



# AXELON

---

BRASS FITTINGS

# CONTENTS

<b>1. Application Data</b>	<b>04</b>
1.1. Visual Index	
1.2. Numbering System	
1.3. Thread Identification	
<b>2. Compression Fittings</b>	<b>17</b>
2.1. Industrial Compression Fittings	
<b>3. Flare Fittings</b>	<b>23</b>
3.1. 45° Flare Fittings	
3.2. Inverted Flare Fittings.	
<b>4. Industrial Fittings &amp; Adapters</b>	<b>34</b>
4.1. Pipe Fittings	
<b>5. Automotive Compression Fittings</b>	<b>42</b>
5.1. Airbrake NTA Fittings	
5.2. Transmission Fittings	
5.3. Airbrake Fittings	
<b>6. Hose Fittings</b>	<b>52</b>
6.1. Push on Barb	
<b>7. Manufacturing Techniques</b>	<b>64</b>
<b>8. Tube Line Fabrication Guide</b>	<b>66</b>
<b>9. English/Metric Conversion</b>	<b>69</b>

# ABOUT THE COMPANY

---

*Every single pursuit towards excellence has its roots firmly set in the courage to dream and having a single-minded focus on fulfilling them. Backed by long industry experience, fuelled by young enthusiasm and steered by farsighted vision, Axelon group's journey from Jamnagar, Gujarat in the world of brass manufacturing industry is motivated by this philosophy where the dream is to establish a new benchmark of brilliance and innovation in the industry. The company believes in a deep-rooted dynamism and dedication towards achieving the goal. Axelon group has a team of experienced, astute and technically expert directors who are holding the bastions of excellence with their shared focus energy helping the group finding its firm presence in the industry.*

*For more than three decades, Axelon group – an ISO 9001:2015 certified company is a leading and reputed name in the organised brass sector delivering engineering brass component solution to range of industries both nationally and internationally.*



**Axelon**  
**GROUP**

# APPLICATION DATA

---


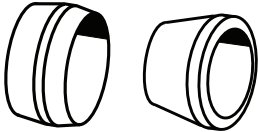

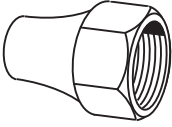
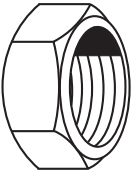
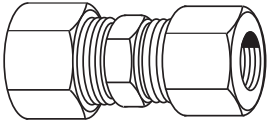
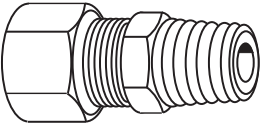
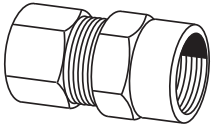
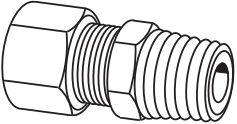
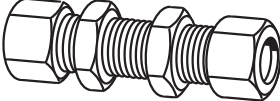
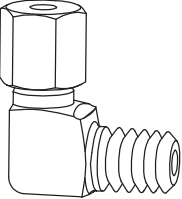
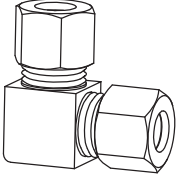
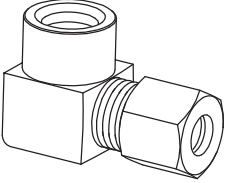
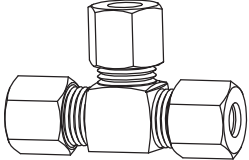
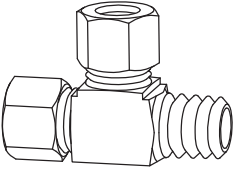
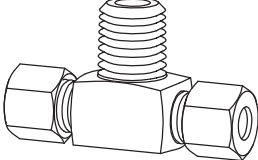
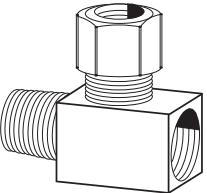
**1.1** VISUAL INDEX

**1.2** NUMBERING SYSTEM

**1.3** THREAD IDENTIFICATION


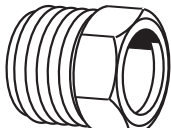
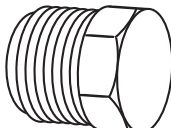
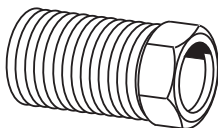
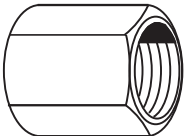
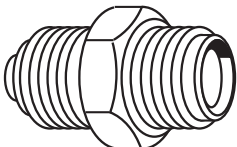
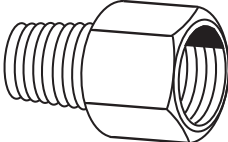
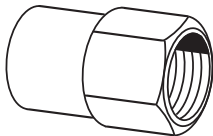
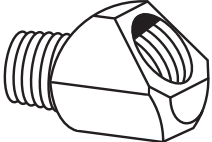
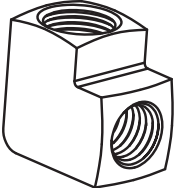
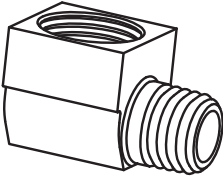
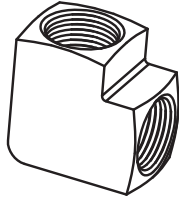
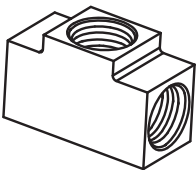
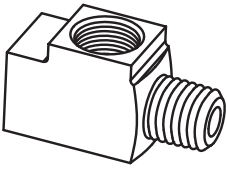
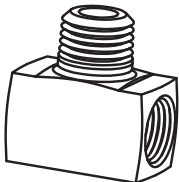
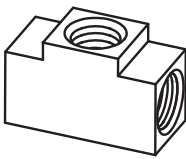
# 1.1 VISUAL INDEX

## COMPRESSION AND SELFALIGN PRODUCTS

<p>Tube Support for Plastic Tubing</p> 	<p>Sleeve</p> 	<p>Nut</p> 	<p>Long Nut</p> 
<p>Bulkhead Nut</p> 	<p>Union</p> 	<p>Male Connector</p> 	<p>Female Connector</p> 
<p>Male Ball Check Connector</p> 	<p>Bulkhead Union</p> 	<p>90° Male Elbow</p> 	<p>90° Union Elbow</p> 
<p>90° Female Elbow</p> 	<p>Union Tee</p> 	<p>Male Run Tee</p> 	<p>Male Branch Tee</p> 
<p>Adapter Tee</p> 			

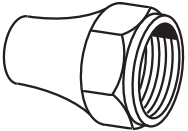
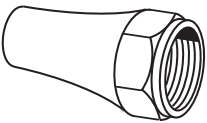
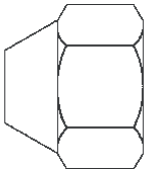
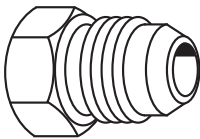
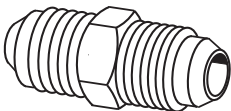
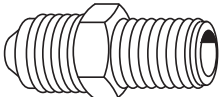
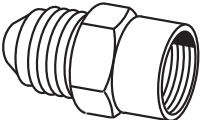
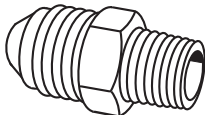
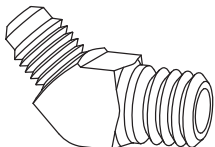
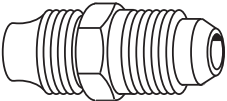
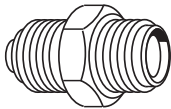
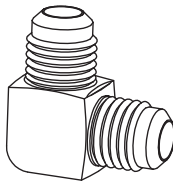
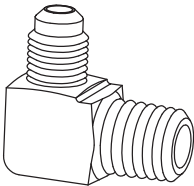
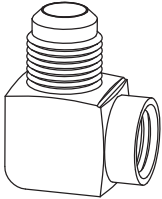
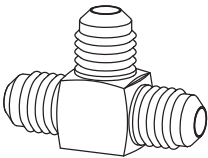
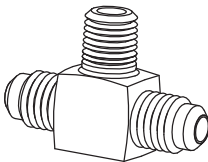
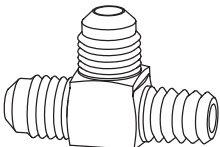
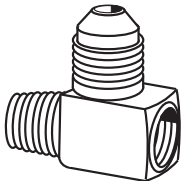
# VISUAL INDEX

## INVERTED FLARE

<p>Tube Nut (Steel)</p> 	<p>Tube Nut (Brass)</p> 	<p>Plug (Steel)</p> 	<p>Tube Nut Long (Steel)</p> 
<p>Union</p> 	<p>Adapter SAE 45° Flare to Inv. Flare</p> 	<p>Male Connector</p> 	<p>Female Connector</p> 
<p>45° Male Elbow</p> 	<p>90° Union Elbow</p> 	<p>90° Male Elbow</p> 	<p>90° Female Elbow</p> 
<p>Union Tee</p> 	<p>Male Run Tee</p> 	<p>Male Branch Tee</p> 	<p>Female Branch Tee</p> 


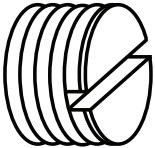
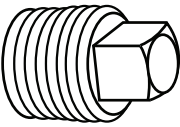
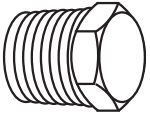
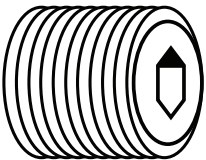
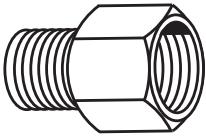
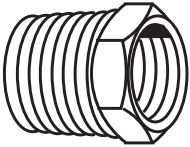
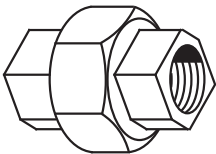
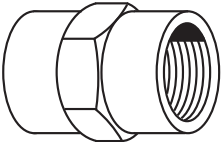
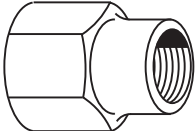
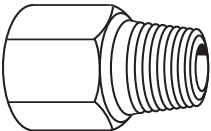
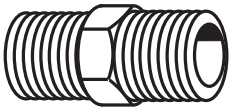
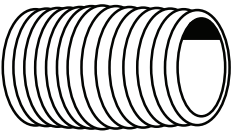
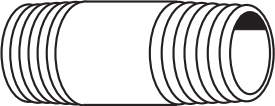
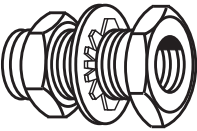
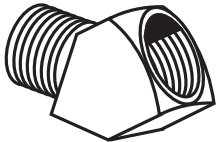
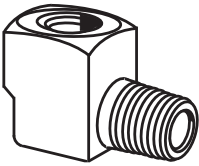
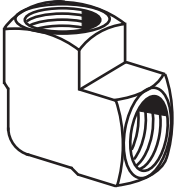
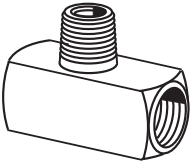
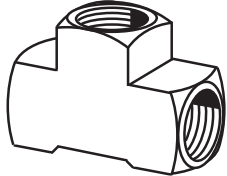
# VISUAL INDEX

## SAE 45° Flare

<p>Nut</p> 	<p>Long Nut</p> 	<p>Cap</p> 	<p>Plug</p> 
<p>Union</p> 	<p>Male Connector</p> 	<p>Female Connector</p> 	<p>Male Ball Check Connector</p> 
<p>45° Male Elbow</p> 	<p>AC Type Adapter</p> 	<p>Adapter SAE 45° Flare to Inv. Flare</p> 	<p>90° Union Elbow</p> 
<p>90° Male Elbow</p> 	<p>90° Female Elbow</p> 	<p>Union Tee</p> 	<p>Male Run Tee</p> 
<p>Male Branch Tee</p> 	<p>Adapter Tee</p> 		

# VISUAL INDEX

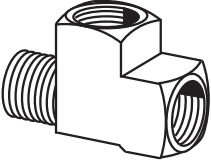
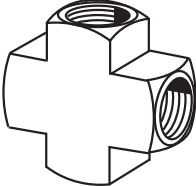
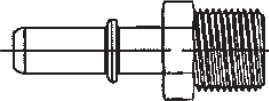
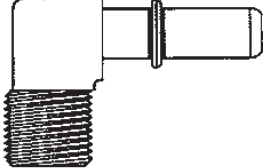
## Pipe Fittings

<p>Cap</p> 	<p>Slotted Plug</p> 	<p>Square Head Plug</p> 	<p>Hex Head Plug</p> 
<p>Hex Socket Plug</p> 	<p>Adapter</p> 	<p>Bushing</p> 	<p>Union</p> 
<p>Coupling</p> 	<p>Reducer Coupling</p> 	<p>Restriction Pipe Adapter</p> 	<p>Hex Nipple</p> 
<p>Close Nipple</p> 	<p>Long Nipple</p> 	<p>Bulkhead Coupling</p> 	<p>45° Street Elbow</p> 
<p>90° Street Elbow</p> 	<p>90° Elbow</p> 	<p>Male Branch Tee</p> 	<p>Tee</p> 

# VISUAL INDEX

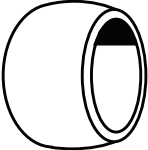
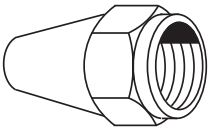
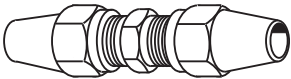
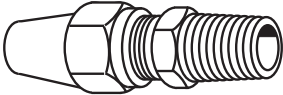
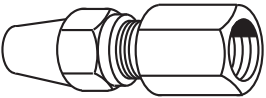
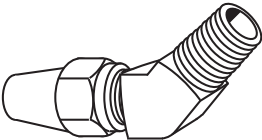
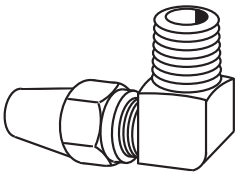
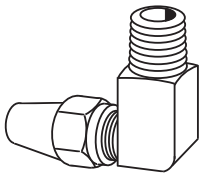
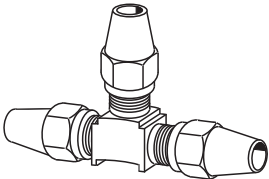
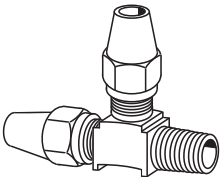
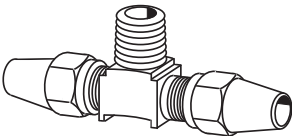
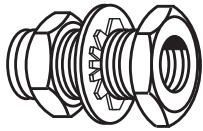
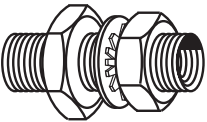
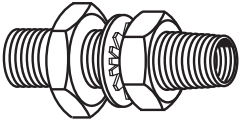
---

## Pipe Fittings

<p>Male Run Tee</p>  A technical drawing of a male run tee fitting. It features a threaded male end on the left and two female ports on the right, one at the top and one at the bottom.	<p>Cross</p>  A technical drawing of a cross fitting. It has a central threaded male end and four female ports extending outwards in a cross pattern.	<p>Straight</p>  A technical drawing of a straight fitting. It consists of a single threaded male end on one side and a smooth female end on the other.	<p>90° Elbow</p>  A technical drawing of a 90-degree elbow fitting. It has a threaded male end on one side and a smooth female end on the other, bent at a 90-degree angle.
---	--	---	--

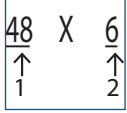
# VISUAL INDEX

## Air Brake Fittings

<p>Sleeve</p> 	<p>Nut</p> 	<p>Union</p> 	<p>Male Connector</p> 
<p>Female Connector</p> 	<p>Adapter</p> 	<p>Bushing</p> 	<p>Union</p> 
<p>Union Tee</p> 	<p>Male Run Tee</p> 	<p>Male Branch Tee</p> 	<p>Bulkhead Coupling</p> 
<p>Bulkhead Coupling</p> 	<p>Bulkhead Coupling</p> 		

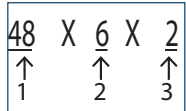
# 1.2 NUMBERING SYSTEM

Parts in this catalog are identified by a series of numbers separated by the letter "X."



1. The number preceding the "X" is the Catalog "Base Number" and indicates the type of connector. See Table 1 for additional base number data (sometimes referred to as dash size).

Type	Example Male Connector	Example Female Connector
45° Flare	48	46
Compression	68	66
Polyline	1268	1266
Selfalign	681	661
Air Brake (Nylon)	1468	1466
Air Brake (Copper)	1368	1366

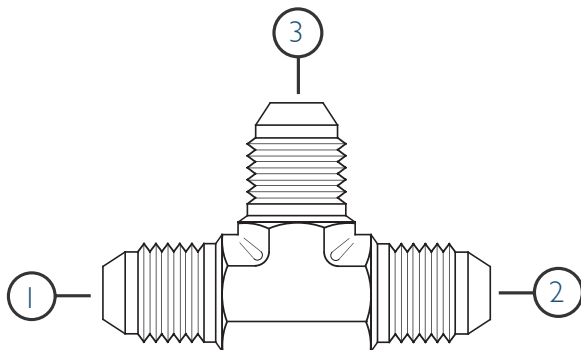


2. The second number is the tube and/or pipe size in sixteenths of an inch. When a pipe thread for a given tube size follows the SAE standard as shown in Table 2, no other number is required. Example: 48X6 = SAE 45° Flare Male Connector-3/8" tube, 1/4" Male Pipe.

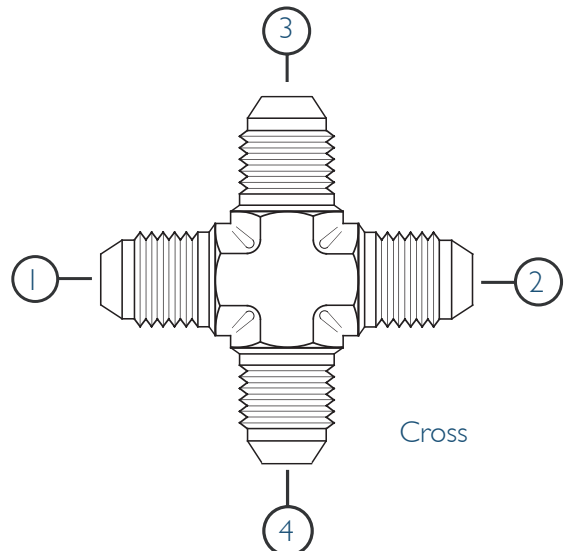
	Tube Size	Pipe Threads
X2	1/8"	1/8"
X3	3/16"	1/8"
X4	1/4"	1/8"
X5	5/16"	1/8"
X6	3/8"	1/4"
X7	7/16"	1/4"
X8	1/2"	3/8"
X10	5/8"	1/2"
X12	3/4"	1/2"
X14	7/8"	3/4"
X16	1"	1"
X20	1-1/4"	No Standard
X24	1-1/2"	No Standard
X32	2"	No Standard

3. If the pipe size is not to the SAE standard, another "X" is added followed by the pipe size indicated in sixteenths of an inch. Example: 1/8" is equal to 2/16" or X2 suffix.

In designating tube and pipe sizes for tees and crosses that are not SAE standard, indicate the sizes in the sequence shown.



Tee



Cross

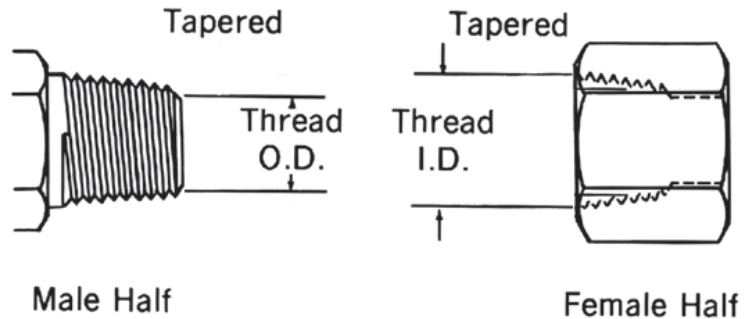
# 1.3 THREAD IDENTIFICATION

## AMERICAN CONNECTIONS NPTF (NATIONAL PIPE TAPERED FUEL)

### NPTF Threads

This connection is still widely used in fluid power systems, even though it is not recommended by the National Fluid Power Association (NFPA) for use in hydraulic applications. The thread is tapered and the seal takes place by deformation of the threads.

Measure thread diameter and subtract 1/4-inch to find the nominal pipe size.

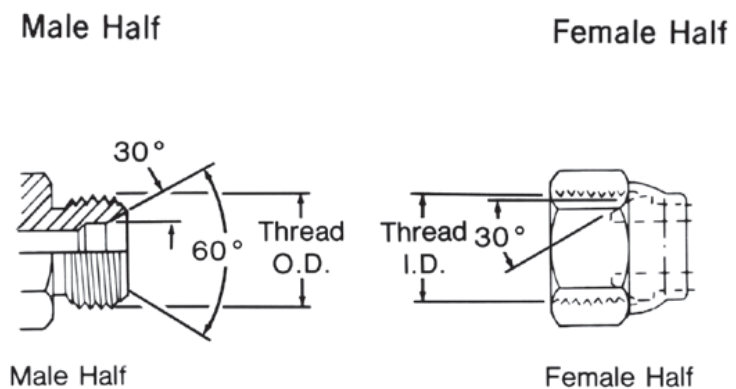


Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. Inch		Female Thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	1/8-27	13/32	0.41	3/8	0.38
1/4	04	1/4-18	17/32	0.54	1/2	0.49
3/8	06	3/8-18	11/16	0.68	5/8	0.63
1/2	08	1/2-14	27/32	0.84	25/32	0.77
3/4	12	3/4-14	1-1/16	1.05	1	0.98
1	16	1-11-1/2	1-5/16	1.32	1-1/4	1.24
1-1/4	20	1-1/4-11-1/2	1-21/32	1.66	1-19/32	0.58
1-1/2	24	1-1/2-11-1/2	1-29/32	1.90	1-13/16	1.82
2	32	2-11-1/2	2-3/8	2.38	2-5/16	2.30

### NPSM (National Pipe Straight Mechanical)

This connection is some times used in fluid power systems. The female half has a straight thread and an inverted 30° seat. The male half of the connection has a straight thread and a 30° internal chamfer. The seal takes place by compression of the 30° seat on the chamfer. The threads hold the connection mechanically.

Note: A properly chamfered NPTF male will also seal with the NPSM female.

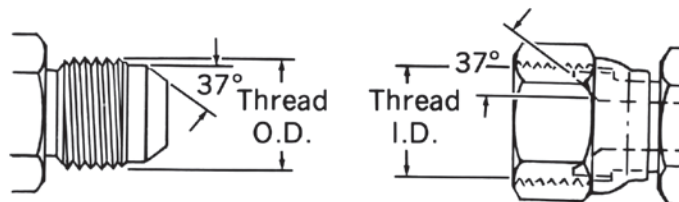


Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. Inch		Female Thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	1/8-27	13/32	0.41	3/8	0.38
1/4	04	1/4-18	17/32	0.54	1/2	0.49
3/8	06	3/8-18	11/16	0.68	5/8	0.63
1/2	08	1/2-14	27/32	0.84	25/32	0.77
3/4	12	3/4-14	1-1/16	1.05	1	0.98
1	16	1-11-1/2	1-5/15	1.32	1-1/4	1.24
1-1/4	20	1-1/4-11-1/2	1-21/32	1.66	1-19/32	0.58
1-1/2	24	1-1/2-11-1/2	1-29/32	1.90	1-13/16	1.82
2	32	2-11-1/2	2-3/8	2.38	2-5/16	2.30

# THREAD IDENTIFICATION

## American Connections SAE J514 37° Hydraulic

This connection is still widely used in fluid power systems, even though it is not recommended by the National Fluid Power Association (NFPA) for use in hydraulic applications. The thread is tapered and the seal takes place by deformation of the threads.



Male Half

Female Half

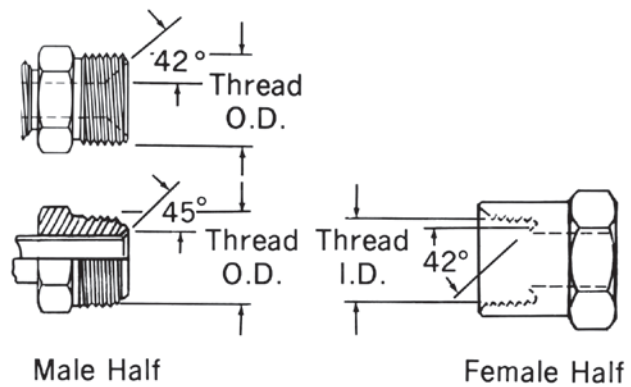
Measure thread diameter and subtract 1/4-inch to find the nominal pipe size.

Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. Inch		Female Thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	5/16-24	5/16	0.31	9/32	0.27
3/16	03	3/8-24	3/8	0.38	11/32	0.34
1/4	04	7/16-20	7/16	0.44	13/32	0.39
5/16	05	1/2-20	1/2	0.50	15/32	0.45
3/8	06	9/16-18	9/16	0.56	17/32	0.51
1/2	08	3/4-16	3/4	0.75	11/16	0.69
5/8	10	7/8-14	7/8	0.88	13/16	0.81
3/4	12	1-1/16-12	1-1/16	1.06	1	0.98
7/8	14	1-3/16-12	1-3/16	1.19	1-1/8	1.13
1	16	1-5/16-12	1-5/16	1.31	1-1/4	1.23
1-1/4	20	1-5/8-12	1-5/8	1.63	1-9/16	1.54
1-1/2	24	1-7/8-12	1-7/8	1.88	1-13/16	1.79
2	32	2-1/2-12	2-1/2	2.50	2-7/16	2.42

# THREAD IDENTIFICATION

## American Connections SAE J512 Inverted

This connection is frequently used in automotive systems. The male connector can either be a 45° flare in the tube fitting form or a 42° seat in the machined adapter form. The female has a straight thread with a 42° inverted flare. The seal takes place on the flared surfaces. The threads hold the connection mechanically.

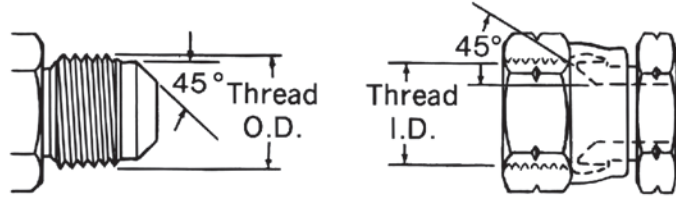


Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. Inch		Female Thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	5/16-28	5/16	0.32	9/32	0.28
3/16	03	3/8-24	3/8	0.38	11/32	0.34
1/4	04	7/16-24	7/16	0.44	13/32	0.40
5/16	05	1/2-20	1/2	0.50	15/32	0.45
3/8	06	5/8-18	5/8	0.63	9/16	0.57
7/16	07	11/16-18	11/16	0.69	5/8	0.63
1/2	08	3/4-18	3/4	0.75	23/32	0.70
5/8	10	7/8-18	7/8	0.88	13/16	0.82
3/4	12	1-1/16-16	11/16	1.06	1	1.00

# THREAD IDENTIFICATION

## American Connections SAE J512 45°

This connection is commonly used in refrigeration, automotive and truck piping systems. The connector is frequently made of brass. Both the male and female connectors have 45° seats. The seal takes place between the male flare the female cone seat. The threads hold the connection mechanically.



Male Half

Female Half

**Caution:**

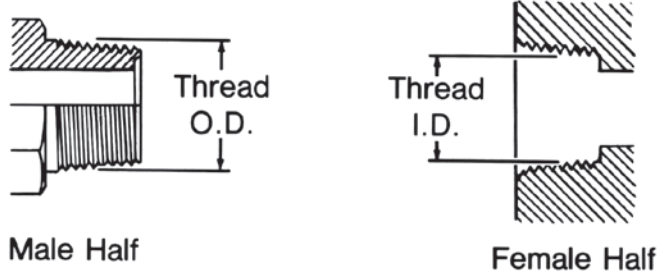
In the -02, -03, -04, -05, -08 and -10 sizes, the threads of the SAE 45° flare and the SAE 37° flare are the same. However, the sealing surface angles are not the same.

Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. Inch		Female Thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	5/16-24	5/16	0.31	9/32	0.27
3/16	03	3/8-24	3/8	0.38	11/32	0.34
1/4	04	7/16-20	7/16	0.44	13/32	0.39
5/16	05	1/2-20	1/2	0.50	15/32	0.45
3/8	06	5/8-18	5/8	0.63	9/16	0.57
1/2	08	3/4-16	3/4	0.75	11/16	0.69
5/8	10	7/8-14	7/8	0.88	13/16	0.81
3/4	12	1-1/16-14	1-1/16	1.06	1	0.99
7/8	14	1-1/4-12	1-1/4	1.25	1-5/32	1.16
1	16	1-3/8-12	1-3/8	1.38	1-9/32	1.29

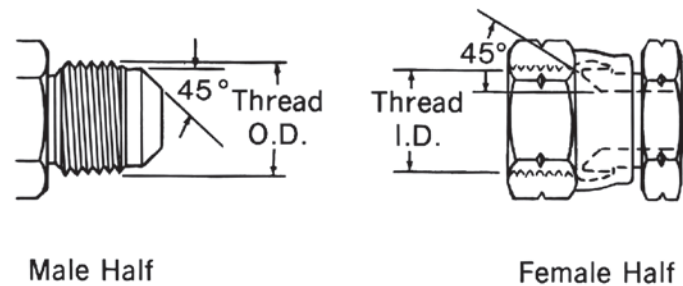
# THREAD IDENTIFICATION

## British Connections British Standard Pipe (BSP)

This BSPT (tapered) connection is similar to the NPT, except that the thread pitches are different in most sizes, and the thread form and O.D.s are close but not the same. Sealing is accomplished by thread distortion. A thread sealant is recommended.



The BSP (parallel) male is similar to the NPSM male except the thread pitches are different in most sizes. The female swivel BSPP has a tapered nose/Globeseal flareless swivel which seals on the cone seat of the male.



## BSPT/BSPP Threads

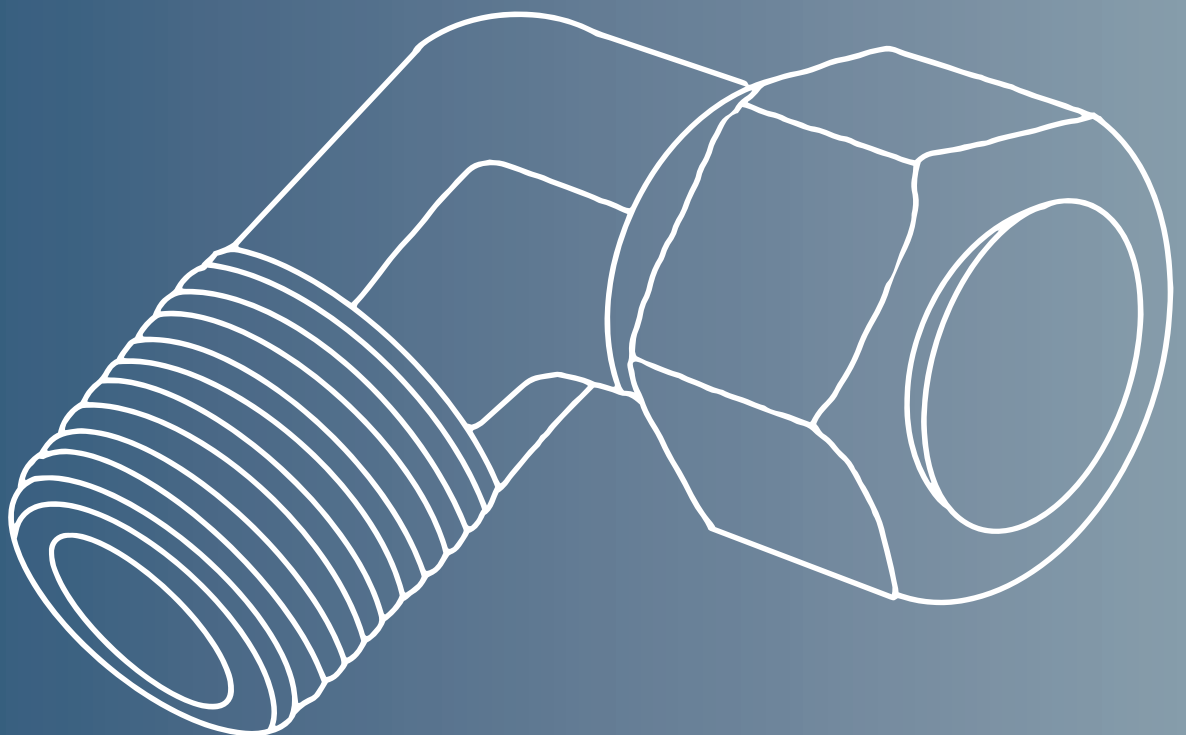
Inch Size	Dash Size	Nominal Thread Size*	Male Thread O.D. Inch		Female thread I.D. Inch	
			Fraction	Decimal	Fraction	Decimal
1/8	02	1/8-28	3/8	0.38	11/32	0.35
1/4	04	1/4-19	33/64	0.52	15/32	0.47
3/8	06	3/8-19	21/32	0.65	19/32	0.60
1/2	08	1/2-14	13/16	0.82	3/4	0.75
5/8	10	5/8-14	7/8	0.88	13/16	0.80
3/4	12	3/4-14	11/32	1.04	31/32	0.97
1	16	1-11	15/16	1.30	1-7/32	1.22
1-1/4	20	1-1/4-11	1-21/32	1.65	1-9/16	1.56
1-1/2	24	1-1/2-11	1-7/8	1.88	1-25/32	1.79
2	32	2-11	2-11/32	2.35	2-1/4	2.26

\*Frequently, the thread size is expressed as a fractional dimension preceded by the letter "G" or the letter "R". The "G" represents a parallel thread and the "R" indicates a tapered thread. For example, BSPP 3/8-19 may be expressed as G 3/8, and BSPT 3/8-19 may be expressed as R3/8.

# 2

## COMPRESSION FITTINGS

### 2.1 INDUSTRIAL COMPRESSION FITTINGS



# 2.1 INDUSTRIAL COMPRESSION FITTINGS

Compression Fittings provide users with an economical choice with numerous connection options for a wide variety of tube materials without the need for flaring, soldering or other tube preparation necessary to assemble.

## Product Features:

- Meets functional requirements of SAEJ-512
- Brass or Acetal sleeve available
- No tube preparation
- Forged and Extruded shapes

## Applications:

- Airlines
- Lubrication lines
- Cooling lines
- Industry
- Machinery
- Compressors
- Fluid transfer

## Markets:

- Industrial
- Packaging
- Pneumatic
- Printing

## Compatible Tubing:

- Copper
- Aluminium
- Thermoplastic Tubing

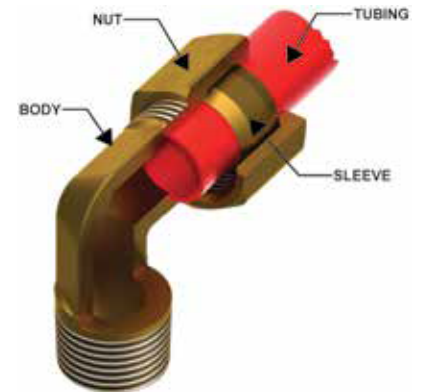
## Specifications:

Temperature Range: 0.65° to +200° F (-53.8° to +93.3° C)

## Pressure Range

TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
1/8	2800	193.0	1/2	750	51.7
3/16	1900	131.0	5/8	650	44.8
1/4	1400	96.5	3/4	550	37.9
5/16	1200	82.7	7/8	450	24.1
3/8	1000	68.9			

Note: Pressures listed in above table are with brass sleeve and copper tubing



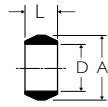
## Assembly Instructions-

1. Slide nut then sleeve onto tubing. The thread end of the nut must face out.
2. Insert tube and bottom on the fitting shoulder
3. Assemble nut to body and tighten "hand tight". Then wrench tighten the number of turns indicated in the table

# INDUSTRIAL COMPRESSION FITTINGS

## Sleeve 60C

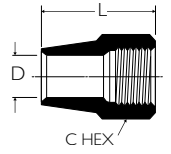
REF. SAE 060115



PART NO.	TUBE SIZE	A	D	L
AX60C-2	1/8	.187	.130	.19
AX60C-3	3/16	.266	.192	.22
AX60C-4	1/4	.344	.255	.25
AX60C-5	5/16	.406	.318	.25
AX60C-6	3/8	.469	.382	.25
AX60C-7	7/16	.531	.444	.31
AX60C-8	1/2	.594	.507	.38
AX60C-10	5/8	.719	.632	.38
AX60C-12	3/4	.875	.758	.44
AX60C-14	7/8	1.000	.883	.41

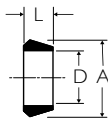
## Long Nut 61CL

REFSAE 060111



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX61CL-4	1/4	7/16-24	1/2	.255	.75
AX61CL-5	5/16	1/2-24	9/16	.318	.84
AX61CL-6	3/8	9/16-24	5/8	.382	.97
AX61CL-8	1/2	11/16-20	13/16	.507	1.06
AX61CL-10	5/8	13/16-18	15/16	.632	1.19
AX61CL-12	3/4	1-18	1-3/16	.758	1.38

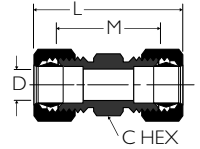
## Acetal Sleeve 60PT



PART NO.	PLASTIC TUBE WALL	TUBE WALL	A	D	L
AX60PT-4	1/4	.040	.375	.254	.19
AX60PT-5	5/16	.062	.438	.317	.19
AX60PT-6	3/8	.062	.500	.379	.19
AX60PT-8	1/2	.062	.631	.507	.25
AX60PT-10	5/8	.062	.747	.632	.22

## Union 62C

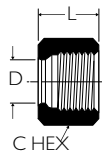
REFSAE 060101 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX62C-2	1/8	5/16-24	5/16	1.05	.64	.094
AX62C-3	3/16	3/8-24	3/8	1.21	.72	.125
AX62C-4	1/4	7/16-24	7/16	1.33	.79	.188
AX62C-5	5/16	1/2-24	1/2	1.39	.85	.250
AX62C-6	3/8	9/16-24	9/16	1.52	.97	.312
AX62C-7	7/16	5/8-24	5/8	1.70	1.02	.312
AX62C-8	1/2	11/16-20	11/16	1.90	1.08	.406
AX62C-10	5/8	13/16-18	13/16	2.06	1.23	.500
AX62C-12	3/4	1-18	1	2.37	1.41	.562
AX62C-14	7/8	1-1/8-18	1-1/8	2.07	1.19	.766

## Nut 61C

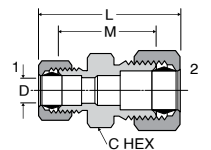
REFSAE 060110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX61C-2	1/8	5/16-24	3/8	.130	.38
AX61C-3	3/16	3/8-24	7/16	.192	.41
AX61C-4	1/4	7/16-24	1/2	.255	.44
AX61C-5	5/16	1/2-24	9/16	.318	.44
AX61C-6	3/8	9/16-24	5/8	.382	.47
AX61C-7	7/16	5/8-24	11/16	.444	.50
AX61C-8	1/2	11/16-20	13/16	.507	.62
AX61C-10	5/8	13/16-18	15/16	.632	.62
AX61C-12	3/4	1-18	1-3/16	.758	.69
AX61C-14	7/8	1-1/8-18	1-1/4	.890	.62

## Union Reducers 62C

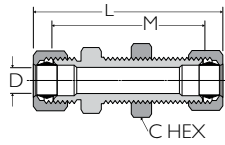
REFSAE 060101 BA



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 THREAD	2 THREAD	C HEX	L	M	FLOW DIA. D
AX62C-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.29	.78	.125
AX62C-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.46	.91	.188
AX62C-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.71	1.03	.312
AX62C-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.82	1.13	.312

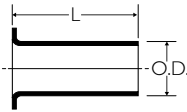
# INDUSTRIAL COMPRESSION FITTINGS

## Bulkhead Union 62CBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
AX62CBH-4	1/4	7/16-24	9/16	2.29	1.75	7/16	.188
AX62CBH-6	3/8	9/16-24	11/16	2.42	1.88	9/16	.312

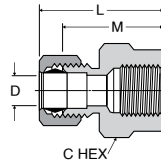
## Brass Insert 63PT



PART NO.	TUBE O.D.	TUBE WALL	L	O.D.
AX63PT-2-16	1/8	.016	.46	.080
AX63PT-2-23	1/8	.023	.45	.073
AX63PT-3-25	3/16	.025	.45	.135
AX63PT-3-40	3/16	.040	.52	.095
AX63PT-4-62	1/4	.062	.33	.110
AX63PT-5-40	5/16	.040	.50	.232
AX63PT-5-62	5/16	.062	.53	.187
AX63PT-10-62	5/8	.062	.72	.483

## Female Connector 66C

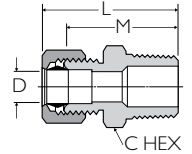
REF. SAE060103BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX66C-2-2	1/8	1/8	5/16-24	9/16	.95	.75	.094
AX66C-3-2	3/16	1/8	3/8-24	9/16	1.02	.78	.125
AX66C-3-4	3/16	1/4	3/8-24	11/16	1.20	.96	.125
AX66C-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
AX66C-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
AX66C-5-2	5/16	1/8	1/2-24	9/16	1.07	.81	.250
AX66C-5-4	5/16	1/4	1/2-24	11/16	1.29	1.03	.250
AX66C-6-2	3/8	1/8	9/16-24	9/16	1.06	.78	.312
AX66C-6-4	3/8	1/4	9/16-24	11/16	1.34	1.06	.312
AX66C-6-6	3/8	3/8	9/16-24	13/16	1.34	1.06	.312
AX66C-6-8	3/8	1/2	9/16-24	1	1.54	1.27	.312
AX66C-7-6	7/16	3/8	5/8-24	13/16	1.43	1.09	.312
AX66C-8-4	1/2	1/4	11/16-20	11/16	1.49	1.09	.406
AX66C-8-6	1/2	3/8	11/16-20	13/16	1.52	1.12	.406
AX66C-8-8	1/2	1/2	11/16-20	1	1.71	1.31	.406
AX66C-10-8	5/8	1/2	13/16-18	1	1.80	1.38	.500

## Male Connector 68C

REF. SAE060102BA

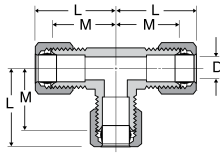


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX68C-2-1	1/8	1/16	5/16-24	3/8	.99	.78	.095
AX68C-2-2	1/8	1/8	5/16-24	7/16	.97	.77	.094
AX68C-3-1	3/16	1/16	3/8-24	3/8	1.08	.84	.125
AX68C-3-2	3/16	1/8	3/8-24	7/16	1.08	.84	.125
AX68C-3-4	3/16	1/4	3/8-24	9/16	1.27	1.03	.125
AX68C-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
AX68C-4-4	1/4	1/4	7/16-24	9/16	1.30	1.06	.188
AX68C-4-6	1/4	3/8	7/16-24	11/16	1.27	1.03	.188
AX68C-4-8	1/4	1/2	7/16-24	7/8	1.55	1.31	.188
AX68C-5-2	5/16	1/8	1/2-24	1/2	1.15	.89	.234
AX68C-5-4	5/16	1/4	1/2-24	9/16	1.33	1.07	.250
AX68C-6-2	3/8	1/8	9/16-24	9/16	1.25	.97	.250
AX68C-6-4	3/8	1/4	9/16-24	9/16	1.42	1.14	.312
AX68C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.312
AX68C-6-8	3/8	1/2	9/16-24	7/8	1.53	1.25	.312
AX68C-7-4	7/16	1/4	5/8-24	5/8	1.50	1.17	.312
AX68C-8-4	1/2	1/4	11/16-20	11/16	1.60	1.20	.312
AX68C-8-6	1/2	3/8	11/16-20	11/16	1.60	1.20	.406
AX68C-8-8	1/2	1/2	11/16-20	7/8	1.71	1.31	.406
AX68C-10-6	5/8	3/8	13/16-18	13/16	1.73	1.31	.406
AX68C-10-8	5/8	1/2	13/16-18	7/8	1.90	1.48	.500
AX68C-10-12	5/8	3/4	13/16-18	1-1/16	1.98	1.56	.500
AX68C-12-8	3/4	1/2	1-18	1	2.05	1.60	.562
AX68C-12-12	3/4	3/4	1-18	1-1/16	2.08	1.63	.656
AX68C-14-12	7/8	3/4	1-1/8-18	1-1/8	1.76	1.41	.750

# INDUSTRIAL COMPRESSION FITTINGS

## Union Tee 164C- 264C

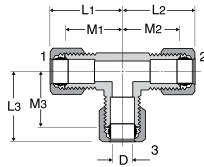
REF.SAE 060401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX164C-2	1/8	5/16-24	.82	.61	.094
AX264C-3	3/16	3/8-24	.84	.60	.125
AX164C-4	1/4	7/16-24	.86	.63	.188
AX264C-4	1/4	7/16-24	.84	.60	.188
AX164C-5	5/16	1/2-24	.98	.71	.250
AX164C-6	3/8	9/16-24	1.03	.74	.312
AX164C-8	1/2	11/16-20	1.34	.93	.406
AX164C-10	5/8	13/16-18	1.54	1.08	.500
AX164C-12	3/4	100-18	1.65	1.17	.563

## Union Tee 164C- 264C Combination Sizes

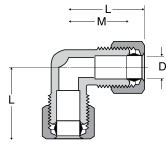
REF. SAE 060401 BA



PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
AX164C-6-4-4	3/8	1/4	1/4	1.03	.96	.96	.75	.72	.72	.188
AX164C-6-6-4	3/8	3/8	1/4	1.03	.96	.96	.75	.75	.72	.188
AX164C-8-8-6	1/2	1/2	3/8	1.34	1.16	1.16	.94	.94	.88	.312

## Union Elbow 165C- 265C

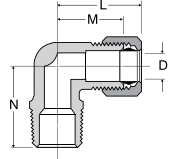
REF. SAE 060201 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX165C-2	1/8	5/16-24	.82	.61	.094
AX165C-3	3/16	3/8-24	.87	.61	.125
AX165C-4	1/4	7/16-24	.88	.61	.188
AX265C-4	1/4	7/16-24	.84	.60	.188
AX165C-5	5/16	1/2-24	.95	.71	.250
AX165C-6	3/8	9/16-24	1.03	.74	.312
AX165C-7	7/16	5/3-24	1.16	.82	.312
AX165C-8	1/2	11/16-20	1.34	.93	.406
AX165C-10	5/8	13/16-18	1.48	1.05	.500
AX165C-12	3/4	1-18	1.65	1.17	.563

## Male Elbow 169C- 269C

REF. SAE 060202 BA



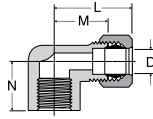
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX169C-2-1	1/8	1/16	5/16-24	.81	.60	.67	.095
AX269C-2-2	1/8	1/8	5/16-24	.80	.60	.67	.094
AX169C-3-1	3/16	1/16	3/8-24	.85	.61	.67	.126
AX169C-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
AX269C-3-2	3/16	1/8	3/8-24	.84	.60	.67	.125
AX169C-3-4	3/16	1/4	3/8-24	.86	.64	.93	.125
AX169C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
AX269C-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
AX169C-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
AX269C-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
AX169C-4-6	1/4	3/8	7/16-24	.93	.68	1.00	.188
AX169C-5-2 *	5/16	1/8	1/2-24	.88	.61	.74	.234
AX269C-5-2 *	5/16	1/8	1/2-24	.86	.60	.73	.250
AX169C-5-4	5/16	1/4	1/2-24	.95	.71	.93	.250
AX269C-5-4	5/16	1/4	1/2-24	.93	.67	.82	.250
AX169C-5-6	5/16	3/8	1/2-24	1.01	.75	1.00	.250
AX169C-6-2 *	3/8	1/8	9/16-24	1.03	.74	.74	.234
AX269C-6-2 *	3/8	1/8	9/16-24	.97	.69	.75	.220
AX169C-6-4	3/8	1/4	9/16-24	1.03	.74	.93	.312
AX269C-6-4	3/8	1/4	9/16-24	1.01	.73	.92	.312
AX169C-6-6	3/8	3/8	9/16-24	1.03	.75	1.00	.312
AX269C-6-6	3/8	3/8	9/16-24	1.12	.84	.97	.312
AX169C-6-8	3/8	1/2	9/16-24	1.22	.94	1.27	.312
AX269C-7-6	7/16	3/8	5/8-24	1.16	.82	.98	.312
AX169C-8-4 *	1/2	1/4	11/16-20	1.34	.94	1.00	.312
AX169C-8-6	1/2	3/8	11/16-20	1.34	.93	1.11	.406
AX169C-8-8	1/2	1/2	11/16-20	1.48	1.00	1.37	.406
AX169C-10-8	5/8	1/2	13/16-18	1.48	1.06	1.31	.500
AX169C-12-8	3/4	1/2	1-18	1.64	1.18	1.49	.562
AX169C-12-12	3/4	3/4	1-18	1.70	1.27	1.58	.562

\* For these parts the pipe thread through hole is smaller than the through hole on the flare end.

# INDUSTRIAL COMPRESSION FITTINGS

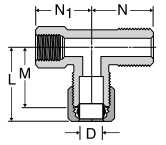
## Female Elbow 170C- 270C

REF. SAE 060203 BA



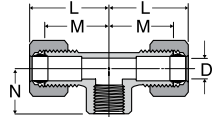
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170C-2-2	1/8	1/8	5/16-24	.89	.69	.56	.094
170C-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170C-4-2	1/4	1/8	7/16-24	.93	.69	.56	.188
270C-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170C-4-4	1/4	1/4	7/16-24	1.02	.78	.67	.188
170C-6-4	3/8	1/4	9/16-24	1.06	.79	.73	.312
170C-6-6	3/8	3/8	9/16-24	1.22	.89	.69	.312
170C-7-4	7/16	1/4	5/8-24	1.27	.93	.73	.312
170C-8-6	1/2	3/8	11/16-20	1.34	1.00	.69	.406
170C-8-8	1/2	1/2	11/16-20	1.56	1.15	.97	.408
170C-12-12	3/4	3/4	1-18	2.06	1.58	1.58	.563

## Adapter Tee 176C



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176C-4-2	1/4	1/8	7/16-24	.93	.69	.75	.66	.188

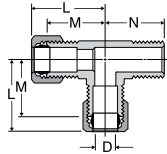
## Female Branch Tee 177C



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177C-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188

## Male Run Tee 171C

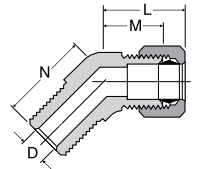
REF. SAE 060424 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
171C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
171C-4-2	1/4	1/8	7/16-24	.90	.64	.75	.188
171C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171C-6-4	3/8	1/4	9/16-24	1.09	.81	1.03	.312

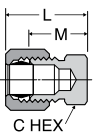
## 45° Elbow 179C

Compression to male pipe



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179C-4-2	1/4	1/8	7/16-24	.90	.66	.56	.188
179C-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179C-6-2	3/8	1/8	9/16-24	.90	.63	.65	.234
179C-6-4	3/8	1/4	9/16-24	.90	.63	.84	.312
179C-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179C-8-6	1/2	3/8	11/16-20	1.15	.81	.95	.406

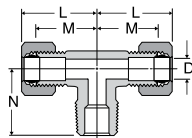
## Seal Plug 639C



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639C-4	1/4	7/16-24	7/16	.74	.50

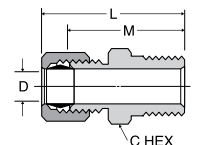
## Male Branch Tee 172C

REF. SAE 060425 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
172C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
172C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
172C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172C-6-2	3/8	1/8	9/16-24	1.03	.75	.75	.234
172C-6-4	3/8	1/4	9/16-24	1.09	.77	.92	.312
172C-6-6	3/8	3/8	9/16-24	1.09	.81	1.00	.312

## Straight Through Tank Fitting 682C



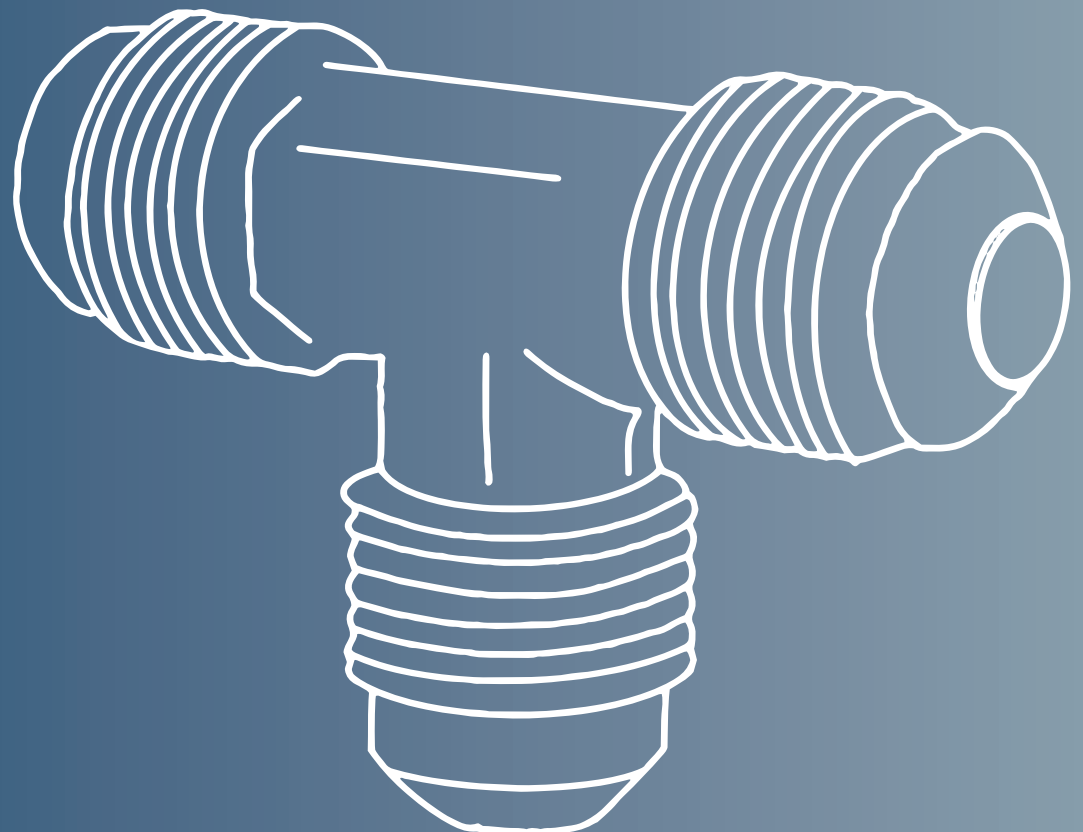
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682C-3-2	3/16	1/8	3/8-24	7/16	1.06	.84	.195
682C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.387
682C-8-8	1/2	1/2	11/16-20	7/8	1.90	1.31	.516

# 3

## FLARE FITTINGS

### 3.1 45° FLARE FITTINGS

### 3.2 INVERTED FLARE FITTINGS



# 3.1 45° FLARE FITTINGS

Flare Fittings is an economical choice for a metal-to-metal seal that resists mechanical pullout. Meets functional requirements of SAE J512 and SAE J513.

## Product Features:

- All brass construction
- Resists vibration with use of long nut
- Functional requirements of SAE J512 and J513

## Applications:

- Refrigerant Lines
- Propane
- Fuels
- Adapters
- Natural Gas

## Markets:

- Refrigeration
- Heavy duty Truck
- Mobile
- Industrial
- Heating
- Air Conditioning

## Compatible Tubing:

- Copper
- Brass
- Aluminium
- Welded Steel Hydraulic Tubing

## Specifications:

Temperature Range: 0.65° to +250° F (-53.8° to +121.1° C)

## Pressure Range

TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
1/8	2800	193.0	3/8	1000	68.9
3/16	1900	131.0	1/2	750	51.7
1/4	1400	96.5	5/8	650	44.8
5/16	1200	82.7	3/4	550	37.9



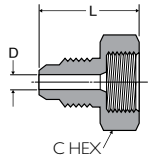
## Assembly Instructions:

1. Cut tubing squarely and clean tube end thoroughly to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube
3. Flare tube end with flaring tool to provide 45o flare.
4. Clamp tube flare between nut and nose of fitting body by screwing nut on finger-tight.
5. Tighten with a wrench an additional 1/4 to 1/2 turn past finger-tight for a metal-to-metal seal.

# 45° FLARE FITTINGS

## Refrigerant Drum Adapter IF

REF. SAE 010165



PART NO.	TUBE O.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
AXIF-4-8	1/4	1/2	1-1/8	1.12	.189
AXIF-4-12*	1/4	3/4	1-1/4	1.12	.189
AXIF-6-12*	3/8	3/4	1-1/4	1.24	.282
AXIF-8-12*	1/2	3/4	1-1/4	1.37	.407

Gasket Furnished with each IF adapter

## Copper Flare Gasket 2GF

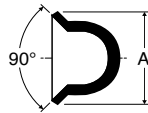
REF. SAE 010113



PART NO.	TUBE SIZE	A
AX2GF-3	3/16	.32
AX2GF-4	1/4	.36
AX2GF-5	5/16	.43
AX2GF-6	3/8	.56
AX2GF-8	1/2	.67
AX2GF-10	5/8	.78
AX2GF-12	3/4	.97

## Seal Bonnet 3GF

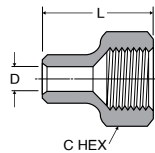
REF. SAE 010114



PART NO.	TUBE SIZE	A
AX3GF-3	3/16	.32
AX3GF-4	1/4	.37
AX3GF-5	5/16	.43
AX3GF-6	3/8	.56
AX3GF-8	1/2	.67
AX3GF-10	5/8	.78
AX3GF-12	3/4	.97

## Long Forged Nut 14FL

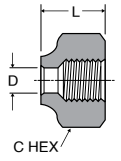
REF. SAE 010167



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX14FL-4	1/4	7/16-20	5/8	.257	.94
AX14FL-6	3/8	5/8-18	13/16	.382	1.06
AX14FL-8	1/2	3/4-16	15/16	.507	1.19
AX14FL-10	5/8	7/8-14	1-1/16	.632	1.44

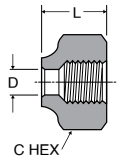
## Short Forged Nut 14FSX

REF. SAE 010166



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AXI4FSX-4	1/4	7/16-20	5/8	.257	.63
AXI4FSX-5	5/16	1/2-20	11/16	.320	.67
AXI4FSX-6	3/8	5/8-18	13/16	.382	.74
AXI4FSX-8	1/2	3/4-16	15/16	.507	.86
AXI4FSX-10	5/8	7/8-14	1-1/16	.632	.97
AXI4FSX-12	3/4	1-1/16-14	1-5/16	.757	1.17

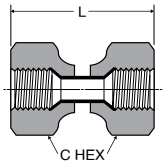
## Short Forged Reducing Nuts 14FS



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AXI4FS-6-4	3/8 TO 1/4	5/8-18	13/16	.257	.74
AXI4FS-8-6	1/2 TO 3/8	3/4-16	15/16	.382	.86
AXI4FS-10-8	5/8 TO 1/2	7/8-14	1-1/16	.507	.99

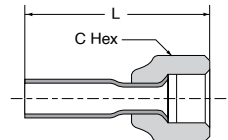
## Swivel Nut Valve Connector 14FSV

REF. SAE 010108



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L MIN.
AXI4FSV-4	1/4	7/16-20	5/8	1.31
AXI4FSV-6	3/8	5/8-18	13/16	1.50
AXI4FSV-8	1/2	3/4-16	15/16	1.75
AXI4FSV-10	5/8	7/8-14	1-1/16	2.00

## Flare Adapter US5

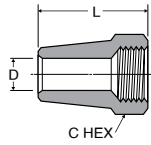


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
AXUS5-4	1/4	7/16-20	5/8	1.50
AXUS5-6	3/8	5/8-18	13/16	1.58
AXUS5-8	1/2	3/4-16	15/16	1.80

# 45° FLARE FITTINGS

## Long Nut 41FL

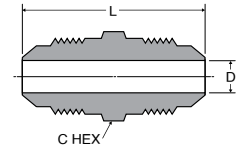
REF. SAE 010111



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX41FL-2	1/8	5/16-24	3/8	.133	.75
AX41FL-3	3/16	3/8-24	7/16	.195	.81
AX41FL-4	1/4	7/16-20	9/16	.257	.94
AX41FL-5	5/16	1/2-20	5/8	.320	1.12
AX41FL-6	3/8	5/8-18	3/4	.382	1.31
AX41FL-8	1/2	3/4-16	7/8	.507	1.62
AX41FL-10	5/8	7/8-14	1-1/16	.632	1.88
AX41FL-12	3/4	1-1/16-14	1-1/4	.757	2.19

## Union 42F

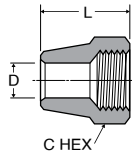
REF. SAE 010101 \*THREAD PROTECTORS



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX42F-2	1/8	5/16-24	5/16	.90	.079
AX42F-3	3/16	3/8-24	3/8	1.04	.125
AX42F-4	1/4	7/16-20	7/16	1.17	.189
AX42F-5	5/16	1/2-20	1/2	1.32	.220
AX42F-6	3/8	5/8-18	5/8	1.48	.282
AX42F-8	1/2	3/4-16	3/4	1.79	.407
AX42F-10	5/8	7/8-14	7/8	2.10	.501
AX42F-12*	3/4	1-1/16-14	1-1/16	2.42	.626
AX42F-14*	7/8	1-1/4-12	1-1/4	2.72	.751

## Short Nut 41FS / Shorter Nut 41FX

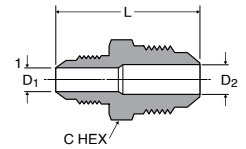
REF. SAE 010110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX41FS-2	1/8	5/16-24	3/8	.132	.50
AX41FS-3	3/16	3/8-24	7/16	.195	.62
AX41FS-4	1/4	7/16-20	9/16	.257	.75
AX41FS-5	5/16	1/2-20	5/8	.320	.88
AX41FS-6	3/8	5/8-18	3/4	.382	1.00
AX41FX-6	3/8	5/8-18	3/4	.382	.91
AX41FS-8	1/2	3/4-16	7/8	.507	1.12
AX41FX-8	1/2	3/4-16	7/8	.507	1.00
AX41FS-10	5/8	7/8-14	1-1/16	.632	1.31
AX41FX-10	5/8	7/8-14	1-1/16	.632	1.06
AX41FX-12	3/4	1-1/16-14	1-1/4	.757	1.17
AX41FS-12	3/4	1-1/16-14	1-1/4	.757	1.50
AX41FS-14	7/8	1-1/4-12	1-1/2	.882	1.62

## Union Reducers 42F

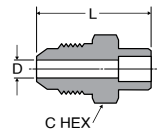
REF. SAE 010101



PART NO.	1 TUBE SIZE	SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D1	DIA. D2
AX42F-6-4	1/4	3/8	7/16-20	5/8-18	5/8	1.36	.189	.282
AX42F-6-5	5/16	3/8	1/2-20	5/8-18	5/8	1.42	.220	.282
AX42F-8-4	1/4	1/2	7/16-20	3/4-16	3/4	1.54	.189	.407
AX42F-8-6	3/8	1/2	5/8-18	3/4-16	3/4	1.67	.282	.407
AX42F-10-6	3/8	5/8	5/8-18	7/8-14	7/8	1.86	.282	.501
AX42F-10-8	1/2	5/8	3/4-16	7/8-14	7/8	1.98	.407	.501

## Flare to Solder 43F

REF. SAE 010104

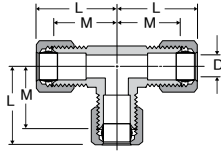


PART NO.	TUBE SIZE	SOLDER OD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX43F-4-4	1/4	1/4	7/16-20	7/16	.98	.189
AX43F-4-5	1/4	5/16	7/16-20	7/16	.98	.189
AX43F-4-6	1/4	3/8	7/16-20	1/2	.98	.189
AX43F-6-4	3/8	1/4	5/8-18	5/8	1.17	.189
AX43F-6-5	3/8	5/16	5/8-18	5/8	1.17	.252
AX43F-6-6	3/8	3/8	5/8-18	5/8	1.17	.282
AX43F-6-8	3/8	1/2	5/8-18	5/8	1.23	.282
AX43F-6-10	3/8	5/8	5/8-18	3/4	1.36	.282
AX43F-8-6	1/2	3/8	3/4-16	3/4	1.36	.314
AX43F-8-8	1/2	1/2	3/4-16	3/4	1.42	.407
AX43F-8-10	1/2	5/8	3/4-16	3/4	1.54	.407
AX43F-10-8	5/8	1/2	7/8-14	7/8	1.60	.440
AX43F-10-10	5/8	5/8	7/8-14	7/8	1.73	.501

# 45° FLARE FITTINGS

## Union Tee 164C-264C

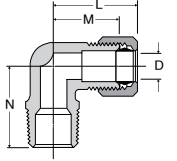
REF. SAE 060401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AXI 64C-2	1/8	5/16-24	.82	.61	.094
AXQ 64C-3	3/16	3/8-24	.84	.60	.125
AXI 64C-4	1/4	7/16-24	.86	.63	.188
AXQ 64C-4	1/4	7/16-24	.84	.60	.188
AXI 64C-5	5/16	1/2-24	.98	.71	.250
AXI 64C-6	3/8	9/16-24	1.03	.74	.312
AXI 64C-8	1/2	1 1/16-20	1.34	.93	.406
AXI 64C-10	5/8	1 3/16-18	1.54	1.08	.500
AXI 64C-12	3/4	1.00-18	1.65	1.17	.563

## Male Elbow 169C-269C

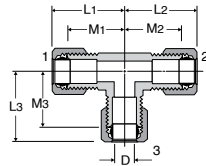
REF. SAE 060202 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXI 169C-2-1	1/8	1/16	5/16-24	.81	.60	.67	.095
AXQ 269C-2-2	1/8	1/8	5/16-24	.80	.60	.67	.094
AXI 169C-3-1	3/16	1/16	3/8-24	.85	.61	.67	.126
AXI 169C-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
AXQ 269C-3-2	3/16	1/8	3/8-24	.84	.60	.67	.125
AXI 169C-3-4	3/16	1/4	3/8-24	.86	.64	.93	.125
AXI 169C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
AXQ 269C-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
AXI 169C-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
AXQ 269C-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
AXI 169C-4-6	1/4	3/8	7/16-24	.93	.68	1.00	.188
AXI 169C-5-2 <sup>†</sup>	5/16	1/8	1/2-24	.88	.61	.74	.234
AXQ 269C-5-2 <sup>†</sup>	5/16	1/8	1/2-24	.86	.60	.73	.250
AXI 169C-5-4	5/16	1/4	1/2-24	.95	.71	.93	.250
AXQ 269C-5-4	5/16	1/4	1/2-24	.93	.67	.82	.250
AXI 169C-5-6	5/16	3/8	1/2-24	1.01	.75	1.00	.250
AXI 169C-6-2 <sup>†</sup>	3/8	1/8	9/16-24	1.03	.74	.74	.234
AXQ 269C-6-2 <sup>†</sup>	3/8	1/8	9/16-24	.97	.69	.75	.220
AXI 169C-6-4	3/8	1/4	9/16-24	1.03	.74	.93	.312
AXQ 269C-6-4	3/8	1/4	9/16-24	1.01	.73	.92	.312
AXI 169C-6-6	3/8	3/8	9/16-24	1.03	.75	1.00	.312
AXQ 269C-6-6	3/8	3/8	9/16-24	1.12	.84	.97	.312
AXI 169C-6-8	3/8	1/2	9/16-24	1.22	.94	1.27	.312
AXQ 269C-7-6	7/16	3/8	5/8-24	1.16	.82	.98	.312
AXI 169C-8-4 <sup>†</sup>	1/2	1/4	1 1/16-20	1.34	.94	1.00	.312
AXI 169C-8-6	1/2	3/8	1 1/16-20	1.34	.93	1.11	.406
AXI 169C-8-8	1/2	1/2	1 1/16-20	1.48	1.00	1.37	.406
AXI 169C-10-8	5/8	1/2	1 3/16-18	1.48	1.06	1.31	.500
AXI 169C-12-8	3/4	1/2	1-18	1.64	1.18	1.49	.562
AXI 169C-12-12	3/4	3/4	1-18	1.70	1.27	1.58	.562

## Union Tee 164C-264C Combination Sizes

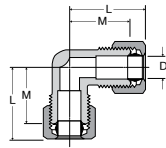
REF. SAE 060401 BA



PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
AXI 64C-6-4-4	3/8	1/4	1/4	1.03	.96	.96	.75	.72	.72	.188
AXI 64C-6-6-4	3/8	3/8	1/4	1.03	.96	.96	.75	.75	.72	.188
AXI 64C-8-8-6	1/2	1/2	3/8	1.34	1.16	1.16	.94	.94	.88	.312

## Union Elbow 165C-265C

REF. SAE 060201 BA



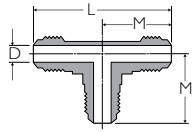
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AXI 65C-2	1/8	5/16-24	.82	.61	.094
AXI 65C-3	3/16	3/8-24	.87	.61	.125
AXI 65C-4	1/4	7/16-24	.88	.61	.188
AXQ 265C-4	1/4	7/16-24	.84	.60	.188
AXI 65C-5	5/16	1/2-24	.95	.71	.250
AXI 65C-6	3/8	9/16-24	1.03	.74	.312
AXI 65C-7	7/16	5/8-24	1.16	.82	.312
AXI 65C-8	1/2	1 1/16-20	1.34	.93	.406
AXI 65C-10	5/8	1 3/16-18	1.48	1.05	.500
AXI 65C-12	3/4	1-18	1.65	1.17	.563

<sup>†</sup>For these parts the pipe thread through hole is smaller than the through hole on the flare end.

# 45° FLARE FITTINGS

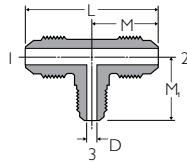
## Union Tee I44F-244F

REF. SAE 010401



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AXI44F-3	3/16	3/8-24	1.46	.73	.125
AXI44F-4	1/4	7/16-20	1.72	.86	.189
AXQ44F-4	1/4	7/16-20	1.72	.86	.189
AXI44F-5	5/16	1/2-20	1.82	.91	.220
AXI44F-6	3/8	5/8-18	2.08	1.04	.282
AXI44F-8	1/2	3/4-16	2.46	1.23	.407
AXI44F-10	5/8	7/8-14	2.78	1.39	.501

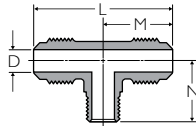
## Union Tee I44F combination sizes



PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	M	MI	FLOW DIA. D
AXI44F-6-6-4	3/8	3/8	1/4	2.08	1.04	.89	.189
AXI44F-8-8-6	1/2	1/2	3/8	2.40	1.20	1.10	.282

## Male Branch Tee I45F

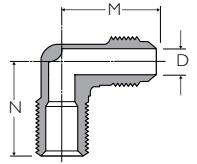
REF. SAE 010425



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXI45F-2-2	1/8	1/8	5/16-24	1.26	.63	.69	.079
AXI45F-4-2	1/4	1/8	7/16-20	1.58	.79	.76	.189
AXI45F-4-4	1/4	1/4	7/16-20	1.78	.89	.92	.189
AXI45F-5-4	5/16	1/4	1/2-20	1.90	.95	.96	.220
AXI45F-6-4	3/8	1/4	5/8-18	1.96	.98	1.05	.282
AXI45F-6-6	3/8	3/8	5/8-18	2.00	1.00	.98	.282
AXI45F-6-8	3/8	1/2	5/8-18	2.28	1.14	1.26	.282
AXI45F-8-6	1/2	3/8	3/4-16	2.40	1.20	1.10	.407
AXI45F-8-8	1/2	1/2	3/4-16	2.46	1.23	1.36	.407
AXI45F-10-8	5/8	1/2	7/8-14	2.78	1.39	1.36	.501

## Male Elbow I49F-249F

REF. SAE 010202



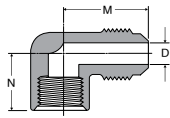
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
AXI49F-2-2	1/8	1/8	5/16-24	.63	.69	.079
AXI49F-3-2	3/16	1/8	3/8-24	.75	.75	.125
AXQ49F-3-2	3/16	1/8	3/8-24	.73	.73	.125
AXI49F-4-2	1/4	1/8	7/16-20	.79	.76	.189
AXQ49F-4-2	1/4	1/8	7/16-20	.79	.76	.189
AXI49F-4-4	1/4	1/4	7/16-20	.89	.92	.189
AXQ49F-4-4	1/4	1/4	7/16-20	.89	.92	.189
AXI49F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
AXQ49F-4-6	1/4	3/8	7/16-20	.92	1.01	.189
AXI49F-4-8	1/4	1/2	7/16-20	1.02	1.26	.189
AXI49F-5-2	5/16	1/8	1/2-20	.90	.79	.220
AXQ49F-5-2	5/16	1/8	1/2-20	.89	.77	.220
AXI49F-5-4	5/16	1/4	1/2-20	.95	.95	.220
AXQ49F-5-4	5/16	1/4	1/2-20	.95	.92	.220
AXI49F-5-6	5/16	3/8	1/2-20	.98	1.01	.220
AXI49F-6-2 <sup>+</sup>	3/8	1/8	5/8-18	1.01	.90	.220
AXQ49F-6-2 <sup>+</sup>	3/8	1/8	5/8-18	1.01	.89	.220
AXI49F-6-4	3/8	1/4	5/8-18	1.01	1.05	.282
AXQ49F-6-4	3/8	1/4	5/8-18	.98	1.04	.282
AXI49F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
AXQ49F-6-6	3/8	3/8	5/8-18	1.04	1.07	.282
AXI49F-6-8	3/8	1/2	5/8-18	1.15	1.26	.282
AXQ49F-6-8	3/8	1/2	5/8-18	1.14	1.26	.282
AXI49F-6-12*	3/8	3/4	5/8-18	1.25	1.38	.282
AXI49F-8-4 <sup>+</sup>	1/2	1/4	3/4-16	1.20	1.17	.314
AXI49F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
AXQ49F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
AXI49F-8-8	1/2	1/2	3/4-16	1.28	1.38	.407
AXQ49F-8-8	1/2	1/2	3/4-16	1.26	1.36	.407
AXI49F-8-12*	1/2	3/4	3/4-16	1.38	1.38	.407
AXI49F-10-4 <sup>+</sup>	5/8	1/4	7/8-14	1.41	1.25	.314
AXI49F-10-6 <sup>+</sup>	5/8	3/8	7/8-14	1.41	1.25	.407
AXI49F-10-8	5/8	1/2	7/8-14	1.40	1.39	.501
AXQ49F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501
AXI49F-10-12*	5/8	3/4	7/8-14	1.42	1.48	.501
AXI49F-12-8*	3/4	1/2	1-1/16-14	1.60	1.48	.563
AXI49F-12-12*	3/4	3/4	1-1/16-14	1.60	1.62	.626

<sup>+</sup>For these parts the pipe thread through hole is smaller than the through hole on the flare end

# 45° FLARE FITTINGS

## Female Elbow I50F

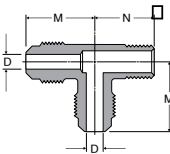
REF. SAE 010203



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
AXI50F-4-2	1/4	1/8	7/16-20	.86	.50	.189
AXI50F-4-4	1/4	1/4	7/16-20	.95	.67	.189
AXI50F-5-4	5/16	1/4	1/2-20	1.01	.67	.220
AXI50F-6-2	3/8	1/8	5/8-18	1.08	.48	.282
AXI50F-6-4	3/8	1/4	5/8-18	1.07	.67	.282
AXI50F-6-6	3/8	3/8	5/8-18	1.14	.67	.282
AXI50F-6-8	3/8	1/2	5/8-18	1.23	.86	.282
AXI50F-8-6	1/2	3/8	3/4-16	1.25	.69	.407
AXI50F-8-8	1/2	1/2	3/4-16	1.36	.92	.407
AXI50F-8-12	1/2	3/4	3/4-16	1.51	.92	.407
AXI50F-10-8*	5/8	1/2	7/8-14	1.48	.98	.501
AXI50F-10-12*	5/8	3/4	7/8-14	1.64	.98	.501

## Male Run Tee I51F

REF. SAE 010424

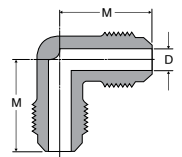


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
AXI51F-4-2	1/4	1/8	7/16-20	.86	.76	.189
AXI51F-4-4	1/4	1/4	7/16-20	.89	.92	.189
AXI51F-5-4	5/16	1/4	1/2-20	.95	.92	.220
AXI51F-6-4	3/8	1/4	5/8-18	1.04	1.04	.282
AXI51F-6-6	3/8	3/8	5/8-18	1.00	.98	.282
AXI51F-6-8	3/8	1/2	5/8-18	1.16	1.26	.282
AXI51F-8-6	1/2	3/8	3/4-16	1.20	1.10	.407
AXI51F-8-8	1/2	1/2	3/4-16	1.23	1.36	.407
AXI51F-10-8	5/8	1/2	7/8-14	1.39	1.36	.501

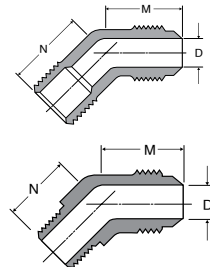
\*Comes standard with thread protectors

## Union Elbow I55F

REF. SAE 010201



PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
AXI55F-2	1/8	5/16-24	.64	.079
AXI55F-3	3/16	3/8-24	.73	.125
AXI55F-4	1/4	7/16-20	.86	.189
AXI55F-5	5/16	1/2-20	.92	.220
AXI55F-6	3/8	5/8-18	1.04	.282
AXI55F-8	1/2	3/4-16	1.20	.407
AXI55F-10	5/8	7/8-14	1.39	.501
AXI55F-12*	3/4	1-1/16-14	1.64	.626



## 45° Elbow I59F-259F

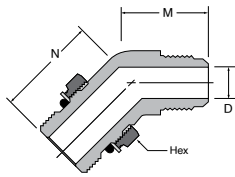
REF. SAE 010302

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
AXI59F-4-2	1/4	1/8	7/16-20	.78	.56	.189
AX259F-4-2	1/4	1/8	7/16-20	.65	.62	.189
AXI59F-4-4	1/4	1/4	7/16-20	.75	.84	.189
AX259F-4-4	1/4	1/4	7/16-20	.73	.84	.189
AXI59F-5-2	5/16	1/8	1/2-20	.76	.65	.220
AXI59F-5-4	5/16	1/4	1/2-20	.75	.81	.220
AXI59F-6-2 <sup>†</sup>	3/8	1/8	5/8-18	.89	.67	.220
AXI59F-6-4	3/8	1/4	5/8-18	.89	.86	.282
AX259F-6-4	3/8	1/4	5/8-18	.91	.86	.282
AXI59F-6-6	3/8	3/8	5/8-18	.91	.93	.282
AX259F-6-6	3/8	3/8	5/8-18	.91	.93	.282
AXI59F-8-4 <sup>†</sup>	1/2	1/4	3/4-16	1.06	.95	.314
AXI59F-8-6	1/2	3/8	3/4-16	1.06	.95	.407
AX259F-8-6	1/2	3/8	3/4-16	1.04	.93	.407
AXI59F-8-8	1/2	1/2	3/4-16	1.12	1.16	.407
AXI59F-10-6 <sup>†</sup>	5/8	3/8	7/8-14	1.13	.95	.407
AXI59F-10-8	5/8	1/2	7/8-14	1.21	1.16	.501
AXI59F-12-8 <sup>†*</sup>	3/4	1/2	1-1/16-14	1.28	1.16	.560

<sup>†</sup>For these parts the pipe thread through hole is smaller than the through hole on the flare end.

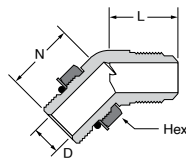
# 45° FLARE FITTINGS

## 45° Flare Elbow to SAE Metric Straight Thread 159F-X-MIX



PART NUMBER	TUBE SIZE	METRIC THREAD	STRAIGHT THREAD TUBE	HEX	M	N	D
AXI59F-8-M16	1/2	M16 X 1.5	3/4-16	22MM	1.10	1.16	.36
AXI59F-10-M127	5/8	M27 X 2.0	7/8-14	1 1/4	1.21	1.50	.50

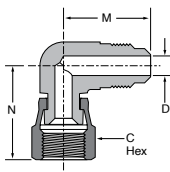
Note: Fluorocarbon o-ring is standard



## 45° Flare to SAE Straight Thread 1595F

PART NO.	TUBE SIZE	STRAIGHT THREAD	STRAIGHT THREAD TUBE	HEX	L	N	FLOW DIA. D
AXI595F-8-8	1/2	3/4-16	3/4-16	7/8	1.00	1.16	.398
AXI595F-12-8*	3/4	3/4-16	1 1/16-14	7/8	1.41	1.30	.398
AXI595F-12-12*	3/4	1 1/16-12	1 1/16-14	1 1/4	1.41	1.45	.615

Note: Fluorocarbon o-ring is standard



## 90° Swivel Elbow 66FSV

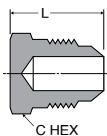
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	M	N	FLOW DIA. D
AXI66FSV-4-4	1/4	7/16-20	9/16	.86	.93	.189
AXI66FSV-6-6	3/8	5/8-18	3/4	1.04	1.12	.282
AXI66FSV-8-8	1/2	3/4-16	7/8	1.20	1.29	.407
AXI66FSV-10-10	5/8	7/8-14	1	1.39	1.50	.501
AXI66FSV-12-12*	3/4	1-1/16-14	1-1/4	1.60	1.83	.626

## Flared Seal Plug 639F

REF. SAE 010109

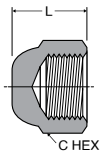
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
AX639F-4	1/4	7/16-20	7/16	.69
AX639F-5	5/16	1/2-20	1/2	.78
AX639F-6	3/8	5/8-18	5/8	.88
AX639F-8	1/2	3/4-16	3/4	1.06
AX639F-10	5/8	7/8-14	7/8	1.19

\*Comes standard with thread protectors  
 † Should be used with 2GF flare gasket



## Cap Nut 640F

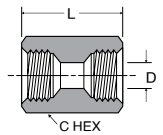
REF. SAE 010112



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
AX640F-3 †	3/16	3/8-24	1/2	.47
AX640F-4 †	1/4	7/16-20	9/16	.53
AX640F-5 †	5/16	1/2-20	5/8	.62
AX640F-6 †	3/8	5/8-18	3/4	.69
AX640F-8 †	1/2	3/4-16	7/8	.84
AX640F-10 †	5/8	7/8-14	1-1/16	.97

## Flared Union-Female Flare to Female Flare 660FHD

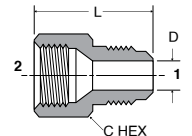
REF. SAE 010107



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX660FHD-4 †	1/4	7/16-20	5/8	.98	.251
AX660FHD-6 †	3/8	5/8-18	13/16	1.24	.376
AX660FHD-8 †	1/2	3/4-16	15/16	1.43	.501
AX660FHD-10 †	5/8	7/8-14	1-1/16	1.67	.626

## Male Flare to Female Flare 661FHD

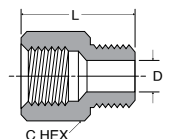
REF. SAE 010105



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX661FHD-4-6 †	1/4	3/8	7/16-20	5/8-18	13/16	1.20	.189
AX661FHD-4-8 †	1/4	1/2	7/16-20	3/4-16	15/16	1.36	.189
AX661FHD-6-4 †	3/8	1/4	5/8-18	7/16-20	5/8	1.10	.282
AX661FHD-6-8 †	3/8	1/2	5/8-18	3/4-16	15/16	1.42	.282
AX661FHD-8-6 †	1/2	3/8	3/4-16	5/8-18	13/16	1.39	.407
AX661FHD-8-10 †	1/2	5/8	3/4-16	7/8-14	1-1/16	1.67	.407
AX661FHD-10-8 †	5/8	1/2	7/8-14	3/4-16	15/16	1.60	.501
AX661FHD-10-12* †	5/8	3/4	7/8-14	1-1/16-14	1-5/16	1.95	.501
AX661FHD-12-10* †	3/4	5/8	1-1/16-14	7/8-14	1-1/16	1.86	.626

## Female Flare to Male Pipe Thread 664FHD

REF. SAE 010106



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX664FHD-4-2 †	1/4	1/8	7/16-20	5/8	.91	.220
AX664FHD-4-4 †	1/4	1/4	7/16-20	5/8	1.01	.252
AX664FHD-6-4 †	3/8	1/4	5/8-18	13/16	1.28	.345
AX664FHD-8-6 †	1/2	3/8	3/4-16	15/16	1.31	.407

# 3.2 INVERTED FLARE FITTINGS

Inverted Flare Fittings offers a metal-to-metal seal that is internal to the fitting for tighter tube bends. These fittings are listed with UL and meets the functional requirements of SAE J512.

**Product Features:**

- All brass construction
- Meets functional requirements of SAE J512
- Steel nut for economy

**Applications:**

- Refrigerant Lines
- Brake lines
- Fuel lines

**Markets:**

- Air Conditioning
- Marine
- Mobile
- Engines

**Compatible Tubing:**

- Copper
- Brass
- Aluminium
- Welded Steel Hydraulic Tubing

**Specifications:**

Temperature Range: 0.65° to +250° F (-53.8° to +121.1° C)

**Pressure Range:**

TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
1/8	2800	193.0	3/8	1000	68.9
3/16	1900	131.0	1/2	750	51.7
1/4	1400	96.5	5/8	650	44.8
5/16	1200	82.7	3/4	550	37.9



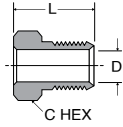
**Assembly Instructions:**

1. Cut tubing squarely and clean to remove burrs.
2. Place nut onto tube. Place threaded end of nut toward end of tube
3. Flare tube end with flaring tool to provide 45° flare.
4. On thin wall copper, welded or brazed tubing, use double flare to prevent pinch-off or cracked flares
5. Clamp tube flare between nut and nose of fitting body by screwing nut on finger tight. Tighten nut with a wrench an additional 1/4 to 1/22 turn past finger tight for a metal-to-metal seal.

# INVERTED FLARE FITTINGS

## Nut 4 IIF

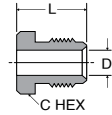
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX4 IIF-2	1/8	5/16-28	5/16	.52	.133
AX4 IIF-3	3/16	3/8-24	3/8	.56	.196
AX4 IIF-4	1/4	7/16-24	7/16	.56	.259
AX4 IIF-5	5/16	1/2-20	1/2	.62	.321
AX4 IIF-6	3/8	5/8-18	5/8	.66	.384
AX4 IIF-8	1/2	3/4-18	3/4	.74	.508

## Piloted Nut 4 IIF for Single Flared Tubing

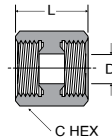
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX4 IIF-2	1/8	5/16-28	5/16	.52	.133
AX4 IIF-3	3/16	3/8-24	3/8	.56	.196
AX4 IIF-4	1/4	7/16-24	7/16	.56	.259
AX4 IIF-5	5/16	1/2-20	1/2	.62	.321
AX4 IIF-6	3/8	5/8-18	5/8	.66	.384
AX4 IIF-8	1/2	3/4-18	3/4	.74	.508

## Union 42IFHD

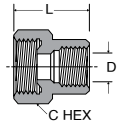
REF. SAE 040101



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX42IFHD-2	1/8	5/16-28	13/32	.60	.078
AX42IFHD-3	3/16	3/8-24	15/32	.63	.125
AX42IFHD-4	1/4	7/16-24	17/32	.63	.189
AX42IFHD-5	5/16	1/2-20	19/32	.71	.220
AX42IFHD-6	3/8	5/8-18	3/4	.81	.282
AX42IFHD-8	1/2	3/4-18	29/32	.92	.407

## Female Connector 46IFHD

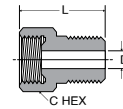
REF. SAE 040103



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
AX46IFHD-4-2	1/4	1/8	7/16-24	17/32	.78	.189
AX46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
AX46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.282
AX46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.407

## Male Connector 48IFHD

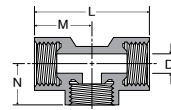
REF. SAE 040102



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX48IFHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
AX48IFHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
AX48IFHD-4-2	1/4	1/8	7/16-24	17/32	.74	.189
AX48IFHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
AX48IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
AX48IFHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
AX48IFHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
AX48IFHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.282
AX48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.282
AX48IFHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
AX48IFHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.407
AX48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.407
AX48IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
AX48IFHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.626

## Union Tee 244IFHD

REF. SAE 040401



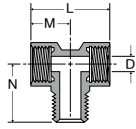
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
AX244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
AX244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
AX244IFHD-6	3/8	5/8-18	1.48	.74	.56	.282
AX244IFHD-8*	1/2	3/4-18	1.76	.88	.67	.407

\*Does not meet SAE or UL.

# INVERTED FLARE FITTINGS

## Male Branch Tee 245IFHD

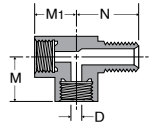
REF. SAE 040425



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX245IFHD-4-2	1/4	1/8	7/16-24	.85	.43	.64	.189
AX245IFHD-6-4	3/8	1/4	5/8-18	1.17	.58	.94	.282

## Male Run Tee 251IFHD

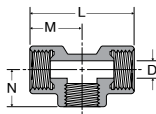
REF. SAE 040424



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	M1	N	FLOW DIA. D
AX251IFHD-3-2	3/16	1/8	3/8-24	.39	.53	.72	.125
AX251IFHD-5-2	5/16	1/8	1/2-20	.45	.62	.85	.220
AX251IFHD-6-4	3/8	1/4	5/8-18	.56	.75	1.08	.282

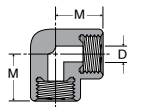
## Female Branch Tee 252IFHD

REF. SAE 040427



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX252IFHD-5-2	5/16	1/8	1/2-20	1.26	.63	.45	.220
AX252IFHD-6-4	3/8	1/4	5/8-18	1.48	.74	.56	.282

## Union Elbow 255IFHD

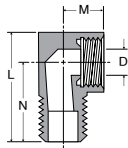


PART NO.	TUBE SIZE	STRAIGHT THREAD	M	FLOW DIA. D
AX255IFHD-4*	1/4	7/16-24	.55	.189

\*Does not meet SAE or UL.

## Male Elbow 249IFHD-249IF

REF. SAE 040202



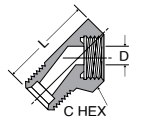
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX249IFHD-2-2	1/8	1/8	5/16-28	.79	.27	.58	.078
AX249IFHD-3-2	3/16	1/8	3/8-24	.85	.27	.61	.125
AX249IFHD-4-2 <sup>†</sup>	1/4	1/8	7/16-24	.92	.33	.65	.189
AX249IFHD-4-4	1/4	1/4	7/16-24	1.10	.28	.82	.189
AX249IFHD-5-4	5/16	1/4	1/2-20	1.16	.45	.86	.220
AX249IFHD-6-2 <sup>†</sup>	3/8	1/8	5/8-18	1.13	.53	.76	.220
AX249IF-6-4 <sup>†</sup>	3/8	1/4	5/8-18	1.26	.45	.92	.282
AX249IFHD-6-4	3/8	1/4	5/8-18	1.32	.53	.95	.282
AX249IFHD-6-6	3/8	3/8	5/8-18	1.32	.50	.94	.282
AX249IFHD-8-4 <sup>†</sup>	1/2	1/4	3/4-18	1.48	.59	1.02	.407
AX249IF-8-6 <sup>†</sup>	1/2	3/8	3/4-18	1.42	.53	.99	.407
AX249IFHD-8-6 <sup>†</sup>	1/2	3/8	3/4-18	1.48	.59	1.02	.407
AX249IFHD-8-8	1/2	1/2	3/4-18	1.67	.66	1.22	.407
AX249IFHD-10-6 <sup>†</sup>	5/8	3/8	7/8-18	1.62	.67	1.09	.531
AX249IFHD-10-8 <sup>†</sup>	5/8	1/2	7/8-18	1.82	.67	1.29	.533

<sup>†</sup>Light Duty Series

+For these parts the pipe thread through hole is smaller than the through<sup>†</sup> hole on the flare end.

## 45° Elbow 259IFHD

REF. SAE 040302

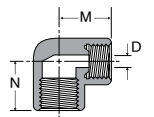


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX259IFHD-3-2	3/16	1/8	3/8-24	17/32	.88	.125
AX259IFHD-4-2	1/4	1/8	7/16-24	9/16	.94	.189
AX259IFHD-5-2	5/16	1/8	1/2-20	5/8	1.00	.220
AX259IFHD-5-4	5/16	1/4	1/2-20	5/8	1.16	.220
AX259IFHD-6-4*	3/8	1/4	5/8-18	13/16	1.34	.282
AX259IFHD-8-6	1/2	3/8	3/4-18	7/8	1.44	.407
AX259IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.75	.533

\*Does not meet SAE or UL.

## Female Elbow 250IFHD

REF. SAE 040203

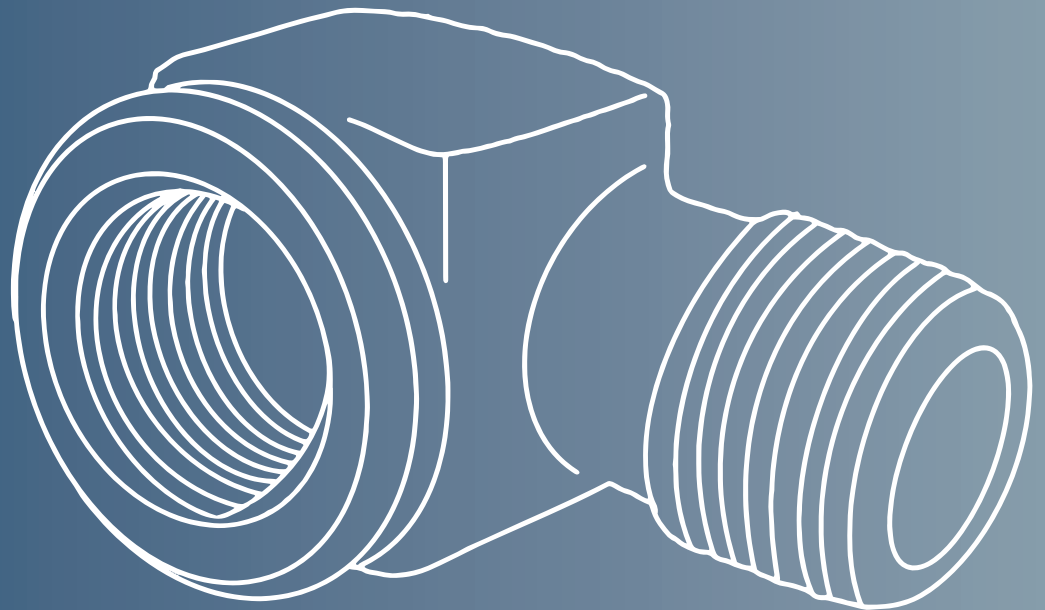


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	M	N	FLOW DIA. D
AX250IFHD-3-2	3/16	1/8	3/8-24	.50	.49	.125
AX250IFHD-4-2	1/4	1/8	7/16-24	.53	.53	.189
AX250IFHD-5-2	5/16	1/8	1/2-20	.59	.59	.220
AX250IFHD-6-4	3/8	1/4	5/8-18	.67	.68	.282

# 4

## INDUSTRIAL FITTINGS & ADAPTERS

### 4.1 PIPE FITTINGS



# 4.1 PIPE FITTINGS

Pipe Fittings meet all functional requirements of SAE J530 and SAE J531. All threads on the pipe fittings are made to dryseal standards.

## Product Features:

- All brass construction
- Meets functional requirements of SAE J530 and SAE J531
- Threads made to dryseal standards
- Both forgings and extrusions available

## Applications:

- Air Lines
- Water Line
- Cooling Lines

## Markets:

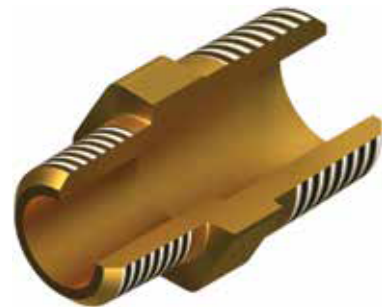
- Industrial Marine
- Construction
- Heavy duty truck
- Mobile
- Factory/process automation

## Specifications:

Temperature Range: -65° to +250° F (-53.9° to +121.1° C)

## Pressure Range:

Up to 1000 PSI (68.9 bar)



## Assembly Instructions:

1. Hand tighten external thread into internal thread .
2. Tighten an additional 2 turns with a wrench up to 1/2" male pipe thread.
3. Above 1/2" 1 1/2 to 2 1/2 turns.

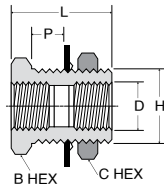
## Elbow or Tee Fittings

1. Hand tighten external thread into internal thread .
2. Tighten an additional 1 to 1 1/2 turns with a wrench
3. Tighten fitting, clockwise to align with tubing. (Never counter clockwise)

Note: To minimize the possibility of a leaking threaded joint after assembling Male to female pipe threads, neither end should be backed out (loosened) Once the assembly has been made.

# PIPE FITTINGS

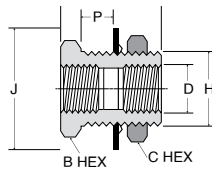
## Bulkhead 207ACBH



PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX. BULK HEAD P	B HEX	C HEX	L	BLKHD HOLE DIA. H	FLOW DIA. D
AX207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
AX207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
AX207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
AX207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
AX207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
AX207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
AX207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
AX207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

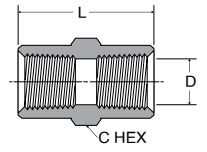
\*Lock Washer not Available

## Sealed Bulkhead 207ACBH-S

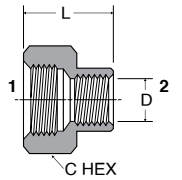


PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX. BULK HEAD P	B HEX	C HEX	J	L	BLKHD HOLE DIA. H	FLOW DIA. D
AX 207ACBH-2-S	1/8	5/8-18	.84	7/8	15/16	1.19	1.50	.656	.339
AX 207ACBHS-2-S	1/8	5/8-18	.30	7/8	15/16	1.19	.96	.656	.339
AX 207ACBH-4-S	1/4	3/4-16	.75	1	1-1/8	1.31	1.50	.781	.441
AX 207ACBHS-4-S	1/4	3/4-16	.20	1	1	1.31	.94	.781	.441
AX 207ACBH-6-S	3/8	1-14	.56	1-1/8	1-1/4	1.75	1.31	1.031	.571

## Coupling 207P

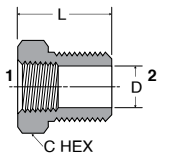


PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
AX207P-2	1/8	9/16	.75	.339
AX207P-4	1/4	3/4	1.12	.441
AX207P-6	3/8	7/8	1.12	.571
AX207P-8	1/2	1-1/16	1.50	.703
AX207P-12	3/4	1-3/8	1.53	.906



## Reducer Coupling 208P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
AX208P-4-2	1/4	1/8	3/4	.97	.339
AX208P-6-4	3/8	1/4	7/8	1.16	.441
AX208P-8-4	1/2	1/4	1-1/16	1.28	.441
AX208P-8-6	1/2	3/8	1-1/16	1.38	.571
AX208P-12-6	3/4	3/8	1-3/8	1.32	.571
AX208P-12-8	3/4	1/2	1-3/8	1.50	.703

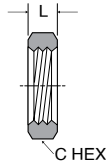


## Bushing 209P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
AX209P-4-2	1/8	1/4	9/16	.75	.339
AX209P-6-2	1/8	3/8	11/16	.75	.339
AX209P-6-4	1/4	3/8	3/4	.75	.441
AX209P-8-2	1/8	1/2	7/8	1.00	.339
AX209P-8-4	1/4	1/2	7/8	1.00	.441
AX209P-8-6	3/8	1/2	7/8	1.00	.571
AX209P-12-2	1/8	3/4	1-1/8	1.00	.339
AX209P-12-4	1/4	3/4	1-1/8	1.00	.441
AX209P-12-6	3/8	3/4	1-1/8	1.00	.571
AX209P-12-8	1/2	3/4	1-1/8	1.00	.703
AX209P-16-8	1/2	1	1-3/8	1.31	.703
AX209P-16-12	3/4	1	1-3/8	1.31	.906

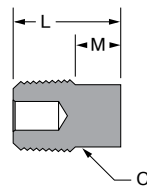
# PIPE FITTINGS

## Lock Nut 210P



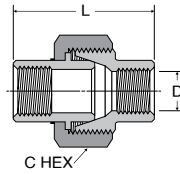
PART NO.	PIPE THREAD	C HEX	L
AX210P-2	1/8 NPSL	11/16	.19
AX210P-4	1/4 NPSL	7/8	.25
AX210P-6	3/8 NPSL	1	.25
AX210P-8	1/2 NPSL	1-1/8	.25

## Square-Head Plug 211P



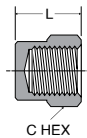
PART NO.	PIPE THREAD	C	L	M
AX211P-2	1/8	9/32	.59	.25
AX211P-4	1/4	3/8	.80	.29
AX211P-6	3/8	7/16	.83	.32
AX211P-8	1/2	9/16	1.07	.39
AX211P-12	3/4	5/8	1.14	.45

## Union 212P



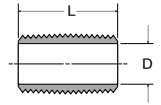
PART NO.	PIPE THREAD	C HEX	L	D
AX212P-4	1/4	1-3/16	1.54	.441
AX212P-6	3/8	1-1/4	1.76	.571

## Cap 213P



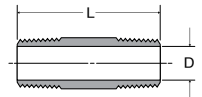
PART NO.	PIPE THREAD	C HEX	L
AX213P-2	1/8	9/16	.50
AX213P-4	1/4	11/16	.63
AX213P-6	3/8	13/16	.63
AX213P-8	1/2	1-1/16	.87
AX213P-12	3/4	1-1/4	.89

## Close Nipple 215PN



PART NO.	PIPE THREAD	L	FLOW DIA.D
AX215PN-2	1/8	.75	.281
AX215PN-4	1/4	.88	.375
AX215PN-6	3/8	1.00	.500
AX215PN-8	1/2	1.13	.625
AX215PN-12	3/4	1.31	.750

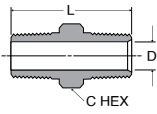
## Long Nipple 215PNL



PART NO.	PIPE THREAD	L	FLOW DIA.D
AX215PNL-2-15	1/8	1-1/2	.250
AX215PNL-4-15	1/4	1-1/2	.375
AX215PNL-6-15	3/8	1-1/2	.500
AX215PNL-8-15	1/2	1-1/2	.625
AX215PNL-2-20	1/8	2	.250
AX215PNL-4-20	1/4	2	.375
AX215PNL-6-20	3/8	2	.500
AX215PNL-8-20	1/2	2	.625
AX215PNL-2-25	1/8	2-1/2	.250
AX215PNL-4-25	1/4	2-1/2	.375
AX215PNL-6-25	3/8	2-1/2	.500
AX215PNL-8-25	1/2	2-1/2	.625
AX215PNL-2-30	1/8	3	.250
AX215PNL-4-30	1/4	3	.375
AX215PNL-6-30	3/8	3	.500
AX215PNL-8-30	1/2	3	.625
AX215PNL-2-35	1/8	3-1/2	.250
AX215PNL-4-35	1/4	3-1/2	.375
AX215PNL-6-35	3/8	3-1/2	.500
AX215PNL-8-35	1/2	3-1/2	.625

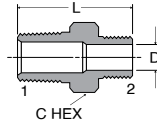
# PIPE FITTINGS

## Hex Nipple 216P



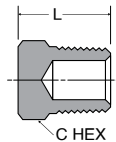
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
AX216P-2	1/8	7/16	.97	.220
AX216P-4	1/4	9/16	1.38	.314
AX216P-6	3/8	11/16	1.41	.440
AX216P-8	1/2	7/8	1.81	.564
AX216P-12	3/4	1-1/16	1.81	.752

## Hex Nipple Reducers 216P



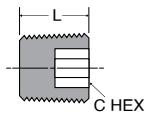
PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
AX216P-4-2	1/4	1/8	9/16	1.19	.220
AX216P-6-2	3/8	1/8	11/16	1.22	.220
AX216P-6-4	3/8	1/4	11/16	1.41	.314
AX216P-8-4	1/2	1/4	7/8	1.62	.314
AX216P-8-6	1/2	3/8	7/8	1.62	.440
AX216P-12-8	3/4	1/2	1-1/16	1.80	.564

## Hex-Head Plug 218P



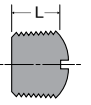
PART NO.	PIPE THREAD	C HEX	L
AX218P-2	1/8	7/16	.560
AX218P-4	1/4	9/16	.747
AX218P-6	3/8	11/16	.780
AX218P-8	1/2	7/8	.970
AX218P-12	3/4	1-1/16	1.054

## Countersunk Hex-Head Plug 219P



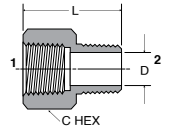
PART NO.	PIPE THREAD	C HEX	L
AX219P-2	1/8	3/16	.30
AX219P-4	1/4	1/4	.46
AX219P-6	3/8	5/16	.46
AX219P-8	1/2	3/8	.61
AX219P-12	3/4	9/16	.62

## Slotted-Head Plug 220P



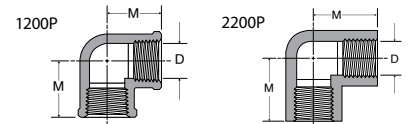
PART NO.	PIPE THREAD	L
AX220P-2	1/8	.31
AX220P-4	1/4	.42
AX220P-6	3/8	.43

## Adapter 222P



PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
AX222P-2-2	1/8	1/8	9/16	.88	.220
AX222P-4-2	1/4	1/8	3/4	1.06	.220
AX222P-4-4	1/4	1/4	3/4	1.25	.314
AX222P-6-2	3/8	1/8	7/8	1.10	.220
AX222P-6-4	3/8	1/4	7/8	1.25	.314
AX222P-6-6	3/8	3/8	7/8	1.25	.440
AX222P-8-4	1/2	1/4	1	1.47	.314
AX222P-8-6	1/2	3/8	1-1/16	1.47	.440
AX222P-8-8	1/2	1/2	1-1/16	1.66	.564
AX222P-12-6	3/4	3/8	1-3/8	1.50	.440
AX222P-12-8	3/4	1/2	1-3/8	1.69	.564
AX222P-12-12	3/4	3/4	1-3/8	1.69	.752

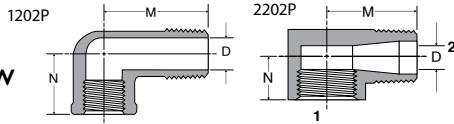
## 90° Union Elbow 1200P-2200P



PART NO.	PIPE THREAD	M	FLOW DIA. D
AX1200P-2-2	1/8	.56	.329
AX2200P-2-2	1/8	.55	.339
AX1200P-4-4	1/4	.81	.441
AX2200P-4-4	1/4	.78	.441
AX1200P-6-6	3/8	.84	.571
AX2200P-6-6	3/8	.84	.571
AX2200P-8-8	1/2	1.07	.703

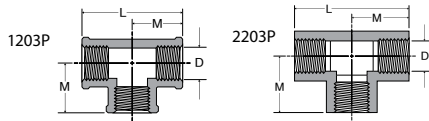
# PIPE FITTINGS

## 90° Street Elbow 1202P-2202P



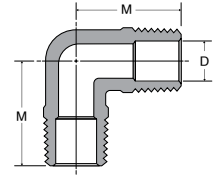
PART NO.	1 PIPE THREAD	2 PIPE THREAD	M	N	FLOW DIA. D
AX1202P-2-2	1/8	1/8	.81	.56	.22
AX2202P-2-2	1/8	1/8	.62	.48	.22
AX2202PA-2-2	1/8	1/8	.66	.48	.22
AX2202P-4-2	1/4	1/8	.72	.45	.23
AX1202P-4-4	1/4	1/4	1.08	.69	.31
AX2202P-4-4	1/4	1/4	.91	.45	.34
AX2202PA-4-4	1/4	1/4	.91	.72	.31
AX2202P-4-6	1/4	3/8	.97	.78	.43
AX1202P-6-4	3/8	1/4	1.25	.78	.31
AX1202P-6-6	3/8	3/8	1.25	.78	.42
AX2202P-6-6	3/8	3/8	.98	.54	.41
AX2202PA-6-6	3/8	3/8	.97	.78	.43
AX1202P-6-8	3/8	1/2	1.53	1.01	.56
AX1202P-8-6	1/2	3/8	1.25	.97	.42
AX2202P-8-8	1/2	1/2	1.25	1.03	.56
AX2202P-12-8	3/4	1/2	1.39	1.10	.56
AX2202P-12-12	3/4	3/4	1.39	1.10	.75

## Union Tee 1203P-2203P



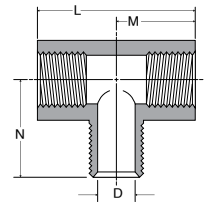
PART NO.	PIPE THREAD	L	M	FLOW DIA. D
AX1203P-2	1/8	1.12	.56	.339
AX2203P-2	1/8	1.06	.53	.339
AX1203P-4	1/4	1.38	.69	.441
AX2203P-4	1/4	1.52	.76	.441
AX2203P-6	3/8	1.68	.84	.571
AX1203P-8	1/2	2.14	1.07	.703
AX2203P-8	1/2	2.14	1.07	.703
AX2203P-12	3/4	2.28	1.14	.906

## Male Elbow 1204P



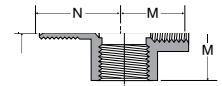
PART NO.	PIPE THREAD	M	FLOW DIA. D
AX1204P-2	1/8	.71	.220
AX1204P-4	1/4	1.09	.312
AX1204P-6	3/8	1.09	.408
AX1204P-8	1/2	1.41	.502

## Male Branch Tee 2224P



PART NO.	PIPE THREAD	L	M	N	FLOW DIA. D
AX2224P-2	1/8	1.06	.53	.66	.220
AX2224P-4	1/4	1.52	.76	.91	.314
AX2224P-6	3/8	1.68	.84	.97	.440
AX2224P-8	1/2	2.18	1.09	1.25	.564
AX2224P-12	3/4	2.32	1.16	1.38	.752

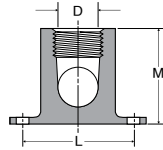
## Street Tee 2225P



PART NO.	PIPE THREAD	M	N	DIA. D
AX2225P-2	1/8	.53	.66	.220
AX2225P-4	1/4	.76	.91	.314
AX2225P-6	3/8	.84	.98	.440
AX2225P-8	1/2	1.07	1.26	.564
AX2225P-12	3/4	1.14	1.38	.752

# PIPE FITTINGS

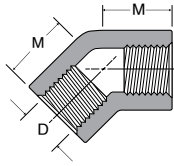
## Drop-ear 90° Elbow 2200PDE



PART NO.	PIPE THREAD	L	M	FLOW DIA.D
AX2200PDE-2	1/8	1.38	1.00	.339

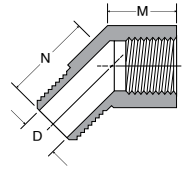
## 45° Female Elbow 1201P-2201P

1201P  
2201P



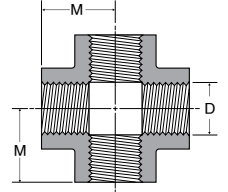
PART NO.	PIPE THREAD	M	FLOW DIA. D
AX2201P-2-2	1/8	.43	.339
AX1201P-8-8	1/2	.89	.703

## 45° Street Elbow 2214P



PART NO.	PIPE THREAD	M	N	FLOW DIA.D
AX 2214P-2-2	1/8	.38	.50	.220
AX 2214P-4-4	1/4	.54	.70	.314
AX 2214P-6-6	3/8	.56	.78	.440
AX 2214P-8-8	1/2	.73	1.00	.564
AX 2214P-12-12	3/4	.75	1.35	.750

## Cross 2205P

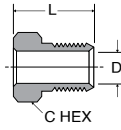


PART NO.	PIPE THREAD	M	FLOW DIA. D
AX2205P-2	1/8	.53	.339
AX2205P-4	1/4	.75	.441
AX2205P-6	3/8	.81	.571
AX2205P-8	1/2	1.07	.703
AX2205P-12	3/4	1.14	.906

# PIPE FITTINGS

## Nut 41IF

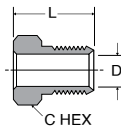
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX 41IF-2	1/8	5/16-28	5/16	.52	.133
AX 41IF-3	3/16	3/8-24	3/8	.56	.196
AX 41IF-4	1/4	7/16-24	7/16	.56	.259
AX 41IF-5	5/16	1/2-20	1/2	.62	.321
AX 41IF-6	3/8	5/8-18	5/8	.66	.384
AX 41IF-8	1/2	3/4-18	3/4	.74	.508

## Steel Nut-Zinc 41IFS

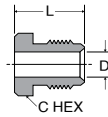
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX 41IFS-3	3/16	3/8-24	3/8	.56	.196
AX 41IFS-4	1/4	7/16-24	7/16	.56	.259
AX 41IFS-5	5/16	1/2-20	1/2	.62	.321
AX 41IFS-6	3/8	5/8-18	5/8	.66	.384
AX 41IFS-8	1/2	3/4-18	3/4	.74	.508
AX 41IFS-10	5/8	7/8-18	7/8	.80	.633

## Piloted Nut 41IFF for Single Flared Tubing

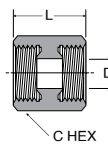
REF. SAE 040110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX 41IFF-2	1/8	5/16-28	5/16	.52	.133
AX 41IFF-3	3/16	3/8-24	3/8	.56	.196
AX 41IFF-4	1/4	7/16-24	7/16	.56	.259
AX 41IFF-5	5/16	1/2-20	1/2	.62	.321
AX 41IFF-6	3/8	5/8-18	5/8	.66	.384
AX 41IFF-8	1/2	3/4-18	3/4	.74	.508

## Union 42IFHD

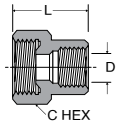
REF. SAE 040101



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	D
AX 42IFHD-2	1/8	5/16-28	13/32	.60	.078
AX 42IFHD-3	3/16	3/8-24	15/32	.63	.125
AX 42IFHD-4	1/4	7/16-24	17/32	.63	.189
AX 42IFHD-5	5/16	1/2-20	19/32	.71	.220
AX 42IFHD-6	3/8	5/8-18	3/4	.81	.282
AX 42IFHD-8	1/2	3/4-18	29/32	.92	.407

## Female Connector 46IFHD

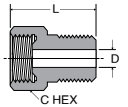
REF. SAE 040103



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX 46IFHD-3-2	3/16	1/8	3/8-24	1/2	.76	.125
AX 46IFHD-4-2	1/4	1/8	7/16-24	17/32	.78	.189
AX 46IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
AX 46IFHD-6-4	3/8	1/4	5/8-18	3/4	1.04	.282
AX 46IFHD-8-6	1/2	3/8	3/4-18	29/32	1.10	.407

## Male Connector 48IFHD

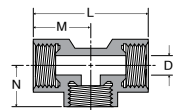
REF. SAE 040102



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
AX48IFHD-2-2	1/8	1/8	5/16-28	13/32	.63	.078
AX48IFHD-3-2	3/16	1/8	3/8-24	15/32	.70	.125
AX48IFHD-4-2	1/4	1/8	7/16-24	17/32	.74	.189
AX48IFHD-4-4	1/4	1/4	7/16-24	9/16	.89	.189
AX48IFHD-5-2	5/16	1/8	1/2-20	19/32	.79	.220
AX48IFHD-5-4	5/16	1/4	1/2-20	19/32	.98	.220
AX48IFHD-6-2	3/8	1/8	5/8-18	3/4	.89	.220
AX48IFHD-6-4	3/8	1/4	5/8-18	3/4	1.03	.282
AX48IFHD-6-6	3/8	3/8	5/8-18	3/4	1.03	.282
AX48IFHD-8-4	1/2	1/4	3/4-18	29/32	1.07	.346
AX48IFHD-8-6	1/2	3/8	3/4-18	29/32	1.07	.407
AX48IFHD-8-8	1/2	1/2	3/4-18	29/32	1.26	.407
AX48IFHD-10-8	5/8	1/2	7/8-18	1-1/16	1.32	.533
AX48IFHD-12-12	3/4	3/4	1-1/16-16	1 1/4	1.38	.626

## Union Tee 244IFHD

REF. SAE 040401



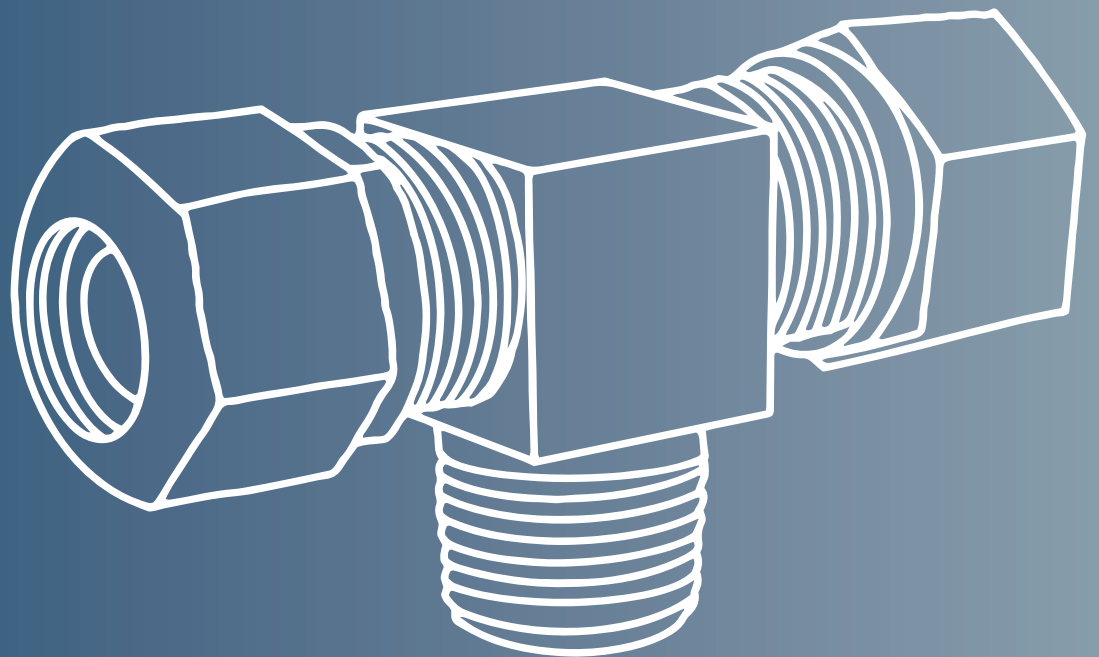
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX244IFHD-3	3/16	3/8-24	1.10	.55	.39	.125
AX244IFHD-4	1/4	7/16-24	1.13	.56	.42	.189
AX244IFHD-5	5/16	1/2-20	1.26	.63	.45	.220
AX244IFHD-6	3/8	5/8-18	1.48	.74	.56	.282
AX244IFHD-8*	1/2	3/4-18	1.76	.88	.67	.407

\*Does not meet SAE or UL.

### 5.1 AIR BRAKE- NTA FITTINGS

### 5.2 TRANSMISSION FITTINGS

### 5.3 AIR BRAKE- AB FITTINGS



# 5.1 Air Brake – NTA Fittings

NTA Fittings utilize a ribbed sleeve for compression and positive grip. Fittings meet SAE and D.O.T. specifications. Designed for all D.O.T truck and trailer applications. Electroless nickel plated bodies can be used with bio-diesel.

## Product Features:

- Meets D.O.T. FMVSS571.106 Performance
- Meets functional Requirements SAE J246 & SAE J1131
- Pre-applied Thread Sealant
- Nickel Plated Versions Available for Bio-diesel

## Applications:

- Air Brakes
- Air Tanks
- Air Ride
- Sliders
- Primary & Secondary Air Lines
- Cab Controls

## Markets:

- Heavy Duty Truck
- Trailer
- Mobile

## Specifications:

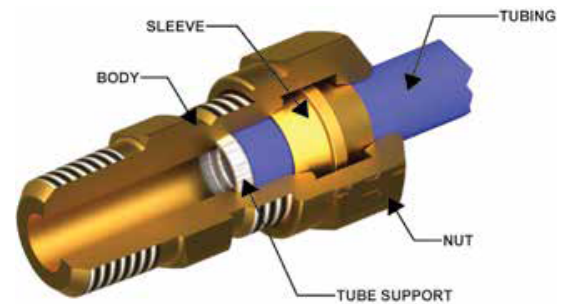
Temperature Range: -40° to +200° F (-40° to +93.3° C)

## Pressure Range:

Up to 150 PSI (10.3 bar)

## Compatible Tubing:

SAE J844 Type A & B nylon tubing)



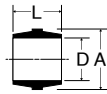
## Assembly Instructions:

1. Cut tubing squarely – maximum of 15° angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing until it bottoms on seat.
4. Tighten nut with wrench until one thread remains visible on the number of remakes) or, the nut tight, then wrench-tightened as indicated in the following table.

# Air Brake – NTA Fittings

## Sleeve 60NTA

REF. SAE 100115

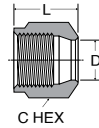


PART NO.	TUBE SIZE	A	D	L
AX 60NTA-3*	3/16	.255	.194	.23
AX 60NTA-4	1/4	.359	.256	.30
AX 60NTA-6	3/8	.479	.384	.39
AX 60NTA-8	1/2	.624	.509	.43
AX 60NTA-10	5/8	.746	.634	.49
AX 60NTA-12	3/4	.922	.760	.54

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Nut 61NTA

REF. SAE 100110

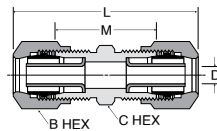


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX 61NTA-3*	3/16	5/16-24	7/16	.194	.40
AX 61NTA-4	1/4	7/16-24	9/16	.256	.45
AX 61NTA-6	3/8	17/32-24	5/8	.384	.63
AX 61NTA-8	1/2	11/16-20	13/16	.509	.72
AX 61NTA-10	5/8	13/16-18	15/16	.634	.77
AX 61NTA-12	3/4	1-18	1-1/8	.760	.81

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Union 62NTA

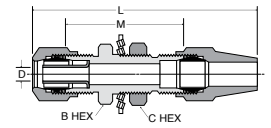
REF. SAE 100101 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D
AX 62NTA-4	1/4	7/16-24	9/16	7/16	1.49	.83	.137
AX 62NTA-6	3/8	17/32-24	5/8	9/16	2.00	1.08	.217
AX 62NTA-8	1/2	11/16-20	13/16	11/16	2.32	1.29	.338
AX 62NTA-10	5/8	13/16-18	15/16	13/16	2.39	1.41	.398
AX 62NTA-12	3/4	1-18	1-1/8	1	2.60	1.58	.523

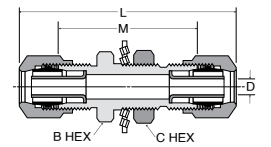
## Bulkhead Union 62ANBH

(NTA® & AIR BRAKE)



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
AX62ANBH-4	1/4	7/16-24	9/16	9/16	2.28	1.38	.137	7/16
AX62ANBH-6	3/8	17/32-24	11/16	3/4	2.97	1.62	.217	17/32
AX62ANBH-8	1/2	11/16-20	13/16	1	3.36	1.88	.338	11/16

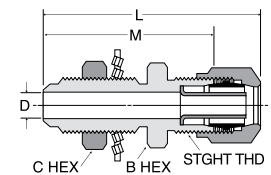
## Bulkhead Union 62NBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	B HEX	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
AX 62NBH-3*	3/16	5/16-24	7/16	7/16	1.80	1.21	.087	5/16
AX 62NBH-4	1/4	7/16-24	9/16	9/16	2.04	1.38	.137	7/16
AX 62NBH-6	3/8	17/32-24	11/16	3/4	2.54	1.62	.217	17/32
AX 62NBH-8	1/2	11/16-20	13/16	1	2.92	1.88	.338	11/16
AX 62NBH-10	5/8	13/16-18	15/16	1	2.99	2.01	.398	13/16

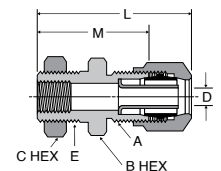
\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Bulkhead Union 62NFBH



PART NO.	TUBE SIZE	FLARE SIZE	STGHT THD	B HEX	C HEX	L	M	FLOW DIA. D	BKHD HOLE DIA.
AX 62NFBH-4	1/4	1/4	7/16-24	9/16	9/16	1.86	1.53	.137	7/16
AX 62NFBH-6	3/8	3/8	17/32-24	3/4	3/4	2.24	1.78	.217	5/8
AX 62NFBH-8	1/2	1/2	11/16-20	7/8	7/8	2.73	2.22	.338	3/4
AX 62NFBH-10	5/8	5/8	13/16-18	1	1	2.68	2.21	.398	7/8
AX 62NFBH-10-8	5/8	1/2	13/16-18	7/8	7/8	2.90	2.40	.398	3/4

## AX Bulkhead Union 66NBH

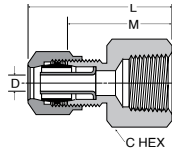


PART NO.	TB SZ	PIPE THD	A STGHT THD	E STGHT THD	B HEX	C HEX	L	M	FLOW DIA. D	BKHD HOLE DIA.
AX66NBH-8-6	1/2	3/8	11/16-20	7/8-14	1-1/16	1-1/16	1.94	1.42	.338	7/8

# Air Brake – NTA Fittings

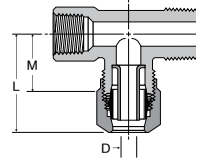
## Female Connector 66NTA

REF. SAE 100103 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX66NTA-4-2	1/4	1/8	7/16-24	9/16	1.17	.84	.137
AX66NTA-4-4	1/4	1/4	7/16-24	11/16	1.40	1.07	.137
AX66NTA-6-2	3/8	1/8	17/32-24	9/16	1.46	1.00	.217
AX66NTA-6-4	3/8	1/4	17/32-24	11/16	1.64	1.18	.217
AX66NTA-6-6	3/8	3/8	17/32-24	7/8	1.64	1.18	.217
AX66NTA-8-6	1/2	3/8	11/16-20	7/8	1.79	1.27	.338
AX66NTA-8-8	1/2	1/2	11/16-20	1-1/16	1.96	1.44	.338
AX66NTA-10-6	5/8	3/8	13/16-18	7/8	1.80	1.31	.398
AX66NTA-10-8	5/8	1/2	13/16-18	1-1/16	1.99	1.50	.398

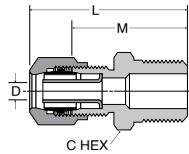
## Adapter Tee VS176NTA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	NI	FLOW DIA. D
AXVS176NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.75	.66	.137

## Male Connector VS68NTA

Ref. SAE 100102 BA

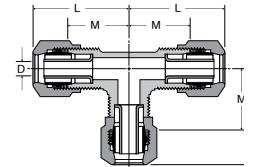


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AXVS68NTA-3-1*	3/16	1/16	5/16-24	3/8	1.16	.87	.087
AXVS68NTA-3-2*	3/16	1/8	5/16-24	7/16	1.15	.86	.087
AXVS68NTA-3-4*	3/16	1/4	5/16-24	9/16	1.35	1.05	.087
AXVS68NTA-4-2	1/4	1/8	7/16-24	7/16	1.22	.89	.137
AXVS68NTA-4-4	1/4	1/4	7/16-24	9/16	1.43	1.10	.137
AXVS68NTA-4-6	1/4	3/8	7/16-24	11/16	1.47	1.14	.137
AXVS68NTA-6-2	3/8	1/8	17/32-24	9/16	1.49	1.03	.217
AXVS68NTA-6-4	3/8	1/4	17/32-24	9/16	1.67	1.21	.217
AXVS68NTA-6-6	3/8	3/8	17/32-24	11/16	1.70	1.24	.217
AXVS68NTA-6-8	3/8	1/2	17/32-24	7/8	1.89	1.43	.217
AXVS68NTA-8-4	1/2	1/4	11/16-20	11/16	1.85	1.33	.338
AXVS68NTA-8-6	1/2	3/8	11/16-20	11/16	1.85	1.33	.338
AXVS68NTA-8-8	1/2	1/2	11/16-20	7/8	2.04	1.52	.338
AXVS68NTA-10-6	5/8	3/8	13/16-18	13/16	1.88	1.39	.398
AXVS68NTA-10-8	5/8	1/2	13/16-18	7/8	2.10	1.58	.398
AXVS68NTA-12-6	3/4	3/8	1-18	1	2.00	1.49	.440
AXVS68NTA-12-8	3/4	1/2	1-18	1	2.19	1.68	.523
AXVS68NTA-12-12	3/4	3/4	1-18	1-1/8	2.22	1.71	.523

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Union Tee 264NTA

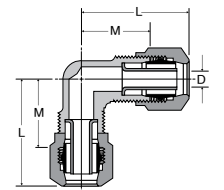
REF. SAE 100401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX264NTA-4	1/4	7/16-24	.95	.62	.137
AX264NTA-6	3/8	17/32-24	1.24	.78	.217
AX264NTA-8	1/2	11/16-20	1.45	.93	.338
AX264NTA-10	5/8	13/16-18	1.58	1.09	.398

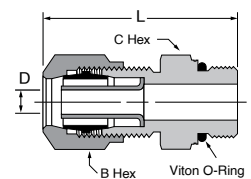
## Union Elbow 265NTA

REF. SAE 100201 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX265NTA-4	1/4	7/16-24	.95	.62	.137
AX265NTA-6	3/8	17/32-24	1.25	.79	.217
AX265NTA-8	1/2	11/16-20	1.45	.93	.338
AX265NTA-10	5/8	13/16-18	1.58	1.09	.398

## NTA® to Metric Adaptor 68NTA-X-MIX



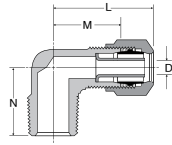
PART NO.	TUBE SIZE	METRIC THREAD	B HEX	C HEX	L	D
AX68NTA-4-M110	1/4	M10 X 1.0	9/16	9/16	1.33	.140

Note: Fluorocarbon o-ring is standard

# Air Brake – NTA Fittings

## Male Elbow VS269NTA

REF. SAE 100202 BA

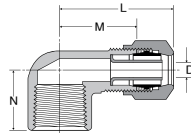


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS269NTA-3-2*	3/16	1/8	5/16-24	.90	.60	.67	.087
AXVS269NTA-3-4*	3/16	1/4	5/16-24	.91	.62	.87	.087
AXVS269NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
AXVS269NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
AXVS269NTA-4-6	1/4	3/8	7/16-24	1.16	.73	.86	.137
AXVS269NTA-6-2	3/8	1/8	17/32-24	1.19	.73	.75	.217
AXVS269NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
AXVS269NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
AXVS269NTA-6-8	3/8	1/2	17/32-24	1.40	.94	1.10	.217
AXVS269NTA-8-4	1/2	1/4	11/16-20	1.38	.86	.99	.338
AXVS269NTA-8-6	1/2	3/8	11/16-20	1.44	.92	.99	.338
AXVS269NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
AXVS269NTA-10-6	5/8	3/8	13/16-18	1.49	1.00	1.05	.398
AXVS269NTA-10-8	5/8	1/2	13/16-18	1.58	1.09	1.24	.398
AXVS269NTA-10-12	5/8	3/4	13/16-18	1.76	1.25	1.32	.400
AXVS269NTA-12-8	3/4	1/2	1-18	1.70	1.19	1.33	.523
AXVS269NTA-12-12	3/4	3/4	1-18	1.77	1.26	1.32	.523

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Female Elbow 270NTA

REF. SAE 100203 BA

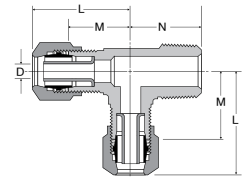


PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX 270NTA-3-2*	3/16	1/8	5/16-24	.96	.67	.52	.087
AX 270NTA-4-2	1/4	1/8	7/16-24	1.02	.69	.52	.137
AX 270NTA-4-4	1/4	1/4	7/16-24	1.11	.78	.71	.137
AX 270NTA-6-2	3/8	1/8	17/32-24	1.29	.83	.59	.217
AX 270NTA-6-4	3/8	1/4	17/32-24	1.35	.89	.77	.217
AX 270NTA-6-6	3/8	3/8	17/32-24	1.39	.93	.77	.217
AX 270NTA-8-6	1/2	3/8	11/16-20	1.55	1.03	.82	.338
AX 270NTA-8-8	1/2	1/2	11/16-20	1.65	1.13	1.01	.338
AX 270NTA-10-8	5/8	1/2	13/16-18	1.70	1.19	1.07	.398

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## Male Run Tee VS271NTA

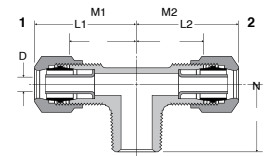
REF. SAE 100424 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS271NTA-4-2	1/4	1/8	7/16-24	.95	.62	.66	.137
AXVS271NTA-4-4	1/4	1/4	7/16-24	1.00	.68	.87	.137
AXVS271NTA-6-4	3/8	1/4	17/32-24	1.25	.79	.92	.217
AXVS271NTA-6-6	3/8	3/8	17/32-24	1.30	.84	.91	.217
AXVS271NTA-8-6	1/2	3/8	11/16-20	1.45	.93	.99	.338
AXVS271NTA-8-8	1/2	1/2	11/16-20	1.55	1.03	1.18	.338
AXVS271NTA-10-8	5/8	1/2	13/16-18	1.60	1.09	1.24	.398

## Male Branch Tee VS272NTA

REF. SAE 100425 BA

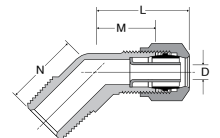


PART NO.	TB 1	TB 2	PIPE THD	STGHT THD	L1	L2	M1	M2	N	FLOW DIA. D
AXVS272NTA-3-2*	3/16	3/16	1/8	5/16-24	.90	.90	.61	.61	.66	.087
AXVS272NTA-4-2	1/4	1/4	1/8	7/16-24	.95	.95	.62	.62	.66	.137
AXVS272NTA-4-4	1/4	1/4	1/4	7/16-24	1.00	1.00	.68	.68	.87	.137
AXVS272NTA-6-2	3/8	3/8	1/8	17/32-24	1.18	1.18	.75	.75	.73	.217
AXVS272NTA-6-4	3/8	3/8	1/4	17/32-24	1.25	1.25	.91	.91	.92	.217
AXVS272NTA-6-4-4	3/8	1/4	1/4	17/32-24	.99	1.25	.67	.79	.91	.137
AXVS272NTA-6-6	3/8	3/8	3/8	17/32-24	1.27	1.27	.84	.84	.91	.217
AXVS272NTA-8-4	1/2	1/2	1/4	11/16-20	1.45	1.45	.93	.93	.99	.338
AXVS272NTA-8-6	1/2	1/2	3/8	11/16-20	1.45	1.45	.93	.93	.99	.338
AXVS272NTA-8-8	1/2	1/2	1/2	11/16-20	1.55	1.55	1.03	1.03	1.18	.338
AXVS272NTA-10-8	5/8	5/8	1/2	13/16-18	1.60	1.60	1.09	1.09	1.24	.398

\*Meets D.O.T. FMVSS 571.106 specification. No applicable SAE specification for this tube size.

## 45° Elbow VS279NTA

REF. SAE 100302 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS279NTA-4-2	1/4	1/8	7/16-24	.81	.49	.63	.137
AXVS279NTA-4-4	1/4	1/4	7/16-24	.93	.60	.85	.137
AXVS279NTA-6-2	3/8	1/8	17/32-24	1.17	.71	.68	.217
AXVS279NTA-6-4	3/8	1/4	17/32-24	1.17	.71	.85	.217
AXVS279NTA-6-6	3/8	3/8	17/32-24	1.21	.75	.94	.217
AXVS279NTA-6-8	3/8	1/2	17/32-24	1.24	.78	1.16	.217
AXVS279NTA-8-4	1/2	1/4	11/16-20	1.36	.84	.94	.338
AXVS279NTA-8-6	1/2	3/8	11/16-20	1.36	.84	.94	.338
AXVS279NTA-8-8	1/2	1/2	11/16-20	1.39	.87	1.16	.338
AXVS279NTA-10-6	5/8	3/8	13/16-18	1.43	.94	.98	.398
AXVS279NTA-10-8	5/8	1/2	13/16-18	1.42	.93	1.16	.398
AXVS279NTA-12-8	3/4	1/2	1-18	1.61	1.10	1.18	.523

# 5.2 Transmission Fittings

Transmission Fittings utilizes a specially designed slotted sleeve to help eliminate notch stress related to over-torque. Ideal for pressure protected pneumatic transmission applications. Electroless nickel plated bodies can be used with bio-diesel.

## Product Features:

- Brass Body
- D.O.T. Approved with Staked in Tube Support
- 3/16" & 5/32" Tube sizes
- Slotted Sleeve
- Nickel Plated Versions Available for Bio-diesel

## Applications:

- Air Shift Transmissions
- Seat Controls
- Dash Controls

## Markets:

- Heavy Duty Truck

## Specifications:

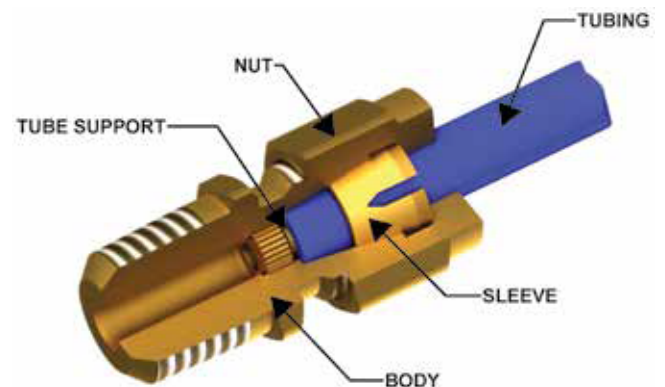
Temperature Range: -40° to +200° F (-40° to +93.3° C)

## Pressure Range:

Up to 150 PSI (10.3 bar)

## Compatible Tubing:

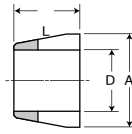
SAE J844 Type A & B nylon tubing)



## Assembly Instructions:

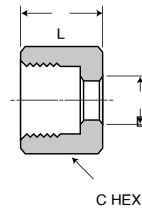
1. Cut tubing squarely and remove burrs
2. Tighten nut 1 1/2 turns from

# Transmission Fittings



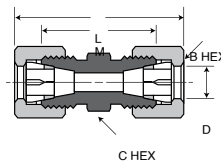
## Sleeve 60TF

PART NO.	TUBE SIZE	A	D	L
AX 60TF-2	1/8	.235	.130	0.17
AX 60TF-5/32	5/32	.251	.165	0.18



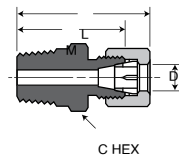
## Nut 61TF

PART NO.	TUBE SIZE	D	L	STRT THD	C HEX
AX 61TF-2	1/8	.133	.32	5/16-24	3/8
AX 61TF-5/32	5/32	.163	.32	5/16-24	3/8



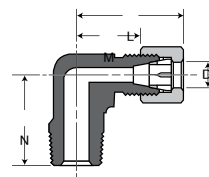
## Union 62TF

PART NO.	TUBE SIZE	D	L	STRT THD	M	C HEX	B HEX
AX 62TF-2	1/8	.109	1.04	5/16-24	.68	5/16	3/8
AX 62TF-5/32	5/32	.068	1.04	5/16-24	.68	5/16	3/8



## Male Connector 68TF

PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	C HEX
AX 68TF-2-1	1/8	1/16	.109	.96	5/16-24	.78	11/32
AX 68TF-2-2	1/8	1/8	.109	.96	5/16-24	.78	7/16
AX 68TF-5/32-1	5/32	1/16	.068	.84	5/16-24	.66	11/32
AX 68TF-5/32-2	5/32	1/8	.068	.96	5/16-24	.78	7/16



## Male Elbow 269TF

PART NO.	TUBE SIZE	PIPE THREAD	D	L	STRT THD	M	N
AX 269TF-2-2	1/8	1/8	.109	.79	5/16-24	.61	.66
AX 269TF-5/32-2	5/32	1/8	.068	.79	5/16-24	.61	.66

# 5.3 Air Brake – AB Fittings

Air Brake - AB Fittings are economical compression style fittings for copper air brake lines. AB fittings meet the functional requirements of SAE and the performance requirements of D.O.T.

## Product Features:

- Brass Body
- Meets D.O.T. FMVSS571.106 Performance
- Meets functional Requirements SAE J246
- Reusable
- Pre-applied Thread Sealant

## Applications:

- Copper Air Brake Lines
- Coolant Lines
- Fuel Lines

## Markets:

- Heavy Duty Truck
- Trailer
- Mobile

## Specifications:

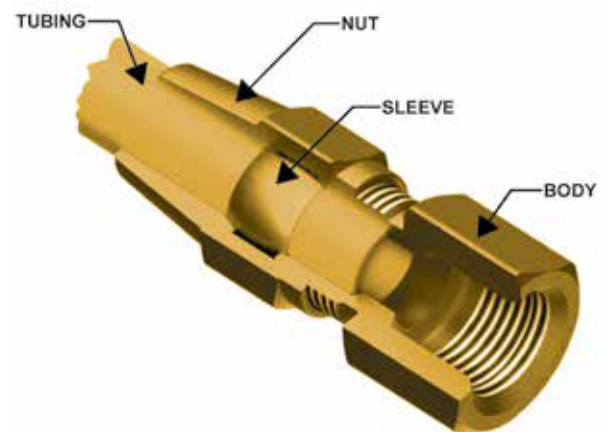
Temperature Range: -65° to +250° F (-53.8° to +121.1° C)

## Pressure Range:

Up to 400 PSI (27.5 bar)

## Compatible Tubing:

SAE J844 Type A & B nylon tubing)



## Assembly Instructions:

1. Cut tubing squarely and remove burrs
2. Slide nut and sleeve onto tubing.
3. bottomed on seat. The nut tight, then wrench tightened as indicated in the chart

# Air Brake – AB Fittings

## Sleeve 60AB

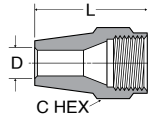
REF. SAE 120115



PART NO.	TUBE SIZE	A	D	L
AX 60AB-4	1/4	.322	.255	.250
AX 60AB-6	3/8	.461	.382	.310
AX 60AB-8	1/2	.594	.507	.380
AX 60AB-10	5/8	.734	.632	.440
AX 60AB-12	3/4	.874	.758	.500

## Nut 61AB

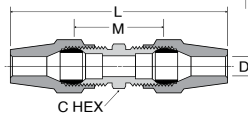
REF. SAE 120111



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
AX 61AB-4	1/4	7/16-24	9/16	.256	.75
AX 61AB-6	3/8	17/32-24	5/8	.384	1.13
AX 61AB-8	1/2	11/16-20	13/16	.509	1.25
AX 61AB-10	5/8	13/16-18	15/16	.634	1.38
AX 61AB-12	3/4	1-18	1-1/8	.760	1.56

## Union 62AB

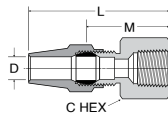
REF. SAE 120101 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX 62AB-4	1/4	7/16-24	7/16	1.98	.83	.189
AX 62AB-6	3/8	17/32-24	9/16	2.87	1.08	.314
AX 62AB-8	1/2	11/16-20	11/16	3.21	1.29	.405
AX 62AB-10	5/8	13/16-18	13/16	3.59	1.41	.531
AX 62AB-12	3/4	1-18	1	4.08	1.59	.656

## Female Connector 66AB

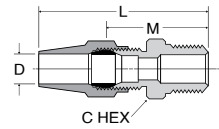
REF. SAE 120103 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX 66AB-4-2	1/4	1/8	7/16-24	9/16	1.42	.84	.188
AX 66AB-4-4	1/4	1/4	7/16-24	11/16	1.65	1.07	.188
AX 66AB-6-2	3/8	1/8	17/32-24	9/16	1.89	1.00	.314
AX 66AB-6-4	3/8	1/4	17/32-24	11/16	2.07	1.18	.314
AX 66AB-6-6	3/8	3/8	17/32-24	7/8	2.07	1.18	.314
AX 66AB-8-6	1/2	3/8	11/16-20	7/8	2.23	1.27	.408
AX 66AB-8-8	1/2	1/2	11/16-20	1-1/16	2.40	1.44	.408
AX 66AB-10-6	5/8	3/8	13/16-18	7/8	2.40	1.31	.533
AX 66AB-10-8	5/8	1/2	13/16-18	1-1/16	2.59	1.50	.533

## Male Connector VS68AB

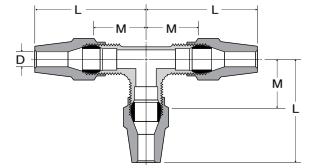
REF. SAE 120102 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
AX VS68AB-4-2	1/4	1/8	7/16-24	7/16	1.47	.89	.189
AX VS68AB-4-4	1/4	1/4	7/16-24	9/16	1.68	1.10	.189
AX VS68AB-4-6	1/4	3/8	7/16-24	11/16	1.72	1.14	.189
AX VS68AB-6-2	3/8	1/8	17/32-24	9/16	1.92	1.03	.189
AX VS68AB-6-4	3/8	1/4	17/32-24	9/16	2.10	1.21	.314
AX VS68AB-6-6	3/8	3/8	17/32-24	11/16	2.13	1.24	.314
AX VS68AB-6-8	3/8	1/2	17/32-24	7/8	2.32	1.43	.314
AX VS68AB-8-4	1/2	1/4	11/16-20	11/16	2.29	1.33	.314
AX VS68AB-8-6	1/2	3/8	11/16-20	11/16	2.29	1.33	.408
AX VS68AB-8-8	1/2	1/2	11/16-20	7/8	2.48	1.52	.408
AX VS68AB-10-6	5/8	3/8	13/16-18	13/16	2.48	1.39	.408
AX VS68AB-10-8	5/8	1/2	13/16-18	7/8	2.67	1.58	.533
AX VS68AB-12-8	3/4	1/2	1-18	1	2.92	1.68	.533
AX VS68AB-12-12	3/4	3/4	1-18	1-1/8	2.95	1.71	.658

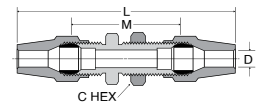
## Union Tee 264AB

REF. SAE 120401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX 264AB-4	1/4	7/16-24	1.20	.62	.189
AX 264AB-6	3/8	17/32-24	1.67	.78	.314
AX 264AB-8	1/2	11/16-20	1.89	.93	.408
AX 264AB-10	5/8	13/16-18	2.18	1.09	.533

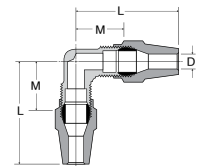
## Bulkhead Union 62ABH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D	BULKHEAD HOLE DIA.
AX 62ABH-4	1/4	7/16-24	9/16	2.53	1.38	.188	7/16
AX 62ABH-6	3/8	17/32-24	3/4	3.41	1.62	.314	17/32
AX 62ABH-8	1/2	11/16-20	1	3.80	1.88	.408	11/16

## Union Elbow 265AB

REF. SAE 120201 BA

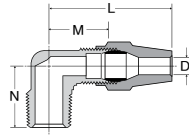


PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
AX 265AB-4	1/4	7/16-24	1.20	.62	.189
AX 265AB-6	3/8	17/32-24	1.68	.79	.314
AX 265AB-8	1/2	11/16-20	1.89	.93	.408
AX 265AB-10	5/8	13/16-18	2.18	1.09	.533

# Air Brake – AB Fittings

## Male Elbow VS269AB

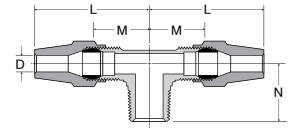
REF. SAE 120202 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX VS269AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
AX VS269AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
AX VS269AB-4-6	1/4	3/8	7/16-24	1.31	.73	.86	.189
AX VS269AB-6-2	3/8	1/8	17/32-24	1.62	.73	.75	.189
AX VS269AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
AX VS269AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
AX VS269AB-6-8	3/8	1/2	17/32-24	1.83	.94	1.10	.314
AX VS269AB-8-4	1/2	1/4	11/16-20	1.82	.86	.99	.314
AX VS269AB-8-6	1/2	3/8	11/16-20	1.88	.93	.99	.408
AX VS269AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
AX VS269AB-10-6	5/8	3/8	13/16-18	2.09	1.00	1.05	.408
AX VS269AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533
AX VS269AB-12-8	3/4	1/2	1-18	2.33	1.19	1.32	.533
AX VS269AB-12-12	3/4	3/4	1-18	2.50	1.26	1.32	.533

## Male Branch Tee VS272AB

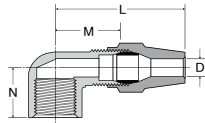
REF. SAE 120425 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS272AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
AXVS272AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
AXVS272AB-6-2	3/8	1/8	17/32-24	1.61	.72	.75	.189
AXVS272AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
AXVS272AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
AXVS272AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
AXVS272AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
AXVS272AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533

## Female Elbow 270AB

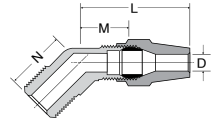
REF. SAE 120203 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AX270AB-4-2	1/4	1/8	7/16-24	1.27	.69	.52	.189
AX270AB-4-4	1/4	1/4	7/16-24	1.36	.78	.71	.189
AX270AB-6-2	3/8	1/8	17/32-24	1.72	.83	.59	.314
AX270AB-6-4	3/8	1/4	17/32-24	1.78	.89	.77	.314
AX270AB-6-6	3/8	3/8	17/32-24	1.82	.93	.77	.314
AX270AB-8-6	1/2	3/8	11/16-20	1.99	1.03	.82	.408
AX270AB-8-8	1/2	1/2	11/16-20	2.09	1.13	1.01	.408
AX270AB-10-8	5/8	1/2	13/16-18	2.28	1.19	1.07	.533

## 45° Elbow VS279AB

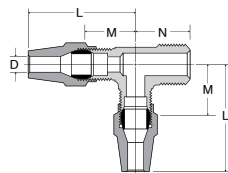
REF. SAE 120302 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS279AB-4-2	1/4	1/8	7/16-24	1.07	.49	.63	.189
AXVS279AB-4-4	1/4	1/4	7/16-24	1.18	.60	.85	.189
AXVS279AB-6-2	3/8	1/8	17/32-24	1.60	.71	.68	.189
AXVS279AB-6-4	3/8	1/4	17/32-24	1.64	.71	.85	.314
AXVS279AB-6-6	3/8	3/8	17/32-24	1.64	.75	.94	.314
AXVS279AB-6-8	3/8	1/2	17/32-24	1.67	.78	1.16	.314
AXVS279AB-8-6	1/2	3/8	11/16-20	1.80	.84	.94	.408
AXVS279AB-8-8	1/2	1/2	11/16-20	1.83	.87	1.16	.408
AXVS279AB-10-6	5/8	3/8	13/16-18	2.03	.94	.98	.408
AXVS279AB-10-8	5/8	1/2	13/16-18	2.13	1.05	1.16	.533
AXVS279AB-12-8	3/4	1/2	1-18	2.34	1.10	1.18	.533

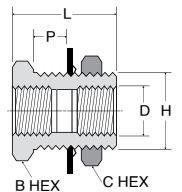
## Male Run Tee VS271AB

REF. SAE 120424 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
AXVS271AB-4-2	1/4	1/8	7/16-24	1.20	.62	.66	.189
AXVS271AB-4-4	1/4	1/4	7/16-24	1.26	.68	.87	.189
AXVS271AB-6-4	3/8	1/4	17/32-24	1.68	.79	.92	.314
AXVS271AB-6-6	3/8	3/8	17/32-24	1.73	.84	.91	.314
AXVS271AB-8-6	1/2	3/8	11/16-20	1.89	.93	.99	.408
AXVS271AB-8-8	1/2	1/2	11/16-20	1.99	1.03	1.18	.408
AXVS271AB-10-8	5/8	1/2	13/16-18	2.18	1.09	1.24	.533

## Anchor Coupling 207ACBH



PART NO.	FEMALE PIPE THREAD	STRAIGHT THREAD	MAX. BKHD P	B HEX	C HEX	L	BKHD HOLE DIA. H	FLOW DIA. D
AX207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
AX207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
AX207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
AX207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
AX207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
AX207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
AX207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
AX207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

\*Lock Washer not Available

# 6 HOSE FITTINGS

---

## 6.1 HOSE BARB

## 6.2 PUSH ON BARB



# 6.1 HOSE BARB

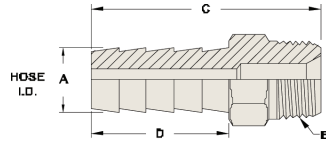
## Rigid Male Adapter

•These are not lead free

Part No.	Hose I.D. x Male NPTF	A	B	C	Approx. Wt. Lbs.	List Price
AX 32-001 *	1/8" x 1/8"	1.19	0.69	0.43	0.02	1.04
AX 32-027	1/8" x 1/4"	1.16	0.46	0.56	0.02	1.43
AX 32-002 *	3/16" x 1/8"	1.19	0.75	0.43	0.02	0.99
AX 32-003 *	3/16" x 1/4"	1.37	0.69	0.56	0.04	1.70
AX 32-301	1/4" x 1/16"	1.44	0.88	0.43	0.02	3.10
AX 32-004 *	1/4" x 1/8"	1.47	0.97	0.43	0.02	1.25
AX 32-005 *	1/4" x 1/4"	1.72	0.97	0.56	0.04	1.39
AX 32-006 *	1/4" x 3/8"	1.72	0.97	0.68	0.05	2.08
AX 32-007	1/4" x 1/2"	1.72	0.81	0.87	0.10	3.66
AX32-008 *	5/16" x 1/8"	1.47	0.97	0.43	0.02	1.17
AX 32-009 *	5/16" x 1/4"	1.72	0.97	0.56	0.04	1.63
AX 32-010 *	5/16" x 3/8"	1.76	0.97	0.68	0.06	2.17
AX 32-390	5/16" x 1/2"	1.88	0.95	0.87	0.10	4.10
AX 32-011 *	3/8" x 1/8"	1.53	0.97	0.56	0.03	1.52
AX 32-012 *	3/8" x 1/4"	1.75	0.97	0.56	0.05	1.41
AX 32-013 *	3/8" x 3/8"	1.72	0.96	0.68	0.06	1.97
AX32-014 *	3/8" x 1/2"	1.87	0.97	0.87	0.09	3.57
AX 32-026 *	3/8" x 3/4"	1.97	0.97	1.06	0.16	4.78
AX 32-302	1/2" x 1/8"	1.57	0.95	0.56	0.06	3.95
AX 32-015 *	1/2" x 1/4"	1.72	0.97	0.56	0.04	2.04
AX32-016 *	1/2" x 3/8"	1.76	0.97	0.68	0.07	2.46
AX 32-017 *	1/2" x 1/2"	1.87	0.96	0.87	0.11	3.14
AX 32-018 *	1/2" x 3/4"	1.94	0.97	1.06	0.16	5.14
AX 32-303	1/2" x 1"	2.31	0.99	1.37	0.33	14.75
AX 32-304	5/8" x 1/4"	1.67	0.92	0.68	0.06	4.83
AX 32-019 *	5/8" x 3/8"	1.76	0.97	0.68	0.08	2.72
AX 32-020 *	5/8" x 1/2"	1.87	0.96	0.87	0.11	3.38
AX32-021 *	5/8" x 3/4"	1.87	0.96	1.06	0.14	4.69
AX 32-305	5/8" x 1"	2.31	0.96	1.37	0.36	17.68
AX 32-306	3/4" x 3/8"	1.65	0.87	0.81	0.12	5.93
AX32-022 *	3/4" x 1/2"	1.87	0.96	0.87	0.14	4.69
AX 32-023 *	3/4" x 3/4"	1.87	0.96	1.06	0.15	5.66
AX 32-316	3/4" x 1"	2.55	1.15	1.37	0.38	13.06
AX 32-307	1" x 1/2"	1.80	0.87	1.06	0.18	7.90
AX 32-024 *	1" x 3/4"	2.19	1.19	1.06	0.32	7.05
AX 32-025 *	1" x 1"	2.48	1.19	1.37	0.39	12.25
AX 32-029	1-1/4" x 3/4"	2.37	1.19	1.37	0.35	16.56
AX 32-028	1-1/4" x 1"	2.55	1.19	1.37	0.46	15.74

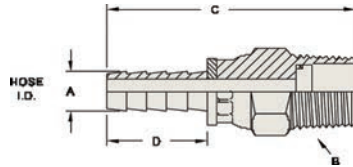
# HOSE BARB

## Brass Rigid Male BSPT Barb Adapter



Part No	Hose I. D. x Male BSPT	List Price
AX32-450	1/4" x 1/8"	1.47
AX32-451	1/4" x 1/4"	2.10
AX32-452	3/8" x 1/4"	2.43
AX32-453	3/8" x 3/8"	6.15
AX32-454	3/8" x 1/2"	4.12
AX32-455	1/2" x 3/8"	3.17
AX32-456	1/2" x 1/2"	4.57
AX32-457	3/4" x 3/4"	7.90
AX32-458	1" x 1"	14.66

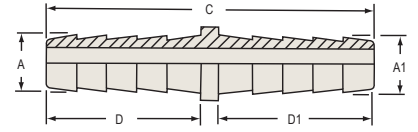
## Swivel Male Adapter



Part No.	Hose I. D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
AX32-329	3/16" x 1/8"	2.00	0.78	0.56	0.06	6.16
AX32-331	3/16" x 1/4"	1.95	0.78	0.56	0.06	6.04
AX32-332	1/4" x 1/8"	2.19	0.97	0.56	0.06	5.83
AX32-349	1/4" x 1/4"	2.12	0.97	0.56	0.06	5.26
AX32-351	3/8" x 1/8"	2.12	0.97	0.56	0.07	6.06
AX32-201	3/8" x 1/4"	2.12	0.97	0.56	0.07	4.26
AX32-360	3/8" x 3/8"	2.12	0.97	0.69	0.08	6.47
AX32-355	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.81
AX32-356	1/2" x 1/2"	2.33	0.97	0.87	0.14	9.44
AX32-357	3/4" x 3/4"	2.33	0.97	1.06	0.20	11.11
AX32-386	1" x 1"	2.88	1.19	1.38	0.40	72.18

PART NO.	Hose I. D. x Male NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
AX32-200	1/4" x 1/4"	1.65	.89	0.56	0.04	4.16
AX32-202	3/8" x 3/8"	1.75	1.00	0.68	0.08	5.66

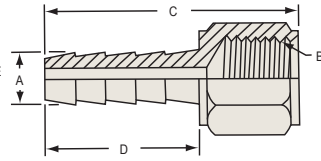
## Mender / Splicer



Part No.	Hose I. D. x Hose I. D.	A	B	C	O. D.	List Price
AX 32-091 *	1/8"	0.98	0.45	0.31	0.01	1.36
AX 32-092	3/16"	1.62	0.77	0.36	0.02	1.82
AX 32-093 *	1/4"	2.00	0.96	0.37	0.02	1.52
AX 32-079 *	1/4" x 1/8"	1.50	0.97	0.37	0.02	3.48
AX 32-094 *	5/16"	2.00	0.96	0.39	0.02	1.44
AX 32-090 *	5/16" x 1/4"	2.00	0.97	0.50	0.03	2.41
AX 32-095 *	3/8"	2.00	0.97	0.51	0.04	1.53
AX 32-080 **	3/8" x 1/4"	2.06	0.97	0.56	0.03	4.18
AX 32-375 *	3/8" x 5/16"	2.00	0.97	0.50	0.03	2.34
AX 32-096 *	1/2"	2.00	0.96	0.62	0.06	2.22
AX 32-087 *	1/2" x 3/8"	2.06	0.97	0.71	0.06	6.01
AX 32-097	5/8"	2.05	0.96	0.75	0.08	3.00
AX 32-088	5/8" x 3/8"	2.06	0.97	0.75	0.06	6.85
AX 32-376	5/8" x 1/2"	2.06	0.97	0.75	0.07	6.78
AX 32-098 *	3/4"	2.50	1.15	0.87	0.10	5.22
AX 32-089	3/4" x 1/2"	2.28	1.19	0.87	0.10	9.43
AX 32-379	3/4" x 5/8"	2.02	0.96	0.87	0.10	5.44
AX 32-380	1" x 3/4"	2.58	1.19	1.12	0.18	5.94
AX 32-099	1"	3.00	1.44	1.02	0.23	9.94

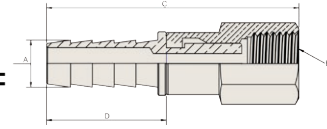
# HOSE BARB

## Rigid Female Adapter



Part No.	Hose I. D. x female NPTF	A	B	Hex	Approx. Wt. Lbs.	List Price
AX 32-050	1/8" x 1/8"	0.96	0.46	0.50	0.02	1.69
AX 32-317	1/8" x 1/4"	1.15	0.46	0.62	0.04	5.14
AX 32-051	3/16" x 1/8"	1.10	0.68	0.50	0.02	1.46
AX 32-062	3/16" x 1/4"	1.44	0.75	0.62	0.04	5.85
AX 32-052	1/4" x 1/8"	1.35	0.93	0.50	0.02	1.87
AX 32-053	1/4" x 1/4"	1.60	0.97	0.62	0.06	1.88
AX 32-054	1/4" x 3/8"	1.65	1.03	0.75	0.04	2.66
AX 32-441	1/4" x 1/2"	1.66	0.97	0.93	0.08	8.17
AX 32-055	5/16" x 1/8"	1.47	0.97	0.56	0.04	2.93
AX32-056	5/16" x 1/4"	1.66	0.97	0.62	0.04	2.55
AX32-318	5/16" x 3/8"	1.66	0.97	0.75	0.06	5.75
AX32-320	5/16" x 1/2"	1.67	0.96	0.93	0.08	6.50
AX32-057	3/8" x 1/8"	1.47	0.97	0.56	0.04	2.59
AX32-058	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.21
AX32-059	3/8" x 3/8"	1.63	1.00	0.81	0.08	2.42
AX32-063	3/8" x 1/2"	1.72	0.94	0.93	0.12	4.35
AX32-442	3/8" x 3/4"	1.97	0.97	1.18	0.20	14.65
AX32-064	1/2" x 1/4"	1.66	0.96	0.62	0.08	2.98
AX32-060	1/2" x 3/8"	1.66	0.97	0.75	0.08	5.51
AX32-061	1/2" x 1/2"	1.76	0.96	0.93	0.12	4.39
AX32-443	1/2" x 3/4"	1.97	0.97	1.18	0.26	14.91
AX32-444	5/8" x 3/8"	1.66	0.97	0.75	0.08	6.53
AX32-445	5/8" x 1/2"	1.66	0.97	0.93	0.10	8.27
AX32-446	5/8" x 3/4"	1.97	0.97	1.18	0.21	14.80
AX32-447	3/4" x 1/2"	1.88	1.19	0.93	0.13	9.25
AX32-065	3/4" x 3/4"	2.19	1.21	1.18	0.22	7.86
AX32-049	1" x 3/4"	2.19	1.19	1.18	0.26	19.43
AX32-321	1" x 1"	2.32	1.19	1.44	0.35	25.29
AX32-448	1-1/4" x 1"	2.32	1.19	1.43	0.44	24.67

## Swivel Female Adapter NPTF



Part No.	Hose I. D. x Female NPTF	A	B	HEX	Approx. Wt. Lbs.	List Price
AX 32-470	1/4" x 1/4"	1.80	0.97	0.62	0.06	10.22
AX 32-472	3/8" x 1/4"	1.80	0.97	0.62	0.06	10.50
AX 32-473	3/8" x 3/8"	1.82	0.97	0.75	0.09	10.89
AX 32-475	1/2" x 3/8"	1.82	0.97	0.75	0.09	13.04
AX 32-476	1/2" x 1/2"	1.86	0.97	0.93	0.14	13.63

## High Volume Male Swivel

- 300 PSI
- Nitrile Buna (NBR) O-Ring

Part No.	Hose I. D. x Male NPTF	A	B	HEX	Approx. Wt. Lbs.	List Price
AX 32-781	3/8" x 1/4"	1.83	0.87	0.62	0.07	17.80
AX 28-415	1/4" x 1/4"	1.30	0.94	0.81	0.14	35.18

4065

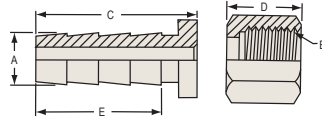
209A 128 29A 29F 126HB 126 FPB 105B-2 KF-RS 104 144

# HOSE BARB

## Swivel Female Adapter - With Gasket

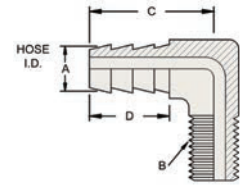
• NPSM Thread

National Pipe Straight Gasket Seal Swivel



Part No.	Hose I. D. x female NPSM	A	B	Hex	Approx. Wt. Lbs.	List Price
AX 32-131	1/8" x 1/8"	0.90	0.46	0.50	0.02	7.98
AX 32-132	3/16" x 1/8"	1.19	0.75	0.50	0.03	7.74
AX 32-133	3/16" x 1/4"	1.28	0.75	0.62	0.04	8.56
AX 32-120	1/4" x 1/8"	1.41	0.97	0.50	0.02	9.55
AX 32-121	1/4" x 1/4"	1.50	0.97	0.62	0.02	3.15
AX 32-129	1/4" x 3/8"	1.63	0.97	0.75	0.04	9.46
AX 32-130	5/16" x 1/4"	1.50	0.97	0.62	0.04	11.89
AX 32-122	3/8" x 1/4"	1.54	1.00	0.62	0.06	5.20
AX 32-123	3/8" x 3/8"	1.60	0.97	0.75	0.06	9.77
AX32-354	3/8" x 1/2"	1.66	0.97	0.93	0.10	11.30
AX 32-124	1/2" x 3/8"	1.60	0.97	0.75	0.08	11.84
AX 32-125	1/2" x 1/2"	1.66	0.97	0.93	0.12	8.48
AX 32-117	1/2" x 3/4"	1.82	1.19	1.18	0.16	12.12
AX 32-118	5/8" x 3/4"	1.82	1.19	1.18	0.18	13.00
AX 32-119	3/4" x 3/4"	1.82	1.19	1.18	0.14	8.46

## Forged Hose Barb 90° ELBOW



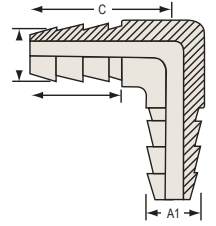
Part No.	Hose I. D. x Female NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
AX32-308	3/16" x 1/8"	0.95	0.70	0.66	0.37	0.02	2.94
AX32-391	3/16" x 1/4"	1.00	0.84	0.63	0.46	0.10	3.77
AX32-038	1/4" x 1/8"	1.01	0.81	0.71	0.47	0.06	2.52
AX32-039	1/4" x 1/4"	1.01	0.87	0.63	0.47	0.06	3.49
AX32-309 **	1/4" x 3/8"	1.08	0.97	0.73	0.69	0.12	4.47
AX32-036	5/16" x 1/8"	1.01	0.81	0.63	0.47	0.04	3.08
AX32-040	5/16" x 1/4"	1.01	0.87	0.63	0.47	0.06	4.06
AX32-310	5/16" x 3/8"	1.06	0.94	0.63	0.50	0.06	6.62
AX32-046	3/8" x 1/8"	1.01	0.81	0.63	0.47	0.06	2.74
AX32-041	3/8" x 1/4"	1.02	0.88	0.65	0.47	0.06	3.49
AX32-042	3/8" x 3/8"	1.09	0.93	0.68	0.50	0.08	4.20
AX32-047	3/8" x 1/2"	1.11	1.09	0.63	0.59	0.10	4.50
AX32-048	1/2" x 1/4"	1.06	1.00	0.68	0.59	0.10	4.29
AX32-043	1/2" x 3/8"	1.06	1.09	0.69	0.59	0.10	5.20
AX32-311	1/2" x 1/2"	1.31	1.19	0.87	0.56	0.12	6.47
AX32-044	5/8" x 3/8"	1.12	1.06	0.61	0.56	0.12	7.03
AX32-045	5/8" x 1/2"	1.12	1.12	0.61	0.63	0.14	6.39
AX32-312	5/8" x 3/4"	1.46	1.26	0.93	1.06	0.32	11.45
AX32-313	3/4" x 1/2"	1.31	1.28	0.87	0.85	0.22	8.75
AX32-314	3/4" x 3/4"	1.46	1.26	0.91	1.06	0.32	14.03
AX32-330 **	3/4" x 1"	1.57	1.64	0.90	1.34	0.64	27.06
AX32-315	1" x 3/4"	1.60	1.40	0.95	1.06	0.32	12.90
AX32-319	1" x 1"	1.69	1.64	0.98	1.30	0.43	52.77

# HOSE BARB

## Barstock Hose Bard 90° Elbow

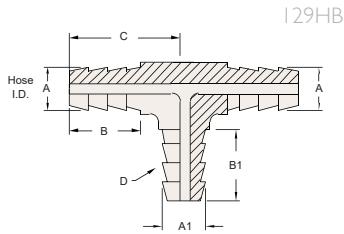
Part No.	Hose I. D. x Male NPTF	A	B	C	Body Size	Approx. Wt. Lbs.	List Price
AX32-038B	1/4" X 1/8"	1.00	0.75	0.75	0.50	0.02	5.52
AX32-039B	1/4" X 1/4"	1.02	0.91	0.74	0.56	0.04	6.12
AX32-041B	3/8" X 1/4"	1.32	0.89	0.97	0.58	0.08	8.75
AX32-042B	3/8" X 3/8"	1.50	1.06	0.97	0.75	0.14	14.91
AX32-043B	1/2" X 3/8"	1.53	1.07	0.97	0.72	0.16	13.99

## 90° Hose Barb Elbow



Part No.	Hose I. D. x Hose I. D.	A	B	Body Size	Approx. Wt. Lbs.	List Price
AX 32-429	1/8" x 1/8"	0.55	0.55	0.37	0.03	7.02
AX 32-433	3/16" x 3/16"	0.90	0.90	0.37	0.03	5.90
AX 32-412	1/4" x 1/8"	1.02	1.02	0.44	0.04	3.67
AX 32-413	1/4" x 1/4"	1.01	1.01	0.44	0.04	3.87
AX 32-425	5/16" x 5/16"	1.15	1.15	0.48	0.05	9.03
AX 32-414	3/8" x 1/8"	1.01	1.01	0.44	0.04	5.05
AX 32-415	3/8" x 1/4"	1.00	1.00	0.44	0.04	4.20
AX 32-416	3/8" x 3/8"	1.02	1.02	0.44	0.04	6.95
AX 32-417	3/8" x 1/2"	1.24	1.10	0.50	0.06	6.37
AX 32-418	1/2" x 1/4"	1.24	1.08	0.50	0.06	5.57
AX 32-419	1/2" x 3/8"	1.22	1.09	0.50	0.06	9.69
AX 32-420	1/2" x 1/2"	1.24	1.24	0.50	0.06	5.83
AX 32-434	5/8" x 5/8"	1.20	1.20	0.75	0.16	20.27
AX 32-435	3/4" x 1/2"	1.41	1.41	0.88	0.21	21.08
AX 32-436	3/4" x 3/4"	1.41	1.41	0.88	0.21	25.22

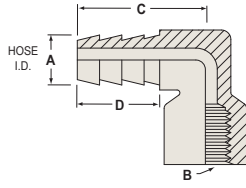
## Hose Barb Tees



Part No.	Hose I. D. x Size (1 & 2) x 3	A	B	Body Size	Approx. Wt. Lbs.	List Price
AX 32-367	1/8"	0.84	0.83	0.25	0.02	3.99
AX 32-368	3/16"	1.02	1.02	0.37	0.03	3.73
AX 32-365	1/4"	1.00	1.00	0.44	0.06	3.37
AX 32-350	(1/4") x 1/8"	0.94	0.94	0.44	0.04	8.09
AX 32-366	5/16"	1.00	1.00	0.44	0.06	4.19
AX 32-126	3/8"	1.01	1.01	0.43	0.06	4.22
AX 32-400	1/2"	1.02	1.00	0.43	0.08	5.13
AX 32-352	(1/2") x 3/8"	1.26	1.26	0.43	0.10	13.81
AX 32-361	5/8"	1.26	1.26	0.75	0.16	19.55
AX 32-363	3/4"	1.26	1.26	0.88	0.18	26.91
AX 32-353	(3/4") x 1/2"	1.41	1.41	0.88	0.23	28.32
AX 32-128	3/8" HB x 1/4" MIP	1.00	0.94	0.43	0.06	11.95

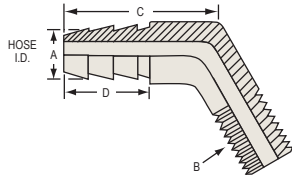
# HOSE BARB

## 90° Female Hose Barb Elbow



Part No.	Hose I. D. x Female NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
AX 32-401	1/4" x 1/8"	1.01	0.82	0.47	0.06	4.88
AX 32-402	1/4" x 1/4"	1.13	0.91	0.56	0.10	6.25
AX 32-403	3/8" x 1/8"	1.01	0.82	0.47	0.06	5.77
AX 32-404	3/8" x 1/4"	1.15	0.91	0.56	0.10	6.29
AX 32-405	3/8" x 3/8"	1.15	1.11	0.68	0.14	14.02
AX 32-406	3/8" x 1/2"	1.26	1.39	0.75	0.20	12.43
AX 32-407	1/2" x 1/4"	1.26	0.91	0.56	0.10	7.37
AX 32-410	1/2" x 3/8"	1.24	1.11	0.68	0.14	10.15
AX 32-411	1/2" x 1/2"	1.37	1.39	0.75	0.20	11.55
AX 32-409	3/4" x 3/4"	1.52	1.75	0.81	0.50	16.20

## 45° Elbow



Part No.	Hose I. D. x Male NPTF	A	B	Body Size	Approx. Wt. Lbs.	List Price
AX32-110	1/4" x 1/8"	0.91	0.62	0.53	0.04	3.88
AX32-109*	1/4" x 1/4"	1.00	0.62	0.57	0.06	7.94
AX32-111	3/8" x 1/8"	0.83	0.66	0.53	0.04	5.48
AX32-112	3/8" x 1/4"	0.82	0.84	0.53	0.06	4.93
AX32-113	3/8" x 3/8"	0.93	0.87	0.59	0.08	6.31
AX32-346	1/2" x 1/4"	1.00	0.84	0.59	0.08	10.06
AX32-114	1/2" x 3/8"	1.00	0.88	0.59	0.08	8.26
AX32-116	1/2" x 1/2"	1.15	0.94	0.59	0.12	13.61
AX32-115	5/8" x 3/8"	0.97	0.88	0.59	0.10	8.80
AX32-345	3/4" x 1/2"	1.15	0.94	0.81	0.13	25.37

\* Barstock

## Crosses

Part No	Hose ID	List Price
AX 32-608	1/4	3.68
AX 32-609	5/16	4.27
AX 32-610	3/8	5.47

HOSE WYES AVAILABLE WITH EXTENDED LEAD TIME.



## Ball End Swivel NPSM - Ball Seat Type

Part No.	Hose I. D. x NPSM	A	B	HEX	Approx. Wt. Lbs.	List Price
AX 32-066	1/8" x 1/8"	0.46	0.44	0.50	0.03	5.64
AX 32-067	3/16" x 1/8"	0.75	0.44	0.50	0.03	4.45
AX 32-068	3/16" x 1/4"	0.75	0.52	0.62	0.04	3.04
AX 32-069	1/4" x 1/8"	0.97	0.44	0.50	0.04	2.80
AX 32-070	1/4" x 1/4"	0.97	0.53	0.62	0.06	2.90
AX 32-078	1/4" x 3/8"	0.97	0.63	0.75	0.06	6.32
AX 32-071	5/16" x 1/4"	0.97	0.52	0.62	0.05	3.90
AX 32-389	5/16" x 3/8"	0.97	0.63	0.75	0.07	8.94
AX 32-072	3/8" x 1/4"	0.97	0.53	0.62	0.06	2.62
AX 32-073	3/8" x 3/8"	0.97	0.59	0.75	0.08	3.14
AX 32-074	3/8" x 1/2"	0.97	0.69	0.94	0.14	9.38
AX 32-075	1/2" x 3/8"	0.97	0.59	0.75	0.08	3.18
AX 32-076	1/2" x 1/2"	0.97	0.69	0.94	0.10	4.19
AX 32-077	3/4" x 3/4"	0.97	0.70	1.12	0.14	7.30

## Ballseat Male Adapter Beveled seat

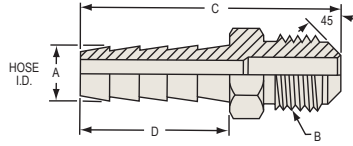
Part No.	NPSM x Male NPTF	A	HEX	Approx. Wt. Lbs.	List Price
AX32-359	1/8" x 1/8"	0.94	0.43	0.03	4.78
AX32-034	1/4" x 1/8"	1.06	0.56	0.04	3.90
AX32-030	1/4" x 1/4"	1.25	0.56	0.06	3.69
AX32-362	3/8" x 1/4"	1.28	0.68	0.08	6.12
AX32-031	3/8" x 3/8"	1.30	0.68	0.08	5.15
AX32-392	3/8" x 1/2"	1.47	0.88	0.13	11.68
AX32-364	1/2" x 3/8"	1.35	0.87	0.10	8.87
AX32-032	1/2" x 1/2"	1.53	0.87	0.14	6.87
AX32-033	3/4" x 3/4"	1.53	1.06	0.20	10.45

## Ballseat Union

Part No.	NPSM x NPSM	A	HEX	Approx. Wt. Lbs.	List Price
AX 32-460	1/8"	0.79	0.43	0.02	4.45
AX 32-461	1/4"	1.09	0.56	0.04	5.30
AX 32-462	3/8"	1.19	0.68	0.07	8.65
AX 32-463	1/2"	1.31	0.87	0.10	10.15

# HOSE BARB

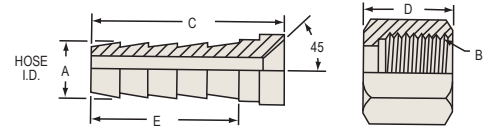
## 45° Flare Adapter



Part No.	Hose I. D. x 45° Flare	Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX32-322	3/16" x 1/4"	7/16-20	1.5	0.75	0.43	0.03	6.46
AX32-081	1/4" x 1/4"	7/16-20	1.72	0.97	0.43	0.03	3.62
AX32-082	1/4" x 3/8"	5/8-18	1.82	0.97	0.62	0.07	4.84
AX32-083	5/16" x 5/16"	1/2-20	1.75	0.97	0.50	0.08	6.24
AX32-084	3/8" x 3/8"	5/8-18	1.82	0.97	0.62	0.08	5.24
AX32-085	3/8" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	8.44
AX32-086	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	7.22

142 201BF KF-MS KDS

## 45° Flare Swivel

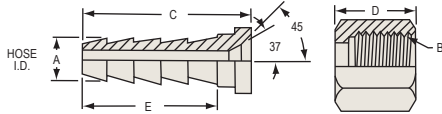


Part No	Hose I. D. x Female 45° Flare	Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX32-326	3/16" x 3/16"	3/8-24	1.19	0.75	0.43	0.04	7.41
AX30-295**	3/16" x 3/8"	5/8-18	1.82	0.90	0.75	0.04	4.26
AX32-101	1/4" x 1/4"	7/16-20	1.57	0.97	0.56	0.04	2.27
AX32-103	1/4" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	2.73
AX32-104	5/16" x 5/16"	1/2-20	1.61	0.97	0.62	0.05	5.58
AX32-327	5/16" x 3/8"	5/8-18	1.67	0.97	0.75	0.08	3.98
AX32-105	3/8" x 3/8"	5/8-18	1.64	0.97	0.75	0.08	3.64
AX32-105C**	3/8" x 3/8"	5/8-18	1.71	0.97	0.75	0.07	4.55
AX32-106	3/8" x 1/2"	3/4-16	1.81	0.97	0.87	0.10	8.85
AX32-100	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.12	4.59
AX32-328	3/4" x 3/4"	1-1/16-14	2.00	0.97	1.25	0.20	18.90

29SAE 209ASF 146HBLFSV KF-NS 128 FSS 146 144

\*\* Swivel crimp style (crimped on the outside of fitting)

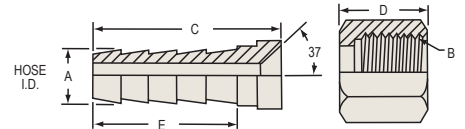
## Dual 45°/ 37° Flare Swivel



Part No.	Hose I. D. x Dual Seat	Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX32-107	3/16" x 1/4"	7/16-20	1.34	0.75	0.56	0.04	3.53
AX32-107C**	3/16" x 1/4"	7/16-20	1.42	0.78	0.56	0.04	3.79
AX32-337	1/4" x 1/4"	7/16-20	1.56	0.97	0.56	0.04	2.73
AX32-337C**	1/4" x 1/4"	7/16-20	1.60	0.97	0.56	0.04	2.98
AX32-102	1/4" x 5/16"	1/2-20	1.61	0.97	0.62	0.06	3.20
AX32-339	5/16" x 5/16"	1/2-20	1.60	0.97	0.62	0.06	3.97
AX32-340	3/8" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	5.52
AX32-341	1/2" x 1/2"	3/4-16	1.68	0.97	0.87	0.10	4.93
AX32-341C**	1/2" x 1/2"	3/4-16	1.75	0.97	0.87	0.09	5.97
AX32-342	1/2" x 5/8"	7/8-14	1.76	0.97	1.00	0.12	7.07
AX32-394**	5/8" x 5/8"	7/8-14	1.83	0.97	1.00	0.14	7.57

KDS

## Female 37° J.I.C Flare Swivel



Part No	Hose I. D. x Female 37° Flare	Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX32-334	1/4" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	4.14
AX32-335	5/16" x 3/8"	9/16-18	1.60	0.97	0.68	0.06	4.28
AX32-336	3/8" x 3/8"	9/16-18	1.60	0.97	0.68	0.10	3.76
AX32-336C**	3/8" x 3/8"	9/16-18	1.66	0.97	0.68	0.06	3.80
AX32-338*	3/4" x 3/4"	1-1/16-12	2.00	0.97	1.25	0.20	19.56
AX32-338SS	3/4" x 3/4"	1-1/16-12	2.00	0.97	1.25	0.24	23.94
AX32-338C	3/4" x 3/4"	1-1/16-12	2.13	1.19	1.25	0.20	12.29
AX32-397**	1" x 1"	1-5/16-12	2.31	1.19	1.50	0.33	18.14

\*\* Swivel crimp style

# 6.2 PUSH ON BARB

---

Air Brake - AB Fittings are economical compression style fittings for copper air brake lines. AB fittings meet the functional requirements of SAE and the performance requirements of D.O.T.

## Product Features:

- Brass Body
- Meets D.O.T. FMVSS571.106 Performance
- Meets functional Requirements SAE J246
- Reusable
- Pre-applied Thread Sealant

## Applications:

- Copper Air Brake Lines
- Coolant Lines
- Fuel Lines

## Markets:

- Heavy Duty Truck
- Trailer
- Mobile

## Specifications:

Temperature Range: -65° to +250° F (-53.8° to +121.1° C)

## Pressure Range:

Up to 400 PSI (27.5 bar)

## Compatible Tubing:

SAE J844 Type A & B nylon tubing)

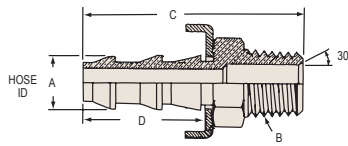


## Assembly Instructions:

1. Cut tubing squarely and remove burrs
2. Slide nut and sleeve onto tubing.
3. bottomed on seat. The nut tight, then wrench tightened as indicated in the chart

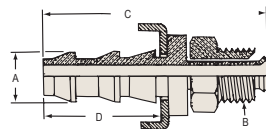
# PUSH ON BARB

## Male Adapter



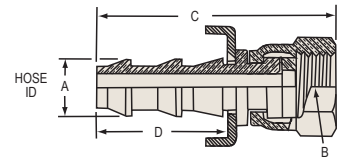
Part No.	Hose I. D. x Male NPTF	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-200	1/4" x 1/8"	1.43	0.87	0.50	0.04	1.43
AX30-201	1/4" x 1/4"	1.66	0.87	0.56	0.06	2.03
AX30-211	1/4" x 3/8"	1.66	0.87	0.68	0.06	2.94
AX30-212	5/16" x 1/8"	1.42	0.77	0.43	0.04	3.14
AX30-213	5/16" x 1/4"	1.66	0.87	0.56	0.06	3.13
AX30-202	3/8" x 1/8"	1.53	0.97	0.50	0.04	2.18
AX30-203	3/8" x 1/4"	1.69	0.89	0.56	0.07	2.31
AX30-204	3/8" x 3/8"	1.76	0.97	0.68	0.08	2.81
AX30-205	3/8" x 1/2"	1.97	0.97	0.87	0.10	5.04
AX30-392	3/8" x 3/4"	1.97	0.92	1.06	0.16	13.28
AX30-216	1/2" x 1/4"	1.76	0.97	0.68	0.08	2.98
AX30-206	1/2" x 3/8"	1.76	0.97	0.68	0.09	2.93
AX30-207	1/2" x 1/2"	1.97	0.97	0.87	0.14	4.86
AX30-217	1/2" x 3/4"	1.97	0.97	1.06	0.16	7.10
AX30-219	5/8" x 3/8"	2.34	1.50	0.75	0.12	7.69
AX30-209	5/8" x 1/2"	2.45	1.45	0.87	0.16	6.71
AX30-214	5/8" x 3/4"	2.45	1.45	1.06	0.18	7.98
AX30-215	3/4" x 1/2"	2.45	1.45	0.87	0.21	8.24
AX30-210	3/4" x 3/4"	2.45	1.45	1.06	0.20	7.72
AX30-238	1" x 3/4"	2.93	1.50	1.25	0.43	28.65
AX30-239	1" x 1"	3.11	1.50	1.37	0.49	31.44

## Male Swivel



Part No.	Hose I. D. x Male NPTF	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-422	1/4" x 1/8"	2.07	0.87	0.56	0.06	6.10
AX30-385	1/4" x 1/4"	2.02	0.87	0.56	0.06	5.54
AX30-423	3/8" x 1/8"	2.12	0.97	0.56	0.07	5.88
AX30-386	3/8" x 1/4"	2.12	0.97	0.56	0.08	6.39
AX30-387	3/8" x 3/8"	2.12	0.97	0.68	0.08	7.16
AX30-388	1/2" x 3/8"	2.12	0.97	0.68	0.10	6.70
AX30-389	1/2" x 1/2"	2.33	0.97	0.87	0.14	9.17
AX30-424	5/8" x 1/2"	2.80	1.45	0.88	0.18	12.72
AX30-390	3/4" x 3/4"	2.80	1.45	1.06	0.24	11.13

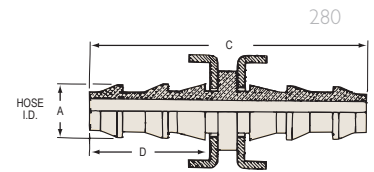
## Female Gasket Seal Swivel - NPSM



Part No.	Hose I. D. x Gasket Swivel(NPSM)	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-359	1/4" x 1/8"	1.39	0.77	0.50	0.03	14.98
AX30-358	1/4" x 1/4"	1.47	0.82	0.68	0.06	6.69
AX30-360	3/8" x 1/4"	1.61	1.00	0.68	0.06	6.26
AX30-361	3/8" x 3/8"	1.77	0.97	0.81	0.08	9.99
AX30-362	3/8" x 1/2"	1.80	0.92	0.93	0.09	15.75
AX30-363	1/2" x 1/2"	1.90	1.02	0.93	0.11	12.64
AX30-366	3/4" x 3/4"	2.36	1.55	1.18	0.32	25.27

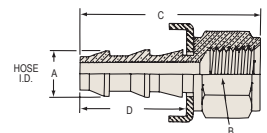
• Not recommend for water due to fiber gasket - for air service only.

## Hose Splicer



Part No.	Hose I. D.	A	Approx. Wt. Lbs.	List Price
AX30-300	1/4"	1.87	0.04	1.78
AX30-305	5/16"	1.80	0.04	2.94
AX30-301	3/8"	2.00	0.06	2.21
AX30-302	1/2"	2.01	0.08	3.36
AX30-303	5/8"	3.03	0.14	7.71
AX30-304	3/4"	3.03	0.14	8.08
AX30-306	1"	3.21	0.28	22.28

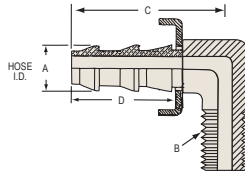
## Rigid Female Adapter



Part No.	Hose I. D. x Female NPTF	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-220	1/4" x 1/8"	1.35	0.87	0.50	0.02	2.56
AX30-221	1/4" x 1/4"	1.51	0.87	0.62	0.06	2.20
AX30-384	1/4" x 3/8"	1.51	0.77	0.75	0.06	7.78
AX30-391	5/16" x 1/8"	1.32	0.77	0.50	0.03	6.70
AX30-222	5/16" x 1/4"	1.51	0.87	0.62	0.06	4.01
AX30-393	3/8" x 1/8"	1.47	0.92	0.56	0.06	7.93
AX30-224	3/8" x 1/4"	1.61	0.97	0.62	0.06	2.54
AX30-225	3/8" x 3/8"	1.63	0.97	0.75	0.06	3.62
AX30-394	3/8" x 1/2"	1.66	0.92	0.93	0.12	8.54
AX30-397	3/8" x 3/4"	1.97	0.97	1.18	0.20	20.90
AX30-223	1/2" x 1/4"	1.76	1.02	0.68	0.08	12.56
AX30-226	1/2" x 3/8"	1.63	0.97	0.75	0.08	4.12
AX30-227	1/2" x 1/2"	1.77	0.97	0.93	0.14	7.06
AX30-396	1/2" x 3/4"	2.07	1.02	1.18	0.20	17.62
AX30-398	5/8" x 3/8"	2.24	1.55	0.75	0.10	10.85
AX30-229	5/8" x 1/2"	2.24	1.48	0.93	0.11	9.09
AX30-399	3/4" x 1/2"	2.24	1.50	0.93	0.14	12.22
AX30-395	3/4" x 3/4"	2.55	1.50	1.18	0.24	16.68
AX30-400	1" x 3/4"	2.55	1.55	1.18	0.25	24.30
AX30-402	1" x 1"	2.68	1.55	1.43	0.37	30.49

# PUSH ON BARB

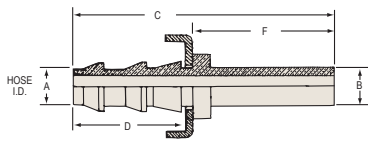
## Male Elbow



Part No.	Hose I. D. x Male NPTF	A	B	Body Width	Approx. Wt. Lbs.	List Price
AX30-372	1/4" x 1/8"	0.98	0.75	0.50	0.04	8.16
AX30-373	1/4" x 1/4"	1.04	0.95	0.56	0.06	7.86
AX30-374	5/16" x 1/8"	1.02	0.94	0.50	0.06	20.38
AX30-375	5/16" x 1/4"	1.09	0.94	0.56	0.08	10.53
AX30-370	3/8" x 1/8"	1.11	0.75	0.50	0.10	5.67
AX30-371	3/8" x 1/4"	1.13	0.90	0.56	0.10	5.28
AX30-376	3/8" x 3/8"	1.21	0.92	0.70	0.12	5.88
AX30-377	3/8" x 1/2"	1.30	1.19	0.87	0.22	20.69
AX30-382	1/2" x 3/8"	1.32	1.02	0.70	0.13	14.02
AX30-378	1/2" x 1/2"	1.50	1.19	0.87	0.22	12.77
AX30-379	5/8" x 1/2"	1.98	1.19	0.87	0.26	17.53
AX30-383	3/4" x 1/2"	2.15	1.24	0.87	0.25	35.35
AX30-381	3/4" x 3/4"	2.07	1.28	1.06	0.34	17.25

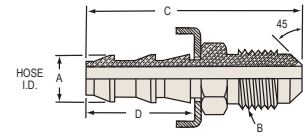
100-C 29EPO 273

## Rigid Tube Adapter



Part No.	Hose I. D. x O.D Tube	A	B	Approx. Wt. Lbs.	List Price
AX30-290	1/4" x 3/16"	1.68	0.77	0.04	7.46
AX30-291	1/4" x 1/4"	1.88	0.77	0.04	2.05
AX30-292	1/4" x 5/16"	1.88	0.77	0.04	7.61
AX30-293	5/16" x 5/16"	1.91	0.79	0.04	4.59
AX30-294	3/8" x 3/8"	2.03	0.92	0.06	3.55
AX30-426	3/8" x 1/2"	1.81	0.97	0.04	5.15
AX30-297	1/2" x 1/2"	2.13	1.02	0.06	7.51
AX30-298	5/8" x 5/8"	2.61	1.50	0.10	11.75
AX30-299	3/4" x 3/4"	2.61	1.50	0.25	13.86

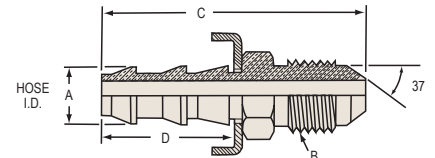
## Male SAE Flare Adapter



Part No.	Hose I. D. x 45° Male Flare	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-240	1/4" x 1/4"	7/16-20	1.45	0.75	0.43	0.04	4.41
AX30-241	1/4" x 5/16"	1/2-20	1.59	0.84	0.50	0.04	5.20
AX30-249	5/16" x 5/16"	1/2-20	1.60	0.80	0.50	0.06	4.12
AX30-271	3/8" x 5/16"	1/2-20	1.64	0.86	0.50	0.08	3.96
AX30-243	3/8" x 3/8"	5/8-18	1.83	0.92	0.62	0.08	4.41
AX30-245	1/2" x 1/2"	3/4-16	1.98	1.02	0.875	0.10	10.86
AX30-246	5/8" x 5/8"	7/8-14	2.73	1.50	0.87	0.19	13.29
AX30-247	3/4" x 3/4"	1-1/16-14	2.98	1.50	1.06	0.32	20.87

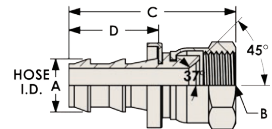
100B-3 KA-MS 727 945 682 302 282

## 37° Male JIC Flare Adapter



Part No.	Hose I. D. x Male JIC	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX32-900	1/4" x 1/4"	7/16-20	1.57	0.84	0.50	0.04	5.26
AX32-901	1/4" x 5/16"	1/2-20	1.60	0.83	0.56	0.04	6.18
AX32-906	1/4" x 3/8"	9/16-18	1.63	0.77	0.62	0.05	8.70
AX32-902	3/8" x 3/8"	9/16-18	1.78	0.97	0.62	0.06	8.27
AX32-903	1/2" x 1/2"	3/4-16	1.97	0.97	0.75	0.10	13.80
AX32-907	5/8" x 5/8"	7/8-14	2.62	1.50	0.93	0.19	15.00
AX32-905	3/4" x 3/4"	1-1/16-12	2.79	1.50	1.12	0.29	19.79

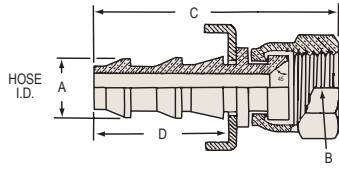
## SAE/JIC DUAL 45°/37° Female Swivel



Part No.	Hose I. D. x Dual Seat	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-230	1/4" x 1/4"	7/16-20	1.53	0.87	0.56	0.06	2.44
AX30-231	1/4" x 5/16"	1/2-20	1.53	0.87	0.62	0.04	3.87
AX30-232	5/16" x 5/16"	1/2-20	1.56	0.87	0.62	0.04	4.02
AX30-427	3/8" x 5/16"	1/2-20	1.74	0.87	0.62	0.06	11.34
AX30-233	3/8" x 1/2"	3/4-16	1.79	0.97	0.87	0.10	4.99
AX30-234	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.10	4.80
AX30-235	1/2" x 5/8"	7/8-14	1.84	0.97	1.00	0.12	7.55
AX30-236	5/8" x 1/2"	3/4-16	2.27	1.45	0.87	0.18	8.62
AX30-237	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	8.55
AX30-428	3/4" x 5/8"	7/8-14	2.33	1.45	1.00	0.20	11.56

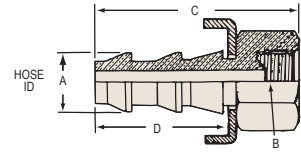
# PUSH ON BARB

## 45° SAE Flare Female Swivel



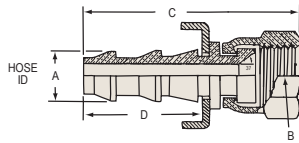
Part No.	Hose I. D. x 45° female flare	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-250	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.75
AX30-251	1/4" x 5/16"	1/2-20	1.57	0.87	0.62	0.04	4.35
AX30-253	1/4" x 3/8"	5/8-18	1.63	0.87	0.75	0.06	4.06
AX30-254	5/16" x 5/16"	1/2-20	1.58	0.87	0.68	0.06	17.80
AX30-260	5/16" x 3/8"	5/8-18	1.63	0.87	0.75	0.08	5.96
AX30-252	3/8" x 3/8"	5/8-18	1.73	0.97	0.75	0.10	3.96
AX30-257	3/8" x 1/2"	3/4-16	1.85	0.87	0.87	0.10	10.18
AX30-261	1/2" x 3/8"	5/8-18	1.92	1.05	0.75	0.10	8.08
AX30-255	1/2" x 1/2"	3/4-16	1.77	0.97	0.87	0.12	6.43
AX30-258	5/8" x 5/8"	7/8-14	2.35	1.45	1.00	0.14	11.92
AX30-259	3/4" x 3/4"	1-1/16-14	2.42	1.45	1.25	0.22	10.51

## Inverted Flare Female Adapter



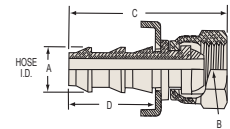
Part No.	Hose I. D. x Female INV flare	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-310	1/4" x 3/16"	1.12	0.84	0.50	0.02	8.05
AX30-311	1/4" x 1/4"	1.14	0.84	0.56	0.02	5.45
AX30-312	1/4" x 5/16"	1.18	0.82	0.62	0.02	9.25
AX30-316	5/16" x 5/16"	1.25	0.81	0.62	0.04	7.26
AX30-313	3/8" x 5/16"	1.32	0.87	0.62	0.04	9.41
AX30-314	3/8" x 3/8"	1.35	0.95	0.75	0.06	5.70
AX30-315	1/2" x 1/2"	1.73	1.04	0.87	0.12	23.51

## Female 37° JIC Flare Swivel



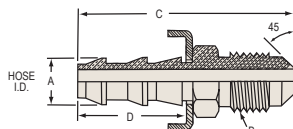
Part No.	Hose I. D. x Female JIC	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-265	1/4" x 1/4"	7/16-20	1.54	0.87	0.56	0.04	2.31
AX30-264	1/4" x 3/8"	9/16-18	1.57	0.87	0.68	0.06	4.48
AX30-270	5/16" x 3/8"	9/16-18	1.60	0.82	0.68	0.06	3.73
AX30-266	3/8" x 3/8"	9/16-18	1.70	0.97	0.68	0.08	3.64
AX30-267	1/2" x 1/2"	3/4-16	1.78	0.97	0.87	0.10	5.63
AX30-268	5/8" x 5/8"	7/8-14	2.33	1.45	1.00	0.14	7.32
AX30-269	3/4" x 3/4"	1-1/16-12	2.40	1.45	1.25	0.22	10.09
AX30-429	1" x 1"	1-5/16-12	2.60	1.45	1.50	0.39	27.59

## Female Ballseat Swivel



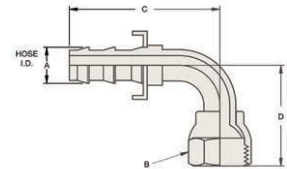
Part No.	Hose I. D. x Female NPSM	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-340	1/4" x 1/8"	1.39	0.85	0.50	0.06	11.29
AX30-341	1/4" x 1/4"	1.47	0.80	0.68	0.06	7.98
AX30-342	1/4" x 3/8"	1.40	0.77	0.68	0.09	8.44
AX30-343	3/8" x 1/4"	1.61	0.97	0.68	0.08	11.75
AX30-344	3/8" x 3/8"	1.75	0.95	0.81	0.10	10.86
AX30-430	3/8" x 1/2"	1.79	0.97	0.93	0.11	13.44
AX30-346	1/2" x 1/2"	1.88	1.09	0.93	0.12	16.13
AX30-345	1/2" x 3/4"	2.36	1.02	1.18	0.18	20.34
AX30-349	3/4" x 3/4"	2.36	1.55	1.18	0.22	22.83

## Inverted Flare Male Swivel



Part No.	Hose I. D. x Male INV flare	UNF Thread	A	B	HEX	Approx. Wt. Lbs.	List Price
AX30-275	1/4" x 3/16"	3/8-24	1.52	0.87	0.37	0.04	8.47
AX30-276	1/4" x 1/4"	7/16-24	1.56	0.87	0.43	0.04	4.11
AX30-277	1/4" x 5/16"	1/2-20	1.62	0.87	0.50	0.04	4.49
AX30-280	5/16" x 5/16"	1/2-20	1.62	0.87	0.50	0.06	7.44
AX30-283	5/16" x 3/8"	5/8-18	1.63	0.87	0.62	0.06	8.90
AX30-284	3/8" x 5/16"	1/2-20	1.72	0.97	0.50	0.06	6.63
AX30-279	3/8" x 3/8"	5/8-18	1.76	0.97	0.62	0.06	5.18
AX30-282	1/2" x 1/2"	3/4-18	1.84	0.97	0.75	0.10	10.20
AX30-286	5/8" x 5/8"	7/8-18	2.50	1.57	0.87	0.14	21.77

## SAE/JIC 37°/45° Female Swivel 90° Zinc Plated Steel



Part No.	Hose I. D. x Female 37°/45°	UNF Thread	A	B	Approx. Wt. Lbs.	List Price
AX30-480	1/4"	7/16-20	1.55	0.83	.064	39.00
AX30-482	3/8"	9/16-18	1.85	0.91	.095	36.60
AX30-483*	3/8"	5/8-18	1.98	0.85	.095	52.68
AX30-484	1/2"	3/4-16	2.33	1.09	.171	43.22
AX30-486	3/4"	1-1/16-12	3.26	1.81	.281	115.97

\* SAE



# MANUFACTURING TECHNIQUES

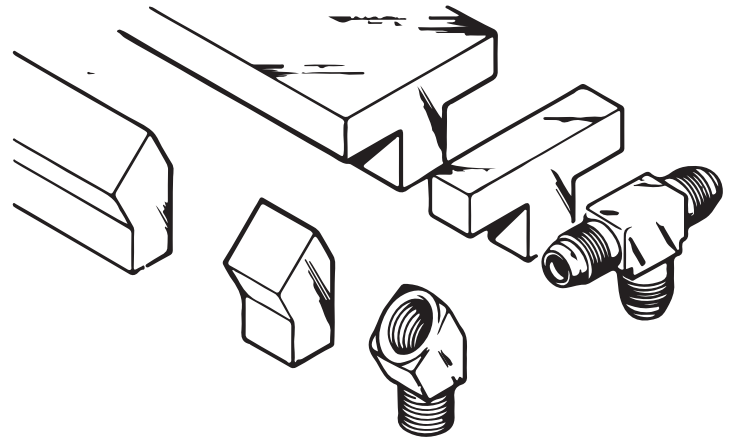
---

# MANUFACTURING TECHNIQUES

## Extruded Fittings-

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper.) After straightening, the bar is ready for machining.

The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an oriented flow of the grain.

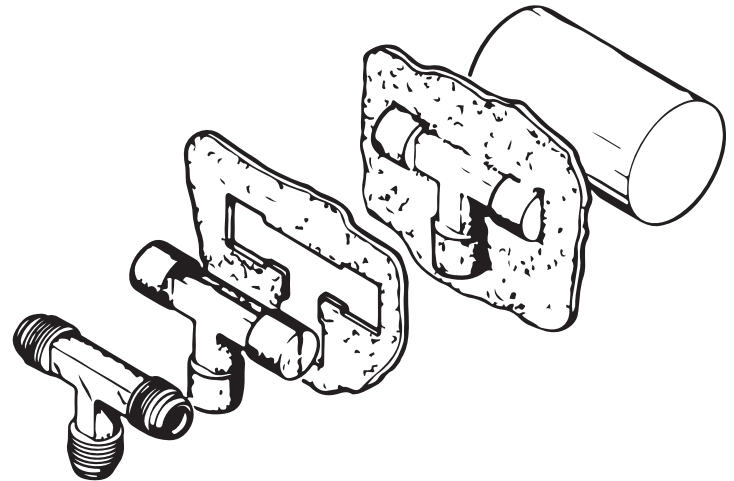


## Material used for our Brass Fittings:

(Reference SAE J461)

Material for forgings is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties.) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling the flash is trimmed away and the forging blank is ready for machining.

This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is more resistant to mechanical shock and vibration.



# 8

## TUBE LINE FABRICATION GUIDE

---

# TUBE LINE FABRICATION GUIDE FOR LEAK FREE SYSTEMS

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance, and general appearance of any system. Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting considering the following in the design of your system:

1. Accessibility of joints
2. Proper routing of lines
3. Adequate tube line supports
4. Available fabricating tools

## Routing of Lines

Routing of lines is probably the most difficult yet most significant of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.

The most logical path should have the following characteristics:

- Avoid excessive strain on joint — A strained joint will eventually leak. (See Figures A1 through A8.)
- Allow for expansion and contraction — Use a “U” bend or a hose in long lines to allow for expansion and contraction. (See Figure A9.)
- Allow for motion under load — Even some apparently rigid systems do move under load. (See Figure A10.)
- Get around obstructions without using excessive amount of 90° bends — Pressure drop due to one 90° bend is greater than that due to two 45° bends. (See Figures A11 and A12.)
- Keep tube lines away from components that require regular maintenance. (See Figures A13 and A14.)
- Have a neat appearance and allow for easy troubleshooting, maintenance and repair. (See Figures A15 and A16.)

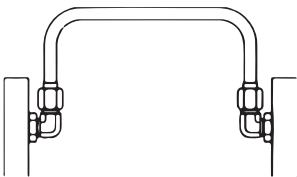


Fig.A1 — Correct Routing

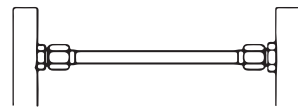


Fig.A2 — Incorrect Routing

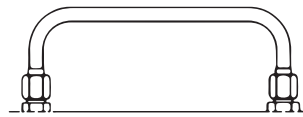


Fig.A5 — Correct Routing

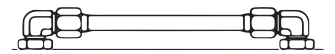


Fig.A6 — Incorrect Routing

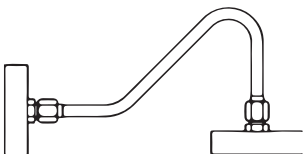


Fig.A3 — Correct Routing

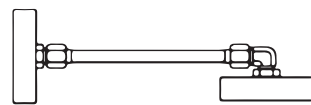


Fig.A4 — Incorrect Routing

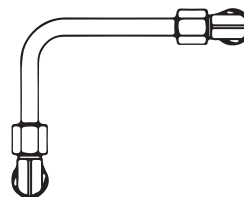


Fig.A7 — Correct Routing

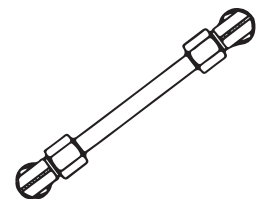


Fig.A8 — Incorrect Routing

# TUBE LINE FABRICATION GUIDE FOR LEAK FREE SYSTEMS

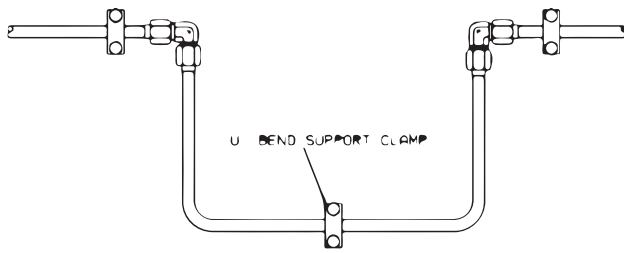


Fig.A9 — U-Bend Allowing Expansion and Contraction

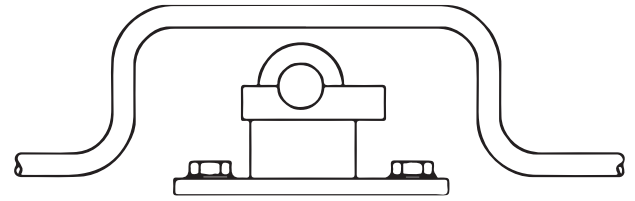


Fig.A12 — Incorrect

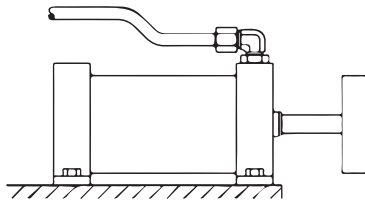


Fig.A10 — Bent Tube Allowing for Motion Under Load

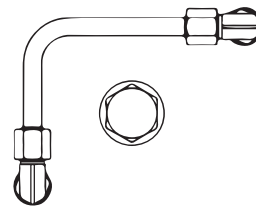


Fig.A13 — Correct

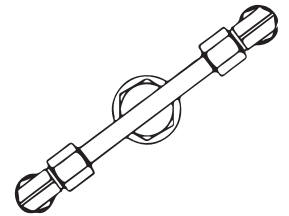


Fig.A14 — Incorrect

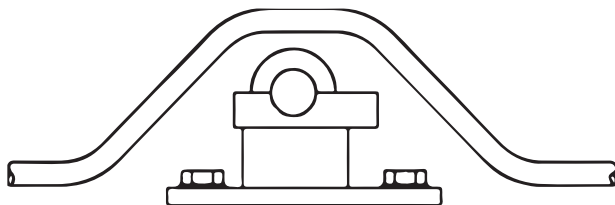


Fig. I1 — Correct

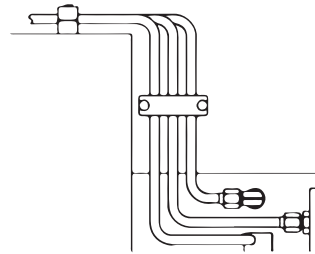


Fig.A15 — Correct

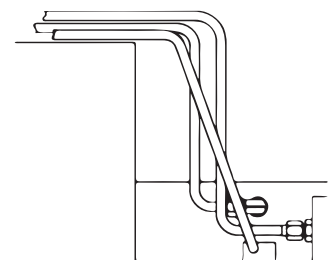


Fig.A16 — Incorrect

# 9

## ENGLISH/METRIC CONVERSION

---

# ENGLISH/METRIC CONVERSIONS

Inches x 25.4 = Millimeters (mm)

Inches x 2.54 = Centimeters (cm)

Inches x .254 = Decimeters (dm)

Feet x .3048 = Meters (m)

Yards x .9144 = Meters (m)

PSI x .0689 = Bars (bar)

Bars x 100 = Kilopascals (kPa)

PSI x .0069 = Megapascals (MPa)

Pound Inches x .113 = Newton Meters (N•m)

Pound Feet x 1.356 = Newton Meters (N•m)

Millimeters x .0394 = Inches

Centimeters x .3937 = Inches

Meters x 3.281 = Feet

Meters x 1.0936 = Yards

Bars x 14.5 = PSI          Megapascals x 145 = PSI

Newton Meters x 8.85 = Pound Inches

Newton Meters x .737 = Pound Feet

## Millimeters to Fractions to Decimals

MM	INCHES	
	FRACTION	DECIMAL
.3969	1/64	.0156
.7938	1/32	.0312
1.1906	3/64	.0468
1.5875	1/16	.0625
1.9844	5/64	.0781
2.3812	3/32	.0937
2.7781	7/64	.1093
3.1750	1/8	.1250
3.5719	9/64	.1406
3.9688	5/32	.1562
4.3656	11/64	.1718
4.7625	3/16	.1875
5.1594	13/64	.2031
5.5562	7/32	.2187
5.9531	15/64	.2343
6.3500	1/4	.2500

MM	INCHES	
	FRACTION	DECIMAL
6.7469	17/64	.2656
7.1438	9/32	.2812
7.5406	19/64	.2968
7.9375	5/16	.3125
8.3344	21/64	.3281
8.7312	11/32	.3437
9.1281	23/64	.3593
9.5250	3/8	.3750
9.9219	25/64	.3906
10.3188	13/32	.4062
10.7156	27/64	.4218
11.1125	7/16	.4375
11.5094	29/64	.4531
11.9062	15/32	.4687
12.3031	31/64	.4843
12.7000	1/2	.5000

MM	INCH	
	FRACTION	DECIMAL
13.0969	33/64	.5156
13.4938	17/32	.5312
13.8906	35/61	.5468
14.2875	9/16	.5625
14.6844	37/64	.5781
15.0812	19/32	.5937
14.4781	39/64	.6093
15.8750	5/8	.6250
16.2719	41/64	.6406
16.6688	21/32	.6562
17.0656	43/64	.6718
17.4625	11/16	.6875
17.8594	45/64	.7031
18.2562	23/32	.7187
18.6531	47/64	.7343
19.0500	3/4	.7500

MM	INCH	
	FRACTION	DECIMAL
19.4469	49/64	.7656
19.8438	25/32	.7812
20.2406	51/64	.7968
20.2375	13/16	.8125
21.0344	53/64	.8281
21.4312	27/32	.8437
21.8281	55/64	.8593
22.2250	7/8	.8750
22.6219	57/64	.8906
23.0188	29/32	.9062
23.4156	59/64	.9218
23.8125	15/16	.9375
24.2094	61/64	.9531
24.6062	31/32	.9687
25.0031	63/64	.9843
25.4000	1	1.0000



# Axelon International

---

**Address:**

307, Kalpataru Plaza, Chincholi Bunder Road, Malad (W), Mumbai,  
Maharashtra - 400064

**Telephone – +91 2886772050 to 2099**

**Email: [ankit@axelongroup.com](mailto:ankit@axelongroup.com)**