

Equipment

Brass Adapters

Inverted FlareTube Nut

(Ref. SAE No. 040110)

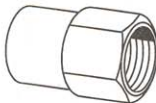


O.D. TUBE	STEEL CAT. NUM.	BRASS CATALOG NUMBER
1/8	105x2	-
3/16	105x3	100x3
1/4	105x4	100x4
5/16	105x5	100x5
3/8	105x6	100x6
3/8	105x6 ^{7*}	-
7/16	105x7	-
1/2	105x8	100x8
5/8	105x10	-
3/4	105x12	-
7/8	105x14	-
1	105x16	-

*3/8" Tube to 11/16-18 Male Thread

Inverted Flare Female Connector

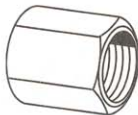
(Ref. SAE No. 040103)



O.D. TUBE	FEM. PIPE THREAD	CATALOG NUMBER
3/16	3/16	252x3
1/4	1/8	252x4
5/16	1/8	252x5

Inverted Flare Union

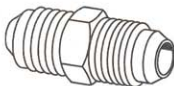
(Ref. SAE No. 040101)



TUBE O.D.	CATALOG NUMBER
1/8	302x2
3/16	302x3
1/4	302x4
5/16	302x5
3/8	302x6
1/2	302x8

SAE 45° Flare Union

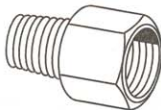
(Ref. SAE No. 010101)



TUBE O.D.	CATALOG NUMBER
1/8	42x2
3/16	42x3
1/4	42x4
5/16	42x5
3/8	42x6
1/2	42x8
5/8	42x10

Inverted Flare Male Connector

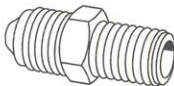
(Ref. SAE No. 040102)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	202x2
3/16	1/8	202x3
1/4	1/8	202x4
1/4	1/4	202x4x4
5/16	1/8	202x5
5/16	1/4	202x5x4
3/8	1/8	202x6x2
3/8	1/4	202x6
3/8	3/8	202x6x6
1/2	1/4	202x8x4
1/2	3/8	202x8
1/2	1/2	202x8x8
5/8	1/2	202x10
1	1	202x16

SAE 45° Flare Male Connector

(Ref. SAE No. 010102)



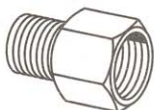
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	48x2
3/16	1/8	48x3
1/4	1/8	48x4
1/4	1/4	48x4x4
5/16	1/8	48x5
5/16	1/4	48x5x4
3/8	1/8	48x6x2
3/8	1/4	48x6
3/8	3/8	48x6x6
3/8	1/2	48x6x8
7/16	1/4	48x7
1/2	1/4	48x8x4
1/2	3/8	48x8
1/2	1/2	48x8x8
5/8	3/8	48x10x6
5/8	1/2	48x10
3/4	1/2	48x12
3/4	3/4	48x12x12

Equipment

Brass Adapters

Adapter

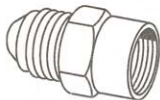
(Ref. SAE No. 130139)



MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER
1/8	1/8	3200x2
1/4	1/8	3200x4x2
1/4	1/4	3200x4
3/8	1/4	3200x6x4
3/8	3/8	3200x6
1/2	3/8	3200x8x6
3/4	3/8	3200x12x6
3/4	1/2	3200x12x8

SAE 45° Flare Female Connector

(Ref. SAE No. 010103)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
3/16	1/8	46x3
1/4	1/8	46x4
1/4	1/4	46x4x4
5/16	1/8	46x5
5/16	1/4	46x5x4
3/8	1/8	46x6x2
3/8	1/4	46x6
3/8	3/8	46x6x6
3/8	1/2	46x6x8
1/2	1/4	46x8x4
1/2	3/8	46x8
1/2	1/2	46x8x8
5/8	1/2	46x10

SAE 45° Flare 45° Male Elbow

(Ref. SAE No. 010302)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	54x4
1/4	1/4	54x4x4
5/16	1/8	54x5
3/8	1/4	54x6
1/2	3/8	54x8
1/2	1/2	54x8x8
5/8	1/2	54x10
5/8	3/8	54x10x6

SAE 45° Flare 90° Male Elbow

(Ref. SAE No. 010202)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	49x2
3/16	1/8	49x3
1/4	1/8	49x4
1/4	1/4	49x4x4
5/16	1/8	49x5
5/16	1/4	49x5x4
3/8	1/8	49x6x2
3/8	1/4	49x6
3/8	3/8	49x6x6
3/8	1/2	49x6x8
7/16	1/4	49x7
1/2	1/4	49x8x4
1/2	3/8	49x8
1/2	1/2	49x8x8
5/8	3/8	49x10x6
5/8	1/2	49x10
3/4	1/2	49x12
3/4	3/4	49x12x12

Cap



MALE PIPE THREAD	CATALOG NUMBER
1/8*	3129x2
1/4*	3129x4
3/8*	3129x6

*PTF Short Thread

Bushing

(Ref. SAE No. 130140)

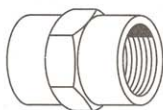


MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER
1/4	1/8	3220x4x2*
3/8	1/8	3220x6x2
3/8	1/4	3220x6x4*
1/2	1/8	3220x8x2*
1/2	1/4	3220x8x4*
1/2	3/8	3220x8x6
3/4	3/8	3220x12x6*
3/4	1/2	3220x12x8*

*PTF Short Thread

Brass Adapters

Coupling
(Ref. SAE No. 130138)



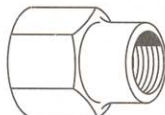
FEMALE PIPE THREAD	CATALOG NUMBER
1/16	3300x1
1/8	3300x2
1/4	3300x4
3/8	3300x6
1/2	3300x8
3/4	3300x12

Long Nipple



MALE PIPE THREAD	LENGTH	CATALOG NUMBER
1/8	1-1/2	3327x2
1/4	1-1/2	3327x4
3/8	1-1/2	3327x6
1/8	2	3328x2
1/4	2	3328x4
3/8	2	3328x6
1/2	2	3328x8
1/8	2-1/2	3329x6
1/4	2-1/2	3329x4
3/8	2-1/2	3329x6
1/2	2-1/2	3329x8
3/4	2-1/2	3329x12
1/8	3	3330x2
1/4	3	3330x4
3/8	3	3330x6
1/2	3	3330x8

**Reducing
Coupling**
(Ref. SAE No. 130138)



FEM. PIPE THREAD	FEM.E PIPE THREAD	CATALOG NUMBER
1/4	1/8	3300x4x2
3/8	1/8	3300x6x2
3/8	1/4	3300x6x4
1/2	3/8	3300x8x6

Hex Nipple
(Ref. SAE No. 130137)



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER
1/16	1/16	3325x1
1/8	1/16	3325x2x1
1/8	1/8	3325x2
1/4	1/8	3325x4x2
1/4	1/4	3325x4
3/8	1/8	3325x6x2
3/8	1/4	3325x6x4
3/8	3/8	3325x6
1/2	1/2	3325x8
3/4	3/4	3325x12

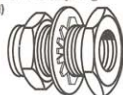
Close Nipple



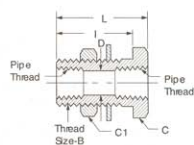
MALE PIPE THREAD	LENGTH	CATALOG NUMBER
1/8	3/4	3326x2
1/4	7/8	3326x4
3/8	1	3326x6
1/2	1-1/8	3326x8
3/4	1-3/8	3326x12

Bulkhead Couplings

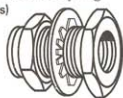
Bulkhead Coupling (Steel)



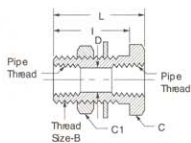
FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/4	W05465	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	W21204	3/4-16	1	1-1/16	.422	.69	.94
3/8	W17709	1-14	1-1/8	1-3/8	.563	1.06	1.31



Bulkhead Coupling (Brass)



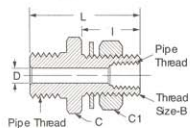
FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/4	1344	3/4-16	1	1-1/16	.422	1.25	1.50
1/4	1345	3/4-16	1	1-1/16	.422	.69	.94
3/8	1346	1-14	1-1/8	1-3/8	.563	1.06	1.31
1/2	1351	1-1/8-14	1-1/4	1-3/8	.703	1.19	1.50



Bulkhead Coupling (Steel)

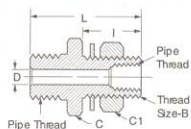
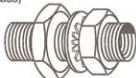


MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	W05498	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	W05499	3/4-16	1-1/4	1-1/16	.312	1.53	2.53



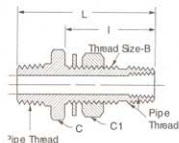
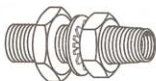
Bulkhead Couplings

**Bulkhead Coupling
(Brass)**



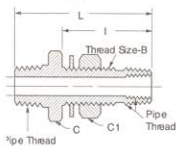
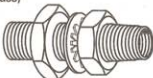
MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	1340	3/4-16	1-1/4	1-1/16	.312	1.13	2.16
1/2	1/4	1341	3/4-16	1-1/4	1-1/16	.312	1.53	2.53

**Bulkhead Coupling
(Steel)**



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

**Bulkhead Coupling
(Brass)**



MALE PIPE THREAD	FEMALE PIPE THREAD	CATALOG NUMBER	THREAD SIZE B	HEX C	HEX C1	D	I	L
1/2	1/4	1342	1-14	1-1/4	1-3/8	.375	1.88	2.94
1/2	1/4	1343	1-14	1-1/4	1-3/8	.375	2.88	3.94

Steel Adapters Introduction

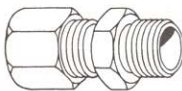
Materials

All Weatherhead Fittings are available in a variety of alloys on special order.

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

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

Finishes



Weathercote™ – is an exclusive 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 – Weatherhead fittings are given an Electrolytic coating .0002" thick minimum.

Stainless Steel – fittings 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 Weatherhead Stainless Steel Fittings 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. ALL Weatherhead fittings and O-rings 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 fittings 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 fittings 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)	Air	Water	Lubricating Oils	Durometer Hardness	Temperature Range °F
_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°
MF7629x*	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 Weatherhead straight thread fittings are supplied with this type O-ring, unless otherwise specified. (Viton O-Rings are available as special order items only).

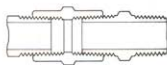
Steel Adapters

Forged Fittings and Adaptors

Pipe Fittings 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	

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



Brazed Fittings (TF)

Pipe Fittings 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)	5000	5000	4000	3000	2500	2000	1150	1000	1000	
Female Pipe (NPTF)	5000	5000	4000	3000	2500	2000	1150	1000	1000	

Seal-Nut For Male Pipe Thread



PIPE THREAD	CATALOG NUMBER
1/8	C3059x2
1/4	C3059x4
3/8	C3059x6
1/2	C3059x8
3/4	C3059x12
1	C3059x16

Hex Socket Pipe Plug



MALE PIPE THREAD	CATALOG NUMBER
1/16	C3169x1
1/8	C3169x2
1/4	C3169x4

Square Head Plug Pipe Thread



MALE PIPE THREAD	CATALOG NUMBER
1/8	C3179x2
1/4	C3179x4
3/8	C3179x6
1/2	C3179x8
3/4	C3179x12
1	C3179x16

Hex Head Pipe Plug



MALE PIPE THREAD	CATALOG NUMBER
1/8	C3159x2
1/4	C3159x4
3/8	C3159x6
1/2	C3159x8
3/4	C3159x12
1	C3159x16
1-1/4	C3159x20
1-1/2	C3159x24
2	C3159x32

*3171x

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 dichromate 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.

Ordering Information: Each fitting is ordered individually by catalog number.

NOTE: See page 377 for hydraulic o-ring assortment.

LABEL SET: FS-2000 (Adhesive)

Steel Adapters

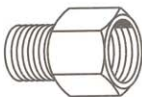
Pipe Bushing
(Ref. SAE No. 140140)



MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	C3109x4x20
3/8	1/8	C3109x6x20
3/8	1/4	C3109x6x40
1/2	1/8	C3109x8x20
1/2	1/4	C3109x8x40
1/2	3/8	C3109x8x60
3/4	1/4	C3109x12x40
3/4	3/8	C3109x12x60
3/4	1/2	C3109x12x80
1	3/8	C3109x16x60
1	1/2	C3109x16x80
1	3/4	C3109x16x120
1-1/4	1/2	C3109x20x80
1-1/4	3/4	C3109x20x120
1-1/4	1	C3109x20x160
1-1/2	3/4	C3109x24x120
1-1/2	1	C3109x24x160
1-1/2	1-1/4	C3109x24x200
2	1-1/4	C3109x32x200
2	1-1/2	C3109x32x240

*3121x

Pipe Adapter
(Ref. SAE No. 140139)



FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	C3209x4x20
3/8	1/4	C3209x6x40
1/2	1/8	C3209x8x20
1/2	1/4	C3209x8x40
1/2	3/8	C3209x8x60
3/4	1/4	C3209x12x40
3/4	1/2	C3209x12x80
1	1/2	C3209x16x80
1	3/4	C3209x16x120
1-1/4	1	C3209x20x160
1-1/2	1-1/4	C3209x24x200
2	1-1/2	C3209x32x240

*3221x

Straight Thread
O-Ring To Female
Pipe Adapter



MALE PORT SIZE	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	C3269x4x20
1/4	1/4	C3269x4x40
5/16	1/8	C3269x5x20
3/8	1/4	C3269x6x40
3/8	3/8	C3269x6x60
3/8	1/2	C3269x6x80
1/2	1/4	C3269x8x40
1/2	3/8	C3269x8x60
1/2	1/2	C3269x8x80
5/8	1/4	C3269x10x40
5/8	3/8	C3269x10x60
5/8	1/2	C3269x10x80
5/8	3/4	C3269x10x120
3/4	1/2	C3269x12x80
3/4	3/4	C3269x12x120
7/8	3/4	C3269x14x120
1	1/2	C3269x16x80
1	3/4	C3269x16x120
1	1	C3269x16x160
1-1/4	1	C3269x20x160
1-1/4	1-1/4	C3269x20x200
1-1/2	1-1/2	C3269x24x240
2	2	C3269x32x320

Female Straight Thread
O-Ring To Male Pipe
Adapter



FEM. PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER
3/8	3/8	C3239x6x60
3/8	1/2	C3239x6x80
1/2	3/8	C3239x8x60
1/2	1/2	C3239x8x80
5/8	1/2	C3239x10x80

Steel Adapters

Pipe Coupling
(Ref. SAE No. 140138)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	C3309x2
1/4	1/8	C3309x4x2
1/4	1/4	C3309x4
3/8	1/4	C3309x6x4
3/8	3/8	C3309x6
1/2	1/4	C3309x8x4
1/2	3/8	C3309x8x6
1/2	1/2	C3309x8
3/4	1/2	C3309x12x8
3/4	3/4	C3309x12
1	3/4	C3309x16x12
1	1	C3309x16
1-1/4	1-1/4	C3309x20
1-1/2	1-1/2	C3309x24
2	2	C3309x32

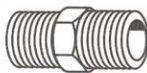
*3321x

Male Straight Thread
O-Ring To Male Pipe
Adapter



MALE PORT SIZE	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	C3249x4x2
3/8	1/4	C3249x6x4
1/2	3/8	C3249x8x6
1/2	1/2	C3249x8x8
5/8	1/2	C3249x10x8
3/4	3/4	C3249x12x12
1	1	C3249x16x16
1-1/4	1-1/4	C3249x20x20
1-1/2	1-1/2	C3249x24x24
2	2	C3249x32x32

Hex Pipe Nipple
(Ref. SAE No. 140137)



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER
1/16	1/16	C3069x1
1/8	1/16	C3069x2x1
1/8	1/8	C3069x2
1/4	1/8	C3069x4x2
1/4	1/4	C3069x4
3/8	1/8	C3069x6x2
3/8	1/4	C3069x6x4
3/8	3/8	C3069x6
1/2	1/4	C3069x8x4
1/2	3/8	C3069x8x6
1/2	1/2	C3069x8
3/4	1/2	C3069x12x8
3/4	3/4	C3069x12
1	3/4	C3069x16x12
1	1	C3069x16
1-1/4	1-1/4	C3069x20
1-1/2	1-1/2	C3069x24
2	2	C3069x32

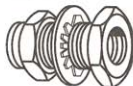
*3081x

45° Pipe Elbow
(Ref. SAE
No. 140338)



FEMALE PIPE THREAD	CATALOG NUMBER
3/8	C3559x6
1/2	C3559x8
3/4	C3559x12
1	C3559x16
1/4	TF3559x4

Bulkhead
Coupling



FEMALE PIPE THREAD	CATALOG NUMBER
1/4	W05465
1/4	W21204
3/8	W17709

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

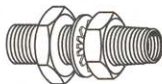
Steel Adapters

Bulkhead
Coupling



MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/2	1/4	W05498
1/2	1/4	W05499

Bulkhead
Coupling



MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/2	1/4	W05730
1/2	1/4	W23464

See page 164 for dimensions.

Pipe Thread 45°
Street Elbow
(Ref. SAE No. 140339)



FEM. PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	C3359x2 ¹
1/4	1/4	C3359x4 ¹
3/8	3/8	C3359x6 ¹
1/2	1/2	C3359x8 ¹
3/4	3/4	C3359x12 ¹
1	1	C3359x16 ¹
1-1/4	1-1/4	C3359x20 ¹
1-1/2	1-1/2	C3359x24 ¹
2	2	C3359x32 ¹
1/8	1/8	TF3359x2
1/4	1/4	TF3359x4
3/8	3/8	TF3359x6
1/2	1/2	TF3359x8
3/4	3/4	TF3359x12
1	1	TF3359x16
1-1/4	1-1/4	TF3359x20
1-1/2	1-1/2	TF3359x24
2	2	TF3359x32

¹Special order only.

*3371x

90° Pipe Elbow
(Ref. SAE No. 140238)



FEM. PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	C3509x2 ¹
1/4	1/4	C3509x4 ¹
3/8	3/8	C3509x6 ¹
1/2	1/2	C3509x8 ¹
3/4	3/4	C3509x12 ¹
1	1	C3509x16
1-1/4	1-1/4	C3509x20
2	2	C3509x32
1/8	1/8	TF3509x2
1/4	1/8	TF3509x4x2
1/4	1/4	TF3509x4
3/8	1/4	TF3509x6x4
3/8	3/8	TF3509x6
1/2	3/8	TF3509x8x6
1/2	1/2	TF3509x8
3/4	1/2	TF3509x12x8
3/4	3/4	TF3509x12
1	1	TF3509x16
1-1/4	1-1/4	TF3509x20
1-1/2	1-1/2	TF3509x24

*3521x

Steel Adapters

Pipe Thread 90° Street Elbow

(Ref. SAE
No. 140239)



MALE PIPE THREAD	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	C3409x2 ¹
1/4	1/4	C3409x4 ¹
3/8	3/8	C3409x6 ¹
1/2	1/2	C3409x8 ¹
3/4	3/4	C3409x12 ¹
1	1	C3409x16 ¹
1-1/4	1-1/4	C3409x20
1-1/2	1-1/2	C3409x24 ¹
2	2	C3409x32
1/8	1/8	TF3409x2
1/4	1/8	TF3409x2x4
1/8	1/4	TF3409x4x2
1/4	1/4	TF3409x4
3/8	1/4	TF3409x4x6
1/4	3/8	TF3409x6x4
3/8	3/8	TF3409x6
1/2	3/8	TF3409x6x8
3/8	1/2	TF3409x8x6
1/2	1/2	TF3409x8
3/4	1/2	TF3409x8x12
1/2	3/4	TF3409x12x8
3/4	3/4	TF3409x12
1	1	TF3409x16
1-1/4	1-1/4	TF3409x20
1-1/2	1-1/2	TF3409x24

¹Special order only.

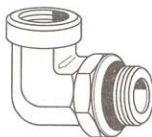
*3421x

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



FEM. PIPE THREAD	MALE PORT SIZE	CATALOG NUMBER
3/8	1/2	C3469x8
1/2	5/8	C3469x10
3/4	3/4	C3469x12
1	1	C3469x16

90° Straight Thread O-Ring Male Elbow



MALE PORT SIZE	FEM. PIPE THREAD	CATALOG NUMBER
1/2	3/8	C3459x8
5/8	1/2	C3459x10
3/4	3/4	C3459x12
1	1	C3459x16
1/4	1/8	TF3459x4
5/16	1/8	TF3459x5
3/8	1/4	TF3459x6
1/2	3/8	TF3459x8
5/8	1/2	TF3459x10
3/4	3/4	TF3459x12
7/8	3/4	TF3459x14
1	1	TF3459x16
1-1/4	1-1/4	TF3459x20
1-1/2	1-1/2	TF3459x24
2	2	TF3459x32

90° Male Pipe Elbow



MALE PIPE THREAD	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	C3529x2 ¹
1/4	1/4	C3529x4 ¹
3/8	3/8	C3529x6 ¹
1/2	1/2	C3529x8
3/4	3/4	C3529x12
1	1	C3529x16 ¹
1/8	1/8	TF3529x2
1/4	1/4	TF3529x4
3/8	1/4	TF3529x6x4
3/8	3/8	TF3529x6
1/2	3/8	TF3529x8x6
1/2	1/2	TF3529x8
3/4	1/2	TF3529x12x8
3/4	3/4	TF3529x12
1	3/4	TF3529x16x12
1	1	TF3529x16
1-1/4	1-1/4	TF3529x20
1-1/2	1-1/2	TF3529x24

*3541x

¹Special order only.

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

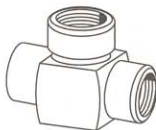
Steel Adapters

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



MALE PORT THREAD SIZE	MALE PIPE SIZE	CATALOG NUMBER
1/4	1/8	TF3569x4
5/16	1/8	TF3569x5
3/8	1/4	TF3569x6
1/2	3/8	TF3569x8
5/8	1/2	TF3569x10
3/4	3/4	TF3569x12
7/8	3/4	TF3569x14
1	1	TF3569x16
1-1/4	1-1/4	TF3569x20
1-1/2	1-1/2	TF3569x24
2	2	TF3569x32

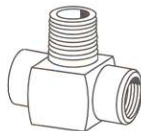
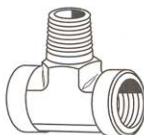
Pipe Tee
(Ref. SAE No. 140438)



FEM. PIPE THREAD	CATALOG NUMBER
1/8	C3709x2□
1/4	C3709x4□
3/8	C3709x6□
1/2	C3709x8□
3/4	C3709x12□
1	C3709x16□
1-1/4	C3709x20
1/8	TF3709x2
1/4	TF3709x4
3/8	TF3709x6
1/2	TF3709x8
3/4	TF3709x12
1	TF3709x16
1-1/4	TF3709x20
1-1/2	TF3709x24
2	TF3709x32

*3721x

Pipe Thread Male
Branch Tee
(Ref. SAE No. 140425)



MALE PIPE THD.	FEMALE PIPE THD.	CATALOG NUMBER
1/8	1/8	C3609x2
1/4	1/4	C3609x4
3/8	3/8	C3609x6 ¹
1/2	1/2	C3609x8 ¹
3/4	3/4	C3609x12 ¹
1	1	C3609x16
1/8	1/8	TF3609x2
1/4	1/4	TF3609x4
3/8	3/8	TF3609x6
1/2	1/2	TF3609x8
3/4	3/4	TF3609x12
1	1	TF3609x16
1-1/4	1-1/4	TF3609x20
1-1/2	1-1/2	TF3609x24

¹Special order only.
*3621x

Pipe Thread Male
Run Tee
(Ref. SAE No. 140424)



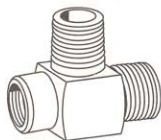
MALE PIPE THD.	FEMALE PIPE THD.	CATALOG NUMBER
1/8	1/8	C3759x2□
1/4	1/4	C3759x4□
3/8	3/8	C3759x6□
1/2	1/2	C3759x8□
3/4	3/4	C3759x12
1	1	C3759x16
1/8	1/8	TF3759x2
1/4	1/4	TF3759x4
3/8	3/8	TF3759x6
1/2	1/2	TF3759x8
3/4	3/4	TF3759x12
1	1	TF3759x16
1-1/4	1-1/4	TF3759x20
1-1/2	1-1/2	TF3759x24
2	2	TF3759x32

*3771x

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

Steel Adapters

Pipe Thread Female Run Tee



FEMALE PIPE THD.	MALE PIPE THD.	CATALOG NUMBER
1/8	1/8	TF3805x2
1/4	1/4	TF3805x4
3/8	3/8	TF3805x6
1/2	1/2	TF3805x8
3/4	3/4	TF3805x12
1	1	TF3805x16
1-1/4	1-1/4	TF3805x20
1-1/2	1-1/2	TF3805x24

Pipe Cross



FEMALE PIPE THREAD	CATALOG NUMBER
1/8	C3959x2 ¹
1/4	C3959x4 ¹
3/8	C3959x6
1/2	C3959x8
3/4	C3959x12
1	C3959x16 ¹
1/8	TF3959x2
1/4	TF3959x4
3/8	TF3959x6
1/2	TF3959x8
3/4	TF3959x12
1	TF3959x16
1-1/4	TF3959x20
1-1/2	TF3959x24
2	TF3959x32

¹Special order only.

Straight Thread O-Ring



Material: Buna-N, 90

Durometer

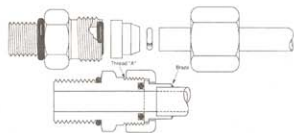
Temperature Range: -40°F to +250°F -40°C to +121°C

Standard O-ring complies with SAE specification SAE J515 Type CH. (see page 247 for O-ring compound and application chart)

PORT SIZE	CATALOG NUMBER
1/16	7629x1
1/8	7629x2
3/16	7629x3
1/4	7629x4
5/16	7629x5
3/8	7629x6
7/16	7629x7
1/2	7629x8
5/8	7629x10
3/4	7629x12
7/8	7629x14
1	7629x16
1-1/4	7629x20
1-1/2	7629x24
2	7629x32

FOR-SEAL[®]

Introduction



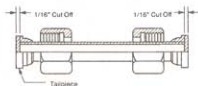
Tube O.D.	1/4	3/8	1/2	5/8	3/4
Thread	9/16-18	11/16-16	13/16-16	1-14	1 3/16-12

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.



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: 12L14 steel

Plating: All fittings 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 Weatherhead[®] meets SAE J1453.

Ordering Information: Use catalog number.

Label Set: FS-2400

NOTE: See page 377 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.

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 braise ring into counterbore of tailpiece. The correct size brazing 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 braise 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 braise joint.
6. The braise 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	125	150
Torque Ft-Lb O-Ring Boss Straight Thread O-Ring Locknut Torque	14-16	24-26	50-60	72-80	125	200	210	270
					135	220	280	360

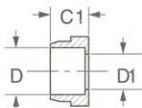
Thread Chart

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 Fittings PSI	6000	6000	6000	6000	6000	5000	4000	3000

FOR-SEAL®

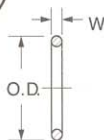
Tailpiece Silver Braze
(Ref. SAE No. 520115)



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

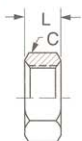
Oil Dipped

FOR-SEAL® Cadmium Free Braze Ring



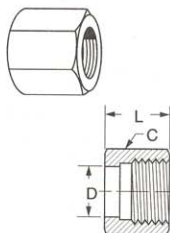
TUBE O.D.	CATALOG NUMBER	WIRE DIA.	O.D.
1/4	4640x4	.046	.250
3/8	4640x6	.046	.375
1/2	4640x8	.046	.500
5/8	4640x10	.046	.625
3/4	4640x12	.062	.750
1	4640x16	.062	1.000
1-1/4	4640x20	.062	1.250
1-1/2	4640x24	.062	1.500

Bulkhead Nut
(Ref. SAE No. 520118)



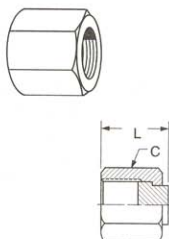
TUBE O.D. A	CATALOG NUMBER	HEX C	L
1/4	4924x4	13/16	.27
3/8	4924x6	1	.31
1/2	4924x8	1-1/8	.35
5/8	4924x10	1-5/16	.41
3/4	4924x12	1-1/2	.41
1	4924x16	1-3/4	.41
1-1/4	4924x20	2	.41
1-1/2	4924x24	2-3/8	.41

Nut
(Ref. SAE No. 520110)



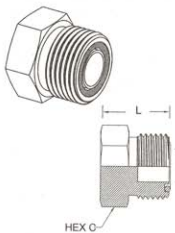
TUBE O.D.	CATALOG NUMBER	HEX C	D	L
1/4	4105x4	11/16	.412	.58
3/8	4105x6	13/16	.531	.67
1/2	4105x8	15/16	.652	.83
5/8	4105x10	1-1/8	.829	.93
3/4	4105x12	1-3/8	.950	1.02
1	4105x16	1-5/8	1.144	1.10
1-1/4	4105x20	1-7/8	1.415	1.10
1-1/2	4105x24	2-1/4	1.727	1.10

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

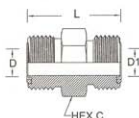
Plug
(Ref. SAE No. 520109)



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

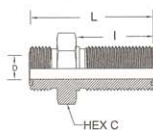
FOR-SEAL o-ring included.

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	.812	.812	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)

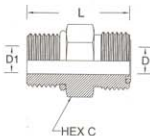


TUBE O.D.	CATALOG NUMBER	HEX C	D	I	L
3/8	4325x6	1	.264	1.34	2.09
1/2	4325x8	1-1/8	.378	1.44	2.30
3/4	4325x12	1-1/2	.609	1.64	2.72
1	4325x16	1-3/4	.812	1.66	2.76
1-1/4	4325x20	2	1.024	1.66	2.76
1-1/2	4325x24	2-3/8	1.260	1.66	2.76

For bulkhead nut, see page 257.

Straight Thread O-Ring Connector

(Ref. SAE No. 520120)

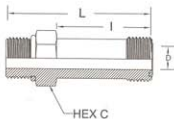
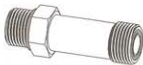


MALETUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	D1	L
1/4	1/4	4315x4	5/8	.172	.172	1.133
1/4	3/8	4315x4x6	11/16	.172	.172	1.202
3/8	1/4	4315x6x4	3/4	.264	.172	1.343
3/8	3/8	4315x6	3/4	.264	.264	1.252
3/8	1/2	4315x6x8	7/8	.378	.264	1.378
3/8	5/8	4315x6x10	1-1/16	.264	.484	1.530
1/2	3/8	4315x8x6	7/8	.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

For replacement Straight Thread O-ring, see page 254.

Straight Thread O-Ring Extended

(Ref. SAE No. 520122)

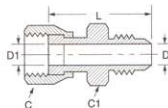
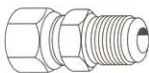


MALETUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	HEX C	D	I	L
3/8	3/8	4316x6	3/4	.264	1.46	2.27
1/2	1/2	4316x8	7/8	.378	1.75	2.67
3/4	3/4	4316x12	1-1/4	.609	2.52	3.76
1	1	4316x16	1-1/2	.811	2.87	4.14
1-1/4	1-1/4	4316x20	1-7/8	1.024	3.41	4.76
1-1/2	1-1/2	4316x24	2-1/8	1.260	3.82	5.26

For replacement Straight Thread O-ring, see page 254.

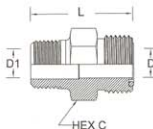
FOR-SEAL®

Male 37° to Female FOR-SEAL®



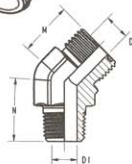
FEMALE TUBE O.D.	MALE TUBE SIZE	CATALOG NUMBER	HEX C	HEX C1	D	L
1/4	1/4	4213x4	11/16	5/8	.172	1.50
3/8	3/8	4213x6	13/16	3/4	.297	1.62
1/2	1/2	4213x8	15/16	7/8	.392	1.90
5/8	5/8	4213x10	1-1/8	1-1/16	.484	2.25
3/4	3/4	4213x12	1-3/8	1-1/4	.609	2.48
1	1	4213x16	1-5/8	1-1/2	.811	2.84

Male FOR-SEAL® Male Pipe Adapter



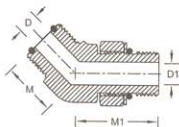
TUBE O.D.	MALE PIPE SIZE	CATALOG NUMBER	HEX C	D	D1	L
3/8	3/8	4205x6x6	3/4	.264	.406	1.30
1/2	3/8	4205x8	7/8	.378	.406	1.45
1/2	1/2	4205x8x8	7/8	.378	.484	1.64
5/8	1/2	4205x10	1-1/16	.484	.531	1.82
3/4	1/2	4205x12x8	1-1/4	.406	.484	1.87
3/4	3/4	4205x12	1-1/4	.609	.719	1.94
3/4	1	4205x12x16	1-3/8	.609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

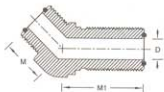
Straight Thread O-Ring Connector 45° Elbow (Ref. SAE No. 520320)



MALETUBE 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	.811	.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 254.

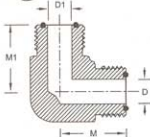
45° Bulkhead Elbow (Ref. SAE No. 520201)



MALETUBE 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

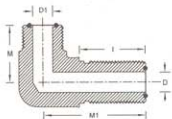
For Bulkhead Nut, see page 257.

Union 90° Elbow
(Ref. SAE No. 520201)



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
2	4505x32	-	-	-

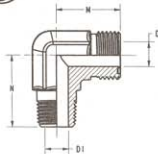
Bulkhead Union 90° Elbow
(Ref. SAE No. 520701)



MALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	I	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	1.36	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 257.

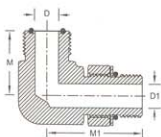
90° Male Elbow



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

Straight Thread O-Ring 90° Elbow

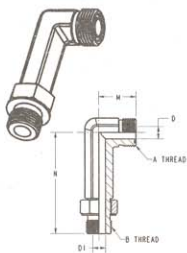
(Ref. SAE No. 520220)



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	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

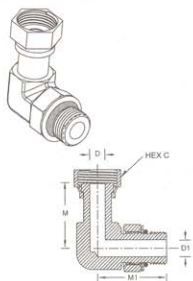
For replacement straight thread O-ring, see page 176.

90° Elbow Straight Thread Swivel - Long



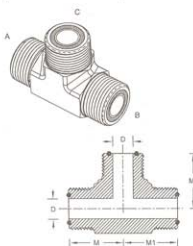
MALE TUBE O.D.	MALE PORT SIZE	CATALOG NUMBER	D	D1	M	N	ACROSS FLATS
1/4	1/4	4515x4L	.172	.180	.85	2.23	9/16
3/8	3/8	4515x6L	.264	.300	.98	2.61	3/4
1/2	1/2	4515x8L	.378	.398	1.10	2.95	3/4
5/8	5/8	4515x10L	.484	.498	1.31	3.51	1-1/16
3/4	3/4	4515x12L	.609	.616	1.47	3.97	1-3/16
1	1	4515x16L	.812	.852	1.64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

90° Straight Thread Swivel (Ref. SAE No. 520281)



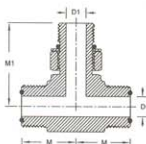
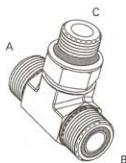
FEMALE TUBE O.D.	PORT SIZE	CATALOG NUMBER	D	D1	M	M1	HEX C	ACROSS FLATS
1/4	1/4	4535x4	.165	.180	1.04	1.29	11/16	9/16
3/8	3/8	4535x6	.264	.300	1.15	1.45	13/16	3/4
1/2	1/2	4535x8	.258	.398	1.49	1.60	15/16	7/8
5/8	5/8	4535x10	.453	.498	1.62	1.97	1-1/8	1-1/16
3/4	3/4	4535x12	.547	.616	1.82	2.17	1-3/8	1-3/8
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	4705x6x8x8	.264	.378	1.04	1.04	1.10	3/4
1/2	3/8	1/2	4705x8x8x8	.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
1-1/2	1-1/2	1-1/2	4705x24	1.260	1.260	1.92	1.92	1.92	1-7/8

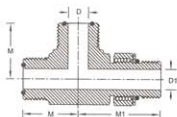
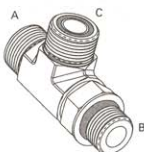
Straight Thread Branch Tee (Ref. SAE No. 520429)



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
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 254.

Straight Thread Run Tee (Ref. SAE No. 520428)

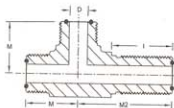


MALE TUBE O.D. A	MALE TUBE O.D. B	MALE TUBE O.D. C	CATALOG NUMBER	D	D1	M	M1	ACROSS FLATS
1/4	1/4	1/4	4716x4	.172	.172	.85	1.29	9/16
1/4	1/4	3/8	4716x4x6	.172	.264	1.39	1.45	3/4
3/8	3/8	3/8	4716x6	.264	.264	.98	1.45	3/4
1/2	1/2	1/2	4716x8	.378	.391	1.10	1.60	7/8
5/8	5/8	5/8	4716x10	.484	.484	1.31	1.97	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 254.

FOR-SEAL®

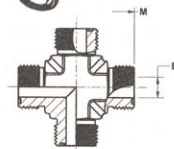
Bulkhead Run Tee (Ref. SAE No. 520958)



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

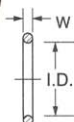
For Bulkhead Nut, see page 257.

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®



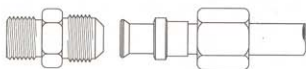
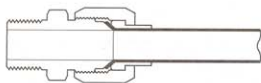
Material: Buna N, 90 Durometer

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
Thread	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14

Tube O.D.	3/4	7/8	1	1-1/4	1-1/2	2
Thread	1-1/16-12	1-3/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/2-12

Typical Application: Hydraulic, instrumentation and chemical processing systems.

Pressure: See chart.

Sealing Method: 37° flare; 2- or 3-piece assembly.

Vibration Rating: Good resistance.

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

Plating: Zinc; yellow dichromate finish.

Used With: Copper, brass, steel, aluminum, and other tubing that can be flared.

Advantages: Zinc plate. Choice of 2- or 3-piece design. Broad selection of styles and sizes. Interchangeable with all sources.

Identifying Characteristics: 2-piece flare has long nut. 3-piece flare has a short nut with the sleeve protruding. Material is generally steel or stainless steel.

Conformance: Meets ASA, ASME, SAE.

Ordering Information: To order a 3-piece assembly – Prefix the catalog number with a "3." Example: To order a male connector C5205x4 with nut and sleeve assembled, order C35205x4. Order bodies, nuts, and sleeves separately by catalog number.

Label Set: FS-200

NOTE: See page 377 for hydraulic o-ring assortment.

Forged Fittings and Adaptors

5000 Series Pressure Rating Chart

CONNECTIONTYPE	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 Fittings (TF)/SAE

5000 Series Pressure Rating Chart

CONNECTIONTYPE	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	4500	4000	4000	4000	3000	3000	2500	2500	2000	1500	1125
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

JIC 37° Flare-Twin®

Sleeve 3-Piece
(Ref. SAE No. 070115)



TUBE O.D.	CATALOG NUMBER
1/8	C5165x2
3/16	C5165x3
1/4	C5165x4
5/16	C5165x5
3/8	C5165x6
1/2	C5165x8
5/8	C5165x10
3/4	C5165x12
7/8	C5165x14
1	C5165x16
1-1/4	C5165x20
1-1/2	C5165x24
2	C5165x32

*5177x

Sleeve 3-Piece Metric
(Ref. SAE No. 070115)



TUBE O.D.(IN)	TUBE O.D.(MM)	CATALOG NUMBER
1/4	6MM	C5165x4x6MM
5/16	8MM	C5165x5x8MM
3/8	10MM	C5165x6x10MM
1/2	12MM	C5165x8x12MM
5/8	14MM	C5165x10x14MM
5/8	15MM	C5165x10x15MM
5/8	16MM	C5165x10x16MM
3/4	18MM	C5165x12x18MM
7/8	20MM	C5165x14x20MM
7/8	22mm	C5165x14x22MM
1	25MM	C5165x16x25MM
1-1/4	30MM	C5165x20x30MM
1-1/4	32MM	C5165x20x32MM
1-1/2	38MM	C5165x24x38MM

Adapts standard SAE Flare-Twin®
Fittings for use with Metric Tubing.

3-Piece Nut
(Short)



TUBE O.D.	CATALOG NUMBER
1/4	C5125x4
5/16	C5125x5
3/8	C5125x6
1/2	C5125x8
5/8	C5125x10
3/4	C5125x12

Stainless steel catalog number.
Available in Stainless Steel.

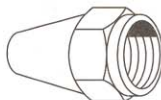
Nut 3-Piece
(Ref. SAE No. 070110)



TUBE O.D.	CATALOG NUMBER
1/8	C5105x2
3/16	C5105x3
1/4	C5105x4
5/16	C5105x5
3/8	C5105x6
1/2	C5105x8
5/8	C5105x10
3/4	C5105x12
7/8	C5105x14
1	C5105x16
1-1/4	C5105x20
1-1/2	C5105x24
2	C5105x32

*5117x

2-Piece Nut
(Ref. SAE No. 070111)



TUBE O.D.	CATALOG NUMBER
1/4	C5115x4
5/16	C5115x5
3/8	C5115x6
1/2	C5115x8
5/8	C5115x10
3/4	C5115x12
7/8	C5115x14
1	C5115x16
1-1/4	C5115x20
1-1/2	C5115x24

JIC 37° Flare-Twin®

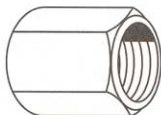
Bulkhead Nut
(Ref. SAE No. 070118)



TUBE O.D.	CATALOG NUMBER
1/8	C5924x2
3/16	C5924x3
1/4	C5924x4
5/16	C5924x5
3/8	C5924x6
1/2	C5924x8
5/8	C5924x10
3/4	C5924x12
7/8	C5924x14
1	C5924x16
1-1/4	C5924x20
1-1/2	C5924x24
2	C5924x32

*7936x

Cap
(Ref. SAE No. 070112)



TUBE O.D.	CATALOG NUMBER
1/8	C5129x2
3/16	C5129x3
1/4	C5129x4
5/16	C5129x5
3/8	C5129x6
1/2	C5129x8
5/8	C5129x10
3/4	C5129x12
1	C5129x16
1-1/4	C5129x20
1-1/2	C5129x24
2	C5129x32

*5141x

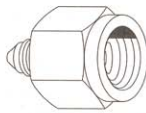
Seal-Nut For Male Pipe Thread



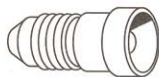
PIPE THREAD	CATALOG NUMBER
1/8	C3059x2
1/4	C3059x4
3/8	C3059x6
1/2	C3059x8
3/4	C3059x12
1	C3059x16

*Stainless steel catalog number.
□ Available in Stainless Steel.

Reducer
(Ref. SAE No. 070123)
Assembly No. C35015x, etc.



(# one-piece design)



(two-piece design)

TUBE A REDUCE	TUBE B REDUCE	CATALOG NUMBER
3/8	1/4	C5015x6x4
1/2	1/4	C5015x8x4
1/2	3/8	C5015x8x6
5/8	1/4	C5015x10x4
5/8	3/8	C5015x10x6
5/8	1/2	C5015x10x8
3/4	1/4	C5015x12x4
3/4	3/8	C5015x12x6
3/4	1/2	C5015x12x8
3/4	5/8	C5015x12x10
7/8	3/8	C5015x14x6
7/8	1/2	C5015x14x8
7/8	5/8	C5015x14x10
7/8	3/4	C5015x14x12
1	1/2	C5015x16x8
1	5/8	C5015x16x10
1	3/4	C5015x16x12
1	7/8	C5015x16x14
1-1/4	3/4	C5015x20x12
1-1/4	1	C5015x20x16
1-1/2	1-1/4	C5015x24x20
2	1-1/2	C5015x32x24

Note: Order 3-piece nut C5105X to use reducer. No sleeve necessary. *5027x

Male Straight Thread O-Ring Hex Socket Plug
(Ref. SAE No. 090109B)



PORT SIZE	CATALOG NUMBER
1/8	7238x2
3/16	7238x3
1/4	7238x4
5/16	7238x5
3/8	7238x6
1/2	7238x8
5/8	7238x10
3/4	7238x12
7/8	7238x14
1	7238x16
1-1/4	7238x20

NOTE: Parts furnished with zinc plate.

JIC 37° Flare-Twin®

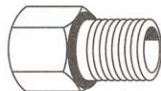
Male Straight Thread
O-Ring Hex Head Plug
(Ref. SAE No. 090109A)



PORT SIZE	CATALOG NUMBER
1/8	7237x2#
3/16	7237x3#
1/4	7237x4#
5/16	7237x5#
3/8	7237x6#
1/2	7237x8#
5/8	7237x10#
3/4	7237x12#
7/8	7237x14#
1	7237x16
1-1/4	7237x20
1-1/2	7237x24
2	7237x32

NOTE: Parts furnished with zinc plate.
#Not counterbored.

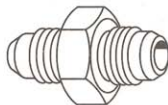
Male Straight Thread/
Female Straight Thread
O-Ring Boss



MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER
1/2	3/8	7033x8x6
5/8	1/2	7033x10x8
3/4	1/2	7033x12x8
7/8	3/4	7033x14x12
1	1/2	7033x16x8
1	3/4	7033x16x12
1-1/4	3/4	7033x20x12
1-1/2	1-1/4	7033x24x20
2	1-1/2	7033x32x24

NOTE: Parts furnished with zinc plate.

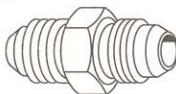
Large Hex Union
(Ref. SAE No. 070119)
Assembly Number C35306x4, etc.



TUBE O.D.	CATALOG NUMBER
1/4	C5306x4
5/16	C5306x5
3/8	C5306x6
1/2	C5306x8
5/8	C5306x10
3/4	C5306x12
1	C5306x16
1-1/4	C5306x20
1-1/2	C5306x24

*5318x = 5318x6x4, 5318x8x6

Small Hex Union
(Ref. SAE No. 070101)
Assembly Number
C35305x4, etc.



TUBE O.D.	TUBE O.D.	CATALOG NUMBER
1/8	1/8	C5305x2
3/16	3/16	C5305x3
1/4	1/4	C5305x4
5/16	1/4	C5305x5x4
5/16	5/16	C5305x5
3/8	1/4	C5305x6x4
3/8	5/16	C5305x6x5
3/8	3/8	C5305x6
1/2	3/8	C5305x8x6
1/2	1/2	C5305x8
5/8	1/2	C5305x10x8
5/8	5/8	C5305x10
3/4	1/2	C5305x12x8
3/4	5/8	C5305x12x10
3/4	3/4	C5305x12
7/8	7/8	C5305x14
1	3/4	C5305x16x12
1	1	C5305x16
1-1/4	1-1/4	C5305x20
1-1/2	1-1/2	C5305x24
2	2	C5305x32

*5317x

Male Straight Thread
O-Ring Union



PORT SIZE	CATALOG NUMBER
1/4	C5314x4x4
3/8	C5314x6x6
1/2	C5314x8x8
5/8	C5314x10x10
3/4	C5314x12x12
1	C5314x16x16
1-1/4	C5314x20x20
1-1/2	C5314x24x24
2	C5314x32x32

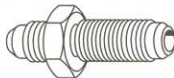
*Stainless steel catalog number.

□ Available in Stainless Steel.

• Available in Stainless Steel Only.

JIC 37° Flare-Twin®

Bulkhead Union
(Ref. SAE No. 070601)
Assembly Number
C35325x4, etc.



TUBE O.D.	CATALOG NUMBER
3/16	C5325x3
1/4	C5325x4
5/16	C5325x5
3/8	C5325x6
1/2	C5325x8
5/8	C5325x10
3/4	C5325x12
3/4	C5325x12BN
1	C5325x16
1-1/4	C5325x20

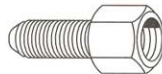
*5337x
For bulkhead nut see page 270.
Included with assembly.

Adapter



TUBE O.D.	INVERTED THREAD	CATALOG NUMBER
1/4	7/16-24	C5880x4
5/16	1/2-20	C5880x5
3/8	5/8-18	C5880x6
1/2	3/4-18	C5880x8

Female Bulkhead Connector
Assembly Number
C35725x4, etc.



TUBE O.D.	FEMALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	C5275x4
3/8	1/4	C5275x6
1/2	3/8	C5275x8
5/8	1/2	C5275x10
3/4	3/4	C5275x12
1	1	C5275x16

For bulkhead nut see page 270.
Included with assembly.

Male Connector
(Ref. SAE No. 070102)
Assembly Number
C35205x4, etc.



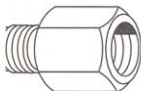
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	C5205x2
3/16	1/8	C5205x3
1/4	1/8	C5205x4
1/4	1/4	C5205x4x4
1/4	3/8	C5205x4x6
1/4	1/2	C5205x4x8
5/16	1/8	C5205x5
5/16	1/4	C5205x5x4
5/16	3/8	C5205x5x6
3/8	1/8	C5205x6x2
3/8	1/4	C5205x6
3/8	3/8	C5205x6x6
3/8	1/2	C5205x6x8
1/2	1/4	C5205x8x4
1/2	3/8	C5205x8
1/2	1/2	C5205x8x8
1/2	3/4	C5205x8x12
5/8	3/8	C5205x10x6
5/8	1/2	C5205x10
5/8	3/4	C5205x10x12
3/4	1/2	C5205x12x8
3/4	3/4	C5205x12
3/4	1	C5205x12x16
7/8	3/4	C5205x14
1	3/4	C5205x16x12
1	1	C5205x16
1	1-1/4	C5205x16x20
1-1/4	1	C5205x20x16
1-1/4	1-1/4	C5205x20
1-1/2	1-1/4	C5205x24x20
1-1/2	1-1/2	C5205x24
2	2	C5205x32

*5217x

*Stainless steel catalog number. □ Standard part is bagged and includes nut.
□ Available in Stainless Steel.

JIC 37° Flare-Twin®

Female Connector
(Ref. SAE No. 070103)
Assembly Number
C35255x4, etc.



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/8	1/8	C5255x2
3/16	1/8	C5255x3
1/4	1/8	C5255x4
1/4	1/4	C5255x4x4
5/16	1/8	C5255x5
5/16	1/4	C5255x5x4
3/8	1/4	C5255x6
3/8	3/8	C5255x6x6
1/2	3/8	C5255x8
1/2	1/2	C5255x8x8
5/8	3/8	C5255x10x6
5/8	1/2	C5255x10
3/4	1/2	C5255x12x8
3/4	3/4	C5255x12
7/8	3/4	C5255x14
1	1	C5255x16
1-1/4	1-1/4	C5255x20
1-1/2	1-1/2	C5255x24
2	2	C5255x32

*5267x

Straight Thread
O-Ring Extended
Connector
(Ref. SAE No. 070122)
Assembly Number
C35316x4, etc.



TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	C5316x4
3/8	3/8	C5316x6
1/2	1/2	C5316x8
1/2	3/8	C5316x8x6
5/8	5/8	C5316x10
3/4	3/4	C5316x12
1	1	C5316x16
1-1/4	1-1/4	C5316x20

Straight Thread
O-Ring Connector
(Ref. SAE No. 070120)
Assembly Number
C35315x4, etc.



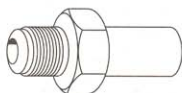
*5327x

TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/8	1/8	C5315x2
3/16	3/16	C5315x3
1/4	1/4	C5315x4
1/4	5/16	C5315x4x5
1/4	3/8	C5315x4x6
1/4	1/2	C5315x4x8
5/16	1/4	C5315x5x4
5/16	5/16	C5315x5
5/16	3/8	C5315x5x6
3/8	1/4	C5315x6x4
3/8	5/16	C5315x6x5
3/8	3/8	C5315x6
3/8	1/2	C5315x6x8
3/8	5/8	C5315x6x10
1/2	3/8	C5315x8x6
1/2	1/2	C5315x8
1/2	5/8	C5315x8x10
1/2	3/4	C5315x8x12
5/8	1/2	C5315x10x8
5/8	5/8	C5315x10
5/8	3/4	C5315x10x12
5/8	1	C5315x10x16
3/4	1/2	C5315x12x8
3/4	5/8	C5315x12x10
3/4	3/4	C5315x12
3/4	7/8	C5315x12x14
3/4	1	C5315x12x16
3/4	1-1/4	C5315x12x20
7/8	7/8	C5315x14
1	5/8	C5315x16x10
1	3/4	C5315x16x12
1	1	C5315x16
1	1-1/4	C5315x16x20
1-1/4	1	C5315x20x16
1-1/4	1-1/4	C5315x20
1-1/4	1-1/2	C5315x20x24
1-1/2	1-1/4	C5315x24x20
1-1/2	1-1/2	C5315x24
1-1/2	2	C5315x24x32
2	1-1/2	C5315x32x24
2	2	C5315x32

Stainless steel catalog number.
Available in Stainless Steel.

JIC 37° Flare-Twin®

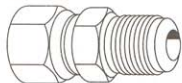
Male 37° JIC to Male
Metric Standpipe



TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER
1/4	6MM	MC5019x4x6
1/4	8MM	MC5019x4x8
3/8	10MM	MC5019x6x10
1/2	12MM	MC5019x8x12
1/2	14MM	MC5019x8x14
5/8	15MM	MC5019x10x15
5/8	16MM	MC5019x10x16
3/4	16MM	MC5019x12x16
3/4	18MM	MC5019x12x18
3/4	20MM	MC5019x12x20
1	22MM	MC5019x16x22
1	25MM	MC5019x16x25

(See page 285 for sleeves and nuts.)

Male 37° JIC to Female
FOR-SEAL®



TUBE O.D.	TUBE O.D.	CATALOG NUMBER
1/4	1/4	4213x4
3/8	3/8	4213x6
1/2	1/2	4213x8
5/8	5/8	4213x10
3/4	3/4	4213x12
1	1	4213x16

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



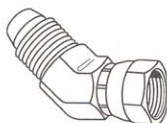
TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	C5216x4x4
1/4	3/8	C5216x4x6
3/8	3/8	C5216x6x6
3/8	1/2	C5216x6x8
1/2	3/8	C5216x8x6
1/2	1/2	C5216x8x8
5/8	5/8	C5216x10x10
3/4	3/4	C5216x12x12
1	1	C5216x16x16
1-1/4	1-1/4	C5216x20x20
1-1/2	1-1/2	C5216x24x24
2	2	C5216x32x32

Female 37° JIC
Swivel to Female
Pipe



TUBE O.D.	PIPE SIZE	CATALOG NUMBER
1/4	1/4	C5256x4x4
3/8	3/8	C5256x6x6
1/2	1/2	C5256x8x8
3/4	3/4	C5256x12
1	1	C5256x16

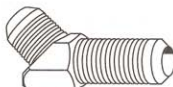
Swivel Nut 45° Elbow
(Ref. SAE No. 070321)
Assembly Number C35356x4,
etc.



TUBE O.D.	CATALOG NUMBER
1/4	C5356x4
5/16	C5356x5
3/8	C5356x6□
1/2	C5356x8□
5/8	C5356x10
3/4	C5356x12
7/8	C5356x14
1	C5356x16
1-1/4	C5356x20†
1-1/2	C5356x24
1/4	TF5356x4
5/16	TF5356x5
3/8	TF5356x6
1/2	TF5356x8
5/8	TF5356x10
3/4	TF5356x12
1	TF5356x16
1-1/4	TF5356x20
1-1/2	TF5356x24
2	TF5356x32

*5368x
†Special order only.

45° Bulkhead
Union Elbow



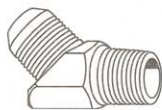
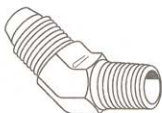
TUBE O.D.	CATALOG NUMBER
1/4	TF5375x4
5/16	TF5375x5
3/8	TF5375x6
1/2	TF5375x8
5/8	TF5375x10
3/4	TF5375x12
1	TF5375x16

For bulkhead nut see page 257.
Included with assembly.

*Stainless steel catalog number.
□ Available in Stainless Steel.

JIC 37° Flare-Twin®

45° Male Elbow
(Ref. SAE No. 070302)
Assembly Number
C35355x4, etc.



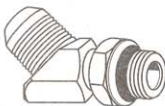
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	C5355x2
3/16	1/8	C5355x3
1/4	1/8	C5355x4□
1/4	1/4	C5355x4x4□
5/16	1/8	C5355x5
5/16	1/4	C5355x5x4
3/8	1/8	C5355x6x2
3/8	1/4	C5355x6□
3/8	3/8	C5355x6x6
3/8	1/2	C5355x6x8
1/2	1/4	C5355x8x4
1/2	3/8	C5355x8□
1/2	1/2	C5355x8x8□
5/8	3/8	C5355x10x6
5/8	1/2	C5355x10
3/4	1/2	C5355x12x8
3/4	3/4	C5355x12□
1	3/4	C5355x16x12
1	1	C5355x16
1-1/4	1-1/4	C5355x20 ¹
1-1/2	1-1/2	C5355x24
2	2	C5355x32
1/8	1/8	TF5355x2
1/4	1/8	TF5355x4
1/4	1/4	TF5355x4x4
5/16	1/8	TF5355x5
5/16	1/4	TF5355x5x4
3/8	1/8	TF5355x6x2
3/8	1/4	TF5355x6
3/8	3/8	TF5355x6x6
3/8	1/2	TF5355x6x8
1/2	1/4	TF5355x8x4
1/2	3/8	TF5355x8
1/2	1/2	TF5355x8x8
5/8	3/8	TF5355x10x6
5/8	1/2	TF5355x10
5/8	3/4	TF5355x10x12
3/4	1/2	TF5355x12x8

*5367x

¹Special order only.

45° Male Elbow cont.
(Ref. SAE No. 070302)
Assembly Number
C35355x4, etc.

Straight Thread O-Ring
45° Elbow
(Ref. SAE No. 070320)
Assembly Number C35365x4,
etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
3/4	3/4	TF5355x12
3/4	1	TF5355x12x16
1	3/4	TF5355x16x12
1	1	TF5355x16
1-1/4	1-1/4	TF5355x20
1-1/2	1-1/2	TF5355x24
2	2	TF5355x32

*5367x

TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	C5365x4
5/16	5/16	C5365x5 ¹
3/8	3/8	C5365x6
1/2	1/2	C5365x8
1/2	5/8	C5365x8x10
5/8	5/8	C5365x10
3/4	5/8	C5365x12x10
3/4	3/4	C5365x12
1	1	C5365x16
1-1/4	1-1/4	C5365x20
1-1/2	1-1/2	C5365x24 ¹
1/4	1/4	TF5365x4
5/16	5/16	TF5365x5
3/8	3/8	TF5365x6
3/8	1/2	TF5365x6x8
1/2	3/8	TF5365x8x6
1/2	1/2	TF5365x8
1/2	5/8	TF5365x8x10
5/8	1/2	TF5365x10x8
5/8	5/8	TF5365x10
5/8	3/4	TF5365x10x12
3/4	5/8	TF5365x12x10
3/4	3/4	TF5365x12
3/4	1	TF5365x12x16
7/8	7/8	TF5365x14
1	3/4	TF5365x16x12
1	1	TF5365x16
1-1/4	1-1/4	TF5365x20
1-1/2	1-1/2	TF5365x24
2	2	TF5365x32

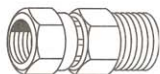
*5377x

¹Special order only.

*Stainless steel catalog number.
□ Available in Stainless Steel.

JIC 37° Flare-Twin®

Female 37° JIC
Swivel to Male
Pipe Adapter



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/4	9100x4x4
5/16	1/4	9100x5x4
3/8	1/4	9100x6x4
3/8	3/8	9100x6x6
1/2	3/8	9100x8x6
1/2	1/2	9100x8x8
5/8	3/8	9100x10x6
5/8	1/2	9100x10x8
3/4	1/2	9100x12x8
3/4	3/4	9100x12x12
1	3/4	9100x16x12
1	1	9100x16x16
1-1/4	1-1/4	9100x20x20

90° Union Elbow
(Ref. SAE No. 070201)
Assembly Number
C35505x4, etc.



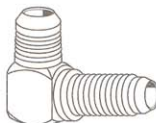
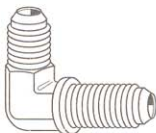
TUBE O.D.	CATALOG NUMBER
1/4	C5505x4 ¹
5/16	C5505x5 ¹
3/8	C5505x6 ¹
1/2	C5505x8 ¹
5/8	C5505x10 ¹
3/4	C5505x12 ¹
1	C5505x16 ¹
1-1/4	C5505x20 ¹
1-1/2	C5505x24 ¹
1/4	TF5505x4
5/16	TF5505x5
3/8	TF5505x6
1/2	TF5505x8
5/8	TF5505x10
3/4	TF5505x12
7/8	TF5505x14
1	TF5505x16
1-1/4	TF5505x20
1-1/2	TF5505x24
2	TF5505x32

¹5517x

¹Special order only.

90° Bulkhead Union
Elbow

(Ref. SAE No. 070701)
Assembly Number C35525x4,
etc.



TUBE O.D.	CATALOG NUMBER
1/4	C5525x4 ¹
5/16	C5525x5 ¹
3/8	C5525x6 ¹
1/2	C5525x8
5/8	C5525x10 ¹
3/4	C5525x12 ¹
1	C5525x16
1-1/4	C5525x20
1/4	TF5525x4
5/16	TF5525x5
3/8	TF5525x6
1/2	TF5525x8
5/8	TF5525x10
3/4	TF5525x12
1	TF5525x16

For bulkhead nut see page 257.

Included with assembly.

¹5537x

¹Special order only.

*Stainless steel catalog number.

□ Available in Stainless Steel.

JIC 37° Flare-Twin®

90° Male Elbow
(Ref. SAE No. 070202)
Assembly Number C35405x4,
etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER	TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	C5405x2□	5/16	1/8	TF5405x5
3/16	1/8	C5405x3	5/16	1/4	TF5405x5x4
1/4	1/8	C5405x4□	5/16	3/8	TF5405x5x6
1/4	1/4	C5405x4x4□	3/8	1/4	TF5405x6
5/16	1/8	C5405x5	3/8	1/8	TF5405x6x2
5/16	1/4	C5405x5x4□	3/8	3/8	TF5405x6x6
3/8	1/8	C5405x6x2□	3/8	1/2	TF5405x6x8
3/8	1/4	C5405x6□	3/8	3/4	TF5405x6x12
3/8	3/8	C5405x6x6□	1/2	1/4	TF5405x8x4
3/8	1/2	C5405x6x8□	1/2	3/8	TF5405x8
1/2	1/4	C5405x8x4□	1/2	1/2	TF5405x8x8
1/2	3/8	C5405x8□	1/2	3/4	TF5405x8x12
1/2	1/2	C5405x8x8□	5/8	3/8	TF5405x10x6
1/2	3/4	C5405x8x12□	5/8	1/2	TF5405x10
5/8	3/8	C5405x10x6	5/8	3/4	TF5405x10x12
5/8	1/2	C5405x10□	3/4	1/2	TF5405x12x8
5/8	3/4	C5405x10x12	3/4	3/4	TF5405x12
3/4	1/2	C5405x12x8□	3/4	1	TF5405x12x16
3/4	3/4	C5405x12□	7/8	3/4	TF5405x14
7/8	3/4	C5405x14 ¹	1	3/4	TF5405x16x12
1	3/4	C5405x16x12	1	1	TF5405x16
1	1	C5405x16□	1	1-1/4	TF5405x16x20
1-1/4	1	C5405x20x16	1-1/4	1	TF5405x20x16
1-1/4	1-1/4	C5405x20	1-1/4	1-1/4	TF5405x20
1-1/2	1-1/2	C5405x24	1-1/4	1-1/2	TF5405x20x24
2	2	C5405x32	1-1/2	1-1/4	TF5405x24x20
1/4	1/8	TF5405x4	1-1/2	1-1/2	TF5405x24
1/4	1/4	TF5405x4x4	2	2	TF5405x32
1/4	3/8	TF5405x4x6			
1/4	1/2	TF5405x4x8			

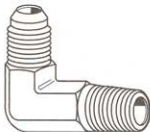
*5417x

¹Special order only.

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

JIC 37° Flare-Twin®

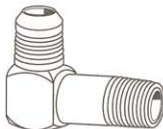
90° Male Elbow Long
(Ref. SAE No. 071502)
Assembly Number C35425x4,
etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/4	C5425x4x1
3/8	1/4	C5425x6
1/2	3/8	C5425x8 ¹
3/4	3/4	C5425x12
7/8	3/4	C5425x14 ¹
1/4	1/8	TF5425x4
1/4	1/4	TF5425x4x4
5/16	1/4	TF5425x5x4
3/8	1/4	TF5425x6
3/8	3/8	TF5425x6x6
1/2	3/8	TF5425x8
1/2	1/2	TF5425x8x8
1/2	3/4	TF5425x8x12
5/8	1/2	TF5425x10
3/4	3/4	TF5425x12
7/8	3/4	TF5425x14
7/8	3/4	TF5425x14x12
1	1	TF5425x16
1-1/4	1-1/4	TF5425x20
1-1/2	1-1/2	TF5425x24

¹Special order only.

90° Male Elbow Extra Long
(Ref. SAE No. 071602)
Assembly Number C35435x4,
etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	TF5435x4
1/4	1/4	TF5435x4x4
5/16	1/8	TF5435x5
5/16	1/4	TF5435x5x4
3/8	1/4	TF5435x6
3/8	3/8	TF5435x6x6
1/2	3/8	TF5435x8
1/2	1/2	TF5435x8x8
5/8	1/2	TF5435x10
3/4	3/4	TF5435x12
7/8	3/4	TF5435x14
1	1	TF5435x16
1-1/4	1-1/4	TF5435x20

90° Female Elbow
(Ref. SAE No. 070203)
Assembly Number
C35455x4, etc.



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	C5455x4 ¹
1/4	1/4	C5455x4x4 ¹
5/16	1/8	C5455x5 ¹
3/8	1/8	C5455x6x2
3/8	1/4	C5455x6 ¹
3/8	3/8	C5455x6x6 ¹
1/2	1/4	C5455x8x4
1/2	3/8	C5455x8 ¹
1/2	1/2	C5455x8x8 ¹
5/8	1/2	C5455x10
3/4	1/2	C5455x12x8
3/4	3/4	C5455x12 ¹
7/8	3/4	C5455x14
1	1	C5455x16 ¹
1-1/4	1-1/4	C5455x20 ¹
1/4	1/8	TF5455x4
1/4	1/4	TF5455x4x4
5/16	1/8	TF5455x5
5/16	1/4	TF5455x5x4
3/8	1/4	TF5455x6
3/8	3/8	TF5455x6x6
1/2	3/8	TF5455x8
1/2	1/2	TF5455x8x8
5/8	1/2	TF5455x10
3/4	3/4	TF5455x12
7/8	3/4	TF5455x14
1	1	TF5455x16
1-1/4	1-1/4	TF5455x20
1-1/2	1-1/2	TF5455x24
2	2	TF5455x32

^{*}5467x

¹Special order only.

JIC 37° Flare-Twin®

Swivel Nut 90° Elbow
(Ref. SAE No. 070221)
Assembly Number C35506x4,
etc.



TUBE O.D.	CATALOG NUMBER
1/4	C5506x4
5/16	C5506x5
3/8	C5506x6
1/2	C5506x8
5/8	C5506x10
3/4	C5506x12
7/8	C5506x14 ¹
1	C5506x16
1-1/4	C5506x20
1/4	TF5506x4
5/16	TF5506x5
3/8	TF5506x6
1/2	TF5506x8
5/8	TF5506x10
3/4	TF5506x12
7/8	TF5506x14
1	TF5506x16
1-1/4	TF5506x20
1-1/2	TF5506x24
2	TF5506x32

^{*}5518x
¹Special order only.

90° Male Pipe to JIC 37°
Swivel
Assembly Number
TF35406x4, etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	TF5406x4
3/8	1/4	TF5406x6
1/2	3/8	TF5406x8
5/8	1/2	TF5406x10
3/4	3/4	TF5406x12
1	1	TF5406x16
1-1/4	1-1/4	TF5406x20
1-1/2	1-1/2	TF5406x24
2	2	TF5406x32

Straight Thread O-Ring
90° Elbow (cont. on next
page)
(Ref. SAE No. 070220)
Assembly Number C35515x4,
etc.



TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/16	3/16	C5515x3
1/4	1/4	C5515x4
5/16	5/16	C5515x5
3/8	3/8	C5515x6
3/8	1/2	C5515x6x8
1/2	3/8	C5515x8x6
1/2	1/2	C5515x8
1/2	5/8	C5515x8x10
5/8	5/8	C5515x10
3/4	5/8	C5515x12x10
3/4	3/4	C5515x12
7/8	7/8	C5515x14
1	3/4	C5515x16x12
1	1	C5515x16
1-1/4	1-1/4	C5515x20
1-1/2	1-1/2	C5515x24
1/4	1/4	TF5515x4
1/4	5/16	TF5515x4x5
1/4	3/8	TF5515x4x6
5/16	1/4	TF5515x5x4
5/16	5/16	TF5515x5
5/16	3/8	TF5515x5x6
3/8	1/4	TF5515x6x4
3/8	5/16	TF5515x6x5
3/8	3/8	TF5515x6
3/8	1/2	TF5515x6x8
3/8	5/8	TF5515x6x10
1/2	3/8	TF5515x8x6
1/2	1/2	TF5515x8
1/2	5/8	TF5515x8x10
1/2	3/4	TF5515x8x12
5/8	1/2	TF5515x10x8
5/8	5/8	TF5515x10
5/8	3/4	TF5515x10x12
3/4	1/2	TF5515x12x8
3/4	5/8	TF5515x12x10

^{*}5527x

JIC 37° Flare-Twin®

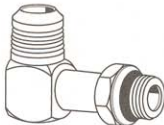
Straight Thread O-Ring
90° Elbow (cont. from
previous page)
(Ref. SAE No. 070220)
Assembly Number C35515x4,
etc.



TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/4	3/4	TF5515x12
3/4	7/8	TF5515x12x14
3/4	1	TF5515x12x16
1	3/4	TF5515x16x12
1	7/8	TF5515x16x14
1	1	TF5515x16
1	1-1/4	TF5515x16x20
1-1/4	1	TF5515x20x16
1-1/4	1-1/4	TF5515x20
1-1/2	1-1/4	TF5515x24x20
1-1/2	1-1/2	TF5515x24
2	2	TF5515x32

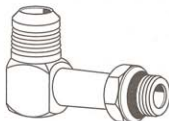
*5527x

Straight Thread O-Ring
90° Elbow Long
(Ref. SAE No. 071620)



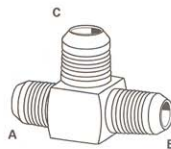
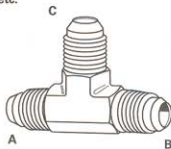
TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/8	3/8	TF5515x6L
1/2	1/2	TF5515x8L
5/8	5/8	TF5515x10L
3/4	3/4	TF5515x12L

Straight Thread O-Ring
90° Elbow Extra Long
(Ref. SAE No. 071620)



TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/8	3/8	TF5515x6LL
1/2	1/2	TF5515x8LL
5/8	5/8	TF5515x10LL
3/4	3/4	TF5515x12LL

Union Tee
(Ref. SAE No. 070401)
Assembly Number C35705x4,
etc.



TUBE O.D. A	TUBE O.D. B	TUBE O.D. C	CATALOG NUMBER
1/8	1/8	1/8	C5705x2
3/16	3/16	3/16	C5705x3
1/4	1/4	1/4	C5705x4
5/16	5/16	5/16	C5705x5 ¹
3/8	3/8	3/8	C5705x6
1/2	1/2	1/2	C5705x8
5/8	5/8	5/8	C5705x10
3/4	3/4	3/4	C5705x12
7/8	7/8	7/8	C5705x14
1	1	1	C5705x16
1-1/4	1-1/4	1-1/4	C5705x20
1-1/2	1-1/2	1-1/2	C5705x24
1/4	1/4	1/4	TF5705x4
5/16	5/16	5/16	TF5705x5
3/8	3/8	3/8	TF5705x6
1/2	1/2	1/2	TF5705x8
5/8	1/2	1/2	TF5705x10x8x8
5/8	5/8	5/8	TF5705x10
5/8	5/8	1/2	TF5705x10x10x8
3/4	3/4	3/4	TF5705x12
7/8	7/8	7/8	TF5705x14
1	1	1	TF5705x16
1-1/4	1-1/4	1-1/4	TF5705x20
1-1/2	1-1/2	1-1/2	TF5705x24
2	2	2	TF5705x32

*5717x

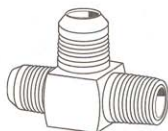
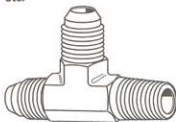
¹Special order only.

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

JIC 37° Flare-Twin®

Male Run Tee (Ref. SAE No. 070424)

Assembly Number C35755x4,
etc.

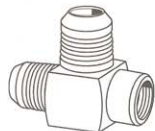


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	C5755x4 ¹
1/4	1/4	C5755x4x4x4 ¹
3/8	1/4	C5755x6 ¹
1/2	3/8	C5755x8 ¹
1/2	1/2	C5755x8x8x8 ¹
5/8	1/2	C5755x10
3/4	3/4	C5755x12
1	1	C5755x16
1/4	1/8	TF5755x4
1/4	1/4	TF5755x4x4x4
5/16	1/8	TF5755x5
3/8	1/4	TF5755x6
3/8	3/8	TF5755x6x6x6
1/2	3/8	TF5755x8
1/2	1/2	TF5755x8x8x8
5/8	1/2	TF5755x10
3/4	3/4	TF5755x12
7/8	3/4	TF5755x14
1	1	TF5755x16
1-1/4	1-1/4	TF5755x20
1-1/2	1-1/2	TF5755x24
2	2	TF5755x32

*5767x

¹Special order only.

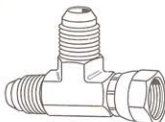
Female Run Tee (Ref. SAE No. 070426)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	TF5805x4
3/8	1/4	TF5805x6
1/2	3/8	TF5805x8
5/8	1/2	TF5805x10
3/4	3/4	TF5805x12
7/8	3/4	TF5805x14
1	1	TF5805x16

Swivel Nut Run Tee (Ref. SAE No. 070432)

Assembly Number C35706x4,
etc.

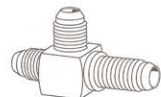
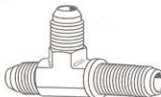


TUBE O.D.	CATALOG NUMBER
1/4	C5706x4 ¹
5/16	C5706x5
3/8	C5706x6 ¹
1/2	C5706x8 ¹
5/8	C5706x10
3/4	C5706x12 ¹
1	C5706x16
1-1/4	C5706x20
1/4	TF5706x4
5/16	TF5706x5
3/8	TF5706x6
1/2	TF5706x8
5/8	TF5706x10
3/4	TF5706x12
7/8	TF5706x14
1	TF5706x16
1-1/4	TF5706x20
1-1/2	TF5706x24
2	TF5706x32

*5718x

Bulkhead Run Tee (Ref. SAE No. 070958)

Assembly Number C35726x4,
etc.



TUBE O.D.	CATALOG NUMBER
3/8	C5726x6
1/2	C5726x8 ¹
1/2	TF5726x8

For bulkhead nut see page 270.
Included with assembly.
¹Special order only.

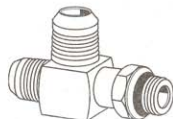
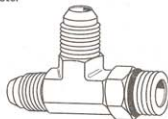
*Stainless Steel Catalog number.
¹Available in Stainless Steel.

JIC 37° Flare-Twin®

Straight Thread O-Ring Run Tee

(Ref. SAE No. 070428)

Assembly Number C35716x4,
etc.



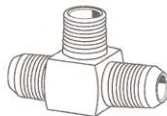
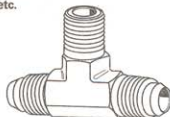
TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	C5716x4
5/16	5/16	C5716x5
3/8	3/8	C5716x6
1/2	1/2	C5716x8
5/8	5/8	C5716x10
3/4	3/4	C5716x12
1	1	C5716x16
1-1/4	1-1/4	C5716x20
1/4	1/4	TF5716x4
5/16	5/16	TF5716x5
3/8	3/8	TF5716x6
1/2	1/2	TF5716x8
5/8	5/8	TF5716x10
3/4	3/4	TF5716x12
7/8	7/8	TF5716x14
1	1	TF5716x16
1-1/4	1-1/4	TF5716x20
1-1/2	1-1/2	TF5716x24

Replacement O-rings page 254.

Male Branch Tee

(Ref. SAE No. 070425)

Assembly Number C35605x4,
etc.



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	C5605x4 ¹
1/4	1/4	C5605x4x4x4
5/16	1/8	C5605x5
3/8	1/4	C5605x6 ¹
1/2	3/8	C5605x8
5/8	1/2	C5605x10
3/4	3/4	C5605x12
7/8	3/4	C5605x14 ¹
1	1	C5605x16
1-1/4	1-1/4	C5605x20 ¹
1/4	1/8	TF5605x4
1/4	1/4	TF5605x4x4x4
5/16	1/8	TF5605x5
3/8	1/4	TF5605x6
3/8	3/8	TF5605x6x6x6
1/2	3/8	TF5605x8
1/2	1/2	TF5605x8x8x8
5/8	1/2	TF5605x10
3/4	3/4	TF5605x12
7/8	3/4	TF5605x14
1	1	TF5605x16
1-1/4	1-1/4	TF5605x20
1-1/2	1-1/2	TF5605x24
2	2	TF5605x32

¹5617x

¹Special order only.

JIC 37° Flare-Twin®

Female Branch Tee
(Ref. SAE No. 070427)
Assembly Number C35655x4,
etc.



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	C5655x4 ¹
3/8	1/4	C5655x8 ¹
1/2	3/8	C5655x8 ¹
5/8	1/2	C5655x10
3/4	3/4	C5655x12
1	1	C5655x16 ¹
1/4	1/8	TF5655x4
1/4	1/4	TF5655x4x4x4
5/16	1/8	TF5655x5
3/8	1/4	TF5655x6
3/8	3/8	TF5655x6x6x6
1/2	3/8	TF5655x8
1/2	1/2	TF5655x8x8x8
5/8	1/2	TF5655x10
3/4	3/4	TF5655x12
7/8	3/4	TF5655x14
1	1	TF5655x16
1-1/4	1-1/4	TF5655x20
1-1/2	1-1/2	TF5655x24
2	2	TF5655x32

*5667x
¹Special order only.

Swivel Nut Branch Tee
(Ref. SAE No. 070433)
Assembly Number C35707x4,
etc.

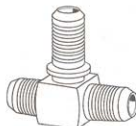
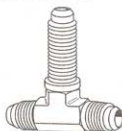


TUBE O.D.	CATALOG NUMBER
1/4	C5707x4
3/8	C5707x6
1/2	C5707x8
3/4	C5707x12
1	C5707x16
1/4	TF5707x4
5/16	TF5707x5
3/8	TF5707x6
1/2	TF5707x8
5/8	TF5707x10
3/4	TF5707x12
7/8	TF5707x14
1	TF5707x16
1-1/4	TF5707x20
1-1/2	TF5707x24
2	TF5707x32

*5719x
¹Special order only.

*Stainless Steel Catalog number.
□ Available in Stainless Steel.

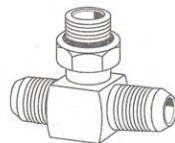
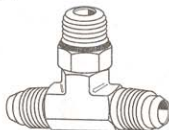
Bulkhead Branch Tee
(Ref. SAE No. 070959)



TUBE O.D.	CATALOG NUMBER
1/4	5737x4#
3/8	5737x6#
1/4	TF5725x4
3/8	TF5725x6
1/2	TF5725x8
5/8	TF5725x10
3/4	TF5725x12
1	TF5725x16

*Stainless steel construction. For bulkhead nut see page 257. Included with assembly.

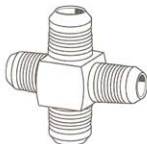
Straight Thread O-Ring
Branch Tee
(Ref. SAE No. 070429)
Assembly Number C35715x4,
etc.



TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	C5715x4
5/16	5/16	C5715x5
3/8	3/8	C5715x6
1/2	1/2	C5715x8
5/8	5/8	C5715x10
3/4	3/4	C5715x12
1	1	C5715x16
1/4	1/4	TF5715x4
5/16	5/16	TF5715x5
3/8	3/8	TF5715x6
1/2	1/2	TF5715x8
5/8	5/8	TF5715x10
3/4	3/4	TF5715x12
7/8	7/8	TF5715x14
1	1	TF5715x16
1-1/4	1-1/4	TF5715x20
1-1/2	1-1/2	TF5715x24

JIC 37° Flare-Twin®

Cross
(Ref. SAE No. 070501)



TUBE O.D.	CATALOG NUMBER
1/4	5967x4#
3/8	5967x6#
1/2	5967x8#
1/4	TF5955x4
5/16	TF5955x5
3/8	TF5955x6
1/2	TF5955x8
5/8	TF5955x10
3/4	TF5955x12
7/8	TF5955x14
1	TF5955x16
1-1/4	TF5955x20
1-1/2	TF5955x24

#Stainless steel construction.

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 247 for O-ring compound and application chart)

PORT SIZE	CATALOG NUMBER
1/16	7629x1
1/8	7629x2
3/16	7629x3
1/4	7629x4
5/16	7629x5
3/8	7629x6
7/16	7629x7
1/2	7629x8
5/8	7629x10
3/4	7629x12
7/8	7629x14
1	7629x16
1-1/4	7629x20
1-1/2	7629x24
2	7629x32

DIN Fittings



Metric Tube O.D.	6	8	10	12	14	15	16
Light	M12x1.5	M14x1.5	M16x1.5	M18x1.5	-	M22x1.5	-
Heavy	M14x1.5	M16x1.5	M18x1.5	M20x1.5	M22x1.5	-	M24x1.5

Metric Tube O.D.	18	20	22	25	28	30
Light	M26x1.5	-	M30x2.0	-	M36x2.0	-
Heavy	-	M30x2.0	-	M36x2.0	-	M42x2.0

Metric Flareless Sleeve

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



Metric Flareless Nut Light Series (DIN 3901/3902L)



TUBE O.D. (MM)	METRIC THREAD SIZE	CATALOG NUMBER
6	M12x1.5	ML7105x6
8	M14x1.5	ML7105x8
10	M16x1.5	ML7105x10
12	M18x1.5	ML7105x12
15	M22x1.5	ML7105x15
18	M26x1.5	ML7105x18
22	M30x2.0	ML7105x22
28	M36x2.0	ML7105x28

Metric Flareless Nut Heavy Series (DIN 3901/3902S)



TUBE O.D. (MM)	METRIC THREAD SIZE	CATALOG NUMBER
6	M14x1.5	MH7105x6
8	M16x1.5	MH7105x8
10	M18x1.5	MH7105x10
12	M20x1.5	MH7105x12
14	M22x1.5	MH7105x14
16	M24x1.5	MH7105x16
20	M30x2.0	MH7105x20
25	M36x2.0	MH7105x25
30	M42x2.0	MH7105x30
38	M52x2.0	MH7105x38

Typical Application: Used in applications to adapt connections made to DIN (Deutsche Industrie Norme) specifications to male SAE 37° flare.

Sealing Method: 3-piece flareless bite type or 60° cone, or 37° flare.

Vibration Rating: Fair resistance.

Material: Carbon steel – SAE 12L14

Plating: Bodies and sleeves – Zinc and Yellow Dichromate finish.
Nuts – Phosphate coating.

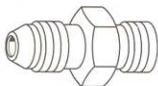
Advantages: Provides an adapter to convert a metric hose assembly to 37° SAE allowing the use of standard hose and end fittings. Can also be used in the repair of metric tubing.

Assembly: See page 390 for metric preset tool.

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

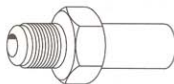
DIN Fittings

Male JIC 37° To 24° Metric
Tube Seat
(DIN 3901/3902L)



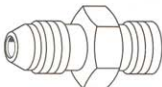
TUBE O.D.	METRIC THREAD	CATALOG NUMBER
1/4	M12x1.5	MC5206x4x6
3/8	M14x1.5	MC5206x6x8
1/2	M16x1.5	MC5206x8x10
1/2	M18x1.5	MC5206x8x12
5/8	M22x1.5	MC5206x10x15
3/4	M26x1.5	MC5206x12x18

Male JIC 37° to Male
Metric Standpipe



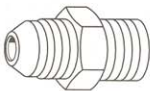
TUBE O.D.	TUBE O.D. (MM)	CATALOG NUMBER
1/4	6MM	MC5019x4x6
1/4	8MM	MC5019x4x8
3/8	10MM	MC5019x6x10
1/2	12MM	MC5019x8x12
1/2	14MM	MC5019x8x14
5/8	15MM	MC5019x10x15
5/8	16MM	MC5019x10x16
3/4	16MM	MC5019x12x16
3/4	18MM	MC5019x12x18
1	20MM	MC5019x12x20
1	22MM	MC5019x16x22
1	25MM	MC5019x16x25

Male JIC 37° To 24° Metric
Tube Seat
(DIN 3901/3902S)



TUBE O.D.	METRIC THREAD	CATALOG NUMBER
3/8	M14x1.5	MC5208x6x6
1/2	M18x1.5	MC5208x8x10
5/8	M22x1.5	MC5208x10x14
3/4	M24x1.5	MC5208x12x16

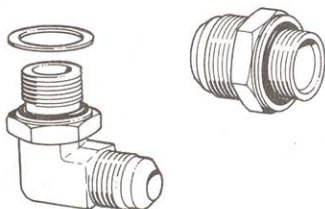
Male JIC 37° To 60°
Metric Tube Seat
(DIN 7631)



TUBE O.D.	METRIC THREAD	CATALOG NUMBER
1/4	M12x1.5	MC5207x4x6
3/8	M14x1.5	MC5207x6x8
3/8	M16x1.5	MC5207x6x10
1/2	M18x1.5	MC5207x8x12
5/8	M22x1.5	MC5207x10x15
3/4	M26x1.5	MC5207x12x18

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

Metric Fittings



Typical Application: Used in applications to adapt connections and tubing to male swivel SAE 37° flare.

Sealing Method: Metric Tapered pipe thread, or o-ring or 37° flare.

Vibration Rating: Fair resistance.

Material: Carbon steel – SAE 12L14

Plating: Zinc with yellow dichromate finish.

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

Sleeve 3-Piece
Metric
(Ref. SAE No. 070115)



TUBE O.D. (IN) SIZE	TUBE O.D. (MM) SIZE	CATALOG NUMBER
1/4	6MM	C5165x4x6MM
5/16	8MM	C5165x5x8MM
3/8	10MM	C5165x6x10MM
1/2	12MM	C5165x8x12MM
5/8	14MM	C5165x10x14MM
5/8	15MM	C5165x10x15MM
5/8	16MM	C5165x10x16MM
3/4	18MM	C5165x12x18MM
7/8	20MM	C5165x14x20MM
7/8	22MM	C5165x14x22MM
1	25MM	C5165x16x25MM
1-1/4	30MM	C5165x20x30MM
1-1/4	32MM	C5165x20x32MM
1-1/2	38MM	C5165x24x38MM

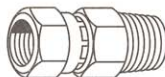
Adapts standard JIC Flare-Twin® fittings for use with metric tubing.

Male JIC 37° To Male
Metric Straight Thread
Connector



TUBE O.D.	MALE METRIC THREAD	CATALOG NUMBER
1/4	M10x1.0	MC5315x4x10
1/4	M12x1.5	MC5315x4x12
1/4	M14x1.5	MC5315x4x14
3/8	M14x1.5	MC5315x6x14
3/8	M16x1.5	MC5315x6x16
1/2	M18x1.5	MC5315x8x18
1/2	M22x1.5	MC5315x8x22
5/8	M20x1.5	MC5315x10x20
3/4	M22x1.5	MC5315x12x22
3/4	M27x2.0	MC5315x12x27
1	M33x2.0	MC5315x16x33
1-1/4	M42x2.0	MC5315x20x42

Female JIC 37° Swivel
To Male JIS Metric Taper
Pipe Thread

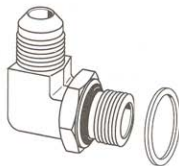


TUBE O.D.	JIS TAPER PIPE THREAD	CATALOG NUMBER
1/4	M10x1.0	M9700x4x6
5/16	M12x1.5	M9700x5x8
3/8	M14x1.5	M9700x6x10
1/2	M16x1.5	M9700x8x12
5/8	M20x1.5	M9700x10x14
3/4	M24x1.5	M9700x12x20
1	M27x2.0	M9700x16x25
1-1/4	M36x2.0	M9700x20x32

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

Metric Fittings

Male JIC 37° To Male Metric Straight Thread 90° Elbow



TUBE O.D.	MALE METRIC THREAD	CATALOG NUMBER
1/4	M10x1.0	MC5515x4x10
1/4	M12x1.5	MC5515x4x12
3/8	M14x1.5	MC5515x6x14
3/8	M16x1.5	MC5515x6x16
1/2	M18x1.5	MC5515x8x18
1/2	M22x1.5	MC5515x8x22
5/8	M18x1.5	MC5515x10x18
5/8	M20x1.5	MC5515x10x20
5/8	M22x1.5	MC5515x10x22
3/4	M22x1.5	MC5515x12x22
3/4	M27x2.0	MC5515x12x27
1	M33x2.0	MC5515x16x33

Metric O-Ring



Material: Buna-N 90 Durometer
Temperature Range: -40°F to +250°F (-40°C to +121°C)
 (See page 247 for O-ring compound and application chart)

METRIC THREAD O.D. (MM)	CATALOG NUMBER
10	M7629x10
12	M7629x12
14	M7629x14
16	M7629x16
18	M7629x18
20	M7629x20
22	M7629x22
27	M7629x27
33	M7629x33
42	M7629x42

Metric Retaining Ring

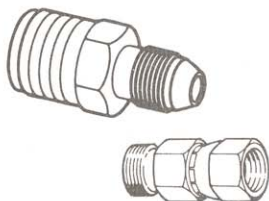


Material: Steel

METRIC THREAD O.D. (MM)	CATALOG NUMBER
10	M7630x10
12	M7630x12
14	M7630x14
16	M7630x16
18	M7630x18
20	M7630x20
22	M7630x22
27	M7630x27
33	M7630x33
42	M7630x42

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

BSP Fittings



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.

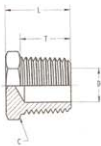
Material: Carbon steel – SAE 12L14

Plating: Zinc with yellow dichromate finish.

Advantages: Provides an adapter to convert BSP ports to 37° allowing the use of standard hose and end fittings.

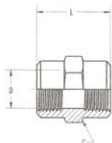
Pipe Size	1/8	1/4	3/8	1/2	5/8	3/4	1	1-1/4
Thread Size	1/8-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1-11	1-1/4-11

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

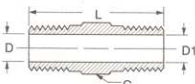
Coupling



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

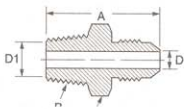
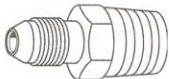
BSP Fittings

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	1/8	MC3069x4x2	17	1.26	.575	.395	.281	.188
1/4	1/4	MC3069x4x4	17	1.45	.575	.575	.281	.281
3/8	1/4	MC3069x6x4	19	1.45	.575	.575	.406	.281
3/8	3/8	MC3069x6x6	19	1.45	.575	.575	.406	.406
1/2	3/8	MC3069x8x6	22	1.70	.765	.575	.531	.406
1/2	1/2	MC3069x8x8	22	1.89	.765	.765	.531	.531
3/4	1/2	MC3069x12x8	30	1.99	.795	.765	.719	.531
3/4	3/4	MC3069x12x12	30	2.02	.795	.795	.719	.719
1	3/4	MC3069x16x12	36	2.18	.955	.795	.939	.719
1	1	MC3069x16x16	36	2.34	.955	.955	.939	.939
1-1/4	1	MC3069x20x16	46	2.51	1.045	.955	1.252	.939
1-1/4	1-1/4	MC3069x20x20	46	2.60	1.045	1.045	1.252	1.252
1-1/2	1-1/4	MC3069x24x20	50	2.67	1.045	1.045	1.502	1.252
1-1/2	1-1/2	MC3069x24x24	50	2.67	1.045	1.045	1.502	1.502
2	1-1/2	MC3069x32x24	65	2.98	1.205	1.045	1.940	1.502
2	2	MC3069x32x32	65	3.14	1.205	1.205	1.940	1.940

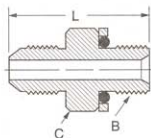
Male Connector



TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT THREAD		HEX C	D	D1
			B	A			
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	.719
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

BSP Fittings

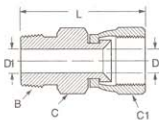
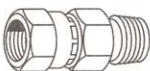
Male British Standard Parallel Pipe to Male 37° SAE



TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP THREAD B	A	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 293.

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

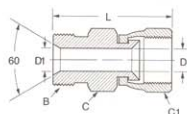


TUBE O.D.	BSPT PIPE SIZE	CATALOG NUMBER	BSPT PIPE SIZE	HEX C	HEX C1	D	D1	L
1/4	1/4	M9800x4x4	1/4	9/16	9/16	.172	.281*	1.56
5/16	1/4	M9800x5x4	1/4	11/16	5/8	.234	.281*	1.63
3/8	1/4	M9800x6x4	1/4	11/16	11/16	.297	.281	1.69
1/2	1/4	M9800x8x4	1/4	7/8	7/8	.391	.281	1.87
1/2	3/8	M9800x8x6	3/8	7/8	7/8	.391	.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.

BSP Fittings

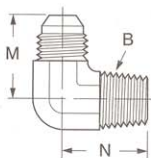
Female 37° SAE Swivel to Male British Standard Parallel Pipe Thread



TUBE O.D.	BSPP PIPE SIZE	CATALOG NUMBER	BSPP PIPE SIZE	HEX C1	HEX C	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.

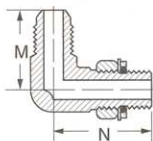
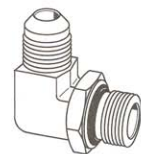
Male British Standard Tapered Pipe to Male SAE 37° SAE 90° Elbow



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	1-1/4-112.06	2.38	2.38	1-5/8

BSP Fittings

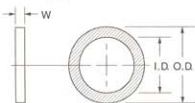
Male British Standard Parallel Pipe to Male 37° SAE 90° Elbow



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

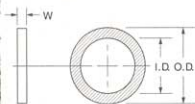
Replacement retaining rings and O-rings see below.

British Retaining Ring



TUBE O.D.	CATALOG NUMBER	RING I.D.	RING O.D.	W
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

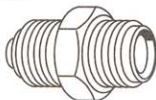
AC8111 Connector
(Steel)



TUBE SIZE	MALE PIPE THREAD	CATALOG NUMBER
1 (1-5/16-14)	3/4	C9240
1 (1-5/16-14)	1	C9200

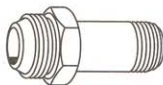
APPLICATION: PTT Thread 30° tube to male pipe adapter for Diesel Engines

SAE 45° Flare to Inv. Flare Adapter
(Brass)



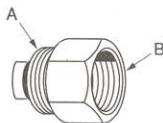
SAE TUBE SIZE	TUBE INV.	CATALOG NUMBER
1/4	3/16	1518
1/4	1/4	1522
3/8	5/16	1553
3/8	3/8	1563
3/8	7/16	1554

Turbocharger Discharge Connector (Brass)



TUBE SIZE	MALE PIPE THREAD	CATALOG NUMBER
19 AC-811 Thread	3/4	1408

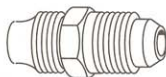
Metric Power Steering Adapter
(Brass) Includes O-ring



TUBE SIZE	TH'D A	INVERTED FLARE B
3/8	14x1.5	5/8-18
3/8	16x1.5	5/8-18
3/8	18x1.5	5/8-18

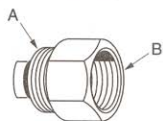
(For replacement O-Ring, see page 300.)

AC Type Adapter
(Brass)



TUBE SIZE	SAE 45° TUBE O.D.	CATALOG NUMBER
1/4 Thread Sleeve	1/4	1521

Ford Power Steering Fitting
(Brass) Includes O-ring

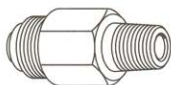


TUBE SIZE	TH'D A	INVERTED FLARE B
3/8	11/16-18	5/8-18

(For replacement O-Ring, see page 300.)

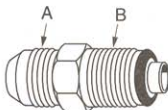
Special Adapters

Truck Oil Line
Extended Fitting
Replaces Roto Master
No. 10-35 (Brass)



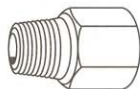
SAE 45° TUBE SIZE	MALE PIPE THREAD	CAT. NO.
3/8	1/4	1432

JIC 37° Flare to
O-Ring Port
(Brass) Includes O-ring



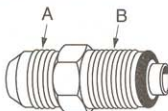
TUBE SIZE	THREAD A	THREAD B	CATALOG NUMBER
1/4	7/16-20	9/16-18	1440
3/8	9/16-18	5/8-18	1439

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

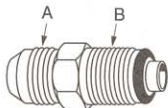
(For replacement O-Ring,
see page 304.)

Ford Transmission
90° Elbow (Brass)
Includes
O-Ring



INV. TUBE O.D.	STRAIGHT PIPE THD.	CATALOG NUMBER
5/16	1/8-27	1437

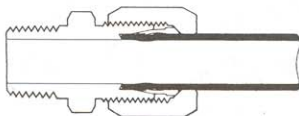
JIC 37° Flare to Metric
O-Ring Port Adapter
(Steel) Includes O-ring



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

(For replacement O-Ring, see page
300.) **Application:** GM power steering
with Saginaw steering and rack and
pinion steering systems.

Steel Flareless Ermeto® Fittings



Typical Application: Hydraulic, instrumentation and chemical processing. Highly recommended for high pressure and high vibration applications.

Pressure: See chart above.

Sealing Method: 3-piece bite-type.

Vibration Rating: Excellent resistance

Material: Carbon steel – AISI/SAE 12L14
Stainless steel – Bodies and nuts type 316,
sleeves 17-4PH

Plating: WEATHERCOTE™

Used With: Aluminum, hard or half-hard copper, steel, stainless steel, monel, titanium and heavy wall tubing that cannot be flared.

Advantages: No tube flaring. Used with extra heavy wall tubing. Broad selection of styles and sizes.

Conformance: Meets ASA, ASME, SAE, and MS specifications and standards.

Ordering Information: Fittings are ordered as complete assemblies. To order bodies only (less nut and sleeve), prefix catalog number with the letter "B." Example: B7205x4. Order nuts and sleeves separately by catalog number.

Label Set: FS-1600

TUBE O.D.	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Thread	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14

TUBE O.D.	3/4	7/8	1	1-1/4	1-1/2	2
Thread	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 Fittings and Adaptors Ermeto® Fittings 7000 Series Pressure Rating Chart

CONNECTION TYPE	END HOSE												
	1/8	3/16	1/4	5/16	3/8	1/2	3/4	5/8	7/8	1	1-1/4	1-1/2	2
Ermeto® Fittings	5000	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	5000		5000		5000	4000		4000		4000	3000	2500	2500
With Female Pipe	5000	5000			4000	3000		2500		2000	1500	1500	1000

Steel Flareless Ermeto® Fittings

PRESET WITH PRESET TOOL:
(Preset Tools are listed on page 389.)

- Slide nut and then sleeve on tube. Shoulder of sleeve 'A' must be toward nut.
- Insert tube into presetting tool. Be sure that tube is bottomed on fitting tube stop at point 'B'. Lubricate threads, seat of fitting and shoulder of sleeve with good grade of lubricant.
- Turn nut slowly with wrench while turning tube with other hand. When the sleeve grips the tube, that is, when the tube can no longer be turned by hand - STOP - and note the position of the wrench. This is the "Ring Grip" point.

Tighten nut an additional number of turns past the ring grip point as shown in Table 1, page 298.

CAUTION: All stainless steel sleeves should be preset in tool prior to installation.

PRESET IN FITTING BODY:

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

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

WARNING: Follow the installation procedures below with care to ensure proper installation of Ermeto® fittings.

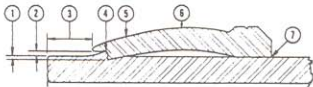
Installation:

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

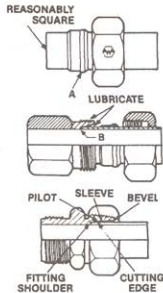
When the assembly procedure for Ermeto® fittings is followed correctly, these points will be evident:

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

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



Assembly Instructions



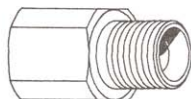
Steel Flareless Ermeto® Fittings

TABLE 1

Number of Additional Turns from "Ring Grip" for Hand Presetting Operation – Ermeto® Sleeve

Tube Size	**Tube Material	.018	.022	.028	.035	.049	.065	.083	.095	.109	.120
2	C1010 MILT 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6						
3	C1010 MILT 8504	1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1-1/6	1 1						
4	C1010 MILT 8504			1-1/6 1-1/6	1-1/6 1	1-1/6 1	1 5/6				
5	C1010 MILT 8504			1-1/6 1-1/6	1-1/6 1-1/6	1-1/6 1	1 1				
6	C1010 MILT 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6			
8	C1010 MILT 8504				1-1/6 1-1/6	1-1/6 1	1 5/6	1 5/6	1 5/6		
10	C1010 MILT 8504					1-1/6 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6	5/6
12	C1010 MILT 8504					1 1-1/6	1 1	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
16	C1010 MILT 8504					1-1/6 1-1/6	1-1/6 1-1/6	5/6 5/6	5/6 5/6	5/6 5/6	5/6 5/6
20	C1010 MILT 8504					1-1/6 1	1 1	1 1	1 1	5/6 5/6	5/6 5/6
24	C1010 MILT 8504								1	1	1
32	C1010 MILT 8504								1	1	1

**C1010 – Carbon Steel Tubing; MILT 8504 – Annealed Stainless Steel



Presetting tools provide a more accurate and positive leakproof method of coupling flareless fittings. Presetting steel Ermeto® sleeves on tubing prior to the fitting assembly will permit the maximum high performance obtainable with

flareless fittings. Due to possible thread galling the use of presetting tools is required when stainless steel fittings are to be assembled. See page 390 for T-F570-1 hydraulic preset machine.

Ermeto® Hand-Presetting Tools 7000 Series

Catalog Number	Seat Size	Tube O.D. (Inches)	Thread Size
T-7002	2	1/8	5/16-24
T-7003	3	3/16	3/8-24
T-7004	4	1/4	7/16-20
T-7005	5	5/16	1/2-20
T-7006	6	3/8	9/16-18
T-7008	8	1/2	3/4-16
T-7010	10	5/8	7/8-14
T-7012	12	3/4	1-1/16-12
T-7016	16	1	1-5/16-12
T-7020	20	1-1/4	1-5/8-12
T-7024	24	1-1/2	1-7/8-12
T-7032	32	2	2-1/2-12

Steel Flareless Ermeto® Fittings

Sleeve
(Ref. SAE No. 080115B)



Tube O.D.	Catalog Number
1/8	7165x2□
3/16	7165x3□
1/4	7165x4□
5/16	7165x5□
3/8	7165x6□
1/2	7165x8□
5/8	7165x10□
3/4	7165x12□
7/8	7165x14□
1	7165x16□
1-1/4	7165x20□
1-1/2	7165x24□
2	7165x32□

*7176x

Sleeve



Tube O.D.	Catalog Number
1/4	8165x4
5/16	8165x5
3/8	8165x6

For use with diesel nuts **ONLY**.

Nut
(Ref. SAE No. 080110)



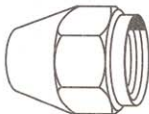
Tube O.D.	Catalog Number
1/8	7105x2□
3/16	7105x3□
1/4	7105x4□
5/16	7105x5□
3/8	7105x6□
1/2	7105x8□
5/8	7105x10□
3/4	7105x12□
7/8	7105x14□
1	7105x16□
1-1/4	7105x20□
1-1/2	7105x24□
2	7105x32□

*7117x

□ Stainless Steel Catalog number.

□ Available in Stainless Steel. * Available in Stainless Steel Only.

Diesel Nut



Tube O.D.	Thread Size	Catalog Number
1/4	9/16-18	8112x4
5/16	5/8-18	8112x5
3/8	3/4-16	8112x6

Bulkhead Nut
(Ref. SAE No. 080118)



Tube O.D.	Catalog Number
1/4	7924x4□
3/8	7924x6□
1/2	7924x8□
5/8	7924x10
3/4	7924x12□
7/8	7924x14
1	7924x16□
1-1/4	7924x20

*7936x

Seal-Nut For
Male Pipe Thread



Pipe Thread	Catalog Number
1/8	C3059x2
1/4	C3059x4
3/8	C3059x6
1/2	C3059x8
3/4	C3059x12
1	C3059x16

Steel Fittings

Steel Flareless Ermeto® Fittings

Cap



TUBE O.D.	CATALOG NUMBER
1/4	7129x4□
3/8	7129x6□
1/2	7129x8□
5/8	7129x10□
3/4	7129x12□
1	7129x16
1-1/4	7129x20

*7141x

•7141x2

Straight Thread O-Ring Hex Head Plug

(Ref. SAE No. 090109A)



Note: Parts furnished with zinc plate.

PORT SIZE	CATALOG NUMBER
1/8	7237x2#
3/16	7237x3#
1/4	7237x4#
5/16	7237x5#
3/8	7237x6#
1/2	7237x8#
5/8	7237x10#
3/4	7237x12#
7/8	7237x14#
1	7237x16
1-1/4	7237x20
1-1/2	7237x24
2	7237x32

#Not counterbored.

Plug

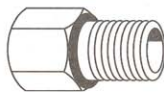
(Ref. SAE No. 080109)



TUBE O.D.	CATALOG NUMBER
1/8	7229x2
1/4	7229x4*
5/16	7229x5
3/8	7229x6*
1/2	7229x8*
5/8	7229x10
3/4	7229x12*
1	7229x16

*7241x

Male Straight Thread/ Female Straight Thread O-Ring Boss



MALE PORT SIZE	FEMALE PORT SIZE	CATALOG NUMBER
3/8	1/2	7033x8x6
1/2	5/8	7033x10x8
1/2	3/4	7033x12x8
3/4	7/8	7033x14x12
1/2	1	7033x16x8
3/4	1	7033x16x12
3/4	1-1/4	7033x20x12
1-1/4	1-1/2	7033x24x20
1-1/2	2	7033x32x24

Straight Thread O-Ring Hex Socket Plug

(Ref. SAE No. 090109B)



PORT SIZE	CATALOG NUMBER
1/8	7238x2
3/16	7238x3
1/4	7238x4
5/16	7238x5
3/8	7238x6
1/2	7238x8
5/8	7238x10
3/4	7238x12
7/8	7238x14
1	7238x16
1-1/4	7238x20

- * Stainless Steel Catalog number.
- Available in Stainless Steel.
- Available in Stainless Steel Only.

Reducer

(Ref. SAE No. 080123)



BODY SIZE T	TUBE SIZE E	CATALOG NUMBER
3/8	1/4	7015x6x4□
1/2	1/4	7015x8x4□
1/2	3/8	7015x8x6□
5/8	1/2	7015x10x8□
3/4	3/8	7015x12x6□
3/4	1/2	7015x12x8□
1	3/4	7015x16x12□
1-1/4	1	7015x20x16□

*7027x

•7027x16□

Note: Parts furnished with zinc plate.

Steel Fittings

Steel Flareless Ermeto® Fittings

Small Hex Union

(Ref. SAE No. 080101)



TUBE O.D.	CATALOG NUMBER
1/8	7305x2
3/16	7305x3
1/4	7305x4
5/16	7305x5
3/8 x 1/4	7305x6x4
3/8	7305x6
1/2 x 3/8	7305x8x6
1/2	7305x8
5/8	7305x10
3/4	7305x12
7/8	7305x14
1	7305x16
1-1/4	7305x20
1-1/2	7305x24
2	7305x32

*7317x

Large Hex Union

(Ref. SAE No. 080119)



TUBE O.D.	CATALOG NUMBER
1/4	7306x4
3/8	7306x6
1/2x3/8	7306x8x6
1/2	7306x8
3/4	7306x12
1	7306x16

*7318x

*7318x6x4

Bulkhead Union

(Ref. SAE No. 080601)



TUBE O.D.	CATALOG NUMBER
1/4	7325x4
3/8	7325x6
1/2	7325x8
3/4	7325x12
1	7325x16

*7337x

For bulkhead nuts see page 230-231.

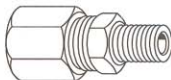
* Stainless Steel Catalog number.

□ Available in Stainless Steel.

• Available in Stainless Steel Only.

Male Connector

(Ref. SAE No. 080102)

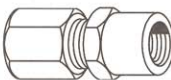


TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7205x2
1/8	1/4	7205x2x4
3/16	1/8	7205x3
1/4	1/8	7205x4
1/4	1/4	7205x4x4
1/4	3/8	7205x4x6
1/4	1/2	7205x4x8
5/16	1/8	7205x5
5/16	1/4	7205x5x4
3/8	1/8	7205x6x2
3/8	1/4	7205x6
3/8	3/8	7205x6x6
3/8	1/2	7205x6x8
1/2	1/4	7205x8x4
1/2	3/8	7205x8
1/2	1/2	7205x8x8
1/2	3/4	7205x8x12
5/8	3/8	7205x10x6
5/8	1/2	7205x10
3/4	1/2	7205x12x8
3/4	3/4	7205x12
7/8	3/4	7205x14
1	3/4	7205x16x12
1	1	7205x16
1-1/4	1-1/4	7205x20
1-1/2	1-1/2	7205x24
2	2	7205x32

*7217x

Female Connector

(Ref. SAE No. 080103)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7255x2
3/16	1/8	7255x3
1/4	1/8	7255x4
1/4	1/4	7255x4x4
5/16	1/8	7255x5
3/8	1/4	7255x6
3/8	3/8	7255x6x6
1/2	1/4	7255x8x4
1/2	3/8	7255x8
1/2	1/2	7255x8x8
5/8	1/2	7255x10
3/4	3/4	7255x12
7/8	3/4	7255x14
1	1	7255x16
1-1/4	1-1/4	7255x20

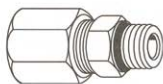
*7267x • 7267x6x8

Steel Fittings

Steel Flareless Ermeto® Fittings

Straight Thread O-Ring Connector

(Ref. SAE No. 080120)

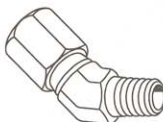


TUBE O.D.	PORT SIZE	CATALOG NUMBER
3/16	3/16	7315x3
1/4	1/4	7315x4□
1/4	5/16	7315x4x5□
1/4	3/8	7315x4x6□
5/16	5/16	7315x5
3/8	3/8	7315x6□
3/8	1/2	7315x6x8
1/2	1/2	7315x8□
1/2	5/8	7315x8x10
1/2	3/4	7315x8x12□
5/8	5/8	7315x10□
3/4	3/4	7315x12□
3/4	1	7315x12x16
7/8	7/8	7315x14
1	3/4	7315x16x12
1	1	7315x16□
1-1/4	1-1/4	7315x20
1-1/2	1-1/2	7315x24
2	2	7315x32

*7327x

45° Male Elbow

(Ref. SAE No. 080302)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7355x4□
1/4	1/4	7355x4x4□
5/16	1/8	7355x5
3/8	1/4	7355x6□
1/2	3/8	7355x8□
5/8	1/2	7355x10
3/4	3/4	7355x12
1	1	7355x16

90° Union Elbow

(Ref. SAE No. 080201)



TUBE O.D.	CATALOG NUMBER
1/4	7505x4□
5/16	7505x5
3/8	7505x6□
1/2	7505x8□
5/8	7505x10□
3/4	7505x12□
7/8	7505x14□
1	7505x16□
1-1/4	7505x20
1-1/2	7505x24

*7517x

90° Male Elbow

(Ref. SAE No. 080202)



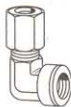
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/8	1/8	7405x2□
3/16	1/8	7405x3
1/4	1/8	7405x4□
1/4	1/4	7405x4x4□
5/16	1/8	7405x5□
5/16	1/4	7405x5x4□
3/8	1/8	7405x6x2□
3/8	1/4	7405x6□
3/8	3/8	7405x6x6□
3/8	1/2	7405x6x8□
1/2	1/4	7405x8x4□
1/2	3/8	7405x8□
1/2	1/2	7405x8x8□
5/8	3/8	7405x10x6□
5/8	1/2	7405x10□
3/4	1/2	7405x12x8
3/4	3/4	7405x12□
7/8	3/4	7405x14
1	3/4	7405x16x12
1	1	7405x16□
1-1/4	1-1/4	7405x20
1-1/2	1-1/2	7405x24
2	2	7405x32

*7417x

90° Female Elbow

(Ref. SAE No. 080203)

(Ref. MSS1813)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7455x4□
1/4	1/4	7455x4x4□
3/8	1/4	7455x6□
3/8	3/8	7455x6x6□
1/2	3/8	7455x8□
1/2	1/2	7455x8x8□
5/8	1/2	7455x10□
3/4	3/4	7455x12□
7/8	3/4	7455x14
1	1	7455x16

*7467x

* Stainless Steel Catalog number.

□ Available in Stainless Steel.

* Available in Stainless Steel Only.

Steel Fittings

Steel Flareless Ermeto® Fittings

Straight Thread O- Ring 90° Elbow

(Ref. SAE No. 080220)

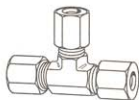


TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7515x4□
5/16	5/16	7515x5
3/8	3/8	7515x6□
1/2	1/2	7515x8□
5/8	5/8	7515x10□
3/4	3/4	7515x12□
1	1	7515x16□
1	3/4	7515x16x12
1-1/4	1-1/4	7515x20

*7527x

Union Tee

(Ref. SAE No. 080401)

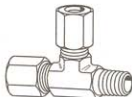


TUBE O.D.	CATALOG NUMBER
3/16	7705x3
1/4	7705x4□
5/16	7705x5□
3/8	7705x6□
1/2	7705x8□
5/8	7705x10□
3/4	7705x12□
7/8	7705x14
1	7705x16□

*7717x

Male Run Tee

(Ref. SAE No. 080424)



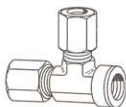
TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7755x4□
1/4	1/4	7755x4x4x4□
3/8	1/4	7755x6□
1/2	3/8	7755x8
1/2	1/2	7755x8x8x8□
5/8	1/2	7755x10
3/4	3/4	7755x12
1	1	7755x16
1-1/4	1-1/4	7755x201

*7767x

1Special order only

Female Run Tee

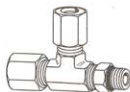
(Ref. SAE No. 080426)



TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7805x4
1/4	1/4	7805x4x4x4
3/8	1/4	7805x6
1/2	3/8	7805x8
5/8	1/2	7805x10
3/4	3/4	7805x12

Straight Thread O-Ring Run Tee

(Ref. SAE No. 080428)

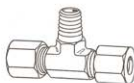


TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7716x4□
3/8	3/8	7716x6□
1/2	1/2	7716x8□

*7726x

Male Branch Tee

(Ref. SAE No. 080425)



TUBE O.D.	MALE PIPE THREAD	CATALOG NUMBER
1/4	1/8	7605x4□
1/4	1/4	7605x4x4x4□
5/16	1/8	7605x5
3/8	1/4	7605x6□
1/2	3/8	7605x8□
1/2	1/2	7605x8x8x8□
5/8	1/2	7605x10
3/4	3/4	7605x12
1	1	7605x16

7617x

*Stainless Steel Catalog number.

□ Available in Stainless Steel.

Steel Fittings

Steel Flareless Ermeto® Fittings

Female Branch Tee

(Ref. SAE No. 080427)

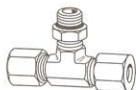


TUBE O.D.	FEM. PIPE THREAD	CATALOG NUMBER
1/4	1/8	7655x40
1/4	1/4	7655x4x4x40
3/8	1/4	7655x60
1/2	3/8	7655x80
5/8	1/2	7655x10
3/4	3/4	7655x12
7/8	3/4	7655x14
1	1	7655x16
1-1/4	1-1/4	7655x20

*7667

Straight Thread O-Ring Branch Tee

(Ref. SAE No. 080429)



TUBE O.D.	PORT SIZE	CATALOG NUMBER
1/4	1/4	7715x40
3/8	3/8	7715x60
1/2	1/2	7715x8

*7727x

Straight Thread O-Ring



Material: Buna-N 90
Durometer

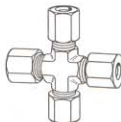
Temperature Range:

-40°F to +250°F
(-40°C to + 121°C)

Standard O-ring complies with SAE specification SAE J515 Type CH. (See page 244 for O-ring compound and application chart)

Cross

(Ref. SAE No. 080501)



TUBE O.D.

CATALOG NUMBER

1/4 7955x40

3/8 7955x60

1/2 7955x8

5/8 7955x101

3/4 7955x121

1 Special order only

*7967x

PORT SIZE

CATALOG NUMBER

1/16 7629x1

1/8 7629x2

3/16 7629x3

1/4 7629x4

5/16 7629x5

3/8 7629x6

7/16 7629x7

1/2 7629x8

5/8 7629x10

3/4 7629x12

7/8 7629x14

1 7629x16

1-1/4 7629x20

1-1/2 7629x24

2 7629x32

*Stainless Steel Catalog number.

□ Available in Stainless Steel.

Steel Fittings

Swivel Adapters

9000 Pipe Fittings

Typical Application:
Pressure hydraulic systems.

Pressure: See chart.

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

Material: Carbon steel, AISI/SAE 12L14.

Plating: Zinc, yellow dichromate finish.

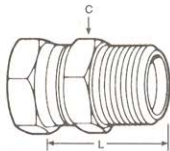
Pipe Fittings 9000 Series Pressure Rating Chart

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

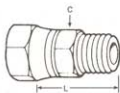


NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L
1/8-27	1/8-27	9205x2x2	9/16	.900
1/8-27	1/4-18	9205x2x4	11/16	1.187
1/4-18	1/8-27	9205x4x2	11/16	0.940
1/4-18	1/4-18	9205x4x4	11/16	1.200
1/4-18	3/8-18	9205x4x6	11/16	1.200
1/4-18	1/2-14	9205x4x8	7/8	1.540
3/8-18	1/4-18	9205x6x4	5/8	1.210
3/8-18	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

Steel Fittings

Swivel Adapters

Female 37° JIC Swivel to Male Pipe Adapter

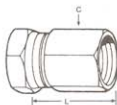


Note: C and L dimensions subject to change.

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	1-11/2	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)



Replacement O-rings page Z54.

Note: C and L dimensions subject to change.

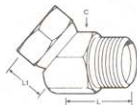
STRAIGHT THREAD	NPSM SWIVEL NUT	CATALOG NUMBER	HEX C	L
7/16-20	1/4-18	9315x4x4	9/16	.970
7/16-20	3/8-18	9315x4x6	5/8	1.060
1/2-20	1/4-18	9315x5x4	5/8	1.109
9/16-18	1/4-18	9315x6x4	11/16	1.171
9/16-18	3/8-18	9315x6x6	11/16	1.090
9/16-18	1/2-14	9315x6x8	13/16	1.210
3/4-16	1/4-18	9315x8x4	7/8	1.234
3/4-16	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

Steel Fittings

Swivel Adapters

45° Swivel Elbow Female Pipe Swivel to Male Pipe

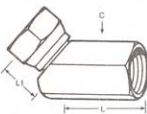
(Ref. SAE No. 140330)



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

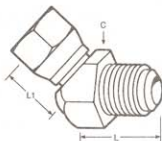
(Ref. SAE No. 140331)



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

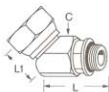
Note: C and L dimensions subject to change.

Steel Fittings

Swivel Adapters

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

(Ref. SAE No. 140357)



Replacement O-rings page 254.

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

90° Elbow Female Pipe Swivel to Male Pipe

(Ref. SAE No. 140230)



Note: C and L dimensions subject to change.

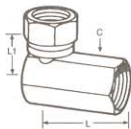
NPSM SWIVEL NUT	MALE PIPE THREAD	CATALOG NUMBER	HEX C	L	L1
1/8-27	1/8-27	9405x2x2	9/16	.720	.700
1/8-27	1/4-18	9405x2x4	11/16	1.190	.750
1/4-18	1/8-27	9405x4x2	11/16	1.060	.780
1/4-18	1/4-18	9405x4x4	11/16	.980	.750
1/4-18	3/8-18	9405x4x6	11/16	1.090	.810
1/4-18	1/2-14	9405x4x8	1	1.810	.940
3/8-18	1/4-18	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 Fittings

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)



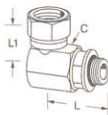
TUBE O.D.	CATALOG NUMBER	HEX C	L	L1
3/8	9151x6x6	3/4	1.00	.69
1/2	9151x8x8	1	1.25	.99
5/8	9151x10x10	1-1/4	1.44	1.09

Steel Fittings

Swivel Adapters

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

(Ref. SAE No. 140257)

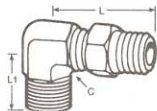


Replacement O-rings page 254.

Note: C and L dimensions subject to change.

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	1-11/12	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

90° Elbow Male Pipe Swivel to Male Pipe Rigid



Not for use with liquids over 212°F.

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

Female Pipe Swivel Tee

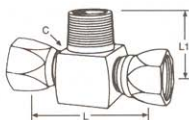


NPSM SWIVEL	CATALOG NUMBER	HEX C	L	L1
1/8-27	9705x2x2x2	1/2	1.406	.660
1/4-18	9705x4x4x4	11/16	1.720	.780
3/8-18	9705x6x6x6	7/8	1.720	.940
1/2-14	9705x8x8x8	1	2.200	1.000
3/4-14	9705x12x12x12	1-1/4	2.780	1.250
1-11-1/2	9705x16x16x16	1-1/2	3.060	1.390
1 1/4-11 1/2	9705x20x20x20	1-7/8	3.320	1.660

Steel Fittings

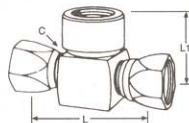
Swivel Adapters

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	3/4-14	9406x12x12x12	1-1/4	2.380	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



Note: C and L dimensions subject to change.

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

Steel Fittings

Ready-Lok® Adapters

Adapter Series: Ready-Lok® Adapters.

Typical Application: General purpose low, medium, and high pressure hydraulics. Generally found in mining operations.

Pressure: For use in hydraulic systems up to and including SAE 100R12 pressures.

Material: Carbon steel – AISI/12L14

Plating: Zinc, Yellow Dichromate finish.

Advantages: Easy installation. Just lock components together with Ready-Lok® staples. Threadless design simplifies field service and cuts maintenance costs.

Ordering Information: Order individually by catalog number.

Label Set: FS-2200

Assembly instructions



1. Lubricate the male Ready-Lok® fitting (including o-ring).



2. Assemble male fitting into fe-male adapter until it bottoms. O-ring will engage in internal mating surface. Insert staple into adapter.

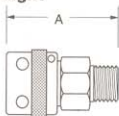


3. When the staple is inserted through the adapter and engages the shoulder of the hose end as shown, the Ready-Lok® connection is complete.



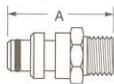
4. To disassemble, remove the staple and disengage the hose assembly.

Male Pipe To Female Ready-Lok® Swivel- Straight



READY-LOK® CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	HEX
1/4	1/4	2008x4S	2.13	3/4
3/8	3/8	2008x6S	2.19	15/16
1/2	1/2	2008x8S	2.51	1-1/8
3/4	3/4	2008x12S	2.49	1-5/16
1	1	2008x16S	3.12	1-11/16
1-1/4	1-1/4	2008x20S	3.17	2-1/8

Male Pipe To Male Ready-Lok® Straight



READY-LOK® CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	HEX
1/4	1/4	2013x4S	1.91	5/8
3/8	3/8	2013x6S	1.91	13/16
1/2	1/2	2013x8S	2.16	1
3/4	3/4	2013x12S	2.23	1-3/16
1	1	2013x16S	2.72	1-9/16
1-1/4	1-1/4	2013x20S	2.81	1-7/8

Steel Fittings

Ready-Lok® Adapters

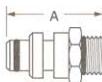
Male Straight Thread O-Ring To Female Ready-Lok® Swivel Straight



Note: Order staples separately.

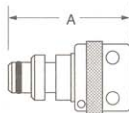
READY-LOK® CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A	HEX
1/4	1/4	2020x4S	7/16-20	1.93	3/4
3/8	3/8	2020x6S	9/16-18	2.02	15/16
1/2	1/2	2020x8S	3/4-16	2.20	1-1/8
3/4	3/4	2020x12S	1-1/16-12	2.33	1-5/16
1	1	2020x16S	1-5/16-12	2.78	1-11/16
1-1/4	1-1/4	2020x20S	1-5/8-12	2.80	2-1/8

Male Straight Thread O-Ring To Male Ready- Lok® Straight



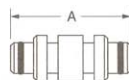
READY-LOK® CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A
1/4	1/4	2012x4S	7/16-20	1.71
3/8	3/8	2012x6S	9/16-18	1.74
1/2	1/2	2012x8S	3/4-16	1.85
3/4	3/4	2012x12S	1-1/16-12	2.08
1	1	2012x16S	1-15/16-12	2.37
1-1/4	1-1/4	2012x20S	1-5/8-12	2.43

Male Ready-Lok® To Female Ready-Lok® Swivel-Straight



READY-LOK® MALE CONNECTOR SIZE	READY-LOK® FEMALE CONNECTOR SIZE	CATALOG NUMBER	A
1/2	3/8	2015x8x6S	2.16
3/4	1/2	2015x12x8S	2.25
1	1/2	2015x16x8S	2.46
1	3/4	2015x16x12S	2.43
1-1/4	3/4	2015x20x12S	2.43
1-1/4	1	2015x20x16S	2.79

Male Ready-Lok® To Male Ready-Lok® Straight



READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A
1/4	2016x4S	2.20
3/8	2016x6S	2.20
1/2	2016x8S	2.20
3/4	2016x12S	2.20
1	2016x16S	2.63
1-1/4	2016x20S	2.63

Steel Fittings

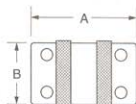
Ready-Lok® Adapters

Male Ready-Lok® Plug



READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A
1/4	2017x4S	1.33
3/8	2017x6S	1.33
1/2	2017x8S	1.33
3/4	2017x12S	1.33
1	2017x16S	1.61
1-1/4	2017x20S	1.61

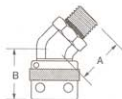
Ready-Lok® Female Connector



READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A	B
1/4	2004x4S	2.17	1.000
3/8	2004x6S	2.17	1.250
1/2	2004x8S	2.17	1.438
3/4	2004x12S	2.17	1.625
1	2004x16S	2.50	2.125
1-1/4	2004x20S	2.50	2.500

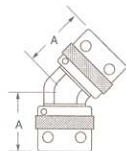
Note: Order staples separately.

45° Elbow Male Straight Thread O- Ring To Female Ready- Lok® Swivel



READY-LOK® CONNECTOR SIZE	TUBE SIZE	CATALOG NUMBER	STRAIGHT THREAD SIZE	A	B
1/4	1/4	2010x4S	7/16-20	1.03	1.29
3/8	3/8	2010x6S	9/16-18	1.08	1.35
1/2	1/2	2010x8S	3/4-16	1.37	1.65
3/4	3/4	2010x12S	1-1/16-12	1.76	1.57
1	1	2010x16S	1-5/16-12	1.79	2.04
1-1/4	1-1/4	2010x20S	1-5/8-12	1.91	2.01

45° Elbow Female Ready-Lok® Swivel Connector

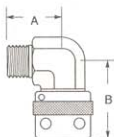


READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A
1/4	2006x4S	1.38
3/8	2006x6S	1.37
1/2	2006x8S	1.66
3/4	2006x12S	1.59
1	2006x16S	1.97
1-1/4	2006x20S	2.01

Steel Fittings

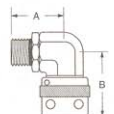
Ready-Lok® Adapters

Male Pipe To Female Ready-Lok® Swivel 90° Elbow



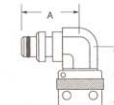
READY-LOK® CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	A	B
1/4	1/4	2009x4S	1.12	1.55
3/8	3/8	2009x6S	1.21	1.69
1/2	1/2	2009x8S	1.49	1.83
3/4	3/4	2009x12S	1.64	1.94
1	1	2009x16S	2.01	2.50
1-1/4	1-1/4	2009x20S	2.38	2.59

90° Elbow Male Straight Thread O-Ring To Female Ready- Lok® Swivel



READY-LOK® CONNECTOR SIZE	MALE PIPE THREAD	CATALOG NUMBER	STRAIGHT THREAD SIZE	A	B
1/4	1/4	2011x4S	7/16-20	1.22	1.56
3/8	3/8	2011x6S	9/16-18	1.42	1.69
1/2	1/2	2011x8S	3/4-16	1.57	1.84
3/4	3/4	2011x12S	1-1/16-12	1.96	1.94
1	1	2011x16S	1-5/16-12	2.13	2.50
1-1/4	1-1/4	2011x20S	1-5/8-12	2.33	2.59

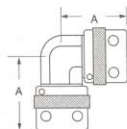
90° Elbow Male Ready- Lok® To Female Ready-Lok®



READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A	B
1/4	2014x4S	1.66	1.55
3/8	2014x6S	1.76	1.66
1/2	2014x8S	1.83	1.84
3/4	2014x12S	1.90	1.91
1	2014x16S	2.34	2.60
1-1/4	2014x20S	2.52	2.59

Note: Order staples separately.

90° Elbow Female Ready-Lok® Swivel Connector

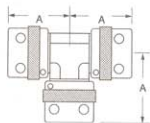


READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A
1/4	2005x4S	1.56
3/8	2005x6S	1.69
1/2	2005x8S	1.84
3/4	2005x12S	1.94
1	2005x16S	2.50
1-1/4	2005x20S	2.59

Steel Fittings

Ready-Lok® Adapters

Female Ready-Lok® Swivel Connector Tee



READY-LOK® CONNECTOR SIZE	CATALOG NUMBER	A
1/4	2007x4S	1.60
3/8	2007x6S	1.72
1/2	2007x8S	1.84
3/4	2007x12S	1.88
1	2007x16S	2.48
1-1/4	2007x20S	2.59

Ready-Lok® Back-up Ring



Material: Nylon 6/6

READY-LOK® CONNECTOR SIZE	CATALOG NUMBER
1/4	2019x4S
3/8	2019x6S
1/2	2019x8S
3/4	2019x12S
1	2019x16S
1-1/4	2019x20S

Ready-Lok® 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 specifications SAE
J515 Type CH (See page 247
for O-ring compound and
application chart)

READY-LOK® CONNECTOR SIZE	CATALOG NUMBER
1/4	2018x4S
3/8	2018x6S
1/2	2018x8S
3/4	2018x12S
1	2018x16S
1-1/4	2018x20S

Ready-Lok® Staple



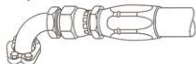
READY-LOK® CONNECTOR SIZE	CATALOG NUMBER
1/4	2003x4
3/8	2003x6
1/2	2003x8
3/4	2003x12
1	2003x16
1-1/4	2003x20

Note: Order staples
separately.

Steel Fittings

Split Flange Adapters and Kits

Adapter Used With Standard Female Swivel End (SAE Code 61)



Weatherhead® split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace equipment hose assembly.

Material: Low carbon steel.

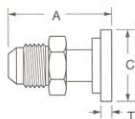
Plating: Zinc, Yellow Dichromate finish.

Pressure: Code 61 – 3000 PSI working pressure (32 sizes 2500 PSI W.P.).

Label Set: FS-300

Note: See page 377 for hydraulic O-ring assortment

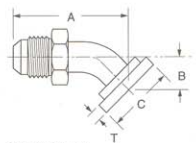
Straight



O-ring not included.

TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	DIA. C	T	THREAD SIZE
1/2	1/2	50008	2.66	1.188	.265	3/4-16
1/2	3/4	50008x12	2.72	1.500	.265	3/4-16
3/4	3/4	50012	2.62	1.500	.265	1-1/16-12
1	1	50016	2.74	1.750	.315	1-5/16-12
1	1-1/4	50016x20	2.74	2.000	.315	1-5/16-12
1-1/4	1	50020x16	2.80	1.750	.315	1-5/8-12
1-1/4	1-1/4	50020	3.27	2.000	.315	1-5/8-12
1-1/2	1-1/2	50024	3.42	2.375	.315	1-7/8-12
2	2	50032	4.24	2.812	.375	2-1/2-12

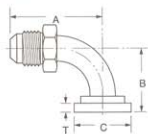
45° Elbow



O-ring not included.

TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	54508	2.91	.78	1.188	.265	3/4-16
1/2	3/4	54508x12	2.93	.84	1.500	.265	3/4-16
3/4	3/4	54512	3.28	1.03	1.500	.265	1-1/16-12
1	1	54516	3.61	1.06	1.750	.315	1-5/16-12
1	1-1/4	54516x20	3.61	1.06	2.000	.315	1-5/16-12
1-1/4	1	54520x16	3.67	1.06	1.750	.315	1-5/8-12
1-1/4	1-1/4	54520	3.36	1.15	2.000	.315	1-5/8-12
1-1/2	1-1/2	54524	4.61	1.41	2.375	.315	1-7/8-12
2	2	54532	6.28	2.00	2.812	.375	2-1/2-12

90° Elbow



O-ring not included.

TUBE SIZE	CODE 61 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	59008	2.54	1.63	1.188	.265	3/4-16
1/2	3/4	59008x12	2.54	1.69	1.500	.265	3/4-16
3/4	3/4	59012	2.79	2.19	1.500	.265	1-1/16-12
1	1	59016	3.61	2.38	1.750	.315	1-5/16-12
1	1-1/4	59016x20	3.61	2.38	2.000	.315	1-5/16-12
1-1/4	1	59020x16	3.66	2.38	1.750	.315	1-5/8-12
1-1/4	1-1/4	59020	3.52	2.62	2.000	.315	1-5/8-12
1-1/2	1-1/2	59024	4.32	3.12	2.375	.315	1-7/8-12
2	2	59032	5.95	4.50	2.812	.375	2-1/2-12

Steel Fittings

Split Flange Adapters and Kits

Split Flange Kits - SAE Standard Pressure Series (Code 61) SAE J518



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
247 for O-ring compound
and application chart)

Included in kit.

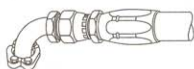
NOMINAL FLANGE SIZE	CATALOG NUMBER COMPLETE KIT	Included in kit.			A	B	C	BOLT TORQUE RANGE LB.-IN.	
		FLANGE HALVES 2 REQ'D.	O-RING	BOLTS					LOCK WASHER
1/2	SFK-08	8x251	8x252	8x853	8x254	1.50	.69	11/32	175-225
3/4	SFK-12	12x251	12x252	12x853	12x254	1.88	.88	13/32	250-350
1	SFK-16	16x251	16x252	12x853	12x254	2.06	1.03	13/32	325-425
1-1/4	SFK-20	20x251	20x252	20x853	20x254	2.31	1.19	15/32	425-550
1-1/2	SFK-24	24x251	24x252	24x853	24x254	2.75	1.41	17/32	550-700
2	SFK-32	32x251	32x252	24x853	24x254	3.06	1.69	17/32	650-800

Flanges conform to SAE J518.

Steel Fittings

Split Flange Adapters and Kits

Adapter Used With Standard Female Swivel End (SAE Code 62)



Weatherhead® split flange adapter eliminates the need for special hose ends. Interconnect pumps and valves with SAE flange outlets using low cost standard hose assemblies to replace original equipment hose assembly.

Material: AISI/SAE 12L14 carbon steel.

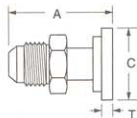
Plating: Zinc, Yellow Dichromate finish.

Pressure: Code 62 - 5000 PSI working pressure.

Label Set: FS-300

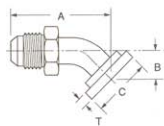
Note: See page 377 for hydraulic o-ring assortment.

Straight



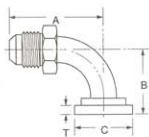
TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	DIA. C	T	THREAD SIZE
1/2	1/2	60008	2.32	1.25	.305	3/4-16
3/4	3/4	60012	2.64	1.62	.345	1-1/16-12
1	1	60016	3.44	1.88	.375	1-5/16-12
1-1/4	1-1/4	60020	3.97	2.12	.405	1-5/8-12
1-1/2	1-1/2	60024	4.97	2.50	.495	1-7/8-12
2	2	60032	5.22	3.12	.495	2-1/2-12

45° Elbow



TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	64508	2.12	1.10	1.25	.305	3/4-16
3/4	3/4	64512	2.56	1.32	1.62	.345	1-1/16-12
1	1	64516	3.34	1.43	1.88	.375	1-5/16-12
1-1/4	1-1/4	64520	3.49	1.87	2.12	.405	1-5/8-12
1-1/2	1-1/2	64524	6.31	3.07	2.50	.495	1-7/8-12
2	2	64532	8.19	3.74	3.12	.495	2-1/2-12

90° Elbow

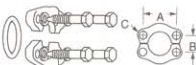


TUBE SIZE	CODE 62 FLANGE SIZE	CATALOG NUMBER	A	B	DIA. C	T	THREAD SIZE
1/2	1/2	69008	1.57	2.11	1.25	.305	3/4-16
3/4	3/4	69012	1.93	2.56	1.62	.345	1-1/16-12
1	1	69016	2.35	2.90	1.88	.375	1-5/16-12
1-1/4	1-1/4	69020	2.91	3.46	2.12	.405	1-5/8-12
1-1/2	1-1/2	69024	5.44	6.53	2.50	.495	1-7/8-12
2	2	69032	7.38	8.22	3.12	.495	2-1/2-12

Steel Fittings

Split Flange Adapters and Kits

Split Flange Kits – SAE High Pressure Series (Code 62) SAE J518



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 specifications SAE J515 Type CH (See page 247 for O-ring compound and application chart)

Note: Code 62 split flange kits cannot be used with Thick Flange™ fittings. Use existing split flanges.

Included in kit.

NOMINAL FLANGE SIZE	CATALOG NUMBER COMPLETE KIT	FLANGE HALVES Z REQ'D.	O-RING	BOLTS	LOCK WASHER	A	B	C	BOLT TORQUE RANGE LB.-IN.
1/2	SFK62-8	8x262	8x252	8x853	8x254	1.57	.72	5/16	175-225
3/4	SFK62-12	12x262	12x252	12x863	12x254	2.00	.94	13/32	300-400
1	SFK62-16	16x262	16x252	16x863	20x254	2.25	1.09	15/32	500-600
1-1/4	SFK62-20	20x262	20x252	20x863	24x254	2.63	1.25	17/32	750-900
1-1/2	SFK62-24	24x262	24x252	24x863	24x264	3.12	1.44	21/32	1400-1600
2	SFK62-32	32x262	32x252	32x863	32x264	3.81	1.75	25/32	2400-2600

Flanges conform to SAE J518.