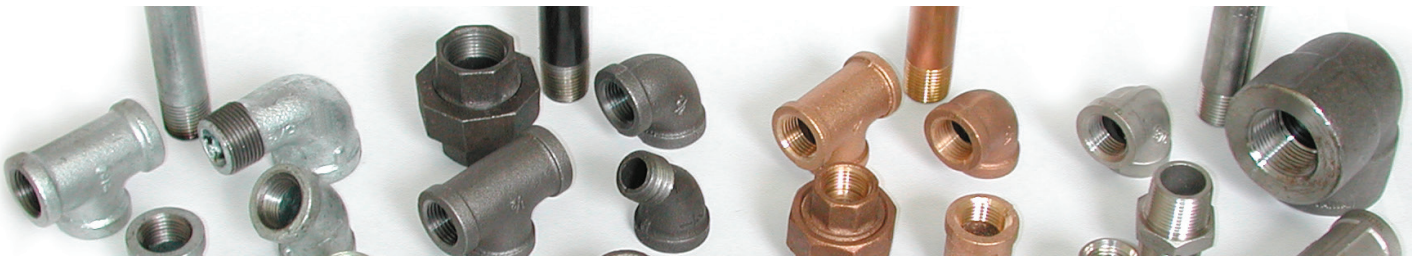
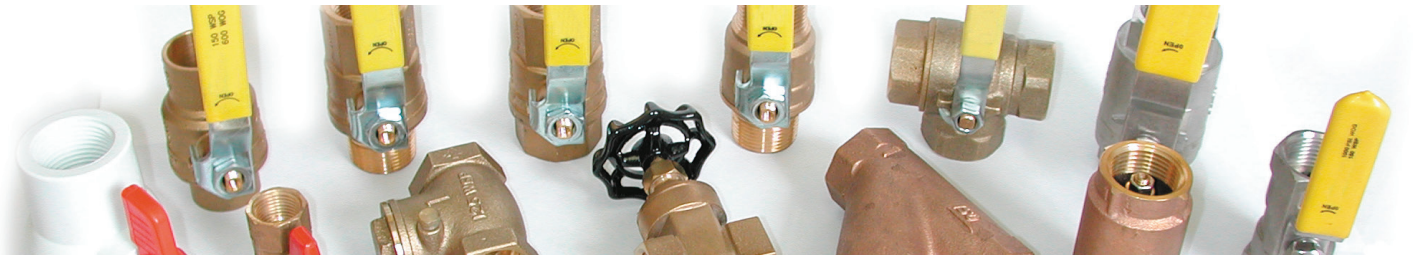
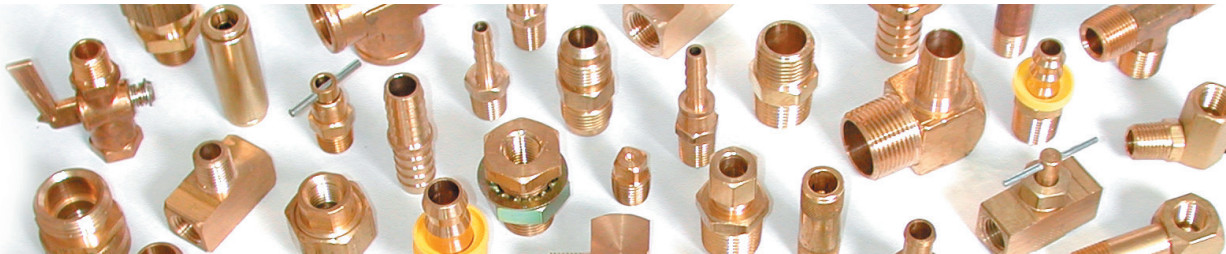




CENLA BOLTS & SUPPLY

# PRODUCT CATEGORIES



CENLABOLTS.COM

## PIPE



Pipe Size	1/16	1/8	1/4	3/8	1/2	3/4	1
Thread Size	1/16-27	1/8-27	1/4-18	3/8-18	1/2-14	3/4-14	1-11 <sup>1/2</sup>
Working Pressure	1200	1200	1200	1200	1200	1000	1000
Thread OD	1/4	3/8	1/2	5/8	3/4	1	1-1/4

•**Typical Application**

Grease, fuels, LP and Natural gas (available on special order), refrigeration, instrumentation and hydraulic systems.

•**Pressure**

Operating pressure up to 1200 PSI.

•**Vibration**

Fair resistance.

•**Temperature Range**

-65°F to +250°F (-53°C to +121°C).

•**Used With**

Brass, bronze, copper, steel, aluminum and iron pipe.

• **Tolerance**

+/- .02 on all dimensions. Dimension Data can change without notice. Please call us when dimensions are critical.

• **Conformance**

Meets specifications and standards of ASA, ASME and SAE

• Not lead free

• “L” at the end of a Part# means **Light Pattern**

- these fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

•**Assembly Instructions**

- 1- Tighten approximately 2-1/2 turns past hand tight.
- 2- Fittings with Everseal tighten two turns past hand tight. Brittle materials require special cautions.



• see page 310-312 for plastic pipe fittings.



• **Lead Free Fittings**

see pages 162-164



• **For Bronze & Larger Sizes**

see pages 224-232



• **For BSPT/ BSPP**

see pages 117-118

Actual outside diameters of pipe threads



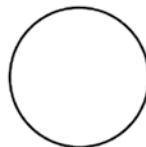
1/8"



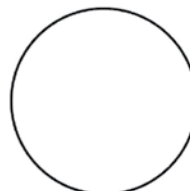
1/4"



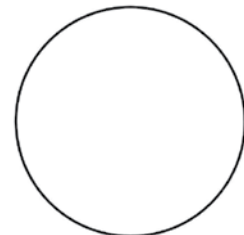
3/8"



1/2"



3/4"



1"

Actual Male Thread Profiles

1/8"

1/4"

3/8"

1/2"

3/4"

1"

## HOSE BARB FITTINGS



- **Temperature and Working Pressure Ranges**

From -40°F to + 160°F at 150 PSI maximum.

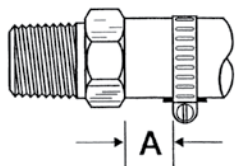
- **Tolerance**

+/- .02 on all dimensions. Dimension Data can change without notice. Please call us when dimensions are critical.

**Note:** These fittings are intended for use with hose clamp, similar type clamp or a crimped ferrule.

- **Assembly Instructions**

- 1- Cut hose cleanly and squarely to length.
- 2- Slide clamp on hose.
- 3- Lubricate hose. Push hose on fitting until hose bottoms against stop ring or hex.
- 4- Position hose clamp as shown below and secure with a screwdriver or wrench. Maintain "A" dimension noted below for proper clamp positioning.



- For Lead Free AB1953 Compliant Fittings see pages 157-158

Other Barbs available



See page 292-295 for plastic hose barb fittings



See page 27-28 for stainless steel hose barbs



See page 307 for King Nipples



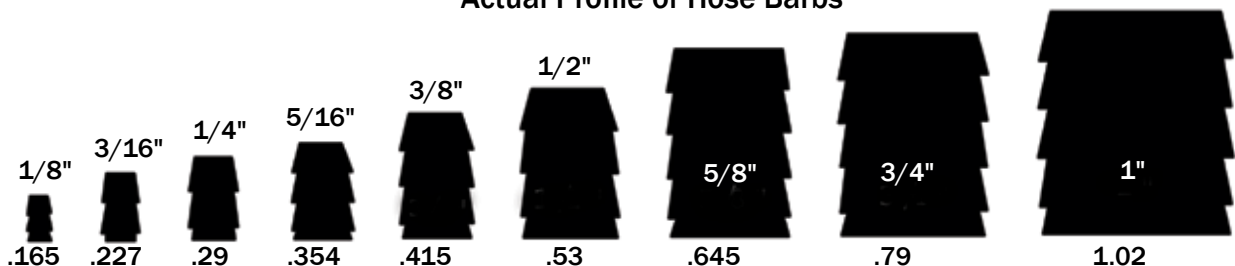
Stainless Steel hose barbs for beverage service available -



See beverage fitting section, pg. 28

Hose Size	A
3/16"	1/4"
1/4"	1/4"
5/16"	1/4"
3/8"	1/8"
1/2"	1/8"
5/8"	1/8"
3/4"	1/8"

## Actual Profile of Hose Barbs



# PUSH ON BARB FITTINGS



**Typical Application:** Low Pressure Air, Fuel, Lube, and Oil Lines

- Pressure determined by tube material and hardness. Our Parts have been tested to max 150 PSI.

**Advantages:** Easy assembly. No clamps needed!!

• **Assembly Instructions**

- 1- Lubricate insert.
- 2- Hold hose at angle as shown & push on and up over first barb.
- 3- Continue to push straight on until hose is seated under protective plastic cap. Keep hands back from hose end area so that hose can expand.

• **Disassembling Instructions**

- 1- Split hose. Do not cut completely through hose. Sealing edge of barb could be damaged.
- 2- Bend hose and remove with a quick pull.

See lead free section for lead free push-on barb fittings.  
**Stainless steel available at the end of this section.**

Actual Profile of Push On Barbs



# GARDEN HOSE FITTINGS



## • Temperature and Working Pressure Ranges

From +35°F to +100°F at 75 PSI maximum or the recommended working pressure of the garden hose. (Not to exceed 150 PSI.)

**Note:** All female connector ends should have a rubber washer inserted prior to usage.

**FGH** = Female Garden Hose threads

**MGH** = Male Garden Hose threads

Male garden hose threads are all 3/4" with an outside diameter of 1.0625 and 11-1/2" threads per inch.



## Male Garden Hose Profile



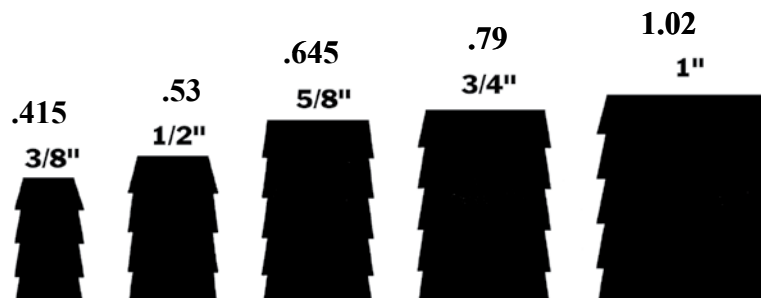
See Plastic section for Plastic Garden Hose Fittings



See page 158 for lead free Garden Hose

Washers included are #30150B black rubber washers.

## Actual Profile of Garden Hose Barbs



# SAE 45° FLARE



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Thread Size-B	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18	11/16-16	3/4-16	7/8-14	1-1/16-14

### •Typical Application

LP and natural gas, flammable liquids, instrumentation, refrigeration, power steering, hydraulic and pneumatic systems.

### •Working Pressure Ranges

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	Tube O.D. (in.)	Tube Wall (in.)
2800	1/8	.030
1900	3/16	.030
1400	1/4	.030
1200	5/16	.032
1000	3/8	.032
750	1/2	.032
650	5/8	.035
550	3/4	.035
450	7/8	.035

### •Vibration

Good resistance - use long nut when greater vibration resistance is required.

### •Temperature Range

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures.

### •Used With

Copper, brass, aluminum and steel hydraulic tubing that can be flared.

### •Tolerance

+/- .03 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

### •Conformance

Meets specifications and standards of ASA, ASME, SAE and MS (Military standards).

### Assembly Instructions

- 1- Cut tubing to desired length. Make sure all burrs are removed and ends are cut square.
- 2- Slide nut on tube. Threaded end "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
  - a- Measure flare diameter.
  - b- Examine flare for excessive thin out.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

**Note:** Do not over-torque as it may damage the fitting or split the tubing at the flare.



• See Lead Free Flare Fittings page 159

### Actual O.D. of Flare Fittings



# INVERTED FLARE



<b>Tube O.D.</b>	<b>1/8</b>	<b>3/16</b>	<b>1/4</b>	<b>5/16</b>	<b>3/8</b>	<b>7/16</b>	<b>1/2</b>	<b>5/8</b>	<b>3/4</b>	<b>7/8</b>	<b>1</b>
Thread O.D. threads per inch	<b>5/16-28</b>	<b>3/8-24</b>	<b>7/16-24</b>	<b>1/2-20</b>	<b>5/8-18</b>	<b>11/16-18</b>	<b>3/4-18</b>	<b>7/8-18</b>	<b>1-1/16-16</b>	<b>1-3/16-16</b>	<b>1-5/16-16</b>

**•Typical Application**

Hydraulic brake, power steering, fuel lines and transmission cooler lines, LP and natural gas.

**•Working Pressure Ranges**

Temperature and type of tubing used are important factors. However, the following table is a good guide for proper selection. Temperature 73°F with copper tubing:

PSI	Tube O.D. (in.)	Tube Wall (in.)
<b>2800</b>	<b>1/8</b>	<b>.030</b>
<b>1900</b>	<b>3/16</b>	<b>.030</b>
<b>1400</b>	<b>1/4</b>	<b>.030</b>
<b>1200</b>	<b>5/16</b>	<b>.032</b>
<b>1000</b>	<b>3/8</b>	<b>.032</b>
<b>750</b>	<b>1/2</b>	<b>.032</b>
<b>650</b>	<b>5/8</b>	<b>.035</b>
<b>550</b>	<b>3/4</b>	<b>.035</b>

**•Vibration**

Excellent resistance.

**•Temperature Range**

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures.

**•Used With**

Copper, brass, aluminum and steel hydraulic tubing that can be flared.

**•Advantages**

Very low cost and reusable. Seats and threads are internal and protected. Compact, excellent vibration life. Short nut affords very close tube bends. Steel or brass tube nut.

**•Tolerance**

+/- .03 on all dimensions.

**•Conformance**

Meets specifications and standards of ASA, ASME, SAE and MS (Military Standards).

**•Assembly Instructions**

- 1-Cut tubing to desired length. Make sure all burrs are removed and the ends are cut square.
- 2- Slide nut on tube. Threaded end "A" of nut must face out.
- 3- Flare end of tube with a 45° flaring tool.
  - a- Measure flare diameter.
  - b- Examine flare for excessive thin out.
  - c- On thin wall, welded or brazed tubing, use double flare to prevent pinch-off and cracked flares.
- 4- Lubricate threads and assemble to fitting body. Nut should be turned hand tight.
- 5- Tighten assembly with wrench until a solid feeling is encountered. From that point, apply a one-sixth turn.

**Note:** Do not over-torque as it may damage the fitting or split the tubing at the flare.

**STANDARD METRIC THREADS**

Description Tube Size	Thread O.D.	Crest (Pitch)	Thread Description
Japanese 3/16"	10mm	1.0mm	M10 x 1.0
European 3/16"	10mm	1.0mm	M10 x 1.0
GM 6mm	12mm	1.0mm	M12 x 1.0
Fuel 5/16"	14mm	1.5mm	M14 x 1.5
Fuel 3/8"	16mm	1.5mm	M16 x 1.5

**Measuring Metric Threads:** Measure the O.D. of the threads and the crest distance (pitch) in millimeters between threads.

**Actual O.D. of male inverted flare threads**

<b>5/16"-28</b>	<b>3/8"-24</b>	<b>7/16"-24</b>	<b>1/2"-20</b>	<b>5/8"-18</b>	<b>3/4"-18</b>	<b>7/8"-18</b>	<b>1-1/16"-16</b>
<b>2800 PSI</b>	<b>1900 PSI</b>	<b>1400 PSI</b>	<b>1200 PSI</b>	<b>1000 PSI</b>	<b>750 PSI</b>	<b>650 PSI</b>	<b>550 PSI</b>

**1/8"**

**3/16"**

**1/4"**

**5/16"**

**3/8"**

**1/2"**

**5/8"**

**3/4"**

# COMPRESSION FITTINGS



## These are NOT Lead Free

See pages 160-164 for Lead Free products

<b>Tube O.D.</b>	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
<b>Thread Size-B</b>	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1-1/8-18
<b>Working Pressure</b>	400	400	300	300	200	200	200	150	100	75

### • Typical Application

Use with copper, aluminum and thermoplastic tubing. Not recommended for steel tubing. Manufactured for low and medium pressure tubing connection work where excessive vibration or tube movement is not involved. Not recommended for application using gaseous media.

### • Pressure

See table above for working pressures at 73°F.

### • Vibration

Fair resistance - use long nut when greater vibration resistance is needed.

### • Temperature Range

-65°F to +250°F (-53°C to +121°C) range at maximum operating pressures. (Refer to tubing temperature range.)

### • Used With

Aluminum, copper, brass and plastic tubing. Plastic tubing requires insert. Not recommended for steel tubing.

### • Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

### • Conformance

Meets specifications and standards of ASA, ASME and SAE.

### • Assembly Instructions

- 1- Cut tubing to desired length.
- 2- Slide nut and then sleeve on tube. Threaded end "A" of nut must face toward fitting.
- 3- Insert tubing into fitting body. Be sure tubing is bottomed on fitting shoulder.
- 4- Lubricate threads and assemble nut to fitting body.
- 5- Tighten nut hand tight. From that point, tighten with a wrench the number of turns indicated in the chart below.

Tube Size	Additional Turns from Hand Tight
1/8" thru 1/4"	1-1/4"
5/16"	1-3/4"
3/8" thru 1"	2-1/4"

• "L" at the end of a Part# means **Light Pattern** - These fittings are completely interchangeable with full pattern fittings, but have been modified in some way. This modification is usually in the length of the pipe threads. Used in plumbing and light industrial applications.

### Actual Profile of Compression Threads





# Flareless

Flareless Brass Tube Fittings are Interchangeable with Poly-Flo®, Poly-Tite® and Poly-Line® and Poly-Fit®



Built-in SS  
Tube Support

Tube O.D.	1/8	3/16	1/4	5/16	3/8	1/2
Thread Size-B	5/16-24	3/8-24	3/8-24	7/16-24	1/2-24	1 1/16-20

#### •Typical Application

Pneumatic instrumentation circuits, lubricant and cooling lines.

#### •Working Pressure and Temperature Ranges

Up to 150 PSI from 0°F to + 150°F with thermoplastic tubing. Up to 300 PSI from 0°F to + 175°F with soft metal tubing.

#### •Maximum allowable metal tube wall thickness for use with Poly-Tite fittings:

1/8", 3/16" O.D. --no limitation,  
1/4" O.D.--.035 5/16", 3/8", 1/2" O.D.--.049

#### •Vibration

Excellent Resistance.

#### •Temperature Range

Depends on tubing used. -65°F to +250°F (-53°C to +121°C) with brass sleeve, -40°F to +150°F (-40°C to +66°C) with plastic sleeve. (Refer to tubing temperature range.)

#### •Used With

Aluminum & copper tubing. Hard plastic tubing requires brass sleeve. Not recommended for steel tubing.

#### •Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

#### •Advantages

No flaring of tubing required. Easy installation, captive sleeve, pre-assembled for installation and can be reassembled. Nuts rotate around the sleeve during tightening, preventing twisting of tubing.

#### •Assembly Instructions

- 1- Cut tubing to desired length.
- 2- Slide nut/sleeve assembly on tube. Threaded end "A" of nut must face toward fitting.
- 3- Bottom tubing into fitting.
- 4- Plastic sleeve - Tighten nut hand tight.  
Brass Sleeve - Tighten nut hand tight, then an additional 3/4 turn.

\* Note: 1/8 and 3/16 sizes have brass sleeves

# PUSH-IN/ PUSH-TO-CONNECT FITTINGS

## BRASS PUSH-IN

PAGE 95-99



## NICKEL PLATED BRASS PUSH-IN

PAGE 100-104



## BALL VALVES FOR N/P PUSH-IN

PAGE 105



## METRIC N/P BRASS PUSH-IN

PAGE 106-108



## COMPOSITE BODY PUSH-IN

PAGE 109-113



## COMPOSITE BODY METRIC PUSH-IN

PAGE 114-116



## PLASTIC PUSH-IN

PAGE 298-299



## DOT BRASS PUSH-IN

PAGE 117-123



## DOT COMPOSITE PUSH-IN

PAGE 124-128

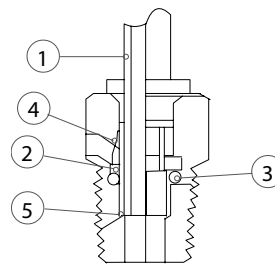


# BRASS PUSH-IN FITTINGS



## ENGINEERING AND DESIGN

- **QUICK CONNECT**, simply push tubing in, no tools. Saves up to 75% of assembly time of standard compression fittings.
- **QUICK DISCONNECT**, hold two fingers on insert and pull tubing out, no tools required.
- **REUSEABLE**, connect and disconnect numerous times.
- **FULL FLOW DESIGN**, provides up to 60% more flow area than conventional fittings with internal tube supports.
- **POSITIVE SEAL**, no leaks. After tubing is inserted, seal is made.
- **VERSATILE**, BunaN "O" rings standard. Other materials of "O" rings available.
- **SECURE TUBE RETENTION**, pulling on tubing only serves to tighten the connection.
- **SELF CONTAINED ASSEMBLY**, no loose parts, brass body and insert.
- **BRASS CONSTRUCTION**, elbows and tees are forged brass.
- **CHOICE** of convenient swivel or economical stationary elbows and tees.
- **STRAIGHT CONNECTORS** have interior hex for Allen key tightening where space is limited...no need to use a wrench.
- **PRE-APPLIED TEFLON®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **METRIC SIZES AVAILABLE**: Metric tube sizes from 2mm through 12mm in both standard NPT and metric pipe sizes are available on a special order basis.
- **WORKING PRESSURE**:  
The fitting is suitable for use up to the maximum working pressure of the plastic tubing used.
- **WORKING TEMPERATURE**:  
-10°F to 200°F (other ranges available on request).
- **PIPE THREAD**: NPTF with Teflon® based sealant pre-applied.



When tubing (1) is inserted into the fitting, it first passes through the gripping teeth (2). Just beyond the gripping teeth is the o-ring (3) which provides the leak proof seal against the OD of the tube. The gripping teeth grab the tube, which

expands the insert. Pulling back on the tube only tightens the grip as the insert moves onto the camming surface (4). Pressure through the tube also serves to tighten the grip. The tube bottoms against a positive tube stop (5) in a cavity providing tube support to prevent leakage.

- **Tolerance**

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical

# NICKEL PLATED PUSH-IN FITTINGS

## with GLOBAL THREAD

• NPTF • BSPP • BSPT • ISO 7 • ISO 228 • G THREAD • J THREAD



- Saves time and money
- No stripped threads
- No stripped parts
- Reduce inventory
- Completely reusable
- Quick installation
- No pitch identification

Component Parts and Materials	
Body	Brass - Nickel Plated
Thrust Ring	Acetalic Resin/ Glass filled Nylon
Sleeve	Brass - Nickel Plated
Gripper Collet	Stainless Steel
Safety Ring	PA66
Lip Seal ( 1/8 O-Ring Seal)	NBR 70
Thread Seal	NBR 70

**Max Operating Pressure:** 0-250 psi (17 bar ) Vacuum service.

**Min Temperature:** 0°F ( -18°C )

**Max Temperature:** 160°F ( +70°C )

**Tubing:** Nylon, Polyethylene, Polyurethane.

- For best results use 95 Durometer

**Media:** Compressed air, water.

### • Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

## GLOBAL THREAD

**Works With Inch or Metric Threads**



“Global Thread” fittings can be assembled with female threads produced to the following standards:

- Tapered NPTF
- Parrallel (BSPP, BSP, ISO 7)
- Tapered (BSPT, PT, ISO 7, ISO 228)

# Composite Body Push-In Fittings



- For Food Grade,  
see page 298-299

## Specifications

Fluid admitted	Air
Working pressure range	0-150 PSI (10BAR)
Min. Burst pressure	340PSI (23BAR)
Working Temperature range	-104°F ~180°F

## Materials of Construction:

1	Body	Composite Polyacetal (hemopolymer,copolymer)
2	Body	Brass
3	Tube Release	Acetal Resin
4	Retainer	Brass
5	Gripper Ring	Stainless Steel
6	Spacer	Brass
7	O-Ring	NBR 70
8	Threads	Brass w/ white sealant

The latest generation of composite material is used in the body construction in addition to brass on threaded components and stainless steel on the tube gripper.

## • Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

# D.O.T. PUSH-IN TUBE FITTINGS



## Meets D.O.T. FMVSS 571.106 SAE J1131 Air Brake System Requirements

### Benefits for Cost Savings & Engineering Project

- **Fast assembly:** No tools required. Simply push tubing in. Saves up to 75% of assembly time compared to standard air compression fittings. No loose parts to handle.
- **Fast disconnect:** Hold the collet collar with two fingers and pull out tube. No tools required.
- **Reusable:** Can be connected and disconnected several times.
- **Reliable sealing:** Using recommended tubing, full sealing is guaranteed.
- **Versatility:** Buna N O'ring standard. Viton and others available per request. Secure tube retention. Pulling on tubing only serves to tighten the connection.
- **Pre-Applied Teflon®** based pipe sealant on all male pipe threads, saving customer additional labor.
- **Full Flow Design,** provides more flow area than conventional fittings with internal tube supports even in the swivels.

DOT Fittings are constructed with an all brass captive eyelet which allows for maximum flow. The brass captive eyelet with extended length is floating and has a machined top end radius for easy installation of tubing. All male threads have a pre-applied Teflon® based pipe sealant to provide for easy assembly and leak proof seal.

### • Materials:

Brass  
"O" Ring: Buna - Nitrile (90 Durometer)  
EP (Ethylene Propylene)

### • Working Pressures & Temperature Ranges

Vacuum to 150 PSI  
-40°F to 200° F ( -40°C to +93°C )

## COMPOSITE BODY DOT AIRBRAKE FITTINGS

NEW

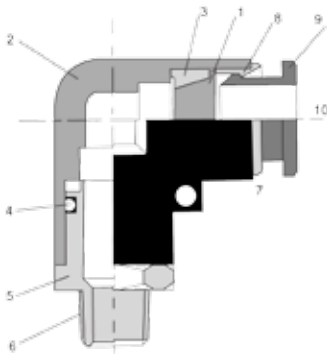
**WARNING**

- Composite DOT push-to-connect fittings are designed only for use in applications where air is utilized as an operating fluid.
  - Fittings must be used in accordance with manufacturer and industry specifications.
  - They are not intended for use in environments exceeding 145psi or 140 degrees F.
  - The Department of Transportation FMVSS 49CFR571-106 prohibits use of this type of fitting for connections between towed and towing vehicles or between a driveshaft and chassis.
  - Using Composite DOT fittings in a manner inconsistent with manufacturer specifications may result in serious injury or property damage.
  - Under no circumstances shall the supplier be liable to buyer for any consequential or incidental damages of any nature whatsoever arising from nonconformity of goods, defective goods, or delay in shipment or any other breach by seller.
- Please feel free to email [warning@compdotfitting.com](mailto:warning@compdotfitting.com) with any questions or concerns.

- One touch connection reduces installation time and cost.
- Rugged ultraviolet and vibration resistant composite body.
- Various shapes and configurations to meet vehicle applications and make installations easier.

**Specifications for FMVSS (D.O.T.) and SAE Compliant Fittings**

Operating Fluid	Air						
Max. Operating Pressure	145psi (1.0MPa)						
Proof Pressure	Size	5/32"	1/4"	3/8"	1/2"	5/8"	3/4"
	At 75°F (24°C)	1200psi	1200psi	1400psi	950psi	900psi	800psi
	At 200 °F (93°C)	450psi (3.1MPa)					
Recommended Fluid and Ambient Temperature*	-40°F to 140°F (-40°C to 60°C)						
Leak Rate at -40°F (-40°C)	7 Ncm <sup>3</sup> /min. or less						
Thread	Thread Portion	ANSI/ASME B1.20.1, 1983 R1992					
	Nut	JIS B 0208 (Unified fine thread) ISO 263					
Thread Sealant	Fluorine/ Acrylic						
Applicable Standards	D.O.T. FMVSS 49 CFR 571.106, SAE J2494-3						
Applicable Tubing	Tubing conforming to both SAE J844 and D.O.T. FMVSS 49 CFR 571.106. Material: Nylon12						
Tube O.D.	5/32", 1/4", 3/8", 1/2", 5/8", 3/4"						



1. Chuck	Stainless steel or Brass
2. Body	Polybutylene Terephthalate (PBT), Brass
3/4. Tube seal, O-Ring	Buna-N, Nitrile Rubber
5. Stud	Brass
6. Sealant	Flourine/ Acrylic
7. Guide	Stainless Steel or Polyacetal (Acetal)
8. Stabilization Ring	Stainless Steel
9. Release Button	Polyacetal, POM (Acetal)
10. Tube support	Stainless Steel/ Brass

# D.O.T. AIR BRAKE - NYLON TUBING



Tube O.D	1/4	3/8	1/2	5/8	3/4
Thread Size-B	7/16-24	17/32-24	11/16-20	13/16-18	1-18

#### •Typical Application

Air brake systems except where temperatures exceed +200°F or where battery acid can drip on tubing.

#### •Pressure

Maximum operating pressure of 150 PSI.

#### •Vibration

Fair resistance.

#### •Temperature Range

-40°F to +200°F (-40°C to +93°C).

#### •Material

Brass

#### •Used With

NT Nylon Tubing - SAE J844 Type A and B.

#### •Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical

#### •Advantages

Easy to assemble (no tube preparation or flaring required.) Built in tube support. Fittings utilize a ribbed sleeve for compression and positive grip. May be used with copper tubing by replacing nut, sleeve and insert with long nut and spherical sleeve. Insert should be removed for copper tubing use.

#### •Conformance

Meets specifications and standards of SAE and DOT FMVSS 571,106.

#### •Assembly Instructions

- 1- Cut tubing to desired length.
- 2-Slide nut and then sleeve on tubing. Threaded end of nut "A" must face toward fitting body.
- 3-Insert tubing into the preassembled fitting. Be sure tubing is bottomed in fitting.
- 4- Tighten nut to required torque as indicated on chart.

**Disassembling:** Remove nut and pull tubing out of fitting body. Insert will remain in tubing.

**Reassembly:** Push tubing and insert into fitting body until it bottoms. Thread nut onto fitting body and torque as in step 4.

Tube Size	Additional Number of Turns from Hand-Tight
1/4	3
3/8, 1/2	4
5/8, 3/4	3-1/2



# D.O.T. AIR BRAKE REUSABLE HOSE/ FITTINGS



### •Typical Application

Air Brake hose connections.  
Meets SAE & DOT specifications  
(FMVCS 10 GAL)

### •Pressure

Determined by maximum working pressure for hose size.  
Up to 125 psi

Temperature: -40°F to + 120° F ( -40°C to +48°C )

### •Advantages

Can be used for nearly any brake line. Easy to assemble with a good selection of hose end configurations. Brass material offers excellent resistance against corrosion.

### • Tolerance

+/- .02 on all dimensions. Dimension data can change without notice. Please call us when dimensions are critical.

### •Assembly Instructions

- 1- Slide nut and sleeve onto hose. Make sure bevel edge of sleeve faces out toward fitting.
- 2- Push hose into fitting until it bottoms.
- 3- Screw nut until contact is made with body hex.

NOTE: When reassembling fitting, body and nut should be inspected. Only reuse if in proper condition. Sleeves should never be reused.

## SLEEVE

### FERRULE



Part #	Hose I.D. Size	Approx. Wt. Lbs.	List Price
38-300	3/8"	0.02	---
38-301	1/2"	0.02	---

#60HC 3380-A 0903610 367 60RB

## NUT



Part #	Hose I.D. Size	Approx. Wt. Lbs.	List Price
38-306	3/8"	0.04	---
38-307	1/2"	0.06	---

61RB #61HC 369 3380-B 0903624

## NUT FOR USE WITH SPRING



Part #	Hose I.D. Size	Thread	Approx. Wt. Lbs.	List Price
38-312	3/8"	31/32-20	0.04	---
38-313	1/2"	1-3/32-20	0.06	---

#61HCS 0903613 3380-D 61RBSG

# SPECIALTY VALVES AND COCKS



**DRAIN COCKS**  
PAGE 144-145



**AIR COCKS**



**3, 4 AND 6 WAY**  
PAGE 150



**NEEDLE**  
PAGE 147-148



**MARINE & ANTI-SIPHON**  
PAGE 151



**PANEL MOUNT BALL VALVES**  
PAGE 152



**TRUCK**  
PAGE 149



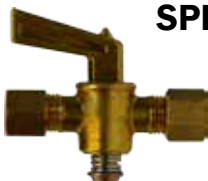
**USA MINI**  
PAGE 152



**SOLID BOTTOM SHUT-OFF**  
PAGE 149

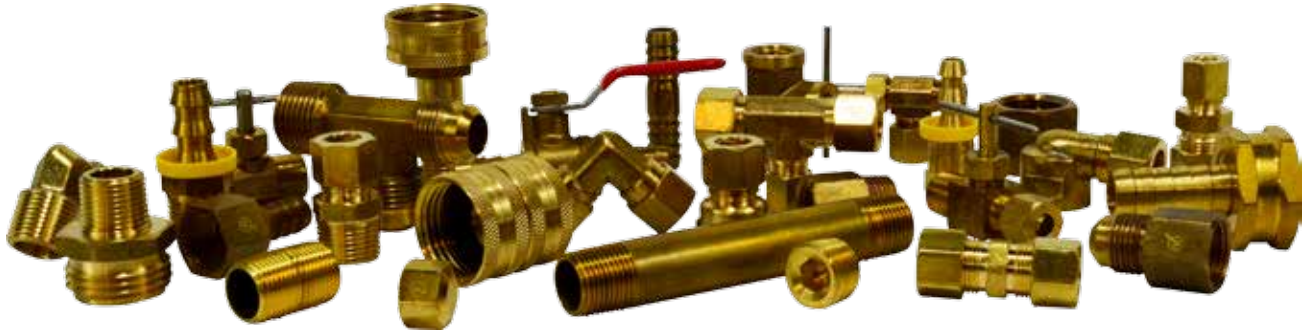


**CHECK**  
PAGE 153



**SPRING BOTTOM SHUT-OFF**  
PAGE 146

# LEAD FREE



## What is the new lead-free requirement?

In 2011, the Reduction of Lead in Drinking Water Act was signed into law. The Act has reduced the lead content allowed in drinking water system and plumbing materials by changing the definition of "lead-free" in Section 1417 of the Safe Drinking Water Act.

*The term "lead-free" has been updated from not more than 8% lead content to mean "not more than a weighted average of 0.25% lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures."*

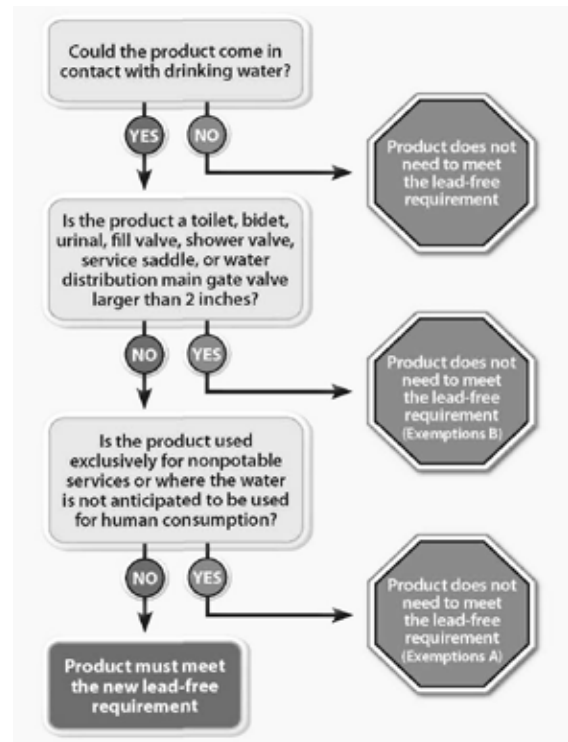
## How do I know which products must meet the new lead-free requirement?

The prohibitions on use and introduction into commerce apply to all pipe, pipe fittings, plumbing fittings, and fixtures (henceforth referred to as "products"), including stocked inventories that have not been installed. This includes coated or uncoated brass or bronze materials. By using the flow-chart below as a guide, you can determine if a product must meet the new lead-free requirement:

### Lead-Free Requirement Exemptions

(A) The new requirement does not apply to pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, that are used exclusively for nonpotable service such as manufacturing, industrial processing, irrigation, outdoor watering or any other uses where the water is not anticipated to be used for human consumption.

(B) The new requirement does not apply to toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles or water distribution main gate valves 2 inches in diameter or larger.



# VALVES



VALVES.....	164-209
LEAD FREE BALL VALVES .....	165-167
LEAD FREE VALVES .....	168
BRASS VALVES .....	169-193
Full Port Ball.....	169
Locking Handle .....	170
Butterfly Handle.....	171
N/P Ball Valve .....	172
N/P Ball w/SS Trim .....	173
Italian Ball Valve .....	174
M X F Ball Valve.....	175-176
Tee Handle M X F Ball .....	177
M X F Ball Locking handle .....	178
Spring Handle Ball Valve .....	179
Right Angle Ball valve .....	179
Wye, 3-Way Ball Valve.....	180
Safety Exhaust Ball Valve.....	180
Gas Valves.....	181
Mini Ball Valves.....	182-185
3-Way Valves.....	186
Strainer Ball Valve .....	187
Vacuum Breaker/Hose Bibb.....	187
Bent Nose Garden Valve - <b>NEW</b> .....	187
Gate Valves.....	188
Quick Opening Gate - <b>NEW</b> .....	189

Y Strainer .....	190
Check Valves.....	191-193

## STAINLESS STEEL VALVES

2000# Full Port.....	194
Standard Port.....	195
1,000 PSI Full Port.....	196
SS Mini Ball Valve .....	197-198
Check Valves.....	199-202
Y-strainer, Globe,Gate .....	203
Carbon Steel valves .....	204-206
2,000# Standard Port .....	204
2,000 # FP 2-Piece.....	205
Hi Pressure 2-Way Valves .....	206
Hi Pressure 3-Way Balves .....	206
Check valves-5,000# .....	207
PVC Valves .....	208-209

# NIPPLES & FITTINGS



**BRASS & BRONZE..... 210-288**

Brass Nipples - Sch 40..... 211-217  
 C/P Brass Nipples..... 218  
 Bronze Fittings..... 219-227  
 Lead Free Bronze Fittings ..... 219-227  
 C/P Fittings..... 227  
 Bronze Cleanout Plugs ..... 228  
 Bronze Drop Ear Elbows..... 228  
 Bronze Barbs for PL. Pipe ..... 229  
 Steel Barbs for PL. Pipe ..... 229  
 Lead Free Bronze Barbs for PL. Pipe..... 230  
 Stainless Steel Barbs for PL. Pipe..... 230  
 Stainless Steel Well Couplings ..... 230  
 Stainless Steel Merchant Couplings ..... 230

**STAINLESS STEEL..... 231-244**

Stainless Nipples..... 231-236  
 150# Cast SS Fittings ..... 237-244

**BLACK & GALVANIZED ..... 245-281**

Sch. 40 Welded Steel Nipples..... 245-253  
 Sch. 80 Seamless Steel nipple..... 254-259  
 Sch. XXS Seamless Steel Nipple ..... 260  
 Groove Nipples..... 261-262  
 Merchant Couplings..... 263  
 API Line Couplings..... 264  
 Malleable Fittings..... 265-273  
 Steel Fittings..... 274-275  
 300# Malleable ..... 276-277

Bull Plugs and Swages..... 278-279  
 Forged Steel Fanges ..... 280-281

Copper Fittings..... 282-288



We hereby certify that to the best of our knowledge and belief the CDA 230 alloy seamless Red Brass Pipe from which our nipples are produced meet the requirements of ASTM Specifications B43 and is free of mercury contamination. The chemical analysis is 85% copper, 15% Zinc and conforms to federal Specifications WWN-351. Our brass nipples meet ANSI/ASTM B687-96 and MS51846 for standard brass nipples, and MS51872 for extra heavy brass nipples.

Threads: Nipples are threaded with American Standard taper pipe threads (NPT) in accordance with screw-thread standard for Federal Services Handbook H-58. ANSI B1.20.1

This product is certified by NSF to NSF/ANSI 61 for use in drinking water supplies of pH 6.5 and above.

- ASTM B43
- ANSI B1.20.1, WW-N-351
- ANSI/ ASTM B687-96
- NSF-61 Approved
- MS51846 STD Brass Nipples
- RoHS compliant

**STANDARD RED BRASS 85% PIPE WITH THREADED ENDS SPECIFICATIONS:**

Pipe Size in Inches	Dimension in Inches		
	O.D.	I.D.	Wall Thickness
1/8"	.405	.281	.062
1/4"	.540	.376	.082
3/8"	.675	.495	.090
1/2"	.840	.626	.107
3/4"	1.050	.822	.114
1"	1.315	1.063	.126
1-1/4"	1.660	1.368	.146
1-1/2"	1.900	1.600	.150
2"	2.375	2.063	.156
2-1/2"	2.875	2.501	.187
3"	3.500	3.062	.219
3-1/2"	4.000	3.500	.250
4"	4.500	4.000	.250
4-1/2"	5.000	4.500	.250
5"	5.563	5.063	.250
6"	6.625	6.125	.250

Standard Size (Inches)	Allowable Pressure POUNDS PER SQUARE INCH			
	@ 100° F	@ 200° F	@ 300° F	@ 400° F
1/8"	370	370	320	140
1/4"	870	870	760	330
3/8"	890	890	780	340
1/2"	900	900	790	340
3/4"	810	810	710	310
1"	630	630	560	240
1-1/4"	690	690	610	260
1-1/2"	630	630	560	240
2"	540	540	480	210
2-1/2"	450	450	390	170
3"	510	510	450	190
3-1/2"	570	570	500	220
4"	510	510	440	190
5"	410	410	360	160
6"	340	340	300	130

No-Lead 125LB seamless Threaded Red Brass Nipples - 2200

**LEAD FREE**



## BRONZE FITTINGS



UL842, UL258, UL125, FM

**Class 125 (150) For steam, water, gas, oil and air service**  
Standard specifications

Materials - ASTM B62-93 (85,5,5,5) C83600

Dimensions - ANSI B 16.15

Threads - ANSI B2.1 or BA 21 and Fed. WW-P-460C, MSS-SP-106, ANSI/ASME B1.20.1

- UL/ FM Approved
- ISO 9001:2000
- Not Lead Free
- RoHS Compliant

Bronze threaded fittings are manufactured from smooth-cored castings, designed to provide full flow with minimum restriction. All threads are accurately machined and gauged to ensure a perfect fit with the pipe. All fittings are individually tested under water to ensure quality. Bronze provides a tighter seal and is easier to install than other metals. Can be used for water, plumbing, heating, pneumatic and marine applications, able to resist the harmful effects of corrosion when coming into contact with salt water or fresh water polluted with mineral acids or peaty soils.

## LEAD FREE BRASS FITTINGS

**LEAD  
FREE**



- Approved to ANSI/NSF 61-4 California AB 1953
- Meets Federal State Drinking Water Act, Lead Free Requirement
- Brass fittings conform to AWWA C800
- Brass castings conform to ASTM B584, UNS Alloy C8933

- Brass fittings dimensions conform to ASME B16.15
- NPT threads on all fittings conform to ASME B1.20.1
- Brass unions conform to specification A-A-59617
- Manufacturing facilities are ISO 9001:2008

## STAINLESS STEEL NIPPLES

**SCHEDULE 40 WELDED**

Stainless steel pipe nipples are manufactured from stainless steel pipe that conforms to specification ASTM A312/SA312.

All stainless steel nipples conform to specification ASTM A733. Threads conform to the requirements of ANSI B1.20.1.

**304**

The basic alloy. Type 304 (18-8) is an austenitic steel possessing a minimum of 18% chromium and 8% nickel, combined with a maximum of 0.08% carbon. It is a nonmagnetic steel which cannot be hardened by heat treatment, but instead, must be cold worked to obtain higher tensile strengths.

Because of its ability to withstand the corrosive action of various acids found in fruits, meats, milk, and vegetables, Type 304 is especially suited for all types of dairy equipment piping and valves, the brewing industry, the citrus and fruit juice industry, and in food processing applications. Also used for the dye tanks, pipelines buckets, dippers, etc. that come in contact with the lormic, acetic, and other organic acids used in the dyeing industry.

In the marine environment, because of its slightly higher strength and wear resistance than type 316 it is also used for nuts, bolts, screws, and other fasteners. It is also used for springs, cogs, and other components where both wear and corrosion resistance is needed.

Both #304 and #316 nipples are NSF/ANSI 372 and NSF/ANSI 61 compliant.

**SCHEDULE 80 SEAMLESS**

- SEAMLESS FOR UNRESTRICTED FLOW
- USE WITH AIR, WATER, OIL, NATURAL GAS, STEAM
- FITTINGS: USE THREADED CLASS 3000 HIGH-PRESSURE STAINLESS STEEL.

- ASTM A733 • ASTM A312 • ANSI/ ASME B1.20.1
- PSI 3000

**316**

For severe environments. Of course, there are many industrial processes that require a higher level of resistance to corrosion than Type 304 can offer. For these applications, Type 316 is the answer.

In type 316, the nickel content is increased slightly. What distinguishes Type 316 from Type 304 is the addition of molybdenum up to a maximum of 3%.

Molybdenum increases the corrosion resistance of this chromium-nickel alloy to withstand attack by many industrial chemicals and solvents, and, in particular, inhibits pitting caused by chlorides. As such, molybdenum is one of the single most useful alloying additives in the fight against corrosion.

Type 316 can withstand corrosive attack by sodium and calcium brines, hypochlorite solutions, phosphoric acid; and the sulfite liquors and sulfurous acids used in the paper pulp industry. This alloy, therefore, is specified for industrial equipment that handles the corrosive process chemicals used to produce inks, rayons, photographic chemicals, paper, textiles, bleaches, and rubber. Type 316 is also used extensively for surgical implants within the hostile environment of the body.

Type 316 is the main stainless used in the marine environment, with the exception of fasteners and other items where strength and wear resistance are needed, then Type 304 (18-8) is typically used.





**150# 304 & 316 Stainless Steel Fittings**

Our high quality standard pattern 150lb rated stainless steel threaded fittings are manufactured to the highest standards. All stainless steel fittings are monitored by our quality control personnel for strict compliance with applicable standards and specifications.

These stainless steel pipe fittings are excellent for uses that involve chemicals or liquids that may be corrosive. Along with fighting corrosion, a stainless steel pipe fitting will prevent contamination making it useful to many professionals.

- Use with air, water, oil, natural gas, steam
- NPT and FNPT threads conform to ASME B1.20.1
- Maximum Pressure: 300 psi @ 72 F; 150 psi @ 366 F for steam
- Maximum Steam Pressure: 150 psi
- Material Conforms to ASTM A-351. Class 150 Pressure Ratings
- Manufacturing facility is ISO 9001:2008
- 304 Stainless Steel is economically priced, chromium-nickel material that offers very good corrosion resistance. 316 Stainless Steel has higher nickel content and contains molybdenum for even better corrosion resistance.

**HIGH PRESSURE 1000# BARSTOCK**



**1000#**

- Stainless bar stock dimensions conform to MSS SP-114
- NPT threads conform to ASME B1.20.1
- Manufacturing facility is ISO 9001:2008
- Fittings meet applicable chemical & physical properties

**HIGH PRESSURE 3000# FORGED**

A182 and ANSI/ASME B16.11.



**3000#**

- Use with air, water, oil, natural gas, steam
- Maximum Pressure:
  - Type 304 SS: 2,570 psi @ 72°F;
  - 1,965 psi @ 350°F for steam
  - Type 316 SS: 3,000 psi @ 72°F
  - 2810 psi @ 350°F for steam
- Pipe Nipples and Pipe: Use threaded Schedule 80 thickwall stainless steel



### BLACK AND GALVANIZED STEEL NIPPLES

#### Product Specifications

Welded steel pipe nipples both galvanized and black in diameters ranging from 1/8" up to 4" in lengths from close to 12" and cut-pipe up to 120". -200°-150° Temp Rating.

#### Technical Specifications

**Standards:** Product complies with ASTM A-53, A-733 and ANSI B1.20.1 for threading, dimensions and pipe specifications.

**Pipe:** Complies with ASTM A-53 mill tested schedule 40 and 80 for both Welded & Seamless Meets ANSI B36.1. All pipe is hydrostatic tested.

**Galvanized:** Zinc coating applied by hot dipped. Galvanized complying with ASTM A-123, NSF approved, RoHS compliant.

**Black:** Protected against oxidation with varnish coating.

**Cutting Procedure:** All pipe is roller cut. A visual inspection of seams, excessive galvanizing, mid-welds, poor galvanizing, bends, roundness, under and over weight of the pipe is made at the time it is cut. This is done for every length of pipe. Pipe lengths are cut to a tolerance of + or - 1/16" of the actual length.

#### Threading Procedure:

All pipe is chaser thread cut to American Standard Tapered Pipe Thread standards. This is 3/4" taper per foot. Pipe is visually inspected for roundness of threads and other visual faults as it is removed from the threading machine.

#### SCHEDULE 80 SEAMLESS



#### XXS SEAMLESS



- ASTM A106 Grade B Seamless Pipe
- ASTM A 53
- WVN 351
- Standard NPT Tapered Pipe Threads as per ANSI B 1.20.1 Specification

# MALLEABLE FITTINGS



### ISO 9002 - CERTIFICATE OF QUALITY - UL/FM LISTED

Our quality fittings are made with care and attention to detail. With better molds we can reduce parting lines and rough edges resulting in better fluid flow. By using a low temperature galvanizing process the coating is more durable which means a longer lasting fitting. All Fittings are 100% Pressure Tested to 300# Class.

*(Every fitting is subjected to an underwater fitness test to ensure the highest quality)*

### SPECIFICATIONS

- MATERIAL: ASTM A 197 - Cuppla Malleable Iron, ASTM A 153 - Hot dipped galvanizing • Coating ASTM A164 LS
- DIMENSIONS: ANSI B 16.3 - Malleable Iron threaded fittings, ANSI B 16.14 - Ferrous Pipe Plugs, Bushings etc..., ANSI B 16.39 - Malleable Iron threaded pipe unions.
- THREADS: ANSI B 2.1 or BS 21 ASME B1.20.1 • RoHS Compliant • Tapered Threads

### MALLEABLE IRON - ANSI B 16.3

F°	Class	Sizes	Sizes	Sizes
	150	1/4-1	1 1/4-2	2 1/4-3
	PSIG			
-200-150	300	2000	1500	1000
200	265	1785	1350	910
250	225	1575	1200	825
300	185	1360	1050	735
366*	150	1150	900	650

\*Permissible for service temperature up to 366°F, reflecting the temperature of saturated steam at 150 psig.

### STEEL FITTINGS



- 1010 Carbon Steel, 3/4 taper threads ( see hydraulic section for 7/8 taper threads.)
- Finish or coating • Black Dipped in rust resistant
- Galvanized, Zinc Plated (Inside and Out)

### 300lb MALLEABLE FITTINGS



**Max. pressure: 300 psi WOG @ 72°F; 150 psi WOG saturated steam**

- Meet ANSI/ ASME B1.20.1 standards
- Black meet ASTM 197 standards

### BULL PLUGS AND SWAGES



### FLANGES



# COPPER FITTINGS



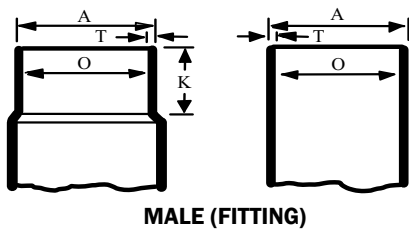
**SYMBOL OF JOINT ENDS**

- C** Solder joint fitting end made to receive copper tube diameter
  - Ftg.** Solder joint fitting end made to copper tube diameter
  - F** Internal ANSI Standard Taper Pipe Thread-Female
  - M** External ANSI Standard Taper Pipe Thread-Male
- Threaded ends ANSI/ ASME B1. Solder ends ASTM B88

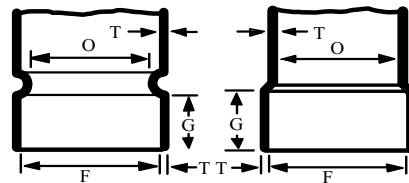
- Temp range 32° to 200°F
- Pressure @100° - 1/8-1 : 500 PSI
- 1-1/4-2 : 400 PSI
- 2-1/2 - 3: 300 PSI

**NSF - 61 CERTIFIED  
ALLOY C12200**

**THE ABOVE CONFORMS TO ASTM B 88 & ASTM B 306, A 306**

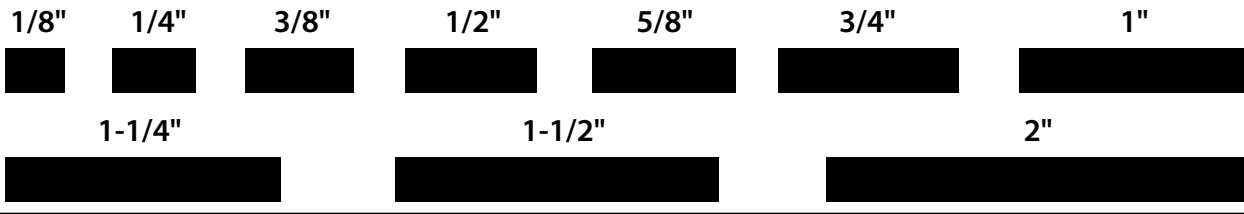


**MALE (FITTING)**



**FEMALE (COPPER)**

Nominal Size	Joint Ends										Metal Thickness T (in)	Inside Diameter O (in)	
	Male End					Female End							
	Outside Diameter (A) in	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) H (in)	Inside Diameter F (in)	Average Tolerance (mm)	Actual MIN in	O.D. MAX in	Length (Min) G (in)			
1/8"	2/8	0.03	2/8	2/8	3/8	2/8	0.03	2/8	2/8	3/8	0	2/8	
1/4"	3/8		3/8	3/8	3/8	3/8		3/8	3/8	3/8	3/8	0	2/8
3/8"	4/8		4/8	4/8	3/8	4/8		4/8	4/8	4/8	3/8	0	3/8
1/2"	5/8		5/8	5/8	4/8	5/8		5/8	5/8	5/8	3/8	0	4/8
5/8"	6/8		6/8	6/8	5/8	6/8		6/8	6/8	6/8	5/8	0	4/8
3/4"	7/8		7/8	7/8	6/8	7/8		7/8	7/8	7/8	5/8	0	5/8
1"	1-1/8	0.04	1-1/8	1-1/8	7/8	1-1/8	0.04	1-1/8	1-1/8	7/8	0	7/8	
1-1/4"	1-3/8		1-3/8	1-3/8	1	1-3/8		1-3/8	1-3/8	1	1	0	1-1/8
1-1/2"	1-5/8	0.05	1-5/8	1-5/8	1-1/8	1-5/8	0.05	1-5/8	1-5/8	1-1/8	0	1-3/8	
2"	2-1/8		2-1/8	2-1/8	1-3/8	2-1/8		2-1/8	2-1/8	2-1/8	1-2/8	0	1-6/8
2-1/2"	2-5/8		2-5/8	2-5/8	1-4/8	2-5/8		2-5/8	2-5/8	2-5/8	1-4/8	1/8	2-1/8
3"	3-1/8		3-1/8	2-1/8	1-6/8	3-1/8		3-1/8	3-1/8	3-1/8	1-5/8	1/8	2-5/8
4"	4-1/8		4-1/8	4-1/8	2-1/8	4-1/8		4-1/8	4-1/8	4-1/8	2-1/8	1/8	3-4/8



# PLASTIC FITTINGS



## SCH 80 PVC NIPPLES



Machined Schedule 80 PVC nipples comply fully with ASTM D2464, threads conform to ASTM F1498, and the pipe is extruded from PVC 1120-1220 meeting ASTM D1784 and meets ASTM D1785, products standard 21-70

## SCH 40 PVC FITTINGS



- NSF 61 certified for use with drinking (potable) water
- Max Temperature: 140°F
- Max Pressure: Not Rated

Resistant to corrosion, strong and rigid - commonly used in low pressure plumbing applications. ASTM D1784 and D2466.

## SCH 80 PVC FITTINGS



PVC Material is Type 1 according to the American Society for Testing Materials (ASTM) D-1784. Fittings conform to ASTM D-2464 & ASTM D-2467. Temperature rating is 140°F. PSI is based on water at 73°F. Derate 50% at 110°F and 78% at 140°F. Not recommended for use in compressed air or gas systems.

## PIPE FITTINGS



- Nylon
- Polyethylene
- Polypropylene

## HOSE BARB FITTINGS



- Nylon
- Polyethylene
- Polypropylene

## GARDEN HOSE FITTINGS



- Nylon

## NYLON & POLYPROPYLENE COMPRESSION FITTINGS



Machined Schedule 80 PVC nipples comply fully with ASTM D2464,

## POLYPROPYLENE PUSH-IN TUBE FITTINGS AND VALVES



- NSF 61 certified for use with drinking (potable) water
- Max Temperature: 140°F
- Max Pressure: Not Rated

**HOSE ACCESSORIES**

**HOSE ACCESSORIES**

**HOSE ACCESSORIES**



**CAM AND GROOVE**



**ALUMINIUM**



**POLYPROPLYENE**



**STAINLESS STEEL**



**BRASS**

**COMBINATION HOSE NIPPLES**



**FIRE HOSE FITTINGS**












**UNIVERSAL/ GROUND JOINT  
COUPLINGS**



# HOSE CLAMPS



	<p><b>WORM GEAR</b> PAGE 312-315</p>		<p><b>QUICK RELEASE</b> PAGE 316</p>
	<p><b>T-BOLT</b> PAGE 317</p>		<p><b>SPRING LOADED T-BOLT</b> PAGE 318</p>
	<p><b>CONSTANT TORQUE</b> PAGE 319</p>		<p><b>V-BAND</b> PAGE 319</p>
	<p><b>MUFFLER</b> PAGE 320</p>		<p><b>EXHAUST</b> PAGE 321</p>
	<p><b>1 EAR, 2 EAR, GAPLESS</b> PAGE 322-323</p>		<p><b>PRE-FORMED</b> PAGE 324-325</p>
	<p><b>TOOLS &amp; STRAPPING</b> PAGE 325-326</p>		<p><b>NON-PERFORATED OR LINED BAND</b> PAGE 327</p>
	<p><b>RUBBER LINED</b> PAGE 328</p>		<p><b>HOSE FERRULES</b> PAGE 329</p>

**TUBING**

**TUBING**

**TUBING**



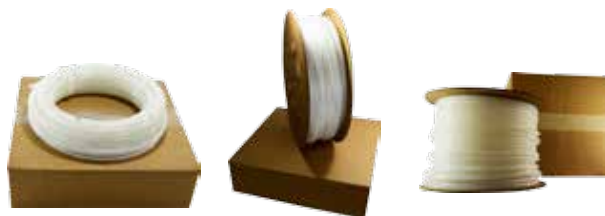
**POLYURETHANE**

**POLYETHYLENE**

**NYLON**

Sold individually boxed

Sold individually boxed



Natural, Black, Blue, Green, Red, Yellow, Orange

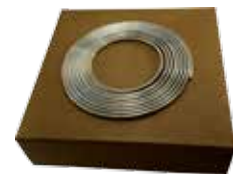


**PVC**

**COPPER AND ALUMINUM**

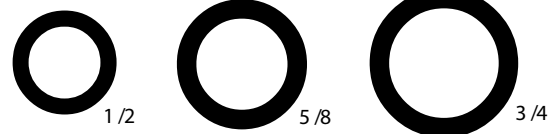
• Clear

Sold individually boxed



**TYPE L AND REFRIGERATION**

**ALUMINUM**





# HIGH PRESSURE SPRAYERS

NEW



## STRAIGHT THROUGH QDS

NEW



## FITTINGS AND SWIVELS

NEW



## NOZZLES

NEW



## SPRAY GUNS AND WANDS

NEW



**PNEUMATICS**

**PNEUMATICS**

**PNEUMATICS**



**QUICK DISCONNECTS**



- Universal
- ARO 210
- Lincoln
- Industrial
- Automotive
- ST Series - High Flow

**BREATHER VENTS, MUFFLERS**



- Mufflers
- Snubbers
- In-line filters
- Breather vents
- Control valves
- Manifolds

**PNEUMATIC ACCESSORIES**



- Kits NEW
- Tire gauge
- Tank and vent valves
- Blow guns
- Air chucks
- Inflators

**GAUGES**



- Liquid filled & Dry
- Lower mount & center mount
- Water test
- Syphons

# TRUCK AND TRAILER



## INDUSTRY GRADE NYLON AIR COIL ASSEMBLY - SET

- Each kit contains one Emergency (Red) and one service (Blue) 1/2" O.D. nylon tubing assembly.
- 1/2" -14 NPTF end fitting with heavy gauge spring.
- Assemblies meet SAE J844 and DOT FMVSS 106 requirements.
- Temp rating -40° - +208°



Part #	Length	Pigtail Length Tractor end	Pigtail Length Trailer end	List Price
39404	12'	6"	6"	---
39400	15'	12"	12"	---
39402	15'	40"	12"	---
39406	20'	12"	12"	---

## FIFTH WHEEL SLIDER COIL

- Temperatures range -40 to 208°F
- 150 psi max pressure rating
- Meets SAE J844 and DOT FMVSS 106 requirements.
- (2) 1/4" OD fittings assembled



Part #	Description	Length	Fittings	List Price
39839	5th Wheel slider coil	up to 54"	(2) 1/4" MPT	---
39838	5th Wheel slider coil	up to 72"	(2) 1/4" MPT	---

## 3-IN-1 AND 4-IN-1 COMBINATION AIRLINE CABLE

- (2) 3/8" ID SAE J1402 rubber service and emergency with blue (service) and red (emergency) gladhand grip handle
- Color-coded grip helps to minimize incorrect tractor/trailer connections have glad handle with Vibraseal
- ABS power line (green) – meets SAE J2222 requirements
- Auxiliary power line (yellow) – fitted with SAESS60 plugs that have an inverted (male) ground pin 4-in-1 only
- SAE J560 Plugs with sleeves for superior corrosion protection and strain relief
- Corrosion resistant all brass fittings 1/2" male NPT w/ Vibraseal
- Tapered grip flexes with airline during tight turns for kink protection
- Temp rating -40 - 208°F



Part #	Description	List Price
39825	Combo 3 in 1 assembly 15 ft.	---
39962	Combo 4 in 1 assembly 15 ft.	---

# HYDRAULIC ADAPTERS & ACCESSORIES



## STEEL ADAPTERS

**Technical information ... 389**  
**Profile size chart ..... 396**  
Steel Pipe Swivels ..... 397  
37° JIC Flare Straights ..... 399  
37° JIC Flare Shapes ..... 401  
Bulkhead Adapters ..... 402  
Steel Pipe Fittings ..... 404  
O-Ring Adapters Straight . 408  
JIC Swivels ..... 410  
O-Ring Adapters ..... 412  
O-Ring Face Seal ..... 415  
BSPT/ BSPP Adapters ..... 418  
Metric Adapters ..... 420

## HYDRAULIC QUICK DISCONNECTS

Thread to Connect - Wing 422  
ISO A Interchange ..... 422  
ISO B Interchange ..... 422  
Flush Face ISO ..... 423  
VEP Series ..... 423  
AG Interchange ..... 424  
Hydraulic Jack Q/D ..... 424

## HYDRAULIC VALVES & ACCESSORIES

Hydraulic Motor ..... 425  
Hydraulic Gear Pump ..... 426  
Flow Control Valve ..... 428  
Variable Flow Counter ..... 429  
Air Breathers ..... 429

## PLATING SPECIFICATION

Our standard Trivalent, Cr<sup>+3</sup> plating performs at nearly double the S.A.E. corrosion resistance requirement. The plating meets ASTM B633, Fe/Zn 5. The thickness is 5um-13um. This plating is silver in appearance and has been testing at 96 hours to white rust and 120 hours to red rust.