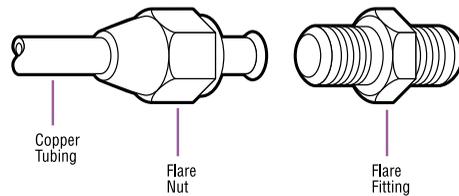


# Trusted solutions for common connection problems.

Find your fittings and make quick work of connection repair.

## Flare Fittings

- Used with water, air, natural gas and fuel oil lines — never with plastic or vinyl tubing
- For higher pressure than compression lines up to 3,000 PSI
- May be assembled and disassembled repeatedly



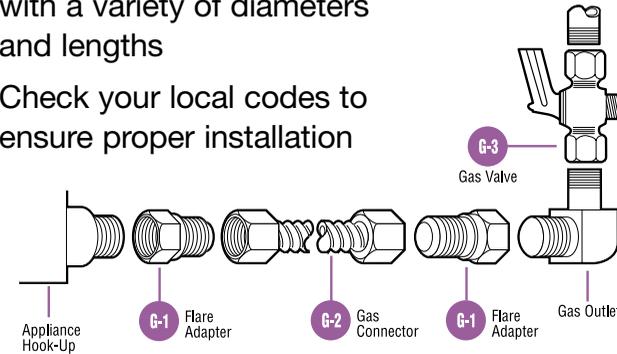
**Note:** Threads on the flare tapered end differ from the pipe threads, and these thread patterns are not interchangeable. Attempting to attach pipe threads to flare threads will result in a leak.

## Need more help?

Visit [www.plumbcraft.com](http://www.plumbcraft.com) for online how-to videos and other resources.

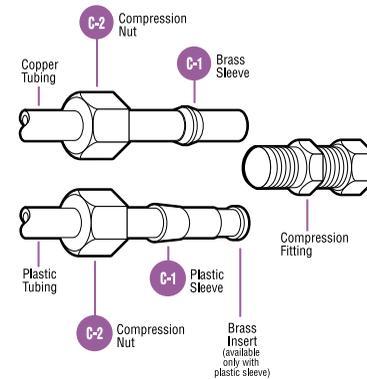
## Gas Fittings

- AGA (American Gas Association) certified
- Designed for use with natural gas, with a variety of diameters and lengths
- Check your local codes to ensure proper installation



## Compression Fittings

- For water, air and vacuum lines — never for gas lines
- Used with copper tubing up to 400 PSI or the rating of the tubing, whichever is least
- Should not be used where repeatedly disassembled and assembly will be necessary (in such cases, choose flare fittings instead)
- Attach tubing to a pipe or pipe fittings with male or female pipe threads



**Note:** Threads on the compression end are finer than those on the pipe thread end of fitting. These thread patterns are not interchangeable and will not seal properly.

PlumbCraft® has been the trusted brand for plumbing home repair products for more than 50 years. Whether you're a seasoned plumber or a casual do-it-yourselfer, PlumbCraft® makes any plumbing repair job much easier.

PlumbCraft® is the trusted brand of choice for plumbing repair made easy throughout the entire home.

PlumbCraft® Essential Take-Home Guides are available for each of these plumbing home repair projects:

CONNECTION REPAIR

TOILET REPAIR

WATER SUPPLY REPAIR

DRAIN REPAIR

HOSE & PIPE REPAIR

SINK & FAUCET REPAIR

## Need more help?

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# PlumbCraft®

CONNECTION REPAIR SOLUTIONS

# Your Essential Take-Home Guide

## Simplify your repair project:

- Check product codes to quickly find parts
- Take home this detailed guide to help with the repair
- Watch online how-to videos at [plumbcraft.com](http://plumbcraft.com)

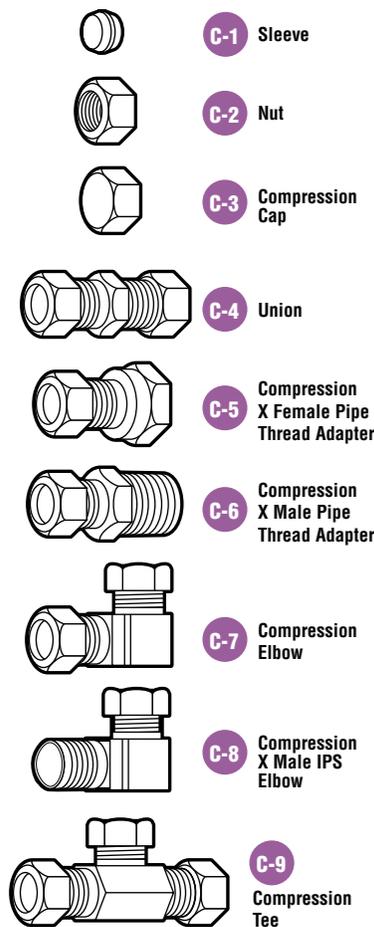


# Connection Repair Solutions

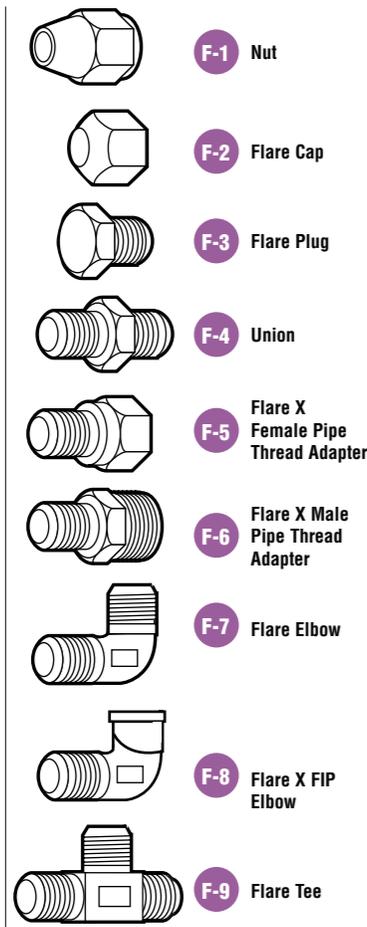
### Select Your Fittings

Both *flare* and *compression fittings* are sized according to the OD of the tubing with which they'll be used. *Pipe fittings* are sized according to the thread, either ID or OD. Fitting sizes can be found on each package.

### Compression



### Flare



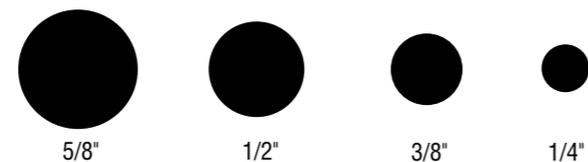
### Identifying Sizes

Both *flare* and *compression fittings* are sized according to the OD of the tubing with which they'll be used. *Pipe fittings* are sized according to the thread, either ID or OD.

To determine sizing, place your pipe or tube over the circles below and align to the proper size. Fittings should be aligned with the tubing — not the thread size. Sizes are noted on each package.

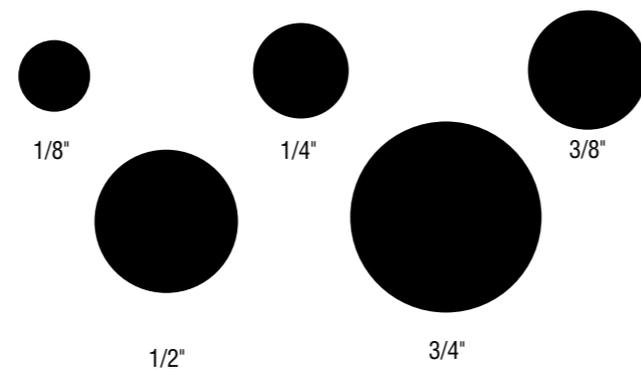
### Flare & Compression Fittings & Tubings (OD)

Illustrations show actual outside diameter (OD) of tubing.



### Pipe Threads (OD)

Illustrations show actual outside diameter (OD) of iron pipe or pipe that contains pipe threads.



### Before You Start

Review these helpful abbreviations:

- IPS: Iron Pipe Straight Threads
- MIP: Male Iron Pipe Threads
- FIP: Female Iron Pipe Threads
- OD: Outside Diameter
- ID: Inside Diameter

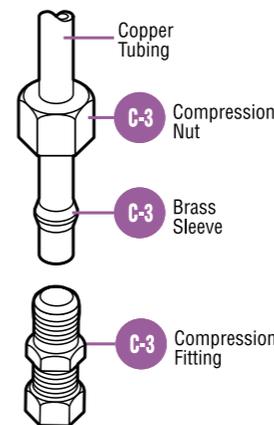
PlumbCraft® products are packaged and marked to help you find plumbing repair parts quickly. Just use the chart to name your problem, determine the cause and find your solution. Then, look for the part codes on every package to easily find what you need.



### Connecting Compression Fittings

When using a compression fitting with copper tubing, make sure the tubing isn't bent or out of round, and that the end of the tubing is cut straight, with no burrs.

1. With the open threaded end facing out, slide the compression nut over the end of the tubing.
2. Slide the brass compression sleeve over the end of the tubing.
3. Insert the end of the tubing into the fitting's compression end until it bottoms out.
4. Slide the compression nut and sleeve down to the fitting and hand tighten.
5. Tighten the nut onto the fitting, avoiding over-tightening. This seats the compression sleeve into the tubing and compresses the sleeve into the tubing to form a water-tight seal.
6. Use wrench to hold fitting while tightening the compression nut.



Once the sleeve is compressed, it cannot be removed.

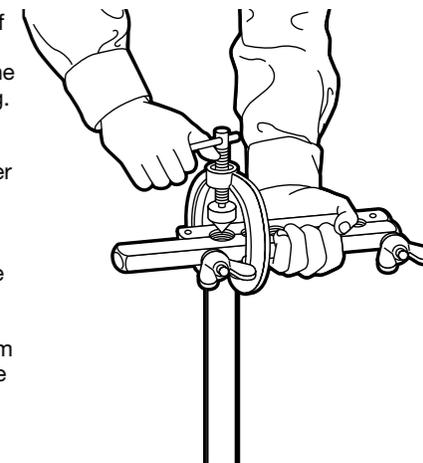
When using plastic tubing, you'll need a delrin plastic sleeve and a brass insert at the end of the tubing, which will keep the plastic tube from collapsing.

**Note:** If one end of the fitting will attach to pipe threads, attach that end first, using pipe dope or PTFE or thread tape on the male pipe threads. (No pipe dope or PTFE tape should be used on the compression end of the fitting.)

### Connecting Flare Fittings

Before installing a flare fitting, check that the end of the copper tubing that is to be flared is cut straight, with no burrs.

1. With the threaded end of the flare nut facing out, slide the flare nut over the end of the copper tubing.
2. Insert the end of the tubing through the proper size hole of the flaring tool, then tighten the wingnuts. (If you can move the tubing, use the next smaller hole.) The tubing should protrude about 1/32" to 1/16" from the top of the hole — the larger the diameter of tubing, the more tubing needs to protrude.



3. Align the flaring ram directly over the end of the tubing until the end is flared at a 45-degree angle. When put together, the angle of the flare should match the tapered end of the fitting.
4. Place the flared end of the tubing over the tapered end of the fitting, slide the flare nut down to the fitting and hand tighten.
5. Tighten the nut approximately 1/4 turn — but do not over-tighten — and check for leaks.
6. Use wrench to hold fitting while tightening the flare nut.

**Note:** If one end of the fitting will attach to pipe threads, attach that end first, using pipe dope or PTFE or thread tape on the male pipe threads. (No pipe dope or PTFE tape should be used on the flare end of the fitting.)

### Installation

Find detailed directions for complete installation on the back of each product package. Each package also offers information on specific tools you may need, and helpful tips to make your projects easier.