

## Modular Aluminum Compressed Air Piping Installation Instructions

**3/4"-2"**

### PLANNING/LAYOUT

Before beginning the installation, create a plan as to the location of the air compressor and where you are going to mount the compressed air outlets. On the plan locate outlets, tees, and elbows.

### AIR COMPRESSOR

Use a flexible jumper hose from the air compressor to the filter regulator unit to reduce vibration to the FastPipe System.

### FILTER REGULATOR

A filter regulator unit is recommended to keep contaminants out of the air system and to allow for pressure adjustment.

### PRESSURE RATINGS

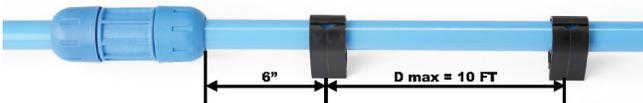
The FastPipe system has a maximum working pressure of 190 psi and a temperature range from 0 to 140 deg F.



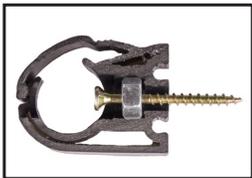
### ASSEMBLY OF THREADED COMPONENTS

Assemble all NPT threads with two wraps of teflon tape and then PIPE SEALANT which prevents thread galling.

### FLAT SURFACE INSTALLATION



- Hangers or mounting clips should be no more than 10 ft apart and one must be at least 6" from a fitting



Pipe Clip



Strut Cushion Clamp

- Use pipe clips to secure pipe to any flat surface with mounting screw
- Ceiling or wall mount
- Clip has 5/16" thru hole and hex bore for a 5/16" hex nut
- Hex nut serves as a backer for screws
- Use #10 Drywall Screw or Tapcon
- In horizontal installations, mount clip pivot tab up

### HANGING INSTALLATION



- Beam Clamp
- 5/16" Threaded Rod
- Pipe Clip



- Beam Clamp
- 3/8" Threaded Rod
- Pipe Clip

### EXPANSION JOINTS



TEMP CHANGE	MAXIMUM STRAIGHT RUN DISTANCE			
	3/4"	1"	1 1/2"	2"
10°F	700ft	600ft	550ft	500ft
20°F	500ft	460ft	420ft	370ft
35°F	350ft	310ft	280ft	250ft
55°F	260ft	230ft	200ft	190ft
70°F	200ft	190ft	170ft	150ft

*Any piping system will expand and contract with temperature changes, use this guide for installation of expansion joints to compensate for this movement of aluminum pipe in non-conditioned buildings*

# INSTALLATION

3/4" - 2"



**1 CUT PIPE TO LENGTH** with tubing cutter (cut must be square) (DO NOT USE HACK SAW)



**2 DEBURR** the end of the pipe outside and inside (a smooth edge allows easy fitting assembly and no damage to the fitting O-ring)



**3 MARK END OF PIPE** for the proper insertion depth  
 3/4" Fittings: 2 inches  
 1" Fittings: 2-3/4 inches  
 1 1/2" Fittings: 4 inches  
 2" Fittings: 4-3/4 inches



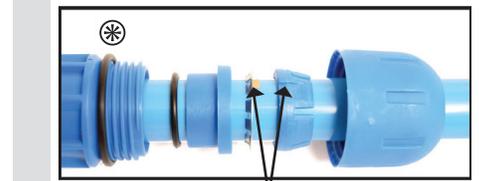
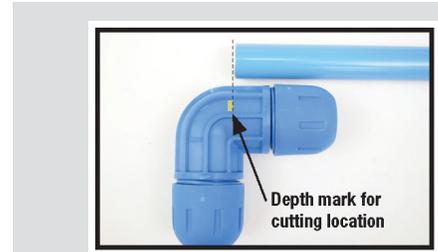
**4 WET END OF PIPE** with very diluted soapy water (DO NOT USE ANY OIL OR GREASE LUBRICANT)



**5 LOOSEN FITTING CONE NUT PARTIALLY**  
 LOOK INSIDE EACH FITTING FOR INNER PARTS (inner parts, o-ring, stainless steel bite ring)



**6 INSERT PIPE** into fitting until pipe bottoms out  
**HAND TIGHTEN** fitting  
**FULLY TIGHTEN** fitting with FASTPIPE spanner wrenches



TAB MUST ALIGN TO NOTCH  
 \*Tension O-ring on 3/4" and 1" fittings only

# OUTLETS

## WALL OUTLET



## WALL OUTLET WITH SHUTOFF



Outlet ports are 1/2" Female NPT, Drain port is 3/8" Female NPT



## QUICK COUPLER



K7241 1/2" Male NPT Thread



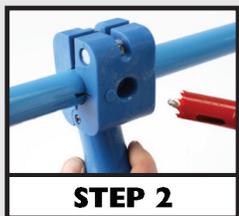
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Use a pipe thread bushing 1/2" Male NPT x 1/4" Female NPT to adapt standard 1/4" quick couplers  
 Or use a Rapidair K7241 1/2" Male NPT Quick Coupler

# SADDLE DROP INSTALLATION



STEP 1



STEP 2



STEP 3



STEP 4

-System must be de-pressurized before installing  
 -To prevent chips from entering the pipe interior, stop drilling occasionally and blow out chips, grease the end of the drilling tool

- 1) Position saddle drop opposite the side of the pipe that needs the hole  
**Tighten securely and mark the pipe by the raised locating mark on the fitting**  
**Mark the pipe both horizontally and vertically along the fitting edge**
- 2) Drill thru one side of pipe with the drill bit, using the hole in the fitting as a locator
- 3) Insert the saddle drop gasket into the molded cavity
- 4) Position the saddle drop over the drilled hole with aligning marks, tighten securely
- 5) Attach the necessary drop pipe or threaded adapter



MAIN SIZE	DRILL BIT	GASKET
1"	9/16" F0043	F2210C
1 1/2"	3/4" F0044	F4210C
2"	3/4" F0044	F5210C

## WARNINGS

- Compressed air is DANGEROUS if not used properly
- Always use EYE PROTECTION when using compressed air
- DO NOT POINT compressed air at your body or any person
- Pressurize system SLOWLY
- TURN OFF air compressor when not in use
- CHECK local building codes before installation
- ALWAYS RELIEVE the system pressure when installing or performing maintenance
- Systems must have a SAFETY RELIEF valve installed at the compressed air source to prevent over pressurization
- When using FastPipe in direct sunlight, cover or paint the polymer fittings to protect from UV exposure (Pipe needs no covering and can be exposed)
- Keep children away from the system



### FastPipe is NOT designed:

- For underground burial
- To electrically ground equipment
- To be welded
- To take violent impacts
- To be used where the compressed air temperature is above 140 deg F
- For environments of caustic or corrosive chemicals



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Wash hands after handling.

**CONTAINS LEAD:  
MAY BE HARMFUL IF EATEN OR CHEWED.  
MAY GENERATE DUST CONTAINING LEAD.  
KEEP OUT OF THE REACH OF CHILDREN**

## FASTPIPE INSTALLATION TIPS AND RECOMMENDATIONS:

Care must be taken on any installation of the Fastpipe system. Pipes will be carrying compressed air/gas up to 190 psi. The Fastpipe system is only as safe as a thorough installation. Read all installation instructions and watch installation videos before starting. Below are some tips for a safe installation.

**We strongly recommend that the installer contact our tech department for installation questions PRIOR to the installation.**

- Assemble all NPT **PIPE THREADS** with two wraps of Teflon tape and then pipe sealant which prevents thread galling
- Support the pipe with clips / hangers a maximum of **10 FT SPACING** and on **ONE SIDE OF EACH FITTING**
- Any machine/compressor plumbed to the Fastpipe must have a **JUMPER HOSE** to reduce vibration
- Any piping system will expand and contract with temperature changes. Use **EXPANSION JOINTS** to compensate for this movement of aluminum pipe in non-conditioned buildings.
- DO NOT USE** Fastpipe for **PULSING** desiccant dryers or other like equipment.
- CAUTION** installing inert gas bulk tank systems, gas must be warmed up to Fastpipe temperature range
- Use a strain relief attached to the building for any rubber hose drops attached to the piping
- DO NOT** connect quick couplings for air hoses to reducing elbows or tee fittings. The constant connecting/disconnecting and pulling of air hoses could loosen the fitting. Use the Fastpipe **WALL OUTLET** which can be secured to a wall or post. Any hoses attached in the ceiling area to a fitting must use a strain relief attached to the building structure
- CHECK** that all fittings are tightened before pressurizing the system for the first time
- For initial installation, pressurize system **SLOWLY** to 50 psi and check for leaks, then pressurize slowly to MAX 190 psi
- Make sure compressor output temperature does not exceed **140°F**.
- AFTER 24 HOURS** of being pressurized, depressurize the system and **RETIGHTEN** the compression nuts. Some settling of components may have occurred. This is not optional, it must be done.
- FASTPIPE** can be bent to conform around minor obstacles to a maximum of 15 degrees. **DO NOT OVERBEND.**

**PRODUCTS MANUFACTURED BY THE SELLER CARRY A LIMITED ONE YEAR WARRANTY.  
SEE [WWW.RAPIDAIRPRODUCTS.COM](http://WWW.RAPIDAIRPRODUCTS.COM) FOR MORE DETAILS**