

These instructions are intended as a general guide and do not supersede local codes in any way. Consult authorities having jurisdiction before installation.

# INSTALLATION INSTRUCTIONS

## Heat Pump Header Pipe Kit (VPB Heat Pump)

VRF SYSTEMS -- HEADER PIPE KITS  
507907-01  
12/2018

**THIS MANUAL MUST BE LEFT WITH THE OWNER FOR FUTURE REFERENCE**

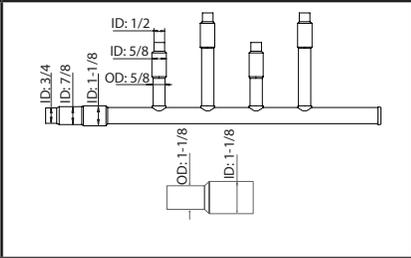
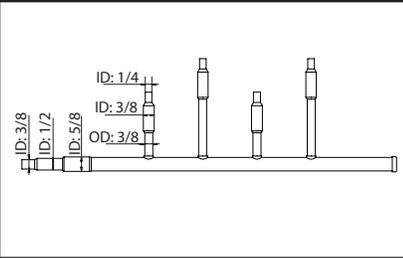
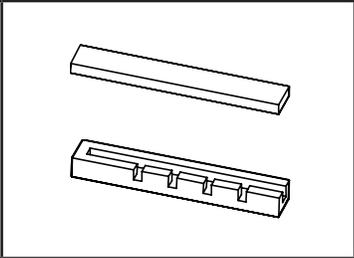
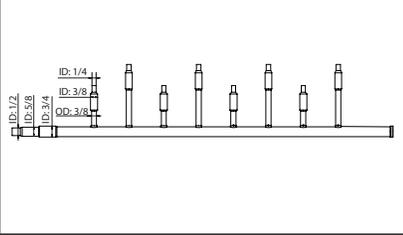
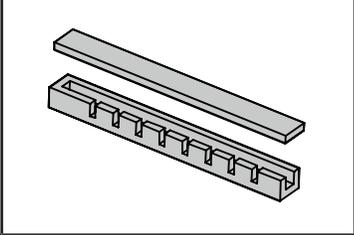
A header kit is refrigerant piping with a single inlet that distributes the refrigerant through multiple outlets. Header kits are typically used when space is restricted because there is a minimum straight pipe distance required between two pieces. The VRF header kit is designed for use within a VRF heat pump system.

### Positioning

Header pipe assemblies must be positioned horizontal and installed level.

### Shipping and Packing List

Package 1 of 1 contains: kit contents vary.

Header Pipe Kit	Gas Pipe Header	Liquid Pipe Header	Insulation
<b>Header for 4 ports</b> <b>V8HDRK04</b> <b>Cat No. 17U29</b>			
<b>Header for 8 ports</b> <b>V8HDRK08</b> <b>Cat No. 17U30</b>			
Use the branch joint kit V81DBP06 (Cat No. 17U31 ) to connect two ports of header for indoor units larger than 054k.			

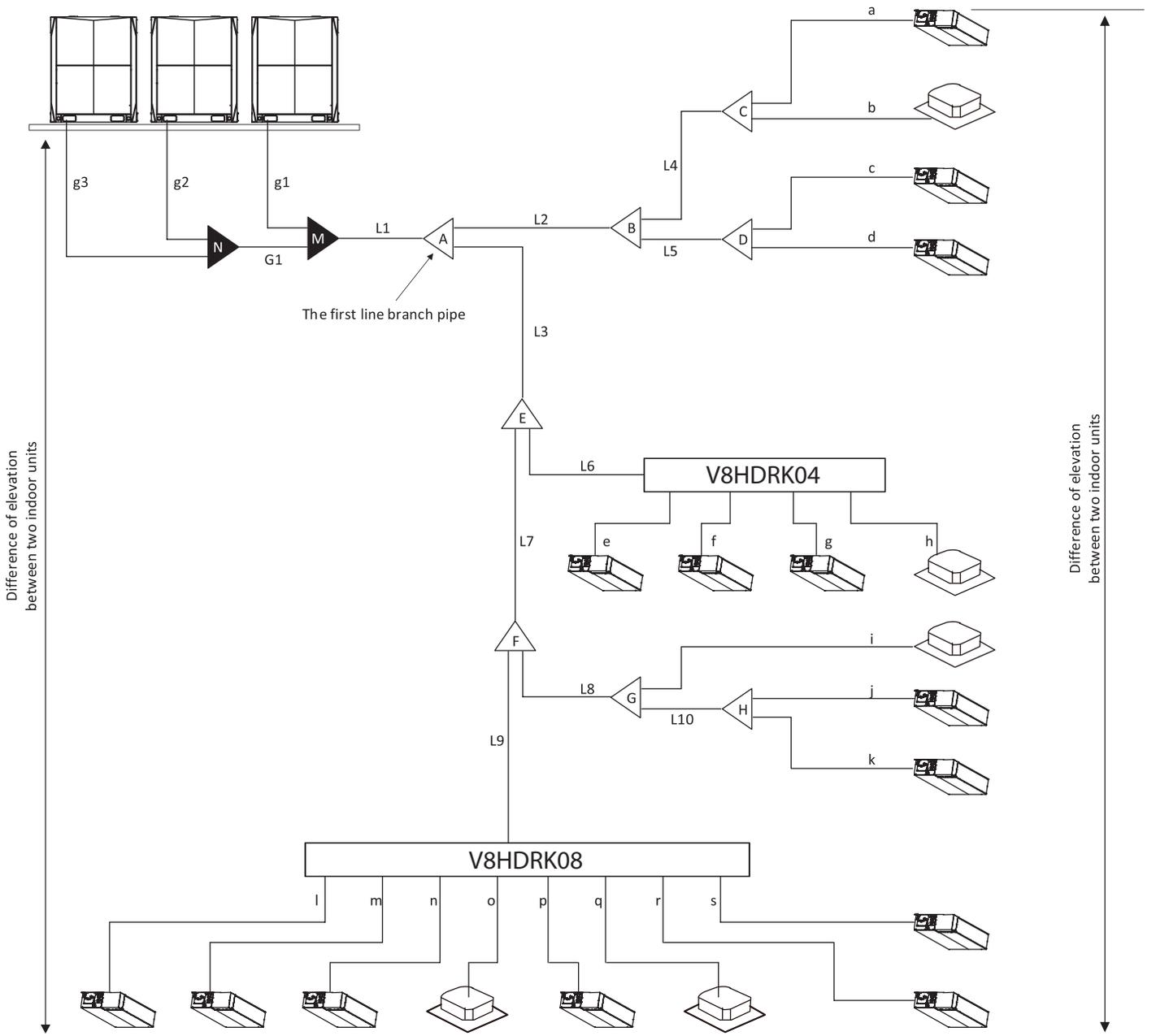
**Table 1. Header Kit Specifications**

<b>Model</b>		<b>V8HDRK04</b>	<b>V8HDRK08</b>
Max. total capacity of downstream indoor units		96kBTU	240kBTU
Max. number of downstream indoor units		4	8
Max. capacity of unit per port		54k Btu	54k Btu
Max. number of units per port		1	1
Max. capacity of single indoor unit		96k Btu	96k Btu
Branch piping diameter (liquid pipe)		5/8 in.	3/4 in.
Branch piping diameter (gas pipe)		7/8 in.	1-1/4 in.
Max. connectable piping diameter (liquid pipe)		5/8 in.	3/4 in.
Max. connectable piping diameter (gas pipe)		1-1/8 in.	1-3/8 in.
Additional refrigerant charge		0.33 lbs	0.55 lbs
Diameter (indoor side)	Liquid Pipe	ID 1/4, ID 3/8	ID 1/4, ID 3/8
	Gas Pipe	ID 1/2, ID 5/8	ID 1/2, ID 5/8
Diameter (outdoor side)	Liquid Pipe	ID 3/8, ID 1/2, ID 5/8	ID 1/2, ID 5/8, ID 3/4
	Gas Pipe	ID 3/4, ID 7/8, ID 1-1/8	ID 7/8, ID 1-1/8, ID 1-3/8

Indoor units larger than 054k Btus require two header ports to be connected together using branch joint kit V81DBP06. See Figure 4.

No branch joints are allowed after the header pipe, header pipes must be connected directly to indoor units.

## Refrigerant Piping Details



Piping Length		Permitted value	Piping
Piping Length	Each pipe length after branch or header pipe	131 ft. (40 m)	a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s
	All other system piping		
Level Difference	Level difference between indoor unit and outdoor unit	Follow outdoor unit piping requirements, see outdoor unit installation manual.	
	Level difference between indoor units		

## Header Pipe Kit Placement

### ⚠ CAUTION

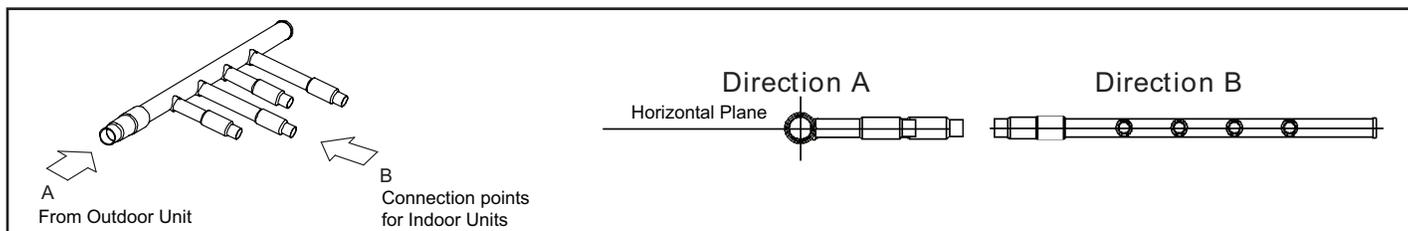
24" minimum straight pipe required before and after header pipe kit to prevent capacity loss and equipment damage.

### ⚠ CAUTION

Header pipe kit must be installed horizontal and level.

### ⚠ IMPORTANT

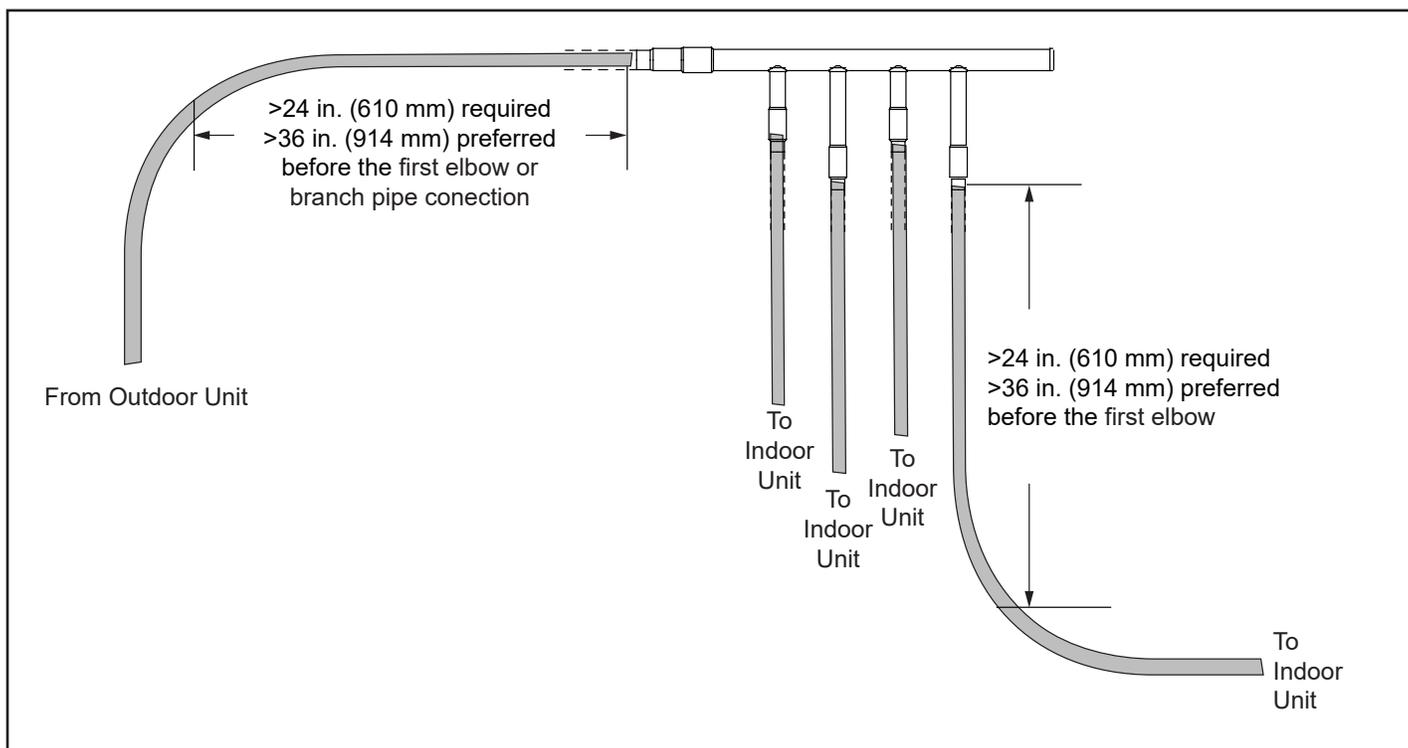
Locate header kit centrally to the connected indoor units to ensure correct distribution of refrigerant.



**Figure 1. Position Header in Horizontal & Level Orientation**

Provide 24 to 36 inches of straight pipe before and after each header pipe kit to avoid creating refrigerant turbulence and flash points.

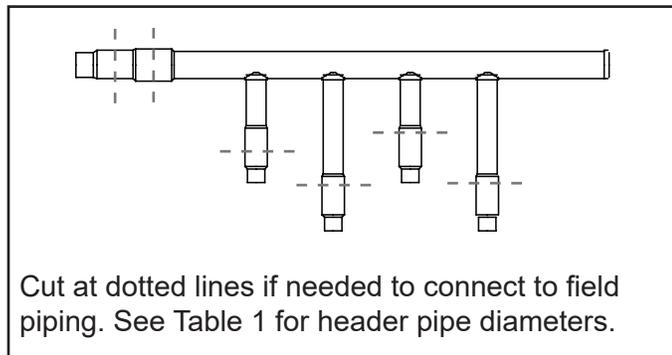
Failure to follow 24 inch minimum guideline can lead to reduced capacity and equipment damage. Support piping on both sides of the header kit.



**Figure 2. 24 to 36" of Straight Pipe Before and After Header Pipe Kit**

## Installation

- Header kits have graduated piping diameters. The piping can be cut to suit the installation needs. See figure 3.
- Use a pipe cutter designed for refrigeration tubing to cut pipe.
- Discard unused pipe.
- Refer to the Lennox VRF Selection Software (LVSS) pipe sizing diagram to obtain the correct inlet and outlet sizes for the installation.
- Keep all components sealed until brazing.

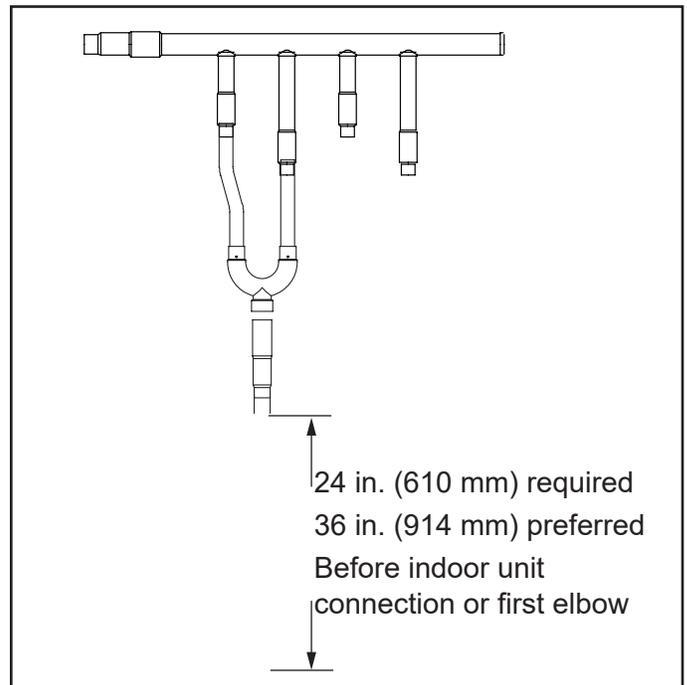


**Figure 3. Cut Header Pipe to Fit**

**NOTE** - A maximum of one indoor unit can be connected to one port on the header pipe kit. The maximum capacity of the indoor unit connected to one port on a header pipe kit must not exceed 54,000 Btus. For larger capacity indoor units, combine two ports using branch joint kit V81DBP06 and the instructions in this manual.

- Field provided piping consists of two HVAC/R rated copper lines connected to the header pipe kit.
- Refrigerant piping connections to outdoor unit(s) and indoor units are made with field braze connections
- Final equipment connections must be brazed or flared connections. Compression or other types of fittings are not permitted for final connections.
- Refrigerant lines must be connected by a qualified technician in accordance with established procedures.
- Copper-phosphorous brazing alloys are to be used to join all pipework connections where applicable.
- Always flow/purge nitrogen to avoid oxidation while brazing.
- After refrigerant piping has been installed and checked for leaks, apply the provided insulation over the header kit. All lines must be individually insulated.

- Refer to the outdoor unit installation instructions and product specifications (EHB) bulletin for more detailed information on refrigerant piping connections.
- The two available header pipe kits can accommodate varying numbers of indoor units. See Table 1.
- Header kits are equipped with braze fittings for indoor unit and outdoor unit refrigerant piping connections.
- Indoor units larger than 054k Btus require two header ports to be connected together using branch joint kit V81DBP06. See Figure 4.
  - Combine the two ports using branch joint kit V81DBP06.
  - The maximum combined capacity is 108,000 Btu/h.
  - The ports must be next to each other, for example Ports 1 & 2 or Ports 3 & 4, or Ports 5 & 6, or Ports 7 & 8.



**Figure 4. Combine Two Header Joints**

- Unused ports must be capped and brazed shut.
- Connect indoor units from the opposite end of the inlet so that if ports are left unused, they are the ones closest to the inlet.
- No branch joints are allowed after the header pipe, header pipes must be connected directly to indoor units.

**Technical Support**

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