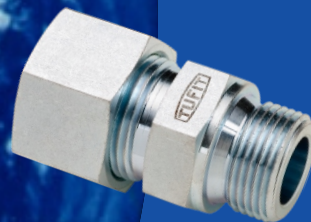




Quality Beyond Compare



Fluid Conveyance
Solutions, Fluid
Connectors and
Accessories

C A T A L O G

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

Ahuja Corporation Pvt. Ltd.
A-185, RIICO Prahladpura Industrial Area
Near Shivdaspura, Tonk Road
Jaipur 302 022
Rajasthan
India

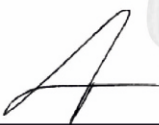
Holds Certificate No:

FM 713505

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

The Design and Manufacture of Hydraulic and Pneumatic Tube Fittings, Hose Assemblies
Equipment's and Accessories.

For and on behalf of BSI:


Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2019-06-14

Latest Revision Date: 2019-06-14

Effective Date: 2019-06-14

Expiry Date: 2022-06-13

Page: 1 of 1



...making excellence a habit.™

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.

An electronic certificate can be authenticated [online](http://www.bsi-global.com/ClientDirectory).

Printed copies can be validated at www.bsi-global.com/ClientDirectory or telephone +91 11 2692 9000.

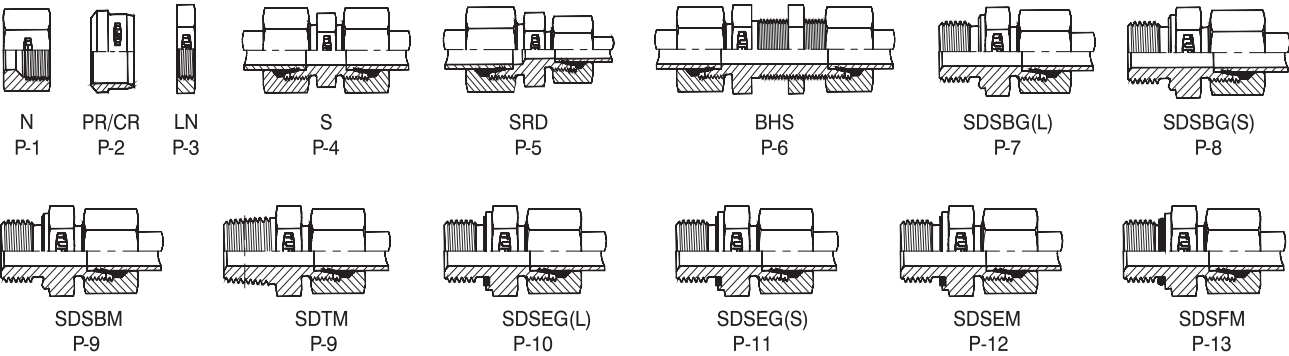
Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained by consulting the organization.

This certificate is valid only if provided original copies are in complete set.

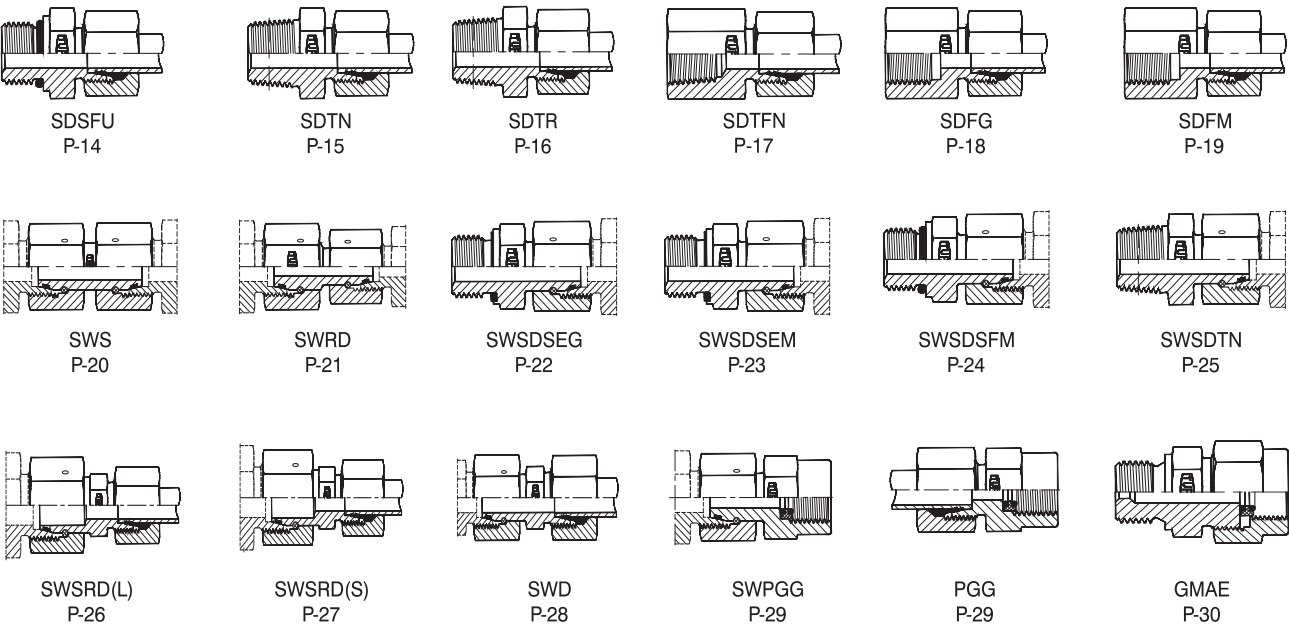
Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.

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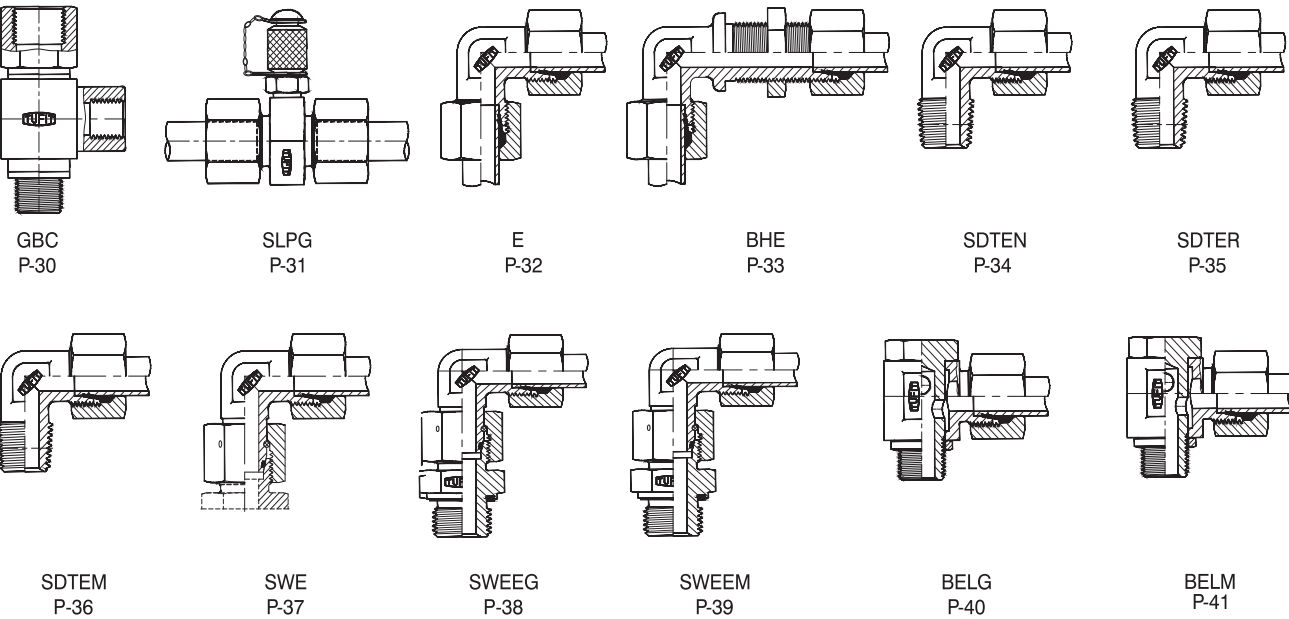
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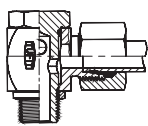
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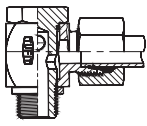
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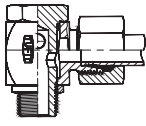
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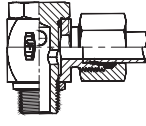
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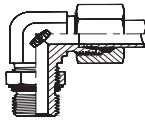
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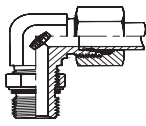
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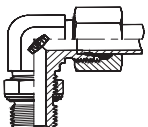
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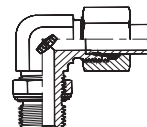
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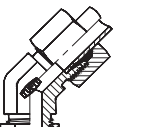
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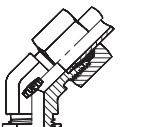
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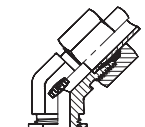
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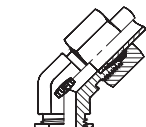
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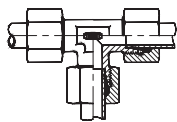


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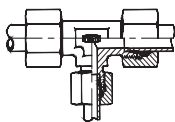


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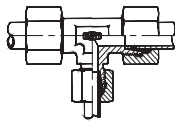
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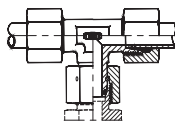
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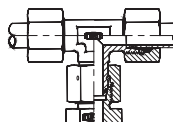
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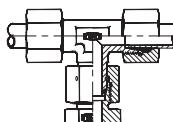
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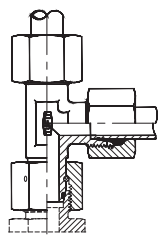
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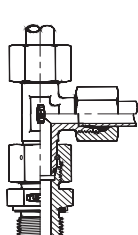
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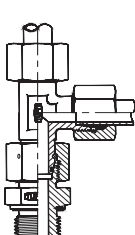
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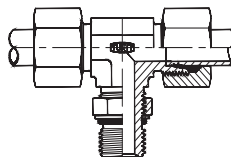
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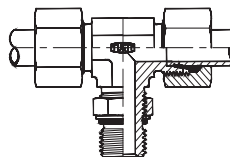
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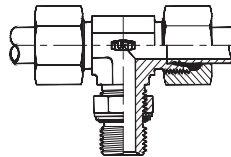
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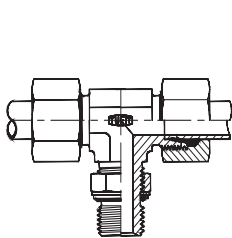
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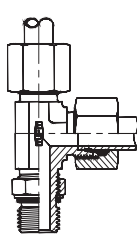
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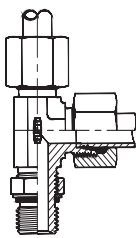
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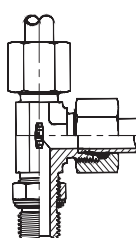
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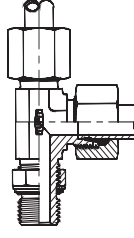
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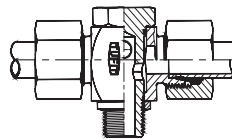
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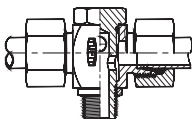
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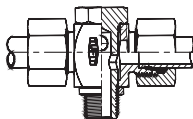
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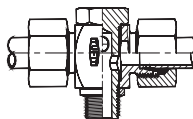
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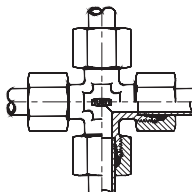
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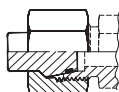
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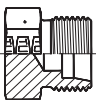
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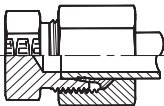
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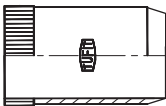
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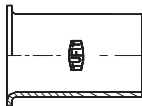
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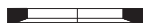
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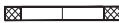


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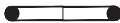


OR
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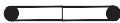
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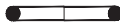
RR
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OR(ISO)
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WDOR
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SWOR
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SR/SRH
P-82

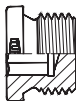


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PGSR
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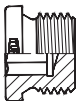
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BPBG
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BPEG
P-83



BPBM
P-83



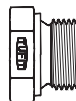
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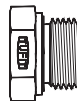
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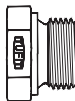
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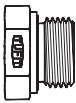
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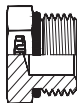
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HBPM
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HBPEM
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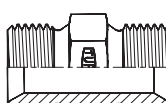
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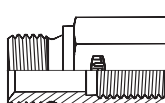
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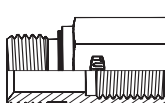
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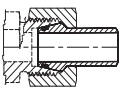


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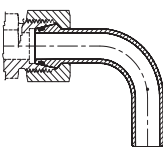


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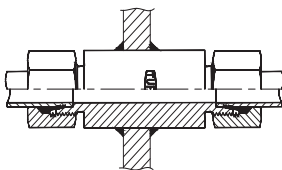
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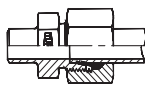
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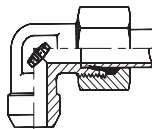
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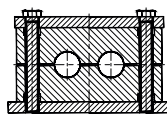
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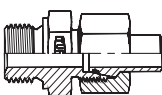
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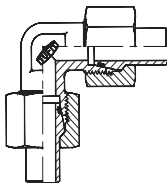
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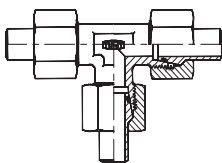
TCS/TCF
P-95



WELDON
STRAIGHT
COUPLING
P-102



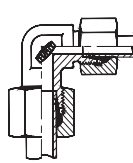
WELD ON
ELBOW
COUPLING
P-103



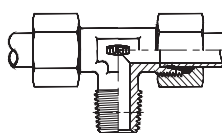
WELD ON
TEE
COUPLING
P-104



CUSTOM
STRAIGHT
PRODUCTS
P-105



CUSTOM
ELBOW
PRODUCTS
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CUSTOM
TEE
PRODUCTS
P-107

Ahuja Corporation Private Limited ("ACPL", Formerly "Ahuja Industries") specializes in manufacturing and supply of **TUFIT** make Fluid Conveyance Products.

Established by our Founder & Chairman Er. V. K. Ahuja, in 1970, we have grown leaps and bounds in the last five decades. Thanks to the continued patronage of our customers, we outgrew our original facility located at Bais Godam, Jaipur. In order to achieve our goal of delighting every customer by providing reliable products with shorter lead times, we have made major investments in a completely new world-class manufacturing facility with an area of 10,000 square meters, latest technology, skilled talent, efficient equipment and quality assurance through the most rigorous tests earning us the highest ratings from our customers and industry-related certifications. We are pleased to invite you for a tour of our ISO 9001-2015 certified facility. The IATF 16949:2016 certification is underway.

TUFIT is known for Hydraulic Fluid Conveyance Solutions including Leak Free products such as 24° Flareless Bite Type Tube Fittings, 30° and 37° flare JIC tube / ORFS Fittings, JIS / Metric / Inch Adapters, Hose and Tube Clamps, Hose Assemblies, Hydraulic Seamless Tubes, and Assemblies.

ACPL has the unique distinction of offering Carbon Steel, Brass and Stainless Steel tube fittings required for Hydraulic & Pneumatic applications for different pressures, temperatures & vibration conditions, being manufactured on CNC lathes, precision single spindle automats, and thread rolling among other machines.

In order to improve the performance at our end, a well-equipped precision Tool Room supports the various development and day to day maintenance work and in order to improve the performance at your end, through new solutions and wider applications.

In house facility of shot blasting, surface finishing, Phosphating, Zinc plating & Yellow passivation, etc., maintains the quality standards of **TUFIT** products. All **TUFIT** products come with a lifetime warranty.

Large inventories of a large variety of our products in our professionally managed stores with us and with our resellers spread all over India, help faster deliveries to actual users.

A long list of our satisfied customers not only testifies to our genuine efforts of improving the quality day by day but delivery too. Our prices are most competitive.

We serve various market segments like Machine Tools, Automotive, Defence, Mobile and Construction Equipment, Railways, Agriculture Equipment, CNG Connections, and Testing Equipment.

We sell through our experienced resellers across India and UAE, directly to OEM's and online to our end users.

Our products conform and exceeds standards ISO 8434-1, ISO 8434-2, ISO 8434-3, ISO 8434-4, ISO 8434-5, ISO 8434-6, DIN 2353, DIN 3851, DIN 3015, DIN 7603, DIN 3869, SAE J514, SAE 060110, BSI 5200, IS 8805, IS 12485, JIS B8363, ANSI B-16.11, IS 1862, IS 13178, DIN 6379, BS 4368 and others.

Our other businesses under the umbrella of Ahuja Group include the sales and distribution of multinational brands like Festo Germany Automation Solutions, Tianyang Steel Tubes, etc. We manufacture StackEasy Material Handling Equipment and Crackamite Silent Demolition Agent.

Our Leak- Free Fluid Conveyance Products are a result of In-house design capabilities, Pressure Testing facility, Corrosion Protection with an assurance of up to 1000 hours of Salt Spray Test Life. **TUFIT** products are Safe, Reliable, Durable and Leak-Free. We assure "Quality Beyond Compare". Eighty percent of our revenues come from existing customers.

We are continuously monitoring and working on On-time Delivery, Zero Defect, Cost Optimisation, New Development, Lead Time, Customer-Specific Requirements, Technological Developments, Operational Efficiencies and taking care of our people and the environment.

We give back to the community through the Ahuja Foundation.

Ahuja Corporation Pvt. Ltd is in the Business of Design, Manufacture and Supply of Turned Components, Hydraulic Tube and Hose Fittings, Hydraulic Seamless Steel Tubes & Hose Assemblies, Fluid Conveyance Product , Material Handling Equipments, Mining Chemicals, Hydraulic & Pneumatic products. We are committed to supply products of High Quality, On Time, consistently, to ensure satisfaction of applicable requirements & Customer Satisfaction through:

- Effective implementation of Quality Management System
- Effective planning of all processes
- Continual improvement of QMS, products, processes and personnel
- Achieving Product Quality Specifications
- Setting quality objectives based on Policy & Continual improvement through objectives

24° Cone Connector
DIN 2353 / ISO : 8434-1



24° Weld Connector
DIN 2353 / ISO : 8434-1



Hose End Fittings & Hose Assemblies



Washer & O-Rings



37° Flared Connector
ISO : 8434 - 2 / JIC : 514



Twin Ferrule Connector



Port Plugs



**Threaded Adapters
Pipe Fitting**



60° Cone Connector
ISO : 8434-6 / BS : 5200



ORFS Connector
ISO : 8434-3



Tube Clamps
DIN : 3015



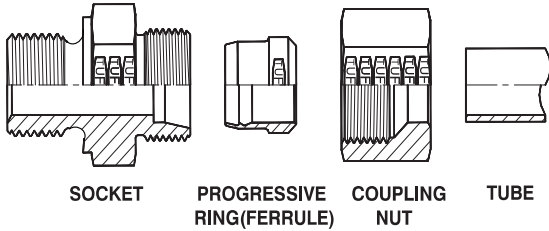
Seamless Tube



WORKING PRINCIPLE:

TUFIT 24° Flare less Bite Type Couplings as per ISO 8434-1 (DIN 2353) are best suited for Steel, Stainless Steel or Copper tubes where brazing, soldering, welding, flaring or threading is not possible or permissible.

TUFIT Fitting is a flare less three-piece design, comprising of a **Socket** body having a precision conical seat, a one-piece precision machined hardened **Progressive Ring** (Ferrule) and a **Coupling Nut** are suitable for use with ferrous & non-ferrous tubes with outside diameter from 4 mm to 42 mm inclusive.



When the Coupling Nut is progressively tightened it makes the Progressive Ring to move on to the tube, which subsequently makes two 360° bite into the outside diameter of the pipe, thereby forming a visible collar of material in front of it at **A**, ensuring a strong, reliable, an unusually high degree of safety and permanent sealing due to the outstanding construction & unique internal geometry design of our progressive ring.

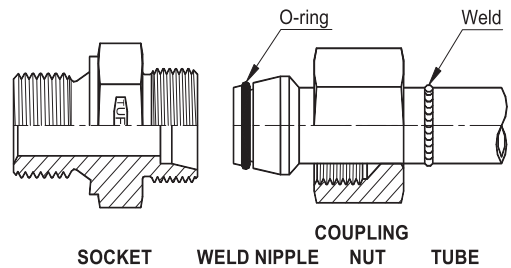
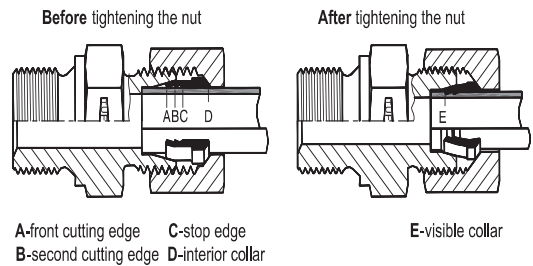
The Progressive Ring design provides a second bite, a seal point at **B** for improved reliability and higher working pressure capability. It also decreases the risk of improper assembly because of the sharp, high torque rise which occurs when the fitting is properly tightened.

The presence of the visible bite & the collar virtually eliminates any risk of catastrophic blow-off. This is a very important safety feature.

Experience has shown that because of the resistance of SS tube the visible collar is smaller than with Steel tube of the same size.

All **TUFIT** couplings in this catalogue can however be supplied with reliable O-ring welding cones which has been designed and made in such a way as to fit into the cone. The standard coupling nut can be used. For details please refer Weld-section.

All **TUFIT** couplings are exactly equivalent to any other or imported fittings and hence are easily replaceable on 1:1 basis.

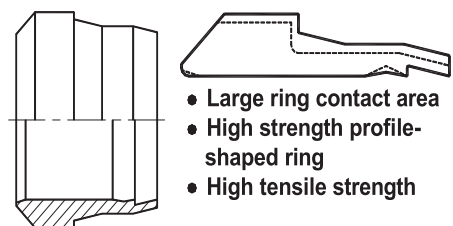

TUFIT PROGRESSIVE RING: (profile with two cutting edges)
(Heart of a fitting)

Development in hydraulics and our continual R&D led to a constant requirement for optimizing the construction of our Progressive Ring. The raising of test pressure ratings was the deciding factor for the present form of our Progressive Ring -PR, the design & profile of which is now much superior then before & thus it replaces the previous Progressive Ring -PRA.

It penetrates to a limited depth only and glides safely and lightly along the well-finished wall of the cone providing a safe metallic seal. It provides a second bite for improved reliability & higher working pressure capability. The Progressive Ring in its dismantled state can be turned around while still on the tube.

The new design of PR distributes a positive load all over the ring. The sealing efficiency & the strength increases to a high degree because of 100% connection between the cutting ring and the tube, high tensile strength, large ring contact area and high strength profile shape. All dimensions and the critical bite edge is monitored on an ongoing basis to maintain the consistency of quality.

Remember ! The behaviour of cutting rings when excessive tightened results in a power loss of the fitting. The fitting using this profile ring is able to withstand excessive tightening by 1/2 of a turn without significant power loss. With the use of this improved design L-series fittings can be used upto a nominal pressure of 500 bars and S-series upto 800 bars with a safety factor of 1:2 provided all other fitting components are original **TUFIT**.



- Large ring contact area
- High strength profile-shaped ring
- High tensile strength



WIDE RANGE:

To provide **One Window Service & Customer Support** & to cater all your requirements of spares of Hydraulic & Pneumatic applications we are manufacturing many types & designs of fittings and couplings for last 50 years. We also supply various Tools, Cutters, Accessories, Cutting device, Bending devices, Oils, Lubricants, Seals, Sealants, Equipment's & Machines required for the proper & fast assembly and installation of these couplings.

TUFIT Fittings are now available over 30 most popular & commonly used configurations & size combinations as per ISO 8434-1, in LL- (Very Light), L- (Light) & S- (Heavy) series in Steel, Stainless Steel (304/316/Ti) & Brass. The fittings in this catalogue have been arranged by shape instead of end-type.

With Orient-able wide range of fittings there are wide varieties of Banjos, Adjustable Elbows or Swivel combinations that allow an optimum solution for each application. Wide ranges of Weld fittings are included in Weld section.

If you can't find the right Fitting or Adapter within this catalogue as per your requirement, you may please refer to our Custom Products section & may choose & specify your required special material, shape & size or combinations for us to manufacture against your request.

The straight products are produced from cold drawn bar stocks whereas the **shaped products** (Elbows, Tees and Crosses etc.) are produced from hot forged forgings and then machined to the stringent specifications on precision machines. The forging process improves the strength and metallurgical properties of the fittings. **Nuts** are cold formed, hot formed or machined from cold drawn material. Cold Forging or cold drawing process provides a more tightly packed grain structure, thus improving not only the material strength but also the fatigue properties or endurance limits.

Our wide range also includes fittings of designs Flared fittings-37° as per ISO 8434-2, O-Ring face seal connections as per ISO 8434-3, Weld-On Nipples with O-ring as per ISO 8434-4, Hose Connectors-60°, with or without O-ring as per ISO 8434-6, Twin Ferrule design Fittings, Pipe fittings & Adaptors, Tube clamps, Rotary fittings, Seamless Tubes, End Fittings for Rubber Hose assemblies, Rubber Hoses & Hose assemblies, Valves, Diagnostic fittings, Flanges etc.



RELIABILITY & TROUBLE FREE:

TUFIT Fittings are trouble free & very easy to assemble and therefore Millions of **TUFIT** fittings are being used by increasing number of users like Machine Tools, Railways, Automobile, Defense, Mobile construction equipment's, Hydraulic Presses, Plastic Injection Molding Machines & many others.

TUFIT Fittings are manufactured under tight quality control which ensures a highly reliable & satisfactory product. All manufacturing locations are ISO 9001 certified.

TUFIT Fittings are designed for best flow rates without any restriction. Therefore, media flows without any excessive noise or heat generation & hence gives its best performance.

TUFIT Helps minimize direct fluid costs & indirect costs. Machine down time, tool cost, product availability, maintenance labor, product disposal, rework and rejects, waste treatment etc. Saving of fluid, coolant, hydraulic oil etc. is the easiest way to increase your profit.



HIGH QUALITY SURFACE PROTECTION:

(Surface treatment)

Protective coatings such as electroplated zinc and zinc phosphate are usually applied to steel fittings for extending their useful service life in corrosive environments.

Steel Fittings: The external surface & threads of all Carbon steel parts are supplied with Standard treatment of Trivalent Cr (VI)-free Zinc coating with white passivation as per the directives 2000/53/EC of the EU & ROHS compliance. The corrosion resistance increases significantly due to the plating layer of minimum thickness of 8 µ to 12 µ (microns) & additional sealing by chromating process. It passes successfully 72 hours to red rust Standard neutral Salt Spray Test (SST) in accordance with ISO 9227/ 5% NaCl. Increased SST hours can also be supplied on request. Internal fluid passages are protected from dust and corrosion during storage. The Silver Bright color due to chromating or passivation process offers an attractive appearance. Weld components are protected from corrosion by a rust preventive oil film or Phosphate coating.

Stainless Steel:

Body: Plain (No Coating) **Progressive Ring:** Plain (No Coating) / Blacken

Nut: Up to 12L / 10S: Plain + Glide Coating, Above 15L-42L / 12S-38S: Plain + Inside Silver Coating.

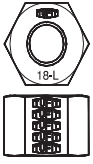
SS Nuts are pre-lubricated with **Silver Plated threads** to eliminate thread galling & to reduce the assembly torque by approx. 40% thereby increasing the assembly speed & efficiency.

Brass: Plain (No Coating)

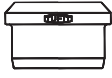


MARKING / STAMPING / STORAGE & SHELF LIFE:

All components of each assembly are marked with our registered trade mark **TUFIT** logo & size for easy identification. Threaded end is protected with a plastic cap, which not only protects the thread from dust but also from getting it damaged during transit. Storage life also increases considerably. Always put dust cap or plug when coupling is not in use.



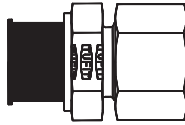
COUPLING
NUT



PROGRESSIVE
RING



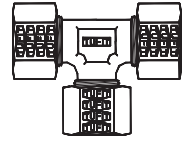
BLUE
PLASTIC CAP



SOCKET



ELBOW



TEE

- Dust / Oil free packing ready to use, easy to store. Each assembly is skin packed with polyethylene sheet / Bubble sheet which should be stored in a cool & dry place at room temperature.
- Bar code, Batch No. and Date of packing is mentioned on each packing box.
- Never disassemble any new unused fitting till you really want to use it so as to avoid any dents, soil etc.



TEST METHODS FOR HYDRAULIC FLUID CONNECTIONS AS PER IS: 10103 / ISO 19879:

In addition to the normal visual & dimensional checks carried out during machining, practical tightness and fatigue tests between the various parts are also carried out on **TUFIT** fittings.

1. Proof Pressure Test: Three test assemblies are picked up at random from the lot and are subjected to a pressure of **1.33 times** the maximum working pressure at a room temperature of 20°C to 40°C. The cold drawn tube for this test is taken as per IS: 8805-(Part-1)-1978. Since the tests may be hazardous, hence before starting any hydraulic test, the system is bled off of any air. The pressure is gradually increased and is maintained at the specified proof pressure for 5 minutes. The coupling should not leak during this routine inspection test.

2. Dismantling and Reassembly: Three test assemblies, which have successfully completed the above test No.1 are picked up and dismantled and re-assembled six times. The test No.1 is carried out once again on all these three assemblies successfully as above.

3. Burst Test: Three test assemblies, which have completed test No.1 successfully, are subjected to a gradual increase of pressure up to **4 times** the maximum working pressure of a coupling at a room temperature of 20°C to 40°C, till the burst pressure is reached. The coupling should not leak below the specified burst pressure with safety factor of 4:1. Stud couplings with Taper or Parallel thread end fittings with metal to metal seal, safety factor is 2.5:1.

4. Vacuum Test: Three test assemblies, which have successfully completed test No.1, are subjected to a vacuum of 6.5 kPa (0.065 bar) absolute pressure to the working pressure when used at temperatures between -40°C and +120°C with petroleum based hydraulic fluids.

5. Pressure impulse Test and Vibrations: Three test assemblies, which have completed successfully the test No.1, are subjected to a hydrostatic pressure of 1.33 times the maximum Pressure at Impulse test @ 30 to 100 cycles / minute, along with the vibrations @ 1400 to 2800 cycles / minute at a room temperature of 50°C to 60°C. At no time after re-tightening, the test assemblies shall leak in excess of 1 cm³ / h / assembly.



GUARANTEE / WARRANTY:

ALL **TUFIT PRODUCTS ARE GUARANTEED:** for the high performance and operational reliability for a period of 12 months against defective material or workmanship provided it has not been mishandled. **TUFIT** products are backed by Life time Warranty. The company's liabilities are limited to the replacement of goods proved to have been defective. The company also accepts no responsibility for any contingent or resulting liabilities or loss arising through any so called defective goods. The company's decision on the cause for any such defects is final and binding.



SAFETY:

The Pressure ratings, safety factors, performance and absolute operational reliability & functional safety are guaranteed only if original **TUFIT** fitting components are used & assembly instructions are strictly adhered to. The proper make up and assembly of **TUFIT** bite type fittings is critical to their proper functioning.

CAUTION: Interchanging or intermixing of parts of tube fittings of different designs, principle, dimensions and tolerances is a very foolhardy & dangerous practice. Leaks, other failures, damage or injuries may result. Do not Mix / Match hose and couplings from one manufacturer with hose and couplings from another manufacturer else pay the price.



GENERAL RECOMMENDATIONS FOR TUBES:

Selection of proper tube and its smooth bends play an important role in the correct, leak proof performance of the assembly of **TUFIT** fittings. Non-standard material or tolerances lead to incorrect assembly fittings.

Steel	Ultimate Tensile Strength Rm	Yield strength ReH	Elongation	Condition
Fine grain quality St 37.4 as per DIN 1630	340 N/mm ² min. 49,000 lbs./in ² or 34.60 to 47.90 Kg/mm ²	235 N/mm ² min. or 34,000 lbs./in ² or 24 kg/mm ² min. Safety factor 1.5	25 % min.	Seamless, cold drawn under inert gas Normal annealed , abbreviation Free of scale, NBK DIN 2391-2 Hardness: 70-75 HRB IS: 8805-(Part-1)-1978 St 37.4 Tubes with ID 1.5-5 mm, Phosphated & Oiled-outside & inside. Tube from 6 mm ID, Cr.(VI)-free Zinc Plated -outside & inside
Stainless Steel	Ultimate Tensile Strength Rm	Yield strength ReH	Elongation	Condition
Austenitic, 1.4571 & 1.4541 X6CrNiMoTi17122	500 N/mm ² min. 72,500 lbs./in ²	245 N/mm ² min. or 35,500 lbs./in ² Safety factor 1.5	35 % min.	Seamless, cold drawn as per ISO 1127 Normal annealed, Free of scale Hardness: 85-90 HRB Heat treated as per DIN 17458 tab.6
Brass	Material no.		Condition	
Copper with short code SF-Cu F37 CUZN35Ni2 DIN 17660	2.0540		Seamless, cold drawn Normal annealed Free of scale abbreviation as per DIN 1786	

Important ! The tubes should be leak proof with a certificate of non-destructive leak test. These should be of weld able quality. Steel Tubes should be able to bear a temperature of – 20°C to +120°C & of SS tubes upto 650°F without pressure reduction. A bend radius of 3 x OD of tube is recommended for cold bending of tubes with hand tube benders. For Weld Nipples, tube that is suitable for welding should be used.

TUFIT TOLERANCE ON TUBES:

The Steel & SS tubes require precise tolerance on their outside diameters to provide a perfect joint as follows:

O.D TUBES (METRIC)		O.D TUBES (INCH)		N.B TUBES (INCH)		N.B TUBES (INCH)	
04 - 12	±0.10 mm	1/4" - 3/4"	±0.004"	1/4"	0.533" - 0.541"	1"	1.332" - 1.342"
14 - 30	±0.08 mm						
35 - 38	±0.15 mm	1" - 1-1/2"	±0.005"	3/8"	0.674" - 0.682"	1-1/4"	1.673" - 1.683"
42	±0.20 mm	2"	±0.006"	1/2"	0.842" - 0.850"	1-1/2"	1.905" - 1.915"
-	-	-	-	3/4"	1.056" - 1.066"	-	-

TUFIT CRITERIA FOR THE SELECTION OF TUBE MATERIAL v/s FITTING MATERIAL:

Tube material	Steel	Stainless steel	Stainless steel	Copper	Plastic
Fitting Material	Steel	Stainless steel	Steel	Brass	Steel,SS,Brass
Pressure capability	Excellent	Excellent	Good	Good	Low
Temperature capability	Very Good	Excellent	Very Good	Very Good	Depending on tube & material
Corrosion resistance	Good	Very Good	Good	Excellent	---
Internal media compatibility	Good	Excellent	Good	Very Good	---
Assembly Characteristics	Excellent	Pre-assembly	Pre-assembly with	Support	Support sleeves
a) Progressive Ring PR			SS progressive ring	sleeves required	mandatory
b) Weld nipple-WN	Excellent	Excellent	Not possible	Not possible	Not possible

Zinc plated mild steel nuts can be supplied with SS fittings as they do not come into contact with the contents of the pipe.



SERIES- LL (extra Light range)

NP 100 bar (1450 psi)			NP 100 bar (1450 psi)			NP 100 bar (1450 psi)		
ANNEALED TUBE			ANNEALED TUBE			ANNEALED TUBE		
OD	NB	Wall Thickness	OD	NB	Wall Thickness	OD	NB	Wall Thickness
4	2	1	8	6	1	12 **	9	1.5
6	4	1	10 **	7	1.5	---	---	---

**Non Standard sizes

SERIES- L (Light range)

NP 250 bar (3625 psi)			NP 160 bar (2320 psi)			NP 100 bar (1450 psi)		
ANNEALED TUBE			ANNEALED TUBE			ANNEALED TUBE		
OD	NB	Wall Thickness	OD	NB	Wall Thickness	OD	NB	Wall Thickness
6	4	1	---	---	---	---	---	---
8	6	1	---	---	---	---	---	---
10	7	1.5	10	8	1	---	---	---
12	9	1.5	---	---	---	12	10	1 *
15	11	2	15	12	1.5	---	---	---
---	---	---	18	15	1.5 *	---	---	---
---	---	---	22	18	2 *	22	19	1.5 *
---	---	---	---	---	---	28	24	2 *
---	---	---	---	---	---	35	31	2 *
---	---	---	---	---	---	42	36	3

■ We recommend the use of Insert Metal Tube Part No. TIM

SERIES- S (Heavy range)

NP 640 bar (9280 psi)			NP 400 bar (5800 psi)			NP 250 bar (3625 psi)		
ANNEALED TUBE			ANNEALED TUBE			ANNEALED TUBE		
OD	NB	Wall Thickness	OD	NB	Wall Thickness	OD	NB	Wall Thickness
6	3	1.5	---	---	---	6	4	1
8	4	2	8	5	1.5	8	6	1
10	5	2.5	10	6	2	10	7	1.5
12	6	3	12	7	2.5	12	9	1.5
14	7	3.5	14	9	2.5	14	10	2
---	---	---	16	10	3	16	12	2
---	---	---	20	13	3.5	20	15	2.5
---	---	---	25	14	5.5	25	19	3
---	---	---	---	---	---	30	22	4
---	---	---	---	---	---	38	28	5

Stainless steel fittings of material SS 304 or SS 316 Ti (1.4571) should not be used on tubing which has a wall thickness less than 1 mm for tube up to 12 mm OD, 1.5 mm for tube above 12 up to 22 mm and 2 mm for tube above 22 mm OD.

A **tube diameter** which is **too small** increases the speed of fluid flow, whilst causing turbulence and an increase in temperature and pressure drop (Pressure loss). The result is an over consumption of the Hydraulic system energy & more sever conditions of use, which can lead to permanent wear of the system components.

A **tube diameter** which is **too big** increases both the dimensions & the cost of the system.



ACCEPTABLE WORKING TEMPERATURES & STORAGE CONDITIONS:

STEEL COUPLINGS: -40° C TO + 120° C with Petroleum-based hydraulic fluids

SEALS: **NBR:** -25° C TO + 100° C **VITON(FPM):** -15° C TO + 200° C **PTEF:** -100° C TO + 250° C

AMBIENT TEMPERATURE: Down to -35° C with NBR seals, down to - 25° C with FPM seals

When combining several different types of materials, the highest & the lowest temperature figures should be used.

STORAGE CONDITIONS: Components & the Couplings with elastomeric seals should be stored cold at a maximum temperature of 25° C, dry and dust free. They should be protected against sunlight, intense artificial light and ozone.



CRITERIA FOR THE SELECTION OF TUBE END: CRITERIA FOR THE SELECTION OF SERIES:

Design			Design (PR)			
Type	Progressive ring PR	Weld nipple WN	Series	Very light LL	Light L	Heavy S
Sealing method	Metal Seal	Elastomeric Seal	Nom. Pressure	40-100 bar	160-315 bar	315-630 bar
Tube compatibility	Steel, Stainless steel, Copper	Weld able Steel Stainless steel	Max. Pressure	100-250 bar	250-500 bar	420-900 bar
Available sizes	4 LL - 12 LL	---	Heavy duty applications	Good	Very Good	Excellent
	6 L - 42 L	6 L - 42 L	Tube OD	4, 6, 8, 10, 12	---	---
	6 S - 38 S	6 S - 38 S		---	6, 8, 10, 12, 15, 18	6, 8, 10, 12, 14, 16
Installation	Good	Excellent		---	22, 28, 35 & 42	20, 25, 30 & 38
Tube preparation	Good	Excellent	Assly. Tightening effort	Very low	Normal	High
Field repair	Very Good	Difficult	Conclusion	Limited space assly.	Normal application	Heavy duty application
Seal reliability	Very Good	Excellent	—	—	—	—
Typical applications	Hydraulics & pneumatics Lubrications Coupling systems Agricultural, Engineering	Limited use for Special applications Heavy machinery Ship building Power plants	Typical applications	Central lubrication Air brake systems Fuel lines Oil / gas stoves	Machine tools Agricultural vehicles	Hydraulic presses Plastic injection molding m/cs Steel Mills Ship building



CRITERIA FOR THE SELECTION OF SWIVEL (ORIENTABLE) FITTINGS:

Type	Swivel Elbow with Connector	Adjustable Locknut Elbow Coupling	Throttle free Banjo Elbow	Banjo Elbow Coupling
Shape				
Sealing method	Elastomeric	Elastomeric	Metal	Metal
Pressure reliability	Excellent	Very Good	Low pressure	Very Good
Seal reliability	Excellent	Good	Good	Good
Flow character	Very Good	Very Good	Good	Good
Compactness	Good	Very Good	Excellent	Excellent
Installation	Excellent	Very Good	Good	Very Good
Field repair	Excellent	Critical	Good	Good
Available sizes	6L - 42L / 6S - 38S	6L - 42L / 6S - 38S	6L - 42L / 6S - 38S	6L - 42L / 6S - 38S
Available threads	Metric / BSP / UN / UNF / BSPT / NPT	Metric / BSP UN / UNF	Metric BSP	Metric BSP



TIGHTENING TORQUE ON NUT END WITH PROGRESSIVE RING (PR):

In (Nm)*

OD of tube:	6 L	8 L	10 L	12 L	15 L	18 L	22 L	28 L	35 L	42 L
Nut end thread:	M12x1.5	M14x1.5	M16x1.5	M18x1.5	M22x1.5	M26x1.5	M30x2	M36x2	M45x2	M52x2
Manual Torque:	20	25	30	40	60	90	170	210	360	490
Manual Torque Swivel end:	20	35	40	45	55	110	130	200	220	240
OD of tube:	6 S	8 S	10 S	12 S	14 S	16 S	20 S	25 S	30 S	38 S
Nut end thread:	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	M24x1.5	M30x2	M36x2	M42x2	M52x2
Manual Torque:	25	30	40	50	70	80	140	230	300	430
Manual Torque Swivel end:	40	45	50	60	80	100	160	240	260	350

- These Torque values are approx. and are only indicative. Follow Assembly Instructions. Tolerance + 10%
- Tightening torque relate to counterpart made of steel *Nm= Newton Meters



TIGHTENING TORQUE FOR METRIC STUD END:

In (Nm)*

Tube O.D & Series	Thread at the stud end Metric	Form-B with cutting face sealing	Form-E with Elastic Sealing (ES)	Form-F with O-ring Sealing (OR)	Form G & H with retaining ring (RR)	Blanking Plugs		Banjo fittings	
						Form E	Form F	Soft sealing ring	Hard sealing ring
6-L	M 10 x 1	18	18	15	20	12	20	18	18
8-L	M 12 x 1.5	30	25	25	30	25		45	35
10-L	M 14 x 1.5	45	45	35	50	35		55	50
12-L	M 16 x 1.5	65	55	40	55	55		80	60
15-L	M 18 x 1.5	80	70	45	70	65		100	80
18-L	M 22 x 1.5	140	125	60	120	90		140	120
22-L	M 26 x 1.5	190	180	100*	250	135		320	130
28-L	M 33 x 2	340	310	160	330	225		360	-
35-L	M 42 x 2	500	450	210	430	360		540	-
42-L	M 48 x 2	630	540	260	510	360		700	-
6-S	M 12 x 1.5	35	35	35	40	80	35	45	35
8-S	M 14 x 1.5	55	55	45	55		45	55	50
10-S	M 16 x 1.5	70	70	55	70		55	80	60
12-S	M 18 x 1.5	110	90	70	85		70	100	80
14-S	M 20 x 1.5	150	125	80	120		80	125	110
16-S	M 22 x 1.5	170	135	100	130		100	135	120
20-S	M 27 x 2	270	180	170	170		170	320	135
25-S	M 33 x 2	410	310	310	330		310	360	-
30-S	M 42 x 2	540	450	330	430		330	540	-
38-S	M 48 x 2	700	540	420	510		420	700	-

- Lubricate stud with hydraulic oil before screwing in
- * Thread M 27x2



Tube O.D & Series	Thread at the stud end BSP	Form-B with cutting face sealing	Form-E with Elastic Sealing (ES)	Form G & H with retaining ring (RR)	Blanking Plugs Form-E with Elastic sealing (ES)	Banjo fittings		Form-F	
						with Soft sealing ring	with Hard sealing ring	with O-ring sealing	
								Thread UNF	Straight stud end
6-L	G 1/8	18	18	20	13	18	18	7/16	20
8-L	G 1/4	35	35	45	30	45	40	1/2	25
10-L	G 1/4	35	35	45	-	45	40	1/2	25
12-L	G 3/8	70	70	70	60	70	65	9/16	30
15-L	G 1/2	140	90	85	80	120	90	3/4	45
18-L	G 1/2	100	90	85	-	120	90	7/8	55
22-L	G 3/4	180	180	170	140	230	125	1-1/16	85
28-L	G 1	330	310	330	200	320	-	1-5/16	130
35-L	G 1-1/4	540	450	430	450	540		1-5/8	170
42-L	G 1-1/2	630	540	510	450	700		1-7/8	180
6-S	G 1/4	55	55	55	-	45	40	1/2	25
8-S	G 1/4	55	55	55	-	45	40	1/2	25
10-S	G 3/8	90	80	80	-	70	65	9/16	35
12-S	G 3/8	90	80	80	-	70	65	9/16	35
14-S	G 1/2	150	115	110	-	120	90	3/4	60
16-S	G 1/2	130	115	110	-	120	90	7/8	85
20-S	G 3/4	270	180	170	-	230	125	1-1/16	150
25-S	G 1	340	310	330	-	320	-	1-5/16	230
30-S	G 1-1/4	540	450	430	-	540		1-5/8	250
38-S	G 1-1/2	700	540	510	-	700		1-7/8	320

- Tightening torques relate to counterpart made of Steel *Nm= Newton Meters
- Lubricate stud with hydraulic oil before screwing in



SEALING PERFORMANCE:

The Fittings listed in this Catalogue are intended solely for the assembly of connection for fluid applications

Performances:	Straight sealing	Adjustable sealing	Straight sealing	Adjustable sealing	Taper sealing
Threads:	Metric	Metric	UNF	UNF	NPT
Static & Dynamic Pressure capacity:	Excellent	Excellent	Excellent	Excellent	Low - medium
Sealing characteristic:	Excellent	Excellent	Excellent	Excellent	Low - medium
Additional sealing required:	No	No	No	No	Yes
Safety factor:	4:1	4:1	4:1	4:1	2.5:1

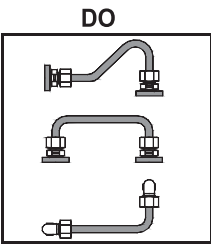
TO ELIMINATE LEAKAGE AND TO MINIMIZE PROLIFERATION:

For new designs of threaded Port & Stud ends only ISO 6149 should be used.
For zero leak performance on the Tube / Hose connection side O-Ring Face (ISO 8434-3) & 24° cones
with Weld nipple (ISO 8434-4) feature Elastomeric seal should be used.

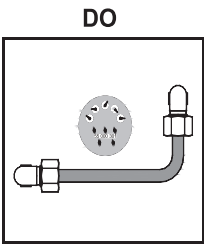
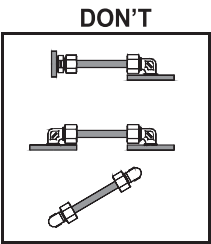
THE COST IS LONG FORGOTTEN BUT THE QUALITY IS REMEMBERD FOR EVER



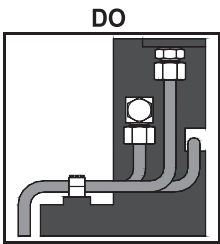
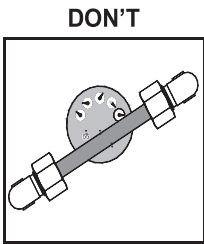
DO NOT ABUSE FITTINGS. FOLLOW THE CORRECT METHOD OF ASSEMBLY AS ILLUSTRATED BELOW. FAILURE TO DO SO MAY RESULT IN SERIOUS PERSONAL INJURY WHILE FABRICATING FOR A LEAK PROOF JOINT



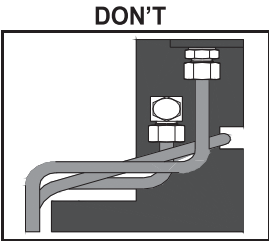
DO
Avoid excessive strain on a joint.
A strained joint will eventually leak



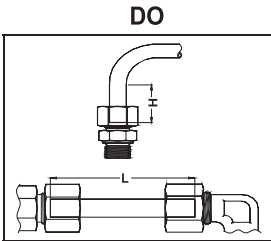
DO
Keep tube away from components that
require regular maintenance



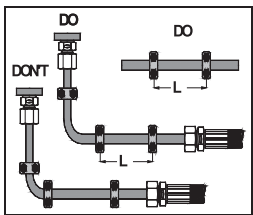
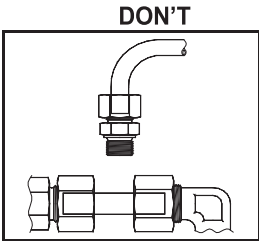
DO
Have a neat
appearance



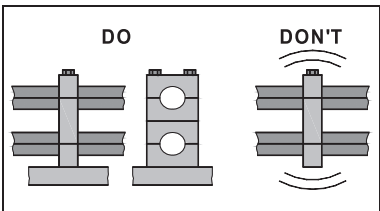
DON'T
Allow for easy
Maintenance



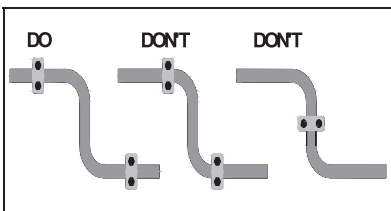
DO
Avoid sharp turn & short length. # A min. length
“L” & “H” should be maintained



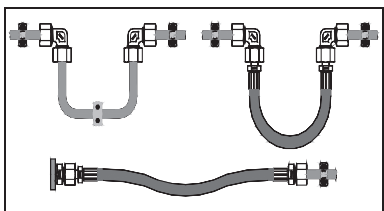
DO
Support with sufficient
clamps to reduce vibrations



DO
Always fix tubes on a stationary
point with tube clamps
DON'T fix tubes themselves!



DON'T
Allow expansion and contraction
DON'T hamper expansion and
contraction nearby tube bends



DO
Consider possibly length extension

Tube OD	L- series										S- series									
	06	08	10	12	15	18	22	28	35	42	06	08	10	12	14	16	20	25	30	38
# H min. mm	31	31	33	33	36	38	42	42	48	48	35	35	37	37	43	43	50	54	58	65
# L min. mm	39	39	42	42	45	48	53	53	60	60	44	44	47	47	54	54	63	68	73	82
L ₁ meter	1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.5	2.0	2.0	1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.5	2.0	2.0



DO AND DON'T'S- ACTIONS & PRECAUTIONS:

DO (Actions):

- Check whether the outer surface of the Tube is seamless, uniform, annealed and of good quality & its Hardness should be between 70-75 HRB for Steel & between 85-90 HRB for SS-304 / 316.
- Check whether the Tube is through, clean, scale & rust free for smooth flow of the Media.
- Tube work must be laid in such a way that in un-assembled state the tubes lie strain-free and all coupling elements may be easily installed.
- Check whether fitting hole is clear, clean & through for the smooth flow of the Media.
- The material of the fitting should be the same that of tube. For Copper tube use Brass Fittings.
- For a good clamping of the tube system, the pipe line installation should be stress free. A sufficient numbers of pipe clamps should be used.



STUD END SCREW THREAD & PORT STANDARDS:

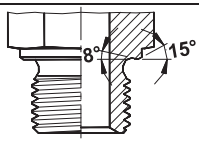
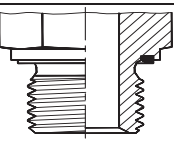
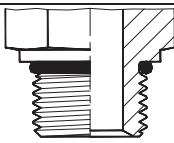
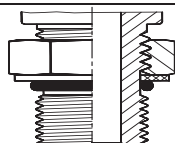
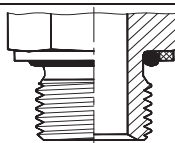
- Lubricate all the components & check the correct incision of the cutting ring on the tube. Keep Ferrule Cutting edge side towards the bottom side.
- It is better to wear eye protection glasses while connecting or dis-connecting a coupling or when under pressure.
- Stay out of the hazardous area while testing assemblies under pressure. Always position a shield between you and any pressurized hydraulic lines.

DON'T (Precautions):

- Never use uneven, hard & welded ERW tube. Biting process will not be perfect.
- Never use even hair line crack, damage, Rusty tube & / or fitting.
- Never use Low pressure fitting & tube for High Pressure application.
- Never use loose spanner for tightening. Do not over tighten any Nut. Always follow specified tightening torque.
- Never turn fitting body. Hold the body and turn the nut.
- Never hit any fitting. Do not pull tube for any direction or alignment.
- Never use finger to check for any leak as high pressure leak of fluid may damage it.
- Tubes are not to be clamped to one another but to a suitable clamp.
- Pre-assembly directly on the machine is not permitted. It should be done separately on the bench.
- Coupling elements must not be retightened or loosened while under pressure.
- Couplings should never be used to pull the tubes into alignment, nor should it be used as tube support. Out of alignment tube and coupling body will cause cross threading and stripping as well as induce abnormal stresses in the joint. The pipe system to be laid should be planned ensuring that any additional mechanical strain in the system is intercepted by Tube Clamps.



STUD END SCREW THREAD & PORT STANDARDS:

	Male stud Form- B	Male stud Form- E	Male stud Rigid Form- F	Male stud Adjustable Form- I	Male stud Rigid Form- H
					
Seal	Cutting Face	Elastic	O-Ring	O-Ring with backup washer	O-Ring with retaining ring
Thread	Metric	Metric	Metric	Metric	Metric
Thread standard	ISO 261/ ISO 724	ISO 261/ ISO 724	ISO 261/ ISO 724	ISO 261/ ISO 724	ISO 261/ ISO 724
Male stud standard	ISO 9974-3	ISO 9974-2	ISO 6149-2/3	ISO 6149-2/3	-
Port tapping standard	ISO 9974-1	ISO 9974-1	ISO 6149-1	ISO 6149-1	ISO 9974-1
Thread	BSPP	BSPP	UN/UNF	UN/UNF	BSPP
Thread standard	ISO 228-T1	ISO 228-T1	ISO 725/ANSI B.1.1-1974	ISO 725/ANSI B.1.1-1974	ISO 228-T1
Male stud standard	ISO 1179-4	ISO 1179-2	ISO 11926-2/3	ISO 11926-2/3	ISO 1179-3
Port tapping standard	ISO 1179-1	ISO 1179-1	ISO 11926-1	ISO 11926-1	ISO 1179-1



TOLERANCES BEING USED DURING MANUFACTURING:

On Spanner sizes: (A/F)	Hex bars up to 32 mm, h13	ISO 4759-1
On Spanner sizes: (A/F)	Hex bars up to 32 mm, h14	ISO 4759-1
On Spanner sizes: (A/F)	Forgings up to 24 mm, h14	0 /-0.8 mm
On Spanner sizes: (A/F)	Forgings above 24 mm, h15	0/-1.0 mm
On Machining:	Medium class	IS: 2102part-1
On Bore size of ring, nut & socket:		ISO: 286-2
Across corner Size		AF size X 1.155

EVEN AFTER CHOOSING THE APPROPRIATE TYPE OF FITTING FOR YOUR APPLICATION, THERE ARE CERTAIN INSTANCES WHEN A PARTICULAR STYLE HAS ADVANTAGE OVER OTHERS

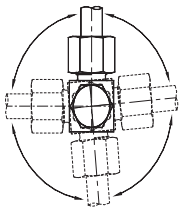


Fig. 1

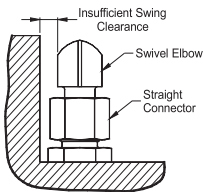


Fig. 2

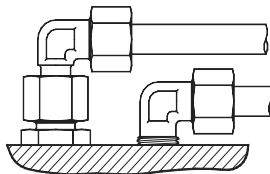


Fig. 3

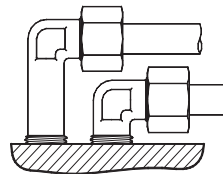


Fig. 4

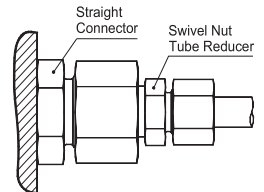
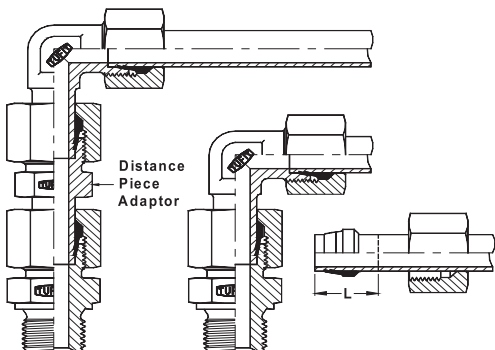
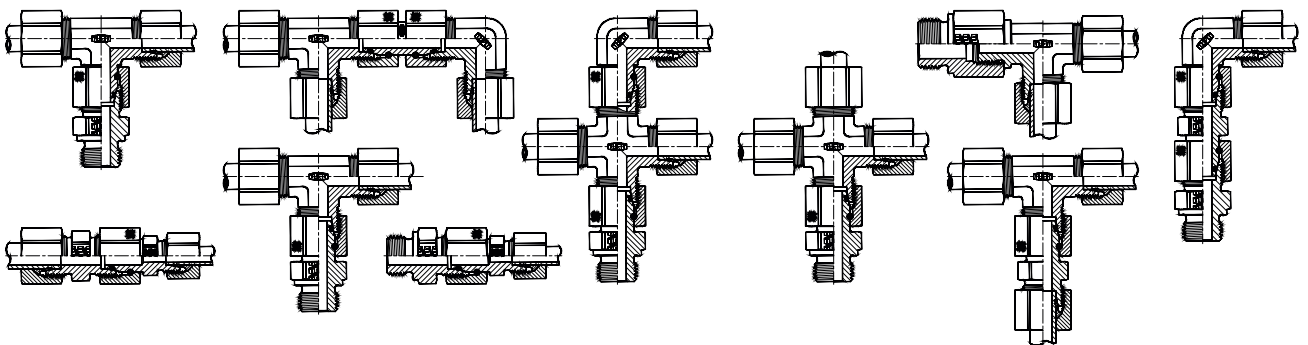


Fig. 5

1. Straight thread adjustable Elbows and Tees have several advantages over similar shaped fittings using Tapered pipe threads. (refer fig. 1) Advantages are
 - Adjustable straight thread connection
 - Permits exact positioning
 - Provides leak free joint
 - Eliminates distortion and cracking of boss due to over tightening &
 - Is easier to maintain.
2. Swivel Nut fitting should be used with a straight connector to allow for connection in tight space, where an Elbow or Tee fitting cannot be fully rotated. (refer fig. 2)
3. The same combination of fittings, shown in fig. 2, can also be used to stack tube lines or provide clearance for ports that are relatively close and within the same plane. (refer fig. 3 & 4)
4. There are some instances where it becomes necessary to connect tube lines of different sizes or tube lines to ports of different sizes. For this, Tube reducers, port expanders, port reducers, or jump size fittings may be used (refer fig. 5). Minimum numbers of joints should be used to achieve this.



- # Distance Piece Adaptor (DPA) allows replacing bite-type connection on existing pipe work easily
- # The existing tubes can be re-used
- # Shortens tube end by distance "L" (see above table)
- # The shortened tube can be used again
- # Suitable for repair work in the field



- 1- Uncompleted assembly will reduce the pressure and vibration capability of a fitting. It can reduce the life cycle time of a connection and leakage can occur. In extreme cases the connection can fail due to tube shear or tube crack.
- 2- After opening a tube connection, the unit has to be re-tightened with the same force used during prior assembly. Under tightening can result in leakage and can reduce the vibration resistance. Over tightening can reduce the possibilities of repeated assembly. In extreme cases the components can be destroyed.
- 3- **TUFIT** tube fittings are intended solely for connections for fluid applications. Fittings are to be handled with care.
- 4- Observe tube recommendations. Non-standard materials or tolerances lead to incorrect assembly.
- 5- Do not use ball bearings, fitting pins or tapered pins, coins or washers instead of the correct blanking plug as blanking parts for 24° cones.
- 6- Tube connection and fitting body once assembled, should remain together. Fitting body is to be used once only for pre-assembly.
- 7- Air bleeding of tube fittings which are under pressure can be dangerous.
- 8- Tube under tension can lead to vibration failure. Tube length and bend angles are to be adhered to precisely. Fix tube lines with tube clamps.
- 9- Tubes are not to be clamped to one another but to suitable fixed points. Plate brackets, cable connections and fixing elements are not suitable. Tubes are not mountings on which to integrate other components e.g. filters, ventilators or shut-off valves.
- 10- Prevent oscillation, pressure surges and inherent strain by using flexible hoses for example.
- 11- Under and over tightening of fittings during assembly reduces the capacity for withstanding pressure and vibration loads and therefore reduces the life of the tube fitting. Leaks from the tube can occur under these circumstances.
- 12- When dismantling / transporting and re-assembling, make sure that no dirt enters the system that the connection elements (threads, sealing surfaces) are not damaged, seals are not lost and tubes are not bent or flattened. We recommend the use of suitable protective caps.
- 13- Disassembled fittings are to be checked for accuracy and damage and replaced if necessary.
- 14- Dirt and metal contamination can lead to damage to the system and leaks.
- 15- The operating parameters given (e.g. pressure, temperature, medium compatibility) are to be adhered to.
- 16- Avoid flow rates > 8 m/s. The resulting forces are high and can destroy the tube lines.
- 17- Components and tooling of different manufacturers are not necessarily compatible. For complete safety, use only **TUFIT** components.
- 18- Tube lines need to be adapted tension free of the relevant connectors before assembly. An easy turning of the nut is required for the complete thread length, otherwise leakage can occur. In extreme cases with additional vibrations tube cracks can occur.
- 19- Vibrations have to be clamped by tube clamps. Independent vibrating units need to be separated with hoses, otherwise tube cracks can occur.

Specific safety instructions for assembly:

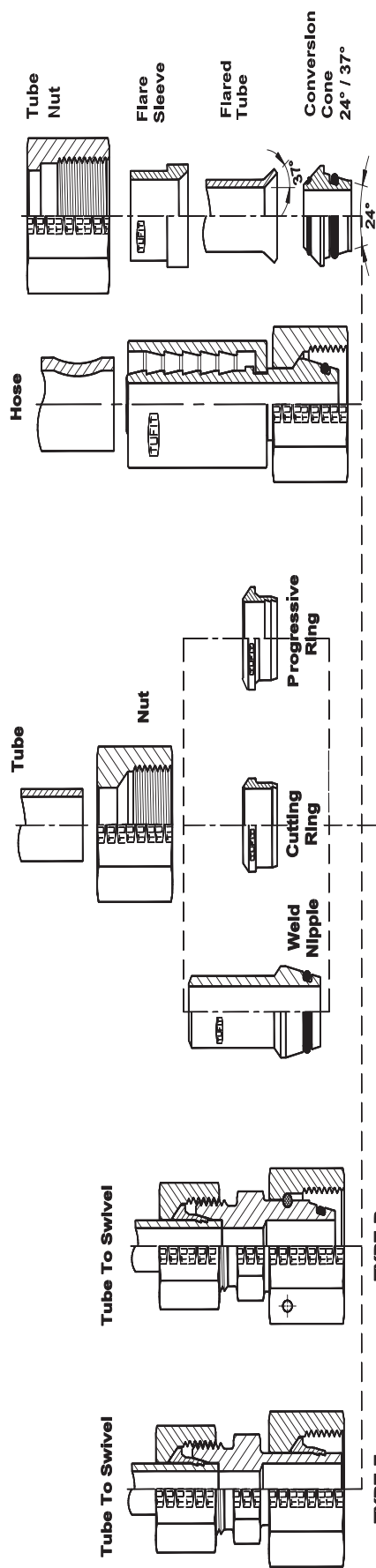
- 1- During a progressive ring fitting assembly the tube has to bottom up in the stud or in the tool. Without tube bottoming the ring cannot bite sufficiently. Under load the connection can fail due to tube shear.
- 2- Preset bite type fittings (Progressive ring) need a final assembly according to assembly instructions.
- 3- Stainless steel progressive ring fittings have to be pre assembled in hardened tools, otherwise the connection may fail under load due to tube shear.
- 4- Do not assemble progressive rings and functional nuts on self-made standpipe stud ends. There is a risk of false assembly with the result of connection shear under load.
- 5- The use of steel cutting rings for stainless steel tubes or other unauthorized tool combinations leads to incorrect assembly.



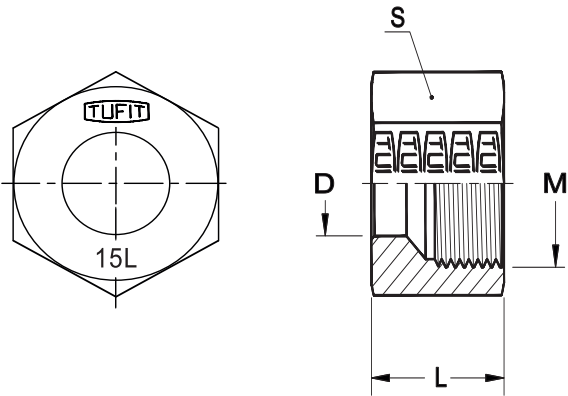
STANDARD TUBE OD v/s STANDARD THREADS ON STUD END:

SERIES / OD OF TUBE / (THREAD ON NUT END)			BSP THREAD		BSPT THREAD		METRIC THREAD		METRIC TAPER THREAD		NPT THREAD		UN/UNF THREAD	
			SIZE	TPI	SIZE	TPI	SIZE	PITCH	SIZE	PITCH	SIZE	TPI	SIZE	TPI
04 (M08)	-	-	G1/8	28	R1/8	28	M08	1.0	M08	1.0 keg	N1/8	27	3/8	24
06 (M10)	-	-	G1/8	28	R1/8	28	M10	1.0	M10	1.0 keg	N1/8	27	3/8	24
08 (M12)	06 (M12)	-	G1/8	28	R1/8	28	M10	1.0	M10	1.0 keg	N1/8	27	3/8	24
10 (M14)	08 (M14)	06 (M14)	G1/4	19	R1/4	19	M12	1.5	M12	1.5 keg	N1/4	18	7/16	20
12 (M16)	10 (M16)	08 (M16)	G1/4	19	R1/4	19	M14	1.5	M14	1.5 keg	N1/4	18	7/16	20
-	12 (M18)	10 (M18)	G3/8	19	R3/8	19	M16	1.5	M16	1.5 keg	N3/8	18	9/16	18
-	-	12 (M20)	G3/8	19	R3/8	19	M18	1.5	M18	1.5 keg	N3/8	18	9/16	18
-	15 (M22)	-	G1/2	14	R1/2	14	M18	1.5	M18	1.5 keg	N1/2	14	3/4	16
-	-	14 (M22)	G1/2	14	R1/2	14	M20	1.5	M20	1.5 keg	N1/2	14	3/4	16
-	18 (M26)	16 (M24)	G1/2	14	R1/2	14	M22	1.5	M22	1.5 keg	N1/2	14	3/4	16
-	22 (M30)	-	G3/4	14	R3/4	14	M26*	1.5	-	-	N3/4	14	7/8	14
-	-	20 (M30)	G3/4	14	R3/4	14	M27	2.0	-	-	N3/4	14	7/8	14
-	28 (M36)	25 (M36)	G1	11	R1	11	M33	2.0	-	-	N1	11 1/2	1 1/16	12
-	35 (M45)	30 (M42)	G1 1/4	11	R1 1/4	11	M42	2.0	-	-	N1 1/4	11 1/2	1 5/16	12
-	42 (M52)	38 (M52)	G1 1/2	11	R1 1/2	11	M48	2.0	-	-	N1 1/2	11 1/2	1 5/8	12
OTHER THREADS			G2	11	-	-	M60	2.0	-	-	-	-	5/16	24
-	-	-	-	-	-	-	-	-	-	-	-	-	1/2	20
-	-	-	-	-	-	-	-	-	-	-	-	-	1 3/16	12
-	-	-	-	-	-	-	-	-	-	-	-	-	1 7/8	12

*M26x1.5 is not standard for O-ring fittings. # R (BSPT) AS PER ISO 7/1 (EXTERNAL) #Rc (BSPT) AS PER ISO 7/1 (INTERNAL) #Rp (BSPP) AS PER ISO 228/1 (PARALLEL)



	Form-A	Sealing by Metallic washer	BSP & Metric	Pressure capacity Low	Sealing characteristics Medium
	Form-B	Sealing by Cutting Face Metal to Metal	BSP & Metric	Pressure capacity High	Sealing characteristics Medium to Good
	Form-C	Sealing by Taper threads	BSPT, Metric (Taper) & NPT	Pressure capacity Low & very high	Sealing characteristics Medium
	Form-D	Sealing by Bonded seal (Dowty seal)	BSP & Metric	Pressure capacity High	Sealing characteristics Good
	Form-E	Sealing by Elastic ring	BSP & Metric	Pressure capacity Very high	Sealing characteristics Excellent
	Form-F	Sealing by O-ring	Metric, UN & UNF	Pressure capacity Very high	Sealing characteristics Excellent
	Form-G	Sealing by O-ring with Retaining Ring	BSP & Metric	Pressure capacity Medium & high	Sealing characteristics Good
	Form-H	Sealing by O-ring with Retaining Ring + Back up Washer	BSP & Metric	Pressure capacity Medium to high	Sealing characteristics Good
	Form-I	Sealing by O-ring with Support Backup Washer	UNF & Metric	Pressure capacity High	Sealing characteristics Very good



D Tube OD	M Metric	L ^{a)}	S A / F	Steel	Stainless Steel AISI-304**	Brass
				Part No.	Part No.	Part No.
LL 04	M 08x1.0	11.0	10	N04LLM08	N04LLM08S4	N04LLM08BR
LL 06	M 10x1.0	11.5	12	N06LLM10	N06LLM10S4	N06LLM10BR
LL 08	M 12x1.0	12.0	14	N08LLM12	N08LLM12S4	N08LLM12BR
LL 10*	M 14x1.0	12.5	17	N10LLM14	N10LLM14S4	N10LLM14BR
LL 12*	M 16x1.0	13.0	19	N12LLM16	N12LLM16S4	N12LLM16BR
L 06	M 12x1.5	14.5	14	N06LM12	N06LM12S4	N06LM12BR
L 08	M 14x1.5	14.5	17	N08LM14	N08LM14S4	N08LM14BR
L 10	M 16x1.5	15.5	19	N10LM16	N10LM16S4	N10LM16BR
L 12	M 18x1.5	15.5	22	N12LM18	N12LM18S4	N12LM18BR
L 15	M 22x1.5	17.0	27	N15LM22	N15LM22S4	N15LM22BR
L 18	M 26x1.5	18.0	32	N18LM26	N18LM26S4	N18LM26BR
L 22	M 30x2.0	20.0	36	N22LM30	N22LM30S4	N22LM30BR
L 28	M 36x2.0	21.0	41	N28LM36	N28LM36S4	N28LM36BR
L 35	M 45x2.0	24.0	50	N35LM45	N35LM45S4	N35LM45BR
L 42	M 52x2.0	24.0	60	N42LM52	N42LM52S4	N42LM52BR
S 06	M 14x1.5	16.5	17	N06SM14	N06SM14S4	N06SM14BR
S 08	M 16x1.5	16.5	19	N08SM16	N08SM16S4	N08SM16BR
S 10	M 18x1.5	17.5	22	N10SM18	N10SM18S4	N10SM18BR
S 12	M 20x1.5	17.5	24	N12SM20	N12SM20S4	N12SM20BR
S 14*	M 22x1.5	20.5	27	N14SM22	N14SM22S4	N14SM22BR
S 16	M 24x1.5	20.5	30	N16SM24	N16SM24S4	N16SM24BR
S 20	M 30x2.0	24.0	36	N20SM30	N20SM30S4	N20SM30BR
S 25	M 36x2.0	27.0	46	N25SM36	N25SM36S4	N25SM36BR
S 30	M 42x2.0	29.0	50	N30SM42	N30SM42S4	N30SM42BR
S 38	M 52x2.0	32.5	60	N38SM52	N38SM52S4	N38SM52BR

- a) Cold Forged nut may be +0.5 to +1.0 mm long
- Nuts to be used with Carbon Steel bodies shall be made of Carbon Steel

■ Nuts to be used with Stainless Steel bodies shall be made of Stainless Steel

■ Nuts to be used with Brass bodies shall be made of Brass

■ Tube bore is concentric to the threads means
tube remains straight while and after tightening

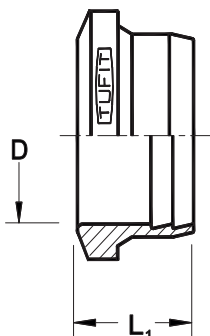
■ Part Nos. in this catalogue refer to Fluid applications
- * Not included in ISO 8434

** Replace S4 by S6 for material AISI-316

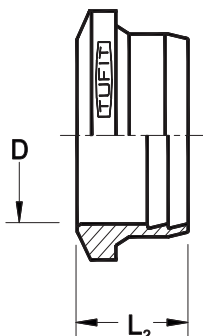
Dimensions and pressure for reference only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating
Brass	Plain (No Coating)

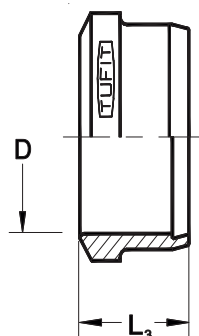
Progressive Ring
Double bite
Steel



Progressive Ring
Double bite
Stainless Steel



Cutting Ring
Single bite
Brass



D Tube OD	Steel		Stainless Steel AISI-304**		Brass	
	L ₁	Part No.	L ₂	Part No.	L ₃	Part No.
LL 04	6.0	CR04LL	6.0	CR04LLS4	6.0	CR04LLBR
LL 06	7.0	CR06LL	7.0	CR06LLS4	7.0	CR06LLBR
LL 08	7.0	CR08LL	7.0	CR08LLS4	7.0	CR08LLBR
LL 10 *	7.0	CR10LL	7.0	CR10LLS4	7.0	CR10LLBR
LL 12 *	7.5	CR12LL	7.5	CR12LLS4	7.5	CR12LLBR
L 06	9.5	PR06L	9.0	PR06LS4	9.0	CR06LBR
L 08	9.5	PR08L	9.0	PR08LS4	9.0	CR08LBR
L 10	10.0	PR10L	9.5	PR10LS4	9.5	CR10LBR
L 12	10.0	PR12L	9.8	PR12LS4	9.8	CR12LBR
L 15	10.0	PR15L	9.5	PR15LS4	9.5	CR15LBR
L 18	10.0	PR18L	9.5	PR18LS4	9.5	CR18LBR
L 22	10.5	PR22L	10.5	PR22LS4	10.5	CR22LBR
L 28	10.5	PR28L	11.0	PR28LS4	11.0	CR28LBR
L 35	13.0	PR35L	13.5	PR35LS4	13.5	CR35LBR
L 42	13.0	PR42L	13.5	PR42LS4	13.5	CR42LBR
S 06	9.5	PR06S	9.0	PR06SS4	9.0	CR06SBR
S 08	9.5	PR08S	9.0	PR08SS4	9.0	CR08SBR
S 10	10.0	PR10S	9.5	PR10SS4	9.5	CR10SBR
S 12	10.0	PR12S	9.8	PR12SS4	9.8	CR12SBR
S 14 *	10.0	PR14S	9.5	PR14SS4	9.5	CR14SBR
S 16	10.0	PR16S	9.5	PR16SS4	9.5	CR16SBR
S 20	13.0	PR20S	12.5	PR20SS4	12.5	CR20SBR
S 25	13.0	PR25S	12.5	PR25SS4	12.5	CR25SBR
S 30	13.0	PR30S	12.5	PR30SS4	12.5	CR30SBR
S 38	13.0	PR38S	13.0	PR38SS4	13.0	CR38SBR

■ Shape & dimensions may differ due to technological improvements

* Not included in ISO 8434

■ The Ring material shall be compatible with the fluid to be conveyed

** Replace S4 by S6 for material AISI-316

■ Ring to be used with Carbon Steel bodies shall be made of Carbon Steel

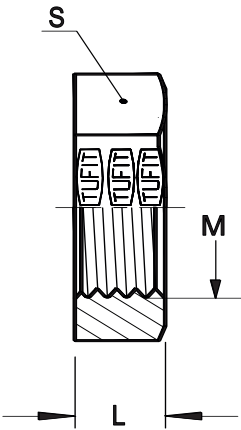
■ Ring to be used with Stainless Steel bodies shall be made of Stainless Steel

■ Ring to be used with Brass bodies shall be made of Brass

■ Absolute tightness is obtained on the outer diameter of the steel tube, with the double cutting edges

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference
only, subject to change



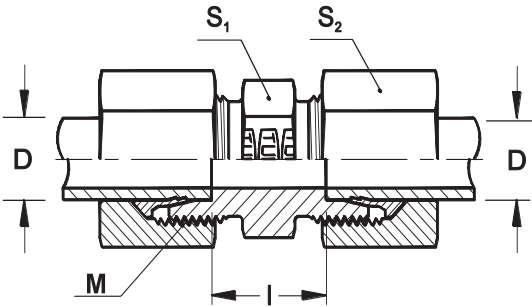
For Tube OD	M Metric	L	S A / F	Steel	Stainless Steel AISI-304**	Brass
				Part No.	Part No.	Part No.
L 06	M 12x1.5	6	17	LN06LM12	LN06LM12S4	LN06LM12BR
L 08	M 14x1.5	6	19	LN08LM14	LN08LM14S4	LN08LM14BR
L 10	M 16x1.5	6	22	LN10LM16	LN10LM16S4	LN10LM16BR
L 12	M 18x1.5	6	24	LN12LM18	LN12LM18S4	LN12LM18BR
L 15	M 22x1.5	7	30	LN15LM22	LN15LM22S4	LN15LM22BR
L 18	M 26x1.5	8	36	LN18LM26	LN18LM26S4	LN18LM26BR
L 22	M 30x2.0	8	41	LN22LM30	LN22LM30S4	LN22LM30BR
L 28	M 36x2.0	9	46	LN28LM36	LN28LM36S4	LN28LM36BR
L 35	M 45x2.0	9	55	LN35LM45	LN35LM45S4	LN35LM45BR
L 42	M 52x2.0	10	65	LN42LM52	LN42LM52S4	LN42LM52BR
S 06	M 14x1.5	6	19	LN06SM14	LN06SM14S4	LN06SM14BR
S 08	M 16x1.5	6	22	LN08SM16	LN08SM16S4	LN08SM16BR
S 10	M 18x1.5	6	24	LN10SM18	LN10SM18S4	LN10SM18BR
S 12	M 20x1.5	6	27	LN12SM20	LN12SM20S4	LN12SM20BR
S 14*	M 22x1.5	7	30	LN14SM22	LN14SM22S4	LN14SM22BR
S 16	M 24x1.5	7	32	LN16SM24	LN16SM24S4	LN16SM24BR
S 20	M 30x2.0	8	41	LN20SM30	LN20SM30S4	LN20SM30BR
S 25	M 36x2.0	9	46	LN25SM36	LN25SM36S4	LN25SM36BR
S 30	M 42x2.0	9	50	LN30SM42	LN30SM42S4	LN30SM42BR
S 38	M 52x2.0	10	65	LN38SM52	LN38SM52S4	LN38SM52BR

■ Used with Bulkhead Straight Coupling (BHS) & Bulkhead Elbow Coupling (BHE)

* Not as per ISO 8434
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Plain (No Coating)
Brass	Plain (No Coating)



D Tube OD	M Metric	L (ref.)	S ₁ A / F	S ₂ A / F	Steel		Stainless Steel AISI-304**		Brass	
					WP ^{a)} (bar)	Part No.	WP ^{a)} (bar)	Part No.	WP ^{a)} (bar)	Part No.
LL 04	M 08x1.0	12	9	10	100	S04LL	100	S04LLS4	63	S04LLBR
LL 06	M 10x1.0	9	11	12	100	S06LL	100	S06LLS4	63	S06LLBR
LL 08	M 12x1.0	12	12	14	100	S08LL	100	S08LLS4	63	S08LLBR
LL 10*	M 14x1.0	12	14	17	100	S10LL	100	S10LLS4	63	S10LLBR
LL 12*	M 16x1.0	11	17	19	100	S12LL	100	S12LLS4	63	S12LLBR
L 06	M 12x1.5	10	12	14	500	S06L	315	S06LS4	200	S06LBR
L 08	M 14x1.5	11	14	17	500	S08L	315	S08LS4	200	S08LBR
L 10	M 16x1.5	13	17	19	500	S10L	315	S10LS4	200	S10LBR
L 12	M 18x1.5	14	19	22	400	S12L	315	S12LS4	200	S12LBR
L 15	M 22x1.5	16	24	27	400	S15L	315	S15LS4	200	S15LBR
L 18	M 26x1.5	16	27	32	400	S18L	315	S18LS4	200	S18LBR
L 22	M 30x2.0	20	32	36	250	S22L	160	S22LS4	100	S22LBR
L 28	M 36x2.0	21	41	41	250	S28L	160	S28LS4	100	S28LBR
L 35	M 45x2.0	20	46	50	250	S35L	160	S35LS4	100	S35LBR
L 42	M 52x2.0	21	55	60	250	S42L	160	S42LS4	100	S42LBR
S 06	M 14x1.5	16	14	17	800	S06S	630	S06SS4	400	S06SBR
S 08	M 16x1.5	18	17	19	800	S08S	630	S08SS4	400	S08SBR
S 10	M 18x1.5	17	19	22	800	S10S	630	S10SS4	400	S10SBR
S 12	M 20x1.5	19	22	24	630	S12S	630	S12SS4	400	S12SBR
S 14*	M 22x1.5	22	24	27	630	S14S	630	S14SS4	400	S14SBR
S 16	M 24x1.5	21	27	30	630	S16S	400	S16SS4	250	S16SBR
S 20	M 30x2.0	23	32	36	420	S20S	400	S20SS4	250	S20SBR
S 25	M 36x2.0	26	41	46	420	S25S	400	S25SS4	250	S25SBR
S 30	M 42x2.0	27	46	50	420	S30S	400	S30SS4	250	S30SBR
S 38	M 52x2.0	29	55	60	420	S38S	315	S38SS4	200	S38SBR

a) WP = Working Pressure

* Not as per ISO 8434

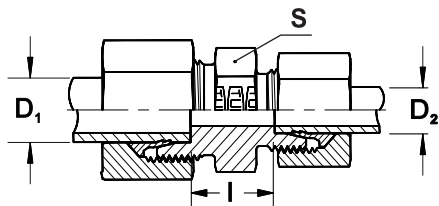
■ Test pressure = WP x 1.33, Burst pressure = WP x 4

** Replace S4 by S6 for material AISI-316

■ 1 Bar = 14.5 psi = 1.02 kgf / cm² (1psi = 0.069 bar)

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

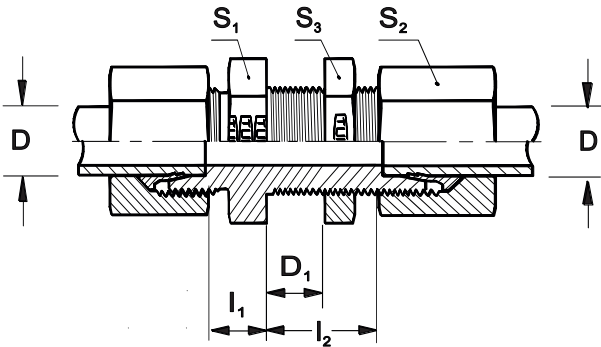


- Series LL is with Cutting Ring. Part No. CR
- Dimensions and Pressures are for reference only.

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

** Replace S4 by S6 for material AISI-316

Tube OD			I (ref.)	S A / F	Steel		Stainless Steel AISI-304**		Brass	
Series	D ₁	D ₂			WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL	06	04	10.5	11	100	SRD0604LL	100	SRD0604LLS4	63	SRD0604LLBR
LL	08	04	12.5	12	100	SRD0804LL	100	SRD0804LLS4	63	SRD0804LLBR
LL	08	06	11.0	12	100	SRD0806LL	100	SRD0806LLS4	63	SRD0806LLBR
L	08	06	11.0	14	500	SRD0806L	315	SRD0806LS4	200	SRD0806LBR
L	10	06	12.0	17	500	SRD1006L	315	SRD1006LS4	200	SRD1006LBR
L	10	08	12.0	17	500	SRD1008L	315	SRD1008LS4	200	SRD1008LBR
L	12	06	13.0	19	400	SRD1206L	315	SRD1206LS4	200	SRD1206LBR
L	12	08	13.0	19	400	SRD1208L	315	SRD1208LS4	200	SRD1208LBR
L	12	10	14.0	19	400	SRD1210L	315	SRD1210LS4	200	SRD1210LBR
L	15	10	15.0	24	400	SRD1510L	315	SRD1510LS4	200	SRD1510LBR
L	15	12	15.0	24	400	SRD1512L	315	SRD1512LS4	200	SRD1512LBR
L	18	10	15.5	27	400	SRD1810L	315	SRD1810LS4	200	SRD1810LBR
L	18	12	15.5	27	400	SRD1812L	315	SRD1812LS4	200	SRD1812LBR
L	18	15	16.5	27	400	SRD1815L	315	SRD1815LS4	200	SRD1815LBR
L	22	12	17.5	32	250	SRD2212L	160	SRD2212LS4	100	SRD2212LBR
L	22	15	18.5	32	250	SRD2215L	160	SRD2215LS4	100	SRD2215LBR
L	22	18	18.0	32	250	SRD2218L	160	SRD2218LS4	100	SRD2218LBR
L	28	18	19.0	41	250	SRD2818L	160	SRD2818LS4	100	SRD2818LBR
L	28	22	21.0	41	250	SRD2822L	160	SRD2822LS4	100	SRD2822LBR
L	35	22	21.0	46	250	SRD3522L	160	SRD3522LS4	100	SRD3522LBR
L	35	28	21.0	46	250	SRD3528L	160	SRD3528LS4	100	SRD3528LBR
L	42	35	21.5	55	250	SRD4235L	160	SRD4235LS4	100	SRD4235LBR
S	08	06	18.0	17	800	SRD0806S	630	SRD0806SS4	400	SRD0806SBR
S	10	06	17.5	19	800	SRD1006S	630	SRD1006SS4	400	SRD1006SBR
S	10	08	17.5	19	800	SRD1008S	630	SRD1008SS4	400	SRD1008SBR
S	12	06	19.5	22	630	SRD1206S	630	SRD1206SS4	400	SRD1206SBR
S	12	08	19.5	22	630	SRD1208S	630	SRD1208SS4	400	SRD1208SBR
S	12	10	19.0	22	630	SRD1210S	630	SRD1210SS4	400	SRD1210SBR
S	14	10	20.5	24	630	SRD1410S	630	SRD1410SS4	400	SRD1410SBR
S	14	12	20.5	24	630	SRD1412S	630	SRD1412SS4	400	SRD1412SBR
S	16	10	20.0	27	630	SRD1610S	400	SRD1610SS4	250	SRD1610SBR
S	16	12	20.0	27	630	SRD1612S	400	SRD1612SS4	250	SRD1612SBR
S	16	14	21.5	27	630	SRD1614S	400	SRD1614SS4	250	SRD1614SBR
S	20	10	22.0	32	420	SRD2010S	400	SRD2010SS4	250	SRD2010SBR
S	20	12	22.0	32	420	SRD2012S	400	SRD2012SS4	250	SRD2012SBR
S	20	16	23.0	32	420	SRD2016S	400	SRD2016SS4	250	SRD2016SBR
S	25	16	25.5	41	420	SRD2516S	400	SRD2516SS4	250	SRD2516SBR
S	25	20	25.5	41	420	SRD2520S	400	SRD2520SS4	250	SRD2520SBR
S	30	20	26.0	46	420	SRD3020S	400	SRD3020SS4	250	SRD3020SBR
S	30	25	26.5	46	420	SRD3025S	400	SRD3025SS4	250	SRD3025SBR
S	38	30	29.5	55	420	SRD3830S	315	SRD3830SS4	200	SRD3830SBR



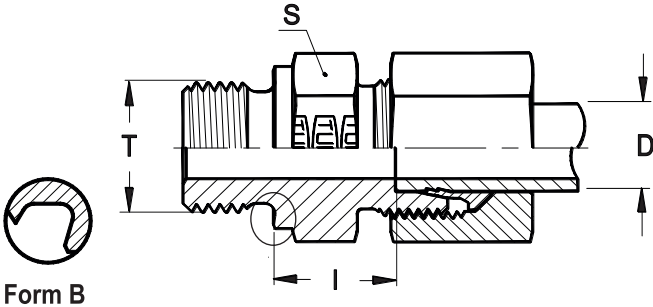
D Tube OD	l ₁ (ref.)	l ₂ (ref.)	S ₁ A / F	S ₂ A / F	S ₃ A / F	Steel		Stainless Steel AISI-304**		Brass	
						WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
L 06	7.0	27.0	17	14	17	500	BHS06L	315	BHS06LS4	200	BHS06LBR
L 08	8.0	27.0	19	17	19	500	BHS08L	315	BHS08LS4	200	BHS08LBR
L 10	10.0	28.0	22	19	22	500	BHS10L	315	BHS10LS4	200	BHS10LBR
L 12	10.0	29.0	24	22	24	400	BHS12L	315	BHS12LS4	200	BHS12LBR
L 15	12.0	31.0	27	27	30	400	BHS15L	315	BHS15LS4	200	BHS15LBR
L 18	13.5	32.5	32	32	36	400	BHS18L	315	BHS18LS4	200	BHS18LBR
L 22	16.5	34.5	36	36	41	250	BHS22L	160	BHS22LS4	100	BHS22LBR
L 28	18.5	35.5	41	41	46	250	BHS28L	160	BHS28LS4	100	BHS28LBR
L 35	18.5	36.5	50	50	55	250	BHS35L	160	BHS35LS4	100	BHS35LBR
L 42	19.0	36.0	60	60	65	250	BHS42L	160	BHS42LS4	100	BHS42LBR
S 06	12.0	29.0	19	17	19	800	BHS06S	630	BHS06SS4	400	BHS06SBR
S 08	13.0	29.0	22	19	22	800	BHS08S	630	BHS08SS4	400	BHS08SBR
S 10	14.5	29.5	24	22	24	800	BHS10S	630	BHS10SS4	400	BHS10SBR
S 12	14.5	30.5	27	24	27	630	BHS12S	630	BHS12SS4	400	BHS12SBR
S 14*	17.0	32.0	30	27	30	630	BHS14S	630	BHS14SS4	400	BHS14SBR
S 16	16.5	31.5	32	30	32	630	BHS16S	400	BHS16SS4	250	BHS16SBR
S 20	17.5	33.5	41	36	41	420	BHS20S	400	BHS20SS4	250	BHS20SBR
S 25	20.0	35.0	46	46	46	420	BHS25S	400	BHS25SS4	250	BHS25SBR
S 30	21.5	37.5	50	50	50	420	BHS30S	400	BHS30SS4	250	BHS30SBR
S 38	22.0	37.0	65	60	65	420	BHS38S	315	BHS38SS4	200	BHS38SBR

- D₁ -Maximum Bulkhead thickness = 16 mm
- Body with locknut : Part No.: BHS08LR
- For Bulkhead Straight Reducer Coupling :
Refer to Custom Product section
- * Not as per ISO 8434
- ** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

metal to metal sealing edge - Form B



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
#LL 04	G 1/8 A	9.5	14	100	SDSB04LLG018	100	SDSB04LLG018S4	63	SDSB04LLG018BR
#LL 06	G 1/8 A	8.0	14	100	SDSB06LLG018	100	SDSB06LLG018S4	63	SDSB06LLG018BR
#LL 08	G 1/8 A	8.0	14	100	SDSB08LLG018	100	SDSB08LLG018S4	63	SDSB08LLG018BR
#L 06	G 1/8 A	8.5	14	315	SDSB06LG018	315	SDSB06LG018S4	200	SDSB06LG018BR
L 06	G 1/4 A	10.0	19	315	SDSB06LG014	315	SDSB06LG014S4	200	SDSB06LG014BR
L 06	G 3/8 A	11.5	22	315	SDSB06LG038	315	SDSB06LG038S4	200	SDSB06LG038BR
L 06	G 1/2 A	12.0	27	315	SDSB06LG012	315	SDSB06LG012S4	200	SDSB06LG012BR
L 08	G 1/8 A	8.5	14	315	SDSB08LG018	315	SDSB08LG018S4	200	SDSB08LG018BR
#L 08	G 1/4 A	10.0	19	315	SDSB08LG014	315	SDSB08LG014S4	200	SDSB08LG014BR
L 08	G 3/8 A	11.5	22	315	SDSB08LG038	315	SDSB08LG038S4	200	SDSB08LG038BR
L 08	G 1/2 A	12.0	27	315	SDSB08LG012	315	SDSB08LG012S4	200	SDSB08LG012BR
#L 10	G 1/4 A	11.0	19	315	SDSB10LG014	315	SDSB10LG014S4	200	SDSB10LG014BR
L 10	G 3/8 A	12.5	22	315	SDSB10LG038	315	SDSB10LG038S4	200	SDSB10LG038BR
L 10	G 1/2 A	13.0	27	315	SDSB10LG012	315	SDSB10LG012S4	200	SDSB10LG012BR
L 12	G 1/4 A	12.0	19	315	SDSB12LG014	315	SDSB12LG014S4	200	SDSB12LG014BR
#L 12	G 3/8 A	12.5	22	315	SDSB12LG038	315	SDSB12LG038S4	200	SDSB12LG038BR
L 12	G 1/2 A	13.0	27	315	SDSB12LG012	315	SDSB12LG012S4	200	SDSB12LG012BR
L 12	G 3/4 A	14.0	32	315	SDSB12LG034	315	SDSB12LG034S4	200	SDSB12LG034BR
L 15	G 3/8 A	13.5	24	250	SDSB15LG038	250	SDSB15LG038S4	160	SDSB15LG038BR
#L 15	G 1/2 A	14.0	27	250	SDSB15LG012	250	SDSB15LG012S4	160	SDSB15LG012BR
L 15	G 3/4 A	15.0	32	250	SDSB15LG034	250	SDSB15LG034S4	160	SDSB15LG034BR
L 18	G 3/8 A	14.0	27	250	SDSB18LG038	250	SDSB18LG038S4	160	SDSB18LG038BR
#L 18	G 1/2 A	14.5	27	250	SDSB18LG012	250	SDSB18LG012S4	160	SDSB18LG012BR
L 18	G 3/4 A	14.5	32	250	SDSB18LG034	250	SDSB18LG034S4	160	SDSB18LG034BR
L 22	G 1/2 A	16.5	32	160	SDSB22LG012	160	SDSB22LG012S4	100	SDSB22LG012BR
#L 22	G 3/4 A	16.5	32	160	SDSB22LG034	160	SDSB22LG034S4	100	SDSB22LG034BR
L 28	G 3/4 A	17.5	41	160	SDSB28LG034	160	SDSB28LG034S4	100	SDSB28LG034BR
#L 28	G 1 A	17.5	41	160	SDSB28LG001	160	SDSB28LG001S4	100	SDSB28LG001BR
L 35	G 1 A	17.5	46	160	SDSB35LG001	160	SDSB35LG001S4	100	SDSB35LG001BR
#L 35	G 1 1/4 A	17.5	50	160	SDSB35LG114	160	SDSB35LG114S4	100	SDSB35LG114BR
#L 42	G 1 1/2 A	19.0	55	160	SDSB42LG112	160	SDSB42LG112S4	100	SDSB42LG112BR

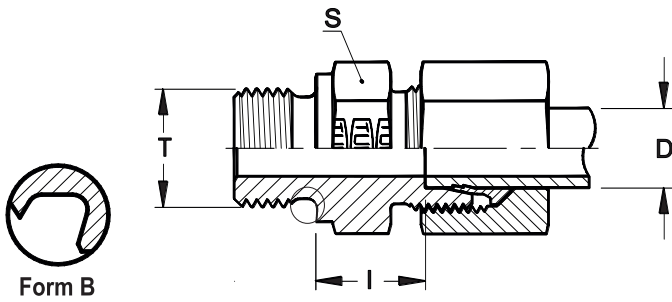
** Replace S4 by S6 for material AISI-316
Standard combination as per ISO 8434-1

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference
only, subject to change



metal to metal sealing edge - Form B



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
# S 06	G 1/4 A	13.0	19	400	SDSB06SG014	400	SDSB06SG014S4	250	SDSB06SG014BR
S 06	G 1/2 A	18.0	27	400	SDSB06SG012	400	SDSB06SG012S4	250	SDSB06SG012BR
# S 08	G 1/4 A	15.0	19	400	SDSB08SG014	400	SDSB08SG014S4	250	SDSB08SG014BR
S 08	G 3/8 A	15.5	22	400	SDSB08SG038	400	SDSB08SG038S4	250	SDSB08SG038BR
S 10	G 1/4 A	14.5	19	400	SDSB10SG014	400	SDSB10SG014S4	250	SDSB10SG014BR
# S 10	G 3/8 A	15.0	22	400	SDSB10SG038	400	SDSB10SG038S4	250	SDSB10SG038BR
S 10	G 1/2 A	17.5	27	400	SDSB10SG012	400	SDSB10SG012S4	250	SDSB10SG012BR
S 12	G 1/4 A	16.5	22	400	SDSB12SG014	400	SDSB12SG014S4	250	SDSB12SG014BR
# S 12	G 3/8 A	17.0	22	400	SDSB12SG038	400	SDSB12SG038S4	250	SDSB12SG038BR
# S 12	G 1/2 A	17.5	27	400	SDSB12SG012	400	SDSB12SG012S4	250	SDSB12SG012BR
S 14*	G 3/8 A	18.5	24	400	SDSB14SG038	400	SDSB14SG038S4	250	SDSB14SG038BR
S 14*	G 1/2 A	19.0	27	400	SDSB14SG012	400	SDSB14SG012S4	250	SDSB14SG012BR
S 16	G 3/8 A	18.0	27	400	SDSB16SG038	400	SDSB16SG038S4	250	SDSB16SG038BR
# S 16	G 1/2 A	18.5	27	400	SDSB16SG012	400	SDSB16SG012S4	250	SDSB16SG012BR
# S 16	G 3/4 A	20.5	32	400	SDSB16SG034	400	SDSB16SG034S4	250	SDSB16SG034BR
S 20	G 1/2 A	20.5	32	400	SDSB20SG012	400	SDSB20SG012S4	250	SDSB20SG012BR
# S 20	G 3/4 A	20.5	32	400	SDSB20SG034	400	SDSB20SG034S4	250	SDSB20SG034BR
S 25	G 3/4 A	23.0	41	250	SDSB25SG034	250	SDSB25SG034S4	160	SDSB25SG034BR
# S 25	G 1 A	23.0	41	250	SDSB25SG001	250	SDSB25SG001S4	160	SDSB25SG001BR
S 30	G 1 A	23.5	46	160	SDSB30SG001	160	SDSB30SG001S4	100	SDSB30SG001BR
# S 30	G 1 1/4 A	23.5	50	160	SDSB30SG114	160	SDSB30SG114S4	100	SDSB30SG114BR
S 38	G 1 1/4 A	26.0	55	160	SDSB38SG114	160	SDSB38SG114S4	100	SDSB38SG114BR
# S 38	G 1 1/2 A	26.0	55	160	SDSB38SG112	160	SDSB38SG112S4	100	SDSB38SG112BR

Standard combination as per ISO 8434-1

■ Form B undercut makes a leak proof joint at the port face

■ It saves the extra cost of a Copper Washer

■ Form A can be provided on request

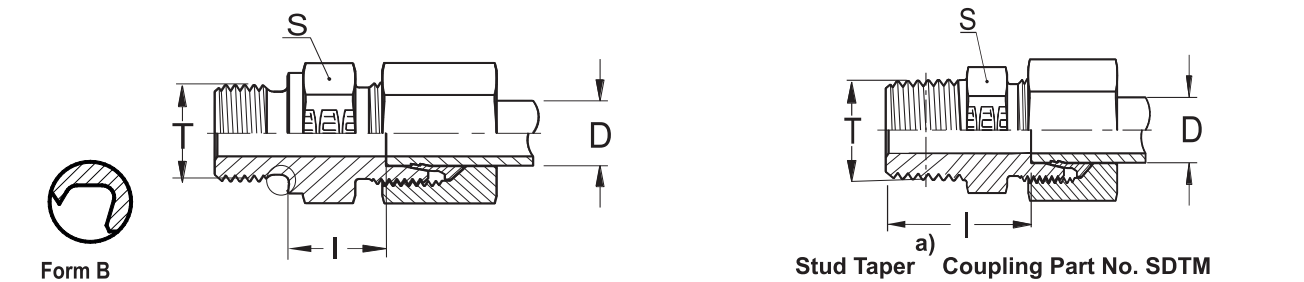
* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

metal to metal sealing edge - Form B



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
# LL 04	M 08x1.0	16.0	10	100	SDT04LLM08	100	SDT04LLM08S4	63	SDT04LLM08BR
# LL 06	M 10x1.0	14.5	11	100	SDT06LLM10	100	SDT06LLM10S4	63	SDT06LLM10BR
# LL 08	M 10x1.0	16.5	12	100	SDT08LLM10	100	SDT08LLM10S4	63	SDT08LLM10BR
# L 06	M 10x1.0	8.5	14	315	SDSB06LM10	315	SDSB06LM10S4	200	SDSB06LM10BR
# L 08	M 12x1.5	10.0	17	315	SDSB08LM12	315	SDSB08LM12S4	200	SDSB08LM12BR
# L 10	M 14x1.5	11.0	19	315	SDSB10LM14	315	SDSB10LM14S4	200	SDSB10LM14BR
L 10	M 16x1.5	12.0	22	315	SDSB10LM16	315	SDSB10LM16S4	200	SDSB10LM16BR
L 10	M 18x1.5	12.5	24	315	SDSB10LM18	315	SDSB10LM18S4	200	SDSB10LM18BR
L 10	M 22x1.5	14.0	27	315	SDSB10LM22	315	SDSB10LM22S4	200	SDSB10LM22BR
L 12	M 14x1.5	11.0	19	315	SDSB12LM14	315	SDSB12LM14S4	200	SDSB12LM14BR
# L 12	M 16x1.5	12.5	22	315	SDSB12LM16	315	SDSB12LM16S4	200	SDSB12LM16BR
L 12	M 18x1.5	12.5	24	315	SDSB12LM18	315	SDSB12LM18S4	200	SDSB12LM18BR
L 12	M 22x1.5	14.0	27	315	SDSB12LM22	315	SDSB12LM22S4	200	SDSB12LM22BR
L 15	M 16x1.5	13.0	24	250	SDSB15LM16	250	SDSB15LM16S4	160	SDSB15LM16BR
# L 15	M 18x1.5	13.5	24	250	SDSB15LM18	250	SDSB15LM18S4	160	SDSB15LM18BR
L 15	M 22x1.5	15.0	27	250	SDSB15LM22	250	SDSB15LM22S4	160	SDSB15LM22BR
L 18	M 18x1.5	14.0	27	250	SDSB18LM18	250	SDSB18LM18S4	160	SDSB18LM18BR
# L 18	M 22x1.5	14.5	27	250	SDSB18LM22	250	SDSB18LM22S4	160	SDSB18LM22BR
L 22	M 22x1.5	16.5	32	160	SDSB22LM22	160	SDSB22LM22S4	160	SDSB22LM22BR
L 22	M 26x1.5	16.5	32	160	SDSB22LM26	160	SDSB22LM26S4	100	SDSB22LM26BR
# L 28	M 33x2.0	17.5	41	160	SDSB28LM33	160	SDSB28LM33S4	100	SDSB28LM33BR
# L 35	M 42x2.0	17.5	50	160	SDSB35LM42	160	SDSB35LM42S4	100	SDSB35LM42BR
# L 42	M 48x2.0	19.0	55	160	SDSB42LM48	160	SDSB42LM48S4	100	SDSB42LM48BR
# S 06	M 12x1.5	13.0	17	400	SDSB06SM12	400	SDSB06SM12S4	250	SDSB06SM12BR
# S 08	M 14x1.5	15.0	19	400	SDSB08SM14	400	SDSB08SM14S4	250	SDSB08SM14BR
# S 10	M 16x1.5	15.0	22	400	SDSB10SM16	400	SDSB10SM16S4	250	SDSB10SM16BR
# S 12	M 18x1.5	17.0	24	400	SDSB12SM18	400	SDSB12SM18S4	250	SDSB12SM18BR
S 12	M 22x1.5	17.5	27	400	SDSB12SM22	400	SDSB12SM22S4	250	SDSB12SM22BR
S 14*	M 20x1.5	19.0	27	400	SDSB14SM20	400	SDSB14SM20S4	250	SDSB14SM20BR
S 16	M 18x1.5	18.0	27	400	SDSB16SM18	400	SDSB16SM18S4	250	SDSB16SM18BR
# S 16	M 22x1.5	18.5	27	400	SDSB16SM22	400	SDSB16SM22S4	250	SDSB16SM22BR
# S 20	M 27x2.0	20.5	32	400	SDSB20SM27	400	SDSB20SM27S4	250	SDSB20SM27BR
# S 25	M 33x2.0	23.0	41	250	SDSB25SM33	250	SDSB25SM33S4	160	SDSB25SM33BR
# S 30	M 42x2.0	23.5	50	160	SDSB30SM42	160	SDSB30SM42S4	100	SDSB30SM42BR
# S 38	M 48x2.0	26.0	55	160	SDSB38SM48	160	SDSB38SM48S4	100	SDSB38SM48BR

- # Standard combination as per ISO-8434-1
- a) Short Taper Thread as per Form C
- Form B undercut makes a leak proof joint at the port face.
It saves the extra cost of a Copper Washer.

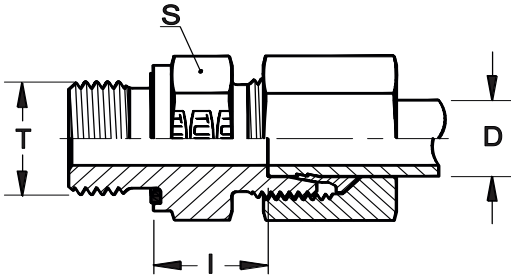
■ Form A can be provided on request
- * Not as per ISO 8434
- ** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)



sealing by elastic seal - Form E



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	G 1/8 A	9.5	14	100	SDSE04LLG018	100	SDSE04LLG018S4	63	SDSE04LLG018BR
LL 06	G 1/8 A	8.0	14	100	SDSE06LLG018	100	SDSE06LLG018S4	63	SDSE06LLG018BR
#L 06	G 1/8 A	8.5	14	500	SDSE06LG018	315	SDSE06LG018S4	200	SDSE06LG018BR
L 06	G 1/4 A	10.0	19	500	SDSE06LG014	315	SDSE06LG014S4	200	SDSE06LG014BR
L 08	G 1/8 A	9.5	14	500	SDSE08LG018	315	SDSE08LG018S4	200	SDSE08LG018BR
#L 08	G 1/4 A	10.0	19	500	SDSE08LG014	315	SDSE08LG014S4	200	SDSE08LG014BR
L 08	G 3/8 A	11.5	22	420	SDSE08LG038	315	SDSE08LG038S4	200	SDSE08LG038BR
#L 10	G 1/4 A	11.0	19	500	SDSE10LG014	315	SDSE10LG014S4	200	SDSE10LG014BR
L 10	G 3/8 A	12.5	22	420	SDSE10LG038	315	SDSE10LG038S4	200	SDSE10LG038BR
L 10	G 1/2 A	13.0	27	400	SDSE10LG012	315	SDSE10LG012S4	200	SDSE10LG012BR
L 12	G 1/4 A	12.0	19	400	SDSE12LG014	315	SDSE12LG014S4	200	SDSE12LG014BR
#L 12	G 3/8 A	12.5	22	420	SDSE12LG038	315	SDSE12LG038S4	200	SDSE12LG038BR
L 12	G 1/2 A	13.0	27	400	SDSE12LG012	315	SDSE12LG012S4	200	SDSE12LG012BR
L 15	G 3/8 A	13.5	24	400	SDSE15LG038	315	SDSE15LG038S4	200	SDSE15LG038BR
#L 15	G 1/2 A	14.0	27	400	SDSE15LG012	315	SDSE15LG012S4	200	SDSE15LG012BR
#L 18	G 1/2 A	14.5	27	400	SDSE18LG012	315	SDSE18LG012S4	200	SDSE18LG012BR
L 18	G 3/4 A	14.5	32	250	SDSE18LG034	160	SDSE18LG034S4	100	SDSE18LG034BR
#L 22	G 3/4 A	16.5	32	250	SDSE22LG034	160	SDSE22LG034S4	100	SDSE22LG034BR
#L 28	G 1 A	17.5	41	250	SDSE28LG001	160	SDSE28LG001S4	100	SDSE28LG001BR
#L 35	G 1 1/4 A	17.5	50	250	SDSE35LG114	160	SDSE35LG114S4	100	SDSE35LG114BR
#L 42	G 1 1/2 A	19.0	55	250	SDSE42LG112	160	SDSE42LG112S4	100	SDSE42LG112BR

Standard combination as per ISO 8434-1

** Replace S4 by S6 for material AISI-316

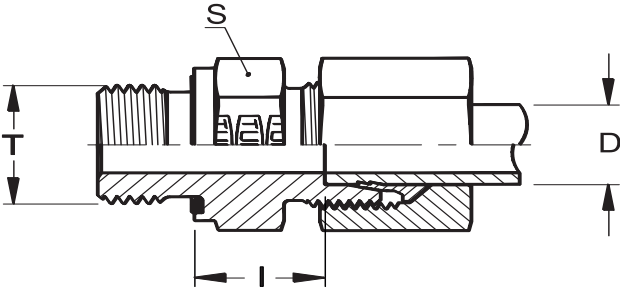
■ Body with Elastic seal: Part No.: SDSE12LG012R

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR



sealing by elastic seal - Form E



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
# S 06	G 1/4 A	13.0	19	800	SDSE06SG014	630	SDSE06SG014S4	400	SDSE06SG014BR
# S 08	G 1/4 A	15.0	19	800	SDSE08SG014	630	SDSE08SG014S4	400	SDSE08SG014BR
S 08	G 3/8 A	15.5	22	800	SDSE08SG038	630	SDSE08SG038S4	400	SDSE08SG038BR
S 10	G 1/4 A	14.5	19	800	SDSE10SG014	630	SDSE10SG014S4	400	SDSE10SG014BR
# S 10	G 3/8 A	15.0	22	800	SDSE10SG038	630	SDSE10SG038S4	400	SDSE10SG038BR
S 10	G 1/2 A	17.5	27	630	SDSE10SG012	630	SDSE10SG012S4	400	SDSE10SG012BR
S 12	G 1/4 A	16.5	22	630	SDSE12SG014	630	SDSE12SG014S4	400	SDSE12SG014BR
# S 12	G 3/8 A	17.0	22	630	SDSE12SG038	630	SDSE12SG038S4	400	SDSE12SG038BR
# S 12	G 1/2 A	17.5	27	630	SDSE12SG012	630	SDSE12SG012S4	400	SDSE14SG012BR
S 14*	G 1/2 A	19.0	27	630	SDSE14SG012	630	SDSE14SG012S4	400	SDSE14SG012BR
S 16	G 3/8 A	18.0	27	630	SDSE16SG038	400	SDSE16SG038S4	250	SDSE10SG038BR
# S 16	G 1/2 A	18.5	27	630	SDSE16SG012	400	SDSE16SG012S4	250	SDSE16SG012BR
# S 16	G 3/4 A	20.5	32	420	SDSE16SG034	400	SDSE16SG034S4	250	SDSE20SG034BR
# S 20	G 3/4 A	20.5	32	420	SDSE20SG034	400	SDSE20SG034S4	250	SDSE20SG034BR
S 25	G 1/2 A	23.0	41	420	SDSE25SG012	400	SDSE25SG012S4	250	SDSE14SG012BR
# S 25	G 1 A	23.0	41	420	SDSE25SG001	400	SDSE25SG001S4	250	SDSE25SG001BR
# S 30	G 1 1/4 A	23.5	50	420	SDSE30SG114	400	SDSE30SG114S4	250	SDSE30SG114BR
# S 38	G 1 1/2 A	26.0	55	420	SDSE38SG112	315	SDSE38SG112S4	200	SDSE38SG112BR

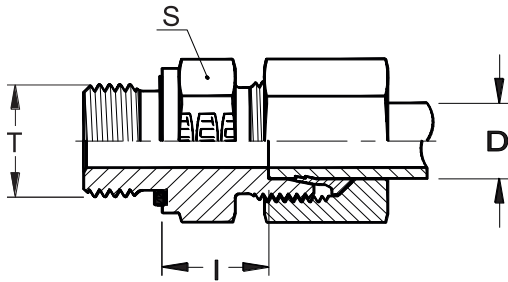
Standard combination as per ISO 8434-1
■ Body with Elastic Seal: Part No: SDSE38SG112R

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR

Dimensions and pressure for reference only, subject to change



sealing by elastic seal - Form E



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
# L 06	M 10x1.0	8.5	14	500	SDSE06LM10	315	SDSE06LM10S4
# L 08	M 12x1.5	10.0	17	500	SDSE08LM12	315	SDSE08LM12S4
# L 10	M 14x1.5	11.0	19	500	SDSE10LM14	315	SDSE10LM14S4
# L 12	M 16x1.5	12.5	22	400	SDSE12LM16	315	SDSE12LM16S4
L 12	M 18x1.5	12.5	24	400	SDSE12LM18	315	SDSE12LM18S4
L 12	M 22x1.5	14.0	27	400	SDSE12LM22	315	SDSE12LM22S4
# L 15	M 18x1.5	13.5	24	400	SDSE15LM18	315	SDSE15LM18S4
L 15	M 22x1.5	15.0	27	400	SDSE15LM22	315	SDSE15LM22S4
# L 18	M 22x1.5	14.5	27	400	SDSE18LM22	315	SDSE18LM22S4
# L 22	M 26x1.5	16.5	32	250	SDSE22LM26	160	SDSE22LM26S4
# L 28	M 33x2.0	17.5	41	250	SDSE28LM33	160	SDSE28LM33S4
# L 35	M 42x2.0	17.5	50	250	SDSE35LM42	160	SDSE35LM42S4
# L 42	M 48x2.0	19.0	55	250	SDSE42LM48	160	SDSE42LM48S4
# S 6	M 12x1.5	13.0	17	800	SDSE06SM12	630	SDSE06SM12S4
# S 8	M 14x1.5	15.0	19	800	SDSE08SM14	630	SDSE08SM14S4
# S 10	M 16x1.5	15.0	22	800	SDSE10SM16	630	SDSE10SM16S4
# S 12	M 18x1.5	17.0	24	630	SDSE12SM18	630	SDSE12SM18S4
S 14 *	M 20x1.5	19.0	27	630	SDSE14SM20	630	SDSE14SM20S4
# S 16	M 22x1.5	18.5	27	630	SDSE16SM22	400	SDSE16SM22S4
# S 20	M 27x2.0	20.5	32	420	SDSE20SM27	400	SDSE20SM27S4
# S 25	M 33x2.0	23.0	41	420	SDSE25SM33	400	SDSE25SM33S4
# S 30	M 42x2.0	23.5	50	420	SDSE30SM42	400	SDSE30SM42S4
# S 38	M 48x2.0	26.0	55	420	SDSE38SM48	315	SDSE38SM48S4

Standard combination as per ISO 8434-1

* Not as per ISO 8434

■ Body with Elastic Seal: Part No.: SDSE12LM22R

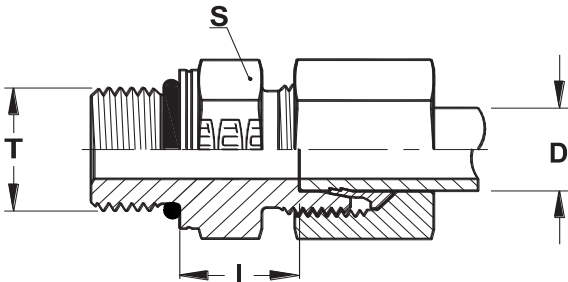
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by O-ring - Form F



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
LL 04	M 08×1.0	9.5	11	100	SDSF04LLM08	-	-
LL 04	M 10×1.0	9.5	13	100	SDSF04LLM10	-	-
LL 06	M 10×1.0	8.0	13	100	SDSF06LLM10	-	-
L 06	M 10×1.0	8.5	14	500	SDSF06LM10	315	SDSF06LM10S4
L 08	M 12×1.5	10.0	17	500	SDSF08LM12	315	SDSF08LM12S4
L 10	M 14×1.5	11.0	19	500	SDSF10LM14	315	SDSF10LM14S4
L 12	M 16×1.5	12.5	22	400	SDSF12LM16	315	SDSF12LM16S4
L 15	M 18×1.5	13.5	24	400	SDSF15LM18	315	SDSF15LM18S4
L 18	M 22×1.5	14.5	27	400	SDSF18LM22	315	SDSF18LM22S4
L 22	M 27×2.0	16.5	32	250	SDSF22LM27	160	SDSF22LM27S4
L 28	M 33×2.0	17.5	41	250	SDSF28LM33	160	SDSF28LM33S4
L 35	M 42×2.0	17.5	50	250	SDSF35LM42	160	SDSF35LM42S4
L 42	M 48×2.0	19.0	55	250	SDSF42LM48	160	SDSF42LM48S4
S 06	M 12×1.5	13.0	17	800	SDSF06SM12	630	SDSF06SM12S4
S 08	M 14×1.5	15.0	19	800	SDSF08SM14	630	SDSF08SM14S4
S 10	M 16×1.5	15.0	22	800	SDSF10SM16	630	SDSF10SM16S4
S 12	M 18×1.5	17.0	24	630	SDSF12SM18	630	SDSF12SM18S4
S 16	M 22×1.5	18.5	27	630	SDSF16SM22	400	SDSF16SM22S4
S 20	M 27×2.0	20.5	32	420	SDSF20SM27	400	SDSF20SM27S4
S 25	M 33×2.0	23.0	41	420	SDSF25SM33	400	SDSF25SM33S4
S 30	M 42×2.0	23.5	50	420	SDSF30SM42	400	SDSF30SM42S4
S 38	M 48×2.0	26.0	55	420	SDSF38SM48	315	SDSF38SM48S4

■ Body with O-ring: Part No.: SDSF12LM16R

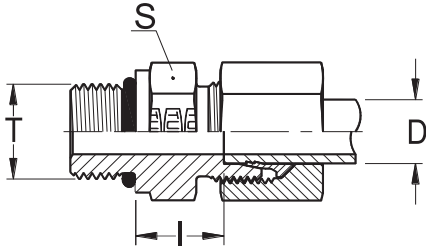
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by O-ring - Form F



D Tube OD	T UN/UNF-2A	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 08	7/16 -20	10.0	17	315	SDSF08LU0716	315	SDSF08LU0716S4
L 10	7/16 -20	11.0	17	315	SDSF10LU0716	315	SDSF10LU0716S4
L 12	9/16 -18	11.0	19	315	SDSF12LU0916	315	SDSF12LU0916S4
L 12	3/4 -16	13.0	24	315	SDSF12LU0034	315	SDSF12LU0034S4
L 12	7/8 -14	14.3	27	315	SDSF12LU0078	315	SDSF12LU0078S4
L 15	3/4 -16	14.0	24	315	SDSF15LU0034	315	SDSF15LU0034S4
L 18	3/4 -16	14.5	27	315	SDSF18LU0034	315	SDSF18LU0034S4
L 18	7/8 -14	14.8	27	315	SDSF18LU0078	315	SDSF18LU0078S4
L 22	7/8 -14	16.8	32	160	SDSF22LU0078	160	SDSF22LU0078S4
L 22	1 1/16 -12	16.5	32	160	SDSF22LU1116	160	SDSF22LU1116S4
L 22	1 5/16 -12	17.5	41	160	SDSF22LU1516	160	SDSF22LU1516S4
L 28	1 1/16 -12	17.5	41	160	SDSF28LU1116	160	SDSF28LU1116S4
L 28	1 5/16 -12	17.5	41	160	SDSF28LU1516	160	SDSF28LU1516S4
L 35	1 5/16 -12	17.5	46	160	SDSF35LU1516	160	SDSF35LU1516S4
L 35	1 5 / 8 -12	17.5	50	160	SDSF35LU0158	160	SDSF35LU0158S4
L 42	1 5 / 8 -12	19.0	55	160	SDSF42LU0158	160	SDSF42LU0158S4
S 08	7/16 -20	13.0	17	630	SDSF08SU0716	630	SDSF08SU0716S4
S 10	9/16 -18	12.5	19	630	SDSF10SU0916	630	SDSF10SU0916S4
S 12	9/16 -18	12.5	22	630	SDSF12SU0916	630	SDSF12SU0916S4
S 12	3/4 -16	14.5	24	630	SDSF12SU0034	630	SDSF12SU0034S4
S 16	3/4 -16	12.5	24	400	SDSF16SU0034	400	SDSF16SU0034S4
S 16	7/8 -14	15.5	27	400	SDSF16SU0078	400	SDSF16SU0078S4
S 20	3/4 -16	17.5	32	400	SDSF20SU0034	400	SDSF20SU0034S4
S 20	7/8 -14	17.5	32	400	SDSF20SU0078	400	SDSF20SU0078S4
S 20	1 1/16 -12	17.0	32	400	SDSF20SU1116	400	SDSF20SU1116S4
S 25	1 1/16 -12	19.5	36	400	SDSF25SU1116	400	SDSF25SU1116S4
S 25	1 5/16 -12	19.5	41	400	SDSF25SU1516	400	SDSF25SU1516S4
S 30	1 5/16 -12	20.0	46	400	SDSF30SU1516	400	SDSF30SU1516S4
S 30	1 5 / 8 -12	20.0	50	400	SDSF30SU0158	400	SDSF30SU0158S4
S 38	1 5 / 8 -12	22.5	55	315	SDSF38SU0158	315	SDSF38SU0158S4

■ Body with O-ring: Part No.: SDSF38SU0158R

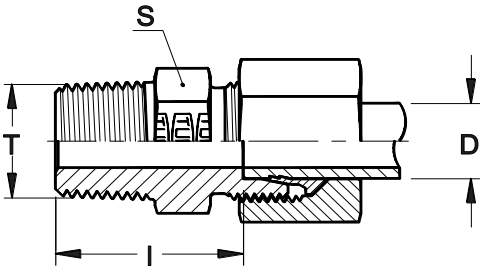
** Replace S4 by S6 for material AISI-316

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton

Dimensions and pressure for reference
only, subject to change



sealing by taper thread



D Tube OD	T NPT	S A / F	I (ref.)	Steel		Stainless Steel AISI-304**		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	N 1/8 -27	11	18.0	100	SDT04LLN018	100	SDT04LLN018S4	63	SDT04LLN018BR
LL 06	N 1/8 -27	11	16.5	100	SDT06LLN018	100	SDT06LLN018S4	63	SDT06LLN018BR
LL 08	N 1/8 -27	12	18.5	100	SDT08LLN018	100	SDT08LLN018S4	63	SDT08LLN018BR
L 06	N 1/8 -27	12	17.0	315	SDT06LN018	315	SDT06LN018S4	200	SDT06LN018BR
L 06	N 1/4 -18	17	23.0	315	SDT06LN014	315	SDT06LN014S4	200	SDT06LN014BR
L 08	N 1/4 -18	17	23.0	315	SDT08LN014	315	SDT08LN014S4	200	SDT08LN014BR
L 10	N 1/4 -18	17	24.0	315	SDT10LN014	315	SDT10LN014S4	200	SDT10LN014BR
L 10	N 3/8 -18	19	25.0	315	SDT10LN038	315	SDT10LN038S4	200	SDT10LN038BR
L 12	N 1/4 -18	19	25.0	315	SDT12LN014	315	SDT12LN014S4	200	SDT12LN014BR
L 12	N 3/8 -18	19	25.0	315	SDT12LN038	315	SDT12LN038S4	200	SDT12LN038BR
L 12	N 1/2 -14	22	30.0	315	SDT12LN012	315	SDT12LN012S4	200	SDT12LN012BR
L 15	N 1/2 -14	24	31.0	315	SDT15LN012	315	SDT15LN012S4	200	SDT15LN012BR
L 18	N 1/2 -14	27	31.5	315	SDT18LN012	315	SDT18LN012S4	200	SDT18LN012BR
L 22	N 3/4 -14	32	33.5	160	SDT22LN034	160	SDT22LN034S4	100	SDT22LN034BR
L 28	N 1 -11 1/2	41	39.5	160	SDT28LN001	160	SDT28LN001S4	100	SDT28LN001BR
L 35	N 1 1/4 -11 1/2	46	40.5	160	SDT35LN114	160	SDT35LN114S4	100	SDT35LN114BR
L 42	N 1 1/2 -11 1/2	55	42.0	160	SDT42LN112	160	SDT42LN112S4	100	SDT42LN112BR
S 06	N 1/4 -18	17	28.0	630	SDT06SN014	630	SDT06SN014S4	400	SDT06SN014BR
S 08	N 1/4 -18	17	28.0	630	SDT08SN014	630	SDT08SN014S4	400	SDT08SN014BR
S 10	N 1/4 -18	19	27.5	630	SDT10SN014	630	SDT10SN014S4	400	SDT10SN014BR
S 10	N 3/8 -18	19	27.5	630	SDT10SN038	630	SDT10SN038S4	400	SDT10SN038BR
S 12	N 1/4 -18	22	29.5	630	SDT12SN014	630	SDT12SN014S4	100	SDT12SN014BR
S 12	N 3/8 -18	22	29.5	630	SDT12SN038	630	SDT12SN038S4	400	SDT12SN038BR
S 12	N 1/2 -14	22	34.5	630	SDT12SN012	630	SDT12SN012S4	400	SDT12SN012BR
S 14	N 1/2 -14	24	36.0	630	SDT14SN012	630	SDT14SN012S4	400	SDT14SN012BR
S 16	N 1/2 -14	32	39.5	400	SDT16SN012	400	SDT16SN012S4	250	SDT16SN012BR
S 20	N 3/4 -14	32	37.5	400	SDT20SN034	400	SDT20SN034S4	250	SDT20SN034BR
S 25	N 1 -11 1/2	41	45.0	400	SDT25SN001	400	SDT25SN001S4	100	SDT25SN001BR
S 30	N 1 1/4 -11 1/2	46	46.5	400	SDT30SN114	400	SDT30SN114S4	100	SDT30SN114BR
S 38	N 1 1/2 -11 1/2	55	49.0	315	SDT38SN112	315	SDT38SN112S4	100	SDT38SN112BR

If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

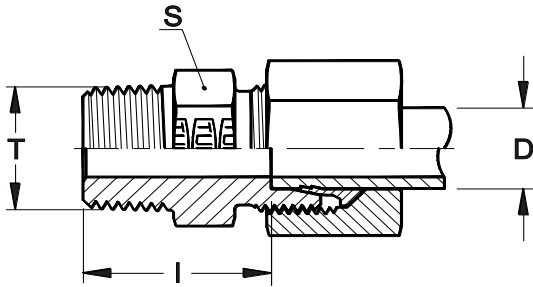
** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



sealing by short taper thread - Form C



D Tube OD	T BSPT	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	R 1/8 -28	16.0	11 ^{a)}	100	SDT04LLR018	100	SDT04LLR018S4	63	SDT04LLR018BR
LL 06	R 1/8 -28	14.5	11 ^{a)}	100	SDT06LLR018	100	SDT06LLR018S4	63	SDT06LLR018BR
LL 08	R 1/8 -28	16.5	12	100	SDT08LLR018	100	SDT08LLR018S4	63	SDT08LLR018BR
LL 08	R 1/4 -19	20.5	14	100	SDT08LLR014	100	SDT08LLR014S4	63	SDT08LLR014BR
LL 10	R 1/4 -19	20.5	14	100	SDT10LLR014	100	SDT10LLR014S4	63	SDT10LLR014BR
LL 12	R 1/4 -19	20.0	17	100	SDT12LLR014	100	SDT12LLR014S4	63	SDT12LLR014BR
LL 12	R 3/8 -19	20.0	17	100	SDT12LLR038	100	SDT12LLR038S4	63	SDT12LLR038BR
L 06	R 1/8 -28	15.0	12	315	SDT06LR018	315	SDT06LR018S4	200	SDT06LR018BR
L 08	R 1/4 -19	20.0	17	315	SDT08LR014	315	SDT08LR014S4	200	SDT08LR014BR
L 10	R 1/4 -19	21.0	17	315	SDT10LR014	315	SDT10LR014S4	200	SDT10LR014BR
L 12	R 1/4 -19	22.0	19	315	SDT12LR014	315	SDT12LR014S4	200	SDT12LR014BR
L 12	R 3/8 -19	22.0	19	315	SDT12LR038	315	SDT12LR038S4	200	SDT12LR038BR
L 12	R 1/2 -14	24.0	24	315	SDT12LR012	315	SDT12LR012S4	200	SDT12LR012BR
L 15	R 3/8 -19	23.0	24	315	SDT15LR038	315	SDT15LR038S4	160	SDT15LR038BR
L 15	R 1/2 -14	25.0	24	315	SDT15LR012	315	SDT15LR012S4	160	SDT15LR012BR
L 18	R 1/2 -14	25.5	27	315	SDT18LR012	315	SDT18LR012S4	160	SDT18LR012BR
L 22	R 3/4 -14	29.5	32	160	SDT22LR034	160	SDT22LR034S4	100	SDT22LR034BR

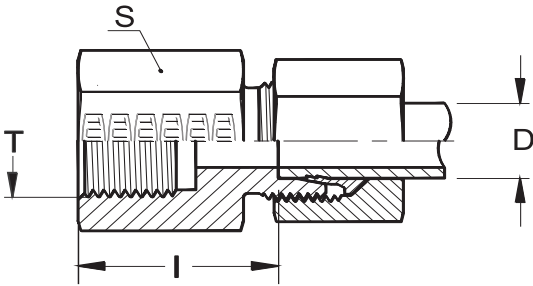
a) S=12 for stainless steel

** Replace S4 by S6 for material AISI-316

If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change

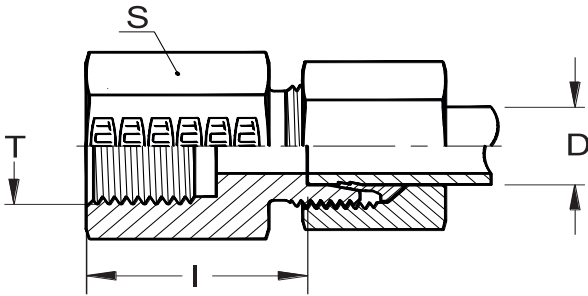


D Tube OD	T NPT	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	N 1/8 -27	19.0	14	315	SDTF06LN018	315	SDTF06LN018S4
L 06	N 1/4 -18	23.5	19	315	SDTF06LN014	315	SDTF06LN014S4
L 08	N 1/4 -18	23.5	19	315	SDTF08LN014	315	SDTF08LN014S4
L 10	N 1/4 -18	24.0	19	315	SDTF10LN014	315	SDTF10LN014S4
L 12	N 3/8 -18	27.0	24	315	SDTF12LN038	315	SDTF12LN038S4
L 12	N 1/2 -14	32.0	27	315	SDTF12LN012	315	SDTF12LN012S4
L 15	N 1/2 -14	33.0	27	315	SDTF15LN012	315	SDTF15LN012S4
L 18	N 1/2 -14	32.5	27	315	SDTF18LN012	315	SDTF18LN012S4
L 22	N 3/4 -14	35.5	36	160	SDTF22LN034	160	SDTF22LN034S4
L 28	N 1 -11 1/2	40.5	41	160	SDTF28LN001	160	SDTF28LN001S4
L 35	N 1 1/4 -11 1/2	40.5	55	160	SDTF35LN114	160	SDTF35LN114S4
L 42	N 1 1/2 -11 1/2	42.0	60	160	SDTF42LN112	160	SDTF42LN112S4
S 06	N 1/8 -27	22.0	14	400	SDTF06SN018	400	SDTF06SN018S4
S 06	N 1/4 -18	26.0	19	400	SDTF06SN014	400	SDTF06SN014S4
S 08	N 1/4 -18	26.0	19	400	SDTF08SN014	400	SDTF08SN014S4
S 10	N 3/8 -18	27.0	24	400	SDTF10SN038	400	SDTF10SN038S4
S 12	N 1/4 -18	25.0	22	400	SDTF12SN014	400	SDTF12SN014S4
S 12	N 3/8 -18	27.5	24	400	SDTF12SN038	400	SDTF12SN038S4
S 12	N 1/2 -14	33.5	27	400	SDTF12SN012	400	SDTF12SN012S4
S 14	N 1/2 -14	35.0	27	400	SDTF14SN012	400	SDTF14SN012S4
S 16	N 1/2 -14	34.5	27	400	SDTF16SN012	400	SDTF16SN012S4
S 20	N 1/2 -14	33.5	32	315	SDTF20SN012	315	SDTF20SN012S4
S 20	N 3/4 -14	35.5	36	315	SDTF20SN034	315	SDTF20SN034S4
S 25	N 1 -11 1/2	41.0	41	315	SDTF25SN001	315	SDTF25SN001S4
S 30	N 1 1/4 -11 1/2	43.5	55	315	SDTF30SN114	315	SDTF30SN114S4
S 38	N 1 1/2 -11 1/2	43.0	60	250	SDTF38SN112	250	SDTF38SN112S4

** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken

Dimensions and pressure for reference only, subject to change

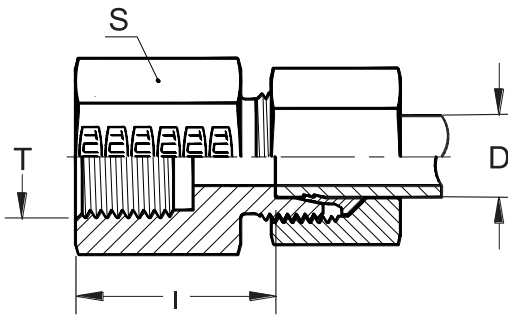


D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **		Brass	
				WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8	19.0	14	315	SDF06LG018	315	SDF06LG018S4	200	SDF06LG018BR
L 08	G 1/4	24.0	19	315	SDF08LG014	315	SDF08LG014S4	200	SDF08LG014BR
L 08	G 3/8	25.0	24	315	SDF08LG038	315	SDF08LG038S4	200	SDF08LG038BR
L 08	G 1/2	29.0	27	315	SDF08LG012	315	SDF08LG012S4	200	SDF08LG012BR
L 10	G 1/4	25.0	19	315	SDF10LG014	315	SDF10LG014S4	200	SDF10LG014BR
L 10	G 3/8	26.0	24	315	SDF10LG038	315	SDF10LG038S4	200	SDF10LG038BR
L 10	G 1/2	30.0	27	315	SDF10LG012	315	SDF10LG012S4	200	SDF10LG012BR
L 12	G 3/8	26.0	24	315	SDF12LG038	315	SDF12LG038S4	200	SDF12LG038BR
L 12	G 1/2	30.0	27	315	SDF12LG012	315	SDF12LG012S4	200	SDF12LG012BR
L 15	G 1/2	31.0	27	315	SDF15LG012	315	SDF15LG012S4	200	SDF15LG012BR
L 18	G 1/2	30.5	27	315	SDF18LG012	315	SDF18LG012S4	200	SDF18LG012BR
L 22	G 3/4	35.5	36	160	SDF22LG034	160	SDF22LG034S4	100	SDF22LG034BR
L 28	G 1	38.0	41	160	SDF28LG001	160	SDF28LG001S4	100	SDF28LG001BR
L 35	G 1 1/4	41.0	55	160	SDF35LG114	160	SDF35LG114S4	100	SDF35LG114BR
L 42	G 1 1/2	42.5	60	160	SDF42LG112	160	SDF42LG112S4	100	SDF42LG112BR
S 06	G 1/4	26.0	19	400	SDF06SG014	400	SDF06SG014S4	250	SDF06SG014BR
S 08	G 1/4	26.0	19	400	SDF08SG014	400	SDF08SG014S4	250	SDF08SG014BR
S 10	G 3/8	26.5	24	400	SDF10SG038	400	SDF10SG038S4	250	SDF10SG038BR
S 12	G 3/8	26.5	24	400	SDF12SG038	400	SDF12SG038S4	250	SDF12SG038BR
S 14	G 1/2	32.0	30	400	SDF14SG012	400	SDF14SG012S4	250	SDF14SG012BR
S 16	G 1/2	31.5	30	400	SDF16SG012	400	SDF16SG012S4	250	SDF16SG012BR
S 20	G 3/4	34.5	36	315	SDF20SG034	315	SDF20SG034S4	200	SDF20SG034BR
S 25	G 1	37.5	41	315	SDF25SG001	315	SDF25SG001S4	200	SDF25SG001BR
S 30	G 1 1/4	42.0	55	315	SDF30SG114	315	SDF30SG114S4	200	SDF30SG114BR
S 38	G 1 1/2	43.5	60	250	SDF38SG112	250	SDF38SG112S4	160	SDF38SG112BR

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	19.5	14	315	SDF06LM10	315	SDF06LM10S4
L 08	M 12x1.5	24.0	17	315	SDF08LM12	315	SDF08LM12S4
L 10	M 14x1.5	25.0	19	315	SDF10LM14	315	SDF10LM14S4
L 12	M 16x1.5	26.0	22	315	SDF12LM16	315	SDF12LM16S4
L 15	M 18x1.5	28.0	24	315	SDF15LM18	315	SDF15LM18S4
L 18	M 22x1.5	29.5	30	315	SDF18LM22	315	SDF18LM22S4
L 22	M 26x1.5	34.5	32	160	SDF22LM26	160	SDF22LM26S4
L 28	M 33x2.0	37.5	41	160	SDF28LM33	160	SDF28LM33S4
L 35	M 42x2.0	40.5	55	160	SDF35LM42	160	SDF35LM42S4
L 42	M 48x2.0	42.0	60	160	SDF42LM48	160	SDF42LM48S4
S 06	M 12x1.5	26.0	17	400	SDF06SM12	400	SDF06SM12S4
S 08	M 14x1.5	26.0	17	400	SDF08SM14	400	SDF08SM14S4
S 10	M 16x1.5	26.5	22	400	SDF10SM16	400	SDF10SM16S4
S 12	M 18x1.5	27.5	24	400	SDF12SM18	400	SDF12SM18S4
S 14	M 20x1.5	31.0	27	400	SDF14SM20	400	SDF14SM20S4
S 16	M 22x1.5	30.5	30	400	SDF16SM22	400	SDF16SM22S4
S 20	M 27x2.0	34.5	36	315	SDF20SM27	315	SDF20SM27S4
S 25	M 33x2.0	37.0	41	315	SDF25SM33	315	SDF25SM33S4
S 30	M 42x2.0	41.5	55	315	SDF30SM42	315	SDF30SM42S4
S 38	M 48x2.0	43.0	60	250	SDF38SM48	250	SDF38SM48S4

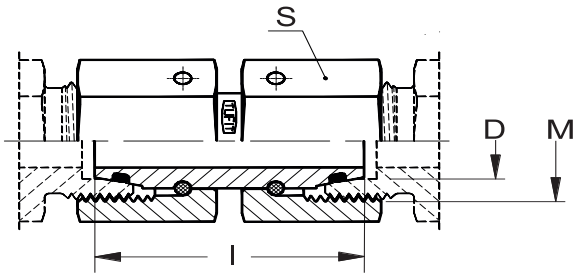
** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken

Dimensions and pressure for reference only, subject to change



Swivel to Swivel



D Tube OD	M Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 12x1.5	32	14	500	SWS06L	315	SWS06LS4
L 08	M 14x1.5	32	17	500	SWS08L	315	SWS08LS4
L 10	M 16x1.5	33	19	500	SWS10L	315	SWS10LS4
L 12	M 18x1.5	33	22	400	SWS12L	315	SWS12LS4
L 15	M 22x1.5	38	27	400	SWS15L	315	SWS15LS4
L 18	M 26x1.5	38	32	400	SWS18L	315	SWS18LS4
L 22	M 30x2.0	44	36	250	SWS22L	160	SWS22LS4
L 28	M 36x2.0	48	41	250	SWS28L	160	SWS28LS4
L 35	M 45x2.0	52	50	250	SWS35L	160	SWS35LS4
L 42	M 52x2.0	57	60	250	SWS42L	160	SWS42LS4
S 06	M 14x1.5	33	17	800	SWS06S	630	SWS06SS4
S 08	M 16x1.5	34	19	800	SWS08S	630	SWS08SS4
S 10	M 18x1.5	35	22	800	SWS10S	630	SWS10SS4
S 12	M 20x1.5	38	24	630	SWS12S	630	SWS12SS4
S 14	M 22x1.5	41	27	630	SWS14S	630	SWS14SS4
S 16	M 24x1.5	42	30	630	SWS16S	400	SWS16SS4
S 20	M 30x2.0	48	36	420	SWS20S	400	SWS20SS4
S 25	M 36x2.0	53	46	420	SWS25S	400	SWS25SS4
S 30	M 42x2.0	62	50	420	SWS30S	400	SWS30SS4
S 38	M 52x2.0	67	60	420	SWS38S	315	SWS38SS4

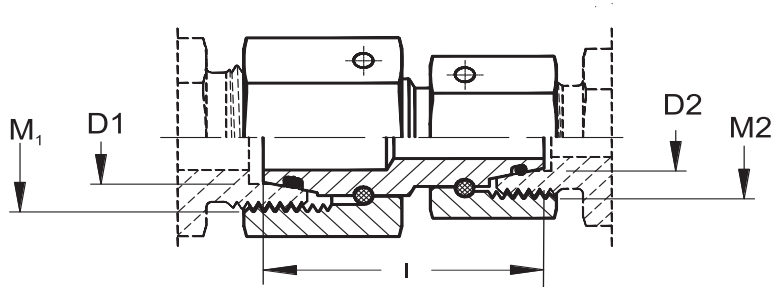
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Swivel to Swivel



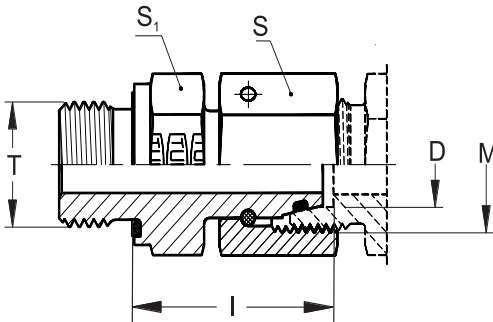
Tube OD		L (ref.)	M ₁ Metric	M ₂ Metric	Steel	
D ₁	D ₂				WP (bar)	Part No.
L 06	S 06	32.0	M 14×1.5	M 12×1.5	500	SWRD06L06S
L 08	S 08	33.0	M 16×1.5	M 14×1.5	500	SWRD08L08S
L 10	S 10	33.5	M 18×1.5	M 16×1.5	500	SWRD10L10S
L 12	S 12	36.0	M 20×1.5	M 18×1.5	400	SWRD12L12S
L 12	L 08	34.0	M 18×1.5	M 14×1.5	400	SWRD12L08L
L 15	L 08	38.0	M 22×1.5	M 14×1.5	400	SWRD15L08L
L 15	L 12	38.0	M 22×1.5	M 18×1.5	400	SWRD15L12L
L 18	S 16	41.5	M 26×1.5	M 24×1.5	400	SWRD18L16S
L 22	S 20	47.0	M 30×2.0	M 30×2.0	250	SWRD22L20S
L 28	S 25	50.5	M 36×2.0	M 36×2.0	250	SWRD28L25S
L 28	L 22	46.0	M 36×2.0	M 30×2.0	250	SWRD28L22L
L 35	S 30	59.0	M 45×2.0	M 42×2.0	250	SWRD35L30S
L 42	S 38	62.0	M 52×2.0	M 52×2.0	250	SWRD42L38S
S 16	L 15	41.0	M 24×1.5	M 22×1.5	400	SWRD16S15L
S 20	L 18	37.5	M 30×2.0	M 26×1.5	400	SWRD20S18L
S 25	L 22	46.0	M 36×2.0	M 30×2.0	250	SWRD25S22L
S 30	L 28	52.0	M 42×2.0	M 36×2.0	250	SWRD30S28L
S 38	L 35	52.0	M 52×2.0	M 45×2.0	250	SWRD38S35L

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR



sealing by elastic seal - Form E



D Tube OD	T BSSP	M Metric	S A / F	S ₁ A / F	I (ref.)	Steel		Stainless Steel AISI-304 **	
						WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	M 12x1.5	14	14	24.5	500	SWDSE06LG018	315	SWDSE06LG018S4
L 08	G 1/4 A	M 14x1.5	17	19	29.5	500	SWDSE08LG014	315	SWDSE08LG014S4
L 10	G 1/4 A	M 16x1.5	19	19	27.5	500	SWDSE10LG014	315	SWDSE10LG014S4
L 12	G 3/8 A	M 18x1.5	22	22	34.0	400	SWDSE12LG038	315	SWDSE12LG038S4
L 15	G 1/2 A	M 22x1.5	27	27	32.0	400	SWDSE15LG012	315	SWDSE15LG012S4
L 18	G 1/2 A	M 26x1.5	32	27	31.5	400	SWDSE18LG012	315	SWDSE18LG012S4
L 22	G 3/4 A	M 30x2.0	36	32	32.5	250	SWDSE22LG034	160	SWDSE22LG034S4
L 28	G 1 A	M 36x2.0	41	41	35.0	250	SWDSE28LG001	160	SWDSE28LG001S4
L 35	G 1 1/4 A	M 45x2.0	50	50	42.5	250	SWDSE35LG114	160	SWDSE35LG114S4
L 42	G 1 1/2 A	M 52x2.0	60	55	46.5	250	SWDSE42LG112	160	SWDSE42LG112S4
S 06	G 1/4 A	M 14x1.5	17	19	27.0	800	SWDSE06SG014	630	SWDSE06SG014S4
S 08	G 1/4 A	M 16x1.5	19	19	29.5	800	SWDSE08SG014	630	SWDSE08SG014S4
S 10	G 3/8 A	M 18x1.5	22	22	32.0	800	SWDSE10SG038	630	SWDSE10SG038S4
S 12	G 3/8 A	M 20x1.5	24	22	34.0	630	SWDSE12SG038	630	SWDSE12SG038S4
S 12	G 1/2 A	M 20x1.5	24	27	34.5	630	SWDSE12SG012	630	SWDSE12SG012S4
S 14*	G 1/2 A	M 22x1.5	27	27	36.5	630	SWDSE14SG012	630	SWDSE14SG012S4
S 16	G 1/2 A	M 24x1.5	30	27	37.0	630	SWDSE16SG012	400	SWDSE16SG012S4
S 16	G 3/4 A	M 24x1.5	30	32	39.0	630	SWDSE16SG034	400	SWDSE16SG034S4
S 20	G 3/4 A	M 30x2.0	36	32	43.0	420	SWDSE20SG034	400	SWDSE20SG034S4
S 25	G 1 A	M 36x2.0	46	41	48.0	420	SWDSE25SG001	400	SWDSE25SG001S4
S 30	G 1 1/4 A	M 42x2.0	50	50	51.0	420	SWDSE30SG114	400	SWDSE30SG114S4
S 38	G 1 1/2 A	M 52x2.0	60	55	60.0	420	SWDSE38SG112	315	SWDSE38SG112S4

■ For Standpipe Adjustable : Refer to Custom Product section

* Not as per ISO 8434

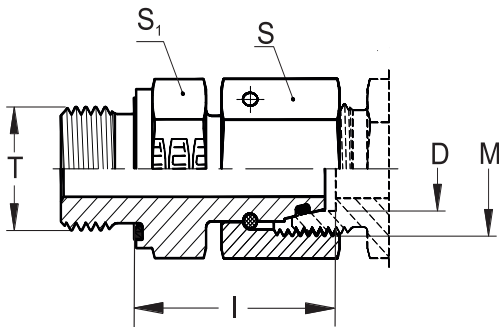
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by elastic seal - Form E



D Tube OD	T Metric	M Metric	S A / F	S ₁ A / F	I (ref.)	Steel		Stainless Steel AISI-304**	
						WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	M 12x1.5	14	14	24.5	500	SWSDSE06LM10	315	SWSDSE06LM10S4
L 08	M 12x1.5	M 14x1.5	17	17	26.5	500	SWSDSE08LM12	315	SWSDSE08LM12S4
L 10	M 14x1.5	M 16x1.5	19	19	27.5	500	SWSDSE10LM14	315	SWSDSE10LM14S4
L 12	M 16x1.5	M 18x1.5	22	22	30.5	400	SWSDSE12LM16	315	SWSDSE12LM16S4
L 15	M 18x1.5	M 22x1.5	27	24	31.5	400	SWSDSE15LM18	315	SWSDSE15LM18S4
L 18	M 22x1.5	M 26x1.5	32	27	31.5	400	SWSDSE18LM22	315	SWSDSE18LM22S4
L 22	M 26x1.5	M 30x2.0	36	32	32.5	250	SWSDSE22LM26	160	SWSDSE22LM26S4
L 28	M 33x2.0	M 36x2.0	41	41	35.0	250	SWSDSE28LM33	160	SWSDSE28LM33S4
L 35	M 42x2.0	M 45x2.0	50	50	42.5	250	SWSDSE35LM42	160	SWSDSE35LM42S4
L 42	M 48x2.0	M 52x2.0	60	55	46.5	250	SWSDSE42LM48	160	SWSDSE42LM48S4
S 06	M 12x1.5	M 14x1.5	17	17	27.0	800	SWSDSE06SM12	630	SWSDSE06SM12S4
S 08	M 14x1.5	M 16x1.5	19	19	29.5	800	SWSDSE08SM14	630	SWSDSE08SM14S4
S 10	M 16x1.5	M 18x1.5	22	22	32.0	800	SWSDSE10SM16	630	SWSDSE10SM16S4
S 12	M 18x1.5	M 20x1.5	24	24	34.0	630	SWSDSE12SM18	630	SWSDSE12SM18S4
S 14*	M 20x1.5	M 22x1.5	27	27	36.5	630	SWSDSE14SM20	630	SWSDSE14SM20S4
S 16	M 22x1.5	M 24x1.5	30	27	37.0	630	SWSDSE16SM22	400	SWSDSE16SM22S4
S 20	M 27x2.0	M 30x2.0	36	32	43.0	420	SWSDSE20SM27	400	SWSDSE20SM27S4
S 25	M 33x2.0	M 36x2.0	46	41	48.0	420	SWSDSE25SM33	400	SWSDSE25SM33S4
S 30	M 42x2.0	M 42x2.0	50	50	51.0	420	SWSDSE30SM42	400	SWSDSE30SM42S4
S 38	M 48x2.0	M 52x2.0	60	55	60.0	420	SWSDSE38SM48	315	SWSDSE38SM48S4

■ For Standpipe Adjustable : Refer to Custom Product section

* Not as per ISO 8434

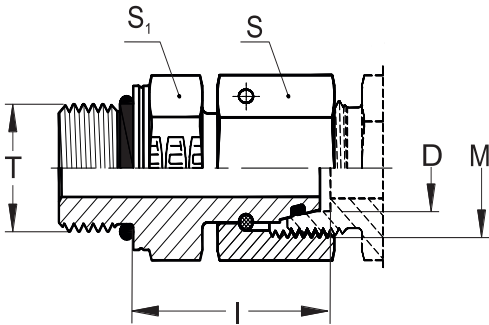
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by O-ring - From F



D Tube OD	T Metric	M Metric	S A / F	S ₁ A / F	I (ref.)	Steel		Stainless Steel AISI-304 **	
						WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	M 12x1.5	14	14	24.5	500	SWSDSF06LM10	315	SWSDSF06LM10S4
L 08	M 12x1.5	M 14x1.5	17	17	26.5	500	SWSDSF08LM12	315	SWSDSF08LM12S4
L 10	M 14x1.5	M 16x1.5	19	19	27.5	500	SWSDSF10LM14	315	SWSDSF10LM14S4
L 12	M 16x1.5	M 18x1.5	22	22	30.5	400	SWSDSF12LM16	315	SWSDSF12LM16S4
L 15	M 18x1.5	M 22x1.5	27	24	31.5	400	SWSDSF15LM18	315	SWSDSF15LM18S4
L 18	M 22x1.5	M 26x1.5	32	27	31.5	400	SWSDSF18LM22	315	SWSDSF18LM22S4
L 22	M 27x2.0	M 30x2.0	36	32	32.5	250	SWSDSF22LM27	160	SWSDSF22LM27S4
L 28	M 33x2.0	M 36x2.0	41	41	35.0	250	SWSDSF28LM33	160	SWSDSF28LM33S4
L 35	M 42x2.0	M 45x2.0	50	50	42.5	250	SWSDSF35LM42	160	SWSDSF35LM42S4
L 42	M 48x2.0	M 52x2.0	60	55	46.5	250	SWSDSF42LM48	160	SWSDSF42LM48S4
S 06	M 12x1.5	M 14x1.5	17	17	27.0	800	SWSDSF06SM12	630	SWSDSF06SM12S4
S 08	M 14x1.5	M 16x1.5	19	19	29.5	800	SWSDSF08SM14	630	SWSDSF08SM14S4
S 10	M 16x1.5	M 18x1.5	22	22	32.0	800	SWSDSF10SM16	630	SWSDSF10SM16S4
S 12	M 18x1.5	M 20x1.5	24	24	34.0	630	SWSDSF12SM18	630	SWSDSF12SM18S4
S 16	M 22x1.5	M 24x1.5	30	27	37.0	630	SWSDSF16SM22	400	SWSDSF16SM22S4
S 20	M 27x2.0	M 30x2.0	36	32	43.0	420	SWSDSF20SM27	400	SWSDSF20SM27S4
S 25	M 33x2.0	M 36x2.0	46	41	48.0	420	SWSDSF25SM33	400	SWSDSF25SM33S4
S 30	M 42x2.0	M 42x2.0	50	50	51.0	420	SWSDSF30SM42	400	SWSDSF30SM42S4
S 38	M 48x2.0	M 52x2.0	60	55	60.0	420	SWSDSF38SM48	400	SWSDSF38SM48S4

■ For Standpipe Adjustable : Refer to Custom Product section

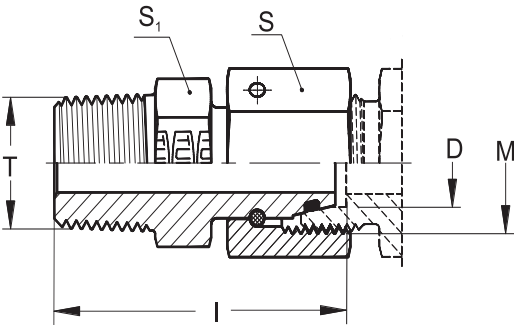
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by taper thread



D Tube OD	T NPT	M Metric	S A / F	S ₁ A / F	I (ref.)	Steel	
						WP (bar)	Part No.
L 06	N 1/8 -27	M 12x1.5	14	11	31.5	315	SWSDT06LN018
L 08	N 1/4 -18	M 14x1.5	17	14	37.5	315	SWSDT08LN014
L 10	N 1/4 -18	M 16x1.5	19	14	38.0	315	SWSDT10LN014
L 12	N 3/8 -18	M 18x1.5	22	19	40.0	315	SWSDT12LN038
L 15	N 1/2 -14	M 22x1.5	27	22	49.5	315	SWSDT15LN012
L 18	N 1/2 -14	M 26x1.5	32	24	49.0	315	SWSDT18LN012
L 22	N 3/4 -14	M 30x2.0	36	27	52.0	160	SWSDT22LN034
L 28	N 1 -11 1/2	M 36x2.0	41	36	61.0	160	SWSDT28LN001
L 35	N 1 1/4 -11 1/2	M 45x2.0	50	46	65.5	160	SWSDT35LN114
L 42	N 1 1/2 -11 1/2	M 52x2.0	60	50	68.5	160	SWSDT42LN112
S 06	N 1/4 -18	M 14x1.5	17	14	37.5	630	SWSDT06SN014
S 08	N 1/4 -18	M 16x1.5	19	14	38.0	630	SWSDT08SN014
S 10	N 3/8 -18	M 18x1.5	22	19	40.5	630	SWSDT10SN038
S 12	N 3/8 -18	M 20x1.5	24	19	42.0	630	SWSDT12SN038
S 14*	N 1/2 -14	M 22x1.5	27	22	50.5	630	SWTSD14SN012
S 16	N 1/2 -14	M 24x1.5	30	22	51.0	400	SWSDT16SN012
S 20	N 3/4 -14	M 30x2.0	36	27	54.0	400	SWSDT20SN034
S 25	N 1 -11 1/2	M 36x2.0	46	36	63.5	400	SWSDT25SN001
S 30	N 1 1/4 -11 1/2	M 42x2.0	50	46	70.5	400	SWSDT30SN114
S 38	N 1 1/2 -11 1/2	M 52x2.0	60	50	73.5	315	SWSDT38SN112

If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

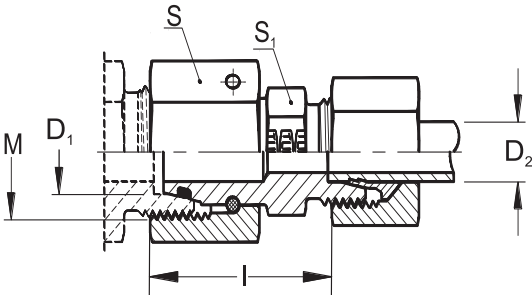
* Not as per ISO 8434

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR



Tube to Swivel



Tube OD		M Metric	S A / F	S ₁ A / F	I (ref.)	Steel		Stainless Steel AISI-304**	
D ₁	D ₂					WP (bar)	Part No.	WP (bar)	Part No.
08	06	M 14x1.5	17	12	23.5	500	SWSRD0806L	315	SWSRD0806LS4
10	06	M 16x1.5	19	14	25.0	500	SWSRD1006L	315	SWSRD1006LS4
	08				25.0	500	SWSRD1008L	315	SWSRD1008LS4
12	06	M 18x1.5	22	17	25.0	400	SWSRD1206L	315	SWSRD1206LS4
	08				25.0	400	SWSRD1208L	315	SWSRD1208LS4
	10				26.0	400	SWSRD1210L	315	SWSRD1210LS4
15	10	M 22x1.5	27	19	29.5	400	SWSRD1510L	315	SWSRD1510LS4
	12				29.5	400	SWSRD1512L	315	SWSRD1512LS4
18	15	M 26x1.5	32	24	30.0	400	SWSRD1815L	315	SWSRD1815LS4
22	15	M 30x2.0	36	27	34.0	250	SWSRD2215L	160	SWSRD2215LS4
	18				33.5	250	SWSRD2218L	160	SWSRD2218LS4
28	15	M 36x2.0	41	32	36.0	250	SWSRD2815L	160	SWSRD2815LS4
	18				35.5	250	SWSRD2818L	160	SWSRD2818LS4
	22				37.5	250	SWSRD2822L	160	SWSRD2822LS4
35	15	M 45x2.0	50	41	39.0	250	SWSRD3515L	160	SWSRD3515LS4
	18				38.5	250	SWSRD3518L	160	SWSRD3518LS4
	22				40.5	250	SWSRD3522L	160	SWSRD3522LS4
	28				40.5	250	SWSRD3528L	160	SWSRD3528LS4
42	15	M 52x2.0	60	50	42.5	250	SWSRD4215L	160	SWSRD4215LS4
	18				42.0	250	SWSRD4218L	160	SWSRD4218LS4
	22				44.0	250	SWSRD4222L	160	SWSRD4222LS4
	28				44.0	250	SWSRD4228L	160	SWSRD4228LS4
	35				43.0	250	SWSRD4235L	160	SWSRD4235LS4

■ Body with Swivel Nut : Part No.: SWSRD4235LR

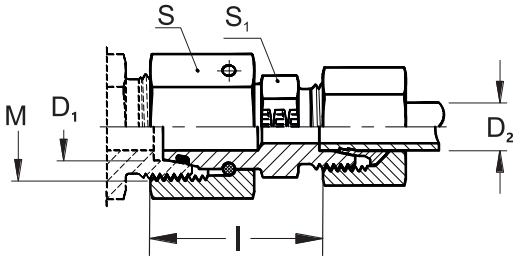
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to Swivel



Tube OD		M	S	S ₁	I	Steel		Stainless Steel	
						WP	Part No.	WP	Part No.
D ₁	D ₂	Metric	A / F	A / F	(ref.)	(bar)		(bar)	
08	06	M 16x1.5	19	14	27.0	800	SWSRD0806S	630	SWSRD0806SS4
10	06	M 18x1.5	22	17	27.5	800	SWSRD1006S	630	SWSRD1006SS4
	08				27.5	800	SWSRD1008S	630	SWSRD1008SS4
12	06	M 20x1.5	24	19	29.0	630	SWSRD1206S	630	SWSRD1206SS4
	08				29.0	630	SWSRD1208S	630	SWSRD1208SS4
	10				29.5	630	SWSRD1210S	630	SWSRD1210SS4
14*	06	M 22x1.5	27	19	31.5	630	SWSRD1406S	630	SWSRD1406SS4
	08				31.5	630	SWSRD1408S	630	SWSRD1408SS4
	10				31.0	630	SWSRD1410S	630	SWSRD1410SS4
	12				31.0	630	SWSRD1412S	630	SWSRD1412SS4
16	06	M 24x1.5	30	22	32.0	630	SWSRD1606S	400	SWSRD1606SS4
	08				32.0	630	SWSRD1608S	400	SWSRD1608SS4
	10				31.5	630	SWSRD1610S	400	SWSRD1610SS4
	12				31.5	630	SWSRD1612S	400	SWSRD1612SS4
	14*				33.0	630	SWSRD1614S	400	SWSRD1614SS4
20	06	M 30x2.0	36	27	36.0	420	SWSRD2006S	400	SWSRD2006SS4
	08				36.0	420	SWSRD2008S	400	SWSRD2008SS4
	10				35.5	420	SWSRD2010S	400	SWSRD2010SS4
	12				35.5	420	SWSRD2012S	400	SWSRD2012SS4
	14*				37.0	420	SWSRD2014S	400	SWSRD2014SS4
	16				36.5	420	SWSRD2016S	400	SWSRD2016SS4
25	06	M 36x2.0	46	32	38.5	420	SWSRD2506S	400	SWSRD2506SS4
	08				38.5	420	SWSRD2508S	400	SWSRD2508SS4
	10				38.0	420	SWSRD2510S	400	SWSRD2510SS4
	12				38.0	420	SWSRD2512S	400	SWSRD2512SS4
	14*				39.5	420	SWSRD2514S	400	SWSRD2514SS4
	16				39.0	420	SWSRD2516S	400	SWSRD2516SS4
	20				39.0	420	SWSRD2520S	400	SWSRD2520SS4
30	08	M 42x2.0	50	41	44.0	420	SWSRD3008S	400	SWSRD3008SS4
	10				43.5	420	SWSRD3010S	400	SWSRD3010SS4
	12				43.5	420	SWSRD3012S	400	SWSRD3012SS4
	14*				45.0	420	SWSRD3014S	400	SWSRD3014SS4
	16				44.5	420	SWSRD3016S	400	SWSRD3016SS4
	20				44.5	420	SWSRD3020S	400	SWSRD3020SS4
	25				45.0	420	SWSRD3025S	400	SWSRD3025SS4
38	12	M 52x2.0	60	50	47.0	420	SWSRD3812S	315	SWSRD3812SS4
	14*				48.0	420	SWSRD3814S	315	SWSRD3814SS4
	16				48.0	420	SWSRD3816S	315	SWSRD3816SS4
	20				48.0	420	SWSRD3820S	315	SWSRD3820SS4
	25				48.5	420	SWSRD3825S	315	SWSRD3825SS4
	30				49.0	420	SWSRD3830S	315	SWSRD3830SS4

■ Body : Part No.: SWSRD3830SR.

* Not as per ISO 8434

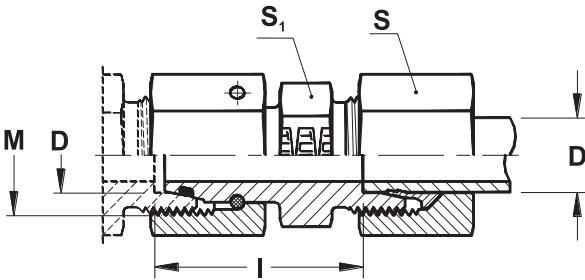
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to Swivel with O-ring



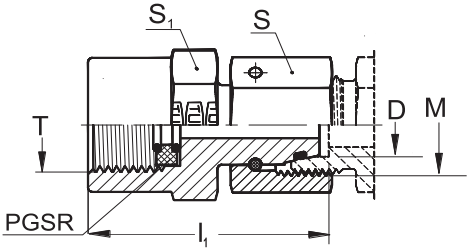
D Tube OD	M Metric Thread	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304**		Brass	
					WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 12x1.5	36	14	12	500	SWD06L	315	SWD06LS4	200	SWD06LBR
L 08	M 14x1.5	36	17	14	500	SWD08L	315	SWD08LS4	200	SWD08LBR
L 10	M 16x1.5	36	19	17	500	SWD10L	315	SWD10LS4	200	SWD10LBR
L 12	M 18x1.5	36	22	19	400	SWD12L	315	SWD12LS4	200	SWD12LBR
L 15	M 22x1.5	36	27	24	400	SWD15L	315	SWD15LS4	200	SWD15LBR
L 18	M 26x1.5	36	32	27	400	SWD18L	315	SWD18LS4	200	SWD18LBR
L 22	M 30x2.0	40	36	32	250	SWD22L	160	SWD22LS4	100	SWD22LBR
L 28	M 36x2.0	40	41	41	250	SWD28L	160	SWD28LS4	100	SWD28LBR
L 35	M 45x2.0	50	50	46	250	SWD35L	160	SWD35LS4	100	SWD35LBR
L 42	M 52x2.0	60	60	55	250	SWD42L	160	SWD42LS4	100	SWD42LBR
S 06	M 14x1.5	36	17	14	800	SWD06S	630	SWD06SS4	400	SWD06SBR
S 08	M 16x1.5	36	19	17	800	SWD08S	630	SWD08SS4	400	SWD08SBR
S 10	M 18x1.5	36	22	19	800	SWD10S	630	SWD10SS4	400	SWD10SBR
S 12	M 20x1.5	36	24	22	630	SWD12S	630	SWD12SS4	400	SWD12SBR
S 14*	M 22x1.5	40	27	24	630	SWD14S	630	SWD14SS4	400	SWD14SBR
S 16	M 24x1.5	40	30	27	630	SWD16S	400	SWD16SS4	250	SWD16SBR
S 20	M 30x2.0	46	36	32	420	SWD20S	400	SWD20SS4	250	SWD20SBR
S 25	M 36x2.0	50	46	41	420	SWD25S	400	SWD25SS4	250	SWD25SBR
S 30	M 42x2.0	56	50	46	420	SWD30S	400	SWD30SS4	250	SWD30SBR
S 38	M 52x2.0	60	60	55	420	SWD38S	315	SWD38SS4	200	SWD38SBR

■ Body with Swivel Nut : Part No.: SWD38SR

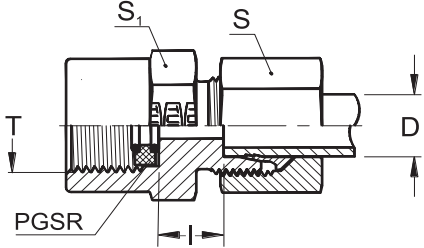
* Not as per ISO 8434
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Surface Protection	
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)



SWPGG



PGG

D Tube OD	T BSPP	M Metric	S A / F	S ₁ A / F	I ₁	Steel		Stainless Steel AISI-304**	
						WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/4	M 12x1.5	14	19	35.5	315	SWPG06LG014	315	SWPG06LG014S4
L 08	G 1/4	M 14x1.5	17	19	35.5	315	SWPG08LG014	315	SWPG08LG014S4
L 10	G 1/4	M 16x1.5	19	19	36.0	315	SWPG10LG014	315	SWPG10LG014S4
L 12	G 1/4	M 18x1.5	22	19	36.0	315	SWPG12LG014	315	SWPG12LG014S4
S 06	G 1/4	M 14x1.5	17	19	35.5	630	SWPG06SG014	630	SWPG06SG014S4
S 06	G 1/2	M 14x1.5	17	27	42.5	630	SWPG06SG012	630	SWPG06SG012S4
S 08	G 1/4	M 16x1.5	19	19	35.5	630	SWPG08SG014	630	SWPG08SG014S4
S 08	G 1/2	M 16x1.5	19	27	43.0	630	SWPG08SG012	630	SWPG08SG012S4
S 10	G 1/4	M 18x1.5	22	19	39.0	630	SWPG10SG014	630	SWPG10SG014S4
S 10	G 1/2	M 18x1.5	22	27	43.5	630	SWPG10SG012	630	SWPG10SG012S4
S 12	G 1/4	M 20x1.5	24	19	39.0	630	SWPG12SG014	630	SWPG12SG014S4
S 12	G 1/2	M 20x1.5	24	27	45.0	630	SWPG12SG012	630	SWPG12SG012S4

** Replace S4 by S6 for material AISI-316

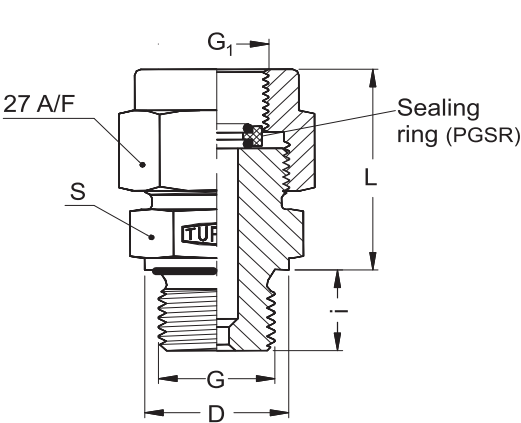


D Tube OD	T BSPP	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304 **		Brass	
					WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	G 1/4	8.5	10	19	100	PG04LLG014	-	PG04LLG014S4	-	PG04LLG014BR
L 06	G 1/4	7.5	14	19	315	PG06LG014	315	PG06LG014S4	200	PG06LG014BR
L 08	G 1/4	7.5	17	19	315	PG08LG014	315	PG08LG014S4	200	PG08LG014BR
L 10	G 1/4	8.5	19	19	315	PG10LG014	315	PG10LG014S4	200	PG10LG014BR
L 12	G 1/4	8.5	22	19	315	PG12LG014	315	PG12LG014S4	200	PG12LG014BR
S 06	G 1/2	11.0	17	27	630	PG06SG012	630	PG06SG012S4	400	PG06SG012BR
S 08	G 1/2	11.0	19	27	630	PG08SG012	630	PG08SG012S4	400	PG08SG012BR
S 10	G 1/2	10.5	22	27	630	PG10SG012	630	PG10SG012S4	400	PG10SG012BR
S 12	G 1/2	10.5	24	27	630	PG12SG012	630	PG12SG012S4	400	PG12SG012BR

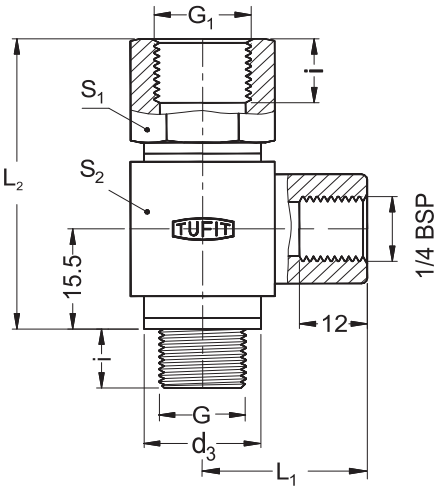
** Replace S4 by S6 for material AISI-316

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR

Dimensions and pressure for reference
only, subject to change



GMAE



GBC

G Stud End BSP	G ₁ Gauge End BSP	I	L	D	S A/F	Steel	Stainless Steel AISI-304**	Brass
						Part No.	Part No.	Part No.
1/4	1/4	12	34.5	19	22	GMAE014014	GMAE014014S4	GMAE014014BR
1/4	3/8	12	34.5	19	22	GMAE014038	GMAE014038S4	GMAE014038BR
1/4	1/2	12	36.5	19	22	GMAE014012	GMAE014012S4	GMAE014012BR
3/8	1/4	12	34.5	22	22	GMAE038014	GMAE038014S4	GMAE038014BR
3/8	3/8	12	34.5	22	22	GMAE038038	GMAE038038S4	GMAE038038BR
3/8	1/2	12	36.5	22	22	GMAE038012	GMAE038012S4	GMAE038012BR
1/2	1/4	14	36.5	27	27	GMAE012014	GMAE012014S4	GMAE012014BR
1/2	3/8	14	36.5	27	27	GMAE012038	GMAE012038S4	GMAE012038BR
1/2	1/2	14	38.5	27	27	GMAE012012	GMAE012012S4	GMAE012012BR

** Replace S4 by S6 for material AISI-316



G Stud End BSP	G ₁ Gauge End BSP	i min	d ₃	L ₁	L ₂	S ₁ A/F	S ₂ A/F	Steel	Stainless Steel AISI-304**	Brass
								Part No.	Part No.	Part No.
1/4	1/4	12	19	29.0	53	19	22	GBC014012	GBC014012S4	GBC014012BR
1/4	3/8	12	22	30.0	53	22	24	GBC014038	GBC014038S4	GBC014038BR
1/4	1/2	14	27	33.0	55	27	32	GBC014012	GBC014012S4	GBC014012BR
1/4	3/4	16	32	32.0	59	32	36	GBC014034	GBC014034S4	GBC014034BR
1/4	1	18	40	37.5	62	41	46	GBC014001	GBC014001S4	GBC014001BR

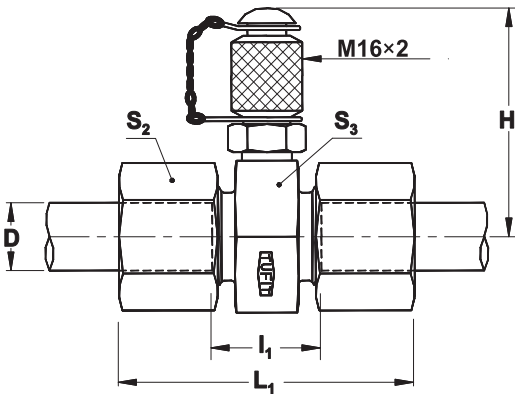
** Replace S4 by S6 for material AISI-316

ASSEMBLY INSTRUCTION OF GAUGE MOUNTING ADAPTORS (GMA)

1. Screw in GMA body at male stud G into the port
2. Tighten by hand the Hex nut of 27 Hex on to the adaptor body till it stops
3. Insert the sealing ring in place, from the top of the nut, keeping O-rings in tact
4. Fully Tighten the Manometer (Pressure Gauge) at female thread at G1 of the nut
5. For the face of the gauge to be in the desired orientation, loosen the nut & rotate the gauge in anti-clockwise direction
6. Rotate the nut to tighten the gauge onto the sealing ring. While rotating the nut hold the gauge to its proper orientation

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR



D Tube OD	S ₂ A / F	S ₃ A / F	I ₁	L ₁	H	Steel		Stainless Steel AISI-304**	
						WP (bar)	Part No.	WP (bar)	Part No.
L 06	14	24	21	51	49	315	SLPG06L	315	SLPG06LS4
L 08	17	24	21	51	49	315	SLPG08L	315	SLPG08LS4
L 10	19	24	23	53	49	315	SLPG10L	315	SLPG10LS4
L 12	22	27	23	53	50	315	SLPG12L	315	SLPG12LS4
L 15	27	30	25	55	52	315	SLPG15L	315	SLPG15LS4
L 18	32	32	24	57	53	315	SLPG18L	315	SLPG18LS4
L 22	36	36	28	61	55	160	SLPG22L	160	SLPG22LS4
L 28	41	41	28	61	57	160	SLPG28L	160	SLPG28LS4
L 35	50	46	26	69	60	160	SLPG35L	160	SLPG35LS4
L 42	60	55	25	71	64	160	SLPG42L	160	SLPG42LS4
S 06	17	24	25	55	49	630	SLPG06S	630	SLPG06SS4
S 08	19	24	25	55	49	630	SLPG08S	630	SLPG08SS4
S 10	22	24	24	57	49	630	SLPG10S	630	SLPG10SS4
S 12	24	24	24	57	49	630	SLPG12S	630	SLPG12SS4
S 14	27	27	27	63	50	630	SLPG14S	630	SLPG14SS4
S 16	30	30	26	63	52	400	SLPG16S	400	SLPG16SS4
S 20	36	36	26	69	55	400	SLPG20S	400	SLPG20SS4
S 25	46	41	27	75	57	400	SLPG25S	400	SLPG25SS4
S 30	50	46	28	81	60	400	SLPG30S	400	SLPG30SS4
S 38	60	55	29	91	64	315	SLPG38S	315	SLPG38SS4

Design factor : 4:1

For pressure monitoring and checking on high, low and negative pressure systems

For bleeding cylinders and hydraulic cylinders

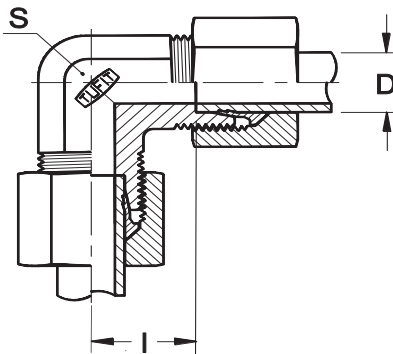
For taking samples

** Replace S4 by S6 for material AISI-316

- Advantages:**
- * Coupling at system pressure level
 - * Leak proof connection before Ball valve is open
 - * Simple connection to measure, control and switching devices
 - * Self-locking metal guard cap

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



D Tube OD	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
		Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	11.0	9	9	100	E04LL	100	E04LLS4	63	E04LLBR
LL 06	9.5	9	11	100	E06LL	100	E06LLS4	63	E06LLBR
LL 08	11.5	12	12	100	E08LL	100	E08LLS4	63	E08LLBR
LL 10 *	12.5	12	14	100	E10LL	100	E10LLS4	63	E10LLBR
LL 12 *	13.0	14	17	100	E12LL	100	E12LLS4	63	E12LLBR
L 06	12.0	12	12	500	E06L	315	E06LS4	200	E06LBR
L 08	14.0	12	14	500	E08L	315	E08LS4	200	E08LBR
L 10	15.0	14	17	500	E10L	315	E10LS4	200	E10LBR
L 12	17.0	17	19	400	E12L	315	E12LS4	200	E12LBR
L 15	21.0	19	22	400	E15L	315	E15LS4	200	E15LBR
L 18	23.5	24	27	400	E18L	315	E18LS4	200	E18LBR
L 22	27.5	27	30	250	E22L	160	E22LS4	100	E22LBR
L 28	30.5	36	36	250	E28L	160	E28LS4	100	E28LBR
L 35	34.5	41	46	250	E35L	160	E35LS4	100	E35LBR
L 42	40.0	50	55	250	E42L	160	E42LS4	100	E42LBR
S 06	16.0	12	14	800	E06S	630	E06SS4	400	E06SBR
S 08	17.0	14	17	800	E08S	630	E08SS4	400	E08SBR
S 10	17.5	17	19	500	E10S	630	E10SS4	400	E10SBR
S 12	21.5	17	22	630	E12S	630	E12SS4	400	E12SBR
S 14 *	22.0	19	22	630	E14S	630	E14SS4	400	E14SBR
S 16	24.5	24	24	630	E16S	400	E16SS4	250	E16SBR
S 20	26.5	27	30	420	E20S	400	E20SS4	250	E20SBR
S 25	30.0	36	36	420	E25S	400	E25SS4	250	E25SBR
S 30	35.5	41	46	420	E30S	400	E30SS4	250	E30SBR
S 38	41.0	50	55	420	E38S	315	E38SS4	200	E38SBR

As per IS: 9388

* Not as per ISO 8434

■ For Elbow Reducer : Refer to Custom Product section

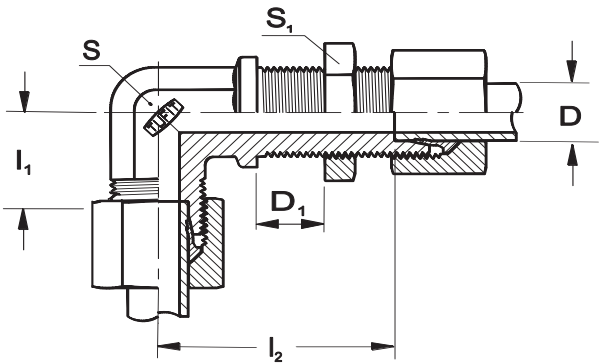
** Replace S4 by S6 for material AISI-316

■ For 45° Elbow Coupling: Refer to Custom Product section

■ Forgings are used. Dense & close grain structure ensures Strength & Durability.

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



D Tube OD	I ₁ (ref.)	I ₂ (ref.)	S ₁ A / F	S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
				Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
L 06	12.0	41.0	17	12	17	315	BHE06L	315	BHE06LS4	200	BHE06LBR
L 08	14.0	44.0	19	12	19	315	BHE08L	315	BHE08LS4	200	BHE08LBR
L 10	15.0	46.0	22	14	22	315	BHE10L	315	BHE10LS4	200	BHE10LBR
L 12	17.0	49.0	24	17	24	315	BHE12L	315	BHE12LS4	200	BHE12LBR
L 15	21.0	54.0	30	19	27	315	BHE15L	315	BHE15LS4	200	BHE15LBR
L 18	23.5	56.5	36	24	32	315	BHE18L	315	BHE18LS4	200	BHE18LBR
L 22	27.5	64.5	41	27	36	160	BHE22L	160	BHE22LS4	100	BHE22LBR
L 28	30.5	69.5	46	36	42	160	BHE28L	160	BHE28LS4	100	BHE28LBR
L 35	34.5	75.5	55	41	50	160	BHE35L	160	BHE35LS4	100	BHE35LBR
L 42	40.0	79.0	65	50	60	160	BHE42L	160	BHE42LS4	100	BHE42LBR
S 06	16.0	46.0	12	12	19	630	BHE06S	630	BHE06SS4	400	BHE06SBR
S 08	17.0	47.0	22	14	22	630	BHE08S	630	BHE08SS4	400	BHE08SBR
S 10	17.5	49.5	24	17	24	630	BHE10S	630	BHE10SS4	400	BHE10SBR
S 12	21.5	51.5	27	17	27	630	BHE12S	630	BHE12SS4	400	BHE12SBR
S 14 *	22.0	55.0	30	19	27	630	BHE14S	630	BHE14SS4	400	BHE14SBR
S 16	24.5	55.5	32	24	30	400	BHE16S	400	BHE16SS4	250	BHE16SBR
S 20	26.5	63.5	41	27	36	400	BHE20S	400	BHE20SS4	250	BHE20SBR
S 25	30.0	69.0	46	36	42	400	BHE25S	400	BHE25SS4	250	BHE25SBR
S 30	35.5	76.5	50	41	50	400	BHE30S	400	BHE30SS4	250	BHE30SBR
S 38	41.0	80.0	65	50	60	315	BHE38S	315	BHE38SS4	200	BHE38SBR

- D₁ Maximum Bulkhead Thickness = 16 mm
- Body with locknut : Part No.: BHE35LR
- For Bulkhead Elbow Reducer : Refer to Custom Product section
- # As per IS: 9757

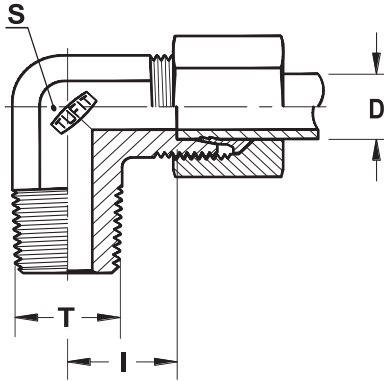
* Not as per ISO 8434
 ** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



sealing by taper thread



D Tube OD	T NPT	I (ref.)	S A / F		Steel		Stainless Steel AISI-304**		Brass	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	N 1/8 -27	11.0	09	11	100	SDTE04LLN018	100	SDTE04LLN018S4	63	SDTE04LLN018BR
LL 06	N 1/8 -27	9.5	09	11	100	SDTE06LLN018	100	SDTE06LLN018S4	63	SDTE06LLN018BR
LL 08	N 1/8 -27	11.5	12	12	100	SDTE08LLN018	100	SDTE08LLN018S4	63	SDTE08LLN018BR
L 06	N 1/8 -27	12.0	12	12	315	SDTE06LN018	315	SDTE06LN018S4	200	SDTE06LN018BR
L 06	N 1/4 -18	14.0	12	12	315	SDTE06LN014	315	SDTE06LN014S4	200	SDTE06LN014BR
L 08	N 1/4 -18	14.0	12	14	315	SDTE08LN014	315	SDTE08LN014S4	200	SDTE08LN014BR
L 10	N 1/4 -18	15.0	14	17	315	SDTE10LN014	315	SDTE10LN014S4	200	SDTE10LN014BR
L 12	N 1/4 -18	17.0	17	19	315	SDTE12LN014	315	SDTE12LN014S4	200	SDTE12LN014BR
L 12	N 3/8 -18	17.0	17	19	315	SDTE12LN038	315	SDTE12LN038S4	200	SDTE12LN038BR
L 12	N 1/2 -14	21.0	17	19	315	SDTE12LN012	315	SDTE12LN012S4	200	SDTE12LN012BR
L 15	N 1/2 -14	21.0	19	22	315	SDTE15LN012	315	SDTE15LN012S4	200	SDTE15LN012BR
L 18	N 1/2 -14	23.5	24	27	315	SDTE18LN012	315	SDTE18LN012S4	200	SDTE18LN012BR
L 22	N 3/4 -14	27.5	27	30	160	SDTE22LN034	160	SDTE22LN034S4	100	SDTE22LN034BR
L 28	N 1 -11 1/2	30.5	36	36	160	SDTE28LN001	160	SDTE28LN001S4	100	SDTE28LN001BR
L 35	N 1 1/4 -11 1/2	34.5	41	46	160	SDTE35LN114	160	SDTE35LN114S4	100	SDTE35LN114BR
L 42	N 1 1/2 -11 1/2	40.0	50	55	160	SDTE42LN112	160	SDTE42LN112S4	100	SDTE42LN112BR
S 06	N 1/4 -18	16.0	12	14	630	SDTE06SN014	630	SDTE06SN014S4	400	SDTE06SN014BR
S 08	N 1/4 -18	17.0	14	17	630	SDTE08SN014	630	SDTE08SN014S4	400	SDTE08SN014BR
S 10	N 3/8 -18	17.5	17	19	630	SDTE10SN038	630	SDTE10SN038S4	400	SDTE10SN038BR
S 12	N 3/8 -18	22.5	17	22	630	SDTE12SN038	630	SDTE12SN038S4	400	SDTE12SN038BR
S 14*	N 1/2 -14	22.0	19	22	630	SDTE14SN012	630	SDTE14SN012S4	400	SDTE14SN012BR
S 16	N 1/2 -14	24.5	24	24	400	SDTE16SN012	400	SDTE16SN012S4	250	SDTE16SN012BR
S 20	N 3/4 -14	26.5	27	30	400	SDTE20SN034	400	SDTE20SN034S4	250	SDTE20SN034BR
S 25	N 1 -11 1/2	30.0	36	36	400	SDTE25SN001	400	SDTE25SN001S4	250	SDTE25SN001BR
S 30	N 1 1/4 -11 1/2	35.5	41	46	400	SDTE30SN114	400	SDTE30SN114S4	250	SDTE30SN114BR
S 38	N 1 1/2 -11 1/2	41.0	50	55	315	SDTE38SN112	315	SDTE38SN112S4	200	SDTE38SN112BR

As per IS: 9388

If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

* Not as per ISO 8434

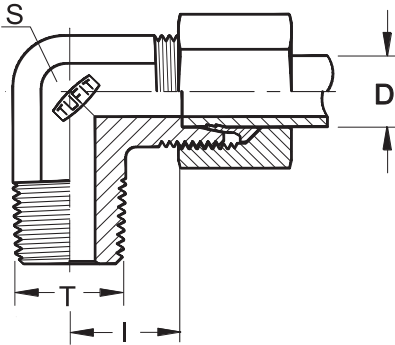
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Surface Protection	
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)



sealing by short taper thread - Form C



D Tube OD	T BSPT	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	R 1/8 -28	11.0	09	11	100	SDTE04LLR018	100	SDTE04LLR018S4	63	SDTE04LLR018BR
LL 06	R 1/8 -28	9.5	09	11	100	SDTE06LLR018	100	SDTE06LLR018S4	63	SDTE06LLR018BR
LL 08	R 1/8 -28	11.5	12	12	100	SDTE08LLR018	100	SDTE08LLR018S4	63	SDTE08LLR018BR
LL 10	R 1/4 -19	12.5	12	14	100	SDTE10LLR014	100	SDTE10LLR014S4	63	SDTE10LLR014BR
LL 12	R 1/4 -19	13.0	14	17	100	SDTE12LLR014	100	SDTE12LLR014S4	63	SDTE12LLR014BR
L 06	R 1/8 -28	12.0	12	12	315	SDTE06LR018	315	SDTE06LR018S4	200	SDTE06LR018BR
L 08	R 1/4 -19	14.0	12	14	315	SDTE08LR014	315	SDTE08LR014S4	200	SDTE08LR014BR
L 10	R 1/4 -19	15.0	14	17	315	SDTE10LR014	315	SDTE10LR014S4	200	SDTE10LR014BR
L 12	R 1/4 -19	17.0	17	19	315	SDTE12LR014	315	SDTE12LR014S4	200	SDTE12LR014BR
L 12	R 3/8 -19	17.0	17	19	315	SDTE12LR038	315	SDTE12LR038S4	200	SDTE12LR038BR
L 15	R 1/2 -14	21.0	19	19	315	SDTE15LR012	315	SDTE15LR012S4	200	SDTE15LR012BR
L 18	R 1/2 -14	23.5	24	24	315	SDTE18LR012	315	SDTE18LR012S4	200	SDTE18LR012BR
L 22	R 3/4 -14	27.5	27	27	160	SDTE22LR034	160	SDTE22LR034S4	100	SDTE22LR034BR
S 06	R 1/4 -19	16.0	12	14	400	SDTE06SR014	400	SDTE06SR014S4	250	SDTE06SR014BR
S 08	R 1/4 -19	17.0	14	17	400	SDTE08SR014	400	SDTE08SR014S4	250	SDTE08SR014BR
S 10	R 3/8 -19	17.5	17	19	400	SDTE10SR038	400	SDTE10SR038S4	250	SDTE10SR038BR
S 12	R 3/8 -19	21.5	17	22	400	SDTE12SR038	400	SDTE12SR038S4	250	SDTE12SR038BR
S 14	R 1/2 -14	22.0	19	22	400	SDTE14SR012	400	SDTE14SR012S4	250	SDTE14SR012BR
S 16	R 1/2 -14	24.5	24	24	400	SDTE16SR012	400	SDTE16SR012S4	250	SDTE16SR012BR

As per IS: 9388

** Replace S4 by S6 for material AISI-316

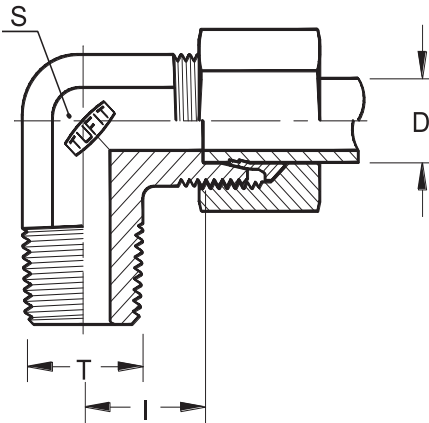
If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



sealing by short taper thread - Form C



D Tube OD	T Metric Taper	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 06	M 10x1.0	9.5	9	11	100	SDTE06LLM10	100	SDTE06LLM10S4	63	SDTE06LLM10BR
LL 08	M 10x1.0	11.5	12	12	100	SDTE08LLM10	100	SDTE08LLM10S4	63	SDTE08LLM10BR
L 06	M 10x1.0	12.0	12	12	315	SDTE06LM10	315	SDTE06LM10S4	200	SDTE06LM10BR
L 08	M 12x1.5	14.0	12	14	315	SDTE08LM12	315	SDTE08LM12S4	200	SDTE08LM12BR
L 10	M 14x1.5	15.0	14	17	315	SDTE10LM14	315	SDTE10LM14S4	200	SDTE10LM14BR
L 12	M 16x1.5	17.0	17	19	315	SDTE12LM16	315	SDTE12LM16S4	200	SDTE12LM16BR
L 15	M 18x1.5	21.0	19	22	315	SDTE15LM18	315	SDTE15LM18S4	200	SDTE15LM18BR
L 18	M 22x1.5	23.0	24	27	315	SDTE18LM22	315	SDTE18LM22S4	200	SDTE18LM22BR
S 06	M 12x1.5	16.0	12	14	400	SDTE06SM12	400	SDTE06SM12S4	250	SDTE06SM12BR
S 08	M 14x1.5	17.0	14	17	400	SDTE08SM14	400	SDTE08SM14S4	250	SDTE08SM14BR
S 10	M 16x1.5	17.5	17	19	400	SDTE10SM16	400	SDTE10SM16S4	250	SDTE10SM16BR
S 12	M 18x1.5	21.5	17	22	400	SDTE12SM18	400	SDTE12SM18S4	250	SDTE12SM18BR
S 14	M 20x1.5	22.0	19	22	400	SDTE14SM20	400	SDTE14SM20S4	250	SDTE14SM20BR
S 16	M 22x1.5	24.5	24	24	400	SDTE16SM22	400	SDTE16SM22S4	250	SDTE16SM22BR

As per IS: 9388

** Replace S4 by S6 for material AISI-316

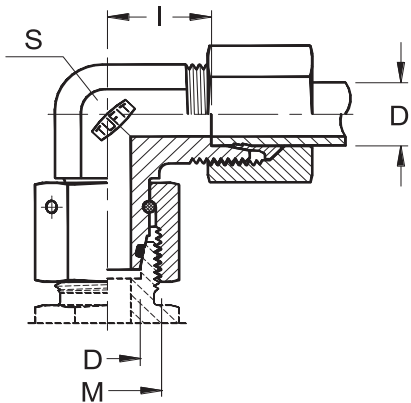
If the Port Tapping is a Parallel thread, a good sealing is achieved by using fluid plastic / Teflon Tape / PTFE / cord or paste. Liquid sealant with Teflon, lubricates the threads and is most suitable for all metals.

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



Tube to Swivel



D Tube OD	M Metric	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304**	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 12x1.5	12.0	12	12	500	SWE06L	315	SWE06LS4
L 08	M 14x1.5	14.0	12	14	500	SWE08L	315	SWE08LS4
L 10	M 16x1.5	15.0	14	17	500	SWE10L	315	SWE10LS4
L 12	M 18x1.5	17.0	17	19	400	SWE12L	315	SWE12LS4
L 15	M 22x1.5	21.0	19	22	400	SWE15L	315	SWE15LS4
L 18	M 26x1.5	23.5	24	27	400	SWE18L	315	SWE18LS4
L 22	M 30x2.0	27.5	27	30	250	SWE22L	160	SWE22LS4
L 28	M 36x2.0	30.5	36	36	250	SWE28L	160	SWE28LS4
L 35	M 45x2.0	34.5	41	46	250	SWE35L	160	SWE35LS4
L 42	M 52x2.0	40.0	50	55	250	SWE42L	160	SWE42LS4
S 06	M 14x1.5	16.0	12	14	800	SWE06S	630	SWE06SS4
S 08	M 16x1.5	17.0	14	17	800	SWE08S	630	SWE08SS4
S 10	M 18x1.5	17.5	17	19	800	SWE10S	630	SWE10SS4
S 12	M 20x1.5	21.5	17	22	630	SWE12S	630	SWE12SS4
S 14*	M 22x1.5	22.0	19	22	630	SWE14S	630	SWE14SS4
S 16	M 24x1.5	24.5	24	24	630	SWE16S	400	SWE16SS4
S 20	M 30x2.0	26.5	27	30	420	SWE20S	400	SWE20SS4
S 25	M 36x2.0	30.0	36	36	420	SWE25S	400	SWE25SS4
S 30	M 42x2.0	35.5	41	46	420	SWE30S	400	SWE30SS4
S 38	M 52x2.0	41.0	50	55	420	SWE38S	315	SWE38SS4

As per ISO: 9388

* Not as per ISO 8434

- Body with Swivel Nut : Part No.: SWE06LR
- For Standpipe Adjustable: Refer to Custom Product section
- For 45° Swivel Elbow with O-ring: Refer to Custom Product section

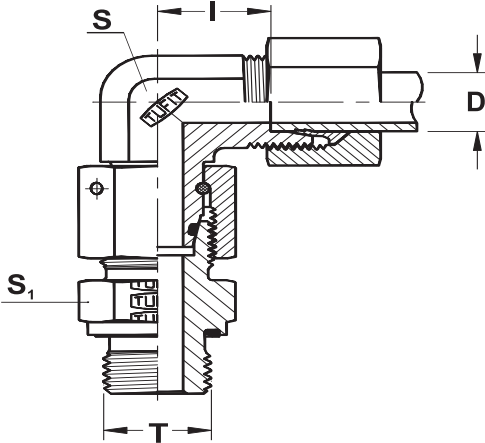
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by elastic seal - Form E



D Tube OD	T BSPP	I (ref.)	S # A / F		S ₁ A / F	Steel		Stainless Steel AISI-304 **	
			Forged	Bar Stock		WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	12.0	12	12	14	500	SWEE06LG018	315	SWEE06LG018S4
L 08	G 1/4 A	14.0	12	14	19	500	SWEE08LG014	315	SWEE08LG014S4
L 10	G 1/4 A	15.0	14	17	19	500	SWEE10LG014	315	SWEE10LG014S4
L 12	G 3/8 A	17.0	17	19	22	400	SWEE12LG038	315	SWEE12LG038S4
L 12	G 1/2 A	17.0	17	19	27	400	SWEE12LG012	315	SWEE12LG012S4
L 15	G 1/2 A	21.0	19	22	27	400	SWEE15LG012	315	SWEE15LG012S4
L 18	G 1/2 A	23.5	24	27	27	400	SWEE18LG012	315	SWEE18LG012S4
L 22	G 3/4 A	27.5	27	30	32	250	SWEE22LG034	160	SWEE22LG034S4
L 28	G 1 A	30.5	36	36	41	250	SWEE28LG001	160	SWEE28LG001S4
L 35	G 1 1/4 A	34.5	41	46	50	250	SWEE35LG114	160	SWEE35LG114S4
L 42	G 1 1/2 A	40.0	50	55	55	250	SWEE42LG112	160	SWEE42LG112S4
S 06	G 1/4 A	16.0	12	14	19	800	SWEE06SG014	630	SWEE06SG014S4
S 08	G 1/4 A	17.0	14	17	19	800	SWEE08SG014	630	SWEE08SG014S4
S 10	G 3/8 A	17.5	17	19	22	800	SWEE10SG038	630	SWEE10SG038S4
S 12	G 3/8 A	21.5	17	22	22	630	SWEE12SG038	630	SWEE12SG038S4
S 14*	G 1/2 A	22.0	19	22	27	630	SWEE14SG012	630	SWEE14SG012S4
S 16	G 1/2 A	24.5	24	24	27	630	SWEE16SG012	400	SWEE16SG012S4
S 16	G 3/4 A	24.5	24	24	32	630	SWEE16SG034	400	SWEE16SG034S4
S 20	G 3/4 A	26.5	27	30	32	420	SWEE20SG034	400	SWEE20SG034S4
S 25	G 1 A	30.0	36	36	41	420	SWEE25SG001	400	SWEE25SG001S4
S 30	G 1 1/4 A	35.5	41	46	50	420	SWEE30SG114	400	SWEE30SG114S4
S 38	G 1 1/2 A	41.0	50	55	55	420	SWEE38SG112	315	SWEE38SG112S4

As per ISO: 9388

* Not as per ISO 8434

- Body with Swivel Nut : Part No.: SWE06LR
- For Standpipe Adjustable: Refer to Custom Product section
- For 45° Swivel Elbow Connector: Refer to Custom Product section

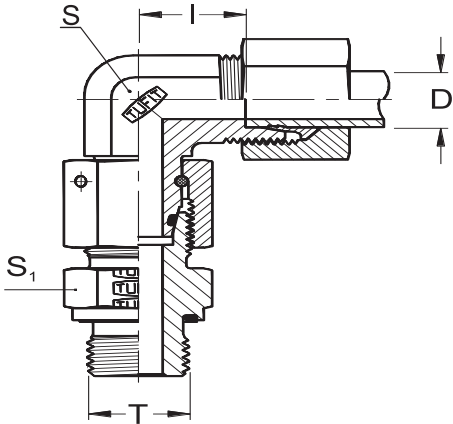
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



sealing by elastic seal - Form E



D Tube OD	T Metric	L (ref.)	S # A / F		S ₁ A / F	Steel		Stainless Steel AISI-304 **	
			Forged	Bar Stock		WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	12.0	12	12	14	500	SWEE06LM10	315	SWEE06LM10S4
L 08	M 12x1.5	14.0	12	14	17	500	SWEE08LM12	315	SWEE08LM12S4
L 10	M 14x1.5	15.0	14	17	19	500	SWEE10LM14	315	SWEE10LM14S4
L 12	M 16x1.5	17.0	17	19	22	400	SWEE12LM16	315	SWEE12LM16S4
L 15	M 18x1.5	21.0	19	22	24	400	SWEE15LM18	315	SWEE15LM18S4
L 18	M 22x1.5	23.5	24	27	27	400	SWEE18LM22	315	SWEE18LM22S4
L 22	M 26x1.5	27.5	27	30	32	250	SWEE22LM26	160	SWEE22LM26S4
L 28	M 33x2.0	30.5	36	36	41	250	SWEE28LM33	160	SWEE28LM33S4
L 35	M 42x2.0	34.5	41	46	52	250	SWEE35LM42	160	SWEE35LM42S4
L 42	M 48x2.0	40.0	50	55	55	250	SWEE42LM48	160	SWEE42LM48S4
S 06	M 12x1.5	16.0	12	14	17	800	SWEE06SM12	630	SWEE06SM12S4
S 08	M 14x1.5	17.0	14	17	19	800	SWEE08SM14	630	SWEE08SM14S4
S 10	M 16x1.5	17.5	17	19	22	800	SWEE10SM16	630	SWEE10SM16S4
S 12	M 18x1.5	21.5	17	22	24	630	SWEE12SM18	630	SWEE12SM18S4
S 14 *	M 20x1.5	22.0	19	22	27	630	SWEE14SM20	630	SWEE14SM20S4
S 16	M 22x1.5	24.5	24	24	27	630	SWEE16SM22	400	SWEE16SM22S4
S 20	M 27x2.0	26.5	27	30	32	420	SWEE20SM27	400	SWEE20SM27S4
S 25	M 33x2.0	30.0	36	36	41	420	SWEE25SM33	400	SWEE25SM33S4
S 30	M 42x2.0	35.5	41	46	50	420	SWEE30SM42	400	SWEE30SM42S4
S 38	M 48x2.0	41.0	50	55	55	420	SWEE30SM48	315	SWEE30SM48S4

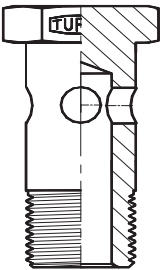
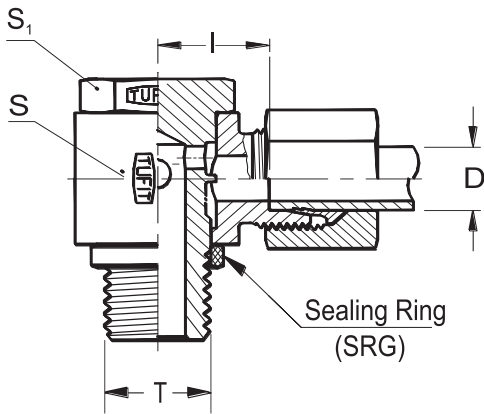
- # As per ISO: 9388
- Body with Swivel Nut : Part No.: SWE30SM48R
- For Standpipe Adjustable: Refer to Custom Product section
- For 45° Swivel Elbow Connector: Refer to Custom Product section

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Banjo Bolt

D Tube OD	T BSPP	I (ref.)	S A / F	S ₁ A / F	Steel		Banjo Bolt
					WP (bar)	Part No.	Part No.
LL 04	G 1/8 A	11.5	14	14	63	BEL04LLG018	LBG018
LL 06	G 1/8 A	10.0	14	14	63	BEL06LLG018	LBG018
LL 08	G 1/8 A	11.0	14	14	63	BEL08LLG018	LBG018
L 06	G 1/8 A	10.5	14	14	160	BEL06LG018	LBG018
L 08	G 1/4 A	13.0	19	19	160	BEL08LG014	LBG014
L 10	G 1/4 A	14.0	19	19	160	BEL10LG014	LBG014
L 12	G 3/8 A	15.5	22	22	100	BEL12LG038	LBG038
L 15	G 1/2 A	19.0	27	27	100	BEL15LG012	LBG012
L 18	G 1/2 A	20.5	30	27	100	BEL18LG012	LBG012
L 22	G 3/4 A	25.5	36	32	100	BEL22LG034	LBG034
S 06	G 1/4 A	15.0	19	19	160	BEL06SG014	LBG014
S 08	G 1/4 A	15.0	19	19	160	BEL08SG014	LBG014
S 10	G 3/8 A	16.0	22	22	100	BEL10SG038	LBG038
S 12	G 3/8 A	17.0	24	24	100	BEL12SG038	LBG038
S 14*	G 1/2 A	20.0	27	27	100	BEL14SG012	LBG012
S 16	G 1/2 A	21.5	30	27	100	BEL16SG012	LBG012
S 20	G 3/4 A	24.5	36	36	100	BEL20SG034	LBG034

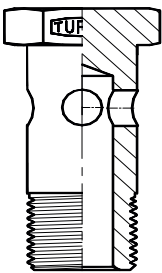
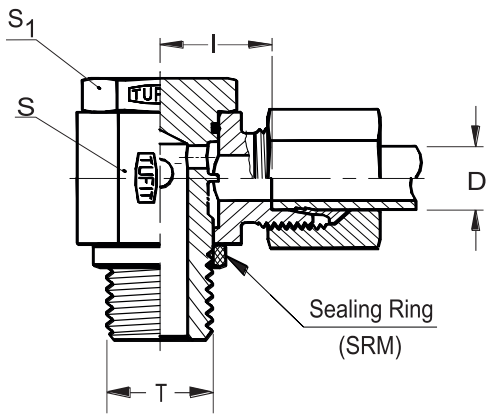
■ Body with Banjo Bolt assembly : Part No. BEL20SG034R

Advantages

- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR



Banjo Bolt

D Tube OD	T Metric	I (ref.)	S A / F	S ₁ A / F	Steel		Banjo Bolt
					WP (bar)	Part No.	Part No.
LL 04	M 08x1.0	10.5	12	12	63	BEL04LLM08	LBM08
LL 06	M 10x1.0	10.0	14	14	63	BEL06LLM10	LBM10
LL 08	M 10x1.0	11.0	14	14	63	BEL08LLM10	LBM10
L 06	M 10x1.0	10.5	14	14	160	BEL06LM10	LBM10
L 08	M 12x1.5	12.0	17	17	160	BEL08LM12	LBM12
L 10	M 14x1.5	14.0	19	19	160	BEL10LM14	LBM14
L 12	M 16x1.5	15.5	22	21	100	BEL12LM16	LBM16
L 15	M 18x1.5	17.5	24	24	100	BEL15LM18	LBM18
L 18	M 22x1.5	20.5	30	27	100	BEL18LM22	LBM22
L 22	M 26x1.5	25.5	36	32	100	BEL22LM26	LBM26
S 06	M 12x1.5	14.0	17	17	160	BEL06SM12	LBM12
S 08	M 14x1.5	15.0	19	19	160	BEL08SM14	LBM14
S 10	M 16x1.5	16.0	22	22	100	BEL10SM16	HBM16
S 12	M 18x1.5	17.0	24	24	100	BEL12SM18	LBM18
S 14	M 20x1.5	20.0	27	27	100	BEL14SM20	LBM20
S 16	M 22x1.5	21.5	30	27	100	BEL16SM22	LBM22
S 20	M 27x2.0	24.5	36	32	100	BEL20SM27	LBM27

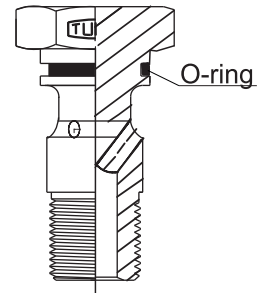
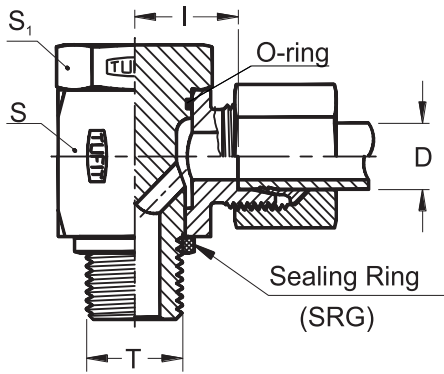
■ Body Part No. BEL20SM27R

Advantages:

- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR



Medium Banjo Bolt

D Tube OD	T BSPP	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304**		Brass		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.	Steel Part No.
L 06	G 1/8 A	12.0	17	17	250	BEM06LG018	250	BEM06LG018S4	160	BEM06LG018BR	MBG018
L 08	G 1/4 A	14.5	22	19	250	BEM08LG014	250	BEM08LG014S4	160	BEM08LG014BR	MBG014
L 10	G 1/4 A	15.5	22	19	250	BEM10LG014	250	BEM10LG014S4	160	BEM10LG014BR	MBG014
L 12	G 3/8 A	18.0	27	24	250	BEM12LG038	250	BEM12LG038S4	160	BEM12LG038BR	MBG038
L 15	G 1/2 A	21.5	32	30	250	BEM15LG012	250	BEM15LG012S4	160	BEM15LG012BR	MBG012
L 18	G 1/2 A	21.0	32	30	250	BEM18LG012	250	BEM18LG012S4	160	BEM18LG012BR	MBG012
L 22	G 3/4 A	27.5	41	36	160	BEM22LG034	160	BEM22LG034S4	100	BEM22LG034BR	MBG034
L 28	G 1 A	32.0	50	46	160	BEM28LG001	160	BEM28LG001S4	100	BEM28LG001BR	MBG001
L 35	G 1 1/4 A	36.0	60	55	160	BEM35LG114	160	BEM35LG114S4	100	BEM35LG114BR	MBG114
L 42	G 1 1/2 A	40.5	70	60	160	BEM42LG112	160	BEM42LG112S4	100	BEM42LG112BR	MBG112
S 06	G 1/4 A	16.5	22	19	315	BEM06SG014	315	BEM06SG014S4	200	BEM06SG014BR	MBG014
S 08	G 1/4 A	16.5	22	19	315	BEM08SG014	315	BEM08SG014S4	200	BEM08SG014BR	MBG014
S 10	G 3/8 A	18.5	27	24	315	BEM10SG038	315	BEM10SG038S4	200	BEM10SG038BR	MBG038
S 12	G 3/8 A	18.5	27	24	315	BEM12SG038	315	BEM12SG038S4	200	BEM12SG038BR	MBG038
S 14	G 1/2 A	22.5	32	30	315	BEM14SG012	315	BEM14SG012S4	200	BEM14SG012BR	MBG012
S 16	G 1/2 A	22.0	32	30	315	BEM16SG012	315	BEM16SG012S4	200	BEM16SG012BR	MBG012
S 20	G 3/4 A	26.5	41	36	160	BEM20SG034	160	BEM20SG034S4	100	BEM20SG034BR	MBG034
S 25	G 1 A	31.5	50	46	160	BEM25SG001	160	BEM25SG001S4	100	BEM25SG001BR	MBG001
S 30	G 1 1/4 A	37.0	60	55	160	BEM30SG114	160	BEM30SG114S4	100	BEM30SG114BR	MBG114
S 38	G 1 1/2 A	41.5	70	60	160	BEM38SG112	160	BEM38SG112S4	100	BEM38SG112BR	MBG112

■ Body with Banjo Bolt : Part No. BEM38SG112R

** Replace S4 by S6 for material AISI-316

* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. MBG112S4

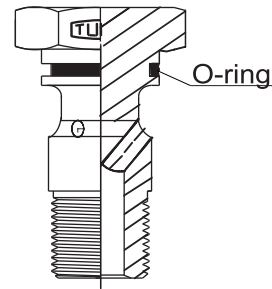
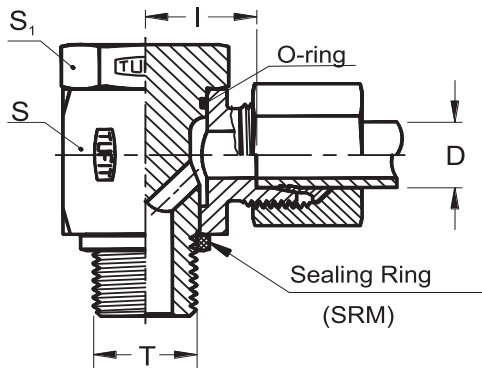
* For Brass add Suffix BR to Banjo Bolt Part No. MBG112BR

Advantages:

- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR

Dimensions and pressure for reference only, subject to change



Medium Banjo Bolt

D Tube OD	T Metric	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304 **		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	Part No.
L 06	M 10x1.0	12.0	17	17	250	BEM06LM10	250	BEM06LM10S4	MBM10
L 08	M 12x1.5	14.5	22	19	250	BEM08LM12	250	BEM08LM12S4	MBM12
L 10	M 14x1.5	15.5	22	19	250	BEM10LM14	250	BEM10LM14S4	MBM14
L 12	M 16x1.5	18.0	27	24	250	BEM12LM16	250	BEM12LM16S4	MBM16
L 15	M 18x1.5	21.5	30	27	250	BEM15LM18	250	BEM15LM18S4	MBM18
L 18	M 22x1.5	21.0	32	30	250	BEM18LM22	250	BEM18LM22S4	MBM22
L 22	M 26x1.5	27.5	41	36	160	BEM22LM26	160	BEM22LM26S4	MBM26
L 28	M 33x2.0	32.0	50	46	160	BEM28LM33	160	BEM28LM33S4	MBM33
L 35	M 42x2.0	36.0	60	55	160	BEM35LM42	160	BEM35LM42S4	MBM42
L 42	M 48x2.0	40.5	70	60	160	BEM42LM48	160	BEM42LM48S4	MBM48
S 06	M 12x1.5	16.5	22	19	315	BEM06SM12	315	BEM06SM12S4	MBM12
S 08	M 14x1.5	16.5	22	19	315	BEM08SM14	315	BEM08SM14S4	MBM14
S 10	M 16x1.5	18.5	27	24	315	BEM10SM16	315	BEM10SM16S4	MBM16
S 12	M 18x1.5	20.0	27	27	315	BEM12SM18	315	BEM12SM18S4	MBM18
S 14	M 20x1.5	22.5	32	30	315	BEM14SM20	315	BEM14SM20S4	MBM20
S 16	M 22x1.5	22.0	32	30	315	BEM16SM22	315	BEM16SM22S4	MBM22
S 20	M 27x2.0	26.5	41	36	160	BEM20SM27	160	BEM20SM27S4	MBM27
S 25	M 33x2.0	31.5	50	46	160	BEM25SM33	160	BEM25SM33S4	MBM33
S 30	M 42x2.0	37.0	60	55	160	BEM30SM42	160	BEM30SM42S4	MBM42
S 38	M 48x2.0	41.5	70	60	160	BEM38SM48	160	BEM38SM48S4	MBM48

■Body with Banjo Bolt assembly : Part No. BEM38SM48R

** Replace S4 by S6 for material AISI-316

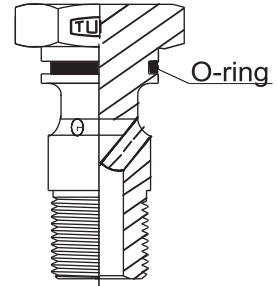
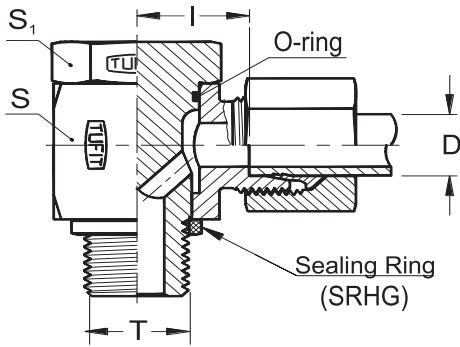
* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. MBM48S4

Advantages:

- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton


High Banjo Bolt

D Tube OD	T BSPP	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304**		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	Part No.
L 06	G 1/8 A	12.0	17	17	315	BEH06LG018	315	BEH06LG018S4	HBG018
L 08	G 1/4 A	14.5	22	19	315	BEH08LG014	315	BEH08LG014S4	HBG014
L 10	G 1/4 A	15.5	22	19	315	BEH10LG014	315	BEH10LG014S4	HBG014
L 12	G 3/8 A	18.0	27	24	315	BEH12LG038	315	BEH12LG038S4	HBG038
L 15	G 1/2 A	21.5	32	30	315	BEH15LG012	315	BEH15LG012S4	HBG012
L 18	G 1/2 A	21.0	32	30	315	BEH18LG012	315	BEH18LG012S4	HBG012
L 22	G 3/4 A	27.5	41	36	160	BEH22LG034	160	BEH22LG034S4	HBG034
L 28	G 1 A	32.0	50	46	160	BEH28LG001	160	BEH28LG001S4	HBG001
L 35	G 1 1/4 A	36.0	60	55	160	BEH35LG114	160	BEH35LG114S4	HBG114
L 42	G 1 1/2 A	40.5	70	60	160	BEH42LG112	160	BEH42LG112S4	HBG112
S 06	G 1/4 A	16.5	22	19	400	BEH06SG014	400	BEH06SG014S4	HBG014
S 08	G 1/4 A	16.5	22	19	400	BEH08SG014	400	BEH08SG014S4	HBG014
S 10	G 3/8 A	18.5	27	24	400	BEH10SG038	400	BEH10SG038S4	HBG038
S 12	G 3/8 A	18.5	27	24	400	BEH12SG038	400	BEH12SG038S4	HBG038
S 14	G 1/2 A	22.5	32	30	400	BEH14SG012	400	BEH14SG012S4	HBG012
S 16	G 1/2 A	22.0	32	30	315	BEH16SG012	315	BEH16SG012S4	HBG012
S 20	G 3/4 A	26.5	41	36	315	BEH20SG034	315	BEH20SG034S4	HBG034
S 25	G 1 A	31.5	50	46	250	BEH25SG001	250	BEH25SG001S4	HBG001
S 30	G 1 1/4 A	37.0	60	55	160	BEH30SG114	160	BEH30SG114S4	HBG114
S 38	G 1 1/2 A	41.5	70	60	160	BEH38SG112	160	BEH38SG112S4	HBG112

■ Body with Banjo Bolt assembly : Part No. BEH38G112R

** Replace S4 by S6 for material AISI-316

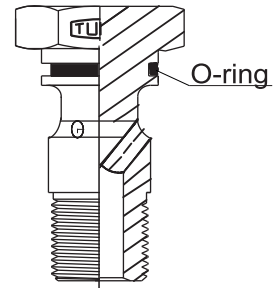
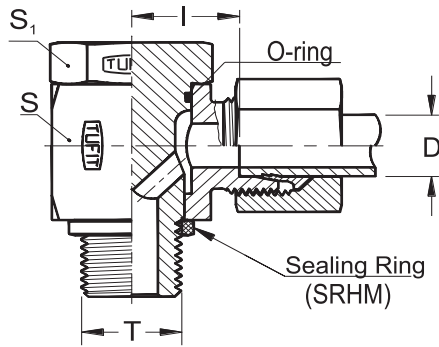
* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. HBG112S4

Advantages:

- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton


High Banjo Bolt

D Tube OD	T Metric	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304 **		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	Part No.
L 06	M 10x1.0	12.0	17	17	315	BEH06LM10	315	BEH06LM10S4	HBM10
L 08	M 12x1.5	14.5	22	19	315	BEH08LM12	315	BEH08LM12S4	HBM12
L 10	M 14x1.5	15.5	22	19	315	BEH10LM14	315	BEH10LM14S4	HBM14
L 12	M 16x1.5	18.0	27	24	315	BEH12LM16	315	BEH12LM16S4	HBM16
L 15	M 18x1.5	21.5	30	30	315	BEH15LM18	315	BEH15LM18S4	HBM18
L 18	M 22x1.5	21.0	32	30	315	BEH18LM22	315	BEH18LM22S4	HBM22
L 22	M 26x1.5	27.5	41	36	160	BEH22LM26	160	BEH22LM26S4	HBM26
L 28	M 33x2.0	32.0	50	46	160	BEH28LM33	160	BEH28LM33S4	HBM33
L 35	M 42x2.0	36.0	60	55	160	BEH35LM42	160	BEH35LM42S4	HBM42
L 42	M 48x2.0	40.5	70	60	160	BEH42LM48	160	BEH42LM48S4	HBM48
S 06	M 12x1.5	16.5	22	19	400	BEH06SM12	400	BEH06SM12S4	HBM12
S 08	M 14x1.5	16.5	22	19	400	BEH08SM14	400	BEH08SM14S4	HBM14
S 10	M 16x1.5	18.5	27	24	400	BEH10SM16	400	BEH10SM16S4	HBM16
S 12	M 18x1.5	20.0	27	27	400	BEH12SM18	400	BEH12SM18S4	HBM18
S 14	M 20x1.5	22.5	32	30	400	BEH14SM20	400	BEH14SM20S4	HBM20
S 16	M 22x1.5	22.0	32	30	315	BEH16SM22	315	BEH16SM22S4	HBM22
S 20	M 27x2.0	26.5	41	36	315	BEH20SM27	315	BEH20SM27S4	HBM27
S 25	M 33x2.0	31.5	50	46	250	BEH25SM33	250	BEH25SM33S4	HBM33
S 30	M 42x2.0	37.0	60	55	160	BEH30SM42	160	BEH30SM42S4	HBM42
S 38	M 48x2.0	41.5	70	60	160	BEH38SM48	160	BEH38SM48S4	HBM48

■ Body with Banjo Bolt assembly : Part No. BEH38SM48R

** Replace S4 by S6 for material AISI-316

* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. HBM48S4

Advantages:

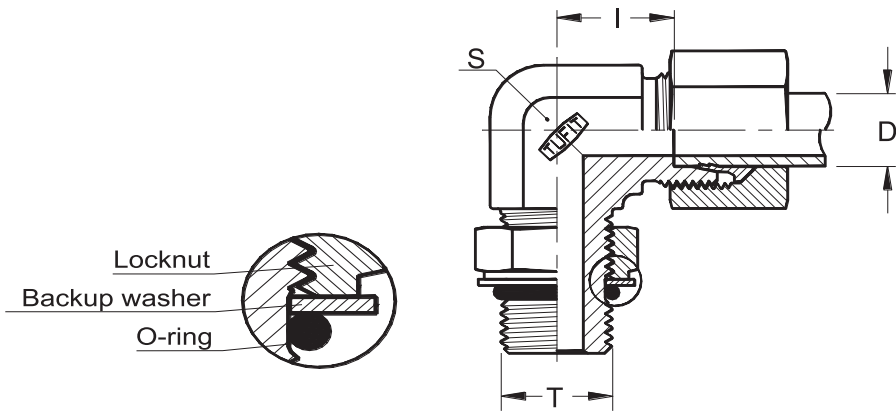
- No air ingress
- 360° Orientable
- Easy assembly
- Field repair good
- High degree of fine sealing
- Seal can be individually replaced
- Re-tightening under pressure is possible
- High safety against excessive tightening
- Space critical application e.g Forklift truck

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
LL 04	M 08x1.0	11.3	12	100	ALNE04LLM08	100	ALNE04LLM08S4
LL 04	M 10x1.0	11.3	11	100	ALNE04LLM10	100	ALNE04LLM10S4
LL 06	M 10x1.0	9.8	14	100	ALNE06LLM10	100	ALNE06LLM10S4
LL 06	M 12x1.0	12.8	14	100	ALNE06LLM12	100	ALNE06LLM12S4
L 06	M 10x1.0	14	14	315	ALNE06LM10	315	ALNE06LM10S4
L 08	M 12x1.5	16	14	315	ALNE08LM12	315	ALNE08LM12S4
L 10	M 14x1.5	17	19	315	ALNE10LM14	315	ALNE10LM14S4
L 12	M 16x1.5	19	19	315	ALNE12LM16	315	ALNE12LM16S4
L 15	M 18x1.5	21	22	315	ALNE15LM18	315	ALNE15LM18S4
L 18	M 22x1.5	24	27	315	ALNE18LM22	315	ALNE18LM22S4
L 22	M 27x2.0	28	30	160	ALNE22LM27	160	ALNE22LM27S4
L 28	M 33x2.0	31	36	160	ALNE28LM33	160	ALNE28LM33S4
L 35	M 42x2.0	38	50	160	ALNE35LM42	160	ALNE35LM42S4
L 42	M 48x2.0	38	50	160	ALNE42LM48	160	ALNE42LM48S4
S 06	M 12x1.5	15	14	400	ALNE06SM12	400	ALNE06SM12S4
S 08	M 14x1.5	17	19	400	ALNE08SM14	400	ALNE08SM14S4
S 10	M 16x1.5	18	19	400	ALNE10SM16	400	ALNE10SM16S4
S 12	M 18x1.5	22	22	400	ALNE12SM18	400	ALNE12SM18S4
S 16	M 22x1.5	25	27	400	ALNE16SM22	400	ALNE16SM22S4
S 20	M 27x2.0	28	30	400	ALNE20SM27	400	ALNE20SM27S4
S 25	M 33x2.0	30	36	315	ALNE25SM33	315	ALNE25SM33S4
S 30	M 42x2.0	36	50	250	ALNE30SM42	250	ALNE30SM42S4
S 38	M 48x2.0	34	50	200	ALNE38SM48	200	ALNE38SM48S4

■ Body with Locknut assembly : Part No.: ALNE38SM48R

** Replace S4 by S6 for material AISI-316

Advantages:

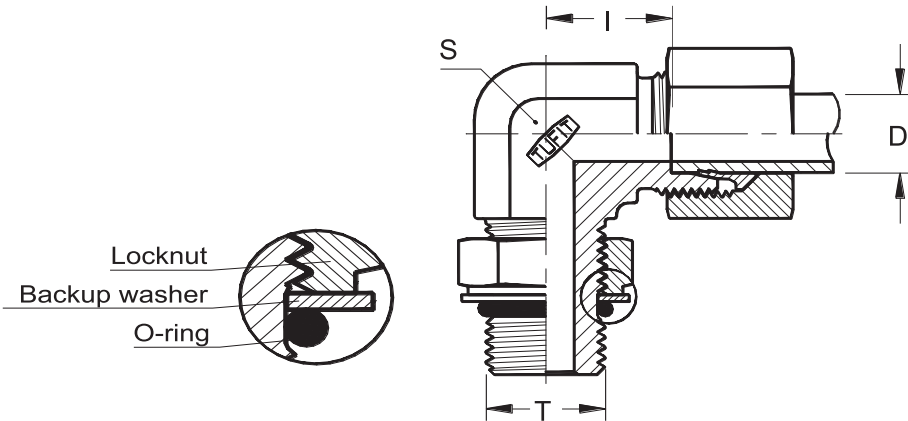
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T UN/UNF-2A	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	7/16 -20	14	14	315	ALNE06LU0716	315	ALNE06LU0716S4
L 08	7/16 -20	16	14	315	ALNE08LU0716	315	ALNE08LU0716S4
L 10	9/16 -18	17	19	315	ALNE10LU0916	315	ALNE10LU0916S4
L 12	9/16 -18	19	19	315	ALNE12LU0916	315	ALNE12LU0916S4
L 12	3/4 -16	19	19	315	ALNE12LU0034	315	ALNE12LU0034S4
L 15	3/4 -16	21	22	315	ALNE15LU0034	315	ALNE15LU0034S4
L 15	7/8 -14	21	22	315	ALNE15LU0078	315	ALNE15LU0078S4
L 18	7/8 -14	24	27	315	ALNE18LU0078	315	ALNE18LU0078S4
L 18	1 1/16 -12	24	30	315	ALNE18LU1116	315	ALNE18LU1116S4
L 22	1 1/16 -12	28	30	160	ALNE22LU1116	160	ALNE22LU1116S4
L 28	1 5/16 -12	31	36	160	ALNE28LU1516	160	ALNE28LU1516S4
L 35	1 5/8 -12	38	50	160	ALNE35LU0158	160	ALNE35LU0158S4
L 42	1 7/8 -12	38	50	160	ALNE42LU0178	160	ALNE42LU0178S4
S 06	7/16 -20	15	14	400	ALNE06SU0716	400	ALNE06SU0716S4
S 08	9/16 -18	17	19	400	ALNE08SU0916	400	ALNE08SU0916S4
S 10	9/16 -18	18	19	400	ALNE10SU0916	400	ALNE10SU0916S4
S 12	3/4 -16	22	22	400	ALNE12SU0034	400	ALNE12SU0034S4
S 16	7/8 -14	25	27	400	ALNE16SU0078	400	ALNE16SU0078S4
S 20	1 1/16 -12	28	30	400	ALNE20SU1116	400	ALNE20SU1116S4
S 25	1 1/16 -12	30	36	400	ALNE25SU1116	400	ALNE25SU1116S4
S 30	1 5/8 -12	36	50	250	ALNE30SU0158	250	ALNE30SU0158S4
S 38	1 7/8 -12	34	50	250	ALNE38SU0178	250	ALNE38SU0178S4

■ Body with Locknut assembly : Part No.: ALNE38SU0178R

** Replace S4 by S6 for material AISI-316

Advantages:

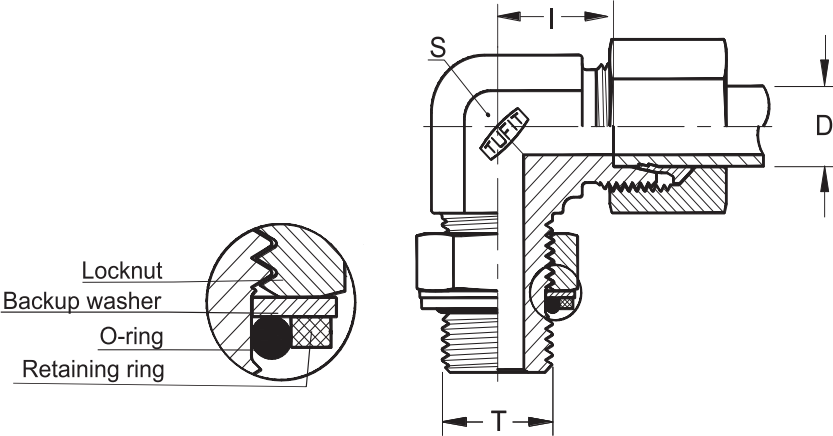
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	14	14	315	ALNEH06LM10	315	ALNEH06LM10S4
L 08	M 12x1.5	16	14	315	ALNEH08LM12	315	ALNEH08LM12S4
L 10	M 14x1.5	17	19	315	ALNEH10LM14	315	ALNEH10LM14S4
L 12	M 16x1.5	19	19	315	ALNEH12LM16	315	ALNEH12LM16S4
L 15	M 18x1.5	21	22	315	ALNEH15LM18	315	ALNEH15LM18S4
L 18	M 22x1.5	24	27	250	ALNEH18LM22	250	ALNEH18LM22S4
L 22	M 27x2.0	28	30	160	ALNEH22LM27	160	ALNEH22LM27S4
L 28	M 33x2.0	31	36	160	ALNEH28LM33	160	ALNEH28LM33S4
L 35	M 42x2.0	38	50	160	ALNEH35LM42	160	ALNEH35LM42S4
L 42	M 48x2.0	38	50	160	ALNEH42LM48	160	ALNEH42LM48S4
S 06	M 12x1.5	15	14	315	ALNEH06SM12	315	ALNEH06SM12S4
S 08	M 14x1.5	17	19	315	ALNEH08SM14	315	ALNEH08SM14S4
S 10	M 16x1.5	18	19	315	ALNEH10SM16	315	ALNEH10SM16S4
S 12	M 18x1.5	22	22	315	ALNEH12SM18	315	ALNEH12SM18S4
S 16	M 22x1.5	25	27	250	ALNEH16SM22	250	ALNEH16SM22S4
S 20	M 27x2.0	28	30	250	ALNEH20SM27	250	ALNEH20SM27S4
S 25	M 33x2.0	30	36	160	ALNEH25SM33	160	ALNEH25SM33S4
S 30	M 42x2.0	36	50	160	ALNEH30SM42	160	ALNEH30SM42S4
S 38	M 48x2.0	34	50	160	ALNEH38SM48	160	ALNEH38SM48S4

■ Body with Locknut assembly: Part No.: ALNEH38SM48R

** Replace S4 by S6 for material AISI-316

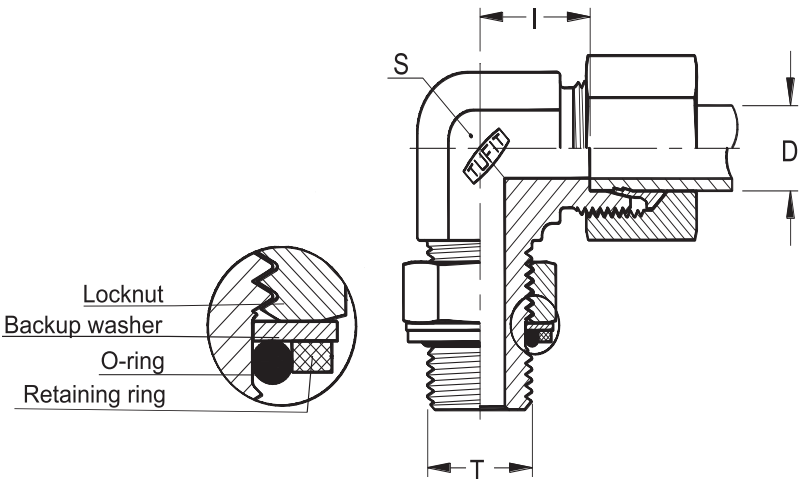
- Advantages:**
- 360° Orient Joint
 - No additional sealant required
 - High degree of fine sealing
 - Good flow characteristic
 - Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
LL 04	G 1/8 A	11	11	250	ALNEH04LLG018	250	ALNEH04LLG018S4
LL 06	G 1/8 A	11	11	250	ALNEH06LLG018	250	ALNEH06LLG018S4
L 06	G 1/8 A	14	14	315	ALNEH06LG018	315	ALNEH06LG018S4
L 08	G 1/4 A	16	14	315	ALNEH08LG014	315	ALNEH08LG014S4
L 10	G 1/4 A	17	19	315	ALNEH10LG014	315	ALNEH10LG014S4
L 12	G 3/8 A	19	19	250	ALNEH12LG038	250	ALNEH12LG038S4
L 15	G 1/2 A	21	22	250	ALNEH15LG012	250	ALNEH15LG012S4
L 18	G 1/2 A	24	27	250	ALNEH18LG012	250	ALNEH18LG012S4
L 22	G 3/4 A	28	30	160	ALNEH22LG034	160	ALNEH22LG034S4
L 28	G 1 A	31	36	160	ALNEH28LG001	160	ALNEH28LG001S4
L 35	G 1 1/4 A	38	50	160	ALNEH35LG114	160	ALNEH35LG114S4
L 42	G 1 1/2 A	38	50	160	ALNEH42LG112	160	ALNEH42LG112S4
S 06	G 1/4 A	15	14	315	ALNEH06SG014	315	ALNEH06SG014S4
S 08	G 1/4 A	17	19	315	ALNEH08SG014	315	ALNEH08SG014S4
S 10	G 3/8 A	18	19	250	ALNEH10SG038	250	ALNEH10SG038S4
S 12	G 3/8 A	22	22	250	ALNEH12SG038	250	ALNEH12SG038S4
S 16	G 1/2 A	25	27	250	ALNEH16SG012	250	ALNEH16SG012S4
S 20	G 3/4 A	28	30	250	ALNEH20SG034	250	ALNEH20SG034S4
S 25	G 1 A	30	36	250	ALNEH25SG001	250	ALNEH25SG001S4
S 30	G 1 1/4 A	36	50	160	ALNEH30SG114	160	ALNEH30SG114S4
S 38	G 1 1/2 A	34	50	160	ALNEH38SG112	160	ALNEH38SG112S4

■ Body with Locknut assembly : Part No.: ALNEH38SG112R

**Replace S4 by S6 for material AISI-316

Advantages:

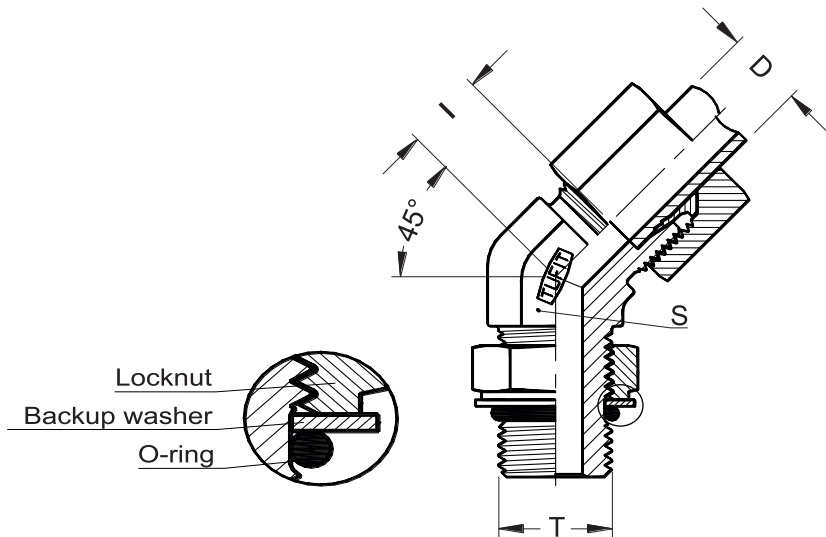
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	9	14	315	ALNE06LM10-45	315	ALNE06LM10-45S4
L 08	M 12x1.5	12	14	315	ALNE08LM12-45	315	ALNE08LM12-45S4
L 10	M 14x1.5	12	19	315	ALNE10LM14-45	315	ALNE10LM14-45S4
L 12	M 16x1.5	14	19	315	ALNE12LM16-45	315	ALNE12LM16-45S4
L 15	M 18x1.5	17	22	315	ALNE15LM18-45	315	ALNE15LM18-45S4
L 18	M 22x1.5	17	27	250	ALNE18LM22-45	250	ALNE18LM22-45S4
L 22	M 27x2.0	19	30	160	ALNE22LM27-45	160	ALNE22LM27-45S4
L 28	M 33x2.0	23	36	160	ALNE28LM33-45	160	ALNE28LM33-45S4
L 35	M 42x2.0	27	50	160	ALNE35LM42-45	160	ALNE35LM42-45S4
L 42	M 48x2.0	26	50	160	ALNE42LM48-45	160	ALNE42LM48-45S4
S 06	M 12x1.5	9	14	315	ALNE06SM12-45	315	ALNE06SM12-45S4
S 08	M 14x1.5	12	19	315	ALNE08SM14-45	315	ALNE08SM14-45S4
S 10	M 16x1.5	13	19	315	ALNE10SM16-45	315	ALNE10SM16-45S4
S 12	M 18x1.5	17	22	315	ALNE12SM18-45	315	ALNE12SM18-45S4
S 16	M 22x1.5	16	27	250	ALNE16SM22-45	250	ALNE16SM22-45S4
S 20	M 27x2.0	16	30	250	ALNE20SM27-45	250	ALNE20SM27-45S4
S 25	M 33x2.0	19	36	160	ALNE25SM33-45	160	ALNE25SM33-45S4
S 30	M 42x2.0	24	50	160	ALNE30SM42-45	160	ALNE30SM42-45S4
S 38	M 48x2.0	21	50	160	ALNE38SM48-45	160	ALNE38SM48-45S4

■ Body with Locknut assembly: Part No.: ALNE38SM48-45R

** Replace S4 by S6 for material AISI-316

Advantages:

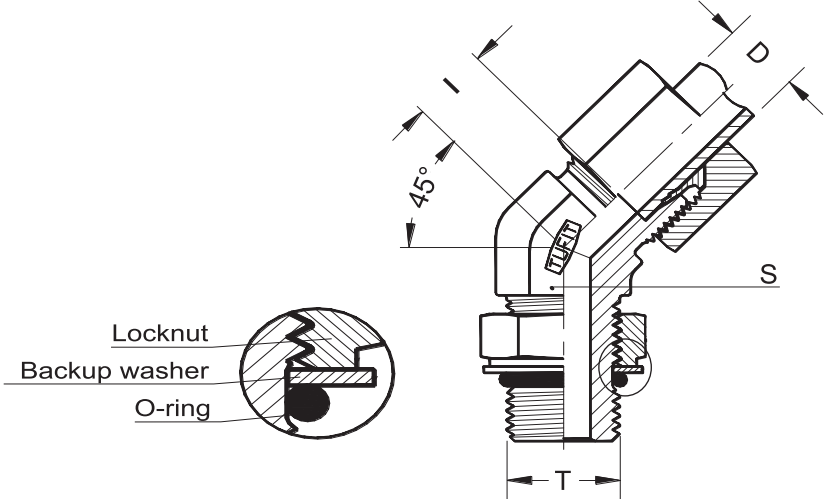
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T UN/UNF-2A	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	7/16 -20	9	14	315	ALNE06LU0716-45	315	ALNE06LU0716-45S4
L 08	7/16 -20	12	14	315	ALNE08LU0716-45	315	ALNE08LU0716-45S4
L 10	9/16 -18	12	19	315	ALNE10LU0916-45	315	ALNE10LU0916-45S4
L 12	9/16 -18	14	19	315	ALNE12LU0916-45	315	ALNE12LU0916-45S4
L 12	3/4 -16	14	19	315	ALNE12LU0034-45	315	ALNE12LU0034-45S4
L 15	3/4 -16	17	22	315	ALNE15LU0034-45	315	ALNE15LU0034-45S4
L 15	7/8 -14	17	22	315	ALNE15LU0078-45	315	ALNE15LU0078-45S4
L 18	7/8 -14	17	27	315	ALNE18LU0078-45	315	ALNE18LU0078-45S4
L 18	1 1/16 -12	17	30	315	ALNE18LU1116-45	315	ALNE18LU1116-45S4
L 22	1 1/16 -12	19	30	160	ALNE22LU1116-45	160	ALNE22LU1116-45S4
L 28	1 5/16 -12	23	36	160	ALNE28LU1516-45	160	ALNE28LU1516-45S4
L 35	1 5/8 -12	27	50	160	ALNE35LU0158-45	160	ALNE35LU0158-45S4
L 42	1 7/8 -12	26	50	160	ALNE42LU0178-45	160	ALNE42LU0178-45S4
S 06	7/16 -20	9	14	400	ALNE06SU0716-45	400	ALNE06SU0716-45S4
S 08	9/16 -18	12	19	400	ALNE08SU0916-45	400	ALNE08SU0916-45S4
S 10	9/16 -18	13	19	400	ALNE10SU0916-45	400	ALNE10SU0916-45S4
S 12	3/4 -16	17	22	400	ALNE12SU0034-45	400	ALNE12SU0034-45S4
S 16	7/8 -14	16	27	400	ALNE16SU0078-45	400	ALNE16SU0078-45S4
S 20	1 1/16 -12	16	30	400	ALNE20SU1116-45	400	ALNE20SU1116-45S4
S 25	1 1/16 -12	30	36	400	ALNE25SU1116-45	400	ALNE25SU1116-45S4
S 30	1 5/8 -12	24	50	250	ALNE30SU0158-45	250	ALNE30SU0158-45S4
S 38	1 7/8 -12	21	50	250	ALNE38SU0178-45	250	ALNE38SU0178-45S4

■ Body with Locknut assembly : Part No.: ALNE38SU0178-45R

** Replace S4 by S6 for material AISI-316

Advantages:

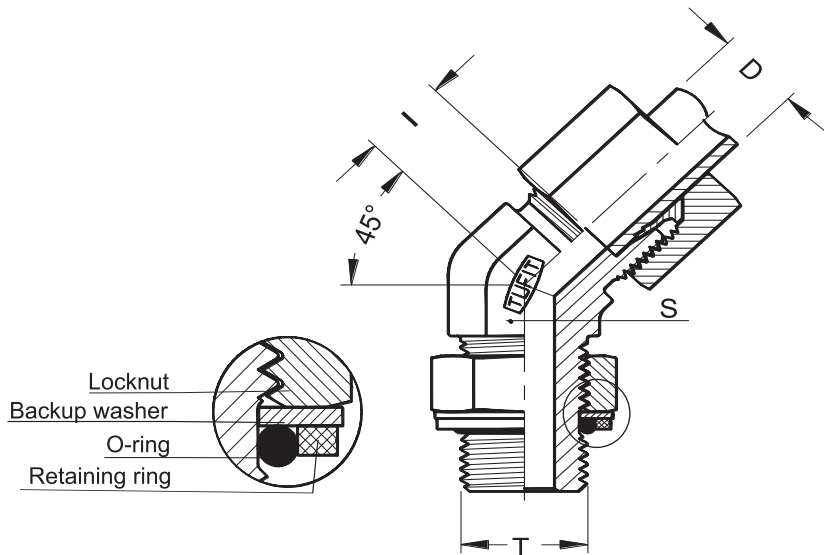
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	9	14	315	ALNEH06LM10-45	315	ALNEH06LM10-45S4
L 08	M 12x1.5	12	14	315	ALNEH08LM12-45	315	ALNEH08LM12-45S4
L 10	M 14x1.5	12	19	315	ALNEH10LM14-45	315	ALNEH10LM14-45S4
L 12	M 16x1.5	14	19	315	ALNEH12LM16-45	315	ALNEH12LM16-45S4
L 15	M 18x1.5	17	22	315	ALNEH15LM18-45	315	ALNEH15LM18-45S4
L 18	M 22x1.5	17	27	250	ALNEH18LM22-45	250	ALNEH18LM22-45S4
L 22	M 27x2.0	19	30	160	ALNEH22LM27-45	160	ALNEH22LM27-45S4
L 28	M 33x2.0	23	36	160	ALNEH28LM33-45	160	ALNEH28LM33-45S4
L 35	M 42x2.0	27	50	160	ALNEH35LM42-45	160	ALNEH35LM42-45S4
L 42	M 48x2.0	26	50	160	ALNEH42LM48-45	160	ALNEH42LM48-45S4
S 06	M 12x1.5	9	14	315	ALNEH06SM12-45	315	ALNEH06SM12-45S4
S 08	M 14x1.5	12	19	315	ALNEH08SM14-45	315	ALNEH08SM14-45S4
S 10	M 16x1.5	13	19	315	ALNEH10SM16-45	315	ALNEH10SM16-45S4
S 12	M 18x1.5	17	22	315	ALNEH12SM18-45	315	ALNEH12SM18-45S4
S 16	M 22x1.5	16	27	250	ALNEH16SM22-45	250	ALNEH16SM22-45S4
S 20	M 27x2.0	16	30	250	ALNEH20SM27-45	250	ALNEH20SM27-45S4
S 25	M 33x2.0	19	36	160	ALNEH25SM33-45	160	ALNEH25SM33-45S4
S 30	M 42x2.0	24	50	160	ALNEH30SM42-45	160	ALNEH30SM42-45S4
S 38	M 48x2.0	21	50	160	ALNEH38SM48-45	160	ALNEH38SM48-45S4

■ Body with Locknut assembly: Part No.: ALNEH38SM48-45R

** Replace S4 by S6 for material AISI-316

Advantages:

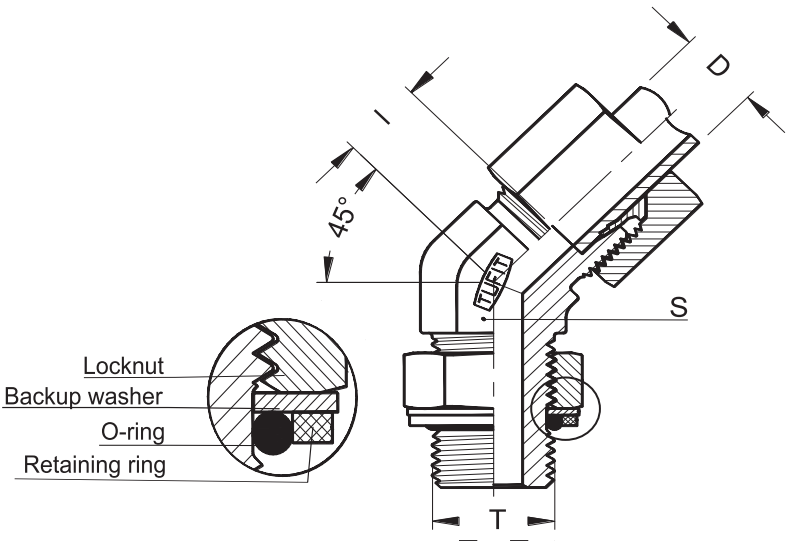
- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	9	14	315	ALNEH06LG018-45	315	ALNEH06LG018-45S4
L 08	G 1/4 A	12	14	315	ALNEH08LG014-45	315	ALNEH08LG014-45S4
L 10	G 1/4 A	12	19	315	ALNEH10LG014-45	315	ALNEH10LG014-45S4
L 12	G 3/8 A	14	19	250	ALNEH12LG038-45	250	ALNEH12LG038-45S4
L 15	G 1/2 A	17	22	250	ALNEH15LG012-45	250	ALNEH15LG012-45S4
L 18	G 1/2 A	17	27	250	ALNEH18LG012-45	250	ALNEH18LG012-45S4
L 22	G 3/4 A	19	30	160	ALNEH22LG034-45	160	ALNEH22LG034-45S4
L 28	G 1 A	23	36	160	ALNEH28LG001-45	160	ALNEH28LG001-45S4
L 35	G 1 1/4 A	27	50	160	ALNEH35LG114-45	160	ALNEH35LG114-45S4
L 42	G 1 1/2 A	26	50	160	ALNEH42LG112-45	160	ALNEH42LG112-45S4
S 06	G 1/4 A	9	14	315	ALNEH06SG014-45	315	ALNEH06SG014-45S4
S 08	G 1/4 A	12	19	315	ALNEH08SG014-45	315	ALNEH08SG014-45S4
S 10	G 3/8 A	13	19	250	ALNEH10SG038-45	250	ALNEH10SG038-45S4
S 12	G 3/8 A	17	22	250	ALNEH12SG038-45	250	ALNEH12SG038-45S4
S 16	G 1/2 A	16	27	250	ALNEH16SG012-45	250	ALNEH16SG012-45S4
S 20	G 3/4 A	16	30	250	ALNEH20SG034-45	250	ALNEH20SG034-45S4
S 25	G 1 A	19	36	250	ALNEH25SG001-45	250	ALNEH25SG001-45S4
S 30	G 1 1/4 A	24	50	160	ALNEH30SG114-45	160	ALNEH30SG114-45S4
S 38	G 1 1/2 A	21	50	160	ALNEH38SG112-45	160	ALNEH38SG112-45S4

■ Body with Locknut assembly : Part No.: ALNEH38SG112-45R

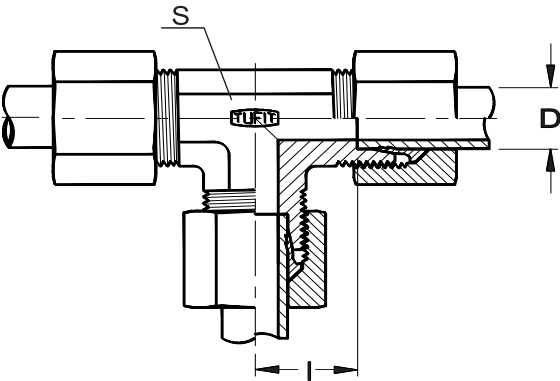
** Replace S4 by S6 for material AISI-316

Advantages:

- 360° Orient Joint
- No additional sealant required
- High degree of fine sealing
- Good flow characteristic
- Unlimited repeated assembly

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



D Tube OD	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
		Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL 04	11.0	9	9	100	T04LL	100	T04LLS4	63	T04LLBR
LL 06	9.5	9	11	100	T06LL	100	T06LLS4	63	T06LLBR
LL 08	11.5	12	12	100	T08LL	100	T08LLS4	63	T08LLBR
LL 10*	12.5	12	14	100	T10LL	100	T10LLS4	63	T10LLBR
LL 12*	15.0	14	17	100	T12LL	100	T12LLS4	63	T12LLBR
L 06	12.0	12	12	500	T06L	315	T06LS4	200	T06LBR
L 08	14.0	12	14	500	T08L	315	T08LS4	200	T08LBR
L 10	15.0	14	17	500	T10L	315	T10LS4	200	T10LBR
L 12	17.0	17	19	400	T12L	315	T12LS4	200	T12LBR
L 15	21.0	19	22	400	T15L	315	T15LS4	200	T15LBR
L 18	23.5	24	27	400	T18L	315	T18LS4	200	T18LBR
L 22	27.5	27	30	250	T22L	160	T22LS4	100	T22LBR
L 28	30.5	36	36	250	T28L	160	T28LS4	100	T28LBR
L 35	34.5	41	46	250	T35L	160	T35LS4	100	T35LBR
L 42	40.0	50	55	250	T42L	160	T42LS4	100	T42LBR
S 06	16.0	12	14	800	T06S	630	T06SS4	400	T06SBR
S 08	17.0	14	17	800	T08S	630	T08SS4	400	T08SBR
S 10	17.5	17	19	800	T10S	630	T10SS4	400	T10SBR
S 12	21.5	17	22	630	T12S	630	T12SS4	400	T12SBR
S 14*	22.0	19	22	630	T14S	630	T14SS4	400	T14SBR
S 16	24.5	24	24	630	T16S	400	T16SS4	250	T16SBR
S 20	26.5	27	30	420	T20S	400	T20SS4	250	T20SBR
S 25	30.0	36	36	420	T25S	400	T25SS4	250	T25SBR
S 30	35.5	41	46	420	T30S	400	T30SS4	250	T30SBR
S 38	41.0	50	55	420	T38S	315	T38SS4	200	T38SBR

As per IS: 9388

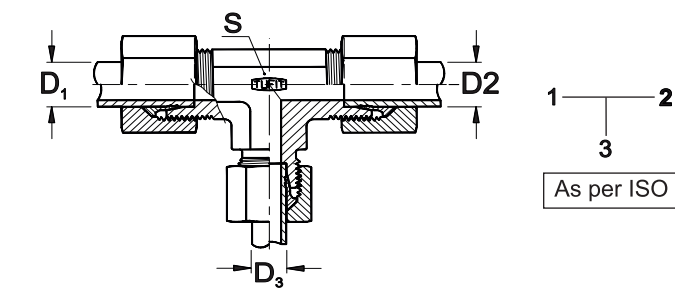
* Not as per ISO 8434

■ Forgings are used. Dense & close grain structure ensures Strength & Durability.

** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

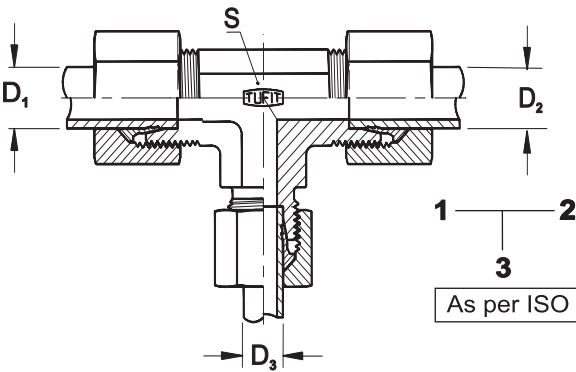
Tube OD				S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
Series	D ₁	D ₂	D ₃	Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	TRD060608LS4 Part No.	WP (bar)	Part No.
L	06	06	08	12	14	500	TRD060608L	315	TRD060608LS4	200	TRD060608LBR
L	06	06	10	14	17	500	TRD060610L	315	TRD060610LS4	200	TRD060610LBR
L	08	08	06	12	14	500	TRD080806L	315	TRD080806LS4	200	TRD080806LBR
L	08	08	10	14	17	500	TRD080810L	315	TRD080810LS4	200	TRD080810LBR
L	08	08	12	17	19	400	TRD080812L	315	TRD080812LS4	200	TRD080812LBR
L	10	10	06	14	17	500	TRD101006L	315	TRD101006LS4	200	TRD101006LBR
L	10	10	08	14	17	500	TRD101008L	315	TRD101008LS4	200	TRD101008LBR
L	10	06	10	14	17	500	TRD100610L	315	TRD100610LS4	200	TRD100610LBR
L	10	10	15	19	22	400	TRD101015L	315	TRD101015LS4	200	TRD101015LBR
L	12	12	06	17	19	400	TRD121206L	315	TRD121206LS4	200	TRD121206LBR
L	12	08	08	17	19	400	TRD120808L	315	TRD120808LS4	200	TRD120808LBR
L	12	12	08	17	19	400	TRD121208L	315	TRD121208LS4	200	TRD121208LBR
L	12	10	10	17	19	400	TRD121010L	315	TRD121010LS4	200	TRD121010LBR
L	12	12	10	17	19	400	TRD121210L	315	TRD121210LS4	200	TRD121210LBR
L	12	10	12	17	19	400	TRD121012L	315	TRD121012LS4	200	TRD121012LBR
L	12	12	15	19	19	400	TRD121215L	315	TRD121215LS4	200	TRD121215LBR
L	12	12	18	24	27	400	TRD121218L	315	TRD121218LS4	200	TRD121218LBR
L	15	15	06	19	22	400	TRD151506L	315	TRD151506LS4	200	TRD151506LBR
L	15	15	10	19	22	400	TRD151510L	315	TRD151510LS4	200	TRD151510LBR
L	15	12	12	19	22	400	TRD151212L	315	TRD151212LS4	200	TRD151212LBR
L	15	15	12	19	22	400	TRD151512L	315	TRD151512LS4	200	TRD151512LBR
L	15	12	15	19	22	400	TRD151215L	315	TRD151215LS4	200	TRD151215LBR
L	18	10	10	24	27	400	TRD181010L	315	TRD181010LS4	200	TRD181010LBR
L	18	18	10	24	27	400	TRD181810L	315	TRD181810LS4	200	TRD181810LBR
L	18	18	12	24	27	400	TRD181812L	315	TRD181812LS4	200	TRD181812LBR
L	18	18	15	24	27	400	TRD181815L	315	TRD181815LS4	200	TRD181815LBR
L	18	10	18	24	27	400	TRD181018L	315	TRD181018LS4	200	TRD181018LBR
L	22	22	10	27	30	250	TRD222210L	160	TRD222210LS4	100	TRD222210LBR
L	22	22	12	27	30	250	TRD222212L	160	TRD222212LS4	100	TRD222212LBR
L	22	15	15	27	30	250	TRD221515L	160	TRD221515LS4	100	TRD221515LBR
L	22	22	15	27	30	250	TRD222215L	160	TRD222215LS4	100	TRD222215LBR
L	22	18	18	27	30	250	TRD221818L	160	TRD221818LS4	100	TRD221818LBR
L	22	22	18	27	30	250	TRD222218L	160	TRD222218LS4	100	TRD222218LBR
L	22	18	22	27	30	250	TRD221822L	160	TRD221822LS4	100	TRD221822LBR
L	28	28	10	36	36	250	TRD282810L	160	TRD282810LS4	100	TRD282810LBR
L	28	28	12	36	36	250	TRD282812L	160	TRD282812LS4	100	TRD282812LBR
L	28	28	15	36	36	250	TRD282815L	160	TRD282815LS4	100	TRD282815LBR
L	28	28	18	36	36	250	TRD282818L	160	TRD282818LS4	100	TRD282818LBR
L	28	22	22	36	36	250	TRD282222L	160	TRD282222LS4	100	TRD282222LBR
L	28	28	22	36	36	250	TRD282822L	160	TRD282822LS4	100	TRD282822LBR

Body: Part No. TRD282228LR

As per IS: 9388

Dimensions and pressure for reference only, subject to change

** Replace S4 by S6 for material AISI-316



Tube OD				S # A / F		Steel		Stainless Steel AISI-304 **		Brass	
Series	D ₁	D ₂	D ₃	Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
S	10	10	06	17	19	800	TRD101006S	630	TRD101006SS4	400	TRD101006SBR
S	12	08	08	17	22	630	TRD120808S	630	TRD120808SS4	400	TRD120808SBR
S	12	12	08	17	22	630	TRD121208S	630	TRD121208SS4	400	TRD121208SBR
S	12	12	10	17	22	630	TRD121210S	630	TRD121210SS4	400	TRD121210SBR
S	12	12	16	24	24	630	TRD121216S	400	TRD121216SS4	250	TRD121216SBR
S	16	16	06	24	24	630	TRD161606S	400	TRD161606SS4	250	TRD161606SBR
S	16	16	08	24	24	630	TRD161608S	400	TRD161608SS4	250	TRD161608SBR
S	16	16	10	24	24	630	TRD161610S	400	TRD161610SS4	250	TRD161610SBR
S	16	16	12	24	24	630	TRD161612S	400	TRD161612SS4	250	TRD161612SBR
S	16	16	20	27	30	420	TRD161620S	400	TRD161620SS4	250	TRD161620SBR
S	20	20	10	27	30	420	TRD202010S	400	TRD202010SS4	250	TRD202010SBR
S	20	20	12	27	30	420	TRD202012S	400	TRD202012SS4	250	TRD202012SBR
S	20	20	16	27	30	420	TRD202016S	400	TRD202016SS4	250	TRD202016SBR
S	20	20	25	36	36	420	TRD202025S	400	TRD202025SS4	250	TRD202025SBR
S	25	25	16	36	36	420	TRD252516S	400	TRD252516SS4	250	TRD252516SBR
S	25	25	20	36	36	420	TRD252520S	400	TRD252520SS4	250	TRD252520SBR
S	25	25	30	41	46	420	TRD252530S	400	TRD252530SS4	250	TRD252530SBR

As per IS: 9388

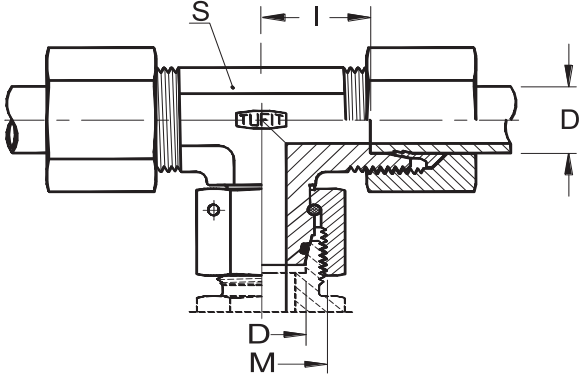
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)



Tube to Swivel



D Tube OD	M Metric	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304**	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 12x1.5	12.0	12	12	500	SWBT06L	315	SWBT06LS4
L 08	M 14x1.5	14.0	12	14	500	SWBT08L	315	SWBT08LS4
L 10	M 16x1.5	15.0	14	17	500	SWBT10L	315	SWBT10LS4
L 12	M 18x1.5	17.0	17	19	400	SWBT12L	315	SWBT12LS4
L 15	M 22x1.5	21.0	19	22	400	SWBT15L	315	SWBT15LS4
L 18	M 26x1.5	23.5	24	27	400	SWBT18L	315	SWBT18LS4
L 22	M 30x2.0	27.5	27	30	250	SWBT22L	160	SWBT22LS4
L 28	M 36x2.0	30.5	36	36	250	SWBT28L	160	SWBT28LS4
L 35	M 45x2.0	34.5	41	46	250	SWBT35L	160	SWBT35LS4
L 42	M 52x2.0	40.0	50	55	250	SWBT42L	160	SWBT42LS4
S 06	M 14x1.5	16.0	12	14	800	SWBT06S	630	SWBT06SS4
S 08	M 16x1.5	17.0	14	17	800	SWBT08S	630	SWBT08SS4
S 10	M 18x1.5	17.5	17	19	800	SWBT10S	630	SWBT10SS4
S 12	M 20x1.5	21.5	17	22	630	SWBT12S	630	SWBT12SS4
S 14*	M 22x1.5	22.0	19	22	630	SWBT14S	630	SWBT14SS4
S 16	M 24x1.5	24.5	24	24	630	SWBT16S	400	SWBT16SS4
S 20	M 30x2.0	26.5	27	30	420	SWBT20S	400	SWBT20SS4
S 25	M 36x2.0	30.0	36	36	420	SWBT25S	400	SWBT25SS4
S 30	M 42x2.0	35.5	41	46	420	SWBT30S	400	SWBT30SS4
S 38	M 52x2.0	41.0	50	55	420	SWBT38S	315	SWBT38SS4

As per ISO: 9388

- Body with Swivel Nut assembly : Part No.: SWBT06LR
- For Standpipe Adjustable: Refer to Custom Product section

* Not as per ISO 8434

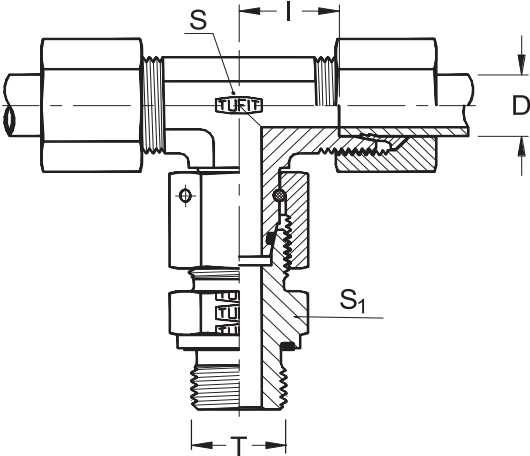
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to swivel - sealing by elastic seal - Form E



D Tube OD	T BSPP	I (ref.)	S ₁ A / F	S # A / F		Steel		Stainless Steel AISI-304 **	
				Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	12.0	14	12	12	500	SWBTE06LG018	315	SWBTE06LG018S4
L 08	G 1/4 A	14.0	19	12	14	500	SWBTE08LG014	315	SWBTE08LG014S4
L 10	G 1/4 A	15.0	19	14	17	500	SWBTE10LG014	315	SWBTE10LG014S4
L 12	G 3/8 A	17.0	22	17	19	400	SWBTE12LG038	315	SWBTE12LG038S4
L 15	G 1/2 A	21.0	27	19	22	400	SWBTE15LG012	315	SWBTE15LG012S4
L 18	G 1/2 A	23.5	27	24	27	400	SWBTE18LG012	315	SWBTE18LG012S4
L 22	G 3/4 A	27.5	32	27	30	250	SWBTE22LG034	160	SWBTE22LG034S4
L 28	G 1 A	30.5	41	36	36	250	SWBTE28LG001	160	SWBTE28LG001S4
L 35	G 1 1/4 A	34.5	50	41	46	250	SWBTE35LG114	160	SWBTE35LG114S4
L 42	G 1 1/2 A	40.0	55	50	55	250	SWBTE42LG112	160	SWBTE42LG112S4
S 06	G 1/4 A	16.0	19	12	14	800	SWBTE06SG014	630	SWBTE06SG014S4
S 08	G 1/4 A	17.0	19	14	17	800	SWBTE08SG014	630	SWBTE08SG014S4
S 10	G 3/8 A	17.5	22	17	19	800	SWBTE10SG038	630	SWBTE10SG038S4
S 12	G 3/8 A	21.5	22	17	22	630	SWBTE12SG038	630	SWBTE12SG038S4
S 14 *	G 1/2 A	22.0	27	19	22	630	SWBTE14SG012	630	SWBTE14SG012S4
S 16	G 1/2 A	24.5	27	24	24	630	SWBTE16SG012	400	SWBTE16SG012S4
S 20	G 3/4 A	26.5	32	27	30	420	SWBTE20SG034	400	SWBTE20SG034S4
S 25	G 1 A	30.0	41	36	36	420	SWBTE25SG001	400	SWBTE25SG001S4
S 30	G 1 1/4 A	35.5	50	41	46	420	SWBTE30SG114	400	SWBTE30SG114S4
S 38	G 1 1/2 A	41.0	55	50	55	420	SWBTE38SG112	315	SWBTE38SG112S4

As per ISO: 9388

* Not as per ISO 8434

■ Body with Swivel Nut assembly : Part No.: SWBTE38SG112R

** Replace S4 by S6 for material AISI-316

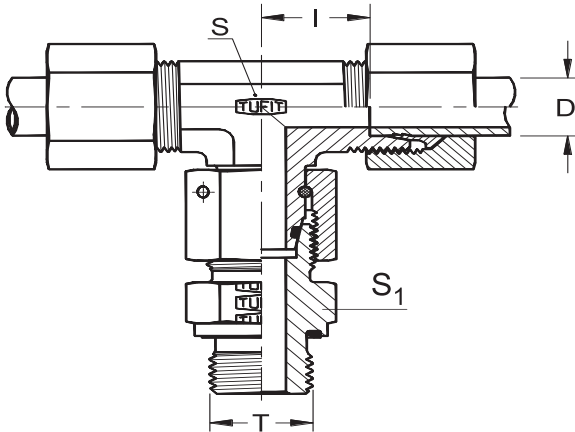
■ For Standpipe Adjustable: Refer to Custom Product section

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to swivel - sealing by elastic seal - Form E



D Tube OD	T Metric	I (ref.)	S ₁ A / F	S [#] A / F		Steel		Stainless Steel AISI-304 ^{**}	
				Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	12.0	14	12	12	500	SWBTE06LM10	315	SWBTE06LM10S4
L 08	M 12x1.5	14.0	17	12	14	500	SWBTE08LM12	315	SWBTE08LM12S4
L 10	M 14x1.5	15.0	19	14	17	500	SWBTE10LM14	315	SWBTE10LM14S4
L 12	M 16x1.5	17.0	22	17	19	400	SWBTE12LM16	315	SWBTE12LM16S4
L 15	M 18x1.5	21.0	24	19	22	400	SWBTE15LM18	315	SWBTE15LM18S4
L 18	M 22x1.5	23.5	27	24	27	400	SWBTE18LM22	315	SWBTE18LM22S4
L 22	M 26x1.5	27.5	32	27	30	250	SWBTE22LM26	160	SWBTE22LM26S4
L 28	M 33x2.0	30.5	41	36	36	250	SWBTE28LM33	160	SWBTE28LM33S4
L 35	M 42x2.0	34.5	50	41	46	250	SWBTE35LM42	160	SWBTE35LM42S4
L 42	M 48x2.0	40.0	55	50	55	250	SWBTE42LM48	160	SWBTE42LM48S4
S 06	M 12x1.5	16.0	17	12	14	800	SWBTE06SM12	630	SWBTE06SM12S4
S 08	M 14x1.5	17.0	19	14	17	800	SWBTE08SM14	630	SWBTE08SM14S4
S 10	M 16x1.5	17.5	22	17	19	800	SWBTE10SM16	630	SWBTE10SM16S4
S 12	M 18x1.5	21.5	24	17	22	630	SWBTE12SM18	630	SWBTE12SM18S4
S 14 [*]	M 20x1.5	22.0	27	19	22	630	SWBTE14SM20	630	SWBTE14SM20S4
S 16	M 22x1.5	24.5	27	24	24	630	SWBTE16SM22	400	SWBTE16SM22S4
S 20	M 27x2.0	26.5	32	27	30	420	SWBTE20SM27	400	SWBTE20SM27S4
S 25	M 33x2.0	30.0	41	36	36	420	SWBTE25SM33	400	SWBTE25SM33S4
S 30	M 42x2.0	35.5	50	41	46	420	SWBTE30SM42	400	SWBTE30SM42S4
S 38	M 48x2.0	41.0	55	50	55	420	SWBTE38SM48	315	SWBTE38SM48S4

As per ISO: 9388

■ Body with Swivel Nut assembly : Part No.: SWBTE38SM48R

■ For Standpipe Adjustable: Refer to Custom Product section

* Not as per ISO 8434

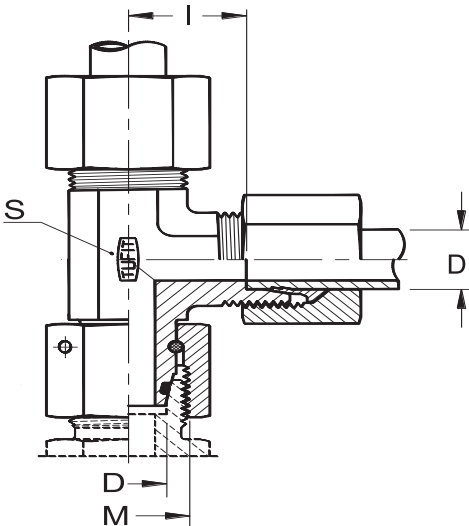
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to Swivel



D Tube OD	M Metric	I (ref.)	S # A / F		Steel		Stainless Steel AISI-304**	
			Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 12x1.5	12.0	12	12	500	SWRT06L	315	SWRT06LS4
L 08	M 14x1.5	14.0	12	14	500	SWRT08L	315	SWRT08LS4
L 10	M 16x1.5	15.0	14	17	500	SWRT10L	315	SWRT10LS4
L 12	M 18x1.5	17.0	17	19	400	SWRT12L	315	SWRT12LS4
L 15	M 22x1.5	21.0	19	22	400	SWRT15L	315	SWRT15LS4
L 18	M 26x1.5	23.5	24	27	400	SWRT18L	315	SWRT18LS4
L 22	M 30x2.0	27.5	27	30	250	SWRT22L	160	SWRT22LS4
L 28	M 36x2.0	30.5	36	36	250	SWRT28L	160	SWRT28LS4
L 35	M 45x2.0	34.5	41	46	250	SWRT35L	160	SWRT35LS4
L 42	M 52x2.0	40.0	50	55	250	SWRT42L	160	SWRT42LS4
S 06	M 14x1.5	16.0	12	14	800	SWRT06S	630	SWRT06SS4
S 08	M 16x1.5	17.0	14	17	800	SWRT08S	630	SWRT08SS4
S 10	M 18x1.5	17.5	17	19	800	SWRT10S	630	SWRT10SS4
S 12	M 20x1.5	21.5	17	22	630	SWRT12S	630	SWRT12SS4
S 14*	M 22x1.5	22.0	19	22	630	SWRT14S	630	SWRT14SS4
S 16	M 24x1.5	24.5	24	24	630	SWRT16S	400	SWRT16SS4
S 20	M 30x2.0	26.5	27	30	420	SWRT20S	400	SWRT20SS4
S 25	M 36x2.0	30.0	36	36	420	SWRT25S	400	SWRT25SS4
S 30	M 42x2.0	35.5	41	46	420	SWRT30S	400	SWRT30SS4
S 38	M 52x2.0	41.0	50	55	420	SWRT38S	315	SWRT38SS4

As per ISO: 9388

- Body with Swivel Nut assembly : Part No.: SWRT06LR
- For Standpipe Adjustable: Refer to Custom Product section

* Not as per ISO 8434

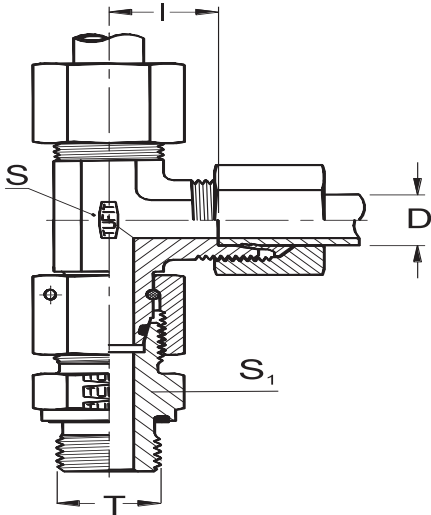
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to swivel - sealing by elastic seal - Form E



D Tube OD	T BSPP	I (ref.)	S ₁ A / F	S # A / F		Steel		Stainless Steel AISI-304 **	
				Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	12.0	14	12	12	500	SWRTE06LG018	315	SWRTE06LG018S4
L 08	G 1/4 A	14.0	19	12	14	500	SWRTE08LG014	315	SWRTE08LG014S4
L 10	G 1/4 A	15.0	19	14	17	500	SWRTE10LG014	315	SWRTE10LG014S4
L 12	G 3/8 A	17.0	22	17	19	400	SWRTE12LG038	315	SWRTE12LG038S4
L 15	G 1/2 A	21.0	27	19	22	400	SWRTE15LG012	315	SWRTE15LG012S4
L 18	G 1/2 A	23.5	27	24	27	400	SWRTE18LG012	315	SWRTE18LG012S4
L 22	G 3/4 A	27.5	32	27	30	250	SWRTE22LG034	160	SWRTE22LG034S4
L 28	G 1 A	30.5	41	36	36	250	SWRTE28LG001	160	SWRTE28LG001S4
L 35	G 1 1/4 A	34.5	50	41	46	250	SWRTE35LG114	160	SWRTE35LG114S4
L 42	G 1 1/2 A	40.0	55	50	55	250	SWRTE42LG112	160	SWRTE42LG112S4
S 06	G 1/4 A	16.0	19	12	14	800	SWRTE06SG014	630	SWRTE06SG014S4
S 08	G 1/4 A	17.0	19	14	17	800	SWRTE08SG014	630	SWRTE08SG014S4
S 10	G 3/8 A	17.5	22	17	19	800	SWRTE10SG038	630	SWRTE10SG038S4
S 12	G 3/8 A	21.5	22	17	22	630	SWRTE12SG038	630	SWRTE12SG038S4
S 14*	G 1/2 A	22.0	27	19	22	630	SWRTE14SG012	630	SWRTE14SG012S4
S 16	G 1/2 A	24.5	27	24	24	630	SWRTE16SG012	400	SWRTE16SG012S4
S 20	G 3/4 A	26.5	32	27	30	420	SWRTE20SG034	400	SWRTE20SG034S4
S 25	G 1 A	30.0	41	36	36	420	SWRTE25SG001	400	SWRTE25SG001S4
S 30	G 1 1/4 A	35.5	50	41	46	420	SWRTE30SG114	400	SWRTE30SG114S4
S 38	G 1 1/2 A	41.0	55	50	55	420	SWRTE38SG112	315	SWRTE38SG112S4

As per ISO: 9388

* Not as per ISO 8434

■ Body with Swivel Nut assembly : Part No.: SWRTE38SG112R

** Replace S4 by S6 for material AISI-316

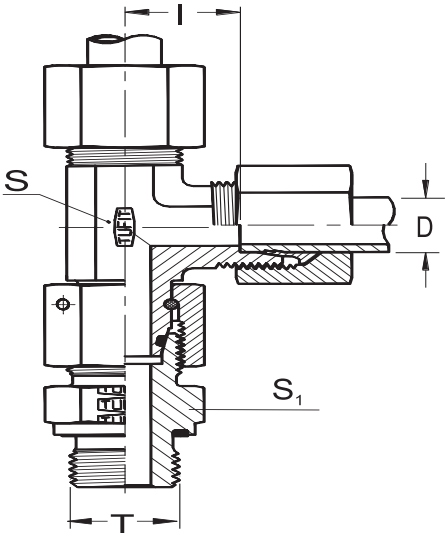
■ For Standpipe Adjustable: Refer to Custom Product section

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube to swivel - sealing by elastic seal - Form E



D Tube OD	T Metric	I (ref.)	S ₁ A / F	S # A / F		Steel		Stainless Steel AISI-304 **	
				Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	12.0	14	12	12	500	SWRTE06LM10	315	SWRTE06LM10S4
L 08	M 12x1.5	14.0	19	12	14	500	SWRTE08LM12	315	SWRTE08LM12S4
L 10	M 14x1.5	15.0	19	14	17	500	SWRTE10LM14	315	SWRTE10LM14S4
L 12	M 16x1.5	17.0	22	17	19	400	SWRTE12LM16	315	SWRTE12LM16S4
L 15	M 18x1.5	21.0	27	19	22	400	SWRTE15LM18	315	SWRTE15LM18S4
L 18	M 22x1.5	23.5	27	24	27	400	SWRTE18LM22	315	SWRTE18LM22S4
L 22	M 26x1.5	27.5	32	27	30	250	SWRTE22LM16	160	SWRTE22LM16S4
L 28	M 33x2.0	30.5	41	36	36	250	SWRTE38LM33	160	SWRTE38LM33S4
L 35	M 42x2.0	34.5	50	41	46	250	SWRTE35LM42	160	SWRTE35LM42S4
L 42	M 48x2.0	40.0	55	50	55	250	SWRTE42LM48	160	SWRTE42LM48S4
S 06	M 12x1.5	16.0	19	12	14	800	SWRTE06SM12	630	SWRTE06SM12S4
S 08	M 14x1.5	17.0	19	14	17	800	SWRTE08SM14	630	SWRTE08SM14S4
S 10	M 16x1.5	17.5	22	17	19	800	SWRTE10SM16	630	SWRTE10SM16S4
S 12	M 18x1.5	21.5	22	17	22	630	SWRTE12SM18	630	SWRTE12SM18S4
S 14 *	M 20x1.5	22.0	27	19	22	630	SWRTE14SM20	630	SWRTE14SM20S4
S 16	M 22x1.5	24.5	27	24	24	630	SWRTE16SM22	400	SWRTE16SM22S4
S 20	M 27x2.0	26.5	32	27	30	420	SWRTE20SM27	400	SWRTE20SM27S4
S 25	M 33x2.0	30.0	41	36	36	420	SWRTE25SM33	400	SWRTE25SM33S4
S 30	M 42x2.0	35.5	50	41	46	420	SWRTE30SM42	400	SWRTE30SM42S4
S 38	M 48x2.0	41.0	55	50	55	420	SWRTE38SM48	315	SWRTE38SM48S4

- # As per ISO: 9388
- Body with Swivel Nut assembly : Part No.: SWRTE38SM48R
- For Standpipe Adjustable: Refer to Custom Product section

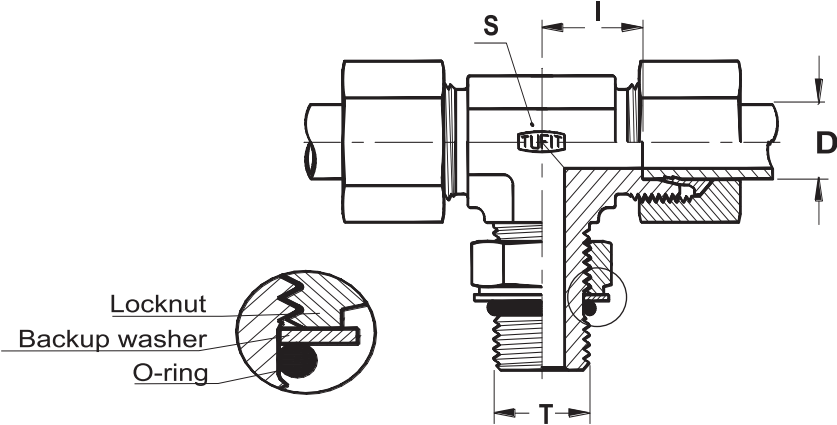
* Not as per ISO 8434
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	14	14	315	ALNBT06LM10	315	ALNBT06LM10S4
L 08	M 12x1.5	16	14	315	ALNBT08LM12	315	ALNBT08LM12S4
L 10	M 14x1.5	17	19	315	ALNBT10LM14	315	ALNBT10LM14S4
L 12	M 16x1.5	19	19	315	ALNBT12LM16	315	ALNBT12LM16S4
L 15	M 18x1.5	21	22	315	ALNBT15LM18	315	ALNBT15LM18S4
L 18	M 22x1.5	24	27	315	ALNBT18LM22	315	ALNBT18LM22S4
L 22	M 27x2.0	28	30	160	ALNBT22LM27	160	ALNBT22LM27S4
L 28	M 33x2.0	31	36	160	ALNBT28LM33	160	ALNBT28LM33S4
L 35	M 42x2.0	38	50	160	ALNBT35LM42	160	ALNBT35LM42S4
L 42	M 48x2.0	38	50	160	ALNBT42LM48	160	ALNBT42LM48S4
S 06	M 12x1.5	15	14	400	ALNBT06SM12	400	ALNBT06SM12S4
S 08	M 14x1.5	17	19	400	ALNBT08SM14	400	ALNBT08SM14S4
S 10	M 16x1.5	18	19	400	ALNBT10SM16	400	ALNBT10SM16S4
S 12	M 18x1.5	22	22	400	ALNBT12SM18	400	ALNBT12SM18S4
S 16	M 22x1.5	25	27	400	ALNBT16SM22	400	ALNBT16SM22S4
S 20	M 27x2.0	28	30	400	ALNBT20SM27	400	ALNBT20SM27S4
S 25	M 33x2.0	30	36	315	ALNBT25SM33	315	ALNBT25SM33S4
S 30	M 42x2.0	36	50	250	ALNBT30SM42	250	ALNBT30SM42S4
S 38	M 48x2.0	34	50	200	ALNBT38SM48	200	ALNBT38SM48S4

■ Body with Locknut assembly : Part No.: ALNBT38SM48R

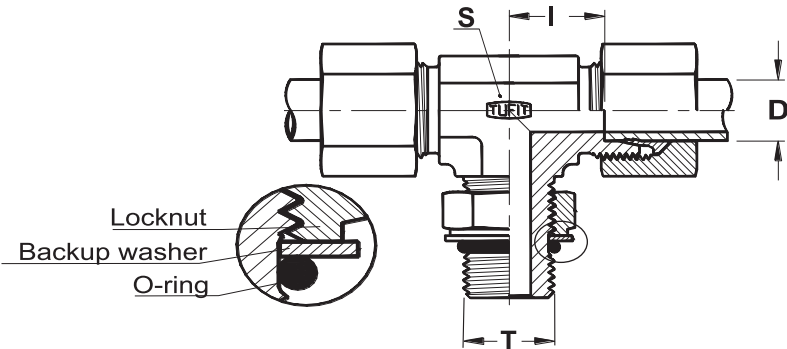
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T UN/UNF-2A	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	7/16 -20	14	14	315	ALNBT06LU0716	315	ALNBT06LU0716S4
L 08	7/16 -20	16	14	315	ALNBT08LU0716	315	ALNBT08LU0716S4
L 10	9/16 -18	17	19	315	ALNBT10LU0916	315	ALNBT10LU0916S4
L 12	9/16 -18	19	19	315	ALNBT12LU0916	315	ALNBT12LU0916S4
L 12	3/4 -16	19	19	315	ALNBT12LU0034	315	ALNBT12LU0034S4
L 15	3/4 -16	21	22	315	ALNBT15LU0034	315	ALNBT15LU0034S4
L 15	7/8 -14	21	22	315	ALNBT15LU0078	315	ALNBT15LU0078S4
L 18	7/8 -14	24	27	315	ALNBT18LU0078	315	ALNBT18LU0078S4
L 18	1 1/16 -14	24	30	315	ALNBT18LU1116	315	ALNBT18LU1116S4
L 22	1 1/16 -12	28	30	160	ALNBT22LU1116	160	ALNBT22LU1116S4
L 28	1 5/16 -12	31	36	160	ALNBT28LU1516	160	ALNBT28LU1516S4
L 35	1 5 / 8 -12	38	50	160	ALNBT35LU0158	160	ALNBT35LU0158S4
L 42	1 7 / 8 -12	38	50	160	ALNBT42LU0178	160	ALNBT42LU0178S4
S 06	7/16 -20	15	14	400	ALNBT06SU0716	400	ALNBT06SU0716S4
S 08	9/16 -18	17	19	400	ALNBT08SU0916	400	ALNBT08SU0916S4
S 10	9/16 -18	18	19	400	ALNBT10SU0916	400	ALNBT10SU0916S4
S 12	3/4 -16	22	19	400	ALNBT12SU0034	400	ALNBT12SU0034S4
S 16	7/8 -14	25	19	400	ALNBT16SU0078	400	ALNBT16SU0078S4
S 20	1 1/16 -12	28	27	400	ALNBT20SU1116	400	ALNBT20SU1116S4
S 25	1 5/16 -12	30	36	400	ALNBT25SU1516	400	ALNBT25SU1516S4
S 30	1 5 / 8 -12	36	50	250	ALNBT30SU0158	250	ALNBT30SU0158S4
S 38	1 7 / 8 -12	34	50	250	ALNBT38SU0178	250	ALNBT38SU0178S4

■ Body with Locknut assembly : Part No.: ALNBT38SU0178R

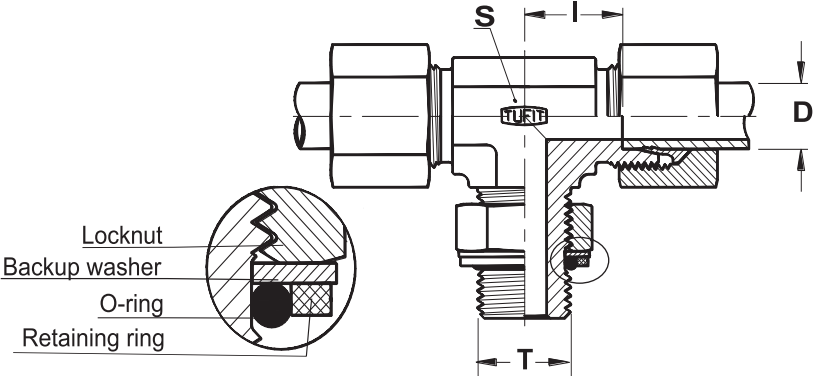
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T Metric	L (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	14	14	315	ALNBTH06LM10	315	ALNBTH06LM10S4
L 08	M 12x1.5	16	14	315	ALNBTH08LM12	315	ALNBTH08LM12S4
L 10	M 14x1.5	17	19	315	ALNBTH10LM14	315	ALNBTH10LM14S4
L 12	M 16x1.5	19	19	315	ALNBTH12LM16	315	ALNBTH12LM16S4
L 15	M 18x1.5	21	22	315	ALNBTH15LM18	315	ALNBTH15LM18S4
L 18	M 22x1.5	24	27	250	ALNBTH18LM22	250	ALNBTH18LM22S4
L 22	M 27x2.0	28	30	160	ALNBTH22LM27	160	ALNBTH22LM27S4
L 28	M 33x2.0	31	36	160	ALNBTH28LM33	160	ALNBTH28LM33S4
L 35	M 42x2.0	38	50	160	ALNBTH35LM42	160	ALNBTH35LM42S4
L 42	M 48x2.0	38	50	160	ALNBTH42LM48	160	ALNBTH42LM48S4
S 06	M 12x1.5	15	14	315	ALNBTH06SM12	315	ALNBTH06SM12S4
S 08	M 14x1.5	17	19	315	ALNBTH08SM14	315	ALNBTH08SM14S4
S 10	M 16x1.5	18	19	315	ALNBTH10SM16	315	ALNBTH10SM16S4
S 12	M 18x1.5	22	19	315	ALNBTH12SM18	315	ALNBTH12SM18S4
S 16	M 22x1.5	25	19	250	ALNBTH16SM22	250	ALNBTH16SM22S4
S 20	M 27x2.0	28	27	250	ALNBTH20SM27	250	ALNBTH20SM27S4
S 25	M 33x2.0	30	36	160	ALNBTH25SM33	160	ALNBTH25SM33S4
S 30	M 42x2.0	36	50	160	ALNBTH30SM42	160	ALNBTH30SM42S4
S 38	M 48x2.0	34	50	160	ALNBTH38SM48	160	ALNBTH38SM48S4

■ Body with Locknut assembly : Part No.: ALNBTH38SM48R

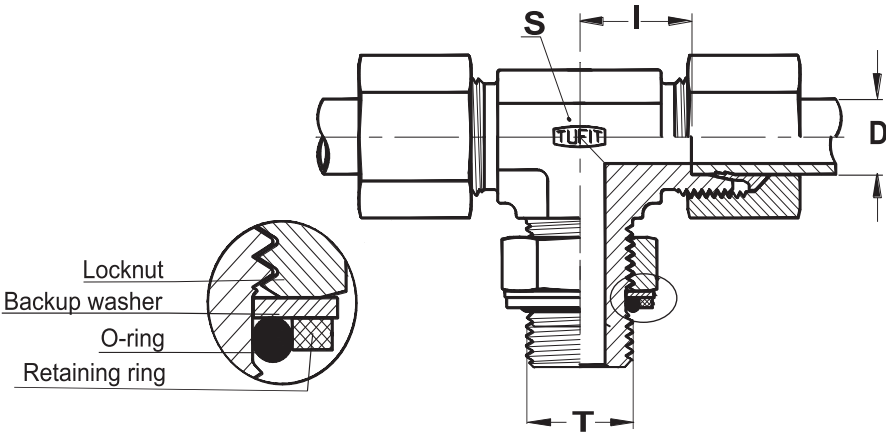
** Replace by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	14	14	315	ALNBTH06LG018	315	ALNBTH06LG018S4
L 08	G 1/4 A	16	14	315	ALNBTH08LG014	315	ALNBTH08LG014S4
L 10	G 1/4 A	17	19	315	ALNBTH10LG014	315	ALNBTH10LG014S4
L 12	G 3/8 A	19	19	250	ALNBTH12LG038	250	ALNBTH12LG038S4
L 15	G 1/2 A	21	22	250	ALNBTH15LG012	250	ALNBTH15LG012S4
L 18	G 1/2 A	24	27	250	ALNBTH18LG012	250	ALNBTH18LG012S4
L 22	G 3/4 A	28	30	160	ALNBTH22LG034	160	ALNBTH22LG034S4
L 28	G 1 A	31	36	160	ALNBTH28LG001	160	ALNBTH28LG001S4
L 35	G 1 1/4 A	38	50	160	ALNBTH35LG114	160	ALNBTH35LG114S4
L 42	G 1 1/2 A	38	50	160	ALNBTH42LG112	160	ALNBTH42LG112S4
S 06	G 1/4 A	15	14	315	ALNBTH06SG014	315	ALNBTH06SG014S4
S 08	G 1/4 A	17	19	315	ALNBTH08SG014	315	ALNBTH08SG014S4
S 10	G 3/8 A	18	19	250	ALNBTH10SG038	250	ALNBTH10SG038S4
S 12	G 3/8 A	22	27	250	ALNBTH12SG038	250	ALNBTH12SG038S4
S 16	G 1/2 A	25	27	250	ALNBTH16SG012	250	ALNBTH16SG012S4
S 20	G 3/4 A	28	30	250	ALNBTH20SG034	250	ALNBTH20SG034S4
S 25	G 1 A	30	36	250	ALNBTH25SG001	250	ALNBTH25SG001S4
S 30	G 1 1/4 A	36	50	160	ALNBTH30SG114	160	ALNBTH30SG114S4
S 38	G 1 1/2 A	34	50	160	ALNBTH38SG112	160	ALNBTH38SG112S4

■ Body with Locknut assembly: Part No.: ALNBTH38SG112R

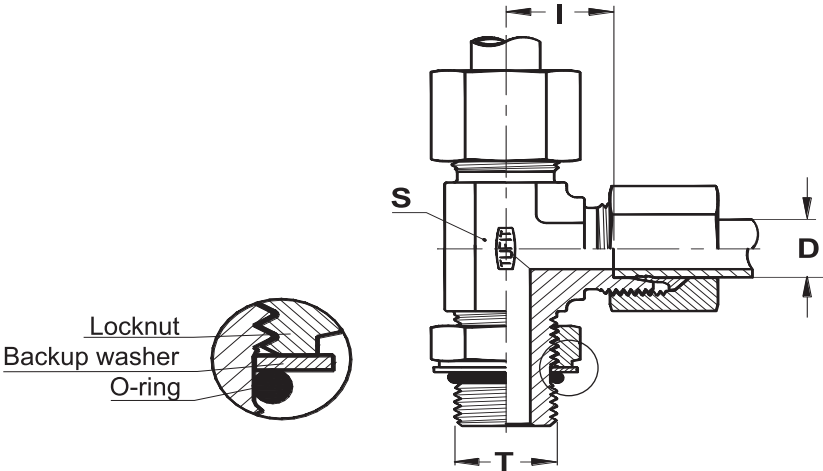
** Replace by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T Metric	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	14	14	315	ALNRT06LM10	315	ALNRT06LM10S4
L 08	M 12x1.5	16	14	315	ALNRT08LM12	315	ALNRT08LM12S4
L 10	M 14x1.5	17	19	315	ALNRT10LM14	315	ALNRT10LM14S4
L 12	M 16x1.5	19	19	315	ALNRT12LM16	250	ALNRT12LM16S4
L 15	M 18x1.5	21	22	315	ALNRT15LM18	250	ALNRT15LM18S4
L 18	M 22x1.5	24	27	315	ALNRT18LM22	250	ALNRT18LM22S4
L 22	M 27x2.0	28	30	160	ALNRT22LM27	160	ALNRT22LM27S4
L 28	M 33x2.0	31	36	160	ALNRT28LM33	160	ALNRT28LM33S4
L 35	M 42x2.0	38	50	160	ALNRT35LM42	160	ALNRT35LM42S4
L 42	M 48x2.0	38	50	160	ALNRT42LM48	160	ALNRT42LM48S4
S 06	M 12x1.5	15	14	400	ALNRT06SM12	400	ALNRT06SM12S4
S 08	M 14x1.5	17	19	400	ALNRT08SM14	400	ALNRT08SM14S4
S 10	M 16x1.5	18	19	400	ALNRT10SM16	400	ALNRT10SM16S4
S 12	M 18x1.5	22	22	400	ALNRT12SM18	400	ALNRT12SM18S4
S 16	M 22x1.5	25	27	400	ALNRT16SM22	400	ALNRT16SM22S4
S 20	M 27x2.0	28	30	400	ALNRT20SM27	400	ALNRT20SM27S4
S 25	M 33x2.0	30	36	315	ALNRT25SM33	315	ALNRT25SM33S4
S 30	M 42x2.0	36	50	250	ALNRT30SM42	250	ALNRT30SM42S4
S 38	M 48x2.0	34	50	200	ALNRT38SM48	200	ALNRT38SM48S4

■ Body with Locknut assembly : Part No. ALNRT38SM48R

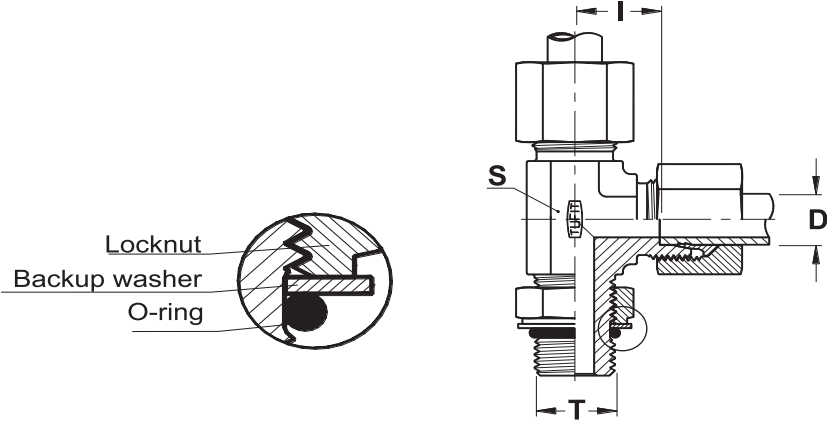
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer & O-ring



D Tube OD	T UN/UNF-2A	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	7/16 -20	14	14	315	ALNRT06LU0716	315	ALNRT06LU0716
L 08	7/16 -20	16	14	315	ALNRT08LU0716	315	ALNRT08LU0716
L 10	9/16 -18	17	19	315	ALNRT10LU0916	315	ALNRT10LU0916
L 12	9/16 -18	19	19	315	ALNRT12LU0916	315	ALNRT12LU0916
L 12	3/4 -16	19	19	315	ALNRT12LU0034	315	ALNRT12LU0034
L 15	3/4 -16	21	22	315	ALNRT15LU0034	315	ALNRT15LU0034
L 15	7/8 -14	21	22	315	ALNRT15LU0078	315	ALNRT15LU0078
L 18	7/8 -14	24	27	315	ALNRT18LU0078	315	ALNRT18LU0078
L 18	1 1/16 -14	24	30	315	ALNRT18LU1116	315	ALNRT18LU1116
L 22	1 1/16 -12	28	30	160	ALNRT22LU1116	160	ALNRT22LU1116
L 28	1 5/16 -12	31	36	160	ALNRT28LU1516	160	ALNRT28LU1516
L 35	1 5 / 8 -12	38	50	160	ALNRT35LU0158	160	ALNRT35LU0158
L 42	1 7 / 8 -12	38	50	160	ALNRT42LU0178	160	ALNRT42LU0178
S 06	7/16 -20	15	14	400	ALNRT06SU0716	400	ALNRT06SU0716
S 08	9/16 -18	17	19	400	ALNRT08SU0916	400	ALNRT08SU0916
S 10	9/16 -18	18	19	400	ALNRT10SU0916	400	ALNRT10SU0916
S 12	3/4 -16	22	22	400	ALNRT12SU0034	400	ALNRT12SU0034
S 16	7/8 -14	25	27	400	ALNRT16SU0078	400	ALNRT16SU0078
S 20	1 1/16 -12	28	30	400	ALNRT20SU1116	400	ALNRT20SU1116
S 25	1 5/16 -12	30	36	250	ALNRT25SU1516	250	ALNRT25SU1516
S 30	1 5 / 8 -12	36	50	160	ALNRT30SU0158	160	ALNRT30SU0158
S 38	1 7 / 8 -12	34	50	160	ALNRT38SU0178	160	ALNRT38SU0178

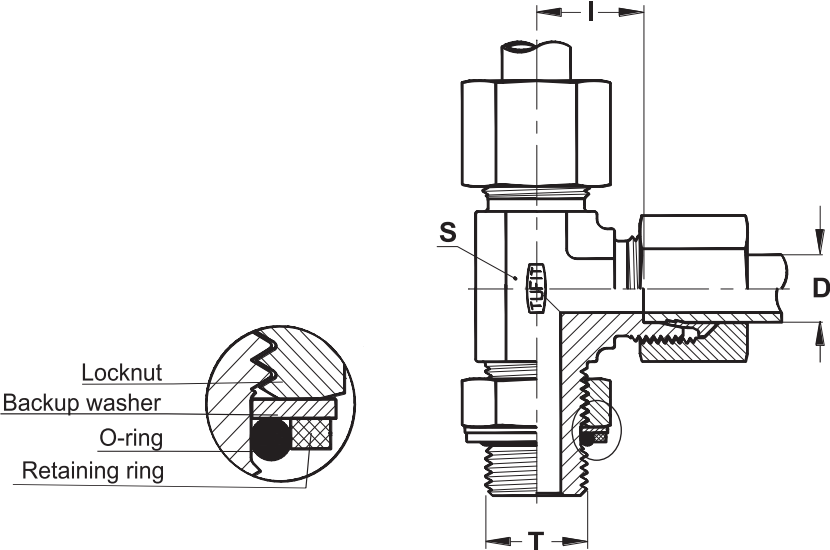
■ Body with Locknut assembly :
Part No.: ALNRT38SU0178R
**Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



D Tube OD	T Metric	L (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	M 10x1.0	14	14	315	ALNRTH06LM10	315	ALNRTH06LM10S4
L 08	M 12x1.5	16	14	315	ALNRTH08LM12	315	ALNRTH08LM12S4
L 10	M 14x1.5	17	19	315	ALNRTH10LM14	315	ALNRTH10LM14S4
L 12	M 16x1.5	19	19	315	ALNRTH12LM16	315	ALNRTH12LM16S4
L 15	M 18x1.5	21	22	315	ALNRTH15LM18	315	ALNRTH15LM18S4
L 18	M 22x1.5	24	27	250	ALNRTH18LM22	250	ALNRTH18LM22S4
L 22	M 27x2.0	28	30	160	ALNRTH22LM27	160	ALNRTH22LM27S4
L 28	M 33x2.0	31	36	160	ALNRTH28LM33	160	ALNRTH28LM33S4
L 35	M 42x2.0	38	50	160	ALNRTH35LM42	160	ALNRTH35LM42S4
L 42	M 48x2.0	38	50	160	ALNRTH42LM48	160	ALNRTH42LM48S4
S 06	M 12x1.5	15	14	315	ALNRTH06SM12	315	ALNRTH06SM12S4
S 08	M 14x1.5	17	19	315	ALNRTH08SM14	315	ALNRTH08SM14S4
S 10	M 16x1.5	18	19	315	ALNRTH10SM16	315	ALNRTH10SM16S4
S 12	M 18x1.5	22	27	315	ALNRTH12SM18	315	ALNRTH12SM18S4
S 16	M 22x1.5	25	27	250	ALNRTH16SM22	250	ALNRTH16SM22S4
S 20	M 27x2.0	28	30	250	ALNRTH20SM27	250	ALNRTH20SM27S4
S 25	M 33x2.0	30	36	160	ALNRTH25SM33	160	ALNRTH25SM33S4
S 30	M 42x2.0	36	50	160	ALNRTH30SM42	160	ALNRTH30SM42S4
S 38	M 48x2.0	34	50	160	ALNRTH38SM48	160	ALNRTH38SM48S4

■ Body with Locknut assembly : Part No.: ALNRTH38SM48R

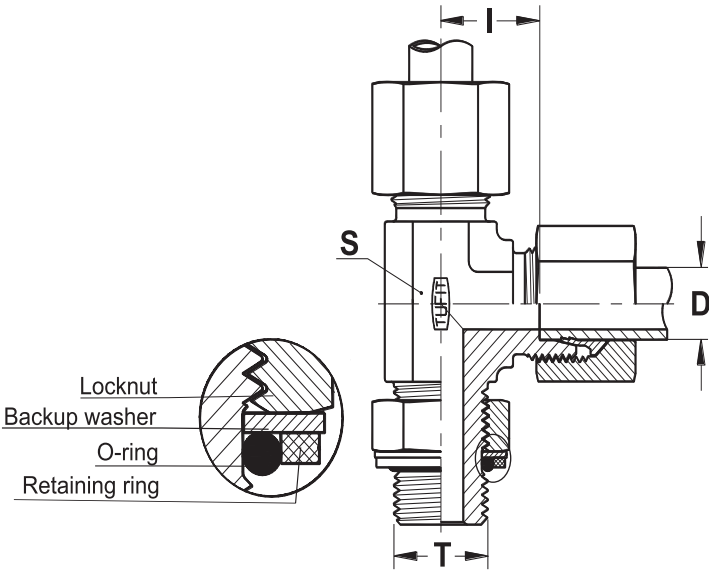
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



with locknut, backup washer, O-ring & retaining ring



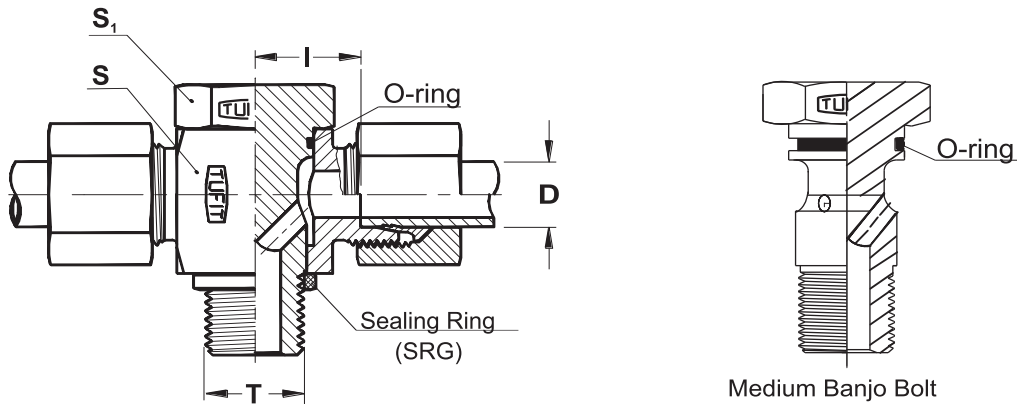
D Tube OD	T BSPP	I (ref.)	S A / F	Steel		Stainless Steel AISI-304**	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	G 1/8 A	14	14	315	ALNRTH06LG018	315	ALNRTH06LG018S4
L 08	G 1/4 A	16	14	315	ALNRTH08LG014	315	ALNRTH08LG014S4
L 10	G 1/4 A	17	19	315	ALNRTH10LG014	315	ALNRTH10LG014S4
L 12	G 3/8 A	19	19	250	ALNRTH12LG038	250	ALNRTH12LG038S4
L 15	G 1/2 A	21	22	250	ALNRTH15LG012	250	ALNRTH15LG012S4
L 18	G 1/2 A	24	27	250	ALNRTH18LG012	250	ALNRTH18LG012S4
L 22	G 3/4 A	28	30	160	ALNRTH22LG034	160	ALNRTH22LG034S4
L 28	G 1 A	31	36	160	ALNRTH28LG001	160	ALNRTH28LG001S4
L 35	G 1 1/4 A	38	50	160	ALNRTH35LG114	160	ALNRTH35LG114S4
L 42	G 1 1/2 A	38	50	160	ALNRTH42LG112	160	ALNRTH42LG112S4
S 06	G 1/4 A	15	14	315	ALNRTH06SG014	315	ALNRTH06SG014S4
S 08	G 1/4 A	17	19	315	ALNRTH08SG014	315	ALNRTH08SG014S4
S 10	G 3/8 A	18	19	250	ALNRTH10SG038	250	ALNRTH10SG038S4
S 12	G 3/8 A	22	22	250	ALNRTH12SG038	250	ALNRTH12SG038S4
S 16	G 1/2 A	25	27	250	ALNRTH16SG012	250	ALNRTH16SG012S4
S 20	G 3/4 A	28	30	250	ALNRTH20SG034	250	ALNRTH20SG034S4
S 25	G 1 A	30	36	250	ALNRTH25SG001	250	ALNRTH25SG001S4
S 30	G 1 1/4 A	36	50	160	ALNRTH30SG114	160	ALNRTH30SG114S4
S 38	G 1 1/2 A	34	50	160	ALNRTH38SG112	160	ALNRTH38SG112S4

■ Body with Locknut assembly : Part No.: ALNRTH38SG112R

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



D Tube OD	T BSPP	L (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304**		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	Part No.
L 06	G 1/8 A	12.0	17	17	250	BTM06LG018	250	BTM06LG018S4	MBG018
L 08	G 1/4 A	14.5	22	19	250	BTM08LG014	250	BTM08LG014S4	MBG014
L 10	G 1/4 A	15.5	22	19	250	BTM10LG014	250	BTM10LG014S4	MBG014
L 12	G 3/8 A	18.0	27	24	250	BTM12LG038	250	BTM12LG038S4	MBG038
L 15	G 1/2 A	21.5	32	30	250	BTM15LG012	250	BTM15LG012S4	MBG012
L 18	G 1/2 A	21.0	32	30	250	BTM18LG012	250	BTM18LG012S4	MBG012
L 22	G 3/4 A	27.5	41	36	160	BTM22LG034	160	BTM22LG034S4	MBG034
L 28	G 1 A	32.0	50	46	160	BTM28LG001	160	BTM28LG001S4	MBG001
L 35	G 1 1/4 A	36.0	60	55	160	BTM35LG114	160	BTM35LG114S4	MBG114
L 42	G 1 1/2 A	40.5	70	60	160	BTM42LG112	160	BTM42LG112S4	MBG112
S 06	G 1/4 A	16.5	22	19	315	BTM06SG014	315	BTM06SG014S4	MBG014
S 08	G 1/4 A	16.5	22	19	315	BTM08SG014	315	BTM08SG014S4	MBG014
S 10	G 3/8 A	18.5	27	24	315	BTM10SG038	315	BTM10SG038S4	MBG038
S 12	G 3/8 A	18.5	27	24	315	BTM12SG038	315	BTM12SG038S4	MBG038
S 14 *	G 1/2 A	22.5	32	30	315	BTM14SG012	315	BTM14SG012S4	MBG012
S 16	G 1/2 A	22.0	32	30	315	BTM16SG012	315	BTM16SG012S4	MBG012
S 20	G 3/4 A	26.5	41	36	160	BTM20SG034	160	BTM20SG034S4	MBG034
S 25	G 1 A	31.5	50	46	160	BTM25SG001	160	BTM25SG001S4	MBG001
S 30	G 1 1/4 A	37.0	60	55	160	BTM30SG114	160	BTM30SG114S4	MBG114
S 38	G 1 1/2 A	41.5	70	60	160	BTM38SG112	160	BTM38SG112S4	MBG112

■ Body with Banjo Bolt assembly : Part No.: BTM38SG112R

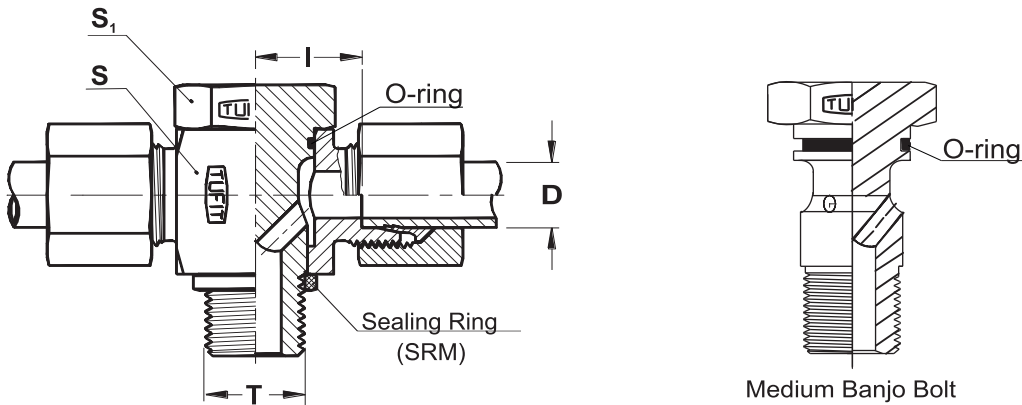
* Not as per ISO 8434

* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. MBG112S4

** Replace S4 by S6 for material AISI-316

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton

Dimensions and pressure for reference only, subject to change



D Tube OD	T Metric	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304**		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	
L 06	M 10x1.0	12.0	17	17	250	BTM06LM10	250	BTM06LM10S4	MBM10
L 08	M 12x1.5	14.5	22	19	250	BTM08LM12	250	BTM08LM12S4	MBM12
L 10	M 14x1.5	15.5	22	19	250	BTM10LM14	250	BTM10LM14S4	MBM14
L 12	M 16x1.5	18.0	27	24	250	BTM12LM16	250	BTM12LM16S4	MBM16
L 15	M 18x1.5	21.5	30	27	250	BTM15LM18	250	BTM15LM18S4	MBM18
L 18	M 22x1.5	21.0	32	30	250	BTM18LM22	250	BTM18LM22S4	MBM22
L 22	M 26x1.5	27.5	41	36	160	BTM22LM26	160	BTM22LM26S4	MBM26
L 28	M 33x2.0	32.0	50	46	160	BTM28LM33	160	BTM28LM33S4	MBM33
L 35	M 42x2.0	36.0	60	55	160	BTM35LM42	160	BTM35LM42S4	MBM42
L 42	M 48x2.0	40.5	70	60	160	BTM42LM48	160	BTM42LM48S4	MBM48
S 06	M 12x1.5	16.5	22	19	315	BTM06SM12	315	BTM06SM12S4	MBM12
S 08	M 14x1.5	16.5	22	19	315	BTM08SM14	315	BTM08SM14S4	MBM14
S 10	M 16x1.5	18.5	27	24	315	BTM10SM16	315	BTM10SM16S4	MBM16
S 12	M 18x1.5	20.0	27	27	315	BTM12SM18	315	BTM12SM18S4	MBM18
S 14 *	M 20x1.5	22.5	32	30	315	BTM14SM20	315	BTM14SM20S4	MBM20
S 16	M 22x1.5	22.0	32	30	315	BTM16SM22	315	BTM16SM22S4	MBM22
S 20	M 27x2.0	26.5	41	36	160	BTM20SM27	160	BTM20SM27S4	MBM27
S 25	M 33x2.0	31.5	50	46	160	BTM25SM33	160	BTM25SM33S4	MBM33
S 30	M 42x2.0	37.0	60	55	160	BTM30SM42	160	BTM30SM42S4	MBM42
S 38	M 48x2.0	41.5	70	60	160	BTM38SM48	160	BTM38SM48S4	MBM48

■ Body with Banjo Bolt assembly : Part No.: BTM38SM48R

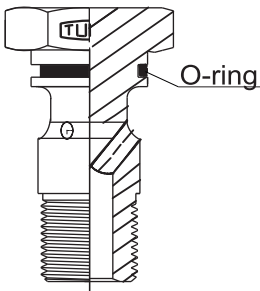
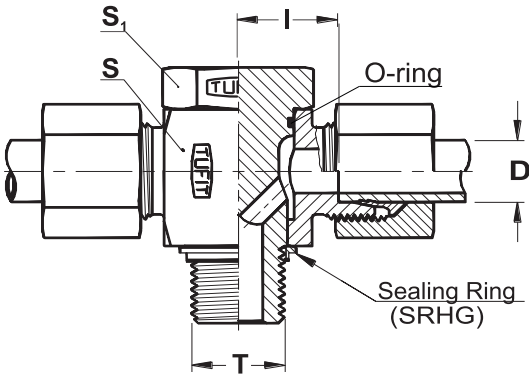
* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. MBM48S4

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton

Dimensions and pressure for reference only, subject to change



High Banjo Bolt

D Tube OD	T BSPP	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304 **		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	Part No.
L 06	G 1/8 A	12.0	17	17	315	BTH06LG018	315	BTH06LG018S4	HBG018
L 08	G 1/4 A	14.5	22	19	315	BTH08LG014	315	BTH08LG014S4	HBG014
L 10	G 1/4 A	15.5	22	19	315	BTH10LG014	315	BTH10LG014S4	HBG014
L 12	G 3/8 A	18.0	27	24	315	BTH12LG038	315	BTH12LG038S4	HBG038
L 15	G 1/2 A	21.5	32	30	315	BTH15LG012	315	BTH15LG012S4	HBG012
L 18	G 1/2 A	21.0	32	30	315	BTH18LG012	315	BTH18LG012S4	HBG012
L 22	G 3/4 A	27.5	41	36	315	BTH22LG034	315	BTH22LG034S4	HBG034
L 28	G 1 A	32.0	50	46	315	BTH28LG001	315	BTH28LG001S4	HBG001
L 35	G 1 1/4 A	36.0	60	55	315	BTH35LG114	315	BTH35LG114S4	HBG114
L 42	G 1 1/2 A	40.5	70	60	315	BTH42LG112	315	BTH42LG112S4	HBG112
S 06	G 1/4 A	16.5	22	19	315	BTH06SG014	315	BTH06SG014S4	HBG014
S 08	G 1/4 A	16.5	22	19	400	BTH08SG014	400	BTH08SG014S4	HBG014
S 10	G 3/8 A	18.5	27	24	400	BTH10SG038	400	BTH10SG038S4	HBG038
S 12	G 3/8 A	18.5	27	24	400	BTH12SG038	400	BTH12SG038S4	HBG038
S 14	G 1/2 A	22.5	32	30	400	BTH14SG012	400	BTH14SG012S4	HBG012
S 16	G 1/2 A	22.0	32	30	400	BTH16SG012	400	BTH16SG012S4	HBG012
S 20	G 3/4 A	26.5	41	36	315	BTH20SG034	315	BTH20SG034S4	HBG034
S 25	G 1 A	31.5	50	46	315	BTH25SG001	315	BTH25SG001S4	HBG001
S 30	G 1 1/4 A	37.0	60	55	160	BTH30SG114	160	BTH30SG114S4	HBG114
S 38	G 1 1/2 A	41.5	70	60	160	BTH38SG112	160	BTH38SG112S4	HBG112

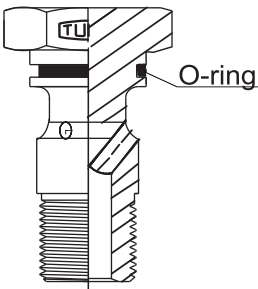
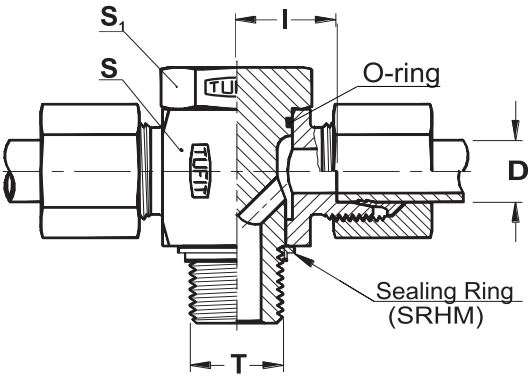
■ Body with Banjo Bolt assembly : Part No.: BTH38SG112R

** Replace S4 by S6 for material AISI-316

* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. HBG112S4

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



High Banjo Bolt

D TUBE OD	T Metric	I (ref.)	S A / F	S ₁ A / F	Steel		Stainless Steel AISI-304 **		Banjo Bolt *
					WP (bar)	Part No.	WP (bar)	Part No.	
L 06	M 10x1.0	12.0	17	17	315	BTH06LM10	315	BTH06LM10S4	HBM10
L 08	M 12x1.5	14.5	22	19	315	BTH08LM12	315	BTH08LM12S4	HBM12
L 10	M 14x1.5	15.5	22	19	315	BTH10LM14	315	BTH10LM14S4	HBM14
L 12	M 16x1.5	18.0	27	24	315	BTH12LM16	315	BTH12LM16S4	HBM16
L 15	M 18x1.5	21.5	30	30	315	BTH15LM18	315	BTH15LM18S4	HBM18
L 18	M 22x1.5	21.0	32	30	315	BTH18LM22	315	BTH18LM22S4	HBM22
L 22	M 26x1.5	27.5	41	36	160	BTH22LM26	160	BTH22LM26S4	HBM26
L 28	M 33x2.0	32.0	50	46	160	BTH28LM33	160	BTH28LM33S4	HBM33
L 35	M 42x2.0	36.0	60	55	160	BTH35LM42	160	BTH35LM42S4	HBM42
L 42	M 48x2.0	40.5	70	60	160	BTH42LM48	160	BTH42LM48S4	HBM48
S 06	M 12x1.5	16.5	22	19	400	BTH06SM12	400	BTH06SM12S4	HBM12
S 08	M 14x1.5	16.5	22	19	400	BTH08SM14	400	BTH08SM14S4	HBM14
S 10	M 16x1.5	18.5	27	24	400	BTH10SM16	400	BTH10SM16S4	HBM16
S 12	M 18x1.5	20.0	27	27	400	BTH12SM18	400	BTH12SM18S4	HBM18
S 14	M 20x1.5	22.5	32	30	400	BTH14SM20	400	BTH14SM20S4	HBM20
S 16	M 22x1.5	22.0	32	30	315	BTH16SM22	315	BTH16SM22S4	HBM22
S 20	M 27x2.0	26.5	41	36	315	BTH20SM27	315	BTH20SM27S4	HBM27
S 25	M 33x2.0	31.5	50	46	250	BTH25SM33	250	BTH25SM33S4	HBM33
S 30	M 42x2.0	37.0	60	55	160	BTH30SM42	160	BTH30SM42S4	HBM42
S 38	M 48x2.0	41.5	70	60	160	BTH38SM48	160	BTH38SM48S4	HBM48

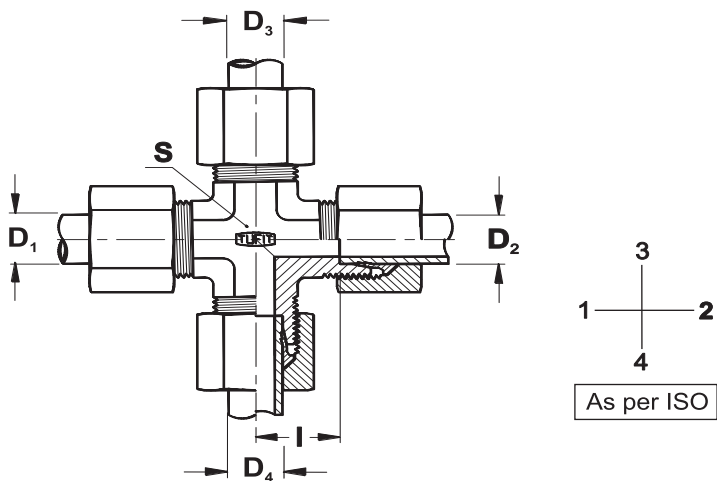
■ Body with Banjo Bolt assembly : Part No.: BTH38SM48R

** Replace S4 by S6 for material AISI-316

* For SS304 & SS316 add Suffix S4 & S6 to Banjo Bolt Part No. MBG112S4

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



Tube End					I (ref.)	S A / F		Steel		Stainless Steel AISI-304**		Brass	
Series	D ₁	D ₂	D ₃	D ₄		Forged	Bar Stock	WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
LL	04	04	04	04	11.0	9	9	100	K04LL	100	K04LLS4	63	K04LLBR
LL	06	06	06	06	9.5	9	11	100	K06LL	100	K06LLS4	63	K06LLBR
LL	08	08	08	08	11.5	12	12	100	K08LL	100	K08LLS4	63	K08LLBR
L	06	06	06	06	12.0	12	12	315	K06L	315	K06LS4	200	K06LBR
L	08	08	08	08	14.0	12	14	315	K08L	315	K08LS4	200	K08LBR
L	10	10	10	10	15.0	14	17	315	K10L	315	K10LS4	200	K10LBR
L	12	12	12	12	17.0	17	19	315	K12L	315	K12LS4	200	K12LBR
L	15	15	15	15	21.0	19	22	315	K15L	315	K15LS4	200	K15LBR
L	18	18	18	18	23.5	24	27	315	K18L	315	K18LS4	200	K18LBR
L	22	22	22	22	27.5	27	30	160	K22L	160	K22LS4	100	K22LBR
L	28	28	28	28	30.5	36	36	160	K28L	160	K28LS4	100	K28LBR
L	35	35	35	35	34.5	41	46	160	K35L	160	K35LS4	100	K35LBR
L	42	42	42	42	40.0	50	55	160	K42L	160	K42LS4	100	K42LBR
S	06	06	06	06	16.0	12	14	630	K06S	630	K06SS4	400	K06SBR
S	08	08	08	08	17.0	14	17	630	K08S	630	K08SS4	400	K08SBR
S	10	10	10	10	17.5	17	19	630	K10S	630	K10SS4	400	K10SBR
S	12	12	12	12	21.5	17	22	630	K12S	630	K12SS4	400	K12SBR
S *	14	14	14	14	22.0	19	22	400	K14S	400	K14SS4	250	K14SBR
S	16	16	16	16	24.5	24	24	400	K16S	400	K16SS4	250	K16SBR
S	20	20	20	20	26.5	27	30	315	K20S	315	K20SS4	200	K20SBR
S	25	25	25	25	30.0	36	36	315	K25S	315	K25SS4	200	K25SBR
S	30	30	30	30	35.5	41	46	315	K30S	315	K30SS4	200	K30SBR
S	38	38	38	38	41.0	50	55	315	K38S	315	K38SS4	200	K38SBR

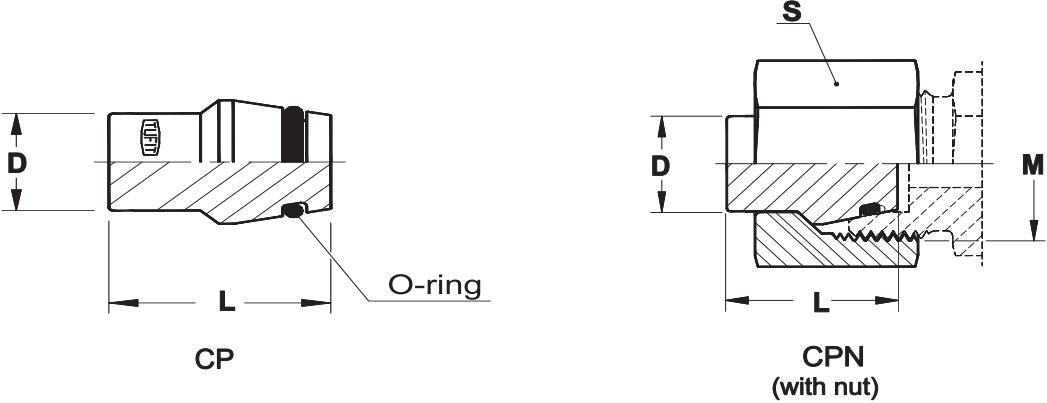
■ For Cross Reducer : Refer to Custom Product section

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference
only, subject to change



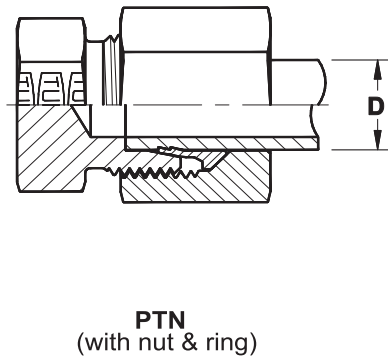
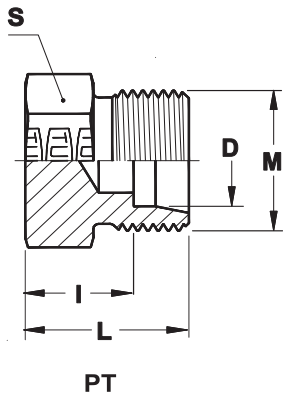
D Tube OD	M Metric	S A / F	L	Steel			StainlessSteel AISI-304**			Brass		
				WP (bar)	CP Part No.	CPN Part No.	WP (bar)	CP Part No.	CPN Part No.	WP (bar)	CP Part No.	CPN Part No.
L 06	M 12x1.5	14	18.5	500	CP06L	CPN06L	315	CP06LS4	CPN06LS4	200	CP06LBR	CPN06LBR
L 08	M 14x1.5	17	18.5	500	CP08L	CPN08L	315	CP08LS4	CPN08LS4	200	CP08LBR	CPN08LBR
L 10	M 16x1.5	19	20.0	500	CP10L	CPN10L	315	CP10LS4	CPN10LS4	200	CP10LBR	CPN10LBR
L 12	M 18x1.5	22	20.5	400	CP12L	CPN12L	315	CP12LS4	CPN12LS4	200	CP12LBR	CPN12LBR
L 15	M 22x1.5	27	20.5	400	CP15L	CPN15L	315	CP15LS4	CPN15LS4	200	CP15LBR	CPN15LBR
L 18	M 26x1.5	32	22.5	400	CP18L	CPN18L	315	CP18LS4	CPN18LS4	200	CP18LBR	CPN18LBR
L 22	M 30x2.0	36	25.0	250	CP22L	CPN22L	160	CP22LS4	CPN22LS4	100	CP22LBR	CPN22LBR
L 28	M 36x2.0	41	25.5	250	CP28L	CPN28L	160	CP28LS4	CPN28LS4	100	CP28LBR	CPN28LBR
L 35	M 45x2.0	50	30.0	250	CP35L	CPN35L	160	CP35LS4	CPN35LS4	100	CP35LBR	CPN35LBR
L 42	M 52x2.0	60	30.0	250	CP42L	CPN42L	160	CP42LS4	CPN42LS4	100	CP42LBR	CPN42LBR
S 06	M 14x1.5	17	18.5	800	CP06S	CPN06S	630	CP06SS4	CPN06SS4	400	CP06SBR	CPN06SBR
S 08	M 16x1.5	19	18.5	800	CP08S	CPN08S	630	CP08SS4	CPN08SS4	400	CP08SBR	CPN08SBR
S 10	M 18x1.5	22	20.0	800	CP10S	CPN10S	630	CP10SS4	CPN10SS4	400	CP10SBR	CPN10SBR
S 12	M 20x1.5	24	20.5	630	CP12S	CPN12S	630	CP12SS4	CPN12SS4	400	CP12SBR	CPN12SBR
S 14 *	M 22x1.5	27	22.5	630	CP14S	CPN14S	630	CP14SS4	CPN14SS4	400	CP14SBR	CPN14SBR
S 16	M 24x1.5	30	23.5	630	CP16S	CPN16S	400	CP16SS4	CPN16SS4	250	CP16SBR	CPN16SBR
S 20	M 30x2.0	36	28.5	420	CP20S	CPN20S	400	CP20SS4	CPN20SS4	250	CP20SBR	CPN20SBR
S 25	M 36x2.0	46	29.0	420	CP25S	CPN25S	400	CP25SS4	CPN25SS4	250	CP25SBR	CPN25SBR
S 30	M 42x2.0	50	30.5	420	CP30S	CPN30S	400	CP30SS4	CPN30SS4	250	CP30SBR	CPN30SBR
S 38	M 52x2.0	60	33.0	420	CP38S	CPN38S	315	CP38SS4	CPN38SS4	200	CP38SBR	CPN38SBR

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating	Viton
Brass	Plain (No Coating)	NBR



D Tube OD	M Metric	I (ref.)	L	S A / F	Steel			Stainless Steel AISI-304**		
					WP (bar)	PT Part No.	PTN Part No.	WP (bar)	PT Part No.	PTN Part No.
L 06	M 12x1.5	7.0	14	12	315	PT06L	PTN06L	315	PT06LS4	PTN06LS4
L 08	M 14x1.5	8.0	15	14	315	PT08L	PTN08L	315	PT08LS4	PTN08LS4
L 10	M 16x1.5	9.0	16	17	315	PT10L	PTN10L	315	PT10LS4	PTN10LS4
L 12	M 18x1.5	10.0	17	19	315	PT12L	PTN12L	315	PT12LS4	PTN12LS4
L 15	M 22x1.5	11.0	18	24	315	PT15L	PTN15L	315	PT15LS4	PTN15LS4
L 18	M 26x1.5	11.5	19	27	315	PT18L	PTN18L	315	PT18LS4	PTN18LS4
L 22	M 30x2.0	13.5	21	32	160	PT22L	PTN22L	160	PT22LS4	PTN22LS4
L 28	M 36x2.0	14.5	22	41	160	PT28L	PTN28L	160	PT28LS4	PTN28LS4
L 35	M 45x2.0	14.5	25	46	160	PT35L	PTN35L	160	PT35LS4	PTN35LS4
L 42	M 52x2.0	16.0	27	55	160	PT42L	PTN42L	160	PT42LS4	PTN42LS4
S 06	M 14x1.5	11.0	18	14	630	PT06S	PTN06S	630	PT06SS4	PTN06SS4
S 08	M 16x1.5	13.0	20	17	630	PT08S	PTN08S	630	PT08SS4	PTN08SS4
S 10	M 18x1.5	12.5	20	19	630	PT10S	PTN10S	630	PT10SS4	PTN10SS4
S 12	M 20x1.5	14.5	22	22	630	PT12S	PTN12S	630	PT12SS4	PTN12SS4
S 14*	M 22x1.5	16.0	24	24	630	PT14S	PTN14S	630	PT14SS4	PTN14SS4
S 16	M 24x1.5	15.5	24	27	400	PT16S	PTN16S	400	PT16SS4	PTN16SS4
S 20	M 30x2.0	17.5	28	32	400	PT20S	PTN20S	400	PT20SS4	PTN20SS4
S 25	M 36x2.0	20.0	32	41	400	PT25S	PTN25S	400	PT25SS4	PTN25SS4
S 30	M 42x2.0	20.5	34	46	400	PT30S	PTN30S	400	PT30SS4	PTN30SS4
S 38	M 52x2.0	23.0	39	55	315	PT38S	PTN38S	315	PT38SS4	PTN38SS4

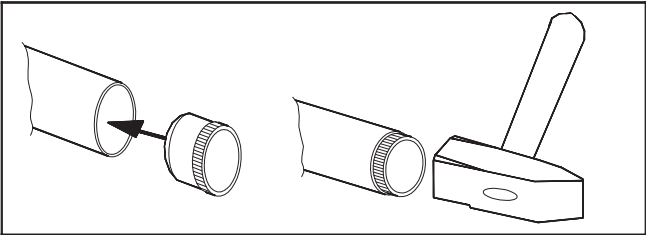
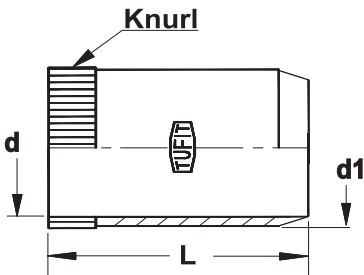
* Not as per ISO 8434
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Surface Protection	
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating)



ASSEMBLY INSTRUCTIONS
Drive TIM into tube end



Used for Tube ID	d	d ₁	L	Steel Part No.	Stainless Steel AISI-304** Part No.	Brass Part No.
4	2.6	3.8	14.0	TIM04	TIM04S4	TIM04BR
5	3.6	4.8	14.0	TIM05	TIM05S4	TIM05BR
6	4.6	5.8	14.0	TIM06	TIM06S4	TIM06BR
7	5.6	6.8	15.5	TIM07	TIM07S4	TIM07BR
8	6.6	7.8	15.5	TIM08	TIM08S4	TIM08BR
9	7.6	8.8	15.5	TIM09	TIM09S4	TIM09BR
10	8.6	9.8	15.5	TIM10	TIM10S4	TIM10BR
12	10.2	11.8	17.0	TIM12	TIM12S4	TIM12BR
13	11.2	12.8	17.0	TIM13	TIM13S4	TIM13BR
14	12.2	13.8	17.0	TIM14	TIM14S4	TIM14BR
15	13.2	14.8	20.0	TIM15	TIM15S4	TIM15BR
16	14.2	15.8	20.0	TIM16	TIM16S4	TIM16BR
17	15.2	16.8	20.0	TIM17	TIM17S4	TIM17BR
18	16.2	17.8	20.0	TIM18	TIM18S4	TIM18BR
19	17.2	18.8	16.0	TIM19	TIM19S4	TIM19BR
20	18.2	19.8	21.5	TIM20	TIM20S4	TIM20BR
21	19.2	20.8	21.5	TIM21	TIM21S4	TIM21BR
22	20.2	21.8	23.5	TIM22	TIM22S4	TIM22BR
24	22.2	23.8	23.5	TIM24	TIM24S4	TIM24BR
25	23.2	24.8	23.5	TIM25	TIM25S4	TIM25BR
26	24.2	25.8	23.5	TIM26	TIM26S4	TIM26BR
27	25.2	26.8	23.5	TIM27	TIM27S4	TIM27BR
30	27.8	29.8	26.5	TIM30	TIM30S4	TIM30BR
31	28.8	30.8	26.5	TIM31	TIM31S4	TIM31BR
32	29.8	31.8	26.5	TIM32	TIM32S4	TIM32BR
33	30.8	32.8	26.5	TIM33	TIM33S4	TIM33BR
38	35.8	37.8	21.0	TIM38	TIM38S4	TIM38BR

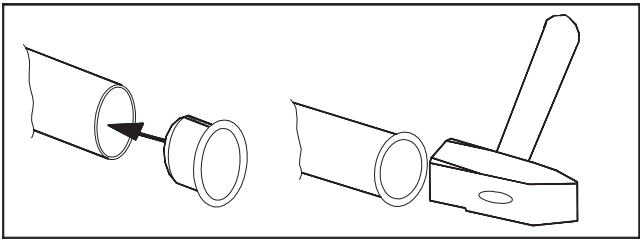
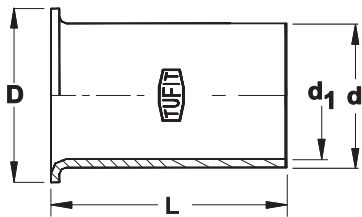
- Step 1 – Insert support sleeve into tube up to knurl
Step 2 – Drive knurled end of support into tube
Step 3 – Ensure that support sleeve is flush with tube end
Step 4 – Pre-set progressive ring following one of the pre-setting methods. The support sleeve prevents collapse of tube

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Dimensions and pressure for reference only, subject to change



ASSEMBLY INSTRUCTIONS
Drive TIP into tube end

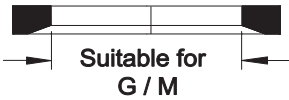


Used For Tube OD	d	d ₁	D	L	Brass Part No.
4	2.0	1.30	3.5	8	TIP04020BR
4	2.5	1.70	4.0	8	TIP04025BR
5	3.0	2.20	5.0	14	TIP05030BR
5	4.0	3.20	5.0	14	TIP05040BR
6	3.0	2.20	5.0	14	TIP06030BR
6	4.0	3.20	5.0	14	TIP06040BR
6	5.0	4.00	6.0	14	TIP06050BR
8	4.0	3.20	6.6	14	TIP08040BR
8	5.0	4.00	8.0	14	TIP08050BR
8	6.0	5.00	8.0	15	TIP08060BR
10	5.0	4.00	8.5	15	TIP10050BR
10	6.0	4.00	8.5	15	TIP10060BR
10	8.0	6.70	10.0	15	TIP10080BR
12	8.0	6.70	12.0	15	TIP12080BR
12	9.0	7.70	12.0	15	TIP12090BR
12	10.0	8.70	12.0	15	TIP12100BR
15	10.0	8.70	12.0	15	TIP15100BR
15	12.0	10.70	14.0	15	TIP15120BR
15	12.5	11.20	14.8	15	TIP15125BR
16	10.0	08.70	12.0	15	TIP16100BR
16	12.5	11.20	14.8	15	TIP16125BR
18	14.0	12.70	17.8	15	TIP18140BR
18	16.0	14.70	17.8	20	TIP18160BR
20	16.0	14.70	17.8	20	TIP20160BR
22	18.0	16.70	21.8	16	TIP22180BR

- Step 1 – Insert support sleeve into tube
Step 2 – Ensure that support sleeve is flush with tube end
Step 3 – Pre-set progressive ring following one of the pre-setting methods. The support sleeve prevents collapse of tube

These Insert are made only in Brass material

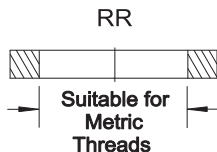
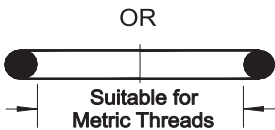
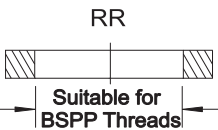
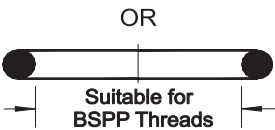
Material	Surface Protection
Brass	Plain (No Coating)



Beveled side to face port

BSPP			METRIC		
Thread Size	NBR Part No.	VITON Part No.	Thread Size	NBR Part No.	VITON Part No.
G 1/8 A	ESNG018	ESVG018	M 08×1	ESNM08	ESVM08
G 1/4 A	ESNG014	ESVG014	M 10×1	ESNM10	ESVM10
G 3/8 A	ESNG038	ESVG038	M 12×1.5	ESNM12	ESVM12
G 1/2 A	ESNG012	ESVG012	M 14×1.5	ESNM14	ESVM14
G 3/4 A	ESNG034	ESVG034	M 16×1.5	ESNM16	ESVM16
G 1 A	ESNG001	ESVG001	M 18×1.5	ESNM18	ESVM18
G 1 1/4 A	ESNG114	ESVG114	M 20×1.5	ESNM20	ESVM20
G 1 1/2 A	ESNG112	ESVG112	M 22×1.5	ESNM22	ESVM22
-	-	-	M 26×1.5	ESNM26	ESVM26
-	-	-	* M 27×2	ESNM27	ESVM27
-	-	-	M 33×2	ESNM33	ESVM33
-	-	-	M 42×2	ESNM42	ESVM42
-	-	-	M 48×2	ESNM48	ESVM48

* For Thread size M27×2, use ESNM26 / ESVM26



ISO1179-1

BSPP (Male)			
Thread Size	NBR Part No.	VITON Part No.	Retaining Ring* Part No.
G 1/8 A	ORNG018	ORVG018	RRG018
G 1/4 A	ORNG014	ORVG014	RRG014
G 3/8 A	ORNG038	ORVG038	RRG038
G 1/2 A	ORNG012	ORVG012	RRG012
G 3/4 A	ORNG034	ORVG034	RRG034
G 1 A	ORNG001	ORVG001	RRG001
G 1 1/4 A	ORNG114	ORVG114	RRG114
G 1 1/2 A	ORNG112	ORVG112	RRG112

ISO 9974-1

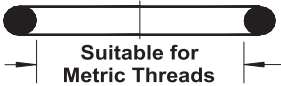
METRIC (Male)			
Thread Size	NBR Part No.	VITON Part No.	Retaining Ring* Part No.
M 08×1	ORNM08	ORVM08	RRM08
M 10×1	ORNM10	ORVM10	RRM10
M 12×1.5	ORNM12	ORVM12	RRM12
M 14×1.5	ORNM14	ORVM14	RRM14
M 16×1.5	ORNM16	ORVM16	RRM16
M 18×1.5	ORNM18	ORVM18	RRM18
M 20×1.5	ORNM20	ORVM20	RRM20
M 22×1.5	ORNM22	ORVM22	RRM22
M 24×1.5	ORNM24	ORVM24	RRM24
M 26×1.5	ORNM26	ORVM26	RRM26
M 27×2	ORNM27	ORVM27	RRM27
M 33×2	ORNM33	ORVM33	RRM33
M 36×2	ORNM36	ORVM36	RRM36
M 42×2	ORNM42	ORVM42	RRM42
M 45×2	ORNM45	ORVM45	RRM45
M 48×2	ORNM48	ORVM48	RRM48

“G” Thread : ISO 228-1

NBR :-Nitrile compound 90-durometer (Standard)
VITON:-Fluorocarbon compound 90-durometer (Optional)
Retaining Ring: Steel (Standard) duly Zinc Plated.
*Retaining Ring: S.S. add Suffix S4 to Part No. RRG112S4

“M” Thread : ISO 261

Dimensions and pressure for reference only, subject to change



used with Metric SDSFM

Thread Size Metric	NBR Part No.	VITON Part No.
M 08×1	ORN08ISO	ORVM08ISO
M 10×1	ORN10ISO	ORVM10ISO
M 12×1.5	ORN12ISO	ORVM12ISO
M 14×1.5	ORN14ISO	ORVM14ISO
M 16×1.5	ORN16ISO	ORVM16ISO
M 18×1.5	ORN18ISO	ORVM18ISO
M 22×1.5	ORN22ISO	ORVM22ISO
M 27×1.5	ORN27ISO	ORVM27ISO
M 30×2	ORN30ISO	ORVM30ISO
M 33×2	ORN33ISO	ORVM33ISO
M 38×2	ORN38ISO	ORVM38ISO
M 42×2	ORN42ISO	ORVM42ISO
M 48×2	ORN48ISO	ORVM48ISO
M 60×2	ORN60ISO	ORVM60ISO

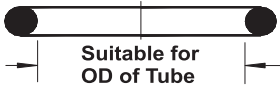
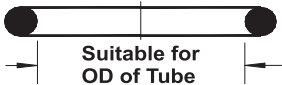
* M30X2 is not a standard ISO 6149 size.

used with UN/UNF thread: SDSFU

SAE Dash Size	Thread Size UN/UNF	NBR Part No.	VITON Part No.
2	5/16 -24	ORNU0516	ORVU0516
3	3/8 -24	ORNU0038	ORVU0038
4	7/16 -20	ORNU0716	ORVU0716
5	1/2 -20	ORNU0012	ORVU0012
6	9/16 -18	ORNU0916	ORVU0916
8	3/4 -16	ORNU0034	ORVU0034
10	7/8 -14	ORNU0078	ORVU0078
12	1 1/16-12	ORNU1116	ORVU1116
14	1 3/16-12	ORNU1316	ORVU1316
16	1 5/16-12	ORNU1516	ORVU1516
20	1 5/8 -12	ORNU0158	ORVU0158
24	1 7/8 -12	ORNU0178	ORVU0178
32	2 1/2 -12	ORNU0212	ORVU0212
-	-	-	-

TUFIT WDOR - O-ring for Weld Nipple

SWOR - O-ring for 24° Swivel End



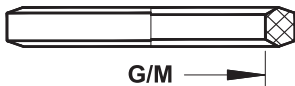
D Tube OD	NBR Part No.	VITON Part No.
L 06	WDORN06L	WDORV06L
L 08	WDORN08L	WDORV08L
L 10	WDORN10L	WDORV10L
L 12	WDORN12L	WDORV12L
L 15	WDORN15L	WDORV15L
L 18	WDORN18L	WDORV18L
L 22	WDORN22L	WDORV22L
L 28	WDORN28L	WDORV28L
L 35	WDORN35L	WDORV35L
L 42	WDORN42L	WDORV42L
S 06	WDORN06S	WDORV06S
S 08	WDORN08S	WDORV08S
S 10	WDORN10S	WDORV10S
S 12	WDORN12S	WDORV12S
S 14	WDORN14S	WDORV14S
S 16	WDORN16S	WDORV16S
S 20	WDORN20S	WDORV20S
S 25	WDORN25S	WDORV25S
S 30	WDORN30S	WDORV30S
S 38	WDORN38S	WDORV38S

used with: WDNP & WDENP

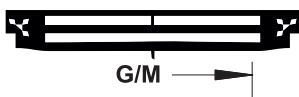
Dimensions and pressure for reference only, subject to change

D Tube OD	NBR Part No.	VITON Part No.
L 06	SWORN06L	SWORV06L
L 08	SWORN08L	SWORV08L
L 10	SWORN10L	SWORV10L
L 12	SWORN12L	SWORV12L
L 15	SWORN15L	SWORV15L
L 18	SWORN18L	SWORV18L
L 22	SWORN22L	SWORV22L
L 28	SWORN28L	SWORV28L
L 35	SWORN35L	SWORV35L
L 42	SWORN42L	SWORV42L
S 06	SWORN06S	SWORV06S
S 08	SWORN08S	SWORV08S
S 10	SWORN10S	SWORV10S
S 12	SWORN12S	SWORV12S
S 14	SWORN14S	SWORV14S
S 16	SWORN16S	SWORV16S
S 20	SWORN20S	SWORV20S
S 25	SWORN25S	SWORV25S
S 30	SWORN30S	SWORV30S
S 38	SWORN38S	SWORV38S

used with:SDSFM,SWSDFSM, ALNBTHM, ALNBTHG



SR (Low / Medium Pressure)



SRH (High Pressure)

for Low pressure (BELG)		for Medium pressure (BEMG/BTMG)			for High pressure(BEHG/BTHG)	
Thread Size	Steel Part No.	Steel Part No.	Stainless Steel AISI-304 Part No.	Brass Part No.	Steel Part No.	Stainless Steel AISI-304** Part No.
G 1/8 A	SRG018	SRG018	SRG018S4	SRG018BR	SRHG018	SRHG018S4
G 1/4 A	SRG014	SRG014	SRG014S4	SRG014BR	SRHG014	SRHG014S4
G 3/8 A	SRG038	SRG038	SRG038S4	SRG038BR	SRHG038	SRHG038S4
G 1/2 A	SRG012	SRG012	SRG012S4	SRG012BR	SRHG012	SRHG012S4
G 3/4 A	SRG034	SRG034	SRG034S4	-	SRHG034	SRHG034S4
G 1 A	-	SRG001	SRG001S4	-	SRHG001	SRHG001S4
G 1 1/4 A	-	SRG114	SRG114S4	-	SRHG114	SRHG114S4
G 1 1/2 A	-	SRG112	SRG112S4	-	SRHG112	SRHG112S4

for Low pressure (BELM)		for Medium pressure (BEMM/BTMM)		for High pressure(BEHM/BTHM)	
Thread Size	Steel Part No.	Steel Part No.	Stainless Steel AISI-304** Part No.	Steel Part No.	Stainless Steel AISI-304** Part No.
M 08×1	SRM08	SRM08	SRM08S4	SRHM08	SRHM08S4
M 10×1	SRM10	SRM10	SRM10S4	SRHM10	SRHM10S4
M 12×1.5	SRM12	SRM12	SRM12S4	SRHM12	SRHM12S4
M 14×1.5	SRM14	SRM14	SRM14S4	SRHM14	SRHM14S4
M 16×1.5	SRM16	SRM16	SRM16S4	SRHM16	SRHM16S4
M 18×1.5	SRM18	SRM18	SRM18S4	SRHM18	SRHM18S4
M 20×1.5	SRM20	SRM20	SRM20S4	SRHM20	SRHM20S4
M 22×1.5	SRM22	SRM22	SRM22S4	SRHM22	SRHM22S4
M 26×1.5	SRM26	SRM26	SRM26S4	SRHM26	SRHM26S4
M 27×2	SRM27	SRM27	SRM27S4	SRHM27	SRHM27S4
M 33×2	-	SRM33	SRM33S4	SRHM33	SRHM33S4
M 42×2	-	SRM42	SRM42S4	SRHM42	SRHM42S4
M 48×2	-	SRM48	SRM48S4	SRHM48	SRHM48S4



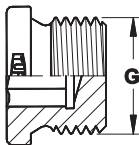
Thread Size	NBR Part No.	VITON Part No.
G 1/4 A	PGSRNG014	PGSRVG014
G 3/8 A	PGSRNG038	PGSRVG038
G 1/2 A	PGSRNG012	PGSRVG012

Dimensions and pressure for reference only, subject to change

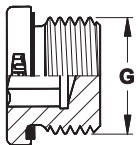


For use with ISO 1179 Port

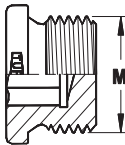
Dash Size	Thread Size	NBR Part No.
2	G 1/8 A	BSNG018
4	G 1/4 A	BSNG014
6	G 3/8 A	BSNG038
8	G 1/2 A	BSNG012
10	G 5/8 A	BSNG058
12	G 3/4 A	BSNG034
16	G 1 A	BSNG001
20	G 1 1/4 A	BSNG114
24	G 1 1/2 A	BSNG112



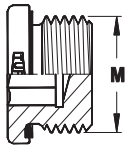
BPBG



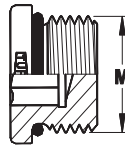
BPEG



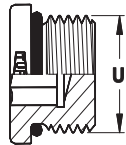
BPBM



BPEM



BPFM

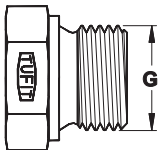


BPFU

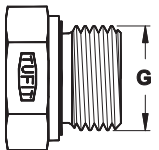
BSPP		
Thread Size	Part No.	Part No.
G 1/8 A	BPBG018	BPEG018
G 1/4 A	BPBG014	BPEG014
G 3/8 A	BPBG038	BPEG038
G 1/2 A	BPBG012	BPEG012
G 3/4 A	BPBG034	BPEG034
G 1 A	BPBG001	BPEG001
G 1 1/4 A	BPBG114	BPEG114
G 1 1/2 A	BPBG112	BPEG112

METRIC				UN/UNF-2A	
Thread Size	Part No.	Part No.	Part No.	Thread Size	Part No.
M 10×1	BPBM10	BPEM10	BPFM10	5/16 -24	BPFU0516
M 12×1.5	BPBM12	BPEM12	BPFM12	3/8 -24	BPFU0038
M 14×1.5	BPBM14	BPEM14	BPFM14	7/16 -20	BPFU0716
M 16×1.5	BPBM16	BPEM16	BPFM16	1/2 -20	BPFU0012
M 18×1.5	BPBM18	BPEM18	BPFM18	9/16 -18	BPFU0916
M 20×1.5	BPBM20	BPEM20	BPFM20	3/4 -16	BPFU0034
M 22×1.5	BPBM22	BPEM22	BPFM22	7/8 -14	BPFU0078
M 26×1.5	BPBM26	BPEM26	BPFM26	1 1/16-12	BPFU1116
M 27×2	BPBM27	BPEM27	BPFM27	1 3/16-12	BPFU1316
M 33×2	BPBM33	BPEM33	BPFM33	1 5/16-12	BPFU1516
M 42×2	BPBM42	BPEM42	BPFM42	1 5/8 -12	BPFU0158
M 48×2	BPBM48	BPEM48	BPFM48	-	-

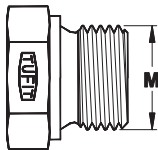
Example: Part No:
SS304 : BPBG112S4 BPBM48S4
SS316 : BPEG0112S6 BPEM48S6
Brass BPBG112BR BPFU0158BR



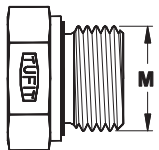
HBPBG



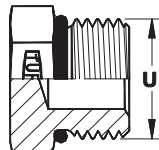
HBPEG



HBPBM



HBPEM



HBPFU

BSPP		
Thread Size	Part No.	Part No.
G 1/8 A	HBPBG018	HBPEG018
G 1/4 A	HBPBG014	HBPEG014
G 3/8 A	HBPBG038	HBPEG038
G 1/2 A	HBPBG012	HBPEG012
G 3/4 A	HBPBG034	HBPEG034
G 1 A	HBPBG001	HBPEG001
G 1 1/4 A	HBPBG114	HBPEG114
G 1 1/2 A	HBPBG112	HBPEG112

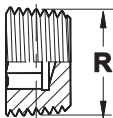
METRIC			UN/UNF-2A	
Thread Size	Part No.	Part No.	Thread Size	Part No.
M 10×1	HBPBM10	HBPEM10	5/16 -24	HBPFU0516
M 12×1.5	HBPBM12	HBPEM12	3/8 -24	HBPFU0038
M 14×1.5	HBPBM14	HBPEM14	7/16 -20	HBPFU0716
M 16×1.5	HBPBM16	HBPEM16	1/2 -20	HBPFU0012
M 18×1.5	HBPBM18	HBPEM18	9/16 -18	HBPFU0916
M 20×1.5	HBPBM20	HBPEM20	3/4 -16	HBPFU0034
M 22×1.5	HBPBM22	HBPEM22	7/8 -14	HBPFU0078
M 26×1.5	HBPBM26	HBPEM26	1 1/16-12	HBPFU1116
M 27×2	HBPBM27	HBPEM27	1 3/16-12	HBPFU1316
M 33×2	HBPBM33	HBPEM33	1 5/16-12	HBPFU1516
M 42×2	HBPBM42	HBPEM42	1 5/8 -12	HBPFU0158
M 48×2	HBPBM48	HBPEM48	-	-

Example: Part No:
SS304 : HBPBG112S4
SS316 : HBPBEG112S6
Brass : HBPBEG112BR

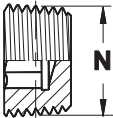
Example: Part No:
SS304 : HBPBM48S4
SS316 : HBPEM48S6
Brass : HBPFU0158BR

Dimensions and pressure for reference
only, subject to change

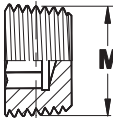
Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR



BPR



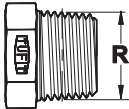
BPN



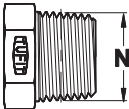
BPM

BSPT		NPT		METRIC TAPER	
Thread Size	Part No.	Thread Size	Part No.	Thread Size	Part No.
R 1/8 tap.	BPR018	N 1/8	BPN018	M 08×1.0 keg	BPM08
R 1/4 tap.	BPR014	N 1/4	BPN014	M 10×1.5 keg	BPM10
R 3/8 tap.	BPR038	N 3/8	BPN038	M 12×1.5 keg	BPM12
R 1/2 tap.	BPR012	N 1/2	BPN012	M 14×1.5 keg	BPM14
R 3/4 tap.	BPR034	N 3/4	BPN034	M 16×1.5 keg	BPM16
R 1 tap.	BPR001	N 1	BPN001	M 18×1.5 keg	BPM18
R 1 1/4 tap.	BPR114	N 1 1/4	BPN114	M 20×1.5 keg	BPM20
R 1 1/2 tap.	BPR112	N 1 1/2	BPN112	M 22×1.5 keg	BPM22
-	-	-	-	M 26×1.5 keg	BPM26
				M 27×2.0 keg	BPM27
				M 30×2.0 keg	BPM30
				M 33×2.0 keg	BPM33
				M 42×2.0 keg	BPM42
				M 48×2.0 keg	BPM48
				M 60×2.0 keg	BPM60

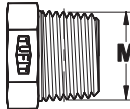
Example: Part No:
SS304 : BPR018S4 BPN018S4
SS316 : BPR018S6 BPN112S6
Brass : BPR018BR BPM60BR



HBPR



HBPN



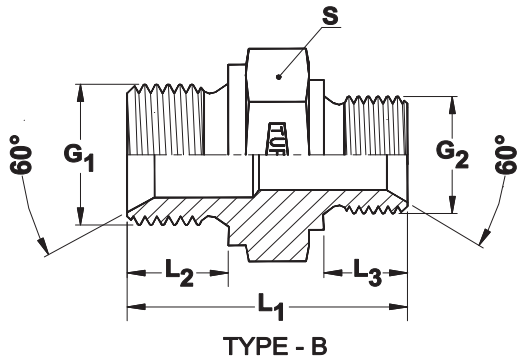
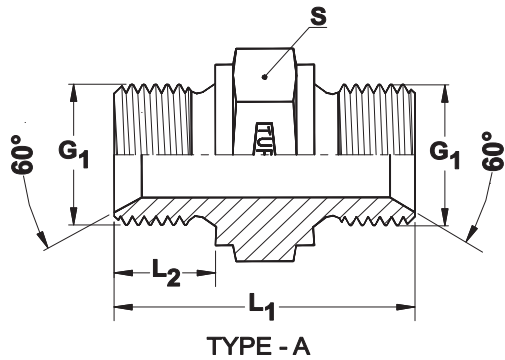
HBPM

BSPT		NPT		METRIC TAPER	
Thread Size	Part No.	Thread Size	Part No.	Thread Size	Part No.
R 1/8 tap.	HBPR018	N 1/8	HBPN018	M 08×1.0 keg	HBPM08
R 1/4 tap.	HBPR014	N 1/4	HBPN014	M 10×1.5 keg	HBPM10
R 3/8 tap.	HBPR038	N 3/8	HBPN038	M 12×1.5 keg	HBPM12
R 1/2 tap.	HBPR012	N 1/2	HBPN012	M 14×1.5 keg	HBPM14
R 3/4 tap.	HBPR034	N 3/4	HBPN034	M 16×1.5 keg	HBPM16
R 1 tap.	HBPR001	N 1	HBPN001	M 18×1.5 keg	HBPM18
R 1 1/4 tap.	-	N 1 1/4	HBPN114	M 20×1.5 keg	HBPM20
R 1 1/2 tap.	-	N 1 1/2	HBPN112	M 22×1.5 keg	HBPM22
-	-	-	-	M 26×1.5 keg	HBPM26
				M 27×2.0 keg	HBPM27
				M 30×2.0 keg	HBPM30
				M 33×2.0 keg	HBPM33
				M 42×2.0 keg	HBPM42
				M 48×2.0 keg	HBPM48
				M 60×2.0 keg	HBPM60

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton
Brass	Plain (No Coating)	NBR

Example : Part No
SS304 : HBPR018S4 HBPN112S4
SS316 HBPR018S6 HBPM60S6
Brass : HBPR018BR HBPM60BR

Dimensions and pressure for reference only, subject to change



Thread Size		L ₁	L ₂	L ₃	S A / F	Type A/B	Steel		Stainless Steel AISI-304**	
G ₁	G ₂						WP (bar)	Part No.	WP (bar)	Part No.
G 1/8 A	G 1/8 A	24.0	8	8	14	A	350	HAG018018	350	HAG018018S4
G 1/4 A	G 1/8 A	28.0	11	8	19	B	350	HAG014018	350	HAG014018S4
G 1/4 A	G 1/4 A	32.0	11	11	19	A	350	HAG014014	350	HAG014014S4
G 3/8 A	G 1/4 A	33.0	12	11	22	B	350	HAG038014	350	HAG038014S4
G 3/8 A	G 3/8 A	35.0	12	12	22	A	350	HAG038038	350	HAG038038S4
G 1/2 A	G 1/4 A	37.0	14	11	27	B	200	HAG012014	200	HAG012014S4
G 1/2 A	G 3/8 A	38.0	14	12	27	B	200	HAG012038	200	HAG012038S4
G 1/2 A	G 1/2 A	41.0	14	14	27	A	200	HAG012012	200	HAG012012S4
G 5/8 A	G 1/2 A	43.0	16	14	30	B	200	HAG058012	200	HAG058012S4
G 5/8 A	G 5/8 A	45.0	16	16	30	A	200	HAG058058	200	HAG058058S4
G 3/4 A	G 1/4 A	39.0	16	11	32	B	200	HAG034014	200	HAG034014S4
G 3/4 A	G 3/8 A	41.0	16	12	32	B	200	HAG034038	200	HAG034038S4
G 3/4 A	G 1/2 A	43.0	16	14	32	B	200	HAG034012	200	HAG034012S4
G 3/4 A	G 5/8 A	45.0	16	16	32	B	200	HAG034058	200	HAG034058S4
G 3/4 A	G 3/4 A	45.0	16	16	32	A	200	HAG034034	200	HAG034034S4
G 1 A	G 1/2 A	47.0	19	14	41	B	120	HAG001012	120	HAG001012S4
G 1 A	G 5/8 A	49.0	19	16	41	B	120	HAG001058	120	HAG001058S4
G 1 A	G 3/4 A	49.0	19	16	41	B	120	HAG001034	120	HAG001034S4
G 1 A	G 1 A	52.0	19	19	41	A	120	HAG001001	120	HAG001001S4
G 1 1/4 A	G 3/4 A	57.0	20	16	50	B	105	HAG114034	105	HAG114034S4
G 1 1/4 A	G 1 A	60.0	20	19	50	B	105	HAG114001	105	HAG114001S4
G 1 1/4 A	G 1 1/4 A	61.0	20	20	50	A	105	HAG114114	105	HAG114114S4
G 1 1/2 A	G 1 A	64.0	23	19	55	B	105	HAG112001	105	HAG112001S4
G 1 1/2 A	G 1 1/4 A	65.0	23	20	55	B	105	HAG112114	105	HAG112114S4
G 1 1/2 A	G 1 1/2 A	67.0	23	23	55	A	105	HAG112112	105	HAG112112S4
G 2 A	G 1 1/2 A	73.0	25	23	70	B	70	HAG002112	70	HAG002112S4
G 2 A	G 2 A	76.0	25	23	70	A	70	HAG002002	70	HAG002002S4

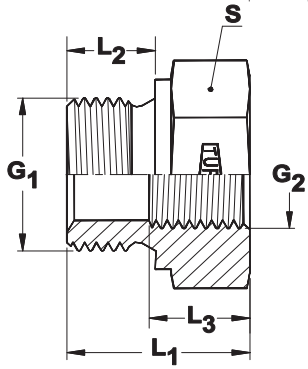
* Other thread combinations in BSPxBSP or MMxMM or BSPxMM are also available on request
 * Use suitable Copper Washer
 * Also available with Elastomeric Seal, Part No. HAGE

** Replace S4 by S6 for material AISI-316

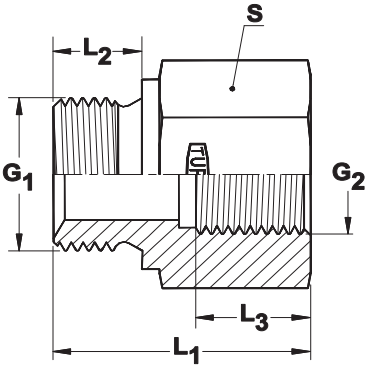
Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken

Dimensions and pressure for reference only, subject to change

Form - B



TYPE-A



TYPE-B

Thread Size		L ₁	L ₂	L ₃	S A/F	Steel		Stainless Steel AISI-304**		Brass	
G ₁ Male	G ₂ Female					WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
G 1/8 A	G 1/4	31.0	8	17.0	19	400	MFAB018014	400	MFAB018014S4	250	MFAB018014BR
G 1/8 A	G 3/8	32.0	8	17.0	24	400	MFAB018038	400	MFAB018038S4	250	MFAB018038BR
G 1/4 A	G 1/8	28.0	12	12.0	19	400	MFAB014018	400	MFAB014018S4	250	MFAB014018BR
G 1/4 A	G 3/8	36.0	12	17.0	24	400	MFAB014038	400	MFAB014038S4	250	MFAB014038BR
G 1/4 A	G 1/2	40.0	12	20.0	30	400	MFAB014012	400	MFAB014012S4	250	MFAB014012BR
G 1/4 A	G 3/4	43.0	12	22.0	36	315	MFAB014034	315	MFAB014034S4	200	MFAB014034BR
G 3/8 A	G 1/8	23.0	12	8.0	22	400	MFAB038018	400	MFAB038018S4	250	MFAB038018BR
G 3/8 A	G 1/4	36.0	12	17.0	22	400	MFAB038014	400	MFAB038014S4	250	MFAB038014BR
G 3/8 A	G 1/2	41.0	12	20.0	30	400	MFAB038012	400	MFAB038012S4	250	MFAB038012BR
G 3/8 A	G 3/4	44.0	12	22.0	36	315	MFAB038034	315	MFAB038034S4	200	MFAB038034BR
G 1/2 A	G 1/8	24.0	14	8.0	27	400	MFAB012018	400	MFAB012018S4	250	MFAB012018BR
G 1/2 A	G 1/4	24.0	14	12.0	27	315	MFAB012014	315	MFAB012014S4	200	MFAB012014BR
G 1/2 A	G 3/8	36.0	14	17.0	27	315	MFAB012038	315	MFAB012038S4	200	MFAB012038BR
G 1/2 A	G 3/4	46.0	14	22.0	36	315	MFAB012034	315	MFAB012034S4	200	MFAB012034BR
G 1/2 A	G 1	49.0	14	24.5	41	160	MFAB012001	160	MFAB012001S4	200	MFAB012001BR
G 1/2 A	G 1 1/4	53.0	14	26.5	55	315	MFAB012114	315	MFAB012114S4	-	MFAB012114BR
G 3/4 A	G 1/4	26.0	16	12.0	32	315	MFAB034014	315	MFAB034014S4	200	MFAB034014BR
G 3/4 A	G 3/8	26.0	16	12.0	32	315	MFAB034038	315	MFAB034038S4	200	MFAB034038BR
G 3/4 A	G 1/2	41.0	16	20.0	32	315	MFAB034012	315	MFAB034012S4	200	MFAB034012BR
G 3/4 A	G 1	51.0	16	24.5	41	160	MFAB034001	160	MFAB034001S4	200	MFAB034001BR
G 3/4 A	G 1 1/4	55.0	16	26.5	55	160	MFAB034114	160	MFAB034114S4	-	MFAB034114BR
G 3/4 A	G 1 1/2	57.0	16	28.5	60	315	MFAB034112	315	MFAB034112S4	-	MFAB034112BR

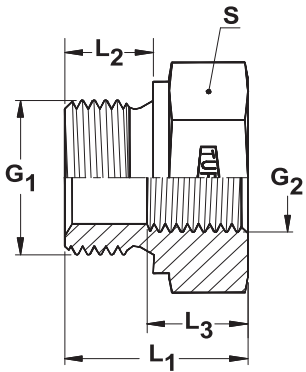
Contd....P - 87

** Replace S4 by S6 for material AISI-316

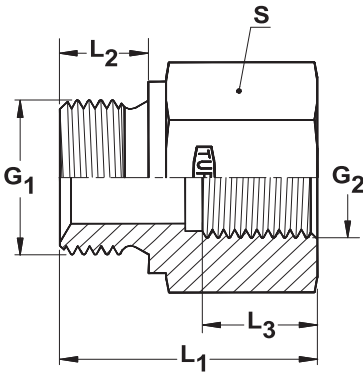
Dimensions and pressure for reference only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Form - B



TYPE-A



TYPE-B

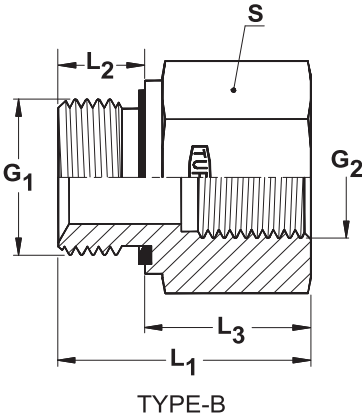
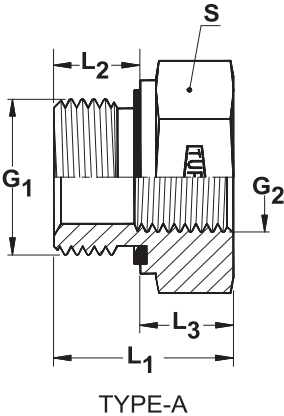
Thread Size		L ₁	L ₂	L ₃	S A/F	Steel		Stainless Steel AISI-304**		Brass	
G ₁ Male	G ₂ Female					WP (bar)	Part No.	WP (bar)	Part No.	WP (bar)	Part No.
G 1 A	G 1/4	29.0	18	12.0	41	315	MFAB001014	315	MFAB001014S4	-	MFAB001014BR
G 1 A	G 3/8	29.0	18	12.0	41	315	MFAB001038	315	MFAB001038S4	200	MFAB001038BR
G 1 A	G 1/2	29.0	18	14.0	41	315	MFAB001012	315	MFAB001012S4	200	MFAB001012BR
G 1 A	G 3/4	47.0	18	22.0	41	160	MFAB001034	160	MFAB001034S4	200	MFAB001034BR
G 1 A	G 1 1/4	57.0	18	26.5	55	160	MFAB001114	160	MFAB001114S4	100	MFAB001114BR
G 1 A	G 1 1/2	59.0	18	28.5	60	160	MFAB001112	160	MFAB001112S4	100	MFAB001112BR
G 1 1/4 A	G 1/2	32.0	20	14.0	50	160	MFAB114012	160	MFAB114012S4	100	MFAB114012BR
G 1 1/4 A	G 3/4	32.0	20	16.0	50	160	MFAB114034	160	MFAB114034S4	100	MFAB114034BR
G 1 1/4 A	G 1	52.0	20	24.5	50	160	MFAB114001	160	MFAB114001S4	100	MFAB114001BR
G 1 1/4 A	G 1 1/2	60.0	20	28.5	60	160	MFAB114112	160	MFAB114112S4	100	MFAB114112BR
G 1 1/2 A	G 1/2	36.0	22	14.0	55	160	MFAB112012	160	MFAB112012S4	100	MFAB112012BR
G 1 1/2 A	G 3/4	36.0	22	16.0	55	160	MFAB112034	160	MFAB112034S4	100	MFAB112034BR
G 1 1/2 A	G 1	36.0	22	18.0	55	160	MFAB112001	160	MFAB112001S4	100	MFAB112001BR
G 1 1/2 A	G 1 1/4	58.0	22	26.5	55	160	MFAB112114	160	MFAB112114S4	100	MFAB112114BR
G 2 A	G 1 1/2	62.0	24	28.5	70	160	MFAB002112	-	MFAB002112S4	-	MFAB002112BR

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken
Brass	Plain (No Coating)

Form - E



Thread Size		L ₁	L ₂	L ₃	S A/F	Steel		Stainless Steel AISI-304**	
G ₁ Male	G ₂ Female					WP (bar)	Part No.	WP (bar)	Part No.
G 1/8 A	G 1/4	31.0	8	17.0	19	400	MFAE018014	400	MFAE018014S4
G 1/8 A	G 3/8	32.0	8	17.0	24	400	MFAE018038	400	MFAE018038S4
G 1/4 A	G 1/8	28.0	12	12.0	19	400	MFAE014018	400	MFAE014018S4
G 1/4 A	G 3/8	36.0	12	17.0	24	400	MFAE014038	400	MFAE014038S4
G 1/4 A	G 1/2	40.0	12	20.0	30	400	MFAE014012	400	MFAE014012S4
G 1/4 A	G 3/4	43.0	12	22.0	36	400	MFAE014034	400	MFAE014034S4
G 3/8 A	G 1/8	23.0	12	8.0	22	400	MFAE038018	400	MFAE038018S4
G 3/8 A	G 1/4	36.0	12	17.0	22	400	MFAE038014	400	MFAE038014S4
G 3/8 A	G 1/2	41.0	12	20.0	22	400	MFAE038012	400	MFAE038012S4
G 3/8 A	G 3/4	44.0	12	22.0	36	315	MFAE038034	315	MFAE038034S4
G 1/2 A	G 1/8	24.0	14	8.0	27	400	MFAE012018	400	MFAE012018S4
G 1/2 A	G 1/4	24.0	14	12.0	27	400	MFAE012014	400	MFAE012014S4
G 1/2 A	G 3/8	37.0	14	17.0	27	400	MFAE012038	400	MFAE012038S4
G 1/2 A	G 3/4	46.0	14	22.0	36	315	MFAE012034	315	MFAE012034S4
G 1/2 A	G 1	49.0	14	24.5	41	315	MFAE012001	315	MFAE012001S4
G 1/2 A	G 1 1/4	53.0	14	26.5	55	315	MFAE012114	315	MFAE012114S4
G 3/4 A	G 1/4	26.0	16	12.0	32	315	MFAE034014	315	MFAE034014S4
G 3/4 A	G 3/8	26.0	16	12.0	32	315	MFAE034038	315	MFAE034038S4
G 3/4 A	G 1/2	43.0	16	20.0	32	315	MFAE034012	315	MFAE034012S4
G 3/4 A	G 1	51.0	16	24.5	41	315	MFAE034001	315	MFAE034001S4
G 3/4 A	G 1 1/4	55.0	16	26.5	55	315	MFAE034114	315	MFAE034114S4
G 3/4 A	G 1 1/2	57.0	16	28.5	60	250	MFAE034112	250	MFAE034112S4

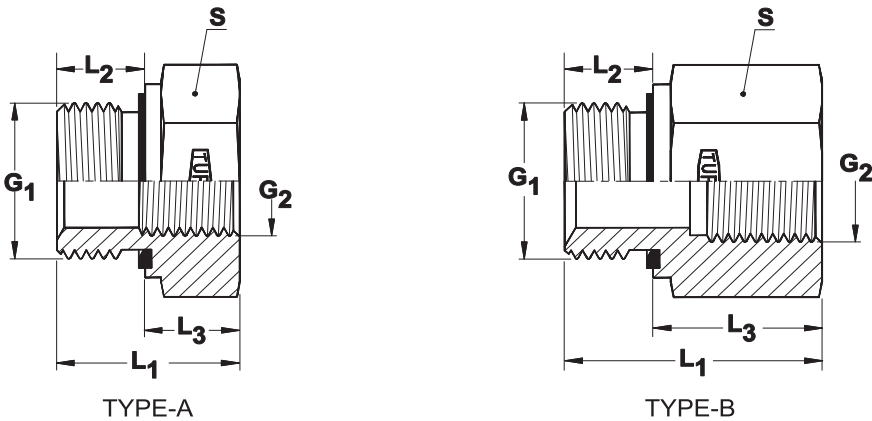
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** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton

Form - E

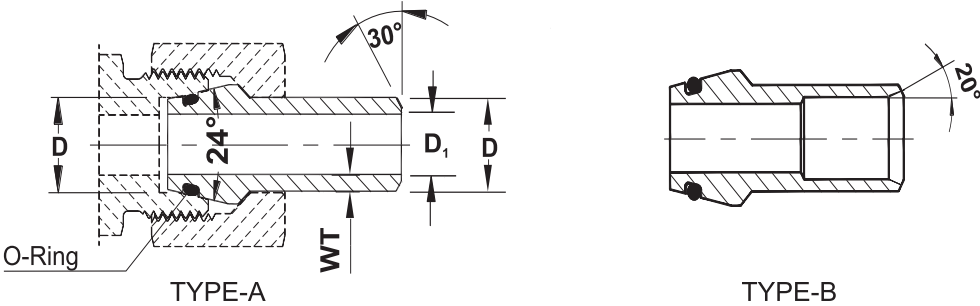


Thread Size		L ₁	L ₂	L ₃	S A/F	Steel		Stainless Steel AISI-304**	
G ₁ Male	G ₂ Female					WP (bar)	Part No.	WP (bar)	Part No.
G 1 A	G 1/4	29.0	18	12.0	41	315	MFAE001014	315	MFAE001014S4
G 1 A	G 3/8	29.0	18	12.0	41	315	MFAE001038	315	MFAE001038S4
G 1 A	G 1/2	29.0	18	14.0	41	315	MFAE001012	315	MFAE001012S4
G 1 A	G 3/4	49.0	18	22.0	41	315	MFAE001034	315	MFAE001034S4
G 1 A	G 1 1/4	57.0	18	26.5	55	315	MFAE001114	315	MFAE001114S4
G 1 A	G 1 1/2	59.0	18	28.5	60	250	MFAE001112	250	MFAE001112S4
G 1 1/4 A	G 1/2	32.0	20	14.0	50	315	MFAE114012	315	MFAE114012S4
G 1 1/4 A	G 3/4	32.0	20	16.0	50	315	MFAE114034	315	MFAE114034S4
G 1 1/4 A	G 1	52.0	20	24.5	50	315	MFAE114001	315	MFAE114001S4
G 1 1/4 A	G 1 1/2	60.0	20	28.5	60	250	MFAE114112	250	MFAE114112S4
G 1 1/2 A	G 1/2	36.0	22	14.0	55	250	MFAE112012	250	MFAE112012S4
G 1 1/2 A	G 3/4	36.0	22	16.0	55	250	MFAE112034	250	MFAE112034S4
G 1 1/2 A	G 1	36.0	22	18.0	55	250	MFAE112001	250	MFAE112001S4
G 1 1/2 A	G 1 1/4	58.0	22	26.5	55	250	MFAE112114	250	MFAE112114S4
G 2 A	G 1 1/2	65.0	24	28.5	75	160	MFAE002112	-	MFAE002112S4

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference only, subject to change

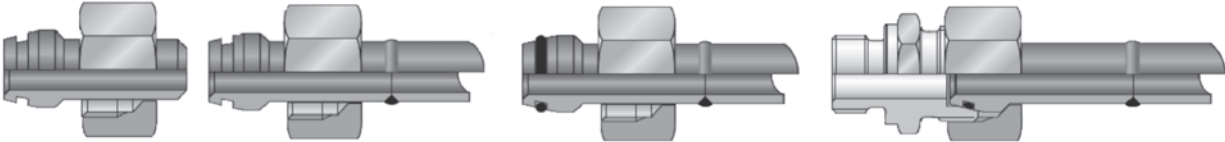
Material	Surface Protection	Standard Sealing Material
Steel	Trivalent Cr(VI) - free Zinc Plated Bright Passivated	NBR
SS	Body : Plain (No Coating) Nut : Up to 12-L / 10-S : Plain + Glide Coating Above 15-L / 12-S : Plain + Inside Silver Coating Progressive Ring : Plain (No Coating) / Blacken	Viton



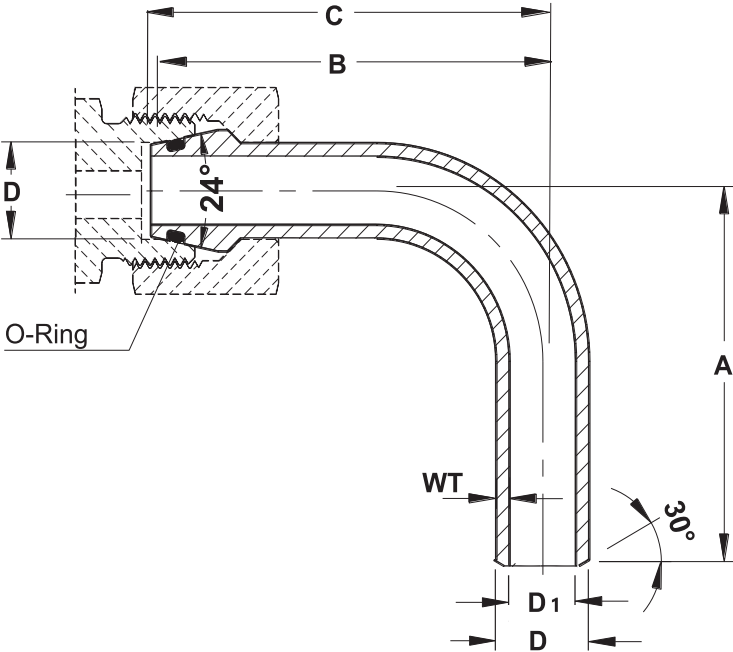
TYPE	Tube Diameter		Steel Tube OD X WT #	Steel		Stainless Steel AISI-304**	
	D	D ₁		WP (bar)	Part No.	WP (bar)	Part No.
B	10	08	10x1.0	249	WDNP1001	240	WDNP1001S4
A	10	07	10x1.5	358	WDNP1015	350	WDNP1015S4
A	10	06	10x2.0	460	WDNP1002	445	WDNP1002S4
B	12	09	12x1.5	305	WDNP1215	300	WDNP1215S4
B	12	08	12x2.0	393	WDNP1202	380	WDNP1202S4
A	12	07	12x2.5	476	WDNP1225	460	WDNP1225S4
B	15	11	15x2.0	315	WDNP1502	250	WDNP1502S4
A	15	10	15x2.5	315	WDNP1525	250	WDNP1525S4
A	18	13	18x2.5	315	WDNP1825	160	WDNP1825S4
A	22	17	22x2.5	160	WDNP2225	160	WDNP2225S4
B	28	23	28x2.5	160	WDNP2825	100	WDNP2825S4
A	28	22	28x3.0	160	WDNP2803	100	WDNP2803S4
B	35	28	35x3.5	160	WDNP3535	100	WDNP3535S4
A	35	35	35x4.0	160	WDNP3504	100	WDNP3504S4
B	42	36	42x3.0	160	WDNP4203	100	WDNP4203S4
A	42	42	42x4.0	160	WDNP4204	100	WDNP4204S4
B	16	13	16x1.5	234	WDNP1615	225	WDNP1615S4
B	16	12	16x2.0	305	WDNP1602	295	WDNP1602S4
B	16	11	16x2.5	372	WDNP1625	360	WDNP1625S4
A	16	10	16x3.0	400	WDNP1603	390	WDNP1603S4
B	20	16	20x2.0	249	WDNP2002	240	WDNP2002S4
B	20	15	20x2.5	305	WDNP2025	300	WDNP2025S4
B	20	14	20x3.0	358	WDNP2003	350	WDNP2003S4
B	20	12	20x4.0	400	WDNP2004	390	WDNP2004S4
B	25	19	25x3.0	294	WDNP2503	285	WDNP2503S4
B	25	17	25x4.0	379	WDNP2504	365	WDNP2504S4
B	25	15	25x5.0	400	WDNP2505	390	WDNP2505S4
B	30	24	30x3.0	249	WDNP3003	240	WDNP3003S4
B	30	22	30x4.0	323	WDNP3004	314	WDNP3004S4
B	30	20	30x5.0	393	WDNP3005	380	WDNP3005S4
A	30	18	30x6.0	400	WDNP3006	390	WDNP3006S4
B	38	30	38x4.0	261	WDNP3804	254	WDNP3804S4
B	38	28	38x5.0	315	WDNP3805	315	WDNP3805S4
B	38	26	38x6.0	315	WDNP3806	315	WDNP3806S4
B	38	24	38x7.0	315	WDNP3807	315	WDNP3807S4

- * Tube Material should be Weldable
 # WT= Wall Thickness
 ** Replace S4 by S6 for material AISI-316
- For Weld-on Reducing Nipple WDRDNP :
 Refer to Custom Product section
- Used for severe conditions (whip-lash, excessive vibrations)
 & for high nominal pressures
- | Material | Surface Protection |
|----------|----------------------|
| Steel | Zinc Phosphated |
| SS | Plain (No Coating) |

ASSEMBLY METHOD



Dimensions and pressure for reference only, subject to change



D Tube OD	Steel Tube # OD X WT	D1	A	B	C	Steel		Stainless Steel AISI-304 **	
						WP (bar)	Part No.	WP (bar)	Part No.
S 10	10x2	6	45	49	50.0	460	WDENP1002	447	WDENP1002S4
S 12	12x2.5	7	50	51	52.0	476	WDENP1225	463	WDENP1225S4
S 16	16x3	10	60	67	68.5	400	WDENP1603	400	WDENP1603S4
S 20	20x4	12	65	85	87.0	400	WDENP2004	400	WDENP2004S4
S 25	25x4	17	85	85	88.5	379	WDENP2504	369	WDENP2504S4
S 25	25x5	15	85	85	88.5	400	WDENP2505	400	WDENP2505S4
S 30	30x4	22	110	111	116.0	323	WDENP3004	314	WDENP3004S4
S 30	30x5	20	110	111	116.0	393	WDENP3005	383	WDENP3005S4
S 38	38x5	28	130	136	143.5	315	WDENP3805	315	WDENP3805S4
S 38	38x6	26	130	136	143.5	315	WDENP3806	315	WDENP3806S4

- * Tube Material should be Weldable

WT= Wall Thickness

■ Together with fittings bodies, weld nipples is a functional unit

■ There are three types of Weld fitting combinations:

1. Weld Nipple **with** Cylindrical Boss with O-ring sealing for **heavy duty** applications

2. Weld Nipple **without** Cylindrical Boss but with O-ring sealing for **normal** applications

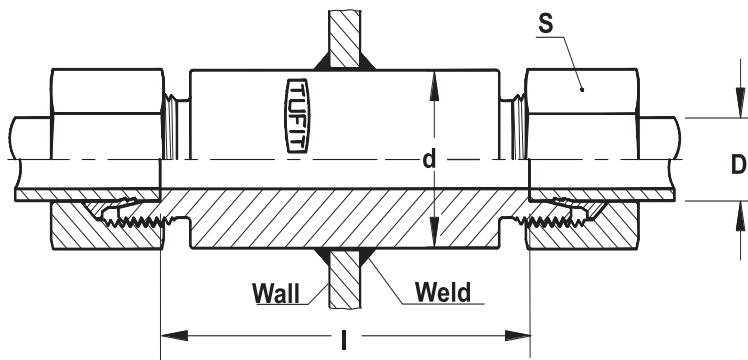
3. Weld Nipple, **metallic** sealing for high temperature or corrosion applications

■ Body Material: Weld Nipple: for Steel tubes: Steel, fusion-weldable
Weld Nipple: for Steel corrosion / acid proof tubes: Stainless Steel

■ O-ring: Buna N (standard) temp. range -20 ° c to + 90° c
 Viton (on request) temp. range -20° c to + 90° c
- ** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Zinc Phosphated
SS	Plain (No Coating)

Dimensions and pressure for reference
only, subject to change



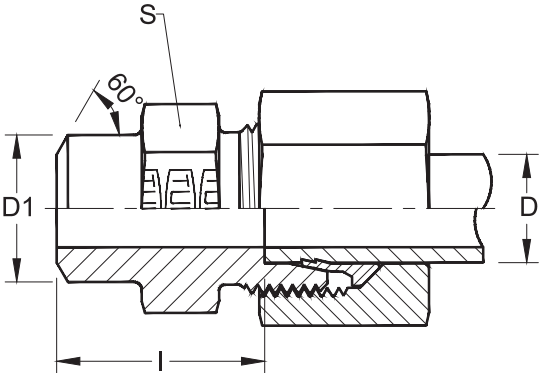
D Tube OD	d dia.	I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
				WP (bar)	Part No.	WP (bar)	Part No.
L 06	18	56	14	500	WBHS06L	250	WBHS06LS4
L 08	20	56	17	500	WBHS08L	250	WBHS08LS4
L 10	22	58	19	500	WBHS10L	250	WBHS10LS4
L 12	25	58	22	400	WBHS12L	250	WBHS12LS4
L 15	28	70	27	400	WBHS15L	250	WBHS15LS4
L 18	32	69	32	400	WBHS18L	160	WBHS18LS4
L 22	36	73	36	250	WBHS22L	160	WBHS22LS4
L 28	40	73	41	250	WBHS28L	100	WBHS28LS4
L 35	50	71	50	250	WBHS35L	100	WBHS35LS4
L 42	60	70	60	250	WBHS42L	100	WBHS42LS4
S 06	20	60	17	800	WBHS06S	630	WBHS06SS4
S 08	22	60	19	800	WBHS08S	630	WBHS08SS4
S 10	25	59	22	800	WBHS10S	630	WBHS10SS4
S 12	28	59	24	630	WBHS12S	630	WBHS12SS4
S 14*	30	72	27	630	WBHS14S	630	WBHS14SS4
S 16	35	71	30	630	WBHS16S	400	WBHS16SS4
S 20	38	71	36	420	WBHS20S	400	WBHS20SS4
S 25	45	72	46	420	WBHS25S	400	WBHS25SS4
S 30	50	73	50	420	WBHS30S	250	WBHS30SS4
S 38	60	72	60	420	WBHS38S	250	WBHS38SS4

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Material	Surface Protection
Steel	Zinc Phosphated
SS	Body : Plain (No Coating) Nut : Plain (No Coating) Progressive Ring : Plain (No Coating)

Dimensions and pressure for reference only, subject to change



Tube OD		I (ref.)	S A / F	Steel		Stainless Steel AISI-304 **	
D	D ₁			WP (bar)	Part No.	WP (bar)	Part No.
L 06	10	14.0	12	315	WDSD06L	315	WDSD06LS4
L 08	12	16.0	14	315	WDSD08L	315	WDSD08LS4
L 10	14	18.0	17	315	WDSD10L	315	WDSD10LS4
L 12	16	18.0	19	315	WDSD12L	315	WDSD12LS4
L 15	19	22.0	22	315	WDSD15L	315	WDSD15LS4
L 18	22	23.5	27	315	WDSD18L	315	WDSD18LS4
L 22	27	28.5	32	160	WDSD22L	160	WDSD22LS4
L 28	32	30.5	41	160	WDSD28L	160	WDSD28LS4
L 35	40	32.5	46	160	WDSD35L	160	WDSD35LS4
L 42	46	35.0	55	160	WDSD42L	160	WDSD42LS4
S 06	11	19.0	14	630	WDSD06S	630	WDSD06SS4
S 08	13	21.0	17	630	WDSD08S	630	WDSD08SS4
S 10	15	22.5	19	630	WDSD10S	630	WDSD10SS4
S 12	17	24.5	22	630	WDSD12S	630	WDSD12SS4
S 14*	19	27.0	24	630	WDSD14S	630	WDSD14SS4
S 16	21	26.5	27	400	WDSD16S	400	WDSD16SS4
S 20	26	29.5	32	400	WDSD20S	400	WDSD20SS4
S 25	31	32.0	41	400	WDSD25S	400	WDSD25SS4
S 30	36	35.5	46	400	WDSD30S	400	WDSD30SS4
S 38	44	38.0	55	315	WDSD38S	315	WDSD38SS4

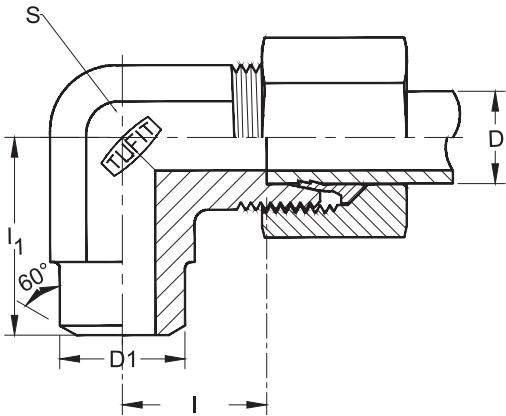
* Tube Material should be Weldable

* Not as per ISO 8434

** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Zinc Phosphated
SS	Plain (No Coating)



Tube OD		I (ref.)	I ₁	S A / F	Steel		Stainless Steel AISI-304**	
D	D ₁				WP (bar)	Part No.	WP (bar)	Part No.
L 06	10	12.0	19	12	315	WDSDE06L	315	WDSDE06LS4
L 08	12	14.0	23	12	315	WDSDE08L	315	WDSDE08LS4
L 10	14	15.0	24	14	315	WDSDE10L	315	WDSDE10LS4
L 12	16	17.0	25	17	315	WDSDE12L	315	WDSDE12LS4
L 15	19	21.0	30	19	315	WDSDE15L	315	WDSDE15LS4
L 18	22	23.5	33	24	315	WDSDE18L	315	WDSDE18LS4
L 22	27	27.5	37	27	160	WDSDE22L	160	WDSDE22LS4
L 28	32	30.5	42	36	160	WDSDE28L	160	WDSDE28LS4
L 35	40	34.5	49	41	160	WDSDE35L	160	WDSDE35LS4
L 42	46	40.0	57	50	160	WDSDE42L	160	WDSDE42LS4
S 06	11	16.0	23	12	630	WDSDE06S	630	WDSDE06SS4
S 08	13	17.0	24	14	630	WDSDE08S	630	WDSDE08SS4
S 10	15	17.5	25	17	630	WDSDE10S	630	WDSDE10SS4
S 12	17	21.5	29	17	630	WDSDE12S	630	WDSDE12SS4
S 14 *	19	22.0	30	19	630	WDSDE14S	630	WDSDE14SS4
S 16	21	24.5	33	24	400	WDSDE16S	400	WDSDE16SS4
S 20	26	26.5	37	27	400	WDSDE20S	400	WDSDE20SS4
S 25	31	30.0	42	36	400	WDSDE25S	400	WDSDE25SS4
S 30	36	35.5	49	41	400	WDSDE30S	400	WDSDE30SS4
S 38	44	41.0	57	50	315	WDSDE38S	315	WDSDE38SS4

* Tube Material should be Weldable

* Not as per ISO 8434

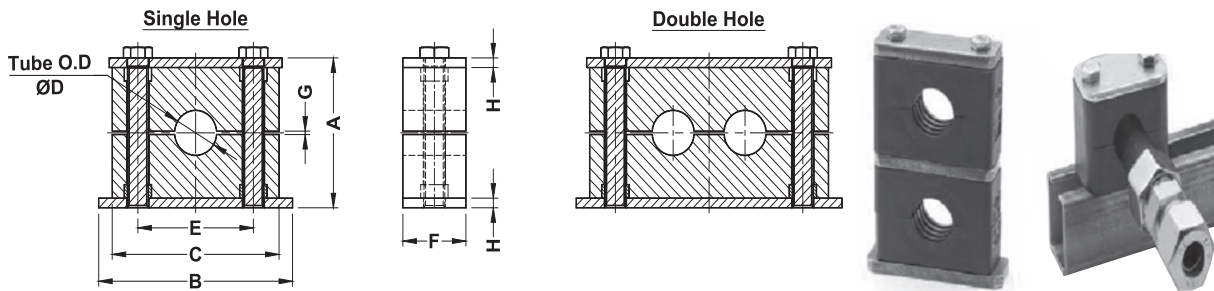
** Replace S4 by S6 for material AISI-316

Dimensions and pressure for reference
only, subject to change

Material	Surface Protection
Steel	Zinc Phosphated
SS	Plain (No Coating)



TCS / TCD - Tube Clamps



SINGLE HOLE: Part No. TCS

DOUBLE HOLE: Part No. TCD

Tube O.D D	A	B	C	F	E	H	G	Hex Bolt size H	Part No.** (LIGHT DUTY)
6	33	40	35	30	20	3	0.6	M6x30	TCS06L
8									TCS08L
10									TCS10L
12									TCS12L
14	39	45	40	30	26	3	0.6	M6x35	TCS14L
15									TCS15L
16									TCS16L
18									TCS18L
20	41	53	48	30	33	3	0.6	M6x40	TCS20L
22									TCS22L
25									TCS25L
28									TCS28L
30	48	62	57	30	40	3	0.6	M6x45	TCS30L
33									TCS33L
35									TCS35L
38									TCS38L
42	64	75	70	30	52	3	0.8	M6x55	TCS42L

■ **STANDARD** (Light duty) clamps shall be supplied If not specified

Tube O.D D	A	B	C	F	E	H	G	Hex Bolt Size H	Part No.** (HEAVY DUTY)
10	48	73	55	30	33	8	1	M10x45	TCS10S
12									TCS12S
16									TCS16S
18									TCS18S
20	64	85	70	30	45	8	1	M10x50	TCS20S
22									TCS22S
25									TCS25S
28									TCS28S
30									TCS30S
33									TCS33S
35	76	100	85	30	60	8	1	M10x65	TCS35S
38									TCS38S
42									TCS42S
48	110	140	115	45	90	10	2	M10x100	TCS48S
50									TCS50S
60									TCS60S

- Do not assemble it under tension and clamp it onto rigid fixtures. Clamps should be mounted to a rigid structure for optimum performance. Clamping tube, pipe or hose Assemblies together without mounting them to a rigid structure often called “floating clamps”, does not provide adequate support.
- Good clamping of the tube system is important to reduce vibrations & to prevent subsequent damages. The pipe line installation should be stress free. Sufficient numbers of pipe clamps should be used.

Material: Plastic clamp halves: High Density Polypropylene **Hardware portion:** Steel, Aluminum & Stainless Steel **Finish:** Duty Zinc plated

Available in **a. Weld Plate Mounting** **b. Rail Mounting** **c. Stacking** ** Replace Part No. TCS with TCD for Double Hole Clamps



declines any responsibility in case, which the user fails to comply strictly and entirely with the general instructions, utilization norms, safety factors, assembly instructions & the working pressures



Tube sizes, Tolerances and Pressure Ratings:

The Nominal Pressure (PN) is a pressure, relating to the pressure rating of a fluid component for continuous dynamic applications. Static test burst pressures are at least 4 times the PN value. Maximum tube wall thickness is based on the pressure holding capability of ferrule fitting.

Tube O.D mm	Tolerance mm	Wall Thickness mm	Tube I.D mm	Design Pressure		Burst Pressure Bar	Weight Kg/m
				Static Bar	Dynamic Bar		
4	±0.1	0.50	3	313	274	1160	0.047
4		0.75	2.50	409	393	1820	0.063
4		1	2	522	502	2850	0.074
5	±0.1	1	3	432	416	2120	0.099
6	±0.1	0.75	4.50	333	289	1230	0.103
6		1	4	389	374	1680	0.123
6		1.50	3	549	528	3050	0.166
6		2	2	692	665	3860	0.197
6		2.25	1.50	757	728	4220	0.208
8	±0.1	1	6	333	289	1190	0.222
8		1.50	5	431	414	1860	0.240
8		2	4	549	528	3020	0.296
8		2.50	3	658	632	3610	0.339
10	±0.1	1	8	282	249	870	0.222
10		1.50	7	373	358	1380	0.314
10		2	6	478	460	2100	0.395
10		2.50	5	576	553	3180	0.462
10		3	4	666	641	3670	0.518
12	±0.1	1	10	235	210	760	0.271
12		1.50	9	353	305	1150	0.388
12		2	8	409	393	1580	0.493
12		2.50	7	495	476	2600	0.586
12		3	6	576	553	3200	0.666
12		3.50	5	651	627	3630	0.734
14	± 0.08	1.5	11	302	265	940	0.462
14		2	10	403	343	1340	0.592
14		2.5	9	434	417	1760	0.709
14		3	8	507	487	2400	0.814
14		3.5	7	576	553	3220	0.906
15	± 0.08	1	13	188	171	590	0.345
15		1.5	12	282	249	980	0.499
15		2	11	376	323	1250	0.641
15		3	9	478	460	2120	0.888
16	± 0.08	1.5	13	264	234	820	0.536
16		2	12	353	305	1170	0.691
16		2.5	11	386	372	1470	0.832
16		3	10	452	435	1920	0.962

Dimensions and pressure for reference
only, subject to change

TUFIT Tube sizes, Tolerances and Pressure Ratings:

Tube O.D mm	Tolerance mm	Wall Thickness mm	Tube I.D mm	Design Pressure		Burst Pressure Bar	Weight Kg/m
				Static Bar	Dynamic Bar		
18	± 0.08	1	16	157	143	510	0.419
18		1.5	15	235	210	780	0.610
18		2	14	313	274	1040	0.789
18		2.5	13	392	335	1320	0.956
18		3	12	409	393	1830	1.111
20	± 0.08	1.5	17	212	191	570	0.684
20		2	16	282	249	920	0.888
20		2.5	15	353	305	1220	1.079
20		3	14	373	358	1450	1.258
20		3.5	13	426	410	1720	1.424
20		4	12	478	460	2080	1.578
22	± 0.08	1.5	19	192	174	590	0.758
22		2	18	256	228	850	0.986
22		2.5	17	320	280	1040	1.202
22		3	16	385	329	1210	1.406
25	± 0.08	2	21	226	202	670	1.134
25		2.5	20	282	249	920	1.387
25		3	19	338	294	1050	1.628
25		4	17	394	379	1520	2.072
25		4.5	16	437	420	1780	2.275
28	± 0.08	1.5	25	151	139	450	0.980
28		2	24	201	182	620	1.282
28		2.5	23	252	224	770	1.572
28		3	22	302	265	920	1.850
30	± 0.08	2	26	188	171	620	1.381
30		2.5	25	235	210	770	1.695
30		3	24	282	249	920	1.998
30		4	22	376	323	1250	2.565
30		5	20	409	393	1580	3.083
35	± 0.15	2	31	161	147	470	1.628
35		2.5	30	201	182	620	2.004
35		3	29	242	216	720	2.367
35		4	27	322	281	960	3.058
38	± 0.15	2.5	33	186	168	550	2.189
38		3	32	223	200	660	2.589
38		4	30	297	261	970	3.354
38		5	28	371	319	1350	4.069
38		6	26	390	375	1390	4.735
42	± 0.20	2	38	134	124	390	1.973
42		3	36	201	182	580	2.885
42		4	34	269	238	850	3.749

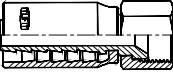
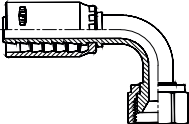
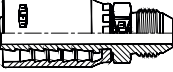
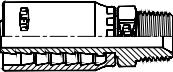
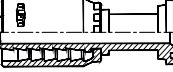
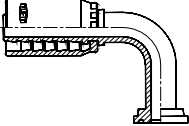
Specification: DIN2391 Steel grade : ST35 Delivery condition : NBK
Finish:- Seamless Steel Tube : Cold drawn with oil / Black phosphated

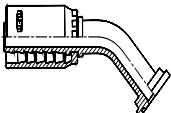
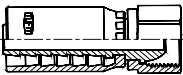
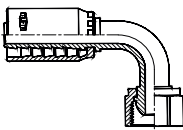
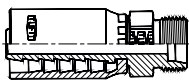
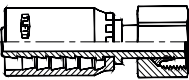
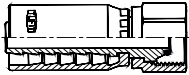
Pressure: 1 Bar=1.02Kgf/cm²=14.5 psi =10⁵ Newtons/m²=0.01 mpa (mega pascals)=100 kpa (kilo pascals) 1 Psi = 0.069 bar
■ The indicated pressure is to be intended at a constant pressure rate and with temperature between – 20° to + 120°C

Dimensions and pressure for reference
only, subject to change



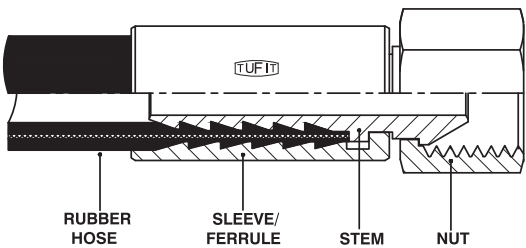
Crimped Hose Assembly

HOSE I. D (inches)	1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2	2
DASH NUMBER	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32
 JIC 37° FLARE FEMALE SWIVEL NUT	7/16-20 1/2-20 9/16-18	1/2-20 9/16-18	1/2-20 9/16-18 3/4-16 7/8-14	9/16-18 3/4-16 7/8-14 1-1/16-12	3/4-16 7/8-14 1-1/16-12 1-3/16-12	7/8-14 1-1/16-12 1-3/16-12 1-5/16-12	1-1/16-12 1-3/16-12 1-5/16-12 1-5/8-12	1-5/8-12	1-7/8-12	2-1/2-12
 JIC 37° FLARE FEMALE SWIVEL NUT 90° BENT TUBE	7/16-20 1/2-20 9/16-18	9/16-18	9/16-18 3/4-16	3/4-16 7/8-14	7/8-14 1-1/16-12	1-1/16-12 1-3/16-12	1-5/16-12 1-5/8-12	1-5/8-12	-	-
 JIC 37° FLARE MALE FIXED	7/16-20 1/2-20 9/16-18	9/16-18	9/16-18 3/4-16 7/8-14	3/4-16 7/8-14 1-1/16-12	3/4-16 7/8-14 1-1/16-12	1-1/16-12 1-3/16-12 1-5/16-12	1-5/16-12 1-5/8-12	1-5/8-12 1-7/8-12	1-7/8-12	2-1/2-12
 NPTF MALE FIXED	1/8-27 1/4-18 3/8-18 1/2-14	1/4-18	1/4-18 3/8-18 1/2-14	3/8-18 1/2-14 3/4-14	1/2-14 3/4-14	1/2-14 3/4-14 1- 11½	3/4-14 1- 11½	1-1/4 11½	1-1/2 11½	2-11½
 CODE 61 SAE J518 O-RING FLANGE ISO 12151-3-S	-	-	-	1/2 5/8 3/4	5/8	3/4 1	1 1-1/4 1-1/2	1-1/4 1-1/2	1-1/2 2	2 2-1/2
 CODE 61 SAE J518 O-RING FLANGE 90° BENT TUBE	-	-	-	1/2 5/8 3/4	5/8 3/4	3/4 1	1 1-1/4	1-1/4 1-1/2	1-1/2 2	2

 CODE 61 SAE J518 O-RING FLANGE 45° BENT TUBE	-	-	-	1/2 5/8 3/4	5/8	3/4 1	1 1-1/4	1-1/4 1-1/2	1-1/2 2	2
 BSP / METRIC FEMALE SWIVEL NUT UNIVERSAL INVERTED CONE (24 / 60°)	1/4-19 M12x1.5 M14x1.5 M16x1.5	3/8-19 M16x1.5 M18x1.5	3/8-19 1/2-14 M16x1.5 M18x1.5	1/2-14 M22x1.5	5/8-14 M26x1.5	3/4-14 M30x1.5 M30x2	1-11 M36x2 M38x1.5	1-1/4-11 M45x2	1-1/2-11 M52x2	2-11 M65x2
 BSP / METRIC FEMALE SWIVEL NUT UNIVERSAL INVERTED CONE (24 / 60°) 90° BENT TUBE	1/4-19 M12x1.5 M14x1.5 M16x1.5	3/8-19 M16x1.5 M18x1.5	3/8-19 1/2-14 M16x1.5 M18x1.5	1/2-14 M22x1.5	5/8-14 M26x1.5	3/4-14 M30x1.5 M30x2	1- 11 M36x2 M38x1.5	1-1/4-11 M45x2	1-1/2-11 M52x2	2- 11 -
 24° CONE (DIN2353) METRIC MALE FIXED	M14x1.5 M16x1.5	M16x1.5	M16x1.5 M18x1.5	M22x1.5	M26x1.5	M30x2	M36x2	M45x2	M52x2	-
 METRIC STANDPIPE FOR 24° CONE (DIN2353) Ø x L	Ø6-L (M12x1.5) Ø6-S (M14x1.5) Ø8-L (M14x1.5) Ø8-S (M16x1.5) Ø10-L (M16x1.5) Ø10-S (M18x1.5)	Ø10-L (M16x1.5) Ø10-S (M18x1.5)	Ø10-L (M16x1.5) Ø10-S (M18x1.5) Ø12-L (M18x1.5) Ø12-S (M20x1.5)	Ø15-L (M22x1.5) Ø16-S (M24x1.5)	Ø18-L (M26x1.5) Ø20-S (M30x2)	Ø22-L (M30x2) Ø25-S (M36x2)	Ø28-L (M36x2) Ø30-S (M42x2)	Ø35-L (M45x2) Ø38-S (M52x2)	Ø42-L (M52x2)	-
 METRIC FEMALE "O" RING SEALING SWIVEL NUT FOR 24° CONE (DIN2353)	M16x1.5 M18x1.5	M20x1.5 M22x1.5	M20x1.5 M22x1.5	M22x1.5 M24x1.5	M30x2 M36x2	M30x2 M36x2	M42x2	M52x2	M52x2	-



ASSEMBLY

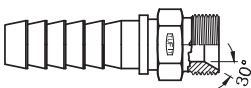


HOSE SELECTION CRITERIA-STAMPED

- S- SIZE
- T- TEMPERATURE
- A- APPLICATION
- M- MATERIAL TO BE CONVEYED
- P- PRESSURE
- E- ENDS OF COUPLINGS
- D- DELIVERY

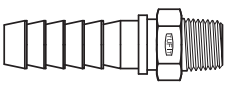
TEST AND GUARENTEE
CERTIFICATE CAN BE
SUPPLIED WITH
EACH SUPPLY

MALE HOSE BSP-30°



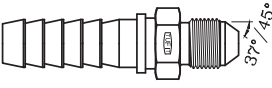
(FOR BSP)

TAPER MALE STUD



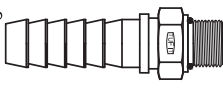
(FOR BSPT)
(FOR NPT)

MALE FLARE 37°



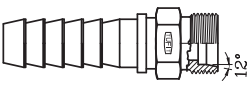
(FOR-37° JIC)
(FOR-45° SAE)

MALE STUD O-RING



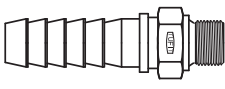
(FOR UNF)
(FOR MM)

PARALLEL MALE
STUD DIN-24°



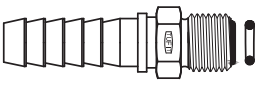
(FOR METRIC)

PARALLEL MALE
STUD FORM-B



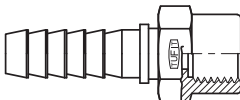
(FOR BSP)
(FOR METRIC)

O-RING FACE SEAL



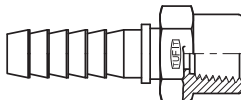
(FOR UNF)

FEMALE STUD



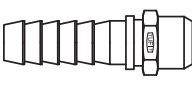
(FOR BSP)
(FOR METRIC)

TAPER FEMALE STUD

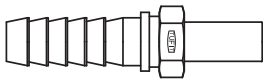


(FOR BSPT)

WELDABLE BOSS

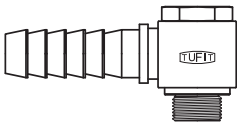


STAND PIPE-DIN



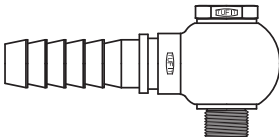
(FOR METRIC TUBING)

ADJUSTABLE CONNECTOR



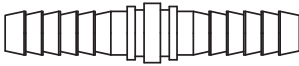
(FOR BSP)
(FOR METRIC)

ADJUSTABLE BANJO
CONNECTOR

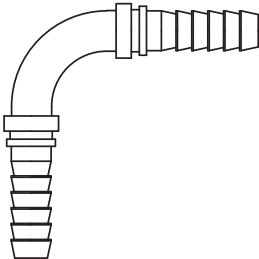


(FOR BSP)
(FOR METRIC)

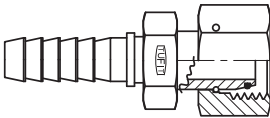
STRAIGHT HOSE
LENGTH EXTENDER



HOSE LENGTH EXTENDER-90°

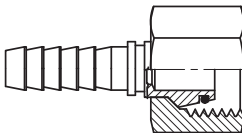


SWIVEL FEMALE DIN -24° TYPE-P



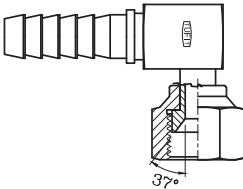
(FOR METRIC)

FEMALE DIN SWIVEL-24°



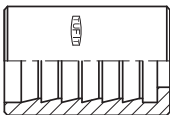
(FOR METRIC)

SWIVEL FEMALE FLARE ELBOW
TYPE-C

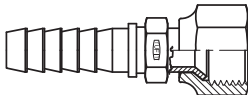


(FOR-37° JIC)
(FOR-45° SAE)

SLEEVE / FERRULE
(for power crimping)

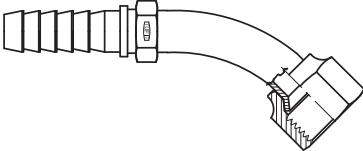


FEMALE SWIVEL FLARE



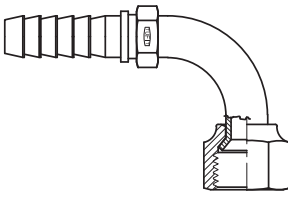
(FOR-45° SAE)
(FOR-37° JIC)

FEMALE SWIVEL
FLARE ELBOW-45°



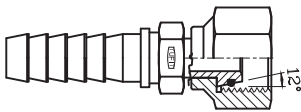
(FOR-45° SAE)
(FOR-37° JIC)

FEMALE SWIVEL
FLARE ELBOW-90°



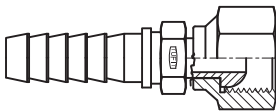
(FOR-45° SAE)
(FOR-37° JIC)

24° INVERTED FLARE FEMALE
FEMALE DIN SWIVEL



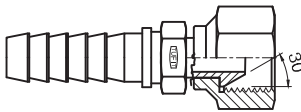
(FOR METRIC)

FEMALE DIN SWIVEL UNIVERSAL
INVERTED CONE (BALL END)



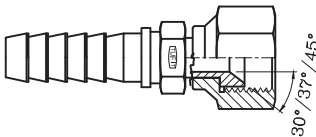
(FOR BSP)
(FOR METRIC)

30°-HOSE-FEMALE SWIVEL
(TYPE-D)



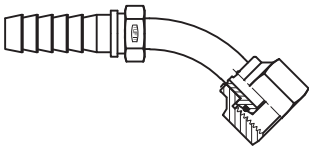
(FOR BSP)
(FOR METRIC)

FEMALE SWIVEL (TYPE-C)



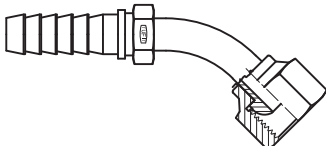
(BSP FOR-30° HOSE)
(UNF FOR-37° JIC)
(UNF FOR-45° SAE)

24° INVERTED FLARE FEMALE
DIN SWIVEL ELBOW-45°



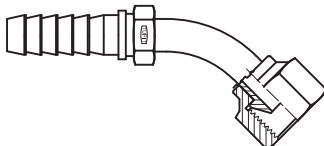
(FOR METRIC)

FEMALE DIN SWIVEL ELBOW UNIVERSAL
INVERTED CONE- 45° (BALL END)



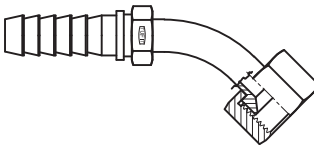
(FOR BSP)
(FOR METRIC)

30°-HOSE FEMALE SWIVEL
ELBOW- 45° (TYPE-D)



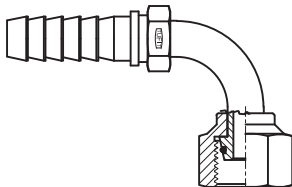
(FOR BSP)
(FOR METRIC)

FEMALE SWIVEL
ELBOW -45° (TYPE-C)



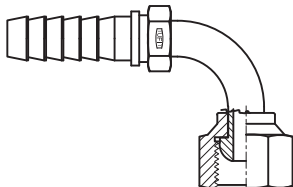
(BSP FOR-30° HOSE)
(UNF FOR-37° JIC)
(UNF FOR-45° SAE)

24° INVERTED FLARE FEMALE
DIN SWIVEL ELBOW-90°



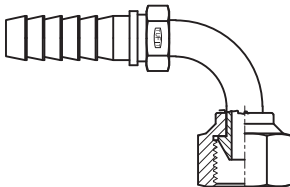
(FOR METRIC)

FEMALE DIN SWIVEL ELBOW UNIVERSAL
INVERTED CONE- 90° (BALL END)



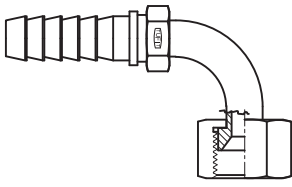
(FOR BSP)
(FOR METRIC)

30°-HOSE FEMALE SWIVEL
ELBOW- 90° (TYPE-D)



(FOR BSP)
(FOR METRIC)

FEMALE SWIVEL
ELBOW -90° (TYPE-C)



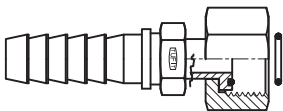
(BSP FOR-30° HOSE)
(UNF FOR-37° JIC)
(UNF FOR-45° SAE)

MALE INVERTED SWIVEL

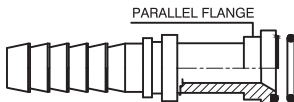


(FOR-37° JIC)
(FOR-45° SAE)

FEMALE FLAT-FACE O-RING
SWIVEL STRAIGHT

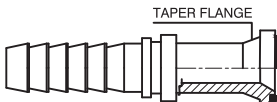


O-RING FLANGE-STRAIGHT



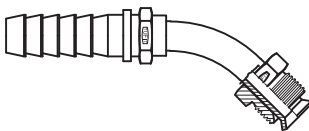
(SAE J518)

O-RING FLANGE-STRAIGHT
(caterpillar style)



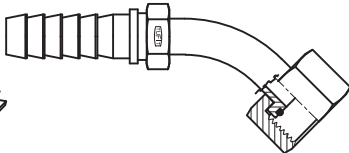
(SAE J518)

FEMALE INVERTED SWIVEL
ELBOW-45°

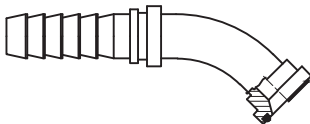


(FOR-37° JIC)
(FOR-45° SAE)

FEMALE FLAT-FACE
O-RING SWIVEL ELBOW-45°

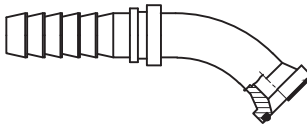


O-RING FLANGE-ELBOW-45°



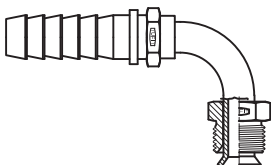
(SAE J518)

O-RING FLANGE-ELBOW-45°
(caterpillar style)



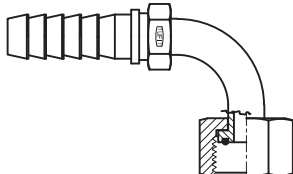
(SAE J518)

FEMALE INVERTED SWIVEL
ELBOW-90°

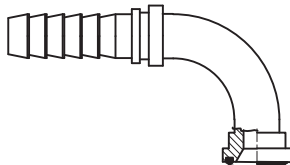


(FOR-37° JIC)
(FOR-45° SAE)

FEMALE FLAT-FACE
O-RING SWIVEL ELBOW-90°

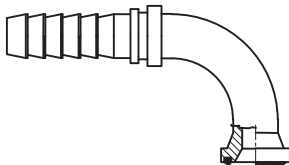


O-RING FLANGE-ELBOW-90°



(SAE J518)

O-RING FLANGE-ELBOW-90°
(caterpillar style)

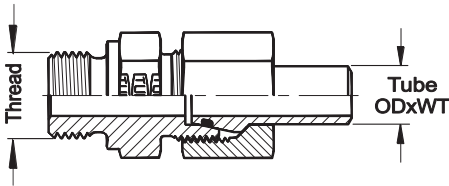


(SAE J518)



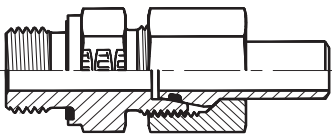
Weld-on Straight Couplings

Available only from 15 mm OD of Tube to 42 mm OD of tube in L series
and from 6 mm OD of tube to 38 mm OD of tube in S series
(Part No. As per Examples shown below against each design)



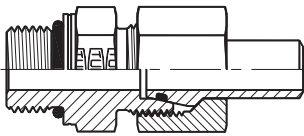
(Form B undercut)
Weld-on Stud Straight Coupling
WSDSDBG (BSPP)
WSDSDBM (MM)

Part No: WSDSDB22X2.5G034
Part No: WSDSDB12X2M16



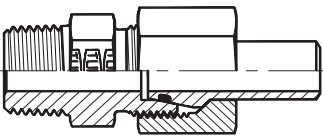
(Form E undercut)
Weld-on Stud Straight Coupling
WSDSEGB (BSPP)
WSDSEEM (MM)

Part No: WSDSE22X2.5G034
Part No: WSDSE12X2M16



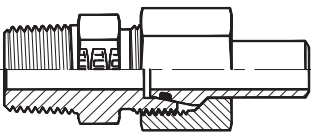
(Form F undercut)
Weld-on Stud Straight Coupling
WSDSDFU (UNF)
WSDSDFM (MM)

Part No: WSDSDF22X2.5U1116
Part No: WSDSDF12X2M16



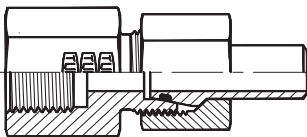
Weld-on Stud Taper Coupling
WSDSTR (BSPT)

Part No: WSDST15X2.5R012



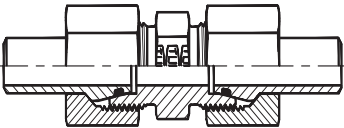
Weld-on Stud Taper Coupling
WSDSTN (NPT)

Part No: WSDST18X2.5N012
Part No: WSDSTS20X3N034



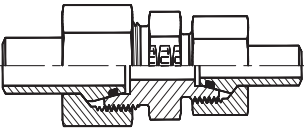
Weld-on Stud Female Coupling
WSDSDFG (BSPP)
WSDSDFM (MM)

Part No: WSDSDF20X3G034
Part No: WSDSDF20X3M27



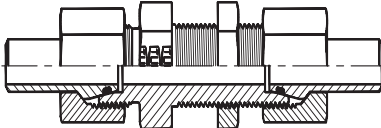
Weld-on Straight Coupling
WDS

Part No: WDS35X3
Part No: WDS20X3



Weld-on Straight Reducer Coupling
WDSRD

Part No: WDSRD35X3/22X2.5
Part No: WDSRD20X3/16X2.5



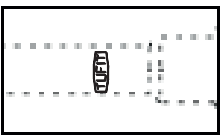
Weld-on Bulkhead Straight Coupling
WDBHS

Part No: WDBHS35X3
Part No: WDBHS20X3

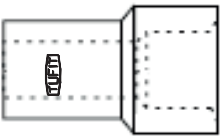


Weld-on Pressure Gauge Coupling
WDPG

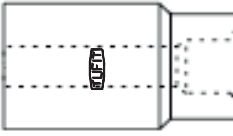
Part No: WDP10x1.5G038



(I)

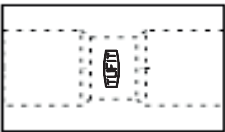


(II)

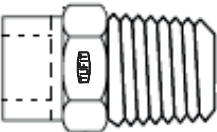


(III)

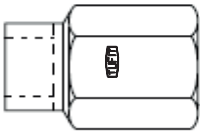
Tube Reducer, Tube Socket Reducer



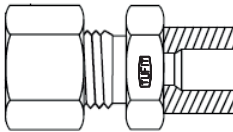
Union Tube, Socket End Both Side



Male Connector, Tube Socket End-Male Pipe End



Female Connector, Tube End Socket-Female Pipe End



Tubing to Tube Socket Weld Straight Connection

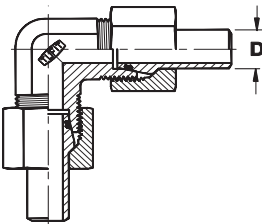


Weld-on Elbow Couplings

Available only from 15 mm OD of Tube to 42 mm OD of tube in L series
and from 6 mm OD of tube to 38 mm OD of tube in S series
(Part No. As per Examples shown below against each design)

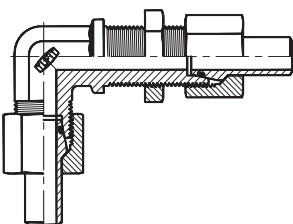
D= Tube OD x WT

T= Thread at the Stud end



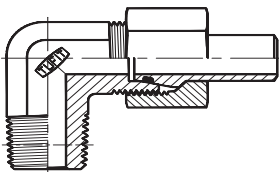
Weld-on Elbow Coupling
WDE

Part No: WDE35X3
Part No: WDE20X3



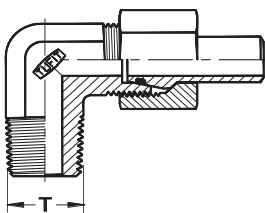
Weld-on Bulkhead Elbow Coupling
WDBHE

Part No: WDBHE35X3
Part No: WDBHE20X3

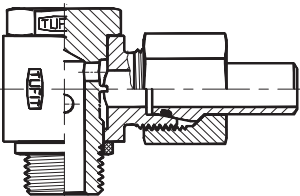


Weld-on Stud Taper Elbow Coupling
WSDTER (BSPT)

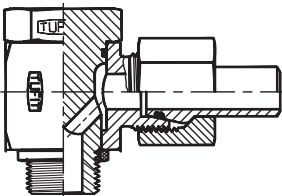
Part No: WSDTER22X3R034
Part No: WSDTER16X2R012



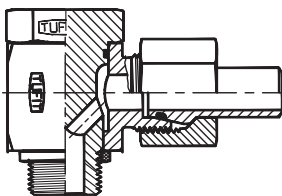
Weld-on Stud Taper Elbow Coupling
WSDTEN (NPT)
WSDTEM (MM)



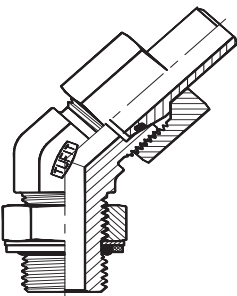
Weld-on Banjo Elbow Coupling (Low Pressure)
WDBELG (BSP)
WDBELM (MM)



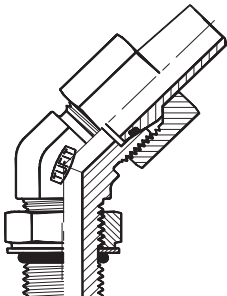
Weld-on Banjo Elbow Coupling (Medium Pressure)
WDBEMG (BSP)
WDBEMM (MM)



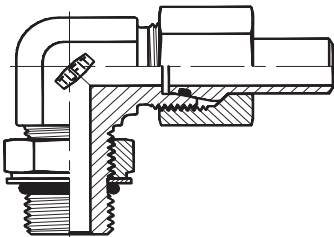
Weld-on Banjo Elbow Coupling (High Pressure)
WDBEHG (BSP)
WDBEHM (MM)



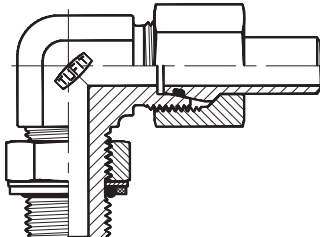
Weld-on Adjustable Locknut Elbow Coupling-45° ISO9974
WDALNEHM-45 (MM)-ISO9974
WDALNEHG-45 (BSP)



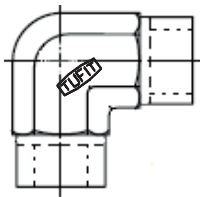
Weld-on Adjustable Locknut Elbow Coupling-45° ISO6149
WDALNEM-45 (MM)-ISO6149
WDALNEU-45 (UNF)



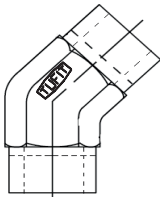
Weld-on Adjustable Locknut Elbow Coupling
WDALNEM (MM)-ISO6149
WDALNEU (UNF)



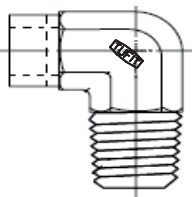
Weld-on Adjustable Locknut Elbow Coupling
WDALNEHM (MM)-ISO9974
WDALNEHG (BSP)



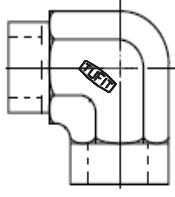
Elbow, Tube Socket
End- Both Ports



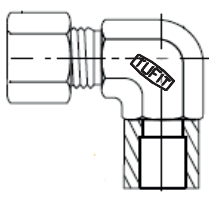
45 Elbow, Tube Socket
End- Both Ports



Male-Elbow, Tube Socket
End-Male Pipe End



Female Elbow, Tube Socket
End-Female Pipe End



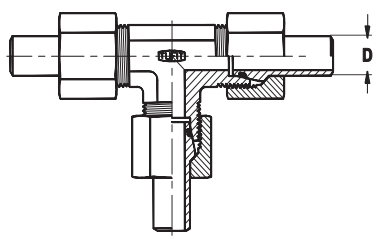
For 24 °Tubing to Tube
Socket Weld
Elbow Connection



Available only from 15 mm OD of Tube to 42 mm OD of tube in L series
and from 6 mm OD of tube to 38 mm OD of tube in S series
(Part No. As per Example shown below against each design)

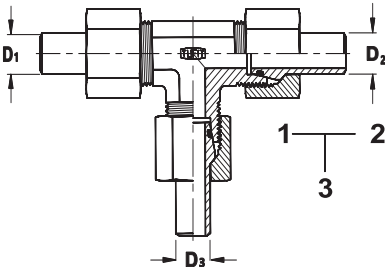
D= Tube OD x WT

T= Thread at the Stud end



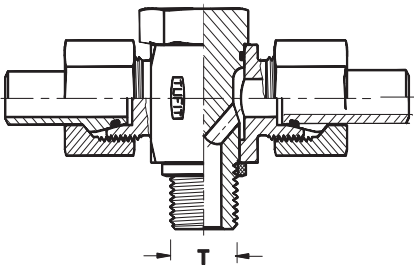
Weld-on Tee Coupling

Part No: WDT35X3
Part No: WDT20X3



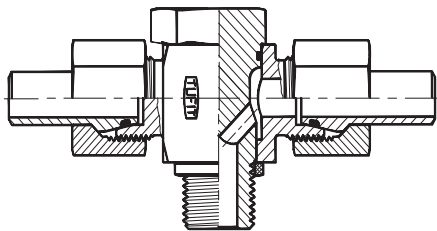
Weld-on Tee Reducer Coupling

WDRD



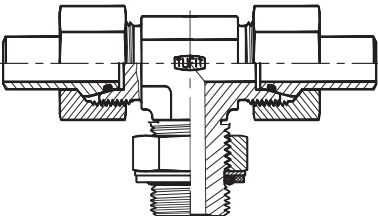
Weld-on Banjo Tee Coupling
(Medium Pressure)

WDBTMG (BSP)
WDBTMM (MM)



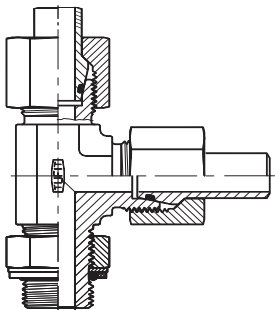
Weld-on Banjo Tee Coupling
(High Pressure)

WDBTHG (BSP)
WDBTHM (MM)



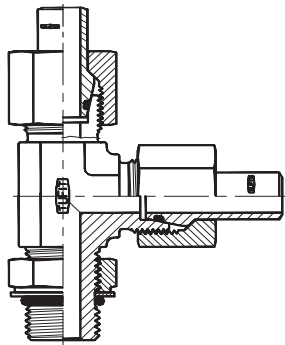
Weld-on Adjustable Locknut
Branch Tee Coupling ISO9974

WDALNBTHM-ISO9974 (MM)
WDALNBTHG (BSP)



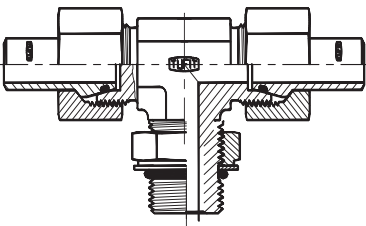
Weld-on Adjustable Locknut
Run Tee Coupling ISO9974

WDALNRTHM-ISO9974 (MM)
WDALNRTHG (BSP)



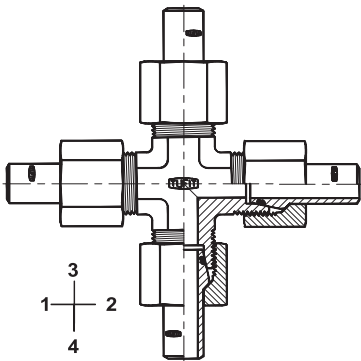
Weld-on Adjustable Locknut
Run Tee Coupling

WDALNRTU (UNF)
WDALNRTM-ISO6149 (MM)



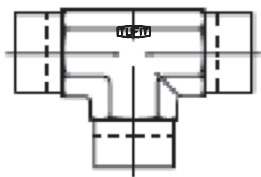
Weld-on Adjustable Locknut
Branch Tee Coupling

WDALNBTU (UNF)
WDALNBTM-ISO6149 (MM)

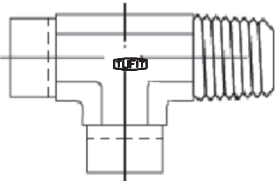


Weld-on Cross
Coupling

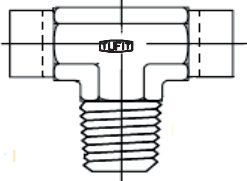
WDK



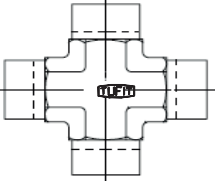
Tee, Tube Socket End-
All Ports



Male Run Tee
Tube Socket Weld End



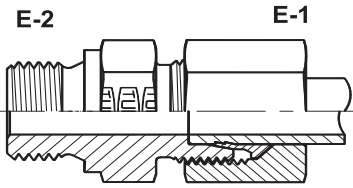
Male Branch Tee
Tube Socket Weld End



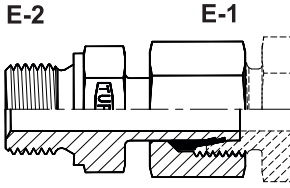
Cross, Tube Socket
End- All Ports

Following examples of various Customized shapes & combinations

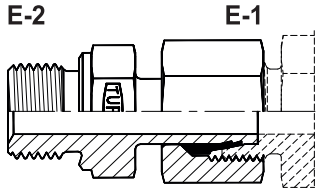
Please mention your required Material, OD of Tube, Thread at the Stud end, Undercut form, Quantity & any other detail



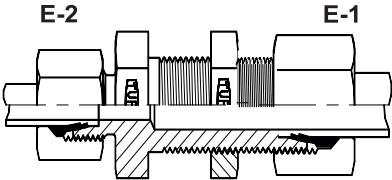
CPS-1



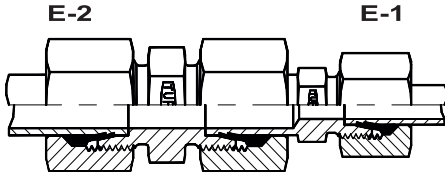
CPS-2



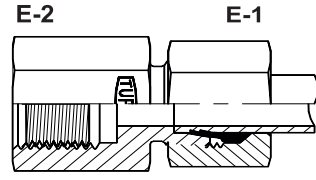
CPS-3



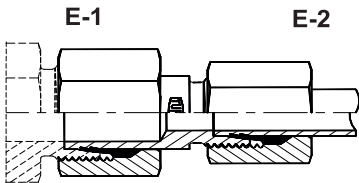
CPS-4



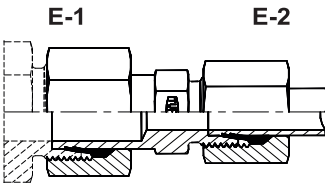
CPS-5



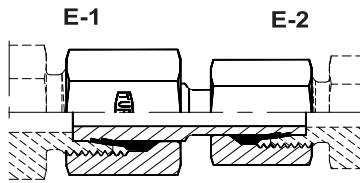
CPS-6



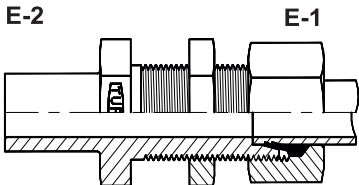
CPS-7



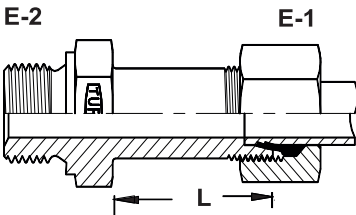
CPS-8



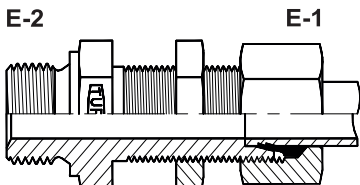
CPS-9



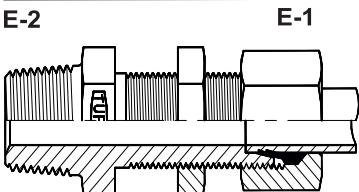
CPS-10



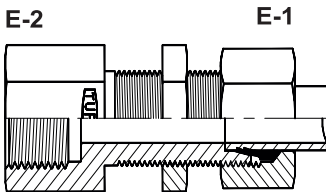
CPS-11



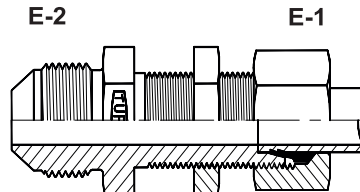
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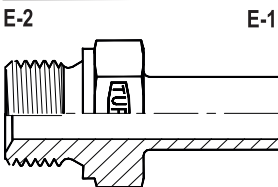
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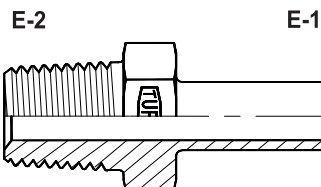
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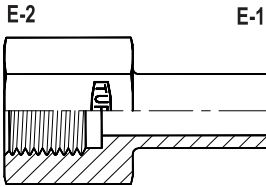
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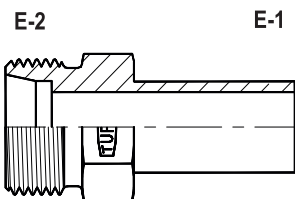
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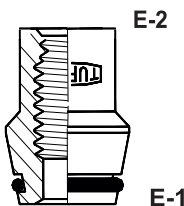
CPS-17



CPS-18



CPS-19

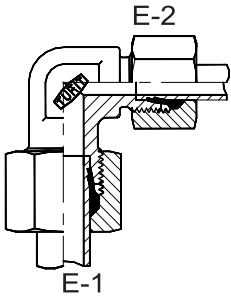


CPS-20

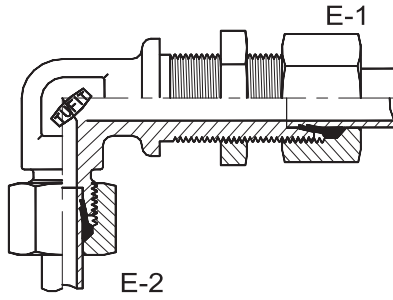
& Many more.....

Following examples of various shapes & combinations

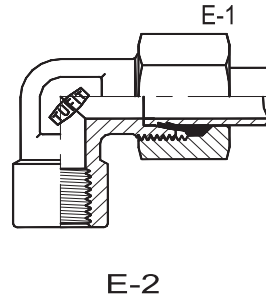
Please mention your required Material, OD of Tube, Thread at the Stud end, Undercut form, Quantity & any other detail



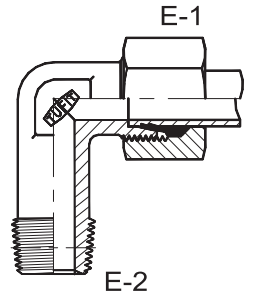
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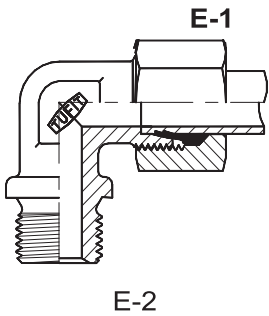
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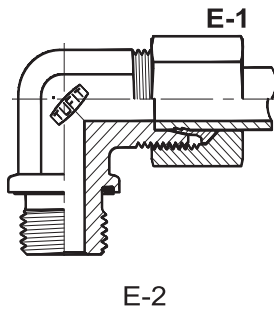
CPE-3



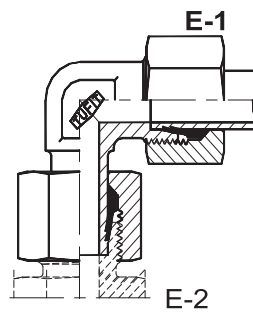
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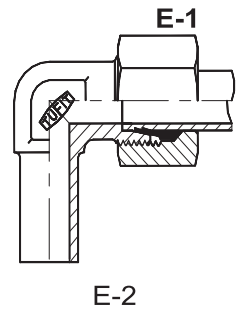
CPE-5



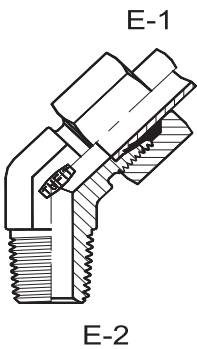
CPE-6



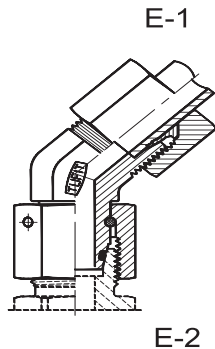
CPE-7



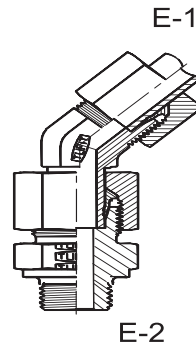
CPE-8



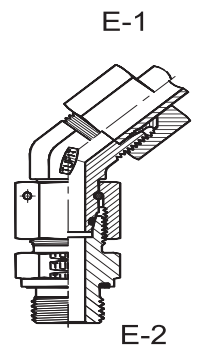
CPE-9



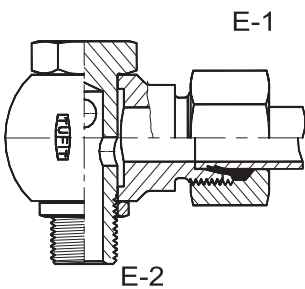
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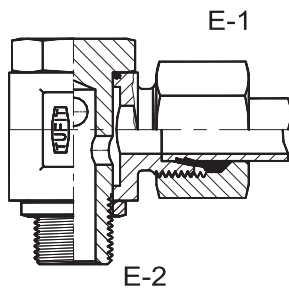
CPE-11



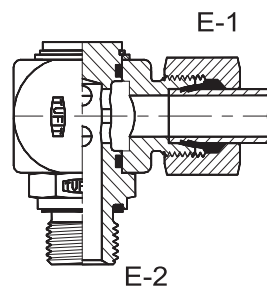
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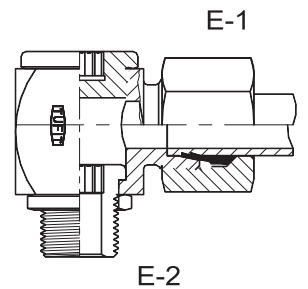
CPE-13



CPE-14



CPE-15

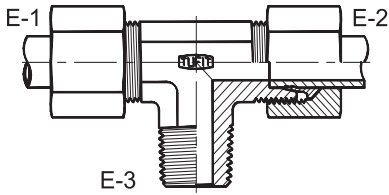


CPE-16

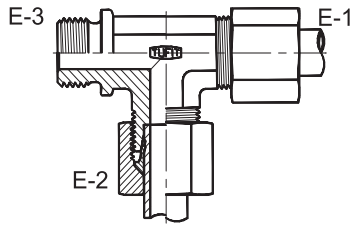
& Many more.....

Following examples of various shapes & combinations

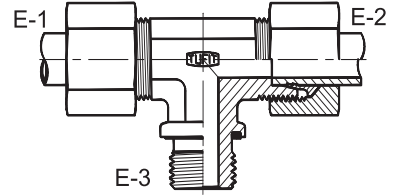
Please mention your required Material, OD of Tube, Thread at the Stud end, Undercut form, Quantity & any other detail



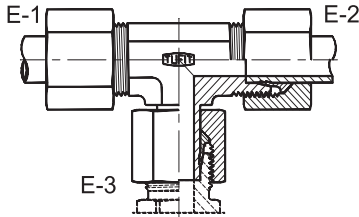
CPT-1 Taper Stud Branch Tee
CPT-2 Taper Stud Run Tee



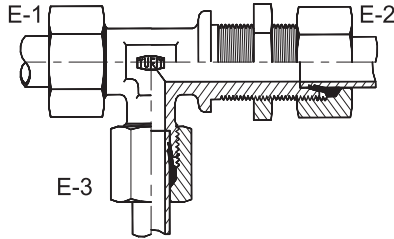
CPT-3 Parallel Stud Branch Tee (B)
CPT-4 Parallel Stud Run Tee (B)



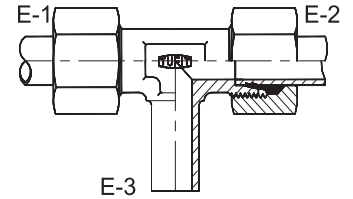
CPT-5 Parallel Stud Branch Tee (E)
CPT-6 Parallel Stud Run Tee (E)



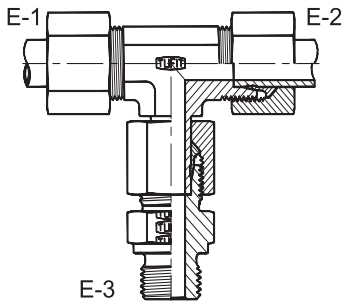
CPT-7 Swivel Nut Branch Tee
CPT-8 Swivel Nut Run Tee



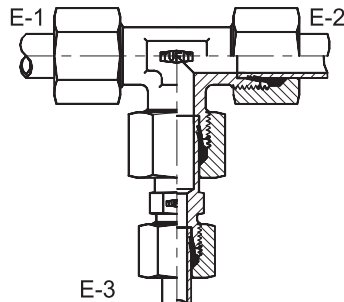
CPT-9 Bulkhead Branch Tee
CPT-10 Bulkhead Run Tee



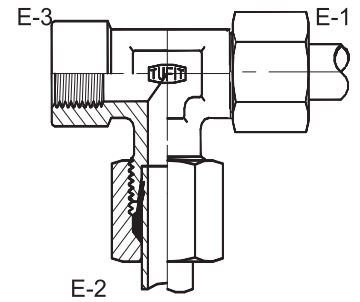
CPT-11 Stand tube Branch Tee
CPT-12 Stand tube Run Tee



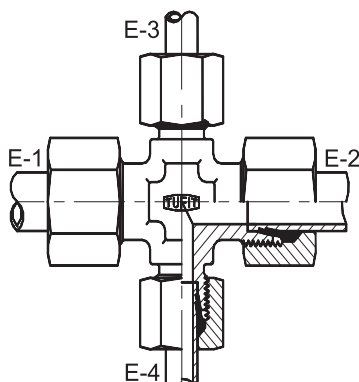
CPT-13 Swivel Nut Branch Tee with Connector
CPT-14 Swivel Nut Run Tee with Connector



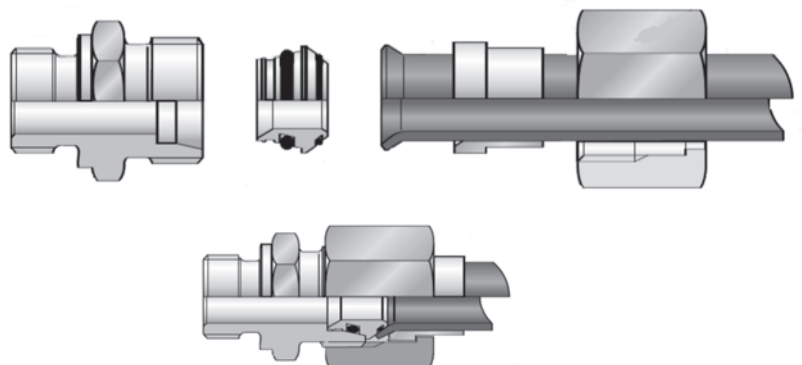
CPT-15 Swivel Nut Branch Tee Reducer
CPT-16 Swivel Nut Run Tee Reducer



CPT-17 Female Branch Tee
CPT-18 Female Run Tee



CPT-19 Cross Reducer
& Many more.....



Converting ISO 8434-1 (24°) to ISO 8434-2 (37°)
Or Vice versa Converting ISO 8434-2 (37°) to ISO 8434-1 (24°)

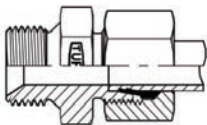


Following examples of various shapes & combinations

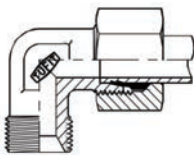
Please mention your required Material, OD of Tube, Thread at the Stud end, Undercut form, Quantity & any other detail



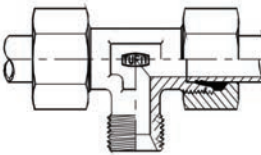
COUPLING TO CONNECT METALLIC TUBE TO RUBBER HOSE (60° CONE END)



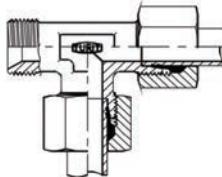
60° HOSE STRAIGHT
COUPLING



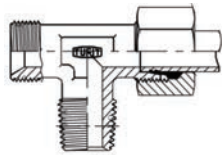
60° HOSE ELBOW
COUPLING



60° HOSE BRANCH
TEE COUPLING



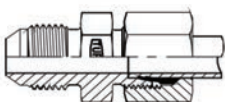
60° HOSE RUN
TEE COUPLING



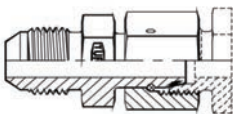
60° HOSE BRANCH
TEE COUPLING TAPER



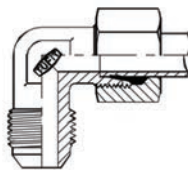
COUPLINGS TO CONNECT METALLIC TUBE TO SAE/JIC 45° / 37° FLARED END



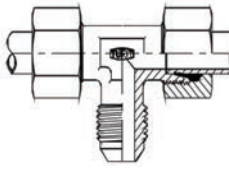
FLARE STRAIGHT
COUPLING



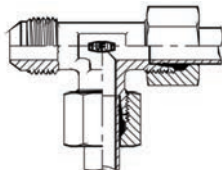
FLARE SWIVEL ST.
COUPLING



FLARE ELBOW
COUPLING



FLARE BRANCH
TEE COUPLING



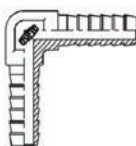
FLARE RUN
TEE COUPLING



BARBED FITTINGS



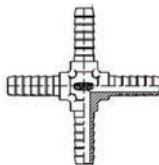
HOSE
MENDER (HEX)



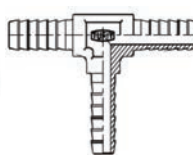
ELBOW
CONNECTOR



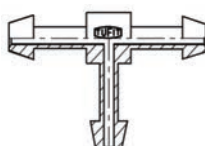
Y-JOINT
CONNECTOR



CROSS
JOINT CONNECTOR



BARBED TEE
JOINT CONNECTOR



LOW PRESSURE
PNEUMATIC TEE



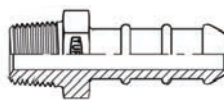
HOSE PARALLEL STUD
CONNECTOR Form-B



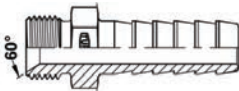
HOSE PARALLEL STUD
CONNECTOR Form-E



HOSE TAPER STUD
CONNECTOR Shape-A



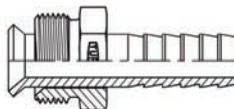
HOSE TAPER STUD
CONNECTOR Shape-B



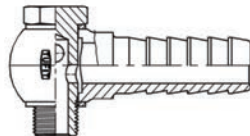
HOSE STRAIGHT
CONNECTOR



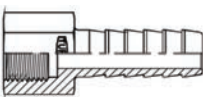
HOSE FLARE
STRAIGHT CONNECTOR



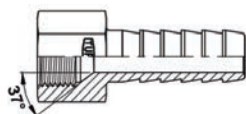
HOSE MALE
SWIVEL TUBE FLARE



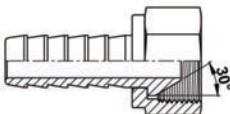
BANJO
CONNECTOR



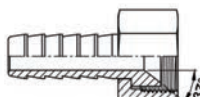
HOSE FEMALE
CONNECTOR



HOSE FEMALE INVERTED
FLARE CONNECTOR



60° HOSE SWIVEL NUT



37° JIC SWIVEL NUT



SWIVEL
NUT-UNIVERSAL

Fitting requires a pre-set operation that creates a bite by the progressive ring into the outer surface of the tube. There are three methods of achieving.

- Manually with the fitting body
- Manually with Hardened pre-assembly tool
- With Hydraulic Machine

The use of Original **TUFI** components, precise knowledge of their function, the proper selection of the tube material and following the strict assembly instructions **GUARANTEE** safety, performance & leak proof results. Failure to follow this rule can adversely affect functional safety and reliability.

1. Cut the tube at right angle with cut-off Saw or a Hacksaw with a fine grain tooth blade duly guided by a Sawing Device. Deburr tube ends with a smooth flat file and remove inside and outside burrs. (maximum 0.2x45°) Do not chamfer. Remove metal chips from inside / outside tube & clean it thoroughly as debris present in the tube end may enter the system. Do not use roller type tube cutters for Steel or SS tubes as they cause angular cuts & severe burr, which are difficult to remove, and creates flow restriction. It can be used for Copper or Aluminum tubes.	2. Check with a Try square for its squareness. A maximum angular deviation of 0.5° relative to the tube axis is permissible. Cutting the pipe square is made easy by Sawing Device : SD0642 Cut-off Saw : CS0642	3. For easier & proper assembly, clean and oil, threads and inside of the cone (taper) of the fitting especially for larger tube sizes above 20 mm. Oil progressive ring all over and inside threads of the coupling nut & run it several times over the fitting body thread for easier assembly. (Do not use grease)	
4. Slide coupling nut and the progressive ring onto the end of the tube with thicker part of sleeve facing the coupling nut. Check the correct alignment of the progressive ring on the tube and the system as a whole.	5. Be careful while sliding the progressive ring. Incorrect placing of the progressive ring will not seal. If it is difficult to push the ring over the tube, file the end of the tube slightly. Ensure that the cutting ring is facing the correct direction to prevent assembly error. DO NOT OPEN THE PROGRESSIVE RING IN ANY CASE.	6. Assemble the nut by hand until finger tight. Insert the tube into the fitting body and push it against the tube stop. Make sure that the tube presses against the stop to ensure that the cutting bites into the tube correctly.	7. Hold the connector body firmly either using a second wrench or a vice. Mark a line with chalk on the nut and the tube in order to measure the required number of turns of the nut. Start tightening the nut. Tighten the nut by approx. 3/4th of a turn. The progressive ring now grips the pipe. The pipe must not rotate with the nut.
8. Finally tighten the nut another 3/4th of a turn approx. with spanner and / or with extension. The progressive ring now bites into the pipe and throws up a visible collar at the front cutting edge. The body must be held rigidly. Deviating from the recommended number of assembly turns can lead to reduce pressure performance & life expectancy. Leakage and slippage may occur.	9. Disassemble the tube connector. Check to make sure that a visible collar fills the space in front of the first cutting edge. The indentation should cover *80% of the ring front side. If not well formed tighten slightly more. The progressive ring does not have to grip tightly on the tube. It may freely rotate on the tube but it should not be capable of axial displacement.	10. Each time the connector disassembled, re-tighten the nut firmly using the same torque as required for initial assembly. Hold the connector body firmly with one wrench and turn nut with another wrench.	11. The Minimum length of straight tube end = 2 x Height of nut. The Straight tube end may not exceed any deviation of roundness or straightness, which exceeds the dimensional tolerances of the tube.
	Assembly with Support Sleeve (TIM)	Assembly with Support Sleeve (TIP)	
12. Minimum length of short tube ends 2½ to 3 x height "H" of nut.	13. Pre-set progressive ring following one of the pre-setting methods. The support sleeve prevents collapse of tube 1- Insert support sleeve up to knurl 2- Drive knurled end of support into tube 3- Ensure that support sleeve is flush with tube end	14. Pre-set progressive ring following one of the pre-setting methods. The support sleeve prevents collapse of tube 1- Insert support sleeve into tube 2- Drive Collar end of support into tube 3- Ensure that support sleeve is flush with tube end	15. Assembly Instructions of Support Sleeve TIM / TIP Drive the Support Sleeve into tube end till it flushes with the tube end

*Experience has shown that because of the resistance of SS tube the visible collar is smaller than with Steel tube of the same size. Because of high coefficient of friction, the use of Steel nuts may be preferable with SS ring & body.



Simple but essential tool for the manual pre-setting with the fitting body is recommended for Steel & Copper tubes. For frequent Pre-setting of Stainless Steel tube and Hose standpipe fitting, a hardened Pre-assembly tool is strongly recommended.

Series	Tube O.D	M Metric	Part No.
L Light	6	M 12x1.5	PAT06L
	8	M 14x1.5	PAT08L
	10	M 16x1.5	PAT10L
	12	M 18x1.5	PAT12L
	15	M 22x1.5	PAT15L
	18	M 26x1.5	PAT18L
	22	M 30x2	PAT22L
	28	M 36x2	PAT28L
	35	M 45x2	PAT35L
	42	M 52x2	PAT42L
S Heavy	6	M 14x1.5	PAT06S
	8	M 16x1.5	PAT08S
	10	M 18x1.5	PAT10S
	12	M 20x1.5	PAT12S
	14	M 22x1.5	PAT14S
	16	M 24x1.5	PAT16S
	20	M 30x2	PAT20S
	25	M 36x2	PAT25S
	30	M 42x2	PAT30S
	38	M 52x2	PAT38S



It saves time and effort in bite type assemblies. The use of **PAT** assures that the ring securely cuts into the tube without damaging the inner fitting cone. A special notch engraves a circular mark onto the tube end to verify that it was properly bottomed at the abutment of the fitting.

Economical for assembly of small quantities only



FINAL ASSEMBLY IN THE CONNECT BODY

CONE GAUGE: Part No. CG24

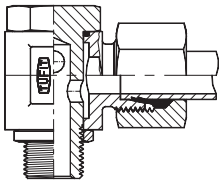
Follow steps 1-6 of Assembly Instructions as shown on Page No. 103. Press the tube end firmly into the cone of the Pre Assembly Tool. Without tube bottoming at the abutment of the fitting body, the ring cannot bite sufficiently. Failures may cause due to improper tube cutting or bottoming in the **PAT**. It can be recognized before final installation. Under load, the connection can fail due to tube shear.

ALTERNATIVE SHAPES



ADJUSTABLE BANJO PORT END ASSEMBLY INSTRUCTIONS:

Inspect components to ensure that male & female port threads and sealing surfaces are free from burrs, nicks and scratches or any foreign material

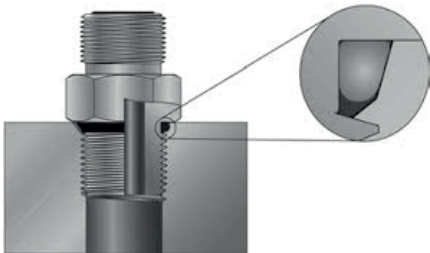


1. Oil port thread and O-ring of bolt
2. Insert hollow bolt into the body
3. Place the metallic sealing ring and center through the bolt thread
4. Align body and tighten bolt with spanner until a noticeable increase in torque is required
5. Tighten bolt with spanner by 1/6 of a turn (60°) beyond the point of resistance with holding the body in position
6. Tighten bolt with spanner by 1/4 of a turn (90°) beyond the point of resistance while holding the body in position, the fitting is thus fixed and sealed.



NON-ADJUSTABLE PORT END ASSEMBLY INSTRUCTIONS:

Inspect components to ensure that male & female port threads and sealing surfaces are free from burrs, nicks and scratches or any foreign material

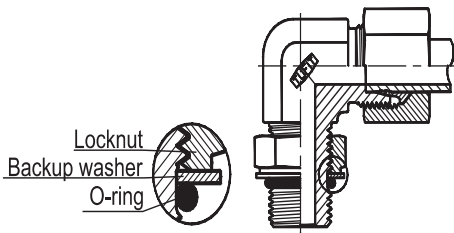


1. If O-ring or seal is not pre-installed to fitting male port end, install proper size O-ring or seal, taking care not to damage it.
2. Lubricate the O-ring with light coat of system fluid or a compatible lubricant to help the O-ring slide smoothly into the port to avoid damage. "ES" seal does not need lubrication.
3. Screw fitting into the port and tighten to proper torque.

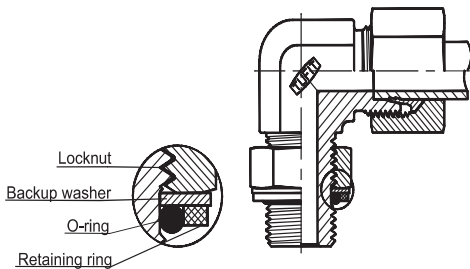
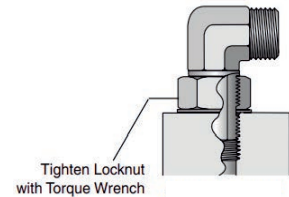
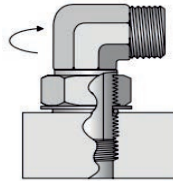
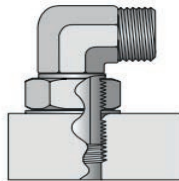
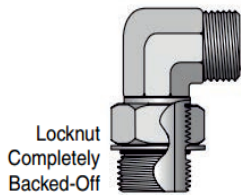


ADJUSTABLE PORT END ASSEMBLY INSTRUCTIONS:

Inspect components to ensure that male & female port threads and sealing surfaces are free from burrs, nicks and scratches or any foreign material



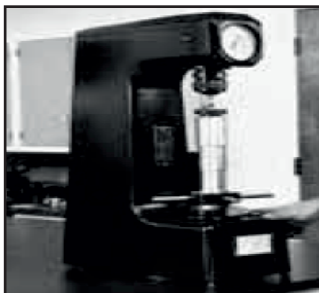
1. Back off locknut as far as possible. Make sure that the backup washer is not loose and is pushed up as far as possible.
2. O-ring and back-up washer in the non-threaded section should be placed nearest to the locknut.
3. Lubricate the O-ring with light coat of system fluid or a compatible lubricant to help the O-ring slide smoothly into the port to avoid damage.
4. Screw the fitting in the port by hand until back-up washer bottoms & contacts face of the port. Light wrenching may be necessary. Over tightening may damage washer.
5. To adjust direction & to align the tube end of the fitting to accept incoming tube or hose assembly, unscrew the fitting by the required amount to a maximum of one full turn.
6. Using two wrenches hold body in desired position and tighten locknut to the proper torque value.
7. Inspect to ensure that the O-ring is not pinched and that washer is seated flat on the face of the port.



1. Screw back locknut as far as possible.
2. O-ring and back-up washer in the non-threaded section should be placed nearest to the locknut
3. Lubricate the O-ring with light coat of system fluid or a compatible lubricant to help the O-ring slide smoothly into the port to avoid damage.
4. With BSP and Metric parallel version slip retaining ring over the O-ring.
5. Screw the fitting in the port by hand until retaining ring or back-up washer bottoms & contacts face of the port. Light wrenching may be necessary. Over tightening may damage washer.
6. To adjust direction & to align the tube end of the fitting to accept incoming tube or hose assembly, unscrew the fitting by the required amount to a maximum of one full turn.
7. Using two wrenches hold body in desired position and tighten locknut to the proper torque value.
8. Inspect to ensure that the O-ring is not pinched and that washer is seated flat on the face of the port.



TESTING PROCEDURE:



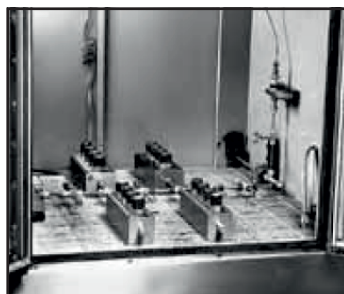
Hardness Test



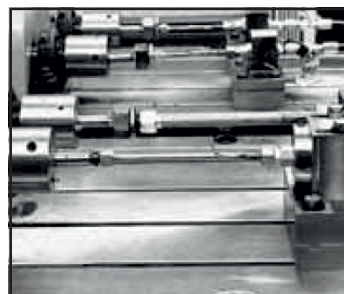
Burst Test



Leak Test



Impulse Test



Vibration Test

1. Tube not bottomed Check for a visible mark on the tube end with fitting. The tubing was not completely inserted into the throat of the fitting body until it bottomed hence the tube travel forward with the ferrule & resulted in a shallow bite. This assembly should be scrapped.	2. Shallow bite Inspect for turned up ridge of material (collar). A failure to achieve this ridge can be traced to either the nut not being tightened enough or the tube not being bottomed against the stop, which allowed the tube to travel forward with the ferrule.	3. Over-set ferrule Too much pressure or more than recommended turns from finger tight were used to preset ferrule or the nut was severely over tightened in the final assembly. This assembly should be scrapped.	4. Ferrule cocked on tube The ferrule may become cocked on the tube when the tube end is not properly lined up with the body. Generally faulty tube bending causes this condition. All bent tube assemblies should drop into the fitting body prior to make up. This assembly should be scrapped.	5. No bite at all If all of the prior checks have been made and the ferrule still shows no sign of biting the tube, it may be that the tube is too hard. This assembly should be scrapped.

Condition	Probable Cause(s)	Recommendation
❖ Immediate leakage when system is pressurized	❖ Improper ferrule / bite ring orientation	❖ Reset ferrule to ensure that the leading edge of ferrule / bite ring is pointing toward end of tube and seat of the mating fitting
❖ Additional / excessive stress apparent on bite	❖ Non-square tube cut; tube not being properly supported in seat of adapter	❖ Re-cut tube to 90° ± 1°
❖ Flexural stresses allow tube to “rock” back and forth	❖ Tube not fully supported in fitting's body seat	❖ Reset tube end. This time ensure that the tube is bottomed in the presetting tool or fitting body
❖ Poor ferrule / bite ring pre-set and / or tube collapse	❖ Tube may be too hard; or preset pressure or torque might be too high ❖ Tube is too thin	❖ Use fully annealed tube max. hardness RB 72 for steel, RB 90 for stainless steel ❖ Tube supports must be used with certain thin walled steel or stainless steel tube. Review present requirement
❖ Tube not bottoming out in fitting body	❖ Improper preset or wrong tool used for presetting	❖ In the presetting process, it is important to exert axial force on the tube to keep it fully bottomed in the tool. Check for indentation on end of the tube
❖ Shallow bite of ferrule or cut ring into tube	❖ Worn preset tool ❖ Too low preset pressure or torque ❖ Tube too hard ❖ Tube not bottomed against stop initially in preset	❖ Replace preset tool ❖ Observe manufacturer's recommendation for proper preset ❖ Ensure that tube is of correct hardness or material ❖ Hold tube against stop in preset
❖ Tube pulls out of fitting in application and ferrule skives end of tube	❖ Improper preset ❖ Tube too hard ❖ Excessive internal pressure ❖ Excessive axial load on tube ❖ Inadequate make up	❖ Preset must be inspected for evidence of proper preset, such as raised ridge of metal in front of leading edge ❖ Ensure that tube is of proper hardness and material ❖ Ensure that internal pressure is within rating of fitting (tube might be of a higher rating) ❖ Avoid additional axial load than that caused by internal pressure ❖ Follow proper presetting and assembly procedures
❖ Fitting nut is tight but leakage still occurs	❖ Overset ferrule ❖ Cracked tube ❖ Damaged components	❖ Excessive force used in presetting of ferrule can cause it not to spring back and affect a seal. Follow manufacturer's recommendation for preset ❖ Check tube for circumferential crack due to fatigue ❖ Check component for damage such as nicks, scratches and cracks

CONSTANTLY STRIVING TO IMPROVE THE PRODUCT TO MEET MORE STRINGENT CONDITIONS, ON GOING RESEARCH & DEVELOPMENT MAY CHANGE PRODUCT COMPOSITION, SPECIFICATIONS & PART NAME OR NOS.

IF YOU HAVE QUESTIONS CONCERNING THE PRODUCTS CONTAINED IN THIS CATALOGUE PLEASE CONTACT / CALL OUR (TUBE FITTING DIVISION) TECHNICAL SERVICE DEPARTMENT

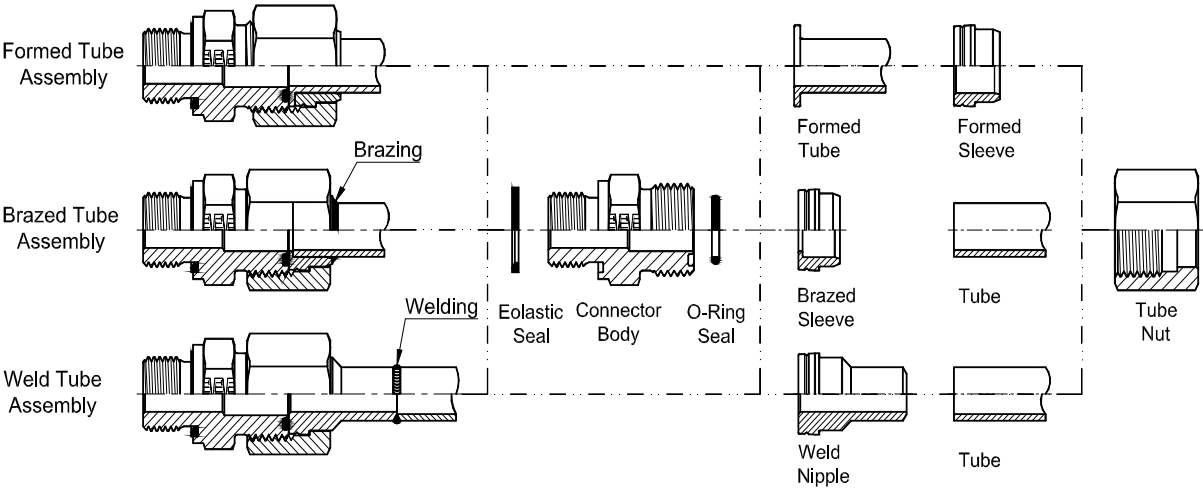
FULL CARE HAS BEEN TAKEN FOR THE ACCURACY OF THE DIMENSIONS BUT WE REGRET THE TYPING / PRINTING MISTAKES

Following examples of various shapes & combinations

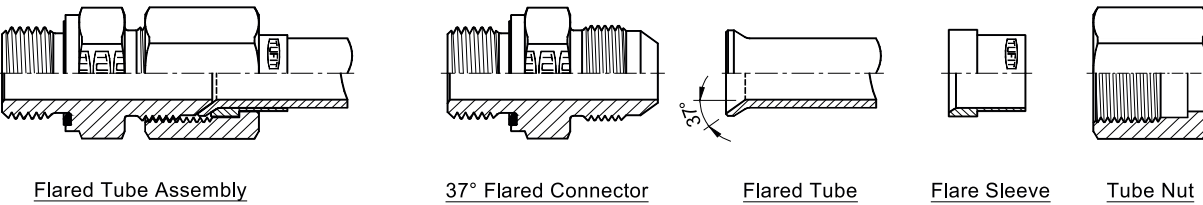
Please mention your required Material, OD of Tube, Thread at the Stud end, Undercut form, Quantity & any other detail



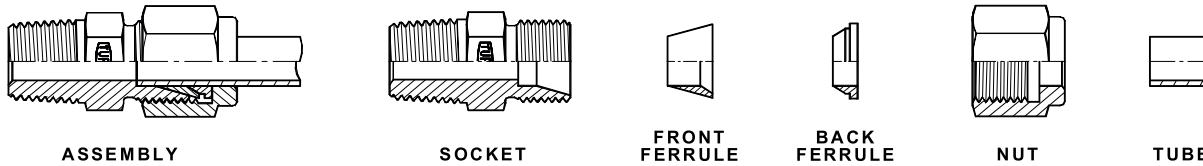
O-RING FACE SEAL CONNECTOR (ORFS) ISO: 8434-3



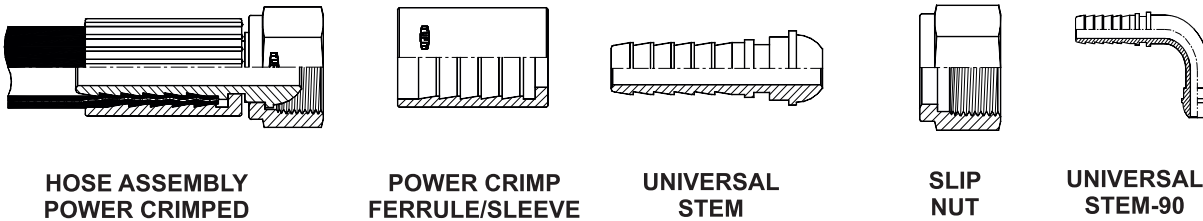
UNIVERSAL JIC 37° FLARED TUBE FITTINGS ISO: 8434-2



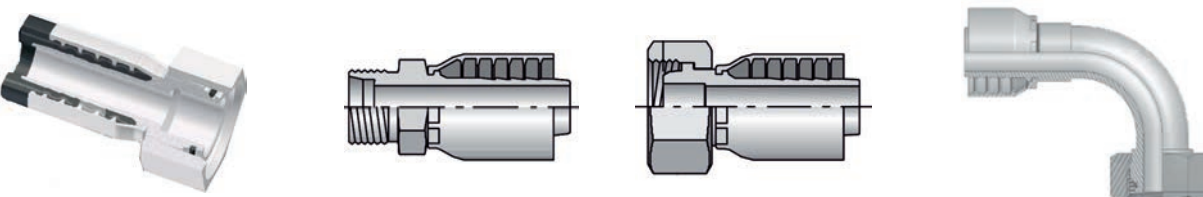
TWIN FERRULE BITE TYPE COMPRESSION COUPLINGS



RUBBER HOSE END FITTINGS



RUBBER HOSE CRIMP OR SWAGE END FITTINGS





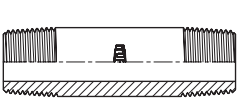
OUR OTHER COUPLINGS / PRODUCTS RANGE

Following examples of various shapes & combinations

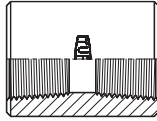
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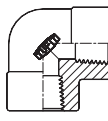
FORGED SCREWED FITTINGS TO ANSI B-16.11 3000/6000 PSI



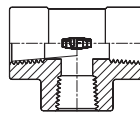
MALE NIPPLE-LONG



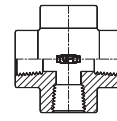
SOCKET



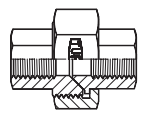
90° ELBOW



TEE



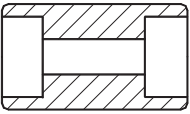
CROSS



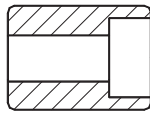
UNION



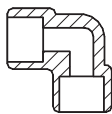
SOCKET WELD FITTINGS TO ANSI B-16.11



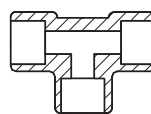
COUPLING



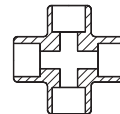
HALF COUPLING



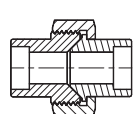
90° ELBOW



TEE



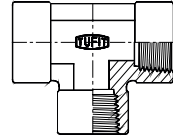
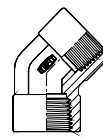
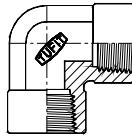
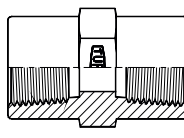
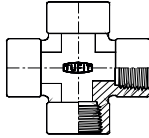
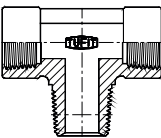
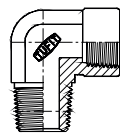
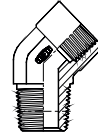
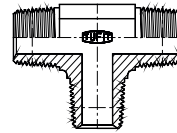
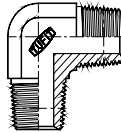
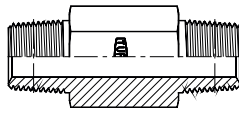
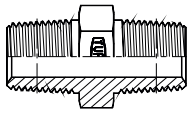
CROSS



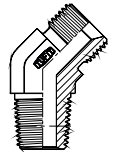
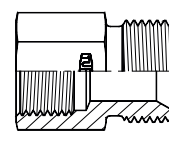
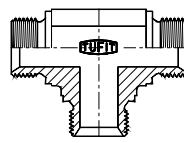
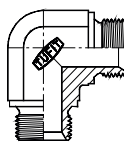
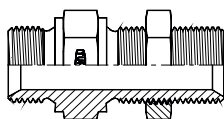
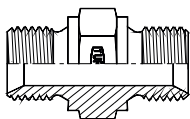
UNION (3Pcs)



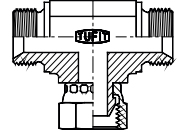
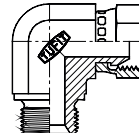
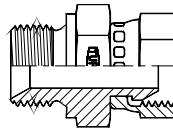
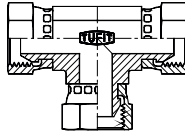
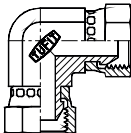
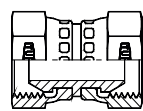
MALE / FEMALE NIPPLES



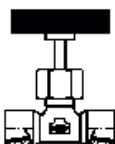
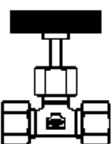
60° HOSE ADAPTORS



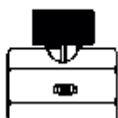
SWIVEL NUT 60° HOSE ADAPTORS



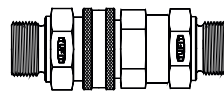
OTHERS



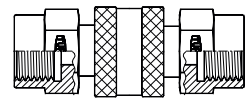
NEEDLE VALVES



BALL VALVES



QUICK RELEASE COUPLINGS





PART No.	PAGE NO	PART No.	PAGE NO	PART No.	PAGE NO	PART No.	PAGE NO
A		G		SDSBM		WDALNEHM-45	
ALNBTHG	66	GBC	30	SDSEG-L	10	WDALNEM-45	103
ALNBTHM	65	GMAE	30	SDSEG-S	11	WDALNEU	103
ALNBTM	63	H		SDSEM	12	WDALNEU-45	103
ALNBТУ	64	HAG	85	SDSFM	13	WDALNRTHG	104
ALNEHG	49	HAGE	85	SDSFU	14	WDALNRTHM	104
ALNEHG-45	53	HBG	44	SDTEM	36	WDALNRTM	104
ALNEHM	48	HBM	45	SDTEN	34	WDALNRTU	104
ALNEHM-45	52	HBPBG	83	SDTER	35	WDBEHG	103
ALNEM	46	HBPBM	83	SDTFN	17	WDBEHM	103
ALNEM-45	50	HBPEG	83	SDTM	9	WDBELG	103
ALNEU	47	HBPEM	83	SDTN	15	WDBELM	103
ALNEU-45	51	HBPFU	83	SDTR	16	WDBEMG	103
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ALNRTHM	69	HBPN	84	SR	82	WDBHE	103
ALNRTM	67	HBPR	84	SRD	5	WDBHS	102
ALNRTU	68	K		SRH	82	WDBTHG	104
B		K	75	SWBT	57	WDBTHM	104
BEHG	44	L		SWBTEG	58	WDBTMG	104
BEHM	45	LBG	40	SWBTEM	59	WDBTMM	104
BELG	40	LBM	41	SWD	28	WDE	103
BELM	41	LN	3	SWE	37	WDENP	91
BEMG	42	M		SWEEG	38	WDK	104
BEMM	43	MBG	42,71	SWEEM	39	WDNP	90
BHE	33	MBM	43,72	SWOR	81	WDOR	81
BHS	6	MFAB	86-87	SWPGG	29	WDPGG	102
BPBG	83	MFAE	88-89	SWRD	21	WDS	102
BPBM	83	N		SWRT	60	WDSД	93
BPEG	83	N	1	SWRTEG	61	WDSDE	94
BPEM	83	O		SWRTEM	62	WDSDFG	102
BPFM	83	OR	80	SWS	20	WDSDFM	102
BPFU	83	OR(ISO)	81	SWSDSEG	22	WDSDSBG	102
BPM	84	P		SWSDSEM	23	WDSDSBM	102
BPN	84	PAT	110	SWSDSFM	24	WSDSEГ	102
BPR	84	PGG	29	SWSDTN	25	WSDSEM	102
BS	82	PGSR	82	SWSRD-L	26	WSDSFM	102
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BTHM	74	PT	77	T		WSDSTEM	103
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BTMM	72	R		TCS /TCD	95	WSDTER	103
C		RR	80	TIM	78	WSDTN	102
CG	110	S		TIP	79	WSDTR	102
CP	76	S	4	TRD-L	55	WDSRD	102
CPN	76	SDFG	18	TRD-S	56	WDT	104
CR	2	SDFM	19	W		WDTRD	104
CS	109	SDSBG-L	7	WBHS	92		
E		SDSBG-S	8	WDALNBTHG	104		
E	32			WDALNBTHM	104		
ES	80			WDALNBTM	104		
				WDALNBТУ	104		
				WDALNEHG	103		
				WDALNEHG-45	103		
				WDALNEHM	103		
				WDALNEM	103		

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Our Customers





Ahuja Corporation Pvt Ltd.

(Formerly Ahuja Industries)

A-185, RIICO Prahladpura Industrial Area,
Near Shivdapura, Tonk Road, Jaipur - 302 022
Rajasthan INDIA

Visit us at www.ahujagroup.in | www.tufit.com

Contact us : sales@ahujagroup.in | +91 93148 36312

