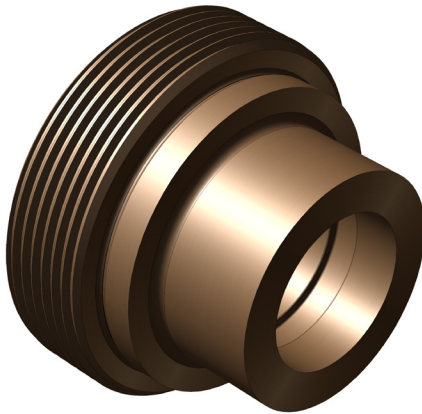
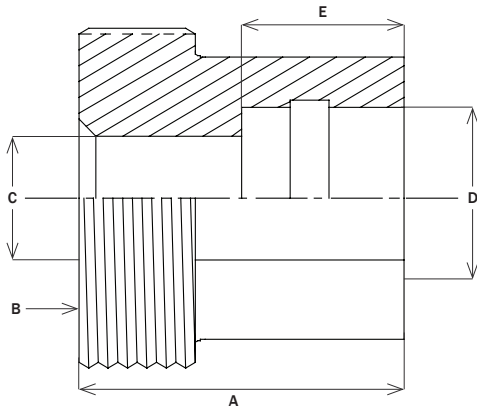
Pipe/Tube size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/8 x 1/8	6R48-0-2	11/16	0.910	3/32	0.130	3/16
1/8 x 1/4	6R48-0-4	11/16	0.910	3/16	0.255	3/8
1/8 x 3/8	6R48-0-6	11/16	0.910	7/32	0.380	3/8
1/4 x 1/8	6R48-1-2	1 1/16	1.067	3/32	0.130	3/16
1/4 x 1/4	6R48-1-4	1 1/16	1.067	3/16	0.255	3/8
1/4 x 3/8	6R48-1-6	1 1/16	1.067	5/16	0.380	3/8
1/4 x 1/2	6R48-1-8	1 1/16	1.067	7/16	0.506	7/16
3/8 x 1/8	6R48-2-2	1 1/8	1.255	3/32	0.130	3/16
3/8 x 1/4	6R48-2-4	1 1/8	1.255	3/16	0.255	3/8
3/8 x 3/8	6R48-2-6	1 1/8	1.255	5/16	0.380	3/8
3/8 x 1/2	6R48-2-8	1 1/8	1.255	7/16	0.506	7/16
3/8 x 5/8	6R48-2-10	1 1/8	1.255	1/2	0.631	1/2
1/2 x 1/8	6R48-3-2	1 1/8	1.630	3/32	0.130	3/16
1/2 x 1/4	6R48-3-4	1 1/8	1.630	3/16	0.255	3/8
1/2 x 3/8	6R48-3-6	1 1/8	1.630	5/16	0.380	3/8
1/2 x 1/2	6R48-3-8	1 1/8	1.630	7/16	0.506	7/16
1/2 x 5/8	6R48-3-10	1 1/8	1.630	1/2	0.631	1/2
1/2 x 3/4	6R48-3-12	1 1/8	1.630	1/2	0.756	1/2
1/2 x 1	6R48-3-16	1 1/8	1.630	1/2	1.003	1/2
3/4 x 1/8	6R48-4-2	1 1/8	1.880	3/32	0.130	3/16
3/4 x 1/4	6R48-4-4	1 1/8	1.880	3/16	0.255	3/8
3/4 x 3/8	6R48-4-6	1 1/8	1.880	5/16	0.380	3/8
3/4 x 1/2	6R48-4-8	1 1/8	1.880	7/16	0.506	7/16
3/4 x 5/8	6R48-4-10	1 1/8	1.880	1/2	0.631	1/2
3/4 x 3/4	6R48-4-12	1 1/8	1.880	1/2	0.756	1/2
3/4 x 1	6R48-4-16	1 1/8	1.880	5/8	1.006	9/16
3/4 x 1 1/4	6R48-4-20	1 1/8	1.880	5/8	1.257	5/8
1 x 1/4	6R48-5-4	1 1/4	2.193	3/16	0.255	3/8
1 x 3/8	6R48-5-6	1 1/4	2.193	5/16	0.380	3/8
1 x 1/2	6R48-5-8	1 1/4	2.193	7/16	0.506	7/16
1 x 5/8	6R48-5-10	1 1/4	2.193	1/2	0.631	1/2
1 x 3/4	6R48-5-12	1 1/4	2.193	1/2	0.756	1/2
1 x 1	6R48-5-16	1 1/4	2.193	5/8	1.006	9/16
1 x 1 1/4	6R48-5-20	1 1/4	2.193	13/16	1.257	5/8
1 1/4 x 3/8	6R48-6-6	1 3/8	2.630	5/16	0.380	3/8
1 1/4 x 1/2	6R48-6-8	1 3/8	2.630	7/16	0.506	7/16
1 1/4 x 5/8	6R48-6-10	1 3/8	2.630	1/2	0.631	1/2
1 1/4 x 3/4	6R48-6-12	1 3/8	2.630	1/2	0.756	1/2
1 1/4 x 1	6R48-6-16	1 3/8	2.630	5/8	1.006	9/16
1 1/4 x 1 1/4	6R48-6-20	1 3/8	2.630	13/16	1.257	5/8
1 1/4 x 1 1/2	6R48-6-24	1 3/8	2.630	1 3/16	1.507	11/16



Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Threadpiece, Tube Size



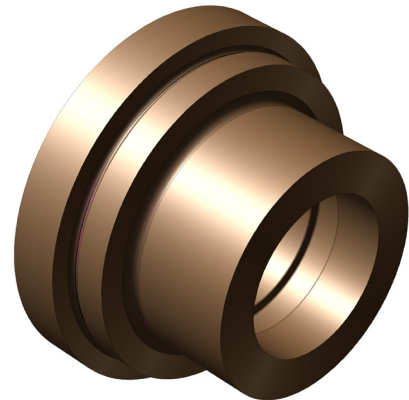
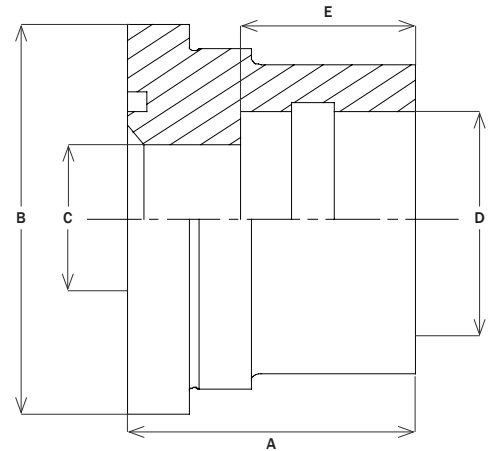
Pipe/Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D	Dim. E
1/8 x 1/4	6T49-0-4	7/8	1 - 14	3/16	0.253	1/4
1/8 x 3/8	6T49-0-6	7/8	1 - 14	7/32	0.378	5/16
1/4 x 1/4	6T49-1-4	1 3/16	1 3/16 - 12	3/16	0.253	1/4
1/4 x 3/8	6T49-1-6	1 3/16	1 3/16 - 12	5/16	0.378	5/16
1/4 x 1/2	6T49-1-8	1 3/16	1 3/16 - 12	7/16	0.503	15/32
3/8 x 1/4	6T49-2-4	1 1/4	1 3/8 - 12	3/16	0.253	1/4
3/8 x 3/8	6T49-2-6	1 1/4	1 3/8 - 12	5/16	0.378	5/16
3/8 x 1/2	6T49-2-8	1 1/4	1 3/8 - 12	7/16	0.503	15/32
1/2 x 1/4	6T49-3-4	1 5/16	1 3/4 - 12	3/16	0.253	1/4
1/2 x 3/8	6T49-3-6	1 5/16	1 3/4 - 12	5/16	0.378	5/16
1/2 x 1/2	6T49-3-8	1 5/16	1 3/4 - 12	7/16	0.503	15/32
1/2 x 3/4	6T49-3-12	1 5/16	1 3/4 - 12	1/2	0.753	9/16
3/4 x 1/4	6T49-4-4	1 5/16	2 - 12	3/16	0.253	1/4
3/4 x 3/8	6T49-4-6	1 5/16	2 - 12	5/16	0.378	5/16
3/4 x 1/2	6T49-4-8	1 5/16	2 - 12	7/16	0.503	15/32
3/4 x 3/4	6T49-4-12	1 5/16	2 - 12	1/2	0.753	9/16
3/4 x 1	6T49-4-16	1 5/16	2 - 12	5/8	1.003	11/16
1 x 1/4	6T49-5-4	1 9/16	2 5/16 - 12	3/16	0.253	1/4
1 x 3/8	6T49-5-6	1 9/16	2 5/16 - 12	5/16	0.378	5/16
1 x 1/2	6T49-5-8	1 9/16	2 5/16 - 12	7/16	0.503	15/32
1 x 3/4	6T49-5-12	1 9/16	2 5/16 - 12	1/2	0.753	9/16
1 x 1	6T49-5-16	1 9/16	2 5/16 - 12	5/8	1.003	11/16
1 x 1 1/4	6T49-5-20	1 9/16	2 5/16 - 12	13/16	1.253	13/16
1 1/4 x 1/4	6T49-6-4	1 11/16	2 3/4 - 12	3/16	0.253	1/4
1 1/4 x 3/8	6T49-6-6	1 11/16	2 3/4 - 12	5/16	0.378	5/16
1 1/4 x 1/2	6T49-6-8	1 11/16	2 3/4 - 12	7/16	0.503	15/32
1 1/4 x 3/4	6T49-6-12	1 11/16	2 3/4 - 12	1/2	0.753	9/16
1 1/4 x 1	6T49-6-16	1 11/16	2 3/4 - 12	5/8	1.003	11/16
1 1/4 x 1 1/4	6T49-6-20	1 11/16	2 3/4 - 12	13/16	1.253	13/16
1 1/4 x 1 1/2	6T49-6-24	1 11/16	2 3/4 - 12	1 3/16	1.503	15/16
1 1/2 x 1/4	6T49-7-4	2	3 1/16 - 12	3/16	0.253	1/4
1 1/2 x 3/8	6T49-7-6	2	3 1/16 - 12	5/16	0.378	5/16
1 1/2 x 1/2	6T49-7-8	2	3 1/16 - 12	7/16	0.503	15/32
1 1/2 x 3/4	6T49-7-12	2	3 1/16 - 12	1/2	0.753	9/16
1 1/2 x 1	6T49-7-16	2	3 1/16 - 12	5/8	1.003	11/16
1 1/2 x 1 1/4	6T49-7-20	2	3 1/16 - 12	13/16	1.253	13/16
1 1/2 x 1 1/2	6T49-7-24	2	3 1/16 - 12	1 3/16	1.503	15/16
1 1/2 x 2	6T49-7-32	2	3 1/16 - 12	1 3/8	2.005	1 1/16
2 x 1/2	6T49-8-8	2 1/8	3 3/4 - 12	7/16	0.503	15/32
2 x 3/4	6T49-8-12	2 1/8	3 3/4 - 12	1/2	0.753	9/16
2 x 1	6T49-8-16	2 1/8	3 3/4 - 12	5/8	1.003	11/16
2 x 1 1/4	6T49-8-20	2 1/8	3 3/4 - 12	13/16	1.253	13/16
2 x 1 1/2	6T49-8-24	2 1/8	3 3/4 - 12	1 3/16	1.503	15/16
2 x 2	6T49-8-32	2 1/8	3 3/4 - 12	1 3/8	2.005	1 1/16

Note: All dimensions are in inches and are reference only

Fitting, Sil-Braze

Tailpiece, Tube Size

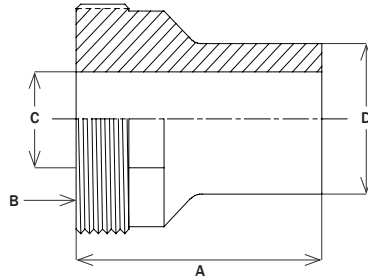
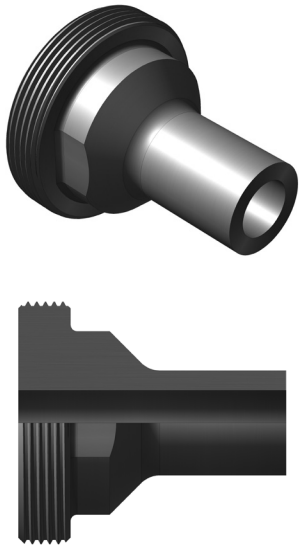
Pipe/Tube size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E
1/8 x 1/8	6R49-0-2	11/16	0.910	1/16	0.128	1/4
1/8 x 1/4	6R49-0-4	11/16	0.910	3/16	0.253	1/4
1/8 x 3/8	6R49-0-6	11/16	0.910	7/32	0.378	5/16
1/4 x 1/4	6R49-1-4	1 1/16	1.067	3/16	0.253	1/4
1/4 x 3/8	6R49-1-6	1 1/16	1.067	5/16	0.378	5/16
1/4 x 1/2	6R49-1-8	1 1/16	1.067	7/16	0.503	15/32
3/8 x 1/4	6R49-2-4	1 1/8	1.255	3/16	0.253	1/4
3/8 x 3/8	6R49-2-6	1 1/8	1.255	5/16	0.378	5/16
3/8 x 1/2	6R49-2-8	1 1/8	1.255	7/16	0.503	15/32
1/2 x 1/4	6R49-3-4	1 1/8	1.630	3/16	0.253	1/4
1/2 x 3/8	6R49-3-6	1 1/8	1.630	5/16	0.378	5/16
1/2 x 1/2	6R49-3-8	1 1/8	1.630	7/16	0.503	15/32
1/2 x 3/4	6R49-3-12	1 1/8	1.630	1/2	0.753	9/16
3/4 x 1/4	6R49-4-4	1 1/8	1.880	3/16	0.253	1/4
3/4 x 3/8	6R49-4-6	1 1/8	1.880	5/16	0.378	5/16
3/4 x 1/2	6R49-4-8	1 1/8	1.880	7/16	0.503	15/32
3/4 x 3/4	6R49-4-12	1 1/8	1.880	1/2	0.753	9/16
3/4 x 1	6R49-4-16	1 1/8	1.880	5/8	1.003	11/16
1 x 1/4	6R49-5-4	1 1/4	2.193	3/16	0.253	1/4
1 x 3/8	6R49-5-6	1 1/4	2.193	5/16	0.378	5/16
1 x 1/2	6R49-5-8	1 1/4	2.193	7/16	0.503	15/32
1 x 3/4	6R49-5-12	1 1/4	2.193	1/2	0.753	9/16
1 x 1	6R49-5-16	1 1/4	2.193	5/8	1.003	11/16
1 x 1 1/4	6R49-5-20	1 1/4	2.193	13/16	1.253	13/16
1 1/4 x 1/4	6R49-6-4	1 3/8	2.630	3/16	0.253	1/4
1 1/4 x 3/8	6R49-6-6	1 3/8	2.630	5/16	0.378	5/16
1 1/4 x 1/2	6R49-6-8	1 3/8	2.630	7/16	0.503	15/32
1 1/4 x 3/4	6R49-6-12	1 3/8	2.630	1/2	0.753	9/16
1 1/4 x 1	6R49-6-16	1 3/8	2.630	5/8	1.003	11/16
1 1/4 x 1 1/4	6R49-6-20	1 3/8	2.630	13/16	1.253	13/16
1 1/4 x 1 1/2	6R49-6-24	1 3/8	2.630	1 3/16	1.503	15/16
1 1/2 x 1/4	6R49-7-4	1 5/8	2.943	3/16	0.253	1/4
1 1/2 x 3/8	6R49-7-6	1 5/8	2.943	5/16	0.378	5/16
1 1/2 x 1/2	6R49-7-8	1 5/8	2.943	7/16	0.503	15/32
1 1/2 x 3/4	6R49-7-12	1 5/8	2.943	1/2	0.753	9/16
1 1/2 x 1	6R49-7-16	1 5/8	2.943	5/8	1.003	11/16
1 1/2 x 1 1/4	6R49-7-20	1 5/8	2.943	13/16	1.253	13/16
1 1/2 x 1 1/2	6R49-7-24	1 5/8	2.943	1 3/16	1.503	15/16
2 x 1/2	6R49-8-8	1 3/4	3.630	7/16	0.503	15/32
2 x 3/4	6R49-8-12	1 3/4	3.630	1/2	0.753	9/16
2 x 1	6R49-8-16	1 3/4	3.630	5/8	1.003	11/16
2 x 1 1/4	6R49-8-20	1 3/4	3.630	13/16	1.253	13/16
2 x 1 1/2	6R49-8-24	1 3/4	3.630	1 3/16	1.503	15/16
2 x 2	6R49-8-32	1 3/4	3.630	1 3/8	2.005	1 1/16



Note: All dimensions are in inches and are reference only

Fitting, Male Weld

Threadpiece, Tube Size

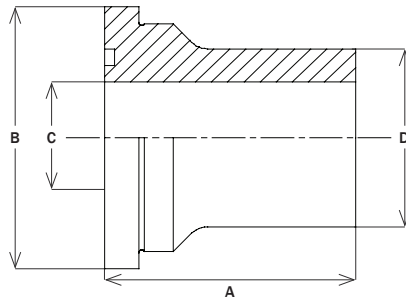
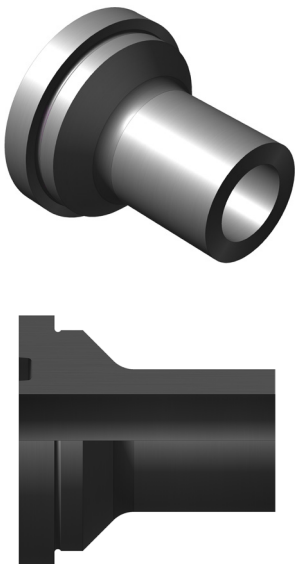


Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D
1/4	6T63-0-4	1 5/8	1 - 14	5/32	0.250
3/8	6T63-1-6	1 7/8	1 3/16 - 12	1/4	0.375
1/2	6T63-2-8	2 1/16	1 3/8 - 12	11/32	0.500
3/4	6T63-3-12	2 5/16	1 3/4 - 12	1/2	0.750
1	6T63-4-16	2 9/16	2 - 12	5/8	1.000
1 1/4	6T63-5-20	2 13/16	2 5/16 - 12	13/16	1.250
1 1/2	6T63-6-24	3 1/8	2 3/4 - 12	1	1.500
2	6T63-7-32	3 1/2	3 1/16 - 12	1 1/4	2.000

Note: All dimensions are in inches and are reference only

Fitting, Male Weld

Tailpiece, Tube Size



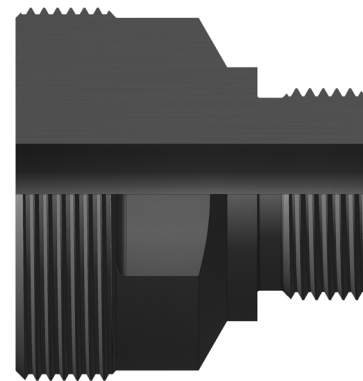
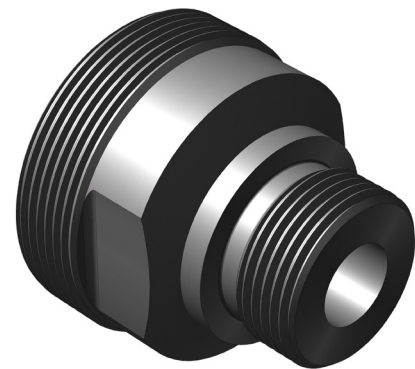
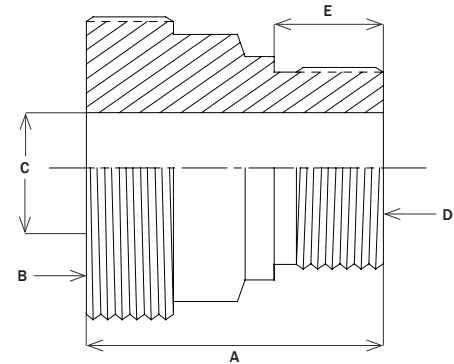
Tube size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D
1/4	6R63-0-4	1 3/8	0.910	5/32	0.250
3/8	6R63-1-6	1 1/2	1.067	1/4	0.375
1/2	6R63-2-8	1 3/4	1.255	11/32	0.500
3/4	6R63-3-12	2	1.630	1/2	0.750
1	6R63-4-16	2 1/8	1.880	5/8	1.000
1 1/4	6R63-5-20	2 1/4	2.193	13/16	1.250
1 1/2	6R63-6-24	2 1/2	2.630	1	1.500
2	6R63-7-32	2 3/4	2.943	1 1/4	2.000

Note: All dimensions are in inches and are reference only

Fitting, Straight Thread

Threadpiece, Male, Tube Size

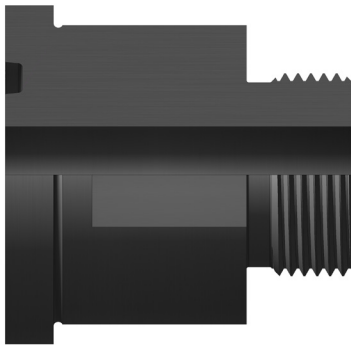
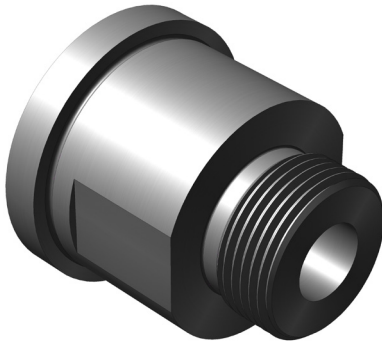
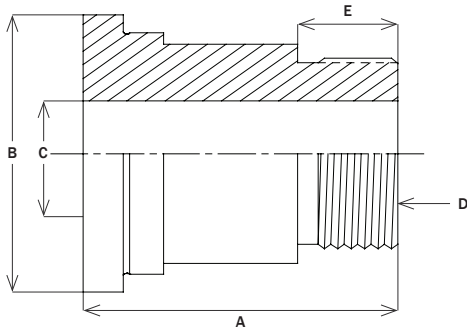
Pipe/Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (thread)	Dim. E
1/8 x 1/4	6T59-0-4	1 7/16	1 - 14	11/64	7/16 - 20	7/16
1/8 x 5/16	6T59-0-5	1 7/16	1 - 14	7/32	1/2 - 20	7/16
1/8 x 3/8	6T59-0-6	1 7/16	1 - 14	19/64	9/16 - 18	7/16
1/4 x 1/4	6T59-1-4	1 9/16	1 3/16 - 12	11/64	7/16 - 20	7/16
1/4 x 5/16	6T59-1-5	1 9/16	1 3/16 - 12	7/32	1/2 - 20	7/16
1/4 x 3/8	6T59-1-6	1 9/16	1 3/16 - 12	19/64	9/16 - 18	7/16
3/8 x 1/4	6T59-2-4	1 11/16	1 3/8 - 12	11/64	7/16 - 20	7/16
3/8 x 3/8	6T59-2-6	1 11/16	1 3/8 - 12	19/64	9/16 - 18	7/16
3/8 x 1/2	6T59-2-8	1 11/16	1 3/8 - 12	25/64	3/4 - 16	9/16
3/8 x 5/8	6T59-2-10	1 11/16	1 3/8 - 12	15/32	7/8 - 14	9/16
1/2 x 1/4	6T59-3-4	1 15/16	1 3/4 - 12	11/64	7/16 - 20	7/16
1/2 x 5/16	6T59-3-5	1 15/16	1 3/4 - 12	7/32	1/2 - 20	7/16
1/2 x 3/8	6T59-3-6	1 15/16	1 3/4 - 12	19/64	9/16 - 18	7/16
1/2 x 1/2	6T59-3-8	1 15/16	1 3/4 - 12	25/64	3/4 - 16	9/16
1/2 x 5/8	6T59-3-10	1 15/16	1 3/4 - 12	15/32	7/8 - 14	9/16
1/2 x 3/4	6T59-3-12	1 15/16	1 3/4 - 12	1/2	1 1/16 - 12	11/16
3/4 x 3/8	6T59-4-6	2 1/16	2 - 12	19/64	9/16 - 18	7/16
3/4 x 1/2	6T59-4-8	2 1/16	2 - 12	25/64	3/4 - 16	9/16
3/4 x 5/8	6T59-4-10	2 1/16	2 - 12	15/32	7/8 - 14	9/16
3/4 x 3/4	6T59-4-12	2 1/16	2 - 12	1/2	1 1/16 - 12	11/16
3/4 x 1	6T59-4-16	2 1/16	2 - 12	5/8	1 5/16 - 12	11/16
1 x 1/2	6T59-5-8	2 1/16	2 5/16 - 12	25/64	3/4 - 16	9/16
1 x 5/8	6T59-5-10	2 3/16	2 5/16 - 12	15/32	7/8 - 14	9/16
1 x 3/4	6T59-5-12	2 3/16	2 5/16 - 12	1/2	1 1/16 - 12	11/16
1 x 1	6T59-5-16	2 3/16	2 5/16 - 12	5/8	1 5/16 - 12	11/16
1 x 1 1/4	6T59-5-20	2 3/16	2 5/16 - 12	13/16	1 5/8 - 12	11/16
1 1/4 x 5/8	6T59-6-10	2 3/8	2 3/4 - 12	15/32	7/8 - 14	9/16
1 1/4 x 3/4	6T59-6-12	2 3/8	2 3/4 - 12	1/2	1 1/16 - 12	11/16
1 1/4 x 1	6T59-6-16	2 3/8	2 3/4 - 12	5/8	1 5/16 - 12	11/16
1 1/4 x 1 1/4	6T59-6-20	2 3/8	2 3/4 - 12	13/16	1 5/8 - 12	11/16
1 1/4 x 1 1/2	6T59-6-24	2 3/8	2 3/4 - 12	1 3/16	1 7/8 - 12	3/4
1 1/2 x 1/4	6T59-7-4	2 9/16	3 1/16 - 12	11/64	7/16 - 20	7/16
1 1/2 x 1/2	6T59-7-8	2 9/16	3 1/16 - 12	25/64	3/4 - 16	9/16
1 1/2 x 1	6T59-7-16	2 9/16	3 1/16 - 12	5/8	1 5/16 - 12	11/16
1 1/2 x 1 1/4	6T59-7-20	2 9/16	3 1/16 - 12	13/16	1 5/8 - 12	11/16
1 1/2 x 1 1/2	6T59-7-24	2 9/16	3 1/16 - 12	1 3/16	1 7/8 - 12	3/4
2 x 1/2	6T59-8-8	2 9/16	3 3/4 - 12	25/64	3/4 - 16	9/16
2 x 1 1/2	6T59-8-24	2 9/16	3 3/4 - 12	1 3/16	1 7/8 - 12	3/4
2 x 2	6T59-8-32	2 9/16	3 3/4 - 12	1 3/8	2 1/2 - 12	15/16



Note: All dimensions are in inches and are reference only

Fitting, Straight Thread

Tailpiece, Male, Tube Size



Pipe/Tube size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (thread)	Dim. E
1/8 x 1/4	6R59-0-4	1 5/16	0.910	11/64	7/16 - 20	7/16
1/4 x 1/4	6R59-1-4	1 1/2	1.067	11/64	7/16 - 20	7/16
1/4 x 5/16	6R59-1-5	1 1/2	1.067	7/32	1/2 - 20	7/16
1/4 x 3/8	6R59-1-6	1 1/2	1.067	19/64	9/16 - 18	7/16
3/8 x 1/4	6R59-2-4	1 3/4	1.255	11/64	7/16 - 20	7/16
3/8 x 3/8	6R59-2-6	1 3/4	1.255	19/64	9/16 - 18	7/16
3/8 x 1/2	6R59-2-8	1 3/4	1.255	25/64	3/4 - 16	9/16
1/2 x 1/4	6R59-3-4	2 1/16	1.630	11/64	7/16 - 20	7/16
1/2 x 3/8	6R59-3-6	2 1/16	1.630	19/64	9/16 - 18	7/16
1/2 x 1/2	6R59-3-8	2 1/16	1.630	25/64	3/4 - 16	9/16
1/2 x 5/8	6R59-3-10	2 1/16	1.630	15/32	7/8 - 14	9/16
1/2 x 3/4	6R59-3-12	2 1/16	1.630	1/2	1 1/16 - 12	11/16
3/4 x 3/8	6R59-4-6	2 1/8	1.880	19/64	9/16 - 18	7/16
3/4 x 1/2	6R59-4-8	2 1/8	1.880	25/64	3/4 - 16	9/16
3/4 x 3/4	6R59-4-12	2 1/8	1.880	1/2	1 1/16 - 12	11/16
3/4 x 1	6R59-4-16	2 1/8	1.880	5/8	1 5/16 - 12	11/16
1 x 1/2	6R59-5-8	2 1/4	2.193	25/64	3/4 - 16	9/16
1 x 3/4	6R59-5-12	2 1/4	2.193	1/2	1 1/16 - 12	11/16
1 x 1	6R59-5-16	2 1/4	2.193	5/8	1 5/16 - 12	11/16
1 x 1 1/4	6R59-5-20	2 1/4	2.193	13/16	1 5/8 - 12	11/16
1 1/4 x 3/4	6R59-6-12	2 1/2	2.630	1/2	1 1/16 - 12	11/16
1 1/4 x 1	6R59-6-16	2 1/2	2.630	5/8	1 5/16 - 12	11/16
1 1/4 x 1 1/4	6R59-6-20	2 1/2	2.630	13/16	1 5/8 - 12	11/16
1 1/4 x 1 1/2	6R59-6-24	2 1/2	2.630	1 3/16	1 7/8 - 12	3/4
1 1/2 x 1	6R59-7-16	2 3/4	2.943	5/8	1 5/16 - 12	11/16
1 1/2 x 1 1/4	6R59-7-20	2 3/4	2.943	13/16	1 5/8 - 12	11/16
1 1/2 x 1 1/2	6R59-7-24	2 3/4	2.943	1 3/16	1 7/8 - 12	3/4
2 x 1 1/4	6R59-8-20	2 15/16	3.630	13/16	1 5/8 - 12	11/16
2 x 1 1/2	6R59-8-24	2 15/16	3.630	1 3/16	1 7/8 - 12	3/4
2 x 2	6R59-8-32	2 15/16	3.630	1 3/8	2 1/2 - 12	15/16

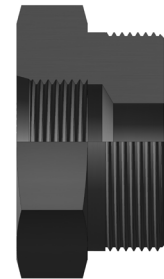
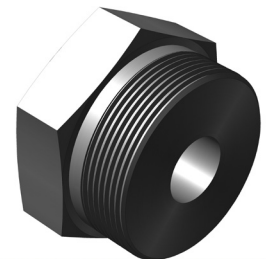
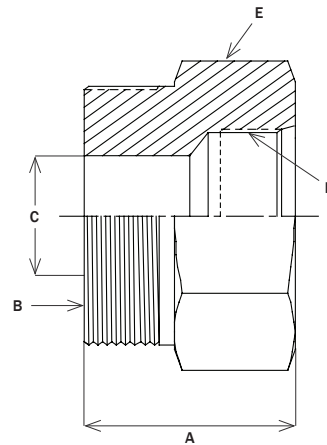
Note: All dimensions are in inches and are reference only

Fitting, Straight Thread

Threadpiece, Female, Style 1, Tube Size

Pipe/Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (thread)	Dim. E (hex)
1/8 x 1/4	6T64-0-4	1 1/16	1 - 14	7/32	7/16 - 20	1 1/8
1/8 x 3/8	6T64-0-6	1 1/16	1 - 14	7/32	9/16 - 18	1 1/8
1/8 x 1/2	6T64-0-8	1 1/2	1 - 14	7/32	3/4 - 16	1 1/4
1/4 x 3/8	6T64-1-6	1 3/16	1 3/16 - 12	5/16	9/16 - 18	1 1/4
1/4 x 1/2	6T64-1-8	1 1/2	1 3/16 - 12	5/16	3/4 - 16	1 1/4
3/8 x 1/2	6T64-2-8	1 5/16	1 3/8 - 12	7/16	3/4 - 16	1 1/2
3/8 x 3/4	6T64-2-12	1 15/16	1 3/8 - 12	7/16	1 1/16 - 12	1 3/4
1/2 x 3/4	6T64-3-12	1 7/16	1 3/4 - 12	1/2	1 1/16 - 12	1 7/8
1/2 x 1	6T64-3-16	2	1 3/4 - 12	1/2	1 5/16 - 12	2 1/8
3/4 x 3/4	6T64-4-12	1 7/16	2 - 12	5/8	1 1/16 - 12	2 1/8
3/4 x 1	6T64-4-16	1 3/4	2 - 12	5/8	1 5/16 - 12	2 1/8
3/4 x 1 1/4	6T64-4-20	2 1/16	2 - 12	5/8	1 5/8 - 12	2 1/2
1 x 1	6T64-5-16	1 9/16	2 5/16 - 12	13/16	1 5/16 - 12	2 1/2
1 x 1 1/4	6T64-5-20	2 1/16	2 5/16 - 12	13/16	1 5/8 - 12	2 1/2
1 x 1 1/2	6T64-5-24	2 1/4	2 5/16 - 12	13/16	1 7/8 - 12	3
1 1/4 x 1 1/4	6T64-6-20	1 11/16	2 3/4 - 12	1 3/16	1 5/8 - 12	2 7/8
1 1/4 x 1 1/2	6T64-6-24	2 1/16	2 3/4 - 12	1 3/16	1 7/8 - 12	3
1 1/2 x 1 1/2	6T64-7-24	1 13/16	3 1/16 - 12	1 3/8	1 7/8 - 12	3 1/8
1 1/2 x 2	6T64-7-32	2 1/2	3 1/16 - 12	1 3/8	2 1/2 - 12	3 7/8
2 x 2	6T64-8-32	2 3/16	3 3/4 - 12	1 3/4	2 1/2 - 12	3 7/8

Note: All dimensions are in inches and are reference only

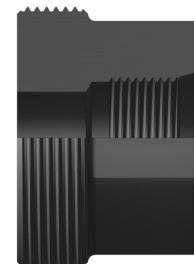
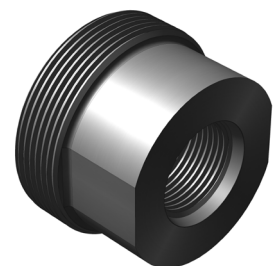
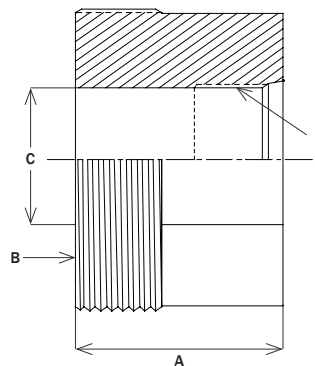


Fitting, Straight Thread

Threadpiece, Female, Style 2, Tube Size

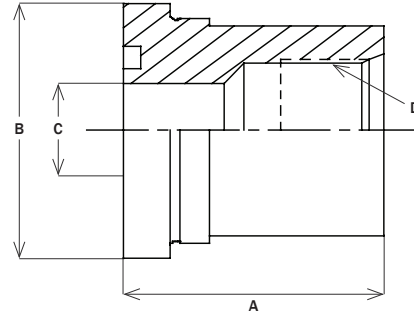
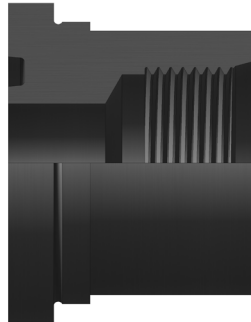
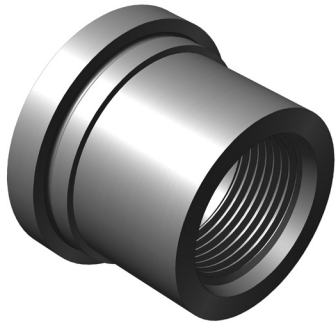
Pipe/Tube size	Part No.	Dim. A	Dim. B (thread)	Dim. C	Dim. D (thread)
1/4 x 1/4	6T64-1-4	1 3/16	1 3/16 - 12	25/64	7/16 - 20
1/4 x 5/16	6T64-1-5	1 3/16	1 3/16 - 12	5/16	1/2 - 20
3/8 x 1/4	6T64-2-4	1 5/16	1 3/8 - 12	25/64	7/16 - 20
3/8 x 3/8	6T64-2-6	1 5/16	1 3/8 - 12	33/64	9/16 - 18
1/2 x 1/4	6T64-3-4	1 5/16	1 3/4 - 12	25/64	7/16 - 20
1/2 x 3/8	6T64-3-6	1 7/16	1 3/4 - 12	33/64	9/16 - 18
1/2 x 1/2	6T64-3-8	1 7/16	1 3/4 - 12	1/2	3/4 - 16
3/4 x 1/2	6T64-4-8	1 7/16	2 - 12	11/16	3/4 - 16
1 x 3/4	6T64-5-12	1 9/16	2 5/16 - 12	13/16	1 1/16 - 12
1 1/4 x 1	6T64-6-16	1 11/16	2 3/4 - 12	1 15/64	1 5/16 - 12
2 x 1 1/2	6T64-8-24	1 13/16	3 3/4 - 12	1 51/64	1 7/8 - 12

Note: All dimensions are in inches and are reference only



Fitting, Straight Thread

Tailpiece, Female, Tube Size

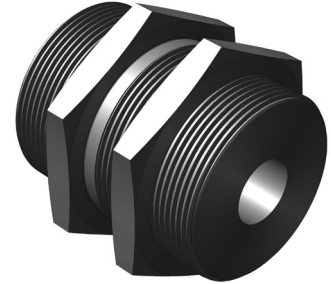
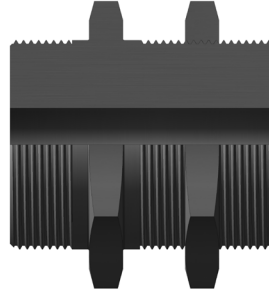
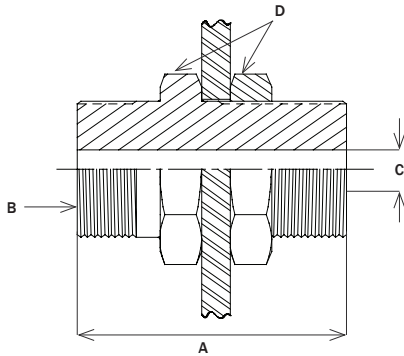


Pipe/Tube size	Part No.	Dim. A	Dim. B	Dim. C	Dim. D (thread)
1/8 x 1/4	6R64-0-4	7/8	0.910	7/32	7/16 - 20
1/4 x 1/4	6R64-1-4	1 1/16	1.067	25/64	7/16 - 20
1/4 x 3/8	6R64-1-6	1 1/16	1.067	5/16	9/16 - 18
3/8 x 1/4	6R64-2-4	1 1/8	1.255	25/64	7/16 - 20
3/8 x 3/8	6R64-2-6	1 1/8	1.255	33/64	9/16 - 18
1/2 x 1/4	6R64-3-4	1 5/16	1.630	25/64	7/16 - 20
1/2 x 3/8	6R64-3-6	1 5/16	1.630	33/64	9/16 - 18
1/2 x 1/2	6R64-3-8	1 5/16	1.630	1/2	3/4 - 16
3/4 x 1/4	6R64-4-4	1 1/2	1.880	25/64	7/16 - 20
3/4 x 1/2	6R64-4-8	1 1/2	1.880	11/16	3/4 - 16
3/4 x 5/8	6R64-4-10	1 1/2	1.880	5/8	7/8 - 14
3/4 x 3/4	6R64-4-12	1 1/2	1.880	5/8	1 1/16 - 12
1 x 3/4	6R64-5-12	1 11/16	2.193	13/16	1 1/16 - 12
1 x 1	6R64-5-16	1 11/16	2.193	13/16	1 5/16 - 12
1 1/4 x 1	6R64-6-16	1 11/16	2.630	1 7/32	1 5/16 - 12
1 1/4 x 1 1/4	6R64-6-20	1 11/16	2.630	1 3/16	1 5/8 - 12
1 1/2 x 1	6R64-7-16	1 3/4	2.943	1 7/32	1 5/16 - 12
1 1/2 x 1 1/4	6R64-7-20	1 3/4	2.943	1 3/8	1 5/8 - 12
2 x 1 1/4	6R64-8-20	1 3/4	3.630	1 17/32	1 5/8 - 12
2 x 1 1/2	6R64-8-24	1 3/4	3.630	1 25/32	1 7/8 - 12

Note: All dimensions are in inches and are reference only

Fitting, Bulkhead

Pipe and Tube Size

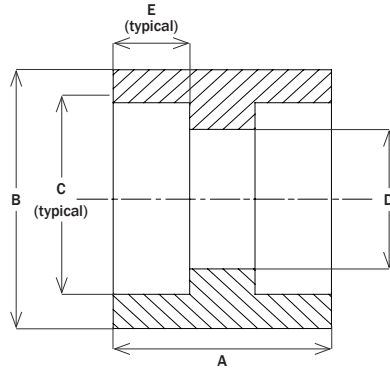
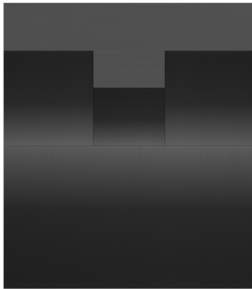
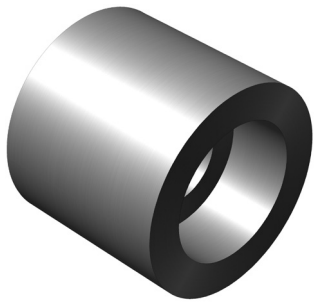


Pipe Part No.	Tube Part No.	Pipe size/ Tube size	Dim. A	Dim. B (thread)	Dim. C	Dim. D (hex)
6T89-0P	-	1/8	2 3/16	1 - 14	7/32	1 3/8
6T89-1P	6T89-4T	1/4	2 7/16	1 3/16 - 12	5/16	1 1/2
6T89-2P	6T89-6T	3/8	2 7/16	1 3/8 - 12	7/16	1 3/4
6T89-3P	6T89-8T	1/2	2 7/16	1 3/4 - 12	1/2	2 1/8
6T89-4P	6T89-12T	3/4	2 7/16	2 - 12	5/8	2 1/2
6T89-5P	6T89-16T	1	2 15/16	2 5/16 - 12	13/16	2 3/4
6T89-6P	6T89-20T	1 1/4	2 15/16	2 3/4 - 12	1 3/16	3 1/4
6T89-7P	6T89-24T	1 1/2	3 7/16	3 1/16 - 12	1 3/8	3 5/8
6T89-8P	6T89-32T	2	3 7/16	3 3/4 - 12	1 3/4	4 1/4

Note: All dimensions are in inches and are reference only

Coupling, Socket Weld

Pipe Size

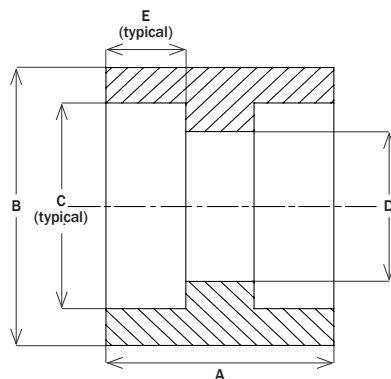
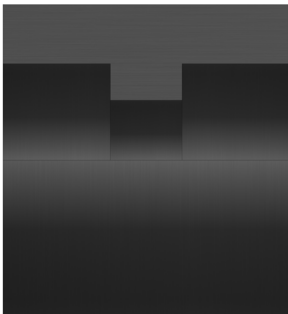
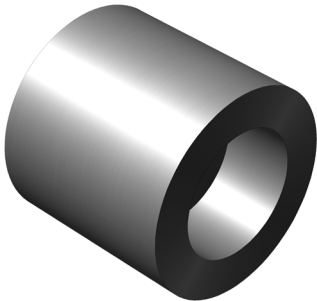


Pipe size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D (dia.)	Dim. E
1/8	6C100-0	1 3/16	3/4	0.420	7/32	3/8
1/4	6C100-1	1 3/16	7/8	0.555	5/16	3/8
3/8	6C100-2	1 1/4	1	0.690	7/16	7/16
1/2	6C100-3	1 3/8	1 3/8	0.855	1/2	1/2
3/4	6C100-4	1 1/2	1 5/8	1.065	5/8	9/16
1	6C100-5	1 3/4	2	1.330	13/16	5/8
1 1/4	6C100-6	1 7/8	2 3/8	1.675	1 3/16	11/16
1 1/2	6C100-7	2	2 3/4	1.915	1 3/8	3/4
2	6C100-8	2 1/2	3 1/4	2.406	1 3/4	7/8

Note: All dimensions are in inches and are reference only

Coupling, Socket Weld

Tube Size

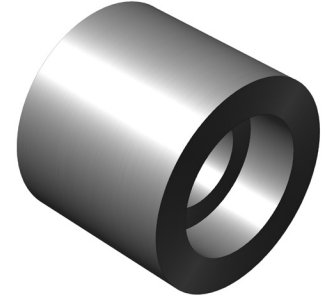
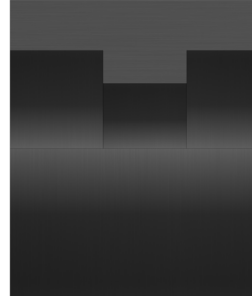
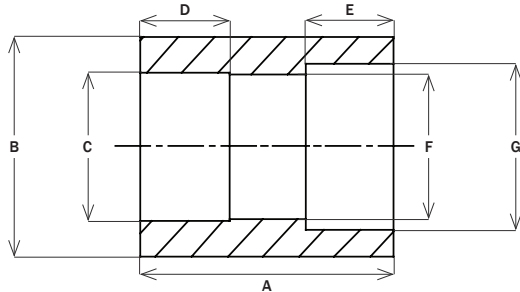


Tube size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D (dia.)	Dim. E
1/4	6C46-4	1 3/16	3/4	0.255	3/16	3/8
3/8	6C46-6	1 3/16	7/8	0.380	5/16	3/8
1/2	6C46-8	1 1/4	1	0.506	7/16	7/16
3/4	6C46-12	1 3/8	1 3/8	0.756	1/2	1/2
1	6C46-16	1 1/2	1 5/8	1.006	5/8	9/16
1 1/4	6C46-20	1 3/4	2	1.257	13/16	5/8
1 1/2	6C46-24	1 7/8	2 3/8	1.507	1 3/16	11/16
2	6C46-32	2	2 3/4	2.007	1 3/8	3/4

Note: All dimensions are in inches and are reference only

Coupling, Socket Weld

IPS X Tube Size

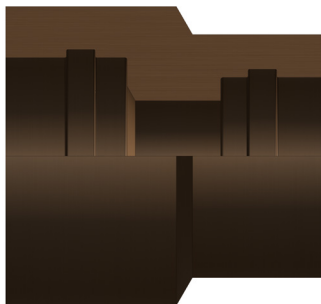
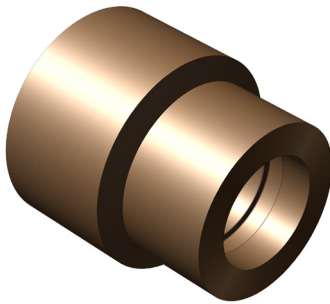
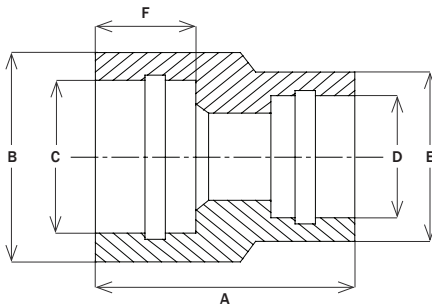


Pipe/Tube size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D	Dim. E	Dim. F (dia.)	Dim. G (dia.)
1/4 x 1/4	6C107-1-4	15/16	0.875	0.545	3/8	3/16	0.218	0.255
1/4 x 3/8	6C107-1-6	1	0.875	0.545	3/8	1/4	0.344	0.380
1/4 x 1/2	6C107-1-8	1 1/16	0.875	0.545	3/8	5/16	0.453	0.505
1/4 x 3/4	6C107-1-12	1 3/16	0.875	0.545	3/8	7/16	0.453	0.755
3/8 x 1/4	6C107-2-4	1	1.000	0.680	7/16	3/16	0.218	0.255
3/8 x 3/8	6C107-2-6	1 1/16	1.000	0.680	7/16	1/4	0.344	0.380
3/8 x 1/2	6C107-2-8	1 1/8	1.000	0.680	7/16	5/16	0.453	0.505
3/8 x 5/8	6C107-2-10	1 3/16	1.000	0.680	7/16	3/8	0.547	0.630
3/8 x 3/4	6C107-2-12	1 1/4	1.000	0.680	7/16	7/16	0.656	0.755
1/2 x 1/4	6C107-3-4	1 1/8	1.375	0.845	1/2	3/16	0.218	0.255
1/2 x 3/8	6C107-3-6	1 3/16	1.375	0.845	1/2	1/4	0.344	0.380
1/2 x 1/2	6C107-3-8	1 1/4	1.375	0.845	1/2	5/16	0.453	0.505
1/2 x 5/8	6C107-3-10	1 5/16	1.375	0.845	1/2	3/8	0.547	0.630
1/2 x 3/4	6C107-3-12	1 3/8	1.375	0.845	1/2	7/16	0.656	0.755
1/2 x 1 1/4	6C107-3-20	1 3/4	2.000	0.845	1/2	9/16	0.547	1.256
3/4 x 3/8	6C107-4-6	1 1/4	1.625	1.055	9/16	1/4	0.344	0.380
3/4 x 1/2	6C107-4-8	1 5/16	1.625	1.055	9/16	5/16	0.453	0.505
3/4 x 5/8	6C107-4-10	1 3/8	1.625	1.055	9/16	3/8	0.547	0.630
3/4 x 3/4	6C107-4-12	1 7/16	1.625	1.055	9/16	7/16	0.656	0.755
3/4 x 1	6C107-4-16	1 1/2	1.625	1.055	9/16	1/2	0.875	1.005
1 x 1/2	6C107-5-8	1 1/2	2.000	1.320	5/8	5/16	0.453	0.505
1 x 3/4	6C107-5-12	1 5/8	2.000	1.320	5/8	7/16	0.656	0.755
1 x 1	6C107-5-16	1 11/16	2.000	1.320	5/8	1/2	0.875	1.005
1 x 1 1/4	6C107-5-20	1 3/4	2.000	1.320	5/8	9/16	1.015	1.256
1 1/4 x 1 1/4	6C107-6-20	1 3/4	2.375	1.665	11/16	9/16	1.015	1.256
1 1/2 x 1 1/2	6C107-7-24	1 7/8	2.750	1.915	3/4	11/16	1.187	1.506

Note: All dimensions are in inches and are reference only

Coupling, Sil-Braze

Pipe Size, Reducer

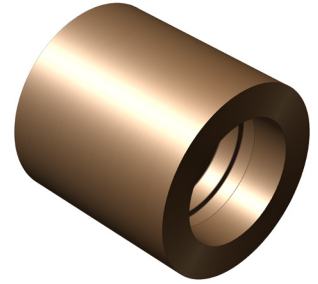
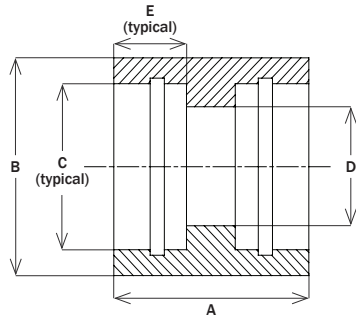


Pipe size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D (dia.)	Dim. E (dia.)	Dim. F
1/4 x 1/8	6C101-1-0	1 3/16	7/8	0.543	0.408	-	3/8
3/8 x 1/8	6C101-2-0	1 3/8	1	0.678	0.408	11/16	15/32
3/8 x 1/4	6C101-2-1	1 3/8	1	0.678	0.543	-	15/32
1/2 x 1/8	6C101-3-0	1 1/2	1 3/8	0.843	0.408	11/16	9/16
1/2 x 1/4	6C101-3-1	1 1/2	1 3/8	0.843	0.543	7/8	9/16
1/2 x 3/8	6C101-3-2	1 1/2	1 3/8	0.843	0.678	1	9/16
3/4 x 1/8	6C101-4-0	1 3/4	1 5/8	1.053	0.408	11/16	11/16
3/4 x 1/4	6C101-4-1	1 3/4	1 5/8	1.053	0.543	7/8	11/16
3/4 x 3/8	6C101-4-2	1 3/4	1 5/8	1.053	0.678	1	11/16
3/4 x 1/2	6C101-4-3	1 3/4	1 5/8	1.053	0.843	1 3/8	11/16
1 x 1/8	6C101-5-0	2 1/8	2	1.318	0.408	11/16	13/16
1 x 1/4	6C101-5-1	2 1/8	2	1.318	0.543	7/8	13/16
1 x 3/8	6C101-5-2	2 1/8	2	1.318	0.678	1	13/16
1 x 1/2	6C101-5-3	2 1/8	2	1.318	0.843	1 3/8	13/16
1 x 3/4	6C101-5-4	2 1/8	2	1.318	1.053	1 5/8	13/16
1 1/4 x 1/8	6C101-6-0	2 1/2	2 3/8	1.663	0.408	11/16	15/16
1 1/4 x 1/4	6C101-6-1	2 1/2	2 3/8	1.663	0.543	7/8	15/16
1 1/4 x 3/8	6C101-6-2	2 1/2	2 3/8	1.663	0.678	1	15/16
1 1/4 x 1/2	6C101-6-3	2 1/2	2 3/8	1.663	0.843	1 3/8	15/16
1 1/4 x 3/4	6C101-6-4	2 1/2	2 3/8	1.663	1.053	1 5/8	15/16
1 1/4 x 1	6C101-6-5	2 1/2	2 3/8	1.663	1.318	2	15/16
1 1/2 x 1/8	6C101-7-0	2 3/4	2 5/8	1.903	0.408	11/16	1 1/16
1 1/2 x 1/4	6C101-7-1	2 3/4	2 5/8	1.903	0.543	7/8	1 1/16
1 1/2 x 3/8	6C101-7-2	2 3/4	2 5/8	1.903	0.678	1	1 1/16
1 1/2 x 1/2	6C101-7-3	2 3/4	2 5/8	1.903	0.843	1 3/8	1 1/16
1 1/2 x 3/4	6C101-7-4	2 3/4	2 5/8	1.903	1.058	1 5/8	1 1/16
1 1/2 x 1	6C101-7-5	2 3/4	2 5/8	1.903	1.318	2	1 1/16
1 1/2 x 1 1/4	6C101-7-6	2 3/4	2 5/8	1.903	1.663	2 3/8	1 1/16
2 x 1/8	6C101-8-0	3 1/4	3 1/4	2.378	0.408	11/16	1 1/4
2 x 1/4	6C101-8-1	3 1/4	3 1/4	2.378	0.543	7/8	1 1/4
2 x 3/8	6C101-8-2	3 1/4	3 1/4	2.378	0.678	1	1 1/4
2 x 1/2	6C101-8-3	3 1/4	3 1/4	2.378	0.843	1 3/8	1 1/4
2 x 3/4	6C101-8-4	3 1/4	3 1/4	2.378	1.053	1 5/8	1 1/4
2 x 1	6C101-8-5	3 1/4	3 1/4	2.378	1.318	2	1 1/4
2 x 1 1/4	6C101-8-6	3 1/4	3 1/4	2.378	1.663	2 3/8	1 1/4
2 x 1 1/2	6C101-8-7	3 1/4	3 1/4	2.378	1.903	2 5/8	1 1/4

Note: All dimensions are in inches and are reference only

Coupling, Sil-Braze

Pipe Size

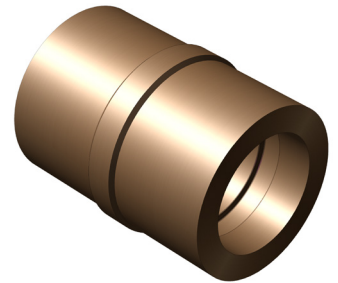
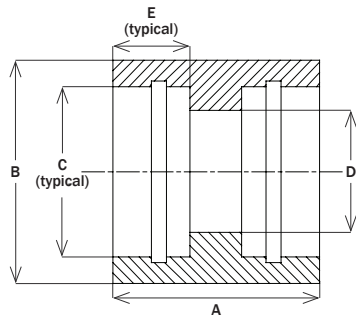


Pipe size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D (dia.)	Dim. E
1/8	6C101-0-0	1 3/16	11/16	0.408	0.22	3/8
1/4	6C101-1-1	1 3/16	7/8	0.543	0.36	3/8
3/8	6C101-2-2	1 3/8	1	0.678	0.47	15/32
1/2	6C101-3-3	1 1/2	1 3/8	0.843	0.59	9/16
3/4	6C101-4-4	1 3/4	1 5/8	1.053	0.74	11/16
1	6C101-5-5	2 1/8	2	1.318	0.93	13/16
1 1/4	6C101-6-6	2 1/2	2 3/8	1.665	1.17	15/16
1 1/2	6C101-7-7	2 3/4	2 5/8	1.905	1.35	1 1/16
2	6C101-8-8	3 1/4	3 1/4	2.380	1.65	1 1/4
2 1/2	6C101-9-9	3 1/2	3 3/4	2.882	2.05	1 5/16

Note: All dimensions are in inches and are reference only

Coupling, Sil-Braze

Tube Size

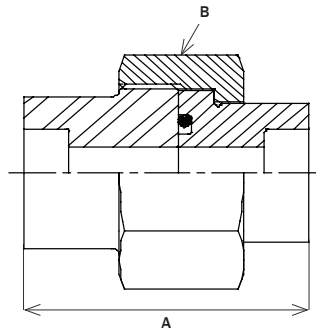
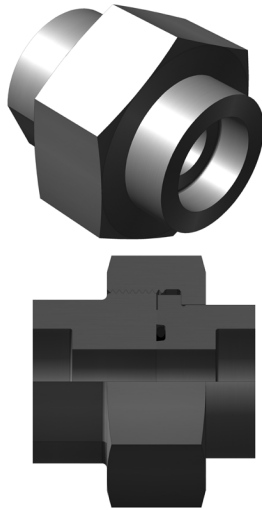


Tube size	Part No.	Dim. A	Dim. B (dia.)	Dim. C (dia.)	Dim. D (dia.)	Dim. E
1/4	6C47-4	7/8	5/8	0.253	0.18	1/4
3/8	6C47-6	1	3/4	0.378	0.27	5/16
1/2	6C47-8	1 3/8	13/16	0.503	0.35	15/32
3/4	6C47-12	1 3/4	1 1/8	0.753	0.52	9/16
1	6C4716	2	1 7/16	1.003	0.72	11/16
1 1/4	6C47-20	2 1/2	1 3/4	1.253	0.91	13/16
1 1/2	6C47-24	2 3/4	2 3/16	1.503	1.08	15/16
2	6C47-32	3	2 13/16	2.005	1.41	1 1/16

Note: All dimensions are in inches and are reference only

Union Assembly

Socketweld End, Pipe Size (Reference: Buship Drawing 1385884)

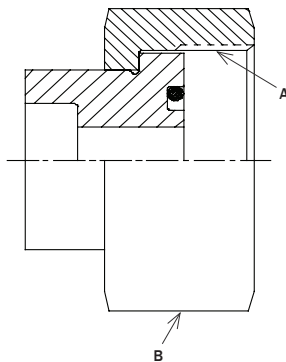
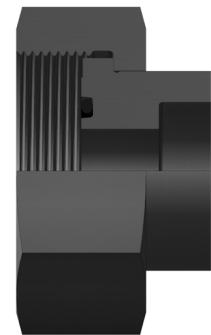
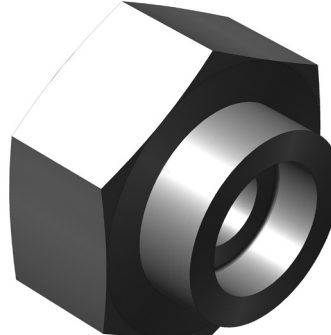
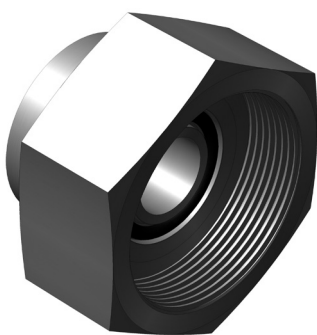


IPS size	Part No.	Dim. A	Dim. B (hex)
1/4 x 1/4	6RTN51-1-1	2 1/4	1 3/8
3/8 x 3/8	6RTN51-2-2	2 3/8	1 5/8
1/2 x 1/2	6RTN51-3-3	2 7/16	2
1/2 x 1	6RTN51-3-5	2 13/16	2 3/4
3/4 x 3/4	6RTN51-4-4	2 7/16	2 3/8
3/4 x 1	6RTN51-4-5	2 13/16	2 3/4
1 x 3/4	6RTN51-5-4	2 13/16	2 3/4
1 x 1	6RTN51-5-5	2 13/16	2 3/4
1 1/4 x 1 1/4	6RTN51-6-6	3 1/16	3
1 1/2 x 1 1/2	6RTN51-7-7	3 5/8	3 1/2
2 x 2	6RTN51-8-8	3 7/8	4 1/8

Note: All dimensions are in inches and are reference only

Union Assembly

Socketweld X Thread End, Pipe Size



IPS size	Part No.	Dim. A (thread)	Dim. B (hex)
1/4	6RN5150-1-1	1 3/16 - 12	1 3/8
3/8	6RN5150-2-2	1 3/8 - 12	1 5/8
1/2	6RN5150-3-3	1 3/4 - 12	2
3/4	6RN5150-4-4	2 - 12	2 3/8
1	6RN5150-5-5	2 5/16 - 12	2 3/4
1 1/4	6RN5150-6-6	2 3/4 - 12	3
1 1/2	6RN5150-7-7	3 1/16 - 12	3 1/2
2	6RN5150-8-8	3 3/4 - 12	4 1/8
2 1/2	6RN5150-9-9	4 1/2 - 12	5 1/8

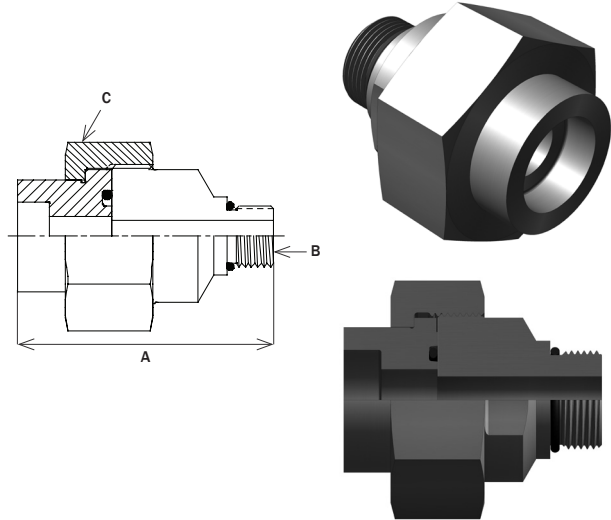
Note: All dimensions are in inches and are reference only

Union Assembly

Socketweld X Male Straight Thread End, Pipe Size

IPS size	Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)
1/4	6RTN5159-1-4	2 5/8	7/16 - 20	1 3/8
1/4	6RTN5159-1-6	2 5/8	9/16 - 18	1 3/8
3/8	6RTN5159-2-4	2 13/16	7/16 - 20	1 5/8
1/2	6RTN5159-3-6	3 1/16	9/16 - 18	2
1/2	6RTN5159-3-8	3 1/16	3/4 - 16	2
1/2	6RTN5159-3-10	3 1/16	7/8 - 14	2
1/2	6RTN5159-3-12	3 1/16	1 1/16 - 12	2
1/2	6RTN5159-3-16	3 9/16	1 5/16 - 12	2
3/4	6RTN5159-4-8	3 3/16	3/4 - 16	2 3/8
3/4	6RTN5159-4-12	3 3/16	1 1/16 - 12	2 3/8
1	6RTN5159-5-16	3 7/16	1 5/16 - 12	2 3/4
1 1/4	6RTN5159-6-20	3 3/4	1 5/8 - 12	3
2	6RTN5159-8-32	4 5/16	2 1/2 - 12	4 1/8

Note: All dimensions are in inches and are reference only

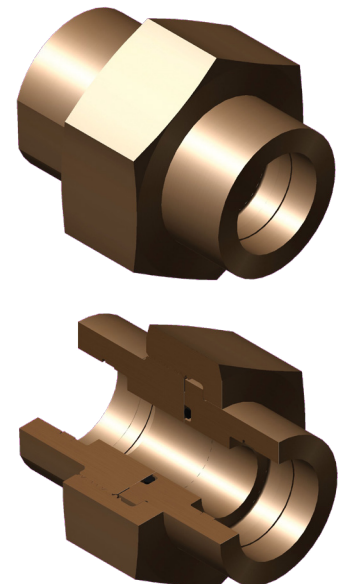
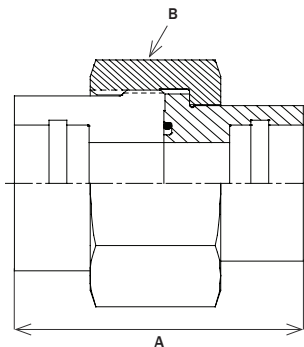


Union Assembly

Sil-Braze End, Pipe Size

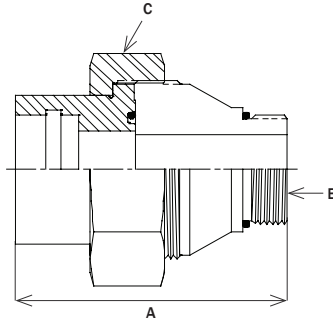
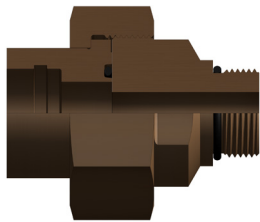
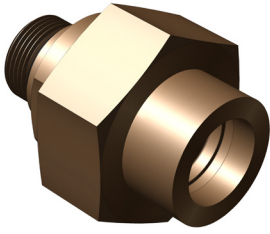
IPS size	Part No.	Dim. A	Dim. B (hex)
1/4	6RTN52-1-1	2 1/4	1 3/8
3/8	6RTN52-2-2	2 15/16	1 5/8
1/2	6RTN52-3-3	2 5/8	2
3/4	6RTN52-4-4	2 7/8	2 3/8
1	6RTN52-5-5	3 5/16	2 3/4
1 1/4	6RTN52-6-6	3 11/16	3
1 1/2	6RTN52-7-7	4 5/16	3 1/2
2	6RTN52-8-8	4 11/16	4 1/8
2 1/2	6RTN52-9-9	4 15/16	5 1/8

Note: All dimensions are in inches and are reference only



Union Assembly

Straight Thread X Sil-Braze, Pipe Size

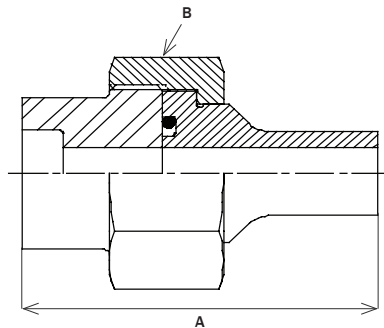
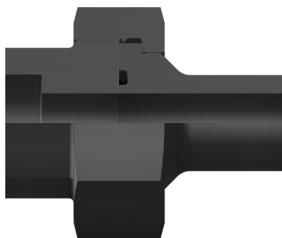
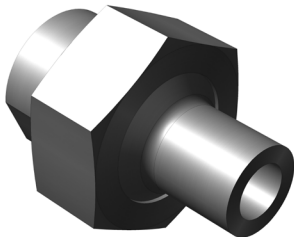


IPS size	Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)
1/4	6RTN5259-1-4	2 5/8	7/16 - 20	1 3/8
1/4	6RTN5259-1-6	2 5/8	9/16 - 18	1 3/8
1/4	6RTN5259-1-8	2 3/8	3/4 - 16	1 3/8
3/8	6RTN5259-2-6	2 29/32	9/16 - 18	1 5/8
3/8	6RTN5259-2-10	2 29/32	7/8 - 14	1 5/8
1/2	6RTN5259-3-4	3 1/4	7/16 - 20	2
1/2	6RTN5259-3-10	3 1/4	7/8 - 14	2
1/2	6RTN5259-3-20	3 1/4	1 5/8 - 12	2
3/4	6RTN5259-4-12	3 1/2	1 1/16 - 12	2 3/4
1	6RTN5259-5-16	3 3/4	1 5/16 - 12	2 3/4
1 1/4	6RTN5259-6-24	4 1/8	1 7/8 - 12	3
1 1/2	6RTN5259-7-24	4 9/16	1 7/8 - 12	3 1/2

Note: All dimensions are in inches and are reference only

Union Assembly

Female Socketweld X Male Socketweld, Pipe Size



IPS size	Part No.	Dim. A	Dim. B (hex)
1/4	6RTN6251-1-1	3 1/16	1 3/8
3/8	6RTN6251-2-2	3 5/16	1 5/8
1/2	6RTN6251-3-3	3 5/16	2
3/4	6RTN6251-4-4	3 7/16	2 3/8
1	6RTN6251-5-5	3 13/16	2 3/4
1 1/4	6RTN6251-6-6	4 3/16	3
1 1/2	6RTN6251-7-7	4 3/4	3 1/2
2	6RTN6251-8-8	5 1/4	4 1/8

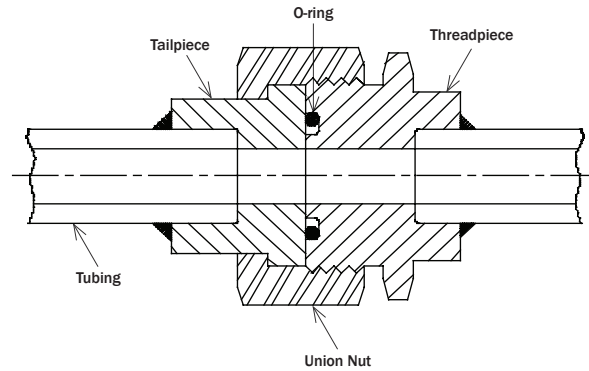
Note: All dimensions are in inches and are reference only

TECH-O-SEAL Fittings

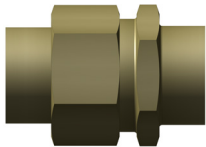
Fitting Information

How the TECH-O-SEAL System Works

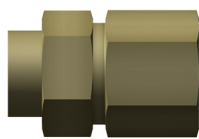
Two flat faced components - a threadpiece and a tailpiece - are joined by a union nut. The threadpiece is manufactured with a recessed groove that accommodates an elastic O-ring - the secret behind this highly effective system. An initial leak proof seal is made by hand tightening the nut. Subsequent pressure in the line, by forcing the O-ring to the outer edge of the groove, actually further strengthens the seal.



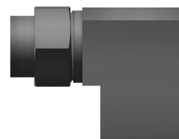
From 1/4 inch to 2 inch diameter



Female to Female
Connector-8300



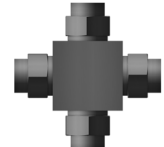
Female Connector-8304



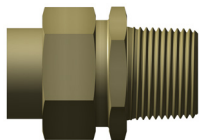
Female Elbow-8322



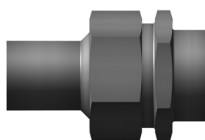
Male Run Tee-8312



Union Cross-8309



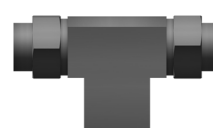
Male Connector-8301



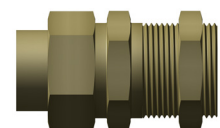
Union-8306



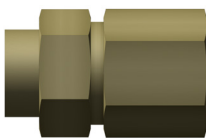
Male Elbow-8323



Female Branch Tee-8313



Bulkhead Union-8305



Female Connector-8302



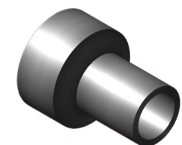
Union Elbow-8320



Union Tee-8310



Male Branch Tee-8315



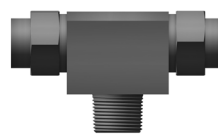
Reducing Insert Male OD X
Female IPS-8366



Male Connector-8303



Male Elbow-8321



Male Branch Tee-8311



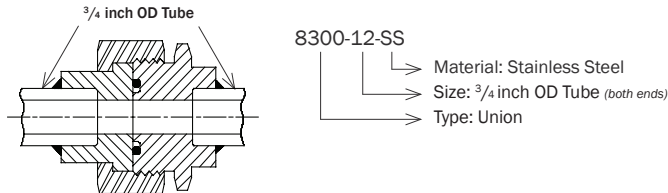
Male Run Tee-8316

TECH-O-SEAL Fittings

Ordering Information

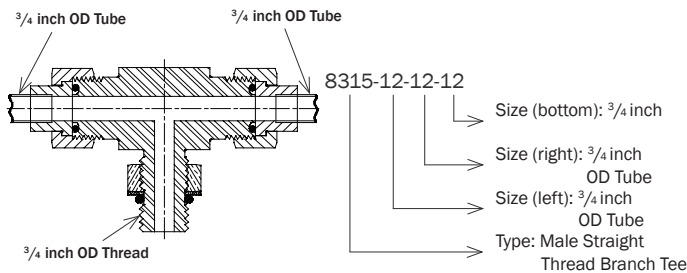
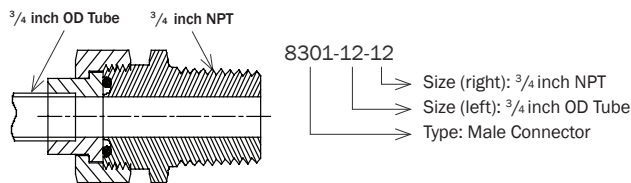
Unions, Connectors, Elbows, Tees and Crosses

The part numbers for all fittings may have one, two, three or four dash numbers to indicate size. Where only one dash number is given, the assembly has the same size at all ends. All dash numbers are expressed in sixteenths of an inch, as shown in the table below. For example:



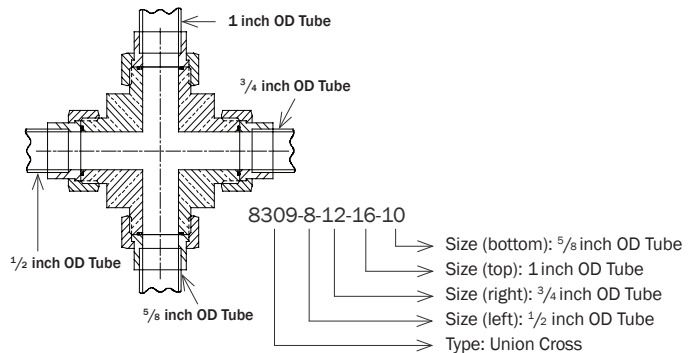
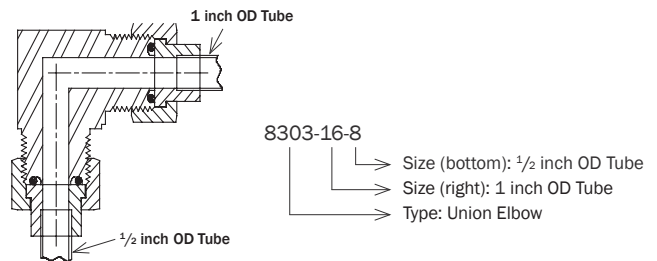
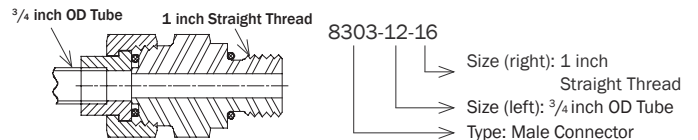
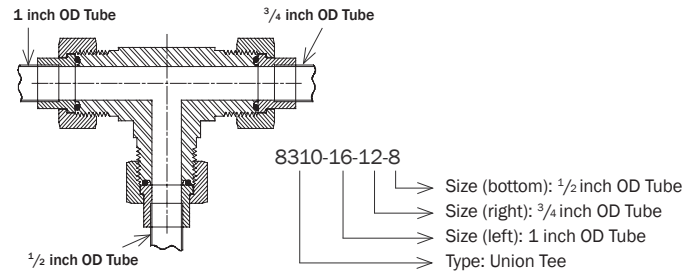
Threaded Parts

Part numbers for fittings with threaded ends always have two or three dash numbers. For example:



Reducers

To order a reducer; two, three or four dash numbers must be given to indicate the different end sizes. For example:



Materials and Ordering

To order any 8300 assembly, use the appropriate part number, and the desired material. Standard configurations are below. Other materials are also available, upon request. Fittings are supplied with BUNA-N O-ring(s) unless otherwise specified. Order Sil-Braze Ring (8329) separately if needed. The most frequently used fittings are shown in the table. Any other fittings can be ordered by using the proper dash numbers.

Material Options

Dash Material	Material
-S	steel
-SS	stainless steel
-BRZ	bronze
-NICU	nickel copper (monel)
-CUNI	copper nickel

Size Options

Size (inch)	Dash No.
1/8	-2
1/4	-4
3/8	-6
1/2	-8
5/8	-10

Size Options

Size (inch)	Dash No.
3/4	-12
1	-16
1 1/4	-20
1 1/2	-24
2	-32

TECH-O-SEAL Fittings

Engineering Data Information

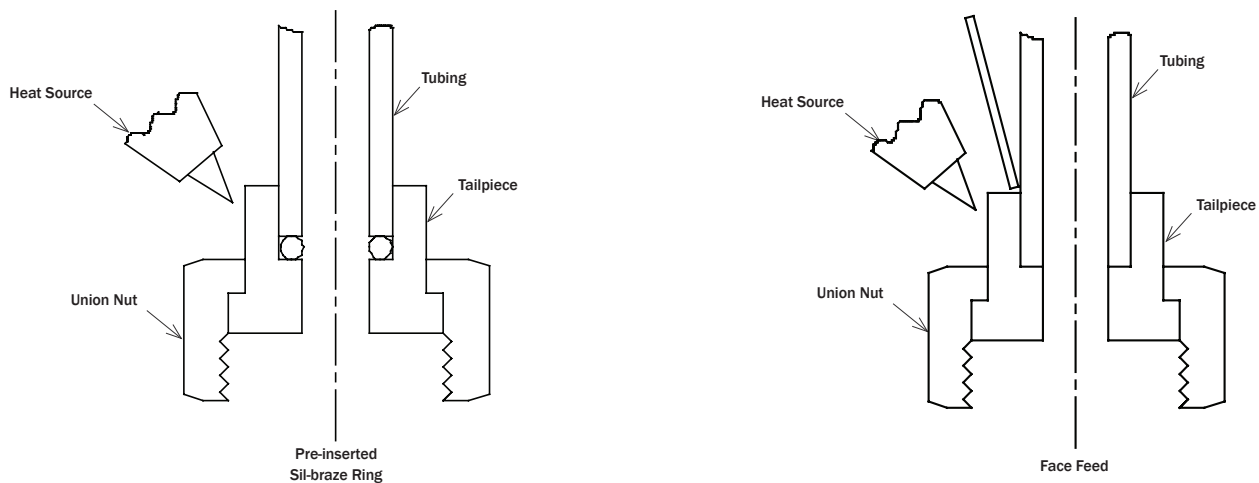
Method of Installation

Series 8300 fittings are designed for welding and brazing. Welding can be easily accomplished by standard welding procedures. Brazing can be accomplished by any of the standard brazing procedures, such as torch, induction heating or furnace. Series 8300 fittings can be brazed by face feed or by melting a pre-inserted sil-braze ring at the bottom of the socket, as shown below. Refer to page 101, Part Number 8329 for applicable sizes.

8300 Dash No.	Tube OD	Union Thread	Port Diameter
-4	1/4	9/16 - 18	0.22
-6	3/8	11/16 - 16	0.34
-8	1/2	13/16 - 16	0.45
-10	5/8	1 - 14	0.55
-12	3/4	1 1/4 - 12	0.66
-16	1	1 1/2 - 12	0.88
-20	1 1/4	1 3/4 - 12	1.00
-24	1 1/2	2 1/8 - 12	1.25
-32	2	2 7/8 - 12	1.63

Note: All dimensions are in inches and are reference only

Methods of Brazing



Fitting Materials

Steel

Tees, Elbows, Threaded connectors, Crosses - 1215 or equal
 Union Nuts - 1117 or 1215 Steel
 Tailpiece - C1018

Stainless Steel

Tees, Elbows, Threaded connectors and Bodies - 316 Stainless Steel
 Union Nuts - 303 Stainless Steel or 304 Stainless Steel
 Tailpiece - 316L Stainless Steel

All direct weld or braze (heat sealed) Tees, Elbows, Inserts and Couplings will be as follows:

Steel - C1018

Stainless Steel - 316L

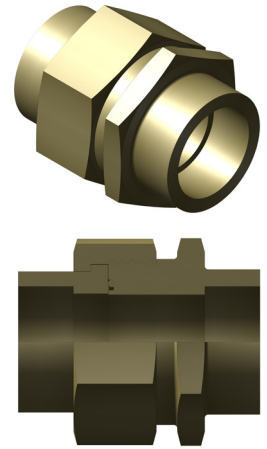
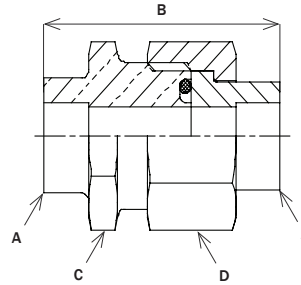
Fittings are also available in Bronze, Brass, CuNi and Monel and other materials to meet your requirements.

Fitting, Tube

Union - Tube to Tube

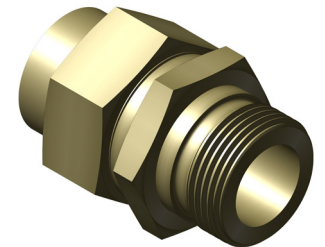
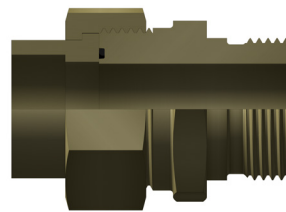
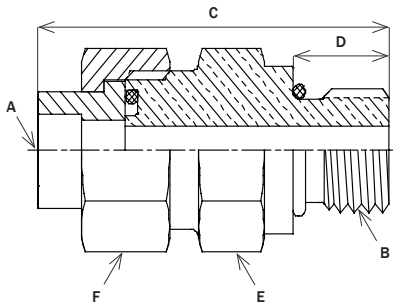
Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C (hex)	Dim. D (hex)	Socket depth
8300-4	1/4	1	5/8	5/8	3/16
8300-6	3/8	1 1/4	3/4	13/16	1/4
8300-8	1/2	1 7/16	7/8	15/16	5/16
8300-10	5/8	1 11/16	1 1/16	1 1/8	3/8
8300-12	3/4	1 15/16	1 3/8	1 3/8	7/16
8300-16	1	2 3/16	1 5/8	1 5/8	1/2
8300-20	1 1/4	2 5/16	1 7/8	2	9/16
8300-24	1 1/2	2 1/2	2 3/8	2 1/4	5/8
8300-32	2	3	3	3 1/4	7/8

Note: All dimensions are in inches and are reference only



Fitting, Tube

Male Connector - Tube to Male Straight Thread

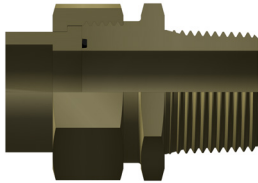
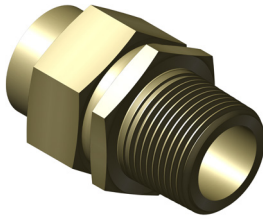
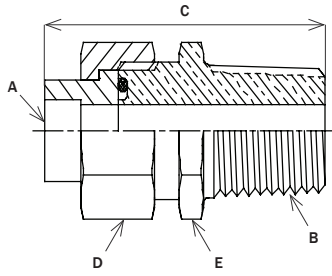


Part No.	Dim. A (OD tube socket)	Dim. B (straight thread)	Dim. C	Dim. D	Dim. E (hex.)	Dim. F (hex.)	Socket depth
8303-4-4	1/4	7/16 - 20	1 1/2	0.41	5/8	5/8	3/16
8303-4-6	1/4	9/16 - 18	1 11/16	0.43	3/4	13/16	3/16
8303-4-8	1/4	3/4 - 16	1 7/8	0.47	7/8	15/16	3/16
8303-6-6	3/8	9/16 - 18	1 11/16	0.43	3/4	13/16	1/4
8303-6-8	3/8	3/4 - 16	1 7/8	0.47	7/8	15/16	1/4
8303-6-10	3/8	7/8 - 14	2 1/8	0.53	1 1/16	1 1/8	1/4
8303-8-8	1/2	3/4 - 16	1 7/8	0.47	7/8	15/16	5/16
8303-8-10	1/2	7/8 - 14	2 1/8	0.53	1 1/16	1 1/8	5/16
8303-8-12	1/2	1 1/16 - 12	2 5/16	0.63	1 3/8	1 3/8	5/16
8303-10-10	5/8	7/8 - 14	2 1/8	0.53	1 1/16	1 1/8	3/8
8303-10-12	5/8	1 1/16 - 12	2 5/16	0.63	1 3/8	1 3/8	3/8
8303-12-12	3/4	1 1/16 - 12	2 5/16	0.63	1 3/8	1 3/8	7/16
8303-12-16	3/4	1 5/16 - 12	2 5/8	0.63	1 5/8	1 5/8	7/16
8303-16-16	1	1 5/16 - 12	2 5/8	0.63	1 5/8	1 5/8	1/2
8303-20-20	1 1/4	1 5/8 - 12	2 11/16	0.63	1 7/8	2	9/16
8303-24-24	1 1/2	1 7/8 - 12	2 3/4	0.63	2 1/4	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Connector - Tube to Male NPT

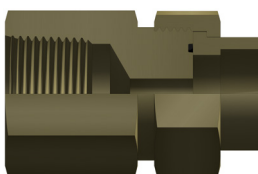
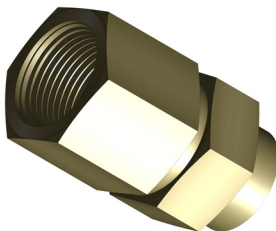
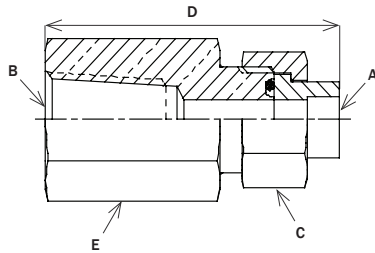


Part No.	Dim. A (OD tube socket)	Dim. B (male NPT)	Dim. C	Dim. D (hex)	Dim. E (hex)	Socket depth
8301-2-2	1/8	1/8 - 27	1 1/8	5/8	5/8	3/16
8301-4-4	1/4	1/4 - 18	1 7/16	5/8	5/8	3/16
8301-6-6	3/8	3/8 - 18	1 11/16	13/16	3/4	1/4
8301-8-8	1/2	1/2 - 14	2 1/16	15/16	1	5/16
8301-10-8	5/8	1/2 - 14	2 1/8	1 1/8	1 1/16	3/8
8301-12-12	3/4	3/4 - 14	2 5/16	1 3/8	1 3/8	7/16
8301-16-16	1	1 - 11 1/2	2 11/16	1 5/8	1 5/8	1/2
8301-20-20	1 1/4	1 1/4 - 11 1/2	2 15/16	2	1 7/8	9/16
8301-24-24	1 1/2	1 1/2 - 11 1/2	2 1/16	2 3/8	2 1/4	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Female Connector - Tube to Female NPT

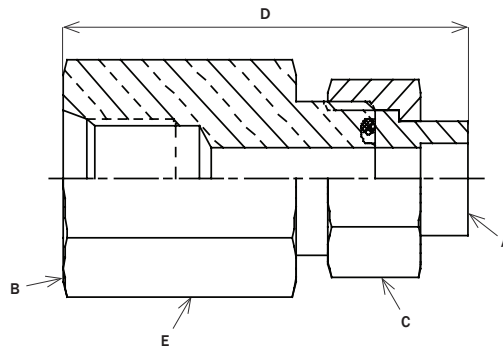
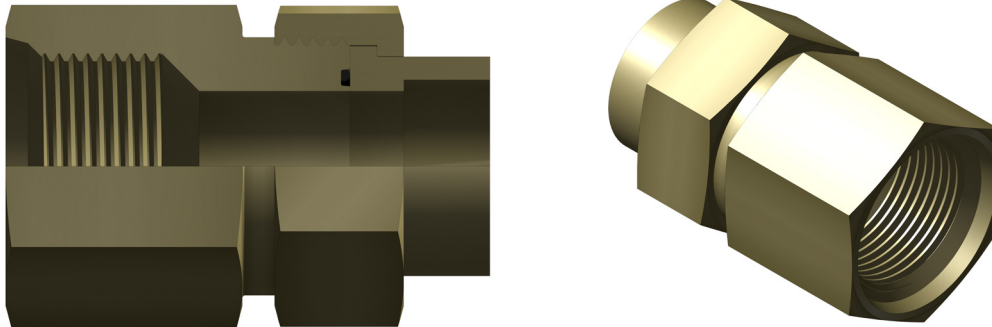


Part No.	Dim. A (OD tube socket)	Dim. B (female NPT)	Dim. C (hex)	Dim. D	Dim. E (hex)	Socket depth
8302-2-2	1/8	1/8 - 27	5/8	1 1/2	5/8	3/16
8302-4-2	1/4	1/8 - 27	5/8	1 3/8	5/8	3/16
8302-4-4	1/4	1/4 - 18	5/8	1 11/16	3/4	3/16
8302-4-6	1/4	3/8 - 18	13/16	1 7/8	7/8	3/16
8302-6-4	3/8	1/4 - 18	13/16	1 3/4	3/4	1/4
8302-6-6	3/8	3/8 - 18	13/16	1 7/8	7/8	1/4
8302-6-8	3/8	1/2 - 14	15/16	2 5/16	1 1/8	1/4
8302-8-6	1/2	3/8 - 18	15/16	1 15/16	7/8	5/16
8302-8-8	1/2	1/2 - 14	15/16	2 5/16	1 1/8	5/16
8302-8-12	1/2	3/4 - 14	1 3/8	2 1/2	1 3/8	5/16
8302-10-8	5/8	1/2 - 14	1 1/8	2 3/8	1 1/8	3/8
8302-10-12	5/8	3/4 - 14	1 3/8	2 1/2	1 3/8	3/8
8302-12-12	3/4	3/4 - 14	1 3/8	2 1/2	1 3/8	7/16
8302-12-16	3/4	1 - 11 1/2	1 5/8	2 15/16	1 5/8	7/16
8302-16-16	1	1 - 11 1/2	1 5/8	2 15/16	1 5/8	1/2
8302-20-20	1 1/4	1 1/4 - 11 1/2	2	3 1/8	2 1/4	9/16
8302-24-24	1 1/2	1 1/2 - 11 1/2	2 3/8	3 1/4	2 1/2	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Female Connector - Tube to Female Straight Thread

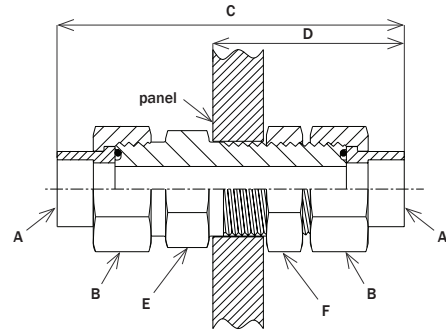
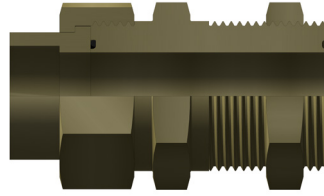
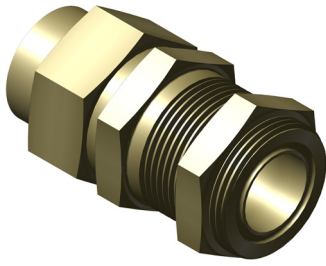


Part No.	Dim. A (OD tube socket)	Dim. B (female straight thread)	Dim. C (hex)	Dim. D	Dim. E (hex)	Socket depth
8304-2-4	1/8	7/16 - 20	5/8	1 5/8	3/4	3/16
8304-4-4	1/4	7/16 - 20	5/8	1 5/8	3/4	3/16
8304-4-6	1/4	9/16 - 18	13/16	1 13/16	13/16	3/16
8304-4-8	1/4	3/4 - 16	15/16	2 1/8	1 1/16	3/16
8304-6-6	3/8	9/16 - 18	13/16	1 13/16	13/16	1/4
8304-6-8	3/8	3/4 - 16	15/16	2 1/8	1 1/16	1/4
8304-6-10	3/8	7/8 - 14	1 1/8	2 5/16	1 1/4	1/4
8304-8-8	1/2	3/4 - 16	15/16	2 1/8	1 1/16	5/16
8304-8-10	1/2	7/8 - 14	1 1/8	2 5/16	1 1/4	5/16
8304-8-12	1/2	1 1/16 - 12	1 3/8	2 9/16	1 1/2	5/16
8304-10-10	5/8	7/8 - 14	1 1/8	2 5/16	1 1/4	3/8
8304-10-12	5/8	1 1/16 - 12	1 3/8	2 9/16	1 1/2	3/8
8304-12-12	3/4	1 1/16 - 12	1 3/8	2 9/16	1 1/2	7/16
8304-12-16	3/4	1 5/16 - 12	1 5/8	2 13/16	1 3/4	7/16
8304-16-16	1	1 5/16 - 12	1 5/8	2 13/16	1 3/4	1/2
8304-20-20	1 1/4	1 5/8 - 12	2	3 1/8	2 1/4	9/16
8304-24-24	1 1/2	1 7/8 - 12	2 3/8	3 3/16	2 1/2	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Bulkhead Union - Tube to Tube

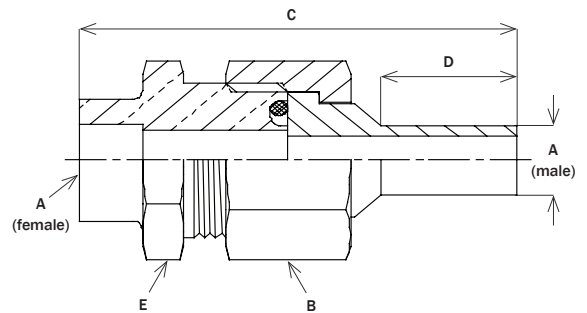
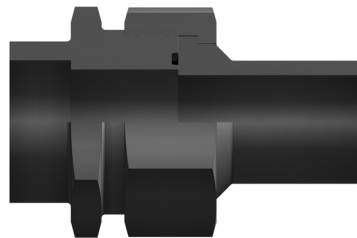
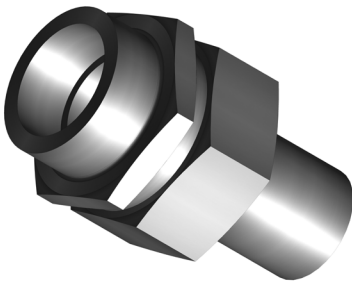


Part No.	Dim. A (OD tube socket)	Dim. B (hex)	Dim. C	Dim. D	Dim. E (hex)	Dim. F (hex)	Panel bore diameter	Socket depth
8305-4	1/4	5/8	2 5/16	1 3/8	5/8	9/16	19/32	3/16
8305-6	3/8	13/16	2 5/8	1 1/2	3/4	11/16	23/32	1/4
8305-8	1/2	15/16	3	1 11/16	7/8	7/8	27/32	5/16
8305-10	5/8	1 1/8	3 1/2	1 15/16	1 1/16	1	1 1/32	3/8
8305-12	3/4	1 3/8	3 5/8	2	1 3/8	1 1/4	1 9/32	7/16
8305-16	1	1 5/8	4	2 3/16	1 5/8	1 1/2	1 17/32	1/2
8305-20	1 1/4	2	4 1/8	2 1/4	1 7/8	1 7/8	1 25/32	9/16
8305-24	1 1/2	2 3/8	4 3/8	2 3/8	2 1/4	2 1/8	2 3/16	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Union - Female Tube to Male Tube

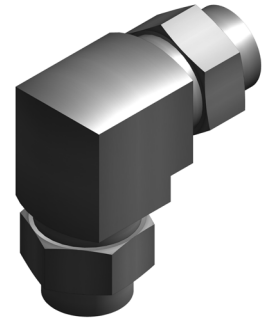
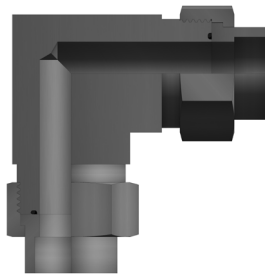
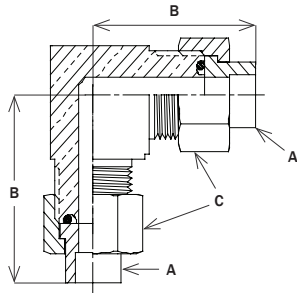


Part No.	Dim. A (OD tube)	Dim. B (hex)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8306-4	1/4	5/8	1 5/16	13/32	5/8	3/16
8306-6	3/8	13/16	1 11/16	19/32	3/4	1/4
8306-8	1/2	15/16	1 15/16	3/4	7/8	5/16
8306-10	5/8	1 1/8	2 1/4	13/16	1 1/16	3/8
8306-12	3/4	1 3/8	2 9/16	15/16	1 3/8	7/16
8306-16	1	1 5/8	2 7/8	1 1/16	1 5/8	1/2
8306-20	1 1/4	2	3 1/8	1 1/4	1 7/8	9/16
8306-24	1 1/2	2 3/8	3 7/16	1 3/8	2 1/4	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Union Elbow - Tube to Tube

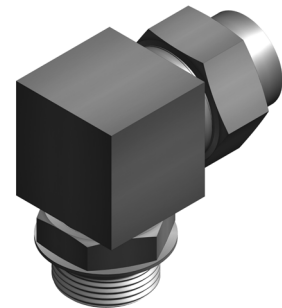
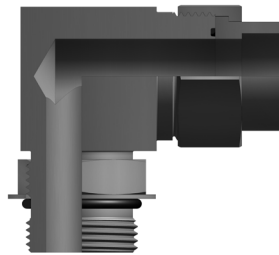
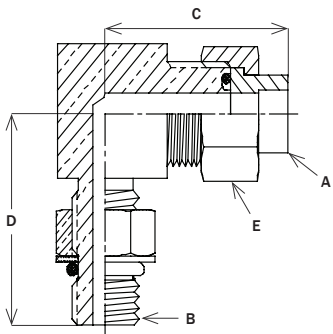


Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C (hex)	Socket depth
8320-4	1/4	1 3/16	5/8	3/16
8320-6	3/8	1 1/2	13/16	1/4
8320-8	1/2	1 11/16	15/16	5/16
8320-10	5/8	2 1/16	1 1/8	3/8
8320-12	3/4	2 1/4	1 3/8	7/16
8320-16	1	2 3/4	1 5/8	1/2
8320-20	1 1/4	3 1/16	2	9/16
8320-24	1 1/2	3 5/16	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Elbow - Tube to Straight Thread

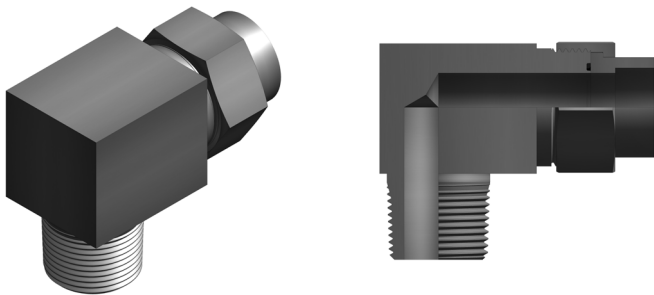
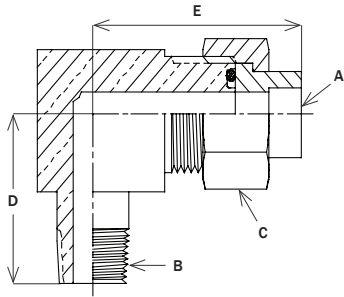


Part No.	Dim. A (OD tube socket)	Dim. B (straight thread)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8323-4-4	1/4	7/16 - 20	1 3/16	1 1/8	5/8	3/16
8323-6-6	3/8	9/16 - 18	1 1/2	1 1/4	13/16	1/4
8323-8-8	1/2	3/4 - 16	1 11/16	1 7/16	15/16	5/16
8323-10-10	5/8	7/8 - 14	2 1/16	1 11/16	1 1/8	3/8
8323-12-12	3/4	1 1/16 - 12	2 1/4	1 15/16	1 3/8	7/16
8323-16-16	1	1 5/16 - 12	2 3/8	2 1/16	1 5/8	1/2
8323-20-20	1 1/4	1 5/8 - 12	3 1/16	2 3/16	2	9/16
8323-24-24	1 1/2	1 7/8 - 12	3 5/16	2 3/8	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Elbow - Tube to Male NPT

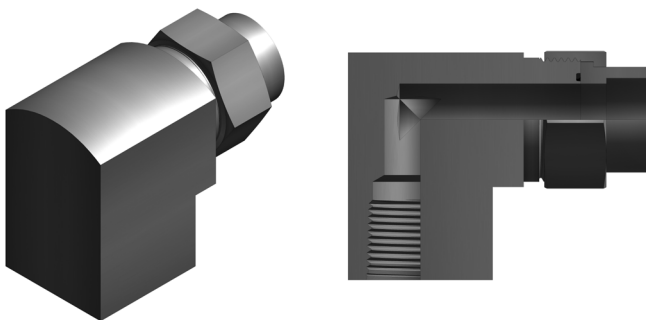
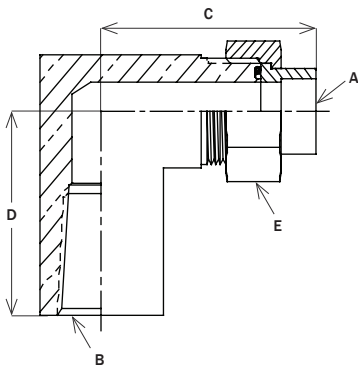


Part No.	Dim. A (OD tube socket)	Dim. B (male NPT)	Dim. C (hex)	Dim. D	Dim. E	Socket depth
8321-2-2	1/8	1/8 - 27	5/8	13/16	1 3/16	3/16
8321-4-4	1/4	1/4 - 18	5/8	1 1/16	1 3/16	3/16
8321-6-6	3/8	3/8 - 18	13/16	1 3/16	1 1/2	1/4
8321-8-8	1/2	1/2 - 14	15/16	1 7/16	1 11/16	5/16
8321-10-8	5/8	1/2 - 14	1 1/8	1 7/16	2 1/16	3/8
8321-12-12	3/4	3/4 - 14	1 3/8	1 9/16	2 1/4	7/16
8321-16-16	1	1 - 11 1/2	1 5/8	1 15/16	2 3/4	1/2
8321-20-20	1 1/4	1 1/4 - 11 1/2	2	2 3/16	3 1/16	9/16
8321-24-24	1 1/2	1 1/2 - 11 1/2	2 3/8	2 3/8	3 5/16	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Female Elbow - Tube to Female NPT

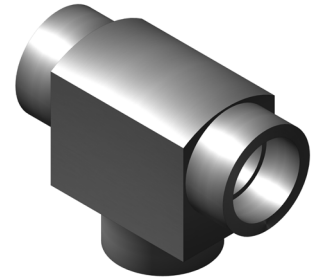
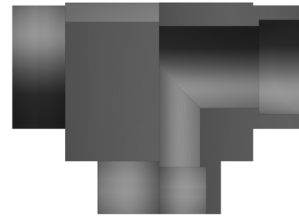
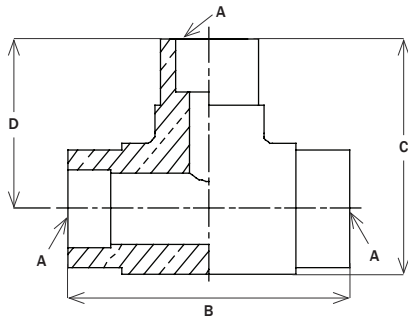


Part No.	Dim. A (OD tube socket)	Dim. B (female NPT)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8322-2-2	1/8	1/8 - 27	1 3/16	13/16	5/8	3/16
8322-4-2	1/4	1/8 - 27	1 3/16	13/16	5/8	3/16
8322-4-4	1/4	1/4 - 18	1 7/16	1 1/16	5/8	3/16
8322-4-6	1/4	3/8 - 18	1 11/16	1 3/16	15/16	3/16
8322-6-4	3/8	1/4 - 18	1 1/2	1 1/16	13/16	1/4
8322-6-6	3/8	3/8 - 18	1 1/2	1 3/16	13/16	1/4
8322-6-8	3/8	1/2 - 14	2 1/16	1 7/16	1 1/8	1/4
8322-8-6	1/2	3/8 - 18	1 11/16	1 3/16	15/16	5/16
8322-8-8	1/2	1/2 - 14	1 15/16	1 9/16	15/16	5/16
8322-8-12	1/2	3/4 - 14	2 3/4	1 15/16	1 5/8	5/16
8322-10-8	5/8	1/2 - 14	2 1/16	1 7/16	1 1/8	3/8
8322-10-12	5/8	3/4 - 14	2 3/4	1 15/16	1 5/8	3/8
8322-12-12	3/4	3/4 - 14	2 3/4	1 15/16	1 3/8	7/16
8322-12-16	3/4	1 - 11 1/2	3 1/16	2 3/16	2	7/16
8322-16-12	1	3/4 - 14	2 3/4	1 15/16	1 5/8	1/2
8322-16-16	1	1 - 11 1/2	2 3/4	1 15/16	1 5/8	1/2
8322-20-16	1 1/4	1 - 11 1/2	3 1/16	2 3/16	2	9/16
8322-20-20	1 1/4	1 1/4 - 11 1/2	3 5/16	2 3/8	2	9/16
8322-24-20	1 1/2	1 1/4 - 11 1/2	3 5/16	2 3/8	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Direct Braze or Weld Tee



Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C	Dim. D	Socket depth
8333-4	1/4	1 5/8	1 1/8	13/16	3/16
8333-6	3/8	1 5/8	1 1/8	13/16	1/4
8333-8	1/2	2 1/8	1 7/16	1 1/16	5/16
8333-10	5/8	2 3/8	1 21/32	1 3/16	3/8
8333-12	3/4	2 7/8	2	1 7/16	7/16
8333-16	1	3 1/8	2 1/4	1 9/16	1/2
8333-20	1 1/4	3 7/8	2 3/4	1 15/16	9/16
8333-24	1 1/2	4 3/8	3 3/16	2 3/16	5/8
8333-32	2	5 3/4	4 1/4	2 7/8	7/8

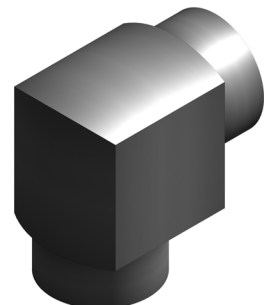
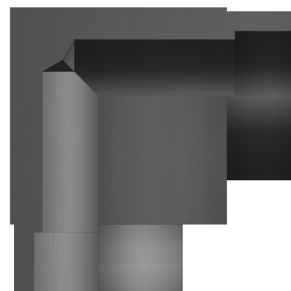
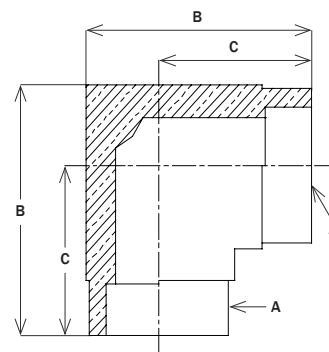
Note: All dimensions are in inches and are reference only

Fitting, Tube

Direct Braze or Weld 90° Elbow

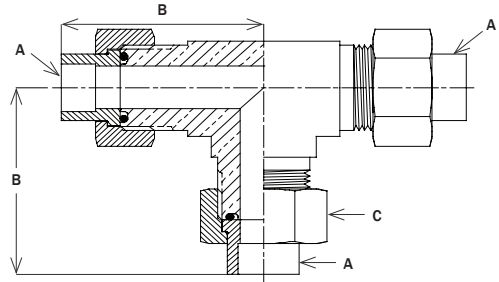
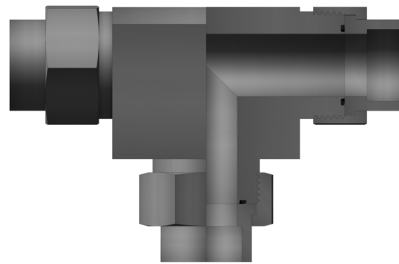
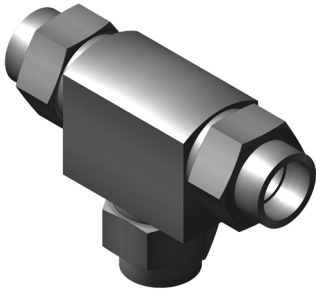
Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C	Socket depth
8340-4	1/4	1 1/8	13/16	3/16
8340-6	3/8	1 1/8	13/16	1/4
8340-8	1/2	1 7/16	1 1/16	5/16
8340-10	5/8	1 21/32	1 3/16	3/8
8340-12	3/4	2	1 7/16	7/16
8340-16	1	2 1/4	1 9/16	1/2
8340-20	1 1/4	2 3/4	1 15/16	9/16
8340-24	1 1/2	3 3/16	2 3/16	5/8
8340-32	2	4 1/4	2 7/8	7/8

Note: All dimensions are in inches and are reference only



Fitting, Tube

Union Tee - Tube to Tube to Tube

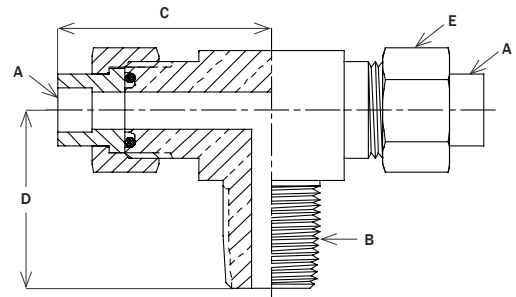
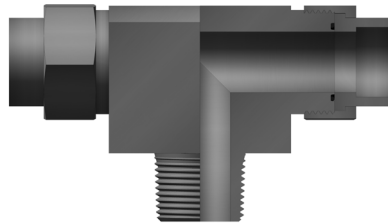
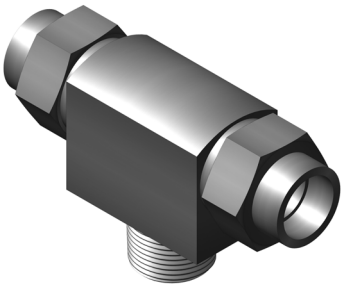


Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C (hex)	Socket depth
8310-4	1/4	1 3/16	5/8	3/16
8310-6	3/8	1 1/2	13/16	1/4
8310-8	1/2	1 11/16	15/16	5/16
8310-10	5/8	2 1/16	1 1/8	3/8
8310-12	3/4	2 1/4	1 3/8	7/16
8310-16	1	2 3/4	1 5/8	1/2
8310-20	1 1/4	3 1/16	2	9/16
8310-24	1 1/2	3 5/16	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Branch Tee - Tube to Tube to Male NPT

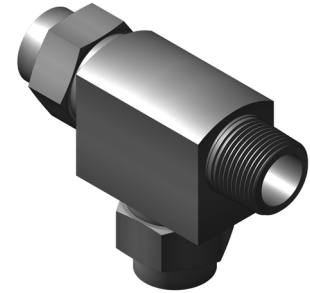
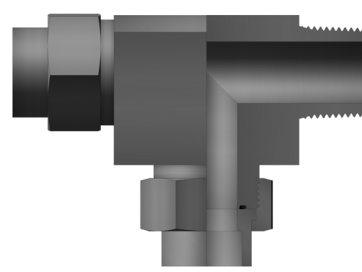
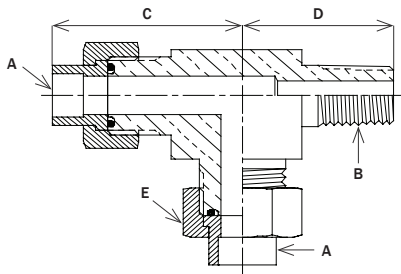


Part No.	Dim. A (OD tube socket)	Dim. B (male NPT)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8311-4-4-4	1/4	1/4 - 18	1 3/16	1 1/32	5/8	3/16
8311-6-6-6	3/8	3/8 - 18	1 1/2	1 3/16	13/16	1/4
8311-8-8-8	1/2	1/2 - 14	1 11/16	1 7/16	15/16	5/16
8311-10-10-8	5/8	1/2 - 14	2 1/16	1 7/16	1 1/8	3/8
8311-12-12-12	3/4	3/4 - 14	2 1/4	1 9/16	1 3/8	7/16
8311-16-16-16	1	1 - 11 1/2	2 3/4	1 15/16	1 5/8	1/2
8311-20-20-20	1 1/4	1 1/4 - 11 1/2	3 1/16	2 3/16	2	9/16
8311-24-24-24	1 1/2	1 1/2 - 11 1/2	3 5/16	2 3/8	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Run Tee - Tube to Male NPT to Tube

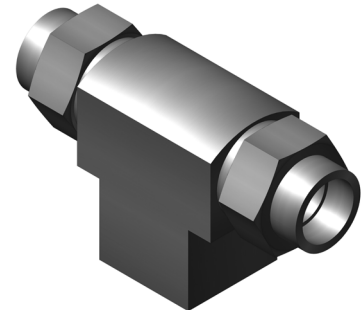
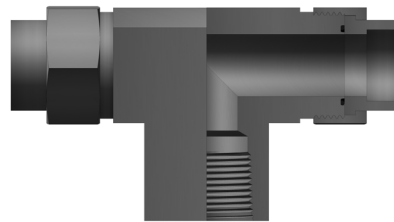
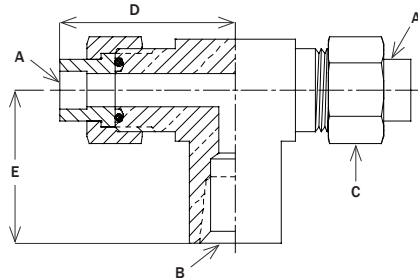


Part No.	Dim. A (OD tube socket)	Dim. B (male NPT)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8312-4-4-4	1/4	1/4 - 18	1 3/16	1 1/16	5/8	3/16
8312-6-6-6	3/8	3/8 - 18	1 1/2	1 3/16	13/16	1/4
8312-8-8-8	1/2	1/2 - 14	1 11/16	1 7/16	15/16	5/16
8312-10-8-10	5/8	1/2 - 14	2 1/16	1 7/16	1 1/8	3/8
8312-12-12-12	3/4	3/4 - 14	2 1/4	1 9/16	1 3/8	7/16
8312-16-16-16	1	1 - 11 1/2	2 3/4	1 15/16	1 5/8	1/2
8312-20-20-20	1 1/4	1 1/4 - 11 1/2	3 1/16	2 3/16	2	9/16
8312-24-24-24	1 1/2	1 1/2 - 11 1/2	3 5/16	2 3/8	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Branch Tee - Tube to Tube to Female NPT

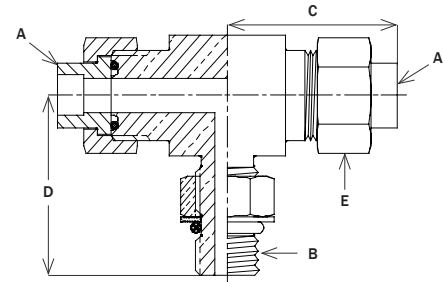
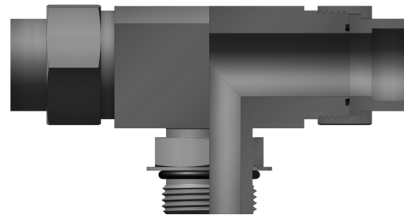
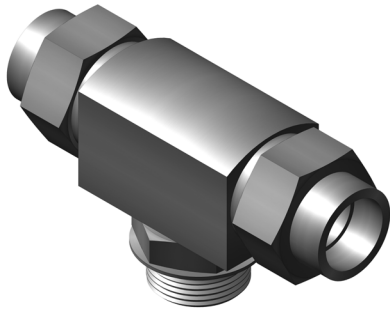


Part No.	Dim. A (OD tube socket)	Dim. B (female NPT)	Dim. C (hex)	Dim. D	Dim. E	Socket depth
8313-4-4-2	1/4	1/8 - 27	5/8	1 3/16	13/16	3/16
8313-6-6-4	3/8	1/4 - 18	13/16	1 1/2	1 1/16	1/4
8313-8-8-6	1/2	3/8 - 18	15/16	1 11/16	1 3/16	5/16
8313-10-10-8	5/8	1/2 - 14	1 1/8	2 1/16	1 7/16	3/8
8313-12-12-12	3/4	3/4 - 14	1 3/8	2 1/4	1 9/16	7/16
8313-16-16-12	1	3/4 - 14	1 5/8	2 3/4	1 15/16	1/2
8313-16-16-16	1	1 - 11 1/2	1 5/8	3	2 3/16	1/2
8313-20-20-16	1 1/4	1 - 11 1/2	2	3 1/16	2 3/16	9/16
8313-20-20-20	1 1/4	1 1/4 - 11 1/2	2	3 1/4	2 3/8	9/16
8313-24-24-20	1 1/2	1 1/4 - 11 1/2	2 3/8	3 5/16	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Branch Tee - Tube to Tube to Straight Thread

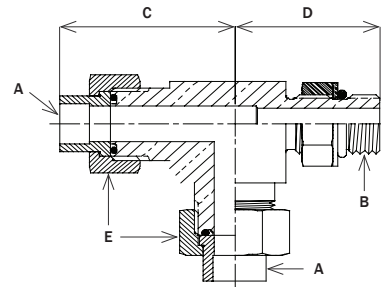
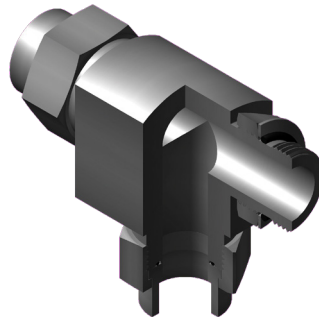


Part No.	Dim. A (OD tube socket)	Dim. B (male straight thread)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8315-4-4-4	1/4	7/16 - 20	1 3/16	1 1/8	5/8	3/16
8315-6-6-6	3/8	9/16 - 18	1 1/2	1 1/4	13/16	1/4
8315-8-8-8	1/2	3/4 - 16	1 11/16	1 7/16	15/16	5/16
8315-10-10-10	5/8	7/8 - 14	2 1/16	1 11/16	1 1/8	3/8
8315-12-12-12	3/4	1 1/16 - 12	2 1/4	1 15/16	1 3/8	7/16
8315-16-16-16	1	1 5/16 - 12	2 3/4	2 1/16	1 5/8	1/2
8315-20-20-20	1 1/4	1 5/8 - 12	3 1/16	2 3/16	2	9/16
8315-24-24-24	1 1/2	1 7/8 - 12	3 5/16	2 3/8	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Male Run Tee - Tube to Straight Thread to Tube

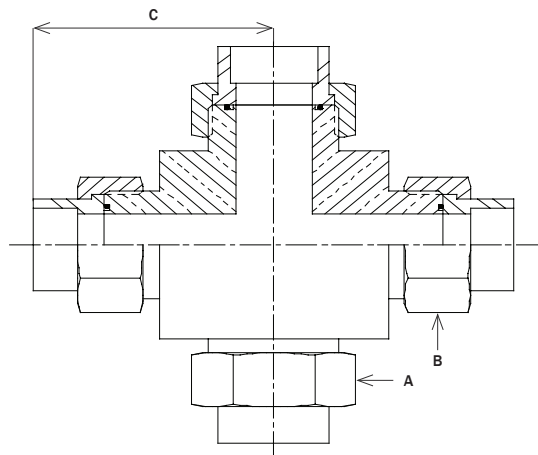
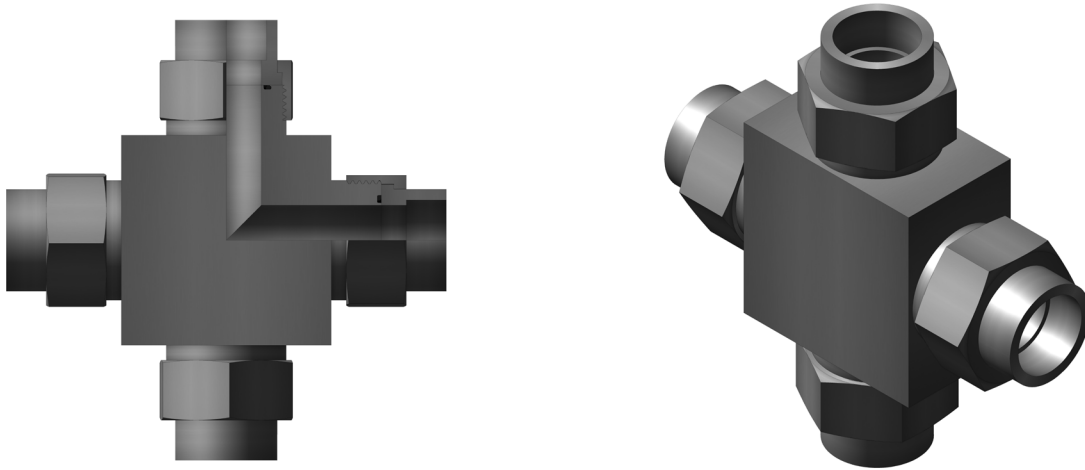


Part No.	Dim. A (OD tube socket)	Dim. B (male straight thread)	Dim. C	Dim. D	Dim. E (hex)	Socket depth
8316-4-4-4	1/4	7/16 - 20	1 3/16	1 1/8	5/8	3/16
8316-6-6-6	3/8	9/16 - 18	1 1/2	1 1/4	13/16	1/4
8316-8-8-8	1/2	3/4 - 16	1 11/16	1 7/16	15/16	5/16
8316-10-10-10	5/8	7/8 - 14	2 1/16	1 11/16	1 1/8	3/8
8316-12-12-12	3/4	1 1/16 - 12	2 1/4	1 15/16	1 3/8	7/16
8316-16-16-16	1	1 5/16 - 12	2 3/4	2 1/16	1 5/8	1/2
8316-20-20-20	1 1/4	1 5/8 - 12	3 1/16	2 3/16	2	9/16
8316-24-24-24	1 1/2	1 7/8 - 12	3 5/16	2	2 3/8	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Union Cross - Tube to Tube to Tube to Tube

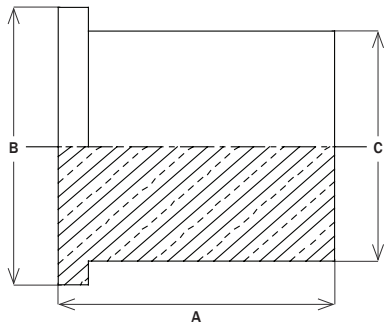


Part No.	Dim. A (OD tube socket)	Dim. B (hex)	Dim. C	Socket depth
8309-4	1/4	5/8	1 3/16	3/16
8309-6	3/8	13/16	1 1/2	1/4
8309-8	1/2	15/16	1 11/16	5/16
8309-10	5/8	1 1/8	2 1/16	3/8
8309-12	3/4	1 3/8	2 1/4	7/16
8309-16	1	1 5/8	2 3/4	1/2
8309-20	1 1/4	2	3 1/16	9/16
8309-24	1 1/2	2 3/8	3 5/16	5/8

Note: All dimensions are in inches and are reference only

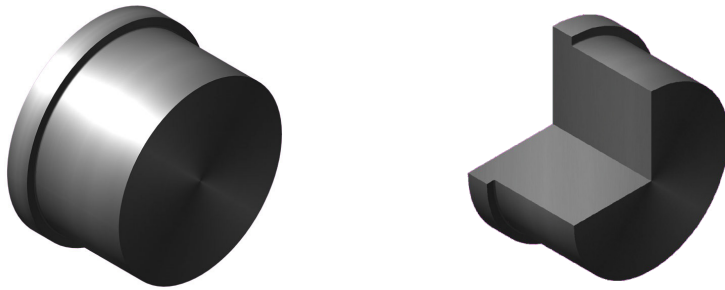
Fitting, Tube

Tailpiece - Blank



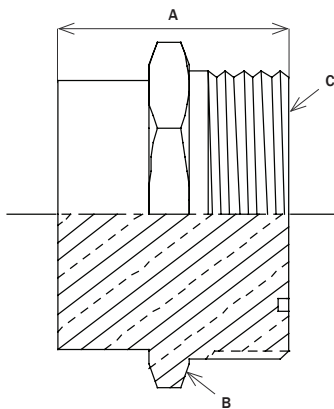
Part No.	OD tube	Dim. A	Dim. B (close)	Dim. C (close)
8317-4	1/4	3/8	1/2	13/32
8317-6	3/8	7/16	39/64	17/32
8317-8	1/2	1/2	47/64	21/32
8317-10	5/8	5/8	29/32	13/16
8317-12	3/4	11/16	1 5/32	1 3/64
8317-16	1	13/16	1 25/64	1 9/32
8317-20	1 1/4	7/8	1 21/32	1 17/32
8317-24	1 1/2	15/16	2 1/64	1 7/8
8317-32	2	1 1/4	2 49/64	2 19/32

Note: All dimensions are in inches and are reference only



Fitting, Tube

Threadpiece - Blank Body



Part No.	OD tube	Dim. A	Dim. B (hex)	Dim. C (thread)
8318-4	1/4	5/8	5/8	9/16 - 18
8318-6	3/8	13/16	3/4	11/16 - 16
8318-8	1/2	15/16	7/8	13/16 - 16
8318-10	5/8	1 1/16	1 1/16	1 - 14
8318-12	3/4	1 1/4	1 3/8	1 1/4 - 12
8318-16	1	1 3/8	1 5/8	1 1/2 - 12
8318-20	1 1/4	1 7/16	1 13/16	1 3/4 - 12
8318-24	1 1/2	1 9/16	2 1/4	2 1/8 - 12
8318-32	2	1 3/4	3	2 7/8 - 12

Note: All dimensions are in inches and are reference only

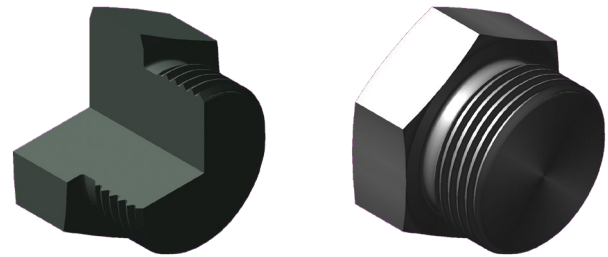
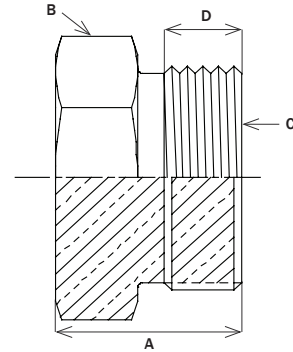


Fitting, Tube

Plug - Straight Thread

Part No.	OD tube	Dim. A (close)	Dim. B (hex)	Dim. C (thread)	Dim. D
8319-4	1/4	43/64	9/16	7/16 - 20	9/32
8319-6	3/8	47/64	11/16	9/16 - 18	19/64
8319-8	1/2	51/64	7/8	3/4 - 16	11/32
8319-10	5/8	15/16	1	7/8 - 14	25/64
8319-12	3/4	1 3/32	1 1/4	1 1/16 - 12	15/32
8319-16	1	1 1/8	1 1/2	1 5/16 - 12	15/32
8319-20	1 1/4	1 13/64	1 7/8	1 5/8 - 12	15/32
8319-24	1 1/2	1 17/64	2 1/8	1 7/8 - 12	15/32
8319-32	2	1 7/16	2 3/4	2 1/2 - 12	15/32

Note: All dimensions are in inches and are reference only

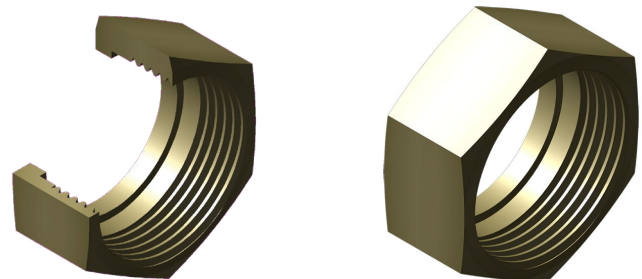
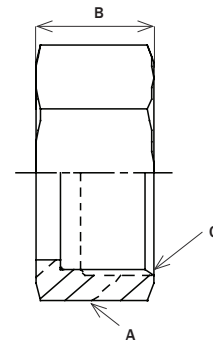


Fitting, Tube

Union Nut

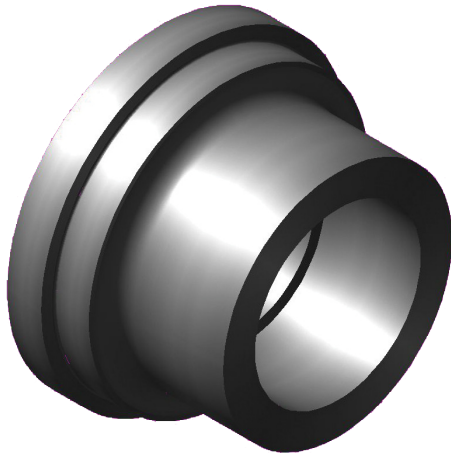
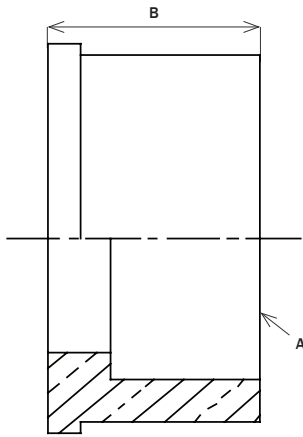
Part No.	OD tube	Dim. A (hex)	Dim. B	Dim. C (thread)
8307-4	1/4	5/8	3/8	9/16 - 18
8307-6	3/8	13/16	7/16	11/16 - 16
8307-8	1/2	15/16	1/2	13/16 - 16
8307-10	5/8	1 1/8	19/32	1 - 14
8307-12	3/4	1 3/8	19/32	1 1/4 - 12
8307-16	1	1 5/8	3/4	1 1/2 - 12
8307-20	1 1/4	2	3/4	1 3/4 - 12
8307-24	1 1/2	2 3/8	13/16	2 1/8 - 12
8307-32	2	3 1/4	15/16	2 7/8 - 12

Note: All dimensions are in inches and are reference only



Fitting, Tube

Tailpiece - Female Tube

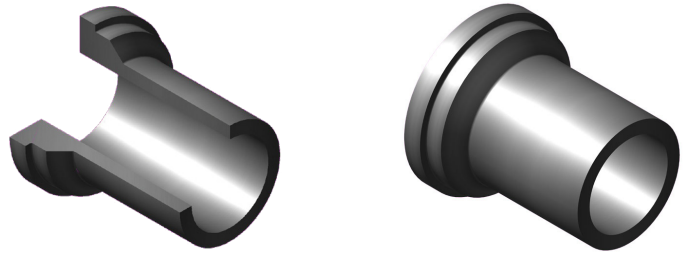
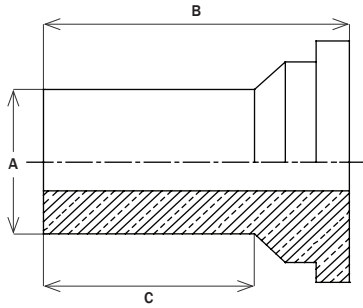


Part No.	Dim. A (OD tube socket)	Dim. B	Socket depth
8308-2-2	1/8	3/8	3/16
8308-4-4	1/4	3/8	3/16
8308-4-2	1/8	3/8	3/16
8308-6-6	3/8	7/16	1/4
8308-6-4	1/4	7/16	3/16
8308-6-2	1/8	7/16	3/16
8308-8-8	1/2	1/2	5/16
8308-8-6	3/8	1/2	1/4
8308-8-4	1/4	1/2	3/16
8308-10-10	5/8	5/8	3/8
8308-10-8	1/2	5/8	5/16
8308-10-6	3/8	5/8	1/4
8308-10-4	1/4	5/8	3/16
8308-12-12	3/4	11/16	7/16
8308-12-10	5/8	11/16	3/8
8308-12-8	1/2	11/16	5/16
8308-12-6	3/8	11/16	1/4
8308-12-4	1/4	11/16	3/16
8308-16-16	1	13/16	1/2
8308-16-12	3/4	13/16	7/16
8308-16-10	5/8	13/16	3/8
8308-16-8	1/2	13/16	5/16
8308-16-6	3/8	13/16	1/4
8308-16-4	1/4	13/16	3/16
8308-20-20	1 1/4	7/8	9/16
8308-20-16	1	7/8	1/2
8308-20-12	3/4	7/8	7/16
8308-20-10	5/8	7/8	3/8
8308-20-8	1/2	7/8	5/16
8308-20-6	3/8	7/8	1/4
8308-20-4	1/4	7/8	3/16
8308-24-24	1 1/2	15/16	5/8
8308-24-20	1 1/4	15/16	9/16
8308-24-16	1	15/16	1/2
8308-24-12	3/4	15/16	7/16
8308-24-10	5/8	15/16	3/8
8308-24-8	1/2	15/16	5/16
8308-24-6	3/8	15/16	1/4
8308-32-32	2	1 1/4	7/8
8308-32-24	1 1/2	1 1/4	5/8
8308-32-20	1 1/4	1 1/4	9/16
8308-32-16	1	1 1/4	1/2
8308-32-12	3/4	1 1/4	7/16
8308-32-10	5/8	1 1/4	3/8
8308-32-8	1/2	1 1/4	5/16

Note: All dimensions are in inches and are reference only

Fitting, Tube

Tailpiece - Male Tube

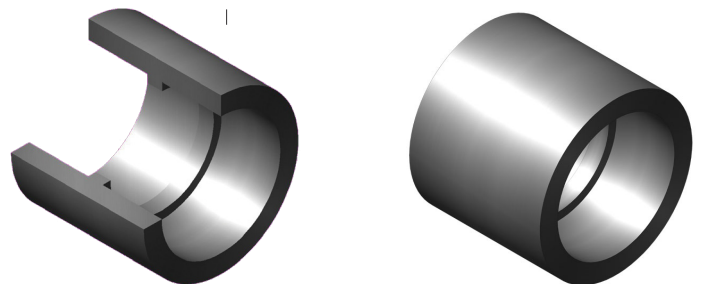
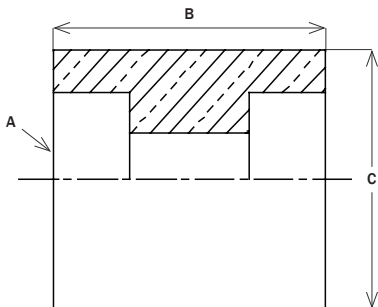


Part No.	Dim. A (OD tube male)	Dim. B	Dim. C
8327-4	1/4	11/16	13/32
8327-6	3/8	7/8	19/32
8327-8	1/2	1	3/4
8327-10	5/8	1 3/16	13/16
8327-12	3/4	1 5/16	15/16
8327-16	1	1 1/2	1 1/16
8327-20	1 1/4	1 11/16	1 1/4
8327-24	1 1/2	1 7/8	1 3/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Coupling - Direct Braze or Weld

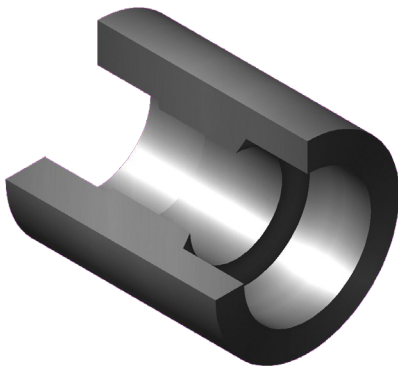
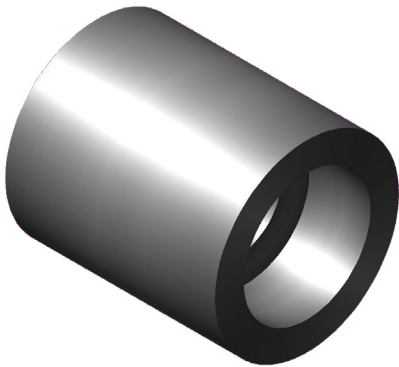
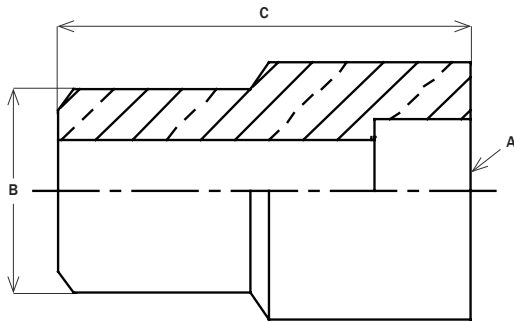


Part No.	Dim. A (OD tube socket)	Dim. B	Dim. C	Socket depth
8347-4-4	1/4	1/2	7/16	3/16
8347-6-6	3/8	5/8	9/16	1/4
8347-8-8	1/2	3/4	11/16	5/16
8347-10-10	5/8	7/8	7/8	3/8
8347-12-12	3/4	1	1 1/16	7/16
8347-16-16	1	1 1/8	1 5/16	1/2
8347-20-20	1 1/4	1 1/4	1 9/16	9/16
8347-24-24	1 1/2	1 3/8	1 15/16	5/8
8347-32-32	2	1 7/8	2 5/8	7/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Insert - IPS Male X OD Female



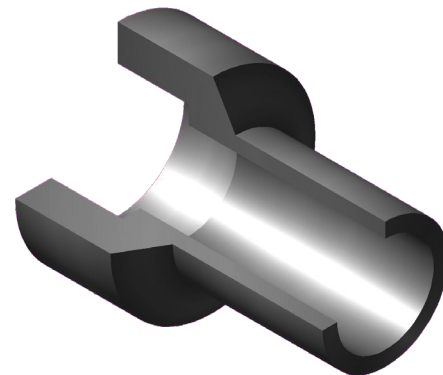
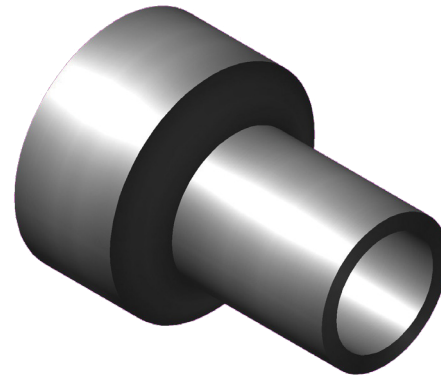
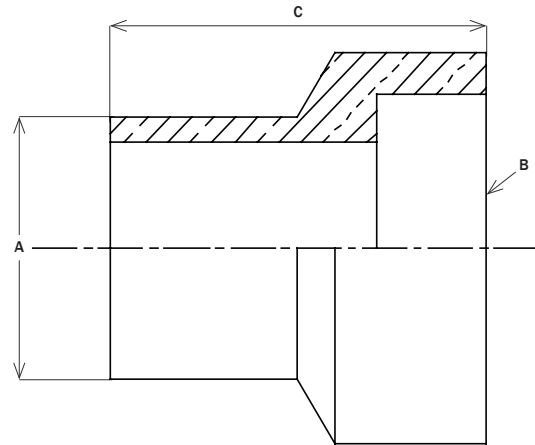
Part No.	Dim. A (OD tube socket)	Dim. B (IPS male)	Dim. C	Socket depth
8365-4-2	1/8	1/4	7/8	3/16
8365-4-4	1/4	1/4	7/8	3/16
8365-4-6	3/8	1/4	1 1/16	1/4
8365-6-2	1/8	3/8	1 1/16	3/16
8365-6-4	1/4	3/8	1 1/16	9/32
8365-6-6	3/8	3/8	1 1/16	1/4
8365-6-8	1/2	3/8	1	5/16
8365-8-4	1/4	1/2	1 3/16	3/16
8365-8-6	3/8	1/2	1 3/16	1/4
8365-8-8	1/2	1/2	1 3/16	5/16
8365-8-10	5/8	1/2	1 3/16	3/8
8365-12-4	1/4	3/4	1 5/16	3/16
8365-12-6	3/8	3/4	1 5/16	1/4
8365-12-8	1/2	3/4	1 3/8	5/16
8365-12-10	5/8	3/4	1 3/8	3/8
8365-12-12	3/4	3/4	1 1/8	7/16
8365-12-16	1	3/4	1 5/8	1/2
8365-16-4	1/4	1	1 9/16	3/16
8365-16-6	3/8	1	1 1/2	1/4
8365-16-8	1/2	1	1 1/2	5/16
8365-16-10	5/8	1	1 9/16	3/8
8365-16-12	3/4	1	1 1/2	7/16
8365-16-16	1	1	1 1/2	1/2
8365-16-20	1 1/4	1	1 3/4	5/8

Note: All dimensions are in inches and are reference only

Fitting, Tube

Insert - OD Male X IPS Female

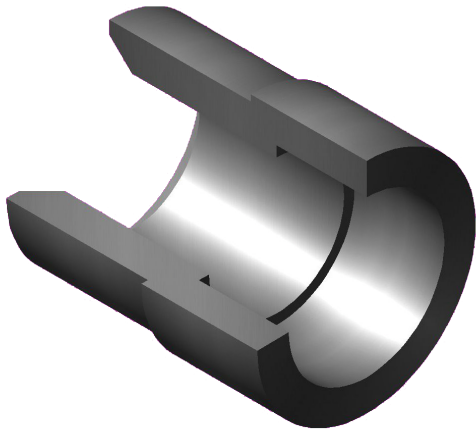
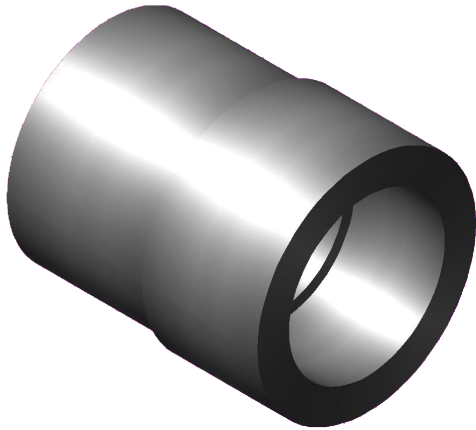
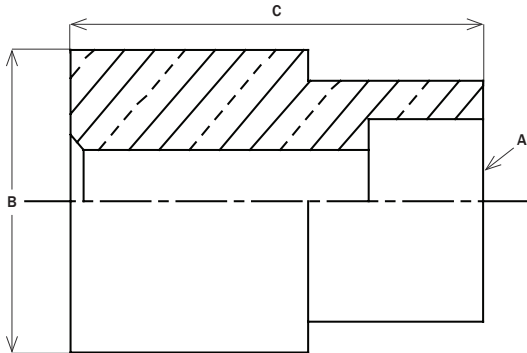
Part No.	Dim. A (OD tube male)	Dim. B (IPS socket)	Dim. C	Socket depth
8366-4-2	1/4	1/8	1 1/8	3/8
8366-4-4	1/4	1/4	1 1/4	3/8
8366-4-6	1/4	3/8	1 3/8	7/16
8366-4-8	1/4	1/2	1 5/8	1/2
8366-6-2	3/8	1/8	1 1/4	3/8
8366-6-4	3/8	1/4	1 5/16	3/8
8366-6-6	3/8	3/8	1 1/2	7/16
8366-6-8	3/8	1/2	1 3/4	1/2
8366-6-12	3/8	3/4	2	9/16
8366-8-4	1/2	1/4	1 1/2	3/8
8366-8-6	1/2	3/8	1 5/8	7/16
8366-8-8	1/2	1/2	1 7/8	1/2
8366-8-12	1/2	3/4	2 1/16	9/16
8366-8-16	1/2	1	2 1/4	5/8
8366-10-4	5/8	1/4	1 1/2	3/8
8366-10-6	5/8	3/8	1 9/16	7/16
8366-10-8	5/8	1/2	1 13/16	1/2
8366-10-12	5/8	3/4	2 1/16	9/16
8366-10-16	5/8	1	2 1/4	5/8
8366-10-20	5/8	1 1/4	2 9/16	11/16
8366-12-4	3/4	1/4	1 1/2	3/8
8366-12-6	3/4	3/8	1 5/8	7/16
8366-12-8	3/4	1/2	1 15/16	1/2
8366-12-12	3/4	3/4	2 1/8	9/16
8366-12-16	3/4	1	2 5/16	5/8
8366-12-20	3/4	1 1/4	2 3/8	11/16
8366-16-4	1	1/4	1 1/2	3/8
8366-16-6	1	3/8	1 1/2	7/16
8366-16-8	1	1/2	1 7/8	1/2
8366-16-12	1	3/4	2 1/8	9/16
8366-16-16	1	1	2 5/16	5/8
8366-16-20	1	1 1/4	2 5/8	11/16
8366-16-24	1	1 1/2	2 3/4	3/4



Note: All dimensions are in inches and are reference only

Fitting, Tube

Direct Braze - Weld Reducing Inserts



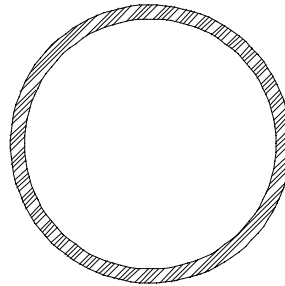
Part No.	Dim. A (OD tube socket)	Dim. B (OD tube male)	Dim. C	Socket depth
8367-6-2	1/8	3/8	11/16	3/16
8367-6-4	1/4	3/8	3/4	3/16
8367-8-2	1/8	1/2	13/16	3/16
8367-8-4	1/4	1/2	13/16	3/16
8367-8-6	3/8	1/2	7/8	1/4
8367-10-2	1/8	5/8	15/16	3/16
8367-10-4	1/4	5/8	15/16	3/16
8367-10-6	3/8	5/8	15/16	1/4
8367-10-8	1/2	5/8	1	5/16
8367-12-2	1/8	3/4	7/8	3/16
8367-12-4	1/4	3/4	7/8	3/16
8367-12-6	3/8	3/4	7/8	1/4
8367-12-8	1/2	3/4	7/8	5/16
8367-12-10	5/8	3/4	1 1/8	3/8
8367-16-2	1/8	1	1	3/16
8367-16-4	1/4	1	1	3/16
8367-16-6	3/8	1	1	1/4
8367-16-8	1/2	1	1	5/16
8367-16-10	5/8	1	1	3/8
8367-16-12	3/4	1	1 1/4	7/16
8367-20-2	1/8	1 1/4	1 1/8	3/16
8367-20-4	1/4	1 1/4	1 1/8	3/16
8367-20-6	3/8	1 1/4	1 1/8	1/4
8367-20-8	1/2	1 1/4	1 1/8	5/16
8367-20-10	5/8	1 1/4	1 1/8	3/8
8367-20-12	3/4	1 1/4	1 1/8	7/16
8367-20-16	1	1 1/4	1 3/8	1/2
8367-24-2	1/8	1 1/2	1 1/8	3/16
8367-24-4	1/4	1 1/2	1 1/8	3/16
8367-24-6	3/8	1 1/2	1 1/8	1/4
8367-24-8	1/2	1 1/2	1 1/8	5/16
8367-24-10	5/8	1 1/2	1 1/8	3/8
8367-24-12	3/4	1 1/2	1 1/4	7/16
8367-24-16	1	1 1/2	1 1/4	1/2
8367-24-20	1 1/4	1 1/2	1 1/2	9/16
8367-32-2	1/8	2	1 3/8	3/16
8367-32-4	1/4	2	1 3/8	3/16
8367-32-6	3/8	2	1 3/8	1/4
8367-32-8	1/2	2	1 3/8	5/16
8367-32-10	5/8	2	1 3/8	3/8
8367-32-12	3/4	2	1 9/16	7/16
8367-32-16	1	2	1 9/16	1/2
8367-32-20	1 1/4	2	1 9/16	9/16
8367-32-24	1 1/2	2	1 5/8	5/8

Note: All dimensions are in inches and are reference only

Rings

O-ring - Union End

Part No.	Union size	ARP No.
4564011	-4	011
4564013	-6	013
4564015	-8	015
4564017	-10	017
4564019	-12	019
4564022	-16	022
4564123	-20	123
4564127	-24	127
4564132	-32	132

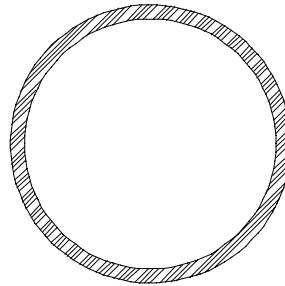


Note: All dimensions are in inches and are reference only

Rings

O-ring - Straight Thread Connection

Part No.	Union size	ARP No.
4564904	-4	904
4564906	-6	906
4564908	-8	908
4564910	-10	910
4564912	-12	912
4564916	-16	916
4564920	-20	920
4564924	-24	924
4564932	-32	932

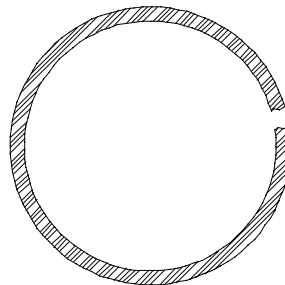


Note: All dimensions are in inches and are reference only

Rings

Sil-Braze Ring

Part No.	OD tube
8329-2	1/8
8329-4	1/4
8329-6	3/8
8329-8	1/2
8329-10	5/8
8329-12	3/4
8329-16	1
8329-20	1 1/4
8329-24	1 1/2
8329-32	2



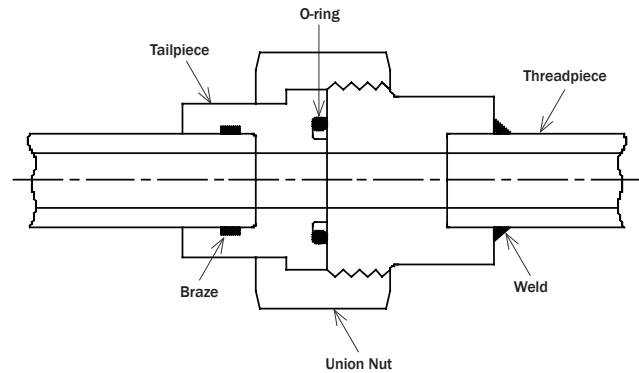
Note: All dimensions are in inches and are reference only

TECH-O-SEAL Pipe Fittings

Fitting Information

The Fittings that Seal Themselves

With flat faced construction and a recessed o-ring, TECH-O-SEAL pipe fittings actually create their own seal. With only light wrenching the seal never leaks, never needs retightening, yet can be easily broken and resealed indefinitely without having to replace the actual piping. From vacuum to 3000 PSI, TECH-O-SEAL fittings are fail-safe, yet priced extremely competitively. They come in a complete family of unions, elbows, tees and connectors for pipe sizes from $\frac{1}{8}$ inch to $1\frac{1}{2}$ inch.



Notes

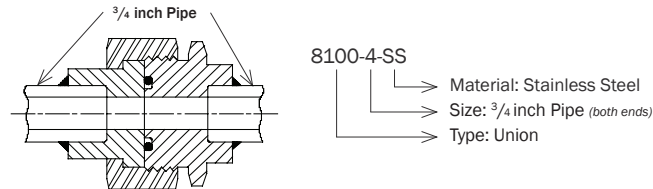
- Fail-safe leak-proof reliability, with any pressure actually serving to strengthen the seal rather than loosening it. Good from vacuum to 3000 PSI for pipe fittings; vacuum up to 10000 PSI for other TECH-O-SEAL valves and fittings.
- Easy component replacement, the flat construction allows for slipping the component in and out without disturbing the surrounding tube or pipe sections.
- No maintenance, since the seal, once made, never requires retightening.
- Resistance to vibration, the seals just will not loosen, even under extreme vibration or pressure surges.
- Size changes with one fitting are implemented through a complete line of standard parts.

TECH-O-SEAL Fittings

Ordering Information

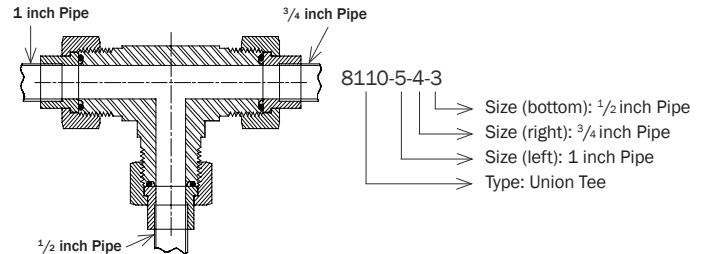
Unions, Connectors, Elbows and Tees

The part numbers for all fittings may have one, two or three dash numbers to indicate size. Where only one dash number is given, the assembly has the same size at all ends. All dash numbers are expressed in sixteenths of an inch, as shown in the table below. For example:



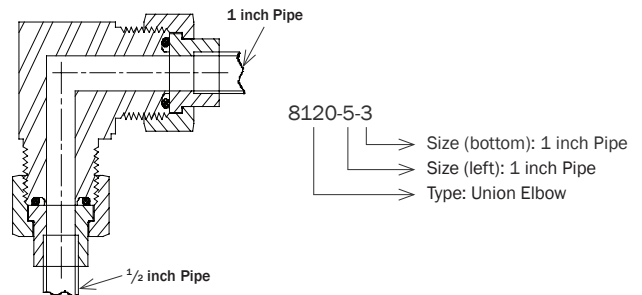
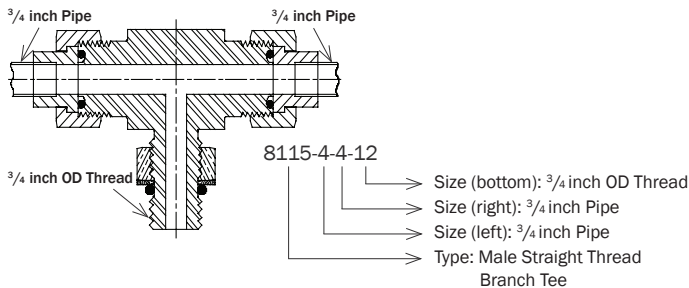
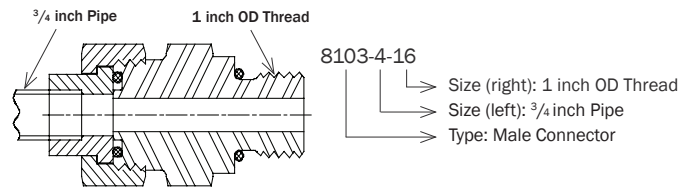
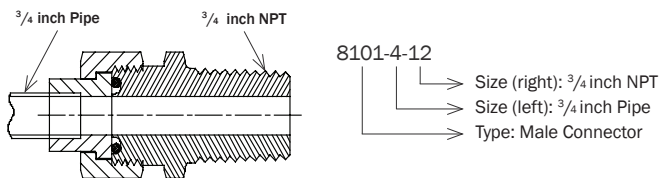
Reducers

To order a reducer, two or three dash numbers must be given to indicate the different end sizes. For example:



Threaded Parts

Part numbers for fittings with threaded ends always have two or three dash numbers. For example:



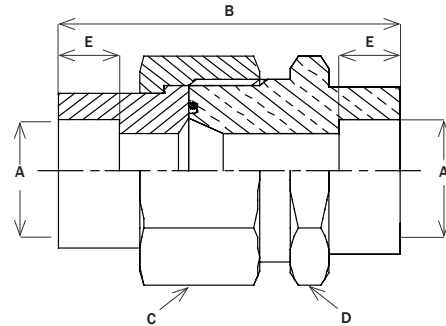
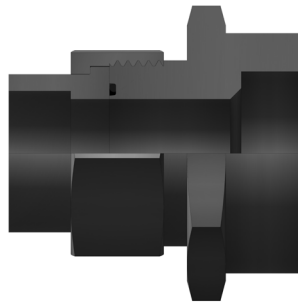
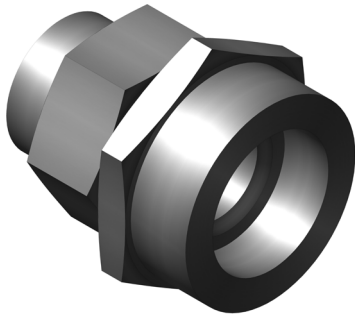
Materials and Ordering

To order any 8100 assembly, use the appropriate part number, and the desired material. Standard configurations are below. Other materials are also available, upon request. Fittings are supplied with BUNA-N O-ring(s) unless otherwise specified. Order Sil-Braze Ring (8129) separately if needed. The most frequently used fittings are shown in the tables. Any other fittings can be ordered by using the proper dash numbers.

Ordering Information for Options		Ordering Information for Options		Ordering Information for Options		Ordering Information for Options	
Dash	Material	NPT size	Dash No.	OD thread	Dash No.	Pipe size	Dash No.
-S	steel	1/16	-0	1/4	-4	1/8	-0
-SS	stainless steel	1/8	-2	3/8	-6	1/4	-1
-BRZ	bronze	1/4	-4	1/2	-8	3/8	-2
-NICU	nickel copper (monel)	3/8	-6	5/8	-10	1/2	-3
-CUNI	copper nickel	1/2	-8	3/4	-12	3/4	-4
		3/4	-12	1	-16	1	-5
		1	-16	1 1/4	-20	1 1/4	-6
		1 1/4	-20	1 1/2	-24	1 1/2	-7
		1 1/2	-24	2	-32	2	-8

Fitting, Pipe

Union - Pipe Socket to Pipe Socket

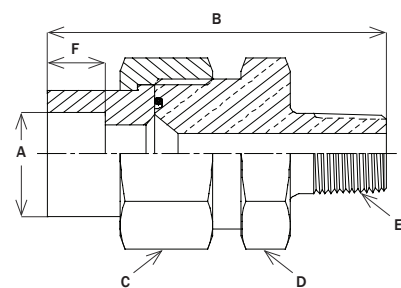
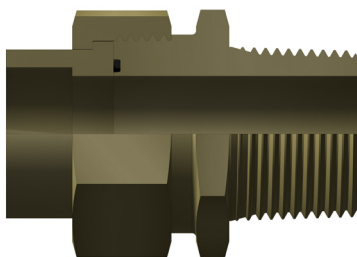
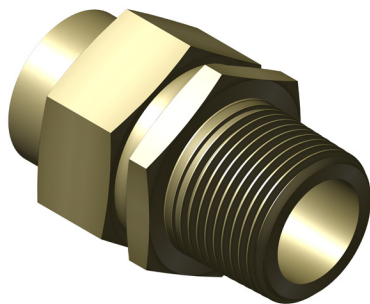


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D (hex)	Dim. E
8100-0	1/8	1 5/8	15/16	15/16	3/8
8100-1	1/4	1 7/8	1 1/8	1 1/8	3/8
8100-2	3/8	1 15/16	1 3/8	1 3/8	3/8
8100-3	1/2	2 1/8	1 5/8	1 5/8	3/8
8100-4	3/4	2 7/16	2	1 7/8	1/2
8100-5	1	2 9/16	2 3/8	2 1/4	1/2
8100-6	1 1/4	3	3 1/4	3	1/2
8100-7	1 1/2	3	3 1/4	3	1/2

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Connector - Pipe Socket to Male NPT

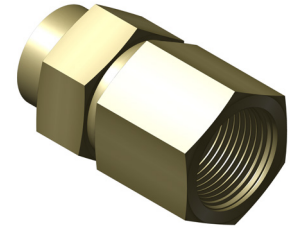
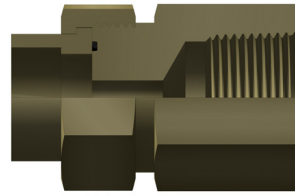
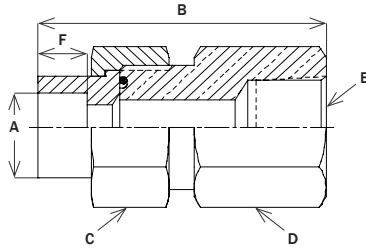


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D (hex)	Dim. E (NPT)	Dim. F
8101-1-4	1/4	2	1 1/8	1 1/16	1/4	3/8
8101-2-6	3/8	2 3/16	1 3/8	1 3/8	3/8	3/8
8101-3-8	1/2	2 9/16	1 5/8	1 5/8	1/2	3/8
8101-4-12	3/4	2 9/16	1 5/8	1 5/8	3/4	1/2
8101-5-16	1	2 15/16	2 3/8	2 1/4	1	1/2
8101-6-20	1 1/4	3 1/2	3 1/4	3	1 1/4	1/2
8101-7-24	1 1/2	3 1/2	3 1/4	3	1 1/2	1/2

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Female Connector - Pipe Socket to Female NPT

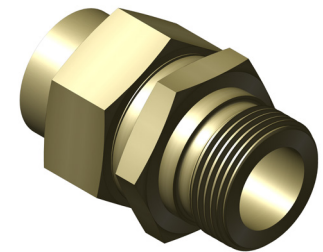
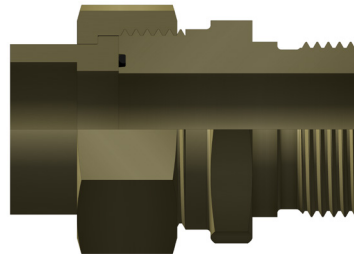
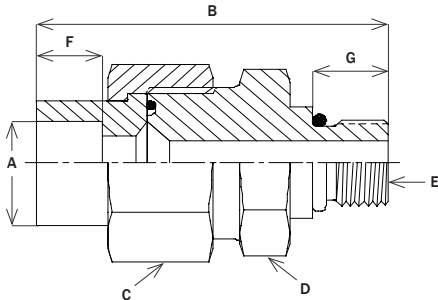


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D (hex)	Dim. E (NPT)	Dim. F
8102-1-4	1/4	2 3/16	1 1/8	1 1/8	1/4	3/8
8102-2-6	3/8	2 5/16	1 3/8	1 3/8	3/8	3/8
8102-3-8	1/2	2 11/16	1 5/8	1 5/8	1/2	3/8
8102-4-12	3/4	2 11/16	1 5/8	1 5/8	3/4	1/2
8102-5-16	1	3 1/16	2 3/8	2 1/4	1	1/2
8102-6-20	1 1/4	3 7/16	3 1/4	3	1 1/4	1/2
8102-7-24	1 1/2	3 7/16	3 1/4	3	1 1/2	1/2

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Connector - Pipe Socket to Male Straight Thread

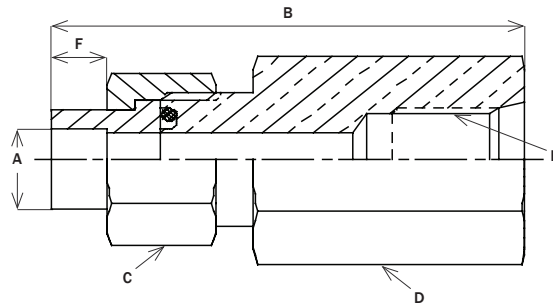
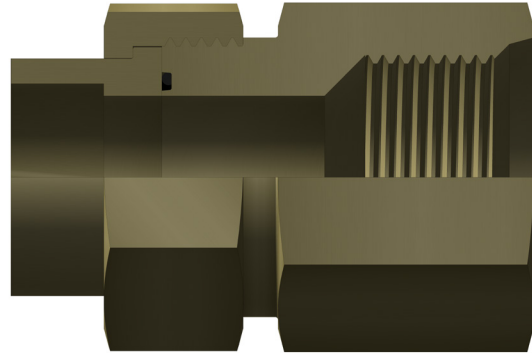
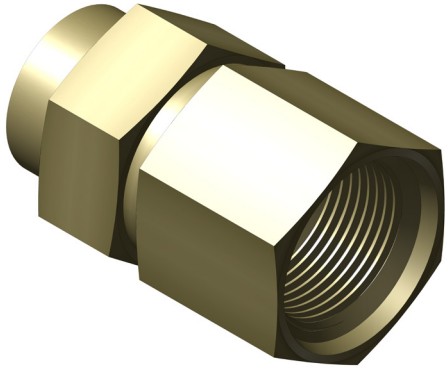


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D (hex)	Dim. E (thread)	Dim. F	Dim. G
8103-1-4	1/4	1 15/16	1 1/8	1 1/16	7/16 - 20	3/8	13/32
8103-1-6	1/4	2	1 1/8	1 1/16	9/16 - 18	3/8	7/16
8103-2-6	3/8	2 3/16	1 3/8	1 3/8	9/16 - 18	3/8	7/16
8103-2-8	3/8	2 5/16	1 3/8	1 3/8	3/4 - 16	3/8	15/32
8103-3-8	1/2	2 5/8	1 5/8	1 5/8	3/4 - 16	3/8	15/32
8103-3-12	1/2	2 5/8	1 5/8	1 5/8	1 1/16 - 12	3/8	5/8
8103-4-12	3/4	2 5/8	1 5/8	1 5/8	1 1/16 - 12	1/2	5/8
8103-4-16	3/4	2 5/8	1 5/8	1 5/8	1 5/16 - 12	1/2	5/8
8103-5-16	1	2 3/4	2 3/8	2 1/4	1 5/16 - 12	1/2	5/8
8103-5-20	1	2 3/4	2 3/8	2 1/4	1 5/8 - 12	1/2	5/8
8103-6-20	1 1/4	3 1/4	3 1/4	3	1 5/8 - 12	1/2	5/8
8103-6-24	1 1/4	3 1/4	3 1/4	3	1 7/8 - 12	1/2	5/8
8103-7-24	1 1/2	3 1/4	3 1/4	3	1 7/8 - 12	1/2	5/8

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Female Connector - Pipe Socket to Female Straight Thread

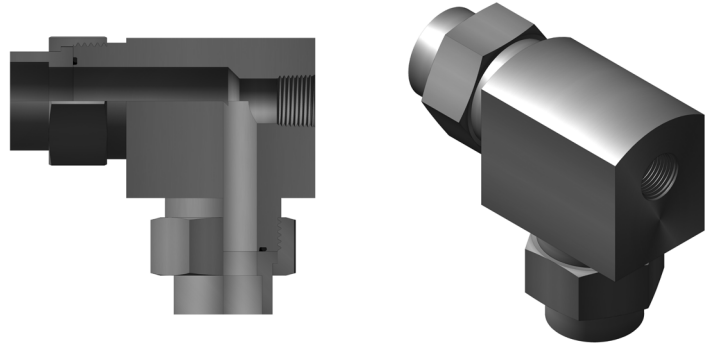
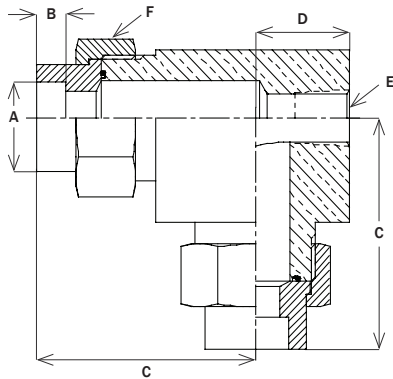


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D (hex)	Dim. E (thread)	Dim. F
8104-1-4	1/4	1 3/4	1 1/8	1 1/8	7/16 - 20	3/8
8104-1-6	1/4	1 13/16	1 1/8	1 1/8	9/16 - 18	3/8
8104-2-6	3/8	1 15/16	1 3/8	1 3/8	9/16 - 18	3/8
8104-2-8	3/8	2 1/16	1 3/8	1 3/8	3/4 - 16	3/8
8104-3-8	1/2	2 3/16	1 5/8	1 5/8	3/4 - 16	3/8
8104-3-12	1/2	2 11/16	1 5/8	1 5/8	1 1/16 - 12	3/8
8104-4-12	3/4	2 11/16	1 5/8	1 5/8	1 1/16 - 12	1/2
8104-4-16	3/4	2 13/16	1 5/8	1 3/4	1 5/16 - 12	1/2
8104-5-16	1	2 15/16	2 3/8	2 1/4	1 5/16 - 12	1/2
8104-5-20	1	3 3/16	2 3/8	2 1/4	1 5/8 - 12	1/2
8104-6-20	1 1/4	3 1/2	3 1/4	3	1 5/8 - 12	1/2
8104-6-24	1 1/4	3 1/2	3 1/4	3	1 7/8 - 12	1/2
8104-7-24	1 1/2	3 1/2	3 1/4	3	1 7/8 - 12	1/2

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Run Tee - Pipe Socket to Female NPT to Pipe Socket

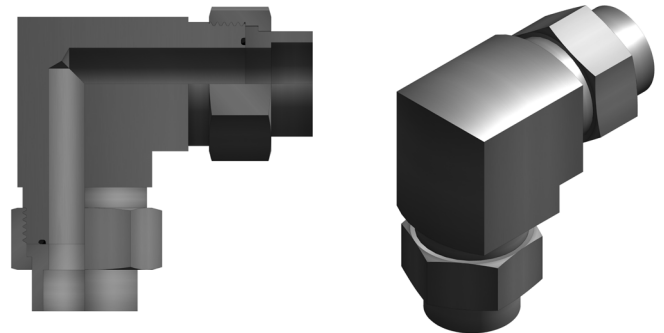
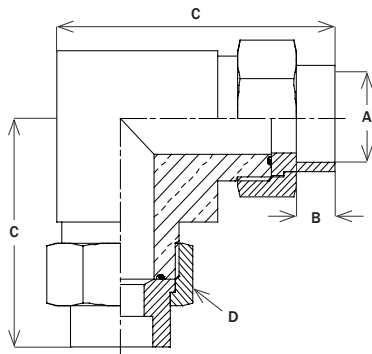


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D	Dim. E (NPT)	Dim. F (hex)
8114-1-4-1	1/4	3/8	2 1/16	1 7/16	1/4	1 1/8
8114-2-6-2	3/8	3/8	2 1/4	1 9/16	3/8	1 3/8
8114-3-8-3	1/2	3/8	2 3/4	1 15/16	1/2	1 5/8
8114-4-12-4	3/4	1/2	2 3/4	1 15/16	3/4	1 5/8
8114-5-16-5	1	1/2	3 5/16	2 3/8	1	2 3/8
8114-6-20-6	1 1/4	1/2	3 3/4	2 1/2	1 1/4	3 1/4
8114-7-24-7	1 1/2	1/2	3 3/4	2 1/2	1 1/2	3 1/4

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Union Elbow - Pipe Socket to Pipe Socket

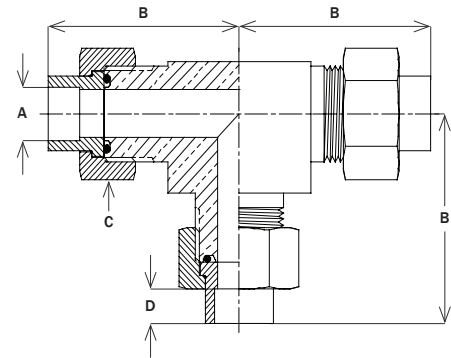
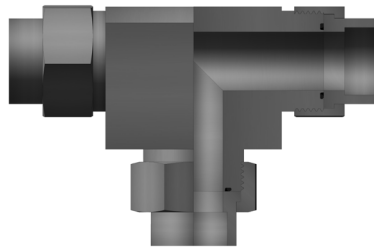
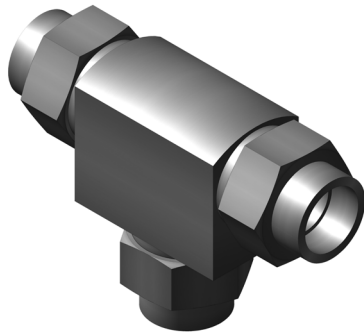


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D (hex)
8120-1-1	1/4	3/8	2 1/16	1 1/8
8120-2-2	3/8	3/8	2 1/4	1 3/8
8120-3-3	1/2	3/8	2 3/4	1 5/8
8120-4-4	3/4	1/2	2 3/4	1 5/8
8120-5-5	1	1/2	3 5/16	2 3/8
8120-6-6	1 1/4	1/2	3 3/4	3 1/4
8120-7-7	1 1/2	1/2	3 3/4	3 1/4

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Union Tee - Pipe Socket

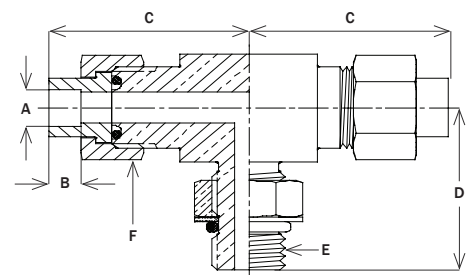
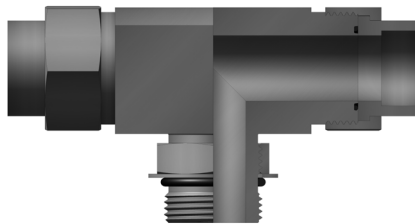
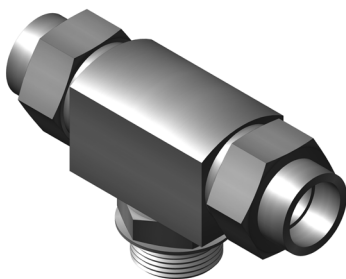


Part No.	Dim. A (IPS)	Dim. B	Dim. C (hex)	Dim. D
8110-0-0-0	$\frac{1}{8}$	$1 \frac{11}{16}$	$\frac{15}{16}$	$\frac{3}{8}$
8110-1-1-1	$\frac{1}{4}$	$2 \frac{1}{16}$	$1 \frac{1}{8}$	$\frac{3}{8}$
8110-2-2-2	$\frac{3}{8}$	$2 \frac{1}{4}$	$1 \frac{3}{8}$	$\frac{3}{8}$
8110-3-3-3	$\frac{1}{2}$	$2 \frac{3}{4}$	$1 \frac{5}{8}$	$\frac{3}{8}$
8110-4-4-4	$\frac{3}{4}$	$2 \frac{3}{4}$	$1 \frac{5}{8}$	$\frac{1}{2}$
8110-5-5-5	1	$3 \frac{5}{16}$	$2 \frac{3}{8}$	$\frac{1}{2}$
8110-6-6-6	$1 \frac{1}{4}$	$3 \frac{3}{4}$	$3 \frac{1}{4}$	$\frac{1}{2}$
8110-7-7-7	$1 \frac{1}{2}$	$3 \frac{3}{4}$	$3 \frac{1}{4}$	$\frac{1}{2}$

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Branch Tee - Pipe Socket to Pipe Socket to Straight Thread

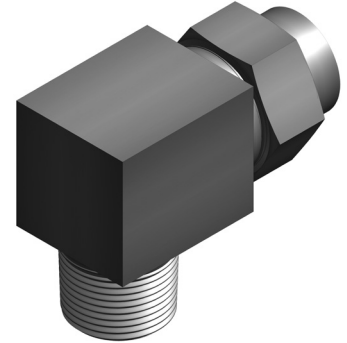
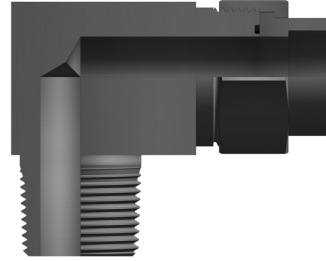
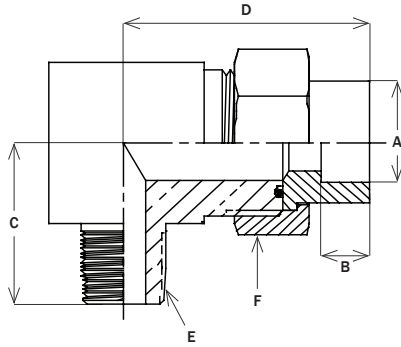


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D	Dim. E (thread)	Dim. F (hex)
8115-1-1-4	$\frac{1}{4}$	$\frac{3}{8}$	$2 \frac{1}{16}$	$1 \frac{11}{16}$	$\frac{7}{16} - 20$	$1 \frac{1}{8}$
8115-2-2-6	$\frac{3}{8}$	$\frac{3}{8}$	$2 \frac{1}{4}$	$1 \frac{15}{16}$	$\frac{9}{16} - 18$	$1 \frac{3}{8}$
8115-3-3-8	$\frac{1}{2}$	$\frac{3}{8}$	$2 \frac{3}{8}$	$2 \frac{1}{16}$	$\frac{3}{4} - 16$	$1 \frac{5}{8}$
8115-4-4-12	$\frac{3}{4}$	$\frac{1}{2}$	$2 \frac{3}{8}$	$2 \frac{1}{16}$	$1 \frac{1}{16} - 12$	$1 \frac{5}{8}$
8115-5-5-16	1	$\frac{1}{2}$	$3 \frac{5}{16}$	$2 \frac{3}{8}$	$1 \frac{5}{16} - 12$	$2 \frac{3}{8}$
8115-6-6-20	$1 \frac{1}{4}$	$\frac{1}{2}$	$3 \frac{5}{8}$	$2 \frac{3}{4}$	$1 \frac{5}{8} - 12$	$3 \frac{1}{4}$
8115-7-7-24	$1 \frac{1}{2}$	$\frac{1}{2}$	$3 \frac{5}{8}$	$2 \frac{3}{4}$	$1 \frac{7}{8} - 12$	$3 \frac{1}{4}$

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Elbow - Pipe Socket to Male NPT

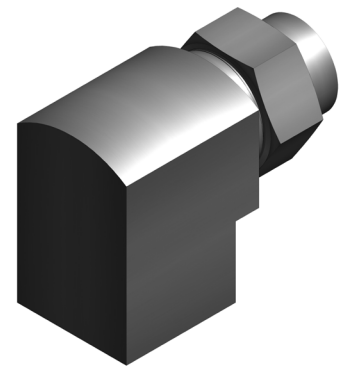
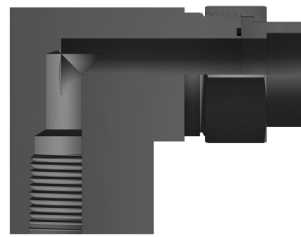
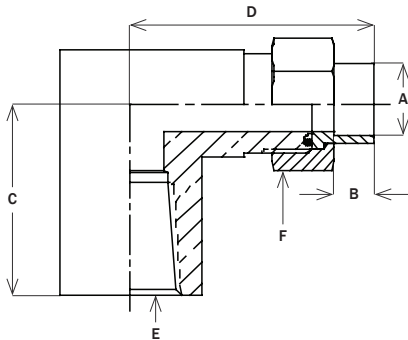


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D	Dim. E (NPT)	Dim. F (hex)
8121-1-4	$\frac{1}{4}$	$\frac{3}{8}$	$1 \frac{7}{16}$	$2 \frac{1}{16}$	$\frac{1}{4}$	$1 \frac{1}{8}$
8121-2-6	$\frac{3}{8}$	$\frac{3}{8}$	$1 \frac{3}{8}$	$1 \frac{15}{16}$	$\frac{3}{8}$	$1 \frac{3}{8}$
8121-3-8	$\frac{1}{2}$	$\frac{3}{8}$	$1 \frac{15}{16}$	$2 \frac{3}{4}$	$\frac{1}{2}$	$1 \frac{5}{8}$
8121-4-12	$\frac{3}{4}$	$\frac{1}{2}$	$2 \frac{3}{8}$	$2 \frac{3}{4}$	$\frac{3}{4}$	$1 \frac{5}{8}$
8121-5-16	1	$\frac{1}{2}$	$2 \frac{3}{8}$	$3 \frac{5}{16}$	1	$2 \frac{3}{8}$
8121-6-20	$1 \frac{1}{4}$	$\frac{1}{2}$	$2 \frac{3}{4}$	$3 \frac{3}{4}$	$1 \frac{1}{4}$	$3 \frac{1}{4}$
8121-7-24	$1 \frac{1}{2}$	$\frac{1}{2}$	$2 \frac{3}{4}$	$3 \frac{3}{4}$	$1 \frac{1}{2}$	$3 \frac{1}{4}$

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Female Elbow - Pipe Socket to Female NPT

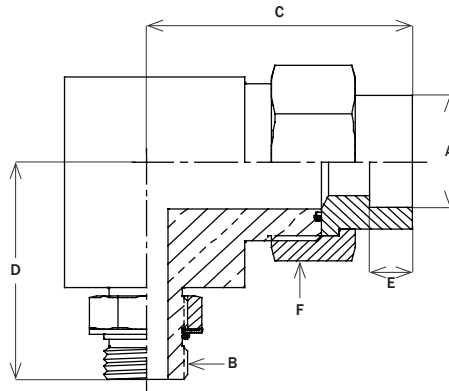
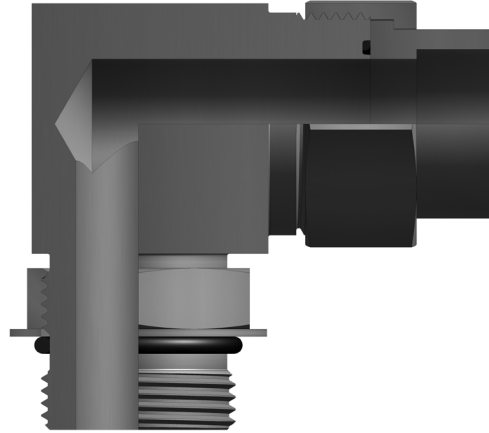
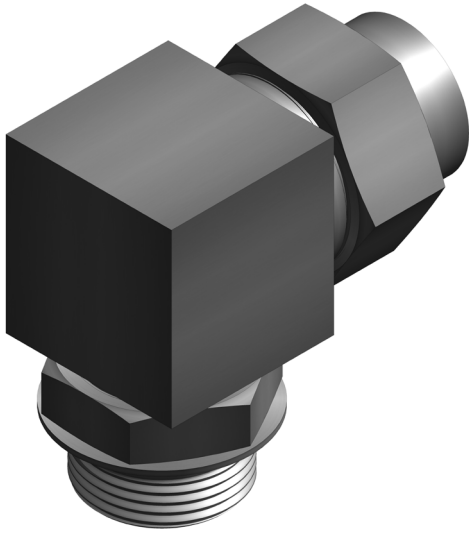


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D	Dim. E (NPT)	Dim. F (hex)
8122-1-4	$\frac{1}{4}$	$\frac{3}{8}$	$1 \frac{1}{16}$	$1 \frac{7}{8}$	$\frac{1}{4}$	$1 \frac{1}{8}$
8122-2-6	$\frac{3}{8}$	$\frac{3}{8}$	$1 \frac{9}{16}$	$2 \frac{1}{4}$	$\frac{3}{8}$	$1 \frac{3}{8}$
8122-3-8	$\frac{1}{2}$	$\frac{3}{8}$	$1 \frac{15}{16}$	$2 \frac{3}{4}$	$\frac{1}{2}$	$1 \frac{5}{8}$
8122-4-12	$\frac{3}{4}$	$\frac{1}{2}$	$1 \frac{15}{16}$	$2 \frac{3}{4}$	$\frac{3}{4}$	$1 \frac{5}{8}$
8122-5-16	1	$\frac{1}{2}$	$2 \frac{3}{8}$	$3 \frac{5}{16}$	1	$2 \frac{3}{8}$
8122-6-20	$1 \frac{1}{4}$	$\frac{1}{2}$	$2 \frac{1}{2}$	$3 \frac{3}{4}$	$1 \frac{1}{4}$	$3 \frac{1}{4}$
8122-7-24	$1 \frac{1}{2}$	$\frac{1}{2}$	$2 \frac{1}{2}$	$3 \frac{3}{4}$	$1 \frac{1}{2}$	$3 \frac{1}{4}$

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Male Elbow - Pipe Socket to Straight Thread



Part No.	Dim. A (IPS)	Dim. B (thread)	Dim. C	Dim. D	Dim. E	Dim. F (hex)
8123-1-4	1/4	7/16 - 20	2 1/16	1 11/16	3/8	5/8
8123-2-6	3/8	9/16 - 18	2 1/4	1 15/16	3/8	13/16
8123-3-8	1/2	3/4 - 16	2 3/8	2 1/16	3/8	15/16
8123-4-12	3/4	1 1/16 - 12	2 3/8	2 1/16	1/2	1 3/8
8123-5-16	1	1 5/16 - 12	3 1/16	2 11/65	1/2	1 5/8
8123-6-20	1 1/4	1 5/8 - 12	3 3/4	2 11/16	1/2	2
8123-7-24	1 1/2	1 7/8 - 12	3 3/4	2 11/16	1/2	2 3/8

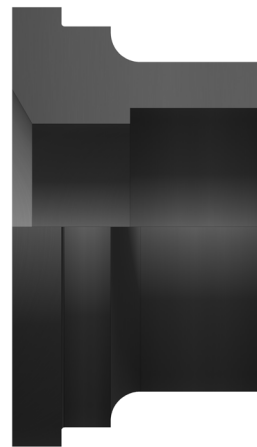
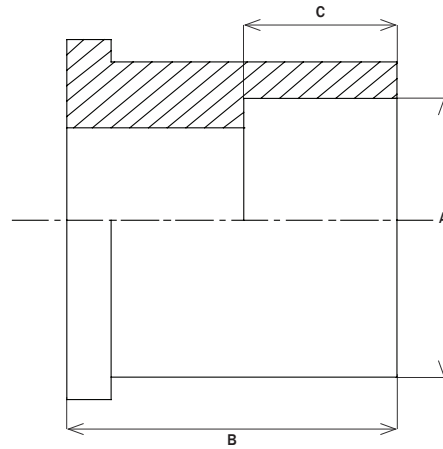
Note: All dimensions are in inches and are reference only

Fitting, Pipe

Tailpiece - OD Union X IPS Socket

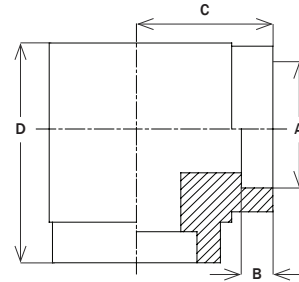
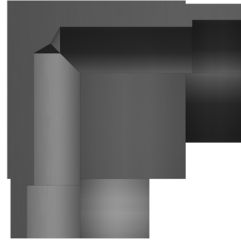
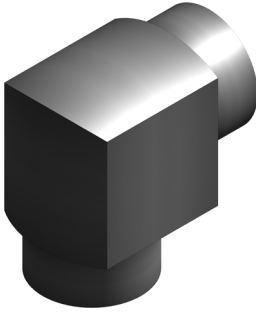
Part No.	Dim. A (IPS)	Dim. B	Dim. C
8108-8-0	1/8	1/2	3/8
8108-10-0	1/8	5/8	3/8
8108-10-1	1/4	5/8	3/8
8108-10-2	3/8	5/8	3/8
8108-12-0	1/8	11/16	3/8
8108-12-1	1/4	11/16	3/8
8108-12-2	3/8	11/16	3/8
8108-12-3	1/2	11/16	3/8
8108-16-0	1/8	13/16	3/8
8108-16-1	1/4	13/16	3/8
8108-16-2	3/8	13/16	3/8
8108-16-3	1/2	13/16	3/8
8108-16-4	3/4	13/16	1/2
8108-20-0	1/8	7/8	3/8
8108-20-1	1/4	7/8	3/8
8108-20-2	3/8	7/8	3/8
8108-20-3	1/2	7/8	3/8
8108-20-4	3/4	7/8	1/2
8108-20-5	1	7/8	1/2
8108-24-0	1/8	15/16	3/8
8108-24-1	1/4	15/16	3/8
8108-24-2	3/8	15/16	3/8
8108-24-3	1/2	15/16	3/8
8108-24-4	3/4	15/16	1/2
8108-24-5	1	15/16	1/2
8108-32-0	1/8	1 1/4	3/8
8108-32-1	1/4	1 1/4	3/8
8108-32-2	3/8	1 1/4	3/8
8108-32-3	1/2	1 1/4	3/8
8108-32-4	3/4	1 1/4	1/2
8108-32-5	1	1 1/4	1/2
8108-32-6	1 1/4	1 1/4	1/2
8108-32-7	1 1/2	1 1/4	1/2
8108-32-8	2	1 1/4	5/8

Note: All dimensions are in inches and are reference only



Fitting, Pipe

90° Elbow - Direct Braze or Socket Weld

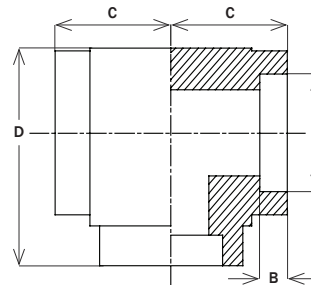
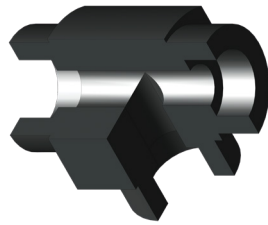
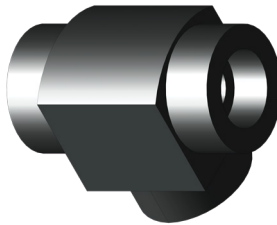


Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D
8140-0	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{15}{16}$	$1 \frac{11}{32}$
8140-1	$\frac{1}{4}$	$\frac{3}{8}$	1	$1 \frac{1}{2}$
8140-2	$\frac{3}{8}$	$\frac{3}{8}$	$1 \frac{1}{8}$	$1 \frac{3}{4}$
8140-3	$\frac{1}{2}$	$\frac{3}{8}$	$1 \frac{1}{4}$	2
8140-4	$\frac{3}{4}$	$\frac{1}{2}$	$1 \frac{9}{16}$	$2 \frac{7}{16}$
8140-5	1	$\frac{1}{2}$	$1 \frac{13}{16}$	$2 \frac{7}{8}$
8140-6	$1 \frac{1}{4}$	$\frac{1}{2}$	2	$3 \frac{1}{4}$
8140-7	$1 \frac{1}{2}$	$\frac{5}{8}$	$2 \frac{5}{16}$	$3 \frac{23}{32}$
8140-8	2	$\frac{5}{8}$	$2 \frac{11}{16}$	$4 \frac{13}{32}$

Note: All dimensions are in inches and are reference only

Fitting, Pipe

Tee - Direct Braze or Socket Weld



Part No.	Dim. A (IPS)	Dim. B	Dim. C	Dim. D
8133-0	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{15}{16}$	$1 \frac{11}{32}$
8133-1	$\frac{1}{4}$	$\frac{3}{8}$	1	$1 \frac{1}{2}$
8133-2	$\frac{3}{8}$	$\frac{3}{8}$	$1 \frac{1}{8}$	$1 \frac{3}{4}$
8133-3	$\frac{1}{2}$	$\frac{3}{8}$	$1 \frac{1}{4}$	2
8133-4	$\frac{3}{4}$	$\frac{1}{2}$	$1 \frac{9}{16}$	$2 \frac{7}{16}$
8133-5	1	$\frac{1}{2}$	$1 \frac{13}{16}$	$2 \frac{7}{8}$
8133-6	$1 \frac{1}{4}$	$\frac{1}{2}$	2	$3 \frac{1}{4}$
8133-7	$1 \frac{1}{2}$	$\frac{5}{8}$	$2 \frac{5}{16}$	$3 \frac{23}{32}$
8133-8	2	$\frac{5}{8}$	$2 \frac{11}{16}$	$4 \frac{13}{32}$

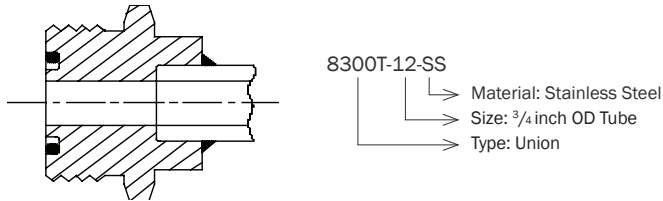
Note: All dimensions are in inches and are reference only

TECH-O-SEAL Hose End Fittings and Adapters

Ordering Information

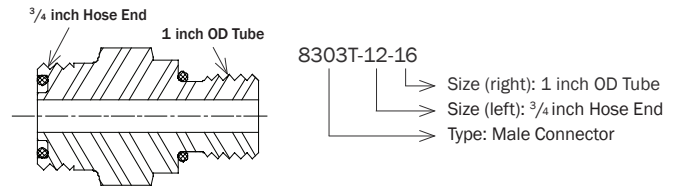
Unions, Connectors, Elbows and Tees

The part numbers for all fittings may have one, two or three dash numbers to indicate size. Where only one dash number is given, the assembly has the same size at all ends. All dash numbers are expressed in $\frac{1}{16}$ of an inch, as shown in the table below. For example:



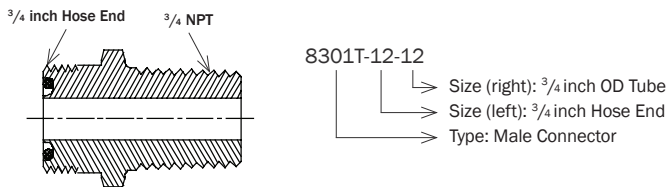
Reducers

To order a reducer, two or three dash numbers must be given to indicate the different end sizes. For example:



Threaded Parts

Part numbers for fittings with threaded ends always have two or three dash numbers. For example:



Materials and Ordering

To order any hose end assembly, use the appropriate part number and the desired material designator. The most frequently used materials and sizes are shown in the tables below. Other materials are also available, upon request. Fittings are supplied with BUNA-N O-ring(s) unless otherwise specified.

Material Options

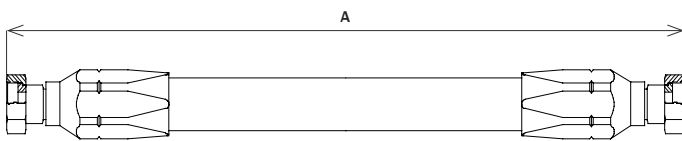
Dash Material	Material
-S	steel
-SS	stainless steel
-BRZ	bronze
-NICU	nickel copper (monel)
-CUNI	copper nickel

Size Options

Size	Dash No.
$\frac{1}{8}$	-2
$\frac{1}{4}$	-4
$\frac{3}{8}$	-6
$\frac{1}{2}$	-8
$\frac{5}{8}$	-10
$\frac{3}{4}$	-12
1	-16
$1\frac{1}{4}$	-20
$1\frac{1}{2}$	-24
2	-32

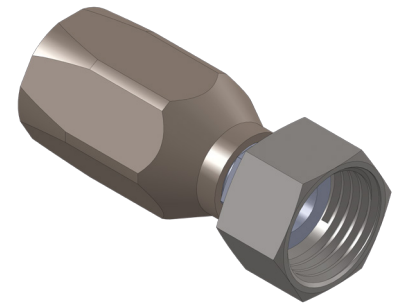
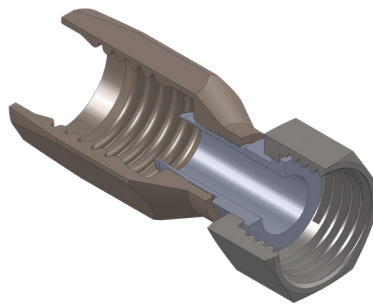
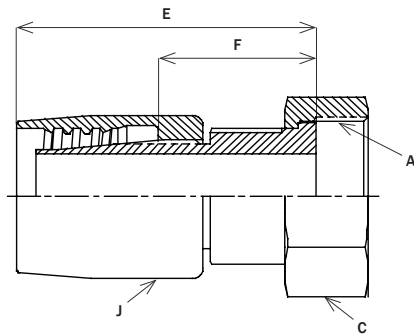
Hose Assemblies

Hose assemblies are available in a variety of pressure and service applications. Hose sizes are specified in $\frac{1}{16}$ of an inch. Please specify size, pressure requirements, fitting material and overall length ("A" dimension).



Fittings, Hose End

Medium Pressure (For SAE 100R5 Hose)

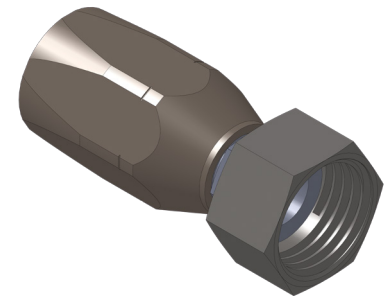
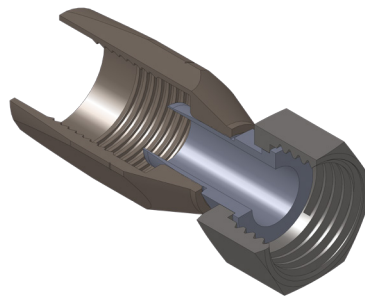
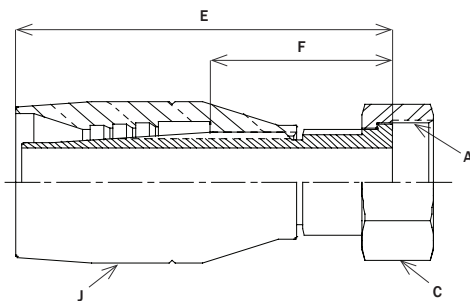


Part No.	Nominal Hose Size	Hose ID	Dim. A (thread)	Dim. C (hex)	Dim. E	Dim. F	Dim. J (hex)	Max Working Pressure (PSI)
8390-4	1/4	3/16	9/16 - 18	5/8	1 15/16	1 3/16	5/8	3000
8390-6	3/8	5/16	11/16 - 16	13/16	2 5/16	1 3/8	13/16	2250
8390-8	1/2	13/32	13/16 - 16	15/16	2 13/16	1 11/16	15/16	2000
8390-10	5/8	1/2	1 - 14	1 1/8	3 1/8	1 13/16	1 1/8	1750
8390-12	3/4	5/8	1 1/4 - 12	1 3/8	3 3/8	1 13/16	1 1/4	1500
8390-16	1	7/8	1 1/2 - 12	1 5/8	3 1/16	1 13/16	1 7/16	800

Note: All dimensions are in inches and are reference only

Fitting, Hose End

High Pressure (For SAE 100R2 Hose)

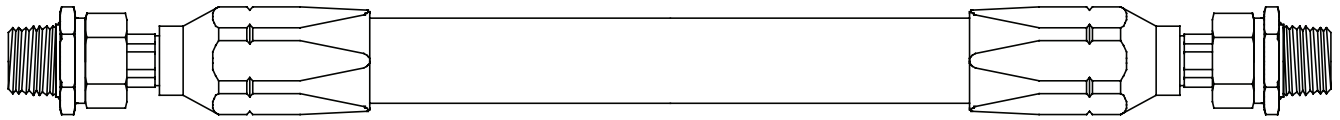


Part No.	Nominal Hose Size	Hose ID	Dim. A (thread)	Dim. C (hex)	Dim. E	Dim. F	Dim. J (hex)	Max Working Pressure (PSI)
8391-4	1/4	1/4	9/16 - 18	5/8	2 5/8	1 3/8	13/16	5000
8391-6	3/8	3/8	11/16 - 16	13/16	2 7/8	1 7/16	1	4000
8391-8	1/2	1/2	13/16 - 16	15/16	3 1/16	1 9/16	1 1/8	3500
8391-10	5/8	5/8	1 - 14	1 1/8	3 5/16	1 3/8	1 1/4	2750
8391-12	3/4	3/4	1 1/4 - 12	1 3/8	3 3/4	1 7/8	1 1/2	2250
8391-16	1	1	1 1/2 - 12	1 5/8	4 3/8	2 5/16	1 3/4	2000

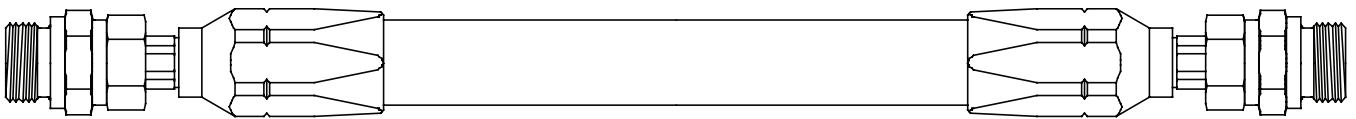
Note: All dimensions are in inches and are reference only

Hose Assemblies

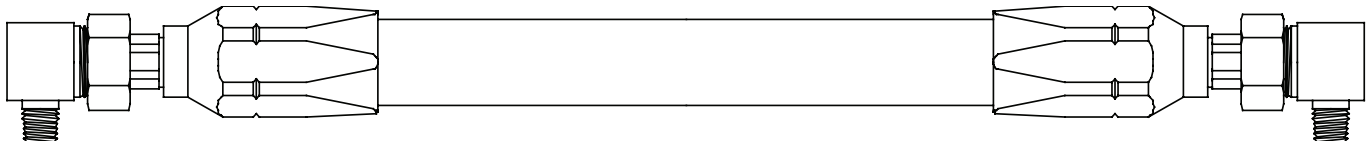
Technical Products union end hose assemblies are available for a variety of pressure and service applications. These assemblies, when combined with TECH-O-SEAL adapters found on pages 117-120, provide a variety of connection options. The o-ring seal end provides the benefits of high pressure and no maintenance connections that can easily be broken and resealed indefinitely.



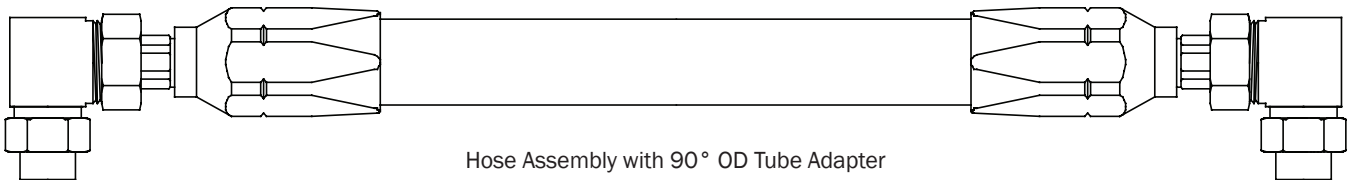
Hose Assembly with Straight Male Pipe Thread Adapter



Hose Assembly with Straight Male Thread Adapter



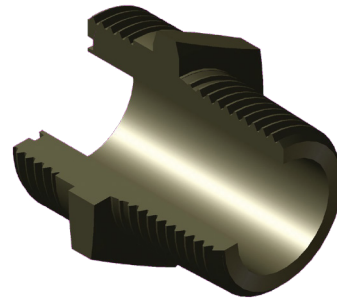
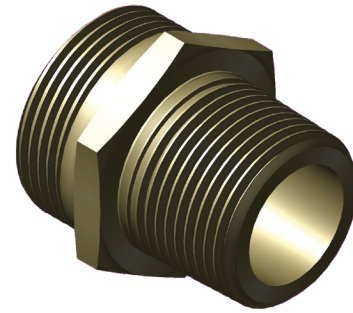
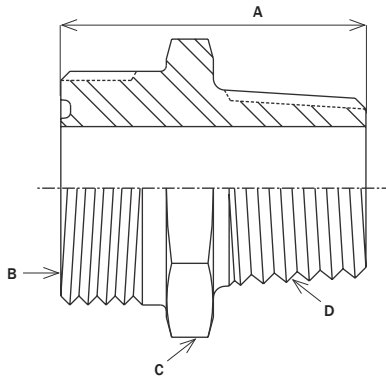
Hose Assembly with 90° Male Pipe Thread Adapter



Hose Assembly with 90° OD Tube Adapter

Adapter, Straight

Male Pipe Thread

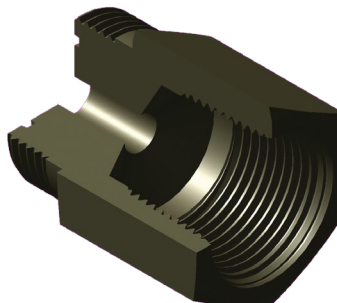
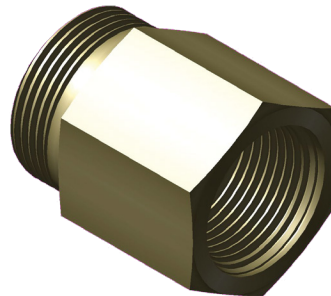
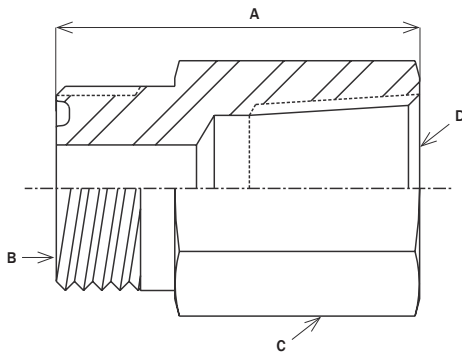


Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)	Dim. D (thread)
8301T-4-2	1	9/16 - 18	5/8	1/8 - 27
8301T-4-4	1 1/16	9/16 - 18	5/8	1/4 - 18
8301T-6-4	1 3/16	11/16 - 16	3/4	1/4 - 18
8301T-8-6	1 1/4	13/16 - 16	1	3/8 - 18
8301T-8-8	1 9/16	13/16 - 16	1	1/2 - 14
8301T-10-8	1 1/2	1 - 14	1 1/16	1/2 - 14
8301T-12-12	1 5/8	1 1/4 - 12	1 3/8	3/4 - 14
8301T-16-16	1 7/8	1 1/2 - 12	1 5/8	1 - 11 1/2

Note: All dimensions are in inches and are reference only

Adapter, Straight

Female Pipe Thread

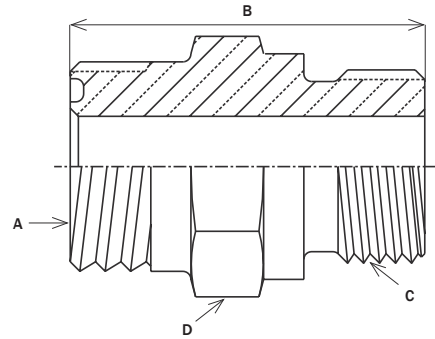
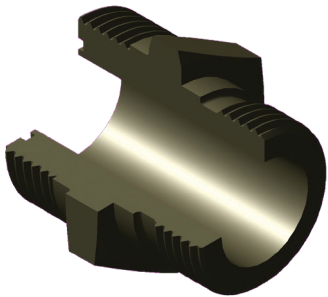
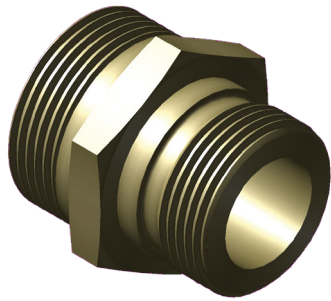


Part No.	Dim. A	Dim. B (thread)	Dim. C (hex)	Dim. D (thread)
8302T-4-2	1 1/8	9/16 - 18	5/8	1/8 - 27
8302T-6-4	1 5/16	11/16 - 16	3/4	1/4 - 18
8302T-8-6	1 1/2	13/16 - 16	7/8	3/8 - 18
8302T-10-8	1 3/4	1 - 14	1 1/8	1/2 - 14
8302T-12-12	1 7/8	1 1/4 - 12	1 3/8	3/4 - 14
8302T-16-16	2 1/16	1 1/2 - 12	1 3/4	1 - 11 1/2

Note: All dimensions are in inches and are reference only

Adapter, Straight

Male Straight Thread

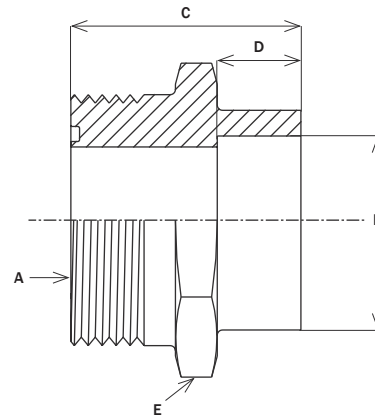
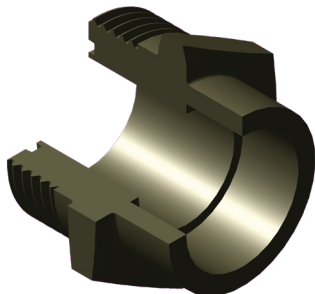
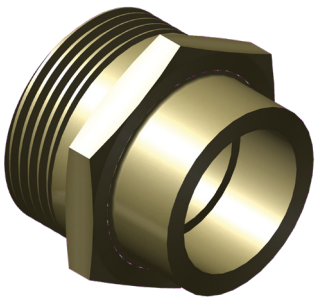


Part No.	Dim. A (thread)	Dim. B	Dim. C (thread)	Dim. D (hex)
8303T-4-4	$9/16 - 18$	$1 \frac{1}{8}$	$7/16 - 20$	$5/8$
8303T-6-6	$1 \frac{1}{16} - 16$	$1 \frac{1}{4}$	$9/16 - 18$	$3/4$
8303T-8-8	$1 \frac{3}{16} - 16$	$1 \frac{3}{8}$	$3/4 - 16$	$7/8$
8303T-10-10	$1 - 14$	$1 \frac{1}{2}$	$7/8 - 14$	$1 \frac{1}{16}$
8303T-12-12	$1 \frac{1}{4} - 12$	$1 \frac{5}{8}$	$1 \frac{1}{16} - 12$	$1 \frac{3}{8}$
8303T-16-16	$1 \frac{1}{2} - 12$	$1 \frac{13}{16}$	$1 \frac{5}{16} - 12$	$1 \frac{5}{8}$

Note: All dimensions are in inches and are reference only

Adapter, Straight

OD Tube

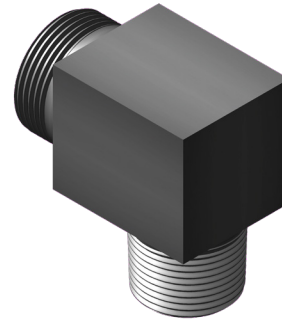
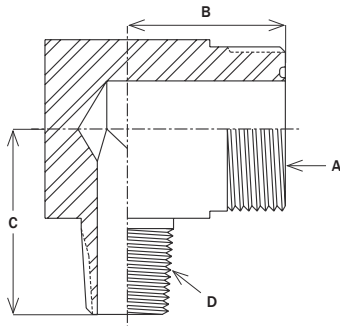


Part No.	Dim. A (thread)	Dim. B (tube OD)	Dim. C	Dim. D	Dim. E (hex)
8300T-4-4	$9/16 - 18$	$1/4$	$5/8$	$3/16$	$5/8$
8300T-6-6	$1 \frac{1}{16} - 16$	$3/8$	$1 \frac{3}{16}$	$1/4$	$3/4$
8300T-8-8	$1 \frac{3}{16} - 16$	$1/2$	$1 \frac{5}{16}$	$5/16$	$7/8$
8300T-10-10	$1 - 14$	$5/8$	$1 \frac{1}{16}$	$3/8$	$1 \frac{1}{16}$
8300T-12-12	$1 \frac{1}{4} - 12$	$3/4$	$1 \frac{1}{4}$	$7/16$	$1 \frac{3}{8}$
8300T-16-16	$1 \frac{1}{2} - 12$	1	$1 \frac{3}{8}$	$1/2$	$1 \frac{5}{8}$

Note: All dimensions are in inches and are reference only

Adapter, Elbow

Male Pipe Thread

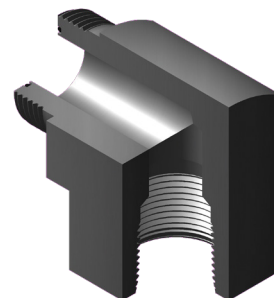
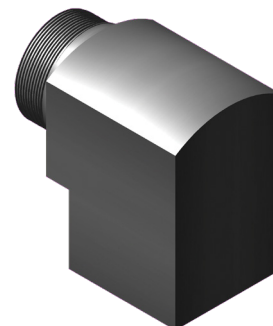
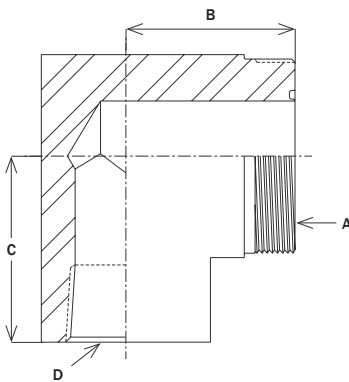


Part No.	Dim. A (thread)	Dim. B	Dim. C	Dim. D (thread)
8321T-4-2	9/16 - 18	13/16	13/16	1/8 - 27
8321T-6-4	11/16 - 16	1 1/16	1 1/16	1/4 - 18
8321T-8-6	13/16 - 16	1 3/16	1 3/16	3/8 - 18
8321T-8-8	13/16 - 16	1 3/16	1 7/16	1/2 - 14
8321T-10-8	1 - 14	1 7/16	1 7/16	1/2 - 14
8321T-12-12	1 1/4 - 12	1 9/16	1 9/16	3/4 - 14
8321T-16-16	1 1/2 - 12	1 15/16	1 15/16	1 - 11 1/2

Note: All dimensions are in inches and are reference only

Adapter, Elbow

Female Pipe Thread

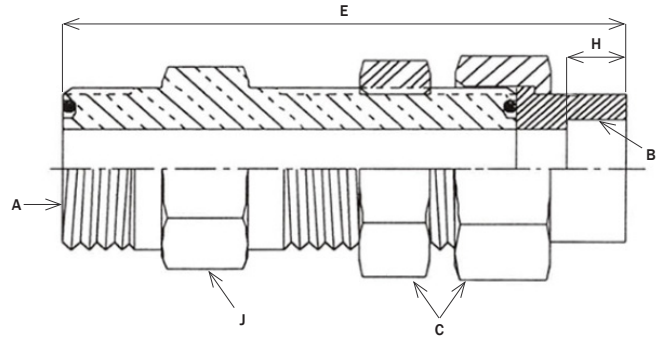
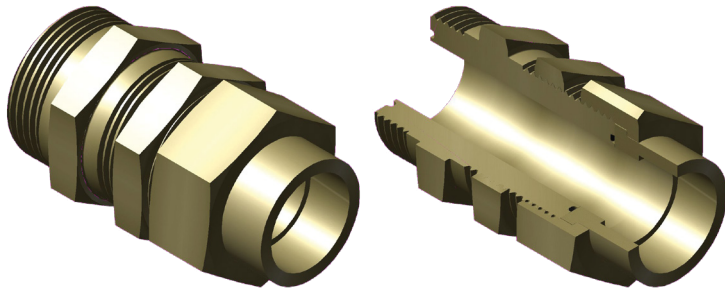


Part No.	Dim. A (thread)	Dim. B	Dim. C	Dim. D (thread)
8322T-4-2	9/16 - 18	13/16	13/16	1/8 - 27
8322T-6-4	11/16 - 16	1 1/16	1 1/16	1/4 - 18
8322T-8-6	13/16 - 16	1 3/16	1 3/16	3/8 - 18
8322T-10-8	1 - 14	1 7/16	1 7/16	1/2 - 14
8322T-12-12	1 1/4 - 12	1 9/16	1 15/16	3/4 - 14
8322T-16-16	1 1/2 - 12	1 15/16	1 15/16	1 - 11 1/2

Note: All dimensions are in inches and are reference only

Adapter, Bulkhead Union

OD Tube

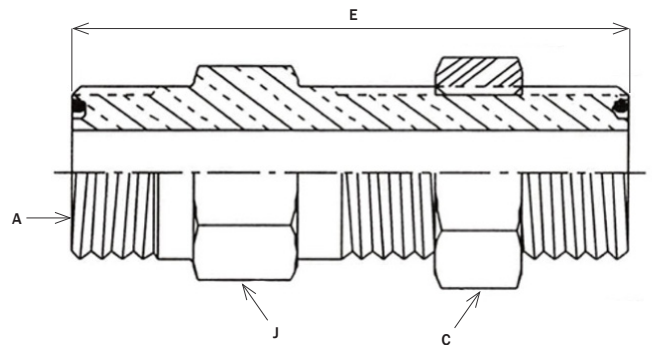
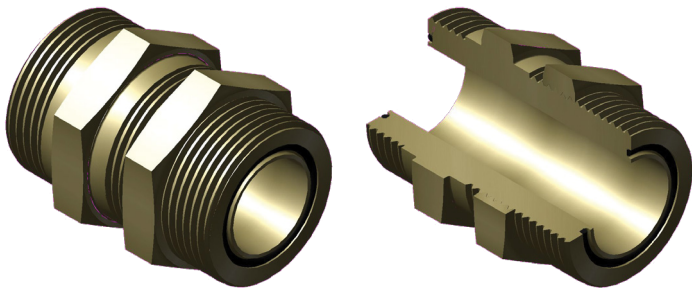


Part No.	Dim. A (thread)	Dim. B	Dim. C (hex)	Dim. E	Dim. H	Dim. J (hex)
8397-4-4	$\frac{9}{16}$ - 18	$\frac{1}{4}$	$\frac{5}{8}$	$1 \frac{15}{16}$	$\frac{3}{16}$	$\frac{5}{8}$
8397-6-6	$\frac{11}{16}$ - 16	$\frac{3}{8}$	$\frac{13}{16}$	$2 \frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{4}$
8397-8-8	$\frac{13}{16}$ - 16	$\frac{1}{2}$	$\frac{15}{16}$	$2 \frac{1}{2}$	$\frac{5}{16}$	$\frac{7}{8}$
8397-10-10	1 - 14	$\frac{5}{8}$	$1 \frac{1}{8}$	$2 \frac{7}{8}$	$\frac{3}{8}$	$1 \frac{1}{16}$
8397-12-12	$1 \frac{1}{4}$ - 12	$\frac{3}{4}$	$1 \frac{3}{8}$	$2 \frac{15}{16}$	$\frac{7}{16}$	$1 \frac{3}{8}$
8397-16-16	$1 \frac{1}{2}$ - 12	1	$1 \frac{5}{8}$	$3 \frac{3}{16}$	$\frac{1}{2}$	$1 \frac{5}{8}$

Note: All dimensions are in inches and are reference only

Adapter, Bulkhead Union

Hose to Hose

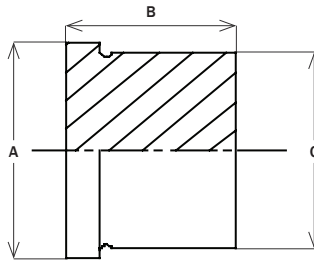
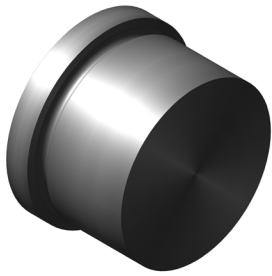


Part No.	Dim. A (thread)	Dim. C (hex)	Dim. E	Dim. J (hex)
8385-4-4	$\frac{9}{16}$ - 18	$\frac{11}{16}$	$1 \frac{9}{16}$	$\frac{5}{8}$
8385-6-6	$\frac{11}{16}$ - 16	$\frac{13}{16}$	$1 \frac{3}{4}$	$\frac{3}{4}$
8385-8-8	$\frac{13}{16}$ - 16	$\frac{15}{16}$	2	$\frac{7}{8}$
8385-10-10	1 - 14	$1 \frac{1}{8}$	$2 \frac{1}{4}$	$1 \frac{1}{16}$
8385-12-12	$1 \frac{1}{4}$ - 12	$1 \frac{3}{8}$	$2 \frac{1}{4}$	$1 \frac{3}{8}$
8385-16-16	$1 \frac{1}{2}$ - 12	$1 \frac{5}{8}$	$2 \frac{3}{8}$	$1 \frac{5}{8}$

Note: All dimensions are in inches and are reference only

Fittings, Tube

Tailpiece, Blank

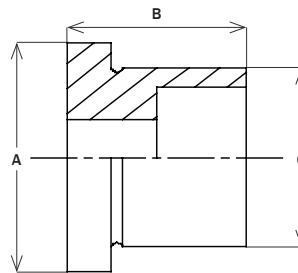
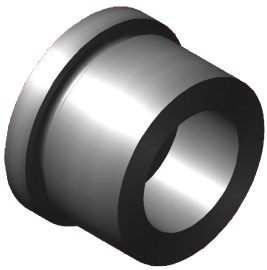


Part No.	Size	Dim. A (dia.)	Dim. B	Dim. C (dia.)
9001-4	1/4	0.563	7/16	0.467
9001-6	3/8	0.670	1/2	0.592
9001-8	1/2	0.860	9/16	0.783
9001-10	5/8	1.255	5/8	0.997
9001-12	3/4	1.395	3/4	1.178

Note: All dimensions are in inches and are reference only

Fittings, Tube

Tailpiece, Socket Weld

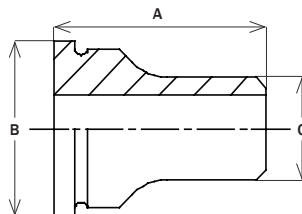
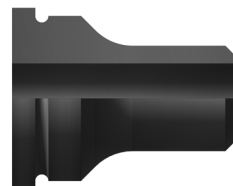
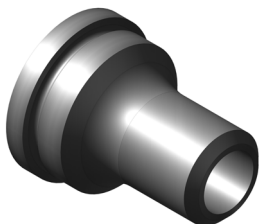


Part No.	Size	Dim. A (dia.)	Dim. B	Dim. C (dia.)
9005-4	1/4	0.563	7/16	0.467
9005-6	3/8	0.670	1/2	0.592
9005-8	1/2	0.860	9/16	0.783
9005-10	5/8	1.255	5/8	0.997
9005-12	3/4	1.395	3/4	1.178
9005-16	1	1.640	1	1.290

Note: All dimensions are in inches and are reference only

Fittings, Tube

Tailpiece, Male Weld



Part No.	Size	Dim. A	Dim. B (dia.)	Dim. C (dia.)
9027-4-4	1/4	13/16	0.563	0.250
9027-6-6	3/8	15/16	0.670	0.375
9027-8-8	1/2	1 1/16	0.860	0.500
9027-10-10	5/8	1 1/4	1.255	0.625
9027-12-12	3/4	1 3/8	1.395	0.750

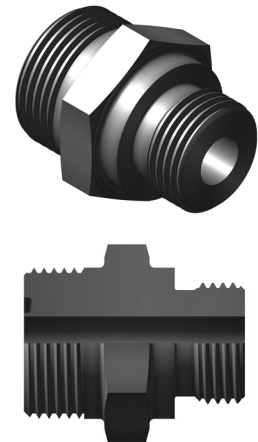
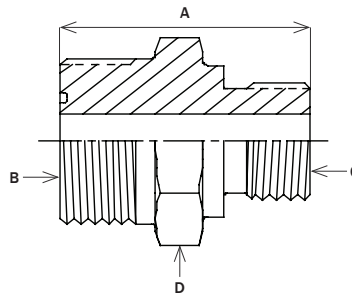
Note: All dimensions are in inches and are reference only

Fittings, Tube

Threadpiece, Straight Male Thread

Part No.	Size	Dim. A	Dim. B (thread)	Dim. C (thread)	Dim. D (hex)
9002T-4	1/4	1 1/8	5/8 - 18	7/16 - 20	3/4
9002T-4-6	1/4 x 3/8	1 1/4	5/8 - 18	9/16 - 18	7/8
9002T-6	3/8	1 1/4	3/4 - 16	9/16 - 18	7/8
9002T-8	1/2	1 3/8	15/16 - 16	3/4 - 16	1 1/16
9002T-10	5/8	1 3/4	1 3/8 - 12	7/8 - 14	1 1/2
9002T-12	3/4	1 13/16	1 1/2 - 12	1 1/16 - 12	1 5/8
9002T-16	1	2	1 3/4 - 12	1 5/16 - 12	1 7/8

Note: All dimensions are in inches and are reference only

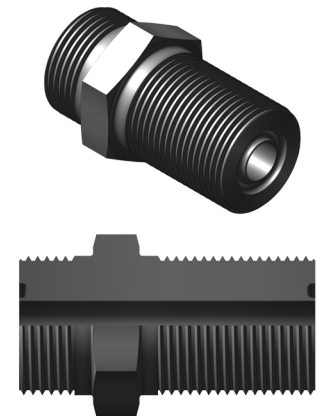
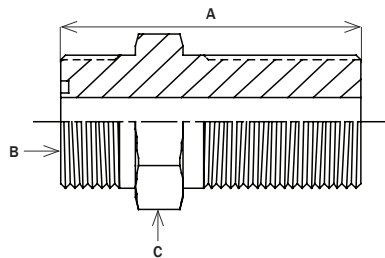


Fittings, Tube

Threadpiece, Bulkhead

Part No.	Size	Dim. A	Dim. B (thread)	Dim. C (hex)
9003T-4	1/4	1 3/4	5/8 - 18	3/4
9003T-6	3/8	1 7/8	3/4 - 16	7/8
9003T-8	1/2	2	15/16 - 16	1 1/16
9003T-10	5/8	2 3/8	1 3/8 - 12	1 1/2
9003T-12	3/4	2 5/8	1 1/2 - 12	1 5/8

Note: All dimensions are in inches and are reference only

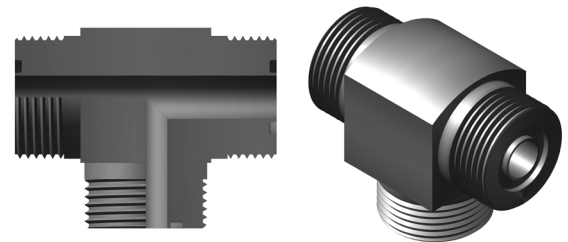
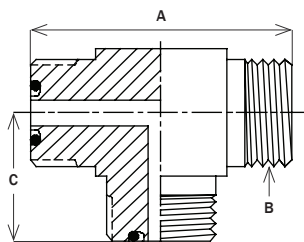


Fittings, Tube

Tee

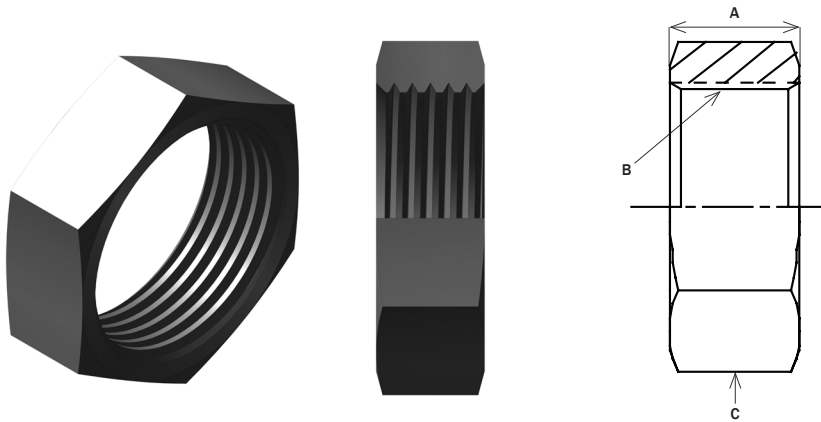
Part No.	Tube size	Dim. A	Dim. B (thread)	Dim. C
9008T-4-4-4	1/4	1 1/2	5/8 - 18	3/4
9008T-6-6-6	3/8	2	3/4 - 16	1
9008T-8-8-8	1/2	2	15/16 - 16	1
9008T-10-10-10	5/8	2 7/8	1 3/8 - 12	1 7/16
9008T-12-12-12	3/4	3	1 1/2 - 12	1 1/2

Note: All dimensions are in inches and are reference only



Fittings, Tube

Nut, Bulkhead

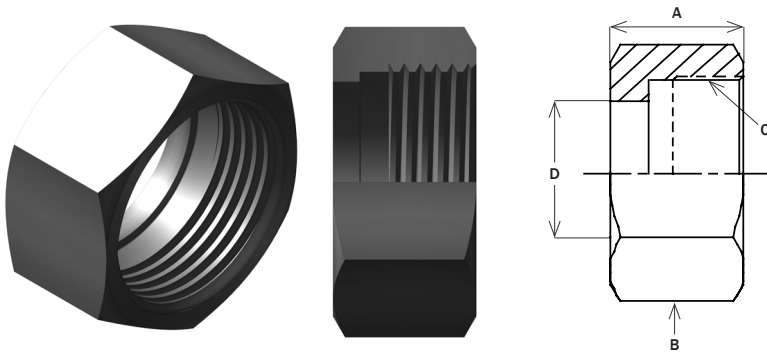


Part No.	Tube size	Dim. A	Dim. B (thread)	Dim. C (hex)
9004-4	1/4	5/16	5/8 - 18	3/4
9004-6	3/8	5/16	3/4 - 16	7/8
9004-8	1/2	3/8	15/16 - 16	1 1/16
9004-12	3/4	3/8	1 1/2 - 12	1 5/8

Note: All dimensions are in inches and are reference only

Fittings, Tube

Nut, Union



Part No.	Tube size	Dim. A	Dim. B (hex)	Dim. C (thread)	Dim. D (dia.)
9006-4	1/4	7/16	3/4	5/8 - 18	0.477
9006-6	3/8	1/2	7/8	3/4 - 16	0.602
9006-8	1/2	9/16	1 1/16	15/16 - 16	0.793
9006-10	5/8	11/16	1 1/2	1 3/8 - 12	1.003
9006-12	3/4	7/8	1 5/8	1 1/2 - 12	1.188
9006-16	1	1 1/16	2	1 3/4 - 12	1.330

Note: All dimensions are in inches and are reference only

Cross Reference List

Tech-O-Seal to CPV-O-Seal

6000 Series Valves and Cartridges	Tech-O-Seal	CPV-O-Seal
Union End Inline Globe Valve	6GP80	380
Union End Angle Globe Valve	6GP81	381
Union End Offset Globe Valve	6GP82	382
Socket Weld Inline Globe Valve	6GPW70	370
Socket Weld Angle Globe Valve	6GPW71	371
Union End Inline Needle Valve	6GN80	480
Union End Angle Needle Valve	6GN81	481
Union End Offset Needle Valve	6GN82	482
Socket Weld Inline Needle Valve	6GNW70	470
Socket Weld Angle Needle Valve	6GNW71	471
Union End Inline Stop Check Valve	6GSC80	580
Union End Angle Stop Check Valve	6GSC81	581
Union End Offset Stop Check Valve	6GSC82	582
Socket Weld Inline Stop Check Valve	6GSCW70	570
Socket Weld Angle Stop Check Valve	6GSCW71	571
Union End Inline Check Valve	6GC80	680
Union End Angle Check Valve	6GC81	681
Union End Offset Check Valve	6GC82	682
Socket Weld Inline Check Valve	6GCW70	670
Socket Weld Angle Check Valve	6GCW71	671
Panel Mounted Inline Globe Valve	6GP80-P	380-P
Panel Mounted Angle Globe Valve	6GP81-P	381-P
Panel Mounted Offset Globe Valve	6GP82-P	382-P
Panel Mounted Inline Needle Valve	6GN80-P	480-P
Panel Mounted Angle Needle Valve	6GN81-P	481-P
Panel Mounted Offset Needle Valve	6GN82-P	482-P
Panel Mounted Inline Stop Check Valve	6GSC80-P	580-P
Panel Mounted Angle Stop Check Valve	6GSC81-P	581-P
Panel Mounted Offset Stop Check Valve	6GSC82-P	582-P
Globe Valve Cartridge	6KP36	365
Needle Valve Cartridge	6KN46	465
Stop Check Valve Cartridge	6KSC56	565
Check Valve Cartridge	6KC66	665
Inline Silent Check Valve	6C23A	123A
High Pressure Relief Valve	6VR57	157
Flush Plugs, Over Seat	OS192	192
Flush Plugs, Flow Thru	FT190	190
Flush Plugs, Under Seat	US191	191
Removable Handle	HE9	9
Valve Handle Lock	3HL	3

Cross Reference List

Tech-O-Seal to CPV-O-Seal

6000 Series Fittings	Tech-O-Seal	CPV-O-Seal
Tailpiece, Socket weld, tube size	6R48	48R
Threadpiece, Socket weld, tube size	6T48	48T
Tailpiece, Sil-Braze, tube size	6R49	49R
Threadpiece, Sil-Braze, tube size	6T49	49T
Tailpiece, Male weld, tube size	6R63	63R
Threadpiece, Male weld, tube size	6T63	63T
Tailpiece, Male Straight Thread, tube size	6R59	59R
Threadpiece, Male Straight Thread, tube size	6T59	59T
Tailpiece, Female Straight Thread, tube size	6R64	64R
Threadpiece, Female Straight Thread, tube size	6T64	64T
Coupling, Socket weld, tube size	6C46	46-
Coupling, Sil-Braze, tube size	6C47	47-
Union Nut	6N50	50N
Tailpiece, Socket weld, pipe size	6R51	51R
Threadpiece, Socket weld, pipe size	6T51	51T
Tailpiece, Butt weld, pipe size	6R58	58R
Threadpiece, Butt weld, pipe size	6T58	58T
Tailpiece, Male weld, pipe size	6R62	62R
Threadpiece, Male weld, pipe size	6T62	62T
Tailpiece, Sil-Braze, pipe size	6R52	52R
Threadpiece, Sil-Braze, pipe size	6T52	52T
Tailpiece, Blank, pipe size	6R104	104R
Threadpiece, Blank, pipe size	6T104	104T
Tailpiece, Female Pipe (NPT), pipe size	6R53	53R
Threadpiece, Female Pipe (NPT), pipe size	6T53	53T
Tailpiece, Male Pipe (NPT), pipe size	6R54	54R
Threadpiece, Male Pipe (NPT), pipe size	6T54	54T
Bulkhead Fitting, pipe size	6T89	89T
Insert, Socket weld, pipe size	6C57	57-
Insert, Sil-Braze, pipe size	6C67	67-
Coupling, Socket weld, pipe size	6C100	100-
Coupling, Sil-Braze, pipe size	6C101	101-
Tee	6T40	40-
Elbow, 90°	6L41	41-
Elbow, 45°	6L45	45-
Cross	6X43	43-

Cross Reference List

Tech-O-Seal to CPV-O-Seal

8300 Series Tube Fittings	Tech-O-Seal	CPV-O-Seal
Union, Tube to Tube	8300	H849
Male Connector, Tube to Male NPT	8301	H854
Female Connector, Tube to Female NPT	8302	H853
Male Connector, Tube to Male Straight Thread	8303	H859
Female Connector, Tube to Female Straight Thread	8304	H864
Bulkhead Union, Tube to Tube	8305	H890
Union, Female Tube to Male Tube	8306	H863
Union Nut	8307	H850N
Tailpiece, Female Tube	8308	H849R
Union Cross, Tube to Tube to Tube to Tube	8309	H809
Union Tee, Tube to Tube to Tube	8310	H810
Male Branch Tee, Tube to Tube to Male NPT	8311	H811
Male Run Tee, Tube to Male NPT to Tube	8312	H812
Branch Tee, Tube to Tube to Female NPT	8313	H813
Female Run Tee, Tube to Female NPT to Tube	8314	H814
Male Branch Tee, Tube to Tube to Straight Thread	8315	H815
Male Run Tee, Tube to Straight Thread to Tube	8316	H816
Tailpiece, Blank	8317	H804R
Threadpiece, Blank Body	8318	H804T
Straight Thread Plug	8319	H805
Union Elbow, Tube to Tube	8320	H820
Male Elbow, Tube to Male NPT	8321	H821
Female Elbow, Tube to Female NPT	8322	H822
Male Elbow, Tube to Straight Thread	8323	H823
Tailpiece, Male Tube	8327	H863R
Direct Braze or Weld Tee	8333	H830
Direct Braze or Weld 90° Elbow	8340	H840
Direct Braze or Weld Coupling	8347	H847
IPS Male X OD Female Insert	8365	H865
OD Male X IPS Female Insert	8366	H866
Direct Braze, Weld Reducing Insert	8367	H867

Adapters for Gages and Instruments	Tech-O-Seal	CPV-O-Seal
Threadpiece, Blank	8319	904
Adapter	4898 Style "B"	954R-4-4
Adapter	4894 Style "A"	953R-4-4
Adapter	4898 Style "C"	951R-4-4
Adapter	4898 Style "K"	959R-4-6
Snubber	4055	A-9695

Cross Reference List

Tech-O-Seal to CPV-O-Seal

8100 Series Pipe Fittings	Tech-O-Seal	CPV-O-Seal
Union, Pipe Socket to Pipe Socket	8100	H749
Male Connector, Pipe Socket to Male NPT	8101	H754
Female Connector, Pipe Socket to Female NPT	8102	H753
Male Connector, Pipe Socket to Male Straight Thread	8103	H759
Female Connector, Pipe Socket to Female Straight Thread	8104	H764
IPS Socket Tailpiece	8108	*
Union Tee, Pipe Socket	8110	*
Male Branch Tee, Pipe Socket to Pipe Socket to Male NPT	8111	*
Male Run Tee, Pipe Socket to Male NPT Pipe Socket	8112	*
Branch Tee, Pipe Socket to Pipe Socket to Female NPT	8113	*
Male Run Tee, Pipe Socket to Female NPT to Pipe Socket	8114	*
Male Branch Tee, Pipe Socket to Pipe Socket to Straight Thread	8115	*
Male Run Tee, Pipe Socket to Straight Thread to Pipe Socket	8116	*
Union Elbow, Pipe Socket to Pipe Socket	8120	*
Male Elbow, Pipe Socket to Male NPT	8121	*
Female Elbow, Pipe Socket to Female NPT	8122	*
Male Elbow, Pipe Socket to Straight Thread	8123	*
Direct Braze or Socket Weld Tee	8133	H730
Direct Braze or Socket Weld 90°	8140	H740

* Use standard CPV-O-SEAL Mark VIII numbers and add "MOD"

7800 Series Tube Fittings	Tech-O-Seal	CPV-O-Seal
Connector, Union	7853	953
Connector, Union	7854	954
Connector, Union	7859	959
Connector, Union	7864	964
Tailpiece	7849	949R
Union Nut	7850	950
Threadpiece, Straight Thread	7859	959T
Coupling	7830	930
Coupling	7832	932
Coupling	7847	947
Tee, Male Branch	7815	915
Tee, Male Run	7816	916
Elbow, Male	7823	923

Cross Reference List

Tech-O-Seal to CPV-O-Seal

Hose Fittings and Adapters	Tech-O-Seal	CPV-O-Seal
Fitting, Hose, Medium Pressure Hose	8390	F870
Fitting, Hose, High Pressure Hose	8391	F880
Adapter, Male Pipe Thread	8301T	F854
Adapter, Female Pipe Thread	8302T	F853
Adapter, male Straight Thread	8303T	F859
Adapter, OD Tube	8300T	F849
Elbow, Male Pipe Thread	8321T	F821
Elbow, Female Pipe Thread	8322T	F822
Bulkhead Union, OD Tube	8397	F890
Bulkhead Union, Hose to Hose	8385	F890T

9000 Series Tube Fittings	Tech-O-Seal	CPV-O-Seal
Tailpiece, Blank	9001	448R
Threadpiece, Straight Thread, Male	9002T	459T
Threadpiece, Bulkhead	9003T	489T
Nut, Bulkhead	9004	489R
Tailpiece, Socket Weld	9005	448R
Union Nut	9006	450N
Threadpiece, Socket Weld	9007	448T
Tee	9008	440
Elbow, 90°	9009	441
Cross	9010	443
Tailpiece, Male Weld	9027	463R
Threadpiece, Male Weld	9026	463T
Threadpiece, Blank	9030	448T
Threadpiece, Straight Thread, Female	9033	486T

Fraction to Decimal Conversions

Fraction	Inches	Millimeters	Fraction	Inches	Millimeters
$\frac{1}{64}$	0.015625	0.3969	$\frac{33}{64}$	0.515625	13.0969
$\frac{1}{32}$	0.031250	0.7938	$\frac{17}{32}$	0.531250	13.4938
$\frac{3}{64}$	0.046875	1.1906	$\frac{35}{64}$	0.546875	13.8907
$\frac{1}{16}$	0.062500	1.5875	$\frac{9}{16}$	0.562500	14.2876
$\frac{5}{64}$	0.078125	1.9844	$\frac{37}{64}$	0.578125	14.6844
$\frac{3}{32}$	0.093750	2.3813	$\frac{19}{32}$	0.593750	15.0813
$\frac{7}{64}$	0.109375	2.7781	$\frac{39}{64}$	0.609375	15.4782
$\frac{1}{8}$	0.125000	3.1750	$\frac{5}{8}$	0.625000	15.8751
$\frac{9}{64}$	0.140625	3.5719	$\frac{41}{64}$	0.640625	16.2719
$\frac{5}{32}$	0.156250	3.9688	$\frac{21}{32}$	0.656250	16.6688
$\frac{11}{64}$	0.171875	4.3656	$\frac{43}{64}$	0.671875	17.0657
$\frac{3}{16}$	0.187500	4.7625	$\frac{11}{16}$	0.687500	17.4626
$\frac{13}{64}$	0.203125	5.1594	$\frac{45}{64}$	0.703125	17.8594
$\frac{7}{32}$	0.218750	5.5563	$\frac{23}{32}$	0.718750	18.2563
$\frac{15}{64}$	0.234375	5.9531	$\frac{47}{64}$	0.734375	18.6532
$\frac{1}{4}$	0.250000	6.3500	$\frac{3}{4}$	0.750000	19.0501
$\frac{17}{64}$	0.265625	6.7469	$\frac{49}{64}$	0.765625	19.4470
$\frac{9}{32}$	0.281250	7.1438	$\frac{25}{32}$	0.781250	19.8438
$\frac{19}{64}$	0.296875	7.5406	$\frac{51}{64}$	0.796875	20.2407
$\frac{5}{16}$	0.312500	7.9375	$\frac{13}{16}$	0.812500	20.6376
$\frac{21}{64}$	0.328125	8.3344	$\frac{53}{64}$	0.828125	21.0345
$\frac{11}{32}$	0.343750	8.7313	$\frac{27}{32}$	0.843750	21.4313
$\frac{23}{64}$	0.359375	9.1282	$\frac{55}{64}$	0.859375	21.8282
$\frac{3}{8}$	0.375000	9.5250	$\frac{7}{8}$	0.875000	22.2251
$\frac{25}{64}$	0.390625	9.9219	$\frac{57}{64}$	0.890625	22.6220
$\frac{13}{32}$	0.406250	10.3188	$\frac{29}{32}$	0.906250	23.0188
$\frac{27}{64}$	0.421875	10.7157	$\frac{59}{64}$	0.921875	23.4157
$\frac{7}{16}$	0.437500	11.1125	$\frac{15}{16}$	0.937500	23.8126
$\frac{29}{64}$	0.453125	11.5094	$\frac{61}{64}$	0.953125	24.2095
$\frac{15}{32}$	0.468750	11.9063	$\frac{31}{32}$	0.968750	24.6063
$\frac{31}{64}$	0.484375	12.3032	$\frac{63}{64}$	0.984375	25.0032
$\frac{1}{2}$	0.500000	12.7001	1	1.00000	25.4001

Description/Part No.	Page No.
Section 1 - Valves & Accessories	
Union End, Inline	
Plug/Globe (6GP80)	10
Plug/Globe (10GP80)	12
Needle (6GN80)	10
Needle (247GN80)	11
Needle (10GN80)	12
Stop Check (6GSC80)	10
Stop Check (10GSC80)	12
Stop (247GS80)	11
Check/Globe (6GC80)	19
Check/Globe (247GC80)	20
Check Angle (247GC81)	20
Check Offset (247GC82)	20
Check (6C23A)	21
Check (3C231)	21
Union End, Angle	
Plug/Globe (6GP81)	13
Needle (6GN81)	13
Needle (247GN81)	14
Stop Check (6GSC81)	13
Stop (247GS81)	14
Check/Globe (6GC81)	19
Union End, Offset	
Plug/Globe (6GP82)	15
Needle (6GN82)	15
Needle (247GN82)	16
Stop Check (6GSC82)	15
Stop (247GS82)	16
Check/Globe (6GC82)	19
Socket Weld, Inline	
Plug/Globe (6GPW70)	17
Needle (6GNW70)	17
Stop Check (6GSCW70)	17
Check/Globe (6GCW70)	19
Check (4144)	22
Socket Weld, Angle	
Plug/Globe (6GPW71)	18
Needle (6GNW71)	18
Stop Check (6GSCW71)	18
Check/Globe (6GCW71)	19
Female Thread Inline	
Check (4C793)	22
High Pressure Relief	
Relief Valve up to 6000 PSI (6VR57)	23
Valve Accessories	
Globe Needle Valve Cartridge (6KN46)	24
Globe Stop Check Valve Cartridge (6KSC56)	24

Description/Part No.	Page No.
Valve Accessories (continued)	
Globe Valve Cartridge (6KP36)	24
Check Valve Cartridge (6KC66)	25
Valve Spacers (6F80)	25
Soft Goods Kits (SGK)	25

Section 2 - Valves, Instrumentation & Adapters

Instrument Valves	
Needle, Vented Stem, Angle (6GN381)	27
Needle, Vented Stem, Inline (6GN382)	27
Needle, Vented Stem, Inline (6GN309)	28
Needle, Vented Stem, Inline (6GN340)	29
Needle, Vented Stem, Inline (6GN341)	29
Needle, Solid Stem, Inline (6GN352)	30
Needle, Vented Stem, Inline (6GN301)	31
Needle, Solid Stem, Inline (6GN393)	31
Needle, Solid Stem, Inline (6GN395)	32
Adapters	
Female Union × Male Straight Thread (7808)	33
Female Union × NPT Male (7817)	33
Female Union × Tube Flareless (7818)	33
Tube End × Blank Tailpiece (7804R)	33
Tube SW × NPT Female (7805)	33
Tube SW × NPT Male (7806)	34
Tube SW × Tube SW (7847)	34
Tube End × Tube SW Tailpiece (7849)	34
Female Union × Tube End Union Nut (7850)	34
Male Union × Female Straight Thread (7864T)	35
IPS Maleweld × Tube SW Bushing (7867)	35
Male Union × Female NPT (7853T)	35
Male Union × Male NPT (7854T)	35
Male Union × Male Straight Thread (7859T)	35
Female Union × NPT Female (7819)	36
Female Union × Female Union (7821)	36
IPS SW × IPS SW (7830)	36
Tube SW × Male Straight Thread (7860)	36
Tube End × Tube MW Tailpiece (7863)	36
Tube End × Tube MW Tailpiece (7863C)	37
Adapters Assemblies	
$\frac{9}{16}$ - 18 Female Union × $\frac{1}{4}$ Tube Flareless (7809)	37
$\frac{9}{16}$ - 18 Female Union × Blank Tailpiece (7811)	37
$\frac{1}{4}$ Tube SW × $\frac{1}{4}$ NPT Female (7853)	37
$\frac{1}{4}$ Tube SW × $\frac{1}{4}$ IPS SW Union (7800)	37
$\frac{9}{16}$ - 18 Female Union × $\frac{1}{4}$ Tube SW (7801)	38
$\frac{9}{16}$ - 18 Female Union × $\frac{1}{4}$ Tube Male (7803)	38
$\frac{1}{4}$ Tube SW × $\frac{1}{4}$ NPT Male (7854)	38

Product Index

Description/Part No.	Page No.	Description/Part No.	Page No.
Adapters Assemblies (continued)		Couplings (continued)	
1/4 Tube SW × 7/16 - 20 Male Straight Thread (7859).....	38	Sil-Braze, Tube Size (6C47)	75
1/4 Tube SW × 7/16 - 20 Female Straight Thread (7864).....	38	Union Assemblies	
1/4 Tube SW × 1/4 Tube SW (7873)	38	Socketweld End, Pipe Size (6RTN51)	76
1/4 OD Union × 1/4 - 18 Female NPT (4898A).....	39	Socketweld × Thread End, Pipe Size (6RN5150).....	76
1/4 OD Union × 1/4 - 18 Male NPT (4898B).....	39	Socketweld × Male Straight Thread, Pipe Size (6RTN5159).....	77
1/4 OD Union × 1/4 IPS SW (4898C)	39	Sil-Braze End, Pipe Size (6RTN52).....	77
1/4 OD Union Thread × 1/4 OD Union Thread (4898V).....	39	Straight Thread × Sil-Braze, Pipe Size (6RTN5259)	78
1/4 OD Union × 1/2 - 14 NPT (4898X).....	39	Female SW × Male SW, Pipe Size (6RTN6251)	78
Section 3 - 6000 Series Fittings, Couplings & Union Assemblies		Section 4 - 8300 Series Fittings, O-Rings & Sil-Braze Rings	
Fittings, Pipe Size		Fittings, Tube	
Socketweld, Threadpiece (6T51)	42-43	Union, Tube × Tube (8300).....	83
Socketweld, Tailpiece (6R51).....	44-45	Male Connector, Tube × Male Straight Thread (8303).....	83
Butt weld, Threadpiece (6T58).....	46	Male Connector, Tube × Male NPT (8301).....	84
Butt weld, Tailpiece (6R58)	46	Female Connector, Tube × Female NPT (8302).....	84
Union Nut (6N50).....	47	Female Connector, Tube × Female Straight Thread (8304).....	85
Blank, Tailpiece (6R104).....	47	Bulkhead, Union, Tube × Tube (8305).....	86
Blank, Threadpiece (6T104).....	47	Union, Female Tube × Male Tube (8306).....	86
Male weld, Threadpiece (6T62)	48	Union Elbow, Tube × Tube (8320).....	87
Male weld, Tailpiece (6R62).....	49	Male Elbow, Tube × Straight Thread (8323)	87
Sil-Braze, Threadpiece (6T52).....	50-51	Male Elbow, Tube × Male NPT (8321)	88
Sil-Braze, Tailpiece (6R52)	52-53	Female Elbow, Tube × Female NPT (8322).....	88
Female NPT, Threadpiece (6T53)	54-55	Direct Braze or Weld Tee (8333).....	89
Female NPT, Tailpiece (6R53).....	56-57	Direct Braze or Weld 90° Elbow (8340)	89
Male NPT, Threadpiece (6T54)	58	Union Tee, Tube × Tube × Tube (8310).....	90
Male NPT, Tailpiece (6R54)	59	Male Branch Tee, Tube × Tube × Male NPT (8311).....	90
Bulkhead (6T89)	71	Male Run Tee, Tube × Male NPT × Tube (8312)	91
Inserts		Branch Tee, Tube × Tube × Female NPT (8313)	91
Socketweld, Pipe size (6C57).....	60	Male Branch Tee, Tube × Tube × Straight Thread (8315).....	92
Sil-Braze (6C67)	61	Male Run Tee, Tube × Straight Thread × Tube (8316)	92
Fittings, Tube Size		Union Cross, Tube × Tube × Tube × Tube (8309)	93
Socketweld, Threadpiece (6T48)	62	Tailpiece, Blank (8317)	94
Socketweld, Tailpiece (6R48).....	63	Threadpiece, Blank (8318).....	94
Sil-Braze, Threadpiece (6T49).....	64	Straight Thread Plug (8319).....	95
Sil-Braze, Tailpiece (6R49)	65	Union Nut (8307)	95
Male weld, Threadpiece (6T63)	66	Tailpiece, Female Tube (8308).....	96
Male weld, Tailpiece (6R63).....	66	Tailpiece, Male Tube (8327).....	97
Straight Thread, Threadpiece, Male (6T59).....	67	Coupling, Direct Braze or Weld (8347)	97
Straight Thread, Tailpiece, Male (6R59).....	68	IPS Male × OD Female Insert (8365)	98
Straight Thread, Threadpiece, Female (6T64).....	69	OD Male × IPS Female Insert (8366)	99
Straight Thread, Tailpiece, Female (6R64).....	70	Direct Braze - Weld Reducing Inserts (8367).....	100
Couplings		O-Rings	
Socketweld, Pipe Size (6C100)	72	Union End (4564011).....	101
Socketweld, Tube Size (6C46).....	72	Straight Thread Connection (4564932).....	101
Socketweld, IPS × Tube Size (6C107).....	73	Sil-Braze Ring	
Sil-Braze, Pipe Size (6C101).....	74-75	Sil-Braze Ring (8329).....	101

Description/Part No.	Page No.
----------------------	----------

Section 5 - 8100 Series Fittings, O-Rings & Sil-Braze Rings

Fittings, Pipe

Union, Pipe Socket × Pipe Socket (8100)	104
Male Connector, Pipe Socket × Male NPT (8101).....	104
Female Connector, Pipe Socket × Female NPT (8102)	105
Male Connector, Pipe Socket × Male Straight Thread (8103).....	105
Female Connector, Pipe Socket × Female Straight Thread (8104).....	106
Male Run Tee, Pipe Socket × Female NPT × Pipe Socket (8114)	107
Union Elbow, Pipe Socket × Pipe Socket (8120)	107
Union Tee, Pipe Socket (8110).....	108
Male Branch Tee, Pipe Socket × Pipe Socket × Straight Thread (8115).....	108
Male Elbow, Pipe Socket × Male NPT (8121).....	109
Female Elbow, Pipe Socket × Female NPT (8122)	109
Male Elbow, Pipe Socket × Straight Thread (8123).....	110
Tailpiece - OD Union × IPS Socket (8108)	111
Direct Braze or Socketweld 90° Elbow (8140).....	112
Direct Braze or Socketweld Tee (8133).....	112

Section 6 - Hose End Fittings & Adapters

Hose End Fittings

Medium Pressure (8390).....	115
High Pressure (8391)	115

Hose Assemblies.....

	116
--	-----

Adapters

Straight, Male Pipe Thread (8301T)	117
Straight, Female Pipe Thread (8302T)	117
Straight, Male Straight Thread (8303T)	118
Straight, OD Tube (8300T)	118
Elbow, Male Pipe Thread (8321T).....	119
Elbow, Female Pipe Thread (8322T).....	119
Bulkhead Union, OD Tube (8397)	120
Bulkhead Union, Hose to Hose (8385).....	120

Section 7 - 9000 Series Fittings

Fittings, Tube

Tailpiece, Blank (9001).....	122
Tailpiece, Socketweld (9005).....	122
Tailpiece, Male Weld (9027).....	122
Threadpiece, Straight Male Thread (9002T).....	123
Threadpiece, Bulkhead (9003T)	123
Tee (9008T)	123
Nut, Bulkhead (9004).....	124
Nut, Union (9006)	124



Hydrasearch DEFENSE

Catalog 1120



Hydrasearch Company, LLC
203A Log Canoe Circle, Stevensville, MD 21666
Phone: 410-643-8900 ▪ Fax: 410-643-8954
defense@hydrasearch.com ▪ www.hydrasearchdefense.com