

# **FASTPIPE**

**Modular Aluminum Compressed Air Piping**

**Sizes 3/4" - 1" - 1 1/2" - 2"**



# **RAPIDAIR**

THE LEADER IN AFFORDABLE, DO IT YOURSELF COMPRESSED AIR SYSTEMS



STEP 1



STEP 2



STEP 3



(see page 8 for detailed instructions)

## Today's Improved Compressed Air Piping Method

### FAST INSTALLATION TIME

- Compression style fittings make installation simple
- Aluminum piping is easy to cut and lift
- O-ring seals ensure a leak free system
- No glueing, threading or soldering
- Installs in half the time as some traditional methods

### DIVERSE

- Install in small shops to industrial plants
- Connect to any existing piping system
- Expand or modify the system with ease

### SUPERIOR AIR QUALITY

- No corrosion in the pipe and fittings means longer tool life
- Cools hot compressed air quickly for better filter performance

### ENERGY EFFICIENT

- Smooth inner wall and free flowing fittings lower compressed air costs
- Sealed connections means your compressor run time is less

## Traditional Compressed Air Piping Methods



### BLACK PIPE

- requires special threading equipment/skill in fabrication for joining
- prone to rust and loose scale deposits over time
- rough inner surface restricts air flow
- modifying the system is more difficult
- inexpensive material costs
- longer time needed for installation



### COPPER

- skill in soldering needed to assemble joints
- smooth inner surface has good air flow
- not all types are suitable for pressure
- expensive material costs due to the high price of copper raw material
- high installation cost



### PVC

- not recommended for compressed air by the manufacturer
- becomes brittle over time and is not safe, can explode, sending shrapnel everywhere
- banned by OSHA for above ground applications

## TECHNICAL SPECIFICATIONS

- 190 psi working pressure
- 0 Deg F to 140 Deg F
- compatible with all types of compressor lubricants
- to be used for compressed air applications

## GENERAL SYSTEM RATINGS

- conforms to ASME B31.1
- fire resistant to flammability standard UL94HB
- OSHA Compliant



### ALUMINUM PIPE SPECIFICATION

- alloy grade 6063-T5
- seamless extruded to ASTM B241
- blue powder coat, color RAL5012 outside
- clear anodize treatment inside

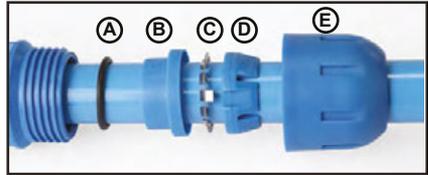


### FITTINGS SPECIFICATION

- nylon 6 base with fiberglass reinforcement
- bite ring: stainless steel
- o-ring: Nitrile

### FITTINGS PARTS BREAKDOWN

- A) O-RING
- B) BACKER
- C) SS BITE RING
- D) COLLET
- E) CONE NUT



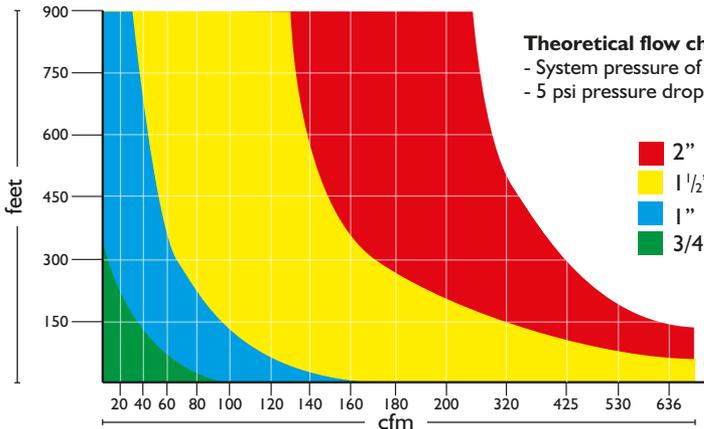
### SPARE PARTS KIT (INCLUDES A AND C)

SIZE	PART NUMBER
3/4"	F1076
1"	F2076
1 1/2"	F4076
2"	F5076



## CHOOSE THE CORRECT SIZE OF FASTPIPE FROM THIS FLOW RATE CHART

LENGTH OF STRAIGHT RUN FROM COMPRESSOR OR 1/2 THE MAIN LOOP LENGTH





## PIPE



SIZE	PART NUMBER	OUTSIDE	INSIDE	LENGTH	WEIGHT
3/4"	F1000	.79 in	.69 in	19ft 8in	2.6 lbs
1"	F2000	.98 in	.87 in	19ft 8in	4.2 lbs
1 1/2"	F4000	1.57 in	1.43 in	19ft 8in	8.8 lbs
2"	F5000	1.97 in	1.81 in	19ft 8in	10.1 lbs

## UNION



SIZE	PART NUMBER
3/4"	F1002
1"	F2002
1 1/2"	F4002
2"	F5002

## REDUCING UNION



SIZE	PART NUMBER
1" x 3/4"	F2121
1 1/2" x 1"	F4221
2" x 1 1/2"	F5421

## 90° ELBOW



SIZE	PART NUMBER
3/4"	F1003
1"	F2003
1 1/2"	F4003
2"	F5003

## 90° REDUCING ELBOW NPT



SIZE	DROP SIZE	PART NUMBER
3/4"	1/2" FEMALE NPT	F1093
3/4"	1/4" FEMALE NPT	F1073
1"	3/4" FEMALE NPT	F2083
1"	1/2" FEMALE NPT	F2093
1"	1/4" FEMALE NPT	F2073

## 45° ELBOW



SIZE	PART NUMBER
1"	F2004
1 1/2"	F4004
2"	F5004



### EQUAL TEE



SIZE	PART NUMBER
3/4"	F1005
1"	F2005
1 1/2"	F4005
2"	F5005

### REDUCING TEE



MAIN SIZE	DROP SIZE	PART NUMBER
1"	3/4" Fastpipe	F2107
1 1/2"	1" Fastpipe	F4207

### REDUCING TEE NPT



MAIN SIZE	DROP SIZE	PART NUMBER
3/4"	1/2" Female NPT	F1009
3/4"	1/4" Female NPT	F1007
1"	3/4" Female NPT	F2008
1"	1/2" Female NPT	F2009
1"	1/4" Female NPT	F2007
1 1/2"	3/4" Female NPT	F4008
1 1/2"	1/2" Female NPT	F4009

### END CAP



SIZE	PART NUMBER
3/4"	F1006
1"	F2006
1 1/2"	F4006
2"	F5006

### INLINE VALVE



SIZE	PART NUMBER
3/4"	F1111
1"	F2222
1 1/2"	F4444
2"	F5555

### THREADED MALE NIPPLE



SIZE	MALE THREAD	PART NUMBER
3/4"	1/2" NPT	F1018
3/4"	3/4" NPT	F1118
1"	1/2" NPT	F2018
1"	3/4" NPT	F2118
1"	1" NPT	F2218
1 1/2"	1 1/2" NPT	F4418
2"	1 1/2" NPT	F5418
2"	2" NPT	F5518

### THREADED FEMALE NIPPLE



SIZE	FEMALE THREAD	PART NUMBER
3/4"	3/4" NPT	F1120
1"	1" NPT	F2220
1 1/2"	1 1/2" NPT	F4420

### WALL OUTLET



TOP INLET SIZE	OUTLET SIZE	PART NUMBER
3/4"	(2x) 1/2" Female NPT	F1024
1"	(2x) 1/2" Female NPT	F2024

(Has bottom moisture drain)

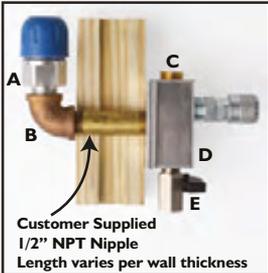
### WALL OUTLET WITH SHUTOFF



TOP INLET SIZE	OUTLET SIZE	PART NUMBER
3/4"	(2x) 1/2" Female NPT	F1024V
1"	(2x) 1/2" Female NPT	F2024V

(Has bottom moisture drain)

### THRU WALL OR OUTSIDE OUTLET



TOP INLET SIZE	OUTLET SIZE	PART NUMBER
3/4"	(1) 1/2" Female NPT	F1024W
1"	(1) 1/2" Female NPT	F2024W

(Kit includes A,B,C,D,E)

## SADDLE DROP



SIZE	DROP SIZE	PART NUMBER
1"	1" Fastpipe	F2210
1 1/2"	3/4" Fastpipe	F4110
1 1/2"	1" Fastpipe	F4210
2"	3/4" Fastpipe	F5110
2"	1" Fastpipe	F5210

## SADDLE DROP NPT



MAIN SIZE	DROP SIZE	PART NUMBER
1"	3/4" Female NPT	F2112
1"	1/2" Female NPT	F2012
1"	1/4" Female NPT	F2011
1 1/2"	3/4" Female NPT	F4112
1 1/2"	1/2" Female NPT	F4012
1 1/2"	1/4" Female NPT	F4011
2"	3/4" Female NPT	F5112
2"	1/2" Female NPT	F5012
2"	1/4" Female NPT	F5011

## SADDLE DROP INSTALLATION



**STEP 1**



**STEP 2**



**STEP 3**



**STEP 4**

- 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

## SADDLE DROP INSTALLATION TIPS

- system must be de-pressurized before installing, wear eye protection
- the drop can be used in any position on the pipe
- avoid putting the hole at the bottom of the pipe to prevent condensate or debris to enter the drop pipe
- to prevent chips from entering the pipe interior, stop drilling occasionally and blow out chips, grease the end of the drilling tool
- allen wrench for tightening is 6mm size



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

## FLAT SURFACE INSTALLATION

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  
 In horizontal installations, mount clip pivot tab up



### PIPE CLIP

MAIN SIZE	PART NUMBER	X DIMENSION
3/4"	F1022-10	15/16"
1"	F2022-10	7/8"
1 1/2"	F4022-10	1 15/16"
2"	F5022-10	1 3/4"

(Pack of 10)



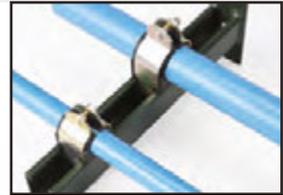
## HANGING INSTALLATION



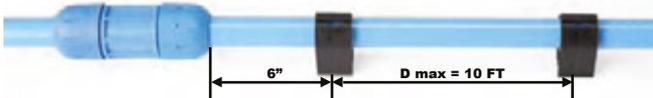
-Beam clamp-Pipe Clip  
 -5/16" threaded rod  
 -Pipe Clip



-Beam Clamp  
 -3/8" threaded rod  
 -Loop hanger



-Cantilever arm  
 -Cantilever tube supports



- hangers or mounting clips should be no more than 10 ft apart and one must be at least 6" from a fitting
- do not over tighten cantilever type tube supports, pipe must be allowed to expand and contract slightly in length
- for continuous lengths over 200 ft and change in temperature swings of 80 deg F consult the factory for expansion joint guidelines

## BEAM CLAMP



-Thru hole design  
 -works for both 5/16"  
 and 3/8" threaded rod  
 -3/4" width opening

PART NUMBER

F0018

## CANTILEVER ARM



-12" overall length  
 -silver zinc plated  
 (green for picture  
 purpose only)

PART NUMBER

F0021

## LOOP HANGER



-for 3/8"-16 threaded rod

MAIN SIZE	PART NUMBER
3/4" & 1"	F0019
1 1/2"	F0020
2"	F0024

## CANTILEVER TUBE SUPPORT



-for 1-5/8" standard strut

MAIN SIZE	PART NUMBER
3/4"	F0017
1"	F0022
1 1/2"	F0023
2"	F0025

## FASTPIPE INSTALLATION STEPS



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

### STEP 1



- 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)

### STEP 2



- 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

### STEP 3



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

### STEP 4



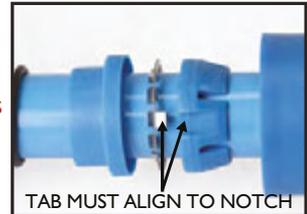
- 5) **LOOSEN FITTING CONE NUT PARTIALLY**  
**LOOK INSIDE EACH FITTING FOR INNER PARTS**  
(inner parts, o-ring, stainless steel bite ring)

### STEP 5



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

### STEP 6

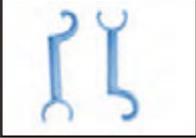


## FASTPIPE INSTALLATION GUIDELINES

- Assemble all NPT threads with two wraps of teflon tape and then **PIPE SEALANT** which prevents thread galling.
- CHECK** that all fittings are fully 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**
- take extra precaution with **END CAP INSTALLATION**, double check these fittings are tightened fully
- FASTPIPE** can be bent to conform around minor obstacles to a maximum of 15 degrees. **DO NOT OVERBEND**
- USE JUMPER HOSE** at the air compressor to absorb vibration
- ONLY** FastPipe outlets are designed for the direct pulling force of air hoses, for other FastPipe fittings attached to hoses, always secure hose with a **STRAIN RELIEF**, attached to the building structure
- After the first 48-96 hours of operation, check all the joints. Then make sure all the cone nuts are tight as these may have loosened due to settling of the component.
- Always use a filter unit to keep contaminants out of the FastPipe system.

## TOOLS AND ACCESSORIES

### SPANNER WRENCH



MAIN SIZE	PART NUMBER
3/4"	F1020
1"	F2020
1 1/2"	F4020
2"	F5020

### DEBURR TOOL



(2) Required

MAIN SIZE	PART NUMBER
3/4" & 1"	F0142
3/4" thru 2"	F0141

### PIPE CUTTER



(3/4" thru 2")

PART NUMBER
F0140

### SPRAY BOTTLE



PART NUMBER
F0139

### TOOL SET



MAIN SIZE	PART NUMBER
3/4"	F0136
1"	F0137
1 1/2"	F0138
2"	F0145

### JUMPER HOSE

(MALE NPT X SWIVEL FEMALE NPT)



MAIN SIZE	LENGTH	PART NUMBER
1/2"	2FT	F0212
1/2"	3FT	F0213
3/4"	2FT	F0214
3/4"	3FT	F0215
1"	2FT	F0216
1"	3FT	F0217

### JUMPER HOSE

(MALE NPT X SWIVEL FEMALE NPT)



MAIN SIZE	LENGTH	PART NUMBER
1 1/2"	18"	F0225

## WARNINGS

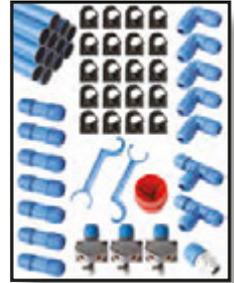
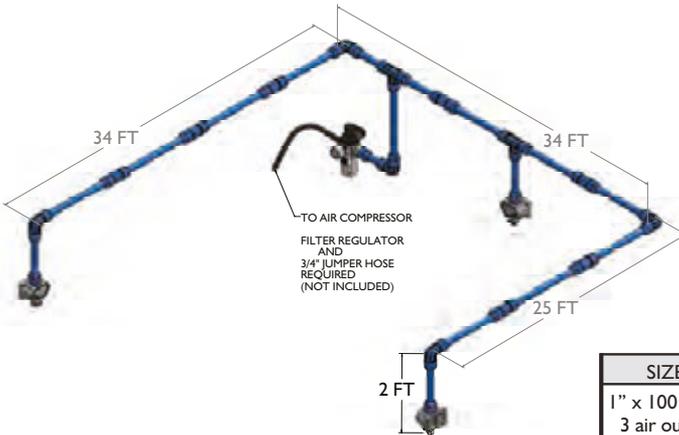
- Compressed air is DANGEROUS if not used properly
- Always use EYE PROTECTION when using compressed air
- DO NOT POINT compressed air at your body or any person
- Pressurize system SLOWLY
- TURN OFF air compressor when not in use
- CHECK local building codes before installation
- CA PROP 65: This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm
- 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



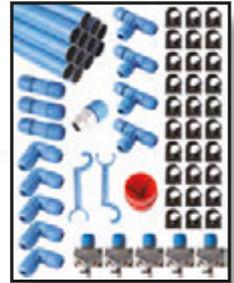
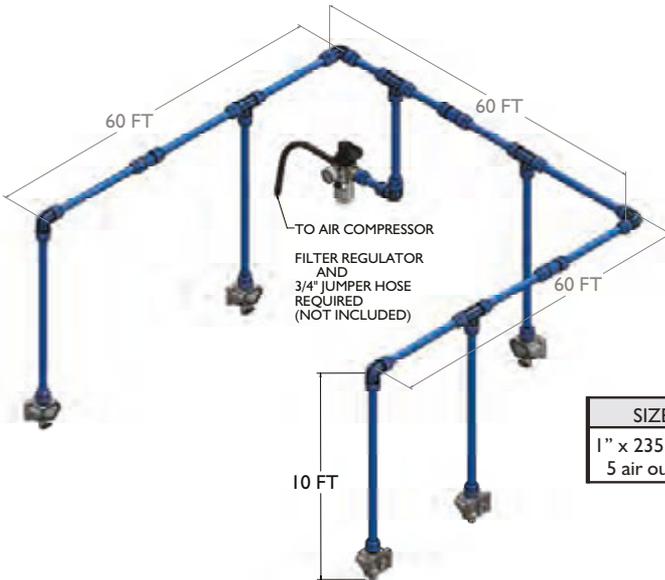
### FastPipe is NOT designed:

- 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

FastPipe also comes in convenient master kit assemblies.



SIZE	PART NUMBER
1" x 100 ft kit 3 air outlets	F28100



SIZE	PART NUMBER
1" x 235 ft kit 5 air outlets	F28235

**WARRANTY**

The Fastpipe compressed air system components are guaranteed against defects resulting from faulty workmanship or materials for a period of one year from the time of purchase. The company will replace, free of charge, any products which are found to be defective in workmanship or material, provided that the following conditions are met:

- the company is promptly notified in writing of such defect immediately upon discovery, and the defective product is returned to the company for inspection
- the defect is not due, without limitation, to faulty installation, misalignment of the product, vibration, ordinary wear and tear, corrosion, ultraviolet degradation, operation outside the products specified limits and using the product for uses other than its intended compressed air use

The company will not allow claims for labor, materials and/or other expenses required to replace the defective product, or to repair any damage resulting from the use thereof. The company's liability is limited to the purchase price of the product.

It is agreed and understood that the company's liability in respect to the sale is strictly limited to the replacement of products as specified. The company shall not, in any event, be liable for any damages whether for loss of use, injury or death, business interruption or any claim for incidental, consequential, special or punitive damages.

Warranty claims should be addressed to the customer service department of Engineered Specialties, LLC.

To help us develop a parts list and quote for your piping installation, use this quote worksheet. Answer the questions and hand sketch your air piping layout and outlet location.

BUILDING LENGTH = \_\_\_\_\_

BUILDING WIDTH = \_\_\_\_\_

SKETCH ITEMS:

X = AIR OUTLET AT WORK HEIGHT

CX= AIR OUTLET AT CEILING

HR= HOSE REEL

O = COMPRESSOR

NOTE ANY OBSTRUCTIONS

<p><b>COMMERCIAL OR RESIDENTIAL</b></p> <p>NEW OR EXISTING BUILDING _____</p> <p>STEEL OR WOODFRAME OR BLOCK CONSTRUCTION _____</p> <p>COMPRESSOR OUTLET SIZE NPT _____</p> <p>HAVE FILTER/REGULATOR AT COMPRESSOR <b>YES NO</b> _____</p> <p># OF PEOPLE USING AIR AT THE SAME TIME _____</p> <p>BUILDING CEILING: <b>FINISHED FLAT</b> OR <b>TRUSS/PERLIN</b> _____</p> <p>HANG MAIN PIPE FROM: <b>CEILING</b> OR <b>ON WALL</b> _____</p> <p>AIR USE: <b>AUTOBODY--FARM--REPAIR--MANUFACTURING--HOBBY--OTHER</b> _____</p>	<p>CEILING HEIGHT _____</p> <p>MAIN PIPING HEIGHT _____</p> <p>AIR OUTLET HEIGHT _____</p> <p>COMPRESSOR HP _____</p>	<p><b>INFO FOR SHIPPING QUOTE:</b></p> <p>COMPANY _____</p> <p>NAME _____</p> <p>BILLING ADDRESS _____</p> <p>CITY ST ZIP _____</p> <p>SHIPPING ADDRESS _____</p> <p>CITY ST ZIP _____</p> <p>PHONE _____</p> <p>EMAIL _____</p>
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