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

- 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

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

<table>
<thead>
<tr>
<th>TEMP CHANGE</th>
<th>3/4”</th>
<th>1”</th>
<th>1½”</th>
<th>2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>10°F</td>
<td>700ft</td>
<td>600ft</td>
<td>550ft</td>
<td>500ft</td>
</tr>
<tr>
<td>20°F</td>
<td>500ft</td>
<td>460ft</td>
<td>420ft</td>
<td>370ft</td>
</tr>
<tr>
<td>35°F</td>
<td>350ft</td>
<td>310ft</td>
<td>280ft</td>
<td>250ft</td>
</tr>
<tr>
<td>55°F</td>
<td>260ft</td>
<td>230ft</td>
<td>200ft</td>
<td>190ft</td>
</tr>
<tr>
<td>70°F</td>
<td>200ft</td>
<td>190ft</td>
<td>170ft</td>
<td>150ft</td>
</tr>
</tbody>
</table>
**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

**OUTLETS**

**WALL OUTLET**

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

**WALL OUTLET WITH SHUTOFF**

**QUICK COUPLER**

- 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 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

K7241 | 1/2” Male NPT Thread

#50716

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**

-Temperature O-ring on 3/4” and 1” fittings only
-TAB MUST ALIGN TO NOTCH

**MAIN SIZE** | **DRILL BIT** | **GASKET**
---|---|---
1” | 9/16” F0043 | F2210C
1 1/2” | 3/4” F0044 | F4210C
2” | 3/4” F0044 | F5210C
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 FOR MORE DETAILS

6-2020 rev3