

Adaptors

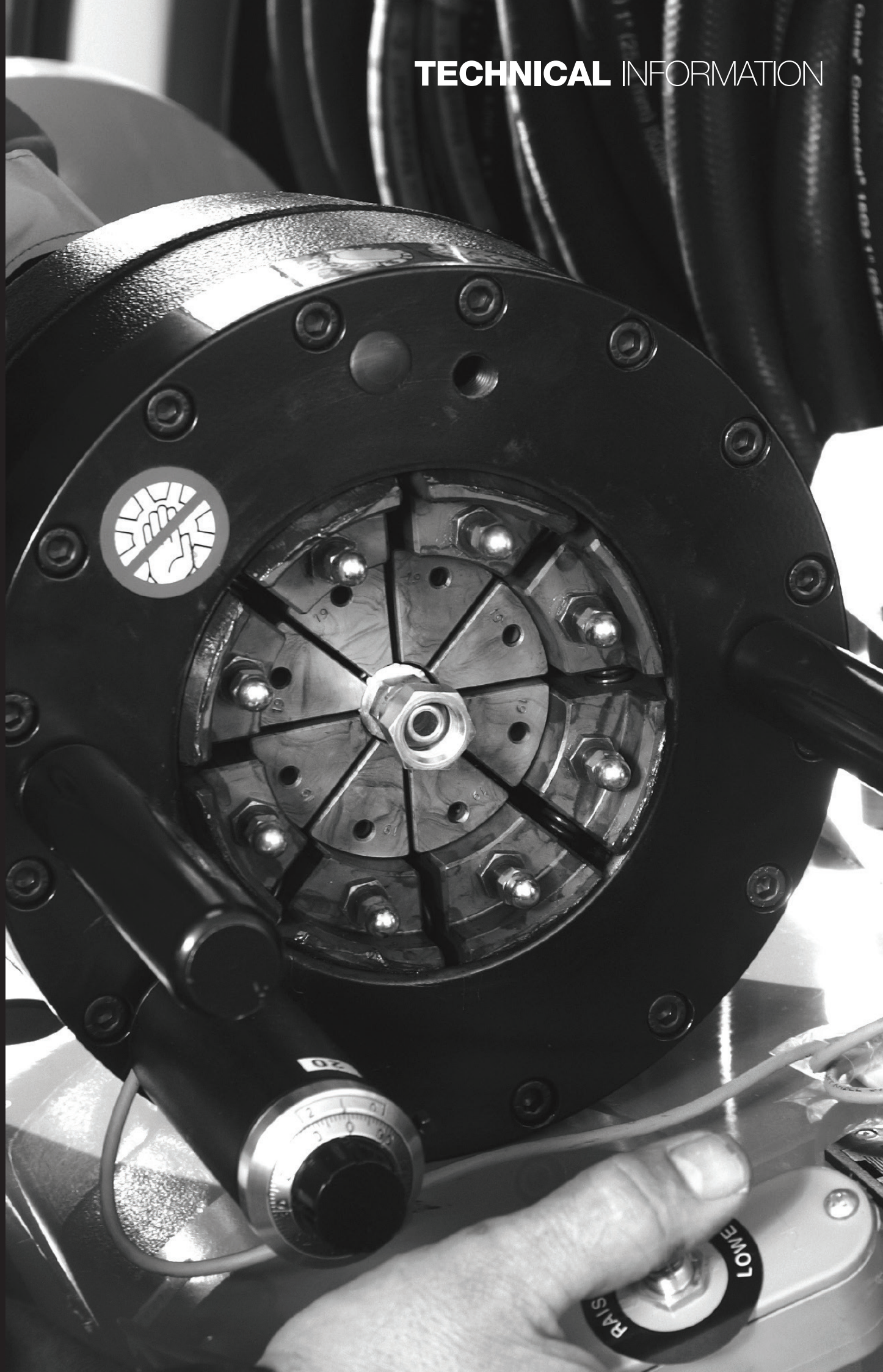
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GENERAL INFORMATION

An essential step in ensuring that a hydraulic system is safe and delivers optimum performance and service life is selecting the correct fluid conveying components.

Although a lot of the work undertaken in this industry is the replacement of existing components with a duplicate it is still good practice to check the product against the application especially if the service life of the product to be replaced was not acceptable or when fault finding on an existing system.

In some cases a problem with a hose assembly or other fluid conveying products can point to an underlying problem with the system itself or possibly the products have been incorrectly specified originally.

INFORMATION - HOSE

HOSE SELECTION & SERVICE LIFE RECOMMENDATIONS

Hydraulic hose (and hose assemblies) have a finite life span that is dependent upon the actual operating conditions the assembly is subjected to. An effective way to remember hose selection criteria is to remember the word STAMPED. STAMPED is an acronym for the following:

S = Size
T = Temperature
A = Application
M = Medium or Media
P = Pressure
E = Ends
D = Delivery

1. Size - Hose Internal Diameter can be determined using the Nomographic Chart found in this section. The correct hose I.D. must be selected for the flow required. Too small an I.D. for a given volume will result in pressure drop, heat generation, fluid turbulence and possible internal tube damage. If in doubt, select the next size up.

2. Temperature. Hose selection is determined by two variables of temperature; the ambient (external) temperature and the fluid/material (internal) temperature. The hose should not be exposed to internal or external temperatures which exceed the manufacturer's stated maximum and minimum limits. Both continual and intermittent temperatures must be accommodated within the recommended limits. Extra care must be taken when specifying hoses that are routed near to (or terminate on) hot components such as engine manifolds.

3. Application. The determination of how the hydraulic hose or hose assembly will be used. Questions that may need to be answered to ensure correct hose selection could include: What is the suitable hose construction? What type of equipment is it used on? What are the end connections? Are there applicable Government or Industry standards to be satisfied? Questions that may need to be answered to ensure correct hose selection could include; What are the environmental conditions the hose will be used in? Does the hose require a special cover or armour? Are there unusual mechanical loads or excessive movement? What are the routing requirements? What are the required lengths and bend radius to satisfy those routing requirements? (Further data regarding Hose Installation Recommendation can be found in this section.)

4. Medium (or media, material) to be conveyed. Hose selection must ensure compatibility of the hose tube (liner) and outer cover with the oil, chemical or gas to be conveyed. A chemical resistance table to rubber compounds can be found in this section. Similar care to ensure compatibility should be taken when specifying end connections (hosetails and adaptors), especially those that contain o-rings.

5. Pressure. The pressure in a hydraulic system should not exceed the stated hose working pressure at any time. System pressure spikes and surges must be considered and accommodated within the stated working pressure limits. Minimum burst pressures are reference pressures, and are intended for destructive testing and design purposes only.

6. Ends. The thread portions of the hose assembly must of course, be compatible with what it is connecting to. Different thread types have different working pressures, always insure that the threaded ends selected meet or exceed the designed working pressure. Check the technical section of this catalogue for pressure ratings. Also the chemical compatibility of the end fittings must be checked as per the hose. Ensure that the ends chosen are of the type matched to the hose.

7. Delivery. When a product is actually needed is important. A decision of what product is used can need to be altered by what is available when needed. Always specify up, not down to meet a timeline. A simple change of adaptor may be all that is needed to meet a requirement.

Exposure of hose or hose assemblies to operating conditions which exceed recommended or stated limits will significantly reduce the expected service life. If in doubt, over-specify hose assemblies to ensure as much safety margin on the recommended limits as possible.

Notes;

The potential service life of products can be significantly reduced if they are constantly operating at maximum limits.

Some areas of the selection process are interrelated however the key to correct product selection is the understanding of the application and what is required of the product.

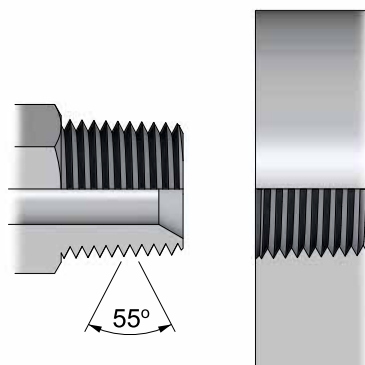
B.S.P.T. - BRITISH STANDARD PIPE TAPER

Taper: 1 in 16 by diameter

Thread Angle: 55°

The BSPT (British Standard Pipe Taper) male is intended to mate with the BSPT female only. Although the taper male will screw into BSP Parallel fixed female sockets, this is not recommended practice where avoidable as a reliable seal cannot be guaranteed.

While many BSPT males are coned 30° and will mate with BSP Parallel swivel nut females, this is not recommended practice as the taper form can deform the parallel thread and reduce the integrity of the seal.



Thread Size & TPI	Male Thread O.D. BSPT*	Female Thread I.D. BSPT
1/8-28	9.7	8.5
1/4-19	13.1	11.4
3/8-19	16.6	14.9
1/2-14	20.9	18.6
5/8-14	22.9	20.6
3/4-14	26.4	24.1
1-11	33.2	30.2
1.1/4-11	41.9	38.9
1.1/2-11	47.8	44.8
2-11	59.6	56.6

*Basic gauge plane diameter at basic gauge depth

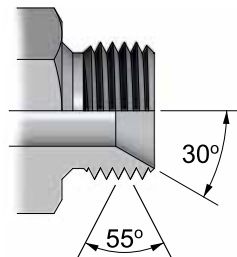
B.S.P.P. - BRITISH STANDARD PIPE PARALLEL

Thread Angle: 55°

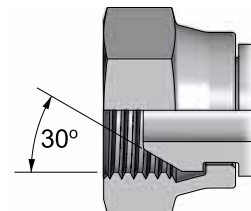
The British Standard Pipe Parallel (BSPP) male is typically coned 30° and will mate with either a BSPP swivel nut female or a BSPP female port.

BSPP female ports are normally spot faced, sealing is by either a soft metal washer, a bonded seal or a captive "O" ring.

In some cases, the port is chamfered to accept an "O" ring seal. (Similar to the U.N.O. style).

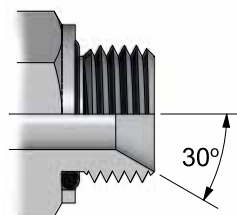


BSPP male



BSPP swivel nut female

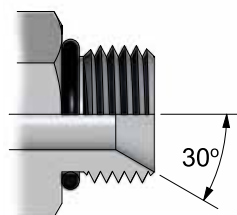
Thread Size & TPI	Male Thread O.D. BSPP	Female Thread I.D. BSPP	Torque Settings BSPP nuts
1/8-28	9.7	8.5	12 Nm
1/4-19	13.1	11.4	26 Nm
3/8-19	16.6	14.9	47 Nm
1/2-14	20.9	18.6	79 Nm
5/8-14	22.9	20.6	104 Nm
3/4-14	26.4	24.1	128 Nm
1-11	33.2	30.2	160 Nm
1.1/4-11	41.9	38.9	200 Nm
1.1/2-11	47.8	44.8	270 Nm
2-11	59.6	56.6	350 Nm



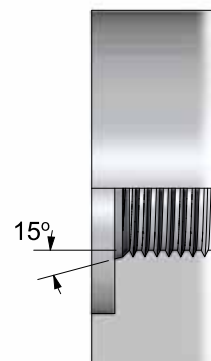
BSPP male with captive o-ring seal



BSPP female port (spot-faced)



BSPP male with o-ring seal



BSPP female port (chamfered)

N.B. Torque values are nominal and supplied as a guide only.

N.P.T. - NATIONAL PIPE THREAD

N.P.T.F.; National Pipe Taper Fuel
N.P.S.M.; National Pipe Straight Mechanical
N.P.S.F.; National Pipe Straight Fuel

Taper: 1 in 16 by diameter.

Thread Angle: 60°

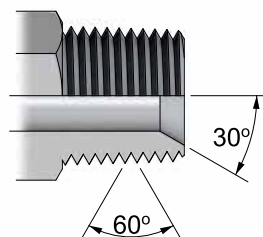
The National Pipe Taper Fuel (NPTF) male is coned 30° and will mate with the NPTF female port (taper), the National Pipe Straight Mechanical (NPSM) female (swivel nut female with 30° sealing cone), or the National Pipe Straight Fuel (NPSF) female port (parallel).

As NPTF is a “dryseal” thread, no sealing medium is required. However a sealing medium can be used to prevent thread galling.

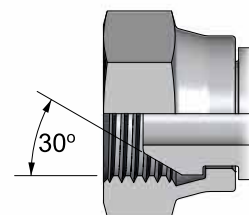
Thread Size & TPI	Male Thread O.D.	Female Thread I.D.	
	NPTF	NPTF	NPSF/SM
1/8-27	10.0	8.6	8.7
1/4-18	13.3	11.2	11.4
3/8-18	16.7	14.7	14.9
1/2-14	20.8	18.2	18.8
3/4-14	26.1	23.5	23.9
1-11.1/2	32.7	29.5	30.2
1.1/4-11.1/2	41.4	38.3	39.1
1.1/2-11.1/2	47.5	44.4	45
2-11.1/2	59.3	56.2	57



**NPTF female
port (taper)**



**NPTF male
(taper)**



**NPSM swivel
nut female**



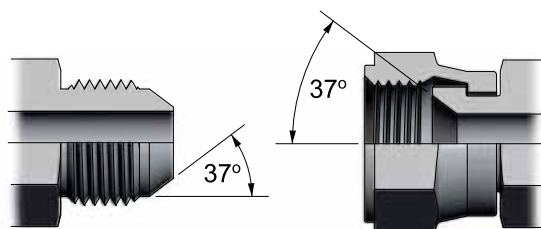
**NPSF female
port (parallel)**

J.I.C / U.N. O-RING THREAD

J.I.C. and U.N. "O"-Ring threads are both of the Unified National Form.

J.I.C. refers to the 37° flare type sealing face. The J.I.C. female is usually a swivel nut, but can also be a fixed socket (port) with a 37° sealing face in the base of the socket.

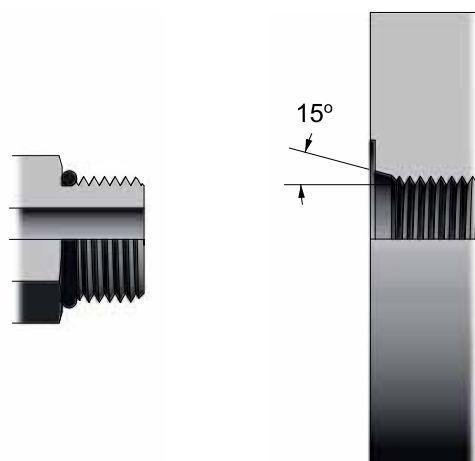
U.N. "O"-Ring refers to the thread type and "O"-Ring for sealing. The female U.N.O port has a chamfer to accept the o-ring.



JIC male

JIC swivel nut female

Thread Size & TPI	Female Thread I.D.	Tube O.D.	Torque Settings	
			JIC	UN"O"
7/16 x 20 UNF	9.8	1/4"	14 Nm	21 Nm
1/2 x 20 UNF	11.5	5/16"	19 Nm	25 Nm
9/16 x 18 UNF	13.0	3/8"	30 Nm	34 Nm
3/4 x 16 UNF	17.4	1/2"	50 Nm	72 Nm
7/8 x 14 UNF	20.3	5/8"	80 Nm	100 Nm
1 1/16 x 12 UN	24.8	3/4"	130 Nm	176 Nm
1 3/16 x 12 UN	28.2	7/8"	140 Nm	220 Nm
1 5/16 x 12 UN	31.2	1"	156 Nm	290 Nm
1 5/8 x 12 UN	39.2	1.1/4"	188 Nm	350 Nm
1 7/8 x 12 UN	45.5	1.1/2"	268 Nm	460 Nm
2 1/2 x 12 UN	61.5	2"	346 Nm	540 Nm



UNO male

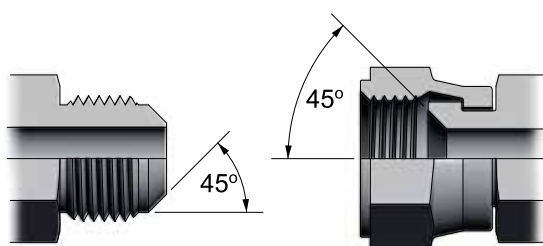
UNO female port (chamfered)

N.B. Torque values are nominal and supplied as a guide only.

S.A.E. - SOCIETY OF AUTOMOTIVE ENGINEERS O.R.F.S. - O-RING FACE SEAL

This system utilises the U.N. thread series and a 45° flare sealing face. Primarily used in the automotive and refrigeration industries.

This system uses an "O"-Ring for sealing. The "O"-Ring is housed in the face of the male and is compressed by the face of the female on connection. Connecting threads are U.N. form.

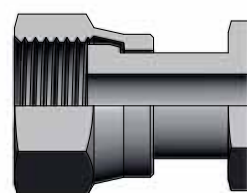


SAE male

**SAE swivel
nut female**



ORFS male



**ORFS swivel
nut female**

Thread Size & TPI	Tube O.D.	Female Thread I.D.
7/16-20	1/4"	9.8
1/2-20	5/16"	11.4
5/8-18	3/8"	14.3
11/16-16	7/16"	16
3/4-16	1/2"	17.5
7/8-14	5/8"	20.5
1.1/16-14	3/4"	24.8
1.1/4-12	7/8"	30.1
1.3/8-12	1"	33.2

Thread Size & TPI	Female Thread I.D.	Tube O.D.	"O"-ring size	Torque Settings *
9/16-18 UNF	12.8	1/4"	5/16x1/16	14-16 Nm
11/16-16 UN	16.0	3/8"	3/8x1/16	24-27 Nm
13/16-16 UN	19.1	1/2"	1/2x1/16	43-47 Nm
1-14 UN	23.5	5/8"	5/8x1/16	60-69 Nm
1.3/16-12UN	26.1	3/4"	3/4x1/16	90-95 Nm
1.7/16-12 UN	34.2	1"	15/16x1/16	125-135 Nm
1.11/16-12 UN	40.6	1.1/4"	1.3/16x1/16	170-190 Nm
2-12 UN	48.0	1.1/2"	1.1/2x1/16	200-225 Nm

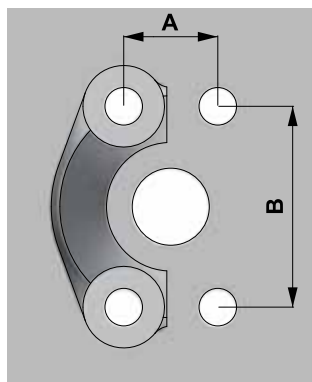
N.B. Torque values are nominal and supplied as a guide only.

S.A.E. O-RING FLANGES (SAE - J518)

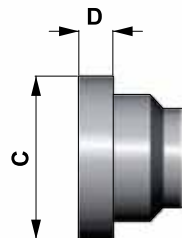
These connections utilise an “O”-Ring for sealing and are widely used for connecting to pump and motor parts as well as end terminations for pipe runs.

The “O”-Ring is housed in the flange head face and seals on a flat face female port, the flange is held in place by two clamp halves (or a one piece clamp) which are secured by four bolts.

SAE flanges are available in two pressure classes: **Standard Series, Code 61**, which goes to 5000 psi (dependent on size), and the **High Pressure Series, Code 62**, which is rated to 6000 psi for all sizes.



**SAE flange
clamp / port
bolt spacing**



**SAE flange
head
dimensions**

Nominal Flange Size	A (mm)		B (mm)		C (mm)		D (mm)	
	Code 61	Code 62	Code 61	Code 62	Code 61	Code 62	Code 61	Code 62
1/2	17.48	18.24	38.1	40.49	30.18	31.75	6.75	7.75
*5/8	19.8	-	42.90	-	34.0	-	6.73	-
3/4	22.23	23.80	47.63	50.80	38.10	41.28	6.73	8.76
1	26.19	27.76	52.37	57.15	44.45	47.63	8.0	9.53
1.1/4	30.18	31.75	58.72	66.68	50.80	53.98	8.0	10.29
1.1/2	35.71	36.50	69.85	79.38	60.33	63.50	8.0	12.57
2	42.88	44.45	77.77	96.82	71.42	79.38	9.53	12.57

Nominal Flange Size	Pressure Rating		"O"-ring size		UNC Bolt size		Bolt torque	
	Code 61	Code 62	Code 61 and 62	AS568A number	Code 61	Code 62	Code 61	Code 62
1/2	5000 psi	6000 psi	3/4x1/8	210	5/16x1.1/4	5/16x1.1/4	20-25 Nm	20-25 Nm
3/4	5000 psi	6000 psi	1x1/8	214	3/8x1.1/4	3/8x1.1/2	28-40 Nm	34-45 Nm
1	5000 psi	6000 psi	1.5/16x1/8	219	3/8x1.1/4	7/16x1.3/4	37-48 Nm	56-68 Nm
1.1/4	4000 psi	6000 psi	1.1/2x1/8	222	7/16x1.1/2	1/2x1.3/4	48-62 Nm	85-102 Nm
1.1/2	3000 psi	6000 psi	1.7/8x1/8	225	1/2x1.1/2	5/8x2.1/4	62-79 Nm	158-181 Nm
2	3000 psi	6000 psi	2.1/4x1/8	228	1/2x1.1/2	3/4x2.3/4	73-90 Nm	271-294 Nm

**The 5/8* size flange is not part of the SAE`standard. It is included in the J.I.S. standards and is used by Komatsu and other O.E.M's.*

N.B. Torque values are nominal and supplied as a guide only

Caterpillar flanges used on XT3 hose are the same as the SAE Code 61, XT5 flanges have the same diameter as the SAE Code 62 but are thicker in the flange head.

French Gaz (Poclain) flanges are completely different to, and will not interchange with the SAE flanges.

J.I.S. - JAPANESE INDUSTRIAL STANDARDS

Japanese Industrial Standards (J.I.S.) incorporate B.S.P. and metric threads as well as flanges in their connection standards.

Taper Threads:

Type R; BSPT Male (*Identical to BSP standard*)

Parallel Threads:

Type G; BSPP Male (*Identical to BSP standard*)

Type C; BSPP Swivel Nut Female (*Identical to BSP standard - for thread data please refer to BSPP section*)

Type F; BSPP Swivel Nut Female, 30° Flare Seat

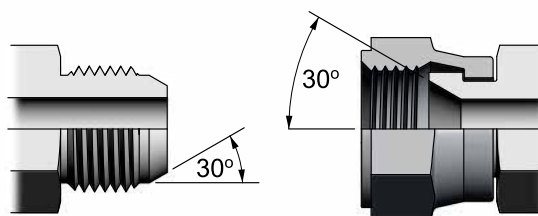
Type M; Metric, Male, 30° Cone

Type MF; Metric, Swivel Nut Female, 30° Flare Seat

“O”-Ring Flanges:

Type I; Equivalent to Code 61 (*Identical to SAE standard*)

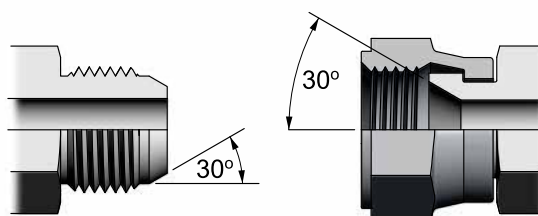
Type II; Equivalent to Code 62 (*Identical to SAE standard*)



Type F JIS male

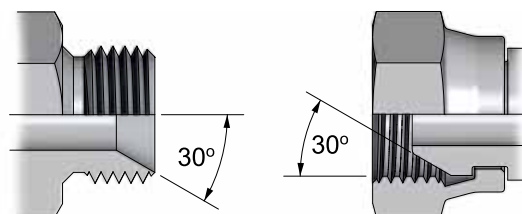
For thread data please refer to BSPP section

Type F JIS swivel nut female



Type MF JIS male

Type MF JIS swivel nut female



Type M JIS male

Type M JIS swivel nut female

THREAD SPECIFICATIONS			
Metric Threads (J.I.S)		Komatsu Threads (Metric)	
14-1.5*	12.5	14-1.5*	12.5
18-1.5*	16.5	18-1.5*	16.5
22-1.5*	20.5	22-1.5*	20.5
27-2.0	25	24-1.5	22.5
33-2.0	31	30-1.5	28.5
42-2.0	40	33-1.5	31.5
50-2.0	48	36-1.5	34.5
60-2.0	58	42-1.5	40.5

* denotes interchange sizes between JIS and Komatsu.

D.I.N. METRICS 24° CONE SYSTEM

The D.I.N. System allows for the connection of hose assemblies and tube in three main pressure series:

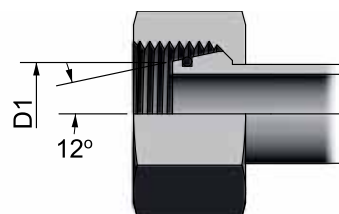
Series LL;	Extra Light, up to 100 bar
Series L;	Light up to 250 bar
Series S;	Heavy up to 640 bar

The pressure ranges are determined by the tube O.D. and the thread size e.g. a 12mm light coupling has an 18mm thread O.D. whereas a 12mm heavy coupling has a 20mm O.D. thread.

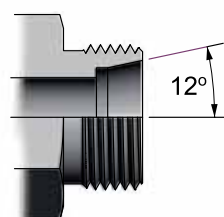
N.B: Rated coupling pressures are subject to the design pressures of the tube or hose being used.

Tubing is connected to the D.I.N. Male by the use of a cutting ring and nut. Hose assemblies can be connected by swivel nut females having either a spherical seal, 24° cone seal (can be fitted with "O"-Ring), or a standpipe with cutting ring and nut. Hose can also be connected directly to tube by use of a hose tail with the D.I.N. Male form

The male form will accept all three female styles shown (right).



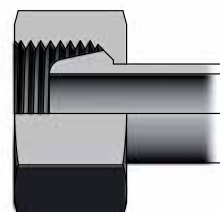
DIN 24° cone female with o-ring



DIN 24° cone male



DIN cutting ring and nut on tube



DIN female swivel nut with spherical seat

THREAD SPECIFICATIONS LIGHT (L) SERIES			
Thread O.D. & Pitch	Female Thread I.D.	Diameter D1 (mm)	Tube O.D.(mm)
M12-1.5	10.5	7.2	6
M14-1.5	12.5	9.2	8
M16-1.5	14.5	11.6	10
M18-1.5	16.5	13.8	12
M22-1.5	20.5	16.8	15
M26-1.5	24.5	19.8	18
M30-2.0	28	23.8	22
M36-2.0	34	29.8	28
M45-2.0	43	37.2	35
M52-2.0	50	44.2	42

THREAD SPECIFICATIONS HEAVY (S) SERIES			
Thread O.D. & Pitch	Female Thread I.D.	Diameter D1 (mm)	Tube O.D.(mm)
M14-1.5	12.5	7.2	6
M16-1.5	14.5	9.2	8
M18-1.5	16.5	11.6	10
M20-1.5	18.5	13.8	12
M22-1.5	20.5	15.8	14
M24-1.5	22.5	17.8	16
M30-2.0	28	22	20
M36-2.0	34	27	25
M42-2.0	40	32	30
M52-2.0	50	40	38

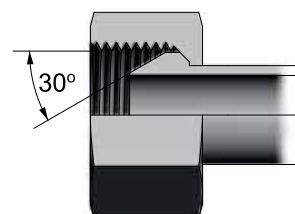
* N.B. Diameter D1 is nominal and may vary between manufacturers.

D.I.N. METRICS 60° CONE SYSTEM

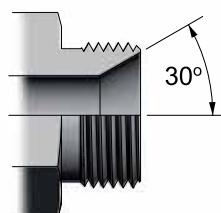
This series utilises a 60° cone seating angle and is used for the connection of hose assemblies and tube. It differs from the 24° series in that the threads are predominately 1.5mm pitch and there is no light or heavy pressure ranges.

The D.I.N. 60° male will accept the universal (spherical seat) female, a 60° coned female and tube fitted with a cutting ring and nut.

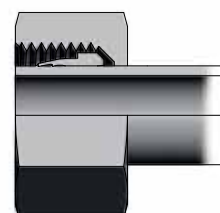
THREAD SPECIFICATIONS		
Thread O.D. & Pitch	Female Thread I.D.	Tube O.D.(mm)
M10-1.0	9.0	5
M12-1.5	10.5	6
M14-1.5	12.5	8
M16-1.5	14.5	10
M18-1.5	16.5	12
M22-1.5	20.5	15
M26-1.5	24.5	18
M30-1.5	28.5	22
M38-1.5	36.5	28
M45-1.5	43.5	35
M52-2.0	56.5	42



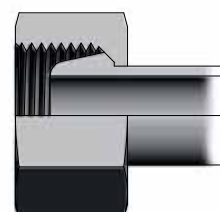
DIN 60° cone female



DIN 60° cone male



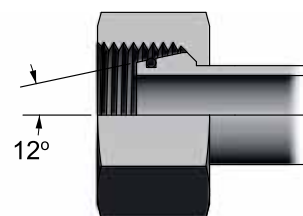
DIN cutting ring and nut on tube



DIN female swivel nut with spherical seat

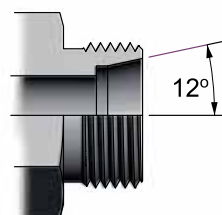
I.S.O. METRICS (INTERNATIONAL STANDARDS ORGANISATION)

The I.S.O. series of couplings is similar to the D.I.N. light and heavy in function. The male has a 24° included angle sealing cone and a recessed counter bore for locating the tube when used in conjunction with a cutting ring and nut. The male will also accept a swivel nut female with either a cone or a spherical seal.

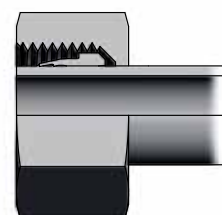


**ISO (24° cone)
female with o-ring**

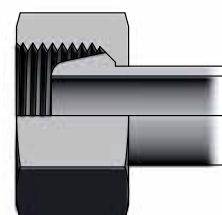
THREAD SPECIFICATIONS		
Thread O.D. & Pitch	Female Thread I.D.	Tube O.D.(mm)
M12-1.0	11.0	6
M14-1.5*	12.5	8
M16-1.5*	14.5	10
M18-1.5*	16.5	12
M20-1.5	18.5	14
M22-1.5*	20.5	15
M24-1.5**	22.5	16
M27-1.5	25.5	18
M30-1.5	28.5	22
M33-1.5	31.5	25
M36-1.5	34.5	28
M39-1.5	37.5	30
M42-1.5	40.5	32
M45-1.5	43.5	35
M48-1.5	46.5	38
M52-1.5	50.5	40



**ISO (24° cone)
male**



**ISO cutting ring and
nut on tube**



**ISO female swivel
nut with spherical
seat**

* Interchange with D.I.N. Light

** Interchange with D.I.N. Heavy

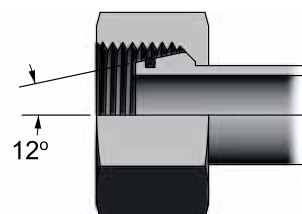
FRENCH METRICS (GAZ & MILLIMETRIQUE SERIES)

The series are similar to the D.I.N. 24° type where the male has a 24° included angle sealing cone and a recessed counterbore for locating the tube.

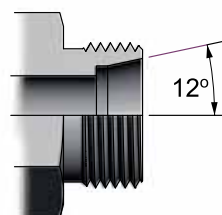
The male will accept a cutting ring and nut for use with tube or a swivel nut female with either a cone or spherical seal.

The Gaz and Millimetrique series are identical in all respects except for the O.D. of the tube:

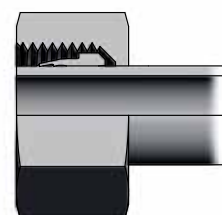
- Gaz series uses fractional number O.D. metric tubing.
- Millimetrique series uses whole number O.D. metric tubing.



French 24° cone female with o-ring

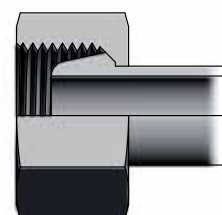


French 24° cone male



Cutting ring and nut on tube

THREAD SPECIFICATIONS LIGHT (L) SERIES			
Thread O.D. & Pitch	Female Thread I.D.	Diameter	
		GAZ	Millimetrique
M12-1.0	11.0	-	6
M14-1.5	12.5	-	8
M16-1.5	14.5	-	10
M18-1.5	16.5	-	12
M20-1.5	18.5	13.25	14
M22-1.5	20.5	-	15
M24-1.5	22.5	16.75	16
M27-1.5	25.5	-	18
M30-1.5	28.5	21.25	22
M33-1.5	31.5	-	25
M36-1.5	34.5	26.75	28
M39-1.5	37.5	-	30
M42-1.5	40.5	-	32
M45-1.5	43.5	33.5	35
M48-1.5	46.5	-	38
M52-1.5	50.5	42.25	40
M54-2.0	52.0	-	45
M58-2.0	56.0	48.25	-

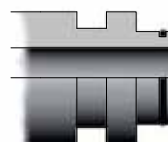


French female swivel nut with spherical seat

STAPLE-LOK COUPLINGS

Originally designed in Germany for underground mining equipment, the Staple-lok requires no spanners for connection or disconnection. The male and female are pushed together and held with a retaining staple or "U" clip.

Sealing is achieved by the captive "O"-Ring located on the male spigot. The female can either be fixed or swivel type. The coupling is not designed to swivel under pressure.

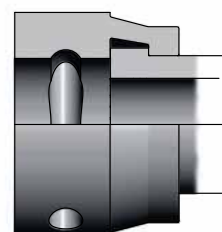


Staple-lok male



Staple-lok fixed female

Coupling Dash Size	Imperial Size	Male O.D.		Female I.D.	
		inch	mm	inch	mm
-4	1/4	0.58	14.8	.59	15.0
-6	3/8	0.78	19.8	.79	20.0
-8	1/2	0.94	23.9	.95	24.1
-12	3/4	1.13	28.8	1.14	29.0
-16	1	1.53	38.9	1.54	39.1
-20	1.1/4	1.80	45.7	1.81	46.0
-24	1.1/2	2.16	54.9	2.17	55.1
-32	2	2.52	64.0	2.53	64.3



Staple-lok swivel female

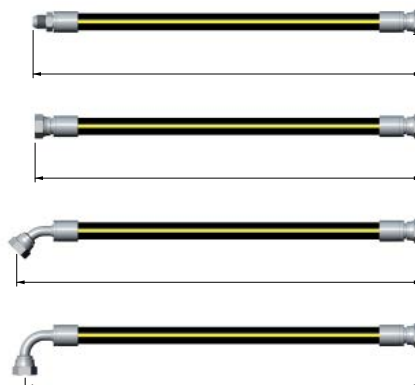


Staple-lok staple

STRAIGHT HOSE ASSEMBLY LENGTH

Overall hose assembly lengths are determined by measuring the centreline length between the coupling end faces for straight couplings, or through the sealing face centreline for angled couplings (examples to right).

Sufficient length allowance should be made to compensate for hose contraction and expansion under operating procedures.



BENT HOSE ASSEMBLY LENGTH

For installations that require a 180° bend in the hose assembly, the overall length can be calculated as follows:

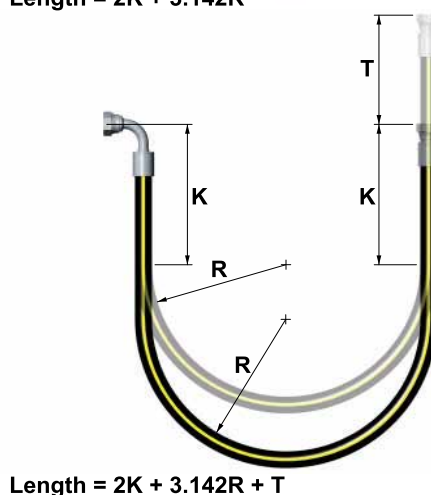
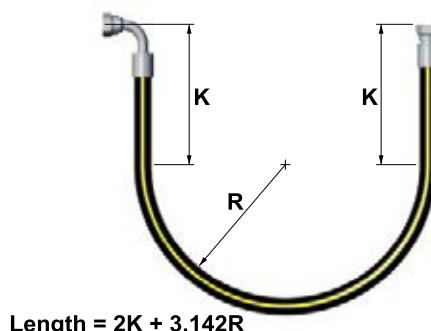
Static Installations

To avoid localised concentration of bending strain on the hose couplings, a free distance (K) of hose should be designed into the length of each assembly. Distance "K" includes length of coupling and adaptor (if used). Dimension "R" should not be less than the manufacturer's recommended bend radius for the hose used. Refer to chart below for "K" dimensions of hoses with I.D. from 3/16" to 2".

Hose I.D.	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1.1/4	1.1/2	2
K (mm)	110	130	130	160	180	210	210	260	260	260	310

Dynamic Installations

When a hose assembly is subjected to relative motion between the two end couplings, additional hose length is required to accommodate the travel distance. In the diagram (right) "T" represents the amount of travel.



Off-Set Angle Measurement

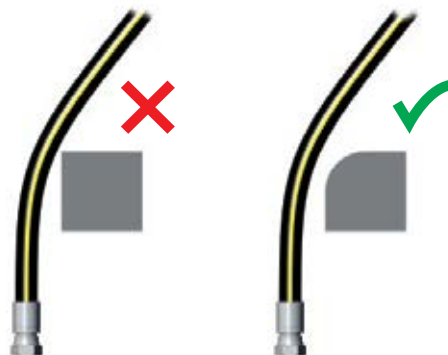
Place hose assembly in line of sight position with coupling furthest away facing upwards. Determine off-set angle by comparing relative position of closest coupling to the far coupling in a clockwise direction.



1. Hose Protection

Protect the hose cover from damage such as abrasion, erosion, snagging, and cutting. Where possible, route hose to reduce abrasion from hose rubbing other hose or objects that may abrade it (Fig. 1). Special abrasion-resistant hoses and hose guards are available for additional protection. Special consideration may also need to be given to hose assemblies near heat sources.

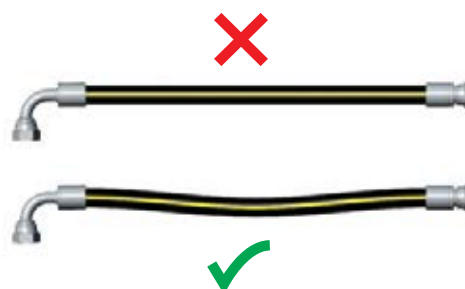
Fig. 1



2. Hose And Machine Tolerances

Avoid tension on hose assemblies and adaptors. Design hose to allow for changes in length due to machine motion and tolerances (Fig. 2). Failure to do so may result in seal or assembly failure.

Fig. 2



3. Torsional Twist

Do not transfer torque to hose while installing. This transfer of torque can result in torsional twist, which may result in premature hose assembly failure. Use swivel type couplings or adaptors for ease of alignment as needed to prevent twisting during installation. Use the brand lay-line as a guide to ensure the hose is not pre-loaded with torsional twist when installed (Fig. 3).

Fig. 3



4. Minimum Bend Radius

The minimum bend radius for hose supplied by Hydraulink is detailed in this catalogue. Routing at less than minimum bend radius is not recommended and may reduce hose life.

Prevent sharp bending at the hose/fitting juncture (Fig. 4a). Unnecessary stress at this point may result in leaking, hose rupturing, or the hose assembly blowing apart.

Stress at this point can be minimised by ensuring adequate hose length (Fig. 4b), or by use of angled adaptors and couplings (Fig 4c).

Fig. 4a

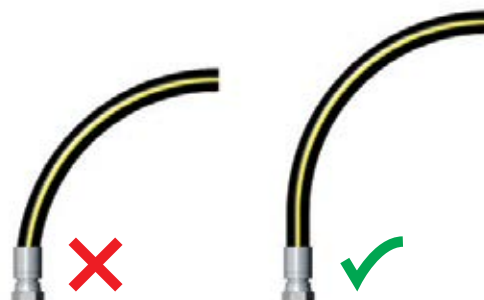


Fig. 4b

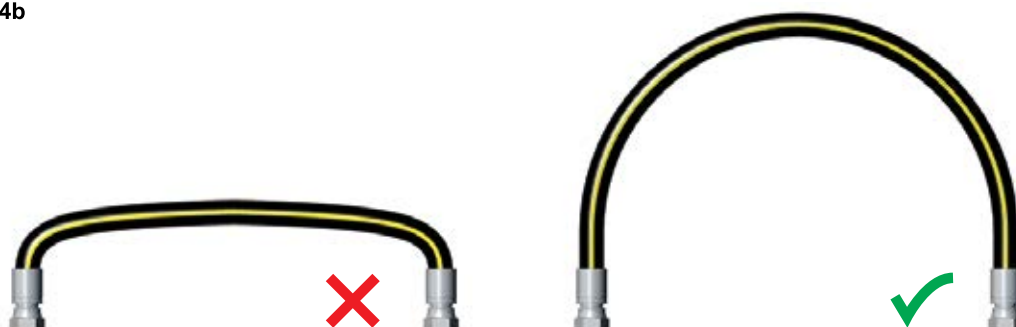


Fig. 4c



5. Hose Length Change

Hydraulic hose can expand longitudinally when pressurised, and this hose length change must be considered when specifying or installing hose assemblies (Fig. 5) When clamping hose lengths, always place clamps to avoid stressing the fitting end.

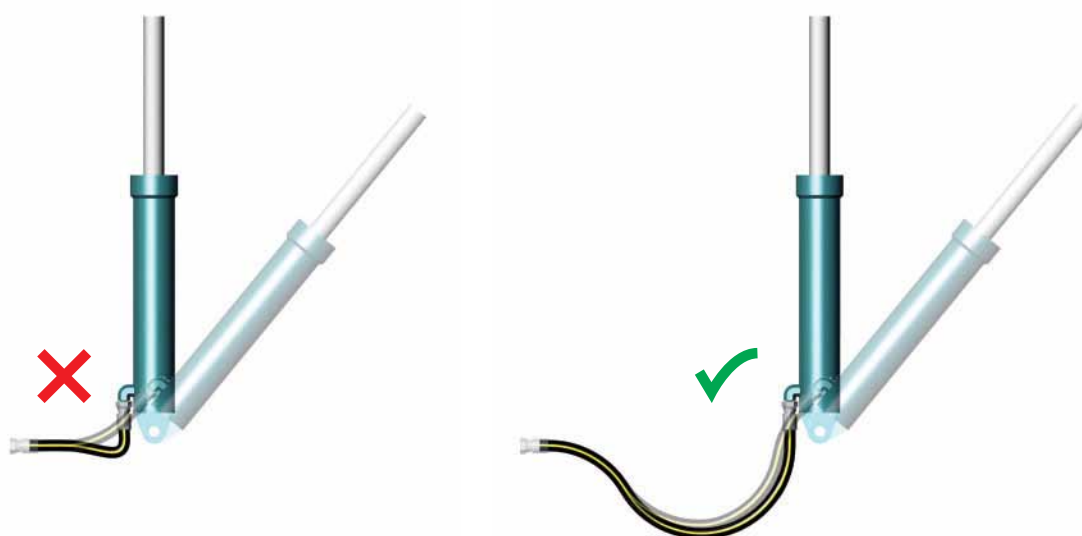
Fig. 5



6. Relative Movement

When specifying or installing hoses that have movement relative to each other, provide adequate hose length to absorb the required movement and prevent bends occurring that are smaller than the minimum bend radius (Fig. 6a).

Fig. 6a





GENERAL INFORMATION

The Hydraulink adaptor range is designed to provide the hydraulic systems designer with a wide range of thread options and combinations when used in conjunction with the Hydraulink range of hosetails.

Hydraulink adaptors are designed and manufactured to conform to the functional requirements specified in the relevant international standards. However it should be noted that the envelope dimensions in this catalogue are for reference only. Dimensions may vary from those catalogued or specified due to ongoing product development, varying tolerances and variation in manufacturing methods. For critical application, please contact Hydraulink to confirm dimensions.

Hydraulink adaptors are typically manufactured from high quality steel and finished with a silver trivalent chromium plating and clear sealant to further increase protection against corrosion. Other material types (such as AISI 316 stainless steel) and finishes are available on request.

For adaptor types or configurations not listed in this catalogue, please contact Hydraulink for further information or special product design.

Hydraulink Fluid Connectors Ltd. reserves the right to discontinue, or to alter the design and specification of any product listed in this catalogue.

PART NUMBERING SYSTEM – ADAPTORS

The Hydraulink adaptor part numbering system is a concise product description in coded form. The part number consists of a minimum of two modules as follows:

Module 1. Code letter denoting the thread form or sealing method (end type).
For example; A denotes BSP taper male and F denotes BSP parallel fixed female socket.

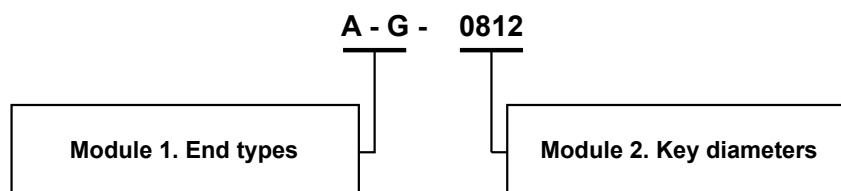
Please refer to the following “Series codes and descriptions” for further information regarding coupling ends and configurations.

Module 2. Number denoting the size of end type. Sizes are expressed as follows;
English/American threads; expressed in 1/16th inch increments denoting the key diameter.
For example; 08 = $8/16 = 1/2$ " and 19 = $19/16 = 1 \frac{3}{16}$ ".

Metric threads; expressed in millimetres with prefix M, denoting the key diameter.
For example; M10 = 10mm O.D. thread.

Flanges; express the nominal size of the flange head. Sizing refers to the maximum internal bore. For example a 12 flange head would have a maximum internal bore of $12/16 = 3/4$ ".

Please refer technical section for further information regarding coupling ends, thread forms and sealing methods.

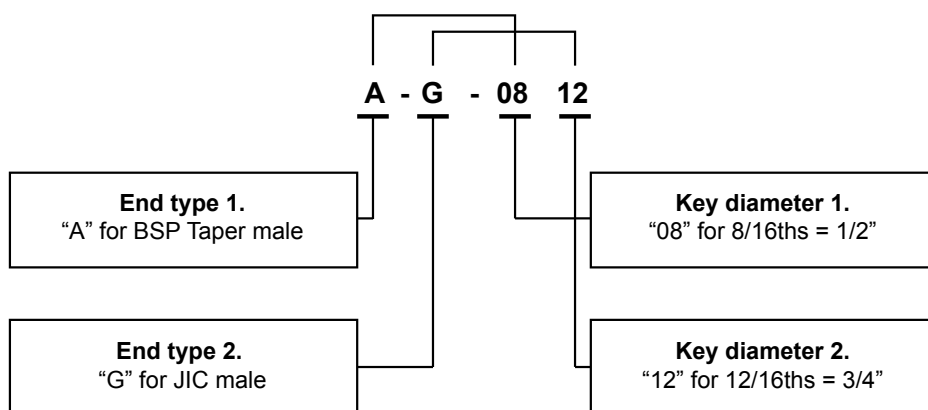
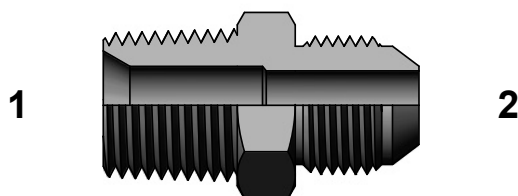


PART NUMBERING SYSTEM – ADAPTORS

Straight Adaptors

End types are nearly always sequenced in alphabetical order, and each code letter in a part number refers to a discrete size in the part number; the first code letter refers to the first size, the second part number to the second size etc. For example; A-G-0812 denotes a BSP taper male (A) size 1/2" (8/16) by JIC male (G) size 3/4" (12/16) straight adaptor.

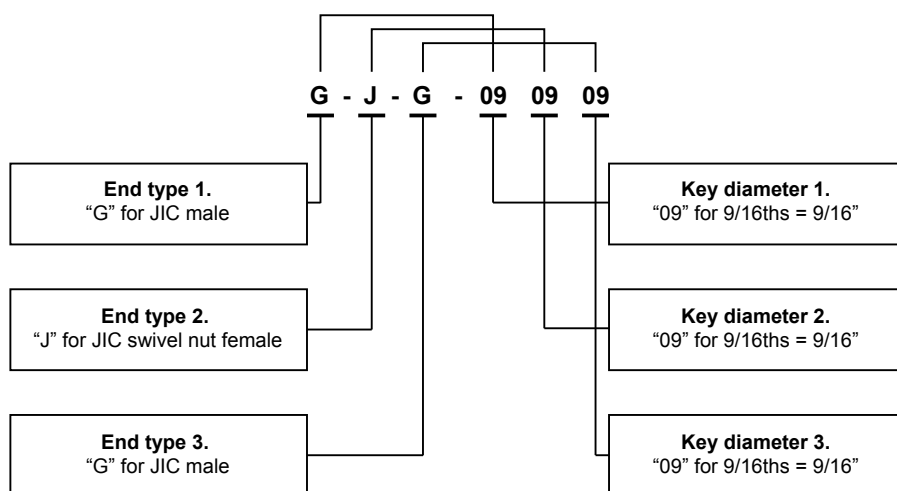
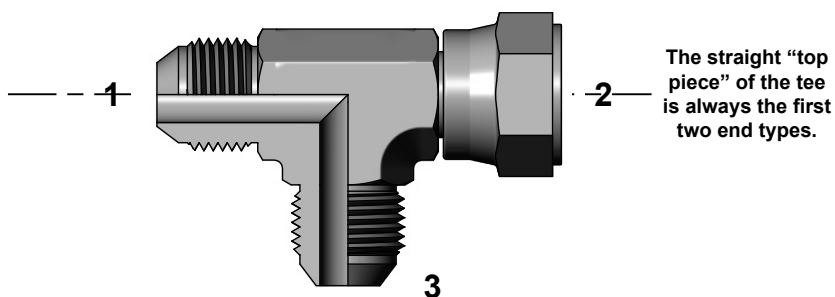
NOTE: In Hydraulink's alphanumeric system, single letters (A, B, C etc.) come before double letters (AA, AC, AG etc.). For example; the correct notation for a SAE male (AA) by BSP parallel male (B) would be B-AA- followed by the corresponding sizes of BSP parallel male then SAE male.



PART NUMBERING SYSTEM – ADAPTORS

Tee Adaptors

An exception to the alphabetical sequencing of end types is the “tee” adaptor. Tee adaptors’ part numbers always denote the end types in a particular order; the two end types on the straight “top piece” and their respective sizes are denoted first in an alphabetical order, but the third end type, the branch or leg of the tee is always denoted third regardless of alphabetical order (and its respective size). This is to clarify between variations; G-G-J-090909 denotes a JIC male (G) size 9/16” by JIC male (G) size 9/16” with a JIC swivel nut female (J) size 9/16” on the leg or branch. However, an G-J-G-090909 denotes a JIC male (G) size 9/16” by JIC swivel nut female (J) size 9/16” with a JIC male (G) size 9/16” on the leg or branch.



SERIES CODES AND DESCRIPTIONS - ADAPTORS

Our product range is constantly evolving and Hydraulink reserve the right to change technical specifications without notice

LOCKNUTS

AK

BSP LOCK NUT

BSPP LOCKNUT TO SUIT BSP BULKHEADS

Part Number	T1	H1 (mm)
AK-04	1/4-19	19
AK-06	3/8-19	22
AK-08	1/2-14	27
AK-12	3/4-14	32
AK-16	1-11	41
AK-20	1.1/4-11	50
AK-24	1.1/2-11	55

AL

UNF LOCK NUT

UNF LOCKNUT TO SUIT JIC BULKHEADS

Part Number	T1	H1 (mm)
AL-07	7/16-20	17.5
AL-08	1/2-20	19.1
AL-09	9/16-18	20.6
AL-12	3/4-16	25.4
AL-14	7/8-14	28.6
AL-17	1.1/16-12	34.9
AL-19	1.3/16-12	38.1
AL-21	1.5/16-12	41.3
AL-26	1.5/8-12	47.6
AL-30	1.7/8-12	54.0

NUTS AND CUTTING RINGS

MLLN

MET EXTRA LIGHT TUBE NUT

METRIC 24° CONE EXTRA LIGHT TUBE NUT

- ISO 8434-1

Part Number	Metric Female Thread (m)	Suits Tube Diameter (mm)	L1 (mm)	CH1 (mm)
MLLN-10	M10-1	6	11.5	12
MLLN-12	M12-1	8	12	14

MLN

MET LIGHT TUBE NUT

METRIC 24° CONE LIGHT TUBE NUT

- ISO 8434-1

Part Number	Metric Female Thread (m)	Suits Tube Diameter (mm)	L1 (mm)	CH1 (mm)
MLN-12	M12-1.5	6	15	14
MLN-14	M14-1.5	8	15	17
MLN-16	M16-1.5	10	16	19
MLN-18	M18-1.5	12	16	22
MLN-22	M22-1.5	15	17	27
MLN-26	M26-1.5	18	18	32
MLN-30	M30-2	22	20	36
MLN-36	M36-2	28	21	41
MLN-45	M45-2	35	24	50
MLN-52	M52-2	42	24	60

MSN

MET HEAVY TUBE NUT

METRIC 24° CONE HEAVY TUBE NUT

- ISO 8434-1

Part Number	Metric Female Thread (m)	Suits Tube Diameter (mm)	L1 (mm)	CH1 (mm)
MSN-14	M14-1.5	6	17	17
MSN-16	M16-1.5	8	17	19
MSN-18	M18-1.5	10	18	22
MSN-20	M20-1.5	12	18	24
MSN-22	M22-1.5	14	21	27
MSN-24	M24-1.5	16	21	30
MSN-30	M30-2	20	24	36
MSN-36	M36-2	25	27	46
MSN-42	M42-2	30	29	50
MSN-52	M52-2	38	33	60

TCM

MET TUBE CUTTING RING

METRIC TUBE 24° CONE CUTTING RING

- ISO 8434-1

Part Number	Suits Light DIN Metric Male	Suits Heavy DIN Metric Male	Suits Tube Diameter (mm)	L1 (mm)	D1 (mm)
TCM-6LL	M10-1		6	6	8
TCM-6L/S	M12-1.5	M14-1.5	6	10	10
TCM-8L/S	M14-1.5	M16-1.5	8	9.5	12
TCM-10L/S	M16-1.5	M18-1.5	10	10	14
TCM-12L/S	M18-1.5	M20-1.5	12	10	16
TCM-15L	M22-1.5		15	10	19
TCM-18L	M26-1.5		18	10	23
TCM-22L	M30-2		22	11	27
TCM-28L	M36-2		28	11	33
TCM-35L	M45-2		35	13	41
TCM-42L	M52-2		42	13	48
TCM-14S		M22-1.5	14	10	19
TCM-16S		M24-1.5	16	11	21
TCM-20S		M30-2.0	20	12	26
TCM-25S		M36-2.0	25	12	32
TCM-30S		M42-2.0	30	13	36
TCM-38S		M52-2.0	38	13	44

TJN

JIC TUBE NUT

JIC 37° FLARE TUBE NUT

- USE WITH TJS TUBE SLEEVE

Part Number	suits tube	JIC Female Thread	L1 - mm	Hex A/F (CH1)
TJN-07	1/4	7/16-20	15	14
TJN-08	5/16	1/2-20	17	16
TJN-09	3/8	9/16-18	18	18
TJN-12	1/2	3/4-16	21	22
TJN-14	5/8	7/8-14	25	25
TJN-17	3/4	1.1/16-12	26	32
TJN-19	7/8	1.3/16-12	27	35
TJN-21	1	1.5/16-12	28	38
TJN-26	1.1/4	1.5/8-12	31	51
TJN-30	1.1/2	1.7/8-12	36	32

TJS

JIC FEMALE TUBE SLEEVE

JIC 37° FLARE IMPERIAL TUBE SUPPORT SLEEVE

- USE WITH TJN TUBE NUT

Part Number	suits tube	L1 - mm	Diameter - mm
TJS-04	1/4	10	10
TJS-05	5/16	11	11
TJS-06	3/8	13	13
TJS-08	1/2	14	17
TJS-10	5/8	17	20
TJS-12	3/4	17	25
TJS-14	7/8	19	28
TJS-16	1	20	31
TJS-20	1.1/4	23	39
TJS-24	1.1/2	28	45

TJNV

JIC TUBE NUT

JIC 37° FEMALE FLARELESS TUBE NUT

- USE WITH TJSV TUBE SLEEVE

Part Number	suits tube	JIC Female Thread	L1 - mm	Hex A/F (CH1)
TJNV-07	1/4	7/16-20	21	14
TJNV-09	3/8	9/16-18	22	17
TJNV-12	1/2	3/4-16	27	22
TJNV-14	5/8	7/8-14	29	25
TJNV-17	3/4	1.1/16-12	35	32
TJNV-21	1	1.5/16-12	36	38

TJSV

JIC FEMALE COMPRESSION SLEEVE

JIC 37° FEMALE FLARELESS TUBE COMPRESSION
(BITE TYPE) SLEEVE

- USE WITH TJNV TUBE NUT

Part Number	suits tube	Overall Length	Diameter - mm
TJSV-04	1/4	11	9
TJSV-06	3/8	12	12
TJSV-08	1/2	14	17
TJSV-10	5/8	15	20
TJSV-12	3/4	17	25
TJSV-16	1	20	31

PLUGS AND CAPS

A

BSPT MALE

BSPT MALE PLUG

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
A-02	1/8-28	12	15	345
A-04	1/4-19	14	21	275
A-06	3/8-19	19	22	210
A-08	1/2-14	22	27	210
A-12	3/4-14	27	30	170
A-16	1-11	36	35	140
A-20	1.1/4-11	46	38	80
A-24	1.1/2-11	50	40	70
A-32	2-11	65	45	70

A-INT

BSPT MALE

BSPT MALE PLUG INTERNAL HEX

Part Number	T1	L1 (mm)	H1 (mm)	PN (bar)
A-04INT	1/4-19	10	7	275
A-06INT	3/8-19	10	8	210
A-08INT	1/2-14	10	10	210
A-12INT	3/4-14	12	12	170
A-16INT	1-11	12	17	140

B

BSP MALE

BSP 60° CONE MALE PLUG

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
B-02	1/8-28	14	14	400
B-04	1/4-19	19	19	400
B-06	3/8-19	22	20	400
B-08	1/2-14	27	24	350
B-12	3/4-14	32	28	315
B-16	1-11	41	32	250
B-20	1.1/4-11	50	35	200
B-24	1.1/2-11	55	40	160
B-32	2-11	70	45	125

B-INT

BSP MALE

BSP MALE CAPTIVE SEAL PLUG INTERNAL HEX

Part Number	G	D1 (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
B-02INT	1/8-28	14	8	12	5	400
B-04INT	1/4-19	19	12	17	6	400
B-06INT	3/8-19	22	12	17	8	400
B-08INT	1/2-14	27	14	19	10	350
B-12INT	3/4-14	32	16	21	12	315
B-16INT	1-11	40	16	23	17	250

C

BSP FEMALE

BSP FEMALE SWIVEL NUT CAP

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
C-02	1/8-28	14	17	400
C-04	1/4-19	19	18	400
C-06	3/8-19	22	20	400
C-08	1/2-14	27	23	350
C-12	3/4-14	32	25	315
C-16	1-11	41	27	250
C-20	1.1/4-11	50	30	200
C-24	1.1/2-11	55	32	160
C-32	2-11	70	33	125

G

JIC MALE

JIC 37° FLARE MALE PLUG

- ISO 8434-2

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
G-07	7/16-20	12	21	350
G-08	1/2-20	14	14	350
G-09	9/16-18	17	22	350
G-12	3/4-16	22	24	310
G-14	7/8-14	24	28	240
G-17	1.1/16-12	30	33	240
G-19	1.3/16-12	32	23	210
G-21	1.5/16-12	36	34	210
G-26	1.5/8-12	46	37	170
G-30	1.7/8-12	50	42	140
G-40	2.1/2-12	67	52	105

AG

JIC FEMALE

JIC 37° FLARE FIXED FEMALE CAP

- ISO 8434-2

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
AG-07	7/16-20	14	15	350
AG-08	1/2-20	16	15	350
AG-09	9/16-18	19	16	350
AG-12	3/4-16	22	19	310
AG-14	7/8-14	27	21	240
AG-17	1.1/16-12	32	23	240
AG-19	1.3/16-12	35	25	210
AG-21	1.5/16-12	41	26	210
AG-26	1.5/8-12	50	27	170
AG-30	1.7/8-12	60	30	140
AG-40	2.1/2-12	73	37	105

L

NPTF MALE

NPTF MALE PLUG

- SAE J531

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
L-02	1/8-27	12	15	345
L-04	1/4-18	14	19	275
L-06	3/8-18	19	20	210
L-08	1/2-14	22	25	210
L-12	3/4-14	27	27	170
L-16	1-11.1/2	36	32	140
L-20	1.1/4-11.1/2	46	37	80
L-24	1.1/2-11.1/2	50	40	70
L-32	2-11.1/2	65	45	70

N

UNO MALE

UNO MALE PLUG

- SAE J514

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
N-07	7/16-20	14	17	315
N-08	1/2-20	17	17	315
N-09	9/16-18	17	19	315
N-12	3/4-16	22	20	315
N-14	7/8-14	27	24	250
N-17	1.1/16-12	32	28	250
N-19	1.3/16-12	36	28	200
N-21	1.5/16-12	41	29	200
N-26	1.5/8-12	50	31	160
N-30	1.7/8-12	55	32	160

N-INT

UNO MALE

UNO MALE PLUG INTERNAL HEX

Part Number	A	L2 (mm)	Internal Hex A/F (mm)	PN (bar)
N-07INT	7/16-20	12.2	4.8	315
N-09INT	9/16-18	13	6.4	315
N-12INT	3/4-16	15	7.9	315
N-14INT	7/8-14	16.8	9.5	250
N-17INT	1.1/16-12	19.8	14.3	250
N-21INT	1.5/16-12	19.8	15.9	200

L-INT

NPTF MALE PLUG

NPTF MALE PLUG INTERNAL HEX

Part Number	T1	L1 (mm)	H1 (mm)	PN (bar)
L-04INT	1/4-18	10.2	6.4	275
L-06INT	3/8-18	11.7	7.9	210
L-08INT	1/2-14	15.5	9.5	210
L-12INT	3/4-14	15.7	14.3	170
L-16INT	1-11.1/2	19.8	15.9	140

R

ORFS MALE

ORFS MALE PLUG

- ISO 8434-3

Part Number	T1	H1 (mm)	L1 (mm)	PN (bar)
R-09	9/16-18	17	16.5	630
R-11	11/16-16	19	19	630
R-13	13/16-16	22	22	630
R-16	1-14	27	26	400
R-19	1.3/16-12	32	28	400
R-23	1.7/16-12	41	28	400
R-27	1.11/16-12	46	28	250
R-32	2-12	54	28	250

T

ORFS FEMALE

ORFS FEMALE SWIVEL NUT CAP

- ISO 8434-3

Part Number	T1	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
T-09	9/16-18	17	17	9	630
T-11	11/16-16	22	19	11	630
T-13	13/16-16	24	22	12	630
T-16	1-14	30	26	14	400
T-19	1.3/16-12	36	29	15	400
T-23	1.7/16-12	41	30	16	400
T-27	1.11/16-12	50	30	16	250
T-32	2-12	57	30	16	250

MLL

MET LIGHT MALE TUBE PLUG

METRIC 24° CONE EXTRA LIGHT MALE TUBE END
PLUG

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
MLL-10	M10-1	6	12	6	10	315

ML

MET LIGHT MALE TUBE PLUG

METRIC 24° CONE LIGHT MALE TUBE END PLUG

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
ML-12	M12-1.5	6	14	7	12	315
ML-14	M14-1.5	8	15	8	14	315
ML-16	M16-1.5	10	16	9	17	315
ML-18	M18-1.5	12	17	10	19	315
ML-22	M22-1.5	15	18	11	24	315
ML-26	M26-1.5	18	19	12	27	315
ML-30	M30-2	22	21	14	32	160
ML-36	M36-2	28	22	15	41	160
ML-45	M45-2	35	25	15	46	160
ML-52	M52-2	42	27	16	55	160

MS

MET HEAVY MALE TUBE PLUG

METRIC 24° CONE HEAVY MALE TUBE END PLUG

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
MS-14	M14-1.5	6	18	11	14	630
MS-16	M16-1.5	8	20	13	17	630
MS-18	M18-1.5	10	20	13	19	630
MS-20	M20-1.5	12	22	15	22	630
MS-22	M22-1.5	14	24	16	24	630
MS-24	M24-1.5	16	24	16	27	400
MS-30	M30-2	20	28	18	32	400
MS-36	M36-2	25	32	20	41	400
MS-42	M42-2	30	34	21	46	400
MS-52	M52-2	38	39	23	55	315

MY

JIS MET MALE

JIS MET KOMATSU STYLE 30° FLARE MALE PLUG

Part Number	Metric Male Thread	A	B	H (mm)	PN (bar)
MY-14	M14-1.5	15	22	16	350
MY-16	M16-1.5	16	24	19	350
MY-18	M18-1.5	18	26	22	350
MY-20	M20-1.5	20	28	22	350
MY-22	M22-1.5	20	29	25	350
MY-24	M24-1.5	22	32	27	275
MY-30	M30-1.5	26	37	32	200
MY-33	M33-1.5	30	41	36	200

UL

MET LIGHT FEMALE PLUG/CAP

METRIC 24° CONE LIGHT BLANKING PLUG/CAP
WITH O RING AND NUT

- ISO 8434-1

Part Number	Metric Female Thread	Suits Tube Diameter (mm)	CH1 (mm)	PN (bar)
UL-12	M12-1.5	6	14	500
UL-14	M14-1.5	8	17	500
UL-16	M16-1.5	10	19	500
UL-18	M18-1.5	12	22	400
UL-22	M22-1.5	15	27	400
UL-26	M26-1.5	18	32	400
UL-30	M30-2	22	36	250
UL-36	M36-2	28	41	250
UL-45	M45-2	35	50	250
UL-52	M52-2	42	60	250

US

MET HEAVY FEMALE PLUG/CAP
METRIC 24° CONE HEAVY BLANKING PLUG/CAP
WITH O RING AND NUT

- ISO 8434-1

Part Number	Metric Female Thread	Suits Tube Diameter (mm)	CH1 (mm)	PN (bar)
US-14	M14-1.5	6	19	800
US-16	M16-1.5	8	19	800
US-18	M18-1.5	10	22	800
US-20	M20-1.5	12	24	630
US-22	M22-1.5	14	27	630
US-24	M24-1.5	16	30	630
US-30	M30-2	20	36	420
US-36	M36-2	25	46	420
US-42	M42-2	30	50	420
US-52	M52-2	38	50	420

UY

JIS MET FEMALE
JIS MET KOMATSU STYLE 30° FLARE FEMALE CAP

- JIS B 8363

Part Number	Metric Female Thread	A	H (mm)	PN (bar)
UY-20	M20-1.5	30	26	350
UY-22	M22-1.5	35	27	350
UY-24	M24-1.5	37	32	275
UY-30	M30-1.5	43	36	200
UY-33	M33-1.5	47	41	200
UY-14	M14-1.5	25	19	350
UY-16	M16-1.5	27	22	350
UY-18	M18-1.5	30	24	350

STRAIGHT ADAPTORS

A-A

BSPT MALE X BSPT MALE

BSPT MALE X BSPT MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
A-A-0202	1/8-28	1/8-28	12	27	345
A-A-0204	1/8-28	1/4-19	14	32	275
A-A-0404	1/4-19	1/4-19	14	37	275
A-A-0406	1/4-19	3/8-19	19	37	210
A-A-0408	1/4-19	1/2-14	22	43	210
A-A-0412	1/4-19	3/4-14	27	45	170
A-A-0606	3/8-19	3/8-19	19	37	210
A-A-0608	3/8-19	1/2-14	22	43	210
A-A-0612	3/8-19	3/4-14	27	45	170
A-A-0616	3/8-19	1-11	36	55	140
A-A-0808	1/2-14	1/2-14	22	48	210
A-A-0812	1/2-14	3/4-14	27	50	170
A-A-0816	1/2-14	1-11	36	55	140
A-A-1010	5/8-14	5/8-14	29	50	170
A-A-1212	3/4-14	3/4-14	27	50	170
A-A-1216	3/4-14	1-11	36	55	140
A-A-1220	3/4-14	1.1/4-11	46	57	80
A-A-1616	1-11	1-11	36	59	140
A-A-1620	1-11	1.1/4-11	46	62	80
A-A-1624	1-11	1.1/2-11	50	65	70
A-A-2020	1.1/4-11	1.1/4-11	46	63	80
A-A-2024	1.1/4-11	1.1/2-11	50	65	70
A-A-2424	1.1/2-11	1.1/2-11	50	66	70
A-A-2432	1.1/2-11	2-11	65	71	70
A-A-3232	2-11	2-11	65	72	70

A-B

BSPT MALE X BSP MALE

BSPT MALE X BSP 60° CONE MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
A-B-0202	1/8-28	1/8-28	14	23	345
A-B-0204	1/8-28	1/4-19	19	29	345
A-B-0402	1/4-19	1/8-28	14	28	275
A-B-0404	1/4-19	1/4-19	19	33	275
A-B-0406	1/4-19	3/8-19	22	37	275
A-B-0408	1/4-19	1/2-14	27	42	275
A-B-0604	3/8-19	1/4-19	19	33	210
A-B-0606	3/8-19	3/8-19	22	37	210
A-B-0608	3/8-19	1/2-14	27	42	210
A-B-0612	3/8-19	3/4-14	32	45	210
A-B-0804	1/2-14	1/4-19	22	41	210
A-B-0806	1/2-14	3/8-19	22	42	210
A-B-0808	1/2-14	1/2-14	27	47	210
A-B-0812	1/2-14	3/4-14	32	50	210
A-B-0816	1/2-14	1-11	41	53	210
A-B-1206	3/4-14	3/8-19	27	45	170
A-B-1208	3/4-14	1/2-14	27	47	170
A-B-1212	3/4-14	3/4-14	32	50	170
A-B-1216	3/4-14	1-11	41	53	170
A-B-1220	3/4-14	1.1/4-11	50	57	170
A-B-1608	1-11	1/2-14	36	53	140
A-B-1612	1-11	3/4-14	36	55	140
A-B-1616	1-11	1-11	41	58	140
A-B-1620	1-11	1.1/4-11	50	62	140
A-B-1624	1-11	1.1/2-11	55	62	140
A-B-2012	1.1/4-11	3/4-14	46	59	80
A-B-2016	1.1/4-11	1-11	46	62	80
A-B-2020	1.1/4-11	1.1/4-11	50	63	80
A-B-2024	1.1/4-11	1.1/2-11	55	65	80
A-B-2416	1.1/2-11	1-11	50	62	70
A-B-2420	1.1/2-11	1.1/4-11	50	63	70
A-B-2424	1.1/2-11	1.1/2-11	55	65	70
A-B-3232	2-11	2-11	70	71	70

A-C

BSPT MALE X BSP FEMALE

BSPT MALE X BSP 60° CONE FEMALE SWIVEL NUT

STRAIGHT

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	PN (bar)
A-C-0202	1/8-28	1/8-28	12	14	26	345
A-C-0204	1/8-28	1/4-19	17	19	28	345
A-C-0404	1/4-19	1/4-19	17	19	32	275
A-C-0406	1/4-19	3/8-19	19	22	34	275
A-C-0408	1/4-19	1/2-14	22	27	38	275
A-C-0604	3/8-19	1/4-19	19	19	33	210
A-C-0606	3/8-19	3/8-19	19	22	34	210
A-C-0608	3/8-19	1/2-14	22	27	38	210
A-C-0806	1/2-14	3/8-19	22	22	41	210
A-C-0808	1/2-14	1/2-14	22	27	43	210
A-C-0812	1/2-14	3/4-14	30	32	46	210
A-C-1208	3/4-14	1/2-14	27	27	43	170
A-C-1212	3/4-14	3/4-14	30	32	46	170
A-C-1216	3/4-14	1-11	36	41	48	170
A-C-1612	1-11	3/4-14	36	32	52	140
A-C-1616	1-11	1-11	36	41	53	140
A-C-1620	1-11	1.1/4-11	46	50	56	140
A-C-2016	1.1/4-11	1-11	41	46	55	80
A-C-2020	1.1/4-11	1.1/4-11	46	50	57	80
A-C-2024	1.1/4-11	1.1/2-11	50	55	58	80
A-C-2420	1.1/2-11	1.1/4-11	50	50	58	70
A-C-2424	1.1/2-11	1.1/2-11	50	55	59	70
A-C-3232	2-11	2-11	65	70	63	70

A-E

BSPT MALE X BSPT FEMALE

BSPT MALE X BSPT FIXED FEMALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
A-E-0202	1/8-28	1/8-28	14	26	345
A-E-0204	1/8-28	1/4-19	19	10	275
A-E-0402	1/4-19	1/8-28	14	22	275
A-E-0404	1/4-19	1/4-19	19	35	275
A-E-0406	1/4-19	3/8-19	22	37	210
A-E-0602	3/8-19	1/8-28	19	22	210
A-E-0604	3/8-19	1/4-19	19	22	210
A-E-0606	3/8-19	3/8-19	22	37	210
A-E-0608	3/8-19	1/2-14	27	43	210
A-E-0802	1/2-14	1/8-28	22	28	210
A-E-0804	1/2-14	1/4-19	22	28	210
A-E-0806	1/2-14	3/8-19	22	28	210
A-E-0808	1/2-14	1/2-14	27	48	210
A-E-0812	1/2-14	3/4-14	36	51	170
A-E-1204	3/4-14	1/4-19	27	30	170
A-E-1206	3/4-14	3/8-19	27	30	170
A-E-1208	3/4-14	1/2-14	27	30	170
A-E-1212	3/4-14	3/4-14	36	49	170
A-E-1606	1-11	3/8-19	36	35	140
A-E-1608	1-11	1/2-14	36	35	140
A-E-1612	1-11	3/4-14	36	35	140
A-E-1616	1-11	1-11	41	60	140
A-E-2008	1.1/4-11	1/2-14	46	38	80
A-E-2012	1.1/4-11	3/4-14	46	38	80
A-E-2016	1.1/4-11	1-11	46	38	80
A-E-2412	1.1/2-11	3/4-14	50	40	70
A-E-2416	1.1/2-11	1-11	50	40	70
A-E-2420	1.1/2-11	1.1/4-11	50	40	70
A-E-3216	2-11	1-11	65	45	70
A-E-3220	2-11	1.1/4-11	65	45	70
A-E-3224	2-11	1.1/2-11	65	45	70

A-G

BSPT MALE X JIC MALE

BSPT MALE X JIC 37° FLARE MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
A-G-0207	1/8-28	7/16-20	12	31	345
A-G-0208	1/8-28	1/2-20	14	31	345
A-G-0209	1/8-28	9/16-18	17	32	345
A-G-0407	1/4-19	7/16-20	14	36	275
A-G-0408	1/4-19	1/2-20	14	36	275
A-G-0409	1/4-19	9/16-18	17	36	275
A-G-0412	1/4-19	3/4-16	22	39	275
A-G-0607	3/8-19	7/16-20	19	36	210
A-G-0608	3/8-19	1/2-20	19	36	210
A-G-0609	3/8-19	9/16-18	19	36	210
A-G-0612	3/8-19	3/4-16	22	39	210
A-G-0614	3/8-19	7/8-14	24	43	210
A-G-0617	3/8-19	1.1/16-12	30	48	210
A-G-0807	1/2-14	7/16-20	22	43	210
A-G-0809	1/2-14	9/16-18	22	43	210
A-G-0812	1/2-14	3/4-16	22	45	210
A-G-0814	1/2-14	7/8-14	24	48	210
A-G-0817	1/2-14	1.1/16-12	30	52	210
A-G-1209	3/4-14	9/16-18	27	45	170
A-G-1212	3/4-14	3/4-16	27	47	170
A-G-1214	3/4-14	7/8-14	27	50	170
A-G-1217	3/4-14	1.1/16-12	30	52	170
A-G-1219	3/4-14	1.3/16-12	32	55	170
A-G-1221	3/4-14	1.5/16-12	36	54	170
A-G-1612	1-11	3/4-16	36	52	140
A-G-1614	1-11	7/8-14	36	55	140
A-G-1617	1-11	1.1/16-12	36	57	140
A-G-1619	1-11	1.3/16-12	36	58	140
A-G-1621	1-11	1.5/16-12	36	58	140
A-G-1626	1-11	1.5/8-12	46	61	140
A-G-2017	1.1/4-11	1.1/16-12	46	60	80
A-G-2021	1.1/4-11	1.5/16-12	46	61	80
A-G-2026	1.1/4-11	1.5/8-12	46	62	80
A-G-2030	1.1/4-11	1.7/8-12	50	67	80
A-G-2421	1.1/2-11	1.5/16-12	50	64	70

A-G-2426	1.1/2-11	1.5/8-12	50	65	70
A-G-2430	1.1/2-11	1.7/8-12	50	71	70
A-G-3230	2-11	1.7/8-12	65	73	70
A-G-3240	2-11	2.1/2-12	65	79	70

A-J

BSPT MALE X JIC FEMALE

BSPT MALE X JIC 37° FLARE FEMALE SWIVEL NUT

STRAIGHT

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	PN (bar)
A-J-0207	1/8-28	7/16-20	12	14	23	345
A-J-0407	1/4-19	7/16-20	14	14	28	275
A-J-0409	1/4-19	9/16-18	14	19	29	275
A-J-0609	3/8-19	9/16-18	19	19	30	210
A-J-0612	3/8-19	3/4-16	19	22	32	210
A-J-0614	3/8-19	7/8-14	22	27	34	210
A-J-0812	1/2-14	3/4-16	22	22	38	210
A-J-0814	1/2-14	7/8-14	22	27	38	210
A-J-0817	1/2-14	1.1/16-12	27	32	43	170
A-J-1217	3/4-14	1.1/16-12	27	32	43	170
A-J-1621	1-11	1.5/16-12	36	41	51	140
A-J-2026	1.1/4-11	1.5/8-12	46	50	57	80

A-L

BSPT MALE X NPTF MALE

BSPT MALE X NPTF MALE STRAIGHT

Part Number	A	B	L1 (mm)	L2 (mm)	L3 (mm)	CH1 (mm)	PN (bar)
A-L-0404	1/4-19	1/4-18	35	15	15	17	275
A-L-0606	3/8-19	3/8-18	36	16	15	19	210
A-L-0808	1/2-14	1/2-14	48	20	20	22	210
A-L-1212	3/4-16	3/4-16	50	20	20	27	170
A-L-1616	1-11	1-11.1/2	62	26	26	36	140

A-N

BSPT MALE X UNO MALE

BSPT MALE X UNO MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-N-0407	1/4-19	7/16-20	14	31	22	275
A-N-0409	1/4-19	9/16-18	17	33	23	275
A-N-0412	1/4-19	3/4-16	22	35	24	275
A-N-0414	1/4-19	7/8-14	27	38	25	250
A-N-0609	3/8-19	9/16-18	19	33	23	210
A-N-0612	3/8-19	3/4-16	22	35	24	210
A-N-0614	3/8-19	7/8-14	27	38	25	210
A-N-0809	1/2-14	9/16-18	22	39	19	210
A-N-0812	1/2-14	3/4-16	22	40	29	210
A-N-0814	1/2-14	7/8-14	27	43	30	210
A-N-0817	1/2-14	1.1/16-12	32	47	32	210
A-N-1212	3/4-14	3/4-16	32	43	29	170
A-N-1214	3/4-14	7/8-14	27	43	30	170
A-N-1217	3/4-14	1.1/16-12	32	47	32	170
A-N-1221	3/4-14	1.5/16-12	41	48	33	170
A-N-1617	1-11	1.1/16-12	36	54	39	140
A-N-1621	1-11	1.5/16-12	41	53	38	140
A-N-1626	1-11	1.5/8-12	50	55	40	140
A-N-2026	1.1/4-11	1.5/8-12	50	55	40	80

A-AA

BSPT MALE X SAE MALE

BSPT MALE X SAE 45° FLARE MALE STRAIGHT

Part Number	A	B	L1 (mm)	L2 (mm)	L3 (mm)	CH1 (mm)	PN (bar)
A-AA-0410	1/4-19	5/8-18	36	14	16	19	275
A-AA-0610	3/8-19	5/8-18	38	15	16	19	210

A-AC

MALE BSPT x NPT FEMALE

BSPT MALE WITH 60° CONE X NPTF FEMALE FIXED
UNION

Part Number	BSPT Male Thread	NPTF Female Thread	Overall Length mm - L1 (mm)	Thread Length - mm (L2)	Hex A/F - CH1 (mm)	PN (bar)
A-AC-0404	1/4-19	1/4-18	34.5	14.5	19	275
A-AC-0606	3/8-19	3/8-18	36.5	15	24	210
A-AC-0808	1/2-14	1/2-14	47	20	30	210
A-AC-1212	3/4-14	3/4-14	49	20	36	170
A-AC-1616	1-11	1-11.1/2	60	25.5	41	140

A-ML

BSPT MALE X MET LIGHT MALE

BSPT MALE X METRIC 24° CONE LIGHT MALE

STRAIGHT

Part Number	BSPT Male Thread (G)	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	L3 (mm)	CH1 (mm)	PN (bar)
A-ML-0212	1/8-28	M12-1.5	6	14	7	8	12	315
A-ML-0214	1/8-28	M14-1.5	8	15	8	8	14	315
A-ML-0216	1/8-28	M16-1.5	10	16	9	8	17	315
A-ML-0412	1/4-19	M12-1.5	6	15	8	12	14	315
A-ML-0414	1/4-19	M14-1.5	8	15	8	12	17	315
A-ML-0416	1/4-19	M16-1.5	10	16	9	12	17	315
A-ML-0418	1/4-19	M18-1.5	12	17	10	12	19	315
A-ML-0614	3/8-19	M14-1.5	8	16	9	12	19	315
A-ML-0616	3/8-19	M16-1.5	10	17	10	12	19	315
A-ML-0618	3/8-19	M18-1.5	12	17	10	12	19	315
A-ML-0622	3/8-19	M22-1.5	15	18	11	12	24	315
A-ML-0814	1/2-14	M14-1.5	8	16	9	14	22	315
A-ML-0816	1/2-14	M16-1.5	10	17	10	14	22	315
A-ML-0818	1/2-14	M18-1.5	12	17	10	14	22	315
A-ML-0822	1/2-14	M22-1.5	15	18	11	14	24	315
A-ML-0826	1/2-14	M26-1.5	18	19	12	14	27	315
A-ML-0830	1/2-14	M30-2	22					315
A-ML-1222	3/4-14	M22-1.5	15					315
A-ML-1226	3/4-14	M26-1.5	18	19	12	16	32	315
A-ML-1230	3/4-14	M30-2	22	21	14	16	32	160
A-ML-1236	3/4-14	M36-2	28					160
A-ML-1636	1-11	M36-2	28	22	15	18	41	160
A-ML-2045	1.1/4-11	M42-2	35	25	14.5	20	46	160
A-ML-2452	1.1/2-11	M52-2	42	27	16	22	55	160

A-MS

BSPT MALE X MET HEAVY MALE

BSPT MALE X METRIC 24° CONE HEAVY MALE

STRAIGHT

Part Number	BSPT Male Thread (G)	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	L3 (mm)	CH1 (mm)	PN (bar)
A-MS-0414	1/4-19	M14-1.5	6	18	11	12	17	630
A-MS-0416	1/4-19	M16-1.5	8	20	13	12	17	630
A-MS-0418	1/4-19	M18-1.5	10					630
A-MS-0618	3/8-19	M18-1.5	10	20	13	12	19	630
A-MS-0620	3/8-19	M20-1.5	12	22	15	12	22	630
A-MS-0622	3/8-19	M22-1.5	14	24	16	12	24	630
A-MS-0624	3/8-19	M24-1.5	16	24	16	12	27	630
A-MS-0816	1/2-14	M16-1.5	8	20	13	17	22	630
A-MS-0818	1/2-14	M18-1.5	10	20	13	18	22	630
A-MS-0820	1/2-14	M20-1.5	12	22	15	14	22	630
A-MS-0822	1/2-14	M22-1.5	14	24	16	14	24	630
A-MS-0824	1/2-14	M24-1.5	16	24	16	14	27	400
A-MS-0830	1/2-14	M30-2	20	28	18	14	32	400
A-MS-1224	3/4-14	M24-1.5	16					400
A-MS-1230	3/4-14	M30-2	20	28	18	16	32	400
A-MS-1236	3/4-14	M36-2	25	32	20	16	41	400
A-MS-1636	1-11	M36-2	25	32	20	18	41	400
A-MS-1642	1-11	M42-2	30	34	20.5	18	46	400
A-MS-2042	1.1/4-11	M42-2	30	34	20.5	20	46	400

B-B

BSP MALE X BSP MALE

BSP 60° CONE MALE X BSP 60° CONE MALE

STRAIGHT

- ISO 8434-6

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
B-B-0202	1/8-28	1/8-28	14	21	400
B-B-0204	1/8-28	1/4-19	19	27	400
B-B-0404	1/4-19	1/4-19	19	30	400
B-B-0406	1/4-19	3/8-19	22	34	400
B-B-0408	1/4-19	1/2-14	27	39	350
B-B-0606	3/8-19	3/8-19	22	35	400
B-B-0608	3/8-19	1/2-14	27	40	350
B-B-0612	3/8-19	3/4-14	32	43	315
B-B-0808	1/2-14	1/2-14	27	42	350
B-B-0812	1/2-14	3/4-14	32	45	315
B-B-0816	1/2-14	1-11	41	48	250
B-B-1212	3/4-14	3/4-14	32	47	315
B-B-1216	3/4-14	1-11	41	50	250
B-B-1220	3/4-14	1.1/4-11	50	54	200
B-B-1616	1-11	1-11	41	53	250
B-B-1620	1-11	1.1/4-11	50	57	200
B-B-1624	1-11	1.1/2-11	55	59	160
B-B-2020	1.1/4-11	1.1/4-11	50	58	200
B-B-2024	1.1/4-11	1.1/2-11	55	60	160
B-B-2424	1.1/2-11	1.1/2-11	55	62	160
B-B-2432	1.1/2-11	2-11	70	67	125
B-B-3232	2-11	2-11	70	70	125

B-C

BSP MALE X BSP FEMALE

BSP 60° CONE MALE X BSP 60° CONE FEMALE

SWIVEL NUT STRAIGHT

- ISO 8434-6

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	PN (bar)
B-C-0404	1/4-19	1/4-19	19	19	31	400
B-C-0606	3/8-19	3/8-19	22	22	35	400
B-C-0608	3/8-19	1/2-14	22	27	42	350
B-C-0806	1/2-14	3/8-19	27	22	42	350
B-C-0808	1/2-14	1/2-14	27	27	41	350
B-C-0812	1/2-14	3/4-14	27	32	49	315
B-C-1212	3/4-14	3/4-14	32	32	45	315
B-C-1216	3/4-14	1-11	32	41	46	250
B-C-1612	1-11	3/4-14	41	32	49	250
B-C-1616	1-11	1-11	41	41	51	250
B-C-1620	1-11	1.1/4-11	41	50	53	200
B-C-2016	1.1/4-11	1-11	50	41	52	200
B-C-2020	1.1/4-11	1.1/4-11	50	50	55	200
B-C-2424	1.1/2-11	1.1/2-11	55	55	64	160

B-F

BSP MALE X BSP FEMALE

BSP 60° CONE MALE X BSP FIXED FEMALE

STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
B-F-0402	1/4-19	1/8-28	19	27	16	400
B-F-0604	3/8-19	1/4-19	22	33	21	400
B-F-0608	3/8-19	1/2-14	27	14	43	350
B-F-0804	1/2-14	1/4-19	27	36	22	350
B-F-0806	1/2-14	3/8-19	27	36	22	350
B-F-1204	3/4-14	1/4-19	32	31	15	350
B-F-1206	3/4-14	3/8-19	32	31	15	315
B-F-1208	3/4-14	1/2-14	32	42	26	315
B-F-1608	1-11	1/2-14	41	34	15	250
B-F-1612	1-11	3/4-14	41	47	28	250
B-F-2012	1.1/4-11	3/4-14	50	38	18	200
B-F-2016	1.1/4-11	1-11	50	50	30	200
B-F-2416	1.1/2-11	1-11	55	40	18	160
B-F-2420	1.1/2-11	1.1/4-11	55	58	36	160
B-F-3224	2-11	1.1/2-11	70	54	29	125

B-G

BSP MALE X JIC MALE

BSP 60° CONE MALE X JIC 37° FLARE MALE

STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
B-G-0207	1/8-28	7/16-20	14	29	350
B-G-0208	1/8-28	1/2-20	14	29	350
B-G-0209	1/8-28	9/16-18	17	29	350
B-G-0407	1/4-19	7/16-20	19	32	350
B-G-0408	1/4-19	1/2-20	19	32	350
B-G-0409	1/4-19	9/16-18	19	32	350
B-G-0412	1/4-19	3/4-16	22	35	310
B-G-0607	3/8-19	7/16-20	22	34	350

B-G-0609	3/8-19	9/16-18	22	34	350
B-G-0612	3/8-19	3/4-16	22	36	310
B-G-0614	3/8-19	7/8-14	24	42	240
B-G-0807	1/2-14	7/16-20	27	38	350
B-G-0809	1/2-14	9/16-18	27	39	350
B-G-0809-1MM	1/2-14	9/16-18	27	39	350
B-G-0812	1/2-14	3/4-16	27	42	310
B-G-0814	1/2-14	7/8-14	27	44	240
B-G-0817	1/2-14	1.1/16-12	30	46	240
B-G-1209	3/4-14	9/16-18	32	40	315
B-G-1212	3/4-14	3/4-16	32	44	310
B-G-1214	3/4-14	7/8-14	32	46	240
B-G-1217	3/4-14	1.1/16-12	32	49	240
B-G-1219	3/4-14	1.3/16-12	32	52	210
B-G-1221	3/4-14	1.5/16-12	36	50	210
B-G-1612	1-11	3/4-16	41	53	250
B-G-1614	1-11	7/8-14	41	53	240
B-G-1617	1-11	1.1/16-12	41	52	240
B-G-1621	1-11	1.5/16-12	41	54	210
B-G-1626	1-11	1.5/8-12	46	56	170
B-G-2017	1.1/4-11	1.1/16-12	50	56	200
B-G-2021	1.1/4-11	1.5/16-12	50	57	200
B-G-2026	1.1/4-11	1.5/8-12	50	58	170
B-G-2030	1.1/4-11	1.7/8-12	50	61	140
B-G-2417	1.1/2-11	1.1/16-12	55	61	160
B-G-2421	1.1/2-11	1.5/16-12	55	60	160
B-G-2426	1.1/2-11	1.5/8-12	55	61	160
B-G-2430	1.1/2-11	1.7/8-12	55	65	140
B-G-3226	2-11	1.5/8-12	70	67	125
B-G-3230	2-11	1.7/8-12	70	70	125
B-G-3240	2-11	2.1/2-12	70	78	105

B-G-EXT

MALE BSP X JIC STRAIGHT

BSPP MALE WITH 60° CONE X JIC 37° MALE

FLARED - EXTENDED

Part Number	T1	T2	L1 (mm)	H1 (mm)	PN (bar)
B-G-0409EX090	1/4-19	9/16-18	90	19	350
B-G-0612EX070	3/8-19	3/4-16	70	22	310

B-J

BSP MALE X JIC FEMALE

BSP 60° CONE MALE X JIC 37° FLARE FEMALE

SWIVEL NUT STRAIGHT

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	PN (bar)
B-J-0407	1/4-19	7/16-20	19	14	26	350
B-J-0409	1/4-19	9/16-18	19	19	27	350
B-J-0609	3/8-19	9/16-18	22	19	29	350
B-J-0612	3/8-19	3/4-16	22	22	31	310
B-J-0614	3/8-19	7/8-14	22	27	33	240
B-J-0809	1/2-14	9/16-18	27	19	35	350
B-J-0812	1/2-14	3/4-16	27	22	36	310
B-J-0814	1/2-14	7/8-14	27	27	36	240
B-J-0817	1/2-14	1.1/16-12	27	32	38	240
B-J-1214	3/4-14	7/8-14	32	27	41	240
B-J-1217	3/4-14	1.1/16-12	32	32	41	240
B-J-1617	1-11	1.1/16-12	41	41	32	240
B-J-1621	1-11	1.5/16-12	41	41	48	210
B-J-2026	1.1/4-11	1.5/8-12	50	50	52	170

B-N

BSP MALE X UNO MALE

BSP 60° CONE MALE X UNO MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
B-N-0407	1/4-19	7/16-20	19	29	20	315
B-N-0409	1/4-19	9/16-18	19	30	20	315
B-N-0609	3/8-19	9/16-18	22	32	22	315
B-N-0612	3/8-19	3/4-16	22	33	22	315
B-N-0812	1/2-14	3/4-16	27	37	25	315
B-N-0814	1/2-14	7/8-14	27	38	25	250
B-N-1214	3/4-14	7/8-14	32	42	29	250
B-N-1217	3/4-14	1.1/16-12	32	44	29	250
B-N-1617	1-11	1.1/16-12	41	48	33	250
B-N-1621	1-11	1.5/16-12	41	48	33	200

B-R

BSP MALE X ORFS MALE

BSP 60° CONE MALE X ORFS MALE STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
B-R-0409	1/4-19	9/16-18	19	28	400
B-R-0411	1/4-19	11/16-16	19	29	400
B-R-0609	3/8-19	9/16-18	22	30	400
B-R-0611	3/8-19	11/16-16	22	31	400
B-R-0613	3/8-19	13/16-16	22	33	400
B-R-0811	1/2-14	11/16-16	12	24	350
B-R-0813	1/2-14	13/16-16	27	38	350
B-R-0816	1/2-14	1-14	27	41	350
B-R-0819	1/2-14	1.3/16-12	32	43	350
B-R-1216	3/4-14	1-14	32	44	315
B-R-1219	3/4-14	1.3/16-12	32	45	315
B-R-1223	3/4-14	1.7/16-12	41	47	315
B-R-1623	1-11	1.7/16-12	41	50	250
B-R-2027	1.1/4-11	1.11/16-12	50	53	200

B-T

BSP MALE X ORFS FEMALE

BSP 60° CONE MALE X ORFS FEMALE SWIVEL NUT

STRAIGHT

Part Number	T1	T2	L1 (mm)	H1 (mm)	H2 (mm)	PN (bar)
B-T-0409	1/4-19	9/16-18	34	19	19	400
B-T-0411	1/4-19	11/16-16	37	17	22	400
B-T-0611	3/8-19	11/16-16	39	17	22	400
B-T-0613	3/8-19	13/16-16	43	19	24	400
B-T-0813	1/2-14	13/16-16	45	22	24	350
B-T-0816	1/2-14	1-14	51	24	30	350
B-T-1219	3/4-14	1.3/16-12	57	30	36	315
B-T-1623	1-11	1.7/16-12	62	36	41	250
B-T-2027	1.1/4-11	1.11/16-12	99.3	50	50	200

B-BK

BSP MALE X BSP BULKHEAD

BSP 60° CONE MALE X BSP 60° CONE BULKHEAD

STRAIGHT

- ISO 8434-6

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
B-BK-0404	1/4-19	1/4-19	19	19	47	29	400
B-BK-0606	3/8-19	3/8-19	22	22	52	31	400
B-BK-0808	1/2-14	1/2-14	27	27	60	34	350
B-BK-1212	3/4-14	3/4-14	32	32	66	37	315
B-BK-1616	1-11	1-11	41	41	74	41	250
B-BK-2020	1.1/4-11	1.1/4-11	50	50	81	45	200
B-BK-2424	1.1/2-11	1.1/2-11	55	55	88	49	160

B-GK

BSP MALE X JIC BULKHEAD

BSP 60° CONE MALE X JIC 37° FLARE BULKHEAD

STRAIGHT

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
B-GK-0609	3/8-19	9/16-18	53	33	22	19	350
B-GK-0812	1/2-14	3/4-16	59	37	27	22	310
B-GK-0814	1/2-14	7/8-14	64	40	27	27	240

B-ML

BSP MALE X MET LIGHT MALE

BSP 60° CONE MALE X METRIC 24° CONE LIGHT

MALE STRAIGHT

- For BSP Stud Ends Refer BX-ML series

Part Number	BSP Male Thread - T1	Metric Male Thread - T2	Suits Tube Diameter (mm)	L1 (mm)	H1 (mm)	PN (bar)
B-ML-0412	1/4-19	M12-1.5	6	29	19	315
B-ML-0414	1/4-19	M14-1.5	8	29	19	315
B-ML-0416	1/4-19	M16-1.5	10	30	19	315
B-ML-0614	3/8-19	M14-1.5	8	30.5	22	315
B-ML-0616	3/8-19	M16-1.5	10	31.5	22	315
B-ML-0618	3/8-19	M18-1.5	12	31.5	22	315
B-ML-0622	3/8-19	M22-1.5	15	31.5	22	315
B-ML-0814	1/2-14	M14-1.5	8	33	27	315
B-ML-0816	1/2-14	M16-1.5	10	34	27	315
B-ML-0818	1/2-14	M18-1.5	12	34	27	315
B-ML-0822	1/2-14	M22-1.5	15	35	27	315
B-ML-0826	1/2-14	M26-1.5	18	36	27	315
B-ML-1222	3/4-14	M22-1.5	15	38	32	315
B-ML-1226	3/4-14	M26-1.5	18	38	32	315
B-ML-1230	3/4-14	M30-2	22	40	32	160
B-ML-1636	1-11	M36-2	28	43	41	160

B-MS

BSP MALE X MET HEAVY MALE

BSP 60° CONE MALE X METRIC 24° CONE HEAVY
MALE STRAIGHT

- For BSP Stud Ends Refer BX-MS series

Part Number	BSPP Male Thread - T1	Metric Male Thread - T2	Suits Tube Diameter (mm)	L1 (mm)	H1 (mm)	PN (bar)
B-MS-0414	1/4-19	M14-1.5	6	32	19	630
B-MS-0416	1/4-19	M16-1.5	8	34	19	630
B-MS-0616	3/8-19	M18-1.5	8	34.5	22	630
B-MS-0618	3/8-19	M18-1.5	10	34.5	22	630
B-MS-0620	3/8-19	M20-1.5	12	36.5	22	630
B-MS-0818	1/2-14	M18-1.5	10	39	27	630
B-MS-0820	1/2-14	M20-1.5	12	39	27	630
B-MS-0822	1/2-14	M22-1.5	14	41	27	630
B-MS-0824	1/2-14	M24-1.5	16	41	27	400
B-MS-1230	3/4-14	M30-2	20	47	32	400
B-MS-1236	3/4-14	M36-2	25	51	41	400
B-MS-1636	1-11	M36-2	25	53	41	400
B-MS-1642	1-11	M36-2	30	55	41	400

B-MY

MALE BSPP X JIS METRIC MALE

BSPP MALE X JIS METRIC KOMATSU STYLE 30°
MALE

Part Number	BSPP Male Thread (A)	Metric Male Thread (B)	L1 (mm)	Overall Length - L2 (mm)	L3 (mm)	Hex A/F - CH2 (mm)	PN (bar)
B-MY-0414	1/4-19	M14-1.5	12	33.5	15.5	19	345
B-MY-0618	3/8-19	M18-1.5	13.5	39.5	18	22	345
B-MY-0622	3/8-19	M22-1.5	13.5	41.5	20	24	345
B-MY-0822	1/2-14	M22-1.5	16	46	20	27	345
B-MY-0824	1/2-14	M24-1.5	16	48	22	27	275
B-MY-1230	3/4-14	M30-2	18.5	52.5	23	32	200
B-MY-1633	1-11	M33-2	20.5	60.5	27	41	200

C-E

BSP FEMALE X BSPT FEMALE

BSP 60° CONE FEMALE SWIVEL NUT X BSPT FIXED

FEMALE STRAIGHT

Part Number	A	B	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
C-E-0404	1/4-19	1/4-19	11	29	10	19	19	275
C-E-0606	3/8-19	3/8-19	13	32	11	25	22	210
C-E-0808	1/2-14	1/2-14	15	41	16	27	27	210
C-E-1212	3/4-14	3/4-14	17	45	16	35	32	170
C-E-1616	1-11	1-11	18	51	19	41	41	140

C-N

BSP FEMALE X UNO MALE

BSP 60° CONE FEMALE SWIVEL NUT X UNO FIXED

STUD STRAIGHT

Part Number	T1	T2	H1 (mm)	H2 (mm)	L2 (mm)	PN (bar)
C-N-0407	1/4-19	7/16-20	19	14	26	315
C-N-0409	1/4-19	9/16-18	19	17	27	315
C-N-0609	3/8-19	9/16-18	22	17	28	315
C-N-0612	3/8-19	3/4-16	22	22	31	315
C-N-0812	1/2-14	3/4-16	27	22	33	315
C-N-0814	1/2-14	7/8-14	27	27	37	250
C-N-1217	3/4-14	1.1/16-12	32	32	41	250
C-N-1621	1-11	1.5/16-12	41	38	42	200

E-E

BSPT FEMALE X BSPT FEMALE

BSPT FIXED FEMALE X BSPT FIXED FEMALE

STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
E-E-0202	1/8-28	1/8-28	14	20	345
E-E-0204	1/8-28	1/4-19	19	24	275
E-E-0404	1/4-19	1/4-19	19	30	275
E-E-0406	1/4-19	3/8-19	22	30	210
E-E-0408	1/4-19	1/2-14	27	34	210
E-E-0606	3/8-19	3/8-19	22	30	210
E-E-0608	3/8-19	1/2-14	27	35	210
E-E-0808	1/2-14	1/2-14	27	38	210
E-E-0812	1/2-14	3/4-14	36	40	170
E-E-1212	3/4-14	3/4-14	36	40	170
E-E-1216	3/4-14	1-11	41	45	140
E-E-1616	1-11	1-11	41	48	140
E-E-2020	1.1/4-11	1.1/4-11	50	50	80
E-E-2424	1.1/2-11	1.1/2-11	60	50	70
E-E-3232	2-11	2-11	74	60	70

E-G

BSPT FEMALE X JIC MALE

BSPT FIXED FEMALE X JIC 37° FLARE MALE

STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
E-G-0207	1/8-28	7/16-20	14	30	345
E-G-0407	1/4-19	7/16-20	19	35	275
E-G-0409	1/4-19	9/16-18	19	35	275
E-G-0609	3/8-19	9/16-18	22	37	210
E-G-0612	3/8-19	3/4-16	22	39	210
E-G-0809	1/2-14	9/16-18	27	43	210
E-G-0812	1/2-14	3/4-16	27	46	210
E-G-0814	1/2-14	7/8-14	27	48	210
E-G-0817	1/2-14	1.1/16-12	52	52	210
E-G-1217	3/4-14	1.1/16-12	36	52	170
E-G-1621	1-11	1.5/16-12	41	60	140

E-N

BSPT FEMALE X UNO MALE

BSPT FIXED FEMALE X UNO MALE STRAIGHT

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
E-N-0212	1/8-28	3/4-16	19	11	22	315
E-N-0409	1/4-19	9/16-18	28	10	19	275
E-N-0412	1/4-19	3/4-16	27	11	22	275
E-N-0414	1/4-19	7/8-14	25	13	25	250
E-N-0417	1/4-19	1.1/16-12	29	15	32	250
E-N-0617	3/8-19	1.1/16-12	33	15	32	210
E-N-0814	1/2-14	7/8-14	33	13	27	210
E-N-0817	1/2-14	1.1/16-12	41.5	15.1	30	210
E-N-0821	1/2-14	1.5/16-12	35	15	38	200
E-N-1217	3/4-14	1.1/16-12	45	15.1	36	170
E-N-1221	3/4-14	1.5/16-12	42	15.1	36	170
E-N-1226	3/4-14	1.5/8-12	35.1	15.1	48	160
E-N-1626	1-11	1.5/8-12	35.1	15.1	48	140

F-F

BSP FEMALE X BSP FEMALE

BSP FIXED FEMALE X BSP FIXED FEMALE

STRAIGHT

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
F-F-0202	1/8-28	1/8-28	14	22	400
F-F-0404	1/4-19	1/4-19	19	30	400
F-F-0606	3/8-19	3/8-19	24	30	400
F-F-0808	1/2-14	1/2-14	27	38	350
F-F-1212	3/4-14	3/4-14	36	40	315
F-F-1616	1-11	1-11	41	48	250
F-F-2020	1.1/4-11	1.1/4-11	55	50	200
F-F-2424	1.1/2-11	1.1/2-11	60	50	160
F-F-3232	2-11	2-11	70	54	125

F-GK

BSPFEMALE X JIC MALE

FEMALE BSPP X MALE WITH 37° CONE

Part Number	BSPP Female Thread (A)	JIC Male Thread (B)	Overall Length (mm)	L1 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
F-GK-0207	1/8-28	7/16-20	47.5	31.6	17	17	350

F-ML

BSP FEMALE X MET LIGHT MALE
BSP SOLID FEMALE X METRIC 24° CONE LIGHT
MALE STRAIGHT

Part Number	BSPP Male Thread - G	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
F-ML-0212	1/8-28	M12-1.5	6	16	9	10	14	315
F-ML-0414	1/4-19	M14-1.5	8	17	10	14	19	315
F-ML-0416	1/4-19	M16-1.5	10	18	11	14	19	315
F-ML-0418	1/4-19	M18-1.5	12	18	12	14	19	315
F-ML-0618	3/8-19	M18-1.5	12	19	12	14	24	315
F-ML-0822	1/2-14	M22-1.5	15	21	14	17	27	315
F-ML-0826	1/2-14	M26-1.5	18	21	13.5	17	27	315
F-ML-1230	3/4-14	M30-2	22	24	16	19	36	160
F-ML-1636	1-11	M36-2	28	23.5	16	21.5	41	160
F-ML-2045	1.1/4-11	M45-2	35	28.5	18	23.5	55	160
F-ML-2452	1.1/2-11	M52-2	42	28.5	17.5	25.5	60	160

F-MS

BSP FEMALE X MET HEAVY MALE
BSP SOLID FEMALE X METRIC 24° CONE HEAVY
MALE STRAIGHT

Part Number	BSPP Male Thread - G	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
F-MS-0414	1/4-19	M14-1.5	6	19	12	14	19	400
F-MS-0416	1/4-19	M16-1.5	8	19	12	14	19	400
F-MS-0618	3/8-19	M18-1.5	10	20	12.5	14	24	400
F-MS-0620	3/8-19	M20-1.5	12	20	13	14	24	400
F-MS-0822	1/2-14	M22-1.5	14	23	15	17	30	400
F-MS-0824	1/2-14	M24-1.5	16	23	15	17	30	400
F-MS-1230	3/4-12	M30-2	20	26	16	19	36	315
F-MS-1636	1-11	M36-2	25	27.5	16	21.5	41	315
F-MS-2042	1.1/4-11	M42-2	30	32.5	19	23.5	55	315
F-MS-2452	1.1/2-11	M52-2	38	34.5	19	25.5	60	250

G-G

JIC MALE X JIC MALE

JIC 37° FLARE MALE X JIC 37° FLARE MALE

STRAIGHT

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
G-G-0707	7/16-20	7/16-20	12	35	350
G-G-0709	7/16-20	9/16-18	17	36	350
G-G-0808	1/2-20	1/2-20	14	35	350
G-G-0909	9/16-18	9/16-18	17	36	350
G-G-0912	9/16-18	3/4-16	22	39	310
G-G-1212	3/4-16	3/4-16	22	41	310
G-G-1214	3/4-16	7/8-14	24	46	240
G-G-1217	3/4-16	1.1/16-12	30	50	240
G-G-1414	7/8-14	7/8-14	24	48	240
G-G-1417	7/8-14	1.1/16-12	30	53	240
G-G-1717	1.1/16-12	1.1/16-12	30	55	240
G-G-1719	1.1/16-12	1.3/16-12	32	56	210
G-G-1721	1.1/16-12	1.5/16-12	36	56	210
G-G-1919	1.3/16-12	1.3/16-12	32	56	210
G-G-2121	1.5/16-12	1.5/16-12	36	57	210
G-G-2126	1.5/16-12	1.5/8-12	46	61	170
G-G-2626	1.5/8-12	1.5/8-12	46	62	170
G-G-3030	1.7/8-12	1.7/8-12	50	70	140
G-G-4040	2.1/2-12	2.1/2-12	65	87	105

G-J

JIC MALE X JIC FEMALE

JIC MALE X JIC 37° FLARE FEMALE SWIVEL NUT

STRAIGHT

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	PN (bar)
G-J-0707	7/16-20	7/16-20	12	14	29	350
G-J-0909	9/16-18	9/16-18	17	19	31	350
G-J-1212	3/4-16	3/4-16	22	22	35	310
G-J-1414	7/8-14	7/8-14	24	27	40	240
G-J-1717	1.1/16-12	1.1/16-12	30	32	46	240
G-J-2121	1.5/16-12	1.5/16-12	35	38	48	210

G-L

JIC MALE X NPTF MALE

JIC 37° MALE X NPTF MALE STRAIGHT

- SAE J514

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
G-L-0702	7/16-20	1/8-27	12	31	345
G-L-0704	7/16-20	1/4-18	14	36	275
G-L-0706	7/16-20	3/8-18	19	36	210
G-L-0708	7/16-20	1/2-14	22	43	210
G-L-0802	1/2-20	1/8-27	14	31	345
G-L-0804	1/2-20	1/4-18	14	36	275
G-L-0806	1/2-20	3/8-18	19	36	210
G-L-0902	9/16-18	1/8-27	17	32	345
G-L-0904	9/16-18	1/4-18	17	36	275
G-L-0906	9/16-18	3/8-18	19	37	210
G-L-0908	9/16-18	1/2-14	22	43	210
G-L-0912	9/16-18	3/4-14	22	39	170
G-L-1204	3/4-16	1/4-18	22	39	275
G-L-1206	3/4-16	3/8-18	22	39	210
G-L-1208	3/4-16	1/2-14	22	46	210
G-L-1212	3/4-16	3/4-14	27	47	170
G-L-1406	7/8-14	3/8-18	24	43	210
G-L-1408	7/8-14	1/2-14	24	48	210
G-L-1412	7/8-14	3/4-14	27	50	170
G-L-1416	7/8-14	1-11.1/2	36	55	140
G-L-1706	1.1/16-12	3/8-18	30	57	210
G-L-1708	1.1/16-12	1/2-14	30	52	210
G-L-1712	1.1/16-12	3/4-14	30	52	170
G-L-1716	1.1/16-12	1-11.1/2	36	57	140
G-L-2112	1.5/16-12	3/4-14	36	54	170
G-L-2116	1.5/16-12	1-11.1/2	36	58	140
G-L-2120	1.5/16-12	1.1/4-11.1/2	46	61	80
G-L-2616	1.5/8-12	1-11.1/2	46	61	140
G-L-2620	1.5/8-12	1.1/4-11.1/2	46	62	80
G-L-2624	1.5/8-12	1.1/2-11.1/2	50	65	70
G-L-3020	1.7/8-12	1.1/4-11.1/2	50	67	80
G-L-3024	1.7/8-12	1.1/2-11.1/2	50	68	70
G-L-3032	1.7/8-12	2-11.1/2	65	73	70
G-L-4032	2-1/2-12	2-11.1/2	65	79	70

G-M

MALE JIC X METRIC STRAIGHT

JIC MALE X METRIC MALE

Part Number	JIC Male Thread (A)	Metric Male Thread (B)	L1 (mm)	L2 (mm)	O/A - mm	Hex A/F - CH1 (mm)	PN (bar)
G-M-0710	7/16-20	M10-1	8	14	23	14	350
G-M-0712	7/16-20	M12-1.5	14	11	31	17	350
G-M-0912	9/16-18	M12-1.5	12	14	21	17	350
G-M-0914	9/16-18	M14-1.5	10	14	22	19	350
G-M-0916	9/16-18	M16-1.5	11	14	24	22	350
G-M-0918	9/16-18	M18-1.5	12	15	23	22	350
G-M-0920	9/16-18	M20-1.5	14.2	12.6	34.5	27	350
G-M-0922	9/16-18	M22-1.5	14	17	24	27	350
G-M-1212	3/4-16	M12-1.5	16.7	11	38	22	310
G-M-1214	3/4-16	M14-1.5	16.7	11	38	22	310
G-M-1216	3/4-16	M16-1.5	16.7	11.5	36	22	310
G-M-1218	3/4-16	M18-1.5	13	17	27	24	310
G-M-1220	3/4-16	M20-1.5	14.2	12.6	34.5	27	310
G-M-1222	3/4-16	M22-1.5	14	17	24	27	310
G-M-1416	7/8-14	M16-1.5	19.3	11.5	41	24	240
G-M-1418	7/8-14	M18-1.5	19.3	12.5	40	24	240
G-M-1420	7/8-14	M20-1.5	19.3	12.6	42	27	240
G-M-1422	7/8-14	M22-1.5	14	19	31	27	240
G-M-1426	1.1/16-12	M26-1.5	19.3	16	45	32	240
G-M-1718	1.1/16-12	M18-1.5	21.9	12.5	45	30	240
G-M-1720	1.1/16-12	M20-1.5	21.9	12.6	46.5	30	240
G-M-1722	1.1/16-12	M22-1.5	21.9	13	47.5	30	240
G-M-1726	1.1/16-12	M26-1.5	21.9	16	50	32	240
G-M-1727	1.1/16-12	M27-2	21.9	16	49	32	240
G-M-1733	1.1/16-12	M33-2	21.9	16	50	41	240
G-M-2126	1.5/16-12	M26-1.5	23.1	16	50	36	210
G-M-2127	1.5/16-12	M27-2	23.1	16	52.5	36	210
G-M-2133	1.5/16-12	M33-2	23.1	16	52	41	210
G-M-2633	1.5/8-12	M33-2	24.2	16	58	47	170
G-M-2642	1.5/8-12	M42-2	24.2	16	58	50	170
G-M-2648	1.5/8-12	M48-2	24.2	17.5	59.5	57	170
G-M-3048	1.7/8-12	M48-2	27.5	17.5	63	55	140

G-N

JIC MALE X UNO MALE

JIC MALE X UNO FIXED STUD STRAIGHT

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-N-0707	7/16-20	7/16-20	14	31	22	350
G-N-0707-1MM	7/16-20	7/16-20	31.2	14	9.1	350
G-N-0709	7/16-20	9/16-18	17	33	23	350
G-N-0712	7/16-20	3/4-16	22	35	14	350
G-N-0714	7/16-20	7/8-14	37.8	14	12.7	350
G-N-0717	7/16-20	1.1/16-12	42.2	14	15.1	350
G-N-0807	1/2-20	7/16-20	14	33	14	350
G-N-0808	1/2-20	1/2-20	16	33	14	350
G-N-0809	1/2-20	9/16-18	18	33	14	350
G-N-0812	1/2-20	3/4-16	22	33	14	350
G-N-0907	9/16-18	7/16-20	16	32	14	350
G-N-0908	9/16-18	1/2-20	16	32	14	350
G-N-0909	9/16-18	9/16-18	17	33	23	350
G-N-0909-1.15MM	9/16-18	9/16-18	17	33	23	350
G-N-0912	9/16-18	3/4-16	22	35	24	350
G-N-0912-1MM	9/16-18	3/4-16	35.1	14.2	11.1	350
G-N-0914	9/16-18	7/8-14	25	38	14	350
G-N-0914-1MM	9/16-18	7/8-14	38.1	14.2	12.7	350
G-N-0917	9/16-18	1.1/16-12	32	42	14	350
G-N-1207	3/4-14	7/16-20	37.8	16.7	9.1	310
G-N-1209	3/4-14	9/16-18	21	37	17	310
G-N-1212	3/4-16	3/4-16	22	38	27	310
G-N-1212-1.5MM	3/4-14	3/4-16	37.6	16.7	11.1	310
G-N-1214	3/4-16	7/8-14	27	41	28	310
G-N-1217	3/4-14	1.1/16-12	32	45	17	310
G-N-1221	3/4-14	1.5/16-12	38	45	17	310
G-N-1409	7/8-14	9/16-18	25	42	19	240
G-N-1412	7/8-14	3/4-16	24	42	19	240
G-N-1414	7/8-14	7/8-14	27	43	30	240
G-N-1417	7/8-14	1.1/16-12	32	47	19	240
G-N-1421	7/8-14	1.5/16-12	38	48	19	240
G-N-1712	1.1/16-12	3/4-16	29	49	22	240
G-N-1714	1.1/16-12	7/8-14	29	48	22	240
G-N-1717	1.1/16-12	1.1/16-12	32	50	35	240
G-N-1719	1.1/16-12	1.3/16-12	35	50	35	240

G-N-1721	1.1/16-12	1.5/16-12	38	51	22	240
G-N-1726	1.1/16-12	1.5/8-12	48	53	22	240
G-N-2112	1.5/16-12	3/4-16	52	23	11.1	210
G-N-2114	1.5/16-12	7/8-14	52	23	12.7	210
G-N-2117	1.5/16-12	1.1/16-12	35	52	23	210
G-N-2121	1.5/16-12	1.5/16-12	38	52	23	210
G-N-2126	1.5/16-12	1.5/8-12	48	54	23	210
G-N-2130	1.5/16-12	1.7/8-12	55.9	23	15.1	210
G-N-2617	1.5/8-12	1.1/16-12	58.4	24	15.1	170
G-N-2621	1.5/8-12	1.5/16-12	43	59	24	170
G-N-2626	1.5/8-12	1.5/8-12	48	55	24	170
G-N-2630	1.5/8-12	1.7/8-12	54	57	24	170
G-N-3026	1.7/8-12	1.5/8-12	51	64	28	140
G-N-3030	1.7/8-12	1.7/8-12	54	64	24	140

G-N X1

EXTENDED MALE JIC X UNO

JIC MALE X UNF MALE WITH O-RING

Part Number	JIC Male Thread (A)	UNO Male Thread (B)	O/A (mm)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-N-0707X1	7/16-20	7/16-20	52.8	36.6	9.1	14.3	350
G-N-0909X1	9/16-18	9/16-18	58.7	39.6	9.9	17.5	350
G-N-1212X1	3/4-16	3/4-16	68.6	47.8	11.1	22.2	310
G-N-1414X1	7/8-14	7/8-14	77.2	53.1	12.7	25.4	240
G-N-1717X1	1.1/16-12	1.1/16-12	91.7	63.5	15.1	31.8	240
G-N-2121X1	1.5/16-12	1.5/16-12	101.1	72.1	15.1	38.1	210

G-R

MALE JIC X ORFS STRAIGHT

JIC MALE X ORFS MALE WITH O-RING

Part Number	JIC Male Thread	ORFS Male Thread	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-R-0709	7/16-20	9/16-18	31.8	14	10	15.9	350
G-R-0911	9/16-18	11/16-16	34.3	14.2	11.2	19.1	350
G-R-1213	3/4-16	13/16-16	39.4	17	12.8	22.2	310
G-R-1413	7/8-14	13/16-16	40.5	19.3	12.8	24	240
G-R-1416	7/8-14	1-14	46.5	19.3	15.5	27	240
G-R-1716	1.1/16-12	1-14	48	21.9	15.5	30	240
G-R-1719	1.1/16-12	1.3/16-12	52.1	21.9	17	31.8	240
G-R-2119	1.5/16-12	1.3/16-12	51	23.1	17	36	210
G-R-2123	1.5/16-12	1.7/16-12	54.9	23.1	17.5	38.1	210
G-R-2623	1.5/8-12	1.7/16-12	54.5	24.2	17.5	46	170
G-R-2627	1.5/8-12	1.11/16-12	57.2	24.2	17.5	44.5	170

G-T

JIC MALE X ORFS FEMALE

JIC MALE X ORFS FEMALE SWIVEL NUT STRAIGHT

Part Number	JIC Male Thread (A)	ORFS Female Thread (B)	O/A (mm)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-T-0709	7/16-20	9/16-18	32	10	14	17	17	350
G-T-0909	9/16-18	9/16-18	32	14	22	22	17	350
G-T-0911	9/16-18	11/16-16	27	14	22	22	21	350
G-T-1211	3/4-16	11/16-16	51.5	16.7	27	22.2	25.4	310
G-T-1213	3/4-16	13/16-16	30	17	24	24	27	310
G-T-1413	7/8-14	13/16-16	58.6	19.3	31.3	25	27	240
G-T-1416	7/8-14	1-14	65	19.3	38.1	27	28.6	240
G-T-1716	1.1/16-12	1-14	63.4	21.9	32.5	30	32	240
G-T-1719	1.1/16-12	1.3/16-12	41	22	36	36	37.1	240
G-T-2119	1.5/16-12	1.3/16-12	71.7	23.1	38.1	37.8	37.1	210
G-T-2123	1.5/16-12	1.7/16-12	77	23.1	44.8	38.1	41.3	210
G-T-2623	1.5/8-12	1.7/16-12	79.5	24.3	43.5	42.9	47.6	170
G-T-2627	1.5/8-12	1.11/16-12	79.5	24.3	43.5	42.9	47.6	170

G-AC

JIC MALE X NPT FEMALE FIXED

JIC MALE X NPTF FEMALE FIXED

Part Number	JIC Male Thread (A)	NPTF Female Thread (B)	L1 (mm)	Overall Length (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-AC-0702	7/16-20	1/8-27	14	30.2	14.3	345
G-AC-0704	7/16-20	1/4-18	14	36.1	19.1	275
G-AC-0804	1/2-20	1/4-18	14	35.6	19.1	275
G-AC-0904	9/16-18	1/4-18	14.2	35.6	19.1	275
G-AC-0906	9/16-18	3/8-18	14.2	37.1	22.2	210
G-AC-1206	3/4-16	3/8-18	16.7	39.6	22.2	210
G-AC-1208	3/4-16	1/2-14	16.7	45.7	28.6	210
G-AC-1408	7/8-14	1/2-14	19.3	48	28.6	210
G-AC-1712	1.5/16-12	3/4-14	21.9	52.3	34.9	170
G-AC-2116	1.5/16-12	1-11.1/2	23.1	59.7	41.3	140

G-GK

JIC MALE X JIC BULKHEAD

JIC MALE X JIC BULKHEAD STRAIGHT

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-GK-0707	7/16-20	7/16-20	17	17	53	22	350
G-GK-0808	1/2-20	1/2-20	19	19	53	22	350
G-GK-0909	9/16-18	9/16-18	22	22	56	34	350
G-GK-1212	3/4-16	3/4-16	24	24	62	38	310
G-GK-1414	7/8-14	7/8-14	30	30	70	41	240
G-GK-1717	1.1/16-12	1.1/16-12	36	36	79	45	240
G-GK-2121	1.5/16-12	1.5/16-12	41	41	80	45	210
G-GK-2626	1.5/8-12	1.5/8-12	50	50	84	47	170
G-GK-3030	1.7/8-12	1.7/8-12	89.4	54	89	47	140

G-MY

JIC MALE X JIS MALE

JIC MALE X JIS METRIC 30° FLARE MALE
(KOMATSU STYLE)

Part Number	T1	T2	L1 (mm)	H1 (mm)	PN (bar)
G-MY-0714	7/16-20	M14-1.5	37	17	350
G-MY-0918	9/16-18	M18-1.5	38	19	350
G-MY-1222	3/4-16	M22-1.5	44.5	24	310
G-MY-1424	7/8-14	M24-1.5	38.5	27	240
G-MY-1730	1.1/16-12	M30-1.5	59	32	240
G-MY-2133	1.5/16-12	M33-1.5	64	36	210

G-UY

JIC MALE X JIS FEMALE

JIC MALE X JIS METRIC 30° FLARE FEMALE

(KOMATSU STYLE)

Part Number	T1	T2	L1 (mm)	H1 (mm)	H2 (mm)	PN (bar)
G-UY-0714	7/16-20	M14-1.5	39	14	19	350
G-UY-0918	9/16-18	M18-1.5	42	17	24	350
G-UY-1222	3/4-16	M22-1.5	49.5	22	27	310
G-UY-1424	7/8-14	M24-1.5	53.6	24	32	240
G-UY-1730	1.1/16-12	M30-1.5	62.8	30	36	240
G-UY-2133	1.5/16-12	M33-1.5	67.8	36	41	210

J-J

JIC FEMALE X JIC FEMALE

JIC FEMALE SWIVEL NUT 37° CONE X JIC FEMALE

SWIVEL NUT 37° CONE

Part Number	JIC Female Thread (A)	JIC Female Thread (B)	Overall Length (mm)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
J-J-0707	7/16-20	7/16-20	40.6	17.5	17.5	12.7	14.3	350
J-J-0909	9/16-18	9/16-18	46.7	20	20	14.3	15.9	350
J-J-1212	3/4-16	3/4-16	52.6	22.7	22.7	20.6	22.2	310
J-J-1717	1.1/16-12	1.1/16-12	66.3	27.8	27.8	28.6	31.8	240
J-J-2121	1.5/16-12	1.5/16-12	69.6	30.6	30.6	38.1	38.1	210

J-L

JIC FEMALE X NPTF MALE

JIC 37° FLARE FEMALE SWIVEL NUT X NPTF MALE

STRAIGHT

Part Number	A	B	O/A (mm)	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
J-L-0702	7/16-20	1/8-27	34.3	8	14	11.1	14.3	345
J-L-0704	7/16-20	1/4-18	30	8	14	14	14	275
J-L-0804	1/2-20	1/4-18	39.9	8	14	14.3	15.9	275
J-L-0904	9/16-18	1/4-18	34	10	14	14	18	275
J-L-0906	9/16-18	3/8-18	34	10	14	19	18	210
J-L-1206	3/4-16	3/8-18	33	13	14	21	22	210
J-L-1208	3/4-16	1/2-14	50	13	19	22.2	22.2	210
J-L-1408	7/8-14	1/2-14	45	13	19	24	25	210
J-L-1708	1.1/16-12	1/2-14	43	13	19	29	32	210
J-L-1712	1.1/16-12	3/4-14	54.1	13	19	28.6	31.8	170
J-L-2112	1.5/16-12	3/4-14	44	15	19	32	40	170
J-L-2116	1.5/16-12	1-11.5	50	15	24	35	38	140

J-N

FEMALE JIC X MALE UNO

JIC FEMALE WITH 37° CONE X UNO MALE

Part Number	JIC Female Thread	UNO Male Thread	Overall Length (mm)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
J-N-0707	7/16-20	7/16-20	33.5	17.5	9.1	14.3	14.3	350
J-N-0909	9/16-18	9/16-18	38.1	20	9.9	14.5	17.5	350
J-N-0912	9/16-18	9/16-18	39.9	20	11.1	22.2	17.5	350
J-N-1209	3/4-16	9/16-18	43.4	22.7	9.9	22.2	22.2	310
J-N-1212	3/4-16	3/4-16	42.2	22.7	11.1	22.2	22.2	310
J-N-1214	3/4-16	7/8-14	44.7	22.7	12.7	25.4	22.2	310
J-N-1414	7/8-14	7/8-14	50.5	24.3	12.7	25.4	25.4	240
J-N-1717	1.1/16-12	1.1/16-12	52.6	27.8	15.1	31.8	31.8	240
J-N-2121	1.5/16-12	1.5/16-12	56.4	30.6	15.1	38.1	38.1	210
J-N-2626	1.5/8-12	1.5/8-12	66.5	32	15.1	47.6	50.8	170

J-R

FEMALE JIC X MALE ORFS

JIC FEMALE WITH 37° CONE X ORFS MALE

Part Number	JIC Female Thread (A)	ORFS Male Thread (B)	Overall Length (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
J-R-0709	7/16-20	9/16-18	26.4	17.5	10	15.9	14.3	350
J-R-0911	9/16-18	11/16-16	40.1	20	11.2	17.5	17.5	350
J-R-1213	3/4-16	13/16-16	29.5	22.7	12.8	22.2	22.2	310
J-R-1416	7/8-14	1-14	26.9	24.3	15.5	27	25.4	240
J-R-1719	1.1/16-12	1.3/16-12	43.9	27.8	17	31.8	31.8	240
J-R-2123	1.5/16-12	1.7/16-12	42.812	30.6	17.5	38.1	41	210

L-L

NPTF MALE X NPTF MALE

NPTF MALE X NPTF MALE STRAIGHT

- SAE J514

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
L-L-0202	1/8-27	1/8-27	12	27	345
L-L-0204	1/8-27	1/4-18	14	32	275
L-L-0404	1/4-18	1/4-18	14	37	275
L-L-0406	1/4-18	3/8-18	19	37	210
L-L-0408	1/4-18	1/2-14	22	43	210
L-L-0606	3/8-18	3/8-18	19	37	210
L-L-0608	3/8-18	1/2-14	22	43	210
L-L-0612	3/8-18	3/4-14	45	16	170
L-L-0808	1/2-14	1/2-14	22	48	210
L-L-0812	1/2-14	3/4-14	27	50	170
L-L-1212	3/4-14	3/4-14	27	50	170
L-L-1216	3/4-14	1-11.1/2	36	54	140
L-L-1616	1-11.1/2	1-11.1/2	36	59	140
L-L-1620	1-11.1/2	1.1/4-11.1/2	46	62	80
L-L-2020	1.1/4-11.1/2	1.1/4-11.1/2	46	63	80
L-L-2024	1.1/4-11.1/2	1.1/2-11.1/2	50	66	70
L-L-2424	1.1/2-11.1/2	1.1/2-11.1/2	66.3	27.5	70
L-L-3232	2-11.1/2	2-11.1/2	65	72	70

L-R

NPTF MALE X ORFS MALE

NPTF MALE X ORFS MALE

Part Number	NPTF Male Thread	ORFS Male Thread	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
L-R-0209	1/8-27	9/16-18	27.2	10.5	10	15.9	345
L-R-0409	1/4-18	9/16-18	30	15	10	15.9	275
L-R-0411	1/4-18	11/16-16	34	15	11.2	19.1	275
L-R-0609	3/8-18	9/16-18	34	16	11.2	19.1	210
L-R-0611	3/8-18	11/16-16	34	16	11.2	19.1	210
L-R-0813	1/2-14	13/16-16	41.7	19.5	12.8	22.2	210
L-R-0816	1/2-14	1-14	46.3	19.5	15.5	27	210
L-R-1219	3/4-14	1.3/16-12	49	19.5	17	31.8	170
L-R-1623	1-11.1/2	1.7/16-12	55.6	25.5	17.5	38.1	140

L-AA

NPTF MALE X SAE MALE

NPTF MALE X SAE 45° FLARE MALE STRAIGHT

- SAE J513

Part Number	NPTF Male Thread	SAE Male Thread	A (mm)	B (mm)	C (mm)	H (mm)
L-AA-0410	1/4-18	5/8-16	36.7	15	15.7	17
L-AA-0610	3/8-18	5/8-16	37.5	16	15.7	19
L-AA-1217	3/4-14	1.1/16-14	57	19	25	29

L-AC

NPTF MALE X NPTF FEMALE

NPTF MALE X NPTF FIXED FEMALE STRAIGHT

- SAE J514

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
L-AC-0202	1/8-27	1/8-27	16	16	345
L-AC-0204	1/8-27	1/4-18	31.5	10.5	275
L-AC-0402	1/4-18	1/8-27	14	22	275
L-AC-0404	1/4-18	1/4-18	36.6	15	275
L-AC-0406	1/4-18	3/8-18	36.6	15	210
L-AC-0602	3/8-18	1/8-27	19	22	210
L-AC-0604	3/8-18	1/4-18	19	22	210
L-AC-0606	3/8-18	3/8-18	22	36	210
L-AC-0608	3/8-18	1/2-14	42.7	16	210
L-AC-0802	1/2-14	1/8-27	22	30	210
L-AC-0804	1/2-14	1/4-18	22	30	210
L-AC-0806	1/2-14	3/8-18	22	30	210
L-AC-0808	1/2-14	1/2-14	29	47	210
L-AC-0812	1/2-14	3/4-14	49	19.5	170
L-AC-1204	3/4-14	1/4-18	27	30	170
L-AC-1206	3/4-14	3/8-18	27	30	170
L-AC-1208	3/4-14	1/2-14	27	30	170
L-AC-1212	3/4-14	3/4-14	55.4	19.5	170
L-AC-1606	1-11.1/2	3/8-18	36	35	140
L-AC-1608	1-11.1/2	1/2-14	36	35	140
L-AC-1612	1-11.1/2	3/4-14	36	35	140
L-AC-1616	1-11.1/2	1-11.1/2	62.5	25.5	140
L-AC-2012	1.1/4-11.1/2	3/4-14	46	37	80
L-AC-2016	1.1/4-11.1/2	1-11.1/2	46	37	80
L-AC-2412	1.1/2-11.1/2	3/4-14	39.9	27.5	70
L-AC-2416	1.1/2-11.1/2	1-11.1/2	50	40	70
L-AC-2420	1.1/2-11.1/2	1.1/4-11.1/2	50	40	70
L-AC-3216	2-11.1/2	1-11.1/2	44.5	27.5	70
L-AC-3220	2-11.1/2	1.1/4-11.1/2	44.5	27.5	70
L-AC-3224	2-11.1/2	1.1/2-11.1/2	65	45	70

L-AD

NPT MALE X NPSM FEMALE

NPT MALE X NPSM FEMALE SWIVEL NUT

Part Number	NPTF Male Thread	NPTF Female Thread	O/A (mm)	Hex A/F - H (mm)	Hex A/F - H (mm)	PN (bar)
L-AD-0202	1/8-27	1/8-27	26.4	14.3	14.3	345
L-AD-0404	1/4-18	1/4-18	36	17.5	17.5	275
L-AD-0606	3/8-18	3/8-18	40.9	22.3	22.3	210
L-AD-0808	1/2-14	1/2-14	48	25.4	25.4	210
L-AD-1212	3/4-14	3/4-14	52.8	31.8	31.8	155
L-AD-1616	1-11.1/2	1-11.1/2	59.7	38.1	38.1	138

N-Q

UNO REDUCING BUSH

UNO MALE X UNO FIXED FEMALE BUSH

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	PN (bar)
N-Q-0707	7/16-20	7/16-20	27.4	18.3	17.5	315
N-Q-0709	7/16-20	9/16-18	30	20.9	19.1	315
N-Q-0907	9/16-18	7/16-20	26.7	16.8	17.5	315
N-Q-0909	9/16-18	9/16-18	29.5	19.6	20.6	315
N-Q-0912	9/16-18	3/4-16	32.5	22.6	25.4	315
N-Q-1209	3/4-16	9/16-18	30.2	19.1	22.2	315
N-Q-1212	3/4-16	3/4-16	35.6	24.5	25.4	315
N-Q-1214	3/4-16	7/8-14	38.1	27	28.6	250
N-Q-1217	3/4-16	1.1/16-12	43.2	32.1	34.9	250
N-Q-1412	7/8-14	3/4-16	34.5	21.8	25.4	250
N-Q-1417	7/8-14	1.1/16-12	43.4	30.7	34.9	250
N-Q-1712	1.1/16-12	3/4-16	27.7	12.6	31.8	250
N-Q-1714	1.1/16-12	7/8-14	39.6	24.5	31.8	250
N-Q-1721	1.1/16-12	1.5/16-12	46.5	31.4	41.3	200
N-Q-2117	1.5/16-12	1.1/16-12	43.7	28.6	38.1	200
N-Q-2126	1.5/16-12	1.5/8-12	54.1	39	54	160
N-Q-2621	1.5/8-12	1.5/16-12	25.4	10.3	47.6	160

N-R

UNO MALE X ORFS MALE

UNO FIXED STUD X ORFS MALE STRAIGHT

- SAE J1453

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
N-R-0709	7/16-20	9/16-18	17	29	18	315
N-R-0711	7/16-20	11/16-16	19	34	9	315
N-R-0909	9/16-18	9/16-18	19	31	19	315
N-R-0911	9/16-18	11/16-16	19	32	20	315
N-R-0913	9/16-18	13/16-16	22	38	26	315
N-R-1209	3/4-16	9/16-18	22	29	11	315
N-R-1211	3/4-16	11/16-16	24	35	21	315
N-R-1213	3/4-16	13/16-16	24	37	23	315
N-R-1216	3/4-16	1-14	27	45	31	315
N-R-1413	7/8-14	13/16-16	27	41	25	250
N-R-1416	7/8-14	1-14	27	43	27	250
N-R-1419	7/8-14	1.3/16-12	32	43	30	250
N-R-1716	1.1/16-12	1-14	32	47	29	250
N-R-1719	1.1/16-12	1.3/16-12	32	49	30	250
N-R-1723	1.1/16-12	1.7/16-12	38	49	32	250
N-R-2119	1.5/16-12	1.3/16-12	38	50	32	200
N-R-2123	1.5/16-12	1.7/16-12	41	50	32	200
N-R-2623	1.5/8-12	1.7/16-12	48	53	32	160
N-R-2627	1.5/8-12	1.11/16-12	50	53	34	160

N-ML

UNO MALE X METRIC LIGHT MALE

UNO FIXED STUD X METRIC 24° CONE LIGHT MALE

STRAIGHT

Part Number	UNO Male Thread - W	Metric Male Thread	Suits Tube Diameter (mm)	D1 (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
N-ML-0716	7/16-20	M16-1.5	10	13.8	17.9	10.9	9.1	17	315
N-ML-0914	9/16-18	M14-1.5	8						315
N-ML-0916	9/16-18	M16-1.5	10						315
N-ML-0918	9/16-18	M18-1.5	12	18.8	18	11	10	19	315
N-ML-1218	3/4-16	M18-1.5	12	21.8	19.9	12.9	11.1	22	315
N-ML-1222	3/4-16	M22-1.5	15	21.8	20.9	13.9	11.1	24	315
N-ML-1226	3/4-16	M26-1.5	18	21.8	21.9	14.4	11.1	27	315
N-ML-1418	7/8-14	M18-1.5	12	26.8	21.3	14.3	12.7	27	315
N-ML-1422	7/8-14	M22-1.5	15						315
N-ML-1726	1.1/16-12	M26-1.5	18						315
N-ML-2136	1.5/16-12	M36-2	28	40.8	24.9	17.4	15.1	41	160

N-MS

UNO MALE X METRIC HEAVY MALE

UNO FIXED STUD X METRIC 24° CONE HEAVY
MALE STRAIGHT

Part Number	UNO Male Thread - W	Metric Male Thread	Suits Tube Diameter (mm)	D1 (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
N-MS-0714	7/16-20	M14-1.5	6						630
N-MS-0716	7/16-20	M16-1.5	8	13.8	21.9	14.9	9.1	17	630
N-MS-0914	9/16-18	M14-1.5	6						630
N-MS-0916	9/16-18	M16-1.5	8						630
N-MS-0918	9/16-18	M18-1.5	10	18.8	22	14.5	10	19	630
N-MS-1220	3/4-16	M20-1.5	12	21.8	24.9	17.4	11.1	22	630
N-MS-1222	3/4-16	M22-1.5	14	21.8	23.9	15.9	11.1	24	630
N-MS-1224	3/4-16	M24-1.5	16	21.8	23.9	15.4	11.1	27	400
N-MS-1424	7/8-14	M24-1.5	16	26.8	27.3	18.8	12.7	27	400
N-MS-1430	7/8-14	M30-2	20	26.8	31.3	20.8	12.7	32	400
N-MS-1730	1.1/16-12	M30-2	20	31.8	30.9	20.4	15.1	32	400
N-MS-2136	1.5/16-12	M36-2	25	40.8	34.9	22.9	15.1	41	400
N-MS-2642	1.5/8-12	M42-2	30	49.8	36.9	23.4	15.1	50	400

Q-Q

UNO SOCKET

UNO FEMALE X UNO FEMALE FIXED SOCKET

Part Number	UNF Female Thread (T1)	UNF Female Thread (T2)	Overall Length mm - L1 (mm)	Hex A/F - CH1 (mm)	PN (bar)
Q-Q-0909	9/16-18	9/16-18	25.4	22.2	315

R-R

ORFS MALE X ORFS MALE

ORFS MALE X ORFS MALE STRAIGHT

- ISO 8434-3

Part Number	ORFS Male Thread (A)	ORFS Male Thread (B)	Overall Length mm - L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
R-R-0909	9/16-18	9/16-18	28	10	10	17	630
R-R-0911	9/16-18	11/16-16	29.7	10	11.2	19.1	630
R-R-1111	11/16-16	11/16-16	31	11	11	19	630
R-R-1113	11/16-16	13/16-16	33.8	11.2	12.8	22.2	630
R-R-1313	13/16-16	13/16-16	36	13	13	22	630
R-R-1316	13/16-16	1-14	39.9	12.8	15.5	27	400
R-R-1616	1-14	1-14	43	16	16	27	400
R-R-1619	1-14	1.3/16-12	46	17	16	32	400
R-R-1919	1.3/16-12	1.3/16-12	47	17	17	32	400
R-R-1923	1.3/16-12	1.7/16-12	48.8	17	17.5	38.1	400
R-R-2323	1.7/16-12	1.7/16-12	50	18	18	41	400
R-R-2727	1.11/16-12	1.11/16-12	52	18	18	46	250
R-R-3232	2-12	2-12	53.1	17.5	17.5	54	250

R-RK

ORFS MALE X ORFS BULKHEAD

ORFS MALE X ORFS BULKHEAD STRAIGHT

- ISO 8434-3

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
R-RK-0909	9/16-18	9/16-18	32	10	22	22	630
R-RK-1111	11/16-16	11/16-16	34	11	27	27	630
R-RK-1313	13/16-16	13/16-16	37	13	30	30	630
R-RK-1616	1-14	1-14	41	16	36	36	400
R-RK-1919	1.3/16-12	1.3/16-12	42	17	41	41	400
R-RK-2323	1.7/16-12	1.7/16-12	42	18	46	46	400
R-RK-2727	1.11/16-12	1.11/16-12	42	18	50	50	250
R-RK-3232	2-12	2-12	42	18	60	60	250

AC-AC

NPTF FEMALE X NPTF FEMALE

NPTF FIXED FEMALE X NPTF FIXED FEMALE

STRAIGHT

- SAE J514

Part Number	T1	T2	H1 (mm)	L1 (mm)	PN (bar)
AC-AC-0202	1/8-27	1/8-27	14	19	345
AC-AC-0404	1/4-18	1/4-18	19	29	275
AC-AC-0606	3/8-18	3/8-18	22	29	210
AC-AC-0808	1/2-14	1/2-14	27	38	210
AC-AC-1212	3/4-14	3/4-14	36	39	170
AC-AC-1616	1-11.1/2	1-11.1/2	41	48	140
AC-AC-2020	1.1/4-11.1/2	1.1/4-11.1/2	50	49	80
AC-AC-2424	1.1/2-11.1/2	1.1/2-11.1/2	60	49	70
AC-AC-3232	2-11	2-11	73	50	70

AC-GK

NPT FEMALE X JIC BULKHEAD

NPT FEMALE SOCKET X MALE JIC BULKHEAD WITH

37° CONE

Part Number	NPTF Female Thread (A)	UNF Male Thread (B)	Overall Length mm - L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
AC-GK-0207	1/8-27	7/16-20	46.7	30.5	17.5	17.5	345
AC-GK-0407	1/4-18	7/16-20	53.1	30.5	19.1	17.5	275
AC-GK-0409	1/4-18	9/16-18	53.8	32.5	20.6	20.6	275

BX-MLK

BSP MALE X MET LIGHT BULKHEAD

BSP STUD CAPTIVE SEAL X METRIC 24° CONE

LIGHT BULKHEAD STRAIGHT

Part Number	BSPP Male Thread - G	Metric Male Thread	Suits Tube OD (mm)	L1 (mm)	L2 (mm)	L3 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
BX-MLK-0618	3/8	M18 - 1.5	12	44.5	37.5	12	24	24	315
BX-MLK-0818	1/2	M18 - 1.5	12	43	36	14	27	23.8	315
BX-MLK-0822	1/2	M22 - 1.5	15	48	41	14	27	30	315
BX-MLK-0826	1/2	M26 - 1.5	18	52	44.5	14	32	36	315
BX-MLK-1230	3/4	M30-2	22	55	47.5	16	36	41	160

BX-ML

BSP STUD X MET LIGHT MALE

BSP STUD CAPTIVE SEAL X METRIC 24° CONE

LIGHT MALE STRAIGHT

- ISO 8434-1

Part Number	BSP Male Thread - G	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
BX-ML-0212	1/8-28	M12-1.5	6	15.5	8.5	8	14	500
BX-ML-0214	1/8-28	M14-1.5	8	16.5	9.5	8	14	500
BX-ML-0216	1/8-28	M16-1.5	10	17.5	10.5	8	17	500
BX-ML-0412	1/4-19	M12-1.5	6	18	11	12	19	500
BX-ML-0414	1/4-19	M14-1.5	8	17	10	12	19	500
BX-ML-0416	1/4-19	M16-1.5	10	18	11	12	19	500
BX-ML-0418	1/4-19	M18-1.5	12	19	12	12	19	400
BX-ML-0612	3/8-19	M12-1.5	6	18.5	11.5	12	22	400
BX-ML-0614	3/8-19	M14-1.5	8	18.5	11.5	12	22	400
BX-ML-0616	3/8-19	M16-1.5	10	22.5	15	12	22	400
BX-ML-0618	3/8-19	M18-1.5	12	24.5	17	12	22	400
BX-ML-0622	3/8-19	M22-1.5	15	20.5	13.5	12	24	400
BX-ML-0814	1/2-14	M14-1.5	8	19	12	14	27	400
BX-ML-0816	1/2-14	M16-1.5	10	20	13	14	27	400
BX-ML-0818	1/2-14	M18-1.5	12	20	13	14	27	400
BX-ML-0822	1/2-14	M22-1.5	15	21	14	14	27	400
BX-ML-0826	1/2-14	M26-1.5	18	22	14.5	14	27	400
BX-ML-0830	1/2-14	M30-2	22	24	16.5	14	32	250
BX-ML-1222	3/4-14	M22-1.5	15	22	15	16	32	250
BX-ML-1226	3/4-14	M26-1.5	18	22	14.5	16	32	250
BX-ML-1230	3/4-14	M30-2	22	24	16.5	16	32	250
BX-ML-1236	3/4-14	M36-2	28	25	17.5	16	41	250
BX-ML-1630	1-11	M30-2	22	25	17.5	18	41	250
BX-ML-1636	1-11	M36-2	28	25	17.5	18	41	250
BX-ML-1645	1-11	M45-2	35	28	17.5	18	46	250
BX-ML-2045	1.1/4-11	M45-2	35	28	17.5	20	50	250
BX-ML-2052	1.1/4-11	M52-2	42	30	19	20	55	250
BX-ML-2452	1.1/2-11	M52-2	42	30	19	22	55	250

BX-MS

BSP STUD X MET HEAVY MALE

BSP STUD CAPTIVE SEAL X METRIC 24° CONE

HEAVY MALE STRAIGHT

- ISO 8434-1

Part Number	BSPP Male Thread - G	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (Bar)
BX-MS-0414	1/4-19	M14-1.5	6	20	13	12	19	800
BX-MS-0416	1/4-19	M16-1.5	8	17	10	12	19	800
BX-MS-0418	1/4-19	M18-1.5	10	18	11	12	19	800
BX-MS-0420	1/4-19	M20-1.5	12	19	12	12	22	800
BX-MS-0616	3/8-19	M16-1.5	8	22.5	15.5	12	22	800
BX-MS-0618	3/8-19	M18-1.5	10	22.5	15	12	22	800
BX-MS-0620	3/8-19	M20-1.5	12	24.5	17	12	22	800
BX-MS-0622	3/8-19	M22-1.5	14	26.5	18.5	12	24	630
BX-MS-0624	3/8-19	M24-1.5	16	26.5	18	12	27	630
BX-MS-0818	1/2-14	M18-1.5	10	20	13	14	27	630
BX-MS-0820	1/2-14	M20-1.5	12	20	13	14	27	630
BX-MS-0822	1/2-14	M22-1.5	14	27	19	14	27	630
BX-MS-0824	1/2-14	M24-1.5	16	27	18.5	14	27	630
BX-MS-0830	1/2-14	M30-2	20	31	20.5	14	32	420
BX-MS-1224	3/4-14	M24-1.5	16	29	20.5	16	32	420
BX-MS-1230	3/4-14	M30-2	20	31	20.5	16	32	420
BX-MS-1236	3/4-14	M36-2	25	35	23	16	41	420
BX-MS-1630	1-11	M30-2	20	33	22.5	18	41	420
BX-MS-1636	1-11	M36-2	25	35	23	18	41	420
BX-MS-1642	1-11	M42-2	30	37	23.5	18	46	420
BX-MS-2042	1.1/4-11	M42-2	30	37	23.5	20	50	420
BX-MS-2052	1.1/4-11	M52-2	38	42	26	20	55	420
BX-MS-2452	1.1/2-11	M52-2	38	42	26	22	55	420

BX-UL

BSP STUD X MET LIGHT FEMALE

BSP STUD CAPTIVE SEAL X METRIC 24° CONE

LIGHT FEMALE SWIVEL NUT STRAIGHT

Part Number	BSP Male Thread - G	Metric Female Thread - m	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (Bar)
BX-UL-0212	1/8-28	M12-1.5	6	25	8	14	14	500
BX-UL-0412	1/4-19	M12-1.5	6	27	12	19	14	500
BX-UL-0414	1/4-19	M14-1.5	8	30	12	19	17	500
BX-UL-0416	1/4-19	M16-1.5	10	28	12	19	19	500
BX-UL-0418	1/4-19	M18-1.5	12	27.5	12	19	22	400
BX-UL-0616	3/8-19	M16-1.5	10	29	12	22	19	400
BX-UL-0618	3/8-19	M18-1.5	12	34	12	22	22	400
BX-UL-0622	3/8-19	M22-1.5	15	31.5	12	22	27	400
BX-UL-0818	1/2-14	M18-1.5	12	30	14	27	22	400
BX-UL-0822	1/2-14	M22-1.5	15	32	14	27	27	400
BX-UL-0826	1/2-14	M26-1.5	18	32	14	27	32	400
BX-UL-1222	3/4-14	M22-1.5	15	30.5	16	32	27	250
BX-UL-1226	3/4-14	M26-1.5	18	31.5	16	32	32	250
BX-UL-1230	3/4-14	M30-2	22	33	16	32	36	250
BX-UL-1236	3/4-14	M36-2	28	33.5	16	32	41	250
BX-UL-1630	1-11	M30-2	22	34	18	41	36	250
BX-UL-1636	1-11	M36-2	28	35	18	41	41	250
BX-UL-2445	1.1/2-11	M45-2	35	46.5	22	55	50	250
BX-UL-2452	1.1/2-11	M52-2	42	46.5	22	55	60	250

BX-US

BSP STUD X MET HEAVY FEMALE

BSP STUD CAPTIVE SEAL X METRIC 24° CONE

HEAVY FEMALE SWIVEL NUT STRAIGHT

Part Number	BSP Male Thread - G	Metric Female Thread - m	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (Bar)
BX-US-0414	1/4-19	M14-1.5	6	27	12	19	17	800
BX-US-0416	1/4-19	M16-1.5	8	30	12	19	19	800
BX-US-0418	1/4-19	M18-1.5	10	30.5	12	19	22	800
BX-US-0420	1/4-19	M20-1.5	12	30.5	12	19	24	630
BX-US-0618	3/8-19	M18-1.5	10	32	12	22	22	630
BX-US-0620	3/8-19	M20-1.5	12	34	12	22	24	630
BX-US-0622	3/8-19	M22-1.5	14	37	12	22	27	630
BX-US-0624	3/8-19	M24-1.5	16	39.5	12	22	30	630
BX-US-0818	1/2-14	M18-1.5	10	32	14	27	22	630
BX-US-0820	1/2-14	M20-1.5	12					630
BX-US-0822	1/2-14	M22-1.5	14	37	14	27	27	630
BX-US-0824	1/2-14	M24-1.5	16	37	14	27	30	630
BX-US-1230	3/4-14	M30-2	20	43	16	32	36	250
BX-US-1236	3/4-14	M36-2	25	45.5	16	32	46	420
BX-US-1636	1-11	M36-2	25	48	18	41	46	420
BX-US-1642	1-11	M42-1.5	30	50.5	18	41	50	420
BX-US-2042	1.1/4-11	M42-1.5	30	51	20	50	50	420
BX-US-2052	1.1/4-11	M52-2	38	53	20	50	60	420
BX-US-2452	1.1/2-11	M52-2	38	60	22	55	60	420

ML-ML

MET LIGHT MALE X MET LIGHT MALE

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT MALE STRAIGHT

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	CH1 (mm)	PN (bar)
ML-ML-1212	M12-1.5	6	24	10	12	500
ML-ML-1414	M14-1.5	8	25	11	14	500
ML-ML-1616	M16-1.5	10	27	13	17	500
ML-ML-1818	M18-1.5	12	28	14	19	400
ML-ML-2222	M22-1.5	15	30	16	24	400
ML-ML-2626	M26-1.5	18	31	16	27	400
ML-ML-3030	M30-2	22	35	20	32	250
ML-ML-3636	M36-2	28	36	21	41	250
ML-ML-4545	M45-2	35	41	20	46	250
ML-ML-5252	M52-2	42	43	21	55	250

ML-MLK

MET LIGHT MALE X MET LIGHT B/HEAD

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT BULKHEAD STRAIGHT

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	L4 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (Bar)
ML-MLK-1212	M12-1.5	6	14	34	7	27	17	17	500
ML-MLK-1414	M14-1.5	8	15	34	8	27	19	19	500
ML-MLK-1616	M16-1.5	10	17	35	10	28	22	22	500
ML-MLK-1818	M18-1.5	12	17	36	10	29	24	24	500
ML-MLK-2222	M22-1.5	15	19	38	12	31	27	30	400
ML-MLK-2626	M26-1.5	18	21	40	14	33	32	36	400
ML-MLK-3030	M30-2	22	24	42	17	35	36	41	250
ML-MLK-3636	M36-2	28	26	43	19	36	41	46	250
ML-MLK-4545	M45-2	35	29	47	18.5	36.5	50	55	250
ML-MLK-5252	M52-2	38	30	47	19	36	60	65	250

ML-UL

MET LIGHT MALE X MET LIGHT F/M

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT FEMALE SWIVEL NUT STRAIGHT

Part Number	Metric Male Thread - m D2	Metric Female Thread - m D1	D2 - mm	D1 (mm)	L1-mm	L2 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (Bar)
ML-UL-1214	M12-1.5	M14-1.5	6	8	31	24	12	17	500
ML-UL-1216	M12-1.5	M16-1.5	6	10	32.5	25.5	14	19	500
ML-UL-1414	M14-1.5	M14-1.5	8	8					500
ML-UL-1416	M14-1.5	M16-1.5	8	10	32.5	25.5	14	19	500
ML-UL-1418	M14-1.5	M18-1.5	8	12	32.5	25.5	17	22	400
ML-UL-1616	M16-1.5	M16-1.5	10	10					400
ML-UL-1618	M16-1.5	M18-1.5	10	12	33.5	26.5	17	22	400
ML-UL-1622	M16-1.5	M22-1.5	10	15	36.5	29.5	19	27	400
ML-UL-1626	M16-1.5	M26-1.5	10	18					400
ML-UL-1818	M18-1.5	M18-1.5	12	12					400
ML-UL-1822	M18-1.5	M22-1.5	12	15	36.5	29.5	19	27	400
ML-UL-1826	M18-1.5	M26-1.5	12	18	37.5	30.5	24	32	250
ML-UL-2222	M22-1.5	M22-1.5	15	15					250
ML-UL-2226	M22-1.5	M26-1.5	15	18	38.5	31.5	24	32	250
ML-UL-2230	M22-1.5	M30-2	15	22	39.5	32.5	27	36	250
ML-UL-2236	M22-1.5	M36-2	15	28					250
ML-UL-2626	M26-1.5	M26-1.5	18	18					250
ML-UL-2630	M26-1.5	M30-2	18	22	40.5	33	27	36	250
ML-UL-2636	M26-1.5	M36-2	18	28					250
ML-UL-3030	M30-2	M30-2	22	22					250
ML-UL-3036	M30-2	M36-2	22	28	43.5	36	32	41	250
ML-UL-3045	M30-2	M45-2	22	35					250
ML-UL-3052	M30-2	M52-2	22	42					250
ML-UL-3636	M36-2	M36-2	28	28					250
ML-UL-3645	M36-2	M45-2	28	35					250
ML-UL-3652	M36-2	M52-2	28	42					250
ML-UL-4545	M45-2	M45-2	35	35					250
ML-UL-4552	M45-2	M52-2	35	42					250
ML-UL-5252	M52-2	M52-2	42	42					250

MS-MS

MET HEAVY MALE X MET HEAVY MALE

METRIC 24° CONE HEAVY MALE X METRIC 24°

CONE HEAVY MALE STRAIGHT

- ISO 8434-1

Part Number	Metric Male Thread	Metric Male Thread	suits tube (D1)	Suits Tube-D2	L1 (mm)	L2 (mm) - mm	CH1 (mm)	PN (bar)
MS-MS-1414	M14-1.5	M14-1.5	6	6	30	16	14	800
MS-MS-1416	M16-1.5	M14-1.5	8	6	32	18	17	800
MS-MS-1420	M20-1.5	M14-1.5	12	6	34	19.5	22	630
MS-MS-1616	M16-1.5	M16-1.5	8	8	32	18	17	800
MS-MS-1618	M18-1.5	M16-1.5	10	8	32	18	19	800
MS-MS-1818	M18-1.5	M18-1.5	10	10	32	17	19	800
MS-MS-1820	M20-1.5	M18-1.5	12	10	34	19	22	630
MS-MS-2020	M20-1.5	M20-1.5	12	12	34	19	22	630
MS-MS-2022	M22-1.5	M20-1.5	14	12	36	21	24	630
MS-MS-2024	M24-1.5	M20-1.5	16	12	36	20	24	630
MS-MS-2030	M30-2	M20-1.5	20	12	40	22	32	420
MS-MS-2222	M22-1.5	M22-1.5	14	14	38	22	24	630
MS-MS-2224	M24-1.5	M22-1.5	16	14	38	22	27	630
MS-MS-2424	M24-1.5	M24-1.5	16	16	38	21	27	630
MS-MS-2430	M30-2	M24-1.5	20	16	42	23	32	420
MS-MS-2436	M36-2	M24-1.5	25	16	46	25.5	41	420
MS-MS-3030	M30-2	M30-2	20	20	44	23	32	420
MS-MS-3036	M36-2	M30-2	25	20	48	26	41	420
MS-MS-3042	M30-2	M42-2	30	20	50	26	46	420
MS-MS-3636	M36-2	M36-2	25	25	50	26	41	420
MS-MS-3642	M42-2	M36-2	30	25	52	27	46	420
MS-MS-4242	M42-2	M42-2	30	30	54	27	46	420
MS-MS-4252	M52-2	M42-2	38	30	59	30	55	420
MS-MS-5252	M52-2	M52-2	38	38	61	29	55	420

MS-MSK

MET HEAVY MALE X MET HEAVY B/HEAD
METRIC 24° CONE HEAVY MALE X METRIC 24°
CONE HEAVY BULKHEAD STRAIGHT

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	L4 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (bar)
MS-MSK-1414	M14-1.5	6	19	36	12	29	19	19	800
MS-MSK-1616	M16-1.5	8	20	36	13	29	22	22	800
MS-MSK-1818	M18-1.5	10	22	37	14.5	29.5	24	24	800
MS-MSK-2020	M20-1.5	12	22	38	15	31	27	27	630
MS-MSK-2222	M22-1.5	14	25	40	17	32	30	30	630
MS-MSK-2424	M24-1.5	16	25	40	17	32	32	32	630
MS-MSK-3030	M30-2	20	28	44	18	34	41	41	420
MS-MSK-3636	M36-2	25	32	47	20	35	46	46	420
MS-MSK-4242	M42-2	30	35	51	22	38	50	50	420
MS-MSK-5252	M52-2	38	38	53	22	37	65	65	420

MS-US

MET HEAVY MALE X MET HEAVY F/M

METRIC 24° CONE HEAVY MALE X METRIC 24°

CONE HEAVY FEMALE SWIVEL NUT STRAIGHT

Part Number	Metric Male Thread	Metric Female Thread - m D1	D2 - mm	D1 (mm)	L1-mm	L2 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (bar)
MS-US-1414	M14-1.5	M14-1.5	6	6					800
MS-US-1416	M14-1.5	M16-1.5	6	8	36	29	14	19	800
MS-US-1418	M14-1.5	M18-1.5	6	10	39	32	17	22	800
MS-US-1616	M16-1.5	M16-1.5	8	8					800
MS-US-1618	M16-1.5	M18-1.5	8	10	38.5	31.5	17	22	800
MS-US-1620	M16-1.5	M20-1.5	8	12	38.5	31.5	17	24	630
MS-US-1818	M18-1.5	M18-1.5	10	10					630
MS-US-1820	M18-1.5	M20-1.5	10	10	38.5	31	19	24	630
MS-US-1822	M18-1.5	M22-1.5	10	12	41	33.5	19	27	630
MS-US-1824	M18-1.5	M24-1.5	10	16					630
MS-US-2020	M20-1.5	M20-1.5	12	12					630
MS-US-2022	M20-1.5	M22-1.5	12	14	43	35.5	22	27	630
MS-US-2024	M20-1.5	M24-1.5	12	16	45.5	38	22	30	630
MS-US-2036	M20-1.5	M36-2	12	25					420
MS-US-2222	M22-1.5	M22-1.5	14	14					420
MS-US-2224	M22-1.5	M24-1.5	14	16	47.5	39.5	24	30	420
MS-US-2230	M22-1.5	M30-2	14	20	50	42	27	36	420
MS-US-2424	M24-1.5	M24-1.5	16	16					420
MS-US-2430	M24-1.5	M30-2	16	20	50	41.5	27	36	420
MS-US-2436	M24-1.5	M36-2	16	25	54.5	46	32	46	420

MS-US-2442	M24-1.5	M42-2	16	30	59	50.5	41	50	420
MS-US-3030	M30-2	M30-2	20	20					420
MS-US-3036	M30-2	M36-2	20	25	56.5	46	32	46	420
MS-US-3042	M30-2	M42-2	20	30	61	50.5	41	50	420
MS-US-3636	M36-2	M36-2	25	25					420
MS-US-3642	M36-2	M42-2	25	30	63	51	41	50	420
MS-US-3652	M36-2	M52-2	25	38					420
MS-US-4242	M42-2	M42-2	30	30					420
MS-US-5252	M52-2	M52-2	38	38					420

MY-MY

JISM MALE X JISM MALE

JIS METRIC MALE X JIS METRIC MALE 30° FLARE
(KOMATSU STYLE)

Part Number	Metric Male Thread (A)	Metric Male Thread (B)	Overall Length mm - L1 (mm)	Thread Length - mm (L2)	Thread Length - L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
MY-MY-1414	M14-1.5	M14-1.5	40	17	17	17	350
MY-MY-1616	M16-1.5	M16-1.5	42	18	18	17	350
MY-MY-1818	M18-1.5	M18-1.5	42	18	18	19	350
MY-MY-2222	M22-1.5	M22-1.5	48	20	20	24	350
MY-MY-2424	M24-1.5	M24-1.5	53	21.5	21.5	27	350
MY-MY-3030	M30-1.5	M30-1.5	63	26	26	32	280
MY-MY-3333	M33-1.5	M33-1.5	71	30	30	36	210

TW-A

TUBEWELD X BSPT MALE

IMPERIAL TUBE WELD SOCKET X BSPT MALE

Part Number	suits tube	BSPT Male Thread (A)	Weld Socket	L2 - mm	L1 - mm	Hex A/F (CH1)
TW-A-0404	1/4	1/4-19		20	14	16
TW-A-0406	1/4	3/8-19		23	15	19
TW-A-0604	3/8	1/4-19		20	14	16
TW-A-0606	3/8	3/8-19		23	15	19
TW-A-0806	1/2	3/8-19		23	15	19
TW-A-0808	1/2	1/2-14		27	19	22
TW-A-1212	3/4	3/4-14		32	20	29
TW-A-1616	1	1-11		36	24	35
TW-A-2020	1.1/4	1.1/4-11		41	25	45

TW-B

TUBEWELD X BSP MALE

IMPERIAL TUBE WELD SOCKET X BSP 60° CONE
MALE

Part Number	suits tube	BSPP Male Thread (A)	Weld Socket	L1 - mm	L2 - mm	Hex A/F (CH1)
TW-B-0606	3/8	3/8-19		20	12	22
TW-B-0806	1/2	3/8-19		20	12	22
TW-B-0808	1/2	1/2-14		24	14	27
TW-B-1208	3/4	1/2-14		24	14	27
TW-B-1212	3/4	3/4-14		28	16	32
TW-B-1612	1	3/4-14		28	16	32
TW-B-1616	1	1-11		33	19	41
TW-B-2016	1.1/4	1-11		33	19	41
TW-B-2020	1.1/4	1.1/4-11		36	20	50
TW-B-2420	1.1/2	1.1/4-11		36	20	50
TW-B-2424	1.1/2	1.1/2-11		38	22	55

TW-C

TUBEWELD X BSP FEMALE

IMPERIAL TUBE WELD SOCKET X BSP 60° CONE

FEMALE SWIVEL NUT

Part Number	suits tube	BSPP Female Thread (A)	Weld Socket	L1 - mm	L2 - mm	Diameter - mm	Hex A/F (CH1)
TW-C-0404	1/4	1/4-19		18	11	13	19
TW-C-0606	3/8	3/8-19		20	13	16	22
TW-C-0808	1/2	1/2-14		24	15	22	27
TW-C-1212	3/4	3/4-14		27	17	25	32
TW-C-1612	1	3/4-14		29	17	30	32
TW-C-1616	1	1-11		30	18	35	38
TW-C-2020	1.1/4	1.1/4-11		35	23	41	51
TW-C-2424	1.1/2	1.1/2-11		33	21	51	55
TW-C-3232	2	2-11		37	22	64	70

TW-G

TUBEWELD X JIC MALE

IMPERIAL TUBE WELD SOCKET X JIC MALE

Part Number	suits tube	JIC Male Thread (A)	Weld Socket	L1 - mm	L2 - mm	Hex A/F (CH1)
TW-G-0407	1/4	7/16-20		21	15	16
TW-G-0409	1/4	9/16-18		21	15	16
TW-G-0609	3/8	9/16-18		22	14	16
TW-G-0612	3/8	3/4-16		22.1	14.1	16
TW-G-0809	1/2	9/16-18		23	15	16
TW-G-0812	1/2	3/4-16		25	17	22
TW-G-0814	1/2	7/8-14		30	20	25
TW-G-1012	5/8	3/4-16		27	17	25
TW-G-1014	5/8	7/8-14		30	20	25
TW-G-1214	3/4	7/8-14		32	20	29
TW-G-1217	3/4	1.1/16-12		34	22	29
TW-G-1617	1	1.1/16-12		36	22	35
TW-G-1621	1	1.5/16-12		37	23	35
TW-G-2021	1.1/4	1.5/16-12		37	23	41
TW-G-2026	1.1/4	1.5/8-12		40	24	44
TW-G-2430	1.1/2	1.7/8-12		44	28	51

UL-UL

MET LIGHT FEMALE X MET LIGHT FEMALE
METRIC 24° CONE LIGHT FEMALE SWIVEL NUT X
METRIC 24° CONE LIGHT FEMALE SWIVEL NUT
STRAIGHT

Part Number	Metric Female Thread - m D2	Metric Female Thread - m D1	Suits Tube size - D2 (mm)	Suits Tube size - D1 (mm)	L1-mm	CH1 (mm)	CH2 (mm)	PN (bar)
UL-UL-1212	M12-1.5	M12-1.5	6	6	40	14	14	500
UL-UL-1214	M12-1.5	M14-1.5	6	8	37	17	14	500
UL-UL-1414	M14-1.5	M14-1.5	8	8	40	17	17	500
UL-UL-1416	M14-1.5	M16-1.5	8	10	37	19	17	500
UL-UL-1616	M16-1.5	M16-1.5	10	10	40	19	19	500
UL-UL-1618	M16-1.5	M18-1.5	10	12	36	22	19	400
UL-UL-1622	M16-1.5	M22-1.5	10	15	40	27	19	400
UL-UL-1818	M18-1.5	M18-1.5	12	12	40	22	22	400
UL-UL-1822	M18-1.5	M22-1.5	12	15	40	27	22	400
UL-UL-1826	M18-1.5	M26-1.5	12	18	40	34	22	400
UL-UL-2222	M22-1.5	M22-1.5	15	15	44	27	27	400
UL-UL-2226	M22-1.5	M26-1.5	15	18	44	32	27	400
UL-UL-2626	M26-1.5	M26-1.5	18	18	43	32	32	400
UL-UL-2630	M26-1.5	M30-2	18	22	46	36	32	250
UL-UL-2636	M26-1.5	M36-2	18	28	47	41	32	250
UL-UL-3030	M30-2	M30-2	22	22	50	36	36	250
UL-UL-3036	M30-2	M36-2	22	28	50	41	36	250
UL-UL-3636	M36-2	M36-2	28	28	51	41	41	250

US-US

MET HEAVY FEMALE X MET HEAVY FEMALE
METRIC 24° CONE HEAVY FEMALE SWIVEL NUT X
METRIC 24° CONE HEAVY FEMALE SWIVEL NUT
STRAIGHT

Part Number	Metric Female Thread - m D2	Metric Female Thread - m D1	Suits Tube size - D2 (mm)	Suits Tube size - D1 (mm)	L1-mm	CH1 (mm)	CH2 (mm)	PN (bar)
US-US-1418	M14-1.5	M18-1.5	6	10	38	22	17	800
US-US-1616	M16-1.5	M16-1.5	8	8	41	19	19	800
US-US-1820	M18-1.5	M20-1.5	10	12	40	24	22	630
US-US-2222	M22-1.5	M22-1.5	14	14	49	27	27	630
US-US-3036	M30-2	M36-2	20	25	60	46	36	420
US-US-5252	M52-2	M52-2	38	38	83	60	60	420

TK

JIC FEMALE X JIC MALE

JIC 37° FLARE FEMALE X JIC 37° FLARE MALE

- SAE J514

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
TK-0707-0.8MM	7/16-20	7/16-20	29.2	14	14.3	350
TK-0709	7/16-20	9/16-18	25.4	14.2	15.9	350
TK-0907	9/16-18	7/16-20	25	14	18	350
TK-0909-0.8MM	9/16-18	9/16-18	30.2	14.2	17.5	350
TK-0912	9/16-18	3/4-16	32.5	16.7	20.6	310
TK-1207	3/4-16	7/16-20	25	14	22	310
TK-1209	3/4-16	9/16-18	25	14	22	310
TK-1214	3/4-16	7/8-14	34	19.3	23.8	240
TK-1217	3/4-16	1.1/16-12	36.6	21.9	28.6	240
TK-1407	7/8-14	7/16-20	26	14	25	240
TK-1409	7/8-14	9/16-18	26	14	25	240
TK-1412	7/8-14	3/4-16	36	17	25	240
TK-1417	7/8-14	1.1/16-12	38.6	21.9	28.6	240
TK-1707	1.1/16-12	7/16-20	28	14	32	240
TK-1709	1.1/16-12	9/16-18	28	14	32	240
TK-1712	1.1/16-12	3/4-16	30	17	32	240
TK-1714	1.1/16-12	7/8-14	42	19	32	240
TK-1721	1.1/16-12	1.5/16-12	46.2	23.1	34.9	210
TK-2112	1.5/16-12	3/4-16	33	17	38	210
TK-2114	1.5/16-12	7/8-14	35	19	38	210
TK-2117	1.5/16-12	1.1/16-12	37	22	38	210
TK-2126	1.5/16-12	1.5/8-12	43.2	24.2	42.9	170
TK-2617	1.5/8-12	1.1/16-12	38	22	51	270
TK-2621	1.5/8-12	1.5/16-12	39	23	51	270
TK-2630	1.5/8-12	1.7/8-12	54.1	27.5	50.8	140
TK-3021	1.7/8-12	1.5/16-12	54.9	23.1	57.2	140
TK-3026	1.7/8-12	1.5/8-12	56.1	24.2	57.2	140
TK-4030	2.1/2-12	1.7/8-12	67.1	27.5	73	105

TR

FEMALE ORFS X ORFS MALE

ORFS FEMALE SWIVEL NUT X MALE ORFS

Part Number	ORFS Female Thread (B)	ORFS Male Thread (A)	Overall Length (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
TR-1109	11/16-16	9/16-18	29.2	10	20.6	630
TR-1309	13/16-16	9/16-18	32.8	10	23.8	630
TR-1311	13/16-16	11/16-16	33.3	11.2	23.8	630
TR-1609	1-14	9/16-18	36.4	10	28.6	400
TR-1611	1-14	11/16-16	37.8	11.2	28.6	400
TR-1613	1-14	13/16-16	38.9	12.8	28.6	400
TR-1909	1.3/16-12	9/16-18	39.3	10	34.6	400
TR-1911	1.3/16-12	11/16-16	39.9	11.2	34.9	400
TR-1913	1.3/16-12	13/16-16	42.2	12.8	34.9	400
TR-1916	1.3/16-12	1-14	43.9	15.5	34.9	400
TR-2313	1.7/16-12	13/16-16	43.9	12.8	41.3	400
TR-2316	1.7/16-12	1-14	45.7	15.5	41.3	400
TR-2319	1.7/16-12	1.3/16-12	47.8	17	41.3	400
TR-2719	1.11/16-12	1.3/16-12	47.8	17	47.6	250
TR-2723	1.11/16-12	1.7/16-12	51.6	17.5	47.6	250

45 DEGREE ADAPTORS

A-A-45

BSPT MALE X BSPT MALE

BSPT MALE X BSPT MALE 45° ELBOW

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-A-45-0202	1/8-28	1/8-28	14	21	21	345
A-A-45-0404	1/4-19	1/4-19	14	22	22	275
A-A-45-0606	3/8-19	3/8-19	19	27	27	210
A-A-45-0608	3/8-19	1/2-14	22	24	29	210
A-A-45-0808	1/2-14	1/2-14	22	29	29	210
A-A-45-0812	1/2-14	3/4-14	27	32	32	170
A-A-45-1212	3/4-14	3/4-14	27	32	32	170
A-A-45-1216	3/4-14	1-11	35	38	43	140
A-A-45-1616	1-11	1-11	35	43	43	140

A-C-45

BSPT MALE X BSP FEMALE

BSPT MALE X BSP 60° CONE FEMALE SWIVEL NUT

45° ELBOW

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-C-45-0202	1/8-28	1/8-28	14	14	17	17	345
A-C-45-0404	1/4-19	1/4-19	14	19	22	20	275
A-C-45-0606	3/8-19	3/8-19	19	22	27	24	210
A-C-45-0808	1/2-14	1/2-14	22	27	29	24	210
A-C-45-1212	3/4-14	3/4-14	27	32	32	29	170
A-C-45-1616	1-11	1-11	35	41	40	33	140

A-E-45

BSPT MALE X BSPT FEMALE

BSPT MALE X BSPT FIXED FEMALE 45° ELBOW

Part Number	BSPT Male Thread (A)	BSPT Female Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
A-E-45-0404	1/4-19	1/4-19	18	20	16	275
A-E-45-0606	3/8-19	3/8-19	25.5	23.5	24	210
A-E-45-0808	1/2-14	1/2-14	31.5	27.5	30	210

A-G-45

BSPT MALE X JIC MALE

BSPT MALE X JIC MALE 45° ELBOW

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-G-45-0207	1/8-28	7/16-20	14	17	20	345
A-G-45-0208	1/8-28	1/2-20	14	17	20	345
A-G-45-0209	1/8-28	9/16-18	22	17	20	345
A-G-45-0407	1/4-19	7/16-20	14	22	20	275
A-G-45-0408	1/4-19	1/2-20	14	22	20	275
A-G-45-0409	1/4-19	9/16-18	14	22	21	275
A-G-45-0412	1/4-19	3/4-16	19	24	25	275
A-G-45-0609	3/8-19	9/16-18	19	24	22	210
A-G-45-0612	3/8-19	3/4-16	19	24	25	210
A-G-45-0614	3/8-19	7/8-14	22	27	28	210
A-G-45-0809	1/2-14	9/16-18	22	29	23	210
A-G-45-0812	1/2-14	3/4-16	22	29	25	210
A-G-45-0814	1/2-14	7/8-14	22	29	28	210
A-G-45-0817	1/2-14	1.1/16-12	27	31	32	210
A-G-45-1212	3/4-14	3/4-16	27	31	27	170
A-G-45-1214	3/4-14	7/8-14	27	31	30	170
A-G-45-1217	3/4-14	1.1/16-12	27	31	32	170
A-G-45-1221	3/4-14	1.5/16-12	35	33	38	170
A-G-45-1621	1-11	1.5/16-12	35	38	38	140
A-G-45-2026	1.1/4-11	1.5/8-12	44	43	41	80
A-G-45-3240	2-11	2.1/2-12	63	50	58	70

B-BP-45

BSP MALE X BSP ADJUSTABLE

BSP 60° CONE MALE X BSP ADJUSTABLE STUD 45°
ELBOW

- ISO 8434-6

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
B-BP-45-0404	1/4-19	1/4-19	21	29	14	19	200
B-BP-45-0606	3/8-19	3/8-19	24	33	19	22	200
B-BP-45-0808	1/2-14	1/2-14	26	39	22	30	200
B-BP-45-1212	3/4-14	3/4-14	32	44	27	36	200
B-BP-45-1616	1-11	1-11	37	47	33	46	200
B-BP-45-2020	1.1/4-11	1.1/4-11	39	48	41	50	160

G-BP-45

JIC MALE X BSP ADJUSTABLE

JIC MALE X BSP ADJUSTABLE STUD 45° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-BP-45-0704	7/16-20	1/4-19	14	19	21	28	200
G-BP-45-0904	9/16-18	1/4-19	14	19	21	28	200
G-BP-45-0906	9/16-18	3/8-19	19	22	22	33	200
G-BP-45-0908	9/16-18	1/2-14	19	27	22	37	200
G-BP-45-1206	3/4-16	3/8-19	19	22	25	33	200
G-BP-45-1208	3/4-16	1/2-14	22	27	25	37	200
G-BP-45-1408	7/8-14	1/2-14	22	27	28	37	200
G-BP-45-1712	1.1/16-12	3/4-14	27	36	32	42	200
G-BP-45-1716	1.1/16-12	1-11	37.5	44	33	41	200
G-BP-45-2116	1.5/16-12	1-11	35	41	37.5	47	200

G-GK-45

JIC MALE X JIC BULKHEAD

JIC MALE X JIC BULKHEAD MALE 45° ELBOW

Part Number	JIC Male Thread	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-GK-45-0707	7/16-20	19.6	38.9	11.1	17.5	350
G-GK-45-0909	9/16-18	21	42.4	14.3	20.6	350
G-GK-45-1212	3/4-16	24.9	49.3	19.1	25.4	310
G-GK-45-1414	7/8-14	28.2	55.1	22.2	28.6	240
G-GK-45-1717	1.1/16-12	32.5	62	27	34.9	240
G-GK-45-2121	1.5/16-12	37.3	65	33.3	41.3	210

G-J-45

JIC MALE X JIC FEMALE

JIC 37° FLARE MALE X JIC 37° FLARE FEMALE

SWIVEL NUT 45° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-J-45-0707	7/16-20	7/16-20	14	14	20	15	350
G-J-45-0808	1/2-20	1/2-20	22	22	14	17	350
G-J-45-0909	9/16-18	9/16-18	14	19	21	19	350
G-J-45-1212	3/4-16	3/4-16	19	22	25	22	310
G-J-45-1414	7/8-14	7/8-14	22	27	28	24	240
G-J-45-1717	1.1/16-12	1.1/16-12	27	32	32	24	240
G-J-45-2121	1.5/16-12	1.5/16-12	35	41	38	29	210
G-J-45-2626	1.5/8-12	1.5/8-12	41	50	40	51	170
G-J-45-3030	1.7/8-12	1.7/8-12	49	50.8	48	55	140
G-J-45-4040	2.1/2-12	2.1/2-12	63	73	56	74	105

G-J-45S

JIC MALE X JIC FEMALE

JIC MALE X JIC FEMALE SWIVEL NUT 45° SWEPT

Part Number	JIC Male Thread (A)	JIC Female Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-J-45S-0707	7/16-20	7/16-20	29.3	30.9	12.6	14.3	350
G-J-45S-0909	9/16-18	9/16-18	30	41.8	15.9	17.5	350
G-J-45S-1212	3/4-16	3/4-16	39	43.1	20.6	22.2	310
G-J-45S-1414	7/8-14	7/8-14	39.9	50.9	23.8	25.4	240
G-J-45S-1717	1.1/16-12	1.1/16-12	48.6	62.5	28.6	31.8	240

G-L-45

JIC MALE X NPTF MALE

JIC MALE X NPTF MALE 45° ELBOW

Part Number	JIC Male Thread (A)	NPTF Male Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-L-45-0702	7/16-20	1/8-27	18.3	16.3	11.1	345
G-L-45-0704	7/16-20	1/4-18	20.8	21.8	14.3	275
G-L-45-0904	9/16-18	1/4-18	21.1	21.8	14.3	275
G-L-45-0906	9/16-18	3/8-18	22.1	24.1	19.1	210
G-L-45-1204	3/4-16	1/4-18	24.9	24.1	19.1	275
G-L-45-1206	3/4-16	3/8-18	24.9	24.1	19.1	210
G-L-45-1208	3/4-16	1/2-14	25.1	29.7	22.2	210
G-L-45-1212	3/4-16	3/4-14	25.1	32.8	26.7	170
G-L-45-1406	7/8-14	3/8-18	25.1	29	21.6	210
G-L-45-1408	7/8-14	1/2-14	28.2	29.7	22.2	210
G-L-45-1412	7/8-14	3/4-14	29.5	30.5	27	170
G-L-45-1708	1.1/16-12	1/2-14	32.5	30.5	27	210
G-L-45-1712	1.1/16-12	3/4-14	32.5	30.5	27	170
G-L-45-1716	1.1/16-12	1-11.1/2	30.1	37.6	33.3	140
G-L-45-2112	1.5/16-12	3/4-14	37.3	37.6	33.3	170
G-L-45-2116	1.5/16-12	1-11.1/2	37.3	37.6	33.3	140
G-L-45-2620	1.5/8-12	1.1/4-11.1/2	40.4	42.4	41.3	80
G-L-45-3024	1.7/8-12	1.1/2-11.1/2	45.2	45	47.6	70
G-L-45-4032	2.1/2-12	2-11.1/2	56.4	53.6	63.5	70

G-NP-45

JIC MALE X UNO ADJUSTABLE

JIC MALE X UNO ADJUSTABLE STUD 45° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-NP-45-0707	7/16-20	7/16-20	14	14	20	27	315
G-NP-45-0709	7/16-20	9/16-18	18.3	27.4	11.1	14	250
G-NP-45-0909	9/16-18	9/16-18	14	17	21	28	250
G-NP-45-0912	9/16-18	3/4-16	19	22	22	32	250
G-NP-45-1209	3/4-16	9/16-18	24.9	29.7	19.1	22	250
G-NP-45-1212	3/4-16	3/4-16	19	22	25	32	250
G-NP-45-1214	3/4-16	7/8-14	22	27	25	37	250
G-NP-45-1217	3/4-16	1.1/16-12	26.4	43.9	27	31.8	200
G-NP-45-1412	7/8-14	3/4-16	28.2	34.5	22.2	22.2	240
G-NP-45-1414	7/8-14	7/8-14	22	27	28	37	200
G-NP-45-1417	7/8-14	1.1/16-12	29.5	43.9	27	31.8	200
G-NP-45-1712	1.1/16-12	3/4-16	27	22	32	36	240
G-NP-45-1714	1.1/16-12	7/8-14	32.5	40.1	27	25.4	200
G-NP-45-1717	1.1/16-12	1.1/16-12	27	32	32	42	200
G-NP-45-1721	1.1/16-12	1.5/16-12	35	41	36	47	160
G-NP-45-2117	1.5/16-12	1.1/16-12	37.3	47.2	33.3	31.8	200
G-NP-45-2121	1.5/16-12	1.5/16-12	35	41	38	47	160
G-NP-45-2626	1.5/8-12	1.5/8-12	44	50	41	49	125
G-NP-45-3030	1.7/8-12	1.7/8-12	45.2	48.5	47.6	54	125

L-AC-45

NPTF MALE X NPTF FEMALE

NPTF MALE X NPTF FIXED FEMALE 45° ELBOW

Part Number	NPTF Male Thread (A)	NPTF Female Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
L-AC-45-0202	1/8-27	1/8-27	18.3	11.9	14.3	345
L-AC-45-0404	1/4-18	1/4-18	26.7	16	19.1	275
L-AC-45-0606	3/8-18	3/8-18	26.9	18.3	22.2	210
L-AC-45-0808	1/2-14	1/2-14	34	23.1	27	210
L-AC-45-1212	3/4-14	3/4-14	35.1	24.6	33.3	170
L-AC-45-1616	1-11.1/2	1-11.1/2	43.7	28.4	41.3	140

L-L-45

MALE NPTF X NPTF MALE

NPTF MALE X MALE 45° ELBOW

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	PN (bar)
L-L-45-0202	1/8-27	1/8-27	17	14.7	11.1	345
L-L-45-0404	1/4-18	1/4-18	21.6	21.6	14.3	275
L-L-45-0606	3/8-18	3/8-18	24.1	24.1	19.1	210
L-L-45-0808	1/2-14	1/2-14	30	30	22.2	210
L-L-45-1212	3/4-14	3/4-14	35.1	35.1	27	170
L-L-45-1616	1-11.1/2	1-11.1/2	37.6	37.6	41.3	140

R-NP-45

ORFS MALE X UNO ADJUSTABLE

ORFS MALE X UNO ADJUSTABLE STUD 45° ELBOW

- SAE J1453

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
R-NP-45-0907	9/16-18	7/16-20	16	30	14	14	315
R-NP-45-0909	9/16-18	9/16-18	17.3	33	19.1	19.1	250
R-NP-45-1107	11/16-16	7/16-20	18.8	30.1	19.1	15.9	315
R-NP-45-1109	11/16-16	9/16-18	19	33	19	17	250
R-NP-45-1112	11/16-16	3/4-16	20.3	36.3	19.1	23.8	250
R-NP-45-1309	13/16-16	9/16-18	20.3	30	19.1	19.1	250
R-NP-45-1312	13/16-16	3/4-16	21	37	19	22	250
R-NP-45-1612	1-14	3/4-16	23.4	36.3	27	23.8	250
R-NP-45-1614	1-14	7/8-14	24	45	27	27	200
R-NP-45-1914	1.3/16-12	7/8-14	25.9	46	30.2	27	200
R-NP-45-1917	1.3/16-12	1.1/16-12	26	50	30	32	200
R-NP-45-2321	1.7/16-12	1.5/16-12	30	53	36	41	160
R-NP-45-2726	11.1/16-12	1.5/8-12	32	53.6	41.3	44.5	125

R-T-45

ORFS MALE X ORFS FEMALE

ORFS MALE X ORFS FEMALE SWIVEL NUT 45°
ELBOW

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
R-T-45-0909	9/16-18	9/16-18	16	27	14	17	630
R-T-45-1111	11/16-16	11/16-16	19	29	19	22	630
R-T-45-1313	13/16-16	13/16-16	21	38	19	24	630
R-T-45-1616	1-14	1-14	24	41	27	30	400
R-T-45-1919	1.3/16-12	1.3/16-12	26	47	30	36	400
R-T-45-2323	1.7/16-12	1.7/16-12	30	54	36	41	400
R-T-45-2727	1.11/16-12	1.11/16-12	32	58	41	50	250

TUBEWELDS

TW-J

TUBEWELD X JIC FEMALE

IMPERIAL TUBE WELD SOCKET X JIC 37 FLARE

FEMALE SWIVEL NUT

Part Number	suits tube	JIC Female Thread (A)	Weld Socket	L1 - mm	L2 - mm	Diameter - mm	Hex A/F (CH1)
TW-J-0407	1/4	7/16-20		14	7	13	15
TW-J-0609	3/8	9/16-18		16	9	16	19
TW-J-0812	1/2	3/4-16		19	10	19	24
TW-J-0814	1/2	7/8-14		20	11	22	27
TW-J-1014	5/8	7/8-14		20	11	22	27
TW-J-1214	3/4	7/8-14		21	11	25	27
TW-J-1217	3/4	1.1/16-12		23	13	25	32
TW-J-1621	1	1.5/16-12		27	15	35	38
TW-J-2021	1.1/4	1.5/16-12		26.7	14.7	38	38
TW-J-2026	1.1/4	1.5/8-12		29	17	41	51
TW-J-2430	1.1/2	1.7/8-12		28	16	51	57

TW-R

TUBEWELD X ORFS MALE

IMPERIAL TUBE WELD SOCKET X ORFS MALE

Part Number	suits tube	UNF Male Thread (A)	Weld Socket	L1 - mm	L2 - mm	Hex A/F (CH1)
TW-R-0409	1/4	9/16-18		18.5	10	19
TW-R-0611	3/8	11/16-16		20	11	19
TW-R-0813	1/2	13/16-16		22	13	22
TW-R-1016	5/8	1-14		24	14	27
TW-R-1219	3/4	1.3/16-12		28	17	32
TW-R-1623	1	1.7/16-12		33	18	38

TW-T

TUBEWELD X ORFS FEMALE

WELD SOCKET TO SUIT TUBE X ORFS FEMALE

Part Number	suits tube	UNF Female Thread (A)	Weld Socket	L1 - mm	L2 - mm	Hex A/F (CH1)
TW-T-0409	1/4	9/16-18		18	10	19
TW-T-0611	3/8	11/16-16		19.9	11.4	19
TW-T-0813	1/2	13/16-16		22.3	12.8	22
TW-T-1016	5/8	1-14		24.2	14.2	27
TW-T-1219	3/4	1.3/16-12		28	17	32
TW-T-1623	1	1.7/16-12		32.5	17.5	38

90 DEGREE ADAPTORS

A-A-90

BSPT MALE X BSPT MALE

BSPT MALE X BSPT MALE 90° ELBOW

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-A-90-0202	1/8-28	1/8-28	12	20	20	345
A-A-90-0204	1/8-28	1/4-19	14	20	25	275
A-A-90-0404	1/4-19	1/4-19	14	25	25	275
A-A-90-0406	1/4-19	3/8-19	19	28	31	210
A-A-90-0408	1/4-19	1/2-14	22	30	35	210
A-A-90-0606	3/8-19	3/8-19	19	31	31	210
A-A-90-0608	3/8-19	1/2-14	22	30	35	210
A-A-90-0808	1/2-14	1/2-14	22	35	35	210
A-A-90-0812	1/2-14	3/4-14	27	40	40	170
A-A-90-1212	3/4-14	3/4-14	27	40	40	170
A-A-90-1216	3/4-14	1-11	35	43	48	140
A-A-90-1616	1-11	1-11	35	48	48	140
A-A-90-1620	1-11	1.1/4-11	41	54	55	80
A-A-90-2020	1.1/4-11	1.1/4-11	41	55	55	80
A-A-90-2424	1.1/2-11	1.1/2-11	50	60	60	70
A-A-90-3232	2-11	2-11	65	74	74	70

A-BP-90

BSPT MALE X BSP ADJUSTABLE

BSPT MALE X BSP ADJUSTABLE STUD 90° ELBOW

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-BP-90-0404	1/4-19	1/4-19	16	22	26	31	200
A-BP-90-0406	1/4-19	3/8-19	16	22	27	36	200
A-BP-90-0606	3/8-19	3/8-19	16	22	28	37	200
A-BP-90-0608	3/8-19	1/2-14	22	27	33	43	200
A-BP-90-0806	1/2-14	3/8-19	22	22	35	43	200
A-BP-90-0808	1/2-14	1/2-14	22	27	35	43	200
A-BP-90-0812	1/2-14	3/4-14	27	32	40	49	200
A-BP-90-1212	3/4-14	3/4-14	27	32	43	49	170
A-BP-90-1216	3/4-14	1-11	33	41	43	53	170
A-BP-90-1616	1-11	1-11	33	41	47	53	140

A-C-90

BSPT MALE X BSP FEMALE

BSPT MALE X BSP 60° CONE FEMALE SWIVEL NUT

90° ELBOW

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-C-90-0202	1/8-28	1/8-28	12	14	22	19	345
A-C-90-0404	1/4-19	1/4-19	14	19	26	23	275
A-C-90-0406	1/4-19	3/8-19	19	22	32	26	275
A-C-90-0604	3/8-19	1/4-19	19	19	32	25	210
A-C-90-0606	3/8-19	3/8-19	19	22	32	26	210
A-C-90-0608	3/8-19	1/2-14	22	27	32	29	210
A-C-90-0806	1/2-14	3/8-19	22	22	36	27	210
A-C-90-0808	1/2-14	1/2-14	22	27	36	29	210
A-C-90-0812	1/2-14	3/4-14	27	32	43	35	210
A-C-90-1208	3/4-14	1/2-14	27	27	43	33	170
A-C-90-1212	3/4-14	3/4-14	27	32	43	35	170
A-C-90-1216	3/4-14	1-11	35	41	45	40	170
A-C-90-1612	1-11	3/4-14	35	32	48	39	140
A-C-90-1616	1-11	1-11	35	41	48	40	140
A-C-90-2020	1.1/4-11	1.1/4-11	41	48	57	47	80
A-C-90-2424	1.1/2-11	1.1/2-11	50	58	65	53	70

AC-AC-90

NPTF FEMALE X NPTF FEMALE

NPTF FIXED FEMALE SOCKET EQUAL 90° ELBOW

Part Number	NPTF Female Thread (A)	L1 (mm)	Hex A/F (CH1)	PN (bar)
AC-AC-90-0202	1/8-27	16.8	14.3	345
AC-AC-90-0404	1/4-18	22.4	19.1	275
AC-AC-90-0606	3/8-18	25.9	22.2	210
AC-AC-90-0808	1/2-14	31.2	27	210
AC-AC-90-1212	3/4-14	34.5	33.3	170
AC-AC-90-1616	1-11.1/2	41.4	41.3	140
AC-AC-90-2020	1.1/4-11.1/2	43.2	47.6	80

A-E-90

BSPT MALE X BSPT FEMALE

BSPT MALE X BSPT FIXED FEMALE 90° ELBOW

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-E-90-0202	1/8-28	1/8-28	14	20	17	345
A-E-90-0404	1/4-19	1/4-19	19	28	22	275
A-E-90-0606	3/8-19	3/8-19	22	30	26	210
A-E-90-0608	3/8-19	1/2-14	33.5	31.5	27	210
A-E-90-0806	1/2-14	3/8-19	22	35	26	210
A-E-90-0808	1/2-14	1/2-14	27	37	31	210
A-E-90-1212	3/4-14	3/4-14	35	42	35	170
A-E-90-1616	1-11	1-11	41	50	41	140
A-E-90-2020	1.1/4-11	1.1/4-11	50	61	43	80

A-G-90

BSPT MALE X JIC MALE

BSPT MALE X JIC 37° MALE 90° ELBOW

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
A-G-90-0207	1/8-28	7/16-20	14	20	24	345
A-G-90-0208	1/8-28	1/2-20	14	20	24	345
A-G-90-0209	1/8-28	9/16-18	14	20	26	345
A-G-90-0407	1/4-19	7/16-20	14	25	24	275
A-G-90-0408	1/4-19	1/2-20	14	25	24	275
A-G-90-0409	1/4-19	9/16-18	14	25	26	275
A-G-90-0412	1/4-19	3/4-16	19	28	32	275
A-G-90-0607	3/8-19	7/16-20	19	31	29	210
A-G-90-0609	3/8-19	9/16-18	19	31	29	210
A-G-90-0612	3/8-19	3/4-16	19	31	32	210
A-G-90-0614	3/8-19	7/8-14	22	30	36	210
A-G-90-0807	1/2-14	7/16-20	22	35	31	210
A-G-90-0809	1/2-14	9/16-18	22	35	31	210
A-G-90-0812	1/2-14	3/4-16	22	35	34	210
A-G-90-0814	1/2-14	7/8-14	22	35	36	210
A-G-90-0817	1/2-14	1.1/16-12	27	40	42	210
A-G-90-1209	3/4-14	9/16-18	43.5	34.8	27	170
A-G-90-1212	3/4-14	3/4-16	27	40	36	170
A-G-90-1214	3/4-14	7/8-14	27	40	39	170
A-G-90-1217	3/4-14	1.1/16-12	27	40	42	170
A-G-90-1221	3/4-14	1.5/16-12	35	43	47	170
A-G-90-1617	1-11	1.1/16-12	35	48	46	140
A-G-90-1621	1-11	1.5/16-12	35	48	47	140
A-G-90-1626	1-11	1.5/8-12	41	54	53	140
A-G-90-2017	1.1/4-11	1.1/16-12	41	55	51	80
A-G-90-2021	1.1/4-11	1.5/16-12	41	55	53	80
A-G-90-2026	1.1/4-11	1.5/8-12	41	55	53	80
A-G-90-2426	1.1/2-11	1.5/8-12	60	65	59	70
A-G-90-2430	1.1/2-11	1.7/8-12	50	60	59	70
A-G-90-3240	2-11	2.1/2-12	63	75	67	70

A-ML-90

BSPT MALE X MET LIGHT MALE

BSPT MALE X METRIC 24° CONE LIGHT MALE 90°

ELBOW

Part Number	BSPT Male Thread (G)	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	L4 (mm) - mm	CH1 (mm)	PN (bar)
A-MLL-90-0208	1/8-28	M8-1.0	4	15	11	17	9	12	100
A-ML-90-0212	1/8-28	M12-1.5	6	19	12	20	8	12	315
A-ML-90-0214	1/8-28	M14-1.5	8	21	14	22	8	12	315
A-ML-90-0216	1/8-28	M16-1.5	10	22	15	22	8	14	315
A-ML-90-0412	1/4-19	M12-1.5	6	21	14	26	12	12	315
A-ML-90-0414	1/4-19	M14-1.5	8	21	14	26	12	12	315
A-ML-90-0416	1/4-19	M16-1.5	10	22	15	27	12	14	315
A-ML-90-0418	1/4-19	M18-1.5	12	24	17	28	12	17	315
A-ML-90-0614	3/8-19	M14-1.5	8	23	16	28	12	17	315
A-ML-90-0616	3/8-19	M16-1.5	10	24	17	28	12	17	315
A-ML-90-0618	3/8-19	M18-1.5	12	24	17	28	12	17	315
A-ML-90-0622	3/8-19	M22-1.5	15	28	31	30	12	19	315
A-ML-90-0816	1/2-14	M16-1.5	10	27	20	34	14	19	315
A-ML-90-0818	1/2-14	M18-1.5	12	27	20	34	14	19	315
A-ML-90-0822	1/2-14	M22-1.5	15	28	21	34	14	19	315
A-ML-90-0826	1/2-14	M26-1.5	18	31	24	36	14	24	315
A-ML-90-1230	3/4-14	M30-2	22	35	28	42	16	27	160
A-ML-90-1636	1-11	M36-2	28	38	30.5	48	18	36	160
A-ML-90-2045	1.1/4-11	M45-2	35	45	34.5	54	20	41	160

A-MS-90

BSPT MALE X MET HEAVY MALE

BSPT MALE X METRIC 24° CONE HEAVY MALE 90°

ELBOW

Part Number	BSPT Male Thread (G)	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	L4 (mm) - mm	CH1 (mm)	PN (bar)
A-MS-90-0414	1/4-19	M14-1.5	6	23	16	26	12	12	630
A-MS-90-0416	1/4-19	M16-1.5	8	24	17	27	12	14	630
A-MS-90-0618	3/8-19	M18-1.5	10	25	18	28	12	17	630
A-MS-90-0620	3/8-19	M20-1.5	12	29	22	28	12	17	630
A-MS-90-0820	1/2-14	M20-1.5	12	28	21	32	14	19	630
A-MS-90-0822	1/2-14	M22-1.5	14	30	22	32	14	19	630
A-MS-90-0824	1/2-14	M24-1.5	16	33	25	32	14	24	400
A-MS-90-1230	3/4-14	M30-2	20	37	27	42	16	27	400
A-MS-90-1636	1-11	M36-2	25	42	30	48	18	36	400
A-MS-90-2042	1.1/4-11	M42-2	30	49	36	54	20	41	400

A-NP-90

BSPT MALE X UNO ADJUSTABLE

BSPT MALE X UNO ADJUSTABLE STUD 90° ELBOW

Part Number	BSPT Male Thread (A)	UNO Thread	L1 (mm)	L2 (mm)	S (mm)	CH2 (mm)	PN (bar)
A-NP-90-0407	1/4-19	7/16-20	25	31	14	16	275
A-NP-90-0409	1/4-19	9/16-18	25	32	14	19	250
A-NP-90-0412	1/4-19	3/4-16	27	37	19	24	250
A-NP-90-0609	3/8-19	9/16-18	31	35	19	19	210
A-NP-90-0612	3/8-19	3/4-16	29	37	19	24	210
A-NP-90-0614	3/8-19	7/8-14	28	39	22	27	200
A-NP-90-0812	1/2-14	3/4-16	35	39	22	24	210
A-NP-90-0814	1/2-14	7/8-14	33	44	22	27	200
A-NP-90-0817	1/2-14	1.1/16-12	44	49	27	32	200
A-NP-90-1214	3/4-14	7/8-14	40	49	27	27	170
A-NP-90-1217	3/4-14	1.1/16-12	38	49	27	32	170
A-NP-90-1621	1-11	1.5/16-12	45	52	35	38	140

A-AA-90

MALE BSPT X SAE MALE 90°

BSPT MALE X SAE MALE 45° CONE 90° ELBOW

Part Number	BSPT Male Thread (A)	SAE Male Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
A-AA-90-0610	3/8-19	5/8-18	28.5	30	16	210

B-BP-90

BSP MALE X BSP ADJUSTABLE

BSP 60° CONE MALE X BSP ADJUSTABLE STUD 90°
ELBOW

- ISO 8434-6

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
B-BP-90-0404	1/4-19	1/4-19	14	19	25	32	200
B-BP-90-0406	1/4-19	3/8-19	16	22	27	37	200
B-BP-90-0606	3/8-19	3/8-19	16	22	28	37	200
B-BP-90-0608	3/8-19	1/2-14	22	27	31	43	200
B-BP-90-0808	1/2-14	1/2-14	22	27	35	43	200
B-BP-90-1212	3/4-14	3/4-14	27	32	40	49	200
B-BP-90-1616	1-11	1-11	33	41	46	53	200
B-BP-90-2020	1.1/4-11	1.1/4-11	41	50	52	58	160

C-BP-90

BSP FEMALE X BSP ADJUSTABLE

BSP 60° CONE FEMALE SWIVEL NUT X BSP
ADJUSTABLE STUD 90° ELBOW

- ISO 8434-6

Part Number	T1	T2	H1 (mm)	H2 (mm)	H3 (mm)	L1 (mm)	L2 (mm)	PN (bar)
C-BP-90-0202	1/8-28	1/8-28	11	14	14	14	14	200
C-BP-90-0404	1/4-19	1/4-19	14	19	19	26	32	200
C-BP-90-0606	3/8-19	3/8-19	16	22	22	30	36	200
C-BP-90-0808	1/2-14	1/2-14	22	27	27	35	43	200
C-BP-90-1212	3/4-14	3/4-14	27	32	32	41	47	200
C-BP-90-1616	1-11	1-11	33	41	41	44	53	200

C-NP-90

BSP FEMALE X UNO ADJUSTABLE
BSP 60° CONE FEMALE SWIVEL NUT X UNO
ADJUSTABLE STUD 90° ELBOW

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	CH3	PN (bar)
C- NP-90-0409	1/4-19	9/16-18	26.2	27.2	14	19	19	250
C- NP-90-0609	3/8-19	9/16-18	31	33	16	19	22	250
C- NP-90-0612	3/8-19	3/4-16	31	35	19	24	22	250
C- NP-90-0812	1/2-14	3/4-16	33	35	19	24	27	250
C- NP-90-0814	1/2-14	7/8-14	33	41	22	27	27	200
C- NP-90-1217	3/4-14	1 1/16-12	43	51	27	32	32	200
C- NP-90-1621	1-11	1 5/16-12	47	55	33	41	41	160

E-E-90

BSPT FEMALE X BSPT FEMALE
BSPT FIXED FEMALE X BSPT FIXED FEMALE 90°
ELBOW

Part Number	A	L1 (mm)	CH1 (mm)	PN (bar)
E-E-90-0202	1/8-28	22	17	345
E-E-90-0404	1/4-19	23	23	275
E-E-90-0606	3/8-19	25	27	210
E-E-90-0808	1/2-14	29	33	210
E-E-90-1212	3/4-14	34	39	170
E-E-90-1616	1-11	40	47	140
E-E-90-2020	1.1/4-11	45	57	80
E-E-90-2424	1.1/2-11	51	63	70
E-E-90-3232	2-11	60	76	70

G-AC-90

MALE JIC X NPT FEMALE SOCKET 90°

JIC MALE X NPTF FEMALE FIXED 90° ELBOW

Part Number	JIC Male Thread (A)	NPTF Female Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-AC-90-0904	9/16-18	1/4-18	31.2	22.4	19.1	275
G-AC-90-0906	9/16-18	3/8-18	33.3	25.9	22.2	210
G-AC-90-0908	9/16-18	1/2-14	35.8	31.2	27	210
G-AC-90-1204	3/4-16	1/4-18	36.1	25.9	22.2	275
G-AC-90-1206	3/4-16	3/8-18	36.1	25.9	22.2	210
G-AC-90-1208	3/4-16	1/2-14	38.6	31.2	27	210
G-AC-90-1212	3/4-16	3/4-14	42.4	34.5	34.9	170
G-AC-90-1406	7/8-14	3/8-18	38.6	25.7	25.4	210
G-AC-90-1408	7/8-14	1/2-14	41.7	31.2	27	210

G-BP-90

JIC MALE X BSP ADJUSTABLE

JIC 37° FLARE MALE X BSP ADJUSTABLE STUD 90°
ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-BP-90-0702	7/16-20	1/8-28	14	14	24	27	200
G-BP-90-0704	7/16-20	1/4-19	14	19	27	32	200
G-BP-90-0706	7/16-20	3/8-19	19	22	29	37	200
G-BP-90-0708	7/16-20	1/2-14	22	27	31	43	200
G-BP-90-0902	9/16-18	1/8-28	14	19	27	32	200
G-BP-90-0904	9/16-18	1/4-19	14	19	27	32	200
G-BP-90-0906	9/16-18	3/8-19	19	22	29	37	200
G-BP-90-0908	9/16-18	1/2-14	22	27	31	43	200
G-BP-90-1204	3/4-16	1/4-19	19	22	27	32	200
G-BP-90-1206	3/4-16	3/8-19	19	22	32	37	200
G-BP-90-1208	3/4-16	1/2-14	22	27	34	43	200
G-BP-90-1212	3/4-16	3/4-14	27	36	36	49	200
G-BP-90-1406	7/8-14	3/8-19	22	22	37	38	200
G-BP-90-1408	7/8-14	1/2-14	22	27	37	43	200
G-BP-90-1412	7/8-14	3/4-14	27	36	39	50	200
G-BP-90-1708	1.1/16-12	1/2-14	27	27	41	47	200
G-BP-90-1712	1.1/16-12	3/4-14	27	36	41	50	200
G-BP-90-1716	1.1/6-12	1-11	35	41	46	52	200
G-BP-90-2112	1.5/16-12	3/4-14	33	36	46	50	200
G-BP-90-2116	1.5/6-12	1-11	35	41	47	52	200
G-BP-90-2120	1.5/16-12	1.1/4-11	41	50	53	58	160
G-BP-90-2124	1.5/16-12	1.1/2-11	52	62.1	47	54.8	160
G-BP-90-2616	1.5/8-12	1-11	41	41	53	58	170
G-BP-90-2620	1.5/8-12	1.1/4-11	41	50	53	58	160
G-BP-90-2624	1.5/8-12	1.1/2-11	51.4	61.1	47	54.8	160
G-BP-90-3020	1.7/8-12	1.1/4-11	48	50	63	63	140
G-BP-90-3024	1.7/8-12	1.1/2-11	48	55	59	60	140

G-G-90

JIC MALE X JIC MALE

JIC MALE X JIC MALE 90° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-G-90-0707	7/16-20	7/16-20	11	23	23	350
G-G-90-0709	7/16-20	9/16-18	14	26	26	350
G-G-90-0808	1/2-20	1/2-20	14	24	24	350
G-G-90-0909	9/16-18	9/16-18	14	26	26	350
G-G-90-0912	9/16-18	3/4-16	19	26	32	310
G-G-90-1212	3/4-16	3/4-16	19	32	32	310
G-G-90-1214	3/4-16	7/8-14	22	33	36	240
G-G-90-1217	3/4-16	1.1/16-12	27	36	42	240
G-G-90-1414	7/8-14	7/8-14	22	36	36	240
G-G-90-1717	1.1/16-12	1.1/16-12	27	40	40	240
G-G-90-2121	1.5/16-12	1.5/16-12	35	48	48	210
G-G-90-2626	1.5/8-12	1.5/8-12	41	53	53	170
G-G-90-3030	1.7/8-12	1.7/8-12	50	60	60	140

G-GK-90

JIC MALE X JIC BULKHEAD

JIC MALE X JIC BULKHEAD 90° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-GK-90-0707	7/16-20	7/16-20	11.1	17	25	38	23	350
G-GK-90-0808	1/2-20	1/2-20	14	19	27	44	26	350
G-GK-90-0909	9/16-18	9/16-18	14	21	28	46	28	350
G-GK-90-1212	3/4-16	3/4-16	19	25	35	54	35	310
G-GK-90-1414	7/8-14	7/8-14	22	29	40	61	39	240
G-GK-90-1717	1.1/16-12	1.1/16-12	27	35	45	68	40	240
G-GK-90-2121	1.5/16-12	1.5/16-12	33	41	49	71	40	210
G-GK-90-2626	1.5/8-12	1.5/8-12	41	48	55	79	41	170

G-J-90

JIC MALE X JIC FEMALE

JIC MALE X JIC FEMALE SWIVEL NUT 90° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-J-90-0707	7/16-20	7/16-20	14	14	24	17	350
G-J-90-0808	1/2-20	1/2-20	14	17	26	22	350
G-J-90-0909	9/16-18	9/16-18	14	19	26	22	350
G-J-90-1212	3/4-16	3/4-16	19	22	32	24	310
G-J-90-1214	3/4-16	7/8-14	19	27	32	27	240
G-J-90-1412	7/8-14	3/4-16	22	24	36	24	240
G-J-90-1414	7/8-14	7/8-14	22	27	36	28	240
G-J-90-1717	1.1/16-12	1.1/16-12	27	32	42	30	240
G-J-90-2121	1.5/16-12	1.5/16-12	35	41	46	36	210
G-J-90-2626	1.5/8-12	1.5/8-12	41	50	53	43	170
G-J-90-3030	1.7/8-12	1.7/8-12	48	55	62	52	140
G-J-90-4040	2.1/2-12	2.1/2-12	75.5	84.1	63	75	105

G-J-90S

MALE JIC X JIC FEMALE SWEPT 90°

JIC MALE X JIC FEMALE SWIVEL NUT 90° SWEPT

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
G-J-90S-0707	7/16-20	7/16-20	30.5	32.5	12.7	14.3	350
G-J-90S-0909	9/16-18	9/16-18	38.1	40.4	15.9	17.5	350
G-J-90S-1212	3/4-16	3/4-16	45.7	45.7	20.6	22.2	310
G-J-90S-1414	7/8-14	7/8-14	50.8	50.8	23.8	25.4	240
G-J-90S-1717	1.1/16-12	1.1/16-12	63.5	57.2	28.6	31.8	240
G-J-90S-2121	1.5/16-12	1.5/16-12	71.1	71.1	34.9	38.1	210
G-J-90S-2626	1.5/8-12	1.5/8-12	82.8	65.8	42.9	50.8	170
G-J-90S-3030	1.7/8-12	1.7/8-12	104.5	75.2	50.6	57	140
G-J-90S-4040	2.1/2-12	2.1/2-12	128.5	98.7	70	70	105

G-J-90S X1

MALE JIC X EXTENDED JIC FEM. 90°

JIC MALE X JIC FEMALE SWIVEL NUT 90° SWEPT

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	PN (bar)
G-J-90S-0707X1	7/16-20	7/16-20	30.5	45.7	12.7	14.3	350
G-J-90S-0909X1	9/16-18	9/16-18	38.1	55.4	15.9	17.5	350
G-J-90S-1212X1	3/4-16	3/4-16	45.7	62	20.6	22.2	310
G-J-90S-1414X1	7/8-14	7/8-14	50.8	65.5	23.8	25.4	240
G-J-90S-1717X1	1.1/16-12	1.1/16-12	63.5	94.7	28.6	31.8	240
G-J-90S-2121X1	1.5/16-12	1.5/16-12	71.1	110	34.9	38.1	210
G-J-90S-2626X1	1.5/8-12	1.5/8-12	82.8	127	42.9	50.8	170
G-J-90S-3030X1	1.7/8-12	1.7/8-12	135	127	50	57	140
G-J-90S-4040X1	2.1/2-12	2.1/2-12	135	127	70	70	105

G-L-90

JIC MALE X NPTF MALE

JIC MALE X NPTF MALE 90° ELBOW

- SAE J514

Part Number	T1	T2	H1 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-L-90-0702	7/16-20	1/8-27	12	22	20	345
G-L-90-0702X	7/16-20	1/8-27	11	23	30	345
G-L-90-0702X1	7/16-20	1/8-27	22.6	39.6	11.1	345
G-L-90-0704	7/16-20	1/4-18	14	24	28	275
G-L-90-0704X1	7/16-20	1/4-18	25.8	52	14.3	275
G-L-90-0706	7/16-20	3/8-18	19	28	31	210
G-L-90-0802	1/2-20	1/8-27	14	24	20	345
G-L-90-0902	9/16-18	1/8-27	14	27	23	345
G-L-90-0904	9/16-18	1/4-18	14	28	28	275
G-L-90-0904X1	9/16-18	1/4-18	27	40.2	14.3	275
G-L-90-0906	9/16-18	3/8-18	19	29	31	210
G-L-90-0908	9/16-18	1/2-14	22	29	37	210
G-L-90-1204	3/4-16	1/4-18	19	32	31	275
G-L-90-1206	3/4-16	3/8-18	19	32	31	210
G-L-90-1208	3/4-16	1/2-14	22	34	37	210
G-L-90-1212	3/4-16	3/4-14	27	36	40	170
G-L-90-1406	7/8-14	3/8-18	22	37	33	210
G-L-90-1408	7/8-14	1/2-14	22	37	37	210
G-L-90-1412	7/8-14	3/4-14	27	39	40	170
G-L-90-1708	1.1/16-12	1/2-14	42.2	40.4	27	210
G-L-90-1712	1.1/16-12	3/4-14	27	42	40	170
G-L-90-1716	1.1/16-12	1-11.5	33	45	50	140
G-L-90-2112	1.5/16-12	3/4-12	46	45.2	33.3	170
G-L-90-2116	1.5/16-12	1-11.1/2	35	46	48	140
G-L-90-2616	1.5/8-12	1-11.1/2	46	50	33.3	140
G-L-90-2620	1.5/8-12	1.1/4-11.5	41	52	60	80
G-L-90-2624	1.5/8-12	1.1/2-11.1/2	56	67.1	48	70
G-L-90-3024	1.7/8-12	1.1/2-11.1/2	59.2	67.1	48	70
G-L-90-4032	2.1/2-12	2-11.1/2	77.7	76.2	63.5	70

G-NP-90

JIC MALE X UNO ADJUSTABLE

JIC MALE X UNO ADJUSTABLE STUD 90° ELBOW

- ISO 8434-2

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
G-NP-90-0707	7/16-20	7/16-20	14	14	24	28	315
G-NP-90-0708	7/16-20	1/2-20	14	16	24	28	315
G-NP-90-0709	7/16-20	9/16-18	14	18	27	32	250
G-NP-90-0808	1/2-20	1/2-20	14	16	24	29	315
G-NP-90-0809	1/2-20	9/16-18	16	17	27	32	250
G-NP-90-0907	9/16-18	7/16-20	14	14	27	30	315
G-NP-90-0908	9/16-18	1/2-20	14	16	27	32	315
G-NP-90-0909	9/16-18	9/16-18	14	17	27	31	250
G-NP-90-0912	9/16-18	3/4-16	19	22	29	37	250
G-NP-90-0914	9/16-18	7/8-14	22	25	31	43	200
G-NP-90-0917	9/16-18	1.1/16-12	27	32	33	49	200
G-NP-90-1209	3/4-16	9/16-18	19	27	32	34	250
G-NP-90-1212	3/4-16	3/4-16	19	22	32	37	250
G-NP-90-1214	3/4-16	7/8-14	22	27	34	43	200
G-NP-90-1217	3/4-16	1.1/16-12	27	32	36	49	200
G-NP-90-1412	7/8-14	3/4-16	22	22	37	40	200
G-NP-90-1414	7/8-14	7/8-14	22	27	37	43	200
G-NP-90-1417	7/8-14	1.1/16-12	27	32	39	50	200
G-NP-90-1712	1.1/16-12	3/4-16	27	22	42	42	240
G-NP-90-1714	1.1/16-12	7/8-14	27	25	42	45	200
G-NP-90-1717	1.1/16-12	1.1/16-12	27	32	41	50	200
G-NP-90-1721	1.1/16-12	1.5/16-12	33	38	45	52	160
G-NP-90-2117	1.5/16-12	1.1/16-12	33	32	46	52	200
G-NP-90-2121	1.5/16-12	1.5/16-12	35	41	47	52	160
G-NP-90-2126	1.5/16-12	1.5/8-12	41	48	51	57	125
G-NP-90-2621	1.5/8-12	1.5/16-12	41	38	52	57	160
G-NP-90-2626	1.5/8-12	1.5/8-12	41	48	52	57	125
G-NP-90-3026	1.7/8-12	1.5/8-12	48	48	59	61	125
G-NP-90-3030	1.7/8-12	1.7/8-12	48	54	59	61	125
G-NP-90-4040	2.1/2-12	2.1/2-12	64	70	78	73	100

G-NP-90 X1

JIC MALE X UNO ADJUSTABLE

JIC MALE X UNO MALE ADJUSTABLE STUD 90°
ELBOW

Part Number	JIC Male Thread (A)	UNO Male Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-NP-90-0707X1	7/16-20	7/16-20	22.6	43.9	11.1	14.3	315
G-NP-90-0909X1	9/16-18	9/16-18	26.9	52.8	14.3	17.5	250
G-NP-90-1212X1	3/4-16	3/4-16	31.8	63	19.1	22.2	250
G-NP-90-1414X1	7/8-14	7/8-14	26.8	73.4	22.2	25.4	200
G-NP-90-1717X1	1.1/16-12	1.1/16-12	42.2	84.8	26.9	31.8	200
G-NP-90-2121X1	1.5/16-12	1.5/16-12	46	94.5	33.3	38.1	160

G-NPS-90

MALE JIC X UNO SWIVEL

JIC MALE X UNO MALE SWIVEL 90° ELBOW

Part Number	JIC Male Thread (A)	UNO Male Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-NPS-90-1214	3/4-16	7/8-14	30.5	52.5	18.6	26.9	200

J-NP-90

JIC FEMALE SWIVEL X UNO ADJUSTABLE

JIC FEMALE SWIVEL X UNO MALE ADJUSTABLE 90°
ELBOW

Part Number	JIC Female Thread (A)	UNO Male Thread (B)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	Hex A/F - CH3 (mm)	PN (bar)
J-NP-90-0707	7/16-20	7/16-20	23.9	26.2	11.1	14.3	14.3	315
J-NP-90-0909	9/16-18	9/16-18	31.2	32.8	14.3	17.5	22.2	250
J-NP-90-1212	3/4-16	3/4-16	35.1	36.8	19.1	22.2	22.2	250
J-NP-90-1414	7/8-14	7/8-14	41.1	43.2	22.2	25.4	25.4	200
J-NP-90-1717	1.1/16-12	1.1/16-12	44.5	49.3	27	31.8	31.8	200
J-NP-90-2121	1.5/16-12	1.5/16-12	51.1	52.1	33.3	38.1	38.1	160

L-AC-90

NPTF MALE X NPTF FEMALE

NPTF MALE X NPTF FIXED FEMALE 90° ELBOW

- SAE J514

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	PN (bar)
L-AC-90-0202	1/8-27	1/8-27	20	17	14	345
L-AC-90-0404	1/4-18	1/4-18	28	23	19	275
L-AC-90-0606	3/8-18	3/8-18	31	26	22	210
L-AC-90-0808	1/2-14	1/2-14	37	31	27	210
L-AC-90-1212	3/4-14	3/4-14	40	35	33	170
L-AC-90-1616	1-11.5	1-11.5	50	41	41	140
L-AC-90-2020	1.1/4-11.1/2	1.1/4-11.1/2	60.5	43.2	47.6	80
L-AC-90-2424	1.1/2-11.1/2	1.1/2-11.1/2	67.1	52.8	65.1	70
L-AC-90-3232	1.1/2-11.1/2	1.1/2-11.1/2	76.2	60.7	71.4	70

L-L-90

NPTF MALE X NPTF MALE

NPTF MALE X NPTF MALE 90° ELBOW

Part Number	T1	T2	L1 (mm)	L2 (mm)	H1 (mm)	PN (bar)
L-L-90-0202	1/8-27	1/8-27	20	20	13	345
L-L-90-0204	1/8-27	1/4-18	22.9	27.7	14.3	275
L-L-90-0404	1/4-18	1/4-18	28	28	16	275
L-L-90-0406	1/4-18	3/8-18	30	31	21	210
L-L-90-0606	3/8-18	3/8-18	31	31	21	210
L-L-90-0608	3/8-18	1/2-14	33	37	24	210
L-L-90-0808	1/2-14	1/2-14	37	37	24	210
L-L-90-0812	1/2-14	3/4-14	40.9	40.4	27	170
L-L-90-1212	3/4-14	3/4-14	40	40	29	170
L-L-90-1616	1-11.5	1-11.5	50	50	35	140
L-L-90-2020	1.1/4-11.1/2	1.1/4-11.1/2	56.4	56.4	41.3	80

L-R-90

MALE NPTF X ORFS 90°

NPTF MALE X ORFS MALE 90° ELBOW

Part Number	NPTF Male Thread	ORFS Male Thread	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
L-R-90-0209	1/8-27	9/16-18	21.6	20.3	14.3	345
L-R-90-0409	1/4-18	9/16-18	21.6	28.5	14.3	275
L-R-90-0411	1/4-18	11/16-16	24.9	27.7	19.1	275

MY-UY-90

JIS METRIC MALE X JIS METRIC FEMALE
JIS MALE METRIC X JIS METRIC FEMALE 90°
ELBOW (KOMATSU STYLE)

Part Number	Metric Male Thread (A)	Metric Female Thread (B)	Thread Length - L2 (mm)	Thread Length - mm (L3)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
MY-UY-90-1414	M14-1.5	M14-1.5	29	29.5	14	19	350
MY-UY-90-1616	M16-1.5	M16-1.5	31.5	31	16	22	350
MY-UY-90-1818	M18-1.5	M18-1.5	33.8	34.1	19	24	350
MY-UY-90-2222	M22-1.5	M22-1.5	38	39.3	22	27	350
MY-UY-90-2424	M24-1.5	M24-1.5	41.2	43.1	24	30	350
MY-UY-90-3030	M30-1.5	M30-1.5	48	51.7	30	36	280

R-BP-90

ORFS MALE X BSP ADJUSTABLE
ORFS MALE X BSP ADJUSTABLE STUD 90° ELBOW

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
R-BP-90-0904	9/16-18	1/4-19	14	19	22	35	200
R-BP-90-1106	11/16-16	3/8-19	19	22	25	38	200
R-BP-90-1306	13/16-16	3/8-19	19	22	28	38	200
R-BP-90-1308	13/16-16	1/2-14	22	27	30	48	200
R-BP-90-1608	1-14	1/2-14	27	27	34	48	200
R-BP-90-1912	1.3/16-12	3/4-14	30	36	38	52	200
R-BP-90-2316	1.7/16-12	1-11	36	41	42	59	200

R-NP-90

ORFS MALE X UNO ADJUSTABLE

ORFS MALE X UNO ADJUSTABLE STUD 90° ELBOW

- SAE J1453

Part Number	T1	T2	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	PN (bar)
R-NP-90-0907	9/16-18	7/16-20	14	17	22	32	315
R-NP-90-0909	9/16-18	9/16-18	17	19	24	36	250
R-NP-90-1107	11/16-16	7/16-20	19	16	25	35	315
R-NP-90-1109	11/16-16	9/16-18	17	19	25	36	250
R-NP-90-1112	11/16-16	3/4-16	19	24	27	41	250
R-NP-90-1309	13/16-16	9/16-18	19	19	28	37	250
R-NP-90-1312	13/16-16	3/4-16	19	24	28	41	250
R-NP-90-1612	1-14	3/4-16	24	24	34	46	250
R-NP-90-1614	1-14	7/8-14	24	27	34	50	200
R-NP-90-1914	1.3/16-12	7/8-14	30	27	37	51	200
R-NP-90-1917	1.3/16-12	1.1/16-12	30	36	38	55	200
R-NP-90-2321	1.7/16-12	1.5/16-12	36	41	42	60	315
R-NP-90-2726	1.11/16-12	1.5/8-12	41	50	45	62	250

R-R-90

ORFS MALE X ORFS MALE

ORFS MALE X ORFS MALE 90° ELBOW

- ISO 8434-3

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
R-R-90-0909	9/16-18	9/16-18	22	22	14	630
R-R-90-1111	11/16-16	11/16-16	25	25	19	630
R-R-90-1313	13/16-16	13/16-16	28	28	19	630
R-R-90-1616	1-14	1-14	34	34	27	400
R-R-90-1919	1.3/16-12	1.3/16-12	38	38	30	400
R-R-90-2323	1.7/16-12	1.7/16-12	42	42	36	400
R-R-90-2727	1.11/16-12	1.11/16-12	45	45	41	250
R-R-90-3232	2-12	2-12	49	49	48	250

R-T-90

ORFS MALE X ORFS FEMALE

ORFS MALE X ORFS FEMALE SWIVEL NUT 90°

ELBOW

- ISO 8434-3

Part Number	ORFS Male Thread (T1)	ORFS Female Thread (T2)	L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
R-T-90-0909	9/16-18	9/16-18	22	27	14	17	630
R-T-90-1111	11/16-16	11/16-16	25	29	19	22	630
R-T-90-1313	13/16-16	13/16-16	28	38	19	24	630
R-T-90-1616	1-14	1-14	34	41	27	30	400
R-T-90-1919	1.3/16-12	1.3/16-12	38	47	30	36	400
R-T-90-2323	1.7/16-12	1.7/16-12	42	54	36	41	400
R-T-90-2727	1.11/16-12	1.11/16-12	45	58	41	50	250
R-T-90-3232	2-12	2-12	48.8	75.9	47.6	57.2	250

ML-ML-90

MET LIGHT MALE X MET LIGHT MALE

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT MALE 90° ELBOW

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	CH1 (mm)	PN (bar)
ML-ML-90-1212	M12-1.5	6	19	12	12	500
ML-ML-90-1414	M14-1.5	8	21	14	12	500
ML-ML-90-1616	M16-1.5	10	22	15	14	500
ML-ML-90-1818	M18-1.5	12	24	17	17	400
ML-ML-90-2222	M22-1.5	15	28	21	19	400
ML-ML-90-2626	M26-1.5	18	31	24	24	400
ML-ML-90-3030	M30-2	22	35	28	27	250
ML-ML-90-3636	M36-2	28	38	31	36	250
ML-ML-90-4545	M45-2	35	45	35	41	250
ML-ML-90-5252	M52-2	42	51	40	50	250

ML-UL-90

MET LIGHT MALE X MET LIGHT F/M

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT FEMALE SWIVEL NUT 90° ELBOW

Part Number	Metric Male Thread	Metric Female Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (Bar)
ML-UL-90-1212	M12-1.5	M12-1.5	6	19	12	26	12	14	500
ML-UL-90-1414	M14-1.5	M14-1.5	8	21	14	28	12	17	500
ML-UL-90-1616	M16-1.5	M16-1.5	10	22	15	29	14	19	500
ML-UL-90-1818	M18-1.5	M18-1.5	12	24	17	30	17	22	400
ML-UL-90-2222	M22-1.5	M22-1.5	15	28	21	33	19	27	400
ML-UL-90-2626	M26-1.5	M26-1.5	18	31	24	36	24	32	400
ML-UL-90-3030	M30-2	M30-2	22	35	28	39	27	36	250
ML-UL-90-3636	M36-2	M36-2	28	38	31	42	36	41	250
ML-UL-90-4545	M45-2	M45-2	35	45	35	42	41	50	250
ML-UL-90-5252	M52-2	M52-2	42	51	40	56	50	60	250

MS-MS-90

MET HEAVY MALE X MET HEAVY MALE
METRIC 24° CONE HEAVY MALE X METRIC 24°
CONE HEAVY MALE 90° ELBOW

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	CH1 (mm)	PN (Bar)
MS-MS-90-1414	M14-1.5	6	23	16	12	800
MS-MS-90-1616	M16-1.5	8	24	17	14	800
MS-MS-90-1818	M18-1.5	10	25	18	17	800
MS-MS-90-2020	M20-1.5	12	29	22	17	630
MS-MS-90-2222	M22-1.5	14	30	22	19	630
MS-MS-90-2424	M24-1.5	16	33	25	24	630
MS-MS-90-3030	M30-2	20	37	27	27	400
MS-MS-90-3636	M36-2	25	42	30	36	400
MS-MS-90-4242	M42-2	30	49	36	41	400
MS-MS-90-5252	M52-2	38	57	41	50	315

MS-US-90

MET HEAVY MALE X MET HEAVY F/M
METRIC 24° CONE HEAVY MALE X METRIC 24°
CONE HEAVY FEMALE SWIVEL NUT 90° ELBOW

Part Number	Metric Male Thread	Metric Female Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (Bar)
MS-US-90-1414	M14-1.5	M14-1.5	6	23	16	27	12	17	800
MS-US-90-1616	M16-1.5	M16-1.5	8	24	17	28	14	19	800
MS-US-90-1818	M18-1.5	M18-1.5	10	25	18	30	17	22	800
MS-US-90-2020	M20-1.5	M20-1.5	12	29	22	31	17	24	630
MS-US-90-2222	M22-1.5	M22-1.5	14	30	22	35	19	27	630
MS-US-90-2424	M24-1.5	M24-1.5	16	33	25	37	24	30	630
MS-US-90-3030	M30-2	M30-2	20	37	27	45	27	36	420
MS-US-90-3636	M36-2	M36-2	25	42	30	50	36	46	420
MS-US-90-4242	M42-2	M42-2	30	49	36	56	41	50	420
MS-US-90-5252	M52-2	M52-2	38	57	41	63	50	60	420

TW-G-90

TUBEWELD X JIC MALE 90° ELBOW
IMPERIAL TUBE WELD SOCKET X JIC MALE 90°
ELBOW

Part Number	suits tube	JIC Male Thread (A)	Weld Socket	L1 - mm	Hex A/F (CH1)
TW-G-90-0609	3/8	9/16-18		23	16
TW-G-90-0812	1/2	3/4-16		31.8	20.6
TW-G-90-1014	5/8	7/8-14		33	25
TW-G-90-1217	3/4	1.1/16-12		36	29
TW-G-90-1621	1	1.5/16-12		46	35.1
TW-G-90-2026	1.1/4	1.5/8-12		52.3	44.5

TEE ADAPTORS

A-A-A

BSPT MALE X BSPT MALE X BSPT MALE
BSPT MALE X BSPT MALE X BSPT MALE TEE

Part Number	T1/T2/T3	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
A-A-A-020202	1/8-28	12	20	20	20	345
A-A-A-040404	1/4-19	14	25	25	25	275
A-A-A-060606	3/8-19	16	31	31	31	210
A-A-A-080808	1/2-14	22	35	35	35	210
A-A-A-121212	3/4-14	27	40	40	40	170
A-A-A-161616	1-11	35	47	47	47	140
A-A-A-202020	1.1/4-11	41	55	55	55	80
A-A-A-242424	1.1/2-11	50	60	60	60	70

A-A-C

BSPT MALE X BSPT MALE X BSP FEMALE
BSPT MALE X BSPT MALE X BSP 60° CONE FEMALE
SWIVEL NUT BRANCH TEE

Part Number	T1/T2/T3	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
A-A-C-040404	1/4-19	14	19	25	25	20	275
A-A-C-060606	3/8-19	19	22	31	31	30	210
A-A-C-080808	1/2-14	22	27	35	35	35	210
A-A-C-121212	3/4-14	27	32	40	40	37	170
A-A-C-161616	1-11	35	41	46	46	42	140

A-C-A

BSPT MALE X BSP FEMALE X BSPT MALE
 BSPT MALE X BSP 60° CONE FEMALE SWIVEL NUT
 X BSPT MALE RUN TEE

Part Number	T1/T2/T3	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
A-C-A-040404	1/4-19	14	19	25	20	25	275
A-C-A-060606	3/8-19	19	22	31	30	31	210
A-C-A-080808	1/2-14	22	27	35	35	35	210
A-C-A-121212	3/4-14	27	32	40	42	40	170
A-C-A-161616	1-11	35	41	47	47	47	140
A-C-A-202020	1.1/4-11	41	50	55	54	55	80

AC-AC-AC

NPTF FEMALE X NPTF FEMALE X NPTF FEMALE
 NPTF FIXED FEMALE X NPTF FIXED FEMALE X NPTF
 FIXED FEMALE TEE

- SAE J514

Part Number	A	L1 (mm)	CH1 (mm)	PN (bar)
AC-AC-AC-020202	1/8-27	16.76	16	345
AC-AC-AC-040404	1/4-18	22.35	19	275
AC-AC-AC-060606	3/8-18	25.91	22	210
AC-AC-AC-080808	1/2-14	31.24	29	210
AC-AC-AC-121212	3/4-14	34.54	35	170
AC-AC-AC-161616	1-11.1/2	41.15	41	140
AC-AC-AC-202020	1.1/4-11.1/2	43	48	80

AC-AC-L

NPTF FEMALE X NPTF FEMALE X NPTF MALE
NPTF FIXED FEMALE X NPTF FIXED FEMALE X NPTF
MALE BRANCH TEE

Part Number	NPTF Female Thread (A)	NPTF Female Thread (A)	NPTF Male Thread (B)	Overall Length - L1 (mm)	L2 (mm)	Hex A/F - CH1 (mm)	PN (bar)
AC-AC-L-040404	1/4-18	1/4-18		44.7	27.7	19	275
AC-AC-L-060606	3/8-18	3/8-18		51.8	31	22.2	210
AC-AC-L-080808	1/2-18	1/2-18		62.5	37.3	27	210
AC-AC-L-121212	3/4-14	3/4-14		69.1	40.4	33.3	170
AC-AC-L-161616	1-11.1/2	1-11.1/2		82.3	50	41.3	140

A-E-E

BSPT MALE X BSPT FEMALE X BSPT FEMALE
BSPT MALE X BSPT FIXED FEMALE X BSPT FIXED
FEMALE RUN TEE

Part Number	T1/T2/T3	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
A-E-E-020202	1/8-28	16	20	24	20	345
A-E-E-040404	1/4-19	19	28	22	22	275
A-E-E-060606	3/8-19	22	31	26	26	210
A-E-E-080808	1/2-14	27	37	31	31	210
A-E-E-121212	3/4-14	35	44	34	34	170
A-E-E-161616	1-11	41	52	42	42	140

A-G-G

BSPT MALE X JIC MALE X JIC MALE

BSPT MALE X JIC MALE X JIC MALE RUN TEE

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	PN (bar)
A-G-G-020707	1/8-28	7/16-20	23	20	14	345
A-G-G-040707	1/4-19	7/16-20	24	28	14	275
A-G-G-040909	1/4-19	9/16-18	28	28	14	275
A-G-G-060909	3/8-19	9/16-18	30	31	19	210
A-G-G-061212	3/8-19	3/4-16	32	31	19	210
A-G-G-081212	1/2-14	3/4-16	34	38	22	210
A-G-G-081414	1/2-14	7/8-14	37	38	22	210
A-G-G-121717	3/4-14	1.1/16-12	42	40	27	170
A-G-G-162121	1-11	1.5/16-12	50	49	49	140

B-C-B

BSP MALE X BSP FEMALE X BSP MALE

BSP MALE X BSPP FEMALE SWIVEL NUT X BSP
MALE RUN TEE

- ISO 8434-6

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
B-C-B-040404	1/4-19	1/4-19	26	33	14	19	400
B-C-B-060606	3/8-19	3/8-19	29	37	19	22	400
B-C-B-080808	1/2-14	1/2-14	34	43	22	27	350
B-C-B-121212	3/4-14	3/4-14	41	54	27	32	315
B-C-B-161616	1-11	1-11	45	61	33	41	250

E-E-E

BSPT FEMALE X BSPT FEMALE X BSPT FEMALE
BSPT FIXED FEMALE X BSPT FIXED FEMALE X BSPT
FIXED FEMALE TEE

Part Number	A	L1 (mm)	CH1 (mm)	PN (bar)
E-E-E-020202	1/8-28	17	14	345
E-E-E-040404	1/4-19	23	23	275
E-E-E-060606	3/8-19	25	27	210
E-E-E-080808	1/2-14	29	33	210
E-E-E-121212	3/4-14	34	39	170
E-E-E-161616	1-11	38	47	140
E-E-E-202020	1.1/4-11	45	53	80
E-E-E-242424	1.1/2-11	51	63	70

G-BP-G

JIC MALE X BSP ADJUSTABLE X JIC MALE
JIC MALE X BSP ADJUSTABLE STUD X JIC MALE
RUN TEE

- ISO 8434-2

Part Number	T1	T2	T3	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-BP-G-070407	7/16-20	1/4-19		14	19	27	32	27	200
G-BP-G-090409	9/16-18	1/4-19		14	19	27	31	27	200
G-BP-G-090609	9/16-18	3/8-19		19	22	29	37	29	200
G-BP-G-120612	3/4-16	3/8-19		19	22	32	37	32	200
G-BP-G-120812	3/4-16	1/2-14		22	27	35	43	35	200
G-BP-G-140814	7/8-14	1/2-14		22	27	38	44	38	200
G-BP-G-171217	1.1/16-12	3/4-14		27	36	44	50	44	200
G-BP-G-211621	1.5/16-12	1-11		36	41	49	53	49	200

G-G-A

JIC MALE X JIC MALE X BSPT MALE

JIC FLARE MALE X JIC FLARE MALE X BSPT MALE

BRANCH TEE

Part Number	T1	T2	T3	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-G-A-070702	7/16-20	7/16-20		12	23	23	20	345
G-G-A-070704	7/16-20	7/16-20		14	27	27	27	275
G-G-A-090904	9/16-18	9/16-18		14	27	27	27	275
G-G-A-090906	9/16-18	9/16-18		19	29	29	31	210
G-G-A-121206	3/4-16	3/4-16		19	32	32	31	210
G-G-A-121208	3/4-16	3/4-16		22	34	34	35	210
G-G-A-141406	7/8-14	7/8-14		26.7	37.6	37.6	35.6	210
G-G-A-141408	7/8-14	7/8-14		22	36	36	35	210
G-G-A-141412	7/8-14	7/8-14		26.2	39	39	40	170
G-G-A-171712	1.1/16-12	1.1/16-12		27	42	42	40	170
G-G-A-212116	1.5/16-12	1.5/16-12		35	46	46	47	140

G-G-BP

JIC MALE X JIC MALE X BSP ADJUSTABLE
JIC 37° FLARE MALE X JIC 37° FLARE MALE X BSP
ADJUSTABLE STUD BRANCH TEE

- ISO 8434-2

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
G-G-BP-070702	7/16-20	1/8-28	23	26	11	14	200
G-G-BP-070704	7/16-20	1/4-19	26.6	26.6	14	19	200
G-G-BP-090904	9/16-18	1/4-19	27.5	32	14	19	200
G-G-BP-090906	9/16-18	3/8-19	28.5	28.5	16	22	200
G-G-BP-121206	3/4-16	3/8-19	32	37	19	22	200
G-G-BP-121208	3/4-16	1/2-14	34	43	22	27	200
G-G-BP-141408	7/8-14	1/2-14	37	43	22	27	200
G-G-BP-171712	1.1/16-12	3/4-14	42	49	27	36	200
G-G-BP-212116	1.5/16-12	1-11	46	52	33	41	200
G-G-BP-262620	1.5/8-12	1.1/4-11	52	52	41.8	50	160
G-G-BP-303024	1.7/8-12	1.1/2-11	59.2	59.2	47.4	60	140

G-G-G

JIC MALE X JIC MALE X JIC MALE
JIC MALE X JIC MALE X JIC MALE TEE

- ISO 8434-2

Part Number	T1	T2	T3	H1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-G-G-070707	7/16-20	7/16-20		11	25	25	25	350
G-G-G-080808	1/2-20	1/2-20		14	26	26	26	350
G-G-G-090909	9/16-18	9/16-18		14	27	27	27	350
G-G-G-121212	3/4-16	3/4-16		19	32	32	32	310
G-G-G-121214	3/4-16	3/4-16		22.2	35	35	38	240
G-G-G-121217	3/4-16	3/4-16		28.6	38	38	44	240
G-G-G-141414	7/8-14	7/8-14		22	38	38	38	240
G-G-G-171712	1.1/16-12	1.1/16-12		27	44	44	38	240
G-G-G-171714	1.1/16-12	1.1/16-12		28.6	44	44	41	240
G-G-G-171717	1.1/16-12	1.1/16-12		27	44	44	44	240
G-G-G-212121	1.5/16-12	1.5/16-12		33	49	49	49	210
G-G-G-262626	1.5/8-12	1.5/8-12		41	57	57	57	170
G-G-G-303030	1.7/8-12	1.7/8-12		48	63	63	63	140

G-G-GK

JIC MALE X JIC MALE X JIC BULKHEAD

JIC 37° FLARE MALE X JIC 37° FLARE MALE X JIC

37° FLARE BULKHEAD BRANCH TEE

- ISO 8434-2

Part Number	A	B	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-G-GK-070707	7/16-20	7/16-20	25	40	28	13	18	350
G-G-GK-090909	9/16-18	9/16-18	28	46	30	16	21	350
G-G-GK-121212	3/4-16	3/4-16	35	54	35	21	25	310
G-G-GK-141414	7/8-14	7/8-14	40	61	39	24	29	240
G-G-GK-171717	1.1/16-12	1.1/16-12	45	68	43	29	35	240
G-G-GK-212121	1.5/16-12	1.5/16-12	48	71	49	49	71	210

G-G-J

JIC MALE X JIC MALE X JIC FEMALE

JIC 37° FLARE MALE X JIC 37° FLARE MALE X JIC

37° FLARE FEMALE SWIVEL NUT BRANCH TEE

- ISO 8434-2

Part Number	T1	T2	T3	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-G-J-070707	7/16-20	7/16-20		12	14	23	23	17	350
G-G-J-080808	1/2-20	1/2-20		14	17	27	27	22	350
G-G-J-090909	9/16-18	9/16-18		14	19	27	27	22	350
G-G-J-121212	3/4-16	3/4-16		19	22	32	32	24	310
G-G-J-141414	7/8-14	7/8-14		22	27	36	36	28	240
G-G-J-171717	1.1/16-12	1.1/16-12		27	32	42	42	30	240
G-G-J-212121	1.5/16-12	1.5/16-12		35	41	46	46	36	210
G-G-J-262626	1.5/16-12	1.5/16-12		41	50	53	53	43	210
G-G-J-303030	1.7/8-12	1.7/8-12		48	55	64	64	54	140

G-GK-G

JIC MALE X JIC BULKHEAD X JIC MALE
JIC MALE X JIC MALE BULKHEAD X JIC MALE RUN
TEE

Part Number	JIC Male Thread	JIC Male Thread	JIC Male Thread	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
G-GK-G-070707	7/16-20	7/16-20		24.6	40.4	24.6	11.1	17.5	350
G-GK-G-090909	9/16-18	9/16-18		27.7	46	27.7	14.3	20.6	350
G-GK-G-121212	3/4-16	3/4-16		34.5	53.6	34.5	19.1	25.4	310
G-GK-G-141414	7/8-14	7/8-14		39.6	60.7	39.6	22.2	28.6	240
G-GK-G-171717	1.1/16-12	1.1/16-12		45.2	67.8	45.2	27	34.9	240
G-GK-G-212121	1.5/16-12	1.5/16-12		50.2	70.6	50.5	32.7	40.8	210

G-G-L

MALE JIC X JIC MALE X NPTF MALE
JIC MALE X JIC MALE X NPTF MALE BRANCH TEE

Part Number	JIC Male Thread	NPTF Male Thread	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-G-L-070702	7/16-20	1/8-27	22.6	22.6	19.8	11.1	345
G-G-L-070704	7/16-20	1/4-18	26.7	26.7	27.7	14.3	275
G-G-L-090904	9/16-18	1/4-18	26.9	26.9	27.7	14.3	275
G-G-L-090906	9/16-18	3/8-18	29.5	31	31	14.5	210
G-G-L-121206	3/4-16	3/8-18	31.8	31.8	31	19.1	210
G-G-L-121208	3/4-16	1/2-14	33.8	33.8	37.3	22.2	210
G-G-L-141408	7/8-14	1/2-14	36.8	36.8	37.3	22.2	210
G-G-L-171712	1.1/16-12	3/4-14	42.2	42.2	40.4	27	170
G-G-L-212116	1.5/16-12	1-11.1/2	46	46	50	33.3	140

G-G-NP

JIC MALE X JIC MALE X UNO ADJUSTABLE
JIC MALE X JIC MALE X UNO ADJUSTABLE STUD
BRANCH TEE

- ISO 8434-2

Part Number	A	B	L1 (mm)	L2 (mm)	CH1 (mm)	CH2 (mm)	PN (bar)
G-G-NP-070707	7/16-20	7/16-20	23	26	11	14	315
G-G-NP-090909	9/16-18	9/16-18	27	32	14	18	250
G-G-NP-090912	9/16-18	3/4-16	29	29	19.1	22.2	250
G-G-NP-121212	3/4-16	3/4-16	32	37	19	22	250
G-G-NP-121214	3/4-16	7/8-14	33.3	33.3	23.8	25.4	200
G-G-NP-141212	7/8-14 X 3/4-16	3/4-16	35.7	34.5	23.7	22	240
G-G-NP-141412	7/8-14	3/4-16	36.8	36.8	23.8	22.2	240
G-G-NP-141414	7/8-14	7/8-14	37	43	22	25	200
G-G-NP-171717	1.1/16-12	1.1/16-12	42	49	27	32	200
G-G-NP-212121	1.5/16-12	1.5/16-12	46	52	33	38	160
G-G-NP-262626	1.5/8-12	1.5/8-12	52.3	52.3	41.3	47.6	125

G-J-G

JIC MALE X JIC FEMALE X JIC MALE

JIC MALE X JIC FEMALE SWIVEL NUT X JIC MALE

RUN TEE

- ISO 8434-2

Part Number	T1	T2	T3	H1 (mm)	H2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	PN (bar)
G-J-G-070707	7/16-20	7/16-20		12	14	23	17	23	350
G-J-G-080808	1/2-20	1/2-20		14	17	27	22	27	350
G-J-G-090909	9/16-18	9/16-18		14	19	27	22	27	350
G-J-G-121212	3/4-16	3/4-16		19	22	32	24	32	310
G-J-G-141414	7/8-14	7/8-14		22	27	36	28	36	240
G-J-G-171717	1.1/16-12	1.1/16-12		27	32	42	30	42	240
G-J-G-212121	1.5/16-12	1.5/16-12		35	41	46	36	46	210
G-J-G-262626	1.5/8-12	1.5/8-12		41	50	55	45	55	170
G-J-G-303030	1.7/8-12	1.7/8-12		48	55	63	53	63	140

G-L-G

MALE JIC X NPTF MALE X JIC MALE

JIC MALE X NPTF MALE X JIC MALE RUN TEE

Part Number	JIC Male Thread	NPTF Male Thread	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
G-L-G-070207	7/16-20	1/8-27	22.6	19.8	22.6	11.1	345
G-L-G-070407	7/16-20	1/4-18	26.7	27.7	26.7	14.3	275
G-L-G-090409	9/16-18	1/4-18	26.9	27.7	26.9	14.3	275
G-L-G-090609	9/16-18	3/8-18	29	31	29	19.1	210
G-L-G-120612	3/4-16	3/8-18	31.8	31	31.8	19.1	210
G-L-G-120812	3/4-16	1/2-14	33.8	37.3	33.8	22.2	210
G-L-G-140814	7/8-14	1/2-14	36.8	37.3	37.3	22.2	210
G-L-G-171217	1.1/16-12	3/4-14	42.2	40.4	42.2	27	170
G-L-G-211621	1.5/16-12	1-11.1/2	46	50	46	33.3	140

G-NP-G

JIC MALE X UNO ADJUSTABLE X JIC MALE

JIC MALE X UNO ADJUSTABLE STUD X JIC MALE

RUN TEE

- ISO 8434-2

Part Number	T1/T3	T2	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	PN (bar)
G-NP-G-070707	7/16-20	7/16-12	22.6	26.2	22.6	11	14	315
G-NP-G-090909	9/16-18	9/16-18	26.9	31.7	26.9	14	18	250
G-NP-G-121212	3/4-16	3/4-16	31.7	36.9	31.7	19	22	250
G-NP-G-141414	7/8-14	7/8-14	36.9	43.2	36.9	22	25	200
G-NP-G-171717	1.1/16-12	1.1/16-12	42.2	45.2	42.2	27	32	200
G-NP-G-212121	1.5/16-12	1.5/16-12	46	52	46	33.3	38.1	160
G-NP-G-262626	1.5/8-12	1.5/8-12	52.3	57.2	52.3	41.3	47.6	125

L-AC-AC

NPTF MALE X NPTF FEMALE X NPTF FEMALE
NPTF MALE X NPTF FEMALE X NPTF FEMALE RUN
TEE

Part Number	NPTF Male Thread (A)	NPTF Female Thread (B)	L1 (mm)	L2 (mm)	L3 (mm)	Hex A/F - CH1 (mm)	PN (bar)
L-AC-AC-020202	1/8-27	1/8-27	19.8	16.8	16.8	14.3	345
L-AC-AC-040404	1/4-18	1/4-18	27.7	22.4	22.4	19.1	275
L-AC-AC-060606	3/8-18	3/8-18	31	25.9	25.9	22.2	210
L-AC-AC-080808	1/2-14	1/2-14	37.3	31.2	31.2	27	210
L-AC-AC-121212	3/4-14	3/4-14	40.4	35.1	35.1	33.3	170
L-AC-AC-161616	1-11.1/2	1-11.1/2	50	41.1	41.1	41.3	140
L-AC-AC-202020	1.1/4-11.1/2	1.1/4-11.1/2	60.5	43.2	43.2	47.6	80

L-L-L

NPTF MALE X NPTF MALE X NPTF MALE
NPT MALE X NPT MALE X NPT MALE TEE

Part Number	NPTF Male Thread (A)	L1 (mm)	Hex A/F (CH1)	PN (bar)
L-L-L-040404	1/4-18	27.7	14.3	275
L-L-L-060606	3/8-18	31	19.1	210
L-L-L-080808	1/2-18	37.3	22.2	210

MY-UY-MY

JIS MALE MET X JIS FEMALE MET X JIS MALE MET
JIS MET MALE X JIS MET FEMALE X JIS MET MALE
RUN TEE (KOMATSU STYLE)

Part Number	Metric Male Thread (A)	Metric Female Thread (B)	Overall Length mm - L1 (mm)	Thread Length - mm (L2)	Thread Length - L3 (mm)	Hex A/F - CH1 (mm)	Hex A/F - CH2 (mm)	PN (bar)
MY-UY-MY-141414	M14-1.5	M14-1.5	53	26.5	26.5	19	14	350
MY-UY-MY-161616	M16-1.5	M16-1.5	59	29.5	29.5	22	16	350
MY-UY-MY-181818	M18-1.5	M18-1.5	61.6	30.8	30.8	24	19	350
MY-UY-MY-222222	M22-1.5	M22-1.5	71	35.5	35.5	27	22	350
MY-UY-MY-242424	M24-1.5	M24-1.5	74	37	37	32	22	350
MY-UY-MY-303030	M30-1.5	M30-1.5	90	45	45	36	30	280

R-R-R

ORFS MALE X ORFS MALE X ORFS MALE
ORFS MALE X ORFS MALE X ORFS MALE TEE

- ISO 8434-3

Part Number	T1/T2/T3	L1/L2/L3 (mm)	H1 (mm)	PN (bar)
R-R-R-090909	9/16-18	22	14	630
R-R-R-111111	11/16-16	25	19	630
R-R-R-131313	13/16-16	28	19	630
R-R-R-161616	1-14	33	27	400
R-R-R-191919	1.3/16-12	38	30	400
R-R-R-232323	1.7/16-12	42	36	400
R-R-R-272727	1.11/16-12	45	41	250

R-R-T

ORFS MALE X ORFS MALE X ORFS FEMALE
ORFS MALE X ORFS MALE X ORFS FEMALE SWIVEL
NUT BRANCH TEE

- ISO 8434-3

Part Number	T1/T2	T3	L1/L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	PN (bar)
R-R-T-090909	9/16-18	9/16-18	22	27	14	17	630
R-R-T-111111	11/16-16	11/16-16	25	29	19	22	630
R-R-T-131313	13/16-16	13/16-16	28	38	19	24	630
R-R-T-161616	1-14	1-14	34	41	27	30	400
R-R-T-191919	1.3/16-12	1.3/16-12	38	47	30	36	400
R-R-T-232323	1.7/16-12	1.7/16-12	42	54	36	41	400
R-R-T-272727	1.11/16-12	1.11/16-12	45	58	41	50	250

R-T-R

ORFS MALE X ORFS FEMALE X ORFS MALE
ORFS MALE X ORFS FEMALE SWIVEL NUT X ORFS
MALE RUN TEE

- ISO 8434-3

Part Number	T1/T3	T2	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	PN (bar)
R-T-R-090909	9/16-18	9/16-18	22	27	14	14	17	630
R-T-R-111111	11/16-16	11/16-16	25	29	19	19	22	630
R-T-R-131313	13/16-16	13/16-16	28	38	19	19	24	630
R-T-R-161616	1-14	1-14	34	41	27	27	30	400
R-T-R-191919	1.3/16-12	1.3/16-12	38	47	30	30	36	400
R-T-R-232323	1.7/16-12	1.7/16-12	42	54	36	36	41	400
R-T-R-272727	1.11/16-12	1.11/16-12	45	58	41	41	50	250
R-T-R-323232	2-12	2-12	54	68	54	50	60	250

ML-ML-ML

MET LIGHT MALE TEE

METRIC 24° CONE LIGHT MALE TEE

- ISO 8434-1

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	CH1 (mm)	PN (bar)
ML-ML-ML-121212	M12-1.5	6	19	12	12	500
ML-ML-ML-141414	M14-1.5	8	21	14	12	500
ML-ML-ML-161616	M16-1.5	10	22	15	14	500
ML-ML-ML-181818	M18-1.5	12	24	17	17	400
ML-ML-ML-222222	M22-1.5	15	28	21	19	400
ML-ML-ML-262626	M26-1.5	18	31	24	24	400
ML-ML-ML-303030	M30-2	22	35	28	27	250
ML-ML-ML-363636	M36-2	28	38	31	36	250
ML-ML-ML-454545	M45-2	35	45	35	41	250
ML-ML-ML-525252	M52-2	42	51	40	50	250

ML-ML-UL

MET LIGHT MALE X MET LIGHT F/M

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT FEMALE SWIVEL NUT BRANCH TEE

- ISO 8434-1

Part Number	Metric Male Thread	Metric Female Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
ML-ML-UL-121212	M12-1.5	M12-1.5	6	19	12	26	12	500
ML-ML-UL-141414	M14-1.5	M14-1.5	8	21	14	28	12	500
ML-ML-UL-161616	M16-1.5	M16-1.5	10	22	15	29	14	500
ML-ML-UL-181818	M18-1.5	M18-1.5	12	24	17	30	17	400
ML-ML-UL-222222	M22-1.5	M22-1.5	15	28	21	33	19	400
ML-ML-UL-262626	M26-1.5	M26-1.5	18	31	24	36	24	400
ML-ML-UL-303030	M30-2	M30-2	22	35	28	39	27	250
ML-ML-UL-363636	M36-2	M36-2	28	38	30.5	41.5	36	250
ML-ML-UL-454545	M45-2	M45-2	35	45	34.5	51.5	41	250
ML-ML-UL-525252	M52-2	M52-2	42	51	40	56	50	250

ML-UL-ML

MET LIGHT MALE X MET LIGHT F/M

METRIC 24° CONE LIGHT MALE X METRIC 24°

CONE LIGHT FEMALE SWIVEL NUT RUN TEE

Part Number	Metric Male Thread - D2	Metric Female Thread - D1	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (Bar)
ML-UL-ML-121212	M12-1.5	M12-1.5	6	19	12	26	12	14	500
ML-UL-ML-141414	M14-1.5	M14-1.5	8	21	14	28	12	17	500
ML-UL-ML-161616	M16-1.5	M16-1.5	10	22	15	29	14	19	500
ML-UL-ML-181818	M18-1.5	M18-1.5	12	24	17	30	17	22	400
ML-UL-ML-222222	M22-1.5	M22-1.5	15	28	21	33	19	27	400
ML-UL-ML-262626	M26-1.5	M26-1.5	18	31	24	36	24	32	400
ML-UL-ML-303030	M30-2	M30-2	22	35	28	39	27	36	250
ML-UL-ML-363636	M36-2	M36-2	28	38	31	42	36	41	250
ML-UL-ML-454545	M45-2	M45-2	35	45	34.5	51.5	41	50	250

MS-MS-MS

MET HEAVY MALE TEE

METRIC 24° CONE HEAVY MALE TEE

Part Number	Metric Male Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (Bar)
MS-MS-MS-141414	M14-1.5	6	23	16	31	12	800
MS-MS-MS-161616	M16-1.5	8	24	17	32	14	800
MS-MS-MS-181818	M18-1.5	10	25	18	34	17	800
MS-MS-MS-202020	M20-1.5	12	29	22	38	17	630
MS-MS-MS-222222	M22-1.5	14	30	22	40	19	630
MS-MS-MS-242424	M24-1.5	16	33	25	43	24	630
MS-MS-MS-303030	M30-2	20	37	27	48	27	420
MS-MS-MS-363636	M36-2	25	42	30	54	36	420
MS-MS-MS-424242	M42-2	30	49	36	62	41	420
MS-MS-MS-525252	M52-2	38	57	41	72	50	420

MS-MS-US

MET HEAVY MALE X MET HEAVY F/M

METRIC 24° CONE HEAVY MALE X METRIC 24°

CONE HEAVY FEMALE SWIVEL NUT BRANCH TEE

Part Number	Metric Male Thread	Metric Female Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	PN (bar)
MS-MS-US-141414	M14-1.5	M14-1.5	6	23	16	27	12	800
MS-MS-US-161616	M16-1.5	M16-1.5	8	24	17	28	14	800
MS-MS-US-181818	M18-1.5	M18-1.5	10	25	18	30	17	800
MS-MS-US-202020	M20-1.5	M20-1.5	12	29	22	31	17	630
MS-MS-US-222222	M22-1.5	M22-1.5	14	30	22	35	19	630
MS-MS-US-242424	M24-1.5	M24-1.5	16	33	25	37	24	630
MS-MS-US-303030	M30-2	M30-2	20	37	27	45	27	420
MS-MS-US-363636	M36-2	M36-2	25	42	30	50	36	420
MS-MS-US-424242	M42-2	M42-2	30	49	36	56	41	420
MS-MS-US-525252	M52-2	M52-2	38	57	41	63	50	420

MS-US-MS

MET HEAVY MALE X MET HEAVY F/M

METRIC 24° CONE HEAVY MALE X METRIC 24°

CONE HEAVY FEMALE SWIVEL NUT RUN TEE

Part Number	Metric Male Thread	Metric Female Thread	Suits Tube Diameter (mm)	L1 (mm)	L2 (mm) - mm	L3 (mm) - mm	CH1 (mm)	CH2 (mm)	PN (bar)
MS-US-MS-141414	M14-1.5	M14-1.5	6	23	16	27	12	17	800
MS-US-MS-161616	M16-1.5	M16-1.5	8	24	17	27.5	14	19	800
MS-US-MS-181818	M18-1.5	M18-1.5	10	25	18	31	17	22	800
MS-US-MS-202020	M20-1.5	M20-1.5	12	29	22	31	17	24	630
MS-US-MS-222222	M22-1.5	M22-1.5	14	30	22	35	19	27	630
MS-US-MS-242424	M24-1.5	M24-1.5	16	33	25	37	24	30	630
MS-US-MS-303030	M30-2	M30-2	20	37	27	45	27	36	420
MS-US-MS-363636	M36-2	M36-2	25	42	30	50	36	46	420
MS-US-MS-424242	M42-2	M42-2	30	49	36	56	41	50	420
MS-US-MS-525252	M52-2	M52-2	38	57	41	63	50	60	420

CROSS ADAPTOR

F-F-F-F

BSPP FEMALE EQUAL CROSS

BSPP EQUAL FEMALE CROSS FORGED

Part Number	BSPP Female Thread (A)	L1 (mm)	Hex A/F (CH1)	PN (bar)
F-F-F-F-04040404	1/4-19	22.5	19	400
F-F-F-F-06060606	3/8-19	26	24	400
F-F-F-F-08080808	1/2-14	32	30	350
F-F-F-F-12121212	3/4-14	34	33	315

G-G-G-G

JIC MALE EQUAL CROSS ADAPTOR

JIC EQUAL MALE CROSS WITH 37° CONE

Part Number	JIC Male Thread (A)	L1 (mm)	Hex A/F (CH1)	PN (bar)
G-G-G-G-07070707	7/16-20	23.4	11.1	350
G-G-G-G-09090909	9/16-18	26.9	14.3	350
G-G-G-G-12121212	3/4-16	31.75	19	310
G-G-G-G-14141414	7/8-14	36.8	23.8	240
G-G-G-G-17171717	1.1/16-12	42.2	27	240
G-G-G-G-21212121	1.5/16-12	46	33.3	210