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SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

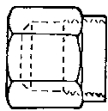
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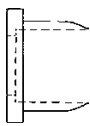
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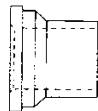
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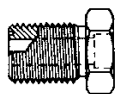
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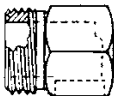


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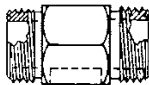
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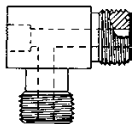
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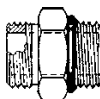
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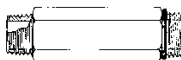
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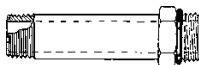
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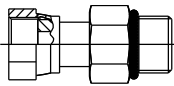


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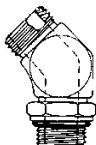


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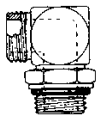
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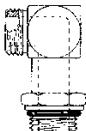
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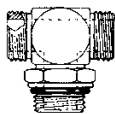
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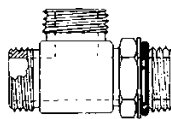
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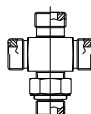
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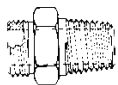


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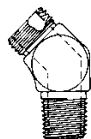


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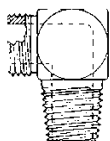
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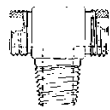
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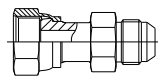


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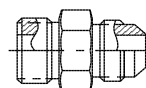


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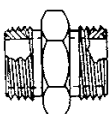


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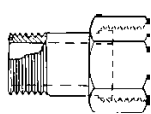


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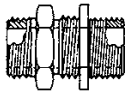
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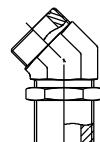
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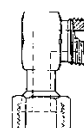
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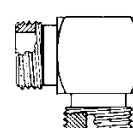
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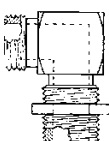


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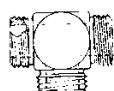


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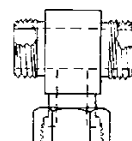
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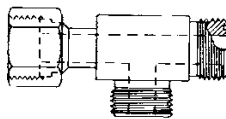
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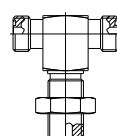
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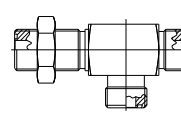
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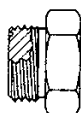


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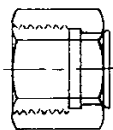


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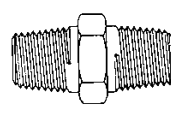
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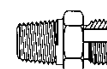
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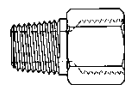


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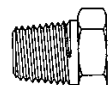
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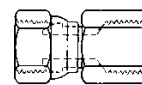
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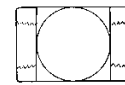
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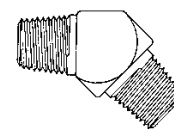
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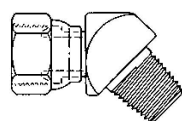


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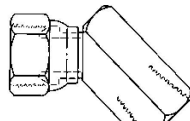


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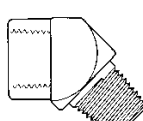
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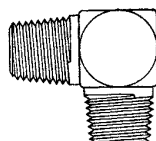
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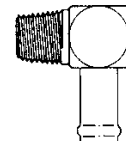
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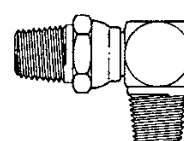
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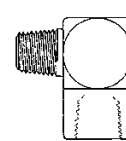
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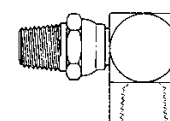
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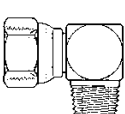


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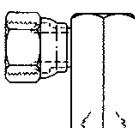


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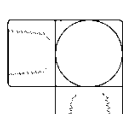
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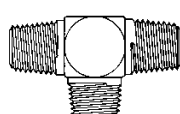
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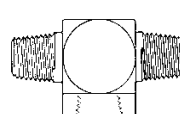
2048
page 229



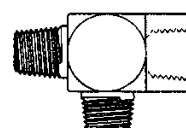
2087
page 230



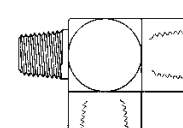
2257
page 230



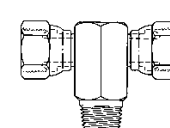
2256
page 230



2093
page 231



2092
page 231



2254
page 231

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

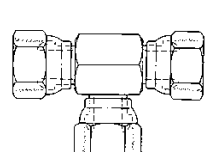
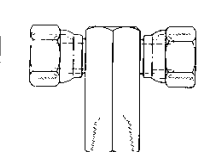
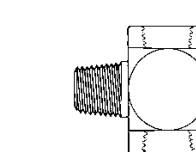
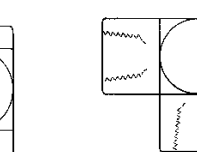
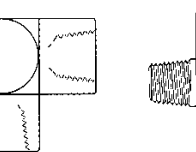
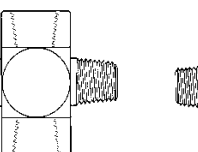
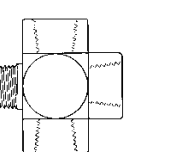
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

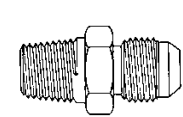
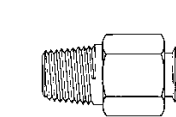
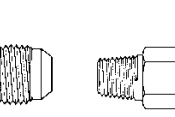
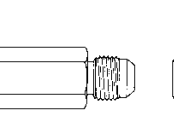
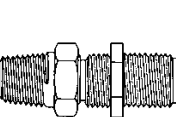
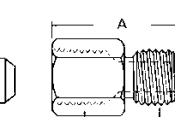
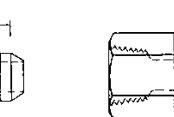
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

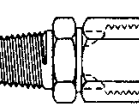
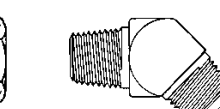
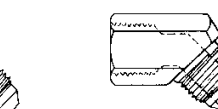
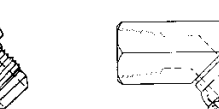
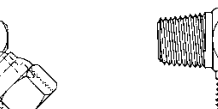
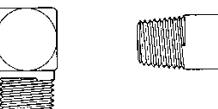
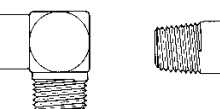
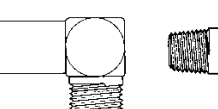
PIPE TO PIPE (CONTINUED)

						
2255 page 231	2253 page 231	2091 page 232	2090 page 232	208006 page 232	208007 page 232	2080 page 232

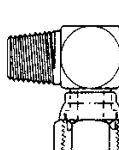
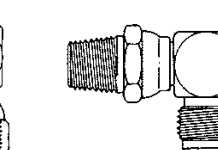
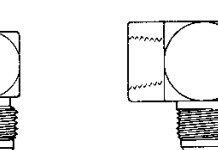
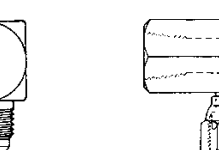
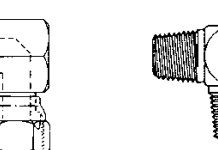
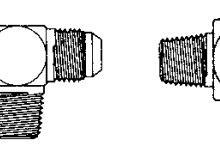
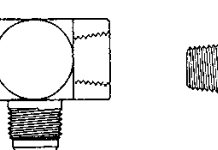
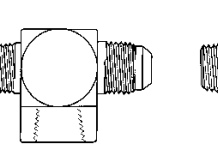
PIPE TO 37° FLARE

						
2021 page 233	202113 page 234	202114 page 234	2240 page 233	2022 page 235	2239 page 234	2242 page 235

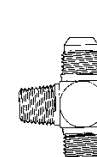
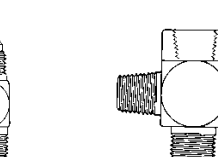
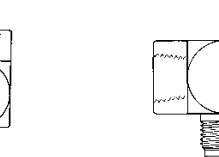
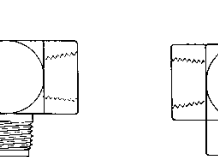
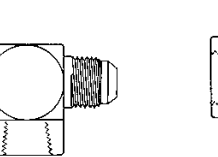
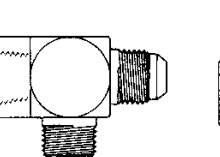
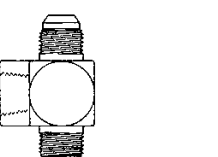
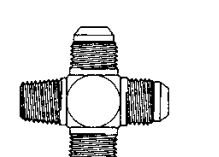
PIPE TO 37° FLARE (CONTINUED)

							
2018 page 234	2023 page 236	2044 page 236	2243 page 236	2024 page 237	202411 page 237	202413 page 238	202414 page 238

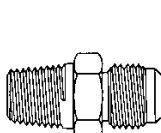
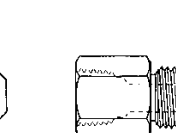
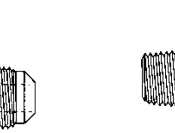
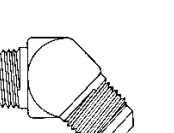
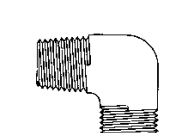
PIPE TO 37° FLARE (CONTINUED)

							
2250 page 238	2249 page 239	2025 page 239	2244 page 239	203007 page 239	203301 page 240	203103 page 240	2028 page 240

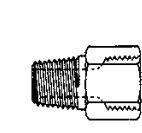
PIPE TO 37° FLARE (CONTINUED)

							
2030 page 241	203006 page 240	202901 page 241	203104 page 241	2029 page 242	2031 page 242	202003 page 242	202006 page 242

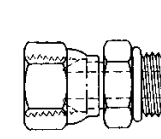
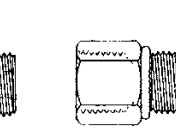
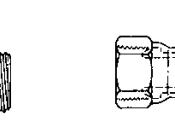
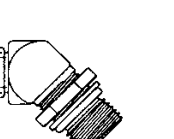
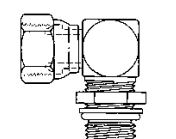
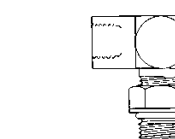
PIPE TO 45° FLARE

				
2000 page 243	2001 page 243	2007 page 243	2003 page 244	2002 page 244

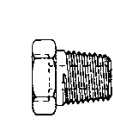
PIPE TO SAE O-RING BOSS


2246 page 244

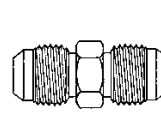
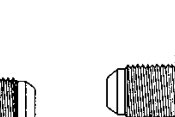
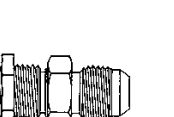
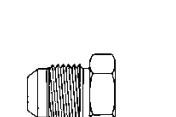
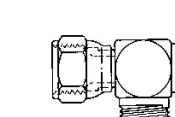
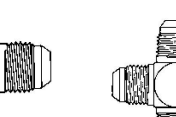
PIPE TO SAE O-RING BOSS (CONTINUED)

					
2066 page 245	2216 page 245	2067 page 245	2068 page 246	206801 page 246	206804 page 246

PIPE TO BRAZE AND WELD

	
73056 page 246	FF1159 page 246

SAE 37° (JIC) FLARE UNION

						
2027 page 247	202712 page 247	2041 page 248	900599 page 248	203102 page 252	2020 page 253	210212 page 253

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

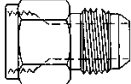
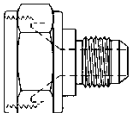
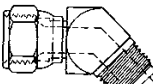
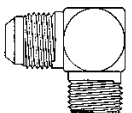
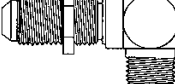
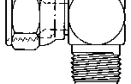
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

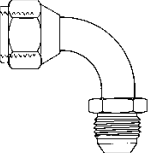
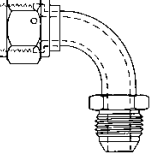
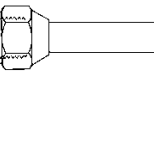
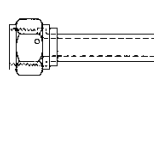
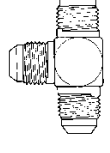
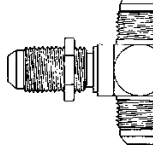
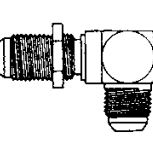
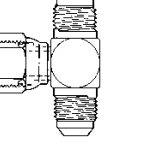
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

SAE 37° (JIC) FLARE UNION (CONTINUED)

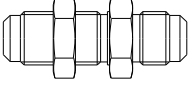
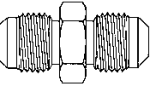
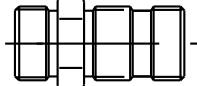
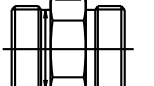
							
210292 page 248	2215 page 249	221501 page 249	2042 page 249	2070 page 249	2039 page 250	2043 page 250	2071 page 250

SAE 37° (JIC) FLARE UNION (CONTINUED)

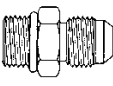
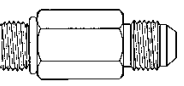
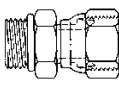
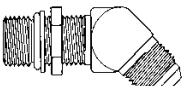
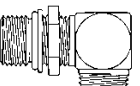
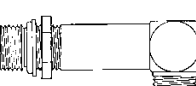
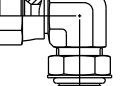
							
500454 page 251	FF5163 page 250	504095 page 251	FF5164 page 251	2033 page 251	203002 page 252	203008 page 252	203101 page 252

SAE 45° FLARE UNION

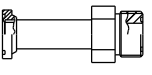
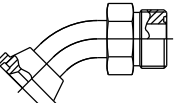
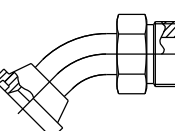
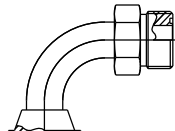
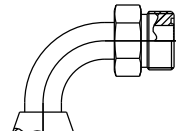
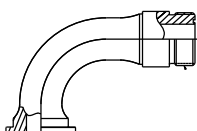
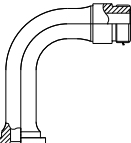
ORB/ORB

				
2056 page 253	2060 page 253	2220 page 223	2229 page 224	FF2591 page 224

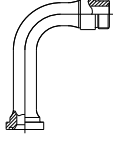
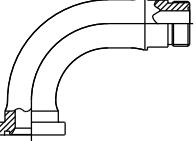
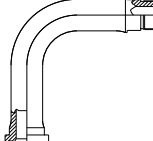
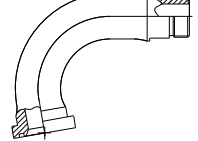
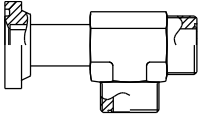
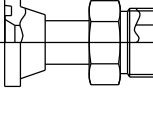
SAE O-RING TO 37° FLARE

								
202702 page 254	202713 page 255	2266 page 255	2061 page 255	2062 page 256	206209 page 255	203005 page 256	203003 page 251	2214 page 256

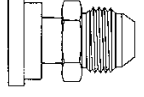
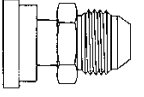
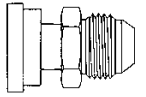
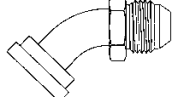
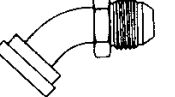
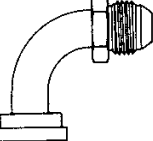
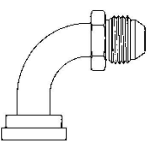
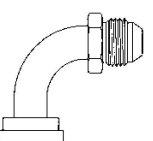
SAE SPLIT FLANGE TO ORS

						
FF5943T page 257	FF6001T page 257	FF6002T page 257	FF5946T page 258	FF5945T page 258	FF6062T page 258	FF6063T page 258

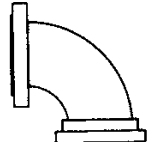
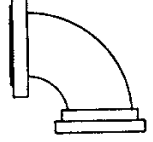
SAE SPLIT FLANGE TO ORS (CONTINUED)

					
FF6064T page 258	FF6071T page 259	FF6072T page 259	FF6073T page 259	FF2522T page 259	FF6033T page 257

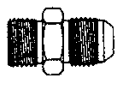
SAE SPLIT FLANGE TO 37° FLARE

								
500025 page 259	FF5239 page 260	FF5541 page 260	500023 page 261	FF5238 page 261	FF5539 page 260	500024 page 261	FF5162 page 262	FF5540 page 262

SAE SPLIT FLANGE TO SAE SPLIT FLANGE

	
504089 page 262	FF5321 page 262

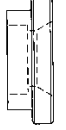
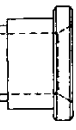
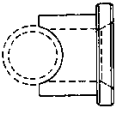
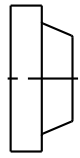
SAE FLARELESS TO 37° UNION

				
FF1315 page 266	210294 page 266	FF9173 page 266	FC2875 page 267	FF9605 page 267

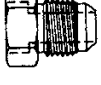
FLARE AND FLARELESS

	
1290 page 267	900605 page 268

BRAZE & WELD TO SPLIT FLANGE

						
71418 page 263	4624 page 263	71423 page 263	71416 page 264	71422 page 264	FC1102 page 264	FC1132 page 264

BRAZE & WELD TO 37° FLARE

	
73014 page 265	202232 page 265

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

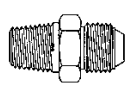
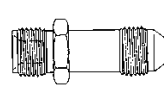
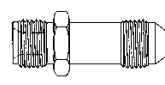
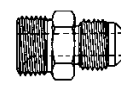
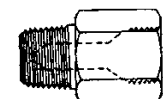
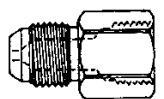
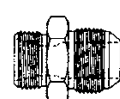
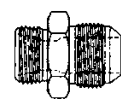
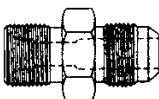
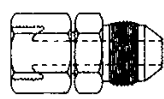
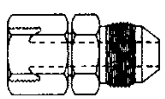
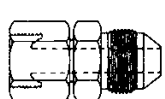
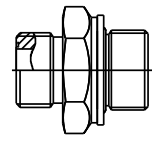
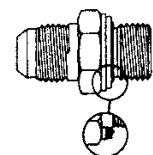
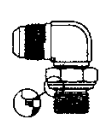
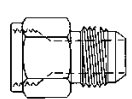
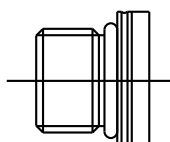
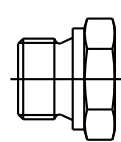
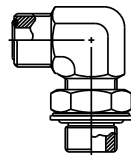
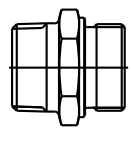
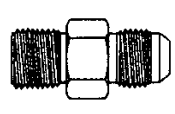
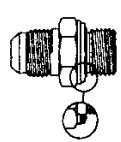
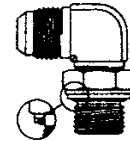
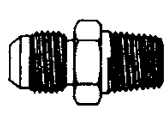
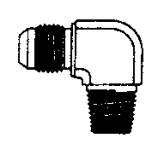
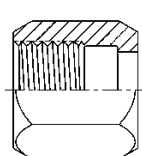
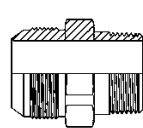
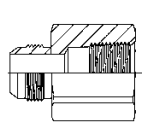
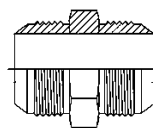
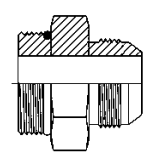
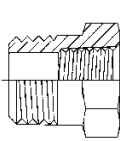
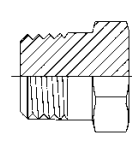
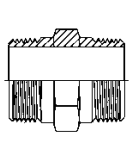
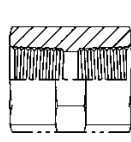
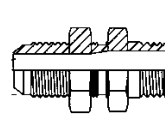
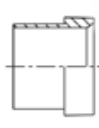
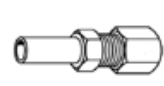
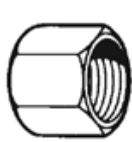
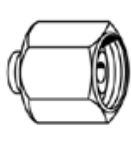
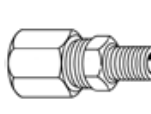
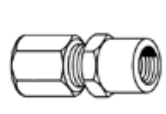
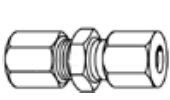
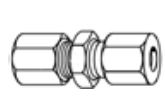
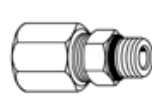
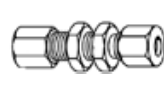
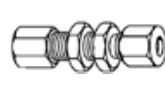
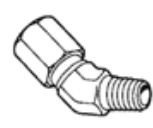
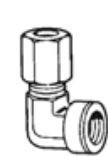
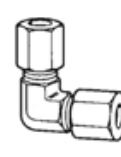
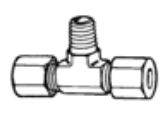
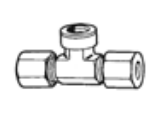
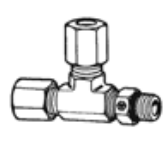
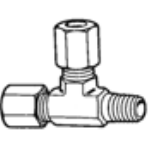
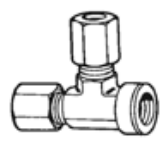
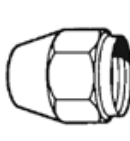
HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

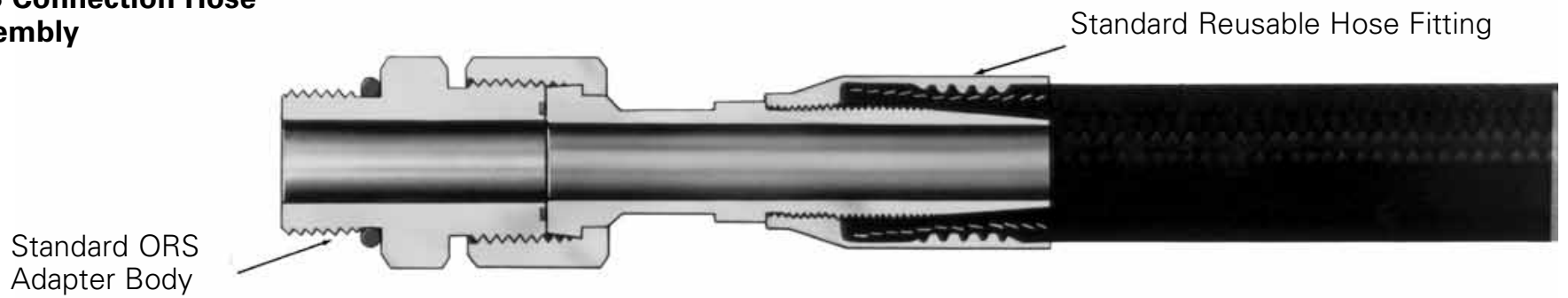
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

SPECIALS					METRIC THREAD				
									
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ORS TO METRIC				BSPP THREAD		BSPT THREAD			
									
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STAINLESS STEEL									
									
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ERMETO									
									
7515x page 291	7605x page 293	7655x page 293	7716x page 292	7755x page 292	7805x page 292	7924x page 287	8112x page 287	8165x page 287	

The Eaton ORS Connection is the Universal Answer to Troublesome Fluid Leakage Problems

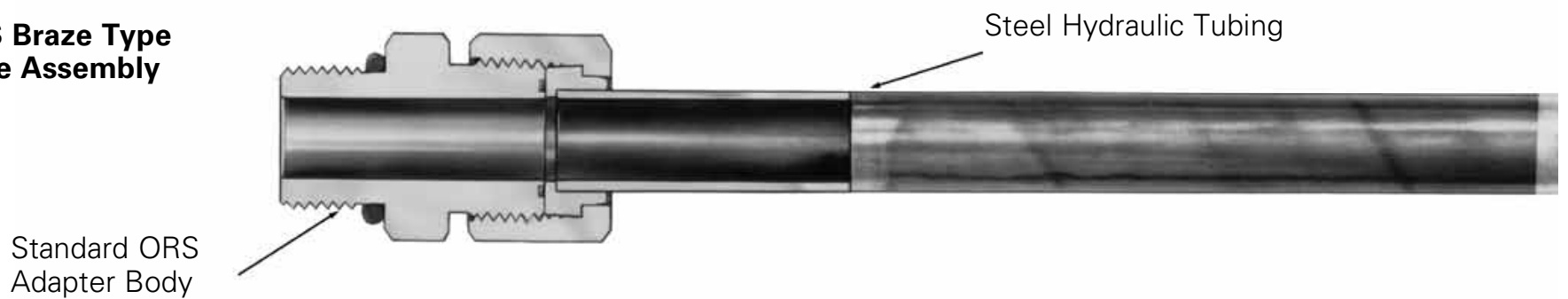
ORS Connection Hose Assembly



ORS TF Tube Assembly



ORS Braze Type Tube Assembly



Hose Assemblies

The ORS connection can be used with flexible hydraulic hose, combining the reusability of the hose fitting and the ORS connection. The result is the ultimate reusable fitting.

Tube Assemblies

The ORS connection can be attached to hydraulic tubing to make a tube assembly. Two methods of attachment are available.

1. ORS-TF: The ORS female can be jointed directly to steel tubing with the ORS-TF (wedge-type) tube fitting, another Eaton innovation. The fitting becomes an integral part of your system at a fraction of the time and expense brazing requires.

The versatility these options provides make ORS the only connection you need for high-pressure situations.

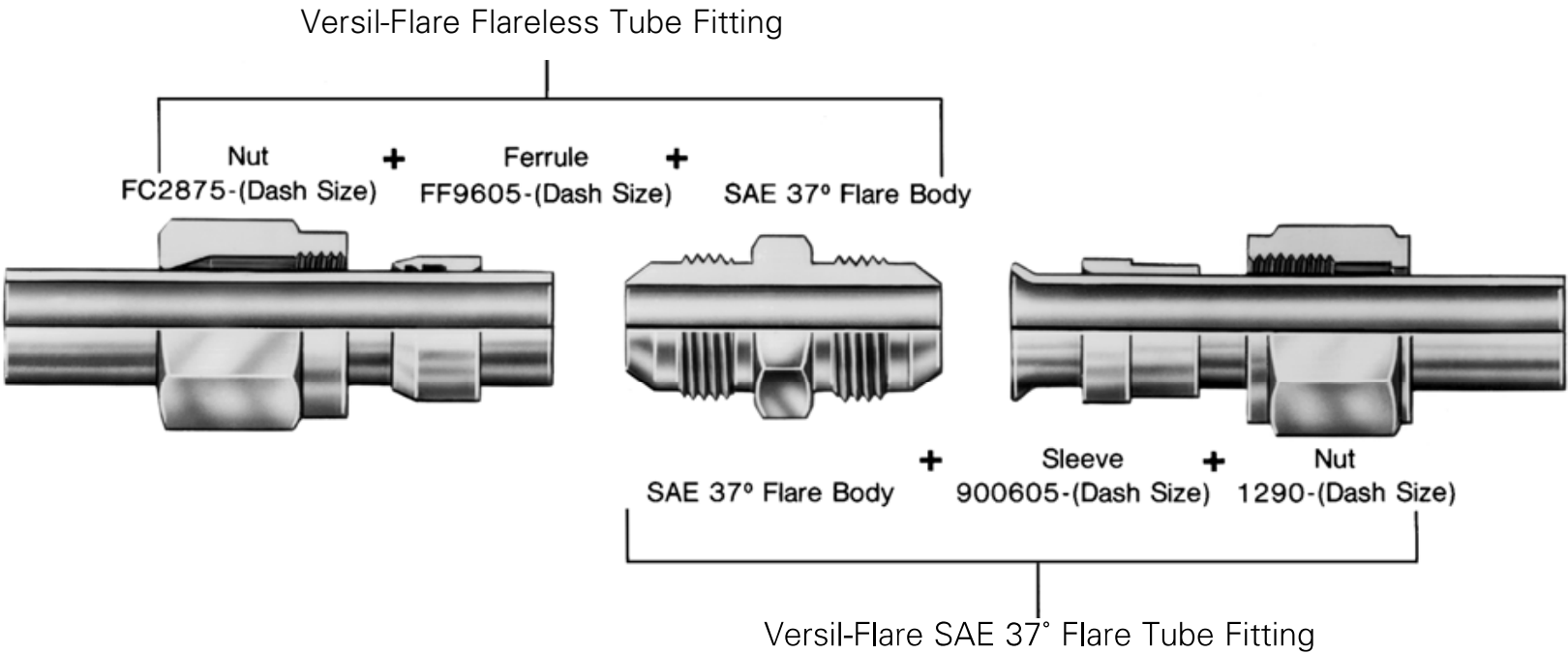
It attaches to most types of fluid conveying lines, controlling most types of fluid, facing the toughest conditions.

2. ORS-Braze Type: The ORS component can be brazed to hydraulic tubing.

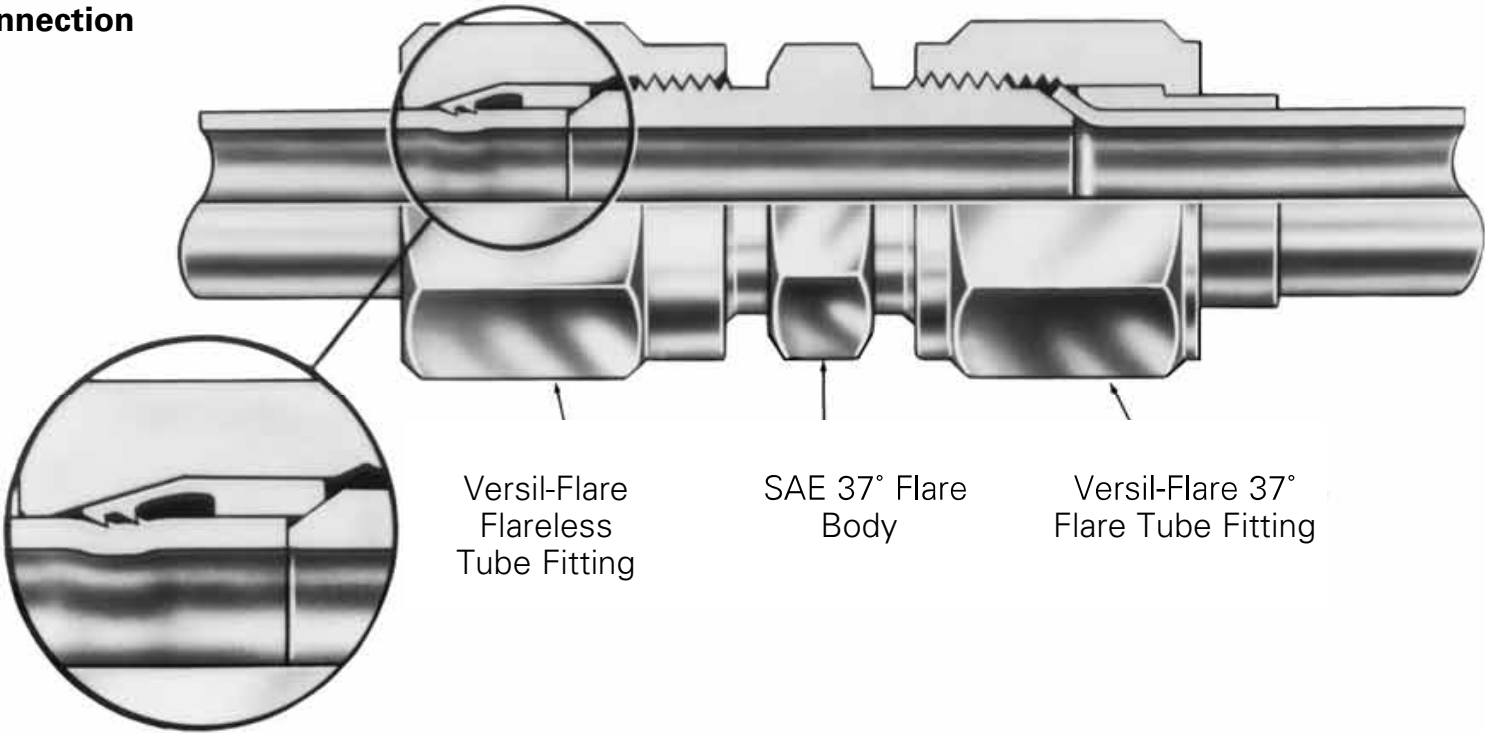
**Versil-Flare Flareless and
Versil-Flare SAE 37° Flared type**

*both styles use the same
SAE 37° flared body*

Before Connection



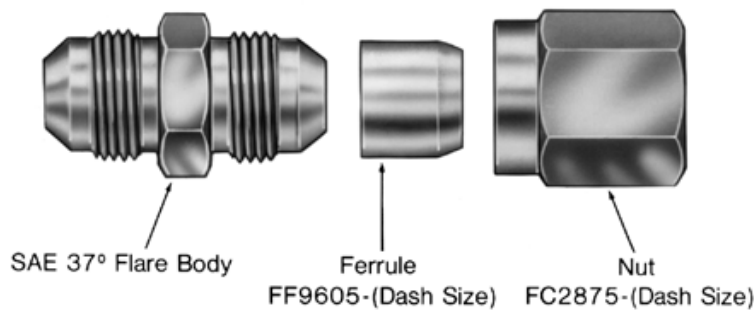
After Connection



One inventory of bodies (any standard SAE 37° flare fitting) allows both flareless and flared type connection of standard steel hydraulic tubing. It is no longer necessary

to inventory flared tube fittings plus the special bodies, nuts and sleeves for flareless tube fittings. The Eaton total tube fitting concept reduces inventory expense.

Eaton Versil-Flare Flareless Tube Fitting

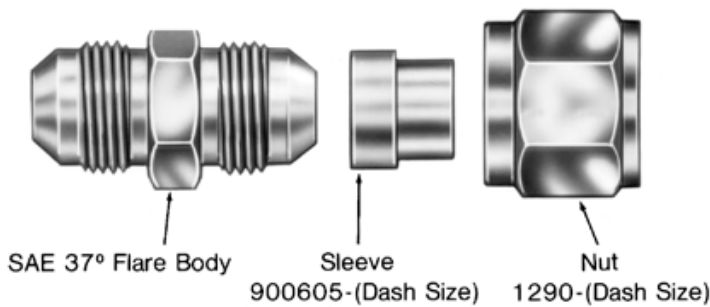


The Eaton Versil-Flare Flareless Tube Fitting can use any standard SAE 37° male flare adapter or hose fitting as a body. This eliminates the need to inventory special flareless tube fitting bodies and results in reduced inventory expense. Eaton Versil-Flare Flareless Tube Fittings are available in size from 3/16" tube O.D. to 2" tube O.D.

Presetting tools and extra assembly time are elimi-

nated because there's no need for flaring, special preparation or presetting with the Eaton Versil-Flare Flareless Tube Fitting. The chance of assembly error is reduced because the ferrule can be installed only one way and assembly is the same for all sizes and tube wall thicknesses. This assures a tight joint every time. These features improve production rates.

Eaton Versil-Flare Flared Tube Fitting



The Eaton industrial standard three piece flare type tube fitting can be used on the full range of standard steel hydraulic tubing in various wall thicknesses from 3/16" tube O.D. to 2" tube O.D. All three components are constructed from high quality zinc plated steel for long service life.

The standard SAE 37° flare angle is used to produce a highly efficient seal under hydraulic pressures. The sleeve is used to help support the tube and absorb vibration.

Assembly is easy. A properly sized wrench and flaring tool are all that is necessary. This is important in tight locations. Eaton standard SAE 37° flare type fittings can also be dis-assembled and re-assembled repeatedly.

Eaton quality is built into every component to assure leakproof connections.

The Eaton standard SAE 37° flare type tube fitting conforms to the following hydraulic tube fitting standards. Military specification, MIL-F-18866 and Society of Automotive Engineers, SAE J514.

Tubing selection and sizing

Eaton Versil-Flare Flareless and standard SAE 37° flare type, tube fittings can be used with SAE J-525 electric resistance welded, cold worked annealed, SAE J-524 seamless annealed tubing and SAE J527 brazed double wall low carbon steel tubing. SAE J356

welded flash controlled normalized steel tubing can only be used with Eaton Versil-Flare Flareless tube fittings. **The maximum hardness of the above tubing should not exceed Rockwell B65.** Selection of proper tubing material, size and wall thickness depends

on corrosion conditions, pressure and flow requirements and other operating requirements of the system.

Adapter Part Numbers

Adapter part numbers consist of a base number followed by a size designation. If the part number contains a "T" character between the base number and size designator, the first size designator signifies the tube size.

Example: FF1852 T 06 04 S

Base part number _____

"T" character _____

Tube size _____

Pipe or port size _____

Material designation suffix (steel) _____

If the part number does not contain a "T" character between the base number and the size description, the first size designation signifies the port size.

Example: 2021- 4 -6 S

Base part number _____

Pipe or port size _____

Tube size _____

Material designation suffix (steel) _____

How to Order Adapters

Adapters are ordered using the complete part number as shown on the adapter pages.

Example: 2021- 8 -10 S

Base part number _____

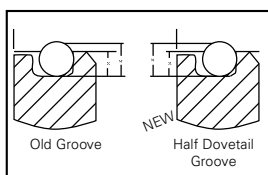
Pipe or port size _____

Tube or hose end _____

Material designation suffix (steel) _____

ORS Adapter Conversion*

ORS adapters have been replaced with the half dovetail groove design. The half dovetail groove is manufactured with an angle on the OD wall. This angle captures the o-ring for maximum retention. For ease of installation, a half dovetail groove installation tool may be used.



Half Dovetail Groove Installation Tool

The half dovetail groove installation tool compresses the o-ring, allowing it to easily slide into the groove in the adapter. Use of the tool maximizes efficiency and minimizes any fatigue that may be associated with repeated insertions over an extended period of time. One tool is required per dash size (or by adapter size). Each tool comes with an illustrated instruction sheet. Tools are available by using the following part numbers: FT1405-04, FT1405-06, FT1405-08, FT1405-10, FT1405-12, FT1405-16, FT1405-20, FT1405-24.



*Eaton reserves the right to use straight groove on some ORS.

How to order ORS Adapters and Tube Fittings

ORS tube fitting body with o-ring, locknut and washer, where applicable.

Example: FF1852T 08 08 S

Base part number _____

ORS tube size _____

Pipe or port size _____

Material designation suffix (steel) _____

ORS tube fitting body without o-rings

Example: FF1852T 1- 08 08 S

Base part number _____

Add 1- after base part number to eliminate O-rings _____

ORS tube size _____

Pipe or port size _____

Material designation suffix (steel) _____

ORS bulkhead tube fitting body without bulkhead nut or o-rings

Example: FF2030T 2- 08 08 S

Base part number _____

Add 2- after base part number to eliminate bulkhead nut _____

ORS tube size _____

Pipe or port size _____

Material designation suffix (steel) _____

ORS-TF Tube Fitting Components

ORS-TF tube fittings, nut, ferrules, and sleeves can be ordered under the following kit part number:

Example: FF90146- 08 S

Kit base part number _____

Dash size _____

Material designation suffix (steel) _____

By ordering a single part number in kit form, you will receive the components ready to be assembled to an ORS tube fitting body:

Example: FF90146-08S includes:
 FC1851-08S (ORS-TF Nut)
 FF90102-08S (ORS-TF Ferrule)
 FF90103-08S (ORS-TF Sleeve)

Continued on next page.

How to order ORS Adapters and Tube Fittings (cont.)

Nuts and Shoulders (Braze Type)

Nuts and shoulders can be ordered separately. Simply use the base number, dash size, and material designation.

Example: FC2326-04 S

Base part number _____

Dash size _____

Material designation suffix (steel) _____

O-Rings

Buna-N O-rings are standard. Other materials may also be specified by adding a material designator prefix if the part number begins with a numeric, and a material designator suffix if the part number begins with an alpha character. In all cases, the suffix "S" shall be omitted.

MATERIAL DESIGNATION PREFIX/SUFFIX	MATERIAL	OPERATING TEMPERATURE RANGE
S (standard)	90 Durometer Buna-N Nitrile Rubber	-40°F to +250°F (-40°C to +121°C)
212	EPR Ethylene Propylene Rubber	-65°F to +300°F (-55°C to +150°C)
213	Viton Fluoroelastomer	-15°F to +400°F (-26°C to +204°C)
214	Buna-N, Low Temperature Nitrile Rubber	-65°F to +225°F (-55°C to +100°C)
352	Neoprene	-65°F to +300°F (-55°C to +150°C)

Example: FF2031T0804 -213

ORS/Male NPTF Adapter

Base part number and size _____

Suffix for Viton _____

O-rings can be ordered separately.

Example: FF9446- 11

O-ring

Base part number _____

Dash size _____

Body Material

Steel is standard. Other materials may also be specified by adding a material designator prefix if the part number begins with a numeric, and a material designator suffix if the part number begins with an alpha character. In all cases, the suffix "S" shall be omitted.

MATERIAL DESIGNATOR PREFIX/SUFFIX	MATERIAL
B (suffix only)	Brass
259	316-Stainless
4	Monel
S	Steel

How to Order Conversion Adapters BSPP/BSPT

Example: GG110-NP 08-08

Base part number including material _____

37° end dash size _____

Port thread dash size _____

Metric

Example: GG108-NP 08-16

Base part number including material _____

37° end dash size _____

Port thread size in mm _____

Dimensions

Eaton tube fittings are ordinarily designed and produced to the functional requirements set forth in SAE Standards J512, J513, J514, J1926 and J1453. However, in some cases the envelope dimensions of certain components vary slightly from cataloged or SAE referenced dimensions. The SAE reference numbers and fitting descriptions given are in accordance with SAE Standard J846.

Availability

All items listed in the current price schedule are normally carried in stock. Price and delivery of non-stocked and special parts may be obtained from your Eaton Sales Representative or Distributor.

Loctite* Vibra-Seal 516 for External Pipe Threads

Loctite Vibra-Seal has the following characteristics:

- Non-hardening thread sealant
- Resists shredding and peeling during assembly
- Can be reused up to 5 times without recoating
- Provides resistance to vibrational loosening
- Excellent resistance to solvents and oils
- Operating temperatures range -65°F to +250°F

Machine applied so that it leaves first 1/2 to 2 threads uncovered for ease of assembly. Because of the excellent characteristics of this product, we are offering Loctite Vibra-Seal on all of our parts that have male pipe threads. Factory applied Loctite for external pipe threads may be ordered for steel parts by adding the prefix "307-" to the completed part number, and dropping suffix "S" if the part number begins with a numeral. Example: 307-2021-8-8. If the part number begins with an alpha character, add the suffix "-307" to the completed part number and drop the suffix "S". Example: FF2031T0606-307.

**Loctite is a trademark of Henkel Corporation.*

SPECIALTY & TRUCK HOSE

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS & TUBE FITTINGS

ACCESSORIES & ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY EQUIPMENT

APPENDICES

ORS-TF Tube Fittings

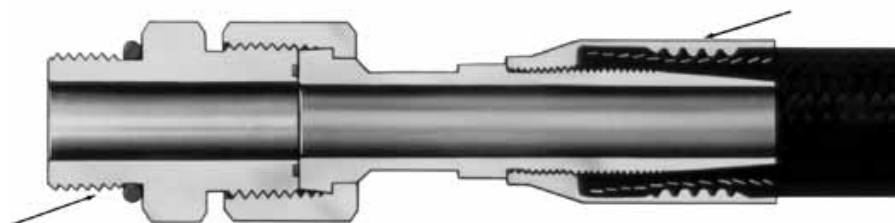
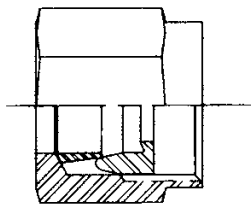
The ORS-TF tube fitting utilizing the ORS-TF nut, ferrule and sleeve can be joined directly to steel tubing to solve your fluid leakage problems. It does not require the time and expense of brazing and provides the advantage of repetitive reuse. It is a compression type fitting that works on a variety of tubing (See page 376 for tubing specifications). See page 311 for assembly instructions.

ORS-TF Kit Part No. FF90146-(Size)

Includes:

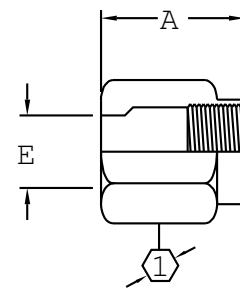
FC1851
FF90102
FF90103

ORS-TF Nut
ORS-TF Ferrule
ORS-TF Sleeve



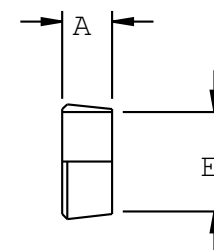
Keep It Simple and Clean with ORS

ORS-TF Nut Part No. FC1851- (Size)



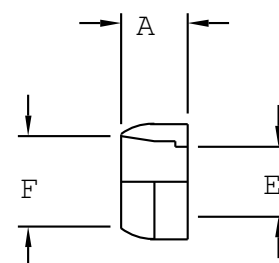
Dash Size	Tube O.D.		Thread T1	A		E		①	
	mm	in		mm	in	mm	in	mm	in
04S	6,3	0.25	9/16-18	21,3	0.84	6,6	0.26	17,5	0.69
06S	9,6	0.38	11/16-16	23,6	0.93	9,6	0.38	20,6	0.81
08S	12,7	0.50	13/16-16	26,9	1.06	12,9	0.51	23,9	0.94
10S	16,0	0.63	1-14	28,7	1.13	16,0	0.63	28,4	1.12
12S	19,0	0.75	1 3/16-12	32,5	1.28	19,3	0.76	35,0	1.38
16S	25,4	1.00	1 7/16-12	34,3	1.35	25,6	1.01	41,1	1.62
20S	31,7	1.25	1 11/16-12	35,8	1.41	32,0	1.26	47,7	1.88
24S	38,1	1.50	2-12	37,3	1.47	38,3	1.51	57,1	2.25

ORS-TF Ferrule Part No. FF90102- (Size)



Dash Size	Tube O.D.		A		E	
	mm	in	mm	in	mm	in
04S	6,3	0.25	6,3	.25	6,6	0.26
06S	9,6	0.38	6,3	0.25	9,6	0.38
08S	12,7	0.50	7,6	1.50	12,9	0.51
10S	16,0	0.63	7,6	1.50	16,0	0.63
12S	19,0	0.75	7,6	1.50	19,3	0.76
16S	25,4	1.00	7,6	1.50	25,6	1.01
20S	31,7	1.25	7,6	1.50	32,0	1.26
24S	38,1	1.50	7,6	1.50	38,3	1.51

ORS-TF Sleeve Part No. FF90103- (Size)

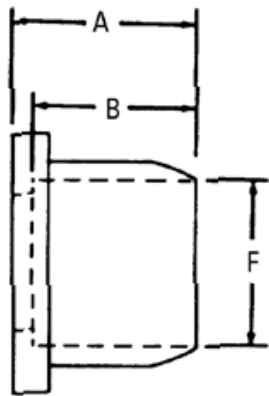


Dash Size	Tube O.D.		A		E		F	
	mm	in	mm	in	mm	in	mm	in
04S	6,3	0.25	8,1	0.32	4,3	0.17	6,3	0.25
06S	9,6	0.38	8,6	0.34	6,6	0.26	9,6	0.38
08S	12,7	0.50	9,4	0.37	9,6	0.38	12,7	0.50
10S	16,0	0.63	10,2	0.40	12,2	0.48	16,0	0.63
12S	19,0	0.75	11,2	0.44	15,5	0.61	19,3	0.76
16S	25,4	1.00	12,7	0.50	20,6	0.81	25,4	1.00
20S	31,7	1.25	14,2	0.56	26,7	1.05	32,0	1.26
24S	38,1	1.50	15,7	0.62	32,0	1.26	38,3	1.51

Material: Corrosion-resistant plated steel.

ORS Braze Type

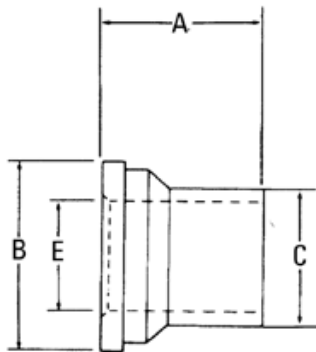
ORS-BR Shoulder Internal Braze



CAUTION

In applications exceeding +480°F (such as during brazing) order the oil-coated/non-plated nut by using part number FC1857-Size-186. When plating is heated above +480°F, toxic gases are given off.

ORS-BR Shoulder External Braze/Weld



CAUTION

In applications exceeding +480°F (such as during brazing) order the oil-coated/non-plated nut by using part number FC1857-Size-186. When plating is heated above +480°F, toxic gases are given off.

Part No. FC1229- (Dash size)* (Ref. SAE 520115)

Dash Size	Tube O.D.		A		B		F	
	mm	in	mm	in	mm	in	mm	in
0404S	6,4	0.25	7,4	0.29	6,4	0.25	6,4	0.25
0604S	9,7	0.38	8,4	0.33	6,4	0.25	6,4	0.25
0606S	9,7	0.38	7,4	0.29	6,4	0.25	9,7	0.38
0806S	12,7	0.50	9,9	0.39	6,4	0.25	9,7	0.38
0808S	12,7	0.50	10,7	0.42	9,7	0.38	12,7	0.50
1008S	16,0	0.63	14,5	0.57	9,7	0.38	12,7	0.50
1208S	12,7	0.50	15,5	0.61	9,7	0.38	12,7	0.50
1010S	16,0	0.63	10,7	0.42	9,7	0.38	15,7	0.62
1210S	19,0	0.75	15,5	0.61	9,7	0.38	15,7	0.62
1212S	19,0	0.75	11,2	0.44	9,7	0.38	19,0	0.75
1414S	22,3	0.88	17,3	0.68	15,7	0.62	22,3	0.88
1612S	25,4	1.00	14,0	0.55	9,7	0.38	19,0	0.75
1614S	25,4	1.00	14,2	0.56	11,2	0.44	22,3	0.88
1616S	25,4	1.00	14,2	0.56	12,7	0.50	25,4	1.00
2016S	31,8	1.25	17,3	0.68	12,7	0.50	25,4	1.00
2020S	31,8	1.25	14,2	0.56	12,7	0.50	31,8	1.25
2420S	38,1	1.50	18,8	0.74	12,7	0.50	31,8	1.25
2424S	38,1	1.50	14,2	0.56	12,7	0.50	38,1	1.50

Part No. FC2325- (Dash size)* (Ref. SAE 520172)

Dash Size	Tube O.D.		A		B		C		E	
	mm	in	mm	in	mm	in	mm	in	mm	in
0404S	6,4	0.25	22,3	0.88	12,7	0.50	6,4	0.25	4,3	0.17
0604S	9,7	0.38	24,4	0.96	15,7	0.62	6,4	0.25	4,0	0.16
0606S	9,7	0.38	24,4	0.96	15,7	0.62	9,7	0.38	6,6	0.26
0806S	12,7	0.50	28,5	1.12	18,8	0.74	9,7	0.38	6,6	0.26
0808S	12,7	0.50	31,8	1.25	18,8	0.74	12,7	0.50	9,1	0.36
1008S	16,0	0.63	34,0	1.34	23,4	0.92	12,7	0.50	9,1	0.36
1010S	16,0	0.63	34,0	1.34	23,4	0.92	15,7	0.62	11,4	0.45
1210S	19,0	0.75	36,6	1.44	27,7	1.09	15,7	0.62	11,4	0.45
1212S	19,0	0.75	36,6	1.44	27,7	1.09	19,0	0.75	14,0	0.55
1612S	25,4	1.00	38,3	1.51	34,0	1.34	19,0	0.75	14,0	0.55
1616S	25,4	1.00	41,4	1.63	34,0	1.34	25,4	1.00	19,8	0.78
2016S	31,8	1.25	41,4	1.63	40,4	1.59	25,4	1.00	19,8	0.78
2020S	31,8	1.25	41,4	1.63	40,4	1.59	31,8	1.25	26,7	1.05
2416S	38,1	1.50	41,4	1.63	48,5	1.91	25,4	1.00	19,8	0.78
2424S	38,1	1.50	41,4	1.63	48,5	1.91	38,1	1.50	32,0	1.26

*Eaton braze counterbores are dimensioned for sized or emeryed tubing. If tubing is used as received, contact Eaton for appropriate part number.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

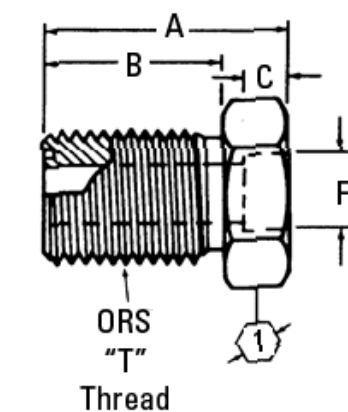
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

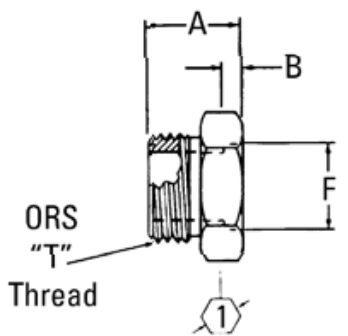
ORS Bulkhead Male/ Braze Adapter



Part No. FF1922T(Size)* (Ref. SAE 520604)

Dash Size	Tube O.D.		Thread T1	A		B		C		D		
	mm	in		mm	in	mm	in	mm	in	mm	in	
0404S	6,4	0.25	9/16-18	40,9	1.61	31,5	1.24	6,4	0.25	6,4	0.25	0.81
0606S	9,7	0.38	1 1/16-16	43,7	1.72	34,0	1.34	6,4	0.25	9,7	0.38	1.00
0808S	12,7	0.50	1 3/16-16	49,3	1.94	36,6	1.44	9,7	0.38	12,7	0.50	1.12
0810S	12,7	0.50	1 3/16-16	49,3	1.94	36,6	1.44	9,7	0.38	15,7	0.62	1.12
1010S	16,0	0.63	1-14	53,6	2.11	40,6	1.60	9,7	0.38	15,7	0.62	1.31
1212S	19,0	0.75	1 3/16-12	55,4	2.18	41,6	1.64	9,7	0.38	19,0	0.75	1.50
1214S	19,0	0.75	1 3/16-12	55,4	2.18	41,6	1.64	9,7	0.38	22,3	0.88	1.50
1616S	25,4	1.00	1 7/16-12	61,7	2.43	42,2	1.66	12,7	0.50	25,4	1.00	1.75
2020S	31,8	1.25	1 11/16-12	61,7	2.43	42,2	1.66	12,7	0.50	31,8	1.25	2.00
2024S	31,8	1.25	1 11/16-12	61,7	2.43	42,2	1.66	12,7	0.50	38,1	1.50	2.12
2424S	38,1	1.50	2-12	61,7	2.43	42,2	1.66	12,7	0.50	38,1	1.50	2.38

ORS/Braze Adapter

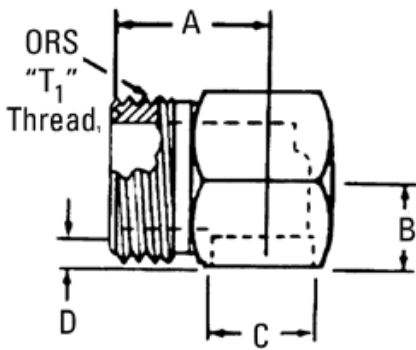


Part No. FF1851T(Size)* (Ref. SAE 520104)

Dash Size	Tube O.D.		Thread T1	A		B		F		
	mm	in		mm	in	mm	in	mm	in	
0404S	6,4	0.25	9/16-18	19,8	0.78	6,4	0.25	6,4	0.25	0.62
0406S	6,4	0.25	9/16-18	19,8	0.78	6,4	0.25	9,7	0.38	0.62
0604S	9,7	0.38	1 1/16-16	21,0	0.83	6,4	0.25	6,4	0.25	0.75
0606S	9,7	0.38	1 1/16-16	21,0	0.83	6,4	0.25	9,7	0.38	0.75
0608S	9,7	0.38	1 1/16-16	24,1	0.95	9,7	0.38	12,7	0.50	0.75
0806S	12,7	0.50	1 3/16-16	22,3	0.88	6,4	0.25	9,7	0.38	0.88
0808S	12,7	0.50	1 3/16-16	25,7	1.01	9,7	0.38	12,7	0.50	0.88
0810S	12,7	0.50	1 3/16-16	25,7	1.01	9,7	0.38	15,7	0.62	0.88
1008S	16,0	0.63	1-14	28,5	1.12	9,7	0.38	12,7	0.50	1.06
1010S	16,0	0.63	1-14	28,5	1.12	9,7	0.38	15,7	0.62	1.06
1210S	19,0	0.75	1 3/16-12	29,7	1.17	9,7	0.38	15,7	0.62	1.25
1212S	19,0	0.75	1 3/16-12	30,7	1.21	9,7	0.38	19,0	0.75	1.25
1214S	19,0	0.75	1 3/16-12	30,7	1.21	9,7	0.38	22,3	0.88	1.25
1216S	19,0	0.75	1 3/16-12	36,8	1.45	12,7	0.50	25,4	1.00	1.50
1612S	25,4	1.00	1 7/16-12	30,7	1.21	9,7	0.38	19,0	0.75	1.50
1616S	25,4	1.00	1 7/16-12	37,3	1.47	12,7	0.50	25,4	1.00	1.50
1620S	25,4	1.00	1 7/16-12	37,3	1.47	12,7	0.50	31,8	1.25	1.75
2016S	31,8	1.25	1 11/16-12	37,3	1.47	12,7	0.50	25,4	1.00	1.75
2020S	31,8	1.25	1 11/16-12	37,3	1.47	12,7	0.50	31,8	1.25	1.75
2024S	31,8	1.25	1 11/16-12	37,3	1.47	12,7	0.50	38,1	1.50	2.12
2424S	38,1	1.50	2-12	37,3	1.47	12,7	0.50	38,1	1.50	2.12
2428S	38,1	1.50	2-12	40,6	1.60	15,7	0.62	44,4	1.75	2.38

*Eaton braze counterbores are dimensioned for sized or emeryed tubing. If tubing is used as received, contact Eaton for appropriate part number.

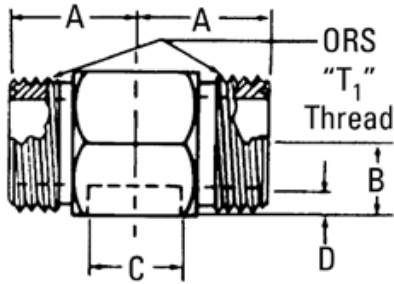
**90° ORS/
Braze Port Adapter**



No. FF1856T(Size)* (Ref. SAE 520204)

Dash Size	Tube O.D.		Thread T1	A		B		C		D	
	mm	in		mm	in	mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	21,6	0.85	9,7	0.38	6,4	0.25	6,4	0.25
0606S	9,7	0.38	11/16-16	24,9	0.98	10,4	0.41	9,7	0.38	6,4	0.25
0808S	12,7	0.50	13/16-16	27,9	1.10	15,0	0.59	12,7	0.50	9,7	0.38
0810S	12,7	0.50	13/16-16	30,5	1.20	16,8	0.66	15,7	0.62	9,7	0.38
1010S	16,0	0.63	1-14	33,3	1.31	16,8	0.66	15,7	0.62	9,7	0.38
1012S	16,0	0.63	1-14	35,8	1.41	18,3	0.72	19,0	0.75	9,7	0.38
1208S	19,0	0.75	1 3/16-12	37,3	1.47	18,8	0.74	12,7	0.50	9,7	0.38
1212S	19,0	0.75	1 3/16-12	37,3	1.47	18,3	0.72	19,0	0.75	9,7	0.38
1216S	19,0	0.75	1 3/16-12	41,1	1.62	23,9	0.94	25,4	1.00	13,2	0.52
1616S	25,4	1.00	1 7/16-12	41,6	1.64	23,9	0.94	25,4	1.00	13,2	0.52
1620S	25,4	1.00	1 7/16-12	44,7	1.76	28,5	1.12	31,8	1.25	13,5	0.53
2016S	31,8	1.25	1 11/16-12	54,3	2.14	28,7	1.13	25,4	1.00	13,5	0.53
2020S	31,8	1.25	1 11/16-12	44,7	1.76	28,5	1.12	31,8	1.25	13,5	0.53
2424S	38,1	1.50	2-12	48,8	1.92	31,8	1.25	38,1	1.50	13,2	0.52

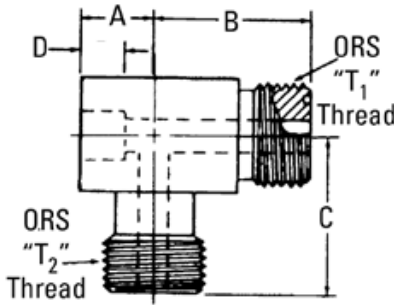
**ORS/ORS/
Braze Port Adapter**



Part No. FF1858T(Size)* (Ref. SAE 520472)

Dash Size	Tube O.D.		Thread T1	A		B		C		D	
	mm	in		mm	in	mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	21,6	0.85	9,1	0.36	6,4	0.25	6,4	0.25
0606S	9,7	0.38	11/16-16	24,9	0.98	9,9	0.39	9,7	0.38	6,4	0.25
0608S	9,7	0.38	11/16-16	26,4	1.04	14,0	0.55	12,7	0.50	9,7	0.38
0808S	12,7	0.50	13/16-16	27,9	1.10	14,5	0.57	12,7	0.50	9,7	0.38
1010S	16,0	0.63	1-14	33,3	1.31	16,2	0.64	15,7	0.62	9,7	0.38
1212S	19,0	0.75	1 3/16-12	37,3	1.47	17,5	0.69	19,0	0.75	9,7	0.38
1216S	19,0	0.75	1 3/16-12	41,1	1.62	23,1	0.91	25,4	1.00	13,2	0.52
1616S	25,4	1.00	1 7/16-12	41,6	1.64	23,1	0.91	25,4	1.00	13,2	0.52
2020S	31,8	1.25	1 11/16-12	44,7	1.76	27,9	1.10	31,8	1.25	13,5	0.53
2424S	38,1	1.50	2-12	48,8	1.92	31,8	1.25	38,1	1.50	13,2	0.52

**ORS/Braze/
ORS Port Adapter**

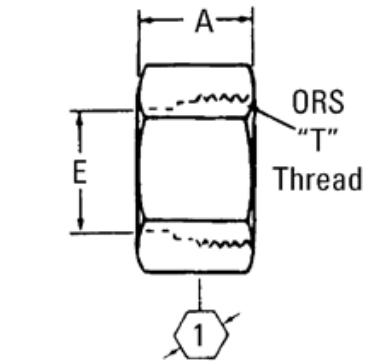


Part No. FF2115T(Size)* (Ref. SAE 520472)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C		D	
	mm	in			mm	in	mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	9,7	0.38	21,6	0.85	21,6	0.85	6,4	0.25
0606S	9,7	0.38	11/16-16	11/16-16	10,4	0.41	24,9	0.98	24,9	0.98	6,4	0.25
0808S	12,7	0.50	13/16-16	13/16-16	15,0	0.59	27,9	1.10	27,9	1.10	9,7	0.38
1010S	16,0	0.63	1-14	1-14	16,8	0.66	33,3	1.31	33,3	1.31	9,7	0.38
1212S	19,0	0.75	1 3/16-12	1 3/16-12	18,3	0.72	37,3	1.47	37,3	1.47	9,7	0.38
1616S	25,4	1.00	1 7/16-12	1 7/16-12	23,9	0.94	41,6	1.64	41,6	1.64	13,5	0.53
2020S	31,8	1.25	1 11/16-12	1 11/16-12	28,7	1.13	44,7	1.76	44,7	1.76	13,5	0.53
2424S	38,1	1.50	2-12	2-12	31,8	1.25	48,8	1.92	48,8	1.92	13,2	0.52

*Eaton braze counterbores are dimensioned for sized or emeryed tubing. If tubing is used as received, contact Eaton for appropriate part number.

ORS-BR Nut

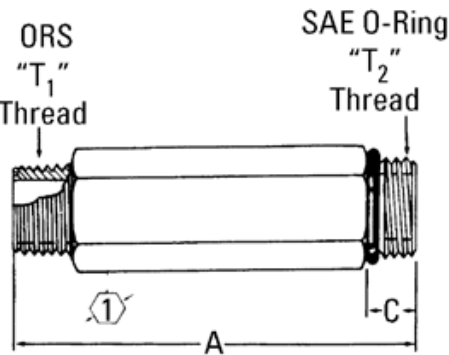


CAUTION

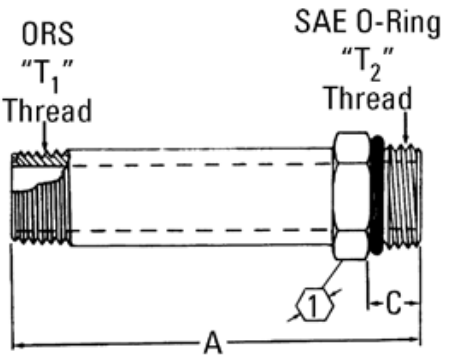
In applications exceeding +480°F (such as during brazing), order the oil-coated/non-plated nut by using part number FC1857-Size-186. When plating is heated above +480°F, toxic gases are given off.

ORS/O-Ring Boss

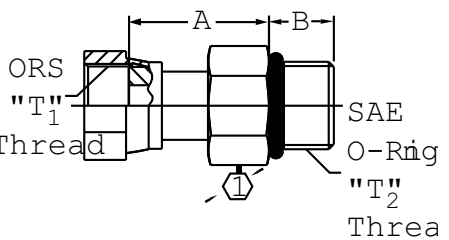
ORS/SAE O-Ring Boss Adapter



ORS/SAE O-Ring Boss Long Adapter



ORS Female Swivel/SAE O-Ring Boss Adapter



Part No. FC2326-(Size) (Ref. SAE 520110)

Dash Size	Tube O.D.		Thread T1	A		E		1	
	mm	in		mm	in	mm	in	mm	in
04S	6,4	0.25	9/16-18	14,7	0.58	10,4	0.41	17,5	0.69
06S	9,7	0.38	11/16-16	17,0	0.67	13,5	0.53	20,6	0.81
08S	12,7	0.50	13/16-16	21,0	0.83	16,5	0.65	23,9	0.94
10S	16,0	0.63	1-14	23,4	0.92	21,0	0.83	28,5	1.12
12S	19,0	0.75	13/16-12	25,9	1.02	24,1	0.95	35,1	1.38
1214S	22,3	0.88	13/16-12	31,0	1.22	25,1	0.99	35,1	1.38
16S	25,4	1.00	17/16-12	27,9	1.10	29,0	1.14	41,1	1.62
20S	31,8	1.25	111/16-12	27,9	1.10	36,1	1.42	47,7	1.88
24S	38,1	1.50	2-12	27,9	1.10	43,9	1.73	57,2	2.25

Part No. FF2211T(Size) (Ref. SAE 520122)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		C		1	
	mm	in			mm	in	mm	in	mm	in
0606S	9,7	0.38	11/16-16	9/16-18	50,0	1.97	11,9	0.47	19,0	0.75
0608S	9,7	0.38	11/16-16	3/4-16	54,1	2.13	14,0	0.55	22,3	0.88
0808S	12,7	0.50	13/16-16	3/4-16	68,1	2.68	14,0	0.55	22,3	0.88
1010S	16,0	0.63	1-14	7/8-14	75,9	2.99	16,0	0.63	26,9	1.06
1212S	19,0	0.75	13/16-12	11/16-12	72,9	2.87	18,5	0.73	31,8	1.25
1616S	25,4	1.00	17/16-12	15/16-12	104,5	4.11	18,5	0.73	38,1	1.50

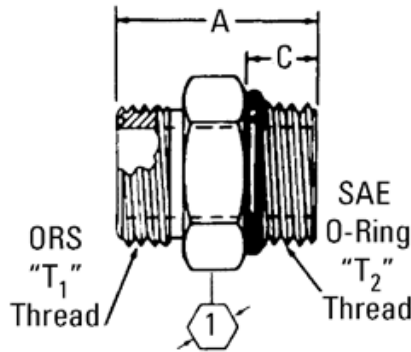
Part No. FF1854T(Size) (Ref. SAE 520122)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		C		1	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	7/16-20	52,6	2.07	10,9	0.43	15,7	0.62
0606S	9,7	0.38	11/16-16	9/16-18	57,6	2.27	11,9	0.47	19,0	0.75
0808S	12,7	0.50	13/16-16	3/4-16	67,8	2.67	14,0	0.55	22,3	0.88
1010S	16,0	0.63	1-14	7/8-14	79,5	3.13	16,0	0.63	26,9	1.06
1212S	19,0	0.75	13/16-12	11/16-12	95,2	3.75	18,5	0.73	31,8	1.25
1214S	19,0	0.75	13/16-12	13/16-12	95,2	3.75	18,5	0.73	35,1	1.38
1616S	25,4	1.00	17/16-12	15/16-12	104,9	4.13	18,5	0.73	38,1	1.50
2020S	31,8	1.25	111/16-12	15/8-12	120,6	4.75	18,5	0.73	47,7	1.88
2424S	38,1	1.50	2-12	17/8-12	133,6	5.26	18,5	0.73	53,9	2.12

Part No. FF2130T(Size) (Ref. SAE 520181)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		1	
	mm	in			mm	in	mm	in	mm	in
0606S	9,7	0.38	11/16-16	9/16-18	28.2	1.11	11,9	0.47	17,5	0.69
0808S	12,7	0.50	13/16-16	3/4-16	35,3	1.39	14,0	0.55	22,3	0.88
1212S	19,0	0.75	13/16-12	11/16-12	41,1	1.62	18,5	0.73	31,8	1.25
1616S	25,4	1.00	17/16-12	15/16-12	49,0	1.93	18,5	0.73	38,1	1.50
2020S	31,8	1.25	111/16-12	15/8-12	47,2	1.86	18,5	0.73	47,7	1.88

**ORS/SAE O-Ring
Boss Adapter**



Part No. FF1852T(Size) (Ref. SAE 520120)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		C		1	
	mm	in	in	in	mm	in	mm	in	mm	in
0403S	6,4	0.25	9/16-18	3/8-24	27,2	1.07	9,4	0.37	15,7	0.62
0404S	6,4	0.25	9/16-18	7/16-20	28,7	1.13	10,9	0.43	15,7	0.62
0405S	6,4	0.25	9/16-18	1/2-20	28,7	1.13	10,9	0.43	15,7	0.62
0406S	6,4	0.25	9/16-18	9/16-18	30,5	1.20	11,9	0.47	17,5	0.69
0408S	6,4	0.25	9/16-18	3/4-16	33,6	1.32	14,0	0.55	22,3	0.88
0603S	9,7	0.38	11/16-16	3/8-24	32,5	1.28	9,4	0.37	19,0	0.75
0604S	9,7	0.38	11/16-16	7/16-20	34,0	1.34	10,9	0.43	19,0	0.75
0605S	9,7	0.38	11/16-16	1/2-20	31,0	1.22	10,9	0.43	19,0	0.75
0606S	9,7	0.38	11/16-16	9/16-18	32,0	1.26	11,9	0.47	19,0	0.75
0608S	9,7	0.38	11/16-16	3/4-16	35,1	1.38	14,0	0.55	22,3	0.88
0610S	9,7	0.38	11/16-16	7/8-14	38,9	1.53	16,0	0.63	25,4	1.00
0612S	9,7	0.38	11/16-16	1 1/16-12	42,9	1.69	18,5	0.73	31,8	1.25
0616S	9,7	0.38	11/16-16	1 5/16-12	43,9	1.73	18,5	0.73	38,1	1.50
0806S	12,7	0.50	11/16-16	9/16-18	37,6	1.48	11,9	0.47	22,3	0.88
0808S	12,7	0.50	1 3/16-16	3/4-16	36,6	1.44	14,0	0.55	22,3	0.88
0810S	12,7	0.50	1 3/16-16	7/8-14	40,4	1.59	16,0	0.63	25,4	1.00
0812S	12,7	0.50	1 3/16-16	1 1/16-12	44,4	1.75	18,5	0.73	31,8	1.25
0814S	12,7	0.50	1 3/16-16	1 3/16-12	44,4	1.75	18,5	0.73	35,1	1.38
0816S	12,7	0.50	1 3/16-16	1 5/16-12	45,5	1.79	18,5	0.73	38,1	1.50
1008S	16,0	0.63	1-14	3/4-16	45,2	1.78	14,0	0.55	26,9	1.06
1010S	16,0	0.63	1-14	7/8-14	43,2	1.70	16,0	0.63	26,9	1.06
1012S	16,0	0.63	1-14	1 1/16-12	47,2	1.86	18,5	0.73	31,8	1.25
1014S	16,0	0.63	1-14	1 3/16-12	47,2	1.86	18,5	0.73	35,1	1.38
1206S	19,0	0.75	1 3/16-12	9/16-18	44,9	1.77	11,9	0.47	31,8	1.25
1208S	19,0	0.75	1 3/16-12	3/4-16	48,5	1.91	14,0	0.55	31,8	1.25
1210S	19,0	0.75	1 3/16-12	7/8-14	50,5	1.99	16,0	0.63	31,8	1.25
1212S	19,0	0.75	1 3/16-12	1 1/16-12	48,8	1.92	18,5	0.73	31,8	1.25
1214S	19,0	0.75	1 3/16-12	1 3/16-12	48,8	1.92	18,5	0.73	35,1	1.38
1216S	19,0	0.75	1 3/16-12	1 5/16-12	49,8	1.96	18,5	0.73	38,1	1.50
1608S	25,4	1.00	1 7/16-12	3/4-16	49,8	1.96	14,0	0.55	38,1	1.50
1610S	25,4	1.00	1 7/16-12	7/8-14	51,8	2.04	16,0	0.63	38,1	1.50
1612S	25,4	1.00	1 7/16-12	1 1/16-12	41,1	1.62	18,5	0.73	38,1	1.50
1614S	25,4	1.00	1 7/16-12	1 3/16-12	50,3	1.98	18,5	0.73	38,1	1.50
1616S	25,4	1.00	1 7/16-12	1 5/16-12	50,3	1.98	18,5	0.73	38,1	1.50
1620S	25,4	1.00	1 7/16-12	1 5/8-12	52,3	2.06	18,5	0.73	47,7	1.88
2016S	31,8	1.25	1 11/16-12	1 5/16-12	57,9	2.28	18,5	0.73	44,4	1.75
2020S	31,8	1.25	1 11/16-12	1 5/8-12	52,3	2.06	18,5	0.73	47,7	1.88
2024S	31,8	1.25	1 11/16-12	1 7/8-12	54,1	2.13	18,5	0.73	53,9	2.12
2420S	38,1	1.50	2-12	1 5/8-12	59,7	2.35	18,5	0.73	53,9	2.12
2424S	38,1	1.50	2-12	1 7/8-12	54,1	2.13	18,5	0.73	53,9	2.12

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

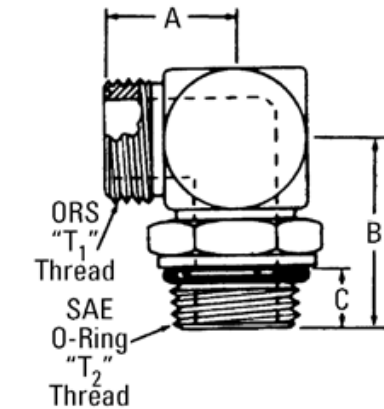
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

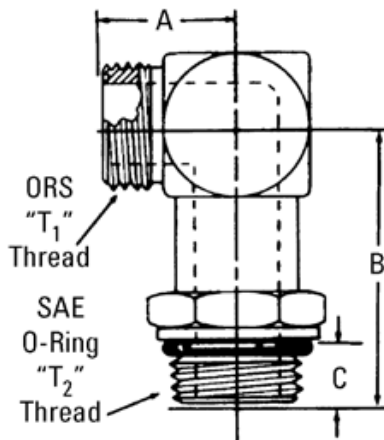
90° ORS/SAE O-Ring Boss (adj.) Adapter



Part No. FF1868T(Size) (Ref. SAE 520220)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0403S	6,4	0.25	9/16-18	3/8-24	21,6	0.85	30,3	1.19	9,4	0.37
0404S	6,4	0.25	9/16-18	7/16-20	21,6	0.85	32,8	1.29	10,9	0.43
0405S	6,4	0.25	9/16-18	1/2-20	23,4	0.92	34,8	1.37	10,9	0.43
0406S	6,4	0.25	9/16-18	9/16-18	23,4	0.92	36,8	1.45	11,9	0.47
0408S	6,4	0.25	9/16-18	3/4-16	24,6	0.97	40,6	1.60	14,0	0.55
0604S	9,7	0.38	11/16-16	7/16-20	24,9	0.98	34,8	1.37	10,9	0.43
0605S	9,7	0.38	11/16-16	1/2-20	24,9	0.98	34,8	1.37	10,9	0.43
0606S	9,7	0.38	11/16-16	9/16-18	24,9	0.98	36,8	1.45	11,9	0.47
0608S	9,7	0.38	11/16-16	3/4-16	26,4	1.04	40,6	1.60	14,0	0.55
0610S	9,7	0.38	11/16-16	7/8-14	29,2	1.15	50,0	1.97	16,0	0.63
0612S	9,7	0.38	11/16-16	1 1/16-12	31,8	1.25	55,2	2.17	18,5	0.73
0806S	12,7	0.50	13/16-16	9/16-18	27,9	1.10	36,6	1.44	11,9	0.47
0808S	12,7	0.50	13/16-16	3/4-16	27,9	1.10	40,6	1.60	14,0	0.55
0810S	12,7	0.50	13/16-16	7/8-14	30,7	1.21	50,0	1.97	16,0	0.63
0812S	12,7	0.50	13/16-16	1 1/16-12	33,6	1.32	55,2	2.17	18,5	0.73
1008S	16,0	0.63	1-14	3/4-16	33,3	1.31	45,7	1.80	14,0	0.55
1010S	16,0	0.63	1-14	7/8-14	33,3	1.31	50,0	1.97	16,0	0.63
1012S	16,0	0.63	1-14	1 1/16-12	35,8	1.41	55,2	2.17	18,5	0.73
1208S	19,0	0.75	1 3/16-12	3/4-16	37,3	1.47	46,7	1.84	14,0	0.55
1210S	19,0	0.75	1 3/16-12	7/8-14	37,3	1.47	51,1	2.01	16,0	0.63
1212S	19,0	0.75	1 3/16-12	1 1/16-12	37,3	1.47	55,2	2.17	18,5	0.73
1214S	19,0	0.75	1 3/16-12	1 3/16-12	37,3	1.47	55,2	2.17	18,0	0.71
1216S	19,0	0.75	1 3/16-12	1 5/16-12	41,1	1.62	59,7	2.35	18,5	0.73
1612S	25,4	1.00	1 7/16-12	1 1/16-12	41,6	1.64	58,9	2.32	18,5	0.73
1614S	25,4	1.00	1 7/16-12	1 3/16-12	41,6	1.64	58,9	2.32	18,0	0.71
1616S	25,4	1.00	1 7/16-12	1 5/16-12	41,6	1.64	59,7	2.35	18,5	0.73
1620S	25,4	1.00	1 7/16-12	1 5/8-12	44,7	1.76	62,2	2.45	18,5	0.73
2012S	31,8	1.25	1 11/16-12	1 1/16-12	44,7	1.76	61,5	2.42	18,5	0.73
2016S	31,8	1.25	1 11/16-12	1 5/16-12	44,7	1.76	61,5	2.42	18,5	0.73
2020S	31,8	1.25	1 11/16-12	1 5/8-12	44,7	1.76	62,2	2.45	18,5	0.73
2420S	38,1	1.50	2-12	1 5/8-12	48,8	1.92	65,0	2.56	18,5	0.73
2424S	38,1	1.50	2-12	1 7/8-12	48,8	1.92	65,8	2.59	18,5	0.73

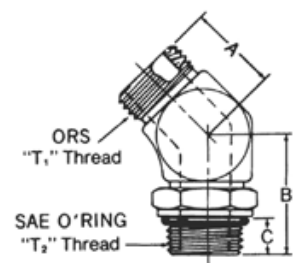
90° ORS/SAE O-Ring Boss (adj.) Long Adapter



Part No. FF2227T(Size) (Ref. SAE 521520)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	7/16-20	21,6	0.85	56,6	2.23	10,9	0.43
0606S	9,7	0.38	11/16-16	9/16-18	24,9	0.98	66,3	2.61	11,9	0.47
0808S	12,7	0.50	13/16-16	3/4-16	27,9	1.10	74,9	2.95	14,0	0.55
1010S	16,0	0.63	1-14	7/8-14	33,3	1.31	89,1	3.51	16,0	0.63
1212S	19,0	0.75	1 3/16-12	1 1/16-12	37,3	1.47	100,8	3.97	18,5	0.73
1616S	25,4	1.00	1 7/16-12	1 5/16-12	41,6	1.64	114,5	4.51	18,5	0.73
2020S	31,8	1.25	1 11/16-12	1 5/8-12	44,7	1.76	126,5	4.98	18,5	0.73

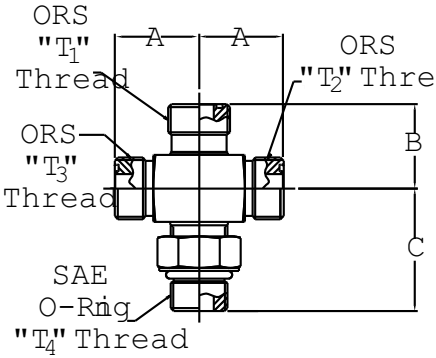
**45° ORS/SAE O-Ring
Boss (adj.) Adapter**



Part No. FF2068T(Size) (Ref. SAE 520320)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	7/16-20	16,0	0.63	30,0	1.18	9,4	0.37
0406S	6,4	0.25	9/16-18	9/16-18	17,3	0.68	33,0	1.30	11,9	0.47
0408S	6,4	0.25	9/16-18	3/4-16	17,0	0.67	36,3	1.43	14,0	0.55
0604S	9,7	0.38	11/16-16	7/16-20	18,8	0.74	31,0	1.22	10,9	0.43
0606S	9,7	0.38	11/16-16	9/16-18	18,8	0.74	33,0	1.30	11,9	0.47
0608S	9,7	0.38	11/16-16	3/4-16	18,8	0.74	36,3	1.43	14,0	0.55
0806S	12,7	0.50	13/16-16	9/16-18	20,3	0.80	32,8	1.29	11,9	0.47
0808S	12,7	0.50	13/16-16	3/4-16	20,3	0.80	36,3	1.43	14,0	0.55
0810S	12,7	0.50	13/16-16	7/8-14	20,8	0.82	44,7	1.76	16,0	0.63
0816S	12,7	0.50	13/16-16	15/16-12	25,7	1.01	52,3	2.06	18,5	0.73
1008S	16,0	0.63	1-14	3/4-16	23,4	0.92	40,4	1.59	12,7	0.50
1010S	16,0	0.63	1-14	7/8-14	23,4	0.92	44,7	1.76	16,0	0.63
1012S	16,0	0.63	1-14	11/16-12	24,4	0.96	50,0	1.97	18,5	0.73
1210S	19,0	0.75	13/16-12	7/8-14	25,9	1.02	46,0	1.81	16,0	0.63
1212S	19,0	0.75	13/16-12	11/16-12	25,9	1.02	50,0	1.97	18,5	0.73
1216S	19,0	0.75	13/16-12	15/16-12	29,5	1.16	52,3	2.06	18,5	0.73
1612S	25,4	1.00	17/16-12	11/16-12	30,0	1.18	51,6	2.03	18,5	0.73
1616S	25,4	1.00	17/16-12	15/16-12	30,0	1.18	52,3	2.06	18,5	0.73
1620S	25,4	1.00	17/16-12	15/8-12	32,0	1.26	53,6	2.11	18,5	0.73
2020S	31,8	1.25	111/16-12	15/8-12	32,0	1.26	53,6	2.11	18,5	0.73
2424S	38,1	1.50	2-12	17/8-12	36,8	1.45	53,6	2.11	18,5	0.73

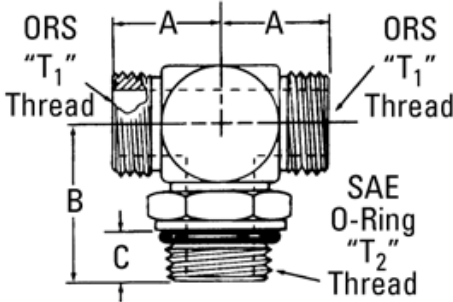
**ORS - SAE O-Ring
Branch Cross
(6000 psi)**



Part No. FF2127T(Size) (Ref. SAE 520520)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	Thread T4	A		B		C	
	mm	in					mm	in	mm	in	mm	in
0606S	9,7	0.38	11/16-16	11/16-16	11/16-16	9/16-18	24,9	0.98	24,6	0.97	36,6	1.44
0808S	12,7	0.50	13/16-16	13/16-16	13/16-16	3/4-16	27,9	1.10	27,7	1.09	40,4	1.59

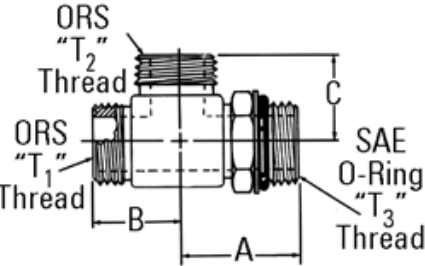
**ORS/ORS/SAE O-Ring
Boss (Adj) Adapter**



Part No. FF1861T(Size) (Ref. SAE 520429)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0403S	6,4	0.25	9/16-18	3/8-24	21,6	0.85	30,3	1.19	9,4	0.37
0404S	6,4	0.25	9/16-18	7/16-20	21,6	0.85	32,8	1.29	10,9	0.43
0606S	9,7	0.38	11/16-16	9/16-18	24,9	0.98	36,8	1.45	11,9	0.47
0608S	9,7	0.38	11/16-16	3/4-16	26,4	1.04	40,6	1.60	14,0	0.55
0808S	12,7	0.50	13/16-16	3/4-16	33,3	1.31	50,0	1.97	14,0	0.55
1010S	16,0	0.63	1-14	7/8-14	33,3	1.31	50,0	1.97	16,0	0.63
1210S	19,0	0.75	13/16-12	7/8-14	37,3	1.47	55,2	2.17	16,0	0.63
1212S	19,0	0.75	13/16-12	15/16-12	41,1	1.62	59,7	2.35	18,5	0.73
1216S	19,0	0.75	13/16-12	15/16-12	41,6	1.64	59,7	2.35	18,5	0.73
1616S	25,4	1.00	17/16-12	15/16-12	41,6	1.64	59,7	2.35	18,5	0.73
2020S	31,8	1.25	111/16-12	15/8-12	44,7	1.76	62,2	2.45	18,5	0.73
2424S	38,1	1.50	2-12	17/8-12	48,8	1.92	65,8	2.59	18,5	0.73

ORS/ORS/SAE O-Ring Boss (Adj) Adapter

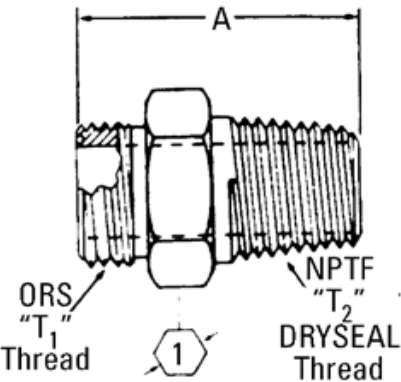


Part No. FF1865T(Size) (Ref. SAE 520428)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	A		B		C	
	mm	in				mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	7/16-20	32,8	1.29	21,6	0.85	21,6	0.85
0406S	6,4	0.25	9/16-18	9/16-18	9/16-18	36,8	1.45	23,4	0.92	23,4	0.92
0604S	9,7	0.38	11/16-16	11/16-16	7/16-20	34,8	1.37	29,7	1.17	24,9	0.98
0606S	9,7	0.38	11/16-16	11/16-16	9/16-18	36,8	1.45	24,9	0.98	24,9	0.98
0806S	12,7	0.50	13/16-16	13/16-16	9/16-18	36,6	1.44	27,9	1.10	27,9	1.10
0808S	12,7	0.50	13/16-16	13/16-16	3/4-16	40,6	1.60	27,9	1.10	27,9	1.10
0812S	12,7	0.50	13/16-16	13/16-16	1 1/16-12	55,2	2.17	33,6	1.32	33,6	1.32
1010S	16,0	0.63	1-14	1-14	7/8-14	50,0	1.97	33,3	1.31	33,3	1.31
1012S	16,0	0.63	1-14	1-14	1 1/16-12	55,2	2.17	35,8	1.41	35,8	1.41
1212S	19,0	0.75	1 3/16-12	1 3/16-12	1 1/16-12	55,2	2.17	37,3	1.47	37,3	1.47
1220S	19,0	0.75	1 3/16-12	1 3/16-12	1 5/8-12	62,2	2.45	44,2	1.74	44,2	1.74
1616S	25,4	1.00	1 7/16-12	1 7/16-12	1 5/16-12	59,7	2.35	41,6	1.64	41,6	1.64
2020S	31,8	1.25	1 11/16-12	1 11/16-12	1 5/8-12	62,2	2.45	44,7	1.76	44,7	1.76
2424S	38,1	1.50	2-12	2-12	1 7/8-12	65,8	2.59	48,8	1.92	48,8	1.92
0005S	-		1 7/16-12	1 3/16-12	1 1/16-12	58,9	2.32	41,6	1.64	41,1	1.62
0001S	-		1 7/16-12	1 3/16-12	1 5/16-12	59,7	2.35	41,6	1.64	41,1	1.62
0012S	-		13/16-16	1 11/16-12	1 5/16-12	61,5	2.42	40,4	1.59	44,7	1.76
0003S	-		1-14	13/16-16	1 1/16-12	55,2	2.17	35,8	1.41	33,6	1.32

ORS/NPTF

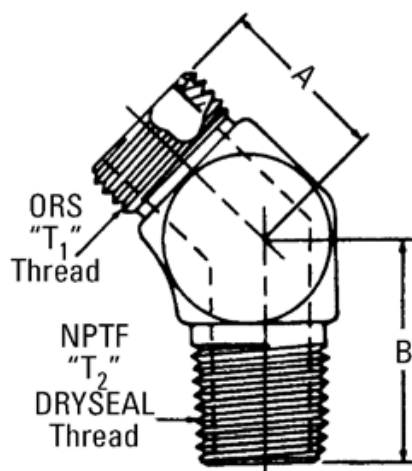
ORS/Male NPTF Adapter



Part No. FF2031T(Size) (Ref. SAE 520102)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		1	
	mm	in			mm	in	mm	in
0402S	6,4	0.25	9/16-18	1/8-27	26,2	1.03	15,7	0.62
0404S	6,4	0.25	9/16-18	1/4-18	31,5	1.24	15,7	0.62
0406S	6,4	0.25	9/16-18	3/8-18	31,5	1.24	19,0	0.75
0408S	6,4	0.25	9/16-18	1/2-14	37,8	1.49	22,3	0.88
0602S	9,7	0.38	11/16-16	1/8-27	28,5	1.12	19,0	0.75
0604S	9,7	0.38	11/16-16	1/4-18	33,0	1.30	19,0	0.75
0606S	9,7	0.38	11/16-16	3/8-18	33,0	1.30	19,0	0.75
0608S	9,7	0.38	11/16-16	1/2-14	39,4	1.55	22,3	0.88
0804S	12,7	0.50	13/16-16	1/4-18	34,5	1.36	22,3	0.88
0806S	12,7	0.50	13/16-16	3/8-18	34,5	1.36	22,3	0.88
0808S	12,7	0.50	13/16-16	1/2-14	40,9	1.61	22,3	0.88
0812S	12,7	0.50	13/16-16	3/4-14	42,7	1.68	26,9	1.06
1008S	16,0	0.63	1-14	1/2-14	43,7	1.72	26,9	1.06
1012S	16,0	0.63	1-14	3/4-14	45,2	1.78	26,9	1.06
1016S	16,0	0.63	1-14	1-11 1/2	50,0	1.97	35,1	1.38
1208S	19,0	0.75	1 3/16-12	1/2-14	46,7	1.84	31,8	1.25
1212S	19,0	0.75	1 3/16-12	3/4-14	46,7	1.84	31,8	1.25
1216S	19,0	0.75	1 3/16-12	1-11 1/2	51,6	2.03	35,1	1.38
1612S	25,4	1.00	1 7/16-12	3/4-14	47,2	1.86	38,1	1.50
1616S	25,4	1.00	1 7/16-12	1-11 1/2	52,0	2.05	38,1	1.50
1620S	25,4	1.00	1 7/16-12	1 1/4-11 1/2	54,9	2.16	42,9	1.69
2016S	31,8	1.25	1 11/16-12	1-11 1/2	54,1	2.13	44,4	1.75
2020S	31,8	1.25	1 11/16-12	1 1/4-11 1/2	54,9	2.16	44,4	1.75
2424S	38,1	1.50	2-12	1 1/2-11 1/2	57,4	2.26	53,9	2.12

45° ORS/Male NPTF Adapter



Part No. FF2093T(Size) (Ref. SAE 520302)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0402S	6,4	0.25	9/16-18	1/8-27	16,0	0.63	17,3	0.68
0404S	6,4	0.25	9/16-18	1/4-18	17,3	0.68	23,6	0.93
0604S	9,7	0.38	11/16-16	1/4-18	18,8	0.74	23,6	0.93
0606S	9,7	0.38	11/16-16	3/8-18	18,8	0.74	26,4	1.04
0608S	9,7	0.38	11/16-16	1/2-14	19,3	0.76	30,7	1.21
0804S	12,7	0.50	13/16-16	1/4-18	20,3	0.80	23,4	0.92
0806S	12,7	0.50	13/16-16	3/8-18	20,3	0.80	26,4	1.04
0808S	12,7	0.50	13/16-16	1/2-14	20,8	0.82	30,5	1.20
1008S	16,0	0.63	1-14	1/2-14	23,4	0.92	30,5	1.20
1212S	19,0	0.75	1 3/16-12	3/4-14	25,9	1.02	31,2	1.23
1616S	25,4	1.00	1 7/16-12	1-11 1/2	30,0	1.18	38,3	1.51
2020S	31,8	1.25	1 11/16-12	1 1/4-11 1/2	32,0	1.26	42,9	1.69
2424S	38,1	1.50	2-12	1 1/2-11 1/2	36,8	1.45	45,7	1.80

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

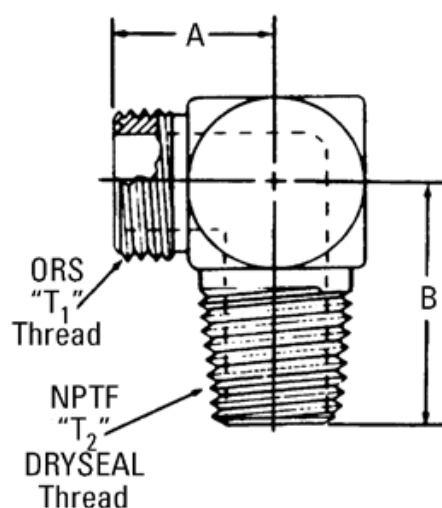
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

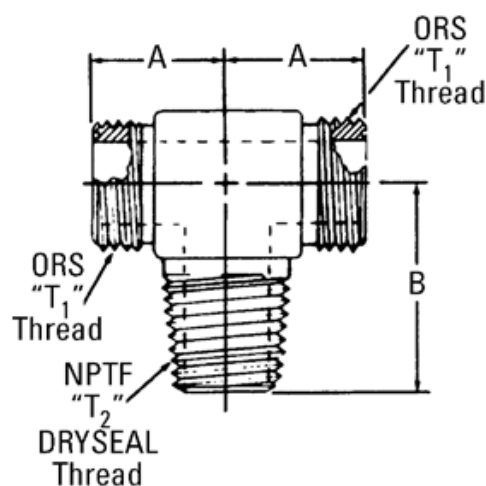
90° ORS/Male NPTF Adapter



Part No. FF2032T(Size) (Ref. SAE 520202)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0402S	6,4	0.25	9/16-18	1/8-27	21,6	0.85	19,8	0.78
0404S	6,4	0.25	9/16-18	1/4-18	23,4	0.92	27,4	1.08
0602S	9,7	0.38	11/16-16	1/8-27	24,9	0.98	21,8	0.86
0604S	9,7	0.38	11/16-16	1/4-18	24,9	0.98	27,4	1.08
0606S	9,7	0.38	11/16-16	3/8-18	26,4	1.04	30,7	1.21
0608S	9,7	0.38	11/16-16	1/2-14	29,2	1.15	38,9	1.53
0802S	12,7	0.50	13/16-16	1/8-27	27,9	1.10	26,9	1.06
0806S	12,7	0.50	13/16-16	3/8-18	27,9	1.10	30,7	1.21
0808S	12,7	0.50	13/16-16	1/2-14	30,7	1.21	38,9	1.53
0812S	12,7	0.50	13/16-16	3/4-14	33,6	1.32	41,9	1.65
1008S	16,0	0.63	1-14	1/2-14	33,3	1.31	38,9	1.53
1012S	16,0	0.63	1-14	3/4-14	35,8	1.41	41,9	1.65
1208S	19,0	0.75	1 3/16-12	1/2-14	37,3	1.47	41,9	1.65
1212S	19,0	0.75	1 3/16-12	3/4-14	37,3	1.47	41,9	1.65
1216S	19,0	0.75	1 3/16-12	1-11 1/2	41,1	1.62	51,6	2.03
1612S	25,4	1.00	1 7/16-12	3/4-14	41,6	1.64	46,7	1.84
1616S	25,4	1.00	1 7/16-12	1-11 1/2	41,6	1.64	51,6	2.03
2016S	31,8	1.25	1 11/16-12	1-11 1/2	44,7	1.76	60,4	2.38
2020S	31,8	1.25	1 11/16-12	1 1/4-11 1/2	44,7	1.76	61,2	2.41
2424S	38,1	1.50	2-12	1 1/2-11 1/2	48,8	1.92	68,6	2.70

ORS/ORS/ Male NPTF Adapter

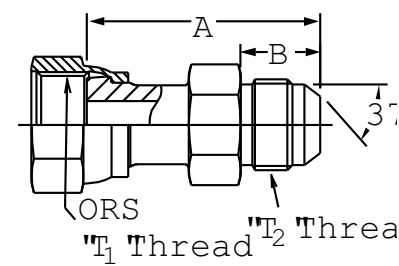


Part No. FF2001T(Size) (Ref. SAE 520425)

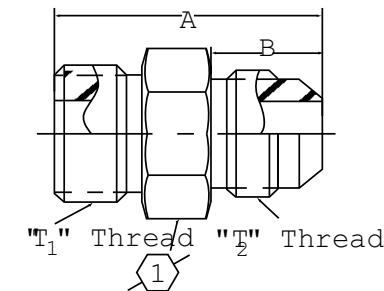
Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0402S	6,4	0.25	9/16-18	1/8-27	21,6	0.85	19,8	0.78
0404S	6,4	0.25	9/16-18	1/4-18	23,4	0.92	27,4	1.08
0604S	9,7	0.38	11/16-16	1/4-18	24,9	0.98	27,4	1.08
0606S	9,7	0.38	11/16-16	3/8-18	26,4	1.04	30,7	1.21
0806S	12,7	0.50	13/16-16	3/8-18	27,9	1.10	30,7	1.21
0808S	12,7	0.50	13/16-16	1/2-14	30,7	1.21	38,9	1.53
1008S	16,0	0.63	1-14	1/2-14	33,3	1.31	38,9	1.53
1206S	19,0	0.75	1 3/16-12	1/2-18	37,3	1.47	37,1	1.46
1212S	19,0	0.75	1 3/16-12	3/4-14	37,3	1.47	41,9	1.65
1216S	19,0	0.75	1 3/16-12	1-11 1/2	41,4	1.63	51,6	2.03
1616S	25,4	1.00	1 7/16-12	1-11 1/2	41,6	1.64	51,6	2.03
2020S	31,8	1.25	1 11/16-12	1 1/4-11 1/2	44,7	1.76	61,2	2.41
2424S	38,1	1.50	2-12	1 1/2-11 1/2	48,8	1.92	68,6	2.70

ORS to SAE 37° Flare

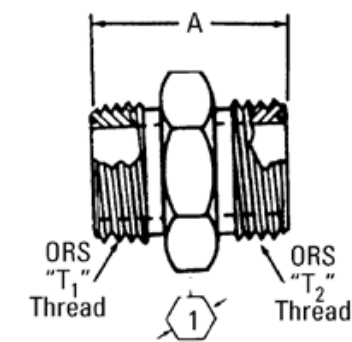
ORS Female Swivel/ SAE 37° Male Flare



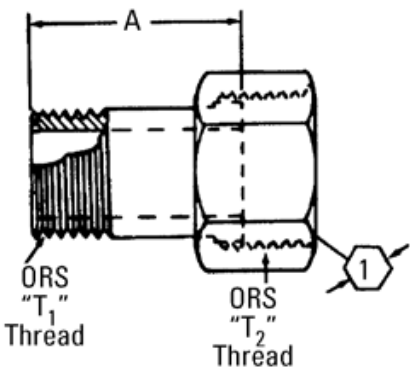
Male ORS/SAE 37° Male Flare



ORS/ORS ORS/ORS Adapter



ORS/ORS Reducer Adapter



† Available without nut. Order by part number FF2151T(Size).

Part No. FF2209T(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0412S	6,4	0.25	9/16-18	1 1/16-12	50,5	1.99	21,8	0.86
0612S	9,7	0.38	1 1/16-16	1 1/16-12	52,6	2.07	21,8	0.86
0808S	12,7	0.50	1 3/16-16	3/4-16	51,6	2.03	16,8	0.66
0812S	12,7	0.50	1 3/16-16	1 1/16-12	57,2	2.25	21,8	0.86
1212S	19,0	0.75	1 3/16-12	1 1/16-12	62,0	2.44	21,8	0.86
1616S	25,4	1.00	1 7/16-12	1 5/16-12	71,6	2.82	23,1	0.91
2016S	31,8	1.25	1 11/16-12	1 5/16-12	73,1	2.88	23,1	0.91

Part No. FF2313T(Dash Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		1	
	mm	in			mm	in	mm	in	mm	in
0808S	12,7	0.50	3/16-16	3/4-16	39,1	1.54	16,8	0.66	22,3	0.88
1010S	16,0	0.63	1-14	7/8-14	46,5	1.83	19,3	0.76	26,9	1.06
1212S	19,0	0.75	1 3/16-12	1 1/10-16	52,1	2.05	21,8	0.86	31,8	1.25

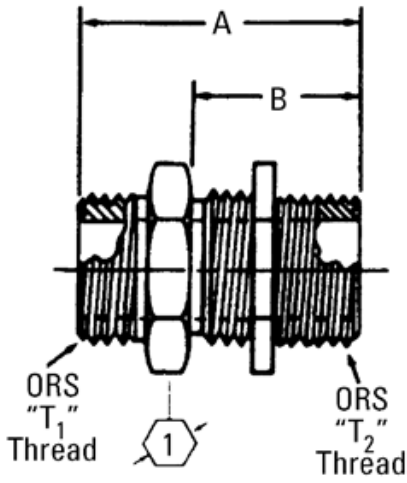
Part No. FF2000T(Size) (Ref. SAE 520101)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		1	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	27,4	1.08	15,7	0.62
0604S	9,7	0.38	1 1/16-16	9/16-18	29,7	1.17	19,0	0.75
0606S	9,7	0.38	1 1/16-16	1 1/16-16	31,0	1.22	19,0	0.75
0806S	12,7	0.50	1 3/16-16	1 1/16-16	33,8	1.33	22,3	0.88
0808S	12,7	0.50	1 3/16-16	1 3/16-16	35,3	1.39	22,3	0.88
1008S	16,0	0.63	1-14	1 3/16-16	39,9	1.57	26,9	1.06
1010S	16,0	0.63	1-14	1-14	42,7	1.68	26,9	1.06
1208S	19,0	0.75	1 3/16-12	1 3/16-16	42,9	1.69	31,8	1.25
1210S	19,0	0.75	1 3/16-12	1-14	45,7	1.80	31,8	1.25
1212S	19,0	0.75	1 3/16-12	1 3/16-12	47,2	1.86	31,8	1.25
1612S	25,4	1.00	1 7/16-12	1 3/16-12	48,8	1.92	38,1	1.50
1616S	25,4	1.00	1 7/16-12	1 7/16-12	49,3	1.94	38,1	1.50
2020S	31,8	1.25	1 11/16-12	1 11/16-12	51,3	2.02	44,4	1.75
2424S	38,1	1.50	2-12	2-12	53,1	2.09	53,9	2.12

Part No. FF2281T(Size) (Ref. SAE 520123)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		1	
	mm	in			mm	in	mm	in
0406S	9,7	0.38	9/16-18	1 1/16-16	19,5	0.77	20,6	0.81
0408S†	12,7	0.50	9/16-18	1 3/16-16	21,8	0.86	23,9	0.94
0410S†	16,0	0.63	9/16-18	1-14	22,9	0.90	28,5	1.12
0412S†	19,0	0.75	9/16-18	1 3/16-12	24,9	0.98	35,1	1.38
0608S	12,7	0.50	1 1/16-16	1 3/16-16	22,3	0.88	23,9	0.94
0610S†	16,0	0.63	1 1/16-16	1-14	24,1	0.95	28,5	1.12
0612S†	19,0	0.75	1 1/16-16	1 3/16-12	26,2	1.03	35,1	1.38
0810S†	16,0	0.63	1 3/16-16	1-14	25,9	1.02	28,5	1.12
0812S†	19,0	0.75	1 3/16-16	1 3/16-12	27,9	1.10	35,1	1.38
0816S†	25,4	1.00	1 3/16-16	1 7/16-12	29,2	1.15	41,1	1.62
1216S	25,4	1.00	1 3/16-12	1 7/16-12	34,0	1.34	41,1	1.62
1220S†	31,8	1.25	1 3/16-12	1 11/16-12	33,5	1.32	47,7	1.88
1224S†	38,1	1.50	1 3/16-12	2-12	33,6	1.32	57,2	2.25
1620S	31,8	1.25	1 7/16-12	1 11/16-12	37,3	2.69	47,7	1.88
1624S†	38,1	1.50	1 7/16-12	2-12	34,0	1.34	57,2	2.25

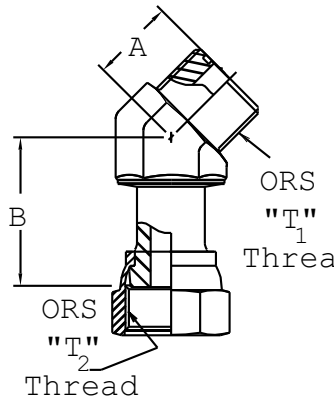
**ORS/ORS
Bulkhead Adapter**



Part No. FF1994T(Size) (Ref. SAE 520601)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		1	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	48,3	1.90	31,5	1.24	20,6	0.81
0606S	9,7	0.38	11/16-16	11/16-16	53,1	2.09	34,0	1.34	25,4	1.00
0608S	9,7	0.38	11/16-16	13/16-16	56,9	2.24	36,6	1.44	28,5	1.12
0808S	12,7	0.50	13/16-16	13/16-16	58,4	2.30	36,6	1.44	28,5	1.12
1010S	16,0	0.63	1-14	1-14	66,5	2.62	40,6	1.60	33,3	1.31
1212S	19,0	0.75	13/16-12	13/16-12	69,1	2.72	41,6	1.64	38,1	1.50
1616S	25,4	1.00	17/16-12	17/16-12	70,1	2.76	42,2	1.66	44,4	1.75
2016S	31,8	1.25	111/16-12	17/16-12	70,1	2.76	42,2	1.66	44,4	1.75
2020S	31,8	1.25	111/16-12	111/16-12	70,1	2.76	42,2	1.66	50,8	2.00
2424S	38,1	1.50	2-12	2-12	70,1	2.76	42,2	1.66	60,4	2.38

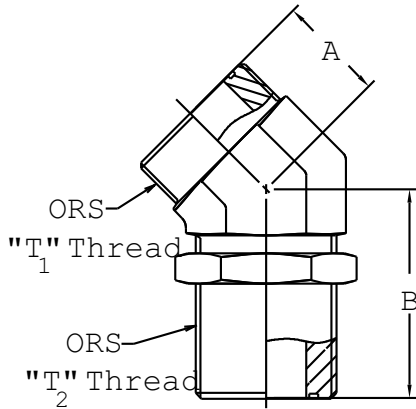
**45° ORS/ORS
Female Adapter**



Part No. FF2133T(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0606S	9,7	0.38	11/16-16	11/16-16	18,8	0.74	26,9	1.06
0808S	12,7	0.50	13/16-16	13/16-16	20,3	0.80	35,6	1.40
1010S	16,0	0.63	1-14	1-14	23,4	0.92	38,6	1.52
1212S	19,0	0.75	13/16-12	13/16-12	25,9	1.02	42,4	1.67

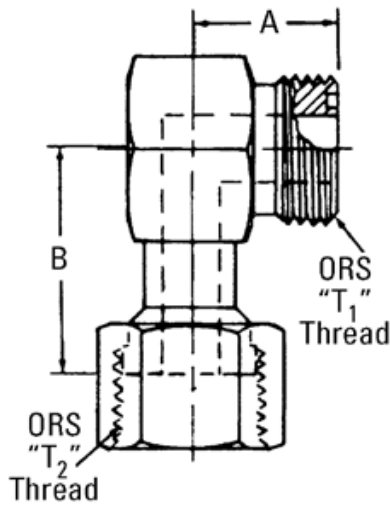
**45° ORS/ORS
Bulkhead Adapter**



Part No. FF2144T(Size) (Ref. SAE 520801)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	16,0	0.63	43,9	1.73
0606S	9,7	0.38	11/16-16	11/16-16	18,8	0.74	48,5	1.91
0808S	12,7	0.50	13/16-16	13/16-16	20,3	0.80	51,1	2.01
1010S	16,0	0.63	1-14	1-14	23,4	0.92	56,6	2.23
1212S	19,0	0.75	13/16-12	13/16-12	25,9	1.02	60,7	2.39
1616S	25,4	1.00	17/16-12	17/16-12	30,0	1.18	65,3	2.57
2020S	31,8	1.25	111/16-12	111/16-12	32,0	1.26	67,0	2.64
2424S	38,1	1.50	2-12	2-12	36,8	1.45	67,0	2.64

**90° ORS/ORS
Female Adapter**



Part No. FF2098T(Size) (Ref. SAE 520221)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	21,6	0.85	26,4	1.04
0606S	9,7	0.38	11/16-16	11/16-16	24,9	0.98	29,2	1.15
0808S	12,7	0.50	13/16-16	13/16-16	27,9	1.10	37,8	1.49
1010S	16,0	0.63	1-14	1-14	33,3	1.31	41,1	1.62
1212S	19,0	0.75	13/16-12	13/16-12	37,3	1.47	46,2	1.82
1616S	25,4	1.00	17/16-12	17/16-12	41,6	1.64	53,3	2.10
2020S	31,8	1.25	111/16-12	111/16-12	44,7	1.76	58,2	2.29
2424S	38,1	1.50	2-12	2-12	48,8	1.92	61,2	2.41

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

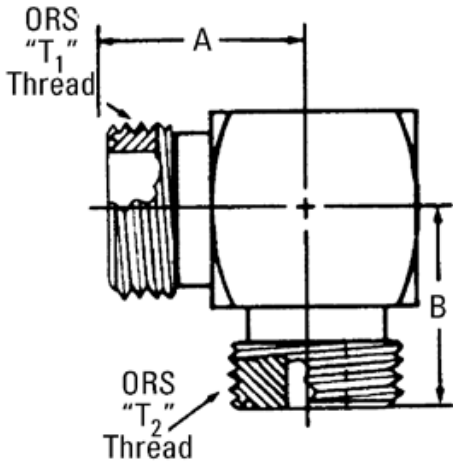
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

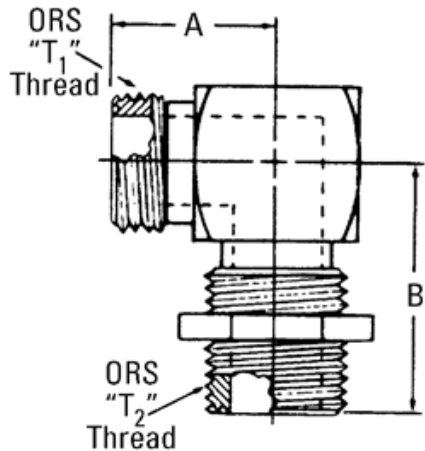
90° ORS/ORS Adapter



Part No. FF2035T(Size) (Ref. SAE 520201)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	21,6	0.85	21,6	0.85
0604S	9,7	0.38	11/16-16	9/16-18	24,9	0.98	23,4	0.92
0606S	9,7	0.38	11/16-16	11/16-16	24,9	0.98	24,9	0.98
0804S	12,7	0.50	13/16-16	9/16-18	27,9	1.10	24,6	0.97
0808S	12,7	0.50	13/16-16	13/16-16	27,9	1.10	27,9	1.10
1010S	16,0	0.63	1-14	1-14	33,3	1.31	33,3	1.31
1208S	19,0	0.75	13/16-12	13/16-16	37,3	1.47	34,0	1.34
1212S	19,0	0.75	13/16-12	13/16-12	37,3	1.47	37,3	1.47
1616S	25,4	1.00	17/16-12	17/16-12	41,6	1.64	41,6	1.64
2020S	31,8	1.25	111/16-12	111/16-12	44,7	1.76	44,7	1.76
2424S	38,1	1.50	2-12	2-12	48,8	1.92	48,8	1.92

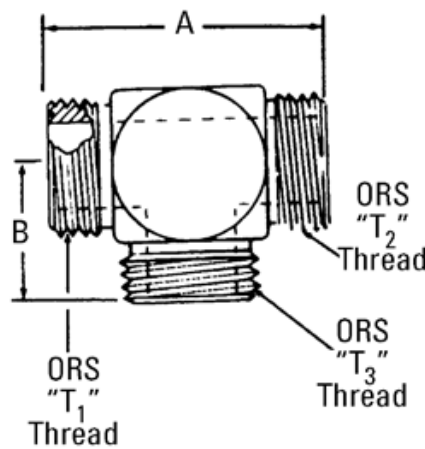
90° ORS/ORS Bulkhead Adapter



Part No. FF2030T(Size) (Ref. SAE 520701)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		E	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	22,6	0.89	47,0	1.85	4,3	0.17
0606S	9,7	0.38	11/16-16	11/16-16	25,9	1.02	52,0	2.05	6,6	0.26
0806S	12,7	0.50	13/16-16	11/16-16	29,0	1.14	53,9	2.12	6,6	0.26
0808S	12,7	0.50	13/16-16	13/16-16	29,0	1.14	55,4	2.18	9,7	0.38
1010S	16,0	0.63	1-14	1-14	34,5	1.36	63,0	2.48	12,2	0.48
1212S	19,0	0.75	13/16-12	13/16-12	38,6	1.52	67,3	2.65	15,5	0.61
1616S	25,4	1.00	17/16-12	17/16-12	42,4	1.67	71,1	2.80	20,6	0.81
2020S	31,8	1.25	111/16-12	111/16-12	45,5	1.79	75,4	2.97	26,2	1.03

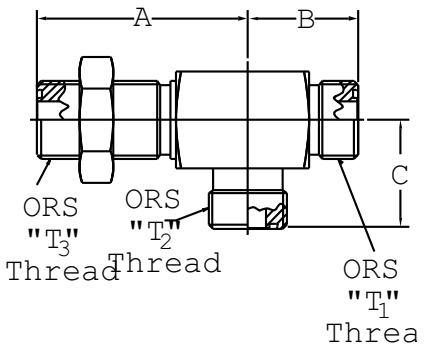
ORS/ORS/ORS



Part No. FF1898T(Size) (Ref. SAE 520401)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	A		B	
	mm	in				mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	9/16-18	43,2	1.70	21,6	0.85
0606S	9,7	0.38	11/16-16	11/16-16	11/16-16	49,8	1.96	24,9	0.98
0608S	9,7	0.38	11/16-16	11/16-16	13/16-16	52,8	2.08	27,9	1.10
0808S	12,7	0.50	13/16-16	13/16-16	13/16-16	55,9	2.20	27,9	1.10
1010S	16,0	0.63	1-14	1-14	1-14	66,5	2.62	33,3	1.31
0004S			13/16-12	13/16-16	13/16-16	70,9	2.79	33,6	1.32
1212S	19,0	0.75	13/16-12	13/16-12	13/16-12	74,7	2.94	37,3	1.47
1216S	19,0	0.75	13/16-12	13/16-12	17/16-12	82,3	3.24	44,7	1.76
1616S	25,4	1.00	17/16-12	17/16-12	17/16-12	83,3	3.28	41,6	1.64
0003S			111/16-12	17/16-12	13/16-12	89,4	3.52	44,2	1.74
2016S	31,8	1.25	111/16-12	111/16-12	17/16-12	89,4	3.52	44,7	1.76
2020S	31,8	1.25	111/16-12	111/16-12	111/16-12	89,4	3.52	44,7	1.76
2424S	38,1	1.50	2-12	2-12	2-12	97,5	3.84	48,8	1.92

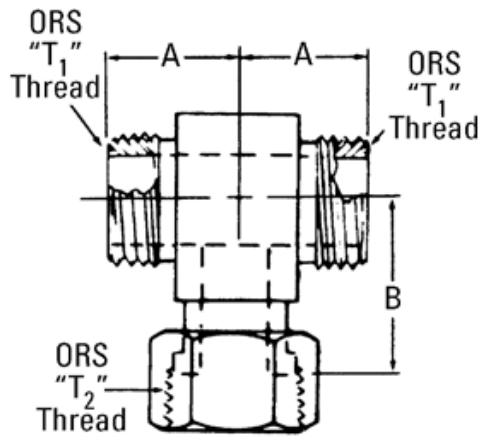
ORS - Bulkhead Run Tee



Part No. FF2174T(Size) (Ref. SAE 520958)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	A		B		C	
	mm	in				mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	9/16-18	47,0	1.85	22,6	0.89	22,6	0.89
0606S	9,7	0.38	11/16-16	11/16-16	11/16-16	52,0	2.05	25,9	1.02	25,7	1.01
0808S	12,7	0.50	13/16-16	13/16-16	13/16-16	55,4	2.18	29,0	1.14	28,7	1.13
1212S	19,0	0.75	13/16-12	13/16-12	13/16-12	54,9	2.16	40,6	1.60	40,6	1.60
1616S	25,4	1.00	17/16-12	17/16-12	17/16-12	71,1	2.80	42,4	1.67	42,4	1.67

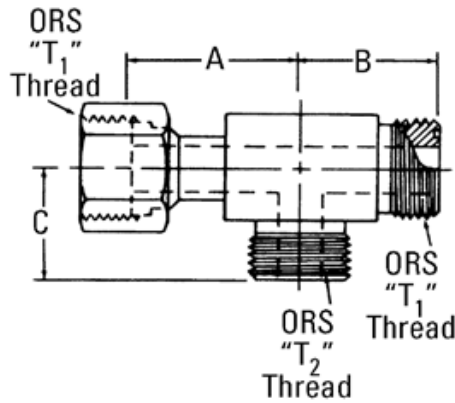
ORS/ORS/ORS Female Adapter



Part No. FF1857T(Size) (Ref. SAE 520433)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	21,6	0.85	26,4	1.04
0606S	9,7	0.38	11/16-16	11/16-16	24,9	0.98	29,2	1.15
0808S	12,7	0.50	13/16-16	13/16-16	27,9	1.10	37,8	1.49
1010S	16,0	0.63	1-14	1-14	33,3	1.31	41,1	1.62
1212S	19,0	0.75	13/16-12	13/16-12	37,3	1.47	46,2	1.82
1616S	25,4	1.00	17/16-12	17/16-12	41,6	1.64	53,3	2.10
2020S	31,8	1.25	111/16-12	111/16-12	44,7	1.76	58,2	2.29
2424S	38,1	1.50	2-12	2-12	48,8	1.92	61,2	2.41

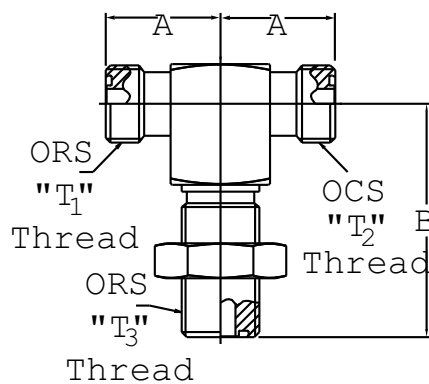
ORS/ORS Female/ ORS Adapter



Part No. FF2114T(Size) (Ref. SAE 520432)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0404S	6,4	0.25	9/16-18	9/16-18	26,4	1.04	21,6	0.85	21,6	0.85
0606S	9,7	0.38	11/16-16	11/16-16	29,2	1.15	24,9	0.98	24,9	0.98
0808S	12,7	0.50	13/16-16	13/16-16	37,8	1.49	27,9	1.10	27,9	1.10
1010S	16,0	0.63	1-14	1-14	41,1	1.62	33,3	1.31	33,3	1.31
0001S	-	-	13/16-12	9/16-18	46,2	1.82	37,3	1.47	30,3	1.19
1212S	19,0	0.75	13/16-12	13/16-12	46,2	1.82	37,3	1.47	37,3	1.47
1616S	25,4	1.00	17/16-12	17/16-12	53,3	2.10	41,6	1.64	41,6	1.64
2020S	31,8	1.25	111/16-12	111/16-12	58,2	2.29	44,7	1.76	44,7	1.76
2424S	38,1	1.50	2-12	2-12	61,2	2.41	48,8	1.92	48,8	1.92

ORS/ORS/ORS Bulkhead Adapter

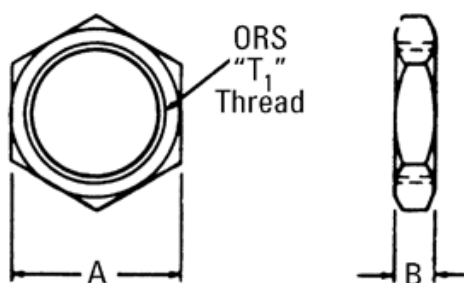


Part No. FF2033T (Size) (Ref. SAE 520959)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	A		B	
	mm	in				mm	in	mm	in
0606S	9,7	0.38	11/16-16	11/16-16	11/16-16	25,7	1.01	52,0	2.05
0808S	12,7	0.50	13/16-16	13/16-16	13/16-16	28,7	1.13	55,4	2.18
1010S	16,0	0.63	1-14	1-14	1-14	34,5	1.36	63,0	2.48
1212S	19,0	0.75	13/16-12	13/16-12	13/16-12	40,6	1.60	67,3	2.65
1616S	25,4	1.00	17/16-12	17/16-12	17/16-12	42,4	1.67	71,1	2.80

ORS Accessories

ORS Bulkhead Nut



Part No. FF9768-(Dash size) (Ref. SAE 520118)

Dash Size	Tube O.D.		Thread T1	A		B	
	mm	in		mm	in	mm	in
04S	6,4	0.25	9/16-18	20,6	0.81	6,8	0.27
06S	9,7	0.38	11/16-16	25,4	1.00	7,9	0.31
08S	12,7	0.50	13/16-16	28,5	1.12	8,9	0.35
10S	16,0	0.63	1-14	33,3	1.31	10,4	0.41
12S	19,0	0.75	13/16-12	38,1	1.50	10,4	0.41
16S	25,4	1.00	17/16-12	44,4	1.75	10,4	0.41
20S	31,8	1.25	111/16-12	50,8	2.00	10,4	0.41
24S	38,1	1.50	2-12	60,4	2.38	10,4	0.41

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

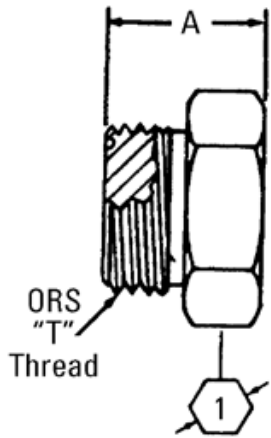
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

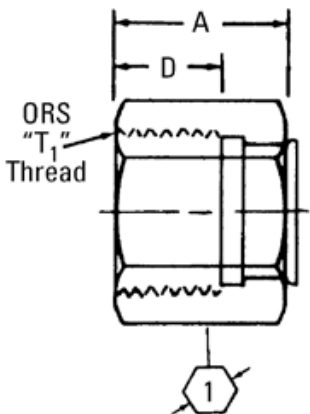
ORS Plug



Part No. FF9767-(Dash size) (Ref. SAE 520109)

Dash Size	Tube O.D.		Thread T1	A			
	mm	in		mm	in	mm	in
04S	6,4	0.25	9/16-18	16,8	0.66	15,7	0.62
06S	9,7	0.38	11/16-16	19,0	0.75	19,0	0.75
08S	12,7	0.50	13/16-16	22,1	0.87	22,3	0.88
10S	16,0	0.63	1-14	25,9	1.02	26,9	1.06
12S	19,0	0.75	13/16-12	27,4	1.08	31,8	1.25
16S	25,4	1.00	17/16-12	27,9	1.10	38,1	1.50
20S	31,8	1.25	111/16-12	27,9	1.10	44,4	1.75
24S	38,1	1.50	2-12	27,9	1.10	53,9	2.12

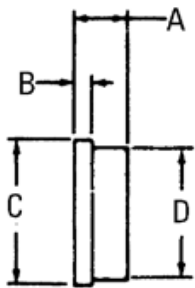
ORS Cap Assembly



Part No. FF9863-(Dash size) (Ref. SAE 520112)

Dash Size	Tube O.D.		Thread T1	A		D			
	mm	in		mm	in	mm	in	mm	in
04S	6,4	0.25	9/16-18	16,8	0.66	8,1	0.32	17,5	0.69
06S	9,7	0.38	11/16-16	19,0	0.75	9,7	0.38	20,6	0.81
08S	12,7	0.50	13/16-16	22,9	0.90	10,9	0.43	23,9	0.94
10S	16,0	0.63	1-14	25,4	1.00	13,5	0.53	28,5	1.12
12S	19,0	0.75	13/16-12	27,9	1.10	14,5	0.57	35,1	1.38
16S	25,4	1.00	17/16-12	29,7	1.17	14,7	0.58	41,1	1.62
20S	31,8	1.25	111/16-12	29,7	1.17	14,7	0.58	47,7	1.88
24S	38,1	1.50	2-12	29,7	1.17	14,7	0.58	57,2	2.25

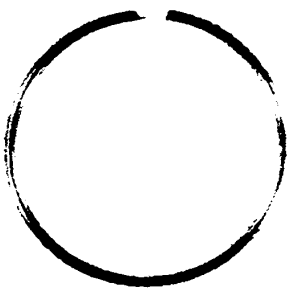
ORS Cap (use with FC2326 Nut)



Part No. FF9766-(Dash size)

Dash Size	Tube O.D.		A		B		C		D	
	mm	in	mm	in	mm	in	mm	in	mm	in
04S	6,4	0.25	8,6	0.34	4,1	0.16	12,7	0.50	10,2	0.40
06S	9,7	0.38	9,4	0.37	4,6	0.18	15,7	0.62	13,2	0.52
08S	12,7	0.50	11,9	0.47	5,1	0.20	18,8	0.74	16,2	0.64
10S	16,0	0.63	11,9	0.47	6,1	0.24	23,4	0.92	20,8	0.82
12S	19,0	0.75	13,5	0.53	6,6	0.26	27,7	1.09	23,9	0.94
14S	22,3	0.88	18,0	0.71	11,4	0.45	27,7	1.09	24,6	0.97
16S	25,4	1.00	15,0	0.59	7,1	0.28	34,0	1.34	28,7	1.13
20S	31,8	1.25	15,0	0.59	7,1	0.28	40,4	1.59	35,6	1.40
24S	38,1	1.50	15,0	0.59	7,1	0.28	48,5	1.91	43,4	1.71

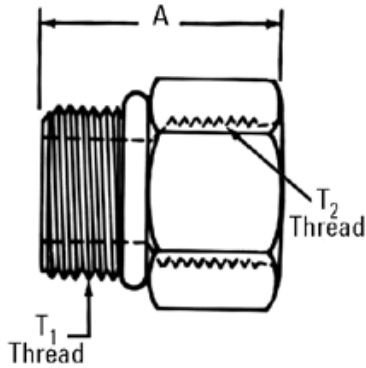
ORS Silver Braze Ring



Part No. FF9075-(Size)

Part Number	Tube O.D.	
	mm	in
FF9075-19	6,4	0.25
FF9075-06	9,7	0.38
FF9075-74	12,7	0.50
FF9075-08	16,0	0.63
FF9075-09	19,0	0.75
FF9075-86	25,4	1.00
FF9075-87	31,8	1.25
FF9075-88	38,1	1.50

ORB/ORB SAE O-Ring Boss Reducer

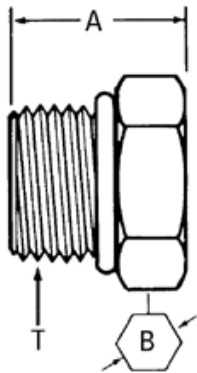


Part No. FF1010-(Dash size)

Dash Size	Thread T1	Thread T2	A	
			mm	in
0408S	7/16-20	3/4-16	32,0	1.26
0806S	3/4-16	9/16-18	26,9	1.06
1006S	7/8-14	9/16-18	20,6	0.81
1008S	7/8-14	3/4-16	31,8	1.25
1206S	1 1/16-12	9/16-18	25,4	1.00
1208S	1 1/16-12	3/4-16	25,4	1.00
1210S	1 1/16-12	7/8-14	36,6	1.44
1216S	1 1/16-12	1 5/16-12	45,5	1.79
1608S	1 5/16-12	3/4-16	25,4	1.00
1610S	1 5/16-12	7/8-14	36,6	1.44
1612S	1 5/16-12	1 1/16-12	40,4	1.59
2012S	1 5/8-12	1 1/16-12	25,4	1.00
2016S	1 5/8-12	1 5/16-12	25,4	1.00

NOTE: Available without O-ring. Order Part No. FF1009-(Dash size).

O-Ring Boss Plug

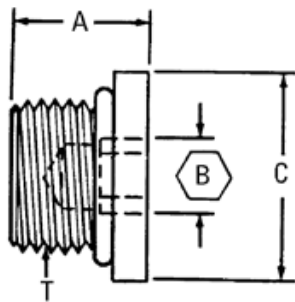


Part No. 900598-(Dash size) (Ref. SAE 090109A)

Dash Size	Thread T	A		B	
		mm	in	mm	in
4S	7/16-20	17,0	0.67	14,2	0.56
5S	1/2-20	17,0	0.67	15,7	0.62
6S	9/16-18	18,5	0.73	17,6	0.69
8S	3/4-16	20,3	0.80	22,4	0.88
10S	7/8-14	23,6	0.93	25,4	1.00
12S	1 1/16-12	27,7	1.09	31,8	1.25
14S	1 3/16-12	27,7	1.09	35,1	1.38
16S	1 5/16-12	28,5	1.12	38,1	1.50
20S	1 5/8-12	30,5	1.20	47,7	1.88
24S	1 7/8-12	32,3	1.27	53,9	2.12
32S	2 1/2-12	36,3	1.43	69,8	2.75

NOTE: Available without O-ring. Order Part No. 900598-1-(Dash size).

SAE Male O-Ring Boss (Hex Socket)

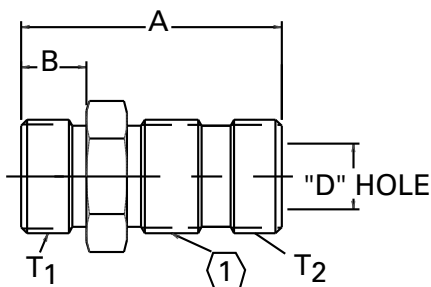


Part No. FF2138-(Dash size) (Ref. SAE 090109B)

Dash Size	Tube O.D.		Thread T	A		C (Round)		B (Hex)	
	mm	in		mm	in	mm	in	mm	in
-02S	3,3	0.13	5/16-24	9,7	0.38	11,2	0.44	3,3	0.13
-03S	4,8	0.19	3/8-24	9,7	0.38	12,7	0.50	3,3	0.13
-04S	6,3	0.25	7/16-20	11,4	0.45	14,2	0.56	4,8	0.19
-05S	7,9	0.31	1/2-20	11,4	0.45	15,7	0.62	4,8	0.19
-06S	9,6	0.38	9/16-18	12,2	0.48	17,6	0.69	6,4	0.25
-08S	12,7	0.50	3/4-16	14,2	0.56	22,4	0.88	7,9	0.31
-10S	16,0	0.63	7/8-14	16,0	0.63	25,4	1.00	9,7	0.38
-12S	19,0	0.75	1 1/16-12	19,0	0.75	31,8	1.25	14,2	0.56
-16S	25,4	1.00	1 5/16-12	19,5	0.77	38,1	1.50	16,0	0.63

NOTE: Available without O-ring. Order Part No. FF2137-(Dash size).

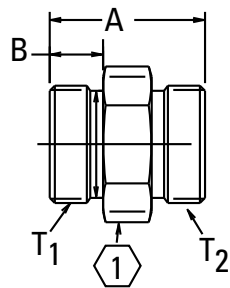
ORB/Adjustable ORB



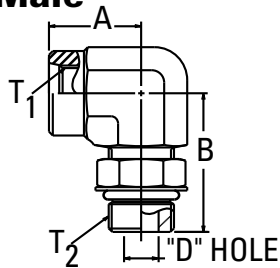
Part No. 2220-(Dash Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		D	
	mm	in			mm	in	mm	in	mm	in
6-6S	9,7	0.38	9/16-18	9/16-18	37,8	1.49	21,6	0.85	17,5	0.69
10-10S	16,0	0.63	7/8-14	7/8-14	50,5	1.99	30,0	1.18	25,4	1.00
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	58,4	2.30	33,6	1.32	31,8	1.25
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	54,1	2.13	29,5	1.16	38,1	1.50

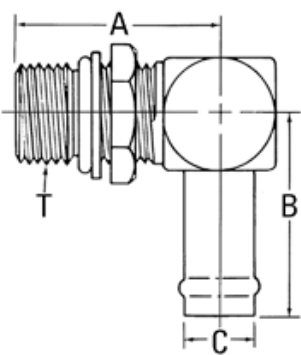
Male ORB/Male ORB



90° Female ORB/
Adjustable
ORB Male

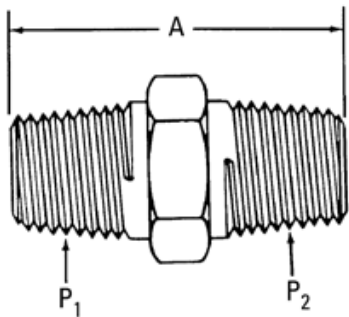


SAE O-Ring Boss
(adj.)/ Hose Connector

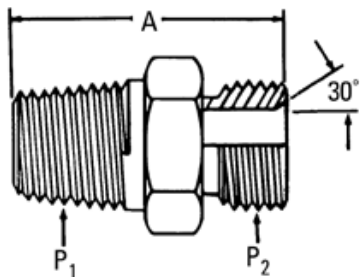


Pipe to Pipe

Nipple-External Pipe/
External Pipe



External Pipe/
External Pipe (NPSM)



Part No. 2229-(Dash Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		1	
	mm	in			mm	in	mm	in	mm	in
8-8S	12,7	0.50	3/4-16	3/4-16	30,3	1.19	11,2	0.44	22,3	0.88
8-10S	16,0	0.63	7/8-14	3/4-16	35,3	1.39	11,2	0.44	25,4	1.00
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	43,9	1.73	15,0	0.59	38,1	1.50

Part No. FF2591- (Dash Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,4	0.25	7/16-20	7/16-20	21,6	0.85	32,0	1.26

Part No. FF1167-(Dash size)

Dash Size	Tube O.D.		Thread T1	A		B		C	
	mm	in		mm	in	mm	in	mm	in
1010S	16,0	0.63	7/8-14	43,4	1.71	52,3	2.06	15,7	0.62
1212S	19,0	0.75	1 1/16-12	49,3	1.94	53,1	2.09	19,0	0.75
1220S	31,7	1.25	1 1/16-12	51,3	2.02	55,6	2.19	31,8	1.25

NOTE: Available without O-ring. Order by Part No. FF1161-(Dash size). Clamp required.

Part No. 2083-(Dash size) (Ref. SAE 140137)

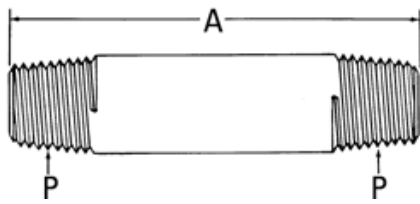
Dash Size	Thread P1	Thread P2	A	
			mm	in
2-2S	1/8-27	1/8-27	26,9	1.06
4-2S	1/4-18	1/8-27	32,0	1.26
4-4S	1/4-18	1/4-18	36,8	1.45
6-4S	3/8-18	1/4-18	36,8	1.45
6-6S	3/8-18	3/8-18	36,8	1.45
8-4S	1/2-14	1/4-18	43,2	1.70
8-6S	1/2-14	3/8-18	43,2	1.70
8-8S	1/2-14	1/2-14	48,0	1.89
12-6S	3/4-14	3/8-18	44,9	1.77
12-8S	3/4-14	1/2-14	49,8	1.96
12-12S	3/4-14	3/4-14	49,8	1.96
16-12S	1-11 1/2	3/4-14	54,6	2.15
16-16S	1-11 1/2	1-11 1/2	59,4	2.34
20-16S	1 1/4-11 1/2	1-11 1/2	62,2	2.45
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	63,0	2.48
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	66,3	2.61
32-32S	2-11 1/2	2-11 1/2	71,6	2.82

Also available in stainless steel as part no. 259-2083.
See pg. 277 for more information.

Part No. 2015-(Dash size)

Dash Size	Thread P1	Thread P2	A	
			mm	in
8-8S	1/2-14	1/2-14	38,1	1.50
12-12S	3/4-14	3/4-14	41,1	1.62
16-16S	1-11 1/2	1-11 1/2	48,5	1.91
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	41,1	1.62

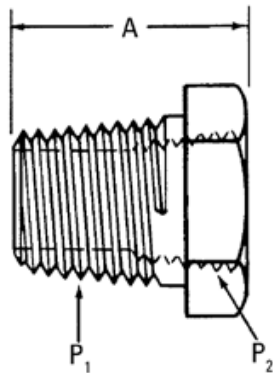
Nipple-External Pipe/ External Pipe



Part No. 2084-(Dash size)

Dash Size	Thread P	A	
		mm	in
2S-3/4	1/8-27	19,0	0.75
2S-2	1/8-27	50,8	2.00
4S-7/8	1/4-18	22,3	0.88
6S-1	3/8-18	25,4	1.00
6S-2	3/8-18	50,8	2.00
6S-3	3/8-18	76,2	3.00
6S-4	3/8-18	101,6	4.00
6S-6	3/8-18	152,4	6.00
8S-11/8	1/2-14	28,5	1.12
8S-21/2	1/2-14	63,5	2.50
12S-13/8	3/4-14	35,1	1.38
16S-11/2	1-11 1/2	38,1	1.50
20S-15/8	1 1/4-11 1/2	41,1	1.62
24S-13/4	1 1/2-11 1/2	44,4	1.75

Reducer-External Pipe/ Internal Pipe

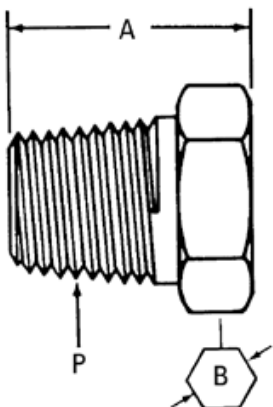


Part No. 2081-(Dash size) (Ref. SAE 140140)

Dash Size	Thread P1	Thread P2	A	
			mm	in
4-2S	1/4-18	1/8-27	21,6	0.85
6-2S	3/8-18	1/8-27	25,4	1.00
6-4S	3/8-18	1/4-18	21,6	0.85
8-2S	1/2-14	1/8-27	27,9	1.10
8-4S	1/2-14	1/4-18	27,9	1.10
8-6S	1/2-14	3/8-18	28,5	1.12
12-4S	3/4-14	1/4-14	29,7	1.17
12-6S	3/4-14	3/8-18	29,7	1.17
12-8S	3/4-14	1/2-14	34,5	1.36
16-6S	1-11 1/2	3/8-14	34,5	1.36
16-8S	1-11 1/2	1/2-14	34,5	1.36
16-12S	1-11 1/2	3/4-14	37,8	1.49
20-12S	1 1/4-11 1/2	3/4-14	37,3	1.47
20-16S	1 1/4-11 1/2	1-11 1/2	40,9	1.61
24-12S	1 1/2-11 1/2	3/4-14	39,9	1.57
24-16S	1 1/2-11 1/2	1-11 1/2	39,9	1.57
24-20S	1 1/2-11 1/2	1 1/4-11 1/2	43,4	1.71
32-16S	2-11 1/2	1-11 1/2	44,4	1.75
32-20S	2-11 1/2	1 1/4-11 1/2	44,4	1.75
32-24S	2-11 1/2	1 1/2-11 1/2	44,4	1.75

Also available in stainless steel as part no. 259-2081.
See pg. 277 for more information.

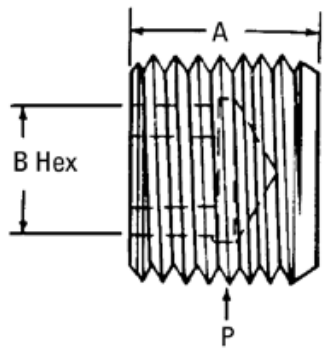
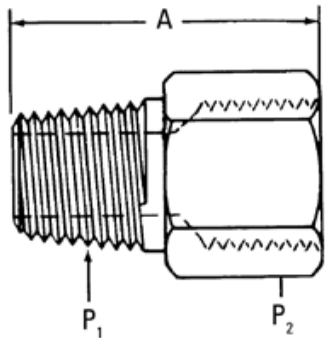
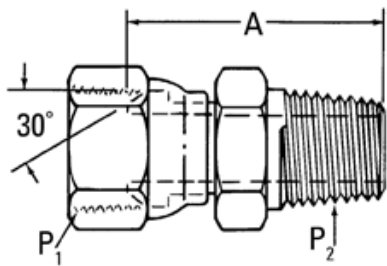
External Pipe/Plug



Part No. 2082-(Dash size) (Ref. SAE 140109E)

Dash Size	Thread P1	A		B	
		mm	in	mm	in
2S	1/8-27	14,7	0.58	11,2	0.44
4S	1/4-18	19,3	0.76	14,2	0.56
6S	3/8-18	20,1	0.79	17,5	0.69
8S	1/2-14	24,9	0.98	22,3	0.88
12S	3/4-14	27,4	1.08	26,9	1.06
16S	1-11 1/2	32,3	1.27	33,3	1.31
20S	1 1/4-11 1/2	33,0	1.30	44,4	1.75
24S	1 1/2-11 1/2	33,8	1.33	50,8	2.00

Also available in stainless steel as part no. 259-2082.
See pg. 277 for more information.

**External Pipe/Plug
Countersunk Hex****External Pipe/
Internal Pipe****Internal Pipe Swivel
(NPSM)/External Pipe****Part No. 2222-(Dash size) (Ref. SAE 140109N)**

Dash Size	Thread P1	A		B	
		mm	in	mm	in
2S	1/8-27	7,6	0.30	4,8	0.19
4S	1/4-18	11,7	0.46	6,4	0.25
6S	3/8-18	11,7	0.46	7,9	0.31
8S	1/2-14	15,5	0.61	9,7	0.38

Part No. 2040-(Dash size) (Ref. SAE 140139)

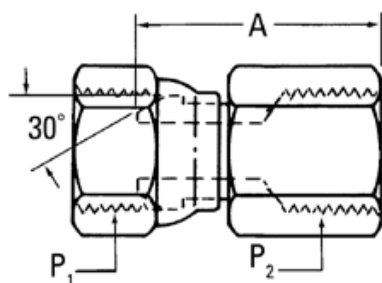
Dash Size	Thread P1	Thread P2	A	
			mm	in
2-2S	1/8-27	1/8-27	26,4	1.04
2-4S	1/8-27	1/4-18	30,7	1.21
4-4S	1/4-18	1/4-18	35,3	1.39
4-6S	1/4-18	3/8-18	36,6	1.44
4-8S	1/4-18	1/2-14	42,7	1.68
6-6S	3/8-18	3/8-18	36,6	1.44
6-8S	3/8-18	1/2-14	42,7	1.68
8-8S	1/2-14	1/2-14	47,5	1.87
8-12S	1/2-14	3/4-14	49,0	1.93
12-12S	3/4-14	3/4-14	49,0	1.93
12-16S	3/4-14	1-11 1/2	55,4	2.18
16-16S	1-11 1/2	1-11 1/2	60,2	2.37
16-20S	1-11 1/2	1 1/4-11 1/2	62,5	2.46
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	63,2	2.49
20-24S	1 1/4-11 1/2	1 1/2-11 1/2	63,5	2.50
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	64,3	2.53
32-32S	2-11 1/2	2-11 1/2	67,6	2.66

Part No. 2045-(Dash size) (Ref. SAE 140130)

Dash Size	Thread P1	Thread P2	A	
			mm	in
2-2S	1/8-27	1/8-27	24,4	0.96
2-4S	1/8-27	1/4-18	29,0	1.14
4-4S	1/4-18	1/4-18	32,0	1.26
4-6S	1/4-18	3/8-18	32,0	1.26
6-4S	3/8-18	1/4-18	32,0	1.26
6-6S	3/8-18	3/8-18	33,6	1.32
6-8S	3/8-18	1/2-14	40,1	1.58
8-6S	1/2-14	3/8-18	34,8	1.37
8-8S	1/2-14	1/2-14	41,1	1.62
8-12S	1/2-14	3/4-14	41,1	1.62
12-12S	3/4-14	3/4-14	44,4	1.75
12-16S	3/4-14	1-11 1/2	50,8	2.00
16-12S	1-11 1/2	3/4-14	44,7	1.76
16-16S	1-11 1/2	1-11 1/2	51,3	2.02
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	52,8	2.08
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	55,9	2.20
32-32S	2-11 1/2	2-11 1/2	60,7	2.39

Pipe to Pipe

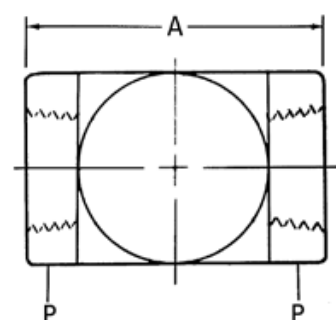
Internal Pipe Swivel (NPSM)/Internal Pipe



Part No. 2046-(Dash size) (Ref. SAE 140131)

Dash Size	Thread P1	Thread P2	A	
			mm	in
2-2S	1/8-27	1/8-27	21,3	0.84
2-4S	1/8-27	1/4-18	26,9	1.06
4-4S	1/4-18	1/4-18	33,0	1.30
4-6S	1/4-18	3/8-18	33,3	1.31
6-6S	3/8-18	3/8-18	33,8	1.33
6-8S	3/8-18	1/2-14	36,8	1.45
8-8S	1/2-14	1/2-14	39,6	1.56
12-12S	3/4-14	3/4-14	44,9	1.77
16-16S	1-11 1/2	1-11 1/2	52,3	2.06
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	52,3	2.06
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	55,4	2.18
32-32S	2-11 1/2	2-11 1/2	58,4	2.30

Coupling - Internal Pipe/Internal Pipe

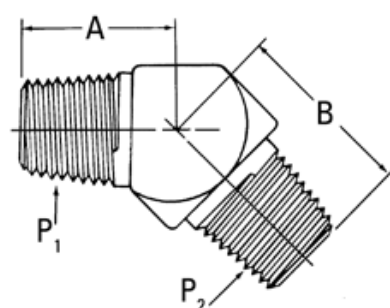


Part No. 2096-(Dash size) (Ref. SAE 140138)

Dash Size	Thread P	A	
		mm	in
2S	1/8-27	19,0	0.75
4S	1/4-18	28,7	1.13
6S	3/8-18	28,7	1.13
8S	1/2-14	38,1	1.50
12S	3/4-14	38,9	1.53
16S	1-11 1/2	48,0	1.89
20S	1 1/4-11 1/2	49,0	1.93
24S	1 1/2-11 1/2	49,0	1.93

Also available in stainless steel as part no. 259-2096. See pg. 279 for more information.

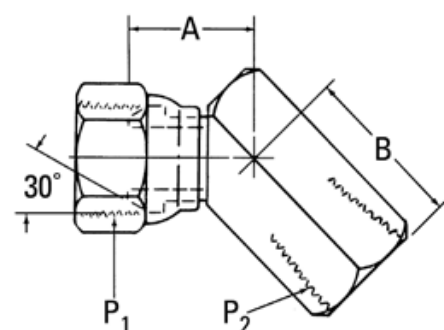
External Pipe/External Pipe



Part No. 2247-(Dash size) (Ref. SAE 140337)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	13,2	0.52	13,2	0.52
4-4S	1/4-18	1/4-18	21,8	0.86	21,8	0.86
6-4S	3/8-18	1/4-18	24,1	0.95	24,1	0.95
6-6S	3/8-18	3/8-18	24,1	0.95	24,1	0.95
8-8S	1/2-14	1/2-14	28,7	1.13	29,7	1.17
12-12S	3/4-14	3/4-14	29,7	1.17	30,5	1.20
16-16S	1-11 1/2	1-11 1/2	30,5	1.20	37,6	1.48
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	47,7	1.88	39,1	1.54

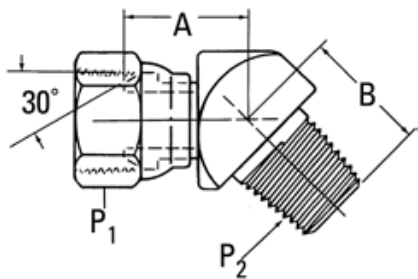
Internal Pipe Swivel (NPSM)/Internal Pipe



Part No. 2050-(Dash size) (Ref. SAE 140331)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	20,1	0.79	24,6	0.97
6-6S	3/8-18	3/8-18	23,4	0.92	30,0	1.18
8-8S	1/2-14	1/2-14	23,1	0.91	35,8	1.41
12-12S	3/4-14	3/4-14	27,9	1.10	38,9	1.53
16-16S	1-11 1/2	1-11 1/2	32,0	1.26	38,9	1.53

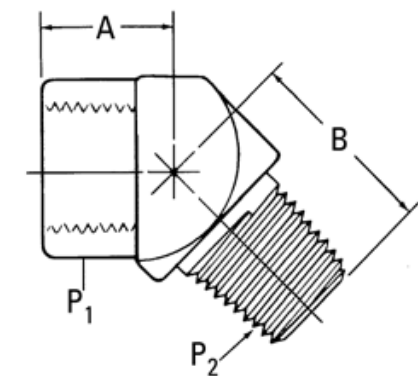
Internal Pipe Swivel
(NPSM)/External Pipe



Part No. 2049-(Dash size) (Ref. SAE 140330)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	17,0	0.67	17,8	0.70
4-4S	1/4-18	1/4-18	20,1	0.79	20,1	0.79
6-6S	3/8-18	3/8-18	23,4	0.92	27,7	1.09
6-8S	3/8-18	1/2-14	23,4	0.92	35,8	1.41
8-6S	1/2-14	3/8-18	23,1	0.91	27,7	1.09
8-8S	1/2-14	1/2-14	23,1	0.91	33,8	1.33
12-12S	3/4-14	3/4-14	27,9	1.10	38,9	1.53
16-16S	1-11 1/2	1-11 1/2	32,0	1.26	38,9	1.53
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	31,8	1.25	44,4	1.75
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	35,8	1.41	50,8	2.00

External Pipe/
Internal Pipe

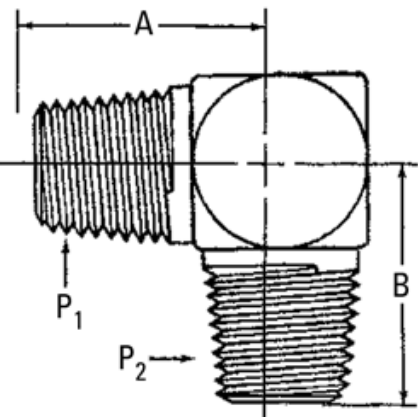


Part No. 2088-(Dash size) (Ref. SAE 140339)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	11,9	0.47	18,3	0.72
4-4S	1/4-18	1/4-18	15,7	0.62	26,7	1.05
6-6S	3/8-18	3/8-18	18,3	0.72	26,9	1.06
8-8S	1/2-14	1/2-14	23,1	0.91	34,0	1.34
12-12S	3/4-14	3/4-14	24,6	0.97	35,1	1.38
16-16S	1-11 1/2	1-11 1/2	28,5	1.12	43,7	1.72

Also available in stainless steel as part no. 259-2088.
See pg. 278 for more information.

External Pipe/
External Pipe

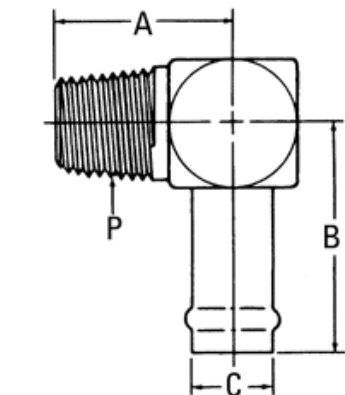


Part No. 2085-(Dash size) (Ref. SAE 140237)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	19,8	0.78	19,8	0.78
4-4S	1/4-18	1/4-18	27,7	1.09	27,7	1.09
6-4S	3/8-18	1/4-18	31,0	1.22	31,0	1.22
6-6S	3/8-18	3/8-18	31,0	1.22	31,0	1.22
8-6S	1/2-14	3/8-18	37,3	1.47	32,5	1.28
8-8S	1/2-14	1/2-14	37,3	1.47	37,3	1.47
12-8S	3/4-14	1/2-14	40,4	1.59	40,4	1.59
12-12S	3/4-14	3/4-14	40,4	1.59	40,4	1.59
16-12S	1-11 1/2	3/4-14	50,0	1.97	45,2	1.78
16-16S	1-11 1/2	1-11 1/2	50,0	1.97	50,0	1.97

Also available in stainless steel as part no. 259-2085.
See pg. 277 for more information.

External Pipe/
Hose Connector*

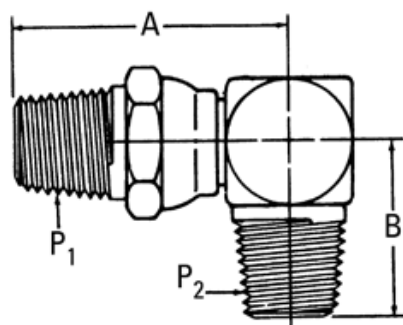


Part No. FF1162-(Dash size) (Ref. SAE 430260)

Dash Size	Tube O.D.		Thread T1	A		B		C	
	mm	in		mm	in	mm	in	mm	in
0406S	9,7	0.38	1/4-18	24,4	0.96	39,1	1.54	9,7	0.38
1212S	19,0	0.75	3/4-14	35,8	1.41	46,5	1.83	19,0	0.75
1616S	25,4	1.00	1-11 1/2	43,4	1.71	49,3	1.94	25,4	1.00
2020S	31,8	1.25	1 1/4-11 1/2	49,8	1.96	54,6	2.15	31,8	1.25

*Clamp required.

External Pipe Swivel/ External Pipe

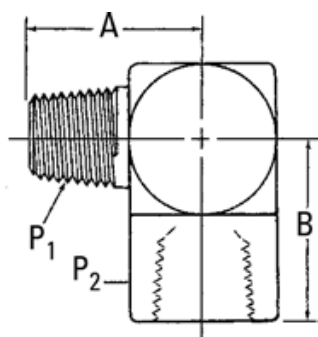


Part No. 2251-(Dash size)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	43,7	1.72	27,7	1.09
6-6S	3/8-18	3/8-18	45,2	1.78	31,0	1.22
8-8S	1/2-14	1/2-14	41,1	1.62	37,3	1.47
12-12S	3/4-14	3/4-14	59,2	2.33	37,3	1.47

NOTE: The above adapter is not a rotating union or swivel joint. Care must be exercised to avoid misuse. To be used with petroleum or water glycol fluids.

External Pipe/ Internal Pipe

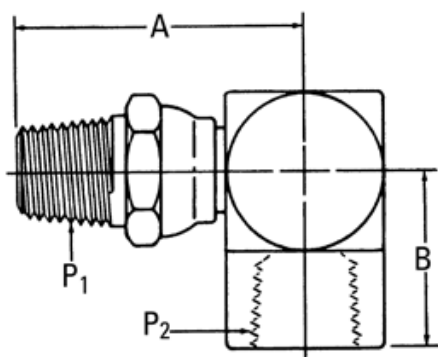


Part No. 2089-(Dash size) (Ref. SAE 140239)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	19,8	0.78	16,8	0.66
2-4S	1/8-27	1/4-18	22,9	0.90	22,3	0.88
4-2S	1/4-18	1/8-27	27,7	1.09	17,0	0.67
4-4S	1/4-18	1/4-18	27,7	1.09	22,3	0.88
4-6S	1/4-18	3/8-18	31,0	1.22	25,9	1.02
6-4S	3/8-18	1/4-18	31,0	1.22	25,7	1.01
6-6S	3/8-18	3/8-18	31,0	1.22	25,9	1.02
6-8S	3/8-18	1/2-14	32,5	1.28	31,2	1.23
8-6S	1/2-14	3/8-18	37,3	1.47	25,7	1.01
8-8S	1/2-14	1/2-14	37,3	1.47	31,2	1.23
8-12S	1/2-14	3/4-14	40,4	1.59	34,5	1.36
12-8S	3/4-14	1/2-14	40,4	1.59	34,3	1.35
12-12S	3/4-14	3/4-14	40,4	1.59	34,5	1.36
16-16S	1-11 1/2	1-11 1/2	50,0	1.97	41,1	1.62
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	60,4	2.38	43,2	1.70
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	67,0	2.64	52,8	2.08

Also available in stainless steel as part no. 259-2089.
See pg. 278 for more information.

External Pipe Swivel/ Internal Pipe

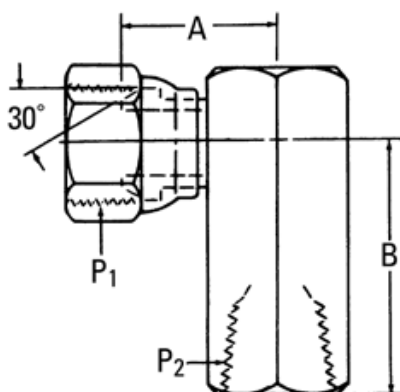


Part No. 2252-(Dash size)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	43,7	1.72	22,3	0.88
6-6S	3/8-18	3/8-18	42,9	1.69	25,9	1.02
8-8S	1/2-14	1/2-14	41,1	1.62	31,2	1.23
12-12S	3/4-14	3/4-14	57,2	2.25	34,5	1.36

NOTE: The above adapter is not a rotating swivel joint. Care must be exercised to avoid misuse. This adapter is to be used with petroleum or water glycol fluids.

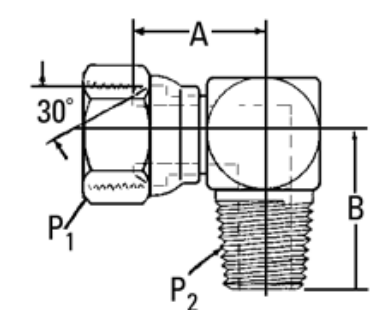
Internal Pipe Swivel (NPSM)/Internal Pipe



Part No. 2048-(Dash size) (Ref. SAE 140231)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	23,1	0.91	24,6	0.97
6-6S	3/8-18	3/8-18	27,7	1.09	27,7	1.09
8-8S	1/2-14	1/2-14	27,4	1.08	34,0	1.34
12-12S	3/4-14	3/4-14	34,5	1.36	38,9	1.53
16-16S	1-11 1/2	1-11 1/2	38,9	1.53	45,2	1.78
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	46,2	1.82	51,6	2.03
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	51,3	2.02	57,9	2.28

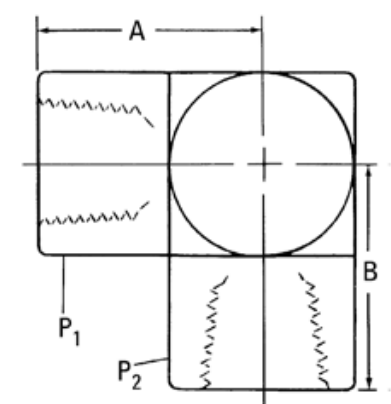
Internal Pipe Swivel
(NPSM)/External Pipe



Part No. 2047-(Dash size) (Ref. SAE 140230)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	18,0	0.71	26,2	1.03
4-4S	1/4-18	1/4-18	23,1	0.91	32,5	1.28
4-6S	1/4-18	3/8-18	27,7	1.09	38,9	1.53
6-6S	3/8-18	3/8-18	27,7	1.09	38,9	1.53
6-8S	3/8-18	1/2-14	26,2	1.03	46,7	1.84
8-6S	1/2-14	3/8-18	27,4	1.08	41,9	1.65
8-8S	1/2-14	1/2-14	27,4	1.08	46,7	1.84
8-12S	1/2-14	3/4-14	31,5	1.24	51,6	2.03
12-8S	3/4-14	1/2-14	34,5	1.36	51,6	2.03
12-12S	3/4-14	3/4-14	34,5	1.36	51,6	2.03
12-16S	3/4-14	1-11 1/2	38,3	1.51	61,2	2.41
16-12S	1-11 1/2	3/4-14	38,9	1.53	56,4	2.22
16-16S	1-11 1/2	1-11 1/2	38,9	1.53	61,2	2.41
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	46,2	1.82	67,3	2.65
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	51,3	2.02	72,1	2.84
32-32S	2-11 1/2	2-11 1/2	60,2	2.37	84,8	3.34

Internal Pipe/
Internal Pipe

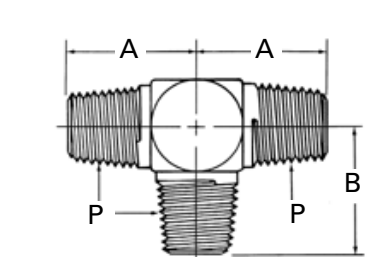


Part No. 2087-(Dash size) (Ref. SAE 140238)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	16,8	0.66	16,8	0.66
4-2S	1/4-18	1/8-27	22,3	0.88	17,0	0.67
4-4S	1/4-18	1/4-18	22,3	0.88	22,3	0.88
6-4S	3/8-18	1/4-18	25,9	1.02	25,7	1.01
6-6S	3/8-18	3/8-18	25,9	1.02	25,9	1.02
8-6S	1/2-14	3/8-18	31,2	1.23	25,7	1.01
8-8S	1/2-14	1/2-14	31,2	1.23	31,2	1.23
12-8S	3/4-14	1/2-14	34,5	1.36	34,3	1.35
12-12S	3/4-14	3/4-14	34,5	1.36	34,5	1.36
16-12S	1-11 1/2	3/4-14	41,1	1.62	35,3	1.39
16-16S	1-11 1/2	1-11 1/2	41,1	1.62	41,1	1.62
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	43,2	1.70	43,2	1.70
24-24S	1 1/2-11 1/2	1 1/2-11 1/2	52,8	2.08	52,8	2.08

Also available in stainless steel as part no. 259-2087.
See pg. 278 for more information.

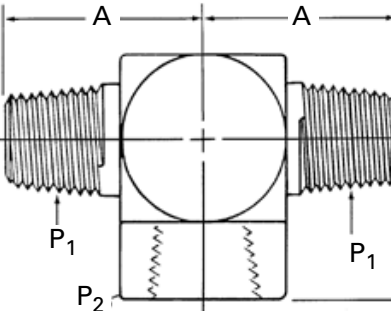
External Pipe/
External Pipe



Part No. 2257-(Dash size)

Dash Size	Thread P1	A		B	
		mm	in	mm	in
2-2S	1/8-27	19,8	0.78	19,8	0.78
4-4S	1/4-18	27,7	1.09	27,7	1.09
6-6S	3/8-18	31,0	1.22	31,0	1.22
8-8S	1/2-14	37,3	1.47	37,3	1.47
12-12S	3/4-14	40,4	1.59	40,4	1.59
16-16S	1-11 1/2	50,0	1.97	50,0	1.97

External Pipe/
Internal Pipe

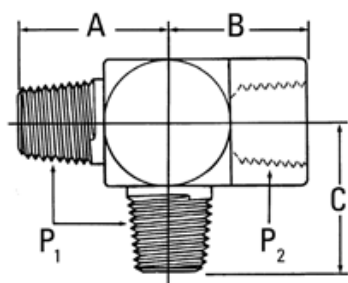


Part No. 2256-(Dash size)

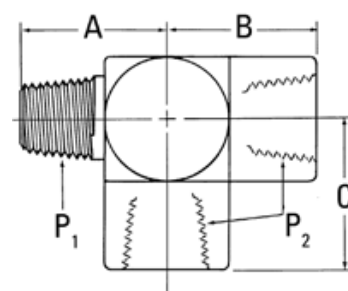
Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	19,8	0.78	16,8	0.66
4-4S	1/4-18	1/4-18	27,7	1.09	22,3	0.88
6-6S	3/8-18	3/8-18	31,0	1.22	25,9	1.02
8-8S	1/2-14	1/2-14	37,3	1.47	31,2	1.23
12-12S	3/4-14	3/4-14	40,4	1.59	34,5	1.36
16-16S	1-11 1/2	1-11 1/2	53,6	2.11	41,1	1.62

Pipe to Pipe

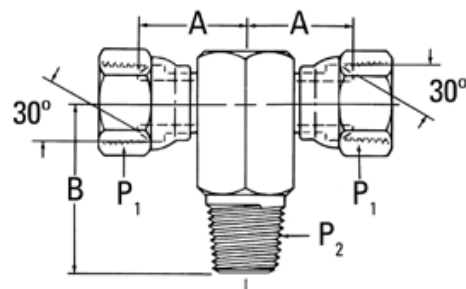
External Pipe/ Internal Pipe



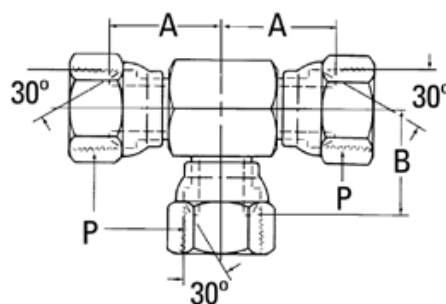
External Pipe/ Internal Pipe



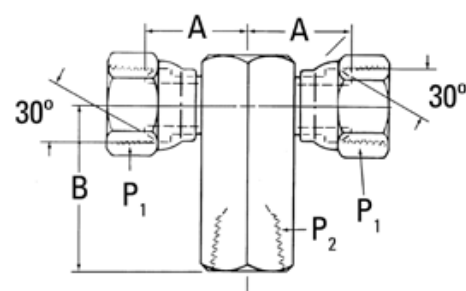
Internal Pipe Swivel (NPSM)/External Pipe



Internal Pipe Swivel (NPSM)



Internal Pipe Swivel (NPSM)/Internal Pipe



Part No. 2093-(Dash size)

Dash Size	Thread P1	Thread P2	A		B		C	
			mm	in	mm	in	mm	in
2-2S	1/8-27	1/8-27	19,8	0.78	16,8	0.66	19,8	0.78
4-4S	1/4-18	1/4-18	27,7	1.09	22,3	0.88	27,7	1.09
6-6S	3/8-18	3/8-18	31,0	1.22	25,9	1.02	31,0	1.22
8-8S	1/2-14	1/2-14	37,3	1.47	31,2	1.23	37,3	1.47
12-12S	3/4-14	3/4-14	40,4	1.59	34,5	1.36	40,4	1.59
16-16S	1-11 1/2	1-11 1/2	50,0	1.97	41,1	1.62	50,0	1.97

Part No. 2092-(Dash size) (Ref. SAE 140424)

Dash Size	Thread P1	Thread P2	A		B		C	
			mm	in	mm	in	mm	in
4-4S	1/4-18	1/4-18	27,7	1.09	22,3	0.88	22,3	0.88
6-6S	3/8-18	3/8-18	31,0	1.22	25,9	1.02	25,9	1.02
8-8S	1/2-14	1/2-14	37,3	1.47	31,2	1.23	31,2	1.23
12-12S	3/4-14	3/4-14	40,4	1.59	34,5	1.36	34,5	1.36
16-16S	1-11 1/2	1-11 1/2	50,0	1.97	41,1	1.62	41,1	1.62
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	71,9	2.83	49,5	1.95	44,7	1.76

Also available in stainless steel as part no. 259-2092. See pg. 279 for more information.

Part No. 2254-(Dash size)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	18,0	0.71	23,4	0.92
4-4S	1/4-18	1/4-18	23,1	0.91	31,2	1.23
6-6S	3/8-18	3/8-18	27,7	1.09	38,9	1.53
8-8S	1/2-14	1/2-14	25,4	1.00	46,0	1.81
12-12S	3/4-14	3/4-14	34,5	1.36	51,6	2.03
16-16S	1-11 1/2	1-11 1/2	34,0	1.34	60,4	2.38
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	38,1	1.50	65,0	2.56

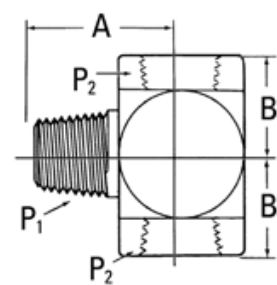
Part No. 2255-(Dash size)

Dash Size	Thread P1	A		B	
		mm	in	mm	in
2-2S	1/8-27	18,0	0.71	18,0	0.71
4-4S	1/4-18	23,1	0.91	23,1	0.91
6-6S	3/8-18	2,3	0.09	27,7	1.09
8-8S	1/2-14	27,4	1.08	27,4	1.08
12-12S	3/4-14	34,5	1.36	34,5	1.36
16-16S	1-11 1/2	38,9	1.53	38,9	1.53

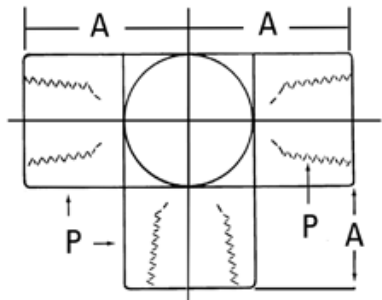
Part No. 2253-(Dash size)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
8-8S	1/2-14	1/2-14	32,3	1.27	34,0	1.34
12-12S	3/4-14	3/4-14	40,4	1.59	38,9	1.53
16-16S	1-11 1/2	1-11 1/2	46,2	1.82	45,2	1.78

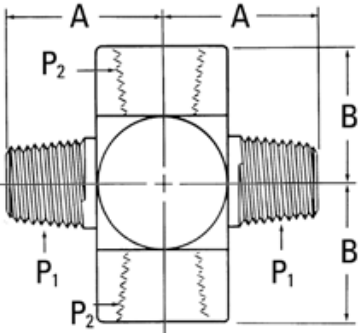
External Pipe/
Internal Pipe



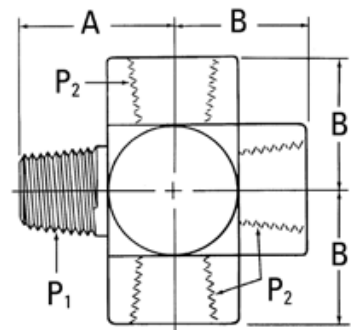
Internal Pipe/
Internal Pipe



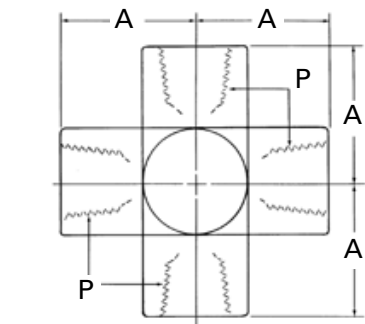
External Pipe/
Internal Pipe



External Pipe/
Internal Pipe



Internal Pipe/
Internal Pipe



Part No. 2091-(Dash size) (Ref. SAE 140425)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
2-2S	1/8-27	1/8-27	19,8	0.78	16,8	0.66
4-4S	1/4-18	1/4-18	27,7	1.09	22,3	0.88
6-6S	3/8-18	3/8-18	31,0	1.22	25,9	1.02
8-8S	1/2-14	1/2-14	37,3	1.47	31,2	1.23
12-12S	3/4-14	3/4-14	40,4	1.59	34,5	1.36
16-16S	1-11 1/2	1-11 1/2	50,0	1.97	41,1	1.62

Also available in stainless steel as part no. 259-2091.
See pg. 278 for more information.

Part No. 2090-(Dash size) (Ref. SAE 140438)

Dash Size	Thread P	A	
		mm	in
2-2S	1/8-27	16,8	0.66
4-4S	1/4-18	22,3	0.88
6-6S	3/8-18	25,9	1.02
8-8S	1/2-14	31,2	1.23
12-12S	3/4-14	34,5	1.36
16-16S	1-11 1/2	41,1	1.62
20-20S	1 1/4-11 1/2	43,2	1.70
24-24S	1 1/2-11 1/2	52,8	2.08

Also available in stainless steel as part no. 259-2090.
See pg. 278 for more information.

Part No. 208006-(Dash size)

Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	29,5	1.16	22,3	0.88
6-6S	3/8-18	3/8-18	33,0	1.30	25,9	1.02
20-20S	1 1/4-11 1/2	1 1/4-11 1/2	67,3	2.65	3,2	1.70

Part No. 208007-(Dash size)

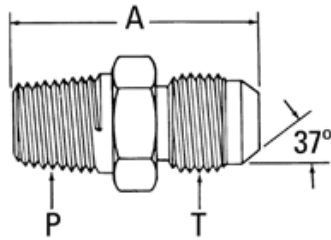
Dash Size	Thread P1	Thread P2	A		B	
			mm	in	mm	in
4-4S	1/4-18	1/4-18	29,5	1.16	22,3	0.88
6-6S	3/8-18	3/8-18	33,0	1.30	25,9	1.02
8-8S	1/2-14	1/2-14	41,4	1.63	31,2	1.23
12-12S	3/4-14	3/4-14	43,9	1.73	34,5	1.36

Part No. 2080-(Dash size)

Dash Size	Thread P	A	
		mm	in
2-2S	1/8-27	16,8	0.66
4-4S	1/4-18	22,3	0.88
6-6S	3/8-18	25,9	1.02
8-8S	1/2-14	31,2	1.23
12-12S	3/4-14	34,5	1.36
16-16S	1-11 1/2	41,1	1.62

Pipe to 37° Flare

External Pipe/ 37° Flare

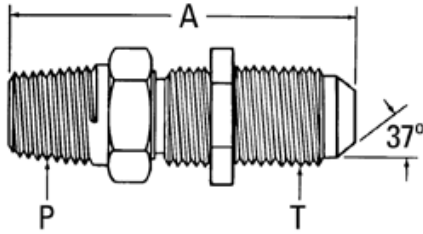


Part No. 2021-(Dash size) (Ref. SAE 070102)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	29,0	1.14
2-4S	6,3	0.25	1/8-27	7/16-20	31,0	1.22
2-5S	7,9	0.31	1/8-27	1/2-20	31,0	1.22
2-6S	9,6	0.38	1/8-27	9/16-18	31,5	1.24
2-8S	12,7	0.50	1/8-27	3/4-16	34,0	1.34
4-4S	6,3	0.25	1/4-18	7/16-20	36,1	1.42
4-5S	7,9	0.31	1/4-18	1/2-20	36,1	1.42
4-6S	9,6	0.38	1/4-18	9/16-18	36,3	1.43
4-8S	12,7	0.50	1/4-18	3/4-16	38,9	1.53
6-4S	6,3	0.25	3/8-18	7/16-20	36,1	1.42
6-5S	7,9	0.31	3/8-18	1/2-20	36,1	1.42
6-6S	9,6	0.38	3/8-18	9/16-18	36,3	1.43
6-8S	12,7	0.50	3/8-18	3/4-16	38,9	1.53
6-10S	16,0	0.63	3/8-18	7/8-14	43,2	1.70
8-4S	6,3	0.25	1/2-14	7/16-20	42,7	1.68
8-6S	9,6	0.38	1/2-14	9/16-18	42,9	1.69
8-8S	12,7	0.50	1/2-14	3/4-16	45,5	1.79
8-10S	16,0	0.63	1/2-14	7/8-14	48,0	1.89
8-12S	19,0	0.75	1/2-14	11/16-12	52,3	2.06
12-6S	9,6	0.38	3/4-14	9/16-18	44,4	1.75
12-8S	12,7	0.50	3/4-14	3/4-16	47,0	1.85
12-10S	16,0	0.63	3/4-14	7/8-14	49,5	1.95
12-12S	19,0	0.75	3/4-14	11/16-12	52,3	2.06
12-16S	25,4	1.00	3/4-14	5/16-12	53,6	2.11
16-12S	19,0	0.75	1-11 1/2	1 1/16-12	57,2	2.25
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	58,4	2.30
16-20S	31,7	1.25	1-11 1/2	1 5/8-12	61,5	2.42
16-24S	38,1	1.50	1-11 1/2	1 7/8-12	66,5	2.62
16-32S	50,8	2.00	1-11 1/2	2 1/2-12	76,7	3.02
20-12S	19,0	0.75	1 1/4-11 1/2	1 1/16-12	59,9	2.36
20-16S	25,4	1.00	1 1/4-11 1/2	1 5/16-12	61,0	2.40
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	62,2	2.45
20-24S	38,1	1.50	1 1/4-11 1/2	1 7/8-12	67,3	2.65
20-32S	50,8	2.00	1 1/4-11 1/2	2 1/2-12	77,5	3.05
24-12S	19,0	0.75	1 1/2-11 1/2	1 1/16-12	62,5	2.46
24-16S	25,4	1.00	1 1/2-11 1/2	1 5/16-12	63,7	2.51
24-20S	31,7	1.25	1 1/2-11 1/2	1 5/8-12	64,8	2.55
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	68,1	2.68
24-32S	50,8	2.00	1 1/2-11 1/2	2 1/2-12	78,2	3.08
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	79,0	3.11

Also available in stainless steel as part no. 259-2021.
See pg. 279 for more information.

External Pipe/ 37° Flare Bulkhead



Part No. 2240-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	46,7	1.84
4-4S	6,3	0.25	1/4-18	7/16-20	51,6	2.03
4-6S	9,6	0.38	1/4-18	9/16-18	53,9	2.12
6-8S	12,7	0.50	3/8-18	3/4-16	59,9	2.36
8-10S	16,0	0.63	1/2-14	7/8-14	68,8	2.71
12-12S	19,0	0.75	3/4-14	1 1/16-12	74,2	2.92
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	79,0	3.11

Also available in stainless steel as part no. 259-2240.
See pg. 279 for more information.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

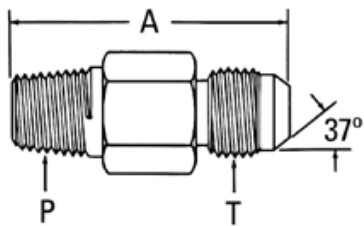
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

External Pipe/ 37° Flare



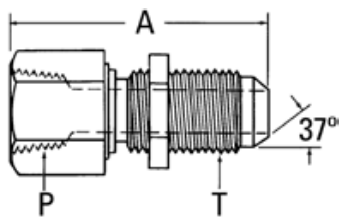
Part No. 202113-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	46,0	1.81
2-5S	7,9	0.31	1/8-27	1/2-20	49,3	1.94
4-4S	6,3	0.25	1/4-18	7/16-20	57,2	2.25
4-5S	7,9	0.31	1/4-18	1/2-20	57,2	2.25
4-6S	9,6	0.38	1/4-18	9/16-18	57,2	2.25
6-6S	9,6	0.38	3/8-18	9/16-18	63,5	2.50
6-8S	12,7	0.50	3/8-18	3/4-16	69,8	2.75
8-10S	16,0	0.63	1/2-14	7/8-14	79,2	3.12
8-12S	19,0	0.75	1/2-14	11/16-12	83,3	3.28
12-12S	19,0	0.75	3/4-14	11/16-12	88,9	3.50
16-16S	25,4	1.00	1-11 1/2	15/16-12	101,6	4.00
20-20S	38,1	1.50	1 1/4-11 1/2	1 5/8-12	114,3	4.50
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	123,9	4.88
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	142,7	5.62

Part No. 202114-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	65,0	2.56
2-5S	7,9	0.31	1/8-27	1/2-20	71,4	2.81
4-4S	6,3	0.25	1/4-18	7/16-20	82,5	3.25
4-5S	7,9	0.31	1/4-18	1/2-20	82,5	3.25
4-6S	9,6	0.38	1/4-18	9/16-18	82,5	3.25
6-8S	12,7	0.50	3/8-18	3/4-16	101,6	4.00
8-6S	9,6	0.38	1/2-14	9/16-18	105,9	4.17
8-10S	16,0	0.63	1/2-14	7/8-14	111,2	4.38
12-12S	19,0	0.75	3/4-14	1 1/16-12	127,0	5.00
12-16S	25,4	1.00	3/4-14	15/16-12	141,2	5.56
16-16S	25,4	1.00	1-11 1/2	15/16-12	146,0	5.75

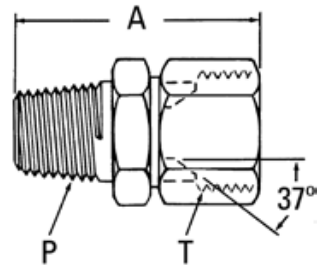
Internal Pipe/ 37° Flare Bulkhead



Part No. 2239-(Dash size) (Ref. SAE 070603)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	52,8	2.08
6-8S	12,7	0.50	3/8-18	3/4-16	63,0	2.48
8-10S	16,0	0.63	1/2-14	7/8-14	72,1	2.84
12-12S	19,0	0.75	3/4-14	1 1/16-12	77,5	3.05
16-16S	25,4	1.00	1-11 1/2	15/16-12	82,5	3.25

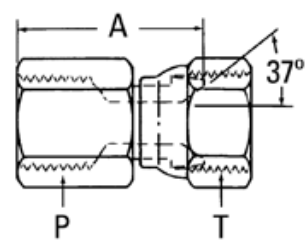
External Pipe/ 37° Flare Swivel



Part No. 2018-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	33,6	1.32
4-6S	9,6	0.38	1/4-18	9/16-18	40,4	1.59
6-8S	12,7	0.50	3/8-18	3/4-16	44,2	1.74
12-12S	19,0	0.75	3/4-14	1 1/16-12	54,6	2.15
16-16S	25,4	1.00	1-11 1/2	15/16-12	64,5	2.54
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	70,6	2.78

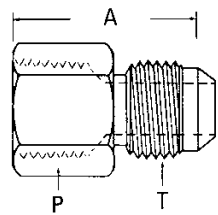
**Internal Pipe/
37° Flare Swivel**



Part No. 2242-(Dash size) (Ref. SAE 070603)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	21,6	0.85
2-5S	7,9	0.31	1/8-27	1/2-20	22,1	0.87
4-4S	6,3	0.25	1/4-18	7/16-20	28,2	1.11
4-5S	7,9	0.31	1/4-18	1/2-20	27,9	1.10
6-6S	9,6	0.38	3/8-18	9/16-18	29,5	1.16
6-8S	12,7	0.50	3/8-18	3/4-16	30,5	1.20
8-6S	9,6	0.38	1/2-14	9/16-18	36,1	1.42
8-8S	12,7	0.50	1/2-14	3/4-16	37,6	1.48
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47
12-12S	19,0	0.75	3/4-14	1 1/16-12	37,8	1.49
12-14S	22,3	0.88	3/4-14	1 3/16-12	39,4	1.55
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	47,0	1.85
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	51,3	2.02

Internal Pipe/37° Flare



Part No. 2022-(Dash size) (Ref. SAE 070103)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	28,7	1.13
2-4S	6,3	0.25	1/8-27	7/16-20	30,3	1.19
2-5S	7,9	0.31	1/8-27	1/2-20	29,7	1.17
4-3S	4,8	0.19	1/4-18	3/8-24	33,6	1.32
4-4S	6,3	0.25	1/4-18	7/16-20	35,3	1.39
4-5S	7,9	0.31	1/4-18	1/2-20	35,3	1.39
4-6S	9,6	0.38	1/4-18	9/16-18	35,6	1.40
4-8S	12,7	0.50	1/4-18	3/4-16	39,4	1.55
6-6S	9,6	0.38	3/8-18	9/16-18	37,1	1.46
6-8S	12,7	0.50	3/8-18	3/4-16	39,6	1.56
8-6S	9,6	0.38	1/2-14	9/16-18	42,9	1.69
8-8S	12,7	0.50	1/2-14	3/4-16	45,5	1.79
8-10S	16,0	0.63	1/2-14	7/8-14	48,0	1.89
8-12S	19,0	0.75	1/2-14	1 1/16-12	52,0	2.05
12-8S	12,7	0.50	3/4-14	3/4-16	47,0	1.85
12-10S	16,0	0.63	3/4-14	7/8-14	49,5	1.95
12-12S	19,0	0.75	3/4-14	1 1/16-12	52,3	2.06
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	59,7	2.35
20-16S	25,4	1.00	1 1/4-11 1/2	1 5/16-12	62,0	2.44
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/16-12	63,2	2.49
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	66,5	2.62
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	75,4	2.97
40-40B	63,5	2.50	2 1/2-8	3-12	82,5	3.25

Also available in stainless steel as part no. 259-2022.
See pg. 280 for more information.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

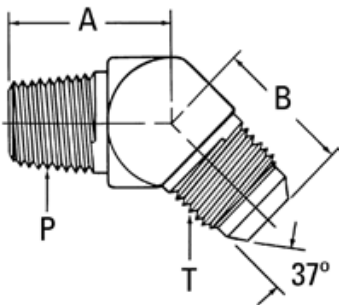
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

External Pipe/ 37° Flare

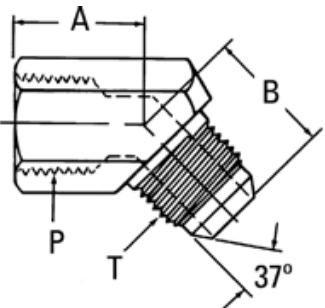


Part No. 2023-(Dash size) (Ref. SAE 070302)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	14,7	0.58	19,3	0.76
2-4S	6,3	0.25	1/8-27	7/16-20	14,7	0.58	19,8	0.78
2-5S	7,9	0.31	1/8-27	1/2-20	16,2	0.64	20,3	0.80
2-6S	9,6	0.38	1/8-27	9/16-18	17,0	0.67	21,0	0.83
4-4S	6,3	0.25	1/4-18	7/16-20	21,8	0.86	24,9	0.98
4-5S	7,9	0.31	1/4-18	1/2-20	21,8	0.86	20,3	0.80
4-6S	9,6	0.38	1/4-18	9/16-18	21,8	0.86	21,0	0.83
4-8S	12,7	0.50	1/4-18	3/4-16	24,1	0.95	24,9	0.98
6-4S	6,3	0.25	3/8-18	7/16-20	24,1	0.95	20,1	0.79
6-6S	9,6	0.38	3/8-18	9/16-18	24,1	0.95	22,3	0.88
6-8S	12,7	0.50	3/8-18	3/4-16	24,1	0.95	24,9	0.98
6-10S	16,0	0.63	3/8-18	7/8-14	24,9	0.98	28,2	1.11
8-6S	9,6	0.38	1/2-14	9/16-18	29,7	1.17	23,1	0.91
8-8S	12,7	0.50	1/2-14	3/4-16	29,7	1.17	25,4	1.00
8-10S	16,0	0.63	1/2-14	7/8-14	29,7	1.17	28,2	1.11
8-12S	19,0	0.75	1/2-14	1 1/16-12	30,5	1.20	35,3	1.39
12-8S	12,7	0.50	3/4-14	3/4-16	30,5	1.20	27,9	1.10
12-10S	16,0	0.63	3/4-14	7/8-14	30,5	1.20	31,0	1.22
12-12S	19,0	0.75	3/4-14	1 1/16-12	30,5	1.20	32,5	1.28
12-16S	25,4	1.00	3/4-14	1 5/16-12	32,8	1.29	37,3	1.47
16-12S	19,0	0.75	1-11 1/2	1 1/16-12	37,6	1.48	38,6	1.52
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	37,6	1.48	37,3	1.47
16-20S	31,7	1.25	1-11 1/2	1 5/8-12	39,1	1.54	41,1	1.62
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	39,1	1.54	42,9	1.69
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	44,9	1.77	45,2	1.78
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	53,6	2.11	56,4	2.22
40-40	63,5	2.50	2 1/2-8	3-12	70,6	2.78	48,0	1.89

Also available in stainless steel as part no. 259-2023. See pg. 279 for more information.

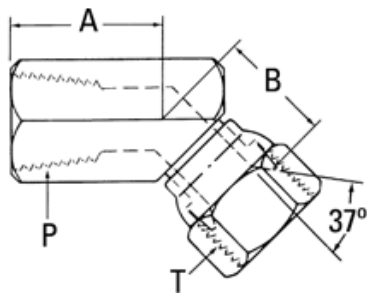
Internal Pipe/ 37° Flare



Part No. 2044-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
4-6S	9,6	0.38	1/4-18	9/16-18	15,7	0.62	21,0	0.83
6-8S	12,7	0.50	3/8-18	3/4-16	18,3	0.72	24,9	0.98
8-10S	16,0	0.63	1/2-14	7/8-14	23,1	0.91	28,2	1.11
12-12S	19,0	0.75	3/4-14	1 1/16-12	24,6	0.97	32,5	1.28

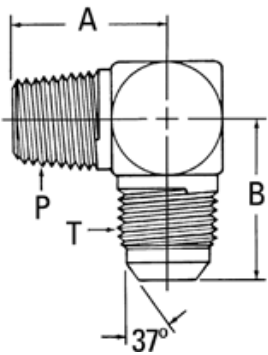
Internal Pipe/ 37° Flare Swivel



Part No. 2243-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
8-6S	9,6	0.38	1/2-14	9/16-18	23,1	0.91	21,3	0.84
8-10S	16,0	0.63	1/2-14	7/8-14	23,1	0.91	23,9	0.94

**External Pipe/
37° Flare**

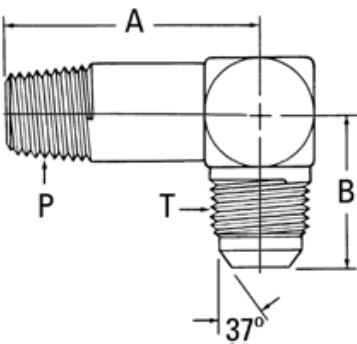


Part No. 2024-(Dash size) (Ref. SAE 070202)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	18,3	0.72	21,0	0.83
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	19,8	0.78	24,1	0.95
2-6S	9,6	0.38	1/8-27	9/16-18	22,9	0.90	26,9	1.06
4-4S	6,3	0.25	1/4-18	7/16-20	27,7	1.09	26,7	1.05
4-5S	7,9	0.31	1/4-18	1/2-20	27,7	1.09	26,7	1.05
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	26,9	1.06
4-8S	12,7	0.50	1/4-18	3/4-16	31,0	1.22	31,8	1.25
6-4S	6,3	0.25	3/8-18	7/16-20	31,0	1.22	28,5	1.12
6-5S	7,9	0.31	3/8-18	1/2-20	31,0	1.22	28,5	1.12
6-6S	9,6	0.38	3/8-18	9/16-18	31,0	1.22	29,0	1.14
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	31,8	1.25
6-10S	16,0	0.63	3/8-18	7/8-14	32,5	1.28	36,8	1.45
6-12S	19,0	0.75	3/8-18	1 1/16-12	35,6	1.40	42,2	1.66
8-4S	6,3	0.25	1/2-14	7/16-20	37,3	1.47	30,7	1.21
8-6S	9,6	0.38	1/2-14	9/16-18	37,3	1.47	31,0	1.22
8-8S	12,7	0.50	1/2-14	3/4-16	37,3	1.47	33,8	1.33
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	36,8	1.45
8-12S	19,0	0.75	1/2-14	1 1/16-12	40,4	1.59	42,2	1.66
8-16S	25,4	1.00	1/2-14	1 5/16-12	45,2	1.78	46,0	1.81
12-6S	9,6	0.38	3/4-14	9/16-18	40,4	1.59	33,3	1.31
12-8S	12,7	0.50	3/4-14	3/4-16	40,4	1.59	36,1	1.42
12-10S	16,0	0.63	3/4-14	7/8-14	40,4	1.59	39,1	1.54
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	42,2	1.66
12-16S	25,4	1.00	3/4-14	1 5/16-12	45,2	1.78	46,0	1.81
16-8S	12,7	0.50	1-11 1/2	3/4-16	50,0	1.97	38,6	1.52
16-12S	19,0	0.75	1-11 1/2	1 1/16-12	50,0	1.97	44,7	1.76
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	46,0	1.81
16-20S	31,7	1.25	1-11 1/2	1 5/8-12	59,7	2.35	52,3	2.06
20-16S	25,4	1.00	1 1/4-11 1/2	1 5/16-12	60,4	2.38	51,1	2.01
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	60,4	2.38	52,3	2.06
20-24S	38,1	1.50	1 1/4-11 1/2	1 7/8-12	66,3	2.61	59,2	2.33
24-20S	31,7	1.25	1 1/2-11 1/2	1 5/8-12	67,0	2.64	55,9	2.20
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	67,0	2.64	59,2	2.33
24-32S	50,8	2.00	1 1/2-11 1/2	1 1/2-12	75,4	2.97	77,7	3.06
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	76,2	3.00	77,7	3.06
40-40S	63,5	2.50	2 1/2-8	3-12	86,1	3.39	75,7	2.98

Also available in stainless steel as part no. 259-2024. See pg. 280 for more information.

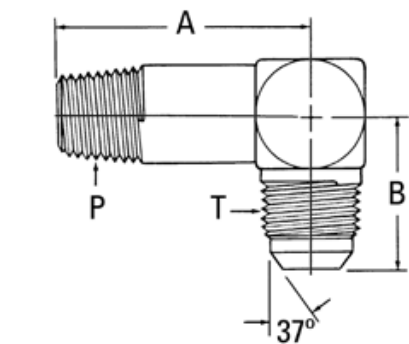
Extra Pipe/37° Flare



Part No. 202411-(Dash size) (Ref. SAE 071502)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	29,7	1.17	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	29,7	1.17	24,1	0.95
4-4S	6,3	0.25	1/4-18	7/16-20	40,1	1.58	26,7	1.05
4-6S	9,6	0.38	1/4-18	9/16-18	40,1	1.58	26,9	1.06
6-8S	12,7	0.50	3/8-18	3/4-16	46,2	1.82	31,8	1.25
8-8S	12,7	0.50	1/2-14	3/4-16	55,2	2.17	33,8	1.33
8-10S	16,0	0.63	1/2-14	7/8-14	55,2	2.17	36,8	1.45
12-10S	16,0	0.63	3/4-14	7/8-14	62,0	2.44	39,1	1.54
12-12S	19,0	0.75	3/4-14	1 1/16-12	62,0	2.44	42,2	1.66
12-16S	25,4	1.00	3/4-14	1 5/16-12	71,6	2.82	46,0	1.81
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	76,4	3.01	46,0	1.81
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	91,2	3.59	52,3	2.06

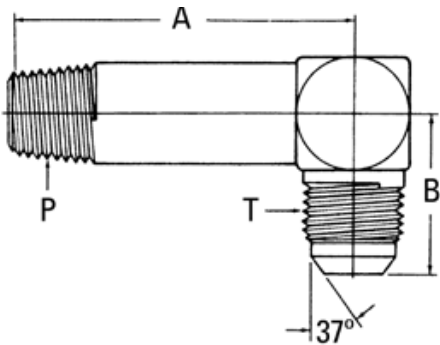
Long External Pipe/37° Flare



Part No. 202413-(Dash size) (Ref. SAE 071602)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	39,6	1.56	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	41,4	1.63	24,1	0.95
4-4S	6,3	0.25	1/4-18	7/16-20	52,6	2.07	26,7	1.05
4-5S	7,9	0.31	1/4-18	1/2-20	52,6	2.07	26,7	1.05
4-6S	9,6	0.38	1/4-18	9/16-18	52,6	2.07	26,9	1.06
6-6S	9,6	0.38	3/8-18	9/16-18	62,5	2.46	26,9	1.06
6-8S	12,7	0.50	3/8-18	3/4-16	61,5	2.42	31,8	1.25
8-8S	12,7	0.50	1/2-14	3/4-16	72,9	2.87	33,8	1.33
8-10S	16,0	0.63	1/2-14	7/8-14	72,9	2.87	36,8	1.45
8-12S	19,0	0.75	1/2-14	1 1/16-12	83,3	3.28	42,2	1.66
12-12S	19,0	0.75	3/4-14	1 1/16-12	83,3	3.28	42,2	1.66
12-16S	25,4	1.00	3/4-14	1 5/16-12	98,0	3.86	46,0	1.81
12-20S	31,7	1.25	3/4-14	1 5/8-12	91,7	3.61	52,3	2.06
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	102,9	4.05	46,0	1.81
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	122,9	4.84	52,3	2.06

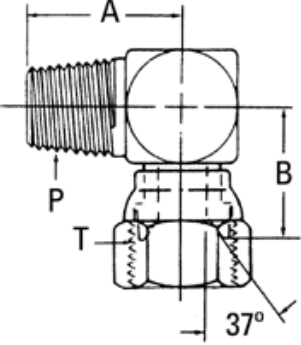
Extra Long External Pipe/37° Flare



Part No. 202414-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	58,7	2.31	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	59,2	2.33	24,1	0.95
4-4S	6,3	0.25	1/4-18	7/16-20	75,9	2.99	24,6	0.97
4-6S	9,6	0.38	1/4-18	9/16-18	77,7	3.06	26,9	1.06
6-8S	12,7	0.50	3/8-18	3/4-16	95,2	3.75	31,8	1.25
8-8S	12,7	0.50	1/2-14	3/4-16	114,5	4.51	31,8	1.25
8-10S	16,0	0.63	1/2-14	7/8-14	114,5	4.51	36,8	1.45
12-12S	19,0	0.75	3/4-14	1 1/16-12	127,8	5.03	42,2	1.66
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	161,8	6.37	46,0	1.81
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	188,4	7.34	52,3	2.06

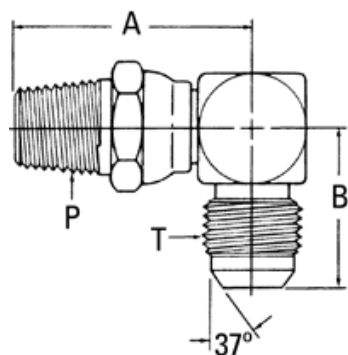
External Pipe/ 37° Flare Swivel



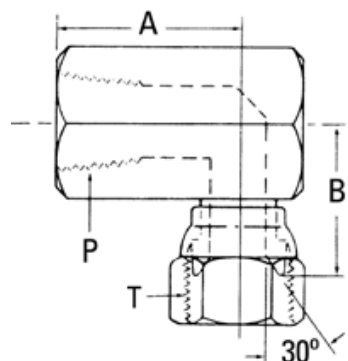
Part No. 2250-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	16,8	0.66
2-5S	7,9	0.31	1/8-27	1/2-20	19,8	0.78	17,3	0.68
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	22,3	0.88
6-6S	9,6	0.38	3/8-18	9/16-18	31,0	1.22	21,6	0.85
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	24,4	0.96
8-8S	12,7	0.50	1/2-14	3/4-16	37,3	1.47	25,4	1.00
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	28,5	1.12
12-8S	12,7	0.50	3/4-14	3/4-16	40,4	1.59	29,7	1.17
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	30,3	1.19
12-14S	22,3	0.88	3/4-14	1 3/16-12	42,9	1.69	30,5	1.20
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	35,8	1.41
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	60,4	2.38	42,7	1.68
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	67,0	2.64	47,2	1.86

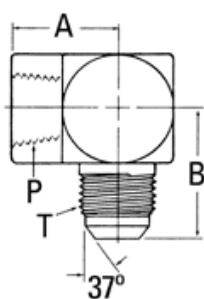
External Pipe Swivel/37° Flare



Internal Pipe/ 37° Flare Swivel



Internal Pipe/ 37° Flare



Part No. 2249-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
4-6S	9,6	0.38	1/4-18	9/16-18	40,6	1.60	26,9	1.06
6-8S	12,7	0.50	3/8-18	3/4-16	43,4	1.71	31,0	1.22
8-10S	16,0	0.63	1/2-14	7/8-14	50,8	2.00	36,8	1.45
12-12S	19,0	0.75	3/4-14	1 1/16-12	41,1	1.62	42,2	1.66

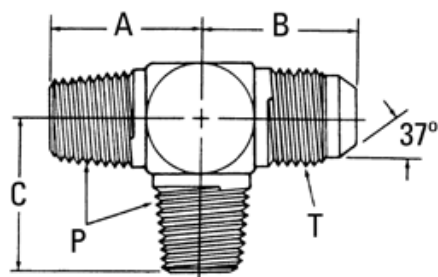
Part No. 2244-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
6-6S	9,6	0.38	3/8-18	9/16-18	25,9	1.02	23,4	0.92
8-6S	9,6	0.38	1/2-14	9/16-18	31,2	1.23	26,2	1.03
8-8S	12,7	0.50	1/2-14	3/4-16	31,2	1.23	27,4	1.08
8-10S	16,0	0.63	1/2-14	7/8-14	31,2	1.23	28,5	1.12

Part No. 2025-(Dash size) (Ref. SAE 070203)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	16,8	0.66	27,4	1.08
2-5S	7,9	0.31	1/8-27	1/2-20	16,8	0.66	27,4	1.08
2-6S	9,6	0.38	1/8-27	9/16-18	17,0	0.67	31,2	1.23
4-4S	6,3	0.25	1/4-18	7/16-20	22,3	0.88	31,0	1.22
4-5S	7,9	0.31	1/4-18	1/2-20	22,3	0.88	31,0	1.22
4-6S	9,6	0.38	1/4-18	9/16-18	22,3	0.88	31,2	1.23
4-8S	12,7	0.50	1/4-18	3/4-16	25,7	1.01	36,1	1.42
6-4S	6,3	0.25	3/8-18	7/16-20	25,9	1.02	32,8	1.29
6-5S	7,9	0.31	3/8-18	1/2-20	25,9	1.02	32,8	1.29
6-6S	9,6	0.38	3/8-18	9/16-18	25,9	1.02	33,3	1.31
6-8S	12,7	0.50	3/8-18	3/4-16	25,9	1.02	36,1	1.42
8-4S	6,3	0.25	1/2-14	7/16-20	31,2	1.23	35,6	1.40
8-5S	7,9	0.31	1/2-14	1/2-20	31,2	1.23	35,6	1.40
8-8S	12,7	0.50	1/2-14	3/4-16	31,2	1.23	38,6	1.52
8-10S	16,0	0.63	1/2-14	7/8-14	31,2	1.23	41,6	1.64
8-12S	19,0	0.75	1/2-14	1 1/16-12	34,3	1.35	48,0	1.89
12-12S	19,0	0.75	3/4-14	1 1/16-12	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	41,1	1.62	55,2	2.17
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	43,2	1.70	59,2	2.33
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	52,8	2.08	73,4	2.89
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	60,7	2.39	83,8	3.30

External Pipe/37° Flare



Part No. 203007-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	22,6	0.89	19,8	0.78
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	26,9	1.06	27,7	1.09
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	31,8	1.25	31,0	1.22
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	42,2	1.66	40,4	1.59
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	46,0	1.81	50,0	1.97
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	61,0	2.40	55,9	2.20	60,4	2.38
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	67,6	2.66	61,5	2.42	67,0	2.64

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

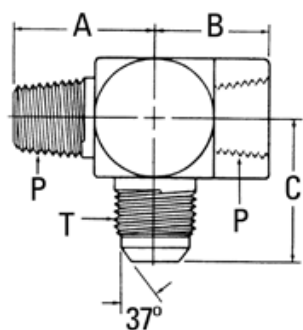
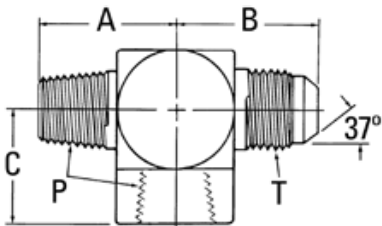
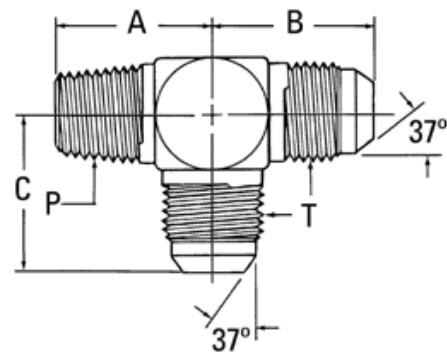
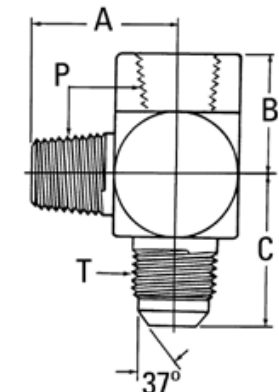
HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

**External Pipe/
Internal Pipe/37° Flare****External Pipe/
37° Flare/Internal Pipe****External Pipe/
37° Flare****External Pipe/
Internal Pipe/37° Flare****Part No. 203301-(Dash size)**

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	16,8	0.66	27,4	1.08
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	22,3	0.88	31,2	1.23
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	25,9	1.02	36,1	1.42
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	31,2	1.23	41,6	1.64
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	41,1	1.62	55,2	2.17

Part No. 203103-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	27,4	1.08	16,8	0.66
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	31,2	1.23	22,3	0.88
6-6S	9,6	0.38	3/8-18	9/16-18	31,0	1.22	33,3	1.31	25,9	1.02
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	36,1	1.42	25,9	1.02
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	41,6	1.64	31,2	1.23
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	48,0	1.89	34,5	1.36
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	53,1	2.09	53,1	2.09	42,1	1.62
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	65,3	2.57	60,4	2.38	43,2	1.70
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	79,7	3.14	83,8	3.30	60,7	2.39

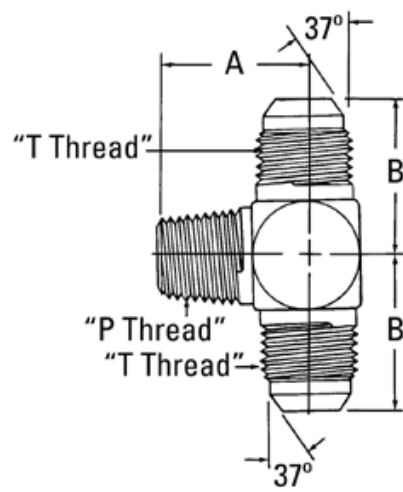
Part No. 2028-(Dash size) (Ref. SAE 070424)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	22,6	0.89	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	20,8	0.82	23,4	0.96	24,1	0.95
4-4S	6,3	0.25	1/4-18	7/16-20	27,7	1.09	26,7	1.05	26,7	1.05
4-5S	7,9	0.31	1/4-18	1/2-20	27,7	1.09	26,7	1.05	26,7	1.05
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	26,9	1.06	26,9	1.06
6-6S	9,6	0.38	3/8-18	9/16-18	31,0	1.22	28,9	1.14	28,9	1.14
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	31,7	1.25	31,7	1.25
8-8S	12,7	0.50	1/2-14	3/4-16	37,3	1.47	28,9	1.33	28,9	1.33
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	36,8	1.45	36,8	1.45
8-12S	19,0	0.75	1/2-14	1 1/16-12	40,4	1.59	42,2	1.66	42,2	1.66
12-10S	16,0	0.63	3/4-14	7/8-14	40,4	1.59	39,1	1.54	39,1	1.54
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	42,2	1.66	42,2	1.66
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	46,0	1.81	46,0	1.81
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	60,4	2.38	55,6	2.19	52,3	2.06
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	67,0	2.64	61,0	2.40	59,2	2.33
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	76,2	3.00	80,0	3.15	77,7	3.06

Part No. 203006-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
4-6S	9,6	.38	1/4-18	9/16-18	27,7	1.09	22,3	0.88	31,2	1.23
6-8S	12,7	.50	3/8-18	3/4-16	31,0	1.22	25,9	1.02	36,1	1.42
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	42,1	1.62	55,1	2.17

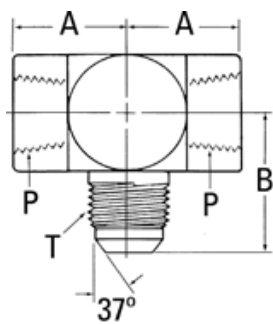
**External Pipe/
37° Flare**



Part No. 2030-(Dash size) (Ref. SAE 070425)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	18,3	0.72	21,1	0.83
2-4S	6,3	0.25	1/8-27	7/16-20	19,8	0.78	22,6	0.89
2-5S	7,9	0.31	1/8-27	1/2-20	20,3	0.80	24,1	0.95
4-4S	6,3	0.25	1/4-18	7/16-20	27,7	1.09	26,7	1.05
4-5S	7,9	0.31	1/4-18	1/2-20	27,7	1.09	26,7	1.05
4-6S	9,6	0.38	1/4-18	9/16-18	27,7	1.09	26,9	1.06
6-6S	9,6	0.38	3/8-18	9/16-18	31,0	1.22	26,9	1.06
6-8S	12,7	0.50	3/8-18	3/4-16	31,0	1.22	31,7	1.25
6-10S	16,0	0.63	3/8-18	7/8-14	31,7	1.25	36,8	1.45
8-6S	9,6	0.38	1/2-14	9/16-18	37,3	1.47	28,7	1.13
8-8S	12,7	0.50	1/2-14	3/4-16	37,3	1.47	28,9	1.33
8-10S	16,0	0.63	1/2-14	7/8-14	37,3	1.47	36,8	1.45
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	42,2	1.66
12-16S	25,4	1.00	3/4-14	1 5/16-12	45,2	1.78	46,0	1.81
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	50,0	1.97	46,0	1.81
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	60,4	2.38	55,9	2.20

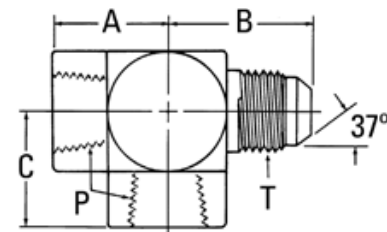
Internal Pipe/37° Flare



Part No. 202901-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	16,8	0.66	27,4	1.08
4-6S	9,6	0.38	1/4-18	9/16-18	22,3	0.88	31,2	1.23
12-12S	19,0	0.75	3/4-14	1 1/16-12	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	42,1	1.62	55,1	2.17

**Internal Pipe/
Internal Pipe/37° Flare**



Part No. 203104-(Dash size) (Ref. SAE 070427)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-2S	3,3	0.13	1/8-27	5/16-24	16,8	0.66	25,4	1.00	16,5	0.65
2-4S	6,3	0.25	1/8-27	7/16-20	16,8	0.66	27,4	1.08	16,8	0.66
4-6S	9,6	0.38	1/4-18	9/16-18	22,3	0.88	31,2	1.23	22,3	0.88
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	42,1	1.62	55,1	2.17	42,1	1.62
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	43,2	1.70	59,2	2.33	43,2	1.70
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	52,8	2.08	73,4	2.89	52,8	2.08

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

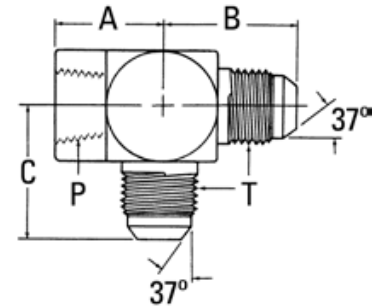
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

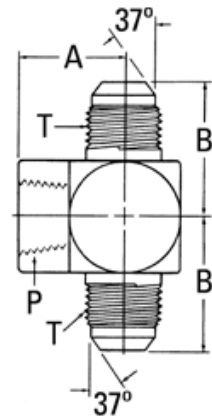
Internal Pipe/37° Flare



Part No. 2029-(Dash size) (Ref. SAE 070426)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
2-4S	6,3	0.25	1/8-27	7/16-20	16,8	0.66	27,4	1.08	24,1	0.95
2-5S	7,9	0.31	1/8-27	1/2-20	16,8	0.66	27,4	1.08	24,9	0.98
4-4S	6,3	0.25	1/4-18	7/16-20	22,4	0.88	25,4	1.00	25,4	1.00
4-6S	9,6	0.38	1/4-18	9/16-18	22,6	0.89	31,2	1.23	28,2	1.11
6-8S	12,7	0.50	3/8-18	3/4-16	25,9	1.02	36,1	1.42	33,6	1.32
8-8S	12,7	0.50	1/2-14	3/4-16	31,2	1.23	36,1	1.42	35,6	1.40
8-10S	16,0	0.63	1/2-14	7/8-14	31,2	1.23	41,6	1.64	41,6	1.64
12-12S	19,0	0.75	3/4-14	1 1/16-12	34,5	1.36	48,0	1.89	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	41,1	1.62	55,2	2.17	53,1	2.09
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	43,2	1.70	59,2	2.33	60,7	2.39
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	52,8	2.08	73,4	2.89	66,3	2.61

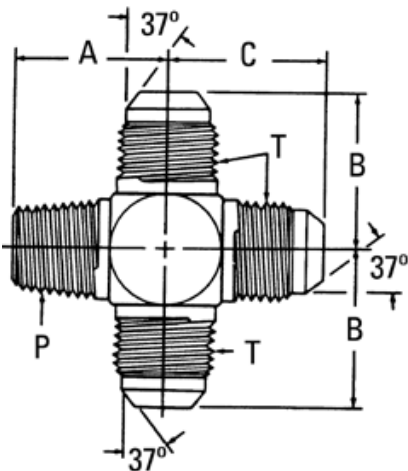
Internal Pipe/
37° Flare Swivel



Part No. 2031-(Dash size) (Ref. SAE 070427)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-3S	4,8	0.19	1/8-27	3/8-24	16,8	0.66	26,2	1.03
2-4S	6,3	0.25	1/8-27	7/16-20	16,8	0.66	27,4	1.08
2-5S	7,9	0.31	1/8-27	1/2-20	16,8	0.66	27,4	1.08
4-4S	6,3	0.25	1/4-18	7/16-20	22,4	0.88	31,0	1.22
4-6S	9,6	0.38	1/4-18	9/16-18	22,4	0.88	31,2	1.23
8-10S	16,0	0.63	1/2-14	7/8-14	31,2	1.23	41,6	1.64
12-12S	19,0	0.75	3/4-14	1 1/16-12	34,5	1.36	48,0	1.89
16-16S	25,4	1.00	1-11 1/2	1 5/16-12	41,1	1.62	53,1	2.09
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	43,2	1.70	60,4	2.38
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	52,8	2.08	65,5	2.58
32-32S	50,8	2.00	2-11 1/2	2 1/2-12	60,7	2.39	83,8	3.30

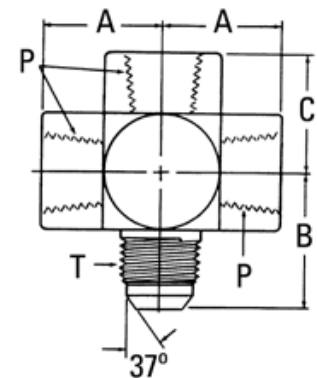
External Pipe/37°Flare



Part No. 202003-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
6-6S	9,6	0.38	3/8-18	9/16-18	26,9	1.06	26,9	1.06	26,9	1.06
12-12S	19,0	0.75	3/4-14	1 1/16-12	40,4	1.59	42,2	1.66	44,2	1.74

Internal Pipe/37° Flare

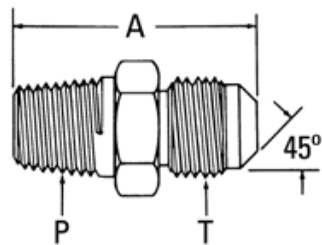


Part No. 202006-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A		B		C	
	mm	in			mm	in	mm	in	mm	in
8-10S	16,0	0.63	1/2-14	7/8-14	29,7	1.17	41,6	1.64	31,2	1.23
12-12S	19,0	0.75	3/4-14	1 1/16-12	34,5	1.36	48,0	1.89	34,5	1.36
20-20S	31,7	1.25	1 1/4-11 1/2	1 5/8-12	43,2	1.70	59,2	2.33	43,2	1.70
24-24S	38,1	1.50	1 1/2-11 1/2	1 7/8-12	52,8	2.08	73,4	2.89	52,8	2.08

Pipe to 45° Flare

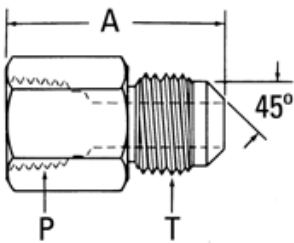
External Pipe/45° Flare



Part No. 2000-(Dash size) (Ref. SAE 010102)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4B	6,3	0.25	1/8-27	7/16-20	26,9	1.06
2-5B	7,9	0.31	1/8-27	1/2-20	29,5	1.16
2-6B	9,6	0.38	1/8-27	5/8-18	31,8	1.25
4-4B	6,3	0.25	1/4-18	7/16-20	31,8	1.25
4-5B	7,9	0.31	1/4-18	1/2-20	34,0	1.34
4-6B	9,6	0.38	1/4-18	5/8-18	36,6	1.44
4-8B	12,7	0.50	1/4-18	3/4-16	41,1	1.62
4-10B	16,0	0.63	1/4-18	7/8-14	46,0	1.81
6-4B	6,3	0.25	3/8-18	7/16-20	33,3	1.31
6-5B	7,9	0.31	3/8-18	1/2-20	35,1	1.38
6-6B	9,6	0.38	3/8-18	5/8-18	36,6	1.44
6-8B	12,7	0.50	3/8-18	3/4-16	41,1	1.62
6-10B	16,0	0.63	3/8-18	7/8-14	46,0	1.81
8-4B	6,3	0.25	1/2-14	7/16-20	39,6	1.56
8-6B	9,6	0.38	1/2-14	5/8-18	42,9	1.69
8-8B	12,7	0.50	1/2-14	3/4-16	46,0	1.81
8-10B	16,0	0.63	1/2-14	7/8-14	50,8	2.00
8-12B	19,0	0.75	1/2-14	1 1/16-14	55,6	2.19
12-8B	12,7	0.50	3/4-14	3/4-16	49,3	1.94
12-10B	16,0	0.63	3/4-14	7/8-14	52,3	2.06
12-12B	19,0	0.75	3/4-14	1 1/16-14	55,6	2.19

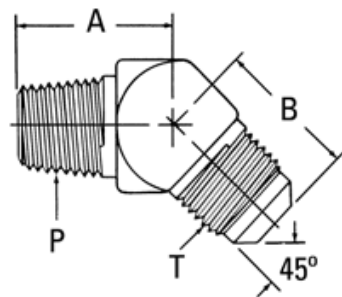
Internal Pipe/45° Flare



Part No. 2001-(Dash size) (Ref. SAE 010103)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
2-4B	6,3	0.25	1/8-27	7/16-20	26,9	1.06
2-5B	7,9	0.31	1/8-27	1/2-20	29,5	1.16
4-4B	6,3	0.25	1/4-18	7/16-20	30,3	1.19
4-5B	7,9	0.31	1/4-18	1/2-20	31,8	1.25
4-6B	9,6	0.38	1/4-18	5/8-18	33,3	1.31
4-8B	12,7	0.50	1/4-18	3/4-16	36,6	1.44
6-4B	6,3	0.25	3/8-18	7/16-20	30,3	1.19
6-6B	9,6	0.38	3/8-18	5/8-18	33,3	1.31
6-8B	12,7	0.50	3/8-18	3/4-16	39,6	1.56
6-10B	16,0	0.63	3/8-18	7/8-14	39,6	1.56
8-6B	9,6	0.38	1/2-14	5/8-18	38,1	1.50
8-8B	12,7	0.50	1/2-14	3/4-16	41,1	1.62
8-10B	16,0	0.63	1/2-14	7/8-14	46,0	1.81
8-12B	19,0	0.75	1/2-14	1 1/16-12	50,8	2.00
12-10B	16,0	0.63	3/4-14	7/8-14	46,0	1.81
12-12B	19,0	0.75	3/4-14	1 1/16-14	49,3	1.94

External Pipe/45° Flare



Part No. 2007-(Dash size) (Ref. SAE 010302)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4B	6,3	0.25	1/8-27	7/16-20	16,2	0.64	17,3	0.68
4-4B	6,3	0.25	1/4-18	7/16-20	21,8	0.86	19,0	0.75
4-6B	9,6	0.38	1/4-18	5/8-18	21,8	0.86	23,1	0.91
6-6B	9,6	0.38	3/8-18	5/8-18	23,9	0.94	23,6	0.93
6-8B	12,7	0.50	3/8-18	3/4-16	22,4	0.88	27,2	1.07
8-6B	9,6	0.38	1/2-14	5/8-18	29,7	1.17	25,1	0.99
8-8B	12,7	0.50	1/2-14	3/4-16	30,0	1.18	28,5	1.12
8-10B	16,0	0.63	1/2-14	7/8-14	29,7	1.17	28,5	1.12

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

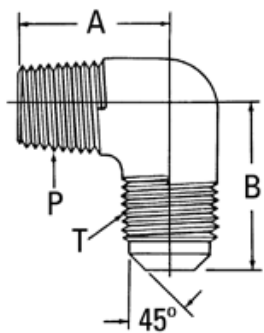
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

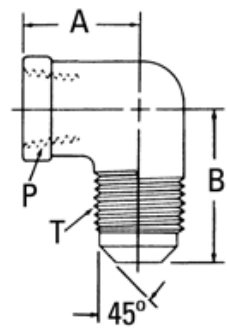
External Pipe/45° Flare



Part No. 2003-(Dash size) (Ref. SAE 010202)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4B	6,3	0.25	1/8-27	7/16-20	20,1	0.79	21,3	0.84
2-5B	7,9	0.31	1/8-27	1/2-20	19,8	0.78	23,1	0.91
2-6B	9,6	0.38	1/8-27	5/8-18	22,4	0.88	25,4	1.00
4-4B	6,3	0.25	1/4-18	7/16-20	22,4	0.88	20,6	0.81
4-5B	7,9	0.31	1/4-18	1/2-20	24,4	0.96	24,9	0.98
4-6B	9,6	0.38	1/4-18	5/8-18	22,4	0.88	25,4	1.00
4-8B	12,7	0.50	1/4-18	3/4-16	25,4	1.00	30,3	1.19
6-4B	6,3	0.25	3/8-18	7/16-20	23,1	0.91	23,1	0.91
6-5B	7,9	0.31	3/8-18	1/2-20	23,1	0.91	25,4	1.00
6-6B	9,6	0.38	3/8-18	5/8-18	23,1	0.91	25,9	1.02
6-8B	12,7	0.50	3/8-18	3/4-16	25,4	1.00	30,3	1.19
6-10B	16,0	0.63	3/8-18	7/8-14	31,0	1.22	34,5	1.36
8-6B	9,6	0.38	1/2-14	5/8-18	27,7	1.09	27,9	1.10
8-8B	12,7	0.50	1/2-14	3/4-16	29,0	1.14	29,5	1.16
8-10B	16,0	0.63	1/2-14	7/8-14	31,0	1.22	34,3	1.35
8-12B	19,0	0.75	1/2-14	1 1/16-14	38,1	1.50	42,9	1.69
12-6B	9,6	0.38	3/4-14	5/8-18	30,3	1.19	33,3	1.31
12-8B	12,7	0.50	3/4-14	3/4-16	31,8	1.25	36,1	1.42
12-10B	16,0	0.63	3/4-14	7/8-14	33,3	1.31	36,3	1.43
12-12B	19,0	0.75	3/4-14	1 1/16-14	41,4	1.63	42,4	1.67

Internal Pipe/45° Flare

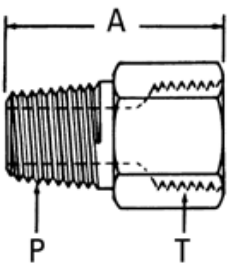


Part No. 2002-(Dash size) (Ref. SAE 010203)

Dash Size	Tube O.D.		Thread P	Thread T	A		B	
	mm	in			mm	in	mm	in
2-4B	6,3	0.25	1/8-27	7/16-20	11,7	0.46	22,9	0.90
2-5B	7,9	0.31	1/8-27	1/2-20	15,0	0.59	25,4	1.00
4-4B	6,3	0.25	1/4-18	7/16-20	16,8	0.66	24,6	0.97
4-5B	7,9	0.31	1/4-18	1/2-20	26,9	1.06	26,9	1.06
4-6B	9,6	0.38	1/4-18	5/8-18	15,0	0.59	26,9	1.06
6-4B	6,3	0.25	3/8-18	7/16-20	14,5	0.57	26,2	1.03
6-6B	9,6	0.38	3/8-18	5/8-18	27,7	1.09	26,9	1.06
6-8B	12,7	0.50	3/8-18	3/4-16	29,0	1.14	29,5	1.16
6-10B	16,0	0.63	3/8-18	7/8-14	31,0	1.22	34,3	1.35
8-8B	12,7	0.50	1/2-14	3/4-16	23,9	0.94	35,1	1.38
8-10B	16,0	0.63	1/2-14	7/8-14	25,4	1.00	41,1	1.62
8-12B	19,0	0.75	1/2-14	1 1/16-14	26,9	1.06	41,4	1.63
12-12B	19,0	0.75	3/4-14	1 1/16-14	26,9	1.06	45,2	1.78

Pipe to SAE O-Ring

External Pipe/
SAE O-Ring
Boss (Internal)

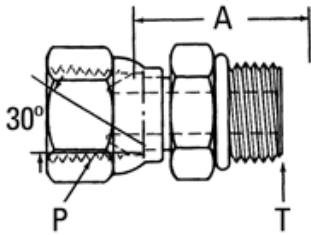


Part No. 2246-(Dash size)

Dash Size	Thread P	Thread T	A	
			mm	in
2-4S	1/8-27	7/16-20	27,7	1.09
2-5S	1/8-27	1/2-20	27,7	1.09
4-6S	1/4-18	9/16-18	34,5	1.36
6-8S	3/8-18	3/4-16	36,8	1.45
8-10S	1/2-14	7/8-14	45,2	1.78
12-12S	3/4-14	1 1/16-12	48,8	1.92
12-14S	3/4-14	1 3/16-12	48,8	1.92
16-16S	1-11 1/2	1 5/16-12	54,1	2.13

Pipe to SAE O-Ring

Internal Pipe Swivel (NPSM)/SAE O-Ring Boss

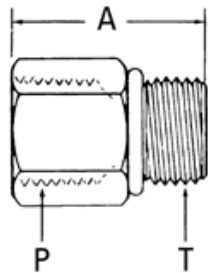


Part No. 2066-(Dash size)

Dash Size	Thread P	Thread T	A	
			mm	in
4-4S	1/4-18	7/16-20	26,7	1.05
4-6S	1/4-18	9/16-18	29,0	1.14
6-6S	3/8-18	9/16-18	29,0	1.14
6-8S	3/8-18	3/4-16	30,3	1.19
8-8S	1/2-14	3/4-16	31,2	1.23
8-10S	1/2-14	7/8-14	33,0	1.30
12-8S	3/4-14	3/4-16	37,8	1.49
12-10S	3/4-14	7/8-14	39,4	1.55
12-12S	3/4-14	1 1/16-12	40,1	1.58
12-14S	3/4-14	1 3/16-12	40,1	1.58
16-16S	1-11 1/2	1 5/16-12	40,4	1.59
16-20S	1-11 1/2	1 5/8-12	40,4	1.59

NOTE: Available without O-ring.
Order by Part No. 206604-(Dash size).

Internal Pipe/SAE O-Ring Boss

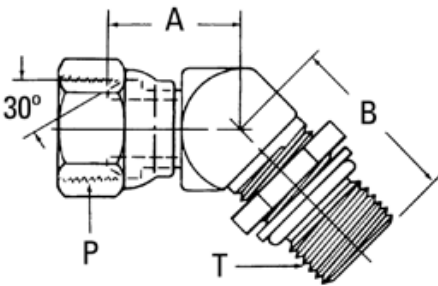


Part No. 2216-(Dash size)

Dash Size	Thread P	Thread T	A	
			mm	in
2-4S	1/8-27	7/16-20	23,4	0.92
4-5S	1/4-18	1/2-20	30,5	1.20
4-6S	1/4-18	9/16-18	31,5	1.24
6-8S	3/8-18	3/4-16	31,8	1.25
6-12S	3/8-18	1 1/16-12	34,0	1.34
8-8S	1/2-14	3/4-16	41,9	1.65
8-10S	1/2-14	7/8-14	39,1	1.54
8-12S	1/2-14	1 1/16-12	43,7	1.72
12-12S	3/4-14	1 1/16-12	42,4	1.67
12-14S	3/4-14	1 3/16-12	42,7	1.68
12-16S	3/4-14	1 5/16-12	25,4	1.00
16-16S	1-11 1/2	1 5/16-12	48,5	1.91
16-20S	1-11 1/2	1 5/8-12	25,4	1.00
20-20S	1 1/4-11 1/2	1 5/8-12	50,8	2.00
24-24S	1 1/2-11 1/2	1 7/8-12	50,8	2.00
32-32S	2-11 1/2	2 1/2-12	53,3	2.10

NOTE: Available without O-ring.
Order by Part no. 2216-1-(Dash size).

Internal Pipe Swivel (NPSM)/SAE O-Ring Boss (adj.)



Part No. 2067-(Dash size)

Dash Size	Thread P	Thread T	A		B	
			mm	in	mm	in
6-6S	3/8-18	9/16-18	23,4	0.92	30,5	1.20
6-8S	3/8-18	3/4-16	23,4	0.92	33,8	1.33
8-8S	1/2-14	3/4-16	23,1	0.91	35,3	1.39
8-10S	1/2-14	7/8-14	23,1	0.91	39,4	1.55
12-12S	3/4-14	1 1/16-12	27,9	1.10	44,7	1.76
12-16S	3/4-14	1 5/16-12	27,9	1.10	48,0	1.89
16-16S	1-11 1/2	1 5/16-12	32,0	1.26	48,0	1.89

NOTE: Available without O-ring. Order by Part No. 2067-1-(Dash size).

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

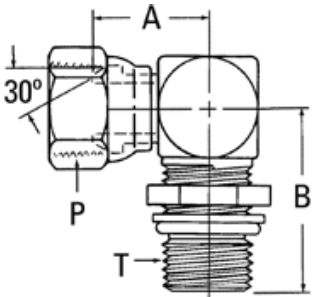
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

Pipe to SAE O-Ring

Internal Pipe Swivel (NPSM)/SAE O-Ring Boss (adj.)

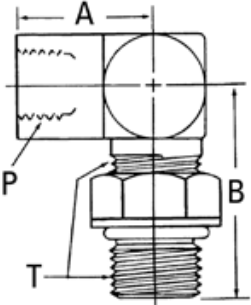


Part No. 2068-(Dash size)

Dash Size	Thread P	Thread T	A		B	
			mm	in	mm	in
4-4S	1/4-18	7/16-20	23,1	0.91	29,5	1.16
4-6S	1/4-18	9/16-18	18,5	0.73	31,8	1.25
6-6S	3/8-18	9/16-18	27,7	1.09	34,3	1.35
6-8S	3/8-18	3/4-16	27,7	1.09	37,6	1.48
8-8S	1/2-14	3/4-16	27,4	1.08	38,3	1.51
8-10S	1/2-14	7/8-14	27,4	1.08	42,4	1.67
12-8S	3/4-14	3/4-16	26,2	1.03	38,1	1.50
12-10S	3/4-14	7/8-14	27,7	1.09	43,2	1.70
12-12S	3/4-14	1 1/16-12	34,5	1.36	50,0	1.97
16-16S	1-11 1/2	1 5/16-12	38,9	1.53	53,9	2.12
20-16S	1 1/4-11 1/2	1 5/16-12	43,2	1.70	41,1	1.62
20-20S	1 1/4-11 1/2	1 5/8-12	41,1	1.62	60,7	2.39

NOTE: Available without O-ring. Order by Part No. 2068-1-(Dash size).

Internal Pipe/SAE O-Ring Boss (adj.)

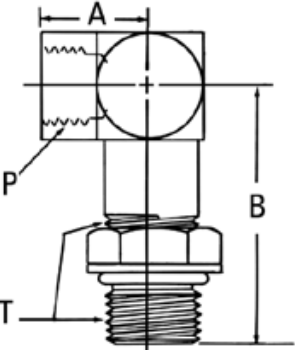


Part No. 206801-(Dash size)

Dash Size	Thread P	Thread T	A		B	
			mm	in	mm	in
6-8S	3/8-18	3/4-16	25,9	1.02	41,1	1.62
8-8S	1/2-14	3/4-16	31,2	1.23	43,9	1.73
12-12S	3/4-14	1 1/16-12	34,5	1.36	55,2	2.17
16-16S	1-11 1/2	1 5/16-12	41,1	1.62	61,2	2.41

NOTE: Available without O-ring. Order by Part No. 206801-1-(Dash size).

Internal Pipe/SAE O-Ring Boss (adj.)



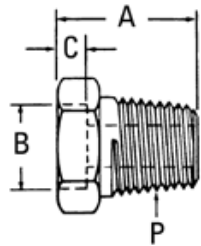
Part No. 206804-(Dash size)

Dash Size	Thread P	Thread T	A		B	
			mm	in	mm	in
6-8S	3/8-18	3/4-16	25,9	1.02	75,4	2.97
8-10S	1/2-14	7/8-14	31,2	1.23	90,4	3.56
12-12S	3/4-14	1 1/16-12	34,5	1.36	104,6	4.12
16-16S	1-11 1/2	1 5/16-12	41,1	1.62	117,8	4.64

NOTE: Available without O-ring. Order by Part No. 206804-1-(Dash size).

Pipe to Braze & Weld

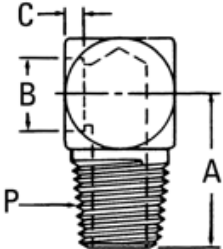
Braze Port/ External Pipe



Part No. 73056-(Dash size)

Dash Size	Tube O.D.		Thread P	A		B		C	
	mm	in		mm	in	mm	in	mm	in
16S	25,4	1.00	1-11 1/2	33,6	1.32	25,4	1.00	6,4	0.25
32S	50,8	2.00	2-11 1/2	38,9	1.53	50,8	2.00	6,4	0.25

Braze Port/ External Pipe

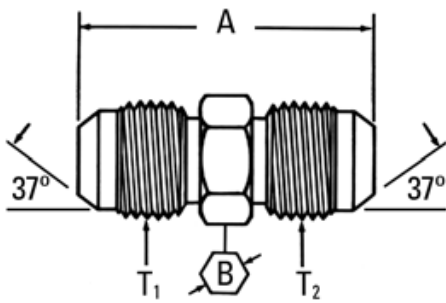


Part No. FF1159-(Dash size)

Dash Size	Tube O.D.		Thread P	A		B		C	
	mm	in		mm	in	mm	in	mm	in
0406S	9,6	0.38	1/4-18	22,9	0.90	9,7	0.38	4,0	0.16
2020S	31,7	1.25	1 1/4-11 1/2	59,7	2.35	31,8	1.25	6,4	0.25

SAE 37° (JIC) Flare Union

Union 37° Flare/ 37° Flare

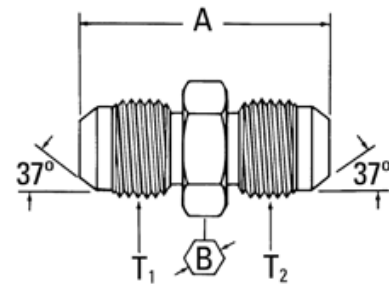


Part No. 2027-(Dash size) (Ref. SAE 070101)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
3-3S	4,8	0.19	3/8-24	3/8-24	31,2	1.23	11,2	0.44
4-4S	6,3	0.25	7/16-20	7/16-20	34,8	1.37	12,7	0.50
5-4S	6,3	0.25	1/2-20	7/16-20	34,8	1.37	14,2	0.56
5-5S	7,9	0.31	1/2-20	1/2-20	34,8	1.37	14,2	0.56
6-4S	6,3	0.25	9/16-18	7/16-20	35,6	1.40	15,7	0.62
6-5S	7,9	0.31	9/16-18	1/2-20	35,6	1.40	15,7	0.62
6-6S	9,6	0.38	9/16-18	9/16-18	35,8	1.41	15,7	0.62
8-4S	6,3	0.25	3/4-16	7/16-20	38,3	1.51	20,6	0.81
8-6S	9,6	0.38	3/4-16	9/16-18	38,6	1.52	20,6	0.81
8-8S	12,7	0.50	3/4-16	3/4-16	41,1	1.62	20,6	0.81
10-5S	7,9	0.31	7/8-14	1/2-20	42,4	1.67	23,9	0.94
10-6S	9,6	0.38	7/8-14	9/16-18	42,7	1.68	23,9	0.94
10-8S	12,7	0.50	7/8-14	3/4-16	45,2	1.78	23,9	0.94
10-10S	16,0	0.63	7/8-14	7/8-14	47,7	1.88	23,9	0.94
12-8S	9,6	0.38	1 1/16-12	3/4-16	49,5	1.95	28,5	1.12
12-10S	15,5	0.61	1 1/16-12	7/8-14	52,0	2.05	28,5	1.12
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	54,9	2.16	28,5	1.12
14-14S	21,1	0.83	1 3/16-12	1 3/16-12	56,1	2.21	31,8	1.25
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	55,9	2.20	35,1	1.38
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	57,2	2.25	35,1	1.38
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	61,7	2.43	42,9	1.69
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	69,8	2.75	50,8	2.00
32-32S	50,8	2.00	2 1/2-12	2 1/2-12	86,4	3.40	66,5	2.62

Also available in stainless steel as part no. 259-2027.
See pg. 280 for more information.

37° Flare/37° Flare (Large Hex)



Part No. 202712-(Dash size) (Ref. SAE 070119)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
5-5S	7,9	0.31	1/2-20	1/2-20	34,8	1.37	19,0	0.75
6-4S	6,3	0.25	9/16-18	7/16-20	35,6	1.40	20,6	0.81
6-5S	7,9	0.31	9/16-18	1/2-20	35,6	1.40	20,6	0.81
8-8S	12,7	0.50	3/4-16	3/4-16	41,1	1.62	25,4	1.00
10-8S	12,7	0.50	7/8-14	3/4-16	45,2	1.78	28,5	1.12
10-10S	16,0	0.63	7/8-14	7/8-14	47,7	1.88	28,5	1.12
12-10S	16,0	0.63	1 1/16-12	7/8-14	52,0	2.05	35,1	1.38
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	54,9	2.16	35,1	1.38
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	57,2	2.25	41,1	1.62

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

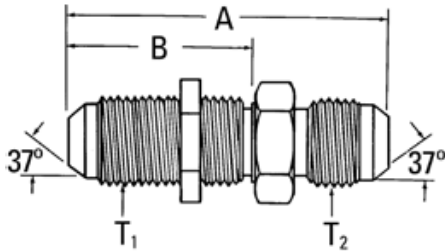
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

37° Flare Bulkhead/37° Flare

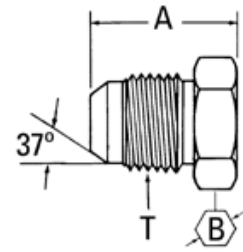


Part No. 2041-(Dash size) (Ref. SAE 070601)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	52,6	2.07	31,2	1.23
4-6S	9,6	0.38	7/16-20	9/16-18	53,3	2.10	31,2	1.23
5-5S	7,9	0.31	1/2-20	1/2-20	52,6	2.07	31,2	1.23
6-6S	9,6	0.38	9/16-18	9/16-18	55,4	2.18	33,3	1.31
8-8S	12,7	0.50	3/4-16	3/4-16	62,0	2.44	37,3	1.47
10-10S	16,0	0.63	7/8-14	7/8-14	69,6	2.74	40,9	1.61
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	78,5	3.09	45,2	1.78
12-16S	25,4	1.00	1 1/16-12	1 5/16-12	79,7	3.14	45,2	1.78
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	79,7	3.14	45,2	1.78
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	84,1	3.31	46,5	1.83
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	89,4	3.52	46,7	1.84

NOTE: Available without nut. Order by Part No. 2041-1-(Dash size).

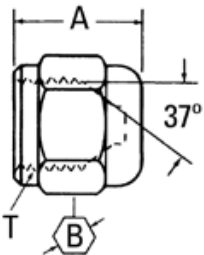
37° Flare Plug



Part No. 900599-(Dash size) (Ref. SAE 070109)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
3S	4,8	0.19	3/8-24	18,5	0.73	11,2	0.44
4S	6,3	0.25	7/16-20	20,3	0.80	12,7	0.50
5S	7,9	0.31	1/2-20	20,3	0.80	14,2	0.56
6S	9,6	0.38	9/16-18	21,3	0.84	15,7	0.62
8S	12,7	0.50	3/4-16	23,9	0.94	20,6	0.81
10S	16,0	0.63	7/8-14	27,9	1.10	23,9	0.94
12S	19,0	0.75	1 1/16-12	32,5	1.28	28,5	1.12
16S	25,4	1.00	1 5/16-12	33,8	1.33	35,1	1.38
20S	31,7	1.25	1 5/8-12	36,8	1.45	42,9	1.69
24S	38,1	1.50	1 7/8-12	41,9	1.65	50,8	2.00
32S	50,8	2.00	2 1/2-12	52,0	2.05	66,5	2.62

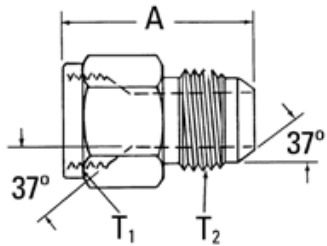
Cap Nut



Part No. 210292-(Dash size) (Ref. SAE 070112)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
3S	4,8	0.19	3/8-24	14,2	0.56	11,2	0.44
4S	6,3	0.25	7/16-20	15,0	0.59	14,2	0.56
5S	7,9	0.31	1/2-20	15,5	0.61	15,7	0.62
6S	9,6	0.38	9/16-18	15,7	0.62	17,6	0.69
8S	12,7	0.50	3/4-16	19,0	0.75	22,4	0.88
10S	16,0	0.63	7/8-14	21,3	0.84	25,4	1.00
12S	19,0	0.75	1 1/16-12	23,1	0.91	31,8	1.25
16S	25,4	1.00	1 5/16-12	25,9	1.02	38,1	1.50
20S	31,7	1.25	1 5/8-12	26,9	1.06	50,8	2.00
24S	38,1	1.50	1 7/8-12	30,3	1.19	57,2	2.25
32S	50,8	2.00	2 1/2-12	36,6	1.44	73,1	2.88

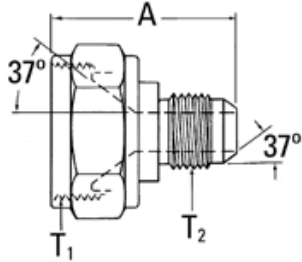
37° Flare (Internal)/ 37° Flare



Part No. 2215-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
6-5S	7,9	0.31	9/16-18	1/2-20	30,0	1.18
10-8S	12,7	0.50	7/8-14	3/4-16	38,9	1.53
10-12S	19,0	0.75	7/8-14	1/16-12	44,2	1.74
12-10S	16,0	0.63	1 1/16-12	7/8-14	43,9	1.73
12-16S	25,4	1.00	1 1/16-12	1 5/16-12	50,8	2.00
16-20S	31,7	1.25	1 5/16-12	1 5/8-12	58,4	2.30
24-20S	31,7	1.25	1 7/8-12	1 5/8-12	58,4	2.30

37° Flare Swivel (Reducer)/37° Flare

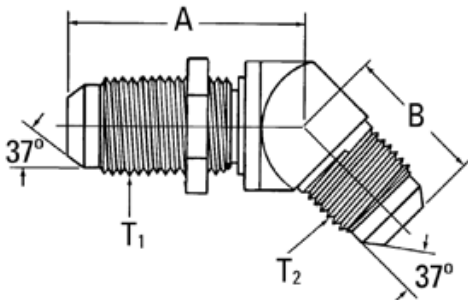


Part No. 221501-(Dash size) (Ref. SAE 070123)

Dash Size	Male Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
6-4S	6,3	0.25	9/16-18	7/16-20	35,6	1.40
8-4S	6,3	0.25	3/4-16	7/16-20	38,1	1.50
8-6S	9,6	0.38	3/4-16	9/16-18	38,1	1.50
10-6S	9,6	0.38	7/8-14	9/16-18	41,1	1.62
12-6S	9,6	0.38	1 1/16-12	9/16-18	42,9	1.69
12-8S	12,7	0.50	1 1/16-12	3/4-16	45,5	1.79
16-6S	9,6	0.38	1 5/16-12	9/16-18	46,7	1.84
16-8S	12,7	0.50	1 5/16-12	3/4-16	49,3	1.94
16-10S	16,0	0.63	1 5/16-12	7/8-14	51,8	2.04
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	54,6	2.15
20-16S	25,4	1.00	1 5/8-12	1 5/16-12	56,6	2.23

NOTE: Available without nut. Order by Part No. FF1066-(Dash size).

37° Flare Bulkhead/ 37° Flare

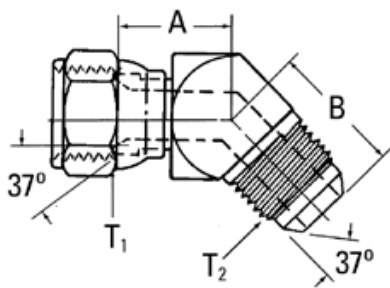


Part No. 2042-(Dash size) (Ref. SAE 070801)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
3-3S	4,8	0.19	3/8-24	3/8-24	35,1	1.38	18,3	0.72
4-4S	6,3	0.25	7/16-20	7/16-20	38,9	1.53	19,5	0.77
5-5S	7,9	0.31	1/2-20	1/2-20	42,2	1.66	19,0	0.75
6-6S	9,6	0.38	9/16-18	9/16-18	42,4	1.67	21,0	0.83
8-8S	12,7	0.50	3/4-16	3/4-16	49,3	1.94	24,9	0.98
10-10S	16,0	0.63	7/8-14	7/8-14	55,2	2.17	28,2	1.11
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	59,9	2.36	35,8	1.41
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	65,5	2.58	37,3	1.47
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	64,3	2.53	42,9	1.69

NOTE: Available without nut. Order by Part No. 2042-1-(Dash size).

37° Flare Swivel/ 37° Flare



Part No. 2070-(Dash size) (Ref. SAE 070321)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	15,2	0.60	18,3	0.72
5-5S	7,9	0.31	1/2-20	1/2-20	15,7	0.62	19,5	0.77
6-6S	9,6	0.38	9/16-18	9/16-18	18,8	0.74	21,0	0.83
8-8S 0.98	12,7	0.50	3/4-16	3/4-16	21,8	0.86	24,9	
10-10S	16,0	0.63	7/8-14	7/8-14	23,9	0.94	28,2	1.11
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	23,9	0.94	32,5	1.28
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	29,5	1.16	37,3	1.47

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

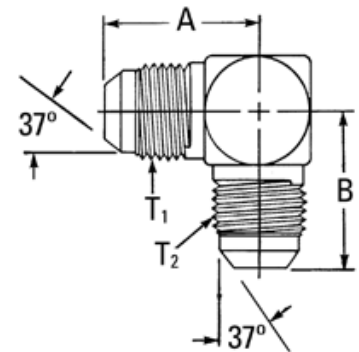
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

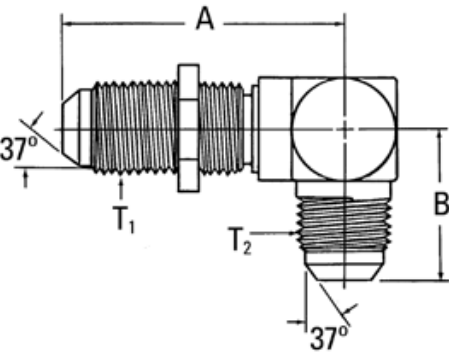
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

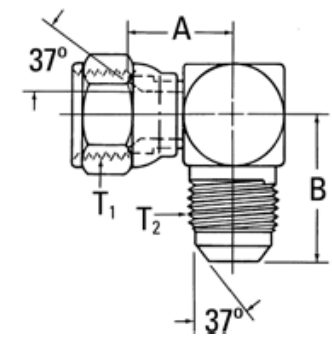
37° Flare/37° Flare



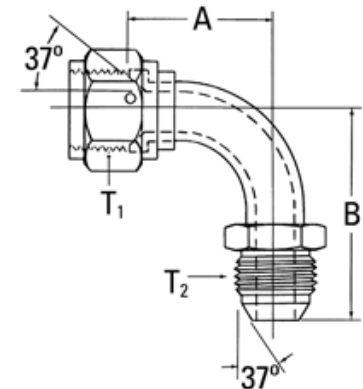
37° Flare Bulkhead/ 37° Flare



37° Flare Swivel/ 37° Flare



37° Flare Swivel/ 37° Flare*



Part No. 2039-(Dash size) (Ref. SAE 070201)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	22,6	0.89	22,6	0.89
5-5S	7,9	0.31	1/2-20	1/2-20	24,1	0.95	24,1	0.95
6-6S	9,6	0.38	9/16-18	9/16-18	26,9	1.06	26,9	1.06
8-6S	9,6	0.38	3/4-16	9/16-16	31,8	1.25	29,0	1.14
8-8S	12,7	0.50	3/4-16	3/4-16	31,8	1.25	31,8	1.25
10-10S	16,0	0.63	7/8-14	7/8-14	36,8	1.45	36,8	1.45
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	42,2	1.66	42,2	1.66
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	46,0	1.81	44,7	1.76
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	46,0	1.81	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	52,3	2.06	52,3	2.06
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	59,2	2.33	59,2	2.33
32-32S	50,8	2.00	2 1/2-12	2 1/2-12	77,7	3.06	77,7	3.06

Also available in stainless steel as part no. 259-2039. See pg. 280 for more information.

Part No. 2043-(Dash size) (Ref. SAE 070701)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	40,4	1.59	24,6	0.97
5-5S	7,9	0.31	1/2-20	1/2-20	43,7	1.72	26,9	1.06
6-6S	9,6	0.38	9/16-18	9/16-18	46,0	1.81	27,7	1.09
8-8S	12,7	0.50	3/4-16	3/4-16	53,6	2.11	34,5	1.36
10-10S	16,0	0.63	7/8-14	7/8-14	60,7	2.39	39,6	1.56
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	67,8	2.67	45,2	1.78
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	71,1	2.80	49,3	1.94
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	79,2	3.12	55,9	2.20

NOTE: Available without nut. Order by Part No. 2043-1-(Dash size).

Part No. 2071-(Dash size) (Ref. SAE 070221)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	16,8	0.66	22,6	0.89
4-6S	9,6	0.38	7/16-20	9/16-18	20,8	0.82	26,9	1.06
5-5S	7,9	0.31	1/2-20	1/2-20	17,3	0.68	24,1	0.95
6-6S	9,6	0.38	9/16-18	9/16-18	22,4	0.88	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	24,4	0.96	31,8	1.25
10-8S	12,7	0.50	7/8-14	3/4-16	28,5	1.12	33,8	1.33
10-10S	16,0	0.63	7/8-14	7/8-14	28,5	1.12	36,8	1.45
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	30,3	1.19	42,2	1.66
14-14S	22,3	0.88	1 3/16-12	1 3/16-12	30,5	1.20	45,7	1.80
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	35,8	1.41	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	42,7	1.68	52,3	2.06
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	47,2	1.86	59,2	2.33

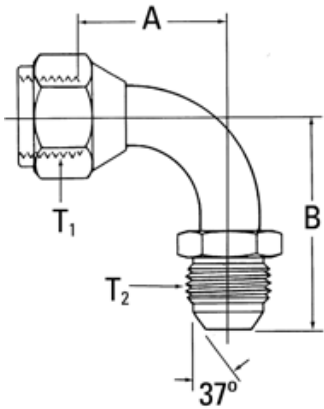
Also available in stainless steel as part no. 259-2071. See pg. 280 for more information.

Part No. FF5163-(Dash size)

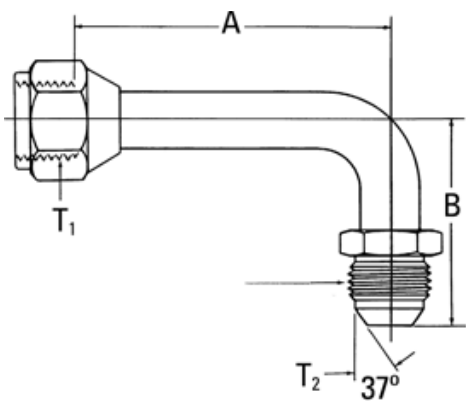
Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0808S	12,7	0.50	3/4-16	3/4-16	47,5	1.87	54,9	2.16
1212S	19,0	0.75	1 1/16-12	1 1/16-12	59,7	2.35	71,4	2.81
1616S	25,4	1.00	1 5/16-12	1 5/16-12	77,2	3.04	86,6	3.41
2020S	31,7	1.25	1 5/8-12	1 5/8-12	86,4	3.40	94,2	3.71
2424S	38,1	1.50	1 7/8-12	1 7/8-12	100,3	3.95	110,0	4.33

*Suitable for pressures through heavy spiral hose - SAE 100R10.

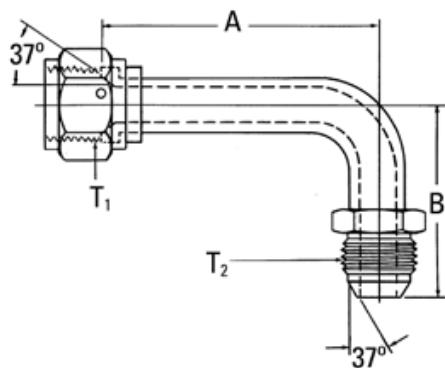
37° Flare Swivel/ 37° Flare*



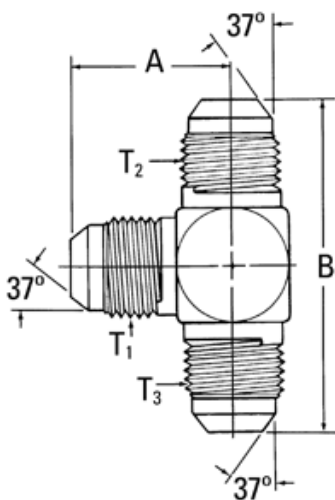
37° Flare Swivel/ 37° Flare*



37° Flare Swivel/ 37° Flare*



37° Flare/ 37° Flare/37° Flare



Part No. 500454-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4S	6,3	0.25	7/16-20	7/16-20	17,3	0.68	28,5	1.12
5S	7,9	0.31	1/2-20	1/2-20	19,5	0.77	31,5	1.24
6S	9,6	0.38	9/16-18	9/16-18	21,6	0.85	33,3	1.31
8S	12,7	0.50	3/4-16	3/4-16	27,7	1.09	42,2	1.66
10S	16,0	0.63	7/8-14	7/8-14	31,2	1.23	46,2	1.82
12S	19,0	0.75	1 1/16-12	1 1/16-12	46,2	1.82	63,2	2.49
16S	25,4	1.00	1 5/16-12	1 5/16-12	60,7	2.39	70,9	2.79
20S	31,7	1.25	1 5/8-12	1 5/8-12	69,8	2.75	79,7	3.14

*Suitable for pressures through 4 light spiral hose - SAE 100R9.

Part No. 504095-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4S	6,3	0.25	7/16-20	7/16-20	45,7	1.80	28,5	1.12
5S	7,9	0.31	1/2-20	1/2-20	44,9	1.77	31,5	1.24
6S	9,6	0.38	9/16-18	9/16-18	55,4	2.18	33,3	1.31
8S	12,7	0.50	3/4-16	3/4-16	61,7	2.43	45,2	1.78
10S	16,0	0.63	7/8-14	7/8-14	65,3	2.57	52,6	2.07
12S	19,0	0.75	1 1/16-12	1 1/16-12	94,7	3.73	63,2	2.49
16S	25,4	1.00	1 5/16-12	1 5/16-12	116,3	4.58	70,9	2.79
20S	31,7	1.25	1 5/8-12	1 5/8-12	140,5	5.53	79,7	3.14

*Suitable for pressures through 4 light spiral hose - SAE 100R9

Part No. FF5164-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
808S	12,7	0.50	3/4-16	3/4-16	84,8	3.34	54,9	2.16
1212S	19,0	0.75	1 1/16-12	1 1/16-12	112,0	4.41	71,4	2.81
1616S	25,4	1.00	1 5/16-12	1 5/16-12	133,1	5.24	86,6	3.41
2020S	31,7	1.25	1 5/8-12	1 5/8-12	164,6	6.48	94,2	3.71

*Suitable for pressures through heavy spiral hose - SAE 100R10

Part No. 2033-(Dash size) (Ref. SAE 070401)

Dash Size	Thread T1	Thread T2	Thread T3	A		B	
				mm	in	mm	in
4-4S	7/16-20	7/16-20	7/16-20	22,6	0.89	45,2	1.78
5-5S	1/2-20	1/2-20	1/2-20	24,1	0.95	48,3	1.90
6-6S	9/16-18	9/16-18	9/16-18	26,9	1.06	53,3	2.10
8-6-6S	3/4-16	9/16-18	9/16-18	31,8	1.25	57,9	2.28
8-8S	3/4-16	3/4-16	3/4-16	31,8	1.25	63,5	2.50
8-12-12S	3/4-16	1 1/16-12	1 1/16-12	36,1	1.42	84,3	3.32
10-10S	7/8-14	7/8-14	7/8-14	36,8	1.45	73,7	2.90
12-12S	1 1/16-12	1 1/16-12	1 1/16-12	42,2	1.66	84,3	3.32
12-12-16S	1 1/16-12	1 1/16-12	1 5/16-12	46,7	1.84	92,7	3.65
16-16S	1 5/16-12	1 5/16-12	1 5/16-12	46,0	1.81	91,9	3.62
16-16-20S	1 5/16-12	1 5/16-12	1 5/8-12	52,8	2.08	103,1	4.06
20-16-16S	1 5/8-12	1 5/16-12	1 5/16-12	52,3	2.06	107,2	4.22
20-20S	1 5/8-12	1 5/8-12	1 5/8-12	52,3	2.06	111,2	4.38

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

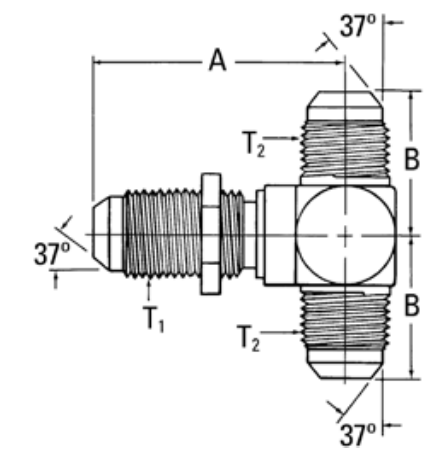
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

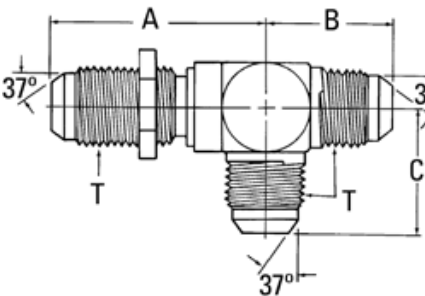
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

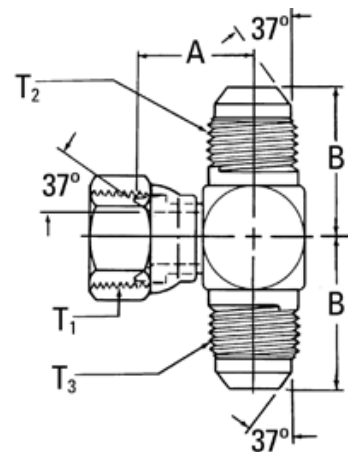
37° Flare Bulkhead/
37° Flare



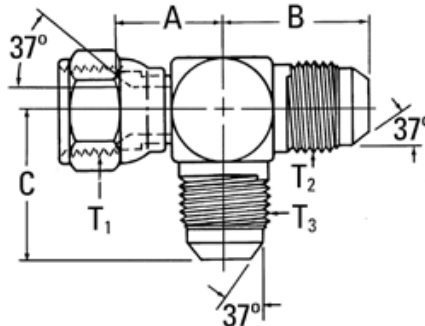
37° Flare Bulkhead/
37° Flare



37° Flare Swivel/
37° Flare/37° Flare



37° Flare Bulkhead/
37° Flare/37° Flare



Part No. 203002-(Dash size) (Ref. SAE 070959)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	40,4	1.59	23,4	0.92
5-5S	7,9	0.31	1/2-20	1/2-20	41,1	1.62	24,1	0.95
6-6S	9,6	0.38	9/16-18	9/16-18	46,0	1.81	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	53,6	2.11	31,5	1.24
10-10S	16,0	0.63	7/8-14	7/8-14	60,7	2.39	36,6	1.44
12-12S	19,0	0.75	1 1/16-12	1 5/16-12	67,8	2.67	43,7	1.72
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	71,1	2.80	49,3	1.94

NOTE: Available without nut. Order by Part No. 203002-1-(Dash size).

Part No. 203008-(Dash size) (Ref. SAE 070958)

Dash Size	Tube O.D.		Thread T1	A		B		C	
	mm	in		mm	in	mm	in	mm	in
6-6S	9,6	0.38	9/16-18	46,0	1.81	27,7	1.09	27,7	1.09
8-8S	12,7	0.50	3/4-16	53,6	2.11	34,5	1.36	34,5	1.36
12-12S	19,0	0.75	1 1/16-12	67,8	2.67	42,2	1.66	42,2	1.66
16-16S	25,4	1.00	1 5/16-12	71,1	2.80	49,3	1.94	49,3	1.94
20-20S	31,7	1.25	1 5/8-12	79,2	3.12	55,6	2.19	52,3	2.06

NOTE: Available without nut. Order by Part No. FF1065-(Dash size).

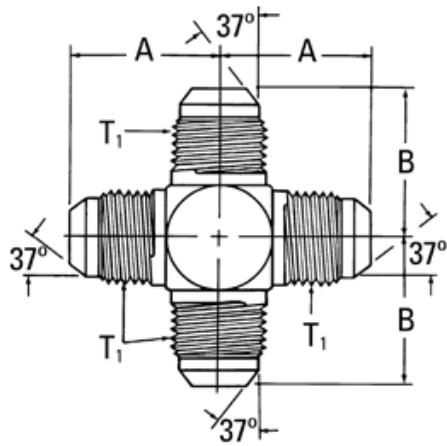
Part No. 203101-(Dash size) (Ref. SAE 070433)

Dash Size	Thread T1	Thread T2	Thread T3	A		B	
				mm	in	mm	in
4-4S	7/16-20	7/16-20	7/16-20	22,6	0.89	45,2	1.78
4-4S	7/16-20	7/16-20	7/16-20	16,8	0.66	22,6	0.89
6-6S	9/16-18	9/16-18	9/16-18	22,4	0.88	26,7	1.05
8-8S	3/4-16	3/4-16	3/4-16	24,4	0.96	31,8	1.25
10-10S	7/8-14	7/8-14	7/8-14	28,5	1.12	36,8	1.45
12-12S	1 1/16-12	1 1/16-12	1 1/16-12	30,3	1.19	42,2	1.66
16-16S	1 5/16-12	1 5/16-12	1 5/16-12	35,8	1.41	46,0	1.81
20-20S	1 5/8-12	1 5/8-12	1 5/8-12	39,4	1.55	52,3	2.06

Part No. 203102-(Dash size) (Ref. SAE 070432)

Dash Size	Tube O.D.		Thread T1	Thread T2	Thread T3	A		B		C	
	mm	in				mm	in	mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	7/16-20	16,8	0.66	22,6	0.89	22,6	0.89
5-5S	7,9	0.31	1/2-20	1/2-20	1/2-20	17,3	0.68	24,1	0.95	24,1	0.95
6-6S	9,6	0.38	9/16-18	9/16-18	9/16-18	22,4	0.88	26,9	1.06	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	3/4-16	24,4	0.96	31,8	1.25	31,8	1.25
10-10S	16,0	0.63	7/8-14	7/8-14	7/8-14	28,5	1.12	36,8	1.45	36,8	1.45
10-10-12S	19,0	0.75	7/8-14	7/8-14	1 1/16-12	28,7	1.13	39,1	1.54	42,2	1.66
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	1 1/16-12	30,3	1.19	42,2	1.66	42,2	1.66
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	1 5/16-12	35,8	1.41	46,0	1.81	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	1 5/8-12	42,7	1.68	52,3	2.06	52,3	2.06

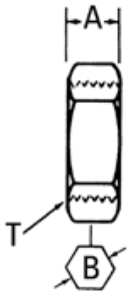
37° Flare



Part No. 2020-(Dash size) (Ref. SAE 070501)

Dash Size	Tube O.D.		Thread T1	A		B	
	mm	in		mm	in	mm	in
4-4S	6,3	0.25	7/16-20	22,6	0.89	22,6	0.89
5-5S	7,9	0.31	1/2-20	24,1	0.95	24,1	0.95
6-6S	9,6	0.38	9/16-18	26,9	1.06	26,9	1.06
8-8S	12,7	0.50	3/4-16	31,8	1.25	31,8	1.25
12-12S	19,0	0.75	1 1/16-12	42,2	1.66	44,2	1.74
16-16S	25,4	1.00	1 5/16-12	46,0	1.81	49,8	1.96

Bulkhead Lock Nut

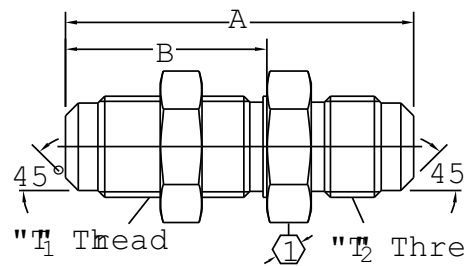


Part No. 210212-(Dash size) (Ref. SAE 070118)

Dash Size	Tube O.D.		Thread T1	A		B	
	mm	in		mm	in	mm	in
4S	6,3	0.25	7/16-20	6,4	0.25	17,6	0.69
5S	7,9	0.31	1/2-20	6,4	0.25	19,0	0.75
6S	9,6	0.38	9/16-18	6,8	0.27	20,6	0.81
8S	12,7	0.50	3/4-16	7,9	0.31	25,4	1.00
10S	16,0	0.63	7/8-14	9,1	0.36	28,5	1.12
12S	19,0	0.75	1 1/16-12	10,4	0.41	35,1	1.38
16S	25,4	1.00	1 5/16-12	10,4	0.41	41,1	1.62
20S	31,7	1.25	1 5/8-12	10,4	0.41	47,7	1.88
24S	38,1	1.50	1 7/8-12	10,4	0.41	53,9	2.12

SAE 45° Flare Union

SAE 45° Flare Bulkhead/45° Flare

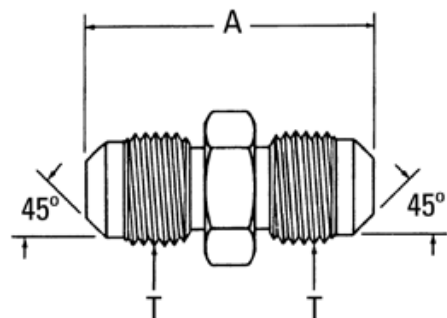


Part No. 2056-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		1
	mm	in			mm	in	mm	in	
10-10S	16,0	0.63	7/8-14	7/8-14	75,9	2.99	43,9	1.73	28,5 1.12

Note: Available without nut. Order by Part No. 2056-1-(Dash size)

45° Flare/45° Flare

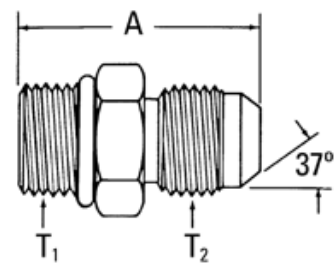


Part No. 2060-(Dash size) (Ref. SAE 010101)

Dash Size	Tube O.D.		Thread T	A	
	mm	in		mm	in
2-2B	3,3	0.13	5/16-24	23,4	0.92
3-3B	4,8	0.19	3/8-24	26,9	1.06
4-4B	6,3	0.25	7/16-20	30,3	1.19
5-5B	7,9	0.31	1/2-20	34,0	1.34
6-6B	9,6	0.38	5/8-18	38,1	1.50
8-8B	12,7	0.50	3/4-16	46,0	1.81
10-10B	16,0	0.63	7/8-14	53,9	2.12
12-12B	19,0	0.75	1 1/16-14	62,0	2.44

SAE O-Ring to 37° Flare

SAE O-Ring Boss/
37° Flare

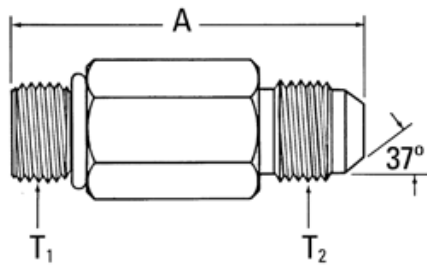


Part No. 202702-(Dash size) (Ref. SAE 070120)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	31,2	1.23
4-6S	9,6	0.38	7/16-20	9/16-18	32,3	1.27
4-8S	12,7	0.50	7/16-20	3/4-16	37,8	1.49
5-5S	7,9	0.31	1/2-20	1/2-20	31,2	1.23
5-6S	9,6	0.38	1/2-20	9/16-18	32,3	1.27
6-4S	6,3	0.25	9/16-18	7/16-20	32,8	1.29
6-6S	9,6	0.38	9/16-18	9/16-18	33,0	1.30
6-8S	12,7	0.50	9/16-18	3/4-16	36,6	1.44
6-10S	16,0	0.63	9/16-18	7/8-14	43,4	1.71
8-4S	6,3	0.25	3/4-16	7/16-20	34,8	1.37
8-5S	7,9	0.31	3/4-16	1/2-20	34,8	1.37
8-6S	9,6	0.38	3/4-16	9/16-18	35,1	1.38
8-8S	12,7	0.50	3/4-16	3/4-16	37,6	1.48
8-10S	16,0	0.63	3/4-16	7/8-14	41,6	1.64
8-12S	19,0	0.75	3/4-16	1 1/16-12	49,3	1.94
10-4S	6,3	0.25	7/8-14	7/16-20	37,8	1.49
10-6S	9,6	0.38	7/8-14	9/16-18	38,1	1.50
10-8S	12,7	0.50	7/8-14	3/4-16	40,6	1.60
10-10S	16,0	0.63	7/8-14	7/8-14	43,2	1.70
10-12S	19,0	0.75	7/8-14	1 1/16-12	47,7	1.88
10-16S	25,4	1.00	7/8-14	1 5/16-12	52,6	2.07
12-6S	9,6	0.38	1 1/16-12	9/16-18	42,2	1.66
12-8S	12,7	0.50	1 1/16-12	3/4-16	44,7	1.76
12-10S	16,0	0.63	1 1/16-12	7/8-14	47,2	1.86
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	50,0	1.97
12-14S	22,3	0.88	1 1/16-12	1 3/16-12	50,5	1.99
12-16S	25,4	1.00	1 1/16-12	1 5/16-12	51,8	2.04
12-20S	31,7	1.25	1 1/16-12	1 5/8-12	58,4	2.30
14-10S	16,0	0.63	1 3/16-12	7/8-14	47,2	1.86
14-12S	19,0	0.75	1 3/16-12	1 1/16-12	49,8	1.96
14-16S	25,4	1.00	1 9/16-12	1 5/16-12	51,8	2.04
16-8S	12,7	0.50	1 5/16-12	3/4-16	45,5	1.79
16-10S	16,0	0.63	1 5/16-12	7/8-14	48,0	1.89
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	50,5	1.99
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	51,8	2.04
16-20S	31,7	1.25	1 5/16-12	1 5/8-12	59,2	2.33
20-12S	19,0	0.75	1 5/8-12	1 1/16-12	52,8	2.08
20-16S	25,4	1.00	1 5/8-12	1 5/16-12	53,9	2.12
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	55,2	2.17
20-24S	38,1	1.50	1 5/8-12	1 7/8-12	64,3	2.53
24-16S	25,4	1.00	1 7/8-12	1 5/16-12	55,9	2.20
24-20S	31,7	1.25	1 7/8-12	1 5/8-12	56,9	2.24
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	60,2	2.37
32-32S	50,8	2.00	2 1/2-12	2 1/2-12	70,6	2.78

Available without O-ring. Order by Part No. 202701-(Dash size).
Also available in stainless steel as part no. 259-202702.
See pg. 281 for more information.

SAE O-Ring Boss/ 37° Flare

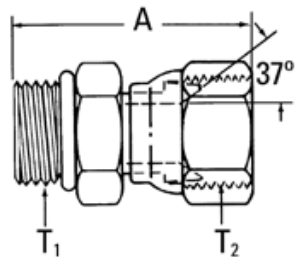


Part No. 202713-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
6-6S	9,6	0.38	9/16-18	9/16-18	58,7	2.31
8-8S	12,7	0.50	3/4-16	3/4-16	68,6	2.70
10-10S	16,0	0.63	7/8-14	7/8-14	77,2	3.04
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	91,7	3.61
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	101,1	3.98

NOTE: Available without O-ring. Order by Part No. 202703-(Dash size).

SAE O-Ring Boss/ 37° Flare Swivel

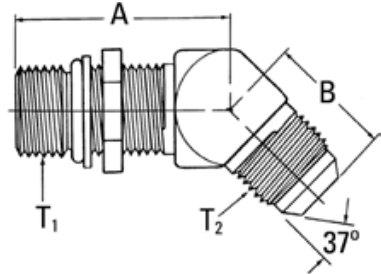


Part No. 2266-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
6-8S	12,7	0.50	9/16-18	3/4-16	41,4	1.63
8-8S	12,7	0.50	3/4-16	3/4-16	39,4	1.55
10-10S	16,0	0.63	7/8-14	7/8-14	43,7	1.72
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	48,3	1.90
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	53,6	2.11

NOTE: Available without O-ring. Order by Part No. 226601-(Dash size).

SAE O-Ring boss (adj.)/37° flare

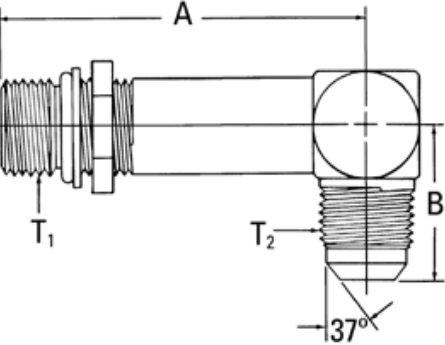


Part No. 2061-(Dash size) (Ref. SAE 070320)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	26,7	1.05	18,3	0.72
5-5S	7,9	0.31	1/2-20	1/2-20	26,7	1.05	19,5	0.77
6-6S	9,6	0.38	9/16-18	9/16-18	29,0	1.14	21,0	0.83
8-8S	12,7	0.50	3/4-16	3/4-16	33,0	1.30	24,9	0.98
8-10S	16,0	0.63	3/4-16	7/8-14	34,5	1.36	28,2	1.11
10-8S	12,7	0.50	7/8-14	3/4-16	38,6	1.52	25,1	0.99
10-10S	16,0	0.63	7/8-14	7/8-14	38,6	1.52	28,2	1.11
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	43,9	1.73	32,5	1.28
12-16S	25,4	1.00	1 1/16-12	1 5/16-12	47,2	1.86	37,3	1.47
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	47,2	1.86	36,1	1.42
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	47,2	1.86	37,3	1.47
20-16S	25,4	1.00	1 5/8-12	1 5/16-12	49,3	1.94	38,6	1.52
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	49,3	1.94	41,4	1.63

NOTE: Available without O-ring. Order by Part No. 2061-1-(Dash size).

SAE O-Ring Boss (adj.)/37° Flare



Part No. 206209-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	43,9	1.73	22,6	0.89
6-6S	9,6	0.38	9/16-18	9/16-18	52,8	2.08	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	63,0	2.48	31,8	1.25
8-10S	16,0	0.63	3/4-16	7/8-14	64,0	2.52	36,8	1.45
10-10S	16,0	0.63	7/8-14	7/8-14	73,4	2.89	36,8	1.45
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	84,8	3.34	42,2	1.66
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	94,5	3.72	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	112,0	4.41	52,3	2.06

NOTE: Available without O-ring. Order by Part No. 206209-1-(Dash size).

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

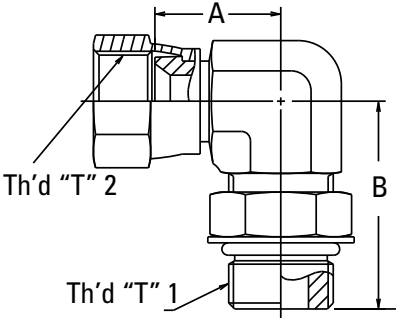
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

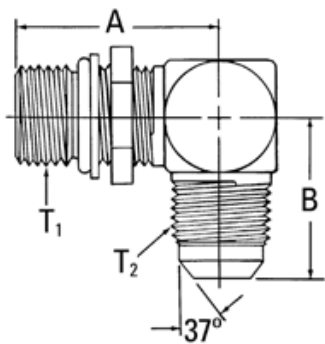
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

SAE O-Ring Boss(adj.)/
37° Flare Swivel



SAE O-Ring Boss(adj.)/
37° Flare



Part No. 2214-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	17,3	0.68	27,9	1.10
6-4S	9,6	0.38	9/16-18	7/16-20	19,0	0.75	31,8	1.25
8-8S	12,7	0.50	3/4-16	3/4-16	23,9	0.94	36,8	1.45
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	30,0	1.18	49,3	1.94

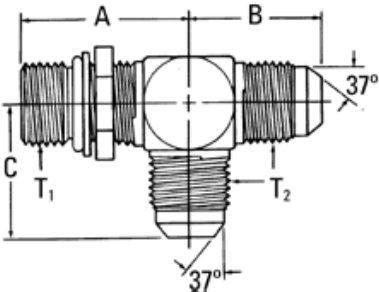
NOTE: Available without O-ring. Order by Part No. 2214-2-(Dash size).

Part No. 2062-(Dash size) (Ref. SAE 070220)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	26,2	1.03	22,6	0.89
4-6S	9,6	0.38	7/16-20	9/16-18	30,3	1.19	26,9	1.06
5-5S	7,9	0.31	1/2-20	1/2-20	28,7	1.13	24,1	0.95
5-6S	9,6	0.38	1/2-20	9/16-18	30,3	1.19	26,9	1.06
6-4S	6,3	0.25	9/16-18	7/16-20	31,8	1.25	26,7	1.05
6-6S	9,6	0.38	9/16-18	9/16-18	31,8	1.25	26,9	1.06
6-8S	12,7	0.50	9/16-18	3/4-16	33,6	1.32	31,8	1.25
8-5S	7,9	0.31	3/4-16	1/2-20	36,8	1.45	26,4	1.04
8-6S	9,6	0.38	3/4-16	9/16-18	36,8	1.45	29,0	1.14
8-8S	12,7	0.50	3/4-16	3/4-16	36,8	1.45	31,8	1.25
8-10S	16,0	0.63	3/4-16	7/8-14	39,1	1.54	36,8	1.45
10-6S	9,6	0.38	7/8-14	9/16-18	43,2	1.70	29,0	1.14
10-8S	12,7	0.50	7/8-14	3/4-16	43,2	1.70	33,8	1.33
10-10S	16,0	0.63	7/8-14	7/8-14	43,2	1.70	36,8	1.45
10-12S	19,0	0.75	7/8-14	1 1/16-12	45,2	1.78	42,2	1.66
12-8S	12,7	0.50	1 1/16-12	3/4-16	49,3	1.94	36,1	1.42
12-10S	16,0	0.63	1 1/16-12	7/8-14	49,3	1.94	39,1	1.54
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	49,3	1.94	42,2	1.66
12-16S	25,4	1.00	1 1/16-12	1 5/16-12	52,0	2.05	46,0	1.81
12-20S	31,7	1.25	1 1/16-12	1 5/8-12	56,1	2.21	52,3	2.06
14-16S	25,4	1.00	1 3/16-12	1 5/16-12	52,3	2.06	46,0	1.81
16-8S	12,7	0.50	1 5/16-12	3/4-16	52,0	2.05	38,6	1.52
16-12S	19,0	0.75	1 5/16-12	1 1/16-12	52,0	2.05	44,7	1.76
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	52,0	2.05	46,0	1.81
16-20S	31,7	1.25	1 5/16-12	1 5/8-12	56,1	2.21	52,3	2.06
20-16S	25,4	1.00	1 5/8-12	1 5/16-12	55,9	2.20	53,1	2.09
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	57,2	2.25	52,3	2.06
20-24S	38,1	1.50	1 5/8-12	1 7/8-12	60,7	2.39	59,2	2.33
24-20S	31,7	1.25	1 7/8-12	1 5/8-12	60,7	2.39	55,9	2.20
24-24S	38,1	1.50	1 7/8-12	1 7/8-12	60,7	2.39	59,2	2.33

Note: Available without O-ring. Order by Part No. 2062-1-(Dash size).
Also available in stainless steel as part no. 259-2062. See pg. 281 for more information.

SAE O-Ring Boss(adj.)/
37° Flare

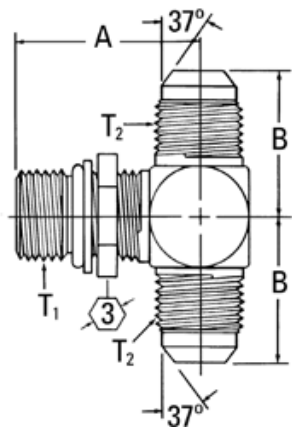


Part No. 203005-(Dash size) (Ref. SAE 070428)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	26,2	1.03	22,6	0.89	22,6	0.89
5-5S	7,9	0.31	1/2-20	1/2-20	27,7	1.09	24,4	0.96	24,1	0.95
6-4-4S			9/16-18	7/16-20	31,8	1.25	26,7	1.05	24,6	0.97
6-6S	9,6	0.38	9/16-18	9/16-18	31,8	1.25	26,9	1.06	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	36,8	1.45	31,8	1.25	31,8	1.25
10-10S	16,0	0.63	7/8-14	7/8-14	43,2	1.70	36,8	1.45	36,8	1.45
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	49,3	1.94	42,2	1.66	42,2	1.66
12-16-16S	25,4	1.00	1 1/16-12	1 5/16-12	52,0	2.05	46,0	1.81	46,0	1.81
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	52,0	2.05	46,0	1.81	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	57,2	2.25	55,6	2.19	52,3	2.06

NOTE: Available without O-ring. Order by Part No. 203005-1-(Dash size).

**SAE O-Ring Boss(adj.)/
37° Flare**

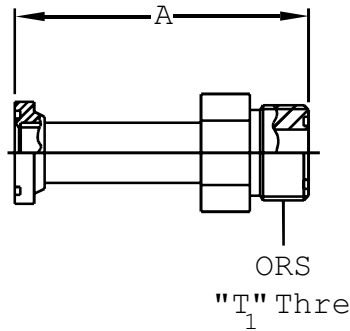


Part No. 203003-(Dash size) (Ref. SAE 070429)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
4-4S	6,3	0.25	7/16-20	7/16-20	26,2	1.03	22,6	0.89
6-6S	9,6	0.38	9/16-18	9/16-18	31,8	1.25	26,9	1.06
8-8S	12,7	0.50	3/4-16	3/4-16	36,8	1.45	31,8	1.25
10-10S	16,0	0.63	7/8-14	7/8-14	43,4	1.71	36,8	1.45
10-12-12S			7/8-14	1 1/16-12	45,7	1.80	42,2	1.66
12-12S	19,0	0.75	1 1/16-12	1 1/16-12	49,3	1.94	42,2	1.66
16-10-10S			1 5/16-12	7/8-14	52,0	2.05	41,6	1.64
16-16S	25,4	1.00	1 5/16-12	1 5/16-12	52,0	2.05	46,0	1.81
20-20S	31,7	1.25	1 5/8-12	1 5/8-12	57,6	2.27	52,3	2.06

SAE Split Flange to ORS

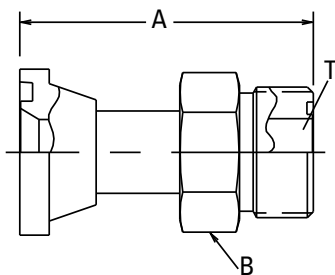
**ORS/Split Flange
(Code 62)**



Part No. FF5943T(Size)

Dash Size	Tube O.D.		Thread T1	A	
	mm	in		mm	in
1612S	25,4	1.00	1.4375-12	69,8	2.75
1616S	25,4	1.00	1.4375-12	90,7	3.57
1620S	25,4	1.00	1.4375-12	90,7	3.57

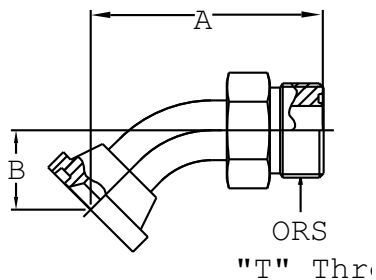
**ORS/Split Flange
(Code 61)/ORS Male**



Part No. FF6033T(Dash size)

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
1624S	1 1/2	25,4	1.00	1 7/16-12	72,4	2.85	38,1	1.50

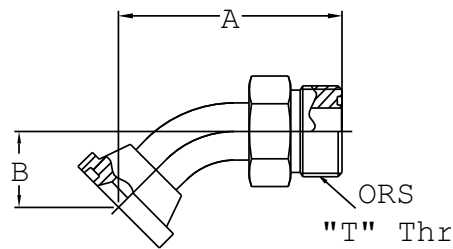
**45° ORS/Split Flange
(Code 61)**



Part No. FF6001T(Size)

Dash Size	Tube O.D.		Thread T1	A Ref		B Ref	
	mm	in		mm	in	mm	in
1216S	19,0	0.75	1 3/16-12	74,7	2.94	25,4	1.00
1616S	25,4	1.00	1 7/16-12	86,6	3.41	26,9	1.06
2020S	31,7	1.25	1 11/16-12	91,9	3.62	29,2	1.15
2424S	38,1	1.50	2-12	57,2	2.25	35,8	1.41

**45° ORS/Split Flange
(Code 62)**



Part No. FF6002T(Size)

Dash Size	Tube O.D.		Thread T1	A Ref		B Ref	
	mm	in		mm	in	mm	in
1212S	19,0	0.75	1 3/16-12	74,7	2.94	25,4	1.00
1612S	25,4	1.00	1 7/16-12	74,7	2.94	25,4	1.00
1616S	25,4	1.00	1 7/16-12	86,6	3.41	26,9	1.06
2020S	31,7	1.25	1 11/16-12	91,9	3.62	29,2	1.15
2424S	38,1	1.50	2-12	107,9	4.25	35,8	1.41

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

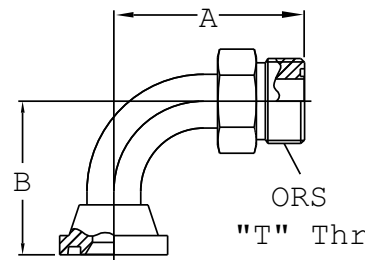
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

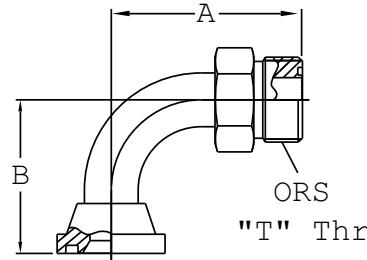
90° ORS/Split Flange (Code 61)



Part No. FF5946T(Size)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1212S	19,0	0.75	1 ³ / ₁₆ -12	67,3	2.65	54,1	2.13
1216S	19,0	0.75	1 ³ / ₁₆ -12	67,3	2.65	54,1	2.13
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	81,8	3.22	60,2	2.37
2020S	31,7	1.25	1 ¹¹ / ₁₆ -12	88,1	3.47	66,5	2.62
2424S	38,1	1.50	2-12	100,8	3.97	79,2	3.12

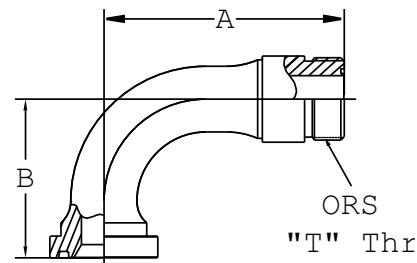
90° ORS/Split Flange (Code 62)



Part No. FF5945T(Size)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1212S	19,0	0.75	1 ³ / ₁₆ -12	67,3	2.65	54,1	2.13
1612S	25,4	1.00	1 ⁷ / ₁₆ -12	67,3	2.65	54,1	2.13
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	81,8	3.22	60,2	2.37
1620S	25,4	1.00	1 ⁷ / ₁₆ -12	88,1	3.47	66,5	2.62
2020S	31,7	1.25	1 ¹¹ / ₁₆ -12	88,1	3.47	66,5	2.62
2424S	38,1	1.50	2-12	100,8	3.97	79,2	3.12

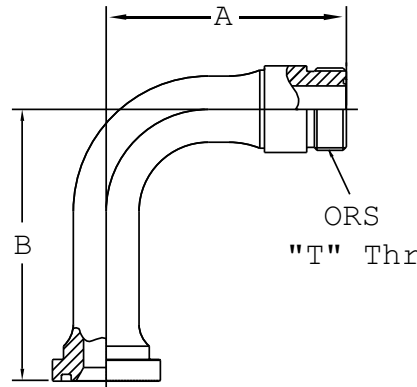
90° ORS/Split Flange (Code 62)



Part No. FF6062T(Size)

Dash Size	Tube O.D.		Thread T	A Ref		B Ref	
	mm	in		mm	in	mm	in
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	105,9	4.17	70,1	2.76

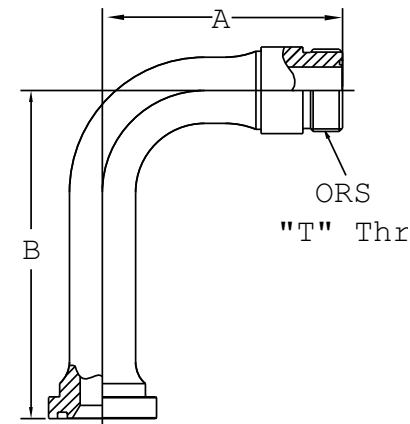
90° ORS/Split Flange (Code 62)



Part No. FF6063T(Size)

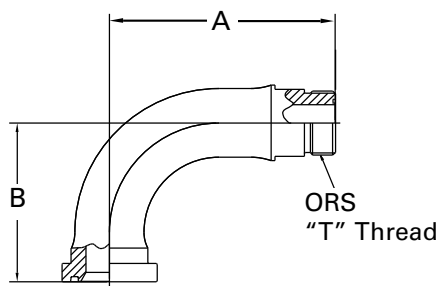
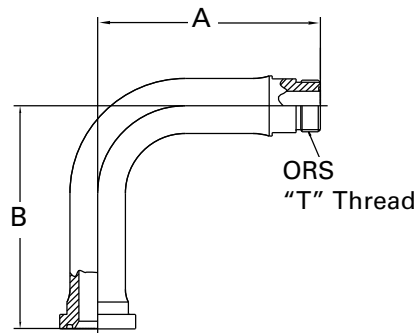
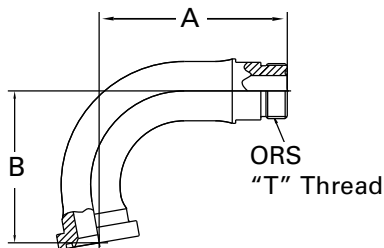
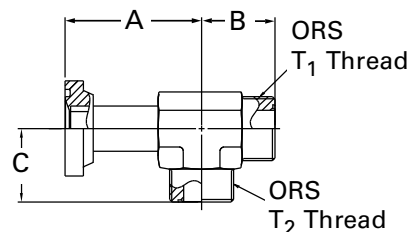
Dash Size	Tube O.D.		Thread T	A Ref		B Ref	
	mm	in		mm	in	mm	in
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	105,9	4.17	119,9	4.72

90° ORS/Split Flange (Code 62)



Part No. FF6064T(Size)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	105,9	4.17	144,8	5.70

**90° ORS/Split Flange
(Code 62)****90° ORS/Split Flange
(Code 62)****100° ORS/Split Flange
(Code 62)****ORS/Split Flange
(Code 62)****Part No. FF6071T(Size)**

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1620S	25,4	1.00	1 ⁷ / ₁₆ -12	128,0	5.04	89,9	3.54

Part No. FF6072T(Size)

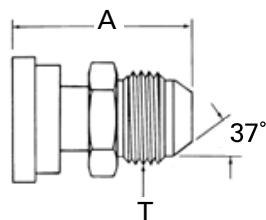
Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1620S	25,4	1.00	1 ⁷ / ₁₆ -12	158,0	6.22	158,0	6.22

Part No. FF6073T(Size)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
1620S	25,4	1.00	1 ⁷ / ₁₆ -12	124,5	4.90	100,3	3.95

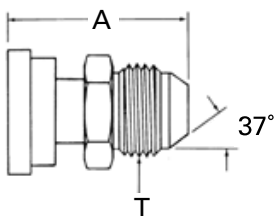
Part No. FF2522T(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0812S	12,7	0.50	1 ³ / ₁₆ -16	1 ³ / ₁₆ -16	41,1	1.62	27,9	1.10	27,9	1.10
1616S	25,4	1.00	1 ⁷ / ₁₆ -12	1 ⁷ / ₁₆ -12	78,7	3.10	41,6	1.64	41,6	1.64
1620S	25,4	1.00	1 ⁷ / ₁₆ -12	1 ⁷ / ₁₆ -12	77,5	3.05	41,6	1.64	41,6	1.64

SAE Split Flange to 37° Flare**Split Flange/
37° Flare SAE
Standard Pressure
Series (Code 61)**

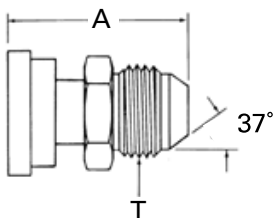
Part No. 500025-(Dash size) (mates with 449-74446 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A	
		mm	in		mm	in
8S	1/2	12,7	0.50	3/4-16	42,2	1.66
12S	3/4	19,0	0.75	1 ¹ / ₁₆ -12	48,5	1.91
12-8S	3/4	12,7	0.50	3/4-16	51,6	2.03
16-10S	1	16,0	0.63	7/8-14	47,2	1.86
16-12S	1	19,0	0.75	1 ¹ / ₁₆ -12	58,4	2.30
16S	1	25,4	1.00	1 ⁵ / ₁₆ -12	51,1	2.01
20-16S	1 ¹ / ₄	25,4	1.00	1 ⁵ / ₁₆ -12	59,7	2.35
20-24S	1 ¹ / ₄	38,1	1.50	1 ⁷ / ₈ -12	67,0	2.64
20S	1 ¹ / ₄	31,7	1.25	1 ⁵ / ₈ -12	62,5	2.46
24S	1 ¹ / ₂	38,1	1.50	1 ⁷ / ₈ -12	68,8	2.71
24-16S	1 ¹ / ₂	25,4	1.00	1 ⁵ / ₁₆ -12	61,2	2.41
24-20S	1 ¹ / ₂	31,7	1.25	1 ⁵ / ₈ -12	62,5	2.46
32-16S	2	25,4	1.00	1 ⁵ / ₁₆ -12	58,9	2.32
32-20S	2	31,7	1.25	1 ⁵ / ₈ -12	64,0	2.52
32-24S	2	38,1	1.50	1 ⁷ / ₈ -12	68,8	2.71
32S	2	50,8	2.00	2 ¹ / ₂ -12	78,2	3.08

**Split flange/37° flare
SAE standard pressure
series (Code 61)**

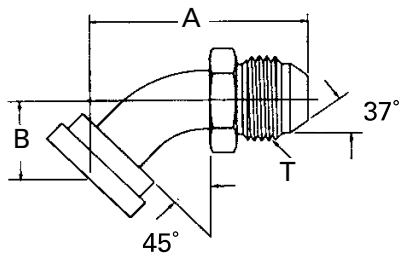
Part No. FF5239-(Dash size) (mates with 449-74446 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A	
		mm	in		mm	in
1212S	3/4	19,0	0.75	1 ¹ / ₁₆ -12	80,5	3.17
1616S	1	25,4	1.00	1 ⁵ / ₁₆ -12	95,5	3.76
2020S	1 ¹ / ₄	31,7	1.25	1 ⁵ / ₈ -12	97,5	3.84
2424S	1 ¹ / ₂	38,1	1.50	1 ⁷ / ₈ -12	118,6	4.67
3232S	2	50,8	2.00	2 ¹ / ₂ -12	143,0	5.63

**Split Flange/
37° Flare SAE
Standard Pressure
Series (Code 62)**

Part No. FF5541-(Dash size) (mates with FC3425- size-449 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

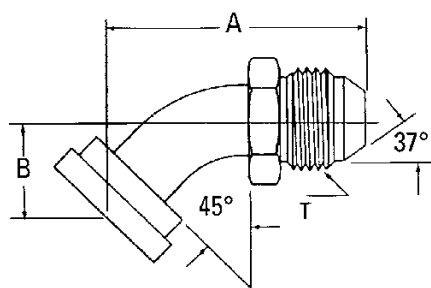
Dash Size	Split Flange Size	Tube O.D.		Thread T	A	
		mm	in		mm	in
1212S	3/4	19,0	0.75	1 ¹ / ₁₆ -12	80,5	3.17
1616S	1	25,4	1.00	1 ⁵ / ₁₆ -12	95,5	3.76
2016S	1 ¹ / ₄	25,4	1.00	1 ⁵ / ₁₆ -12	95,5	3.76
2020S	1 ¹ / ₄	31,7	1.25	1 ⁵ / ₈ -12	97,5	3.84
2416S	1 ¹ / ₂	25,4	1.00	1 ⁵ / ₁₆ -12	95,5	3.76
2420S	1 ¹ / ₂	31,7	1.25	1 ⁵ / ₈ -12	97,5	3.84
2424S	1 ¹ / ₂	38,1	1.50	1 ⁷ / ₈ -12	118,6	4.67

**Split Flange/
37° Flare SAE
Standard Pressure
Series (Code 62)**

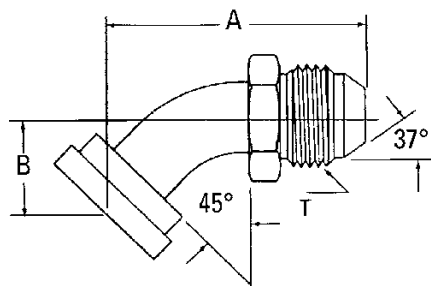
Part No. FF5539-(Dash size) (mates with FC3425-size-449 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
1612S	1	19,0	0.75	1 ¹ / ₁₆ -12	78,5	3.09	25,4	1.00
1616S	1	25,4	1.00	1 ¹ / ₁₆ -12	91,4	3.60	26,9	1.06
2020S	1 ¹ / ₄	31,7	1.25	1 ⁵ / ₈ -12	98,0	3.86	29,2	1.15
2416S	1 ¹ / ₂	25,4	1.00	1 ⁵ / ₁₆ -12	103,1	4.06	31,8	1.25
2420S	1 ¹ / ₂	31,7	1.25	1 ⁵ / ₈ -12	98,0	3.86	29,2	1.15
2424S	1 ¹ / ₂	38,1	1.50	1 ⁷ / ₈ -12	117,1	4.61	35,8	1.41

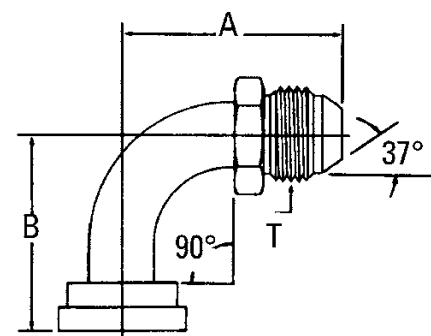
Split Flange/37° Flare SAE Standard Pressure Series (Code 61)



Split Flange/ 37° Flare SAE Standard Pressure Series (Code 61)



Split Flange/ 37° Flare SAE Standard Pressure Series (Code 61)



Part No. 500023-(Dash size) (mates with 449-74446 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
8S	1/2	12,7	0.50	3/4-16	59,4	2.34	25,4	1.00
12-8S	3/4	12,7	0.50	3/4-16	59,4	2.34	25,4	1.00
12S	3/4	19,0	0.75	1 1/16-12	70,3	2.77	25,7	1.01
16-10S	1	16,0	0.63	7/8-14	65,5	2.58	25,4	1.00
16-12S	1	19,0	0.75	1 1/16-12	70,3	2.77	25,7	1.01
16S	1	25,4	1.00	1 5/16-12	77,2	3.04	28,7	1.13
20-12S	1 1/4	19,0	0.75	1 1/16-12	70,3	2.77	25,7	1.01
20-16S	1 1/4	25,4	1.00	1 5/16-12	77,2	3.04	28,7	1.13
20S	1 1/4	31,7	1.25	1 5/8-12	82,3	3.24	28,5	1.12
24-16S	1 1/2	25,4	1.00	1 5/16-12	78,2	3.08	29,7	1.17
24-20S	1 1/2	31,7	1.25	1 5/8-12	82,3	3.24	28,5	1.12
24S	1 1/2	38,1	1.50	1 7/8-12	89,9	3.54	28,5	1.12
24-32S	1 1/2	50,8	2.00	2 1/2-12	99,3	3.91	28,5	1.12
32S	2	50,8	2.00	2 1/2-12	107,7	4.24	31,8	1.25
40-24S	2 1/2	38,1	1.50	1 7/8-12	90,9	3.58	29,7	1.17
40S	2 1/2	63,5	2.50	3-12	131,6	5.18	42,2	1.66

Part No. FF5238-(Dash size) (mates with 449-74446 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
1212S	3/4	19,0	0.75	1 1/16-12	78,5	3.09	25,4	1.00
1616S	1	25,4	1.00	1 5/16-12	91,4	3.60	26,9	1.06
2020S	1 1/4	31,7	1.25	1 5/8-12	98,0	3.86	29,2	1.15
2420S	1 1/2	31,7	1.25	1 5/8-12	98,0	3.86	35,8	1.41
2424S	1 1/2	38,1	1.50	1 7/8-12	117,1	4.61	35,8	1.41
3232S	2	50,8	2.00	2 1/2-12	153,4	6.04	50,8	2.00

Part No. 500024-(Dash size) (mates with 449-74446 flanges) The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
8S	1/2	12,7	0.50	3/4-16	45,2	1.78	41,1	1.62
12S	3/4	19,0	0.75	1 1/16-12	63,2	2.49	54,6	2.15
16-10S	1	16,0	0.63	7/8-14	54,9	2.16	53,9	2.12
16-12S	1	19,0	0.75	1 1/16-12	63,2	2.49	54,6	2.15
16S	1	25,4	1.00	1 5/16-12	70,9	2.79	60,2	2.37
12-8S	3/4	12,7	0.50	3/4-16	45,2	1.78	41,1	1.62
12-10S	3/4	16,0	0.63	7/8-14	60,4	2.38	54,6	2.15
20-12S	1 1/4	19,0	0.75	1 1/16-12	63,2	2.49	54,6	2.15
20-16S	1 1/4	25,4	1.00	1 5/16-12	70,9	2.79	60,2	2.37
20S	1 1/4	31,7	1.25	1 5/8-12	79,7	3.14	63,5	2.50
20-24S	1 1/4	38,1	1.50	1 7/8-12	90,9	3.58	68,3	2.69
24-16S	1 1/2	25,4	1.00	1 5/16-12	70,9	2.79	62,0	2.44
24-20S	1 1/2	31,7	1.25	1 5/8-12	79,7	3.14	63,5	2.50
24S	1 1/2	38,1	1.50	1 7/8-12	90,9	3.58	69,8	2.75
32-24S	2	38,1	1.50	1 7/8-12	90,9	3.58	69,8	2.75
32S	2	50,8	2.00	2 1/2-12	113,3	4.46	82,5	3.25
40-24S	2 1/2	38,1	1.50	1 7/8-12	90,9	3.58	71,4	2.81
40-40S	2 1/2	63,5	2.50	3-12	148,8	5.86	131,8	5.19

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

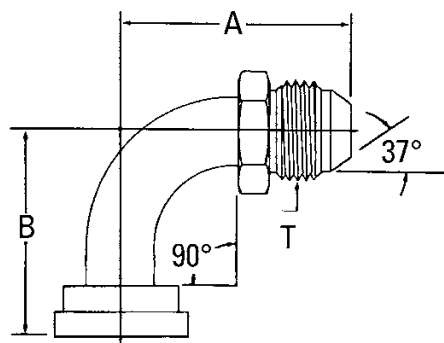
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

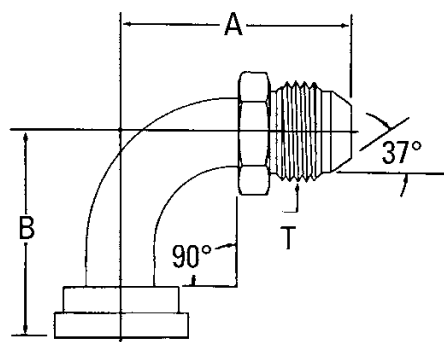
Split Flange/ 37° Flare SAE Standard Pressure Series (Code 61)



Part No. FF5162-(Dash size) (mates with 449-74446 flanges)
The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
0808S	1/2	12,7	0.50	3/4-16	54,9	2.16	41,1	1.62
1212S	3/4	19,0	0.75	1 1/16-12	71,4	2.81	54,1	2.13
1612S	1	19,0	0.75	1 1/16-12	71,4	2.81	54,1	2.13
1616S	1	25,4	1.00	1 5/16-12	86,6	3.41	60,4	2.38
1620S	1	31,7	1.25	1 5/8-12	87,9	3.46	60,4	2.38
2016S	1 1/4	25,4	1.00	1 5/16-12	86,6	3.41	60,4	2.38
2020S	1 1/4	31,7	1.25	1 5/8-12	94,2	3.71	66,5	2.62
2420S	1 1/2	31,7	1.25	1 5/8-12	94,2	3.71	66,5	2.62
2424S	1 1/2	38,1	1.50	1 7/8-12	110,0	4.33	79,2	3.12
3232S	2	50,8	2.00	2 1/2-12	145,0	5.71	114,3	4.50

Split Flange/37° Flare SAE High Pressure Series (Code 62)

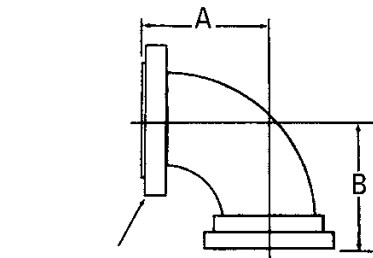


Part No. FF5540-(Dash size) (mates with FC3425 - size-449 flanges)
The performance rating of these adapters is the lower of the two terminal ends. These adapters are rated to JIC pressures as specified in SAE J514.

Dash Size	Split Flange Size	Tube O.D.		Thread T	A		B	
		mm	in		mm	in	mm	in
1612S	1	19,0	0.75	1 1/16-12	71,4	2.81	54,1	2.13
1616S	1	25,4	1.00	1 5/16-12	86,6	3.41	60,4	2.38
2016S	1 1/4	25,4	1.00	1 5/16-12	86,6	3.41	60,4	2.38
2020S	1 1/4	31,7	1.25	1 5/8-12	94,2	3.71	66,5	2.62
2416S	1 1/2	25,4	1.00	1 5/16-12	86,6	3.41	69,8	2.75
2420S	1 1/2	31,7	1.25	1 5/8-12	94,2	3.71	66,5	2.62
2424S	1 1/2	38,1	1.50	1 7/8-12	110,0	4.33	79,2	3.12

SAE Split Flange to SAE Split Flange

SAE Swivel Flange/ Split Flange SAE Standard Pressure Series (Code 61)

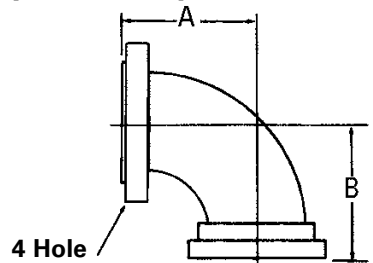


4 Hole
(Threaded)
Swivel Flange

Part No. 504089-(Dash size) (suitable for pressures thru 4 light spiral hose - SAE 100R9)

Dash Size	Flange Size	Shoulder Size	A		B	
			mm	in	mm	in
16S	1	1	52,3	2.06	60,2	2.37
20S	1 1/4	1 1/4	58,7	2.31	63,5	2.50
24S	1 1/2	1 1/2	66,5	2.62	69,8	2.75
32S	2	2	79,2	3.12	82,5	3.25
40S	2 1/2	2 1/2	119,1	4.69	131,8	5.19

SAE Swivel Flange/ Split Flange (Welded) SAE Standard Pressure Series (Code 61)



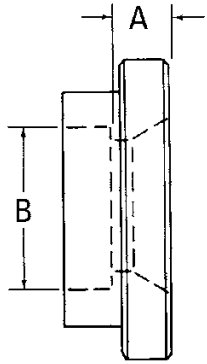
4 Hole
(Threaded)
Swivel Flange

Part No. FF5321-(Dash size) (suitable for pressures thru 4 heavy spiral hose - SAE 100R10)

Dash Size	Flange Size	Shoulder Size	A		B	
			mm	in	mm	in
1616S	1	1	60,4	2.38	60,4	2.38
2020S	1 1/4	1 1/4	66,5	2.62	66,5	2.62
2424S	1 1/2	1 1/2	79,2	3.12	79,2	3.12
3232S	2	2	114,3	4.50	114,3	4.50

Braze & Weld to Split Flange

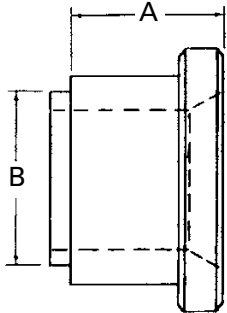
Braze/Solid Flanged Head SAE Standard Pressure Series (Code 61)



Part No. 71418-(Dash size)

Dash Size	Split Flange Size	Tube O.D.		A		B	
		mm	in	mm	in	mm	in
12-12S	3/4	19,0	0.75	7,9	0.31	19,0	0.75
16-12S	3/4	25,4	1.00	7,9	0.31	25,4	1.00
16-16S	1	25,4	1.00	7,9	0.31	25,4	1.00
16-20S	1 1/4	25,4	1.00	7,9	0.31	25,4	1.00
20-16S	1	31,7	1.25	7,9	0.31	31,8	1.25
20-20S	1 1/4	31,7	1.25	7,9	0.31	31,8	1.25
20-24S	1 1/2	31,7	1.25	7,9	0.31	31,8	1.25
24-20S	1 1/4	38,1	1.50	9,7	0.38	38,1	1.50
24-24S	1 1/2	38,1	1.50	9,7	0.38	38,1	1.50
32-32S	2	50,8	2.00	9,7	0.38	50,8	2.00
40-40S	2 1/2	63,5	2.50	11,2	0.44	63,5	2.50

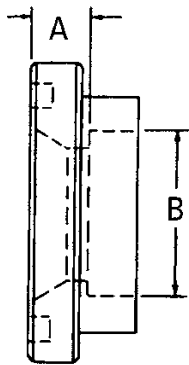
Weld (Tank Pilot) Solid Flanged Head SAE Standard Pressure Series (Code 61)



Part No. 71423-(Dash size)

Dash Size	Flange Size	A		B	
		mm	in	mm	in
12S	3/4	27,4	1.08	26,9	1.06
16S	1	27,4	1.08	33,3	1.31
20S	1 1/4	27,4	1.08	36,6	1.44
24S	1 1/2	29,0	1.14	42,9	1.69
32S	2	29,0	1.14	55,6	2.19

Braze/(Flanged Head) SAE Standard Pressures Series (Code 61)



Part No. 4624-(Dash size)

Dash Size	Split Flange Size	Tube O.D.		A		B	
		mm	in	mm	in	mm	in
8-6S	1/2	9,6	0.38	6,4	0.25	9,7	0.38
8S	1/2	12,7	0.50	6,4	0.25	12,7	0.50
12-8S	3/4	12,7	0.50	6,4	0.25	12,7	0.50
12-10S	3/4	16,0	0.63	7,9	0.31	15,7	0.62
12-16S	3/4	25,4	1.00	7,9	0.31	25,4	1.00
12S	3/4	19,0	0.75	7,9	0.31	19,0	0.75
16-10S	1	16,0	0.63	10,4	0.41	15,7	0.62
16-12S	1	19,0	0.75	7,9	0.31	19,0	0.75
16-20S	1	31,7	1.25	7,9	0.31	31,8	1.25
16S	1	25,4	1.00	7,9	0.31	25,4	1.00
20-12S	1 1/4	19,0	0.75	7,9	0.31	19,0	0.75
20-16S	1 1/4	25,4	1.00	7,9	0.31	25,4	1.00
20-24S	1 1/4	38,1	1.50	7,9	0.31	38,1	1.50
20S	1 1/4	31,7	1.25	7,9	0.31	31,8	1.25
24-12S	1 1/2	19,0	0.75	9,7	0.38	19,0	0.75
24-16S	1 1/2	25,4	1.00	9,7	0.38	25,4	1.00
24-20S	1 1/2	31,7	1.25	7,9	0.31	31,8	1.25
24S	1 1/2	38,1	1.50	9,7	0.38	38,1	1.50
32-16S	2	25,4	1.00	7,1	0.28	25,4	1.00
32-20S	2	31,7	1.25	9,7	0.38	31,8	1.25
32-24S	2	38,1	1.50	9,7	0.38	38,1	1.50
32S	2	50,8	2.00	9,7	0.38	50,8	2.00
40-32S	2 1/2	50,8	2.00	11,2	0.44	50,8	2.00

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

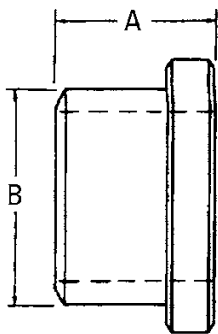
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

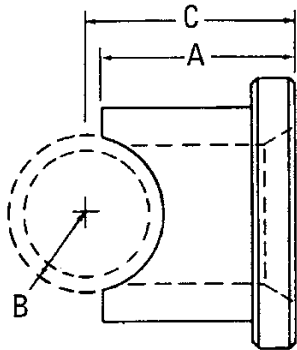
HOSE ASSEMBLY
EQUIPMENT

APPENDICES

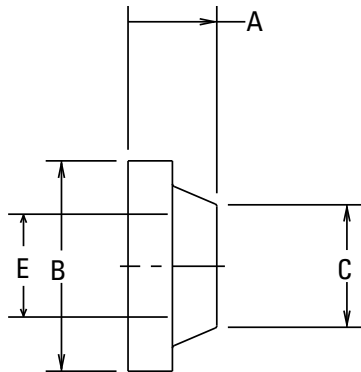
Buttweld (Pipe)/ Solid Flanged Head SAE Standard Pressure Series (Code 61)



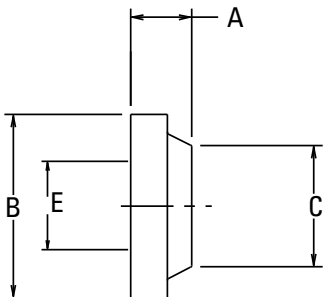
Saddle Weld (Pipe)/ Solid Flanged Head SAE Standard Pressure Series (Code 61)



Braze/(Flanged Head) SAE High Pressure Series (Code 62)



Braze/Solid Flanged Head SAE High Pressure Series (Code 62)



Part No. 71416-(Dash size)

Dash Size	Flange Size	A		B	
		mm	in	mm	in
16S	1	27,4	1.08	33,6	1.32
20S	1 ¹ / ₄	27,4	1.08	42,2	1.66
24S	1 ¹ / ₂	29,0	1.14	48,3	1.90
32S	2	29,0	1.14	60,4	2.38

Part No. 71422-(Dash size)

Dash Size	Flange Size	A		B		C	
		mm	in	mm	in	mm	in
16-16S	1	30,7	1.21	16,8	0.66	38,6	1.52
20-20S	1 ¹ / ₄	32,3	1.27	21,0	0.83	44,9	1.77
24-24S	1 ¹ / ₂	36,1	1.42	24,1	0.95	49,8	1.96
24-32S	2	39,6	1.56	24,1	0.95	47,2	1.86

Part No. FC1102-(Dash size)

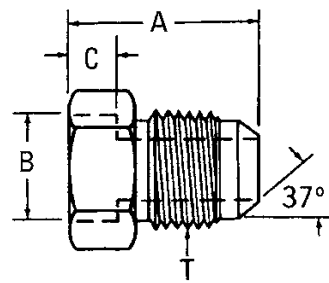
Dash Size	Tube O.D.		A		B		C		E	
	mm	in	mm	in	mm	in	mm	in	mm	in
0808S	12,7	0.50	15,7	0.62	31,7	1.25	17,8	0.70	9,9	0.39
1208S	12,7	0.50	15,7	0.62	41,4	1.63	24,1	0.95	9,9	0.39
1212S	19,0	0.75	17,5	0.69	41,4	1.63	24,1	0.95	14,7	0.58
1612S	25,4	1.00	17,5	0.69	47,7	1.88	31,5	1.24	14,7	0.58
1616S	25,4	1.00	15,7	0.62	47,7	1.88	31,5	1.24	20,8	0.82
2012S	31,7	1.25	15,7	0.62	54,1	2.13	38,3	1.51	19,0	0.75
2016S	31,7	1.25	15,7	0.62	54,1	2.13	38,3	1.51	20,8	0.82
2020S	31,7	1.25	15,7	0.62	54,1	2.13	38,1	1.50	26,7	1.05
2416S	38,1	1.50	15,7	0.62	63,5	2.50	46,5	1.83	20,8	0.82
2424S	38,1	1.50	19,0	0.75	63,5	2.50	46,5	1.83	32,2	1.27
3220S	50,8	2.00	15,7	0.62	79,5	3.13	63,0	2.48	26,7	1.05
3224S	50,8	2.00	19,0	0.75	79,5	3.13	63,0	2.48	32,2	1.27
3232S	50,8	2.00	28,4	1.12	79,5	3.13	58,7	2.31	43,7	1.72

Part No. FC1132-(Dash size)

Dash Size	Tube O.D.		A		B		C		E	
	mm	in	mm	in	mm	in	mm	in	mm	in
1212	19,0	0.75	17,5	0.69	41,4	1.63	24,1	0.95	14,7	0.58
1616	25,4	1.00	15,7	0.62	47,7	1.88	31,5	1.24	20,5	0.81
2020	31,7	1.25	15,7	0.62	54,1	2.13	38,1	1.50	26,7	1.05

Braze & Weld to 37° Flare

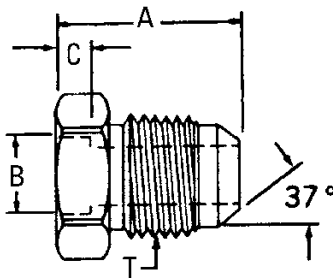
Weld Port/37° Flare



Part No. 202232-(Dash size)

Dash Size	IPS Size		Thread T	A		B		C	
	mm	in		mm	in	mm	in	mm	in
1/4-8S	6,3	0.25	3/4-16	30,5	1.20	14,2	0.56	9,7	0.38
1/2-12S	12,7	0.50	1 1/16-12	39,1	1.54	21,8	0.86	12,7	0.50
1-20S	25,4	1.00	1 5/8-12	46,0	1.81	34,0	1.34	16,0	0.63

Braze Port/37° Flare



Part No. 73014-(Dash size)

Dash Size	Tube O.D.		Thread T	A		B		C	
	mm	in		mm	in	mm	in	mm	in
4S	6,3	0.25	7/16-20	18,8	0.74	6,4	0.25	4,0	0.16
5S	7,9	0.31	1/2-20	20,3	0.80	7,9	0.31	4,0	0.16
6S	9,6	0.38	9/16-18	20,6	0.81	9,7	0.38	4,0	0.16
8-6S	12,7	0.50	9/16-18	21,3	0.84	12,7	0.50	4,0	0.16
8S	12,7	0.50	3/4-16	23,9	0.94	12,7	0.50	4,0	0.16
10S	16,0	0.63	7/8-14	27,2	1.07	15,7	0.62	4,0	0.16
10-16S	16,0	0.63	1 5/16-12	32,8	1.29	15,7	0.62	4,0	0.16
12-10S	19,0	0.75	7/8-14	28,7	1.13	19,0	0.75	6,4	0.25
12S	19,0	0.75	1 1/16-12	31,5	1.24	19,0	0.75	6,4	0.25
14S	22,3	0.88	1 3/16-12	32,0	1.26	22,4	0.88	6,4	0.25
16S	25,4	1.00	1 5/16-12	32,8	1.29	25,4	1.00	6,4	0.25
16-12S	25,4	1.00	1 1/16-12	31,5	1.24	25,4	1.00	6,4	0.25
20S	31,7	1.25	1 5/8-12	35,6	1.40	31,8	1.25	6,4	0.25
20-16S	31,7	1.25	1 5/16-12	32,8	1.29	31,8	1.25	6,4	0.25
24-16S	38,1	1.50	1 5/16-12	35,8	1.41	38,1	1.50	6,4	0.25
24S	38,1	1.50	1 7/8-12	40,1	1.58	38,1	1.50	6,4	0.25
24-20S	38,1	1.50	1 5/8-12	37,1	1.46	38,1	1.50	6,4	0.25
24-32S	38,1	1.50	2 1/2-12	49,5	1.95	38,1	1.50	6,4	0.25
32S	50,8	2.00	2 1/2-12	49,8	1.96	50,8	2.00	6,4	0.25
40S	63,5	2.50	3-12	47,2	1.86	63,5	2.50	6,4	0.25

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

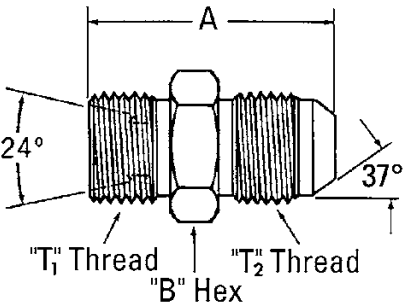
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

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SAE Flareless to 37° Union

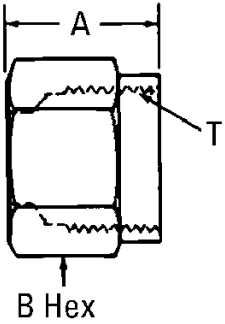
Male SAE Flareless/ 37° Flare*



Part No. FF1315-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0404S	6,3	0.25	7/16-20	7/16-20	31,0	1.22	12,7	0.50
0604S	9,6	0.38	9/16-18	7/16-20	32,3	1.27	15,7	0.62
0606S	9,6	0.38	9/16-18	9/16-18	32,5	1.28	15,7	0.62
0806S	12,7	0.50	3/4-16	9/16-18	34,8	1.37	20,6	0.81
0808S	12,7	0.50	3/4-16	3/4-16	37,3	1.47	20,6	0.81
1008S	16,0	0.63	7/8-14	3/4-16	40,4	1.59	23,9	0.94
1010S	16,0	0.63	7/8-14	7/8-14	42,9	1.69	23,9	0.94
1212S	19,0	0.75	1 1/16-12	1 1/16-12	49,0	1.93	28,5	1.12
1412S	22,3	0.88	1 3/16-12	1 1/16-12	49,0	1.93	31,8	1.25
1616S	25,4	1.00	1 5/16-12	1 5/16-12	50,3	1.98	35,1	1.38

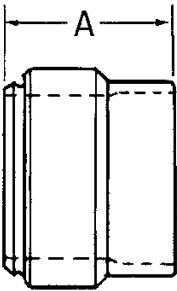
Flareless Tube Nut*



Part No. 210294-(Dash size) Use with FF1315-(Dash size) Body Only (Ref. SAE 080110)

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
4S	6,3	0.25	7/16-20	17,8	0.70	14,2	0.56
6S	9,6	0.38	9/16-18	19,0	0.75	17,6	0.69
8S	12,7	0.50	3/4-16	21,3	0.84	22,4	0.88
10S	16,0	0.63	7/8-14	23,4	0.92	25,4	1.00
12S	19,0	0.75	1 1/16-12	24,6	0.97	31,8	1.25
14S	22,3	0.88	1 3/16-12	25,4	1.00	35,1	1.38
16S	25,4	1.00	1 5/16-12	26,7	1.05	38,1	1.50

Ferrule-Style A* (for Flareless Tube Fittings)



Part No. FF9173-(Dash size) Use with FF1315-(Dash size) Body Only (Ref. SAE 080115A)

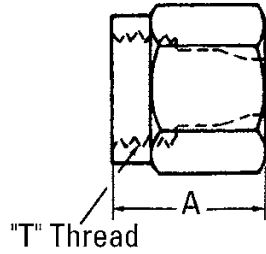
Dash Size	Tube O.D.		A	
	mm	in	mm	in
04S	6,3	0.25	9,1	0.36
06S	9,6	0.38	9,9	0.39
08S	12,7	0.50	10,9	0.43
10S	16,0	0.63	11,2	0.44
12S	19,0	0.75	11,9	0.47
14S	22,3	0.88	12,2	0.48
16S	25,4	1.00	12,2	0.48

*NOTE: All three components (adapter FF1315, tube nut 210294 and ferrule FF9173) required for assembly. Order by Part Number FF1316-(Dash size) for complete assembly.

Versil-Flare

Flare and Flareless

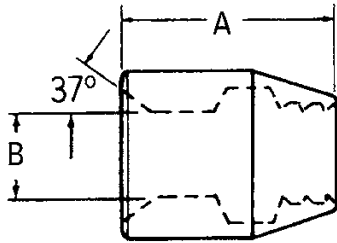
Versil-Flare Flareless Tube Nut



Part No. FC2875-(Dash size)
Use with FF9605-(Dash size) Ferrule Only

Dash Size	Tube O.D.		Thread T	A	
	mm	in		mm	in
03S	4,8	0.19	$\frac{3}{8}$ -24	20,1	0.79
04S	6,3	0.25	$\frac{7}{16}$ -20	20,8	0.82
05S	7,9	0.31	$\frac{1}{2}$ -20	20,8	0.82
06S	9,6	0.38	$\frac{9}{16}$ -18	21,8	0.86
08S	12,7	0.50	$\frac{3}{4}$ -16	27,4	1.08
10S	16,0	0.63	$\frac{7}{8}$ -14	28,5	1.12
12S	19,0	0.75	$1\frac{1}{16}$ -12	34,5	1.36
16S	25,4	1.00	$1\frac{5}{16}$ -12	35,6	1.40
20S	31,7	1.25	$1\frac{5}{8}$ -12	45,7	1.80
24S	38,1	1.50	$1\frac{7}{8}$ -12	46,7	1.84
32S	50,8	2.00	$2\frac{1}{2}$ -12	55,9	2.20

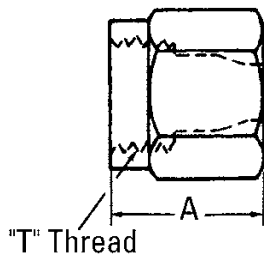
Versil-Flare Flareless Tube Ferrule



Part No. FF9605-(Dash size)
Use with FC2875-(Dash size) Nut Only

Dash Size	Tube O.D.		A		B	
	mm	in	mm	in	mm	in
03S	4,8	0.19	10,2	0.40	4,8	0.19
04S	6,3	0.25	10,7	0.42	6,4	0.25
05S	7,9	0.31	10,7	0.42	7,9	0.31
06S	9,6	0.38	11,7	0.46	9,7	0.38
08S	12,7	0.50	14,5	0.57	12,7	0.50
10S	16,0	0.63	14,7	0.58	15,7	0.62
12S	19,0	0.75	17,8	0.70	19,0	0.75
16S	25,4	1.00	17,8	0.70	25,4	1.00
20S	31,7	1.25	25,4	1.00	31,8	1.25
24S	38,1	1.50	25,4	1.00	38,1	1.50
32S	50,8	2.00	29,7	1.17	50,8	2.00

Versil-Flare SAE 37° Flared Style "B" Nut



Part No. 1290-(Dash size) (Ref. SAE 070110)
Use with 900605 Tube Sleeve Only

Dash Size	Tube O.D.		Thread T	A		B	
	mm	in		mm	in	mm	in
3S	4,8	0.19	$\frac{3}{8}$ -24	15,2	0.60	11,2	0.44
4S	6,3	0.25	$\frac{7}{16}$ -20	15,7	0.62	14,2	0.56
5S	7,9	0.31	$\frac{1}{2}$ -20	17,0	0.67	15,7	0.62
6S	9,6	0.38	$\frac{9}{16}$ -18	18,3	0.72	17,6	0.69
8S	12,7	0.50	$\frac{3}{4}$ -16	21,3	0.84	22,4	0.88
10S	16,0	0.63	$\frac{7}{8}$ -14	24,6	0.97	25,4	1.00
12S	19,0	0.75	$1\frac{1}{16}$ -12	25,9	1.02	31,8	1.25
14S	22,3	0.88	$1\frac{3}{16}$ -12	27,4	1.08	35,1	1.38
16S	25,4	1.00	$1\frac{5}{16}$ -12	28,5	1.12	38,1	1.50
20S	31,7	1.25	$1\frac{5}{8}$ -12	31,0	1.22	50,8	2.00
24S	38,1	1.50	$1\frac{7}{8}$ -12	35,8	1.41	57,2	2.25
32S	50,8	2.00	$2\frac{1}{2}$ -12	40,4	1.59	73,1	2.88

Also available in stainless steel as part no. 259-1290. See pg. 281 for more information.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

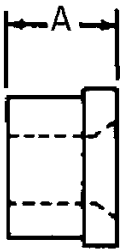
ADAPTERS &
TUBE FITTINGS

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ASSEMBLY INSTRUCTIONS

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Versil-Flare
SAE 37° Flared Sleeve



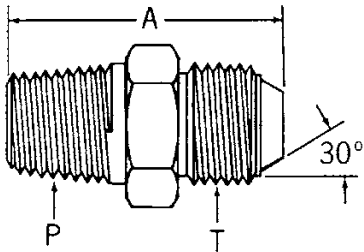
Part No. 900605-(Dash size) (Ref. SAE 070115)
Use with 1290 Short Nut Only

Dash Size	Tube O.D.		A	
	mm	in	mm	in
3S	4,8	0.19	8,6	0.34
4S	6,3	0.25	10,4	0.41
5S	7,9	0.31	11,2	0.44
6S	9,6	0.38	12,7	0.50
8S	12,7	0.50	14,2	0.56
10S	16,0	0.63	16,8	0.66
12S	19,0	0.75	17,6	0.69
14S	22,3	0.88	19,3	0.76
16S	25,4	1.00	19,8	0.78
20S	31,7	1.25	23,1	0.91
24S	38,1	1.50	28,5	1.12
32S	50,8	2.00	30,3	1.19

Also available in stainless steel as part no. 259-900605.
See pg. 281 for more information.

Specials

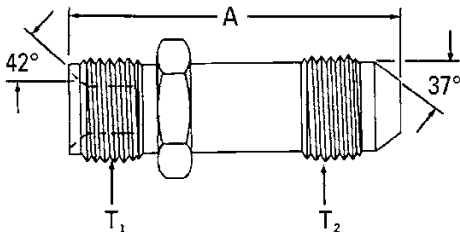
External Pipe/
30° Flare



Part No. 2004-(Dash size)

Dash Size	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
12-16S	25,4	1.00	3/4-14	15/16-14	46,7	1.84
16-16S	25,4	1.00	1-11 1/2	15/16-14	51,6	2.03
20-20S	31,7	1.25	1 1/4-11 1/2	15/8-14	59,4	2.34

42° Inverted Flare/
37° Flare

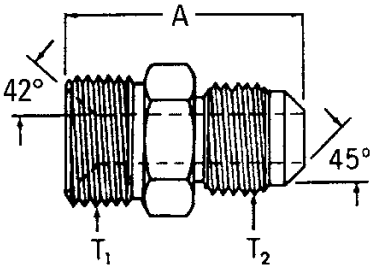


Part No. 202124-(Dash size)
Part No. FF1327-(Dash size) Long*

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
3-3S	4,8	0.19	3/8-24	3/8-24	27,2	1.07
3-4S	6,3	0.25	3/8-24	7/16-20	29,0	1.14
0304S*	6,3	0.25	3/8-24	7/16-20	61,0	2.40
4-4S	6,3	0.25	7/16-24	7/16-20	29,0	1.14
0404S*	6,3	0.25	7/16-24	7/16-20	61,0	2.40
0405S*	7,9	0.31	7/16-24	1/2-20	61,0	2.40
5-4S	6,3	0.25	1/2-20	7/16-20	29,5	1.16

*Length required to insert adapter at installation.

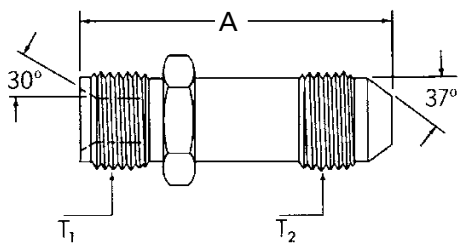
42° Inverted Flare/
45° Flare



Part No. 200001-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
4-4B	6,3	0.25	7/16-24	7/16-20	27,7	1.09
4-5B	7,9	0.31	7/16-24	1/2-20	28,5	1.12
4-6B	9,6	0.38	7/16-24	5/8-18	30,7	1.21
5-4B	6,3	0.25	1/2-20	7/16-20	27,9	1.10
5-5B	7,9	0.31	1/2-20	1/2-20	29,5	1.16
5-6B	9,6	0.38	1/2-20	5/8-18	31,8	1.25
6-5B	7,9	0.31	5/8-18	1/2-20	31,0	1.22
6-6B	9,6	0.38	5/8-18	5/8-18	32,5	1.28
7-6B	9,6	0.38	1 1/16-18	5/8-18	36,3	1.43
7-8B	12,7	0.50	1 1/16-18	3/4-16	39,6	1.56
8-6B	9,6	0.38	3/4-18	5/8-18	36,3	1.43
8-8B	12,7	0.50	3/4-18	3/4-16	39,6	1.56
10-10B	16,0	0.63	7/8-18	7/8-14	44,7	1.76
12-12B	19,0	0.75	1 1/16-16	1 1/16-14	52,0	2.05

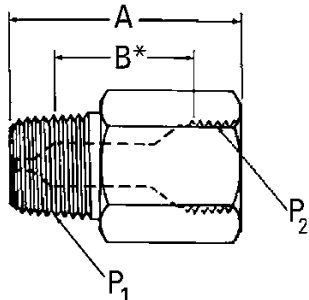
30° Inverted Flare/ 37° Flare



Part No. FF1353-(Dash size) Part No. FF1354-(Dash size) Long†

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
0404S	6,3	0.25	7/16-20	7/16-20	33,8	1.33
0404S†	6,3	0.25	7/16-20	7/16-20	63,5	2.50

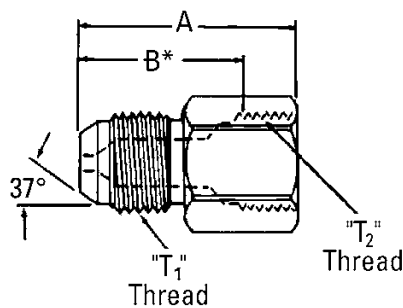
Restrictor† Male Pipe/ Female Pipe



Part No. FF1980-(Dash size)

Dash Size	Tube O.D.		Thread P1	Thread P2	A		B*	
	mm	in			mm	in	mm	in
0404	6,3	0.25	1/4-18	1/4-18	35,3	1.39	16,2	0.64
0606	9,6	0.38	3/8-18	3/8-18	36,6	1.44	17,6	0.69
0808	12,7	0.50	1/2-14	1/2-14	47,5	1.87	22,1	0.87

Restrictor† 37° Male Flare/ 37° Female



Part No. FF1981-(Dash size)

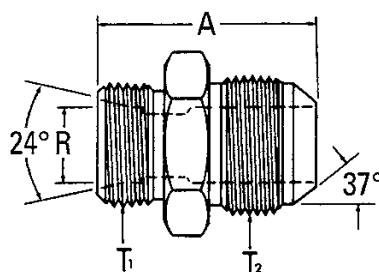
Dash Size	Tube O.D.		Thread P1	Thread P2	A		B*	
	mm	in			mm	in	mm	in
0404	6,3	0.25	7/16-20	7/16-20	28,9	1.14	17,5	0.69
0606	9,6	0.38	9/16-18	9/16-18	30,2	1.19	18,3	0.72
0808	12,7	0.50	3/4-16	3/4-16	34,5	1.36	25,6	1.01

*Length required to insert adapter at installation.

†Ordering Information: Eaton Restrictor Adapters are available in orifice sizes from .06 to .25 inches. When ordering restrictor adapters, it is important to indicate the drill size required.
For example: For a .125 drill size in FF1980-0404 adapter, order as FF1980-125-0404.
If you indicate the desired orifice size in inches, the appropriate 3 digit number will be assigned.

Metric to 37° Flare

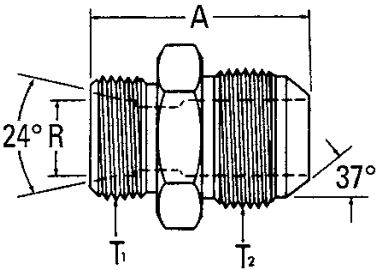
Metric 24° (DIN 3901/3902 I.Rh)/ 37° Flare



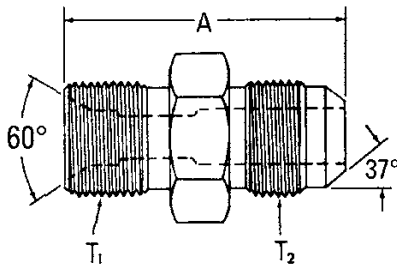
Part No. 15.063-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		Rø	
	mm	in			mm	in	mm	in
6-4	6,4	0.25	M12 x 1.5	7/16-20	31,0	1.22	6,0	0.24
8-6	9,7	0.38	M14 x 1.5	9/16-18	31,0	1.22	8,0	0.31
10-8	12,7	0.50	M16 x 1.5	3/4-16	34,5	1.36	10,0	0.39
12-8	12,7	0.50	M18 x 1.5	3/4-16	34,5	1.36	12,0	0.47
15-10	16,0	0.63	M22 x 1.5	7/8-14	39,1	1.54	15,0	0.59
18-12	19,0	0.75	M26 x 1.5	1 1/16-12	42,9	1.69	18,0	0.71
22-16	25,4	1.00	M30 x 2	1 5/16-12	46,0	1.81	22,0	0.87
28-20	31,8	1.25	M36 x 2	1 5/8-12	47,5	1.87	28,0	1.10
35-24	38,1	1.50	M45 x 2	1 7/8-12	52,6	2.07	35,0	1.38
42-32	50,8	2.00	M52 x 2	2 1/2-12	61,0	2.40	42,0	1.65

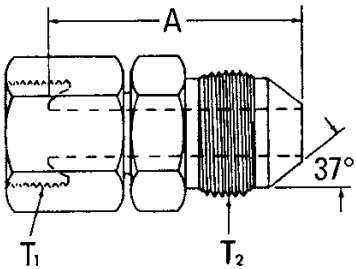
Metric 24° (DIN 3901/3902 s.Rh)/ 37° Flare



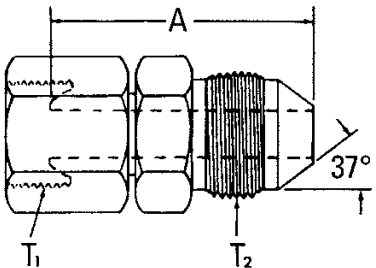
Metric 60° (DIN 7631)/37° Flare



Metric 24° (DIN 3901/3902 s.Rh)/ 37° Flare



Metric 24° (DIN 3901/3902 I.Rh)/ 37° Flare



Part No. 15.147-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		Rø	
	mm	in			mm	in	mm	in
6-6	9,7	0.38	M14 x 1.5	9/16-18	33,0	1.30	6,0	0.24
10-8	12,7	0.50	M18 x 1.5	3/4-16	35,6	1.40	10,0	0.39
14-10	16,0	0.63	M22 x 1.5	7/8-14	40,4	1.59	14,0	0.55
16-12	19,0	0.75	M24 x 1.5	1 1/16-12	44,9	1.77	16,0	0.63
20-16	25,4	1.00	M30 x 2	1 5/16-12	48,0	1.89	20,0	0.79
30-24	38,1	1.50	M42 x 2	1 7/8-12	56,4	2.22	30,0	1.18
38-32	50,8	2.00	M52 x 2	2 1/2-12	67,0	2.64	38,0	1.50

Part No. 15.117-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
4-4	6,4	0.25	M12 x 1.5	7/16-20	31,0	1.22
6-6	9,7	0.38	M14 x 1.5	9/16-18	31,0	1.22
8-6	9,7	0.38	M16 x 1.5	9/16-18	32,0	1.26
8-8	12,7	0.50	M16 x 1.5	3/4-16	34,5	1.36
10-8	12,7	0.50	M18 x 1.5	3/4-16	34,5	1.36
13-10	16,0	0.63	M22 x 1.5	7/8-14	38,6	1.52
16-12	19,0	0.75	M26 x 1.5	1 1/16-12	42,9	1.69
25-20	31,8	1.25	M38 x 1.5	1 5/8-12	47,5	1.87
32-24	38,1	1.50	M45 x 1.5	1 7/8-12	52,6	2.07
40-32	50,8	2.00	M52 x 1.5	2 1/2-12	61,0	2.40

Part No. 15.164-(Dash size)

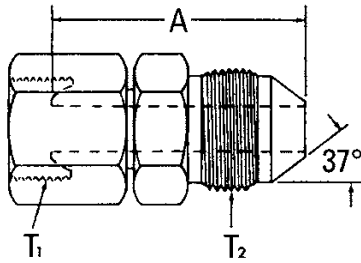
Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
6-6	9,7	0.38	M14 x 1.5	9/16-18	35,1	1.38
10-8	12,7	0.50	M18 x 1.5	3/4-16	38,1	1.50
14-10	16,0	0.63	M22 x 1.5	7/8-14	40,9	1.61
16-12	19,0	0.75	M24 x 1.5	1 1/16-12	43,4	1.71
20-16	25,4	1.00	M30 x 2	1 1/16-12	47,0	1.85
30-24	38,1	1.50	M42 x 2	1 7/8-12	53,9	2.12
38-32	50,8	2.00	M52 x 2	2 1/2-12	62,5	2.46

PartNo. 15.163-(Dash size)

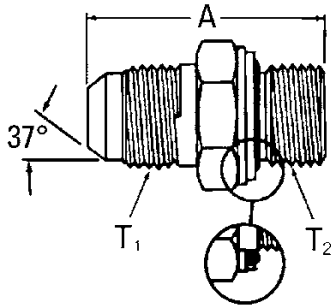
Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
4-4†	6,4	0.25	M12 x 1.5	7/16-20	34,5	1.36
6-6†	9,7	0.38	M14 x 1.5	9/16-18	34,5	1.36
8-6†	9,7	0.38	M16 x 1.5	9/16-18	35,6	1.40
8-8†	12,7	0.50	M16 x 1.5	3/4-16	38,1	1.50
10-8†	12,7	0.50	M18 x 1.5	3/4-16	38,1	1.50
13-10†	16,0	0.63	M22 x 1.5	7/8-14	40,9	1.61
16-12†	19,0	0.75	M26 x 1.5	1 1/16-12	47,5	1.87
22-16	25,4	1.00	M30 x 2	1 5/16-12	49,0	1.93
28-20	31,8	1.25	M36 x 2	1 5/8-12	51,6	2.03
35-24	38,1	1.50	M45 x 2	1 7/8-12	53,6	2.11
42-32	50,8	2.00	M52 x 2	2 1/2-12	62,5	2.46

†Universal fitting also mates with 60° DIN 7631/7647 connections.

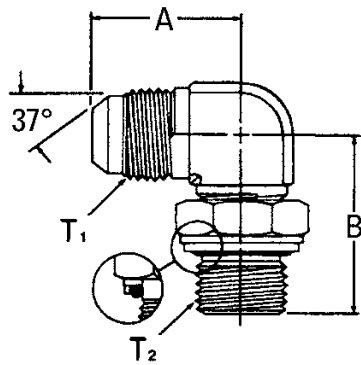
**Metric 60° (DIN
7631/7647)/37° Flare**



**SAE 37° Male/
Metric Male**



**90° Adjustable Elbow
SAE 37° Male/Metric
Male**



Part No. 15.165-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
20-16	25,4	1.00	M30 x 1.5	1 ⁵ / ₁₆ -12	46,0	1.81
25-20	31,7	1.25	M38 x 1.5	1 ⁵ / ₈ -12	49,5	1.95
32-24	38,1	1.50	M45 x 1.5	1 ⁷ / ₈ -12	52,6	2.07
40-32	50,8	2.00	M52 x 1.5	2 ¹ / ₂ -12	61,0	2.40

GG108-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
04-10	6,4	0.25	7/ ₁₆ -20	M10 x 1	29,0	1.14
04-12	6,4	0.25	7/ ₁₆ -20	M12 x 1.5	33,0	1.30
05-10	7,9	0.31	1/ ₂ -20	M10 x 1	29,0	1.14
06-14	9,7	0.38	9/ ₁₆ -18	M14 x 1.5	34,0	1.34
06-16	9,7	0.38	9/ ₁₆ -18	M16 x 1.5	34,0	1.34
08-16	12,7	0.50	3/ ₄ -16	M16 x 1.5	37,1	1.46
08-18	12,7	0.50	3/ ₄ -16	M18 x 1.5	37,6	1.48
10-18	16,0	0.63	7/ ₈ -14	M18 x 1.5	40,1	1.58
10-20	16,0	0.63	7/ ₈ -14	M20 x 1.5	42,9	1.69
10-22	16,0	0.63	7/ ₈ -14	M22 x 1.5	42,9	1.69
12-22	19,0	0.75	1 ¹ / ₁₆ -12	M22 x 1.5	46,5	1.83
12-27	19,0	0.75	1 ¹ / ₁₆ -12	M27 x 2	49,5	1.95
16-33	25,4	1.00	1 ⁵ / ₁₆ -12	M33 x 2	53,6	2.11

GG308-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
04-10	6,4	0.25	7/ ₁₆ -20	M10 x 1	22,6	0.89	25,9	1.02
04-12	6,4	0.25	7/ ₁₆ -20	M12 x 1.5	26,9	1.06	31,5	1.24
06-16	9,7	0.38	9/ ₁₆ -18	M16 x 1.5	28,5	1.12	36,6	1.44
08-16	12,7	0.50	3/ ₄ -16	M16 x 1.5	31,5	1.24	36,6	1.44
08-18	12,7	0.50	3/ ₄ -16	M18 x 1.5	31,5	1.24	36,6	1.44
10-18	16,0	0.63	7/ ₈ -14	M18 x 1.5	36,6	1.44	39,6	1.56
10-20	16,0	0.63	7/ ₈ -14	M20 x 1.5	36,6	1.44	42,9	1.69
10-22	16,0	0.63	7/ ₈ -14	M22 x 1.5	36,6	1.44	42,9	1.69
12-22	19,0	0.75	1 ¹ / ₁₆ -12	M22 x 1.5	41,9	1.65	45,5	1.79
12-27	19,0	0.75	1 ¹ / ₁₆ -12	M27 x 2	41,9	1.65	49,0	1.93

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

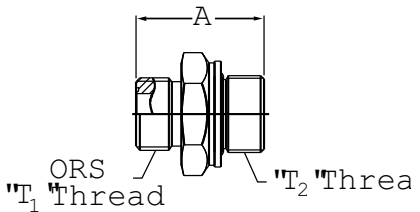
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

ORS to Metric

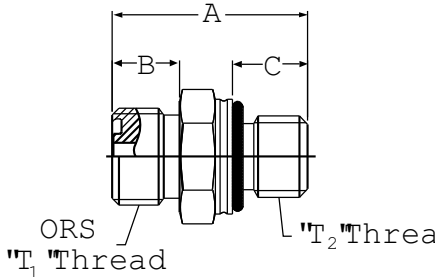
ORS - Special Metric Connector (Mates with DIN 3852 large spotface)



Part No. FF2485T(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	Ref A	
	mm	in			mm	in
0410S	6,4	0.25	9/16-18	M10 x 1	24,9	0.98
0614S	9,7	0.38	11/16-16	M14 x 1.5	31,0	1.22
0818S	12,7	0.50	13/16-16	M18 x 1.5	33,6	1.32
0822S	12,7	0.50	13/16-16	M22 x 1.5	36,3	1.43
1022S	16,0	0.63	1-14	M22 x 1.5	39,1	1.54
1227S	19,0	0.75	13/16-12	M27 x 2	44,4	1.75
1633S	25,4	1.00	17/16-12	M33 x 2	48,0	1.89
2042S	31,8	1.25	111/16-12	M42 x 2	51,6	2.03
2448S	38,1	1.50	2-12	M48 x 2	55,6	2.19

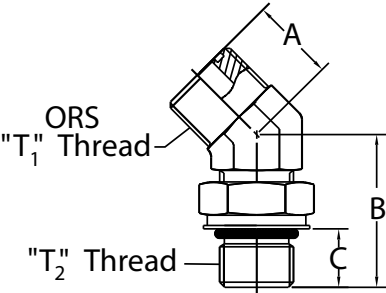
ORS/Male ISO 6149 Boss (S-Series)



Part No. FF2742T(Size) (Ref. SAE 52M0187)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0410S	6,4	0.25	9/16-18	M10 x 1	27,9	1.10	9,9	0.39	9,4	0.37
0412S	6,4	0.25	9/16-18	M12 x 1.5	28,5	1.12	9,9	0.39	10,9	0.43
0612S	9,7	0.38	11/16-16	M12 x 1.5	32,0	1.26	11,2	0.44	10,9	0.43
0614S	9,7	0.38	11/16-16	M14 x 1.5	32,0	1.26	11,2	0.44	10,9	0.43
0616S	9,7	0.38	11/16-16	M16 x 1.5	33,6	1.32	11,2	0.44	12,4	0.49
0818S	12,7	0.50	13/16-16	M18 x 1.5	38,1	1.50	12,7	0.50	14,0	0.55
0822S	12,7	0.50	13/16-16	M22 x 1.5	39,4	1.55	12,7	0.50	15,0	0.59
1022S	16,0	0.63	1-14	M22 x 1.5	41,9	1.65	15,5	0.61	15,0	0.59
1222S	19,0	0.75	13/16-12	M22 x 1.5	43,4	1.71	17,0	0.67	15,0	0.59
1227S	19,0	0.75	113/16-12	M27 x 2	48,5	1.91	17,0	0.67	18,5	0.73
1633S	25,4	1.00	17/16-12	M33 x 2	52,0	2.05	17,6	0.69	19,0	0.75
2042S	31,8	1.25	111/16-12	M42 x 2	54,6	2.15	17,6	0.69	14,0	0.55
2448S	38,1	1.50	2-12	M48 x 2	56,9	2.24	15,0	0.59	21,6	0.85

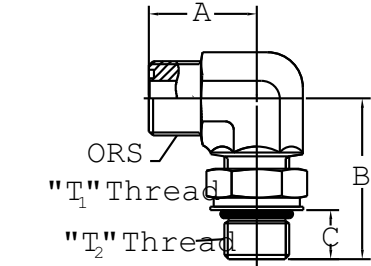
45° ORS/ISO 6149 Boss (S-Series)



Part No. FF2743T(Size) (Ref. SAE 52M0287)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0818S	12,7	0.50	13/16-16	M18 x 1.5	20,3	0.80	37,1	1.46	14,2	0.56
1022S	16,0	0.63	1-14	M22 x 1.5	23,4	0.92	43,9	1.73	14,7	0.58
1227S	19,0	0.75	13/16-12	M27 x 2	25,9	1.02	50,5	1.99	18,3	0.72

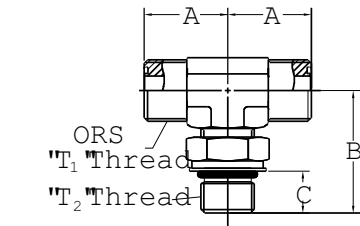
90° ORS/ISO 6149 Boss (S-Series)



Part No. FF2744T(Size) (Ref. SAE 52M0287)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0818S	12,7	0.50	13/16-16	M18 x 1.5	29,7	1.17	44,2	1.74	14,2	0.56
1022S	16,0	0.63	1-14	M22 x 1.5	33,3	1.31	49,0	1.93	14,7	0.58
1227S	19,0	0.75	13/16-12	M27 x 2	37,3	1.47	55,6	2.19	18,3	0.72

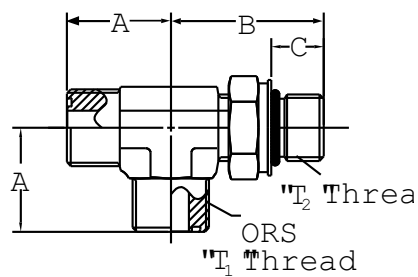
ORS/ISO 6149 Boss (S-Series) Branch Tee



Part No. FF2745T(Size) (Ref. SAE 52M0489)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0818S	12,7	0.50	13/16-16	M18 x 1.5	27,9	1.10	40,9	1.61	14,2	0.56
1022S	16,0	0.63	1-14	M22 x 1.5	33,3	1.31	49,0	1.93	14,7	0.58
1227S	19,0	0.75	13/16-12	M27 x 2	37,3	1.47	55,6	2.19	18,3	0.72

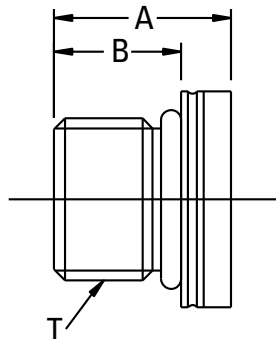
**ORS/ISO 6149 Boss
(S-Series) Run Tee**



Part No. FF2746T(Size) (Ref. SAE 52M0488)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
0818S	12,7	0.50	1 ³ / ₁₆ -16	M18 x 1.5	27,9	1.10	40,9	1.61	14,2	0.56
1022S	16,0	0.63	1-14	M22 x 1.5	33,3	1.31	49,0	1.93	14,7	0.58
1227S	19,0	0.75	1 ³ / ₁₆ -12	M27 x 2	37,3	1.47	55,6	2.19	18,3	0.72

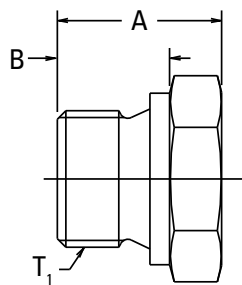
**Male ISO-6149 Boss
(S-Series) Plug**



Part No. FF90396-(Dash size)

Dash Size	Thread T	A		B	
		mm	in	mm	in
14S	M14x1.5	15,0	0.59	6,1	0.24
18S	M18x1.5	18,3	0.72	8,1	0.32
22S	M22x1.5	19,3	0.76	9,9	0.39

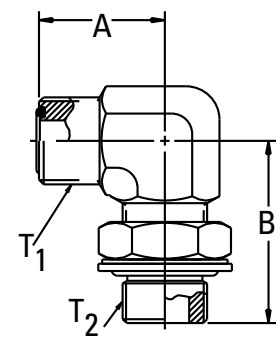
**DIN 3852 Form "A"
with Dowty Seal Plug**



Part No. FF1939-(Dash size)

Dash Size	Tube O.D.		Thread T1	A		B	
	mm	in		mm	in	mm	in
065	9,6	0.38	G ³ / ₈	22,3	0.88	22,3	0.88
085	12,7	0.50	G ¹ / ₂	24,9	0.98	26,9	1.06

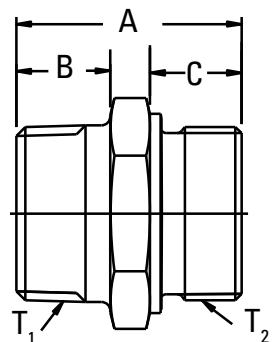
**90° ORS Male/
Special BSP Parallel -
Mates with DIN 3852
Large Spottface**



Part No. FF2484T-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
0402S	6,3	0.25	9 ¹⁶ / ₁₆ -18	G 0.13	21,6	0.85	32,5	1.28
0604S	9,6	0.38	1 ¹⁶ / ₁₆ -16	G 0.25	24,9	0.98	37,1	1.46
0806S	12,7	0.50	1 ³ / ₁₆ -16	G 0.38	27,9	1.10	25,4	1.00
1008S	16,0	0.63	1-14	G 0.50	33,3	1.31	50,0	1.97
1212S	19,0	0.75	1 ³ / ₁₆ -12	G 0.75	37,3	1.47	54,9	2.16

**Male Pipe NPTF/
BSP Male Parallel
DIN3852 Form "B"**



Part No. 15.000-(Dash size)*

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B		C	
	mm	in			mm	in	mm	in	mm	in
4-4	6,3	0.25	1 ⁴ / ₄ -18	G 1 ⁴ / ₄	36,1	1.42	14,0	0.55	19,0	0.75
6-6	9,6	0.38	3 ⁸ / ₈ -18	G 3 ⁸ / ₈	38,1	1.50	14,5	0.57	22,1	0.87
8-8	12,7	0.50	1 ² / ₂ -14	G 1 ² / ₂	40,4	1.59	17,0	0.67	26,9	1.06
12-12	19,0	0.75	3 ⁴ / ₄ -14	G 3 ⁴ / ₄	44,4	1.75	19,0	0.75	32,0	1.26
16-16	25,4	1.00	1-11 ¹ / ₂	G 1	54,3	2.14	21,1	0.83	40,9	1.61
20-20	31,7	1.25	1 ¹ / ₄ -11	G 1 ¹ / ₄	57,1	2.25	23,1	0.91	50,0	1.97

*These adapters do not come with an O-ring on the BSP thread.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

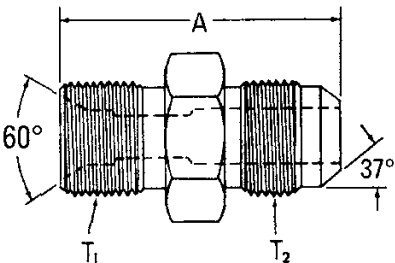
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

BSPP to 37° Flare

BSPP (parallel)/ 37° flare

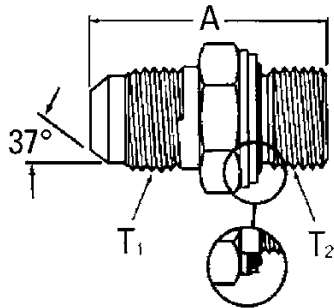


Part No. 2063-(Dash size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
2-4S	6,4	0.25	1/8-28	7/16-20	35,1	1.38
4-4S	6,4	0.25	1/4-19	7/16-20	35,1	1.38
4-5S	7,9	0.31	1/4-19	1/2-20	35,1	1.38
4-6S	9,7	0.38	1/4-19	9/16-18	35,1	1.38
6-6S	9,7	0.38	3/8-19	9/16-18	36,3	1.43
6-8S	12,7	0.50	3/8-19	3/4-16	38,9	1.53
8-8S	12,7	0.50	1/2-14	3/4-16	41,4	1.63
8-10S	16,0	0.63	1/2-14	7/8-14	43,9	1.73
10-12S	19,0	0.75	5/8-14	1 1/16-12	49,3	1.94
12-10S	16,0	0.63	3/4-14	7/8-14	47,7	1.88
12-12S	19,0	0.75	3/4-14	1 1/16-12	50,5	1.99
16-16S	25,4	1.00	1-11	1 5/16-12	53,1	2.09

Note: The BSPP male end mates with a BSPP female swivel nut.
Use GG106 conversion adapters for port connections.

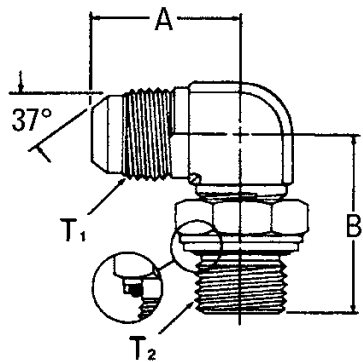
SAE 37° Male/ BSPP Male



GG106-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
04-02	6,4	0.25	7/16-20	G 1/8-28	29,0	1.14
04-04	6,4	0.25	7/16-20	G 1/4-19	34,5	1.36
04-06	6,4	0.25	7/16-20	G 3/8-19	34,5	1.36
04-08	6,4	0.25	7/16-20	G 1/2-14	38,1	1.50
06-04	9,7	0.38	9/16-18	G 1/4-19	34,5	1.36
06-06	9,7	0.38	9/16-18	G 3/8-19	34,5	1.36
06-08	9,7	0.38	9/16-18	G 1/2-14	38,1	1.50
08-04	12,7	0.50	3/4-16	G 1/4-19	37,6	1.48
08-06	12,7	0.50	3/4-16	G 3/8-19	37,6	1.48
08-08	12,7	0.50	3/4-16	G 1/2-14	40,9	1.61
08-12	12,7	0.50	3/4-16	G 3/4-14	44,9	1.77
10-06	16,0	0.63	7/8-14	G 3/8-19	40,4	1.59
10-08	16,0	0.63	7/8-14	G 1/2-14	43,4	1.71
12-08	19,0	0.75	1 1/16-12	G 1/2-14	47,0	1.85
12-12	19,0	0.75	1 1/16-12	G 3/4-14	50,0	1.97
12-16	19,0	0.75	1 1/16-12	G 1-11	52,6	2.07
16-12	25,4	1.00	1 1/16-12	G 3/4-14	51,1	2.01
16-16	25,4	1.00	1 5/16-12	G 1-11	53,6	2.11
16-20	25,4	1.00	1 5/16-12	G 1 1/4-11	56,9	2.24
20-20	31,8	1.25	1 5/8-12	G 1 1/4-11	58,4	2.30

90° Adjustable Elbow SAE 37° Male/ BSPP Male

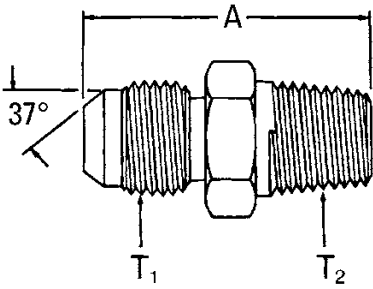


GG306-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
04-02	6,4	0.25	7/16-20	G 1/8-28	22,6	0.89	26,4	1.04
04-04	6,4	0.25	7/16-20	G 1/4-19	26,9	1.06	31,5	1.24
05-04	7,9	0.31	1/2-20	G 1/4-19	26,9	1.06	31,5	1.24
06-04	9,7	0.38	9/16-18	G 1/4-19	26,9	1.06	31,5	1.24
06-06	9,7	0.38	9/16-18	G 3/8-19	28,5	1.12	36,6	1.44
06-08	9,7	0.38	9/16-18	G 1/2-14	31,0	1.22	42,9	1.69
08-06	12,7	0.50	3/4-16	G 3/8-19	31,5	1.24	36,6	1.44
08-08	12,7	0.50	3/4-16	G 1/2-14	34,0	1.34	42,9	1.69
10-08	16,0	0.63	7/8-14	G 1/2-14	36,6	1.44	42,9	1.69
12-12	19,0	0.75	1 1/16-12	G 3/4-14	41,9	1.65	49,0	1.93
16-16	25,4	1.00	1 5/16-12	G 1-11	46,0	1.81	52,6	2.07
20-20	31,8	1.25	1 5/8-12	G 1 1/4-11	52,0	2.05	56,9	2.24

BSPT to 37° Flare

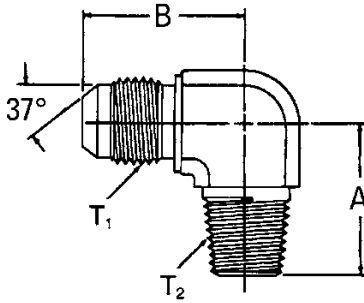
**SAE 37° Male/
BSPT Male**



GG110-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
04-02	6,4	0.25	7/16-20	R1/8-28	29,0	1.14
04-04	6,4	0.25	7/16-20	R1/4-19	33,0	1.30
06-04	9,7	0.38	9/16-18	R1/4-19	33,6	1.32
06-06	9,7	0.38	9/16-18	R3/8-19	33,6	1.32
08-06	12,7	0.50	3/4-16	R3/8-19	36,6	1.44
08-08	12,7	0.50	3/4-16	R1/2-14	40,4	1.59
10-08	16,0	0.63	7/8-14	R1/2-14	42,9	1.69
12-08	19,0	0.75	1 1/16-12	R1/2-14	47,5	1.87
12-12	19,0	0.75	1 1/16-12	R3/4-14	49,5	1.95
12-16	19,0	0.75	1 1/16-12	R1-11	51,6	2.03
16-12	25,4	1.00	1 5/16-12	R3/4-14	50,5	1.99
16-16	25,4	1.00	1 5/16-12	R1-11	52,6	2.07

**90° Elbow,
SAE 37° Male/
BSPT Male**

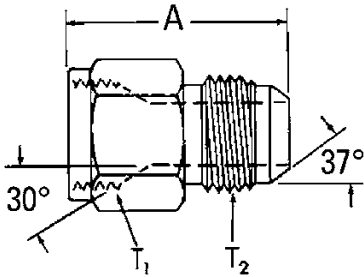


GG310-NP(Size)-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A		B	
	mm	in			mm	in	mm	in
04-02	6,4	0.25	7/16-20	R1/8-28	20,6	0.81	23,4	0.92
04-04	6,4	0.25	7/16-20	R1/4-19	27,4	1.08	26,9	1.06
06-06	9,7	0.38	9/16-18	R3/8-19	31,0	1.22	28,5	1.12
06-08	9,7	0.38	9/16-18	R1/2-14	37,1	1.46	31,0	1.22
08-06	12,7	0.50	3/4-16	R3/8-19	31,0	1.22	31,5	1.24
08-08	12,7	0.50	3/4-16	R1/2-14	37,1	1.46	34,0	1.34
12-12	19,0	0.75	1 1/16-12	R3/4-14	40,4	1.59	41,9	1.65
16-16	25,4	1.00	1 5/16-12	R1-11	50,0	1.97	46,0	1.81

JIS 30° to 37° Flare

**Female Cone Seat
JIS 30° Female
Cone Seat/
SAE 37° Male**



Part No. FF2593-(Size)

Dash Size	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
0404S	6,4	0.25	G1/4-19	7/16-20	30,3	1.19
0606S	9,7	0.38	G3/8-19	9/16-18	30,7	1.21
0808S	12,7	0.50	G1/2-14	3/4-16	35,8	1.41
1212S	19,0	0.75	G3/4-14	1 1/16-12	43,2	1.70

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

**Stainless Steel
Adapters**

Eaton stainless steel adapters are manufactured from 316 stainless steel for excellent corrosive resistance. All parts meet dimensional and performance requirements of SAE J514.

Additionally, all parts are passivated after machining to increase corrosive protection.

Applications:

- Marine/Military
- Chemical Processing
- Pulp and Paper Industry
- Food and BeverageProcessing
- Off-Shore Drilling

Note: Stainless steel threaded products are susceptible to galling. Sealing surfaces and threads may be severely damaged due to the high pressure associated with assembly. It is recommended that a high-pressure lubricant be used to prevent galling.

**Torque
Requirements**

SAE Degree (JIC)

Dash Size	Thread Size (Inches)	SWIVEL NUT TORQUE	
		Ft./Lbs.	Newton Meters
-04	7/16-20	11-12	15-16
-05	1/2-20	15-16	20-22
-06	9/16-18	18-20	24-28
-08	3/4 -16	38-42	52-88
-10	7/8-14	57-62	77-85
-12	1 1/16-12	79-87	108-119
-16	1 5/16-12	108-113	148-154
-20	1 5/8 -12	127-133	173-182
-24	1 7/8-12	158-167	216-227
-32	2 1/2-12	245-258	334-352

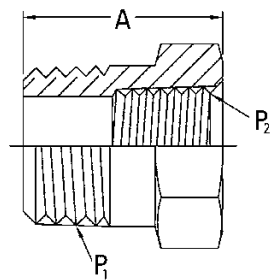
**Straight Thread
O-Ring**

**Low pressure with 37°
(SAE J514)**

Dash Size	Thread Size (Inches)	SWIVEL NUT TORQUE	
		Ft./Lbs.	Newton Meters
-03	3/8-24	8-9	12-13
-04	7/16-20	13-15	18-20
-05	1/2-20	14-15	19-21
-06	9/16-18	23-24	32-33
-08	3/4-16	40-43	55-57
-10	7/8-14	43-48	59-64
-12	1 1/16-12	68-75	93-101
-14	1 3/16-12	83-90	113-122
-16	1 5/16-12	112-123	152-166
-20	1 5/8-12	146-161	198-218
-24	1 7/8-12	154-170	209-230
-32	2 1/2-12	218-240	296-325

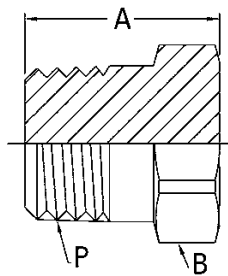
Pipe NPTF
to NPTF

Reducer Bushings



Part Number	Thread P1	Thread P2	A	
			mm	in
259-2081-6-2	3/8-18	1/8-27	21,6	0.85
259-2081-6-4	3/8-18	1/4-18	25,4	1.00
259-2081-8-2	1/2-14	1/8-27	27,9	1.10
259-2081-8-4	1/2-14	1/4-18	27,9	1.10
259-2081-12-4	3/4-14	1/4-18	29,7	1.17
259-2081-12-6	3/4-14	3/8-18	29,7	1.17
259-2081-12-8	3/4-14	1/2-14	34,5	1.36
259-2081-16-6	1-11 1/2	3/8-18	34,5	1.36
259-2081-16-8	1-11 1/2	1/2-14	34,5	1.36
259-2081-16-12	1-11 1/2	3/4-14	37,8	1.49
259-2081-20-12	1 1/4-11 1/2	3/4-14	37,3	1.47
259-2081-24-12	1 1/2-11 1/2	3/4-14	39,9	1.57
259-2081-24-16	1 1/2-11 1/2	1-11 1/2	39,9	1.57
259-2081-32-16	2-11 1/2	1-11 1/2	44,4	1.75
259-2081-32-20	2-11 1/2	1 1/4-11 1/2	44,4	1.75
259-2081-32-24	2-11 1/2	1 1/2-11 1/2	44,4	1.75

Plugs



Part Number	Thread P1	A		B	
		mm	in	mm	in
259-2082-2	1/8-27	14,7	0.58	11,2	0.44
259-2082-4	1/4-18	19,3	0.76	14,2	0.56
259-2082-6	3/8-18	20,1	0.79	17,6	0.69
259-2082-8	1/2-14	24,9	0.98	22,4	0.88
259-2082-12	3/4-14	27,4	1.08	26,9	1.06
259-2082-16	1-11 1/2	32,3	1.27	33,3	1.31
259-2082-20	1 1/4-11 1/2	33,0	1.30	44,4	1.75
259-2082-24	1 1/2-11 1/2	33,8	1.33	50,8	2.00
259-2082-32	2-11 1/2	35,3	1.39	63,5	2.50

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

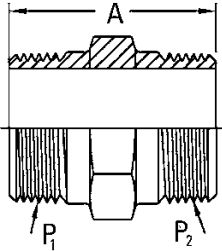
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

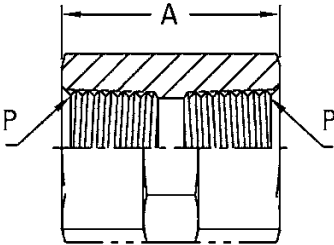
Pipe NPTF to NPTF

Hexagon Pipe Nipples



Part Number	Thread P1	Thread P2	A	
			mm	in
259-2083-4-4	1/4-18	1/4-18	36,8	1.45
259-2083-6-4	3/8-18	1/4-18	36,8	1.45
259-2083-6-6	3/8-18	3/8-18	36,8	1.45
259-2083-8-6	1/2-14	3/8-18	43,2	1.70
259-2083-8-8	1/2-14	1/2-14	48,0	1.89
259-2083-12-8	3/4-14	1/2-14	49,8	1.96
259-2083-12-12	3/4-14	3/4-14	49,8	1.96
259-2083-16-12	1-11 1/2	3/4-14	54,6	2.15
259-2083-16-16	1-11 1/2	1-11 1/2	59,4	2.34
259-2083-20-16	1 1/4-11 1/2	1-11 1/2	62,2	2.45
259-2083-24-24	1 1/2-11 1/2	1 1/2-11 1/2	66,3	2.61

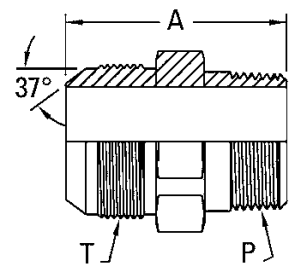
Hexagon Pipe Coupling



Part Number	Thread P	A	
		mm	in
259-2096-4	1/4-18	28,7	1.13
259-2096-6	3/8-18	28,7	1.13
259-2096-8	1/2-14	38,1	1.50
259-2096-12	3/4-14	38,9	1.53
259-2096-16	1-11 1/2	48,0	1.89
259-2096-20	1 1/4-11 1/2	49,0	1.93
259-2096-24	1 1/2-11 1/2	49,0	1.93

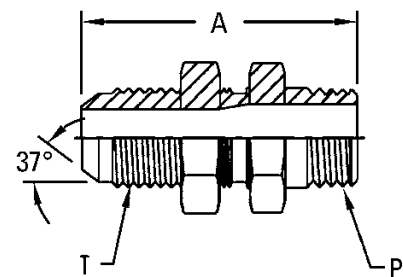
Pipe NPT to
SAE 37° Flare

Male Connector



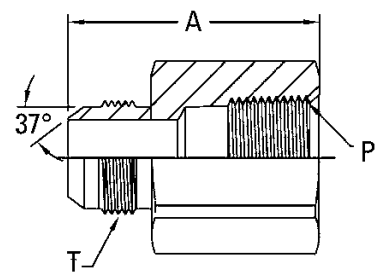
Part Number	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
259-2021-4-4	6,3	0.25	1/4-18	7/16-20	36,1	1.42
259-2021-4-6	9,6	0.38	1/4-18	9/16-18	36,3	1.43
259-2021-6-6	9,6	0.38	3/8-18	9/16-18	36,3	1.43
259-2021-6-8	12,7	0.50	3/8-18	3/4-16	38,9	1.53
259-2021-8-8	12,7	0.50	1/2-14	3/4-16	45,5	1.79
259-2021-12-12	19,0	0.75	3/4-14	1 1/16-12	52,3	2.06
259-2021-16-16	25,4	1.00	1-11 1/2	1 5/16-12	58,4	2.30
259-2021-16-20	31,7	1.25	1-11 1/2	1 5/8-12	61,5	2.42
259-2021-20-16	25,4	1.00	1 1/4-11 1/2	1 5/16-12	61,0	2.40
259-2021-20-20	31,7	1.25	1 1/4-11 1/2	1 5/8-12	62,2	2.45

Bulkhead w/Jam Nut



Part Number	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
259-2240-4-4	6,3	0.25	7/16-20	1/4-18	51,6	2.03
259-2240-4-6	9,6	0.38	9/16-18	1/4-18	53,9	2.12
259-2240-6-8	12,7	0.50	3/4-16	3/8-18	59,9	2.36
259-2240-12-12	19,0	0.75	1 1/16-12	3/4-14	74,2	2.92
259-2240-16-16	25,4	1.00	1 5/16-12	1-11 1/2	79,0	3.11

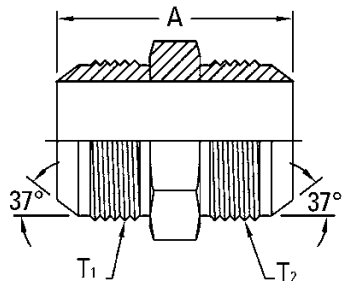
Female Connector



Part Number	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
259-2022-4-4	6,3	0.25	1/4-18	7/16-20	35,3	1.39
259-2022-6-6	9,6	0.38	3/8-18	9/16-18	37,1	1.46
259-2022-6-8	12,7	0.50	3/8-18	3/4-16	39,6	1.56
259-2022-8-8	12,7	0.50	1/2-14	3/4-16	45,5	1.79
259-2022-12-12	19,0	0.75	3/4-14	1 1/16-12	52,3	2.06
259-2022-16-16	25,4	1.00	1-11 1/2	1 5/16-12	59,7	2.35
259-2022-20-20	31,7	1.25	1 1/4-11 1/2	1 5/8-12	63,2	2.49
259-2022-24-24	38,1	1.50	1 1/2-11 1/2	1 7/8-12	66,5	2.62

SAE 37° Flare

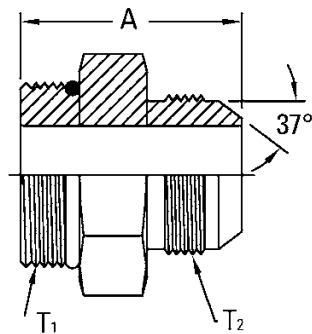
Union



Part Number	Tube O.D.		Thread T1	Thread T2	A	
	mm	in			mm	in
259-2027-4-4	6,3	0.25	7/16-20	7/16-20	34,8	1.37
259-2027-6-4	6,3	0.25	9/16-18	7/16-20	35,6	1.40
259-2027-6-6	9,6	0.38	9/16-18	9/16-18	35,8	1.41
259-2027-8-6	9,6	0.38	3/4-16	9/16-18	38,6	1.52
259-2027-8-8	12,7	0.50	3/4-16	3/4-16	41,1	1.62
259-2027-16-16	25,4	1.00	1 5/16-12	1 5/16-12	57,2	2.25
259-2027-20-20	31,7	1.25	1 5/8-12	1 5/8-12	61,7	2.43
259-2027-24-24	38,1	1.50	1 7/8-12	1 7/8-12	69,8	2.75

O-Ring Boss to
SAE 37°Flare

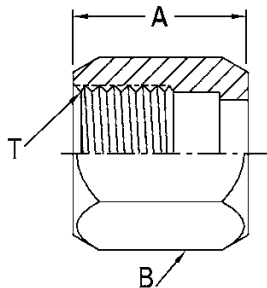
Straight Thread
Short Connector



Part Number	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
259-202702-4-4	6,3	0.25	7/16-20	7/16-20	31,2	1.23
259-202702-4-6	9,6	0.38	7/16-20	9/16-18	32,3	1.27
259-202702-6-4	6,3	0.25	9/16-18	7/16-20	32,8	1.29
259-202702-6-6	9,6	0.38	9/16-18	9/16-18	33,0	1.30
259-202702-6-8	12,7	0.50	9/16-18	3/4-16	36,6	1.44
259-202702-8-6	9,6	0.38	3/4-16	9/16-18	35,1	1.38
259-202702-8-8	12,7	0.50	3/4-16	3/4-16	37,6	1.48
259-202702-12-12	19,0	0.75	1 1/16-12	1 1/16-12	50,0	1.97
259-202702-12-16	25,4	1.00	1 1/16-12	1 5/16-12	51,8	2.04
259-202702-16-12	19,0	0.75	1 5/16-12	1 1/16-12	50,5	1.99
259-202702-16-16	25,4	1.00	1 5/16-12	1 5/16-12	51,8	2.04
259-202702-16-20	31,7	1.25	1 5/16-12	1 5/8-12	59,2	2.33
259-202702-20-16	25,4	1.00	1 5/8-12	1 5/16-12	53,9	2.12
259-202702-20-20	31,7	1.25	1 5/8-12	1 5/8-12	55,2	2.17
259-202702-20-24	38,1	1.50	1 5/8-12	1 7/8-12	64,3	2.53
259-202702-24-20	31,7	1.25	1 7/8-12	1 5/8-12	56,9	2.24
259-202702-24-24	38,1	1.50	1 7/8-12	1 7/8-12	60,2	2.37

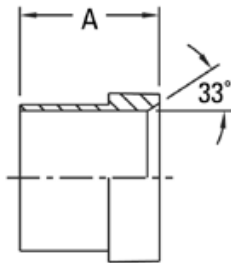
SAE 37° Flare Nuts and Sleeves

Nuts



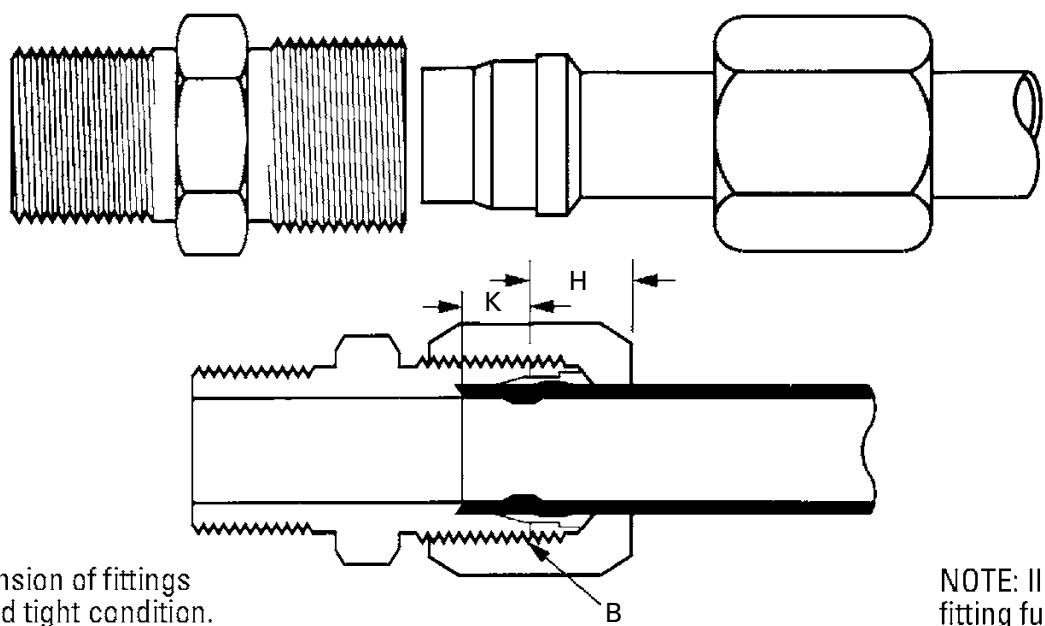
Part Number	Tube O.D.		Thread P	Thread T	A	
	mm	in			mm	in
259-1290-4	6,3	0.25	7/16-20	.62	14,2	0.56
259-1290-6	9,6	0.38	9/16-18	.72	17,6	0.69
259-1290-8	12,7	0.50	3/4-16	.84	22,4	0.88
259-1290-10	16,0	0.63	7/8-14	.97	25,4	1.00
259-1290-12	19,0	0.75	1 1/16-12	1.02	31,8	1.25
259-1290-16	25,4	1.00	1 5/16-12	1.12	38,1	1.50
259-1290-20	31,7	1.25	1 5/8-12	1.22	50,8	2.00
259-1290-24	38,1	1.50	1 7/8-12	1.41	57,2	2.25

Sleeves



Part Number	Tube O.D.		A	
	mm	in	mm	in
259-900605-4	6,3	0.25	10,4	0.41
259-900605-6	9,6	0.38	12,7	0.50
259-900605-8	12,7	0.50	14,2	0.56
259-900605-10	16,0	0.63	16,8	0.66
259-900605-12	19,0	0.75	17,6	0.69
259-900605-16	25,4	1.00	19,8	0.78
259-900605-20	31,7	1.25	23,1	0.91
259-900605-24	38,1	1.50	28,5	1.12

7000 Series Ermeto



NOTE: "H" is dimension of fittings assembled to hand tight condition.

NOTE: Illustration shows fitting fully assembled.

Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	2
Thread Size-B	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1 1/16-12	1 3/16-12	1 5/16-12	1 5/8-12	1 7/8-12	2 1/2-12
Seat Depth-K	.19	.24	.24	.26	.26	.31	.36	.36	.36	.42	.42	.49	.49
H (Ref.)	.31	.30	.39	.41	.47	.48	.53	.55	.53	.63	.56	.61	.64

• Typical Application

Hydraulic, instrumentation and chemical processing systems. Highly recommended for high pressure applications.

• Pressure

Operating pressure up to 10,000 psi depending on tube and fitting size. See steel fittings recommendations, pages 285.

• Vibration

Excellent resistance.

• Temperature Range

-65°F to +400°F (-53°C to +204°C) at maximum operating pressures. Has been used at 800°F and 1000 psi to 4000 psi depending on tube size. Stainless steel has been used at +1000°F and 2000 psi.

• Material

Carbon Steel - AISI/SAE 12L14

Plating - Black Zinc Phosphate

Stainless Steel - Bodies and nuts: type 316. Sleeves: 17-4PH.

• Used With

Aluminum, hard or half copper, steel, stainless steel, monel, titanium and extra heavy wall tubing that cannot be flared.

• Advantages

An excellent high pressure fitting - NO TUBE FLARING. Used with extra heavy wall tubing. Broad selection of sizes and styles.

• Conformance

Meets specifications and standards of ASA, ASME and SAE.

• How to Order

For complete assembly (body, nut sleeve) order individually by part number. Example: 7205x4. To order body only (less nut and sleeve), prefix the part number with the letter Example: B7205x4. Nuts and sleeves can be ordered separately by part number.

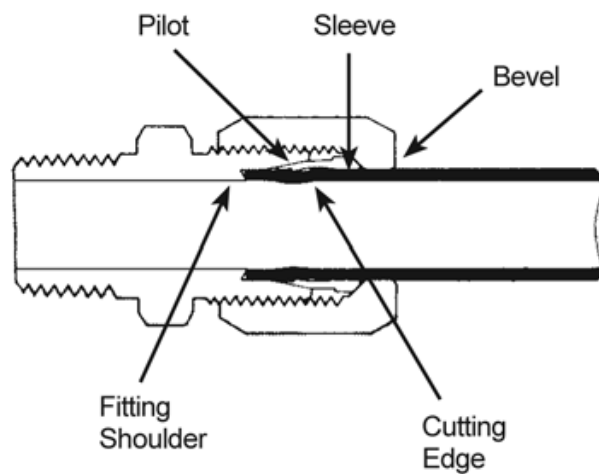
• NOTE

Refer to current price list for availability of cataloged items. Quotations and delivery of non-stock items supplied on request. Configurations and dimensions subject to change without notice. Additional information can found in SAE J514.

• Assembly Instructions

See page 284.

Ermeto Fittings (7000 Series) are especially designed for making leak-proof tube connections. This fitting will effectively withstand high pressure, severe vibration and extreme temperature. No special tools are needed for assembly. Simply cut tube square, preset sleeve on tubing and assemble.



ERMETO Design Principle Provides Positive Seal

1. In presetting, as the nut is tightened it forces the sleeve forward into the body taper. See page 283 for preset instructions.
2. Pilot of sleeve contracts, forcing the cutting edge of sleeve to shear a groove into outer surface of the tube, making a tight joint between fitting and tube.
3. In assembling the preset sleeve and tube into the fitting body, the nut presses on the bevel at rear of sleeve causing it to clamp tightly to the tube. Resistance to vibration is concentrated at this point rather than at the sleeve cut.
4. When fully tightened, the case hardened sleeve is bowed slightly at the midsection and acts as a spring. This spring action of the sleeve maintains a constant tension between the body and the nut, and thus prevents the nut from loosening.
5. After the first assembly, the sleeve is permanently attached to the tube. Disassembly and reassembly of the fitting can be made without loss of strength or sealing qualities.

“7000” Series Fittings

Specifically designed to meet all SAE approved standards for hydraulic flareless tube fittings. Available in a complete range of standard body styles. In addition, the “7000” Series includes all body styles for SAE straight thread o-ring boss mounting. Complete size range to 2”.

Carbon Steel “7000” Series

Eaton Ermeto Fittings have a black zinc phosphate finish, which fully resists the effects of nonflammable hydraulic fluids.

Stainless Steel “7000” Series

Fittings are also available in a complete range of body styles and sizes.

Standard stainless steel assemblies may be ordered by quoting the stainless steel part numbers appearing in this catalog. Standard stainless steel assemblies are composed of the following types of material:

Body - Type 316 Stainless Steel

Nut - Type 316 Stainless Steel

Sleeve - Type 17-4PH Stainless Steel

Any deviation from the standard assembly must be ordered as component parts. Example: If Type 316 bodies and 17-4PH sleeves are to be used, they can be ordered as follows:

B7217x8 Body only (Type 316 Stainless Steel)

7176x8 Sleeves (Type 17-4PH Stainless Steel)

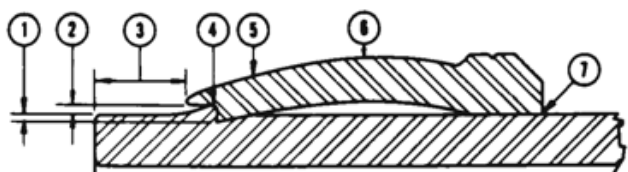
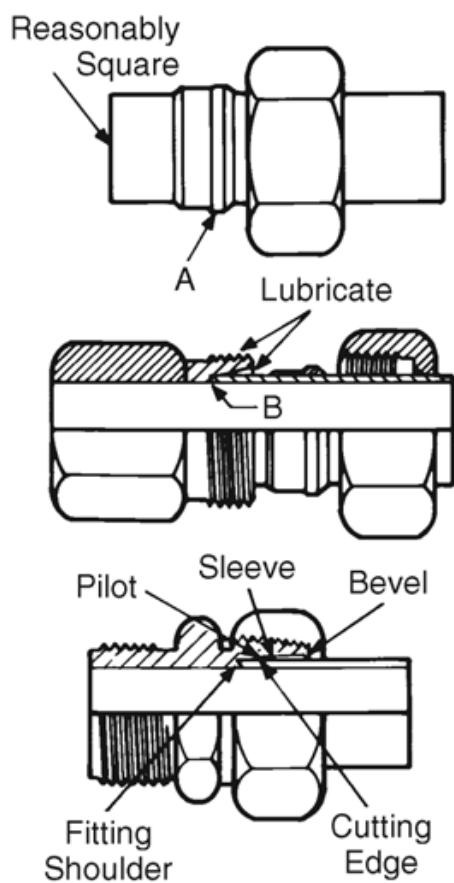
7105x8 Nuts (Standard Carbon Steel)

In general, the “bite-action” of the sleeves in any given material varies as shown in the following table:

Stainless Steel Sleeves

Part No. 7176 sleeves are made from Armco 17-4PH precipitation hardened stainless steel. When used on “fully annealed” to $\frac{1}{8}$ hard tubing in the 303 to 316 stainless range, they provide the typical seal.

“7000” SERIES SLEEVE	SLEEVE MATERIAL	TUBING USED 303 TO 316 STAINLESS AND CUPRO-NICKEL	“BITE-ACTION”
7165	Heat Treated Carbon Steel (Standard Carbon)	Fully annealed to $\frac{1}{8}$ hard	Excellent
7176	17-4PH Stainless (Standard Stainless)	Fully annealed	Excellent



Presetting Operation

Preset with Preset Tool:

1. CAUTION: All stainless steel sleeves should be preset in tool prior to installation.
2. Slide nut and then sleeve on tube. Shoulder of sleeve "A" must be toward nut.
3. Insert tube into presetting tool. Be sure that tube is bottomed on fitting tube stop at point "B". Lubricate threads, seat of fitting and shoulder of sleeve with good grade of lubricant.
4. Turn nut slowly with wrench while turning tube with other hand. When the sleeve grips the tube, that is, when the tube can no longer be turned by hand - STOP - and note the position of the wrench. This is the "Ring Grip" point.
5. Tighten nut an additional number of turns past the ring grip point per tube size and wall thickness as shown in Table 1, page 283.
6. Disassemble from preset tool.

Preset in Fitting Body:

1. Follow same procedure as when presetting with preset tool. Once the fitting nut has been turned the proper number of turns past ring grip, the fitting assembly is complete and ready for use.

NOTE: Only Carbon Steel Sleeves can be preset directly into the fitting body. Due to possible thread galling, the use of presetting tools is required when stainless steel fittings are to be assembled.

Fitting Installation

1. After sleeve and nut have been preset on the tubing and checked as described, the assembly is ready for installation into the Ermeto fitting seat.
2. Lubricate threads, seat of fitting and shoulder of sleeve with a good grade of lubricant compatible with system fluid.
3. Insert tube assembly into fitting and tighten nut until sharp rise in torque is felt.
4. Starting at the position of sharp torque rise, tighten nut $\frac{1}{4}$ turn to complete assembly.

When the assembly procedure for Ermeto fittings is followed correctly, these points will be evident:

1. Cutting edge of sleeve will be imbedded in tubing to its full depth.
2. Pilot edge of sleeve should be close to or touching O.D. of tubing.
3. Distance between end of tube and leading or pilot edge of sleeve will be at least $\frac{1}{8}$ ".
4. Metal will be piled ahead of cutting edge of sleeve under pilot.
5. Contact area of sleeve will show evidence of being in perfect contact with tapered seat of fitting.
6. Sleeve will show evidence of being bowed within its elastic limits.
7. Back of sleeve will be in contact with tube.

NOTE: Performance of fitting will not be affected if sleeve rotates on tube after disassembly.

For Re-Installation of Fitting After Disassembly

1. Insert tube assembly into fitting, tighten nut until a sharp rise in torque is felt.
2. Starting at the position of sharp torque rise, tighten nut $\frac{1}{4}$ turn to complete the reinstallation.

**TABLE 1: Number of Additional Turns from “Ring Grip”
for Hand Presetting Operation-Ermeto Sleeve**

Tube Size	Tube Material **	TUBE WALL THICKNESS									
		.018	.022	.028	.035	.049	.065	.083	.095	.109	.120
2	C 1010 MIL T 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6						
3	C 1010 MIL T 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1 1						
4	C 1010 MIL T 8504			1-1/6 1-1/6	1-1/6 1	1-1/6 1	1 5/6				
5	C 1010 MIL T 8504			1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1	1 1				
6	C 1010 MIL T 8504				1-1/6 1-1/6	1-1/6 5/6	1 5/6	1 1			
8	C 1010 MIL T 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6	1 5/6		
10	C 1010 MIL T 8504					1-1/6 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6	5/6
12	C 1010 MIL T 8504					1 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6 5/6	
16	C 1010 MIL T 8504					1-1/6	1-1/6 1-1/6	5/6 1-1/6	5/6 5/6	5/6 5/6	5/6
20	C 1010 MIL T 8504					1-1/6 1	1 1	1 1	1 1	5/6 5/6	5/6 5/6
24	C 1010 MIL T 8504								1	1	1
32	C 1010 MIL T 8504								1	1	1

** C 1010 - Carbon Steel Tubing

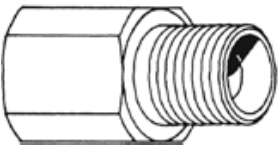
** MIL T 8504 - Annealed Stainless Steel

**Ermeto Hand Presetting Tools
7000 Series**



Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting steel Ermeto sleeves on tubing prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. Due to possible thread galling, the use of presetting tools is required when assembling stainless steel fittings.

**Metric Flareless
Hand Presetting Tools**



Presetting tools provide a more accurate and positive leak-proof method of coupling flareless fittings. Presetting the steel metric sleeves prior to fitting assembly will permit the maximum high performance obtainable with flareless fittings. These tools are available for both the Light (DIN 3901/3902L) and Heavy (DIN 3901/3902S) flareless series.

CATALOG NUMBER	TUBE O.D. (INCHES)	THREAD SIZE
T-7002	1/8	5/16-24
T-7003	3/16	3/8-24
T-7004	1/4	7/16-20
T-7005	5/16	1/2-20
T-7006	3/8	9/16-18
T-7008	1/2	3/4-16
T-7010	5/8	7/8-14
T-7012	3/4	1 1/16-12
T-7016	1	1 5/16-12
T-7020	1-1/4	1 5/8-12
T-7024	1-1/2	1 7/8-12
T-7032	2	2 1/2-12

Light Series 3901/3902L

CATALOG NUMBER	TUBE O.D. (MM)	THREAD SIZE
TL-7008	8	M14x1.5
TL-7010	10	M16x1.5
TL-7012	12	M18x1.5
TL-7015	15	M22x1.5
TL-7018	18	M26x1.5
TL-7022	22	M30x2.0
TL-7028	28	M36x2.0

Heavy Series 3901/3902S

CATALOG NUMBER	TUBE O.D. (MM)	THREAD SIZE
TH-7008	8	M16x1.5
TH-7010	10	M18x1.5
TH-7012	12	M20x1.5
TH-7014	14	M22x1.5
TH-7016	16	M24x1.5
TH-7020	20	M30x2.0
TH-7025	25	M36x2.0
TH-7030	30	M42x2.0

Hydraulic Pressure Data - ERMETO Flareless Fittings

Ermeto® fittings have been used with success on many and varied applications far exceeding the conservative conditions presented below. Specifically:

- Temperatures up to 800°F, in carbon steel and 1000°F, in stainless steel have been handled without failure.*
- Burst pressures up to 32,000 psi with 1/4" tubing.
- Vibration conditions of 1/8" off-center amplitude with 12" overhang in 1/4" tubing have been withstood at rated operating pressure with 4-to-1 safety factors for over ten million cycles.

Obviously under extreme conditions of pressure, temperature and/or vibration, the safety factor is proportionately reduced.

The Ermeto flareless fitting is the ultimate hydraulic fitting available today. Special performance conditions as outlined can be accommodated; however, it is recommended that your local Eaton representative be consulted for engineering assistance prior to finalizing design.

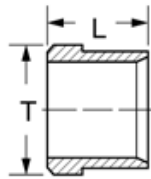
The values shown in the following table are pressure ratings of Ermeto flareless fittings under various surge conditions. They apply and are recommended for conservative operating conditions.

Size No.	Size in Inches	Maximum Pressure† No Surges PSI	Maximum Pressure† With Surges to 50%	Maximum Pressure† With Surges of 50% to 100%	Maximum Pressure† With Surges up to 150%
2	1/8	10,000	6,500	5,000	4,000
3	3/16	9,000	6,000	4,500	3,600
4	1/4	8,000	5,250	4,000	3,200
5	5/16	8,000	5,250	4,000	3,200
6	3/8	7,500	5,000	3,750	3,000
8	1/2	7,000	4,500	3,500	2,700
10	5/8	5,000	3,250	2,500	2,000
12	3/4	5,000	3,250	2,500	2,000
14	7/8	3,750	2,500	1,800	1,500
16	1	3,600	2,400	1,800	1,400
20	1 1/4	3,200	2,100	1,600	1,275
24	1 1/2	3,000	2,000	1,500	1,200
32	2	2,750	1,800	1,350	1,100

†Pressures shown do not apply to pneumatic applications or stainless steel tubing installations.
*Zinc plating discolors at temperatures over 400°F and melts at 750°F.

Sleeve-Part No. 7165x

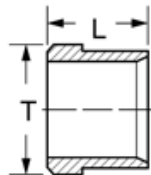
Stainless Steel No. 7176x
(Ref. SAE No. 080115B)



Sleeve-Part No. 8165x

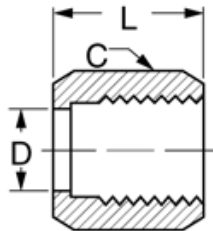
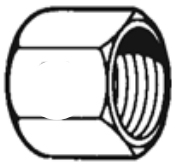


For use with diesel nuts only.

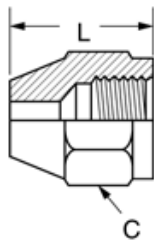
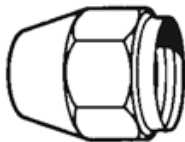


Nut-Part No. 7105x

Stainless Steel No. 7117x
(Ref. SAE No. 080110)

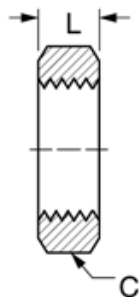
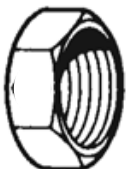


Diesel Nut-Part No. 8112x



Bulkhead Nut-Part No. 7924x

Stainless Steel No. 7936x
(Ref. SAE No. 080118)



Part Number	Tube O.D.	L	Dia. T
7165x2•	1/8	.28	.20
7165x3•	3/16	.28	.31
7165x4•	1/4	.34	.36
7165x5•	5/16	.34	.42
7165x6•	3/8	.38	.48
7165x8•	1/2	.38	.63
7165x10•	5/8	.42	.75
7165x12•	3/4	.42	.88
7165x14•	7/8	.42	1.00
7165x16•	1	.42	1.13
7165x20•	1 1/4	.42	1.41
7165x24•	1 1/2	.42	1.66
7165x32•	2	.45	2.19

Part Number	Tube O.D.	L	Dia. T
8165x4	1/4	.34	.38
8165x5	5/16	.34	.44
8165x6	3/8	.38	.50

Part Number	Tube O.D.	Hex C	L	D Dia.
7105x2•	1/8	3/8	.53	.132
7105x3•	3/16	7/16	.61	.195
7105x4•	1/4	9/16	.70	.257
7105x5•	5/16	5/8	.72	.320
7105x6•	3/8	1 1/16	.75	.382
7105x8•	1/2	7/8	.84	.508
7105x10•	5/8	1	.92	.634
7105x12•	3/4	1 1/4	.97	.759
7105x14•	7/8	1 3/8	1.00	.884
7105x16•	1	1 1/2	1.05	1.009
7105x20•	1 1/4	2	1.05	1.263
7105x24•	1 1/2	2 1/4	1.03	1.513
7105x32•	2	2 7/8	1.12	2.017

Part Number	Tube O.D.	Thread Number	Hex C	L
8112x4	1/4	9/16-18	3/4	.94
8112x5	5/16	5/8-18	1 3/16	1.00
8112x6	3/8	3/4-16	1 5/16	1.13

Part Number	Tube O.D.	Hex C	L
7924x4•	1/4	1 1/16	.28
7924x6•	3/8	1 3/16	.27
7924x8•	1/2	1	.31
7924x10	5/8	1 1/8	.36
7924x12•	3/4	1 3/8	.41
7924x14	7/8	1 1/2	.41
7924x16•	1	1 5/8	.41

• Available in stainless steel.
All measurements are in inches.

SPECIALTY &
TRUCK HOSE

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

ACCESSORIES

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

Cap-Part No. 7129x

Stainless Steel No. 7141x
(Ref. SAE No. 080112)



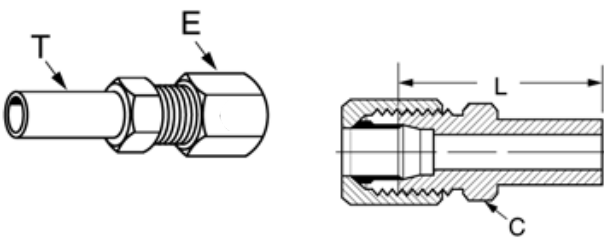
Plug-Part No. 7229x

Stainless Steel No. 7241x
(Ref. SAE No. 080109)



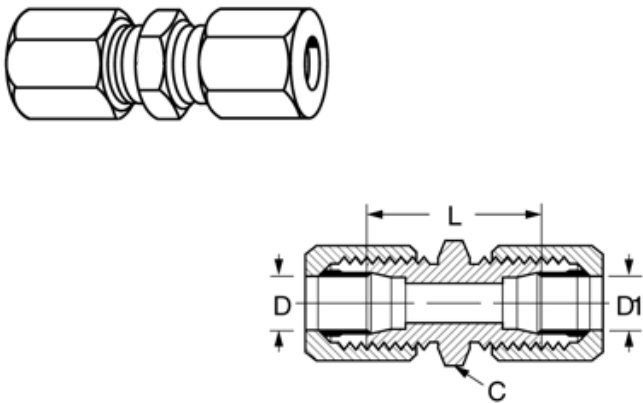
Reducer-Part No. 7015x

Stainless Steel No. 7027x
(Ref. SAE No. 080123)



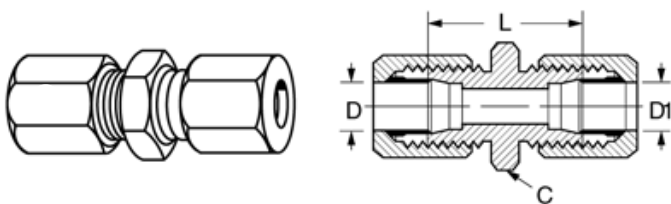
Small Hex Union-Part No. 7305x

Stainless Steel No. 7317x
(Ref. SAE No. 080101)



Large Hex Union-Part No. 7306x

Stainless Steel No. 7318x
(Ref. SAE No. 080119)



Part Tube Number	O.D.	Hex C	L
7129x4•	1/4	9/16	.70
7129x6•	3/8	1 1/16	.75
7129x8•	1/2	7/8	.84
7129x10•	5/8	1	.92
7129x12•	3/4	1 1/4	.97
7129x16•	1	1 1/2	1.05
7129x20	1 1/4	2	1.05

Part Tube Number	O.D.	Hex C	L
7229x2	1/8	7/16	.63
7229x4•	1/4	1/2	.71
7229x5	5/16	9/16	.71
7229x6•	3/8	5/8	.75
7229x8•	1/2	1 3/16	.85
7229x10	5/8	1 5/16	.97
7229x12•	3/4	1 1/8	1.10
7229x16	1	1 3/8	1.10

Part Number	Body size T	Tube Size E	Hex C	L
7015x6x4•	1 3/8	1/4	1/2	1.61
7015x8x4•	1/2	1/4	9/16	1.73
7015x8x6•	1/2	3/8	5/8	1.77
7015x10x8•	5/8	1/2	1 3/16	1.96
7015x12x6•	3/4	3/8	1 3/16	1.93
7015x12x8•	3/4	1/2	1 3/16	2.03
7015x16x12•	1	3/4	1 1/8	2.24
7015x20x16•	1 1/4	1	1 3/8	2.28

Part Number	Tube O.D.	Tube O.D.	Hex C	D	D1	I
7305x2•	1/8	1/8	7/16	.093	.093	1.02
7305x3•	3/16	3/16	7/16	.125	.125	1.11
7305x4•	1/4	1/4	1/2	.203	.203	1.18
7305x5•	5/16	5/16	9/16	.234	.234	1.18
7305x6x4•	3/8	1/4	5/8	.281	.203	1.22
7305x6•	3/8	3/8	5/8	.281	.281	1.24
7305x8x6	1/2	3/8	1 3/16	.422	.281	1.33
7305x8•	1/2	1/2	1 3/16	.422	.422	1.42
7305x10•	5/8	5/8	1 5/16	.500	.500	1.61
7305x12•	3/4	3/4	1 1/8	.656	.656	1.81
7305x14	7/8	7/8	1 1/4	.718	.718	1.81
7305x16•	1	1	1 3/8	.875	.875	1.81
7305x20	1 1/4	1 1/4	1 11/16	1.093	1.093	1.89
7305x24	1 1/2	1 1/2	2	1.344	1.344	1.96
7305x32	2	2	2 5/8	1.813	1.813	2.11

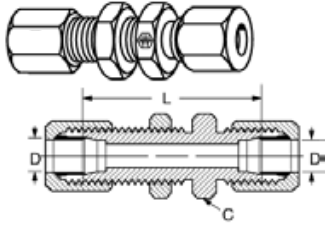
Part Number	Tube O.D.	Tube O.D.	Hex C	D	D1	I
7306x4•	1/4	1/4	1 1/16	.203	.203	1.18
7306x6•	3/8	3/8	1 3/16	.281	.281	1.24
7306x8x6•	1/2	3/8	1	.422	.281	1.33
7306x8•	1/2	1/2	1	.422	.422	1.42
7306xx12•	3/4	3/4	1 3/8	.656	.656	1.81
7306x16	1	1	1 5/8	.875	.875	1.81

• Available in stainless steel.
All measurements are in inches.

Bulkhead Union-Part No. 7325x

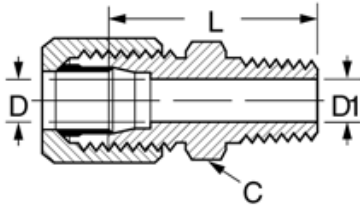
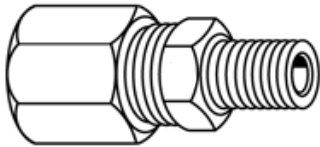
Stainless Steel No. 7337x (Ref. SAE No. 080601)

Bulkhead nut included, for replacement nuts see page 287.



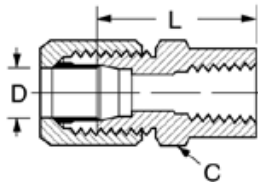
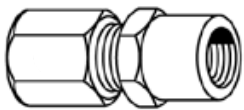
Male Connector-Part No. 7205x

Stainless Steel No. 7217x (Ref. SAE No. 080102))



Female Connector-Part No. 7255x

Stainless Steel No. 7267x (Ref. SAE No. 080103)



Part Number	Tube O.D.	Hex C	D	L
7325x4•	1/4	1 1/16	.203	1.89
7325x6•	3/8	1 3/16	.281	1.98
7325x8•	1/2	1	.422	2.22
7325x12•	3/4	1 3/8	.656	2.72
7325x16	1	1 5/8	.875	2.72

Part Number	Tube O.D.	Male Pipe Thread	Hex C	D1 D	Opt.	L
7205X2•	1/8	1/8	7/16	.093	.188	1.04
7205X2X4•	1/8	1/4	9/16	.093	.281	1.25
7205X3•	3/16	1/8	7/16	.125	.188	1.09
7205X4•	1/4	1/8	1/2	.203	.188	1.12
7205X4X4•	1/4	1/4	9/16	.203	.281	1.32
7205X4X6•	1/4	3/8	3/4	.203	.406	1.33
7205X4X8•	1/4	1/2	7/8	.203	.531	1.58
7205X5•	5/16	1/8	9/16	.234	.188	1.12
7205X5X4•	5/16	1/4	9/16	.234	.281	1.32
7205X6X2•	3/8	1/8	5/8	.281	.188	1.15
7205X6•	3/8	1/4	5/8	.281	.281	1.34
7205X6X6•	3/8	3/8	3/4	.281	.406	1.35
7205X6X8•	3/8	1/2	7/8	.281	.531	1.60
7205X8X4•	1/2	1/4	1 3/16	.422	.281	1.44
7205X8•	1/2	3/8	1 3/16	.422	.406	1.44
7205X8X8•	1/2	1/2	7/8	.422	.531	1.69
7205X8X12•	1/2	3/4	1 1/8	.422	.719	1.76
7205X10X6•	5/8	3/8	1 5/16	.500	.406	1.56
7205X10•	5/8	1/2	1 5/16	.500	.531	1.75
7205X12X8•	3/4	1/2	1 1/8	.656	.531	1.88
7205X12•	3/4	3/4	1 1/8	.656	.719	1.88
7205X14•	7/8	3/4	1 1/4	.718	.719	1.88
7205X16X12•	1	3/4	1 3/8	.875	.719	1.88
7205X16•	1	1	1 3/8	.875	.938	2.07
7205X20	1 1/4	1 1/4	1 11/16	1.093	1.250	2.18
7205X24	1 1/2	1 1/2	2	1.344	1.500	2.28
7205XX32	2	2	2 5/8	1.813	1.938	2.46

Part Number	Fern Tube O.D.	Pipe Thread	Hex C	D	L
7255x2•	1/8	1/8	9/16	.093	1.05
7255x3•	3/16	1/8	9/16	.125	1.08
7255x4•	1/4	1/8	9/16	.203	1.09
7255x4x4•	1/4	1/4	3/4	.203	1.20
7255x5•	5/16	1/8	9/16	.234	1.08
7255x6•	3/8	1/4	3/4	.281	1.31
7255x6x6•	3/8	3/8	7/8	.281	1.40
7255x8x4•	1/2	1/4	7/8	.422	1.38
7255x8•	1/2	3/8	7/8	.422	1.47
7255x8x8•	1/2	1/2	1 1/8	.422	1.63
7255x10	5/8	1/2	1 1/8	.500	1.76
7255x12•	3/4	3/4	1 3/8	.656	1.89
7255x14	7/8	3/4	1 3/8	.718	1.86
7255x16•	1	1	1 5/8	.875	2.13
7255x20	1 1/4	1 1/4	2	1.093	2.22

• Available in stainless steel.

All measurements are in inches.

SPECIALTY &
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HIGH PRESSURE HOSE

HOSE FITTINGS

ADAPTERS &
TUBE FITTINGS

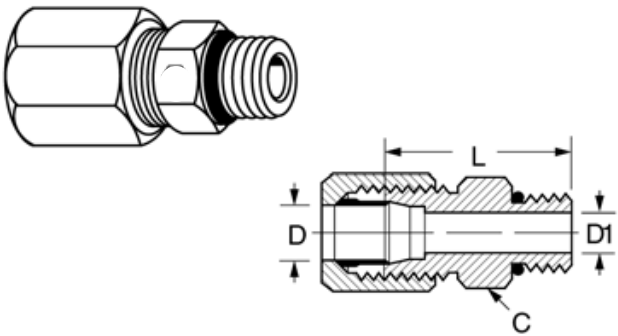
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

APPENDICES

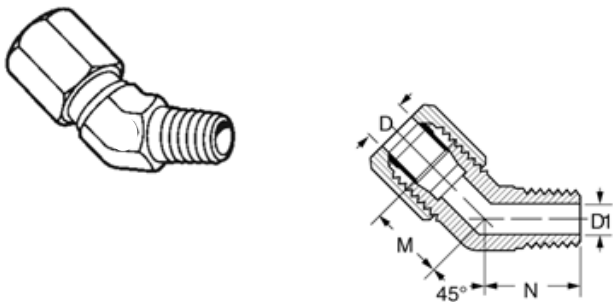
Straight Thread O-Ring Connector-Part No. 7315x

Stainless Steel No. 7327x
(Ref. SAE No. 080120)



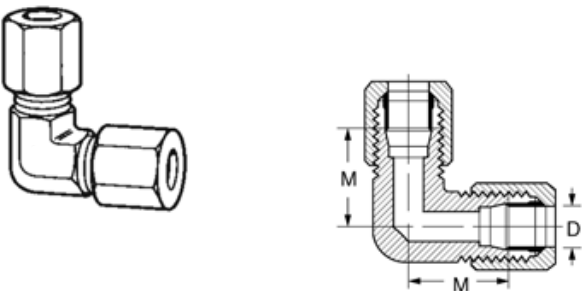
Part Number	Tube O.D.	Port Size	Hex C	D	L	D1 Opt.
7315x3	³ / ₁₆	³ / ₁₆	¹ / ₂	.125	1.04	-
7315x4•	¹ / ₄	¹ / ₄	⁹ / ₁₆	.203	1.13	-
7315x4x5•	¹ / ₄	⁵ / ₁₆	⁵ / ₈	.203	1.13	-
7315x4x6•	¹ / ₄	³ / ₈	^{1 1} / ₁₆	.203	1.19	.281
7315x5	⁵ / ₁₆	⁵ / ₁₆	⁵ / ₈	.234	1.13	-
7315x6•	³ / ₈	³ / ₈	^{1 1} / ₁₆	.281	1.21	-
7315x6x8	³ / ₈	¹ / ₂	⁷ / ₈	.281	1.29	.422
7315x8•	¹ / ₂	¹ / ₂	⁷ / ₈	.422	1.38	-
7315x8x10	¹ / ₂	⁵ / ₈	1	.422	1.51	.500
7315x8x12•	¹ / ₂	³ / ₄	^{1 1} / ₄	.422	1.67	.656
7315x10•	⁵ / ₈	⁵ / ₈	1	.500	1.57	-
7315x12•	³ / ₄	³ / ₄	^{1 1} / ₄	.656	1.79	-
7315x12x16	³ / ₄	1	^{1 1} / ₂	.656	1.82	.876
7315x14	⁷ / ₈	⁷ / ₈	^{1 3} / ₈	.718	1.79	-
7315x16x12	1	³ / ₄	^{1 1} / ₂	.875	1.82	.656
7315x16•	1	1	^{1 1} / ₂	.875	1.82	-
7315x20	^{1 1} / ₄	^{1 1} / ₄	^{1 7} / ₈	1.093	1.90	-
7315x24	^{1 1} / ₂	^{1 1} / ₂	^{2 1} / ₈	1.344	1.97	-
7315x32	2	2	^{2 3} / ₄	1.813	2.13	-

45° Male Elbow-Part No. 7355x
(Ref. SAE No. 080302)



Part Number	Tube O.D.	Male Pipe Thread	D	D1	M	N	Across Flats
7355x4	¹ / ₄	¹ / ₈	.203	.188	.70	.64	⁷ / ₁₆
7355x4x4	¹ / ₄	¹ / ₄	.203	.281	.83	.86	⁹ / ₁₆
7355x5	⁵ / ₁₆	¹ / ₈	.234	.188	.75	.64	⁹ / ₁₆
7355x6	³ / ₈	¹ / ₄	.281	.281	.83	.86	⁹ / ₁₆
7355x8	¹ / ₂	³ / ₈	.422	.406	.98	.95	³ / ₄
7355x10	⁵ / ₈	¹ / ₂	.500	.531	1.08	1.17	⁷ / ₈
7355x12	³ / ₄	³ / ₄	.656	.719	1.27	1.20	^{1 1} / ₁₆
7355x16	1	1	.875	.938	1.36	1.48	^{1 5} / ₁₆

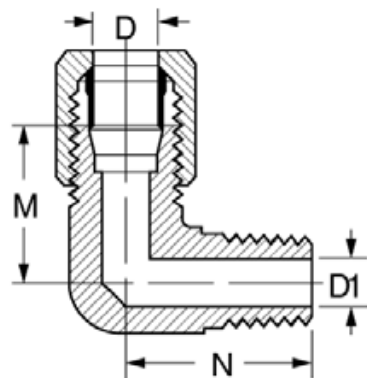
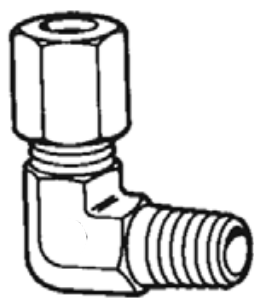
90° Union Elbow-Part No. 7505x
(Ref. SAE No. 080201)



Part Number	Tube O.D.	D	M	Across Flats
7505x4	¹ / ₄	.203	.89	⁷ / ₁₆
7505x5	⁵ / ₁₆	.234	.95	¹ / ₂
7505x6	³ / ₈	.281	1.05	⁹ / ₁₆
7505x8	¹ / ₂	.422	1.25	³ / ₄
7505x10	⁵ / ₈	.500	1.42	⁷ / ₈
7505x12	³ / ₄	.656	1.58	^{1 1} / ₁₆
7505x14	⁷ / ₈	.718	1.66	^{1 5} / ₁₆
7505x16	1	.875	1.73	^{1 5} / ₁₆
7505x20	^{1 1} / ₄	1.093	1.89	^{1 5} / ₈
7505x24	^{1 1} / ₂	1.346	2.02	^{1 7} / ₈

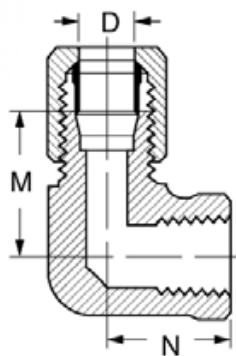
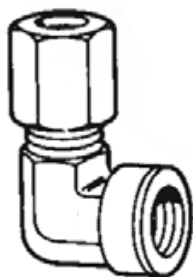
• Available in stainless steel.
All measurements are in inches.

90° Male Elbow-Part No. 7405x
(Ref. SAE No. 080202)



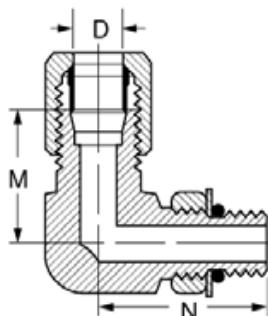
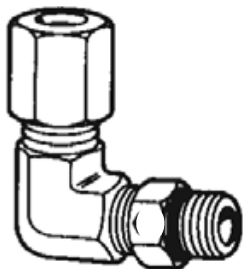
Part Number	Tube O.D.	Male Pipe Thread	D	D1	M	N	Across Flats
7405x2	1/8	1/8	.093	.188	.77	.72	7/16
7405x3	3/16	1/8	.125	.188	.83	.72	7/16
7405x4	1/4	1/8	.203	.188	.89	.78	7/16
7405x4x4	1/4	1/4	.203	.281	1.03	1.09	9/16
7405x5	5/16	1/8	.234	.188	.95	.81	1/2
7405x5x4	5/16	1/4	.234	.281	1.03	1.09	9/16
7405x6x2	3/8	1/8	.281	.188	1.05	.90	9/16
7405x6	3/8	1/4	.281	.281	1.05	1.09	9/16
7405x6x6	3/8	3/8	.281	.406	1.16	1.22	3/4
7405x6x8	3/8	1/2	.281	.531	1.24	1.47	7/8
7405x8x4	1/2	1/4	.422	.281	1.25	1.22	3/4
7405x8	1/2	3/8	.422	.406	1.25	1.22	3/4
7405x8x8	1/2	1/2	.422	.531	1.35	1.47	7/8
7405x10x6	5/8	3/8	.500	.406	1.42	1.28	7/8
7405x10	5/8	1/2	.500	.531	1.42	1.47	7/8
7405x12x8	3/4	1/2	.656	.531	1.58	1.59	1 1/16
7405x12	3/4	3/4	.656	.719	1.58	1.59	1 1/16
7405x14	7/8	3/4	.718	.719	1.62	1.69	1 5/16
7405x16x12	1	3/4	.875	.719	1.73	1.78	1 5/16
7405x16	1	1	.875	.938	1.73	1.97	1 5/16
7405x20	1 1/4	1 1/4	1.093	1.250	1.89	2.38	1 5/8
7405x24	1 1/2	1 1/2	1.344	1.500	2.02	2.64	1 7/8
7405x32	2	2	1.813	1.938	2.45	3.00	2 9/16

90° Female Elbow-Part No. 7455x
(Ref. SAE No. 080203)



Part Number	Tube O.D.	Fem. Pipe Thread	D	M	N	Across Flats
7455x4	1/4	1/8	.203	.89	.66	9/16
7455x4x4	1/4	1/4	.203	1.03	.88	3/4
7455x6	3/8	1/4	.281	1.05	.88	3/4
7455x6x6	3/8	3/8	.281	1.14	1.02	7/8
7455x8	1/2	3/8	.422	1.23	1.02	7/8
7455x8x8	1/2	1/2	.422	1.35	1.23	1 1/16
7455x10	5/8	1/2	.500	1.42	1.23	1 1/16
7455x12	3/4	3/4	.656	1.58	1.36	1 5/16
7455x14	7/8	3/4	.718	1.66	1.42	1 5/16
7455x16	1	1	.875	1.73	1.62	1 5/8

90° Elbow - Straight Thread O-Ring-Part No. 7515x
(Ref. SAE No. 080220)



Part Number	Tube O.D.	Port Size	D	M	N	Across Flats
7515x4	1/4	1/4	.203	.89	1.03	7/16
7515x5	5/16	5/16	.234	.96	1.13	9/16
7515x6	3/8	3/8	.281	1.05	1.25	9/16
7515x8	1/2	1/2	.422	1.25	1.45	3/4
7515x10	5/8	5/8	.500	1.42	1.70	7/8
7515x12	3/4	3/4	.656	1.58	1.94	1 1/16
7515x16x12	1	3/4	.875	1.73	2.05	1 5/16
7515x16	1	1	.875	1.73	2.05	1 5/16
7515x20	1 1/4	1 1/4	1.093	1.89	2.25	1 5/8

• Available in stainless steel.
All measurements are in inches.

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HOSE FITTINGS

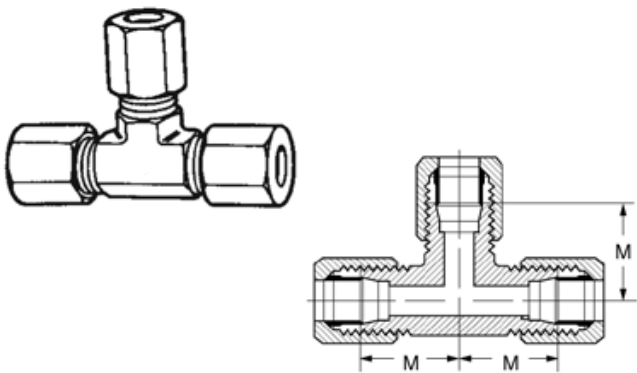
ADAPTERS &
TUBE FITTINGS

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

HOSE ASSEMBLY
EQUIPMENT

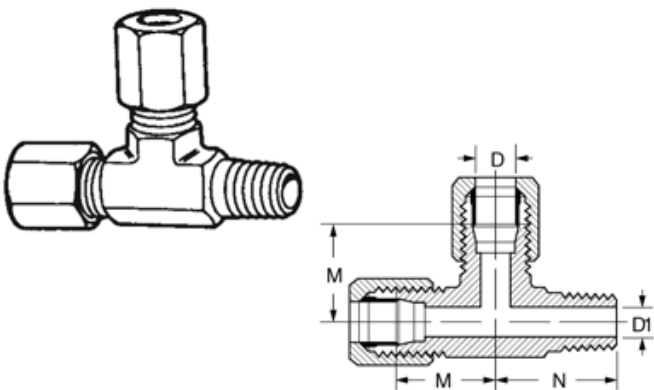
APPENDICES

Union Tee-Part No. 7717x
(Ref. SAE No. 080401)



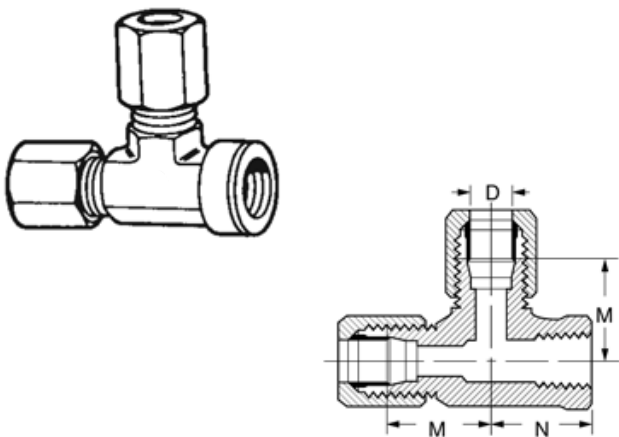
Part Number	Tube O.D.	D	M	Across Flats
7705x3	$\frac{3}{16}$	.125	.83	$\frac{7}{16}$
7705x4	$\frac{1}{4}$	.203	.89	$\frac{7}{16}$
7705x5	$\frac{5}{16}$	.234	.95	$\frac{9}{16}$
7705x6	$\frac{3}{8}$	.281	1.05	$\frac{9}{16}$
7705x8	$\frac{1}{2}$	.422	1.25	$\frac{3}{4}$
7705x10	$\frac{5}{8}$	.500	1.42	$\frac{7}{8}$
7705x12	$\frac{3}{4}$	.656	1.58	$1\frac{1}{16}$
7705x14	$\frac{7}{8}$	.718	1.62	$1\frac{5}{16}$
7705x16	1	.875	1.73	$1\frac{5}{16}$

Male Run Tee-Part No. 7755x
(Ref. SAE No. 080424)



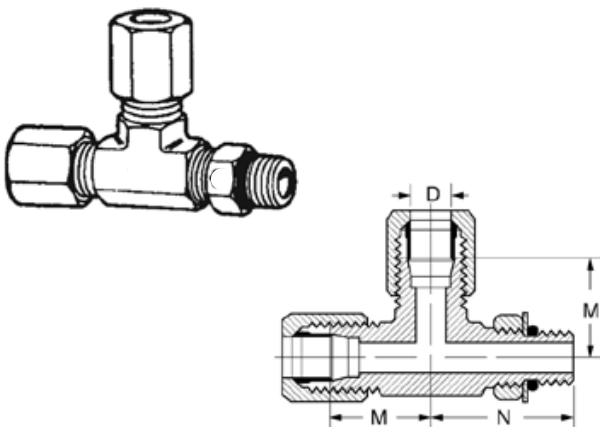
Part Number	Tube O.D.	Male Pipe Thread	D	D1	M	N	Across Flats
7755x4	$\frac{1}{4}$	$\frac{1}{8}$	.203	.188	.89	.78	$\frac{7}{16}$
7755x4x4x4	$\frac{1}{4}$	$\frac{1}{4}$	.203	.281	1.03	1.09	$\frac{9}{16}$
7755x6	$\frac{3}{8}$	$\frac{1}{4}$	.281	.281	1.05	1.09	$\frac{9}{16}$
7755x8	$\frac{1}{2}$	$\frac{3}{8}$	.422	.422	1.25	1.22	$\frac{3}{4}$
7755x8x8x8	$\frac{1}{2}$	$\frac{1}{2}$	.422	.531	1.35	1.47	$\frac{7}{8}$
7755x10	$\frac{5}{8}$	$\frac{1}{2}$	.500	.531	1.42	1.47	$\frac{7}{8}$
7755x12	$\frac{3}{4}$	$\frac{3}{4}$	.656	.719	1.58	1.59	$1\frac{1}{16}$
7755x16	1	1	.875	.938	1.73	1.97	$1\frac{5}{16}$

Female Run Tee-Part No. 7805x



Part Number	Tube O.D.	Fem. Pipe Thread	D	M	N	Across Flats
7805x4	$\frac{1}{4}$	$\frac{1}{8}$	.203	.89	.66	$\frac{9}{16}$
7805x4x4x4	$\frac{1}{4}$	$\frac{1}{4}$	.203	1.03	.88	$\frac{3}{4}$
7805x6	$\frac{3}{8}$	$\frac{1}{4}$	.281	1.05	.88	$\frac{3}{4}$
7805x8	$\frac{1}{2}$	$\frac{3}{8}$	.422	1.23	1.02	$\frac{7}{8}$
7805x10	$\frac{5}{8}$	$\frac{1}{2}$	.500	1.42	1.23	$1\frac{1}{16}$
7805x12	$\frac{3}{4}$	$\frac{3}{4}$	.656	1.58	1.36	$1\frac{5}{16}$

Straight Thread O-Ring Run Tee-Part No. 7716x
(Ref. SAE No. 080428)

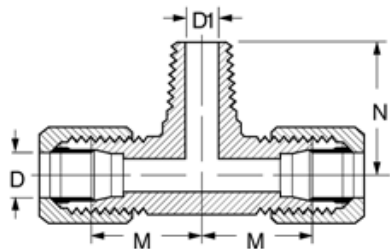
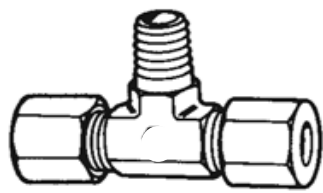


Part Number	Tube O.D.	Port Size	D	M	N	Across Flats
7716x4	$\frac{1}{4}$	$\frac{1}{4}$	.203	.89	1.03	$\frac{7}{16}$
7716x6	$\frac{3}{8}$	$\frac{3}{8}$	.281	1.05	1.25	$\frac{9}{16}$
7716x8	$\frac{1}{2}$	$\frac{1}{2}$	.422	1.25	1.45	$\frac{3}{4}$

All measurements are in inches.

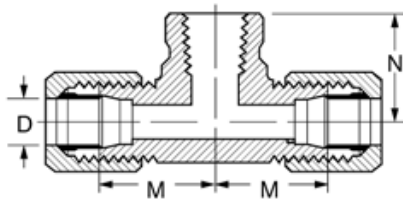
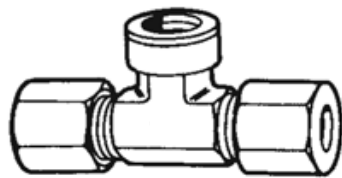
Male Branch Tee-Part No. 7605x

(Ref. SAE No. 080425)



Female Branch Tee-Part No. 7655x

(Ref. SAE No. 080427)



Part Number	Tube O.D.	Male Pipe Thread	D	D1	M	N	Across Flats
7605x4	1/4	1/8	.203	.188	.89	.78	7/16
7605x4x4x4	1/4	1/4	.203	.281	1.03	1.09	9/16
7605x5	5/16	1/8	.234	.188	.95	.81	9/16
7605x6	3/8	1/4	.281	.281	1.05	1.09	9/16
7605x8	1/2	3/8	.422	.406	1.25	1.22	3/4
7605x8x8x8	1/2	1/2	.422	.531	1.35	1.47	7/8
7605x10	5/8	1/2	.500	.531	1.42	1.47	7/8
7605x12	3/4	3/4	.656	.719	1.58	1.59	1 1/16
7605x16	1	1	.875	.938	1.73	1.97	1 5/16

Part Number	Tube O.D.	Fem. Pipe Thread	D	M	N	Across Flats
7655x4	1/4	1/8	.203	.89	.66	9/16
7655x4x4x4	1/4	1/4	.203	1.03	.88	3/4
7655x6	3/8	1/4	.281	1.05	.88	3/4
7655x8	1/2	3/8	.422	1.23	1.02	7/8
7655x10	5/8	1/2	.500	1.42	1.23	1 1/16
7655x12	3/4	3/4	.656	1.58	1.36	1 5/16
7655x14	7/8	3/4	.718	1.62	1.42	1 5/16
7655x16	1	1	.875	1.73	1.62	1 5/8
7655x20	1 1/4	1 1/4	1.093	2.08	1.70	1 7/8

All measurements are in inches.

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