



# YogaPipe<sup>ACR</sup>

Ultimate Flexibility and Strength

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YogaPipe ACR lineset assemblies are designed and tested for the following applications:

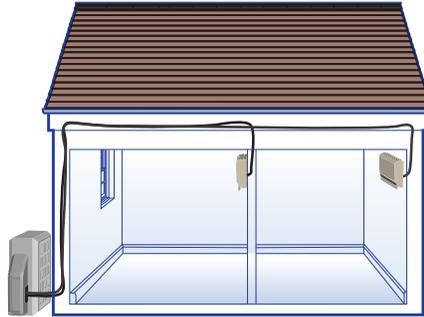
- Air Conditioning
- Heat Pump
- VRF Systems



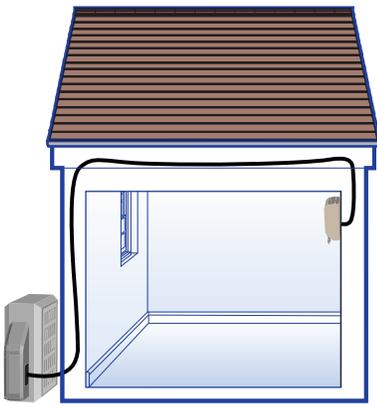
# Installation Applications



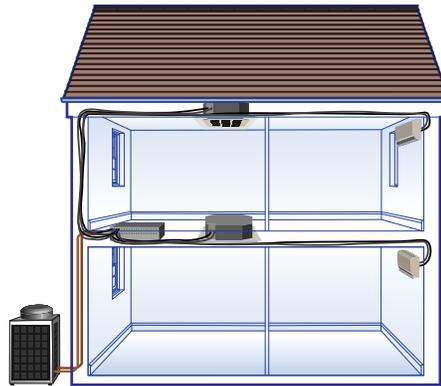
**Residential  
Air Conditioner  
and Heat Pump  
Systems\***



**Multi-Zone  
Split Systems**



**Mini-Split  
Systems**



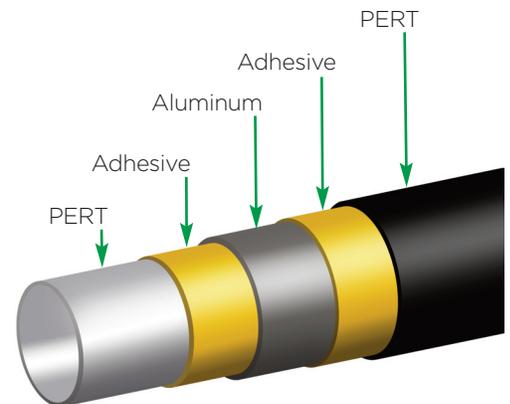
**R2 Series  
VRF Systems\*\***

**YogaPipe is available in sizes from 1/4" up to 1 1/8" in lengths of 50 ft. and 200 ft. with the option of pre-installed foam insulation.**

YogaPipe ACR offers multiple advantages over conventional line sets including:

- Ease of installation. Easy to route, store, carry and bend
- Less kinking meaning less rework
- Reduced brazing and joints reduces chance of leakage
- Reduced copper content which reduces theft
- Reduced wastage due to scrap and damaged inventory

This five-layer pipe is designed to withstand the temperature and pressure extremes associated with air conditioning applications while providing excellent installation flexibility and long life. System benefits include increased insulating effect compared to copper and reduced transmission of vibration which decreases noise and potential connection failures, making the system more efficient and reliable. For manufacturers, the upside of use is a cleaner system due to less contamination caused by brazing. YogaPipe has been designed to eliminate refrigerant leakage while providing flexibility not capable with copper tubing.



\* Heat pump operating pressures and temperatures must not exceed pipe specifications

\*\* Copper must be used between the outside unit and the BC controller box

# Installation Instructions

## GENERAL INSTRUCTIONS

This safety guide provides instructions for selecting and using YogaPipe ACR. Due to the wide variety of operating conditions and applications, the user is solely responsible for:

- Final selection of the products
  - Meeting user requirement and ensuring the application presents no health or safety hazards
  - Ensuring compliance with all applicable industry and government standards
  - Following the temperature and pressure operating parameters of Yogapipe

## YogaPipe ACR SELECTION & INSTALLATION INSTRUCTIONS

**1) Sizing :** YogaPipe ACR lines sets are to be sized in accordance with system manufacturer's guidelines. YogaPipe ACR uses standard sizing conventions from 1/4" to 1 1/8".

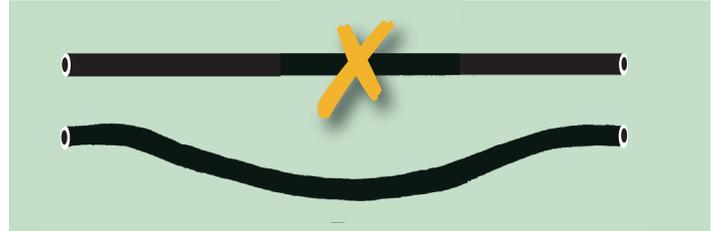
**2) YogaPipe Fittings:** Fitting should not be modified from the manufactured specifications. Doing so could affect operation of the system. A full range of YogaPipe fittings are offered to maximize ease of installation.

**3) Pressure:** YogaPipe has been designed and engineered to operate in the capacity of a refrigerant line set on a wide range of HVAC equipment. Pressures can vary drastically from manufacturer to manufacturer and between system designs. It is the responsibility of the installer to determine that the YogaPipe is suitable for the application on which it is being used based on the operating pressures of the equipment and the published pressure capabilities of YogaPipe ACR. Improperly installed equipment can exceed intended pressure and temperatures and cause equipment within the system to fail. YogaPipe recommendations and industry standards must be followed to maintain integrity of warranty.

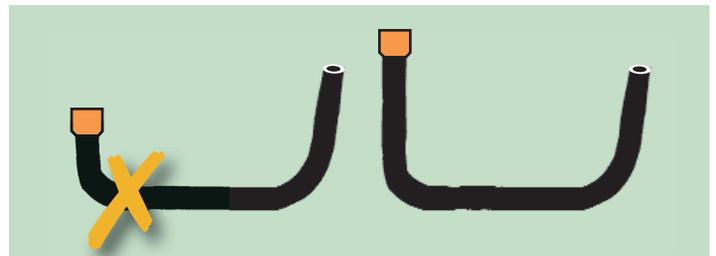
**4) Line Set Use:** YogaPipe is approved for all HVAC suction line and liquid line use as long as the system working pressures and temperatures are equal or less than published YogaPipe working pressure and temperature.

**5) Compressor Discharge Line:** YogaPipe is approved for use on heat pump gas lines (i.e. suction in cooling mode/discharge in heating mode). YogaPipe cannot be attached to the compressor discharge. A high risk exists for exceeding the YogaPipe maximum temperature rating if a compressor fails or has abnormal operation.

**6) Bend Radius:** Although YogaPipe ACR is much more flexible than conventional line sets, bending the pipe to a radius less than the specified minimum radius significantly weakens the pipe. If the pipe becomes kinked, the damaged section must be cut out and repaired with a YogaPipe ACR coupling.



Allow sufficient slack for expansion and contraction, since YogaPipe ACR may change in length under the surge of high pressure.



YogaPipe ACR not be bent too close to the fitting. The specified bend radius must be observed to avoid kinking the tubing and creating a flow restriction.

**7) Temperature:** Be certain that refrigerant and ambient temperatures, both steady and variable, do not exceed the published maximum specifications of YogaPipe. Special care must be taken when routing near of extreme heat. Continuous use at or near the maximum temperature rating will reduce the service life of YogaPipe ACR.

**8) Refrigerant and Oil Compatibility:** YogaPipe is to be used with the refrigerant/oil combinations outlined in the ICC listing granted to the product.

**9) Insulation:** Although YogaPipe has inherent insulative properties that are superior to copper, the product should be insulated as per code.

**10) Environment:** YogaPipe has been designed to be resistant to traditional cleaning products, UV, rain, ozone, etc.

**11) Physical Damage:** YogaPipe is very robust though care should be taken to protect from kinking, bending smaller than the minimum bend radius and cutting, any of which

can cause premature failure. Any YogaPipe that has been kinked or bent to a radius smaller than the minimum bend radius should be removed and/or repaired.

**12) Cleanliness:** Components may vary in cleanliness levels. Care must be taken to ensure the YogaPipe product has an adequate level of cleanliness for the application.

**13) Radiant Heat:** YogaPipe product can be damaged by nearby items as hot manifolds, exhaust piping or sources of extreme heat.

**14) Visual Inspection of Tubing/Fitting:** As good practice, check before installation and after startup procedures for external damage such as severe abrasion, holes, tensile loads, external heat damage, kinking, and leaks.

YogaPipe ACR should immediately be replaced if there are any deep abrasions or cuts to the pipe or if the pipe is kinked. Replace any YogaPipe fittings that are cracked, damaged or show corrosion before installation.

**15) Storage:** Stored YogaPipe must not be subjected to damage that could reduce their expected service life. Stored product must not be exposed to temperature extremes, ozone, oils, corrosive liquids or fumes or solvents.

**16) Installation in Cold Temperatures:** Due to the nature of plastics, YogaPipe becomes less flexible at colder temperatures. It is recommended to keep YogaPipe ACR in a warm environment to maximize ease of installation. Do not warm YogaPipe by exposing it to open flames or by direct contact with heat sources above specification temperature.

It is important that a proper vacuum is pulled and that the system is pressure tested to no less than 400 psi and up to 600 psi in heat pump applications to detect leaks immediately. As with any R-410a system, introduction of air and contaminants can lead to premature failure of equipment and potentially the pipe itself.

				Liquid Line at 105 Degrees F			
Pipe Size (inches)	Inner (inches)	Flow Area (Sq. In)	Outer (inches)	Lb charge/ft	Lb charge/35 ft	Lb charge/50 ft	Lb charge/100 ft
1/4"	0.267	0.056	0.472	0.0227	0.7943	1.1348	2.270
3/8"	0.337	0.089	0.551	0.0362	1.2655	1.8078	3.616
1/2"	0.429	0.145	0.630	0.0586	2.0507	2.9296	5.859
5/8"	0.484	0.184	0.709	0.0746	2.6102	3.7289	7.458
3/4"	0.563	0.249	0.984	0.1009	3.5319	5.0455	10.091
7/8"	0.721	0.408	1.024	0.1655	5.7924	8.2748	16.550
1 1/8"	0.956	0.718	1.260	0.2910	10.1836	14.5480	29.096

Pipe Size (inches)	Suction Line at 40 Degrees F				Discharge Line at 140 Degrees F			
	Lb charge/ft	Lb charge/35 ft	Lb charge/50 ft	Lb charge/100 ft	Lb charge/ft	Lb charge/35 ft	Lb charge/50 ft	Lb charge/100 ft
1/4"	0.0009	0.0301	0.0430	0.086	0.0049	0.1711	0.2444	0.489
3/8"	0.0014	0.0301	0.0684	0.137	0.0078	0.2725	0.3893	0.779
1/2"	0.0022	0.0776	0.1109	0.222	0.0126	0.4416	0.6309	1.262
5/8"	0.0028	0.0988	0.1412	0.282	0.0161	0.5621	0.8030	1.606
3/4"	0.0038	0.1337	0.1910	0.382	0.0217	0.7606	1.0866	2.173
7/8"	0.0063	0.2193	0.3133	0.627	0.0356	1.2474	1.7820	3.564
1 1/8"	0.0110	0.3856	0.5508	1.102	0.0627	2.1930	3.1329	6.266

To watch the full installation video, go to [YogaPipe.com](http://YogaPipe.com)

SINGLE LINE NON-INSULATED YOGAPIPE		
Part No.	Product Description	Package
ACR1450B	1/4" (12) ACR P-A-P - YogaPipe	50 ft/coil
ACR14200B	1/4" (12) ACR P-A-P - YogaPipe	200 ft/coil
ACR3850B	3/8" (14) ACR P-A-P - YogaPipe	50 ft/coil
ACR38200B	3/8" (14) ACR P-A-P - YogaPipe	200 ft/coil
ACR1250B	1/2" (16) ACR P-A-P - YogaPipe	50 ft/coil
ACR12200B	1/2" (16) ACR P-A-P - YogaPipe	200 ft/coil
ACR5850B	5/8" (18) ACR P-A-P - YogaPipe	50 ft/coil
ACR58200B	5/8" (18) ACR P-A-P - YogaPipe	200 ft/coil
ACR3450B	3/4" (20) ACR P-A-P - YogaPipe	50 ft/coil
ACR34200B	3/4" (20) ACR P-A-P - YogaPipe	200 ft/coil
ACR7850B	7/8" (25) ACR P-A-P - YogaPipe	50 ft/coil
ACR78200B	7/8" (25) ACR P-A-P - YogaPipe	200 ft/coil
ACR11850B*	1 1/8" (32) ACR P-A-P - YogaPipe	50 ft/coil
ACR118200B*	1 1/8" (32) ACR P-A-P - YogaPipe	200 ft/coil

\*Use on Air Conditioning applications only



SINGLE LINE INSULATED YOGAPIPE		
Part No.	Product Description	Package
ACR14INSUL50	1/4" (12) ACR P-A-P Single Line Insulated	50 ft/coil
ACR14INSUL200	1/4" (12) ACR P-A-P Single Line Insulated	200 ft/coil
ACR38INSUL50	3/8" (14) ACR P-A-P Single Line Insulated	50 ft/coil
ACR38INSUL200	3/8" (14) ACR P-A-P Single Line Insulated	200 ft/coil
ACR12INSUL50	1/2" (16) ACR P-A-P Single Line Insulated	50 ft/coil
ACR12INSUL200	1/2" (16) ACR P-A-P Single Line Insulated	200 ft/coil
ACR58INSUL50	5/8" (18) ACR P-A-P Single Line Insulated	50 ft/coil
ACR58INSUL200	5/8" (18) ACR P-A-P Single Line Insulated	200 ft/coil
ACR34INSUL50	3/4" (20) ACR P-A-P Single Line Insulated	50 ft/coil
ACR34INSUL200	3/4" (20) ACR P-A-P Single Line Insulated	200 ft/coil
ACR78INSUL50	7/8" (25) ACR P-A-P Single Line Insulated	50 ft/coil
ACR78INSUL200	7/8" (25) ACR P-A-P Single Line Insulated	200 ft/coil



FLARED FITTING SIZE	RECOMMENDED SETTING TORQUE
1/4"	8-10 Ft.-Lbs.
3/8"	15-18 Ft.-Lbs.
1/2"	28-32 Ft.-Lbs.
5/8"	38-42 Ft.-Lbs.
3/4"	50-55 Ft.-Lbs.
7/8"	85-92 Ft.-Lbs.

- YogaPipe flared fittings must use the copper flare gasket with all installations.
- The fitting does not need any oil or lubricant to form a sealing point.
- The fittings have been tested to withstand a minimum pressure of 2100 PSI.
- YogaPipe flared fittings come pre-assembled.
- The fitting can swivel after being crimped.
- No brazing needed with this fitting.

## Technical Specifications for YogaPipeACR

### ICC-ES Listing

PMG-1409

### Working pressure

580 psi

Maximum pressure 650 PSI

### Working temperature\*

-40°F to 203°F

### Oxygen-permeability

Zero

### Bend radius

5xD (D=outside diameter)

### Thermal conductivity

1.439 BTU in/h ft F

### Coefficient of thermal expansion

0.0001 inch/(M.K.)

### Corrosion resistance

Excellent

### Life span/Warranty

50yr / 10yr

Pipe will outlast the equipment

### Detectable

Walls & underground

### Static shield

Excellent

**\* YogaPipeACR is only suitable for use in applications that are designed to operate within the set working temperature parameters as specified in this technical data sheet.**

**IMPORTANT!** 1 1/8" pipe is **NOT** suitable for heat pump applications.

## YogaPipeACR Pre-Insulated Line Set with Polyethylene Foam and Protective Skin

Pre-insulated YogaPipeACR pipe is suitable for applications up to 5 tons.

### PE Foam Insulation Specifications

#### Polyethylene Foam:

The insulation coating is grade low density closed cell polyethylene foam (LDPE Foam) - insulation material for use on typical HVAC systems.

#### Density:

25 - 33 Kgs/cbm

#### Wall Thickness:

1/2 in. (EN 13467:2004)

#### Thermal Conductivity:

0,04 W/mK at 40°C (0.263 Btu in/sq. ft.°F h at 104°F) according to ISO EN 8499:1999 and likewise to ASTM E 84.

#### Working Temperature:

Polyethylene foam is suitable for technical applications included in a range temperature from -101°C up to 93°C (-150° F up to 200° F) according ASTM C 1427-07, type I (tubular), grade 1 (non-cross-linked).

#### Moisture Diffusion Coefficient:

= 6000 - 11000 according to EN 13469:2004

#### Surface Burning Characteristics:

Plenum Rated as per (ASTM E 84)

