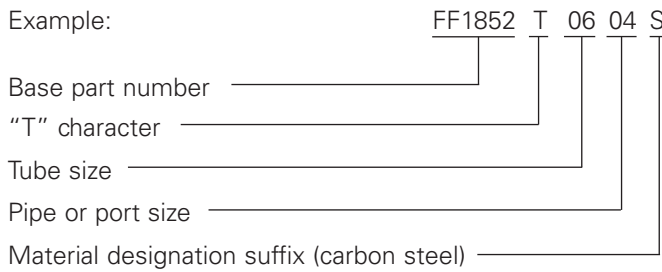


Adapters New to Eaton Weatherhead

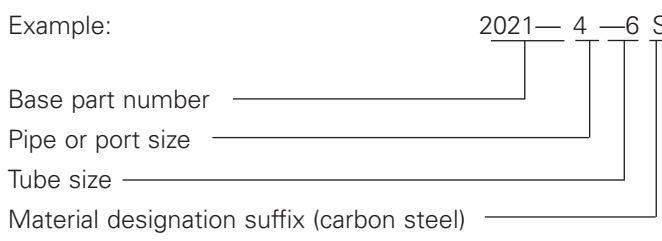
How to Order

New Eaton 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.

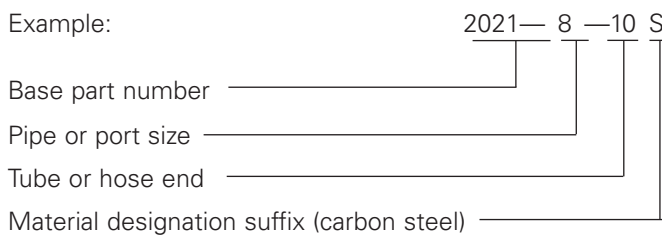


If the part number does not contain a "T" character between the base number and the size description, the first size designation signifies the port size.



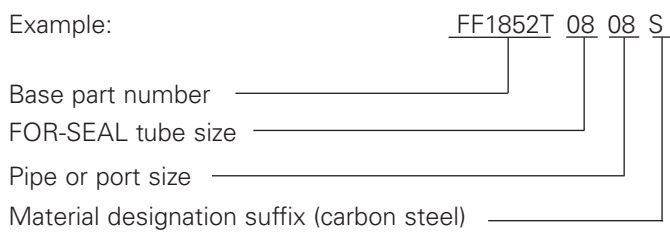
How to Order New Eaton Adapters

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

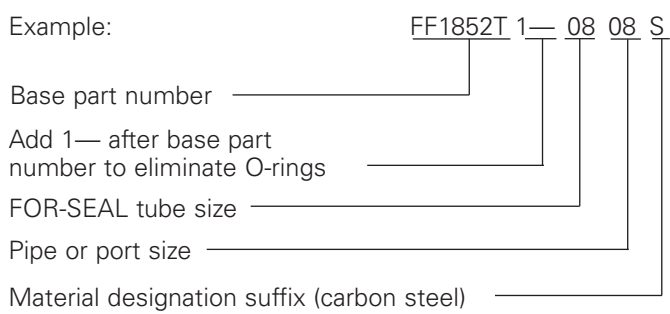


How to order FOR-SEAL Adapters and Tube Fittings

FOR-SEAL tube fitting body with O-ring, locknut and washer, where applicable.



FOR-SEAL tube fitting body without O-rings



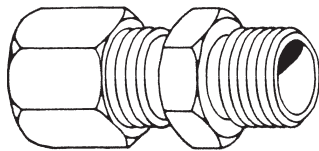
Steel Adapters Introduction

Materials

Eaton connectors are available in a variety of alloys on special order.

Carbon Steel Adapters – are precision machined from AISI 12L14 carbon steel. Shaped Adapters such as elbows and tees with a “C” prefix are made from hi-density forgings. Shaped Adapters with a “TF” prefix are brazed. Straight Adapters made from bar stock.

Stainless Steel Adapters – are made from type 316 stainless. Standard Ermeto flareless sleeves are made from 17-4PH precipitation hardened stainless.



Finishes

Weathercote™ – is an Eaton trademark for a protective coating that far exceeds the minimum requirements of the

SAE specifications for a corrosion resistant finish for use with petroleum-based, synthetic, and water-based hydraulic fluids. It is readily identified by its dark appearance. Weathercote is an amorphous phosphate coating covered with a soluble rust-proof film resulting in a coating of .0002" thick, yet providing full protection against electrolytic action, thread seizure or corrosive action of hydraulic fluids.

The lubricity of the rust-proof solvent film measurably reduces the amount of torque required to make leak-proof connections.

Zinc Plated – Eaton connectors are given a coating .0002" thick minimum.

Stainless Steel – Stainless Steel Adapters are supplied with natural surface finish except tube nuts which are coated with a bonded dry-film lubricant (black) to reduce assembly torque and prevent galling of threads. All Eaton Stainless Steel Adapters are

passivated to remove microscopic foreign particles from the surface of stainless steel as required. Process also leaves a film of corrosion protection.

Hydraulic Fluids

Modern hydraulic systems in use today employ a wide variety of high quality hydraulic fluids. There are three principle types in general use today – each best suited for particular conditions. They are discussed here briefly to clarify the fitting finishes compatible with each type.

Petroleum or Mineral Oil Based

Hydraulic Fluids – are good general purpose fluids available in a full range of viscosity specified as SAE 10, 20, 30, etc. These fluids are not fire resistant making them unsuitable for use where there is a potential source of ignition. Eaton Connectors can be used with these fluids.

Straight Synthetic Hydraulic Fluids – is a general term applied to such products as Pydraul, Lindol, Cellulubes 90, 150, 180, 220, etc. where fire hazards are high. Weathercote-finish Connectors are recommended for this type of fluid. O-Rings MUST be made of a “Butyl” compound, or they will “swell” when contacted by synthetic fluids.

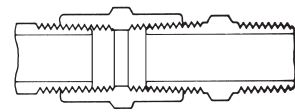
Water-Based Hydraulic Fluids – consist generally of a mixture of water and poly-glycols. They are non-flammable and serve the same purpose as the synthetic types. **Only Weathercote-finish Connectors are recommended for this type of fluid.** Zinc plate finishes will be dissolved by water-based fluids and damage to expensive components may result. These water-based fluids are usually less expensive than synthetic fluids and have little or no detrimental effects on Buna-N compounds used in O-Rings.

O-Ring Compound and Application Chart

O-RING CATALOG NUMBER	BASE MATERIAL OF COMPOUND	PETROLEUM & MINERAL OIL-BASED HYDRAULIC FLUIDS	STRAIGHT SYNTHETIC HYDRAULIC FLUIDS	WATER-BASED HYDRAULIC FLUIDS (POLY-GLYCOLS)	LUBRICATING OILS		DUROMETER HARDNESS	TEMP RANGE °F	
					AIR	WATER			
_x252*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
2018x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
4629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
MB7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
M7629x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	90	-40° to +250°
ZW747x*	Buna-N	Excellent	Unsuitable	Good	Excellent	Good	Excellent	70	-40° to +250°

*Standard O-Ring complies with SAE J-515 Type CH and ASTM specifications D2000. All standard Eaton connectors are supplied with this type O-Ring, unless otherwise specified. (Viton O-Rings are available as special order items only).

Steel Adapters



Ordering Information:

Each adapter is ordered individually by catalog number.

Typical Application: Grease, instrumentation and most hydraulic systems.

Pressure: See chart below.

Vibration Rating:

Fair resistance.

Material:

Carbon steel – AISI/SAE 12L14
Stainless steel – Type 316

Plating: Zinc; yellow finish.

Temperature:

-65°F to +400°F

Advantages: Dryseal pipe threads (NPTF), zinc plate, compact size, and broad selection of styles and sizes.

Conformance:

Meets SAE specifications.

Note:

See page 408 for hydraulic O-Ring assortment.

Label Set: FS-2000 (Adhesive)

PIPE SIZE	1/16	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11 1/2	1 1/4-11 1/2	1 1/2-11 1/2	2-11 1/2

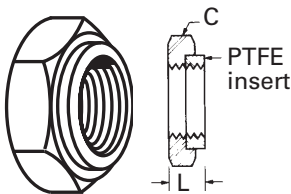
Forged Hose Ends and Adaptors Pipe Hose Ends 3000 Series Pressure Rating Chart

CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)	6000	5000	5000	4000	4000	4000	3000	2500	2500
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1500	1500	1000

Brazed Hose Ends (TF) Pipe Hose Ends 3000 Series Pressure Rating Chart

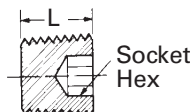
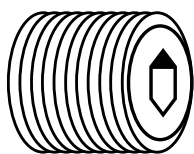
CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)	6000	5000	5000	4000	4000	4000	3000	2500	2500
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1500	1500	1000

Seal-Nut For Male Pipe Thread



PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8	C3059x2	5/8	.15
1/4	C3059x4	3/4	.25
3/8	C3059x6	7/8	.25
1/2	C3059x8	1-1/8	.25
3/4	C3059x12	1-5/16	.25
1	C3059x16	1-5/8	.34

Hex Socket Plug



MALE PIPE THREAD	CATALOG NUMBER	SOCKET HEX	L
1/16	C3169x1	5/32	.31
1/8	C3169x2	3/16	.30
1/4	C3169x4	1/4	.46

Steel Adapters

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

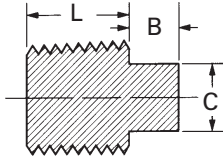
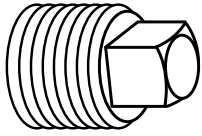
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

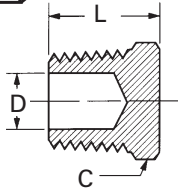
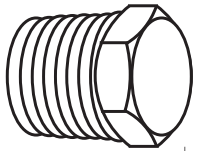
Square Head Plug Thread



MALE PIPE THREAD	CATALOG NUMBER	B	C	L
1/8	C3179x2	.25	9/32	.34
1/4	C3179x4	.29	3/8	.51
3/8	C3179x6	.32	7/16	.51
1/2	C3179x8	.40	9/16	.68
3/4	C3179x12	.46	5/8	.69
1	C3179x16	.52	13/16	.85

Hex Head Plug

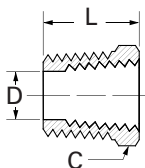
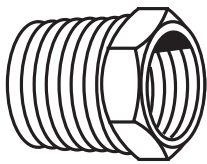
Stainless Steel No. 3171x



MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	D OPT. DIA.
1/8	C3159x2•	7/16	.56	.156
1/4	C3159x4•	9/16	.68	.250
3/8	C3159x6•	11/16	.78	.375
1/2	C3159x8•	7/8	.98	.500
3/4	C3159x12	1-1/8	1.06	.690
1	C3159x16	1-3/8	1.25	.875
1-1/4	C3159x20	1-3/4	1.56	–
1-1/2	C3159x24	2	1.62	–
2	C3159x32	2-1/2	1.75	–

Bushing

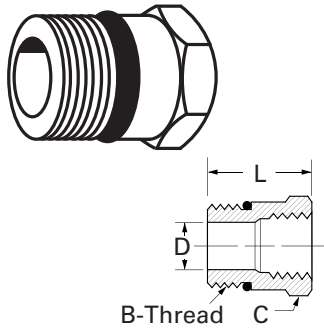
Stainless Steel No. 3121x
(Ref. SAE No. 140140)



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/4	1/8	C3109x4x2•	5/8	.322	.85
3/8	1/8	C3109x6x2•	3/4	.332	.85
3/8	1/4	C3109x6x4•	3/4	.438	.85
1/2	1/8	C3109x8x2•	7/8	.332	1.10
1/2	1/4	C3109x8x4•	7/8	.438	1.10
1/2	3/8	C3109x8x6•	7/8	.562	1.10
3/4	1/4	C3109x12x4•	1-1/8	.438	1.17
3/4	3/8	C3109x12x6•	1-1/8	.562	1.17
3/4	1/2	C3109x12x8•	1-1/8	.703	1.17
1	3/8	C3109x16x6	1-3/8	.562	1.36
1	1/2	C3109x16x8•	1-3/8	.703	1.36
1	3/4	C3109x16x12•	1-3/8	.922	1.36
1-1/4	1/2	C3109x20x8	1-3/4	.703	1.47
1-1/4	3/4	C3109x20x12•	1-3/4	.922	1.47
1-1/4	1	C3109x20x16•	1-3/4	1.156	1.47
1-1/2	3/4	C3109x24x12	2	.906	1.58
1-1/2	1	C3109x24x16	2	1.141	1.58
1-1/2	1-1/4	C3109x24x20	2	1.500	1.57
2	1-1/4	C3109x32x20	2-1/2	1.484	1.75
2	1-1/2	C3109x32x24	2-1/2	1.719	1.75

Steel Adapters

Straight Thread O-Ring to Female Pipe Adapter

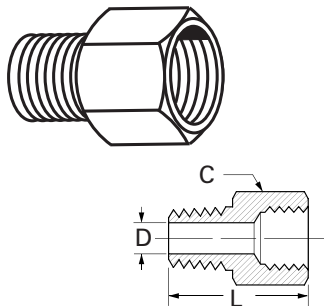


MALE PORT SIZE	FEMALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
1/4	1/8	C3269x4x2	7/16-20	9/16	.172	.97
1/4	1/4	C3269x4x4	7/16-20	3/4	.172	1.16
5/16	1/8	C3269x5x2	1/2-20	5/8	.234	.94
3/8	1/4	C3269x6x4	9/16-18	3/4	.297	1.09
3/8	3/8	C3269x6x6	9/16-18	7/8	.281	1.30
3/8	1/2	C3269x6x8	9/16-18	1-1/8	.281	1.44
1/2	1/4	C3269x8x4	3/4-16	7/8	.421	1.06
1/2	3/8	C3269x8x6	3/4-16	7/8	.421	1.22
1/2	1/2	C3269x8x8	3/4-16	1-1/16	.421	1.50
5/8	1/4	C3269x10x4	7/8-14	1	.422	.81
5/8	3/8	C3269x10x6	7/8-14	1	.500	1.25
5/8	1/2	C3269x10x8	7/8-14	1-1/8	.500	1.50
5/8	3/4	C3269x10x12	7/8-14	1-3/8	.500	1.62
3/4	1/2	C3269x12x8	1-1/16-12	1-1/4	.688	1.34
3/4	3/4	C3269x12x12	1-1/16-12	1-3/8	.656	1.66
7/8	3/4	C3269x14x12	1-3/16-12	1-3/8	.718	1.63
1	1/2	C3269x16x8	1-5/16-12	1-1/2	.688	1.00
1	3/4	C3269x16x12	1-5/16-12	1-1/2	.876	1.50
1	1	C3269x16x16	1-5/16-12	1-5/8	.876	1.88
1-1/4	1	C3269x20x16	1-5/8-12	1-7/8	1.080	1.00
1-1/4	1-1/4	C3269x20x20	1-5/8-12	2	1.080	1.94
1-1/2	1-1/2	C3269x24x24	1-7/8-12	2-3/8	1.312	1.88
2	2	C3269x32x32	2-1/2-12	2-7/8	1.781	1.91

Replacement O-rings page 256.

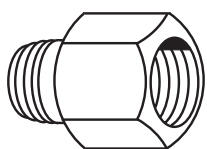
Adapter

Stainless Steel No. 3221x
(Ref. SAE 140139)

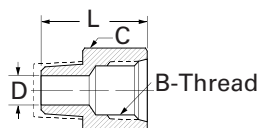


FEMALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/4	1/8	C3209x4x2*	3/4	.188	1.21
3/8	1/4	C3209x6x4*	7/8	.281	1.44
1/2	1/8	C3209x8x2*	1-1/8	.188	1.50
1/2	1/4	C3209x8x4*	1-1/8	.281	1.68
1/2	3/8	C3209x8x6*	1-1/8	.406	1.68
3/4	1/4	C3209x12x4*	1-3/8	.281	1.78
3/4	1/2	C3209x12x8*	1-3/8	.531	1.93
1	1/2	C3209x16x8*	1-5/8	.562	2.09
1	3/4	C3209x16x12*	1-5/8	.719	2.18
1-1/4	1	C3209x20x16	2	.938	2.46
1-1/2	1-1/4	C3209x24x20	2-3/8	1.25	2.50
2	1-1/2	C3209x32x24	2-7/8	1.500	2.63

Female Straight Thread O-Ring to Male Pipe Adapter



FEM. PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
3/8	3/8	C3239x6x6	9/16-18	13/16	.406	1.38
3/8	1/2	C3239x6x8	9/16-18	7/8	.500	1.61
1/2	3/8	C3239x8x6	3/4-16	1	.406	1.46
1/2	1/2	C3239x8x8	3/4-16	1	.562	1.69
5/8	1/2	C3239x10x8	7/8-14	1-1/4	.531	1.81



APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

Steel Adapters

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

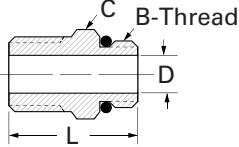
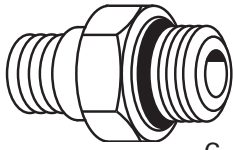
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Male Straight Thread O-Ring to Male Pipe Adapter

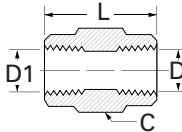
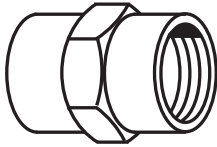


Replacement O-rings page 256.

MALE PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	HEX C	D	L
1/4	1/8	C3249x4x2	7/16-20	9/16	.172	1.05
3/8	1/4	C3249x6x4	9/16-18	11/16	.281	1.30
1/2	3/8	C3249x8x6	3/4-16	7/8	.391	1.36
1/2	1/2	C3249x8x8	3/4-16	7/8	.391	1.55
5/8	1/2	C3249x10x8	7/8-14	1	.434	1.69
3/4	3/4	C3249x12x12	1-1/16-12	1-1/4	.609	1.73
1	1	C3249x16x16	1-5/16-12	1-1/2	.844	2.06
1-1/4	1-1/4	C3249x20x20	1-5/8-12	1-7/8	1.078	2.17
1-1/2	1-1/2	C3249x24x24	1-7/8-12	2-1/8	1.312	2.26
2	2	C3249x32x32	2-1/2-12	2-7/8	1.781	2.47

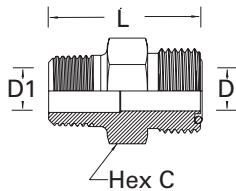
Coupling

Stainless Steel No. 3321x
(Ref. SAE No. 140138)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	D1	L
1/8	1/8	C3309x2•	5/8	.332	.332	.75
1/4	1/8	C3309x4x2•	3/4	.437	.332	1.13
1/4	1/4	C3309x4•	3/4	.437	.437	1.13
3/8	1/4	C3309x6x4•	7/8	.562	.437	1.13
3/8	3/8	C3309x6•	7/8	.562	.562	1.13
1/2	1/4	C3309x8x4•	1-1/8	.687	.437	1.50
1/2	3/8	C3309x8x6•	1-1/8	.687	.562	1.50
1/2	1/2	C3309x8•	1-1/8	.687	.687	1.50
3/4	1/2	C3309x12x8	1-3/8	.906	.687	1.53
3/4	3/4	C3309x12•	1-3/8	.906	.906	1.53
1	3/4	C3309x16x12	1-5/8	1.125	.906	1.89
1	1	C3309x16•	1-5/8	1.125	1.125	1.89
1-1/4	1-1/4	C3309x20	2	1.468	1.468	1.93
1-1/2	1-1/2	C3309x24	2-3/8	1.703	1.703	1.93
2	2	C3309x32	2-7/8	2.188	2.188	1.96

Male FOR-SEAL® to Male Pipe Adapter



Replacement O-rings page 273.

TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

Steel Adapters

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

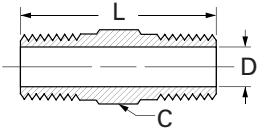
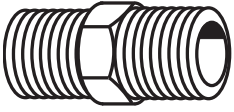
ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

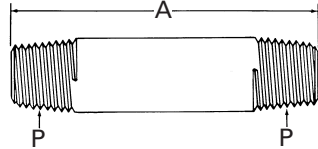
Hex Nipple

Stainless Steel No. 3081x
(Ref. SAE No. 140137)



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/16	1/16	C3069x1	5/16	.141	.940
1/8	1/16	C3069x2x1	7/16	.141	.970
1/8	1/8	C3069x2•	7/16	.188	1.06
1/4	1/8	C3069x4x2•	5/8	.188	1.26
1/4	1/4	C3069x4•	5/8	.281	1.45
3/8	1/8	C3069x6x2•	3/4	.188	1.26
3/8	1/4	C3069x6x4•	3/4	.281	1.45
3/8	3/8	C3069x6•	3/4	.406	1.45
1/2	1/4	C3069x8x4•	7/8	.281	1.70
1/2	3/8	C3069x8x6•	7/8	.406	1.70
1/2	1/2	C3069x8•	7/8	.531	1.89
3/4	1/2	C3069x12x8•	1-1/8	.531	1.96
3/4	3/4	C3069x12•	1-1/8	.719	1.96
1	3/4	C3069x16x12	1-3/8	.719	2.16
1	1	C3069x16•	1-3/8	.938	2.34
1-1/4	1-1/4	C3069x20	1-3/4	1.250	2.48
1-1/2	1-1/2	C3069x24	2	1.500	2.61
2	2	C3069x32	2-1/2	1.938	2.83

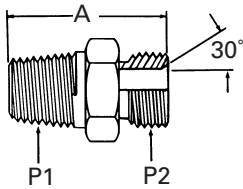
Long Nipple



Part No. 2084- (Dash Size)

DASH SIZE	THREAD P (NPTF)	A	
		mm	inches
2S - 3/4	1/8- 27	19,0	.75
2S - 2	1/8- 27	50,8	2.00
4S - 7/8	1/4- 18	22,3	.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
8S - 1 1/8	1/2- 14	28,5	1.12
8S - 2 1/2	1/2- 14	63,5	2.50
12S - 1 3/8	3/4- 14	35,1	1.38
16S - 1 1/2	1 - 11 1/2	38,1	1.50

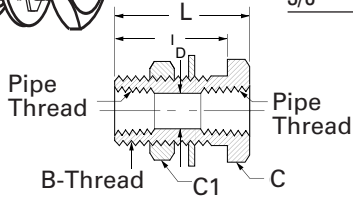
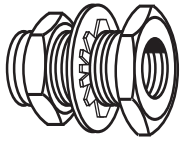
NPSM Adapter



Part No. 2015- (Dash Size)

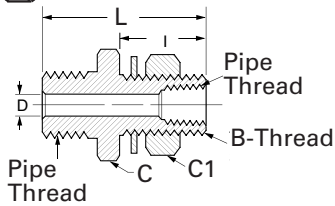
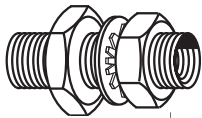
DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPSM)	A	
			mm	inches
8 - 8S	1/2- 14	1/2- 14	38,1	1.50

Bulkhead Coupling



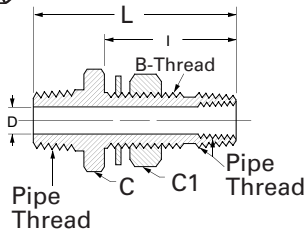
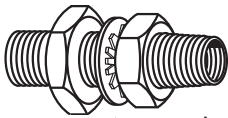
FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/4	W05465	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	W21204	3/4-16	1	1-1/16	.422	.69	.94
3/8	W17709	1-14	1-1/8	1-3/8	.563	1.06	1.31

Bulkhead Coupling



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	W05498	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	W05499	3/4-16	1-1/4	1-1/16	.312	1.53	2.53

Bulkhead Coupling



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	W05730	1-14	1-1/4	1-3/8	.375	1.88	2.94
1/2	1/4	W23464	1-14	1-1/4	1-3/8	.375	2.88	3.94

Steel Adapters

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

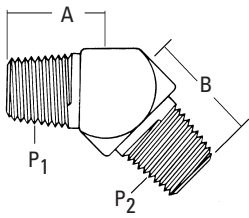
ADAPTERS &
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

45° Union Elbow

(Ref. SAE 140337)

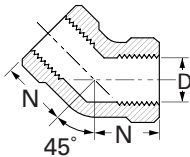
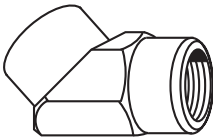
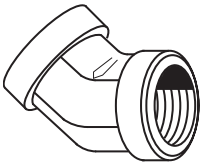


Part No. 2247- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	21,8	.86	21,8	.86
6-6S	3/8 - 18	3/8 - 18	24,1	.95	24,1	.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

45° Female Elbow

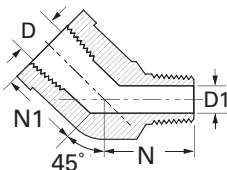
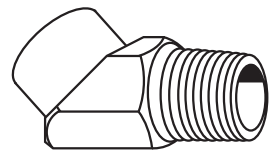
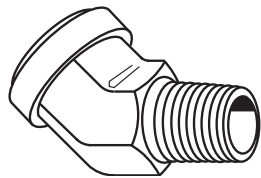
(Ref. SAE No. 140338)



FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/4	C3559x4	.437	.69	3/4
3/8	C3559x6	.562	.750	7/8
1/2	C3559x8	.687	.940	1-1/16
3/4	C3559x12	.906	1.000	1-5/16
1	C3559x16	1.125	1.190	1-5/8
1/4	TF3559x4	.437	.620	3/4

45° Street Elbow

Stainless Steel No. 3371x
(Ref. SAE No. 140339)



FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	N1	N	ACROSS FLATS
1/8	1/8	C3359x2*	.332	.188	.47	.72	9/16
1/4	1/4	C3359x4*	.437	.281	.62	1.05	3/4
3/8	3/8	C3359x6*	.562	.406	.72	1.10	7/8
1/2	1/2	C3359x8*	.687	.531	.91	1.34	1-1/16
3/4	3/4	C3359x12*	.906	.719	.97	1.38	1-5/16
1	1	C3359x16*	1.125	.938	1.12	1.72	1-5/8
1/8	1/8	TF3359x2	.332	.188	.47	.72	5/8
1/4	1/4	TF3359x4	.437	.281	.62	1.05	3/4
3/8	3/8	TF3359x6	.562	.406	.72	1.10	7/8
1/2	1/2	TF3359x8	.687	.531	.91	1.34	1-1/8
3/4	3/4	TF3359x12	.906	.719	.97	1.38	1-3/8
1	1	TF3359x16	1.125	.938	1.12	1.72	1-5/8
1-1/4	1-1/4	TF3359x20	1.468	1.250	1.63	1.80	2
1-1/2	1-1/2	TF3359x24	1.734	1.500	1.69	2.06	2-3/8
2	2	TF3359x32	2.188	1.938	2.30	2.15	2-1/2

Steel Adapters

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

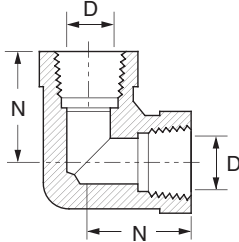
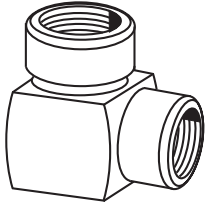
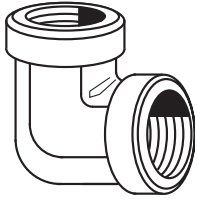
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

90° Female Elbow

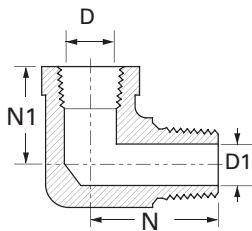
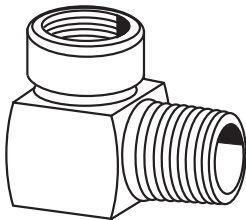
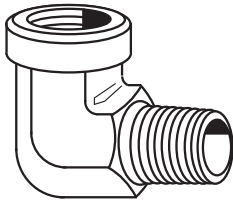
Stainless Steel No. 3521x
(Ref. SAE No. 140238)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/8	1/8	C3509x2•	.332	.66	9/16
1/4	1/4	C3509x4•	.437	.88	3/4
3/8	3/8	C3509x6•	.562	1.02	7/8
1/2	1/2	C3509x8•	.687	1.23	1-1/16
3/4	3/4	C3509x12•	.906	1.36	1-5/16
1	1	C3509x16	1.125	1.62	1-5/8
1-1/4	1-1/4	C3509x20	1.468	1.70	1-7/8
2	2	C3509x32	2.188	2.39	2-3/16
1/8	1/8	TF3509x2	.332	.66	5/8
1/4	1/8	TF3509x4x2	.343	.88	3/4
1/4	1/4	TF3509x4	.437	.88	3/4
3/8	1/4	TF3509x6x4	.437	1.02	7/8
3/8	3/8	TF3509x6	.562	1.02	7/8
1/2	3/8	TF3509x8x6	.562	1.23	1-1/8
1/2	1/2	TF3509x8	.687	1.23	1-1/8
3/4	1/2	TF3509x12x8	.687	1.23	1-3/8
3/4	3/4	TF3509x12	.906	1.36	1-3/8
1	1	TF3509x16	1.125	1.62	1-5/8
1-1/4	1-1/4	TF3509x20	1.468	1.70	2
1-1/2	1-1/2	TF3509x24	1.734	2.08	2-3/8

90° Street Elbow

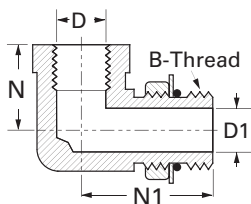
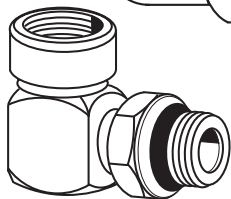
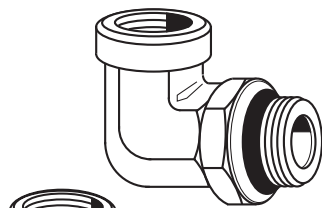
Stainless Steel No. 3421x
(Ref. SAE No. 140239)



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	D	D1	N	N1	ACROSS FLATS
1/8	1/8	C3409x2•	.332	.188	.78	.66	9/16
1/4	1/4	C3409x4•	.437	.281	1.09	.88	3/4
3/8	3/8	C3409x6•	.562	.406	1.22	1.02	7/8
1/2	1/2	C3409x8•	.687	.531	1.47	1.23	1-1/16
3/4	3/4	C3409x12•	.906	.719	1.59	1.36	1-5/16
1	1	C3409x16•	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	C3409x20	1.468	1.250	2.38	1.70	1-7/8
2	2	C3409x32	2.188	1.930	3.00	2.39	2-13/16
1/8	1/8	TF3409x2	.332	.188	.78	.66	5/8
1/8	1/4	TF3409x2x4	.437	.188	.91	.88	3/4
1/4	1/8	TF3409x4x2	.332	.281	1.09	.67	5/8
1/4	1/4	TF3409x4	.437	.281	1.09	.88	3/4
1/4	3/8	TF3409x4x6	.562	.281	1.22	1.02	7/8
3/8	1/4	TF3409x6x4	.437	.406	1.22	.91	13/16
3/8	3/8	TF3409x6	.562	.406	1.22	1.02	7/8
3/8	1/2	TF3409x6x8	.687	.406	1.38	1.23	1-1/8
1/2	3/8	TF3409x8x6	.562	.531	1.47	1.05	15/16
1/2	1/2	TF3409x8	.687	.531	1.47	1.23	1-1/8
1/2	3/4	TF3409x8x12	.906	.531	1.59	1.23	1-3/8
3/4	1/2	TF3409x12x8	.687	.719	1.59	1.23	1-1/8
3/4	3/4	TF3409x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3409x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3409x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3409x24	1.734	1.500	2.64	2.08	2-3/8

Steel Adapters

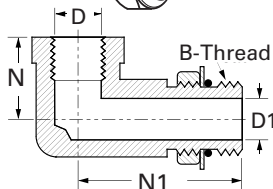
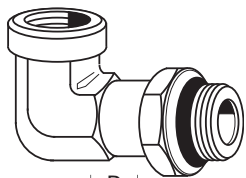
90° Straight Thread O-Ring Male Elbow



MALE PORT SIZE	FEM. PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/2	3/8	C3459x8	3/4-16	.562	.422	.63	1.47	7/8
5/8	1/2	C3459x10	7/8-14	.687	.500	.75	1.81	1-1/16
3/4	3/4	C3459x12	1-1/16-12	.906	.656	.81	2.00	1-5/16
1	1	C3459x16	1-5/16-12	1.125	.876	1.00	2.25	1-5/8
1/4	1/8	TF3459x4	7/16-20	.332	.172	.66	1.09	5/8
5/16	1/8	TF3459x5	1/2-20	.332	.234	.66	1.13	5/8
3/8	1/4	TF3459x6	9/16-18	.437	.297	.88	1.31	3/4
1/2	3/8	TF3459x8	3/4-16	.562	.391	1.02	1.49	7/8
5/8	1/2	TF3459x10	7/8-14	.687	.484	1.23	1.80	1-1/8
3/4	3/4	TF3459x12	1-1/16-12	.906	.609	1.36	2.06	1-3/8
7/8	3/4	TF3459x14	1-3/16-12	.906	.719	1.42	2.06	1-3/8
1	1	TF3459x16	1-5/16-12	1.125	.844	1.62	2.17	1-5/8
1-1/4	1-1/4	TF3459x20	1-5/8-12	1.468	1.078	1.70	2.38	2
1-1/2	1-1/2	TF3459x24	1-7/8-12	1.703	1.312	2.08	2.58	2-3/8
2	2	TF3459x32	2-1/2-12	2.180	1.781	2.39	3.02	2-7/8

Replacement O-rings page 256.

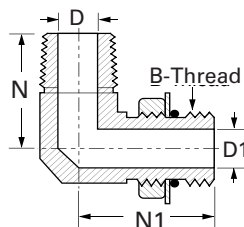
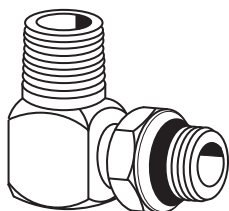
90° Straight Thread O-Ring Female Elbow Long



45° PORT SIZE	FEM. PIPE SIZE	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/2	3/8	C3469x8	3/4-16	.562	.422	.63	2.94	7/8
5/8	1/2	C3469x10	7/8-14	.687	.500	.75	3.56	1-1/16
3/4	3/4	C3469x12	1-1/16-12	.906	.656	.81	4.13	1-5/16
1	1	C3469x16	1-5/16-12	1.125	.876	1.00	4.63	1-5/8

Replacement O-rings page 256.

90° Straight Thread O-Ring Male Elbow To Male Pipe



MALE PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD B	D	D1	N	N1	ACROSS FLATS
1/4	1/8	TF3569x4	7/16-20	.172	.188	.78	1.03	1/2
5/16	1/8	TF3569x5	1/2-20	.234	.188	.78	1.09	9/16
3/8	1/4	TF3569x6	9/16-18	.297	.281	1.09	1.25	5/8
1/2	3/8	TF3569x8	3/4-16	.391	.406	1.22	1.45	13/16
5/8	1/2	TF3569x10	7/8-14	.484	.531	1.47	1.70	15/16
3/4	3/4	TF3569x12	1-1/16-12	.609	.719	1.59	1.94	1-1/8
7/8	3/4	TF3569x14	1-3/16-12	.719	.719	1.69	2.00	1-1/4
1	1	TF3569x16	1-5/16-12	.844	.938	1.97	2.05	1-3/8
1-1/4	1-1/4	TF3569x20	1-5/8-12	1.078	1.250	2.38	2.25	1-3/4
1-1/2	1-1/2	TF3569x24	1-7/8-12	1.312	1.500	2.64	2.39	2
2	2	TF3569x32	2-1/2-12	1.781	1.938	3.00	2.89	2-5/8

Replacement O-rings page 256.

Steel Adapters

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASM'BL Y INSTRUCTIONS

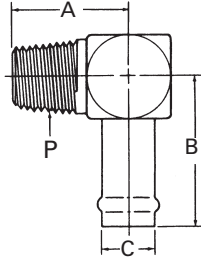
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

90° Elbow Hose Connector

(Ref. SAE 430260)

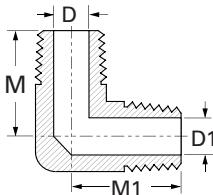
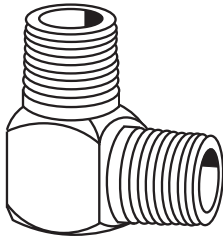
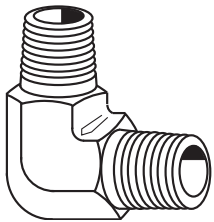


Part No. FF1162- (Dash Size)

DASH SIZE	HOSE SIZE		THREAD P (NPTF)	A		B		C	
	mm	inches		mm	inches	mm	inches	mm	inches
1212S	19,0	.75	3/4 - 14	35,8	1.41	46,5	1.83	19,0	.75
1616S	25,4	1.00	1 - 11 1/2	43,4	1.71	49,3	1.94	25,4	1.00

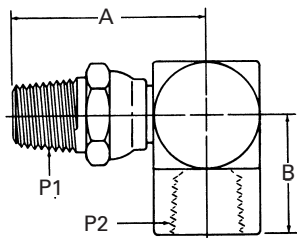
90° Male Elbow

Stainless Steel No. 3541x



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/8	1/8	C3529x2•	.188	.188	.78	.78	7/16
1/4	1/4	C3529x4•	.281	.281	1.09	1.09	9/16
3/8	3/8	C3529x6•	.406	.406	1.22	1.22	3/4
1/2	1/2	C3529x8	.531	.531	1.47	1.47	7/8
3/4	3/4	C3529x12	.719	.719	1.59	1.59	1-1/16
1/8	1/8	TF3529x2	.188	.188	.78	.78	1/2
1/4	1/4	TF3529x4	.281	.281	1.09	1.09	5/8
3/8	1/4	TF3529x6x4	.406	.281	1.28	1.19	13/16
3/8	3/8	TF3529x6	.406	.406	1.21	1.21	13/16
1/2	3/8	TF3529x8x6	.531	.406	1.47	1.28	15/16
1/2	1/2	TF3529x8	.531	.531	1.47	1.47	15/16
3/4	1/2	TF3529x12x8	.719	.531	1.59	1.56	1-1/8
3/4	3/4	TF3529x12	.719	.719	1.59	1.59	1-1/8
1	3/4	TF3529x16x12	.938	.719	1.97	1.72	1-3/8
1	1	TF3529x16	.938	.938	1.97	1.97	1-3/8
1-1/4	1-1/4	TF3529x20	1.250	1.250	2.38	2.38	1-3/4
1-1/2	1-1/2	TF3529x24	1.938	1.938	2.64	2.64	2

90° Male Pipe Swivel to Female Pipe Rigid



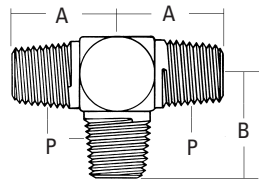
Part No. 2252- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	43,7	1.72	22,3	.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	54,3	2.14	31,2	1.23
12-12S	3/4 - 14	3/4 - 14	57,2	2.25	34,5	1.36

Not for use in applications over +212°F. Not intended to be a live swivel.

Steel Adapters

Union Tee



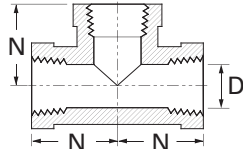
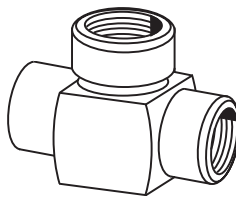
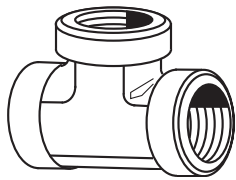
Part No. 2257- (Dash Size)

DASH SIZE	THREAD P (NPTF)	A		B	
		mm	inches	mm	inches
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

Tee

Stainless Steel No. 3721x
(Ref. SAE No. 140438)

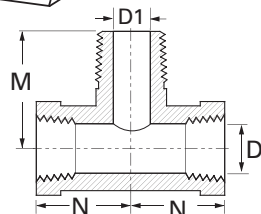
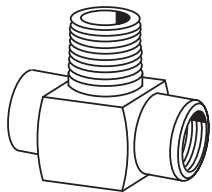
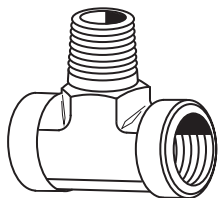
FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
1/8	C3709x2•	.332	.66	9/16
1/4	C3709x4•	.437	.88	3/4
3/8	C3709x6•	.562	1.02	7/8
1/2	C3709x8•	.687	1.23	1-1/16
3/4	C3709x12•	.906	1.36	1-5/16
1	C3709x16•	1.125	1.62	1-5/8
1-1/4	C3709x20	1.468	1.70	1-7/8
1/8	TF3709x2	.343	.66	5/8
1/4	TF3709x4	.437	.88	3/4
3/8	TF3709x6	.562	1.02	7/8
1/2	TF3709x8	.687	1.23	1-1/8
3/4	TF3709x12	.906	1.36	1-3/8
1	TF3709x16	1.275	1.62	1-5/8
1-1/4	TF3709x20	1.468	1.70	2
1-1/2	TF3709x24	1.710	2.08	2-3/8
2	TF3709x32	2.180	2.39	2-7/8



Male Branch Tee

Stainless Steel No. 3621x
(Ref. SAE No. 140425)

MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C3609x2	.332	.188	.78	.66	9/16
1/4	1/4	C3609x4•	.437	.281	1.09	.88	3/4
1	1	C3609x16	1.125	.938	1.97	1.62	1-5/8
1/8	1/8	TF3609x2	.343	.188	.78	.66	5/8
1/4	1/4	TF3609x4	.437	.281	1.09	.87	3/4
3/8	3/8	TF3609x6	.562	.406	1.22	1.02	7/8
1/2	1/2	TF3609x8	.687	.531	1.47	1.23	1-1/8
3/4	3/4	TF3609x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3609x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3609x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3609x24	1.700	1.500	2.64	2.08	2-3/8



APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

Steel Adapters

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASM'BL Y INSTRUCTIONS

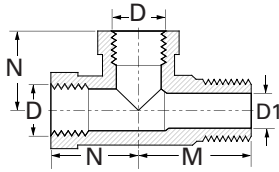
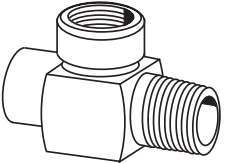
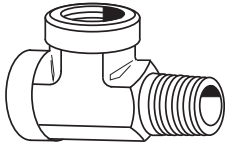
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

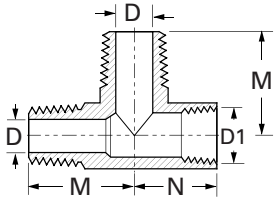
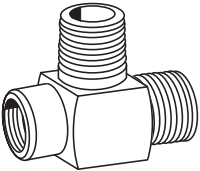
Male Run Tee

Stainless Steel No. 3771x
(Ref. SAE No. 140424)



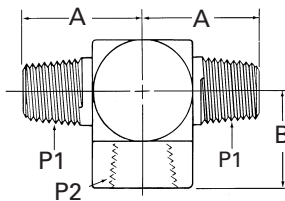
FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C3759x2*	.332	.188	.78	.66	9/16
1/4	1/4	C3759x4*	.437	.281	1.09	.88	3/4
3/8	3/8	C3759x6*	.562	.406	1.22	1.02	7/8
1/2	1/2	C3759x8*	.687	.531	1.47	1.23	1-1/16
3/4	3/4	C3759x12	.906	.719	1.59	1.36	1-5/16
1	1	C3759x16	1.125	.938	1.97	1.62	1-5/8
1/8	1/8	TF3759x2	.343	.188	.78	.66	5/8
1/4	1/4	TF3759x4	.437	.281	1.09	.88	3/4
3/8	3/8	TF3759x6	.562	.406	1.22	1.02	7/8
1/2	1/2	TF3759x8	.687	.531	1.47	1.23	1-1/8
3/4	3/4	TF3759x12	.906	.719	1.59	1.36	1-3/8
1	1	TF3759x16	1.125	.938	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3759x20	1.468	1.250	2.38	1.70	2
1-1/2	1-1/2	TF3759x24	1.710	1.500	2.64	2.08	2-3/8
2	2	TF3759x32	2.180	1.938	3.00	2.39	2-7/8

Female Run Tee



FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	TF3805x2	.188	.343	.78	.66	5/8
1/4	1/4	TF3805x4	.281	.437	1.09	.88	3/4
3/8	3/8	TF3805x6	.406	.562	1.22	1.02	7/8
1/2	1/2	TF3805x8	.531	.687	1.47	1.23	1-1/8
3/4	3/4	TF3805x12	.719	.906	1.59	1.36	1-3/8
1	1	TF3805x16	.938	1.125	1.97	1.62	1-5/8
1-1/4	1-1/4	TF3805x20	1.250	1.468	2.38	1.70	2
1-1/2	1-1/2	TF3805x24	1.490	2.180	2.64	2.08	2-3/8

Female Branch Tee

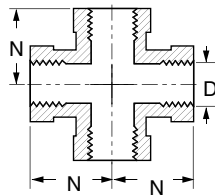
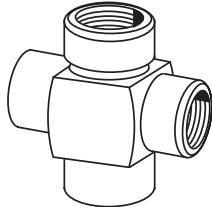
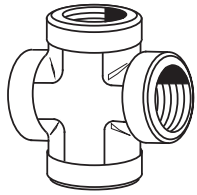


Part No. 2256- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1/4 - 18	1/4 - 18	27,7	1.09	22,3	.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

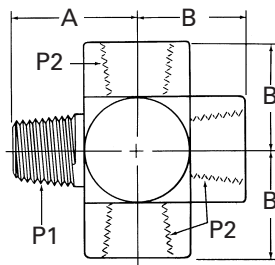
Steel Adapters

Cross



FEM. PIPE THREAD	CATALOG NUMBER	D	N	ACROSS FLATS
3/8	C3959x6	.562	1.02	7/8
1/2	C3959x8	.687	1.23	1-1/16
3/4	C3959x12	.906	1.36	1-5/16
1/8	TF3959x2	.343	.66	5/8
1/4	TF3959x4	.437	.88	3/4
3/8	TF3959x6	.562	1.02	7/8
1/2	TF3959x8	.687	1.23	1-1/8
3/4	TF3959x12	.906	1.36	1-3/8
1	TF3959x16	1.125	1.62	1-5/8
1-1/4	TF3959x20	1.468	1.70	2
1-1/2	TF3959x24	1.710	2.08	2-3/8
2	TF3959x32	2.180	2.39	2-7/8

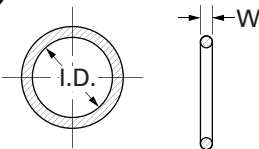
Cross



Part No. 208007- (Dash Size)

DASH SIZE	THREAD P1 (NPTF)	THREAD P2 (NPTF)	A		B	
			mm	inches	mm	inches
4-4S	1 ¹ / ₄ - 18	1 ¹ / ₄ - 18	29,5	1.16	22,3	.88
8-8S	1 ¹ / ₂ - 14	1 ¹ / ₂ - 14	41,4	1.63	31,2	1.23

Straight Thread O-Ring



Material: Buna-N, 90 Durometer
Temperature Range:
 -40°F to +250°F
 (-40°C to +121°C)

Standard O-Ring complies with SAE specification SAE J515 Type CH.
 (See page 343 for O-Ring compound and application chart.)

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/16	7629x1	.058	.185
1/8	7629x2	.064	.239
3/16	7629x3	.064	.301
1/4	7629x4	.072	.351
5/16	7629x5	.072	.414
3/8	7629x6	.078	.468
7/16	7629x7	.082	.530
1/2	7629x8	.087	.644
5/8	7629x10	.097	.755
3/4	7629x12	.116	.924
7/8	7629x14	.116	1.048
1	7629x16	.116	1.171
1-1/4	7629x20	.118	1.475
1-1/2	7629x24	.118	1.720
2	7629x32	.118	2.337

Steel Connectors

Swivel Adapters

9000 Pipe Connectors

Typical Application:
Pressure hydraulic systems.
Pressure: See chart.

Material: Carbon steel
Plating: Zinc

Sealing Method: Metal to metal, 30° cone-NPSM thread on pipe swivel end. Sealing methods vary depending on swivel adapter type.

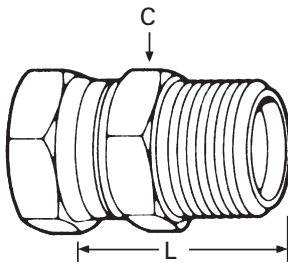
Pipe Hose Ends 9000 Series Pressure Rating Chart

CONNECTION TYPE	END SIZE								
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Male Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1000	1000
Female Pipe (NPTF)*	5000	5000	4000	3000	2500	2000	1500	1500	1000

*Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure ratings applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting unless otherwise agreed to by the supplier and user.

Female Pipe Swivel to Male Pipe

(Ref. SAE No. 140130)

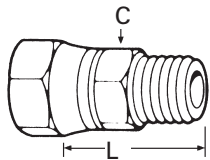


NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX	
			C	L
1/8-27	1/8-27	9205x2x2	9/16	.900
1/8-27	1/4-18	9205x2x4	11/16	1.187
1/4-18	1/8-27	9205x4x2	11/16	0.940
1/4-18	1/4-18	9205x4x4	11/16	1.200
1/4-18	3/8-18	9205x4x6	11/16	1.200
1/4-18	1/2-14	9205x4x8	7/8	1.500
3/8-18	1/4-18	9205x6x4	5/8	1.210
3/8-18	3/8-18	9205x6x6	3/4	1.240
3/8-18	1/2-14	9205x6x8	7/8	1.540
1/2-14	3/8-18	9205x8x6	7/8	1.330
1/2-14	1/2-14	9205x8x8	1	1.640
1/2-14	3/4-14	9205x8x12	1-1/4	1.620
3/4-14	1/2-14	9205x12x8	1	1.720
3/4-14	3/4-14	9205x12x12	1-1/4	1.680
3/4-14	1-11-1/2	9205x12x16	1-1/2	1.984
1-11-1/2	3/4-14	9205x16x12	1-1/2	1.800
1-11-1/2	1-11-1/2	9205x16x16	1-1/2	2.010
1-11-1/2	1-1/4-11-1/2	9205x16x20	1-11/16	2.080
1-1/4-11-1/2	1-11-1/2	9205x20x16	1-7/8	2.100
1-1/4-11-1/2	1-1/4-11-1/2	9205x20x20	1-7/8	2.140
1-1/4-11-1/2	1-1/2-11-1/2	9205x20x24	2-1/8	2.187
1-1/2-11-1/2	1-1/4-11-1/2	9205x24x20	2-1/8	2.093
1-1/2-11-1/2	1-1/2-11-1/2	9205x24x24	2-1/8	2.270
2-11-1/2	2-11-1/2	9205x32x32	2-5/8	2.420

Steel Connectors

Swivel Adapters

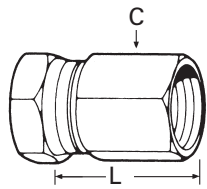
Female 37° JIC Swivel to Male Pipe Adapter



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L
1/4	1/4	9100x4x4	9/16	1.130
5/16	1/4	9100x5x4	11/16	1.170
3/8	1/4	9100x6x4	11/16	1.290
3/8	3/8	9100x6x6	11/16	1.290
1/2	3/8	9100x8x6	7/8	1.430
1/2	1/2	9100x8x8	7/8	1.610
5/8	3/8	9100x10x6	1	1.400
5/8	1/2	9100x10x8	1	1.600
3/4	1/2	9100x12x8	1-1/8	1.650
3/4	3/4	9100x12x12	1-1/8	1.650
1	3/4	9100x16x12	1-3/8	1.750
1	1	9100x16x16	1-3/8	1.940
1-1/4	1 1/4	9100x20x20	1-7/8	2.090

Female Pipe Swivel to Female Pipe Straight

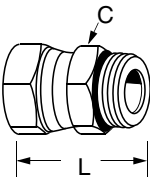
(Ref. SAE No. 140131)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8-27	1/8-27	9255x2x2	9/16	.880
1/4-18	1/4-18	9255x4x4	11/16	1.170
1/4-18	3/8-18	9255x4x6	7/8	1.312
3/8-18	1/4-18	9255x6x4	11/16	1.250
3/8-18	3/8-18	9255x6x6	7/8	1.310
3/8-18	1/2-14	9255x6x8	1	1.453
1/2-14	3/8-18	9255x8x6	1	1.500
1/2-14	1/2-14	9255x8x8	1	1.500
3/4-14	3/4-14	9255x12x12	1-1/4	1.620
3/4-14	1-11-1/2	9255x12x16	1-1/2	1.906
1-11-1/2	1-11-1/2	9255x16x16	1-1/2	2.000
1-1/4-11-1/2	1-1/4-11-1/2	9255x20x20	1-7/8	2.000
1-1/2-11-1/2	1-1/2-11-1/2	9255x24x24	2-1/8	2.000
2-11-1/2	2-11-1/2	9255x32x32	2-5/8	2.120

Male Straight Thread O-Ring to Female Pipe Swivel

(Ref. SAE No. 140157)



STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L
7/16-20	1/4-18	9315x4x4	9/16	.970
7/16-20	3/8-18	9315x4x6	5/8	1.060
1/2-20	1/4-18	9315x5x4	5/8	1.109
9/16-18	1/4-18	9315x6x4	11/16	1.171
9/16-18	3/8-18	9315x6x6	11/16	1.090
9/16-18	1/2-14	9315x6x8	13/16	1.210
3/4-16	1/4-18	9315x8x4	7/8	1.234
3/4-16	3/8-18	9315x8x6	7/8	1.200
3/4-16	1/2-14	9315x8x8	7/8	1.260
3/4-16	3/4-14	9315x8x12	1	1.406
3/4-14	3/8-18	9315x10x6	1	1.375
3/4-14	1/2-14	9315x10x8	1	1.400
3/4-14	3/4-14	9315x10x12	1	1.546
1-1/16-12	1/2-14	9315x12x8	1-1/4	1.453
1-1/16-12	3/4-14	9315x12x12	1-1/4	1.600
1-3/16-12	3/4-14	9315x14x12	1-3/8	1.703
1-5/16-12	3/4-14	9315x16x12	1-1/2	1.734
1-5/16-12	1-11-1/2	9315x16x16	1-1/2	1.710
1-5/8-12	1-11-1/2	9315x20x16	1-7/8	1.828
1-5/8-12	1-1/4-11-1/2	9315x20x20	1-7/8	1.890
1-7/8-12	1-1/2-11-1/2	9315x24x24	2-1/8	1.953
2-1/2-12	2-11-1/2	9315x32x32	2-3/4	2.156

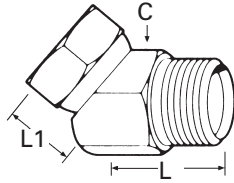
Replacement o-rings page 256.

Steel Connectors

Swivel Adapters

45° Swivel Elbow Female Pipe Swivel to Male Pipe

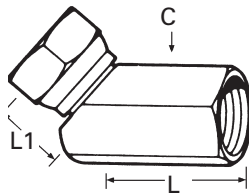
(Ref. SAE No. 140330)



NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9355x2x2	9/16	.620	.500
1/4-18	1/8-27	9355x4x2	11/16	.660	.470
1/4-18	1/4-18	9355x4x4	11/16	1.020	.670
1/4-18	3/8-18	9355x4x6	7/8	1.060	.620
1/4-18	1/2-14	9355x4x8	1	1.380	.730
3/8-18	1/4-18	9355x6x4	7/8	1.000	.750
3/8-18	3/8-18	9355x6x6	7/8	1.060	.750
3/8-18	1/2-14	9355x6x8	1	1.060	.750
1/2-14	3/8-18	9355x8x6	1	1.310	.910
1/2-14	1/2-14	9355x8x8	1	1.310	.910
1/2-14	3/4-14	9355x8x12	1-1/4	1.31	.910
3/4-14	1/2-14	9355x12x8	1-1/4	1.500	1.000
3/4-14	3/4-14	9355x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9355x12x16	1-1/2	1.500	1.030
1-11-1/2	3/4-14	9355x16x12	1-1/2	1.310	1.050
1-11-1/2	1-11-1/2	9355x16x16	1-1/2	1.500	1.060
1-11-1/2	1-1/4-11-1/2	9355x16x20	1-7/8	1.800	1.300
1-1/4-11-1/2	1-1/4-11-1/2	9355x20x20	1-7/8	1.750	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9355x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9355x32x32	2-5/8	2.000	.500

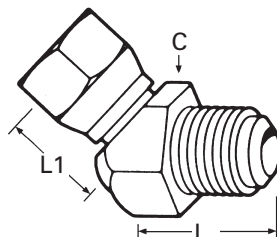
45° Swivel Elbow Female Pipe Swivel to Female Pipe

(Ref. SAE No. 140331)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9385x2x2	1/2	.620	.500
1/4-18	1/4-18	9385x4x4	11/16	1.020	.670
1/4-18	3/8-18	9385x4x6	7/8	1.062	.625
3/8-18	3/8-18	9385x6x6	7/8	1.060	.750
3/8-18	1/2-14	9385x6x8	1	1.310	.750
1/2-14	1/2-14	9385x8x8	1	1.310	1.270
3/4-14	3/4-14	9385x12x12	1-1/4	1.500	1.000
3/4-14	1-11-1/2	9385x12x16	1-1/2	1.500	1.031
1-11-1/2	1-11-1/2	9385x16x16	1-1/2	1.500	1.000
1-1/4-11-1/2	1-1/4-11-1/2	9385x20x20	1-7/8	1.790	1.250
1-1/2-11-1/2	1-1/2-11-1/2	9385x24x24	2-1/8	1.940	1.380
2-11-1/2	2-11-1/2	9385x32x32	2-5/8	2.000	1.500

45° Swivel Elbow Female 45° SAE to Male 45° SAE (Steel)



TUBE O.D.	CATALOG NUMBER	HEX C	L	L1
3/8	9154x6x6	3/4	1.400	.429
1/2	9154x8x8	1	1.760	.598
5/8	9154x10x10	1-1/4	1.920	.645

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

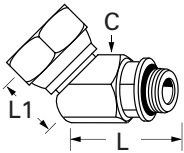
TECHNICAL DATA

Steel Connectors

Swivel Adapters

45° Swivel Elbow Male Straight Thread O-Ring to Female Pipe Swivel 45° Elbow

(Ref. SAE No. 140357)

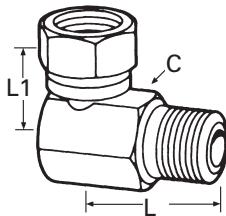


STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L	L1
7/16-20	1/4-18	9365x4x4	11/16	1.062	.656
7/16-20	3/8-18	9365x4x6	7/8	1.062	.656
9/16-18	3/8-18	9365x6x6	7/8	1.062	.703
9/16-18	1/2-14	9365x6x8	1	1.062	.812
3/4-16	3/8-16	9365x8x6	1	1.125	.875
3/4-16	1/2-14	9365x8x8	1	1.125	.812
7/8-14	1/2-14	9365x10x8	1	1.500	.781
1-1/16-12	3/4-14	9365x12x12	1-1/4	1.500	1.046
1-5/16-12	1-11-1/2	9365x16x16	1-1/2	1.625	1.062
1-5/8-12	1-1/4-11 1/2	9365x20x20	1-7/8	1.281	1.171
1-7/8-12	1-1/2-11 1/2	9365x24x24	2-1/8	1.609	1.343

Replacement o-rings page 256.

90° Elbow Female Pipe Swivel to Male Pipe

(Ref. SAE No. 140230)



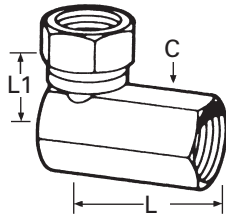
NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9405x2x2	9/16	.720	.700
1/8-27	1/4-18	9405x2x4	11/16	1.190	.750
1/4-18	1/8-27	9405x4x2	11/16	1.060	.780
1/4-18	1/4-18	9405x4x4	11/16	.980	.750
1/4-18	3/8-18	9405x4x6	11/16	1.090	.810
1/4-18	1/2-14	9405x4x8	1	1.810	.940
3/8-18	1/4-18	9405x6x4	13/16	1.090	.900
3/8-18	3/8-18	9405x6x6	7/8	1.090	.900
3/8-18	1/2-14	9405x6x8	1	1.350	1.020
3/8-18	3/4-14	9405x6x12	1-1/4	2.000	1.120
1/2-14	3/8-18	9405x8x6	1	1.280	1.020
1/2-14	1/2-14	9405x8x8	1	1.350	1.020
1/2-14	3/4-14	9405x8x12	1-1/4	1.490	1.140
1/2-14	1-11-1/2	9405x8x16	1-1/2	2.380	1.250
3/4-14	3/4-14	9405x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9405x12x16	1-1/2	2.380	1.380
1-11 1/2	3/4-14	9405x16x12	1-1/2	2.190	1.440
1-11-1/2	1-11-1/2	9405x16x16	1-1/2	2.380	1.440
1-11-1/2	1-1/4-11-1/2	9405x16x20	1-7/8	1.578	2.620
1-1/4-11-1/2	1-11-1/2	9405x20x16	1-7/8	2.530	1.660
1-1/4-11-1/2	1-1/4-11-1/2	9405x20x20	1-7/8	2.070	1.630
1-1/4-11-1/2	1-1/2-11-1/2	9405x20x24	2-1/8	2.810	1.780
1-1/2-11-1/2	1-1/2-11-1/2	9405x24x24	2-1/8	2.810	1.750
2-11-1/2	2-11-1/2	9405x32x32	2-5/8	3.120	2.310

Steel Connectors

Swivel Adapters

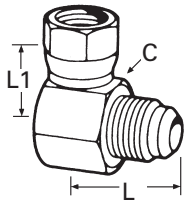
90° Elbow Female Pipe Swivel to Female Pipe

(Ref. SAE No. 140231)



NPSM SWIVEL NUT	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9455x2x2	9/16	.640	.700
1/4-18	1/4-18	9455x4x4	11/16	.870	.750
1/4-18	3/8-18	9455x4x6	13/16	1.000	.810
1/4-18	1/2-14	9455x4x8	1	1.250	.940
3/8-18	1/4-18	9455x6x4	13/16	1.000	.900
3/8-18	3/8-18	9455x6x6	13/16	1.000	.900
3/8-18	1/2-14	9455x6x8	1	1.250	1.000
1/2-14	3/8-18	9455x8x6	1	1.220	1.020
1/2-14	1/2-14	9455x8x8	1	1.250	1.000
1/2-14	3/4-14	9455x8x12	1-1/4	1.440	1.120
3/4-14	1/2-14	9455x12x8	1-1/4	1.440	1.250
3/4-14	3/4-14	9455x12x12	1-1/4	1.490	1.200
3/4-14	1-11-1/2	9455x12x16	1-1/2	1.750	1.380
1-11-1/2	3/4-14	9455x16x12	1-1/2	1.750	1.380
1-11-1/2	1-11-1/2	9455x16x16	1-1/2	1.690	1.460
1-1/4-11-1/2	1-1/4-11-1/2	9455x20x20	1-7/8	1.850	1.630
1-1/2-11-1/2	1-1/2-11-1/2	9455x24x24	2-1/8	2.250	1.750
2-11-1/2	2-11 1/2	9455x32x32	2-5/8	2.500	2.310

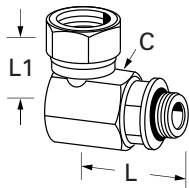
90° Elbow 45° SAE Female Swivel to SAE 45° Male (Steel)



TUBE O.D.	CATALOG NUMBER	HEX C	L	L1
3/8	9151x6x6	3/4	1.00	.69
1/2	9151x8x8	1	1.25	.99
5/8	9151x10x10	1-1/4	1.44	1.09

90° Elbow Male Straight Thread O-Ring to Female Pipe Swivel

(Ref. SAE No. 140257)



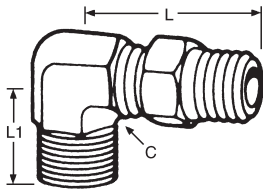
STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L	L1
7/16-20	1/4-18	9515x4x4	11/16	1.090	.781
7/16-20	3/8-18	9515x4x6	7/8	1.100	.900
9/16-18	1/4-18	9515x6x4	11/16	1.187	.781
9/16-18	3/8-18	9515x6x6	7/8	1.296	.937
9/16-18	1/2-14	9515x6x8	1	1.484	1.000
3/4-16	3/8-18	9515x8x6	1	1.515	1.000
3/4-16	1/2-14	9515x8x8	1	1.515	1.000
3/4-16	3/4-14	9515x8x12	1-1/4	1.656	1.250
7/8-14	3/8-18	9515x10x6	1	1.640	1.000
7/8-14	1/2-14	9515x10x8	1	1.640	1.025
7/8-14	3/4-14	9515x10x12	1-1/4	1.781	1.250
1-1/16-12	1/2-14	9515x12x8	1-1/4	1.921	1.125
1-1/16-12	3/4-14	9515x12x12	1-1/4	1.921	1.250
1-3/16-12	3/4-14	9515x14x12	1-1/4	1.921	1.250
1-5/16-12	3/4-14	9515x16x12	1-1/2	2.093	1.375
1-5/16-12	1-11-1/2	9515x16x16	1-1/2	2.093	1.390
1-5/8-12	3/4-14	9515x20x12	1-7/8	2.484	1.562
1-5/8-12	1-1/4-11-1/2	9515x20x20	1-7/8	2.484	1.656
1-7/8-12	1-1/2-11-1/2	9515x24x24	2-1/8	2.609	1.734
2-1/2-12	2-11-12	9515x32x32	2-5/8	3.250	2.312

Replacement o-rings page 256.

Steel Connectors

Swivel Adapters

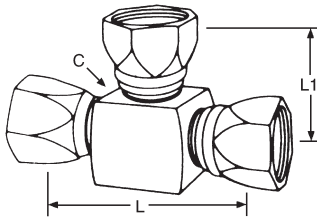
90° Elbow Male Pipe Swivel to Male Pipe Rigid



MALE PIPE SWIVEL	MALE PIPE RIGID	CATALOG NUMBER	HEX C	L	L1
1/4-18	1/4-18	9435x4x4	9/16	1.870	1.060
3/8-18	3/8-18	9435x6x6	3/4	1.950	1.220
1/2-14	1/2-14	9435x8x8	7/8	2.250	1.470

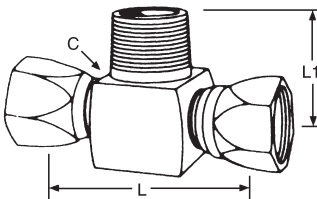
Not for use with liquids over 212°F.

Female Pipe Swivel Tee



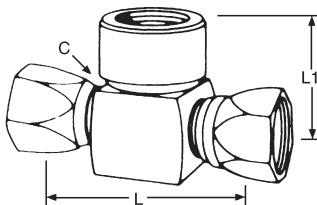
NPSM SWIVEL	CATALOG NUMBER	HEX C	L	L1
1/8-27	9705x2x2x2	1/2	1.406	.660
1/4-18	9705x4x4x4	11/16	1.720	.780
3/8-18	9705x6x6x6	7/8	1.720	.940
1/2-14	9705x8x8x8	1	2.200	1.000
3/4-14	9705x12x12x12	1-1/4	2.780	1.250
1-11-1/2	9705x16x16x16	1-1/2	3.060	1.390
1 1/4-11 1/2	9705x20x20x20	1-7/8	3.320	1.660

Female Pipe Swivel to Male Pipe Branch Tee



SWIVEL THREAD	NPSM MALE PIPE	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9406x2x2x2	9/16	1.380	.940
1/4-18	1/4-18	9406x4x4x4	11/16	1.500	1.190
1/4-18	3/8-18	9406x4x4x6	7/8	1.744	1.500
1/4-18	1/2-14	9406x4x4x8	7/8	1.880	1.500
3/8-18	3/8-18	9406x6x6x6	1	1.874	1.750
3/8-18	1/2-14	9406x6x6x8	1	2.000	1.750
1/2-14	1/2-14	9406x8x8x8	1	2.000	1.810
1/2-14	3/4-14	9406x8x8x12	1-1/4	2.250	2.000
3/4-14	1-11-1/2	9406x12x12x16	1-1/2	2.756	2.375
1-11-1/2	3/4-14	9406x16x16x12	1-1/2	2.780	2.187
1-11-1/2	1-11-1/2	9406x16x16x16	1-1/2	2.880	2.380
1-1/4-11-1/2	1-1/4-11-1/2	9406x20x20x20	1-7/8	3.240	2.620
1-1/2-11-1/2	1-1/2-11-1/2	9406x24x24x24	2-1/8	3.500	2.810

Female Pipe Swivel to Female Pipe Branch Tee



NPSM SWIVEL THREAD	FEMALE PIPE	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9456x2x2x2	1/2	1.312	.687
1/4-18	1/4-18	9456x4x4x4	11/16	1.625	.937
1/4-18	3/8-18	9456x4x4x6	7/8	1.744	1.062
3/8-18	3/8-18	9456x6x6x6	7/8	1.874	.937
3/8-18	1/2-14	9456x6x6x8	1	2.000	1.250
1/2-14	1/2-14	9456x8x8x8	1	2.000	1.250
1/2-14	3/4-14	9456x8x8x12	1-1/4	2.250	1.437
3/4-14	3/4-14	9456x12x12x12	1-1/4	2.500	1.437
3/4-14	1-11-1/2	9456x12x12x16	1-1/2	2.750	1.750
1-11-1/2	1-11-1/2	9456x16x16x16	1-1/2	2.780	1.750
1-1/4-11-1/2	1-1/4-11-1/2	9456x20x20x20	1-7/8	3.312	2.000

FOR-SEAL

Introduction

Ordering Information:

Use catalog number.

Typical Application:

High pressure, hydraulic, pneumatic and chemical processing.

Pressure:* Working pressure to 6000 PSI (1-1/4" and 1-1/2"; maximum 4000 PSI).

Sealing Method: O-Ring.

Vibration Rating:

Excellent resistance.

Material: Generally 12L14 steel

Plating: Eaton Carbon Steel Connectors are zinc-plated, except brazed parts which are oil dipped.

Used With: Steel tubing (tubing for brazing must be non-coated).

Advantages: Tubing is brazed for permanent leakproof connection.

Conformance:

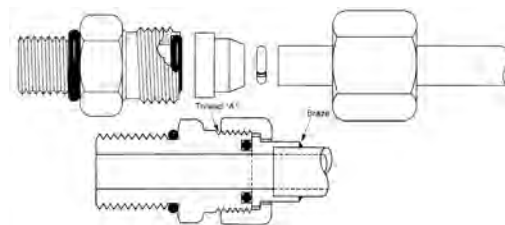
An exclusive item with Eaton, meets SAE J1453.

Label Set: FS-2400

Note:

See page 408 for new hydraulic O-Ring assortment.

* Pressure ratings shown are the pressure ratings for the fitting and are not necessarily the pressure rating applicable in an assembly with hydraulic hose. The applicable pressure rating for an assembly with hydraulic hose is the lower value specified for the hose and the fitting.



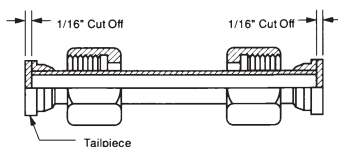
Tube O.D.	1/4	3/8	1/2	5/8	3/4
Thread	9/16-18	11/16-16	13/16-16	1-14	1 3/16-12

Tube O.D.	7/8	1	1-1/4	1-1/2
Thread	1 3/16-12	1 7/16-12	1 11/16-12	2-12

Tube Preparation and Cleaning

Figure 1

1. Establish the length of tubing required allowing 1/16" cut-off factor for each connection.
2. Cut the tubing to proper length keeping ends reasonably square. A fine tooth hack saw or cut-off saw works well for this job. The use of a tubing cutter is not recommended due to possible collapse of the tube end, retarding the capillary action required for proper braze flow.



Note:

Subtract 1/16" from tube length for each connection.



3. Clean the end of the tube with an alkaline cleaner to remove all traces of oil or grease. Deburr the end of the tube with a file and polish the outside of the tube down to bare metal with clean emery paper. Oil and grease residue must be removed first to avoid working the oily residue into the tube surface.
4. After polishing, wipe off any metal particles using a clean solvent if necessary. Avoid touching the tube end after final cleaning as this may leave greasy spots which will braze poorly. Clean the tailpiece with an alkaline cleaner.



FOR-SEAL

Fluxing and Brazing Cleanup

Flux may be cleaned up using hot water and wire brush, using care not to scratch the tailpiece sealing surface.

1. Assemble proper size braze ring into counterbore of tailpiece. The correct size braze ring will be slightly smaller than the inside diameter of the counterbore.



2. Clamp the tube securely in a vise, slide nut on tube, with threads pointing outward. Coat the tube end with flux and several inches of the tube outside diameter.



3. Coat the tailpiece liberally with flux including the counterbore and braze ring.



4. In a well ventilated area, apply heat uniformly to the tailpiece and the tube end. Watch the flux. The flux becomes completely clear when it is close to the proper brazing temperature. When ring melts, the tailpiece will settle down onto the end.



Note:
General working knowledge of Acetylene torch brazing techniques is recommended.

5. Remove tube assembly from vise and check braze joint.



6. The braze alloy will flow down through the joint and should form a continuous fillet at the tube to tailpiece joint.



Note:
Do not overheat. Excessive heat will only cause scaling and charred flux and make the parts more difficult to clean up.

Torque Requirements

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
Torque Ft-Lb. For-Seal SW. Nut	10-12	18-20	32-35	46-50	65-70	92 100	125 140	150 165
Torque Ft-Lb O-Ring Boss Straight Thread O-Ring Locknut Torque	14-16	24-26	50-60	72-80	125 135	200 220	210 280	270 360

Thread Chart

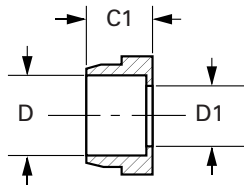
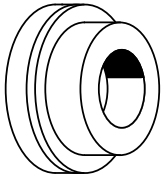
Rated pressures are for low surge, static type applications.

Tube O.D.	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2
For-Seal Thread	9/16-18	11/16-16	13/16-16	1-14	1-3/16-12	1-7/16-12	1-11/16-12	2-12
Maximum PSI	6000	6000	6000	6000	6000	6000	4000	4000
Adjustable Hose Ends PSI	6000	6000	6000	6000	6000	5000	4000	3000

FOR-SEAL

Tailpiece Silver Braze

(Ref. SAE No. 520115)

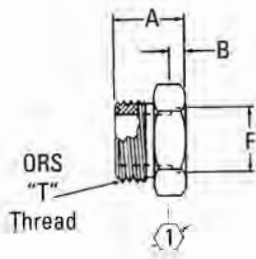


TUBE O.D.	CATALOG NUMBER	D	D1	C1
1/4	4165x4	.256	.172	.374
3/8	4165x6	.381	.264	.374
1/2	4165x8	.506	.378	.374
5/8	4165x10	.631	.484	.413
3/4	4165x12	.757	.609	.551
1	4165x16	1.007	.811	.610
1-1/4	4165x20	1.257	1.024	.610
1-1/2	4165x24	1.507	1.260	.610

Oil Dipped

FOR-SEAL Braze Adapter

(Ref. SAE 520104)

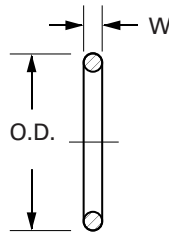
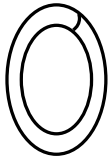


Part No. FF1851T(Size)*

DASH SIZE	TUBE O.D.		THREAD T1	A		B		F		①
	mm	inches		mm	inches	mm	inches	mm	inches	
1212S	19,0	.75	1 ³ / ₁₆ - 12	30,7	1.21	9,6	.38	19,0	.75	1.25

*Eaton counterbores are dimensioned for sizes or emerged tubing. If tubing is used as received, contact Eaton for appropriate part number.

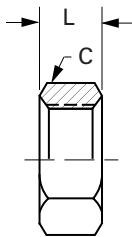
FOR-SEAL Cadmium Free Braze Ring



TUBE O.D.	CATALOG NUMBER	WIRE DIA.	O.D.
1/4	4640x4	.046	.250
3/8	4640x6	.046	.375
1/2	4640x8	.046	.500
5/8	4640x10	.046	.625
3/4	4640x12	.062	.750
1	4640x16	.062	1.000
1-1/4	4640x20	.062	1.250
1-1/2	4640x24	.062	1.500

Bulkhead Nut

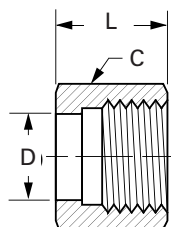
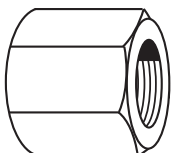
(Ref. SAE No. 520118)



TUBE O.D. A	CATALOG NUMBER	HEX C	L
1/4	4924x4	13/16	.27
3/8	4924x6	1	.31
1/2	4924x8	1-1/8	.35
5/8	4924x10	1-5/16	.41
3/4	4924x12	1-1/2	.41
1	4924x16	1-3/4	.41
1-1/4	4924x20	2	.41
1-1/2	4924x24	2-3/8	.41

Nut

(Ref. SAE No. 520110)

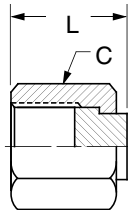
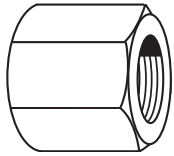


TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	4105x4	11/16	.412	.58
3/8	4105x6	13/16	.531	.67
1/2	4105x8	15/16	.652	.83
5/8	4105x10	1-1/8	.829	.93
3/4	4105x12	1-3/8	.950	1.02
1	4105x16	1-5/8	1.144	1.10
1-1/4	4105x20	1-7/8	1.415	1.10
1-1/2	4105x24	2-1/4	1.727	1.10

APPLICATION DATA
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HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

FOR-SEAL**Cap**

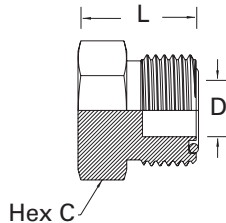
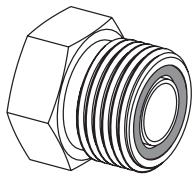
(Ref. SAE No. 520112)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/4	4129x4	11/16	.67
3/8	4129x6	13/16	.75
1/2	4129x8	15/16	.90
5/8	4129x10	1-1/8	1.00
3/4	4129x12	1-3/8	1.10
1	4129x16	1-5/8	1.17
1-1/4	4129x20	1-7/8	1.17
1-1/2	4129x24	2-1/4	1.17

Plug

(Ref. SAE No. 520109)

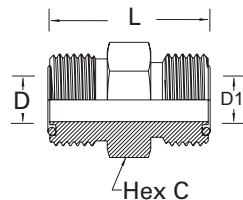
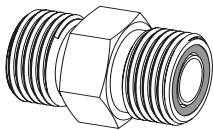


TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	4229x4	5/8	.172	.659
3/8	4229x6	3/4	.264	.751
1/2	4229x8	7/8	.378	.854
5/8	4229x10	1-1/16	.484	1.020
3/4	4229x12	1-1/4	.609	1.080
1	4229x16	1-1/2	.811	1.100
1-1/4	4229x20	1-3/4	1.024	1.100
1-1/2	4229x24	2-1/8	1.260	1.100

FOR-SEAL O-Ring included.

Union

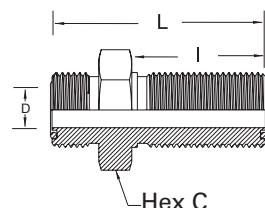
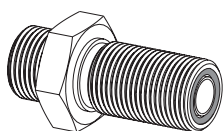
(Ref. SAE No. 520101)



TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4305x4	5/8	.172	.172	1.08
3/8	1/4	4305x6x4	3/4	.264	.172	1.17
3/8	3/8	4305x6	3/4	.264	.264	1.22
1/2	3/8	4305x8x6	7/8	.378	.264	1.33
1/2	1/2	4305x8	7/8	.378	.378	1.39
5/8	1/2	4305x10x8	1-1/16	.484	.378	1.57
5/8	5/8	4305x10	1-1/16	.484	.484	1.68
3/4	1/2	4305x12x8	1-1/4	.609	.378	1.69
3/4	5/8	4305x12x10	1-1/4	.609	.484	1.80
3/4	3/4	4305x12	1-1/4	.609	.609	1.86
1	3/4	4305x16x12	1-1/2	.812	.609	1.92
1	1	4305x16	1-1/2	.811	.811	1.94
1-1/4	1-1/4	4305x20	1-3/4	1.024	1.024	2.02
1-1/2	1-1/2	4305x24	2-1/8	1.260	1.260	2.09

Bulkhead Union

(Ref. SAE No. 520601)



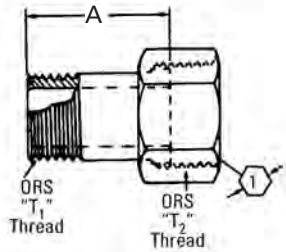
TUBE O.D.	CATALOG NUMBER	HEX C	D	I	L
3/8	4325x6	1	.264	1.34	2.09
1/2	4325x8	1-1/8	.378	1.44	2.30
3/4	4325x12	1-1/2	.609	1.64	2.72
1	4325x16	1-3/4	.812	1.66	2.76
1-1/4	4325x20	2	1.024	1.66	2.76
1-1/2	4325x24	2-3/8	1.260	1.66	2.76

For bulkhead nut, see page 265.

FOR-SEAL

FOR-SEAL Reducer Adapter

(Ref. SAE 520123)

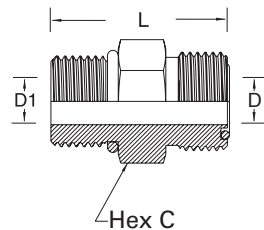
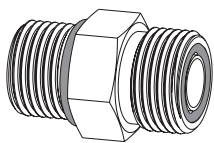


Part No. FF2281T(Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		①
	mm	inches			mm	inches	
0406S	9,6	.38	9/16 - 18	11/16 - 16	19,5	.77	.81
0408S	12,7	.50	9/16 - 18	13/16 - 16	21,8	.86	.94
0608S	12,7	.50	11/16 - 16	13/16 - 16	22,3	.88	.94
0612S	19,0	.75	11/16 - 16	13/16 - 12	26,2	1.03	1.38
0812S	19,0	.75	13/16 - 16	13/16 - 12	27,9	1.10	1.38

Straight Thread O-Ring Connector

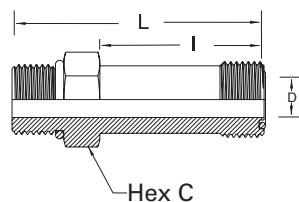
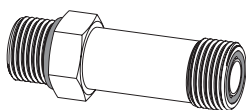
(Ref. SAE No. 520120)



MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

Straight Thread O-Ring Extended

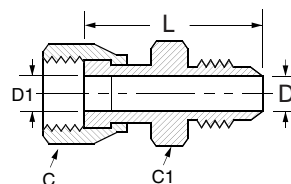
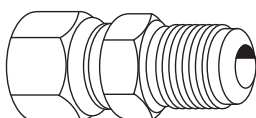
(Ref. SAE No. 520122)



MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	I	L
3/8	3/8	4316x6	3/4	.264	1.46	2.27
1/2	1/2	4316x8	7/8	.378	1.75	2.67
3/4	3/4	4316x12	1-1/4	.609	2.52	3.76
1	1	4316x16	1-1/2	.811	2.87	4.14
1-1/4	1-1/4	4316x20	1-7/8	1.024	3.41	4.76
1-1/2	1-1/2	4316x24	2-1/8	1.260	3.82	5.26

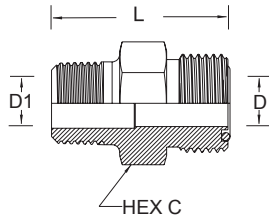
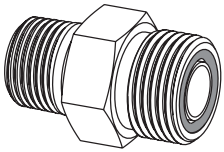
For replacement Straight Thread O-Ring, see page 273.

Male 37° to Female FOR-SEAL

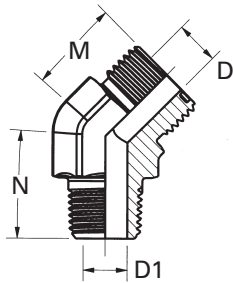


FEMALE TUBE O.D.	MALE TUBE SIZE	CATALOG NUMBER	HEX C	HEX C1	D	L
1/4	1/4	4213x4	11/16	5/8	.172	1.50
3/8	3/8	4213x6	13/16	3/4	.297	1.62
1/2	1/2	4213x8	15/16	7/8	.392	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	2.25
3/4	3/4	4213x12	1-3/8	1-1/4	.609	2.48
1	1	4213x16	1-5/8	1-1/2	.811	2.84

APPLICATION DATA
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HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

FOR-SEAL**Male FOR-SEAL Male
Pipe Adapter**

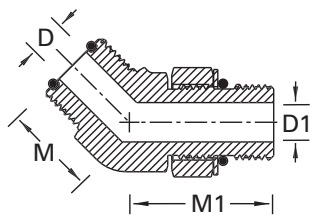
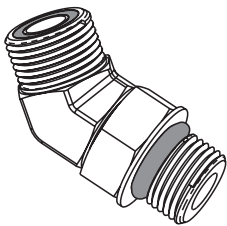
TUBE O.D.	MALE PIPE SIZE	CATALOG NUMBER	HEX C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609	.938	1.87
1	1	4205x16	1-1/2	.811	.938	2.19
1-1/4	1-1/4	4205x20	1-3/4	1.024	1.250	2.30

45° Male Elbow

MALE TUBE O.D.	MALE TUBE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	4355x4	.172	.188	.63	.64	9/16
3/8	1/4	4355x6	.264	.281	.74	.86	3/4
1/2	3/8	4355x8	.378	.406	.80	.95	7/8
5/8	1/2	4355x10	.484	.531	.92	1.17	1-1/16
3/4	3/4	4355x12	.609	.719	1.02	1.20	1-5/16
1	1	4355x16	.812	.939	1.18	1.48	1-5/8
1-1/4	1-1/4	4355x20	1.026	1.252	1.26	1.67	1-5/8
1-1/2	1-1/2	4355x24	1.262	1.502	1.45	1.77	1-7/8

**Straight Thread O-Ring
Connector 45° Elbow**

(Ref. SAE No. 520320)



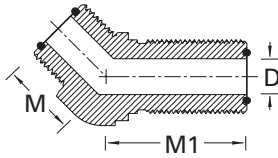
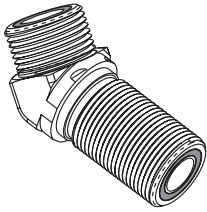
MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4365x4	.172	.172	.63	1.18	9/16
1/4	3/8	4365x4x6	.172	.264	.68	1.30	3/4
3/8	1/4	4365x6x4	.264	.172	.74	1.22	3/4
3/8	3/8	4365x6	.264	.264	.74	1.30	3/4
3/8	1/2	4365x6x8	.264	.390	.74	1.43	3/4
1/2	3/8	4365x8x6	.378	.264	.80	1.27	3/4
1/2	1/2	4365x8	.378	.390	.80	1.43	3/4
1/2	5/8	4365x8x10	.378	.484	.82	1.76	1-1/16
1/2	3/4	4365x8x12	.378	.609	.87	1.97	1-3/16
5/8	1/2	4365x10x8	.484	.390	.92	1.59	1-1/16
5/8	5/8	4365x10	.484	.484	.92	1.76	1-1/16
5/8	3/4	4365x10x12	.484	.609	.94	1.97	1-3/16
3/4	5/8	4365x12x10	.609	.484	1.02	1.81	1-3/16
3/4	3/4	4365x12	.609	.609	1.02	1.97	1-5/16
3/4	1	4365x12x16	.609	.811	1.16	2.06	1-5/16
1	3/4	4365x16x12	.811	.609	1.12	2.03	1-7/16
1	1	4365x16	.812	.811	1.18	2.06	1-1/2
1	1-1/4	4365x16x20	.811	1.081	1.26	2.11	1-5/8
1-1/4	1-1/4	4365x20	1.024	1.081	1.26	2.11	1-5/8
1-1/2	1-1/2	4365x24	1.260	1.312	1.45	2.11	1-7/8

For replacement straight thread O-Ring, see page 273.

FOR-SEAL

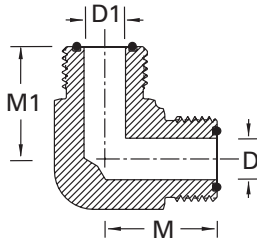
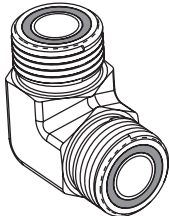
45° Bulkhead Elbow

(Ref. SAE No. 520201)



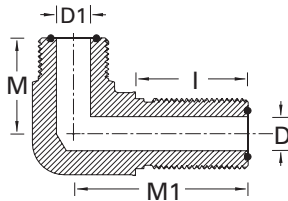
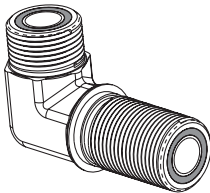
Union 90° Elbow

(Ref. SAE No. 520201)

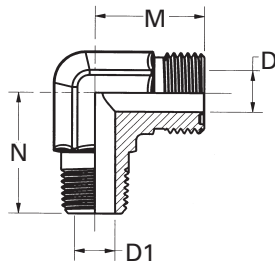


Bulkhead Union 90° Elbow

(Ref. SAE No. 520701)



90° Male Elbow



MALE TUBE O.D.	CATALOG NUMBER	D	M	M1	ACROSS FLATS
1/4	4375x4	.172	.63	1.73	9/16
3/8	4375x6	.264	.74	1.91	3/4
1/2	4375x8	.378	.80	2.01	3/4
5/8	4375x10	.484	.92	2.23	1-1/16
3/4	4375x12	.609	1.02	2.39	1-3/16
1	4375x16	.811	1.18	2.57	1-7/16
1-1/4	4375x20	1.045	1.26	2.64	1-11/16
1-1/2	4375x24	1.312	1.45	2.64	1-7/8

For Bulkhead Nut, see page 265.

MALE TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	4505x4	.172	.85	9/16
3/8	4505x6	.264	.98	3/4
1/2	4505x8	.378	1.10	3/4
5/8	4505x10	.484	1.31	1-1/16
3/4	4505x12	.609	1.47	1-3/16
1	4505x16	.811	1.64	1-7/16
1-1/4	4505x20	1.045	1.76	1-5/8
1-1/2	4505x24	1.312	1.92	1-7/8

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	1	ACROSS FLATS
1/4	1/4	4525x4	.172	.172	.89	1.85	1.24	9/16
3/8	3/8	4525x6	.264	.264	1.02	2.05	1.34	3/4
1/2	1/2	4525x8	.378	.378	1.14	2.18	1.44	7/8
5/8	5/8	4525x10	.484	.484	1.36	2.36	1.44	1-1/16
3/4	3/4	4525x12	.609	.609	1.52	2.64	1.60	1-5/16
1	1	4525x16	.811	.811	1.67	2.80	1.64	1-5/8
1-1/4	1-1/4	4525x20	1.024	1.024	1.79	2.97	1.66	1-7/8
1-1/2	1-1/2	4525x24	1.260	1.260	1.95	3.13	1.66	1-7/8

For Bulkhead Nut, see page 265.

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	4405x4	.172	.188	.85	.78	9/16
3/8	1/4	4405x6	.264	.281	.80	1.09	3/4
1/2	3/8	4405x8	.378	.406	1.10	1.22	3/4
5/8	1/2	4405x10	.484	.531	1.31	1.47	1-1/16
3/4	3/4	4405x12	.609	.719	1.47	1.59	1-5/16
1	1	4405x16	.812	.939	1.64	1.97	1-5/8
1-1/4	1-1/4	4405x20	1.026	1.252	1.76	2.38	1-5/8
1-1/2	1-1/2	4405x24	1.262	1.502	1.92	2.64	1-7/8

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

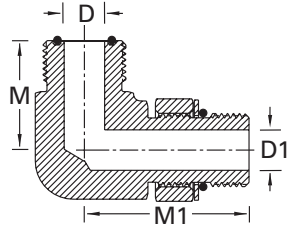
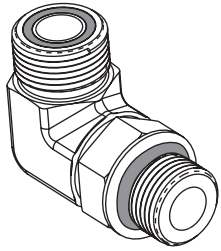
FOR-SEAL

90° Swivel Elbow

(Ref. SAE No. 520221)

Straight Thread O-Ring 90° Elbow

(Ref. SAE No. 520220)

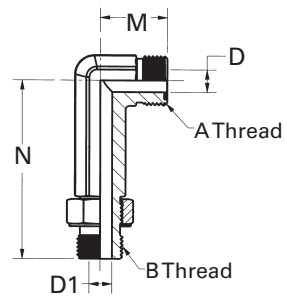


MALE TUBE O.D.	FEMALE PORT O.D.	CATALOG NUMBER	HEX C	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4506x4	11/16	.172	.165	.85	1.04	9/16
3/8	3/8	4506x6	13/16	.264	.264	.98	1.19	3/4
1/2	3/8	4506x8x6	13/16	.378	.264	1.10	1.49	3/4
1/2	1/2	4506x8	15/16	.378	.358	1.10	1.46	3/4
5/8	5/8	4506x10	1-1/8	.484	.453	1.31	1.59	1-1/16
3/4	3/4	4506x12	1-3/8	.609	.547	1.47	1.79	1-5/16
1	1	4506x16	1-5/8	.811	.783	1.64	2.10	1-7/16
1-1/4	1-1/4	4506x20	1-7/8	1.045	1.024	1.76	2.29	1-5/8
1-1/2	1-1/4	4506x24x20	1-7/8	1.312	1.024	1.92	2.41	1-7/8
1-1/2	1-1/2	4506x24	2-1/4	1.312	1.260	1.92	2.41	1-7/8

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4515x4	.172	.172	.85	1.29	9/16
1/4	3/16	4515x4x3	.172	.120	.85	1.19	9/16
1/4	5/16	4515x4x5	.172	.234	.85	1.29	9/16
1/4	3/8	4515x4x6	.172	.264	.92	1.45	3/4
1/4	1/2	4515x4x8	.172	.390	.97	1.60	3/4
3/8	1/4	4515x6x4	.264	.172	.98	1.37	3/4
3/8	5/16	4515x6x5	.264	.234	.98	1.37	3/4
3/8	3/8	4515x6	.264	.264	.98	1.45	3/4
3/8	1/2	4515x6x8	.264	.390	1.04	1.60	3/4
3/8	5/8	4515x6x10	.264	.484	1.15	1.97	3/4
3/8	3/4	4515x6x12	.264	.609	1.25	2.17	1-3/16
1/2	5/8	4515x8x10	.378	.484	1.21	1.97	1-1/16
1/2	3/4	4515x8x12	.378	.484	1.32	2.17	1-1/16
1/2	3/8	4515x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4515x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4515x10	.484	.484	1.31	1.97	1-1/16
5/8	3/4	4515x10x12	.484	.609	1.41	2.17	1-3/16
5/8	1/2	4515x10x8	.484	.390	1.31	1.80	1-1/16
3/4	5/8	4515x12x10	.609	.484	1.47	2.01	1-5/16
3/4	3/4	4515x12	.609	.609	1.47	2.17	1-5/16
3/4	1	4515x12x16	.609	.811	1.62	2.35	1-5/16
3/4	1/2	4515x12x8	.609	.390	1.47	1.84	1-3/16
1	3/4	4515x16x12	.811	.609	1.64	2.32	1-5/8
1	7/8	4515x16x14	.811	.609	1.64	2.32	1-5/8
1	1	4515x16	.811	.811	1.64	2.35	1-5/8
1	1-1/4	4515x16x20	.811	1.081	1.76	2.45	1-5/8
1-1/4	1	4515x20x16	1.024	.811	1.76	2.42	1-5/8
1-1/4	1-1/4	4515x20	1.024	1.081	1.76	2.45	1-7/8
1-1/4	1-1/2	4515x20x24	1.024	1.312	1.92	2.59	1-7/8
1-1/2	1-1/4	4515x24x20	1.312	1.081	1.92	2.59	1-7/8
1-1/2	1-1/2	4515x24	1.312	1.312	1.92	2.59	1-7/8

For replacement straight thread O-Ring, see page 273.

Straight Thread O-Ring 90° Elbow - Long

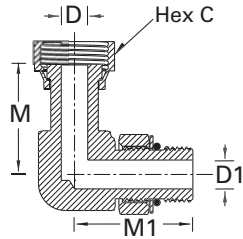
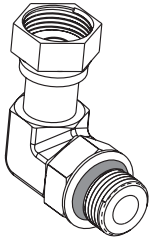


MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/4	4515x4L	.172	.180	.85	2.23	9/16
3/8	3/8	4515x6L	.264	.300	.98	2.61	3/4
1/2	1/2	4515x8L	.378	.398	1.10	2.95	3/4
5/8	5/8	4515x10L	.484	.498	1.31	3.51	1-1/16
3/4	3/4	4515x12L	.609	.616	1.47	3.97	1-3/16
1	1	4515x16L	.812	.852	1.64	4.51	1-7/16
1-1/4	1-1/4	4515x20L	1.026	1.090	1.76	4.98	1-5/8
1-1/2	1-1/2	4515x24L	1.262	1.326	1.92	5.48	1-7/8

FOR-SEAL

90° Straight Thread Swivel

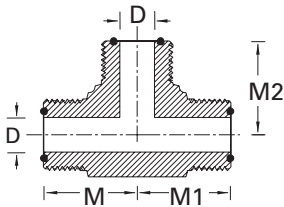
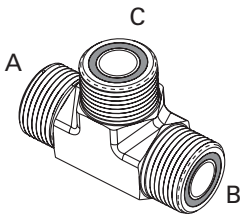
(Ref. SAE No. 520281)



FEM. TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	HEX C	ACROSS FLATS
1/4	1/4	4535x4	.165	.180	1.04	1.29	11/16	9/16
3/8	3/8	4535x6	.264	.300	1.15	1.45	13/16	3/4
1/2	1/2	4535x8	.258	.398	1.49	1.60	15/16	7/8
5/8	5/8	4535x10	.453	.498	1.62	1.97	1-1/8	1-1/16
3/4	3/4	4535x12	.547	.616	1.82	2.17	1-3/8	1-3/8
1	1	4535x16	.783	.852	2.10	2.35	1-5/8	1-5/8
1-1/4	1-1/4	4535x20	1.026	1.090	2.29	2.45	1-7/8	1-5/8
1-1/2	1-1/2	4535x24	1.262	1.326	2.41	2.59	2-1/4	1-7/8

Union Tee

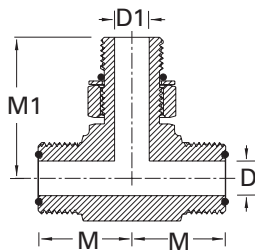
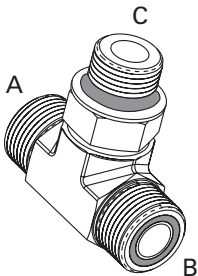
(Ref. SAE No. 520401)



MALE TUBE O.D. A	MALE TUBE O.D. B	MALE TUBE O.D. C	CATALOG NUMBER	D	D1	M	M1	M2	ACROSS FLATS
1/4	1/4	1/4	4705x4	.172	.172	.85	.85	.85	9/16
3/8	3/8	3/8	4705x6	.264	.264	.98	.98	.98	3/4
3/8	3/8	1/2	4705x6x6x8	.264	.378	1.04	1.04	1.10	3/4
1/2	3/8	1/2	4705x8x6x8	.264	.378	.98	.98	1.10	3/4
1/2	1/2	1/2	4705x8	.378	.378	1.10	1.10	1.10	3/4
5/8	5/8	5/8	4705x10	.484	.484	1.31	1.31	1.31	1-1/16
3/4	3/4	3/4	4705x12	.609	.609	1.47	1.47	1.47	1-3/16
1	1	1	4705x16	.811	.811	1.64	1.64	1.64	1-5/8
1-1/4	1-1/4	1-1/4	4705x20	1.024	1.024	1.76	1.76	1.76	1-5/8
1-1/4	1-1/4	1	4705x20x20x16	1.024	.811	1.76	1.76	1.76	1-5/8
1-1/2	1-1/2	1-1/2	4705x24	1.260	1.260	1.92	1.92	1.92	1-7/8

Straight Thread Branch Tee

(Ref. SAE No. 520429)



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	4715x4	.172	.172	.85	1.29	9/16
1/4	3/16	4715x4x3	.172	.120	.85	1.19	9/16
3/8	3/8	4715x6	.264	.264	.98	1.45	3/4
3/8	1/2	4715x6x8	.264	.391	1.04	1.60	7/8
1/2	3/8	4715x8x6	.378	.264	1.10	1.44	3/4
1/2	1/2	4715x8	.378	.390	1.10	1.60	3/4
5/8	5/8	4715x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	4715x12	.609	.609	1.47	2.17	1-3/16
3/4	1	4715x12x16	.609	.812	1.62	2.35	1-5/8
1	1	4715x16	.811	.845	1.64	2.35	1-5/8
1-1/4	1	4715x20x16	1.046	.845	1.76	2.45	1-15/16
1-1/4	1-1/4	4715x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	4715x24	1.260	1.313	1.92	2.59	1-7/8

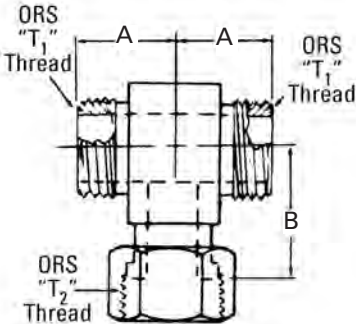
For replacement straight thread O-Ring, see page 273.

APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & TUBE HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

FOR-SEAL

Female Branch Tee

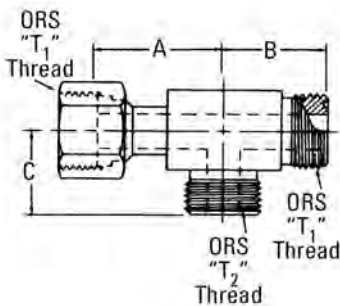
(Ref. SAE No. 520433)



CATALOG NUMBER	TUBE OD	THREAD T1	THREAD T2	A	B
4707x4	.25	9/16-18	9/16-18	.85	1.04
4707x6	.38	11/16-16	11/16-16	.98	1.15
4707x8	.50	13/16-16	13/16-16	1.10	1.49
4707x10	.63	1-14	1-14	1.31	1.62
4707x12	.75	1 3/16-12	1 3/16-12	1.47	1.82
4707x16	1.00	1 7/16-12	1 7/16-12	1.64	2.10
4707x20	1.25	1 11/16-12	1 11/16-12	1.76	2.29
4707x24	1.50	2-12	2-12	1.92	2.41

Female Run Tee

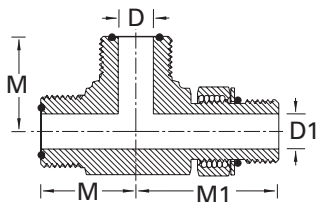
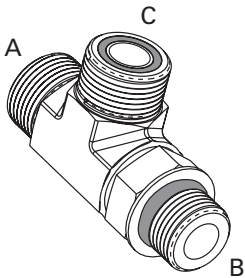
(Ref. SAE No. 520432)



CATALOG NUMBER	TUBE OD	THREAD T1	THREAD T2	A	B	C
4706x4	.25	9/16-18	9/16-18	1.04	.85	.85
4706x6	.38	11/16-16	11/16-16	1.15	.98	.98
4706x8	.50	13/16-16	13/16-16	1.49	1.10	1.10
4706x10	.63	1-14	1-14	1.62	1.31	1.31
4706x12	.75	1 3/16-12	1 3/16-12	1.82	1.47	1.47
4706x16	1.00	1 7/16-12	1 7/16-12	2.10	1.64	1.64
4706x20	1.25	1 11/16-12	1 11/16-12	2.29	1.76	1.76
4706x24	1.50	2-12	2-12	2.41	1.92	1.92

Straight Thread Run Tee

(Ref. SAE No. 520428)



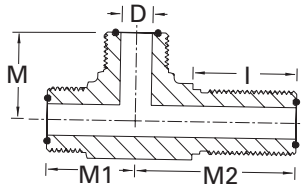
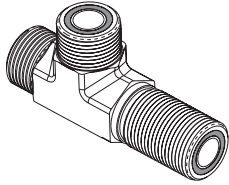
MALE TUBE O.D. A	MALE TUBE O.D. B	MALE TUBE O.D. C	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	1/4	4716x4	.172	.172	.85	1.29	9/16
1/4	1/4	3/8	4716x4x6	.172	.264	1.39	1.45	3/4
3/8	3/8	3/8	4716x6	.264	.264	.98	1.45	3/4
1/2	1/2	1/2	4716x8	.378	.391	1.10	1.60	7/8
5/8	5/8	5/8	4716x10	.484	.484	1.31	1.97	1-1/16
3/4	3/4	3/4	4716x12	.609	.609	1.47	2.17	1-3/16
3/4	3/4	1	4716x12x16	.609	.812	1.62	2.32	1-7/16
3/4	1	3/4	4716x12x16x12	.609	.812	1.62	2.35	1-7/16
1	1	3/4	4716x16x12	.812	.609	1.64	2.35	1-7/16
1	1	1	4716x16	.812	.845	1.64	2.35	1-7/16
1-1/4	1-1/4	1-1/4	4716x20	1.046	1.081	1.76	2.45	1-7/8
1-1/2	1-1/2	1-1/2	4716x24	1.313	1.313	1.92	2.59	1-7/8

For replacement straight thread O-Ring, see page 273.

FOR-SEAL

Bulkhead Run Tee

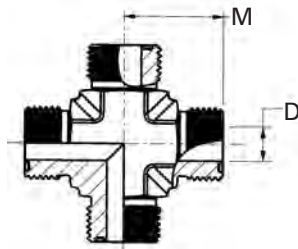
(Ref. SAE No. 520958)



TUBE O.D.	CATALOG NUMBER	D	I	M	M1	M2	ACROSS FLATS
1/4	4726x4	.172	1.24	.89	.89	1.85	9/16
3/8	4726x6	.264	1.34	1.02	1.02	2.05	3/4
1/2	4726x8	.378	1.44	1.14	1.14	2.18	3/4
5/8	4726x10	.484	1.60	1.36	1.36	2.48	1-1/16
3/4	4726x12	.609	1.64	1.52	1.52	2.65	1-3/16
1	4726x16	.812	1.66	1.67	1.67	2.80	1-7/16
1-1/4	4726x20	1.024	1.66	1.79	1.79	2.97	1-5/8
1-1/2	4726x24	1.260	1.66	1.95	1.95	3.13	1-7/8

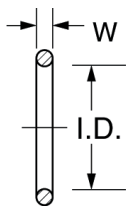
For Bulkhead Nut, see page 265.

Male FOR-SEAL Cross



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	4955x4	.172	.89	9/16
3/8	4955x6	.264	1.02	3/4
1/2	4955x8	.378	1.14	7/8
5/8	4955x10	.484	1.36	1-1/16
3/4	4955x12	.609	1.52	1-5/16
1	4955x16	.812	1.67	1-5/8
1-1/4	4955x20	1.026	1.79	1-5/8
1-1/2	4955x24	1.262	1.95	1-7/8

O-Ring, FOR-SEAL



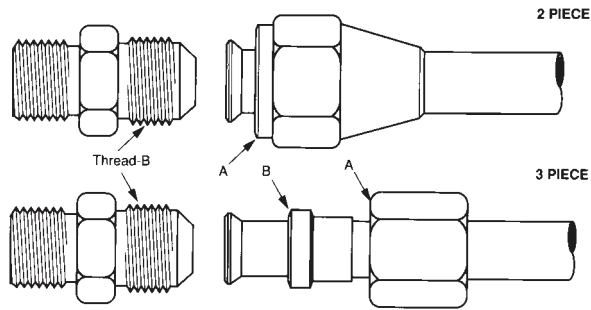
Material: Buna N, 90 Durometer

Temperature:
-40°F to +250°F
(-40°C to +121°C)

Standard O-Ring complies with SAE specification SAE J515 Type CH

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/4	4629x4	.070 ± .005	.301 ± .005
3/8	4629x6	.070 ± .005	.364 ± .005
1/2	4629x8	.070 ± .005	.489 ± .005
5/8	4629x10	.070 ± .005	.614 ± .005
3/4	4629x12	.070 ± .005	.739 ± .005
1	4629x16	.070 ± .006	.926 ± .006
1-1/4	4629x20	.070 ± .006	1.176 ± .006
1-1/2	4629x24	.070 ± .010	1.489 ± .010

JIC 37° Flare-Twin



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

Forged Adapters 5000 Series Pressure Rating Chart

Connection Type	End Size												
	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"
SAE Fittings	6000	5000	5000	5000	5000	4000	4000	4000	4000	4000	3000	3000	3000
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male Pipe	6000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000		5000		4000	3000		2500		2000	1500	1500	1000

Brazed Adapters (TF)/SAE 5000 Series Pressure Rating Chart

Connection Type	End Size												
	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"
SAE Fittings	5000	5000	5000	5000	5000	4500	3500	3500	3000	3000	2500	2000	1500
W/Adjustable Straight Thread O-Ring	5000	5000	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
With Male or Female Pipe	5000	5000	5000	5000	4000	3000	3000	2500	2500	2000	1150	1000	1000

Typical Application

Hydraulic, instrumentation and chemical processing systems.

Pressure

Refer to the pressure charts above. The maximum working pressure of an adapter is the lower working pressure of the end size. Ex: C3069x8x6, 8 = 4000 psi and 6 = 5000 psi.

Maximum working pressure is 4000 psi.

Vibration

Good resistance. Vibration resistance decreases with increase in tube size.

Use two piece design when greater vibration resistance is required.

Temperature Range

-65°F to +400°F (-53°C to +204°C) at maximum operating pressures.

Material

Carbon Steel - AISI/SAE 12L14

Stainless Steel - Type 316

Plating - Zinc, yellow dichromate.

Used With

Copper, brass, steel, aluminum and other tubing that can be flared. See page 29-33 for material compatibility.

Advantages

Zinc Plate. Choice of two or three-piece design. Broad selection of styles and sizes. Interchangeable with all sources.

Conformance

Meets specifications and standards of ASA, ASME and SAE.

How to Order

To order a three-piece assembly, prefix the catalog number with a "3".

Example: To order a male connector C5205x4 with nut and sleeve assembled, order C35205x4. To order a two-piece assembly, order nut and body separately.

Example: Order male connector C5205x4 and two-piece style nut C5115x4. Bodies, nuts and sleeves can be ordered separately by catalog number. Stainless steel bodies, nuts and sleeves are ordered separately by catalog number.

To order Weathercote finish (black phosphate coating) use "W" prefix in place of "C": Example: W5205x4 (special order only).

To order with pipe sealants (Seal-AThread), add a "Z" suffix to the catalog number. Example: C5205x4Z (special order only).

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 be found in SAE J514.

Weatherhead fittings with a "C" prefix are made from a forged construction.

Example: C5405x4. Weatherhead fittings with a "TF" prefix are made from a brazed construction.

Example: TF5405x4.

Label Set: FS-200 (adhesive)

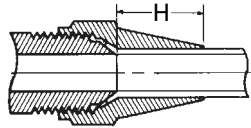
Assembly Instructions

- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- Slide nut on tube. Threaded end of nut "A" must face toward fitting body. (See above.)
- Slide sleeve on tube (3-piece assembly only). Collar end "B" of sleeve must face toward fitting body. (See above.)
- Flare end of tubing with 37° flaring tool.
 - Check flare diameter. For dimensional data on 37° flares, see page 275.
 - Examine flare for excessive thinout.
 - On thin wall, welded or brazed tubing, use double flare to prevent pinch-off and cracked flares.
- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- Tighten assembly until finger tight, then until a sharp torque rise is encountered. From that point, apply one-sixth turn with a wrench.

JIC 37° Flare-Twin

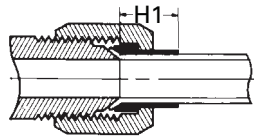
Dimensional Data

Dimensional Data Two-Piece Assemblies



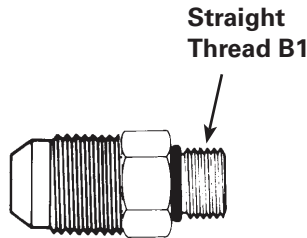
Dimensional Data Three-Piece Assemblies

Note: H & H1 are dimensions of fittings assembled to hand tight condition.



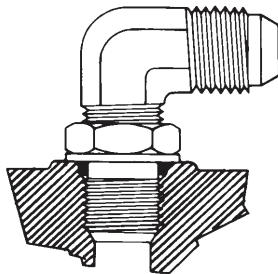
TUBE O.D.	H	H1
1/8	—	.31
3/16	—	.38
1/4	.59	.36
5/16	.66	.41
3/8	.69	.47
1/2	.81	.50
5/8	.94	.64
3/4	—	.61
7/8	—	.69
1	—	.75
1-1/4	—	.73
1-1/2	—	1.05
2	—	1.08

Straight Thread O-Ring Thread Sizes



PORT SIZE	THREAD SIZE B1	PORT SIZE	THREAD SIZE B1
1/8	5/16-24	3/4	1-1/16-12
3/16	3/8-24	7/8	1-3/16-12
1/4	7/16-20	1	1-5/16-12
5/16	1/2-20	1-1/4	1-5/8-12
3/8	9/16-18	1-1/2	1-7/8-12
1/2	3/4-16	2	2-1/2-12
5/8	7/8-14		

Straight Thread O-Ring Fitting



Adjustable Fittings

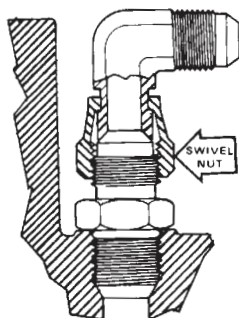
- Permit exact positioning of tees and elbows.
- Provide a leakproof joint.
- Eliminate distorted bosses from over tightening.

1. Lubricate O-ring by coating with a light oil or petrolatum and push back-up washer and O-ring to the extreme rear of the O-ring groove.
2. Turn the lock nut down until it just contacts the back-up washer.
3. Screw fitting by hand into straight thread boss until the back-up washer contacts the face of the boss.
4. Position the fitting by backing out (counter-clockwise) up to one full turn. Hold fitting in desired position and tighten lock nut with a wrench.
5. Assemble tube to fitting. Retighten lock nut.

NOTE: O-ring, lock nuts and back-up washers are preassembled on all straight thread fittings.

Swivel Fitting

(Used with Connector)



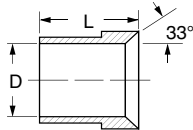
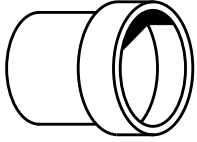
Weatherhead swivel end fittings can be used with a straight connector when space limitations will not permit full rotation of standard straight thread elbows and tees.

1. Screw connector into the O-ring boss and tighten.
2. Thread swivel nut onto connector.
3. Hold fitting in desired position and tighten swivel nut with a wrench

JIC 37° Flare-Twin®

• Available in Stainless Steel.

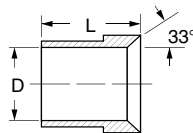
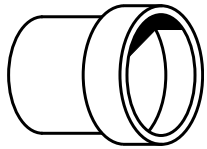
Sleeve 3 Piece

Stainless Steel No. 5177x
(Ref. SAE No. 070115)

TUBE O.D.	CATALOG NUMBER	D	L
1/8	C5165x2•	.130	.34
3/16	C5165x3•	.193	.34
1/4	C5165x4•	.255	.41
5/16	C5165x5•	.318	.44
3/8	C5165x6•	.380	.50
1/2	C5165x8•	.505	.56
5/8	C5165x10•	.631	.66
3/4	C5165x12•	.756	.68
7/8	C5165x14	.881	.76
1	C5165x16•	1.006	.78
1-1/4	C5165x20•	1.260	.91
1-1/2	C5165x24•	1.510	1.12
2	C5165x32•	2.014	1.19

Sleeve 3 Piece Metric

(Ref. SAE No. 070115)

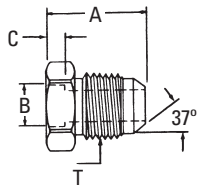


TUBE O.D.	TUBE O.D.	CATALOG NUMBER	D	L
(Inch Size)	(Metric Size)			
1/4	6MM	C5165x4x6MM	.241	.41
5/16	8MM	C5165x5x8MM	.320	.44
3/8	10MM	C5165x6x10MM	.399	.50
1/2	12MM	C5165x8x12MM	.478	.56
5/8	14MM	C5165x10x14MM	.556	.66
5/8	15MM	C5165x10x15MM	.596	.66
5/8	16MM	C5165x10x16MM	.636	.66
3/4	18MM	C5165x12x18MM	.717	.68
7/8	20MM	C5165x14x20MM	.793	.76
7/8	22MM	C5165x14x22MM	.866	.76
1	25MM	C5165x16x25MM	.990	.78
1-1/4	30MM	C5165x20x30MM	1.191	.91
1-1/4	32MM	C5165x20x32MM	1.270	.91
1-1/2	38MM	C5165x24x38MM	1.510	1.12

Adapts Standard SAE Flare-Twin® Hose Ends for use with metric tubing.

JIC 37° Braze Adapter

Part No. 73014- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD T	A		B		C	
	mm	inches		mm	inches	mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	18,8	.74	6,3	.25	4,0	.16
5S	7,9	.31	1/2 - 20	20,3	.80	7,9	.31	4,0	.16
6S	9,6	.38	9/16 - 18	20,6	.81	9,6	.38	4,0	.16
8S	12,7	.50	3/4 - 16	23,9	.94	12,7	.50	4,0	.16
10S	16,0	.63	7/8 - 14	27,2	1.07	15,7	.62	4,0	.16
12S	19,0	.75	1 1/16 - 12	31,5	1.24	19,0	.75	6,3	.25
16S	25,4	1.00	1 5/16 - 12	32,8	1.29	25,4	1.00	6,3	.25
20S	31,7	1.25	1 5/8 - 12	35,6	1.40	31,7	1.25	6,3	.25
20-16S	31,7	1.25	1 5/16 - 12	32,8	1.29	31,7	1.25	6,3	.25
32S	50,8	2.00	2 1/2 - 12	49,8	1.96	50,8	2.00	6,3	.25

JIC 37° Flare-Twin®

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

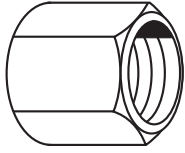
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

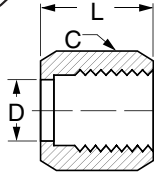
TECHNICAL DATA

Nut 3 Piece

Stainless Steel No. 5117x
(Ref. SAE No. 070115)

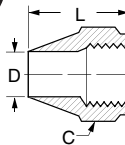
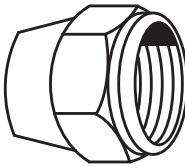


SAE style 'B'



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/8	C5105x2•	3/8	.181	.55
3/16	C5105x3•	7/16	.243	.61
1/4	C5105x4•	9/16	.306	.62
5/16	C5105x5•	5/8	.375	.68
3/8	C5105x6•	11/16	.441	.73
1/2	C5105x8•	7/8	.571	.85
5/8	C5105x10•	1	.698	.98
3/4	C5105x12•	1-1/4	.835	1.03
7/8	C5105x14	1-3/8	.961	1.09
1	C5105x16•	1-1/2	1.089	1.13
1-1/4	C5105x20•	2	1.347	1.23
1-1/2	C5105x24•	2-1/4	1.617	1.42
2	C5105x32•	2-7/8	2.167	1.75

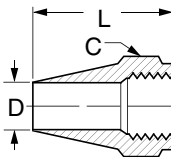
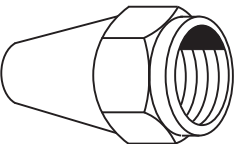
2 Piece Nut (Short)



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	C5125x4	9/16	.255	.59
5/16	C5125x5	5/8	.318	.59
3/8	C5125x6	11/16	.380	.66
1/2	C5125x8	7/8	.505	.81
5/8	C5125x10	1	.631	.94
3/4	C5125x12	1-1/4	.756	1.14

2 Piece Nut

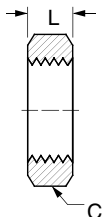
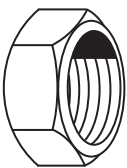
(Ref. SAE No. 070111 (style A))



TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	C5115x4	9/16	.255	1.00
5/16	C5115x5	5/8	.318	1.06
3/8	C5115x6	11/16	.380	1.09
1/2	C5115x8	7/8	.505	1.28
5/8	C5115x10	1	.631	1.48
3/4	C5115x12	1-1/4	.756	1.66
7/8	C5115x14	1-3/8	.881	1.81
1	C5115x16	1-1/2	1.006	1.94
1-1/4	C5115x20	2	1.260	2.19
1-1/2	C5115x24	2-1/4	1.510	2.31

Bulkhead Nut

Stainless Steel No. 7936x
(Ref. SAE No. 070118)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/8	C5924x2	9/16	.22
3/16	C5924x3	5/8	.22
1/4	C5924x4•	11/16	.25
5/16	C5924x5	3/4	.28
3/8	C5924x6•	13/16	.27
1/2	C5924x8•	1	.31
5/8	C5924x10	1-1/8	.36
3/4	C5924x12•	1-3/8	.41
7/8	C5924x14	1-1/2	.41
1	C5924x16•	1-5/8	.41
1-1/4	C5924x20	1-7/8	.41
1-1/2	C5924x24	2-1/8	.41
2	C5924x32	2-3/4	.41

JIC 37° Flare-Twin®

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

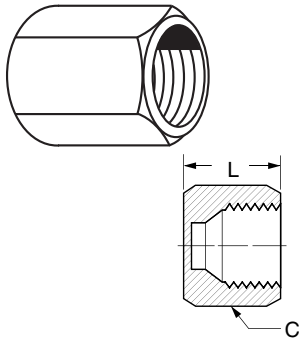
ADAPTERS &
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Cap

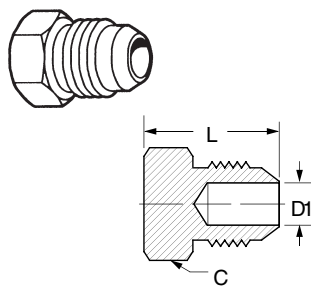
Stainless Steel No. 5141x
(Ref. SAE No. 070112)



TUBE O.D.	CATALOG NUMBER	HEX C	L
1/8	C5129x2	3/8	.50
3/16	C5129x3	7/16	.56
1/4	C5129x4•	9/16	.59
5/16	C5129x5•	5/8	.61
3/8	C5129x6•	11/16	.62
1/2	C5129x8•	7/8	.75
5/8	C5129x10•	1	.84
3/4	C5129x12•	1-1/4	.91
1	C5129x16•	1-1/2	1.02
1-1/4	C5129x20•	2	1.06
1-1/2	C5129x24	2-1/4	1.19
2	C5129x32	2-7/8	1.44

Plug

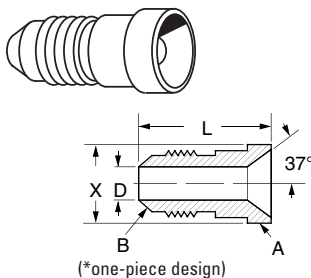
Stainless Steel No. 5241x
(Ref. SAE No. 070109)



TUBE O.D.	CATALOG NUMBER	HEX C	L	D1 OPT.
1/4	C5229x4•	1/2	.80	.172
5/16	C5229x5•	9/16	.80	.234
3/8	C5229x6•	5/8	.84	.297
1/2	C5229x8•	13/16	.94	.391
5/8	C5229x10•	15/16	1.10	.484
3/4	C5229x12•	1-1/8	1.28	.609
7/8	C5229x14	1-1/4	1.31	.719
1	C5229x16•	1-3/8	1.33	.844
1-1/4	C5229x20	1-11/16	1.45	1.078
1-1/2	C5229x24	2	1.65	1.312
2	C5229x32	2-5/8	2.05	1.781

Reducer

Stainless Steel No. 5027x
(Ref. SAE No. 070123)
Example assembly No.
C35015x



FEMALE REDUCTION A	MALE REDUCTION B	CATALOG NUMBER	D	L	DIA. X	HEX C
3/8	1/4	C5015x6x4•	.172	.97	.502	–
1/2	1/4	C5015x8x4•	.172	1.00	.682	–
1/2	3/8	C5015x8x6•	.297	1.00	.682	–
5/8*	1/4	C5015x10x4•	.172	1.47	–	1
5/8*	3/8	C5015x10x6•	.297	1.41	–	1
5/8*	1/2	C5015x10x8•	.391	1.41	–	1
3/4	1/4	C5015x12x4•	.172	1.09	.972	–
3/4	3/8	C5015x12x6•	.297	1.09	.972	–
3/4	1/2	C5015x12x8•	.391	1.19	.972	–
3/4*	5/8	C5015x12x10	.484	1.58	–	1-1/4
7/8*	3/8	C5015x14x6	.297	1.59	–	1-3/8
7/8*	1/2	C5015x14x8	.391	1.69	–	1-3/8
7/8*	5/8	C5015x14x10	.484	1.73	–	1-3/8
7/8*	3/4	C5015x14x12	.609	1.80	–	1-3/8
1*	1/2	C5015x16x8	.391	1.72	–	1-1/2
1*	5/8	C5015x16x10	.484	1.79	–	1-1/2
1	3/4	C5015x16x12•	.609	1.47	1.222	–
1*	7/8	C5015x16x14	.719	1.87	–	1-1/2
1-1/4	3/4	C5015x20x12	.609	1.50	1.534	–
1-1/4*	1	C5015x20x16	.844	2.00	–	2
1-1/2*	1-1/4	C5015x24x20	1.078	2.15	–	2-1/4
2*	1-1/2	C5015x32x24	1.312	2.61	–	2-7/8

NOTE: Two-piece design does not include nut. Order nut C5105x to use reducer.

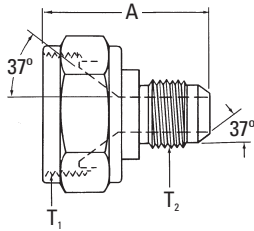
JIC 37° Flare-Twin®

• Available in Stainless Steel.

APPLICATION
DATA

Reducer

(Ref. SAE 070123)



Part No. 221501- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A	
	mm	inches			mm	inches
10-6S	9,6	.38	7/8 - 14	9/16 - 18	41,1	1.62
16-6S	9,6	.38	1 5/16 - 12	9/16 - 18	46,7	1.84
16-8S	12,7	.50	1 5/16 - 12	3/4 - 16	49,3	1.94
16-10S	16,0	.63	1 5/16 - 12	7/8 - 14	51,8	2.04
16-12S	19,0	.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

Includes swivel nut

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

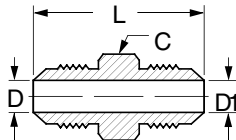
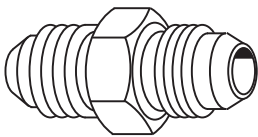
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Small Hex Union

Stainless Steel No. 5317x
(Ref. SAE No. 070101)
Example assembly No.
C35305x2

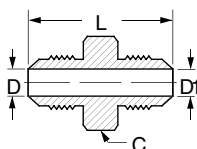
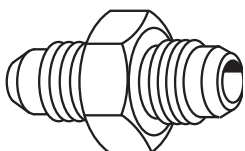


TUBE O.D.	TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/8	1/8	C5305x2	7/16	.062	.062	1.17
3/16	3/16	C5305x3	7/16	.125	.125	1.23
1/4	1/4	C5305x4•	1/2	.172	.172	1.37
5/16	1/4	C5305x5x4	9/16	.234	.172	1.37
5/16	5/16	C5305x5•	9/16	.234	.234	1.37
3/8	1/4	C5305x6x4	5/8	.297	.172	1.40
3/8	5/16	C5305x6x5	5/8	.297	.234	1.40
3/8	3/8	C5305x6•	5/8	.297	.297	1.41
1/2	3/8	C5305x8x6	13/16	.391	.297	1.52
1/2	1/2	C5305x8•	13/16	.391	.391	1.62
5/8	1/2	C5305x10x8	15/16	.484	.391	1.78
5/8	5/8	C5305x10•	15/16	.484	.484	1.88
3/4	1/2	C5305x12x8	1-1/8	.609	.391	1.95
3/4	5/8	C5305x12x10	1-1/8	.609	.484	2.05
3/4	3/4	C5305x12•	1-1/8	.609	.609	2.16
7/8	7/8	C5305x14	1-1/4	.719	.719	2.21
1	3/4	C5305x16x12	1-3/8	.844	.609	2.20
1	1	C5305x16•	1-3/8	.844	.844	2.25
1-1/4	1-1/4	C5305x20	1-11/16	1.078	1.078	2.43
1-1/2	1-1/2	C5305x24	2	1.312	1.312	2.75
2	2	C5305x32	2-5/8	1.781	1.781	3.40

JIC 37° Flare-Twin®

Large Hex Union

Stainless Steel No. 5318x
(Ref. SAE No. 070119)
Example assembly No.
C35306x2

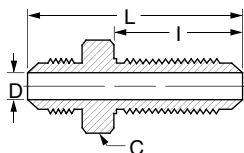
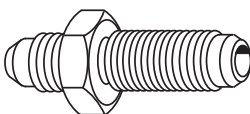


TUBE O.D.	CATALOG NUMBER	HEX C	D	D1	L
1/4	C5306x4•	11/16	.172	.172	1.37
5/16	C5306x5•	3/4	.234	.234	1.37
3/8	5318x6x4*	13/16	.297	.172	1.40
3/8	C5306x6•	13/16	.297	.297	1.41
1/2	5318x8x6*	1	.391	.297	1.52
1/2	C5306x8•	1	.391	.391	1.62
5/8	C5306x10•	1-1/8	.484	.484	1.88
3/4	C5306x12•	1-3/8	.609	.609	2.16
1	C5306x16•	1-5/8	.844	.844	2.25
1-1/4	C5306x20	1-7/8	1.078	1.078	2.43
1-1/2	C5306x24	2-1/8	1.312	1.312	2.75

* Stainless Steel

Bulkhead Union

Stainless Steel No. 5337x
(Ref. SAE No. 070601)
Example assembly No.
C5325x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	I	L
3/16	C5325x3	5/8	.125	1.14	1.90
1/4	C5325x4•	11/16	.172	1.23	2.07
5/16	C5325x5	3/4	.234	1.23	2.07
3/8	C5325x6•	13/16	.297	1.31	2.18
1/2	C5325x8•	1	.391	1.47	2.44
5/8	C5325x10•	1-1/8	.484	1.61	2.74
3/4	C5325x12•	1-3/8	.609	1.78	3.09
1	C5325x16	1-5/8	.844	1.78	3.14
1-1/4	C5325x20	1-7/8	1.078	1.83	3.31

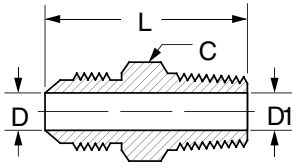
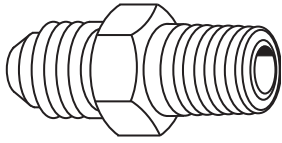
Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.

JIC 37° Flare-Twin

• Available in Stainless Steel.

Male Connector

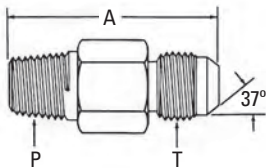
Stainless Steel No. 5217x
(Ref. SAE No. 070102)
Example assembly No.
C35205x4



*Optional counterbore for D1.

TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	HEX C	D	D1 OPT.	L
1/8	1/8	C5205x2*	7/16	.062	.188*	1.11
3/16	1/8	C5205x3	7/16	.125	.188*	1.14
1/4	1/8	C5205x4*	1/2	.172	.188*	1.22
1/4	1/4	C5205x4x4*	9/16	.172	.281*	1.42
1/4	3/8	C5205x4x6	3/4	.172	.406*	1.42
1/4	1/2	C5205x4x8	7/8	.172	.531*	1.68
5/16	1/8	C5205x5	9/16	.234	.188	1.22
5/16	1/4	C5205x5x4*	5/8	.234	.281*	1.42
5/16	3/8	C5205x5x6	13/16	.234	.406*	1.42
3/8	1/8	C5205x6x2*	5/8	.297	.188	1.24
3/8	1/4	C5205x6*	5/8	.297	.281	1.43
3/8	3/8	C5205x6x6*	3/4	.297	.297*	1.43
3/8	1/2	C5205x6x8*	7/8	.297	.531*	1.69
1/2	1/4	C5205x8x4*	13/16	.391	.281	1.53
1/2	3/8	C5205x8*	13/16	.391	.406*	1.53
1/2	1/2	C5205x8x8*	15/16	.391	.531*	1.79
1/2	3/4	C5205x8x12*	1-1/8	.391	.719*	1.85
5/8	3/8	C5205x10x6	15/16	.484	.406	1.70
5/8	1/2	C5205x10*	15/16	.484	.531*	1.89
5/8	3/4	C5205x10x12	1-1/8	.484	.484*	1.95
3/4	1/2	C5205x12x8*	1-1/8	.609	.531	2.06
3/4	3/4	C5205x12*	1-1/8	.609	.719*	2.06
3/4	1	C5205x12x16	1-3/8	.609	.938*	2.25
7/8	3/4	C5205x14	1-1/4	.718	.718*	2.09
1	3/4	C5205x16x12	1-3/8	.844	.719	2.25
1	1	C5205x16*	1-3/8	.844	.938*	2.30
1	1-1/4	C5205x16x20	1-11/16	.844	1.250*	2.40
1-1/4	1	C5205x20x16	1-11/16	1.078	.938	2.42
1-1/4	1-1/4	C5205x20	1-11/16	1.078	1.250*	2.45
1-1/2	1-1/4	C5205x24x20	2	1.312	1.250*	2.65
1-1/2	1-1/2	C5205x24	2	1.312	1.500*	2.68
2	2	C5205x32	2-5/8	1.781	1.938*	3.11

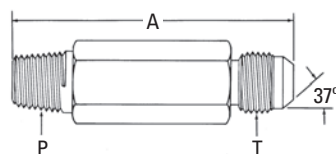
Male Connector Long



Part No. 202113- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T (NPTF)	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	46,0	1.81
4-4S	6,3	.25	1/4 - 18	7/16 - 20	57,2	2.25
4-5S	7,9	.31	1/4 - 18	1/2 - 20	57,2	2.25
4-6S	9,6	.38	1/4 - 18	9/16 - 18	57,2	2.25
6-6S	9,6	.38	3/8 - 18	9/16 - 18	63,5	2.50
6-8S	12,7	.50	3/8 - 18	3/4 - 16	69,8	2.75
8-12S	19,0	.75	1/2 - 14	1 1/16 - 12	83,3	3.28
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	88,9	3.50
16-16S	25,4	1.00	1 - 11 1/2	1 5/16 - 12	101,6	4.00

Male Connector Extra Long



Part No. 202114- (Dash Size)

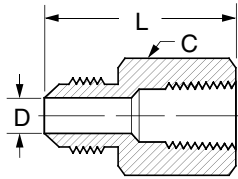
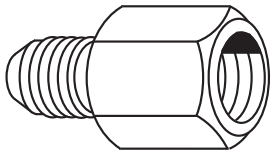
DASH SIZE	TUBE O.D.		THREAD P	THREAD T (NPTF)	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	65,0	2.56
4-4S	6,3	.25	1/4 - 18	7/16 - 20	82,5	3.25
4-6S	9,6	.38	1/4 - 18	9/16 - 18	82,5	3.25
6-8S	12,7	.50	3/8 - 18	3/4 - 16	101,6	4.00
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	127,0	5.00

APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & TUBE HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

JIC 37° Flare-Twin®

Female Connector

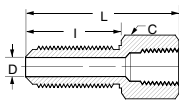
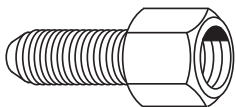
Stainless Steel No. 5267x
(Ref. SAE No. 070103)
Example assembly
No. C35255x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	L
1/8	1/8	C5255x2	9/16	.062	1.12
3/16	1/8	C5255x3	9/16	.125	1.13
1/4	1/8	C5255x4•	9/16	.172	1.19
1/4	1/4	C5255x4x4•	3/4	.172	1.39
5/16	1/8	C5255x5	9/16	.234	1.17
5/16	1/4	C5255x5x4•	3/4	.234	1.39
3/8	1/4	C5255x6•	3/4	.297	1.40
3/8	3/8	C5255x6x6•	7/8	.297	1.46
1/2	3/8	C5255x8•	7/8	.391	1.56
1/2	1/2	C5255x8x8•	1-1/8	.391	1.79
5/8	3/8	C5255x10x6	7/8	.484	1.89
5/8	1/2	C5255x10•	1-1/8	.484	1.89
3/4	1/2	C5255x12x8•	1-1/8	.609	2.05
3/4	3/4	C5255x12•	1-3/8	.609	2.06
7/8	3/4	C5255x14	1-3/8	.875	2.06
1	1	C5255x16•	1-5/8	.844	2.35
1-1/4	1-1/4	C5255x20	2	1.078	2.49
1-1/2	1-1/2	C5255x24	2-3/8	1.312	2.62
2	2	C5255x32	2-7/8	1.781	2.97

Female Bulkhead Connector

Example assembly
No. C35275x4

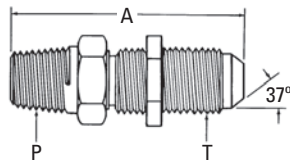


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	HEX C	D	I	L
1/4	1/8	C5275x4	11/16	.172	1.23	1.84
3/8	1/4	C5275x6	13/16	.297	1.31	2.06
1/2	3/8	C5275x8	1	.391	1.47	2.35
5/8	1/2	C5275x10	1-1/8	.484	1.61	2.66
3/4	3/4	C5275x12	1-3/8	.609	1.78	2.91
1	1	C5275x16	1-5/8	.844	1.78	3.09

Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.

Male Bulkhead Connector

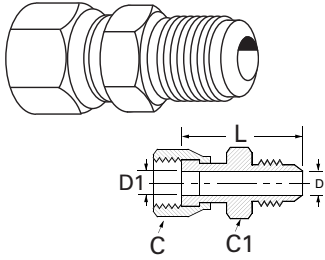
Part No. 2240- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	46,7	1.84
4-4S	6,3	.25	1/4 - 18	7/16 - 20	51,6	2.03
4-6S	9,6	.38	1/4 - 18	9/16 - 18	53,9	2.12
6-8S	12,7	.50	3/8 - 18	3/4 - 16	59,9	2.36
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	74,2	2.92
16-16S	25,4	1.00	1 - 11 1/2	5 5/16 - 12	79,0	3.11

JIC 37° Flare-Twin®

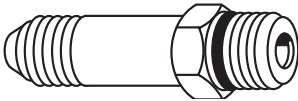
Male JIC 37° SAE to Female FOR-SEAL®



FEMALE TUBE O.D.	MALE 37° TUBE SIZE	CATALOG NUMBER	HEX C1	HEX C	D	D1	L
1/4	1/4	4213x4	11/16	5/8	.172	.165	1.50
3/8	3/8	4213x6	13/16	3/4	.297	.264	1.62
1/2	1/2	4213x8	15/16	7/8	.397	.358	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	.453	2.25
3/4	3/4	4213x12	1-3/16	1-1/4	.609	.547	2.48
1	1	4213x16	1-5/8	1-1/2	.811	.783	2.84

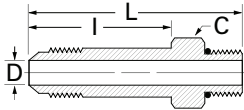
Straight Thread O-Ring Extended Connector

(Ref. SAE No. 070122)
Example assembly No.
C35316x4



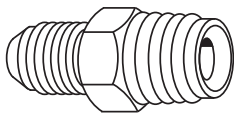
TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	I	L
1/4	1/4	C5316x4	9/16	.172	1.39	2.08
3/8	3/8	C5316x6	11/16	.297	1.56	2.31
1/2	3/8	C5316x8x6	7/8	.297	1.56	2.38
1/2	1/2	C5316x8	7/8	.391	1.88	2.70
5/8	5/8	C5316x10	1	.484	2.09	3.04
3/4	3/4	C5316x12	1-1/4	.609	2.50	3.61
1	1	C5316x16	1-1/2	.844	2.84	3.98
1-1/4	1-1/4	C5316x20	1-7/8	1.078	3.47	4.69

Replacement O-rings page 302.

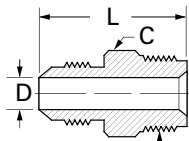


Adapter

Example assembly No.
C35880x4



TUBE O.D.	INVERTED THREAD	CATALOG NUMBER	HEX C	D	L
1/4	7/16-24	C5880x4	1/2	.172	1.08
5/16	1/2-20	C5880x5	9/16	.234	1.14
3/8	5/8-18	C5880x6	11/16	.297	1.22
1/2	3/4-18	C5880x8	13/16	.391	1.46



Inverted Thread

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASM'BL Y INSTRUCTIONS

ADAPTERS & TUBE
HOSE ENDS

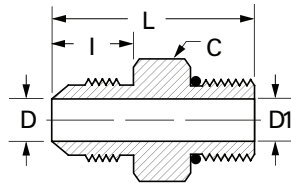
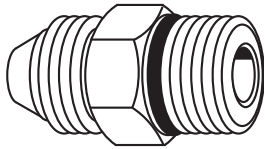
HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

JIC 37° Flare-Twin®

Straight Thread O-Ring Connector

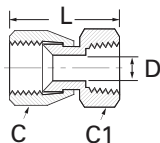
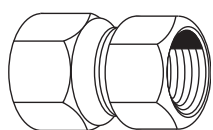
Stainless Steel No. 5327x
(Ref. SAE No. 070120)
Example assembly
No. C35315x4



*Optional counterbore for D1.
Replacement O-rings page 302.

TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	D1 OPT.	I	L
1/8	1/8	C5315x2•	7/16	.062	.062*	.45	1.06
3/16	3/16	C5315x3	1/2	.125	.125*	.48	1.10
1/4	1/4	C5315x4•	9/16	.172	.172*	.55	1.23
1/4	5/16	C5315x4x5•	5/8	.172	.234*	.55	1.23
1/4	3/8	C5315x4x6	11/16	.172	.297*	.55	1.29
1/4	1/2	C5315x4x8	7/8	.172	.391*	.55	1.37
5/16	1/4	C5315x5x4	5/8	.234	.172	.55	1.23
5/16	5/16	C5315x5	5/8	.234	.234*	.55	1.23
5/16	3/8	C5315x5x6	11/16	.234	.297*	.55	1.29
3/8	1/4	C5315x6x4	11/16	.297	.172	.56	1.27
3/8	5/16	C5315x6x5	11/16	.297	.234	.56	1.27
3/8	3/8	C5315x6•	11/16	.297	.297*	.56	1.30
3/8	1/2	C5315x6x8•	7/8	.297	.391*	.56	1.38
3/8	5/8	C5315x6x10	1	.297	.484*	.56	1.50
1/2	3/8	C5315x8x6	13/16	.391	.297	.66	1.44
1/2	1/2	C5315x8•	7/8	.391	.391*	.66	1.48
1/2	5/8	C5315x8x10•	1	.391	.484*	.66	1.60
1/2	3/4	C5315x8x12•	1-1/4	.391	.609*	.66	1.76
5/8	1/2	C5315x10x8	1	.484	.391	.76	1.64
5/8	5/8	C5315x10•	1	.484	.484*	.76	1.70
5/8	3/4	C5315x10x12	1-1/4	.484	.609*	.76	1.86
5/8	1	C5315x10x16	1-1/2	.484	.844*	.76	1.89
3/4	1/2	C5315x12x8	1-1/4	.609	.391	.86	1.94
3/4	5/8	C5315x12x10	1-1/8	.609	.484	.86	1.88
3/4	3/4	C5315x12•	1-1/4	.609	.609*	.86	1.97
3/4	7/8	C5315x12x14	1-3/8	.609	.718*	.86	1.96
3/4	1	C5315x12x16	1-1/2	.609	.844*	.86	1.99
3/4	1-1/4	C5315x12x20	1-7/8	.609	1.078*	.86	2.08
7/8	7/8	C5315x14	1-3/8	.719	.719*	.89	1.99
1	5/8	C5315x16x10	1-1/2	.844	.484	.91	2.07
1	3/4	C5315x16x12	1-1/2	.844	.609	.91	2.04
1	1	C5315x16•	1-1/2	.844	.844*	.91	2.04
1	1-1/4	C5315x16x20	1-7/8	.844	1.078*	.91	2.12
1-1/4	1	C5315x20x16	1-7/8	1.078	.844	.96	2.33
1-1/4	1-1/4	C5315x20	1-7/8	1.078	1.078*	.96	2.17
1-1/4	1-1/2	C5315x20x24	2-1/8	1.078	1.312*	.96	2.24
1-1/2	1-1/4	C5315x24x20	2-1/8	1.312	1.078*	1.08	2.53
1-1/2	1-1/2	C5315x24	2-1/8	1.312	1.312*	1.08	2.37
1-1/2	2	C5315x24x32	2-3/4	1.312	1.781*	1.08	2.53
2	1-1/2	C5315x32x24	2-3/4	1.781	1.312*	1.33	2.81
2	2	C5315x32	2-3/4	1.781	1.781	1.33	2.78

Female JIC 37° Swivel to Female Pipe



TUBE O.D.	FEMALE PIPE	CATALOG NUMBER	HEX C	HEX C1	L	D
1/4	1/4	C5256x4x4	9/16	3/4	1.32	.172
3/8	3/8	C5256x6x6	11/16	7/8	1.63	.297
1/2	1/2	C5256x8x8	7/8	1-1/8	1.81	.391
3/4	3/4	C5256x12	1-1/4	1-1/4	2.08	.609
1	1	C5256x16	1-1/2	1-1/2	2.62	.844

APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

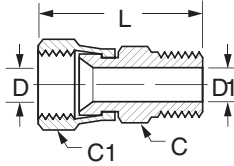
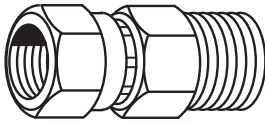
ACCESSORIES &
ASSEMBLY INSTRUCTIONS

ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

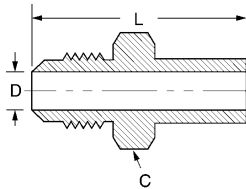
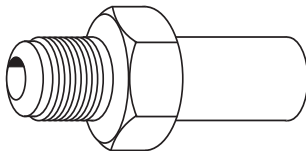
Female JIC 37° Swivel to Male Pipe Adapter



*Optional counterbore for D1.

TUBE O.D.	MALE PIPE SIZE	CATALOG NUMBER	HEX C	HEX C1	D	D1	L
1/4	1/4	9100x4x4	9/16	9/16	.172	.281*	1.50
5/16	1/4	9100x5x4	11/16	5/8	.234	.281*	1.57
3/8	1/4	9100x6x4	11/16	11/16	.297	.281	1.69
3/8	3/8	9100x6x6	11/16	11/16	.297	.406*	1.69
1/2	3/8	9100x8x6	7/8	7/8	.391	.406*	1.87
1/2	1/2	9100x8x8	7/8	7/8	.391	.531*	2.05
5/8	3/8	9100x10x6	1	1	.484	.406	1.91
5/8	1/2	9100x10x8	1	1	.484	.531*	2.11
3/4	1/2	9100x12x8	1-1/8	1-1/4	.609	.531	2.21
3/4	3/4	9100x12x12	1-1/8	1-1/4	.609	.719*	2.21
1	3/4	9100x16x12	1-3/8	1-1/2	.844	.719	2.36
1	1	9100x16x16	1-3/8	1-1/2	.844	.938*	2.55
1-1/4	1-1/4	9100x20x20	1-7/8	2	1.078	1.250*	2.73

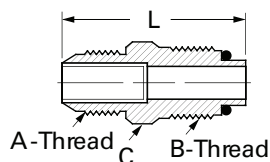
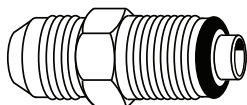
Male JIC 37° to Male Metric Standpipe



For metric flareless nuts and sleeves see page 304.

TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	HEX C	L	D
1/4	6MM	MC5019x4x6	9/16	1.58	.16
1/4	8MM	MC5019x4x8	9/16	1.68	.17
3/8	10MM	MC5019x6x10	3/4	1.67	.28
1/2	12MM	MC5019x8x12	7/8	1.97	.32
1/2	14MM	MC5019x8x14	7/8	1.89	.39
5/8	15MM	MC5019x10x15	1	2.03	.43
5/8	16MM	MC5019x10x16	1	2.07	.47
3/4	16MM	MC5019x12x16	1-1/4	2.22	.47
3/4	18MM	MC5019x12x18	1-1/4	2.12	.55
3/4	20MM	MC5019x12x20	1-1/4	2.38	.61
1	22MM	MC5019x16x22	1-1/2	2.21	.67
1	25MM	MC5019x16x25	1-1/2	2.54	.79

Male JIC 37° to O-Ring Port Adapter

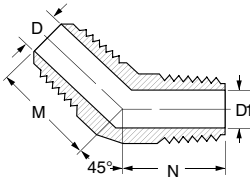
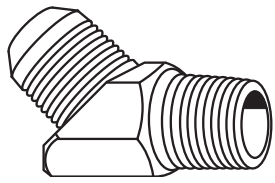
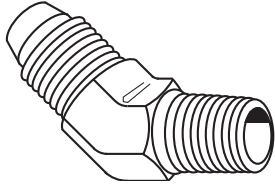


TUBE SIZE	PORT SIZE	CATALOG NUMBER	REPLACEMENT O-RING	THREAD A	THREAD B	HEX C	L
1/4	1/4	41157x4	7629x1	7/16-20	7/16-24	7/16	1.33
3/8	3/8	41157x6	7629x3	9/16-18	5/8-18	5/8	1.47
1/2	1/2	41157x8	7629x5	3/4-16	3/4-16	3/4	1.91
5/8	5/8	41157x10	7629x7	7/8-14	7/8-14	15/16	2.23
3/4	3/4	41157x12	7629x8	1-1/16-12	1-1/16-16	1-1/8	2.13

JIC 37° Flare-Twin®

45° Male Elbow

Stainless Steel No. 5367x
(Ref. SAE No. 070302)
Example assembly No.
C35355x4



Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N	Across Flats
1/8	1/8	C5355x2	.062	.188	.66	.52	7/16
3/16	1/8	C5355x3	.125	.188	.66	.52	7/16
1/4	1/8	C5355x4•	.172	.188	.72	.64	7/16
1/4	1/4	C5355x4x4•	.172	.281	.83	.86	9/16
5/16	1/8	C5355x5	.234	.188	.77	.67	9/16
5/16	1/4	C5355x5x4	.234	.281	.83	.86	9/16
3/8	1/8	C5355x6x2	.297	.188	.83	.69	9/16
3/8	1/4	C5355x6•	.297	.281	.83	.86	9/16
3/8	3/8	C5355x6x6	.297	.406	.98	.95	3/4
3/8	1/2	C5355x6x8	.297	.531	1.06	1.17	7/8
1/2	1/4	C5355x8x4	.391	.281	.98	.95	3/4
1/2	3/8	C5355x8•	.391	.406	.98	.95	3/4
1/2	1/2	C5355x8x8•	.391	.531	.99	1.17	7/8
5/8	3/8	C5355x10x6	.484	.406	1.11	1.00	7/8
5/8	1/2	C5355x10	.484	.531	1.11	1.17	7/8
3/4	1/2	C5355x12x8	.609	.531	1.28	1.20	1-1/16
3/4	3/4	C5355x12•	.609	.719	1.28	1.20	1-1/16
1	3/4	C5355x16x12	.844	.719	1.47	1.27	1-5/16
1	1	C5355x16	.844	.938	1.47	1.48	1-5/16
1-1/2	1-1/2	C5355x24	1.312	1.500	1.78	1.77	1-7/8
1/8	1/8	TF5355x2	.062	.188	.66	.52	7/16
1/4	1/8	TF5355x4	.172	.188	.72	.64	1/2
1/4	1/4	TF5355x4x4	.172	.281	.81	.86	5/8
5/16	1/8	TF5355x5	.234	.188	.76	.64	9/16
5/16	1/4	TF5355x5x4	.234	.281	.83	.86	5/8
3/8	1/8	TF5355x6x2	.297	.188	.81	.66	5/8
3/8	1/4	TF5355x6	.297	.281	.82	.86	5/8
3/8	3/8	TF5355x6x6	.297	.406	.91	.95	13/16
3/8	1/2	TF5355x6x8	.297	.531	1.03	1.17	15/16
1/2	1/4	TF5355x8x4	.391	.281	.98	.94	13/16
1/2	3/8	TF5355x8	.391	.406	.98	.95	13/16
1/2	1/2	TF5355x8x8	.391	.531	1.12	1.17	15/16
5/8	3/8	TF5355x10x6	.484	.406	1.11	1.06	15/16
5/8	1/2	TF5355x10	.484	.531	1.11	1.17	15/16
5/8	3/4	TF5355x10x12	.484	.719	1.26	1.20	1-1/8
3/4	1/2	TF5355x12x8	.609	.531	1.28	1.17	1-1/8
3/4	3/4	TF5355x12	.609	.719	1.28	1.20	1-1/8
3/4	1	TF5355x12x16	.609	.938	1.42	1.48	1-3/8
1	3/4	TF5355x16x12	.844	.719	1.47	1.28	1-3/8
1	1	TF5355x16	.844	.938	1.47	1.48	1-3/8
1-1/4	1-1/4	TF5355x20	1.078	1.250	1.59	1.67	1-3/4
1-1/2	1-1/2	TF5355x24	1.312	1.500	1.78	1.77	2
2	2	TF5355x32	1.781	1.938	2.22	2.11	2-5/8

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

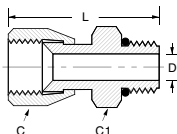
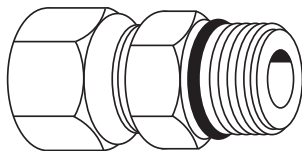
ADAPTERS &
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

JIC 37° Flare-Twin

37° JIC Female Swivel to Male Straight Thread O-Ring

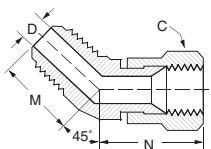
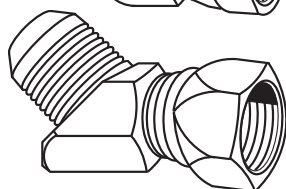
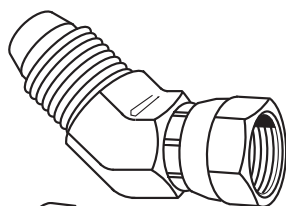


TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	HEX C1	L	D
1/4	1/4	C5216x4x4	9/16	9/16	1.32	.17
1/4	3/8	C5216x4x6	11/16	11/16	1.37	.17
3/8	3/8	C5216x6x6	11/16	11/16	1.51	.30
3/8	1/2	C5216x6x8	11/16	7/8	1.58	.30
1/2	3/8	C5216x8x6	7/8	3/4	1.62	.30
1/2	1/2	C5216x8x8	7/8	7/8	1.61	.39
5/8	5/8	C5216x10x10	1	1	1.96	.48
3/4	3/4	C5216x12x12	1-1/4	1-1/4	2.17	.61
1	1	C5216x16x16	1-1/2	1-1/2	2.30	.84
1-1/4	1-1/4	C5216x20x20	2	1-7/8	2.47	1.08
1-1/2	1-1/2	C5216x24x24	2-1/8	2-1/8	2.63	1.31
2	2	C5216x32x32	2-3/4	2-3/4	2.95	1.78

For replacement Straight Thread O-rings, see page 302.

45° Elbow - Swivel Nut

Stainless Steel No. 5368x
(Ref. SAE No. 070321)
Example assembly
No. C35356x4

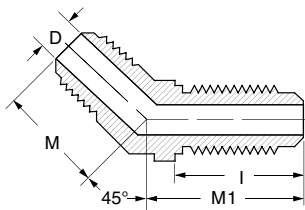
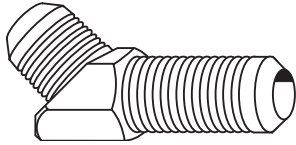


TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5356x4	9/16	.172	.72	.94	7/16
5/16	C5356x5	5/8	.234	.77	1.00	9/16
3/8	C5356x6•	11/16	.297	.83	1.12	9/16
1/2	C5356x8•	7/8	.391	.98	1.28	3/4
5/8	C5356x10	1	.484	1.11	1.44	7/8
3/4	C5356x12	1-1/4	.609	1.28	1.50	1-1/16
7/8	C5356x14	1-3/8	.718	1.39	1.62	1-5/16
1	C5356x16	1-1/2	.845	1.47	1.75	1-5/16
1-1/2	C5356x24	2-1/4	1.312	1.78	2.25	1-7/8
1/4	TF5356x4	9/16	.172	.72	.94	1/2
5/16	TF5356x5	5/8	.234	.77	1.00	9/16
3/8	TF5356x6	11/16	.297	.83	1.12	5/8
1/2	TF5356x8	7/8	.391	.98	1.28	13/16
5/8	TF5356x10	1	.484	1.11	1.44	15/16
3/4	TF5356x12	1-1/4	.609	1.28	1.50	1-1/8
1	TF5356x16	1-1/2	.845	1.47	1.75	1-3/8
1-1/4	TF5356x20	2	1.078	1.59	2.03	1-3/4
1-1/2	TF5356x24	2-1/4	1.312	1.78	2.25	2
2	TF5356x32	2-7/8	1.781	2.22	2.91	2-5/8

JIC 37° Flare-Twin

45° Bulkhead Union Elbow

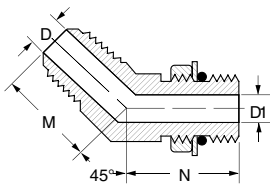
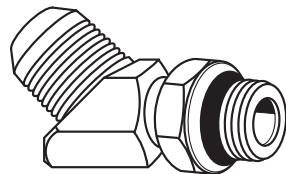
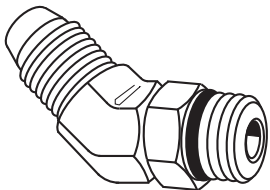
(Ref. SAE No. 070801)



TUBE O.D.	CATALOG NUMBER	D	M	M1	ACROSS FLATS	I
1/4	TF5375x4	.172	.72	1.53	1/2	1.11
5/16	TF5375x5	.234	.76	1.53	9/16	1.11
3/8	TF5375x6	.297	.83	1.67	5/8	1.18
1/2	TF5375x8	.391	.98	1.94	13/16	1.38
5/8	TF5375x10	.484	1.11	2.17	15/16	1.52
3/4	TF5375x12	.609	1.28	2.44	1-1/8	1.69
1	TF5375x16	.844	1.47	2.56	1-3/8	1.69

Bulkhead nut not included. Must be ordered separately. See page 277 for bulkhead nut.

45° Elbow - Straight Thread O-Ring

(Ref. SAE No. 070320)
Example assembly No.
C35365x4

TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/4	C5365x4	.172	.172	.72	1.05	7/16
5/16	5/16	C5365x5	.234	.234	.77	1.05	9/16
3/8	3/8	C5365x6	.297	.297	.83	1.14	9/16
1/2	1/2	C5365x8	.391	.391	.98	1.30	3/4
1/2	5/8	C5365x8x10	.391	.484	.99	1.52	7/8
5/8	5/8	C5365x10	.484	.484	1.11	1.52	7/8
3/4	5/8	C5365x12x10	.609	.484	1.28	1.57	1-1/16
3/4	3/4	C5365x12	.609	.609	1.28	1.73	1-1/16
1	1	C5365x16	.844	.844	1.47	1.86	1-5/16
1-1/4	1-1/4	C5365x20	1.078	1.078	1.59	1.91	1-5/8
1/4	1/4	TF5365x4	.172	.172	.72	1.05	1/2
5/16	5/16	TF5365x5	.234	.234	.77	1.05	9/16
3/8	3/8	TF5365x6	.297	.297	.83	1.14	5/8
3/8	1/2	TF5365x6x8	.297	.391	.87	1.30	13/16
1/2	3/8	TF5365x8x6	.391	.297	.98	1.17	13/16
1/2	1/2	TF5365x8	.391	.391	.98	1.30	13/16
1/2	5/8	TF5365x8x10	.391	.484	.99	1.52	15/16
5/8	1/2	TF5365x10x8	.484	.391	1.09	1.41	15/16
5/8	5/8	TF5365x10	.484	.484	1.09	1.52	15/16
5/8	3/4	TF5365x10x12	.484	.609	1.22	1.73	1-1/8
3/4	5/8	TF5365x12x10	.609	.484	1.30	1.58	1-1/8
3/4	3/4	TF5365x12	.609	.609	1.28	1.73	1-1/8
3/4	1	TF5365x12x16	.609	.844	1.45	1.86	1-3/8
7/8	7/8	TF5365x14	.718	.718	1.39	1.80	1-1/4
1	3/4	TF5365x16x12	.844	.609	1.47	1.86	1-3/8
1	1	TF5365x16	.844	.844	1.47	1.86	1-3/8
1-1/4	1-1/4	TF5365x20	1.078	1.250	1.59	1.91	1-3/4
1-1/2	1-1/2	TF5365x24	1.312	1.312	1.78	1.91	2
2	2	TF5365x32	1.781	1.938	2.22	1.86	2-5/8

Replacement O-rings page 302.

JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

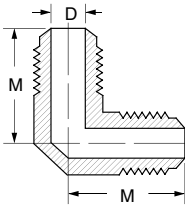
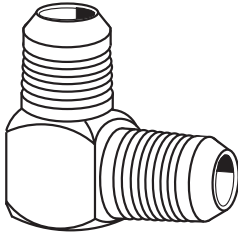
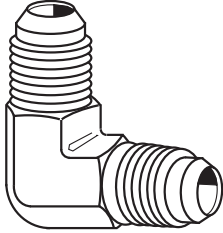
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

90° Union Elbow

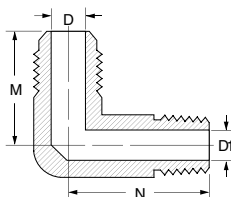
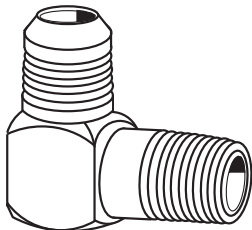
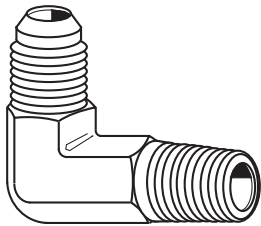
Stainless Steel No. 5517x
(Ref. SAE No. 070201)
Example assembly
No. C35505x4



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	C5505x4•	.172	.89	7/16
3/8	C5505x6•	.297	1.06	9/16
1/2	C5505x8•	.391	1.25	3/4
5/8	C5505x10•	.484	1.45	7/8
3/4	C5505x12•	.609	1.66	1-1/16
1	C5505x16•	.844	1.81	1-5/16
1/4	TF5505x4	.172	.89	1/2
5/16	TF5505x5	.234	.95	1/2
3/8	TF5505x6	.297	1.06	5/8
1/2	TF5505x8	.391	1.25	13/16
5/8	TF5505x10	.484	1.45	15/16
3/4	TF5505x12	.609	1.66	1-1/8
7/8	TF5505x14	.718	1.73	1-1/4
1	TF5505x16	.844	1.81	1-3/8
1-1/4	TF5505x20	1.078	2.06	1-3/4
1-1/2	TF5505x24	1.312	2.33	2
2	TF5505x32	1.781	3.06	2-5/8

90° Male Elbow Long

(Ref. SAE No. 071502)
Example assembly
No. C35425x4

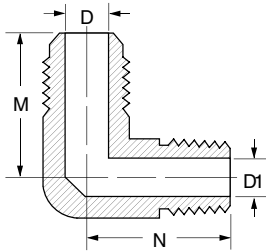
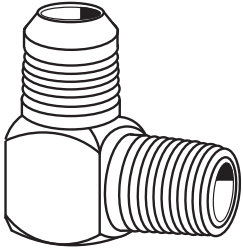
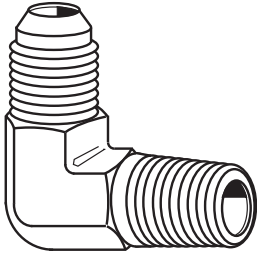


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	1/4	C5425x6	.297	.281	1.06	1.58	9/16
3/4	3/4	C5425x12	.609	.719	1.66	2.44	1-1/16
1/4	1/8	TF5425x4	.172	.188	.89	1.17	1/2
1/4	1/4	TF5425x4x4	.172	.281	.95	1.58	5/8
5/16	1/4	TF5425x5x4	.234	.281	.95	1.55	9/16
3/8	1/4	TF5425x6	.297	.281	1.06	1.58	5/8
3/8	3/8	TF5425x6x6	.297	.406	1.16	1.83	13/16
1/2	3/8	TF5425x8	.391	.406	1.25	1.83	13/16
1/2	1/2	TF5425x8x8	.391	.531	1.31	2.17	15/16
1/2	3/4	TF5425x8x12	.391	.719	1.41	2.44	1-1/8
5/8	1/2	TF5425x10	.484	.531	1.45	2.17	15/16
3/4	3/4	TF5425x12	.609	.719	1.66	2.44	1-1/8
7/8	3/4	TF5425x14	.718	.719	1.73	2.66	1-1/4
1	1	TF5425x16	.844	.938	1.81	3.02	1-3/8
1-1/4	1-1/4	TF5425x20	1.078	1.250	2.06	3.69	1-3/4
1-1/2	1-1/2	TF5425x24	1.312	1.500	2.32	4.11	2

JIC 37° Flare-Twin®

90° Male Elbow

Stainless Steel No. 5417x
(Ref. SAE No. 070202)
Example assembly
No. C35405x4



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/8	1/8	C5405x2•	.062	.188	.77	.72	7/16
3/16	1/8	C5405x3	.125	.188	.83	.72	7/16
1/4	1/8	C5405x4•	.172	.188	.89	.78	7/16
1/4	1/4	C5405x4x4•	.172	.281	1.05	1.09	9/16
5/16	1/8	C5405x5	.234	.188	.95	.78	9/16
5/16	1/4	C5405x5x4•	.234	.281	1.05	1.09	9/16
3/8	1/8	C5405x6x2•	.297	.188	1.06	.90	9/16
3/8	1/4	C5405x6•	.297	.281	1.06	1.09	9/16
3/8	3/8	C5405x6x6•	.297	.406	1.14	1.22	3/4
3/8	1/2	C5405x6x8•	.297	.531	1.22	1.47	7/8
1/2	1/4	C5405x8x4•	.391	.281	1.25	1.22	3/4
1/2	3/8	C5405x8•	.391	.406	1.25	1.22	3/4
1/2	1/2	C5405x8x8•	.391	.531	1.33	1.47	7/8
1/2	3/4	C5405x8x12•	.391	.719	1.42	1.59	1-1/16
5/8	3/8	C5405x10x6	.484	.406	1.45	1.28	7/8
5/8	1/2	C5405x10•	.484	.531	1.45	1.47	7/8
5/8	3/4	C5405x10x12	.484	.719	1.54	1.59	1-1/16
3/4	1/2	C5405x12x8•	.609	.531	1.66	1.59	1-1/16
3/4	3/4	C5405x12	.609	.719	1.66	1.59	1-1/16
1	3/4	C5405x16x12	.844	.719	1.81	1.78	1-5/16
1	1	C5405x16•	.844	.938	1.81	1.97	1-5/16
1-1/4	1	C5405x20x16	1.078	.938	2.06	2.38	1-5/8
1-1/4	1-1/4	C5405x20	1.078	1.250	2.06	2.38	1-5/8
1-1/2	1-1/2	C5405x24	1.312	1.500	2.33	2.64	1-7/8
2	2	C5405x32	1.781	1.938	3.06	3.00	2-9/16
1/4	1/8	TF5405x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5405x4x4	.172	.281	.95	1.09	5/8
1/4	3/8	TF5405x4x6	.172	.406	1.05	1.22	13/16
1/4	1/2	TF5405x4x8	.172	.531	1.11	1.47	15/16
5/16	1/8	TF5405x5	.234	.188	.95	.78	9/16
5/16	1/4	TF5405x5x4	.234	.281	.98	1.09	5/8
5/16	3/8	TF5405x5x6	.234	.406	1.08	1.22	13/16
3/8	1/8	TF5405x6x2	.297	.188	1.06	.81	5/8
3/8	1/4	TF5405x6	.297	.281	1.06	1.09	5/8
3/8	3/8	TF5405x6x6	.297	.406	1.16	1.22	13/16
3/8	1/2	TF5405x6x8	.297	.531	1.22	1.47	15/16
3/8	3/4	TF5405x6x12	.297	.719	1.31	1.59	1-1/8
1/2	1/4	TF5405x8x4	.391	.281	1.25	1.19	13/16
1/2	3/8	TF5405x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5405x8x8	.391	.531	1.31	1.47	15/16
1/2	3/4	TF5405x8x12	.391	.719	1.41	1.59	1-1/8
5/8	3/8	TF5405x10x6	.484	.406	1.45	1.28	15/16
5/8	1/2	TF5405x10	.484	.531	1.45	1.47	15/16
5/8	3/4	TF5405x10x12	.484	.719	1.55	1.59	1-1/8
3/4	1/2	TF5405x12x8	.609	.531	1.66	1.56	1-1/8
3/4	3/4	TF5405x12	.609	.719	1.66	1.59	1-1/8
3/4	1	TF5405x12x16	.609	.938	1.78	1.97	1-3/8
7/8	3/4	TF5405x14	.718	.719	1.73	1.69	1-1/4
1	3/4	TF5405x16x12	.844	.719	1.81	1.72	1-3/8
1	1	TF5405x16	.844	.938	1.81	1.97	1-3/8
1	1-1/4	TF5405x16x20	.844	1.250	2.00	2.37	1-3/4
1-1/4	1	TF5405x20x16	1.078	.938	2.06	2.16	1-3/4
1-1/4	1-1/4	TF5405x20	1.078	1.250	2.06	2.37	1-3/4
1-1/4	1-1/2	TF5405x20x24	1.078	1.500	2.19	2.64	2
1-1/2	1-1/4	TF5405x24x20	1.312	1.250	2.33	2.50	2
1-1/2	1-1/2	TF5405x24	1.312	1.500	2.33	2.64	2
2	2	TF5405x32	1.781	1.938	3.06	3.00	2-5/8

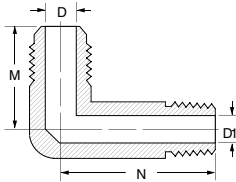
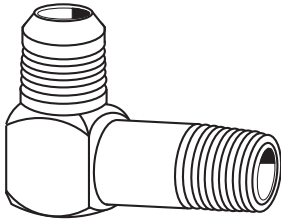
• Available in Stainless Steel.

JIC 37° Flare-Twin®

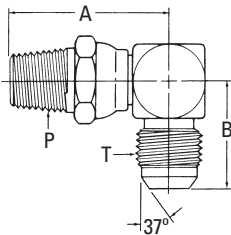
• Available in Stainless Steel.

90° Male Elbow Extra Long

(Ref. SAE No. 071602)

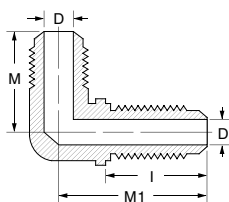
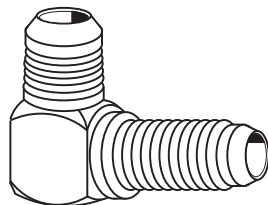
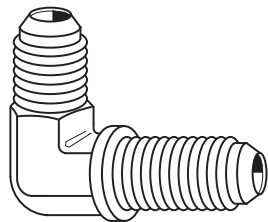


90° Swivel Male Elbow



90° Bulkhead Union Elbow

Stainless Steel No. 5537x
(Ref. SAE No. 070701)
Example assembly No.
C35525x4



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	TF5435x4	.172	.188	.89	1.56	1/2
1/4	1/4	TF5435x4x4	.172	.281	.95	2.07	5/8
5/16	1/8	TF5435x5	.234	.188	.95	1.62	9/16
5/16	1/4	TF5435x5x4	.234	.281	.95	2.04	9/16
3/8	1/4	TF5435x6	.297	.281	1.06	2.08	5/8
3/8	3/8	TF5435x6x6	.297	.406	1.06	2.42	13/16
1/2	3/8	TF5435x8	.391	.406	1.25	2.42	13/16
1/2	1/2	TF5435x8x8	.391	.531	1.31	2.88	15/16
5/8	1/2	TF5435x10	.484	.531	1.45	2.88	15/16
3/4	3/4	TF5435x12	.609	.719	1.66	3.28	1-1/8
7/8	3/4	TF5435x14	.718	.719	1.73	3.62	1-1/4
1	1	TF5435x16	.844	.938	1.81	4.05	1-3/8
1-1/4	1-1/4	TF5435x20	1.078	1.250	2.06	5.00	1-3/4

Part No. 2249- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B	
	mm	inches			mm	inches	mm	inches
4-6S	9,6	.38	1/4 - 18	9/16 - 18	40,6	1.60	26,9	1.06
6-8S	12,7	.50	3/8 - 18	3/4 - 18	43,4	1.71	31,0	1.22
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	54,3	2.14	42,2	1.66

TUBE O.D.	CATALOG NUMBER	D	I	M	M1	ACROSS FLATS
1/4	C5525x4•	.172	1.11	.97	1.59	7/16
3/8	C5525x6•	.297	1.18	1.09	1.81	9/16
1/2	C5525x8	.391	1.38	1.36	2.11	3/4
3/4	C5525x12•	.609	1.69	1.78	2.67	1-1/16
1	C5525x16	.844	1.69	1.94	2.80	1-5/16
1-1/4	C5525x20	1.078	1.74	2.17	3.12	1-5/8
1/4	TF5525x4	.172	1.11	.97	1.59	1/2
5/16	TF5525x5	.234	1.11	1.03	1.62	9/16
3/8	TF5525x6	.297	1.18	1.09	1.81	5/8
1/2	TF5525x8	.391	1.38	1.36	2.11	13/16
5/8	TF5525x10	.484	1.52	1.56	2.39	15/16
3/4	TF5525x12	.609	1.69	1.78	2.67	1-1/8
1	TF5525x16	.844	1.69	1.94	2.80	1-3/8

Bulkhead nut not included. Must be ordered separately.

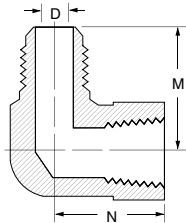
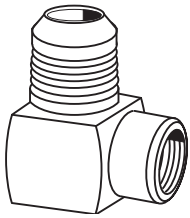
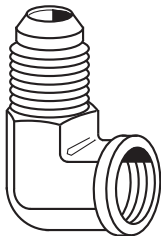
See page 277 for bulkhead nut.

APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & TUBE HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

JIC 37° Flare-Twin®

90° Female Elbow

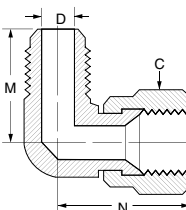
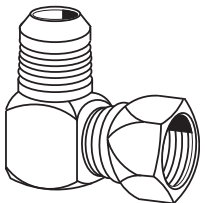
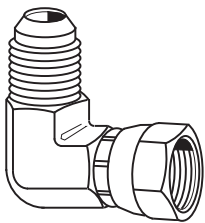
Stainless Steel No. 5467x
(Ref. SAE No. 070203)
Example assembly
No. C35455x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	C5455x4•	.172	1.08	.66	9/16
3/8	1/8	C5455x6x2	.297	1.06	.66	9/16
3/8	1/4	C5455x6•	.297	1.23	.88	3/4
3/8	3/8	C5455x6x6•	.297	1.31	1.02	7/8
1/2	1/4	C5455x8x4	.391	1.23	.88	3/4
1/2	3/8	C5455x8•	.391	1.42	1.02	7/8
1/2	1/2	C5455x8x8•	.391	1.52	1.23	1-1/16
5/8	1/2	C5455x10	.484	1.64	1.23	1-1/16
3/4	1/2	C5455x12x8	.609	1.66	1.23	1-1/16
3/4	3/4	C5455x12•	.609	1.89	1.36	1-5/16
7/8	3/4	C5455x14	.718	1.86	1.42	1-5/16
1	1	C5455x16•	.844	2.17	1.62	1-5/8
1/4	1/8	TF5455x4	.172	1.08	.66	5/8
1/4	1/4	TF5455x4x4	.172	1.14	.88	3/4
5/16	1/8	TF5455x5	.234	1.08	.66	5/8
5/16	1/4	TF5455x5x4	.234	1.30	1.02	7/8
3/8	1/4	TF5455x6	.297	1.23	.88	3/4
3/8	3/8	TF5455x6x6	.297	1.14	.88	3/4
1/2	3/8	TF5455x8	.391	1.42	1.02	7/8
1/2	1/2	TF5455x8x8	.391	1.55	1.23	1-1/8
5/8	1/2	TF5455x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5455x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5455x14	.718	1.86	1.42	1-3/8
1	1	TF5455x16	.814	2.17	1.62	1-5/8
1-1/4	1-1/4	TF5455x20	1.078	2.33	1.70	2
1-1/2	1-1/2	TF5455x24	1.312	2.89	2.08	2-3/8
2	2	TF5455x32	1.781	3.30	2.39	2-7/8

90° Elbow - Swivel Nut

Stainless Steel No. 5518x
(Ref. SAE No. 070221)
Example assembly
No. C35506x4

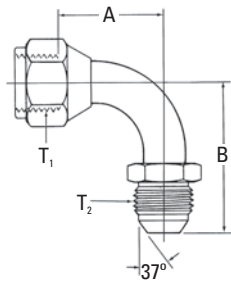


TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5506x4•	9/16	.172	.89	1.00	7/16
5/16	C5506x5	5/8	.234	.95	1.06	9/16
3/8	C5506x6•	11/16	.297	1.06	1.25	9/16
1/2	C5506x8•	7/8	.391	1.25	1.42	3/4
5/8	C5506x10	1	.484	1.43	1.62	7/8
3/4	C5506x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5506x16•	1-1/2	.844	1.81	2.00	1-5/16
1-1/4	C5506x20	2	1.078	2.06	2.31	1-5/8
1/4	TF5506x4	9/16	.172	.89	1.00	1/2
5/16	TF5506x5	5/8	.234	.95	1.06	9/16
3/8	TF5506x6	11/16	.297	1.06	1.25	5/8
1/2	TF5506x8	7/8	.391	1.25	1.38	13/16
5/8	TF5506x10	1	.484	1.45	1.62	15/16
3/4	TF5506x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5506x14	1-3/8	.718	1.73	1.78	1-1/4
1	TF5506x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5506x20	2	1.078	2.06	2.31	1-3/4
1-1/2	TF5506x24	2-1/4	1.312	2.33	2.59	2
2	TF5506x32	2-7/8	1.781	3.06	3.38	2-5/8

• Available in Stainless Steel.

JIC 37° Flare-Twin

90° Sweep Elbow

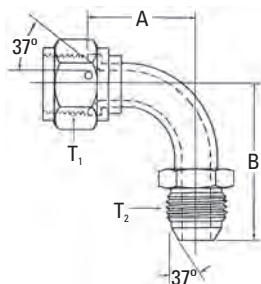


Part No. 500454- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	7/16 - 20	17,3	.68	28,5	1.12
6S	9,6	.38	9/16 - 18	9/16 - 18	21,6	.85	33,3	1.31
8S	12,7	.50	3/4 - 16	3/4 - 16	27,7	1.09	42,2	1.66
10S	16,0	.63	7/8 - 14	7/8 - 14	31,2	1.23	46,2	1.82
12S	19,0	.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 2-wire hose)

90° Sweep Elbow

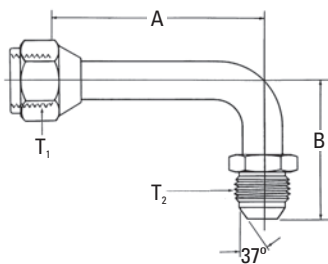


Part No. FF5163- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
0808S	12,7	.50	3/4 - 16	3/4 - 16	47,5	1.87	54,9	2.16
1212S	19,0	.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	71,4	2.81
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 4-wire hose)

90° Sweep Elbow Long

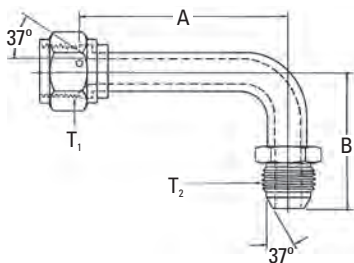


Part No. 504095- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
4S	6,3	.25	7/16 - 20	7/16 - 20	45,7	1.80	28,5	1.12
6S	9,6	.38	9/16 - 18	9/16 - 18	55,4	2.18	33,3	1.31
8S	12,7	.50	3/4 - 16	3/4 - 16	61,7	2.43	45,2	1.78
10S	16,0	.63	7/8 - 14	7/8 - 14	65,3	2.57	52,6	2.07
12S	19,0	.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 2-wire hose)

90° Sweep Elbow Long



Part No. FF5164- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A		B	
	mm	inches			mm	inches	mm	inches
0808S	12,7	.50	3/4 - 16	3/4 - 16	84,8	3.34	54,9	2.16
1212S	19,0	.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	71,4	2.81

(Suitable for pressures through 4-wire hose)

JIC 37° Flare-Twin

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

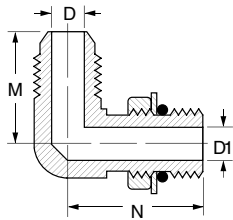
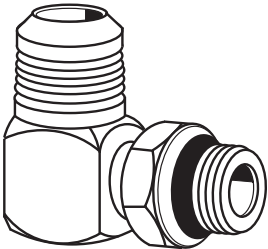
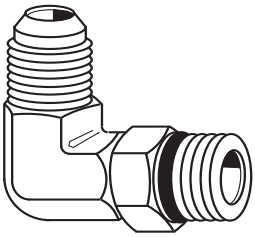
ADAPTERS &
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

90° Elbow - Straight Thread O-Ring

Stainless Steel No. 5527x
(Ref. SAE No. 070220)
Example assembly
No. C35515x4



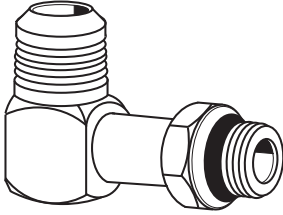
Replacement O-rings page 302.

TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/16	3/16	C5515x3	.125	.125	.83	.94	7/16
1/4	1/4	C5515x4•	.172	.172	.89	1.03	7/16
5/16	5/16	C5515x5•	.234	.234	.95	1.13	9/16
3/8	3/8	C5515x6•	.297	.297	1.06	1.25	9/16
3/8	1/2	C5515x6x8	.297	.391	1.14	1.45	3/4
1/2	3/8	C5515x8x6	.391	.297	1.25	1.32	3/4
1/2	1/2	C5515x8•	.391	.391	1.25	1.45	3/4
1/2	5/8	C5515x8x10	.391	.484	1.33	1.70	7/8
5/8	5/8	C5515x10	.484	.484	1.45	1.70	7/8
3/4	5/8	C5515x12x10	.609	.484	1.66	1.78	1-1/16
3/4	3/4	C5515x12•	.609	.609	1.66	1.94	1-1/16
7/8	7/8	C5515x14	.718	.718	1.73	2.00	1-5/16
1	3/4	C5515x16x12	.844	.609	1.81	2.05	1-5/16
1	1	C5515x16	.844	.844	1.81	2.05	1-5/16
1-1/4	1-1/4	C5515x20	1.078	1.078	2.06	2.25	1-5/8
1-1/2	1-1/2	C5515x24	1.312	1.312	2.33	2.39	1-7/8
1/4	1/4	TF5515x4	.172	.172	.89	1.03	1/2
1/4	5/16	TF5515x4x5	.172	.234	.95	1.12	5/8
1/4	3/8	TF5515x4x6	.172	.297	.95	1.25	5/8
5/16	1/4	TF5515x5x4	.234	.172	.98	1.06	9/16
5/16	5/16	TF5515x5	.234	.234	.95	1.09	9/16
5/16	3/8	TF5515x5x6	.234	.297	.98	1.25	5/8
3/8	1/4	TF5515x6x4	.297	.172	1.06	1.09	5/8
3/8	5/16	TF5515x6x5	.297	.234	1.06	1.12	5/8
3/8	3/8	TF5515x6	.297	.297	1.06	1.25	5/8
3/8	1/2	TF5515x6x8	.297	.391	1.16	1.45	13/16
3/8	5/8	TF5515x6x10	.297	.484	1.22	1.70	15/16
1/2	3/8	TF5515x8x6	.391	.297	1.25	1.34	13/16
1/2	1/2	TF5515x8	.391	.391	1.25	1.45	13/16
1/2	5/8	TF5515x8x10	.391	.484	1.31	1.70	15/16
1/2	3/4	TF5515x8x12	.391	.609	1.41	1.94	1-1/8
5/8	1/2	TF5515x10x8	.484	.391	1.45	1.52	15/16
5/8	5/8	TF5515x10	.484	.484	1.45	1.70	15/16
5/8	3/4	TF5515x10x12	.484	.609	1.55	1.94	1-1/8
3/4	1/2	TF5515x12x8	.609	.391	1.66	1.61	1-1/8
3/4	5/8	TF5515x12x10	.609	.484	1.66	1.80	1-1/8
3/4	3/4	TF5515x12	.609	.609	1.66	1.94	1-1/8
3/4	7/8	TF5515x12x14	.609	.718	1.72	2.00	1-1/4
3/4	1	TF5515x12x16	.609	.844	1.78	2.05	1-3/8
7/8	7/8	TF5515x14	.718	.718	1.73	2.00	1-5/16
1	3/4	TF5515x16x12	.844	.609	1.81	2.06	1-3/8
1	7/8	TF5515x16x14	.844	.718	1.81	2.06	1-3/8
1	1	TF5515x16	.844	.844	1.81	2.05	1-3/8
1	1-1/4	TF5515x16x20	.844	1.078	2.00	2.25	1-3/4
1-1/4	1	TF5515x20x16	1.078	.844	2.06	2.23	1-3/4
1-1/4	1-1/4	TF5515x20	1.078	1.078	2.06	2.25	1-3/4
1-1/2	1-1/4	TF5515x24x20	1.312	1.078	2.33	2.37	2
1-1/2	1-1/2	TF5515x24	1.312	1.312	2.33	2.39	2
2	2	TF5515x32	1.781	1.781	3.06	2.89	2-5/8

JIC 37° Flare-Twin

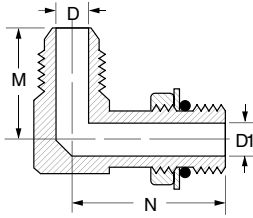
90° Elbow Long - Straight Thread O-Ring

(Ref. SAE No. 071520)



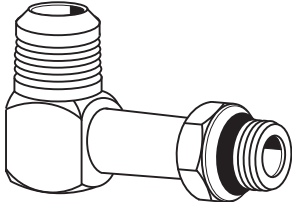
TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	3/8	TF5515x6L	.297	.297	1.06	1.66	5/8
1/2	1/2	TF5515x8L	.391	.391	1.25	1.81	13/16
5/8	5/8	TF5515x10L	.484	.484	1.45	2.16	15/16
3/4	3/4	TF5515x12L	.609	.609	1.66	2.47	1-1/8

Replacement O-rings page 302.



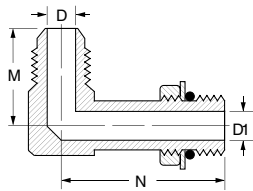
90° Elbow Extra Long - Straight Thread O-Ring

(Ref. SAE No. 071620)

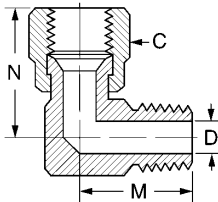
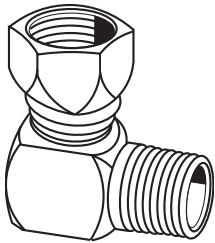


TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
3/8	3/8	TF5515x6LL	.297	.297	1.06	2.08	5/8
1/2	1/2	TF5515x8LL	.391	.391	1.25	2.50	13/16
5/8	5/8	TF5515x10LL	.484	.484	1.45	3.25	15/16
3/4	3/4	TF5515x12LL	.609	.609	1.66	3.34	1-1/8

Replacement O-rings page 302.

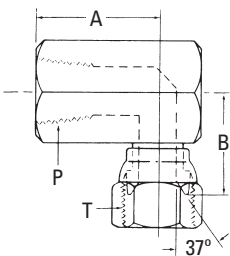


90° Male Pipe to 37° JIC Swivel



TUBE O.D.	MALE PIPE	CATALOG NUMBER	D	M	N	ACROSS FLATS	HEX C
1/4	1/8	TF5406x4	.188	.78	1.00	1/2	9/16
3/8	1/4	TF5406x6	.281	1.09	1.25	5/8	11/16
1/2	3/8	TF5406x8	.406	1.22	1.38	13/16	7/8
5/8	1/2	TF5406x10	.531	1.47	1.62	15/16	1
3/4	3/4	TF5406x12	.719	1.59	1.75	1-1/8	1-1/4
1	1	TF5406x16	.938	1.97	2.00	1-3/8	1-1/2
1-1/4	1-1/4	TF5406x20	1.250	2.38	2.31	1-3/4	2
1-1/2	1-1/2	TF5406x24	1.500	2.64	2.59	2	2-1/4
2	2	TF5406x32	1.938	3.00	3.38	2-5/8	2-7/8

90° Female Pipe to 37° JIC Swivel



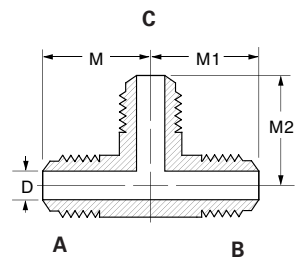
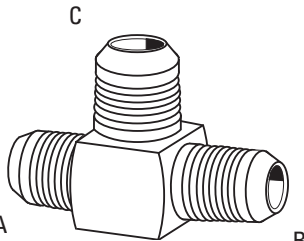
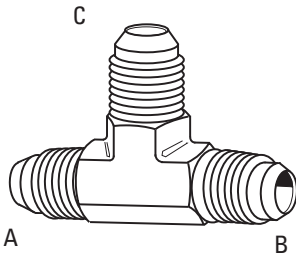
Part No. 2244- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B	
	mm	inches			mm	inches	mm	inches
8-8S	12,7	.50	1/2 - 14	3/4 - 16	31,2	1.23	27,4	1.08
8-10S	16,0	.63	1/2 - 14	7/8 - 14	31,2	1.23	28,5	1.12

JIC 37° Flare-Twin

Union Tee

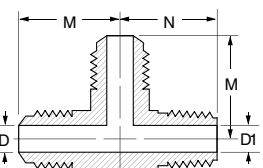
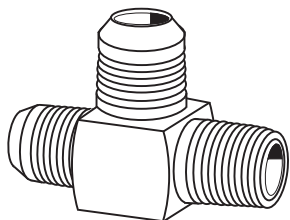
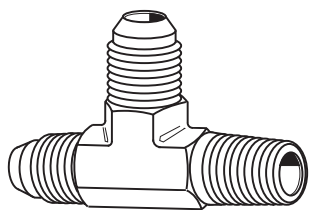
Stainless Steel No. 5717x
(Ref. SAE No. 070401)
Assembly No. C35705x4



TUBE O.D. A	TUBE O.D. B	TUBE O.D. C	CATALOG NUMBER	D	M	M1	M2	ACROSS FLATS
1/8	1/8	1/8	C5705x2	.062	.77	.77	.77	7/16
3/16	3/16	3/16	C5705x3	.125	.83	.83	.83	7/16
1/4	1/4	1/4	C5705x4•	.172	.89	.89	.89	7/16
5/16	5/16	5/16	C5705x5	.234	.95	.95	.95	9/16
3/8	3/8	3/8	C5705x6•	.297	1.06	1.06	1.06	9/16
1/2	1/2	1/2	C5705x8•	.391	1.25	1.25	1.25	3/4
5/8	5/8	5/8	C5705x10•	.484	1.45	1.45	1.45	7/8
3/4	3/4	3/4	C5705x12•	.609	1.66	1.66	1.66	1-1/16
7/8	7/8	7/8	C5705x14	.718	1.73	1.73	1.73	1-5/16
1	1	1	C5705x16	.844	1.81	1.81	1.81	1-5/16
1-1/4	1-1/4	1-1/4	C5705x20	1.078	2.06	2.06	2.06	1-5/8
1-1/2	1-1/2	1-1/2	C5705x24	1.312	2.33	2.33	2.33	1-7/8
1/4	1/4	1/4	TF5705x4	.172	.89	.89	.89	1/2
5/16	5/16	5/16	TF5705x5	.234	.95	.95	.95	1/2
3/8	3/8	3/8	TF5705x6	.297	1.06	1.06	1.06	5/8
1/2	1/2	1/2	TF5705x8	.391	1.25	1.25	1.25	13/16
5/8	1/2	1/2	TF5705x10x8x8	.484	1.45	1.31	1.31	15/16
5/8	5/8	5/8	TF5705x10	.484	1.45	1.45	1.45	15/16
5/8	5/8	1/2	TF5705x10x10x8	.484	1.45	1.45	1.31	15/16
3/4	3/4	3/4	TF5705x12	.609	1.66	1.66	1.66	1-1/8
7/8	7/8	7/8	TF5705x14	.718	1.73	1.73	1.73	1-1/4
1	1	1	TF5705x16	.844	1.81	1.81	1.81	1-3/8
1-1/4	1-1/4	1-1/4	TF5705x20	1.078	2.06	2.06	2.06	1-3/4
1-1/2	1-1/2	1-1/2	TF5705x24	1.312	2.33	2.33	2.33	1-7/8
2	2	2	TF5705x32	1.781	3.06	3.06	3.06	2-5/8

Male Run Tee

Stainless Steel No. 5767x
(Ref. SAE No. 070424)
Example assembly
No. C35755x4



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	C5755x4•	.172	.188	.89	.78	7/16
1/2	3/8	C5755x8•	.391	.406	1.25	1.22	3/4
5/8	1/2	C5755x10	.484	.531	1.45	1.47	7/8
3/4	3/4	C5755x12	.609	.719	1.66	1.59	1-1/16
1	1	C5755x16	.844	.938	1.81	1.97	1-5/16
1/4	1/8	TF5755x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5755x4x4x4	.172	.281	.95	1.09	9/16
5/16	1/8	TF5755x5	.234	.188	.95	.78	1/2
3/8	1/4	TF5755x6	.297	.281	1.06	1.09	9/16
3/8	3/8	TF5755x6x6x6	.297	.406	1.16	1.22	9/16
1/2	3/8	TF5755x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5755x8x8x8	.391	.531	1.31	1.47	7/8
5/8	1/2	TF5755x10	.484	.531	1.45	1.47	15/16
3/4	3/4	TF5755x12	.609	.719	1.66	1.59	1-1/8
7/8	3/4	TF5755x14	.718	.719	1.73	1.69	1-1/4
1	1	TF5755x16	.844	.938	1.81	1.97	1-3/8
1-1/4	1-1/4	TF5755x20	1.078	1.250	2.06	2.38	1-3/4
1-1/2	1-1/2	TF5755x24	1.312	1.500	2.33	2.64	2
2	2	TF5755x32	1.781	1.938	3.06	3.00	2-5/8

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

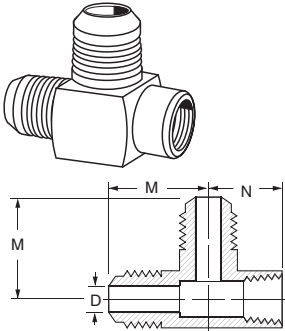
JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION
DATA

Female Run Tee

(Ref. SAE No. 070426)

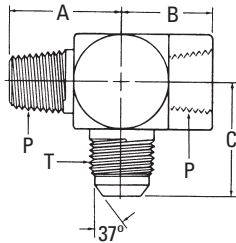


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	TF5805x4	.172	1.08	.66	5/8
3/8	1/4	TF5805x6	.297	1.23	.88	3/4
1/2	3/8	TF5805x8	.391	1.42	1.02	7/8
5/8	1/2	TF5805x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5805x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5805x14	.718	1.86	1.42	1-3/8
1	1	TF5805x16	.844	2.17	1.62	1-5/8

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

Male Pipe/Female Pipe/37° Flare Tee

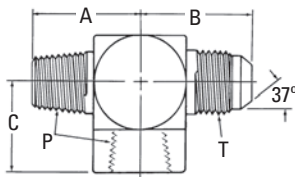


Part No. 203301- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	19,8	.78	16,8	.66	27,4	1.08
4-6S	9,6	.38	1/4 - 18	9/16 - 18	27,7	1.09	22,3	.88	31,2	1.23
12-12S	19,0	.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	55,1	2.17

SPECIALTY HOSE

Male Pipe/37° Flare/Female Pipe



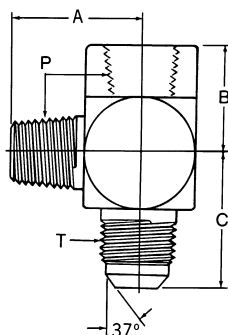
Part No. 203103- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
2-4S	6,3	.25	1/8 - 27	7/16 - 20	19,8	.78	27,4	1.08	16,8	.66
4-6S	9,6	.38	1/4 - 18	9/16 - 18	27,7	1.09	31,2	1.23	22,3	.88
6-6S	9,6	.38	3/8 - 18	9/16 - 18	31,0	1.22	33,3	1.31	25,9	1.02
6-8S	12,7	.50	3/8 - 18	3/4 - 16	31,0	1.22	36,1	1.42	25,9	1.02
8-10S	16,0	.63	1/2 - 14	7/8 - 14	37,3	1.47	41,6	1.64	31,2	1.23
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	40,4	1.59	48,0	1.89	34,5	1.36

ACCESSORIES &
ASM'BY INSTRUCTIONS

ADAPTERS & TUBE
HOSE ENDS

Male Pipe/Female Pipe 37° Flare Tee



Part No. 203006- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
12-12S	19,0	.75	3/4 - 14	1 1/16 - 12	40,4	1.59	34,5	1.36	48,0	1.89

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

JIC 37° Flare-Twin

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

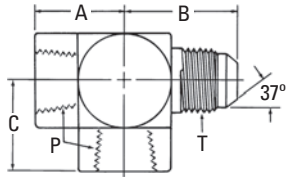
ADAPTERS &
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Male JIC Run Tee

(Ref. SAE 070427)

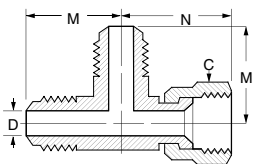
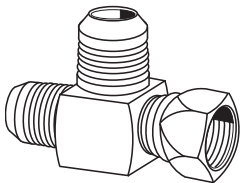
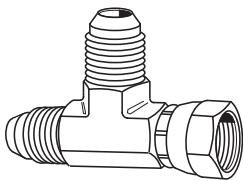


Part No. 203104- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD P	THREAD T	A		B		C	
	mm	inches			mm	inches	mm	inches	mm	inches
4-6S	9,6	.38	1/4 - 18	9/16 - 18	22,3	.88	31,2	1.23	22,3	.88

Swivel Nut Run Tee

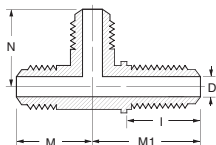
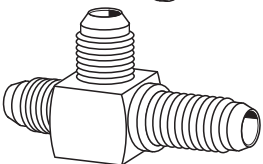
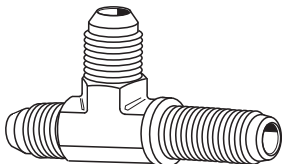
Stainless Steel No. 5718x
(Ref. SAE No. 070432)
Example assembly
No. C35706x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	C5706x4•	9/16	.172	.89	1.00	7/16
5/16	C5706x5	5/8	.234	.95	1.06	9/16
3/8	C5706x6•	11/16	.297	1.06	1.25	9/16
1/2	C5706x8•	7/8	.391	1.25	1.44	3/4
5/8	C5706x10	1	.484	1.45	1.62	7/8
3/4	C5706x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5706x16	1-1/2	.844	1.81	2.00	1-5/16
1-1/4	C5706x20	2	1.078	2.06	2.36	1-5/8
1/4	TF5706x4	9/16	.172	.89	1.00	1/2
5/16	TF5706x5	5/8	.234	.95	1.06	9/16
3/8	TF5706x6	11/16	.297	1.06	1.25	5/8
1/2	TF5706x8	7/8	.391	1.25	1.38	13/16
5/8	TF5706x10	1	.484	1.45	1.62	15/16
3/4	TF5706x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5706x14	1-3/8	.719	1.73	1.78	1-1/4
1	TF5706x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5706x20	2	1.078	2.06	2.31	1-3/4
1-1/2	TF5706x24	2-1/4	1.312	2.33	2.59	2
2	TF5706x32	2-7/8	1.781	3.06	3.38	2-5/8

Bulkhead Run Tee

(Ref. SAE No. 070958)
Example assembly
No. C35726x6



Bulkhead nut not included. Must be ordered separately.
See page 277 for bulkhead nut.

TUBE O.D.	CATALOG NUMBER	D	I	N	M	M1	ACROSS FLATS
3/8	C5726x6	.297	1.18	1.09	1.06	1.81	9/16
1/2	TF5726x8	.391	1.38	1.36	1.36	2.11	3/4

JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

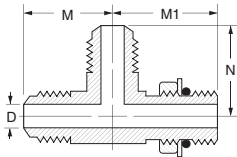
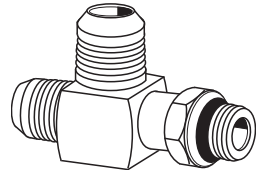
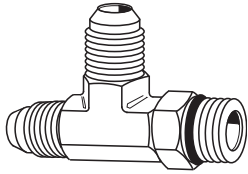
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Straight Thread O-Ring Run Tee

(Ref. SAE No. 070428)
Example assembly
No. C35716x4

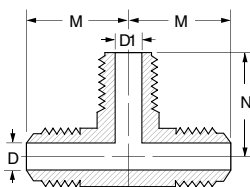
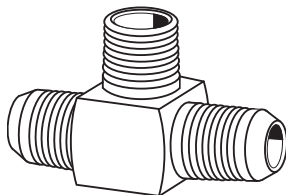
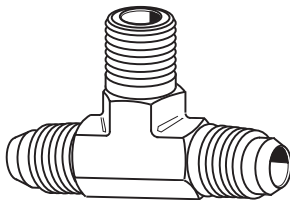


TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	M1	ACROSS FLATS	N
1/4	1/4	C5716x4	.172	.89	1.03	7/16	.89
5/16	5/16	C5716x5	.234	.95	1.09	9/16	.95
3/8	3/8	C5716x6	.297	1.06	1.25	9/16	1.06
1/2	1/2	C5716x8	.391	1.25	1.45	3/4	1.25
5/8	5/8	C5716x10	.484	1.45	1.70	7/8	1.45
3/4	3/4	C5716x12	.609	1.66	1.94	1-1/16	1.66
1	1	C5716x16	.844	1.81	2.05	1-5/16	1.81
1-1/4	1-1/4	C5716x20	1.078	2.06	2.25	1-5/8	2.06
1/4	1/4	TF5716x4	.172	.89	1.03	1/2	.89
5/16	5/16	TF5716x5	.234	.95	1.09	9/16	.95
3/8	3/8	TF5716x6	.297	1.06	1.25	5/8	1.06
1/2	1/2	TF5716x8	.391	1.25	1.45	13/16	1.25
5/8	5/8	TF5716x10	.484	1.45	1.70	15/16	1.45
3/4	3/4	TF5716x12	.609	1.66	1.94	1-1/8	1.66
7/8	7/8	TF5716x14	.718	1.73	2.00	1-1/4	1.73
1	1	TF5716x16	.844	1.81	2.05	1-3/8	1.81
1-1/4	1-1/4	TF5716x20	1.078	2.06	2.25	1-3/4	2.06
1-1/2	1-1/2	TF5716x24	1.312	2.33	2.39	2	2.33

Replacement O-rings page 302.

Male Branch Tee

Stainless Steel No. 5617x
(Ref. SAE No. 070425)
Example assembly No.
C35605x4

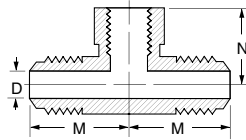
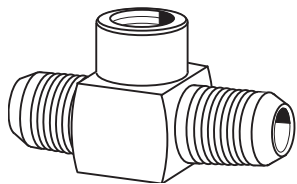
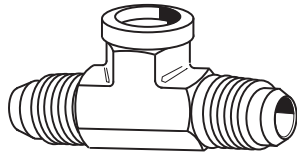


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/8	C5605x4*	.172	.188	.89	.78	7/16
1/4	1/4	C5605x4x4x4	.172	.281	1.05	1.09	9/16
5/16	1/8	C5605x5	.234	.188	.95	.78	9/16
3/8	1/4	C5605x6*	.297	.281	1.06	1.09	9/16
1/2	3/8	C5605x8	.391	.406	1.25	1.22	3/4
5/8	1/2	C5605x10	.484	.531	1.45	1.47	7/8
3/4	3/4	C5605x12	.609	.719	1.66	1.59	1-1/16
1	1	C5605x16	.844	.938	1.81	1.97	1-5/16
1/4	1/8	TF5605x4	.172	.188	.89	.78	1/2
1/4	1/4	TF5605x4x4x4	.172	.281	.95	1.09	5/8
5/16	1/8	TF5605x5	.234	.188	.95	.78	9/16
3/8	1/4	TF5605x6	.297	.281	1.08	1.09	5/8
3/8	3/8	TF5605x6x6x6	.297	.406	1.16	1.22	13/16
1/2	3/8	TF5605x8	.391	.406	1.25	1.22	13/16
1/2	1/2	TF5605x8x8x8	.391	.531	1.31	1.47	15/16
5/8	1/2	TF5605x10	.484	.531	1.45	1.47	15/16
3/4	3/4	TF5605x12	.609	.719	1.66	1.59	1-1/8
7/8	3/4	TF5605x14	.718	.719	1.73	1.69	1-1/4
1	1	TF5605x16	.844	.938	1.81	1.97	1-3/8
1-1/4	1-1/4	TF5605x20	1.078	1.250	2.06	2.38	1-3/4
1-1/2	1-1/2	TF5605x24	1.312	1.500	2.33	2.64	2
2	2	TF5605x32	1.781	1.938	3.06	3.00	2-5/8

JIC 37° Flare-Twin

Female Branch Tee

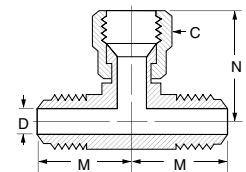
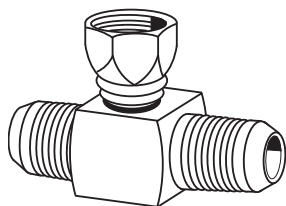
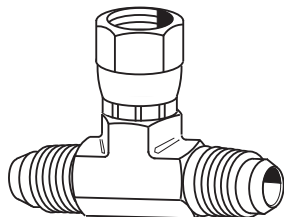
Stainless Steel No. 5667x
(Ref. SAE No. 070427)
Example assembly
No. C35655x4



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/8	C5655x4•	.172	1.08	.66	9/16
3/8	1/4	C5655x6•	.297	1.23	.88	3/4
1/2	3/8	C5655x8•	.391	1.42	1.02	7/8
5/8	1/2	C5655x10	.484	1.64	1.23	1-1/16
3/4	3/4	C5655x12	.609	1.89	1.36	1-5/16
1/4	1/8	TF5655x4	.172	1.08	.66	5/8
1/4	1/4	TF5655x4x4x4	.172	1.14	.88	3/4
5/16	1/8	TF5655x5	.234	1.08	.66	5/8
3/8	1/4	TF5655x6	.297	1.23	.88	3/4
3/8	3/8	TF5655x6x6x6	.297	1.30	1.02	7/8
1/2	3/8	TF5655x8	.391	1.42	1.02	7/8
1/2	1/2	TF5655x8x8x8	.391	1.55	1.23	1-1/8
5/8	1/2	TF5655x10	.484	1.64	1.23	1-1/8
3/4	3/4	TF5655x12	.609	1.89	1.36	1-3/8
7/8	3/4	TF5655x14	.718	1.86	1.42	1-3/8
1	1	TF5655x16	.844	2.17	1.62	1-5/8
1-1/4	1-1/4	TF5655x20	1.078	2.33	1.70	2
1-1/2	1-1/2	TF5655x24	1.312	2.89	2.08	2-3/8
2	2	TF5655x32	1.781	3.30	2.39	2-7/8

Swivel Nut Branch Tee

Stainless Steel No. 5719x
(Ref. SAE No. 070433)
Example assembly
No. C35707x4



TUBE O.D.	CATALOG NUMBER	HEX C	D	M	N	ACROSS FLATS
1/4	5719x4•	9/16	.172	.89	1.00	7/16
3/8	C5707x6•	11/16	.297	1.06	1.25	9/16
1/2	5719x8•	7/8	.391	1.25	1.43	3/4
3/4	C5707x12•	1-1/4	.609	1.66	1.75	1-1/16
1	C5707x16	1-1/2	.844	1.81	2.00	1-5/16
1/4	TF5707x4	9/16	.172	.89	1.00	7/16
5/16	TF5707x5	5/8	.234	.95	1.06	9/16
3/8	TF5707x6	11/16	.297	1.06	1.25	5/8
1/2	TF5707x8	7/8	.391	1.25	1.38	13/16
5/8	TF5707x10	1	.484	1.45	1.62	7/8
3/4	TF5707x12	1-1/4	.609	1.66	1.75	1-1/8
7/8	TF5707x14	1-3/8	.719	1.73	1.78	1-1/4
1	TF5707x16	1-1/2	.844	1.81	2.00	1-3/8
1-1/4	TF5707x20	2	1.078	2.06	2.31	2
1-1/2	TF5707x24	2-1/4	1.312	2.33	2.59	2
2	TF5707x32	2-7/8	1.781	3.06	3.38	2-5/8

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

JIC 37° Flare-Twin

• Available in Stainless Steel.

APPLICATION
DATA

LOW & MEDIUM
PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES &
ASSEMBLY INSTRUCTIONS

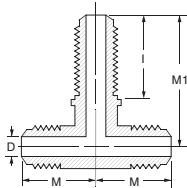
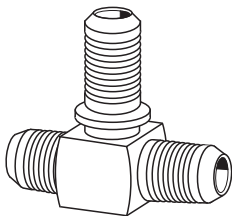
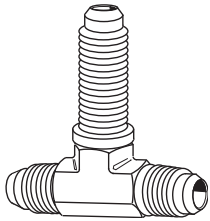
ADAPTERS & TUBE
HOSE ENDS

HOSE ASSEMBLY
EQUIPMENT

TECHNICAL DATA

Bulkhead Branch Tee

(Ref. SAE No. 070959)



TUBE O.D.	CATALOG NUMBER	I	D	M	M1	ACROSS FLATS
1/4	TF5725x4	1.11	.172	.97	1.59	1/2
3/8	TF5725x6	1.18	.297	1.06	1.81	5/8
1/2	TF5725x8	1.38	.391	1.36	2.11	13/16
5/8	TF5725x10	1.52	.484	1.56	2.39	15/16
3/4	TF5725x12	1.69	.609	1.78	2.67	1-1/8
1	TF5725x16	1.69	.844	1.94	2.80	1-3/8
1/4	5737x4•	1.11	.172	.97	1.59	7/16
3/8	5737x6•	1.18	.297	1.09	1.81	9/16

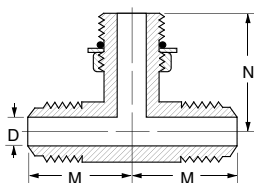
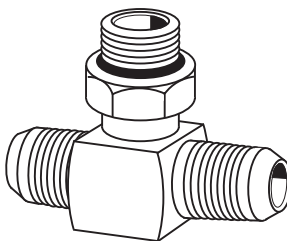
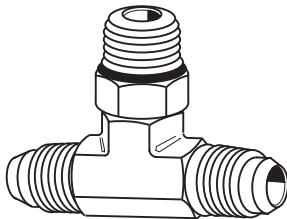
Bulkhead nut not included. Must be ordered separately.

See page 277 for bulkhead nut.

Straight Thread O-Ring Branch Tee

(Ref. SAE No. 070429)

Example assembly
No. C35715x4



TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	M	N	ACROSS FLATS
1/4	1/4	C5715x4	.172	.89	1.03	7/16
3/8	3/8	C5715x6	.297	1.06	1.25	9/16
1/2	1/2	C5715x8	.391	1.25	1.45	3/4
5/8	5/8	C5715x10	.484	1.45	1.70	7/8
3/4	3/4	C5715x12	.609	1.66	1.94	1-1/16
1	1	C5715x16	.844	1.81	2.05	1-5/16
1/4	1/4	TF5715x4	.172	.89	1.03	7/16
5/16	5/16	TF5715x5	.234	.95	1.09	9/16
3/8	3/8	TF5715x6	.297	1.06	1.25	5/8
1/2	1/2	TF5715x8	.391	1.25	1.45	3/4
5/8	5/8	TF5715x10	.484	1.45	1.70	15/16
3/4	3/4	TF5715x12	.609	1.66	1.94	1-1/8
7/8	7/8	TF5715x14	.719	1.73	2.00	1-1/4
1	1	TF5715x16	.844	1.81	2.05	1-3/8
1-1/4	1-1/4	TF5715x20	1.078	2.06	2.25	1-3/4
1-1/2	1-1/2	TF5715x24	1.312	2.33	2.39	2

Replacement O-rings listed on page 302.

JIC 37° Flare-Twin

APPLICATION DATA

LOW & MEDIUM PRESSURE HOSE

HIGH PRESSURE HOSE

SPECIALTY HOSE

ACCESSORIES & ASSEMBLY INSTRUCTIONS

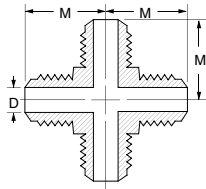
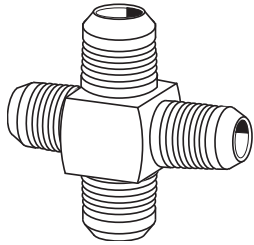
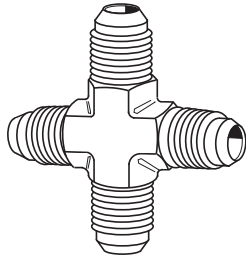
ADAPTERS & HOSE ENDS

HOSE ASSEMBLY EQUIPMENT

TECHNICAL DATA

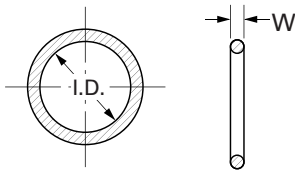
Cross

(Ref. SAE No. 070501)



TUBE O.D.	CATALOG NUMBER	D	M	ACROSS FLATS
1/4	TF5955x4	.172	.89	1/2
5/16	TF5955x5	.234	.95	9/16
3/8	TF5955x6	.297	1.06	5/8
1/2	TF5955x8	.391	1.25	13/16
5/8	TF5955x10	.484	1.45	15/16
3/4	TF5955x12	.609	1.66	1-1/8
7/8	TF5955x14	.718	1.73	1-1/4
1	TF5955x16	.844	1.81	1-3/8
1-1/4	TF5955x20	1.078	2.06	1-3/4
1-1/2	TF5955x24	1.312	2.33	2
1/4	5967x4•	.172	.89	7/16
3/8	5967x6•	.297	1.06	9/16
1/2	5967x8•	.391	1.25	3/4

Straight Thread O-Ring



Material: Buna-N 90 Durometer

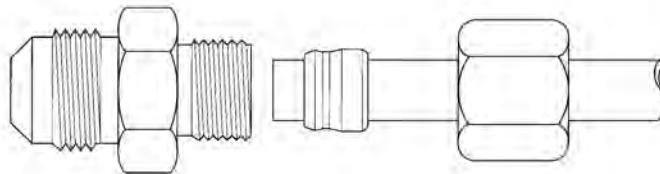
Temperature Range:

-40°F to +250°F
(-40°C to +121°C)

Standard O-ring complies with SAE specification SAE J515 Type CH.

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/16	7629x1	.058	.185
1/8	7629x2	.064	.239
3/16	7629x3	.064	.301
1/4	7629x4	.072	.351
5/16	7629x5	.072	.414
3/8	7629x6	.078	.468
7/16	7629x7	.082	.530
1/2	7629x8	.087	.644
5/8	7629x10	.097	.755
3/4	7629x12	.116	.924
7/8	7629x14	.116	1.048
1	7629x16	.116	1.171
1-1/4	7629x20	.118	1.475
1-1/2	7629x24	.118	1.720
2	7629x32	.118	2.337

Steel DIN Fittings



METRIC TUBE OD	6	8	10	12	14	15	16	18	20	22	25	28	30	38
Light	M12x1.5	M14x1.5	M16x1.5	M18x1.5	-	M22x1.5	-	M26x1.5	-	M30x2.0	-	M36x2.0	-	-
Heavy	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	-	M24x1.5	-	M30x2.0	-	M36x2.0	-	M42x2.0	M52x2.0

• Typical Application

Used in applications to adapt connections made to DIN (Deutsche Industrie Norme) specifications to male 37° JIC Flare.

• Sealing Method

Three-Piece Flareless Bite Type or 60° or 24° Tube Seat, or 37° Flare.

• Vibration Rating

Three-Piece Flareless Bite Type or 60° or 24° Tube Seat. Fair Resistance.

• Material

Carbon Steel - SAE 12L14

• Plating

Bodies and Sleeves - Zinc Yellow Dichromate Finish
Nuts - Phosphate Coating.

• Advantages

Provides an adapter to convert a metric hose assembly to JIC 37° allowing the use of standard hose and end fittings. Can also be used in the repair of metric tubing.

• Presetting Instructions

1. Preset with preset tool. All sleeves should be preset in tool prior to installation.
2. Cut the tubing squarely and lightly deburr the end of the tubing inside and out.
3. Lubricate the sleeve, nut and threads with a good grade of lubricant compatible with the system fluid.
4. Slide the nut and sleeve on the tubing. The thicker end of the sleeve should be towards the nut.
5. Insert the tube into the preset tool making sure it is bottomed on the tube stop. Tighten the nut by hand as much as possible.

6. On the tube sizes up to and including 18mm O.D., tighten the nut 1-1/2 turns past hand tight. For larger tube O.D.'s, tighten the nut 1-1/4 turns past hand tight.
7. To inspect preset, mark the nut location and remove nut.
8. To reinstall, tighten the nut 1/6 turn (one hex flat) past the previous nut location.

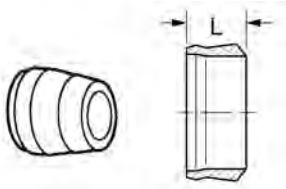
• Ordering Information

Order individually by catalog number. Preset tools found on page 431.

Steel DIN Fittings

NOTE:
Multiply millimeters (mm) by 0.03937 to
obtain inches.

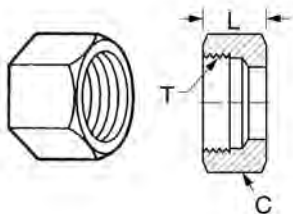
Metric Flareless Sleeve



TUBE O.D. (MM)	CATALOG NUMBER	L (MM)
6	7165x6MM	8.5
8	7165x8MM	8.5
10	7165x10MM	9.5
12	7165x12MM	9.5
14	7165x14MM	10.0
15	7165x15MM	10.0
16	7165x16MM	10.0
18	7165x18MM	10.0
20	7165x20MM	11.5
22	7165x22MM	11.5
25	7165x25MM	11.5
28	7165x28MM	11.5
30	7165x30MM	13.5
38	7165x38MM	13.5

Metric Flareless Nut Light Series

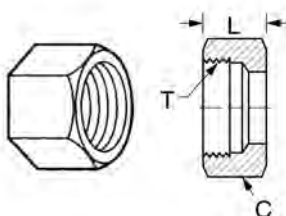
(DIN 3901/3902L)



TUBE O.D. (MM)	CATALOG NUMBER	T THD.	HEX C (MM)	L (MM)
6	ML7105x6	M12x1.5	14	a14.5
8	ML7105x8	M14x1.5	17	14.5
10	ML7105x10	M16x1.5	19	15.5
12	ML7105x12	M18x1.5	22	15.5
15	ML7105x15	M22x1.5	27	17.0
18	ML7105x18	M26x1.5	32	18.0
22	ML7105x22	M30x2.0	36	20.0
28	ML7105x28	M36x2.0	41	21.0

Metric Flareless Nut Heavy Series

(DIN /3902S)3901



TUBE O.D. (MM)	CATALOG NUMBER	T THD.	HEX C (MM)	L (MM)
6	MH7105x6	M14x1.5	17	16.5
8	MH7105x8	M16x1.5	19	16.5
10	MH7105x10	M18x1.5	22	17.5
12	MH7105x12	M20x1.5	24	17.5
14	MH7105x14	M22x1.5	27	20.5
16	MH7105x16	M24x1.5	30	20.5
20	MH7105x20	M30x2.0	36	24.0
25	MH7105x25	M36x2.0	46	27.0
30	MH7105x30	M42x2.0	50	29.0
38	MH7105x38	M52x2.0	60	32.5

Steel DIN Fittings

NOTE:
Multiply millimeters (mm) by 0.03937 to obtain inches.

APPLICATION DATA

DIUM PRESSURE HOSE

ASSEMBLY INSTRUCTIONS

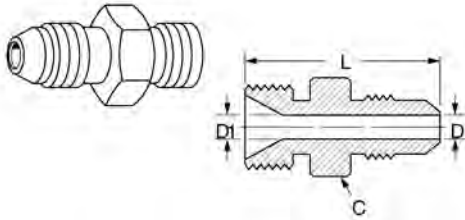
HOSE ENDS

EQUIPMENT

TECHNICAL DATA

Male JIC 37° to 24° Metric Tube Seat (Light)

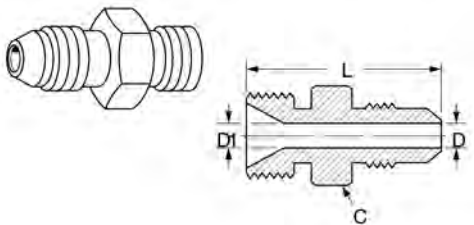
(DIN 3901/3902L)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
1/4	6	MC5206x4x6	M12x1.5	5/8	.171	.171	1.22
3/8	8	MC5206x6x8	M14x1.5	3/4	.297	.240	1.22
1/2	10	MC5206x8x10	M16x1.5	7/8	.391	.322	1.41
1/2	12	MC5206x8x12	M18x1.5	15/16	.391	.398	1.48
5/8	15	MC5206x10x15	M22x1.5	1-1/16	.484	.478	1.70
3/4	18	MC5206x12x18	M26x1.5	1-3/4	.609	.596	1.91

Male JIC 37° to 24° Metric Tube Seat (Heavy)

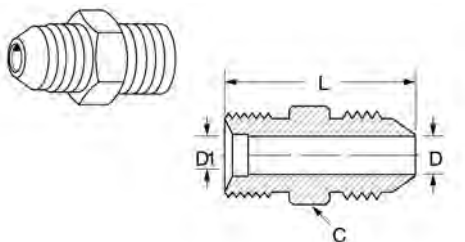
(DIN 3901/3902L)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
3/8	6	MC5208x6x6	M14x1.5	3/4	.297	.167	1.22
1/2	10	MC5208x8x10	M18x1.5	15/16	.391	.283	1.48
5/8	14	MC5208x10x14	M22x1.5	1-1/16	.484	.397	1.70
3/4	16	MC5208x12x16	M24x1.5	1-1/8	.609	.476	1.77

Male JIC 37° to 60° Metric Tube Seat

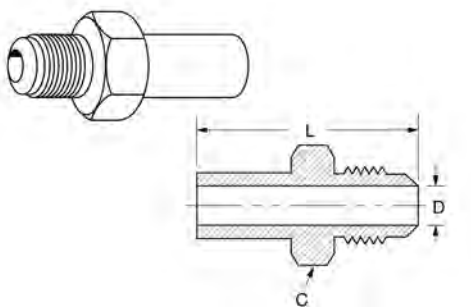
(DIN 7631)



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	METRIC THD.	HEX C	D	D1	L
1/4	6	MC5207x4x6	M12x1.5	1/2	.171	.157	1.22
3/8	8	MC5207x6x8	M14x1.5	5/8	.297	.242	1.22
3/8	10	MC5207x6x10	M16x1.5	7/8	.297	.321	1.32
1/2	12	MC5207x8x12	M18x1.5	15/16	.391	.394	1.48
5/8	15	MC5207x10x15	M22x1.5	1-1/16	.472	.472	1.52
3/4	18	MC5207x12x18	M26x1.5	1-1/8	.609	.596	1.91

Male JIC 37° to Male Metric Standpipe

(DIN 7631)

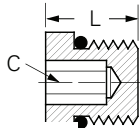


TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER	HEX C	L	D
1/4	6MM	MC5019x4x6	9/16	1.58	.16
1/4	8MM	MC5019x4x8	9/16	1.68	.17
3/8	10MM	MC5019x6x10	3/4	1.67	.28
1/2	12MM	MC5019x8x12	7/8	1.97	.32
1/2	14MM	MC5019x8x14	7/8	1.89	.39
5/8	15MM	MC5019x10x15	1	2.03	.43
5/8	16MM	MC5019x10x16	1	2.07	.47
3/4	16MM	MC5019x12x16	1-1/4	2.22	.47
3/4	18MM	MC5019x12x18	1-1/4	2.12	.55
3/4	20MM	MC5019x12x20	1-1/4	2.38	.61
1	22MM	MC5019x16x22	1-1/2	2.21	.67
1	25MM	MC5019x16x25	1-1/2	2.54	.79

Straight Thread O-Ring

Straight Thread O-Ring Hex Socket Plug

(Ref. SAE No. 090109B)



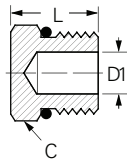
Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER	HEX C	L
1/8	7238x2	1/8	.40
3/16	7238x3	1/8	.40
1/4	7238x4	3/16	.47
5/16	7238x5	3/16	.47
3/8	7238x6	1/4	.50
1/2	7238x8	5/16	.58
5/8	7238x10	3/8	.65
3/4	7238x12	9/16	.77
7/8	7238x14	9/16	.77
1	7238x16	5/8	.77
1-1/4	7238x20	3/4	.78

Straight Thread O-Ring Hex Head Plug

(Ref. SAE No. 090109A)

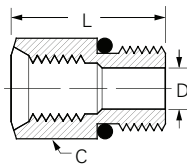
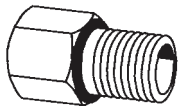


Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER	HEX C	L	D1 OPT.
1/8	7237x2	7/16	.60	.093
3/16	7237x3	1/2	.60	.125
1/4	7237x4	9/16	.67	.203
5/16	7237x5	5/8	.67	.234
3/8	7237x6	11/16	.73	.297
1/2	7237x8	7/8	.80	.422
5/8	7237x10	1	.93	.500
3/4	7237x12	1-1/4	1.09	.656
7/8	7237x14	1-3/8	1.09	.718
1	7237x16	1-1/2	1.12	.875
1-1/4	7237x20	1-7/8	1.20	1.093
1-1/2	7237x24	2-1/8	1.27	1.344
2	7237x32	2-3/4	1.42	1.815

Male Straight Thread/Female Straight Thread O-Ring Boss

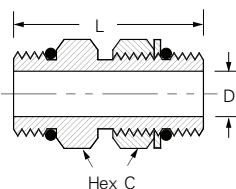
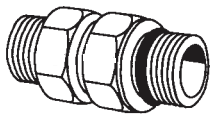


Replacement O-rings page 302.

NOTE: Parts furnished with zinc plate.

MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER	HEX C	D	L
1/2	3/8	7033x8x6	7/8	.391	1.16
5/8	1/2	7033x10x8	1	.484	1.34
3/4	1/2	7033x12x8	1-1/4	.671	1.44
7/8	3/4	7033x14x12	1-3/8	.719	1.72
1	1/2	7033x16x8	1-1/2	.687	1.12
1	3/4	7033x16x12	1-1/2	.844	1.70
1-1/4	3/4	7033x20x12	1-7/8	.968	1.20
1-1/2	1-1/4	7033x24x20	2-1/8	1.312	1.75
2	1-1/2	7033x32x24	2-3/4	1.781	1.44

Straight Thread O-Ring Union

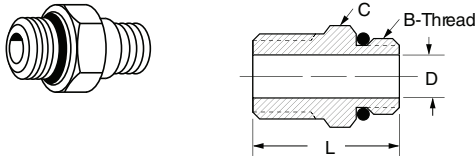


Replacement O-rings page 302.

PORT SIZE	CATALOG NUMBER	HEX C	D	L
1/4	C5314x4x4	9/16	.172	1.37
3/8	C5314x6x6	11/16	.297	1.50
1/2	C5314x8x8	7/8	.391	1.56
5/8	C5314x10x10	1	.484	1.80
3/4	C5314x12x12	1-1/4	.609	2.33
1	C5314x16x16	1-1/2	.844	2.28
1-1/4	C5314x20x20	1-7/8	1.078	2.13
1-1/2	C5314x24x24	2-1/8	1.312	2.13
2	C5314x32x32	2-3/4	1.781	2.13

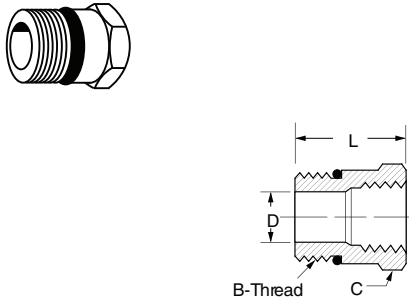
Straight Thread O-Ring

Male Straight Thread O-Ring to Male Pipe Adapter



Replacement O-rings page 302.

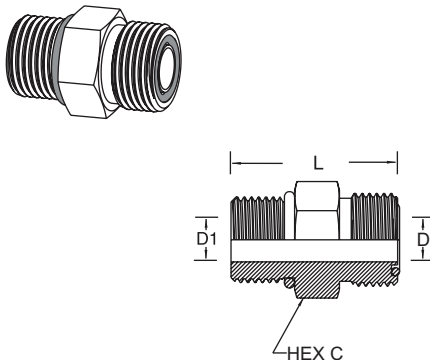
Straight Thread O-Ring to Female Pipe Adapter



Replacement o-rings page 302.

Straight Thread O-Ring Connector to FOR-SEAL®

(Ref. SAE No. 520120)



Replacement straight o-rings page 302.

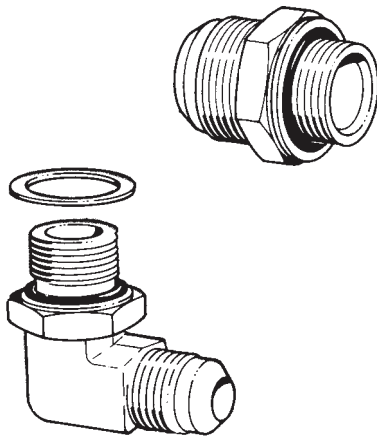
PORT SIZE	MALE PIPE THD.	CATALOG NUMBER	STRAIGHT THD B	HEX C	D	L
1/4	1/8	C3249x4x2	7/16-20	9/16	.172	1.05
3/8	1/4	C3249x6x4	9/16-18	11/16	.281	1.30
1/2	3/8	C3249x8x6	3/4-16	7/8	.391	1.36
1/2	1/2	C3249x8x8	3/4-16	7/8	.391	1.55
5/8	1/2	C3249x10x8	7/8-14	1	.484	1.69
3/4	3/4	C3249x12x12	1-1/16-12	1-1/4	.609	1.73
1	1	C3249x16x16	1-5/16-12	1-1/2	.844	2.06
1-1/4	1-1/4	C3249x20x20	1-5/8-12	1-7/8	1.078	2.17
1-1/2	1-1/2	C3249x24x24	1-7/8-12	2-1/8	1.312	2.26
2	2	C3249x32x32	2-1/2-12	2-3/4	1.781	2.47

PORT SIZE	FEMALE PIPE THD.	CATALOG NUMBER	STRAIGHT THD B	HEX C	D	L
1/4	1/8	C3269x4x2	7/16-20	9/16	.172	.97
1/4	1/4	C3269x4x4	7/16-20	3/4	.172	1.16
5/16	1/8	C3269x5x2	1/2-20	5/8	.234	.94
3/8	1/4	C3269x6x4	9/16-18	3/4	.297	1.09
3/8	3/8	C3269x6x6	9/16-18	7/8	.281	1.30
3/8	1/2	C3269x6x8	9/16-18	1-1/8	.281	1.44
1/2	1/4	C3269x8x4	3/4-16	7/8	.421	1.06
1/2	3/8	C3269x8x6	3/4-16	7/8	.421	1.22
1/2	1/2	C3269x8x8	3/4-16	1-1/16	.421	1.50
5/8	1/4	C3269x10x4	7/8-14	1	.422	.81
5/8	3/8	C3269x10x6	7/8-14	1	.500	1.25
5/8	1/2	C3269x10x8	7/8-14	1-1/8	.500	1.50
5/8	3/4	C3269x10x12	7/8-14	1-3/8	.500	1.62
3/4	1/2	C3269x12x8	1-1/16-12	1-1/4	.688	1.34
3/4	3/4	C3269x12x12	1-1/16-12	1-3/8	.656	1.66
7/8	3/4	C3269x14x12	1-3/16-12	1-3/8	.718	1.63
1	1/2	C3269x16x8	1-5/16-12	1-1/2	.688	1.00
1	3/4	C3269x16x12	1-5/16-12	1-1/2	.876	1.50
1	1	C3269x16x16	1-5/16-12	1-5/8	.876	1.88
1-1/4	1	C3269x20x16	1-5/8-12	1-7/8	1.080	1.00
1-1/4	1-1/4	C3269x20x20	1-5/8-12	2	1.080	1.94
1-1/2	1-1/2	C3269x24x24	1-7/8-12	2-3/8	1.312	1.88
2	2	C3269x32x32	2-1/2-12	2-7/8	1.781	1.91

MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.378	.264	1.472
1/2	1/2	4315x8	7/8	.378	.378	1.441
1/2	5/8	4315x8x10	1	.378	.484	1.590
1/2	3/4	4315x8x12	1-1/4	.378	.609	1.748
5/8	5/8	4315x10	1-1/16	.484	.484	1.700
3/4	3/4	4315x12	1-1/4	.609	.609	1.918
3/4	1	4315x12x16	1-1/2	.609	.609	1.960
1	3/4	4315x16x12	1-1/2	.812	.609	2.138
1	1	4315x16	1-1/2	.811	.811	1.978
1	1-1/4	4315x16x20	1-7/8	.812	1.709	2.058
1-1/4	1	4315x20x16	1-3/4	1.024	.843	2.278
1-1/4	1-1/4	4315x20	1-7/8	1.024	1.024	2.058
1-1/2	1-1/2	4315x24	2-1/8	1.260	1.260	2.125

APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & TUBE HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

DIN Connectors



• Typical Application

Used in applications to adapt connections and tubing to male and female swivel 37° JIC flare.

• Sealing Method

Tapered pipe thread, or o-ring, or 37° flare.

• Vibration Rating

Fair resistance.

• Material

Carbon Steel – SAE 12L14.

• Plating

Zinc yellow dichromate finish.

• Advantages

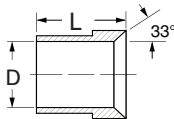
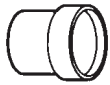
Provides an adapter to convert Metric ports to 37° JIC allowing the use of standard hose and end fittings. Also metric tubing that can be flared can be adapted to a standard 37° JIC connection by the use of sleeves.

• Ordering Information

Order individually by catalog number.

Sleeve 3 Piece Metric

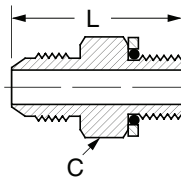
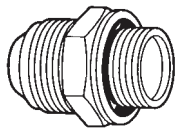
(Ref. SAE No. 070115)



Adapts standard JIC Flare-Twin® fittings for use with metric tubing

Male JIC 37° to Male Metric Straight Thread Connector

(Port Per ISO 9974)



Replacement O-rings page 309.

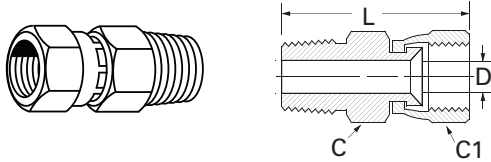
TUBE O.D. IN. SIZE	TUBE O.D. METRIC	CATALOG NUMBER	D	L
1/4	6MM	C5165x4x6MM	.241	.41
5/16	8MM	C5165x5x8MM	.320	.44
3/8	10MM	C5165x6x10MM	.399	.50
1/2	12MM	C5165x8x12MM	.478	.56
5/8	14MM	C5165x10x14MM	.556	.66
5/8	15MM	C5165x10x15MM	.596	.66
5/8	16MM	C5165x10x16MM	.636	.66
3/4	18MM	C5165x12x18MM	.717	.68
7/8	20MM	C5165x14x20MM	.793	.76
7/8	22MM	C5165x14x22MM	.866	.76
1	25MM	C5165x16x25MM	.990	.78
1-1/4	30MM	C5165x20x30MM	1.191	.91
1-1/4	32MM	C5165x20x32MM	1.270	.91
1-1/2	38MM	C5165x24x38MM	1.500	1.12

TUBE O.D.	MALE THD. METRIC	CATALOG NUMBER	L	HEX C
1/4	M10x1.0	MC5315x4x10	1.18	5/8
1/4	M12x1.5	MC5315x4x12	1.22	5/8
1/4	M14x1.5	MC5315x4x14	1.22	3/4
3/8	M14x1.5	MC5315x6x14	1.22	3/4
3/8	M16x1.5	MC5315x6x16	1.32	7/8
1/2	M18x1.5	MC5315x8x18	1.48	15/16
1/2	M22x1.5	MC5315x8x22	1.61	1-1/16
5/8	M20x1.5	MC5315x10x20	1.71	1
3/4	M22x1.5	MC5315x12x22	1.81	1-1/8
3/4	M27x2.0	MC5315x12x27	1.95	1-1/4
1	M33x2.0	MC5315x16x33	2.03	1-5/8
1-1/4	M42x2.0	MC5315x20x42	2.19	2

Metric Connectors

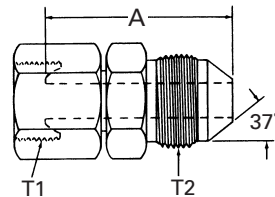
Female JIC 37° Swivel to Male Metric Taper Pipe Thread

(Pipe Thread Per DIN 3852)



TUBE O.D.	TAPER PIPE THD. METRIC	CATALOG NUMBER	HEX C	HEX C1	D	L
1/4	M10 x 1.0	M9700x4x6	9/16	9/16	.172	1.25
5/16	M12 x 1.5	M9700x5x8	11/16	5/8	.234	1.54
3/8	M14 x 1.5	M9700x6x10	11/16	11/16	.297	1.60
1/2	M16 x 1.5	M9700x8x12	7/8	7/8	.391	1.78
5/8	M20 x 1.5	M9700x10x14	1	1	.484	1.91
3/4	M24 x 1.5	M9700x12x20	1-1/8	1-1/8	.609	2.04
1	M27 x 2.0	M9700x16x25	1-3/8	1-1/2	.845	2.30
1-1/4	M36 x 2.0	M9700x20x32	1-7/8	2	1.079	2.43

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

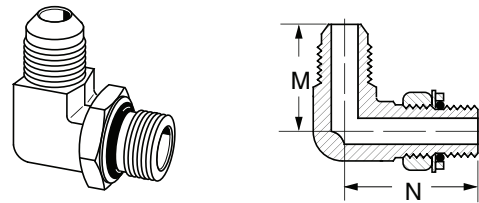


Part No. 15.163- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1	THREAD T2	A	
	mm	inches			mm	inches
4-4T	6,3	.25	M12 x 1.5	7/16 - 20	34,5	1.36

90° Elbow - Male JIC 37° to Male Metric Straight Thread

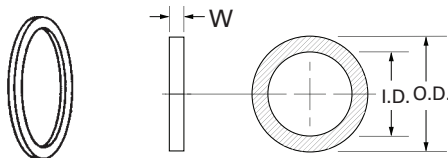
(For ISO 9974 Port)



Replacement retaining rings and O-rings see below.

TUBE O.D.	MALE THD. METRIC	CATALOG NUMBER	M	N
1/4	M10x1.0	MC5515x4x10	.89	1.03
1/4	M12x1.5	MC5515x4x12	.95	1.09
3/8	M14x1.5	MC5515x6x14	1.06	1.25
3/8	M16x1.5	MC5515x6x16	1.14	1.45
1/2	M18x1.5	MC5515x8x18	1.26	1.47
1/2	M22x1.5	MC5515x8x22	1.33	1.70
5/8	M18x1.5	MC5515x10x18	1.41	1.60
5/8	M20x1.5	MC5515x10x20	1.45	1.70
5/8	M22x1.5	MC5515x10x22	1.45	1.70
3/4	M22x1.5	MC5515x12x22	1.66	1.78
3/4	M27x2.0	MC5515x12x27	1.66	1.94
1	M33x2.0	MC5515x16x33	1.81	2.05

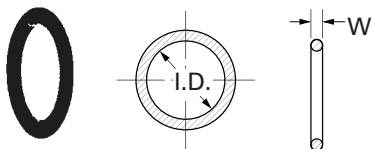
Metric Retaining Ring



TUBE O.D. (MM)	CATALOG NUMBER	RING I.D. (MM)	RING O.D. (MM)	W (MM)
10	M7630x10	11.33	14.85	1.00
12	M7630x12	13.72	17.85	1.42
14	M7630x14	15.73	19.85	1.42
16	M7630x16	17.73	21.85	1.42
18	M7630x18	19.73	23.80	1.42
20	M7630x20	21.73	25.85	1.42
22	M7630x22	23.73	27.85	1.42
27	M7630x27	29.44	32.85	1.90
33	M7630x33	35.44	39.85	1.90
42	M7630x42	44.44	49.85	1.90

Metric O-Ring

(For ISO 9974 Port)



TUBE O.D.	CATALOG NUMBER	W (MM)	I.D. (MM)
10	M7629x10	1.60	8.10
12	M7629x12	2.40	9.30
14	M7629x14	2.10	11.40
16	M7629x16	2.40	13.30
18	M7629x18	2.40	15.60
20	M7629x20	2.46	18.00
22	M7629x22	2.46	19.80
27	M7629x27	2.95	23.47
33	M7629x33	2.95	29.74
42	M7629x42	3.00	39.20

Material: Buna N 90 Durometer
Temperature Range: -40°F to +250°F
 (-40°C to +121°C)

APPLICATION DATA
 LOW & MEDIUM PRESSURE HOSE
 HIGH PRESSURE HOSE
 SPECIALTY HOSE
 ACCESSORIES & ASSEMBLY INSTRUCTIONS
 ADAPTERS & TUBE HOSE ENDS
 HOSE ASSEMBLY EQUIPMENT
 TECHNICAL DATA

BSP Connectors

Typical Application:
Used in applications to adapt connections made to BSP (British Standard Pipe) specifications to male or female swivel SAE 37° flare.

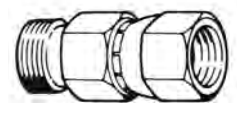
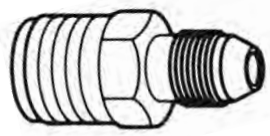
Sealing Method:
Tapered (BSPT) or Parallel Pipe Thread (BSPP), O-Ring or JIC 37° flare.

Vibration Rating:
Fair resistance.

Material:
Carbon steel

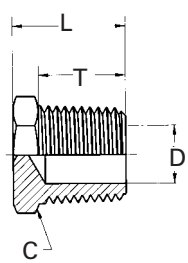
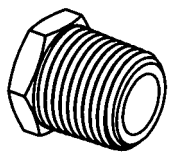
Plating: Zinc

Advantages: Provides an adapter to convert BSP ports to 37° allowing the use of standard connectors.



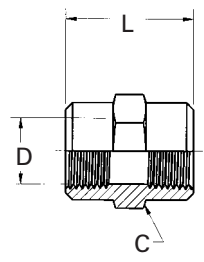
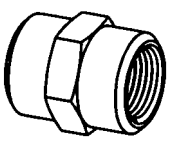
Pipe Size	1/8	1/4	3/8	1/2	5/8	3/4	1	1-1/4
Thread Size	1/8-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1-11	1-1/4-11

Hex Head Plug



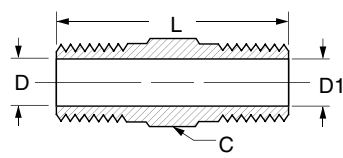
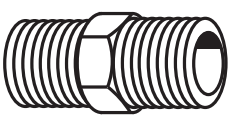
BSPT PIPE SIZE	CATALOG NUMBER	HEX C (MM)	L	T	D OPT. DIA.
1/8	MC3159x2	11	.58	.385	.16
1/4	MC3159x4	14	.76	.577	.25
3/8	MC3159x6	17	.80	.577	.38
1/2	MC3159x8	22	.98	.765	.50
3/4	MC3159x12	27	1.11	.796	.69
1	MC3159x16	36	1.27	.943	.88

Coupling



BSPT PIPE SIZE	CATALOG NUMBER	HEX C (MM)	L	D OPT. DIA.
1/8	MC3309x2	17	.75	.337
1/4	MC3309x4	19	1.13	.450
3/8	MC3309x6	22	1.13	.588
1/2	MC3309x8	30	1.50	.733
3/4	MC3309x12	36	1.53	.949
1	MC3309x16	41	1.89	1.192

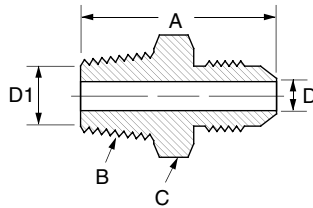
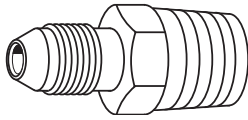
Hex Nipple



BSPT PIPE SIZE A	BSPT PIPE SIZE A1	CATALOG NUMBER	HEX C (MM)	L	T	T1	D	D1
1/8	1/8	MC3069x2x2	11	1.06	.395	.395	.188	.188
1/4	1/4	MC3069x4x4	17	1.26	.575	.575	.281	.281
3/8	3/8	MC3069x6x6	19	1.45	.575	.575	.406	.406
1/2	1/2	MC3069x8x8	22	1.70	.765	.765	.531	.531
3/4	3/4	MC3069x12x12	30	1.99	.795	.795	.719	.719
1	1	MC3069x16x16	36	2.18	.955	.955	.939	.939
1-1/4	1-1/4	MC3069x20x20	46	2.51	1.045	1.045	1.252	1.252
1-1/2	1-1/2	MC3069x24x24	50	2.67	1.045	1.045	1.502	1.502
2	2	MC3069x32x32	65	2.98	1.205	1.205	1.940	1.940

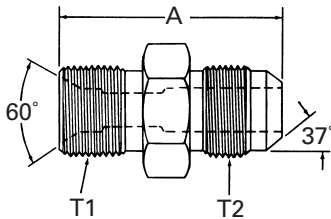
BSP Connectors

Male Connector



TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT THREAD B	A	HEX C	D	D1
1/4	1/8	MC5205x4x2	1/8-28	1.22	1/2	.172	.281
1/4	1/4	MC5205x4x4	1/4-19	1.42	9/16	.172	.188
1/4	3/8	MC5205x4x6	1/4-19	1.42	1/2	.172	.406
5/16	1/4	MC5205x5x4	1/4-19	1.22	9/16	.234	.281
5/16	3/8	MC5205x5x6	3/8-19	1.42	47/64	.234	.406
3/8	1/4	MC5205x6x4	1/4-19	1.21	5/8	.297	.406
3/8	3/8	MC5205x6x6	3/8-19	1.29	3/4	.297	.281
3/8	1/2	MC5205x6x8	1/2-14	1.69	55/64	.297	.531
3/8	3/4	MC5205x6x12	3/4-14	1.78	1-5/32	.297	.719
1/2	3/8	MC5205x8x6	3/8-19	1.41	13/16	.391	.531
1/2	1/2	MC5205x8x8	1/2-14	1.59	15/16	.391	.406
1/2	3/4	MC5205x8x12	3/4-14	1.88	1-5/32	.391	.719
5/8	1/2	MC5205x10x8	1/2-14	1.66	15/16	.484	.531
5/8	3/4	MC5205x10x12	3/4-14	1.99	1-1/8	.484	.719
5/8	1	MC5205x10x16	1-11	2.15	1-13/32	.484	.939
3/4	1/2	MC5205x12x8	1/2-14	2.06	1-5/32	.609	.531
3/4	1	MC5205x12x16	1-11	2.25	1-13/32	.609	.531
7/8	3/4	MC5205x14x12	3/4-14	2.12	1-5/32	.609	.939
7/8	1	MC5205x14x16	1-11	2.28	1-13/32	.719	.719
3/4	3/4	MC5205x12x12	3/4-14	1.93	1-1/8	.719	.942
1	3/4	MC5205x16x12	3/4-14	2.14	1-13/32	.845	.939
1	1	MC5205x16x16	1-11	2.13	1-3/8	.845	.719
1-1/4	1-1/4	MC5205x20x20	1-1/4-11	2.34	1-11/16	1.080	1.252
1-1/2	1-1/2	MC5205x24x24	1-1/2-11	2.71	1-15/16	1.314	1.502
2	2	MC5205x32x32	2-11	3.27	2-3/4	1.784	1.940

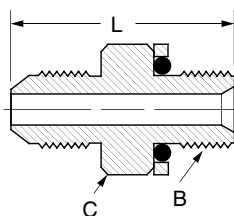
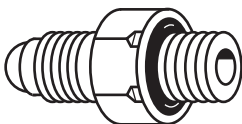
Male Connector



Part No. 2063- (Dash Size)

DASH SIZE	TUBE O.D.		THREAD T1 (BSPP)	THREAD T2	A	
	mm	inches			mm	inches
2-4S	6,3	.25	1/8 - 28	7/16 - 20	35,1	1.38
4-4S	6,3	.25	1/4 - 19	7/16 - 20	35,1	1.38
4-6S	9,6	.38	1/4 - 19	9/16 - 18	35,1	1.38
6-6S	9,6	.38	3/8 - 19	9/16 - 18	36,3	1.43
8-10S	16,0	.63	1/2 - 14	7/8 - 14	43,9	1.73
12-12S	19,0	.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

Male British Standard Parallel Pipe to Male 37° SAE



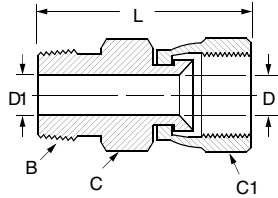
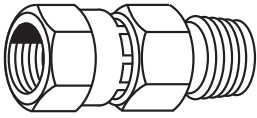
TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP THREAD B	L	HEX C
1/4	1/8	MB5315x4x2	1/8-28	1.10	5/8
1/4	1/4	MB5315x4x4	1/4-19	1.24	3/4
5/16	1/4	MB5315x5x4	1/4-19	1.24	3/4
3/8	1/4	MB5315x6x4	1/4-19	1.25	3/4
3/8	3/8	MB5315x6x6	3/8-19	1.31	7/8
1/2	3/8	MB5315x8x6	3/8-19	1.48	7/8
1/2	1/2	MB5315x8x8	1/2-14	1.67	1-1/8
5/8	3/4	MB5315x10x12	3/4-14	1.83	1-3/8
3/4	3/4	MB5315x12x12	3/4-14	1.93	1-3/8
1	1	MB5315x16x16	1-11	2.20	1-3/4
1-1/4	1-1/4	MB5315x20x20	1-1/4-11	2.32	2

Replacement retaining rings and O-Rings page 313.

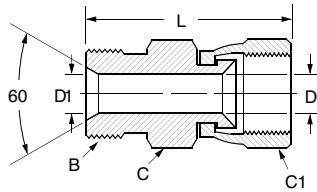
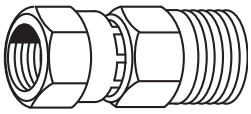
APPLICATION DATA
LOW & MEDIUM PRESSURE HOSE
HIGH PRESSURE HOSE
SPECIALTY HOSE
ACCESSORIES & ASSEMBLY INSTRUCTIONS
ADAPTERS & TUBE HOSE ENDS
HOSE ASSEMBLY EQUIPMENT
TECHNICAL DATA

BSP Connectors

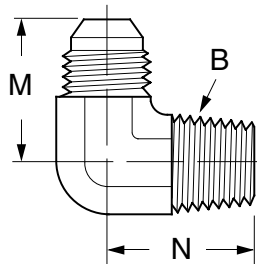
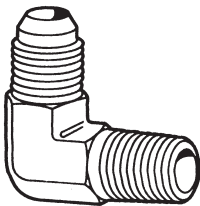
Female 37° SAE Swivel to Male British Standard Tapered Pipe Thread



Female 37° SAE Swivel to Male British Standard Parallel Pipe Thread



Male British Standard Tapered Pipe to Male SAE 37° SAE 90° Elbow



TUBE O.D.	BSPT PIPE	CATALOG NUMBER SIZE	BSPT PIPE	HEX SIZE	HEX C1	D	D1	L
1/4	1/4	M9800x4x4	1/4	9/16	9/16	.172	.281*	1.56
5/16	1/4	M9800x5x4	1/4	11/16	5/8	.234	.281*	1.63
3/8	1/4	M9800x6x4	1/4	11/16	11/16	.297	.281	1.69
1/2	1/4	M9800x8x4	1/4	7/8	7/8	.391	.281	1.87
1/2	3/8	M9800x8x6	3/8	7/8	7/8	.391	.406*	1.87
1/2	1/2	M9800x8x8	1/2	7/8	7/8	.391	.531*	2.06
5/8	1/2	M9800x10x8	1/2	1	1	.484	.531*	2.11
3/4	1/2	M9800x12x8	1/2	1-1/8	1-1/4	.609	.531	2.21
3/4	3/4	M9800x12x12	3/4	1-1/8	1-1/4	.609	.719*	2.24
1	3/4	M9800x16x12	3/4	1-3/8	1-1/2	.845	.719	2.39
1	1	M9800x16x16	1	1-3/8	1-1/2	.845	.938*	2.55
1-1/4	1-1/4	M9800x20x20	1-1/4	1-7/8	2	1.079	1.125*	2.73

*Optional counterbore.

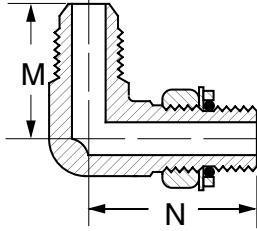
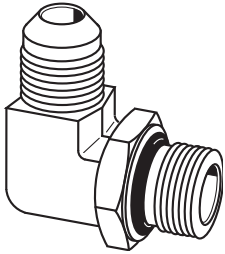
TUBE O.D.	BSPP PIPE	CATALOG NUMBER SIZE	BSPT PIPE	HEX SIZE	HEX C1	D	D1	L
1/4	1/4	M9600x4x4	1/4	9/16	9/16	.172	.198*	1.43
5/16	1/4	M9600x5x4	1/4	5/8	11/16	.234	.198	1.50
3/8	1/4	M9600x6x4	1/4	11/16	11/16	.297	.198	1.56
3/8	3/8	M9600x6x6	3/8	11/16	11/16	.297	.322*	1.66
1/2	3/8	M9600x8x6	3/8	7/8	7/8	.391	.322	1.77
1/2	1/2	M9600x8x8	1/2	7/8	7/8	.391	.448*	1.92
5/8	1/2	M9600x10x8	1/2	1	1	.484	.448	1.97
3/4	3/4	M9600x12x12	3/4	1-1/4	1-1/8	.609	.666*	2.25
1	1	M9600x16x16	1	1-1/2	1-3/8	.845	.885*	2.48
1-1/4	1-1/4	M9600x20x20	1-1/4	2	1-7/8	1.078	1.125*	2.64

*Optional counterbore.

TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT THREAD B	M	N	ACROSS FLATS
1/4	1/4	MC5405x4x4	1/4-19	1.05	1.09	7/16
5/16	1/4	MC5405x5x4	1/4-19	1.05	1.09	1/2
3/8	1/4	MC5405x6x4	1/4-19	1.06	1.09	9/16
3/8	3/8	MC5405x6x6	3/8-19	1.14	1.22	3/4
1/2	3/8	MC5405x8x6	3/8-19	1.25	1.22	3/4
1/2	1/2	MC5405x8x8	1/2-14	1.33	1.47	7/8
5/8	3/4	MC5405x10x12	3/4-14	1.54	1.59	1-1/16
3/4	3/4	MC5405x12x12	3/4-14	1.66	1.59	1-1/16
1	1	MC5405x16x16	1-11	1.81	1.97	1-5/16
1-1/4	1-1/4	MC5405x20x20	1-1/4-11	2.06	2.38	1-5/8

BSP Connectors

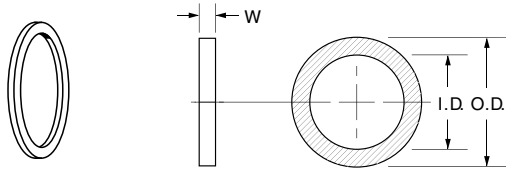
Male British Standard Parallel Pipe to Male 37° SAE 90° Elbow



TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP THREAD	M	N	ACROSS FLATS
1/4	1/4	MB5515x4x4	1/4-19	1.05	1.25	9/16
5/16	1/4	MB5515x5x4	1/4-19	.95	1.25	9/16
3/8	1/4	MB5515x6x4	1/4-19	1.06	1.25	9/16
3/8	3/8	MB5515x6x6	3/8-19	1.14	1.45	3/4
1/2	3/8	MB5515x8x6	3/8-19	1.25	1.45	3/4
1/2	1/2	MB5515x8x8	1/2-14	1.33	1.70	7/8
5/8	3/4	MB5515x10x12	3/4-14	1.34	1.94	1-1/16
3/4	3/4	MB5515x12x12	3/4-14	1.66	1.94	1-1/16
1	1	MB5515x16x16	1-11	1.81	2.05	1-5/16
1-1/4	1-1/4	MB5515x20x20	1-14-11	2.06	2.25	1-5/8

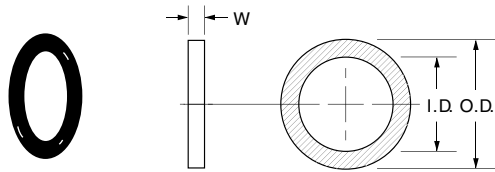
Replacement retaining rings and O-Rings see below.

British Retaining Ring



TUBE O.D.	CATALOG NUMBER	RING	RING I.D.	W O.D.
1/8	MB7630x2	.45	.60	.044
1/4	MB7630x4	.63	.81	.067
3/8	MB7630x6	.77	.93	.067
1/2	MB7630x8	.91	1.12	.067
5/8	MB7630x10	1.00	1.24	.067
3/4	MB7630x12	1.12	1.37	.067
1	MB7630x16	1.44	1.74	.092
1-1/4	MB7630x20	1.76	2.18	.092
1-1/2	MB7630x24	2.02	2.43	.092

British O-Ring



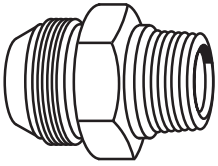
Material:
Buna N 90 Durometer

Temperature Range:
-40°F to +250°F
(-40°C to +121°C)

TUBE O.D.	CATALOG NUMBER	W	I.D.
1/8	MB7629x2	.070	.239
1/4	MB7629x4	.103	.424
3/8	MB7629x6	.103	.549
1/2	MB7629x8	.103	.695
5/8	MB7629x10	.103	.818
3/4	MB7629x12	.103	.924
1	MB7629x16	.139	1.171
1-1/4	MB7629x20	.139	1.484

Special Adapters

AC8111 Connector (Steel)



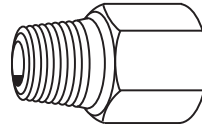
TUBE SIZE	MALE PIPE THREAD	CATALOG NUMBER
1 (1-5/16-14)	3/4	C9240

1 (1-5/16-14)	1	C9200
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APPLICATION: PTT Thread 30° tube to male pipe adapter for Diesel Engines

Restriction Pipe Adapter (Brass)

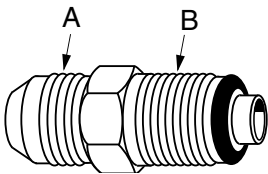
With .0625 Orifice



MALE PIPE SIZE	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	1512

JIC 37° Flare to O-Ring Port (Steel)

Includes O-Ring

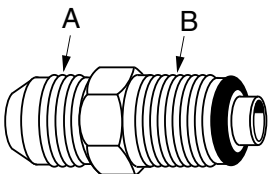


TUBE SIZE	THREAD A	THREAD B	CATALOG NUMBER
1/4	7/16-20	7/16-24	41157x4
3/8	9/16-18	5/8-18	41157x6
1/2	3/4-16	3/4-16	41157x8
5/8	7/8-14	7/8-14	41157x10
3/4	1-1/16-12	1-1/16-16	41157x12

Includes O-Ring.

JIC 37° Flare to Metric O-Ring Port Adapter (Steel)

Includes O-Ring



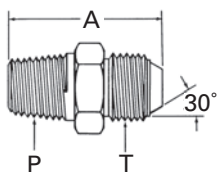
TUBE SIZE	THREAD A	THREAD B	CATALOG NUMBER
3/8	M14x1.5	9/16-18	M41157x6x14
3/8	M16x1.5	9/16-18	M41157x6x16
3/8	M18x1.5	9/16-18	M41157x6x18

Includes O-Ring.

Application: GM power steering with Saginaw steering and rack and pinion steering systems.

Male Pipe to 30° Flare

Part No. 2004- (Dash Size)



DASH SIZE	TUBE O.D.		THREAD P (NPTF)	THREAD T	A	
	mm	inches			mm	inches
16-16S	25,4	1.00	1 - 11 ¹ / ₂	1 ⁵ / ₁₆ - 14	51,6	2.03