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# INSTALLATION INSTRUCTIONS

## MLB and MPC MULTI-ZONE OUTDOOR UNITS

MULTI-ZONE MINI-SPLIT OUTDOOR UNITS  
(208/230V)  
507549-08 10/2022  
Supersedes 8/2022

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

### **! WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

Installation and service must be performed by a licensed professional HVAC installer (or equivalent) or a service agency.

### **! WARNING**

The clean Air Act of 1990 bans the intentional venting of refrigerant (CFCs, HCFCs, and HFCs) as of July, 1992. Approved methods of recovery, recycling or reclaiming must be followed. Fines and/or incarceration may be levied for non-compliance.

### **! CAUTION**

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

### **General**

Refer to the Product Specifications bulletin (EHB) for more product information.

These instructions are intended as a general guide and do not supersede local or national codes in any way. Authorities having jurisdiction should be consulted before installation.

The MWMC, M22A, M33C, MMDB, MCFB and MFMA indoor units are matched with a two to five port multi-zone outdoor heat pump unit to create a mini-split system that uses HFC-410A refrigerant.

**NOTE:** Outdoor units can only be installed in an unenclosed outdoor environment.

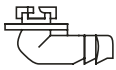


## Included Parts

Check the components for shipping damage. If you find any damage, immediately contact the last carrier.

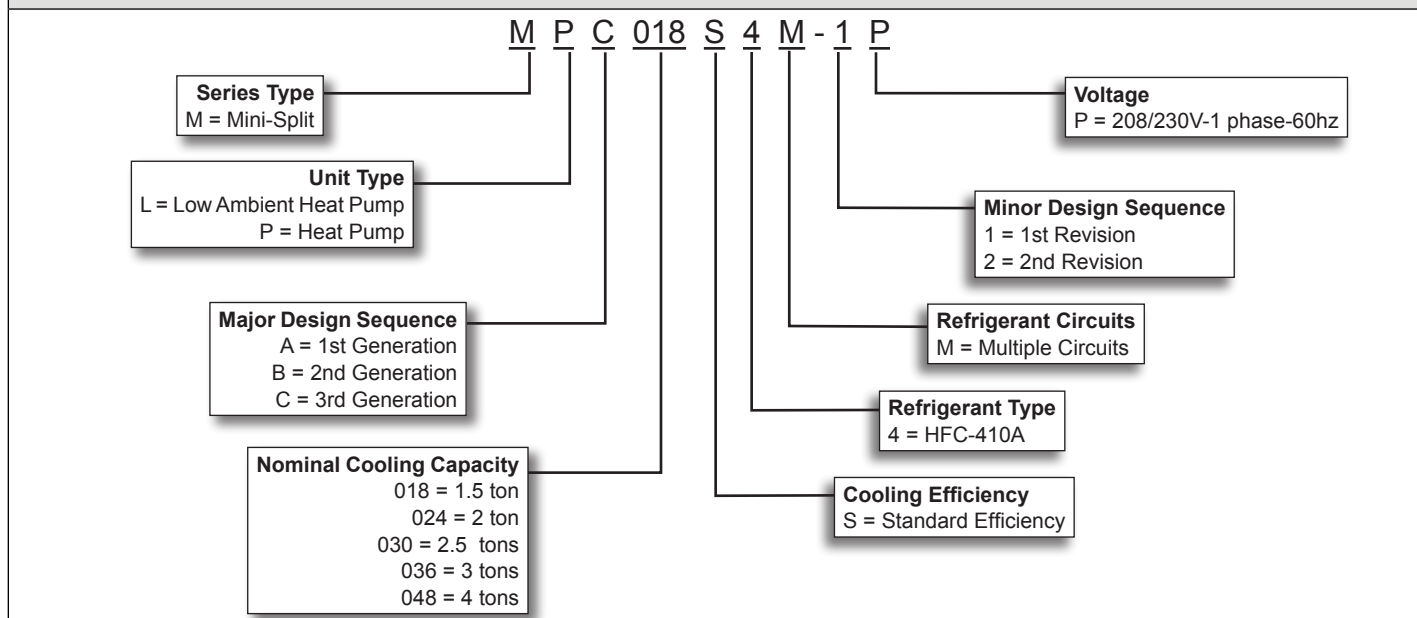
Package contains the following:

**1 - Assembled Indoor Unit** (assembled indoor unit will include accessories specific to the unit. See each indoor unit's section within this manual for accessories included with that unit).

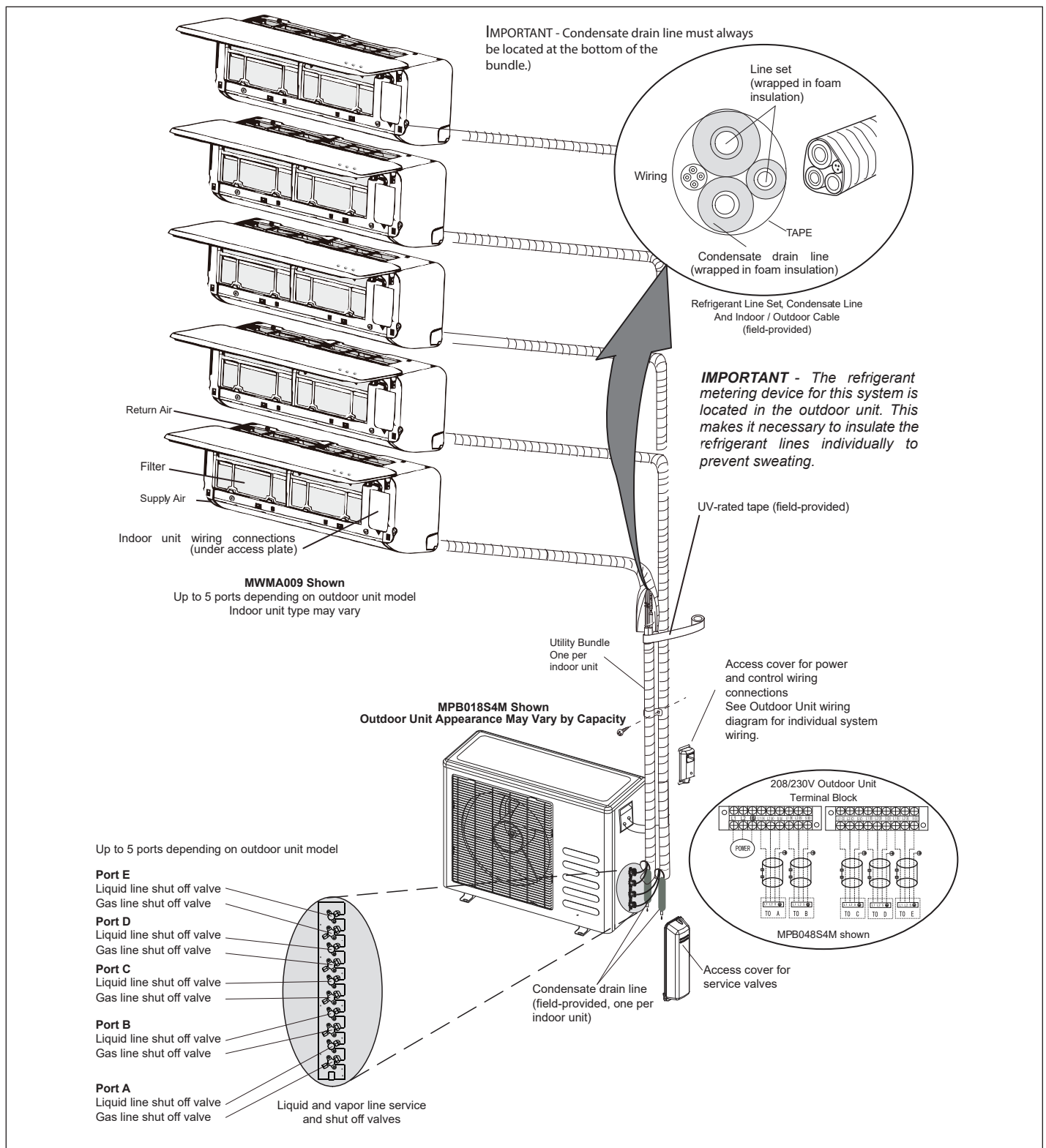
**1 - Assembled Outdoor Unit and the following items:**

Parts	Figure	Qty	Parts	Figure	Qty	Parts	Figure	Qty
Drain connector		1	Installation Instruction		1 ea.	Seal Ring		1

## Model Number Identification

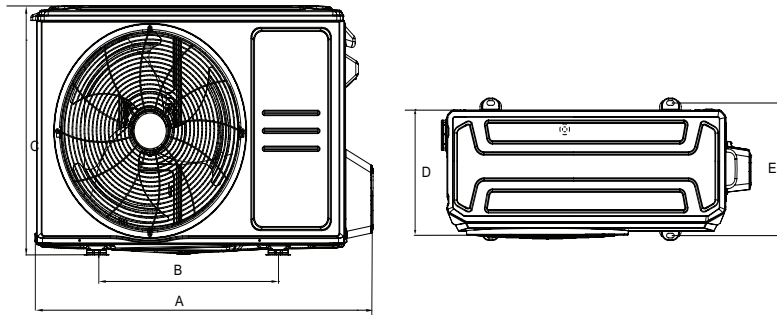


## Typical Multi-Zone System Components



**Figure 1. Typical System Shown**  
(Indoor Unit Appearance is Dependent on Model)

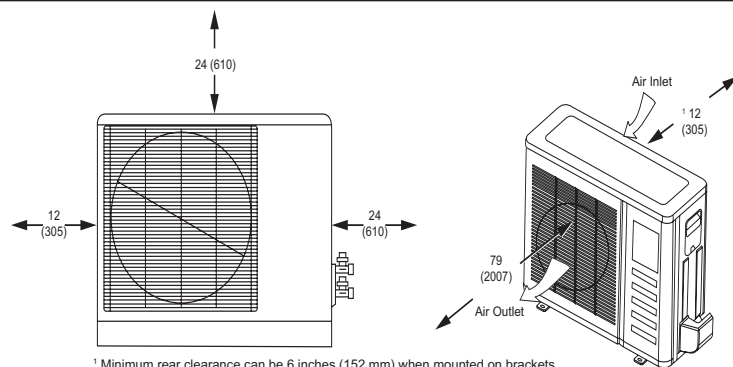
## Outdoor Unit Dimensions



Model	Unit of Measurement	A	B	C	D	E
MPC018S4M-*P	inches	39	26-1/8	26-1/2	12-3/4	13-3/4
	mm	991	664	673	342	345
MPC024S4M-*P MPC030S4M-*P MPC036S4M-*P	inches	40-3/4	26-1/2	31-7/8	16-1/8	15-7/8
	mm	1035	673	810	410	403
MPC048S4M-*P	inches	41-3/4	25	52-1/2	16-3/8	17-5/8
	mm	1060	635	1334	416	448
MLB018S4M-*P MLB030S4M-*P	inches	40-5/8	26-1/2	31-7/8	15-1/8	15-7/8
	mm	1035	673	810	410	403
MLB036S4M-*P MLB048S4M-*P	inches	41-3/4	25	52-1/2	16-3/8	17-5/8
	mm	1060	635	1334	416	448

**Figure 2. Outdoor Unit Dimensions - Inches (mm)**

## Outdoor Unit Clearances

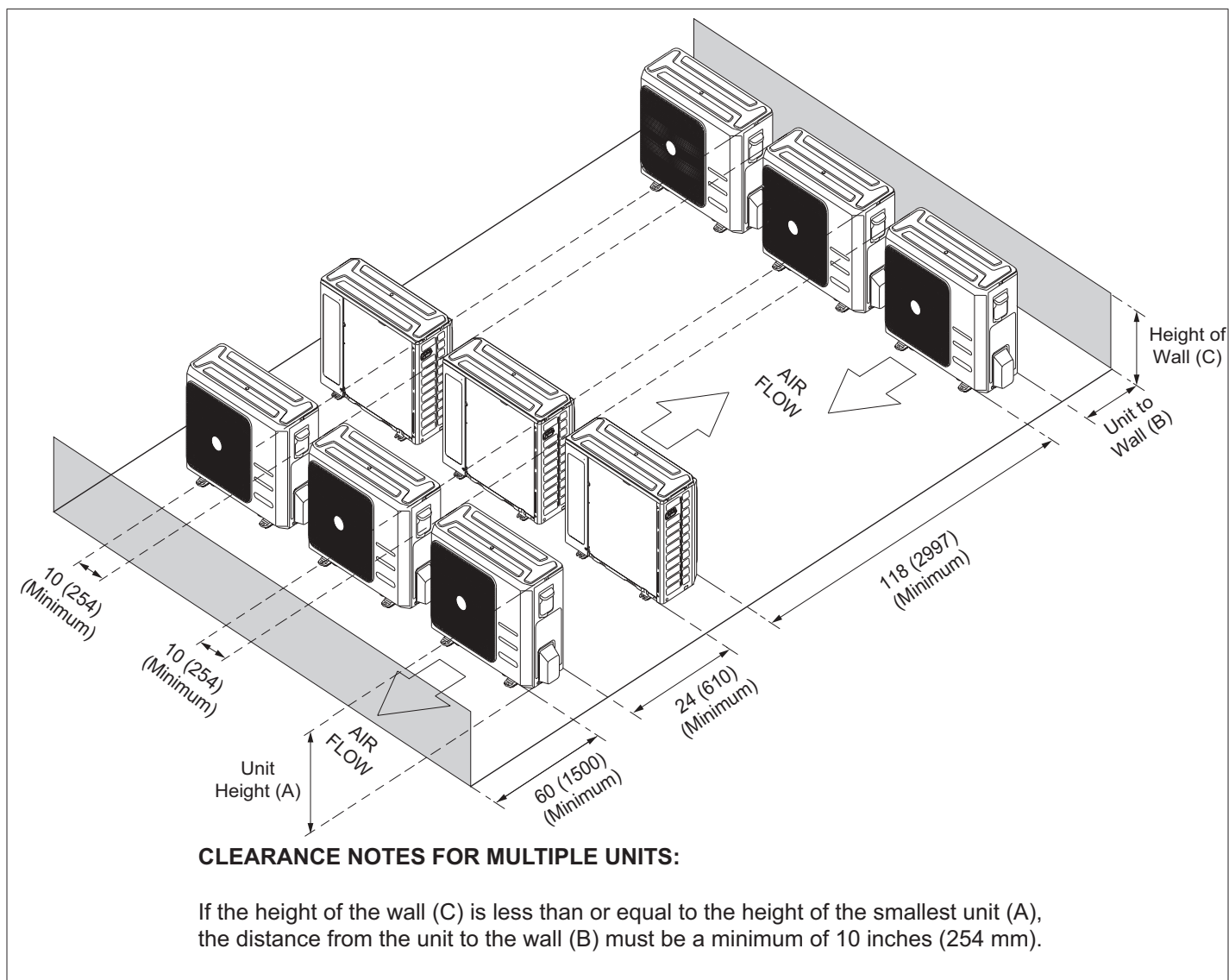


<sup>1</sup> Minimum rear clearance can be 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides.

### IMPORTANT

The construction of a canopy or shade is recommend when the outdoor unit is placed in direct sunlight all day with temperatures exceeding 100°F (38°C). This is necessary because of an ambient limit control set to 122°F (50°C) to protect the electronics. If the outdoor unit is placed in direct sunlight it is possible that the limit may activate and shut down the unit. A canopy is recommended

**Figure 3. Outdoor Unit Clearances - Inches (mm)**



**Figure 4. Multiple Outdoor Unit Clearances - Inches (mm)**

## MLB and MPC Multi-Zone System Combinations

Table 1. MLB and MPC Multi-Zone System Combinations

NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB and MPC018S4M	2	6K	6K	---	---	---	6,000	6,000	---	---	---	6,700	6,700	---	---	---
		9K	6K	---	---	---	9,000	6,000	---	---	---	9,900	6,600	---	---	---
		12K	6K	---	---	---	12,000	6,000	---	---	---	12,500	6,300	---	---	---
		9K	9K	---	---	---	9,000	9,000	---	---	---	9,500	9,500	---	---	---
		12K	9K	---	---	---	11,000	8,000	---	---	---	11,500	8,600	---	---	---
		12K	12K	---	---	---	10,000	10,000	---	---	---	10,100	10,100	---	---	---
MLB and MPC024S4M	2	12K	6K	---	---	---	12,000	6,000	---	---	---	12,900	6,500	---	---	---
		18K	6K	---	---	---	17,000	5,000	---	---	---	18,900	6,300	---	---	---
		9K	9K	---	---	---	9,000	9,000	---	---	---	9,700	9,700	---	---	---
		12K	9K	---	---	---	11,000	8,000	---	---	---	12,900	9,700	---	---	---
		18K	9K	---	---	---	16,000	8,000	---	---	---	18,300	9,200	---	---	---
		12K	12K	---	---	---	11,000	11,000	---	---	---	12,600	12,600	---	---	---
		18K	12K	---	---	---	15,000	10,000	---	---	---	17,400	11,600	---	---	---
		18K	18K	---	---	---	14,000	14,000	---	---	---	14,800	14,800	---	---	---
	3	6K	6K	6K	---	---	7,000	7,000	7,000	---	---	8,500	8,500	8,500	---	---
		9K	6K	6K	---	---	10,000	7,000	7,000	---	---	11,500	7,700	7,700	---	---
		12K	6K	6K	---	---	13,000	6,000	6,000	---	---	13,900	7,000	7,000	---	---
		18K	6K	6K	---	---	17,000	6,000	6,000	---	---	17,500	5,900	5,900	---	---
		9K	9K	6K	---	---	9,000	9,000	6,000	---	---	9,500	9,500	6,000	---	---
		12K	9K	6K	---	---	12,000	9,000	6,000	---	---	12,700	9,500	6,400	---	---
		18K	9K	6K	---	---	16,000	8,000	5,000	---	---	16,100	8,100	5,400	---	---
		12K	12K	6K	---	---	11,000	11,000	6,000	---	---	11,700	11,700	5,900	---	---
		18K	12K	6K	---	---	15,000	10,000	5,000	---	---	15,000	10,000	5,000	---	---
		9K	9K	9K	---	---	9,000	9,000	9,000	---	---	9,500	9,500	9,500	---	---
		12K	9K	9K	---	---	11,000	9,000	9,000	---	---	11,700	8,800	8,800	---	---
		18K	9K	9K	---	---	15,000	7,000	7,000	---	---	15,000	7,500	7,500	---	---
		12K	12K	9K	---	---	11,000	11,000	8,000	---	---	10,800	10,800	8,100	---	---
		12K	12K	12K	---	---	10,000	10,000	10,000	---	---	10,000	10,000	10,000	---	---
MLB and MPC030S4M	2	12K	6K	---	---	---	12,000	6,000	---	---	---	12,900	6,500	---	---	---
		18K	6K	---	---	---	17,000	5,000	---	---	---	18,900	6,300	---	---	---
		9K	9K	---	---	---	9,000	9,000	---	---	---	9,700	9,700	---	---	---
		12K	9K	---	---	---	11,000	8,000	---	---	---	12,900	9,700	---	---	---
		18K	9K	---	---	---	16,000	8,000	---	---	---	18,300	9,200	---	---	---
		12K	12K	---	---	---	11,000	11,000	---	---	---	12,600	12,600	---	---	---
		18K	12K	---	---	---	15,000	10,000	---	---	---	17,400	11,600	---	---	---
		18K	18K	---	---	---	14,000	14,000	---	---	---	14,800	14,800	---	---	---
	3	6K	6K	6K	---	---	7,000	7,000	7,000	---	---	8,500	8,500	8,500	---	---
		9K	6K	6K	---	---	10,000	7,000	7,000	---	---	11,500	7,700	7,700	---	---
		12K	6K	6K	---	---	13,000	6,000	6,000	---	---	13,900	7,000	7,000	---	---
		18K	6K	6K	---	---	17,000	6,000	6,000	---	---	17,500	5,900	5,900	---	---
		9K	9K	6K	---	---	10,000	10,000	6,000	---	---	10,500	10,500	7,000	---	---
		12K	9K	6K	---	---	12,000	9,000	6,000	---	---	12,700	9,500	6,400	---	---
		18K	9K	6K	---	---	16,000	8,000	5,000	---	---	16,100	8,100	5,400	---	---
		12K	12K	6K	---	---	11,000	11,000	6,000	---	---	11,700	11,700	5,900	---	---
		18K	12K	6K	---	---	15,000	10,000	5,000	---	---	15,000	10,000	5,000	---	---
		9K	9K	9K	---	---	9,000	9,000	9,000	---	---	9,500	9,500	9,500	---	---
		12K	9K	9K	---	---	11,000	9,000	9,000	---	---	11,700	8,800	8,800	---	---

**Table 1. MLB and MPC Multi-Zone System Combinations**

**NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.**

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
<b>MLB and MPC030S4M</b>	3	18K	9K	9K	---	---	15,000	7,000	7,000	---	---	15,000	7,500	7,500	---	---
		12K	12K	9K	---	---	11,000	11,000	8,000	---	---	10,800	10,800	8,100	---	---
		12K	12K	12K	---	---	10,000	10,000	10,000	---	---	10,000	10,000	10,000	---	---
<b>MLB and MPC036S4M</b>	2	18K	6K	---	---	---	18,000	6,000	---	---	---	19,100	6,400	---	---	---
		24K	6K	---	---	---	22,000	6,000	---	---	---	24,200	6,100	---	---	---
		18K	9K	---	---	---	17,000	9,000	---	---	---	18,700	9,400	---	---	---
		24K	9K	---	---	---	21,000	8,000	---	---	---	23,300	8,800	---	---	---
		12K	12K	---	---	---	12,000	12,000	---	---	---	12,800	12,800	---	---	---
		18K	12K	---	---	---	17,000	11,000	---	---	---	18,200	12,100	---	---	---
		24K	12K	---	---	---	20,000	10,000	---	---	---	22,200	11,100	---	---	---
		18K	18K	---	---	---	15,000	15,000	---	---	---	16,600	16,600	---	---	---
		24K	18K	---	---	---	18,000	13,000	---	---	---	19,300	14,500	---	---	---
		24K	24K	---	---	---	15,000	15,000	---	---	---	15,700	15,700	---	---	---
	3	12K	6K	6K	---	---	12,900	6,500	6,500	---	---	13,600	6,800	6,800	---	---
		18K	6K	6K	---	---	18,000	6,000	6,000	---	---	18,900	6,300	6,300	---	---
		24K	6K	6K	---	---	22,000	5,500	5,500	---	---	23,200	5,800	5,800	---	---
		12K	9K	6K	---	---	12,500	9,300	6,200	---	---	13,100	9,800	6,600	---	---
		18K	9K	6K	---	---	17,200	8,600	5,700	---	---	18,100	9,100	6,100	---	---
		24K	9K	6K	---	---	21,100	7,900	5,300	---	---	22,200	8,400	5,600	---	---
		12K	12K	6K	---	---	12,000	12,000	6,000	---	---	12,600	12,600	6,300	---	---
		18K	12K	6K	---	---	16,500	11,000	5,500	---	---	17,400	11,600	5,800	---	---
		24K	12K	6K	---	---	20,100	10,000	5,000	---	---	21,200	10,600	5,300	---	---
		18K	18K	6K	---	---	15,100	15,100	5,000	---	---	15,900	15,900	5,300	---	---
		24K	18K	6K	---	---	18,100	13,600	4,500	---	---	19,200	14,400	4,800	---	---
		9K	9K	9K	---	---	9,300	9,300	9,300	---	---	9,800	9,800	9,800	---	---
		12K	9K	9K	---	---	12,000	9,000	9,000	---	---	12,600	9,500	9,500	---	---
		18K	9K	9K	---	---	16,500	8,300	8,300	---	---	17,400	8,700	8,700	---	---
		24K	9K	9K	---	---	20,100	7,500	7,500	---	---	21,200	8,000	8,000	---	---
		12K	12K	9K	---	---	11,500	11,500	8,600	---	---	12,100	12,100	9,100	---	---
		18K	12K	9K	---	---	15,800	10,500	7,900	---	---	16,700	11,100	8,400	---	---
		24K	12K	9K	---	---	19,100	9,600	7,200	---	---	20,200	10,100	7,600	---	---
		18K	18K	9K	---	---	14,300	14,300	7,200	---	---	15,200	15,200	7,600	---	---
		12K	12K	12K	---	---	11,000	11,000	11,000	---	---	11,600	11,600	11,600	---	---
		18K	12K	12K	---	---	15,100	10,000	10,000	---	---	15,900	10,600	10,600	---	---
		24K	12K	12K	---	---	18,100	9,100	9,100	---	---	19,200	9,600	9,600	---	---
		18K	18K	12K	---	---	13,600	13,600	9,100	---	---	14,400	14,400	9,600	---	---
	4	6K	6K	6K	6K	---	7,200	7,200	7,200	7,200	---	7,700	7,700	7,700	7,700	---
		9K	6K	6K	6K	---	10,400	6,900	6,900	6,900	---	11,000	7,400	7,400	7,400	---
		12K	6K	6K	6K	---	13,200	6,600	6,600	6,600	---	14,000	7,000	7,000	7,000	---
		18K	6K	6K	6K	---	17,900	6,000	6,000	6,000	---	19,000	6,400	6,400	6,400	---
		24K	6K	6K	6K	---	21,400	5,300	5,300	5,300	---	22,600	5,700	5,700	5,700	---
		9K	9K	6K	6K	---	9,900	9,900	6,600	6,600	---	10,500	10,500	7,000	7,000	---
		12K	9K	6K	6K	---	12,600	9,400	6,300	6,300	---	13,300	10,000	6,700	6,700	---
		18K	9K	6K	6K	---	17,000	8,500	5,700	5,700	---	18,000	9,000	6,000	6,000	---
		24K	9K	6K	6K	---	20,100	7,500	5,000	5,000	---	21,200	8,000	5,300	5,300	---
		12K	12K	6K	6K	---	12,000	12,000	6,000	6,000	---	12,700	12,700	6,400	6,400	---
		18K	12K	6K	6K	---	16,000	10,700	5,300	5,300	---	17,000	11,300	5,700	5,700	---
		24K	12K	6K	6K	---	18,900	9,400	4,700	4,700	---	19,900	10,000	5,000	5,000	---
		9K	9K	9K	6K	---	9,400	9,400	9,400	6,300	---	10,000	10,000	10,000	6,700	---
		12K	9K	9K	6K	---	12,000	9,000	9,000	6,000	---	12,700	9,500	9,500	6,400	---
		18K	9K	9K	6K	---	16,000	8,000	8,000	5,300	---	17,000	8,500	8,500	5,700	---
		24K	9K	9K	6K	---	18,900	7,100	7,100	4,700	---	19,900	7,500	7,500	5,000	---
		12K	12K	9K	6K	---	11,300	11,300	8,500	5,700	---	12,000	12,000	9,000	6,000	---
		18K	12K	9K	6K	---	15,100	10,100	7,500	5,000	---	15,900	10,600	8,000	5,300	---
		12K	12K	12K	6K	---	10,700	10,700	10,700	5,300	---	11,300	11,300	11,300	5,700	---
		18K	12K	12K	6K	---	14,100	9,400	9,400	4,700	---	14,900	10,000	10,000	5,000	---
		9K	9K	9K	9K	---	9,000	9,000	9,000	9,000	---	9,500	9,500	9,500	9,500	---



**Table 1. MLB and MPC Multi-Zone System Combinations**

**NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.**

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB and MPC036S4M	4	12K	9K	9K	9K	---	11,300	8,500	8,500	8,500	---	12,000	9,000	9,000	9,000	---
		18K	9K	9K	9K	---	15,100	7,500	7,500	7,500	---	15,900	8,000	8,000	8,000	---
		12K	12K	9K	9K	---	10,700	10,700	8,000	8,000	---	11,300	11,300	8,500	8,500	---
		18K	12K	9K	9K	---	14,100	9,400	7,100	7,100	---	14,900	10,000	7,500	7,500	---
		12K	12K	12K	9K	---	10,100	10,100	10,100	7,500	---	10,600	10,600	10,600	8,000	---
		12K	12K	12K	12K	---	9,400	9,400	9,400	9,400	---	10,000	10,000	10,000	10,000	---
MLB and MPC048S4M	2	24K	9K	---	---	---	24,000	9,000	---	---	---	25,100	9,400	---	---	---
		30K	9K	---	---	---	29,000	8,000	---	---	---	30,400	9,100	---	---	---
		36K	9K	---	---	---	33,000	8,000	---	---	---	34,500	8,600	---	---	---
		24K	12K	---	---	---	23,000	11,000	---	---	---	24,800	12,400	---	---	---
		30K	12K	---	---	---	28,000	11,000	---	---	---	29,600	11,900	---	---	---
		36K	12K	---	---	---	31,000	10,000	---	---	---	33,200	11,100	---	---	---
		18K	18K	---	---	---	17,000	17,000	---	---	---	18,600	18,600	---	---	---
		24K	18K	---	---	---	22,000	17,000	---	---	---	23,700	17,800	---	---	---
		30K	18K	---	---	---	26,000	15,000	---	---	---	27,600	16,600	---	---	---
		36K	18K	---	---	---	28,000	14,000	---	---	---	30,000	15,000	---	---	---
		24K	24K	---	---	---	21,000	21,000	---	---	---	22,000	22,000	---	---	---
		30K	24K	---	---	---	23,000	18,000	---	---	---	25,000	20,000	---	---	---
		36K	24K	---	---	---	23,000	15,000	---	---	---	26,000	17,300	---	---	---
		30K	30K	---	---	---	19,000	19,000	---	---	---	21,700	21,700	---	---	---
	3	24K	6K	6K	---	---	24,000	6,000	6,000	---	---	25,500	6,400	6,400	---	---
		30K	6K	6K	---	---	29,000	6,000	6,000	---	---	30,100	6,100	6,100	---	---
		36K	6K	6K	---	---	33,000	5,000	5,000	---	---	34,300	5,800	5,800	---	---
		24K	9K	6K	---	---	23,000	9,000	6,000	---	---	24,800	9,300	6,200	---	---
		30K	9K	6K	---	---	28,000	8,000	6,000	---	---	29,300	8,800	5,900	---	---
		36K	9K	6K	---	---	32,000	8,000	5,000	---	---	33,500	8,400	5,600	---	---
		18K	12K	6K	---	---	18,000	12,000	6,000	---	---	19,100	12,800	6,400	---	---
		24K	12K	6K	---	---	23,000	11,000	6,000	---	---	24,100	12,100	6,100	---	---
		30K	12K	6K	---	---	27,000	11,000	5,000	---	---	28,600	11,500	5,800	---	---
		36K	12K	6K	---	---	31,000	10,000	5,000	---	---	32,700	10,900	5,500	---	---
		18K	18K	6K	---	---	17,000	17,000	6,000	---	---	18,100	18,100	6,100	---	---
		24K	18K	6K	---	---	22,000	16,000	5,000	---	---	22,900	17,200	5,800	---	---
		30K	18K	6K	---	---	26,000	15,000	5,000	---	---	27,300	16,400	5,500	---	---
		36K	18K	6K	---	---	29,000	14,000	5,000	---	---	31,400	15,700	5,300	---	---
		24K	24K	6K	---	---	20,000	20,000	5,000	---	---	21,800	21,800	5,500	---	---
		30K	24K	6K	---	---	24,000	19,000	5,000	---	---	26,200	21,000	5,300	---	---
		18K	9K	9K	---	---	18,000	9,000	9,000	---	---	19,100	9,600	9,600	---	---
		24K	9K	9K	---	---	23,000	9,000	9,000	---	---	24,100	9,100	9,100	---	---
		30K	9K	9K	---	---	27,000	8,000	8,000	---	---	28,600	8,600	8,600	---	---
		36K	9K	9K	---	---	31,000	8,000	8,000	---	---	32,700	8,200	8,200	---	---
		12K	12K	9K	---	---	12,000	12,000	9,000	---	---	13,200	13,200	9,900	---	---
		18K	12K	9K	---	---	18,000	12,000	9,000	---	---	18,600	12,400	9,300	---	---
		24K	12K	9K	---	---	22,000	11,000	8,000	---	---	23,500	11,800	8,800	---	---
		30K	12K	9K	---	---	26,000	11,000	8,000	---	---	27,900	11,200	8,400	---	---
		36K	12K	9K	---	---	30,000	10,000	7,000	---	---	32,100	10,700	8,100	---	---
		18K	18K	9K	---	---	17,000	17,000	8,000	---	---	17,600	17,600	8,800	---	---
		24K	18K	9K	---	---	21,000	16,000	8,000	---	---	22,300	16,800	8,400	---	---
		30K	18K	9K	---	---	25,000	15,000	7,000	---	---	26,700	16,100	8,100	---	---
		36K	18K	9K	---	---	28,000	14,000	7,000	---	---	30,900	15,500	7,800	---	---
		24K	24K	9K	---	---	20,000	20,000	7,000	---	---	21,400	21,400	8,100	---	---
		30K	24K	9K	---	---	23,000	19,000	7,000	---	---	25,700	20,600	7,800	---	---



**Table 1. MLB and MPC Multi-Zone System Combinations**

**NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.**

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB and MPC048S4M	3	12K	12K	12K	---	---	12,000	12,000	12,000	---	---	12,800	12,800	12,800	---	---
		18K	12K	12K	---	---	17,000	11,000	11,000	---	---	18,100	12,100	12,100	---	---
		24K	12K	12K	---	---	22,000	11,000	11,000	---	---	22,900	11,500	11,500	---	---
		30K	12K	12K	---	---	26,000	10,000	10,000	---	---	27,300	10,900	10,900	---	---
		36K	12K	12K	---	---	29,000	10,000	10,000	---	---	31,400	10,500	10,500	---	---
		18K	18K	12K	---	---	16,000	16,000	11,000	---	---	17,200	17,200	11,500	---	---
		24K	18K	12K	---	---	20,000	15,000	10,000	---	---	21,800	16,400	10,900	---	---
		30K	18K	12K	---	---	24,000	14,000	10,000	---	---	26,200	15,700	10,500	---	---
		24K	24K	12K	---	---	19,000	19,000	10,000	---	---	21,000	21,000	10,500	---	---
		18K	18K	18K	---	---	15,000	15,000	15,000	---	---	16,400	16,400	16,400	---	---
		24K	18K	18K	---	---	19,000	14,000	14,000	---	---	21,000	15,700	15,700	---	---
	4	18K	6K	6K	6K	---	18,000	6,000	6,000	6,000	---	---	19,400	6,500	6,500	6,500
		24K	6K	6K	6K	---	24,000	6,000	6,000	6,000	---	---	25,100	6,300	6,300	6,300
		30K	6K	6K	6K	---	29,000	6,000	6,000	6,000	---	---	30,100	6,100	6,100	6,100
		36K	6K	6K	6K	---	32,000	5,000	5,000	5,000	---	---	33,800	5,700	5,700	5,700
		18K	9K	6K	6K	---	18,000	9,000	6,000	6,000	---	---	19,100	9,600	6,400	6,400
		24K	9K	6K	6K	---	24,000	9,000	6,000	6,000	---	---	24,600	9,300	6,200	6,200
		30K	9K	6K	6K	---	28,000	8,000	6,000	6,000	---	---	29,200	8,800	5,900	5,900
		36K	9K	6K	6K	---	31,000	8,000	5,000	5,000	---	---	32,500	8,200	5,500	5,500
		12K	12K	6K	6K	---	12,000	12,000	6,000	6,000	---	---	12,900	12,900	6,500	6,500
		18K	12K	6K	6K	---	18,000	12,000	6,000	6,000	---	---	18,900	12,600	6,300	6,300
		24K	12K	6K	6K	---	23,000	11,000	6,000	6,000	---	---	24,100	12,100	6,100	6,100
		30K	12K	6K	6K	---	27,000	11,000	5,000	5,000	---	---	28,200	11,300	5,700	5,700
		36K	12K	6K	6K	---	30,000	10,000	5,000	5,000	---	---	31,000	10,400	5,200	5,200
		18K	18K	6K	6K	---	17,000	17,000	6,000	6,000	---	---	18,100	18,100	6,100	6,100
		24K	18K	6K	6K	---	22,000	16,000	5,000	5,000	---	---	22,600	16,900	5,700	5,700
		30K	18K	6K	6K	---	25,000	15,000	5,000	5,000	---	---	25,800	15,500	5,200	5,200
		24K	24K	6K	6K	---	20,000	20,000	5,000	5,000	---	---	20,700	20,700	5,200	5,200
		12K	9K	9K	6K	---	12,000	9,000	9,000	6,000	---	---	12,900	9,700	9,700	6,500
		18K	9K	9K	6K	---	18,000	9,000	9,000	6,000	---	---	18,900	9,500	9,500	6,300
		24K	9K	9K	6K	---	23,000	9,000	9,000	6,000	---	---	24,100	9,100	9,100	6,100
		30K	9K	9K	6K	---	27,000	8,000	8,000	5,000	---	---	28,200	8,500	8,500	5,700
		36K	9K	9K	6K	---	30,000	7,000	7,000	5,000	---	---	31,000	7,800	7,800	5,200
		12K	12K	9K	6K	---	12,000	12,000	9,000	6,000	---	---	12,800	12,800	9,600	6,400
		18K	12K	9K	6K	---	18,000	12,000	9,000	6,000	---	---	18,500	12,300	9,300	6,200
		24K	12K	9K	6K	---	22,000	11,000	8,000	6,000	---	---	23,400	11,700	8,800	5,900
		30K	12K	9K	6K	---	26,000	10,000	8,000	5,000	---	---	27,100	10,900	8,200	5,500
		36K	12K	9K	6K	---	28,000	9,000	7,000	5,000	---	---	29,300	9,800	7,400	4,900
		18K	18K	9K	6K	---	17,000	17,000	8,000	6,000	---	---	17,500	17,500	8,800	5,900
		24K	18K	9K	6K	---	21,000	16,000	8,000	5,000	---	---	21,700	16,300	8,200	5,500
		30K	18K	9K	6K	---	24,000	14,000	7,000	5,000	---	---	24,500	14,700	7,400	4,900
		12K	12K	12K	6K	---	12,000	12,000	12,000	6,000	---	---	12,600	12,600	12,600	6,300
		18K	12K	12K	6K	---	17,000	11,000	11,000	6,000	---	---	18,100	12,100	12,100	6,100
		24K	12K	12K	6K	---	22,000	11,000	11,000	5,000	---	---	22,600	11,300	11,300	5,700

**Table 1. MLB and MPC Multi-Zone System Combinations**

**NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.**

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB and MPC048S4M	4	30K	12K	12K	6K	---	25,000	10,000	10,000	5,000	---	---	25,800	10,400	10,400	5,200
		18K	18K	12K	6K	---	16,000	16,000	11,000	5,000	---	---	16,900	16,900	11,300	5,700
		24K	18K	12K	6K	---	20,000	15,000	10,000	5,000	---	---	20,700	15,500	10,400	5,200
		9K	9K	9K	9K	---	9,000	9,000	9,000	9,000	---	---	9,700	9,700	9,700	9,700
		12K	9K	9K	9K	---	12,000	9,000	9,000	9,000	---	---	12,800	9,600	9,600	9,600
		18K	9K	9K	9K	---	18,000	9,000	9,000	9,000	---	---	18,500	9,300	9,300	9,300
		24K	9K	9K	9K	---	22,000	8,000	8,000	8,000	---	---	23,400	8,800	8,800	8,800
		30K	9K	9K	9K	---	26,000	8,000	8,000	8,000	---	---	27,100	8,200	8,200	8,200
		36K	9K	9K	9K	---	28,000	7,000	7,000	7,000	---	---	29,300	7,400	7,400	7,400
		12K	12K	9K	9K	---	12,000	12,000	9,000	9,000	---	---	12,600	12,600	9,500	9,500
		18K	12K	9K	9K	---	17,000	11,000	9,000	9,000	---	---	18,100	12,100	9,100	9,100
		24K	12K	9K	9K	---	22,000	11,000	8,000	8,000	---	---	22,600	11,300	8,500	8,500
		30K	12K	9K	9K	---	25,000	10,000	7,000	7,000	---	25,800	10,400	7,800	7,800	---
		18K	18K	9K	9K	---	16,000	16,000	8,000	8,000	---	16,900	16,900	8,500	8,500	---
		24K	18K	9K	9K	---	20,000	15,000	7,000	7,000	---	20,700	15,500	7,800	7,800	---
		12K	12K	12K	9K	---	12,000	12,000	12,000	9,000	---	12,300	12,300	12,300	9,300	---
		18K	12K	12K	9K	---	17,000	11,000	11,000	8,000	---	17,500	11,700	11,700	8,800	---
		24K	12K	12K	9K	---	21,000	10,000	10,000	8,000	---	21,700	10,900	10,900	8,200	---
		30K	12K	12K	9K	---	24,000	9,000	9,000	7,000	---	24,500	9,800	9,800	7,400	---
		18K	18K	12K	9K	---	16,000	16,000	10,000	8,000	---	16,300	16,300	10,900	8,200	---
		24K	18K	12K	9K	---	19,000	14,000	9,000	7,000	---	19,600	14,700	9,800	7,400	---
		12K	12K	12K	12K	---	11,000	11,000	11,000	11,000	---	12,100	12,100	12,100	12,100	---
		18K	12K	12K	12K	---	16,000	11,000	11,000	11,000	---	16,900	11,300	11,300	11,300	---
		24K	12K	12K	12K	---	20,000	10,000	10,000	10,000	---	20,700	10,400	10,400	10,400	---
		18K	18K	12K	12K	---	15,000	15,000	10,000	10,000	---	15,500	15,500	10,400	10,400	---
	5	9K	6K	6K	6K	6K	9,000	6,000	6,000	6,000	6,000	10,000	7,000	7,000	7,000	7,000
		12K	6K	6K	6K	6K	12,000	6,000	6,000	6,000	6,000	13,000	6,000	6,000	6,000	6,000
		18K	6K	6K	6K	6K	18,000	6,000	6,000	6,000	6,000	19,000	6,000	6,000	6,000	6,000
		24K	6K	6K	6K	6K	24,000	6,000	6,000	6,000	6,000	25,000	6,000	6,000	6,000	6,000
		30K	6K	6K	6K	6K	28,000	6,000	6,000	6,000	6,000	29,000	5,000	5,000	5,000	5,000
		36K	6K	6K	6K	6K	31,000	5,000	5,000	5,000	5,000	32,000	5,000	5,000	5,000	5,000
		9K	9K	6K	6K	6K	9,000	9,000	6,000	6,000	6,000	10,000	10,000	6,000	6,000	6,000
		12K	9K	6K	6K	6K	12,000	9,000	6,000	6,000	6,000	13,000	10,000	6,000	6,000	6,000
		18K	9K	6K	6K	6K	18,000	9,000	6,000	6,000	6,000	19,000	9,000	6,000	6,000	6,000
		24K	9K	6K	6K	6K	23,000	9,000	6,000	6,000	6,000	24,000	9,000	6,000	6,000	6,000
		30K	9K	6K	6K	6K	27,000	8,000	5,000	5,000	5,000	28,000	8,000	5,000	5,000	5,000
		36K	9K	6K	6K	6K	29,000	7,000	5,000	5,000	5,000	31,000	7,000	5,000	5,000	5,000
		12K	12K	6K	6K	6K	12,000	12,000	6,000	6,000	6,000	13,000	13,000	6,000	6,000	6,000
		18K	12K	6K	6K	6K	18,000	12,000	6,000	6,000	6,000	18,000	12,000	6,000	6,000	6,000
		24K	12K	6K	6K	6K	22,000	11,000	6,000	6,000	6,000	23,000	11,000	5,000	5,000	5,000
		30K	12K	6K	6K	6K	26,000	10,000	5,000	5,000	5,000	27,000	10,000	5,000	5,000	5,000
		18K	18K	6K	6K	6K	17,000	17,000	6,000	6,000	6,000	17,000	17,000	5,000	5,000	5,000

**Table 1. MLB and MPC Multi-Zone System Combinations**

**NOTE - For multi-zone systems, the total capacity of all indoor units must be 66% to 133% of the outdoor unit capacity.**

Outdoor Unit Model No.	Number of Zones	Indoor Unit Capacity					Nominal Cooling Capacity at Rated System Capacity (Btuh)					Nominal Heating Capacity at Rated System Capacity (Btuh)				
		#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
MLB and MPC048S4M	5	24K	18K	6K	6K	6K	21,000	16,000	5,000	5,000	5,000	21,000	16,000	5,000	5,000	5,000
		9K	9K	9K	6K	6K	9,000	9,000	9,000	6,000	6,000	10,000	10,000	10,000	6,000	6,000
		12K	9K	9K	6K	6K	12,000	9,000	9,000	6,000	6,000	13,000	9,000	9,000	6,000	6,000
		18K	9K	9K	6K	6K	18,000	9,000	9,000	6,000	6,000	18,000	9,000	9,000	6,000	6,000
		24K	9K	9K	6K	6K	22,000	8,000	8,000	6,000	6,000	23,000	8,000	8,000	5,000	5,000
		30K	9K	9K	6K	6K	26,000	8,000	8,000	5,000	5,000	27,000	8,000	8,000	5,000	5,000
		12K	12K	9K	6K	6K	12,000	12,000	9,000	6,000	6,000	12,000	12,000	9,000	6,000	6,000
		18K	12K	9K	6K	6K	17,000	12,000	9,000	6,000	6,000	18,000	12,000	9,000	6,000	6,000
		24K	12K	9K	6K	6K	22,000	11,000	8,000	5,000	5,000	22,000	11,000	8,000	5,000	5,000
		30K	12K	9K	6K	6K	24,000	10,000	7,000	5,000	5,000	26,000	10,000	7,000	5,000	5,000
		18K	18K	9K	6K	6K	16,000	16,000	8,000	5,000	5,000	17,000	17,000	8,000	5,000	5,000
		24K	18K	9K	6K	6K	20,000	15,000	7,000	5,000	5,000	21,000	15,000	7,000	5,000	5,000
		12K	12K	12K	6K	6K	12,000	12,000	12,000	6,000	6,000	12,000	12,000	12,000	6,000	6,000
		18K	12K	12K	6K	6K	17,000	11,000	11,000	6,000	6,000	17,000	11,000	11,000	5,000	5,000
		24K	12K	12K	6K	6K	21,000	10,000	10,000	5,000	5,000	21,000	10,000	10,000	5,000	5,000
		18K	18K	12K	6K	6K	16,000	16,000	10,000	5,000	5,000	16,000	16,000	10,000	5,000	5,000
		9K	9K	9K	9K	6K	9,000	9,000	9,000	9,000	6,000	9,000	9,000	9,000	9,000	6,000
		12K	9K	9K	9K	6K	12,000	9,000	9,000	9,000	6,000	12,000	9,000	9,000	9,000	6,000
		18K	9K	9K	9K	6K	17,000	9,000	9,000	9,000	6,000	18,000	9,000	9,000	9,000	6,000
		24K	9K	9K	9K	6K	22,000	8,000	8,000	8,000	5,000	22,000	8,000	8,000	8,000	5,000
		30K	9K	9K	9K	6K	24,000	7,000	7,000	7,000	5,000	26,000	7,000	7,000	7,000	5,000
		12K	12K	9K	9K	6K	12,000	12,000	9,000	9,000	6,000	12,000	12,000	9,000	9,000	6,000
		18K	12K	9K	9K	6K	17,000	11,000	8,000	8,000	6,000	17,000	11,000	8,000	8,000	5,000
		24K	12K	9K	9K	6K	21,000	10,000	8,000	8,000	5,000	21,000	10,000	8,000	8,000	5,000
		18K	18K	9K	9K	6K	16,000	16,000	8,000	8,000	5,000	16,000	16,000	8,000	8,000	5,000
		12K	12K	12K	9K	6K	12,000	12,000	12,000	9,000	6,000	12,000	12,000	12,000	9,000	6,000
		18K	12K	12K	9K	6K	16,000	11,000	11,000	8,000	5,000	17,000	11,000	11,000	8,000	5,000
		24K	12K	12K	9K	6K	20,000	10,000	10,000	7,000	5,000	21,000	10,000	10,000	7,000	5,000
		12K	12K	12K	12K	6K	11,000	11,000	11,000	11,000	6,000	11,000	11,000	11,000	11,000	5,000
		18K	12K	12K	12K	6K	16,000	10,000	10,000	10,000	5,000	16,000	10,000	10,000	10,000	5,000
		9K	9K	9K	9K	9K	9,000	9,000	9,000	9,000	9,000	9500	9500	9500	9500	9500
		12K	9K	9K	9K	9K	12,000	9,000	9,000	9,000	9,000	12,000	9,000	9,000	9,000	9,000
		18K	9K	9K	9K	9K	17,000	8,000	8,000	8,000	8,000	17,000	8,000	8,000	8,000	8,000
		24K	9K	9K	9K	9K	21,000	8,000	8,000	8,000	8,000	21,000	8,000	8,000	8,000	8,000
		12K	12K	9K	9K	9K	12,000	12,000	9,000	9,000	9,000	12,000	12,000	9,000	9,000	9,000
		18K	12K	9K	9K	9K	16,000	11,000	8,000	8,000	8,000	17,000	11,000	8,000	8,000	8,000
		24K	12K	9K	9K	9K	20,000	10,000	7,000	7,000	7,000	21,000	10,000	7,000	7,000	7,000
		12K	12K	12K	9K	9K	11,000	11,000	11,000	8,000	8,000	11,000	11,000	11,000	8,000	8,000
		18K	12K	12K	9K	9K	16,000	10,000	10,000	8,000	8,000	16,000	10,000	10,000	8,000	8,000
		12K	12K	12K	12K	9K	11,000	11,000	11,000	11,000	8,000	11,000	11,000	11,000	11,000	8,000
		12K	12K	12K	12K	12K	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

## MLB and MPC Connection and Line Set Usage

**Table 2. MLB and MPC018S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (A)</b>
<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
006	006
009	006
012	006
009	009
012	009
012	012

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

**Table 3. MLB and MPC024S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>
<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
012	006	---
018	006	---
009	009	---
012	009	---
018	009	---
012	012	---
018	012	---
018	018	---
006	006	006
009	006	006
012	006	006
018	006	006
009	006	006
012	006	009
018	009	006
012	012	006
018	012	006
009	009	009
012	009	009
018	009	009
012	012	009
012	012	012

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

**Table 4. MLB and MPC030S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>
<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
012	006	---
018	006	---
009	009	---
012	009	---
018	009	---
012	012	---
018	012	---
018	018	---
006	006	006
009	006	006
012	006	006
018	006	006
009	006	006
012	009	006
018	009	006
012	012	006
018	012	006
009	009	009
012	009	009
018	009	009
012	012	009
012	012	012

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

**Table 5. MLB and MPC036S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>	<b>Zone 4 (D)</b>
<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
018	006	---	---
024	006	---	---
018	009	---	---
024	009	---	---
012	012	---	---
018	012	---	---
024	012	---	---
018	018	---	---

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

<sup>1</sup> 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

3/8 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (not furnished).

**Table 5. MLB and MPC036S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>	<b>Zone 4 (D)</b>
<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
024	018	---	---
024	<sup>1</sup> 024	---	---
012	006	006	---
018	006	006	---
024	006	006	---
012	009	006	---
018	009	006	---
024	009	006	---
012	012	006	---
018	012	006	---
024	012	006	---
018	018	006	---
024	018	006	---
009	009	009	---
012	009	009	---
018	009	009	---
024	009	009	---
012	012	009	---
018	012	009	---
024	012	009	---
018	018	009	---
012	012	012	---
018	012	012	---
024	012	012	---
018	018	012	---
006	006	006	006
009	006	006	006
012	006	006	006
018	006	006	006
024	006	006	006
009	009	006	006
012	009	006	006
018	009	006	006
024	009	006	006
012	012	006	006
018	012	006	006
024	012	006	006
009	009	009	006

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

<sup>1</sup> 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

3/8 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (not furnished).

**Table 5. MLB and MPC036S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
012	009	009	006
018	009	009	006
024	009	009	006
012	012	009	006
018	012	009	006
012	012	012	006
018	012	012	006
009	009	009	009
012	009	009	009
018	009	009	009
012	012	009	009
018	012	009	009
012	012	012	009
012	012	012	012

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

<sup>1</sup> 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 036 outdoor unit (furnished with outdoor unit).

3/8 x 5/8 in. gas pipe adapter is required for line set connection to the 036 outdoor unit (not furnished).

**Table 6. MLB and MPC048S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
024	009	---	---	---
030	009	---	---	---
036	009	---	---	---
024	012	---	---	---
030	012	---	---	---
036	012	---	---	---
018	018	---	---	---
024	018	---	---	---
024	024	---	---	---
030	018	---	---	---
036	018	---	---	---
030	024	---	---	---
036	024	---	---	---
030	030	---	---	---
024	006	006	---	---

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).



**Table 6. MLB and MPC048S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>	<b>Zone 4 (D)</b>	<b>Zone 5 (E)</b>
<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
030	006	006	---	---
036	006	006	---	---
024	009	006	---	---
030	009	006	---	---
036	009	006	---	---
018	012	006	---	---
024	012	006	---	---
030	012	006	---	---
036	012	006	---	---
018	018	006	---	---
024	018	006	---	---
030	018	006	---	---
036	018	006	---	---
024	024	006	---	---
030	024	006	---	---
018	009	009	---	---
024	009	009	---	---
030	009	009	---	---
036	009	009	---	---
012	012	009	---	---
018	012	009	---	---
024	012	009	---	---
030	012	009	---	---
036	012	009	---	---
018	018	009	---	---
024	018	009	---	---
030	018	009	---	---
036	018	009	---	---
024	024	009	---	---
030	024	009	---	---
012	012	012	---	---
018	012	012	---	---
024	012	012	---	---
030	012	012	---	---
036	012	012	---	---
018	018	012	---	---
024	018	012	---	---
030	018	012	---	---
024	024	012	---	---

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

**Table 6. MLB and MPC048S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

<b>Zone 1 (A)</b>	<b>Zone 2 (B)</b>	<b>Zone 3 (C)</b>	<b>Zone 4 (D)</b>	<b>Zone 5 (E)</b>
<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 1/2 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>	<b>1/4 in. liq + 3/8 in. gas</b>
018	018	018	---	---
024	018	018	---	---
018	006	006	006	---
024	006	006	006	---
030	006	006	006	---
036	006	006	006	---
018	009	006	006	---
024	009	006	006	---
030	009	006	006	---
036	009	006	006	---
012	012	006	006	---
018	012	006	006	---
024	012	006	006	---
030	012	006	006	---
036	012	006	006	---
018	018	006	006	---
024	018	006	006	---
030	018	006	006	---
024	024	006	006	---
012	009	009	006	---
018	009	009	006	---
024	009	009	006	---
030	009	009	006	---
036	009	009	006	---
012	012	009	006	---
018	012	009	006	---
024	012	009	006	---
030	012	009	006	---
036	012	009	006	---
018	018	009	006	---
024	018	009	006	---
030	018	009	006	---
012	012	012	006	---
018	012	012	006	---
024	012	012	006	---
030	012	012	006	---
018	018	012	006	---
024	018	012	006	---
009	009	009	009	---

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

## Number of Zones and Outdoor Unit Connection Sizes

NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
012	009	009	009	---
018	009	009	009	---
024	009	009	009	---
030	009	009	009	---
036	009	009	009	---
012	012	009	009	---
018	012	009	009	---
024	012	009	009	---
030	012	009	009	---
018	018	009	009	---
024	018	009	009	---
012	012	012	009	---
018	012	012	009	---
024	012	012	009	---
030	012	012	009	---
018	018	012	009	---
024	018	012	009	---
012	012	012	012	---
018	012	012	012	---
024	012	012	012	---
018	018	012	012	---
009	006	006	006	006
012	006	006	006	006
018	006	006	006	006
024	006	006	006	006
030	006	006	006	006
036	006	006	006	006
009	009	006	006	006
012	009	006	006	006
018	009	006	006	006
024	009	006	006	006
030	009	006	006	006
036	009	006	006	006
012	012	006	006	006
018	012	006	006	006
024	012	006	006	006
030	012	006	006	006
018	018	006	006	006
024	018	006	006	006

## LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

Table 6. MLB and MPC048S4M

## Number of Zones and Outdoor Unit Connection Sizes

NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
009	009	009	006	006
012	009	009	006	006
018	009	009	006	006
024	009	009	006	006
030	009	009	006	006
012	012	009	006	006
018	012	009	006	006
024	012	009	006	006
030	012	009	006	006
018	018	009	006	006
024	018	009	006	006
012	012	012	006	006
018	012	012	006	006
024	012	012	006	006
018	018	012	006	006
009	009	009	009	006
012	009	009	009	006
018	009	009	009	006
024	009	009	009	006
030	009	009	009	006
012	012	009	009	006
018	012	009	009	006
024	012	009	009	006
018	018	009	009	006
012	012	012	009	006
018	012	012	009	006
024	012	012	009	006
012	012	012	012	006
018	012	012	012	006
009	009	009	009	009
012	009	009	009	009
018	009	009	009	009
024	009	009	009	009
012	012	009	009	009
018	012	009	009	009
024	012	009	009	009
012	012	012	009	009
018	012	012	009	009
012	012	012	012	009

## LEGEND:

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

**Table 6. MLB and MPC048S4M**

**Number of Zones and Outdoor Unit Connection Sizes**

**NOTE - Letter = Indoor Unit Zone Connection on Outdoor Unit**

Zone 1 (A)	Zone 2 (B)	Zone 3 (C)	Zone 4 (D)	Zone 5 (E)
1/4 in. liq + 1/2 in. gas	1/4 in. liq + 1/2 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas	1/4 in. liq + 3/8 in. gas
012	012	012	012	012

**LEGEND:**

CLEAR = No adapters required.

GRAY = 3/8 x 1/2 in. gas pipe adapter is required for line set connection to outdoor unit (furnished with outdoor unit).

BLACK = 1/4 x 3/8 in. liquid pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

1/2 x 5/8 in. gas pipe adapter is required for line set connection to the 048 outdoor unit (furnished with outdoor unit).

## Torque Requirements for Caps and Fasteners

When servicing or repairing HVAC components, ensure the fasteners are appropriately tightened. "Table 7. Torque Requirements" provides torque values for fasteners.

## IMPORTANT

Only use Allen wrenches of sufficient hardness (50Rc - Rockwell scale minimum). Fully insert the wrench into the valve stem recess.

Service valve stems are factory-torqued from 9 ft.-lbs. (12 N\*m) for small valves, to 25 ft.-lbs. (34 N\*m) for large valves) to prevent refrigerant loss during shipping and handling. Using an Allen wrench rated at less than 50Rc risks rounding or breaking off the wrench, or stripping the valve stem recess.

See the Lennox Service and Application Notes C-08-1 for further details and information.

**Table 7. Torque Requirements**

Parts	Recommended Torque	
	U.S.	Newton-Meter- N
Service valve cap	8 ft.-lb.	11
Sheet metal screws	16 in.-lb.	2
Machine screws #10	27 in.-lb.	3
Compressor bolts	7 ft.-lb.	10
Gauge port seal cap	8 ft.-lb.	11

## Outdoor Unit Installation

### Placement Considerations

## ! CAUTION

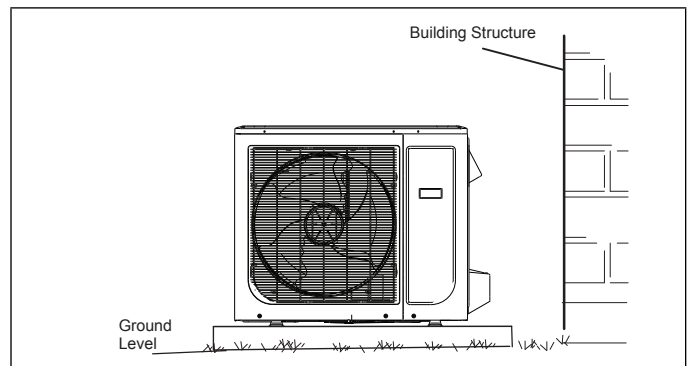
In order to avoid injury, take proper precaution when lifting heavy objects.

Consider the following when positioning the unit:

- In coastal areas or other places with salty atmosphere of sulfate gas, corrosion may shorten the life of the unit. In coastal areas, the coil should be cleaned with potable water several times per year to avoid corrosive buildup (salt).
- Some localities are adopting sound ordinances based on the unit's sound level registered from the adjacent

property, not from the property where the unit is installed. Install the unit as far as possible from the property line.

- When possible, do not install the unit directly outside a window. Glass has a very high level of sound transmission.
- Install unit level.



**Figure 5. Install Unit Level**

- Choose a place solid enough to bear the weight and vibration of the unit, where the operation noise will not be amplified.
- Choose a location where the hot air discharged from the unit or the operation noise will not be a nuisance to neighbors.
- Avoid installing the outdoor unit near a bedroom or other places where noise may cause a problem.
- There must be sufficient space to carry the unit into and out of the site.
- There must be unobstructed air flow around the air inlet and the air outlet.
- The unit must not be installed in areas where a flammable gas leak may occur.
- Install the outdoor unit a minimum of 3 feet (1m) away from any antenna, power cord (line), radio, telephone, security system, or intercom. Electrical interference and radio frequencies from any of these sources may affect operation.
- Since water drains from the outdoor unit during various stages of operation, do not place anything which may be damaged by moisture under the unit.

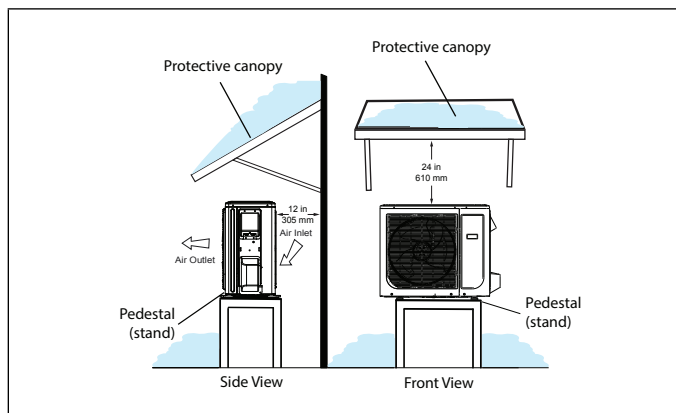
## Direct Sunlight, Rain, Snow and Ice Protection

### Indoor Unit

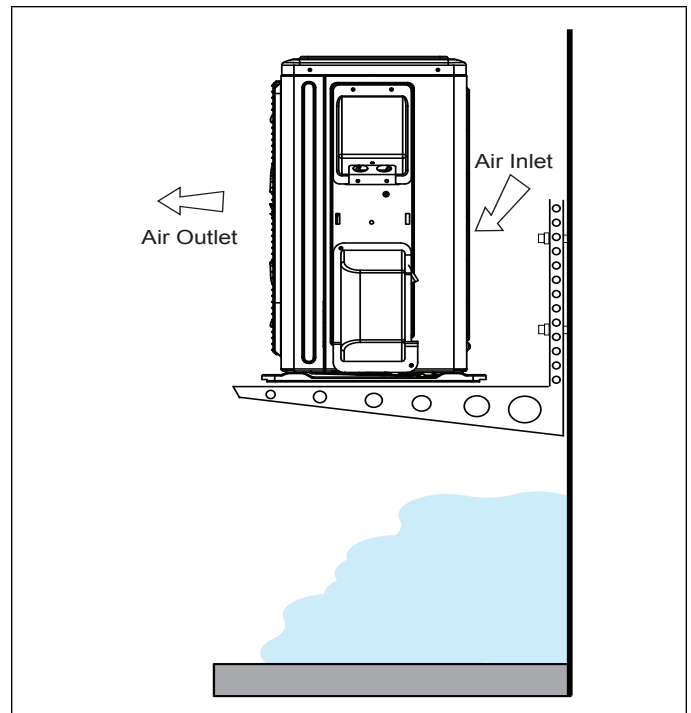
- It is recommended that Medium Static Ducted Indoor Units not be installed in unconditioned spaces with temperatures above 100°F (38°C).

### Outdoor Unit:

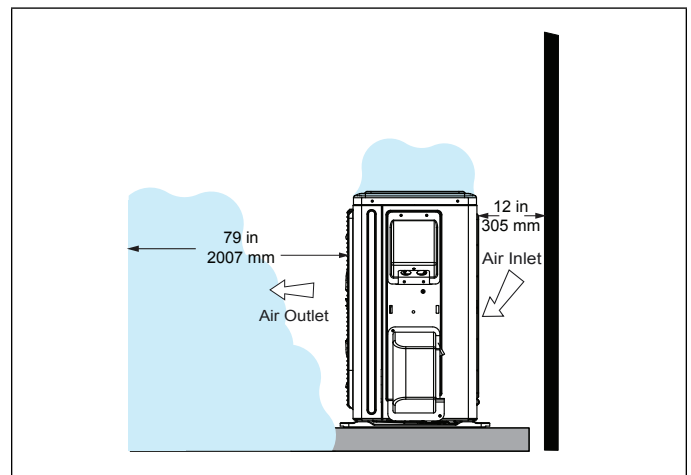
- The construction of a canopy or shade is suggested when the outdoor unit is placed in direct sunlight all day with temperatures exceeding 100°F (38°C). This is necessary because of an ambient limit control set to 122°F (50°C) to protect the electronics. If the outdoor unit is placed in direct sunlight it is possible that the limit may activate and shut down the unit. A canopy is recommended as illustrated in “Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy” on page 21 or “Figure 11. Dog House-Style Shelter” on page 22.
- Place outdoor unit away from overhanging roof lines which would allow water or ice to drop on, or in front of, coil or into unit. Construct a canopy as illustrated in “Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy” on page 21.
- The outdoor unit base should be elevated above the depth of average snows as illustrated in “Figure 7. Outdoor Unit on Brackets above Snow Line” on page 21.
- In heavy snow areas, do not place the outdoor unit where drifting will occur as illustrated in “Figure 8. Outdoor Unit Air Flow Obstructed by Snow” on page 21.
- Carefully consider how to manage defrost water disposal to prevent ice from blocking walkways or creating a safety hazard near the outdoor unit as illustrated in “Figure 9. Avoid Defrost Water Ice Hazard” on page 21.



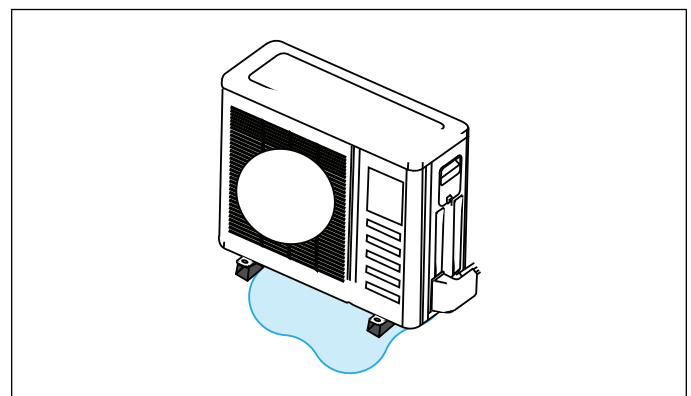
**Figure 6. Outdoor Unit on Pedestal (Stand) and Protective Canopy**



**Figure 7. Outdoor Unit on Brackets above Snow Line**



**Figure 8. Outdoor Unit Air Flow Obstructed by Snow**



**Figure 9. Avoid Defrost Water Ice Hazard**

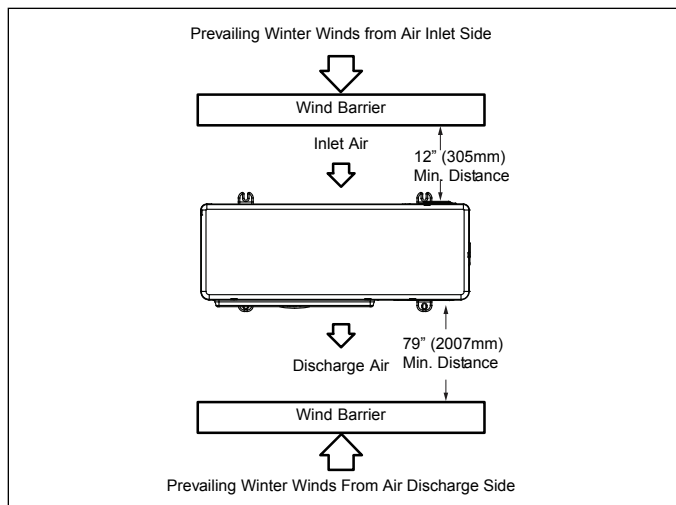
## Prevailing Winds

Normally wind baffles are not required for a outdoor unit. However, in order to maximize reliability and performance, the following best practices should be followed.

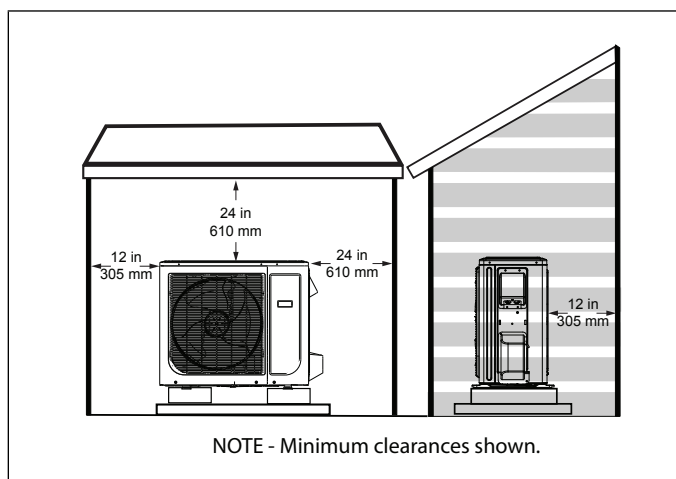
If unit coil cannot be installed away from prevailing winter winds, some method of protecting the coil is recommended. However, minimum clearances as reference in "Figure 3. Outdoor Unit Clearances - Inches (mm)" on page 4 must be observed at all times.

Common application examples are:

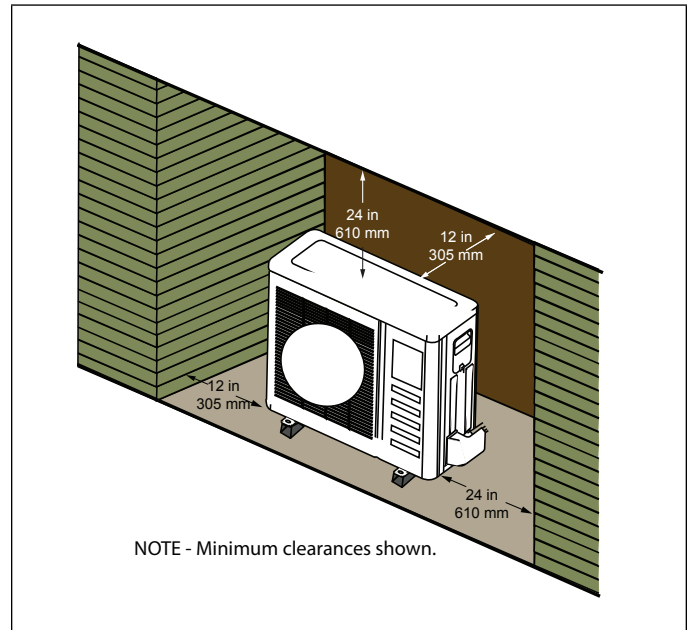
- When prevailing winds are from the air inlet side, then position the wind barrier a minimum of 12 inches (305 mm) from the unit as illustrated in "Figure 3. Outdoor Unit Clearances - Inches (mm)".
- When prevailing wind is into the discharge side, then position the wind barrier a minimum 79 inches (2007 mm) from the front of the unit as illustrated in "Figure 10. Wind Barrier".
- Outdoor unit can be installed in a dog house style shelter as illustrated in "Figure 11. Dog House-Style Shelter".
- Outdoor unit can be installed in an alcove or under a roof overhang as illustrated in "Figure 12. Unit installed in Alcove".



**Figure 10. Wind Barrier**



**Figure 11. Dog House-Style Shelter**



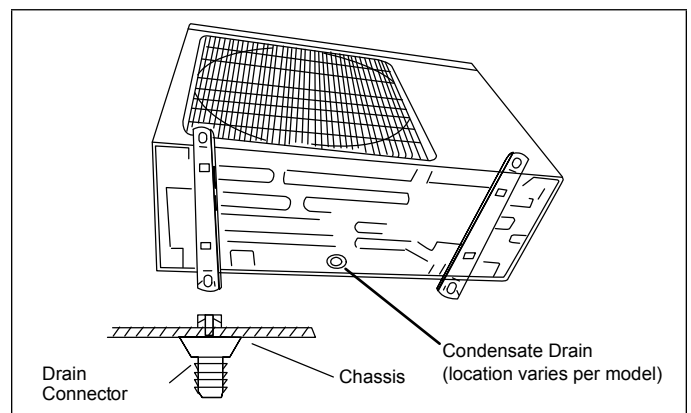
**Figure 12. Unit installed in Alcove**

## Buried Refrigerant Pipe Protection

- **All** refrigerant lines must be insulated regardless of if it is buried
- In addition to insulating each line of piping, buried lines must rest inside a **sealed, watertight** conduit
- The conduit must be designed so it cannot collect and retain water

## Outdoor Unit Condensate Piping

Condensate formed during the heating and defrost processes must be drained from heat pump units. Drain holes are provided in the base of the units to ensure proper drainage. Heat pumps must be raised when installed on a concrete pad or the ground to allow drainage to occur. If the heat pump unit is installed on wall mounting bracket, insert the provided drain connector into one of the 1 inch (25 mm) drain holes and attached a field-provided insulated drain hose to the connector. Use field-provided rubber plugs to cover any unused drain holes.



**Figure 13. Condensate Drain**



## Securing the Outdoor Unit

### Slab or Roof Mounting

Install the unit a minimum of 4 inches (102 mm) above the roof or ground surface to avoid ice build-up around the unit. Place the unit above a load bearing wall or area of the roof that can adequately support the unit. Consult local codes for rooftop applications.

## ! CAUTION

### Roof Damage!

This system contains both refrigerant and oil. Some rubber roofing material may absorb oil. This will cause the rubber to swell when it comes into contact with oil. The rubber will then bubble and could cause leaks. Protect the roof surface to avoid exposure to refrigerant and oil during service and installation. Failure to follow this notice could result in damage to roof surface.

### Securing Outdoor Unit to Slab, Frame, or Rails

If the outdoor unit is installed on a field-provided slab or frame, use lag bolts or equivalent to secure the outdoor unit to the slab or frame.

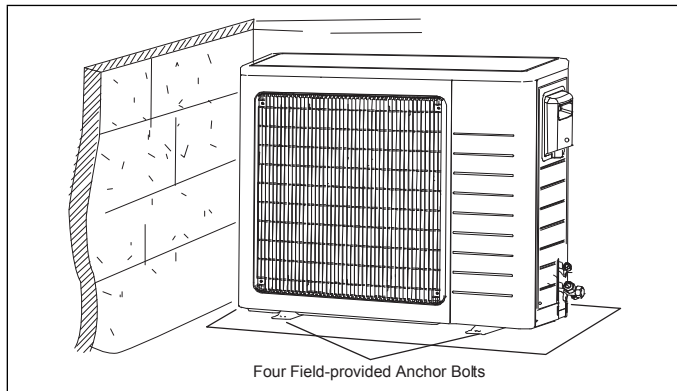


Figure 14. Securing Outdoor Unit to Slab

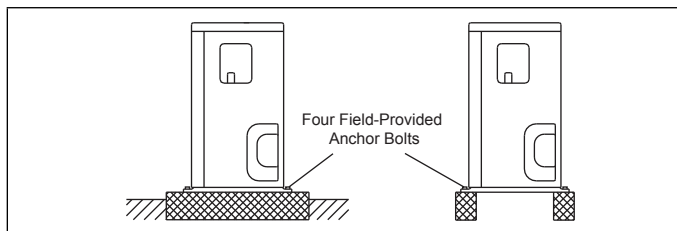


Figure 15. Securing Outdoor Unit to Rails

### Securing Outdoor Unit To Hanging Brackets

If the outdoor unit is installed on field-provided wall mounting brackets, use lag bolts or equivalent to secure the outdoor unit to the bracket. Minimum rear clearance can be reduced to 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides. Allow for condensate disposal when placing units above one another.

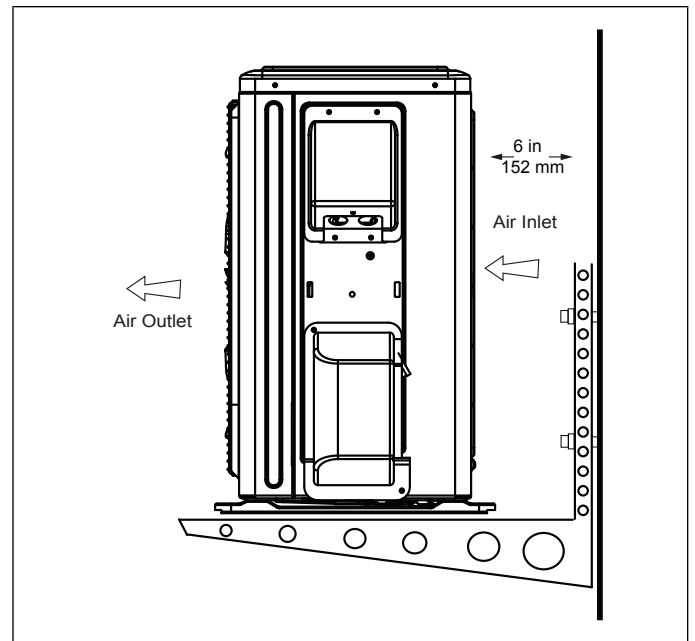


Figure 16. Securing Outdoor Unit to Brackets

## Refrigerant Piping Connections

Line sets consists of two copper pipes connecting the outdoor unit to the indoor unit. "Table 9. Refrigerant Piping and Indoor Unit Connection Sizes" on page 24 lists the connection sizes. The connections are made using the provided brass flare nuts at the end of the refrigerant piping connections.

1. Choose the correct pipe sizes for your application using "Table 9. Refrigerant Piping and Indoor Unit Connection Sizes" on page 24.
2. Confirm that you are using the correct diameter piping.
3. Determine the necessary piping length required for the application.
4. Cut the selected pipes with a pipe cutter. Make the cuts flat and smooth as illustrated in "Figure 17. Cutting Pipe".

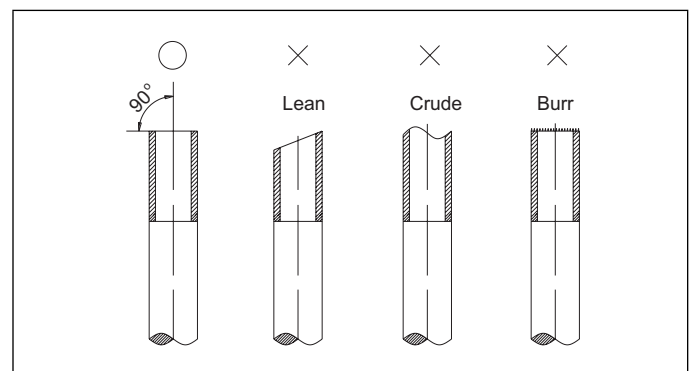
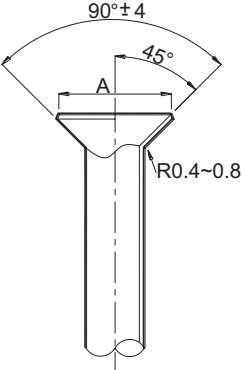


Figure 17. Cutting Pipe

5. Insulate the copper piping.
6. Insert a flare nut onto each pipe before flaring.
7. Use "Table 8. Flaring Pipe" to properly flare the pipe.

## Table 8. Flaring Pipe

Pipe Diameter	Flare Dimension A (mm)		Flare Shape
	Min	Max	
1/4" (6.35)	8.3	8.7	
3/8" (9.62)	12.0	12.4	
1/2" (9.52")	15.4	15.8	
5/8" (15.9)	18.6	19.1	
3/4" (22.9)	22.9	23.3	

8. After flaring the pipe, temporarily sealed pipe ends with adhesive tape to avoid contaminants from entering the pipes.
9. The seal on the unit refrigerant piping connections should remain in place until the last possible moment. This will prevent dust or water from getting into the refrigerant piping before it is connected.
10. **CAREFULLY** adjust refrigerant piping connections to suit the application.
11. Slowly loosen one of the flare nuts to release the factory nitrogen charge from the indoor units only.
12. Remove the flare nuts from the connections on the unit and discard the seal from each of the piping connections.
13. Slide the flare nuts onto the ends of the field-provided refrigerant piping before using a suitable flaring tool to flare the end of the copper pipe.
14. Apply recommended HFC-410A refrigerant lubricant to the outside of the flared refrigerant lines.

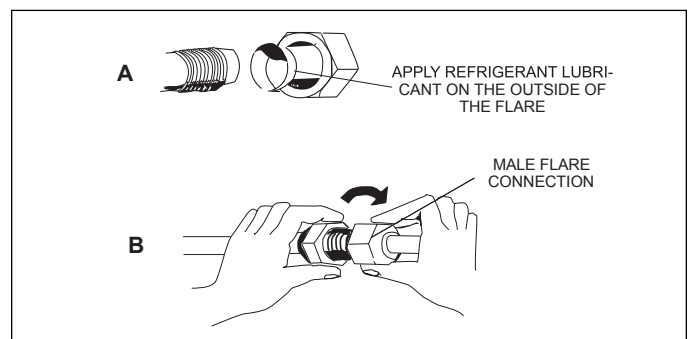
## IMPORTANT

The compressor in this unit contains PVE oil (Polyvinylether). PVE oil is formulated for hydrofluorocarbon (HFC) refrigerants, such as HFC-410A, which this system contains. While it may have some miscibility properties with mineral-based oil and POE oil (Polyolester), it is not recommended to mix PVE oil with any other type of refrigerant oil.

15. Align the threaded connections with the flared refrigerant lines. Tighten the flare nuts lightly at first to obtain a smooth match as illustrated in "Figure 18. Making Connections (Male to Female Connection)".

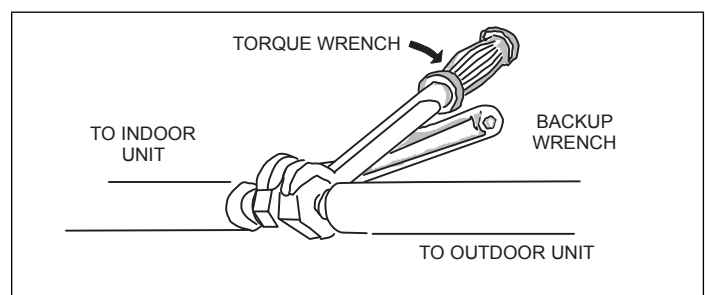
**Table 9. Refrigerant Piping and Indoor Unit Connection Sizes**

Size (Btuh)	Liquid Line in.	Gas Line in.
9000	1/4	3/8
12000	1/4	1/2
18000	1/4	1/2
24000	3/8	5/8



**Figure 18. Making Connections (Male to Female Connection)**

16. Once snug, continue another half-turn on each nut which should create a leak-free joint. A torque wrench may be used to tighten flare nuts using "Table 10. Flare Nut Torque Recommendations" recommendations. **Do not over-tighten a flared joint. Flared connections should always be accessible and must be insulated to prevent condensation.**
17. After refrigerant piping has been installed and checked for leaks, apply insulation over all flared connections.



**Figure 19. Tighten Flare Nut**

**Table 10. Flare Nut Torque Recommendations**

Outside Diameter	Recommended Torque	No torque wrench available Finger tighten and use an appropriately sized wrench to turn an additional:
Inches		
1/4	15 ft.-lb. (20 N)	1/4 turn
3/8	26 ft.-lb. (35 N)	1/2 turn
1/2	41 ft.-lb. (56 N)	7/8 turn
5/8	48 ft.-lb. (65 N)	1 full turn

### Indoor Unit Installation

## CAUTION

In order to avoid injury, take proper precaution when lifting heavy objects.

Please refer to the installation instruction included with the indoor unit for setup.

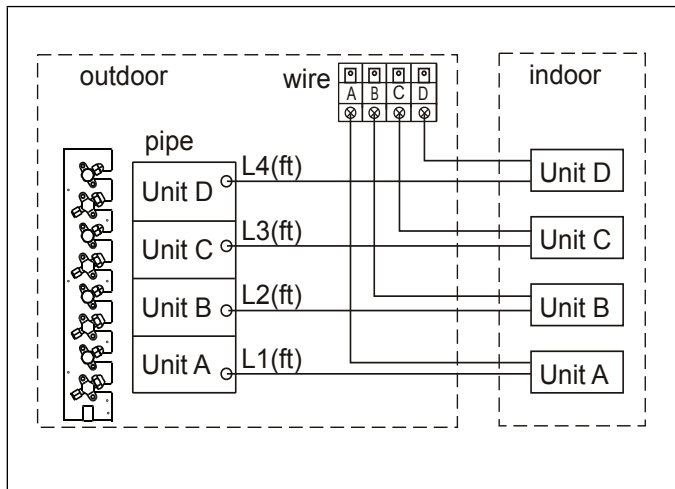
## IMPORTANT

Pipe and wire to each zone separately.  
Test each indoor unit separately to ensure proper operation.

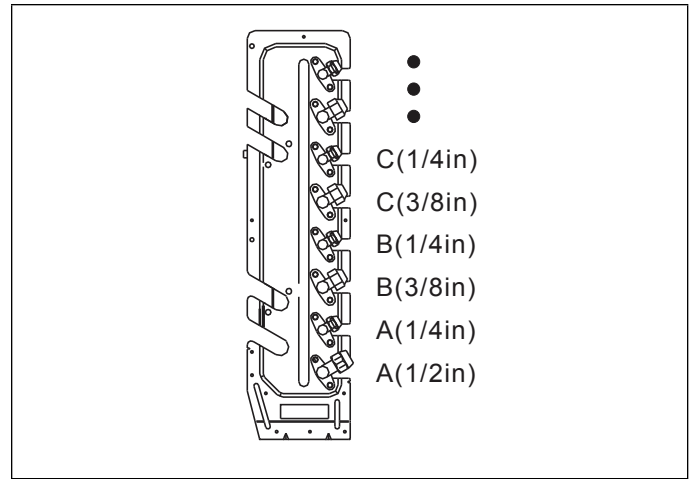
### Connecting Multiple Capacity Indoor Units

- The largest capacity indoor unit must be connected to the lowest refrigerant connection ports on the outdoor unit.
- The 24,000 Btu indoor unit is only allowed to be connected to MPC036S4M, MPC048S4M, MLB036S4M and MLB048S4M outdoor units.

**NOTE:** Each indoor unit must be piped AND wired to the correct zone piping connections and wiring terminals. Make sure that indoor unit A is wired to the zone A terminal block and connected to the appropriate refrigerant pipe connections.



**Figure 20. Pipe and Wire Each Zone Separately**



**Figure 21. Connecting Multiple Capacity Indoor Units**

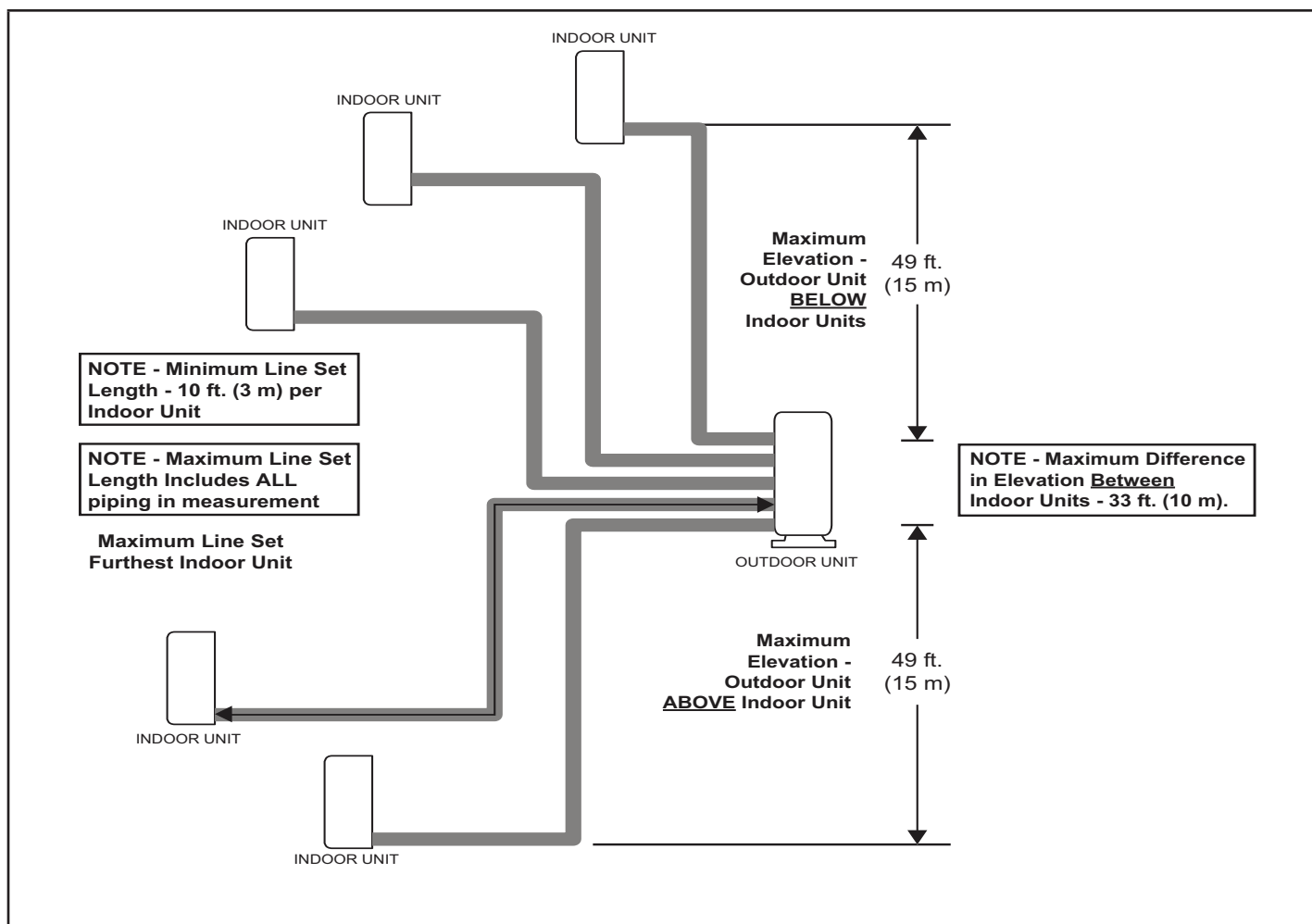


Figure 22. MLB and MPC Line Set Elevations

Table 11. Maximum Line Set Length

Outdoor Unit Model No.	MPC018S4M	MPC024S4M	MPC030S4M	MPC036S4M	MPC048S4M
Maximum Number of Indoor Units/Zones	Two	Three	Three	Four	Five
Indoor Unit Connections	(2) 1/4 liq. (2) 3/8 gas	(3) 1/4 liq. (3) 3/8 gas	(3) 1/4 liq. (3) 3/8 gas	(4) 1/4 liq. (3) 3/8 gas (1) 1/2 gas	(5) 1/4 liq. (3) 3/8 gas (2) 1/2 gas
Maximum Pipe Length for all Rooms	131 ft. (40 m)	197 ft. (60 m)	197 ft. (60 m)	262 ft. (80 m)	262 ft. (80 m)
Maximum Line Set Length - Furthest Indoor Unit	82 ft. (25 m)	98 ft. (30 m)	98 ft. (30 m)	115 ft. (35 m)	115 ft. (35 m)

NOTE - Refer to "Outdoor To Indoor Unit Line Connections" tables starting on page 42 for correct refrigerant line adapters furnished with outdoor units.

Table 12. Line Set Adapters

Number of Zones	Model	Number x Liquid side/ Gas side (inch)	Adapter	Adapter Quantity
2	MPC018S4M-*P	2 X (1/4"/3/8")	3/8"-->1/2"	2
3	MPC024S4M-*P MPC030S4M-*P	3 X (1/4"/3/8")	3/8"-->1/2"	3
4	MPC036S4M-*P	3x (1/4"/3/8") & 1x (1/4"/1/2")	3/8"-->1/2"	3
			1/2"-->3/8"	1
			1/4"-->3/8"	1
			1/2"-->5/8"	1

**Table 12. Line Set Adapters**

Number of Zones	Model	Number x Liquid side/ Gas side (inch)	Adapter	Adapter Quantity
5	MPC048S4M-*P	3x (1/4"/3/8") & 2x (1/4"/1/2")	1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
			3/8"-->1/2"	3
2	MLB018S4M-*P	2 X (1/4"/3/8")	3/8"-->1/2"	2
3	MLB030S4M-*P	3x (1/4"/3/8")	3/8"-->1/2"	2
			1/2"-->3/8"	1
			1/4"-->3/8"	1
			1/2"-->5/8"	1
4	MLB036S4M-*P	3x (1/4"/3/8") & 1x (1/4"/1/2")	3/8"-->1/2"	2
			1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
5	MLB048S4M-*P	3x (1/4"/3/8") & 2x (1/4"/1/2")	1/2"-->3/8"	2
			1/4"-->3/8"	2
			1/2"-->5/8"	2
			3/8"-->1/2"	3

### Leak Test and Evacuation

Air and moisture remaining in the refrigerant system will have undesirable effects as indicated below:

- Pressure in the system rises.
- Operating current rises.
- Cooling or heating efficiency drops.
- Moisture in the refrigerant circuit may freeze.
- Water may lead to corrosion of parts in the refrigeration system.

The line set between the indoor and outdoor units must be leak tested and evacuated to remove any non-condensables and moisture from the system.

#### Leak Test

Use the following procedure to test for system leaks:

1. Connect the manifold gauge set and dry nitrogen gas cylinder to the liquid and gas service ports.
2. Open valve on nitrogen cylinder.
3. Pressurize the system per the pressure test specifications in "Table 13. Pressure Test Specifications".
4. Check that the system pressure remains stable. If there is any movement check system for leaks.
5. After the system is found to be free of leaks:
  - Close valve on nitrogen cylinder.
  - Relieve the nitrogen pressure by: loosening the charge hose connector at the nitrogen cylinder.
  - When the system pressure is reduced to normal, disconnect the hose from the cylinder.

## IMPORTANT

Use only oxygen-free nitrogen (OFN).

#### Triple Evacuation Procedure

A Micron or Torr gauge must be used for this procedure.

1. Discharge the oxygen-free nitrogen and evacuate the system to a reading of 8000 Microns (8 Torr) using all service valves.
2. Break the vacuum by allowing nitrogen into the port connections (liquid and gas line pipes) until a positive pressure is achieved.
3. Evacuate the system to a reading of 5000 Microns (5 Torr).
4. Break the vacuum by allowing nitrogen into the port connections (liquid and gas line pipes) until a positive pressure is achieved.
5. Evacuate the system to a minimum reading of 500 Microns (0.5 Torr).
6. For a moisture-free system, ensure the vacuum is held without movement for a minimum of 4 hours.
7. If vacuum fails to hold, carry out steps 2 through 6 until vacuum holds.

**Table 13. Pressure Test Specifications**

1	3 bar	44 psig	Minimum of 10 minutes
2	15 bar	220 psig	Minimum of 10 minutes
3	32 bar	470 psig	Minimum of 10 minutes
4	45 bar	650 psig	1 hour. Stress test to prove the integrity of the complete installation.
5	32 bar	470 psig	24 hours. Lower system pressure test, after confirmation No. 4 was successfully completed.

## Wiring Connections

### IMPORTANT

Install unit so that unit disconnect is accessible.

Use specified wiring and cable to make electrical connections. Clamp cables securely and make sure that connections are tight to avoid strain on wiring. Insecure wiring connections may result in equipment failure and risk of fire.

Wiring must be installed so that all cover plates can be securely closed.

### ! WARNING

**Electric Shock Hazard.** Can cause injury or death. Unit must be rounded in accordance with national and local codes.

Line voltage is present at all components when unit is not in operation. Disconnect all remote electric power supplies before opening access panel. Unit may have multiple power sources.

### ! CAUTION

All terminal connections must be made as illustrated in the following diagrams. Improperly connected wiring could damage unit or cause communication errors between indoor and outdoor units.

In the U.S.A., wiring must conform with current local codes and the current National Electric Code (NEC). In Canada, wiring must conform with current local codes and the current Canadian Electrical Code (CEC).

#### Outdoor Unit

- Refer to unit nameplate for minimum circuit ampacity and maximum over-current protection size.
- Make all electrical power wiring connections at the outdoor unit.
- Be sure to reattach all electrical box covers after connections are complete.

#### Indoor Units

Refer to the installation instruction included with the indoor unit for further details.

#### Automatic Wiring and Line Set Correction Function

A "Check Switch" on outdoor unit control reviews zone wiring and piping connections and displays "CE" if all connections are correct. If a unit(s) is not connected to the correct zone the control will automatically remap the wiring to the correct zone based on indoor unit size.

All models now feature automatic correction of wiring and line set installation errors.

##### How To Activate This Function

1. Check that outside temperature is above 41°F (5°C). This function does not work when the outside temperature is below 41°F (5°C).

2. Check that the service valves of the liquid and gas lines are open.
3. Turn on the breaker and wait at least two minutes.
4. Press and hold the check switch on the outdoor control board for five seconds or until the LED displays "CE" then release the switch. The CE code indicates the function is operating correctly.
5. Approximately 5-10 minutes after the switch is pressed, the "CE" code will disappear. This indicates the wiring/line set error(s) have been corrected and the system is now fully functional.

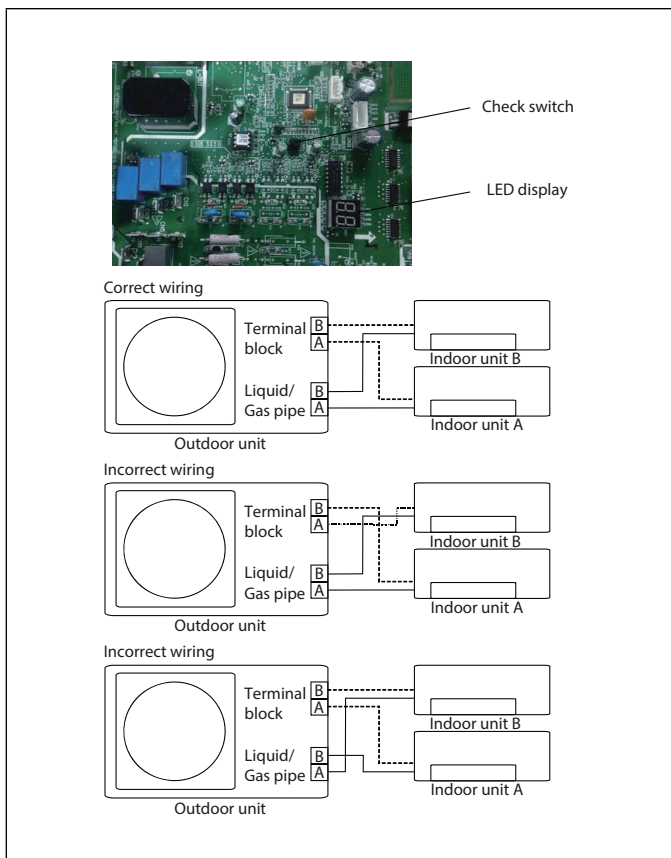
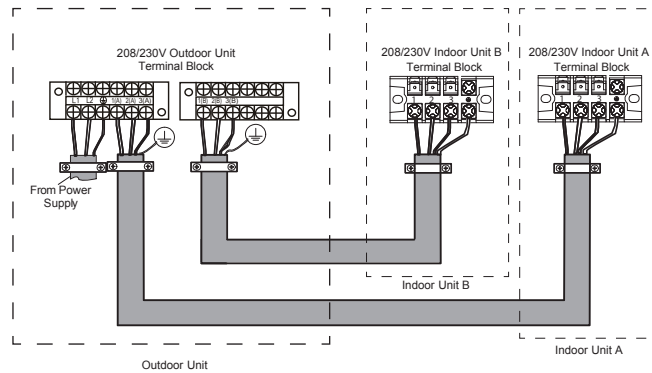


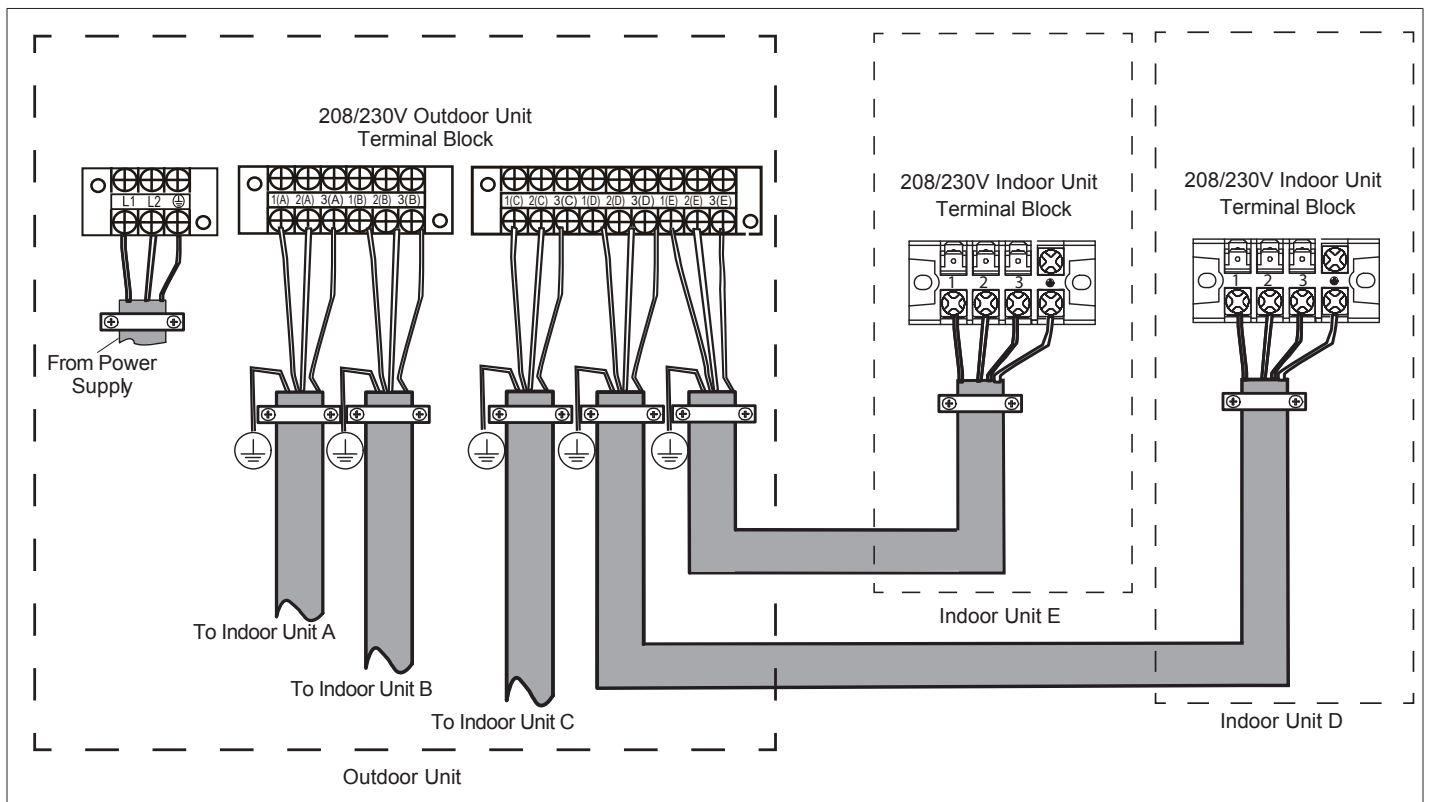
Figure 23. Correct and Incorrect Wiring

# IMPORTANT

All diagrams (Figure 24 through Figure 33) are typical wiring diagrams. Refer to the wiring diagram on the unit for actual wiring.



**Figure 24. Connection Diagram - Systems 24k and Below**



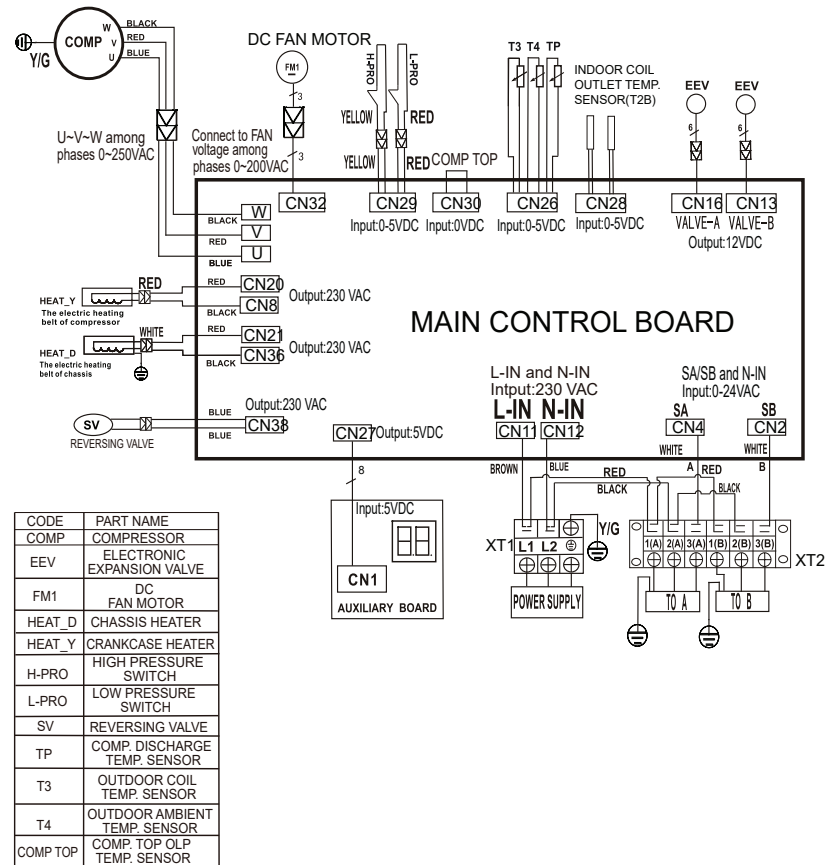
**Figure 25. Connection Diagram**



**Table 14. Multi-Zone Installation Wiring Requirements**

System and Terminal Designations	System Capacity	System Voltage	Number of Conductors	Wire Type	Wire Gauge / MCA
Indoor to Outdoor Unit					
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	06K, 09K and 12K	208/230VAC	4	Stranded and unshielded	16AWG
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	18K	208/230VAC	4	Stranded and unshielded	16AWG
Indoor to Outdoor Wiring - (Communication/Power) 1, 2, 3 and GND	24K	208/230VAC	4	Stranded and unshielded	16AWG
Multi-Zone Outdoor Unit to Main Power					
Outdoor to Main Power - L1, L2 and GND	18K	208/230VAC	3	Stranded and unshielded	14AWG / 18A
Outdoor to Main Power - L1, L2 and GND	24K	208/230VAC	3	Stranded and unshielded	12AWG / 24.5A
Outdoor to Main Power - L1, L2 and GND	30K	208/230VAC	3	Stranded and unshielded	12AWG / 24.5A
Outdoor to Main Power - L1, L2 and GND	36K	208/230VAC	3	Stranded and unshielded	12AWG / 25A
Outdoor to Main Power - L1, L2 and GND	48K	208/230VAC	3	Stranded and unshielded	8AWG / 35A

MCA = Minimum Circuit Amps



**Figure 26. MPC018S4M-\*P Outdoor Unit Wiring Diagram**

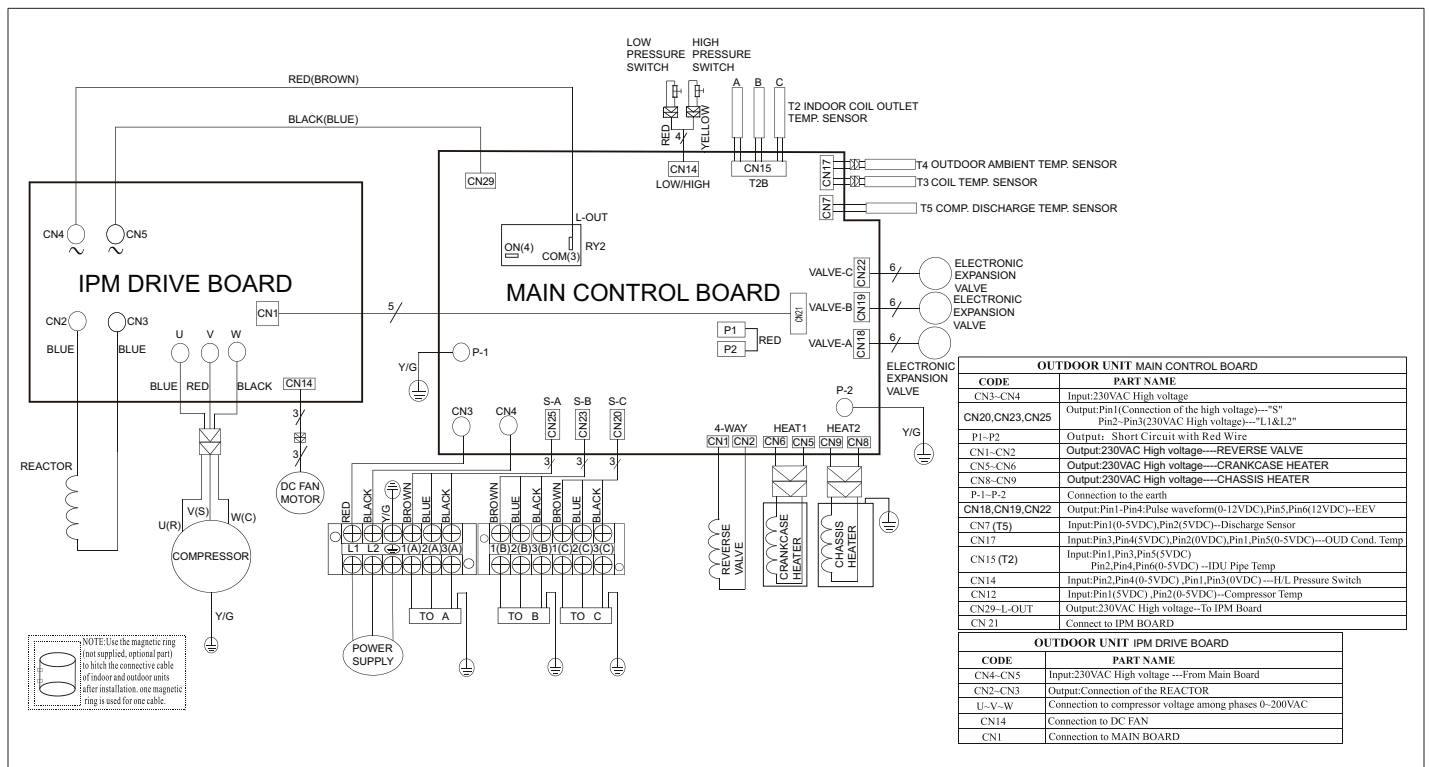


Figure 27. MPC024S4M-P Outdoor Unit Wiring Diagram

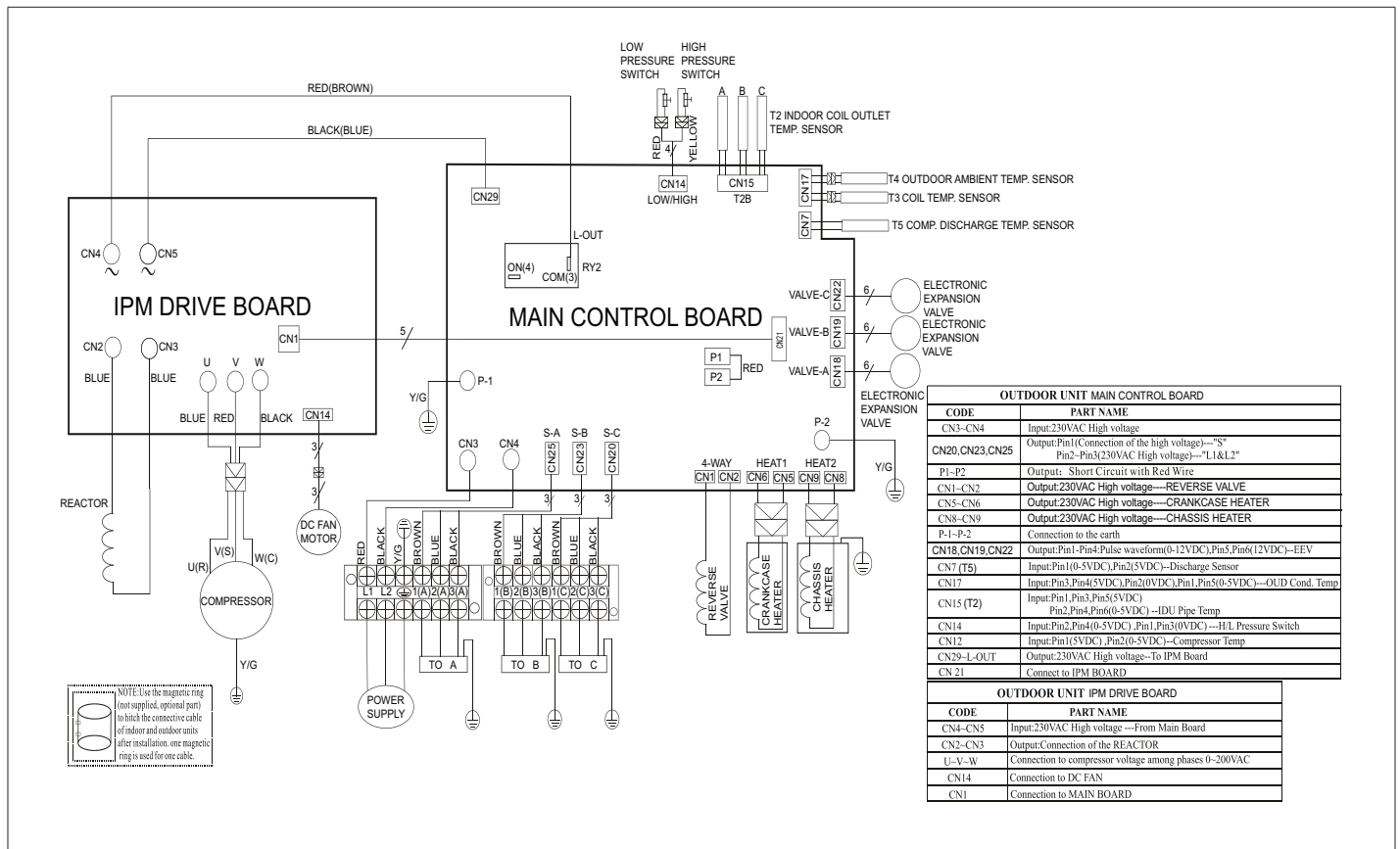


Figure 28. MPC030S4M-P Outdoor Unit Wiring Diagram

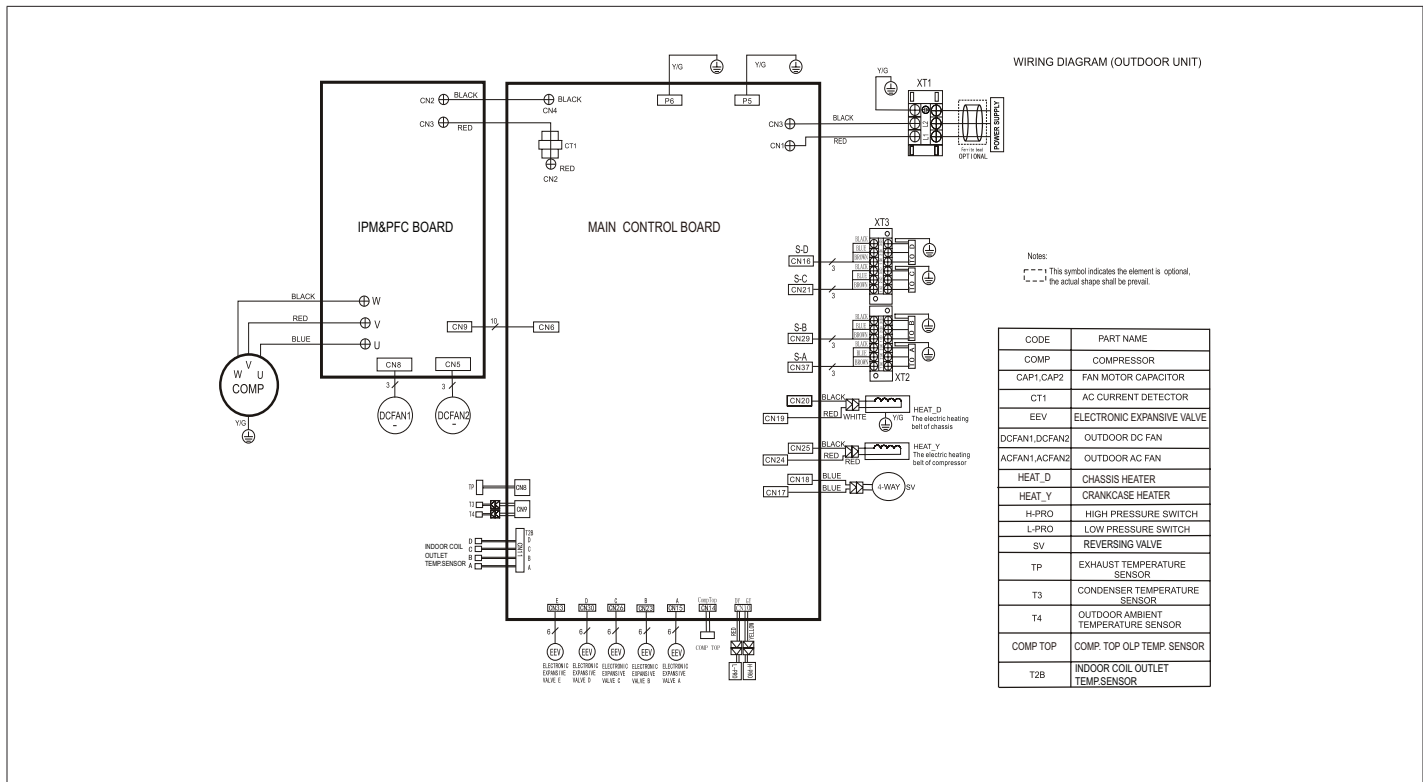


Figure 29. MPC036S4M-\*P Outdoor Unit Wiring Diagram

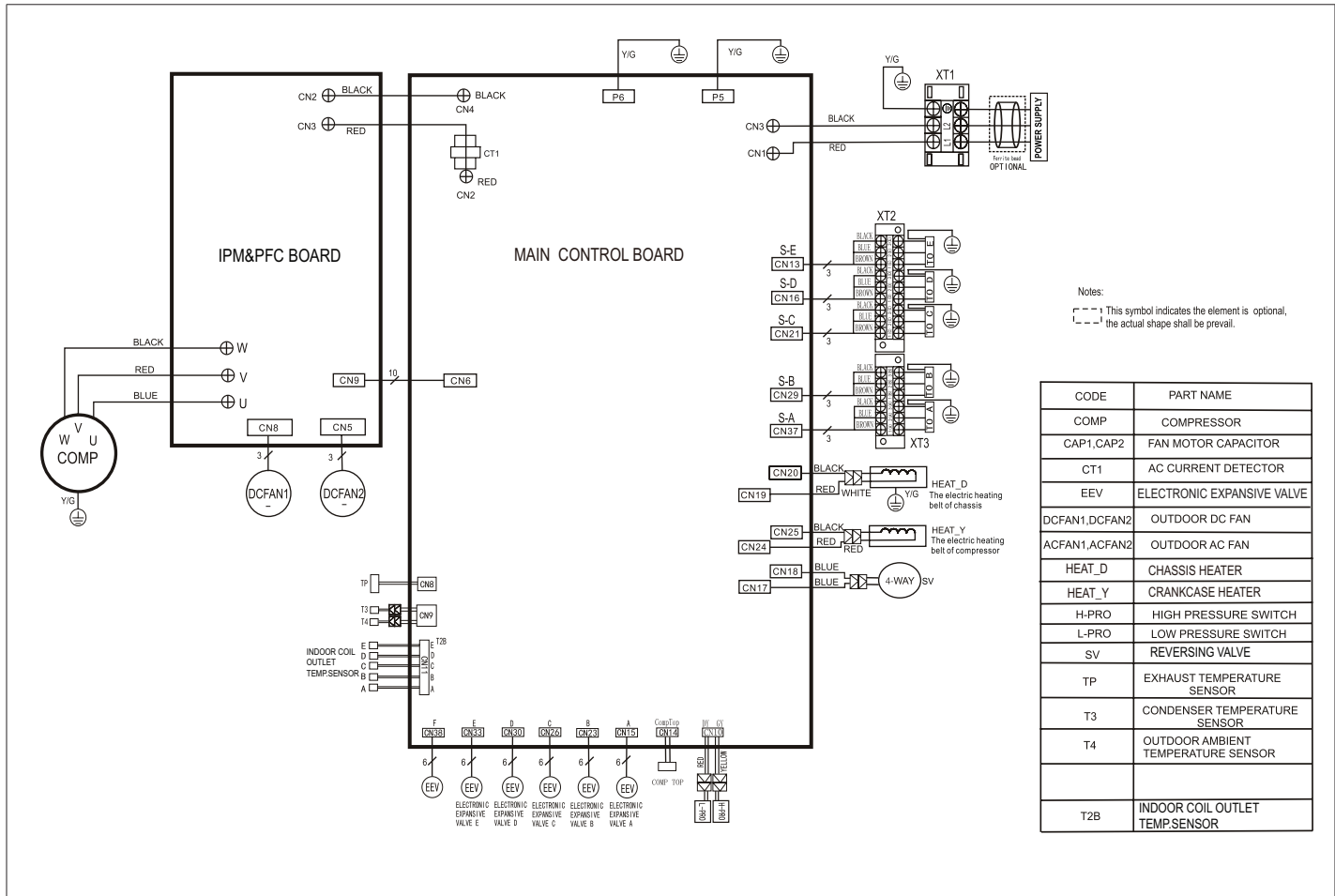


Figure 30. MPC048S4M-\*P Outdoor Unit Wiring Diagram

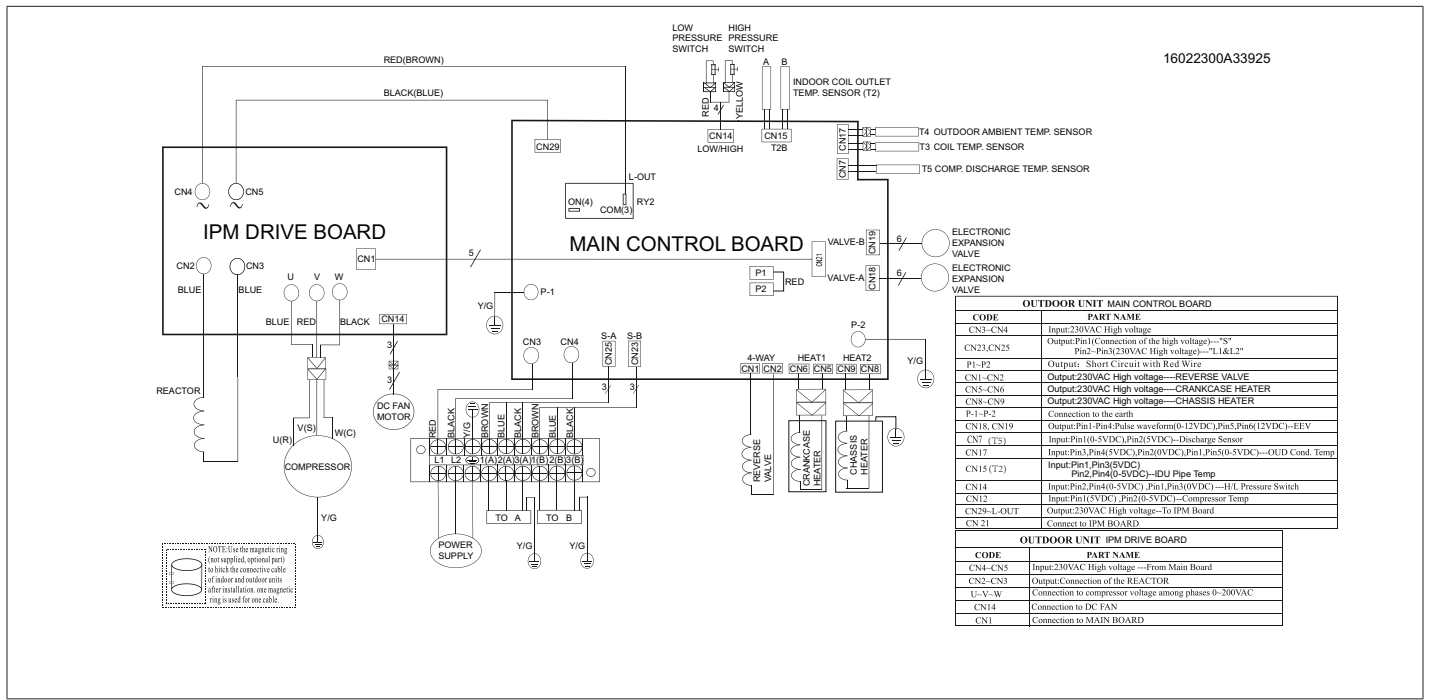


Figure 31. MLB018S4M-\*P Outdoor Unit Wiring Diagram

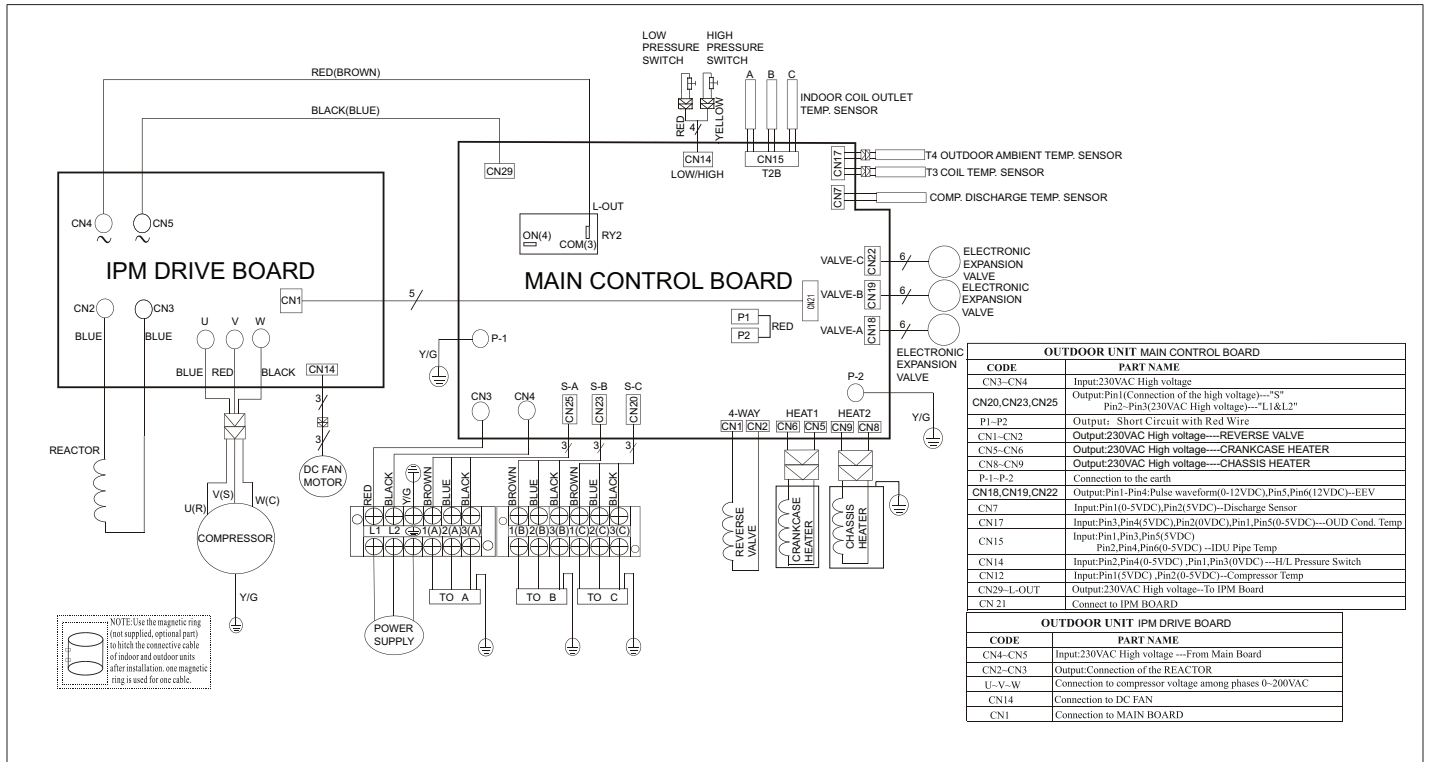


Figure 32. MLB030S4M-\*P Outdoor Unit Wiring Diagram

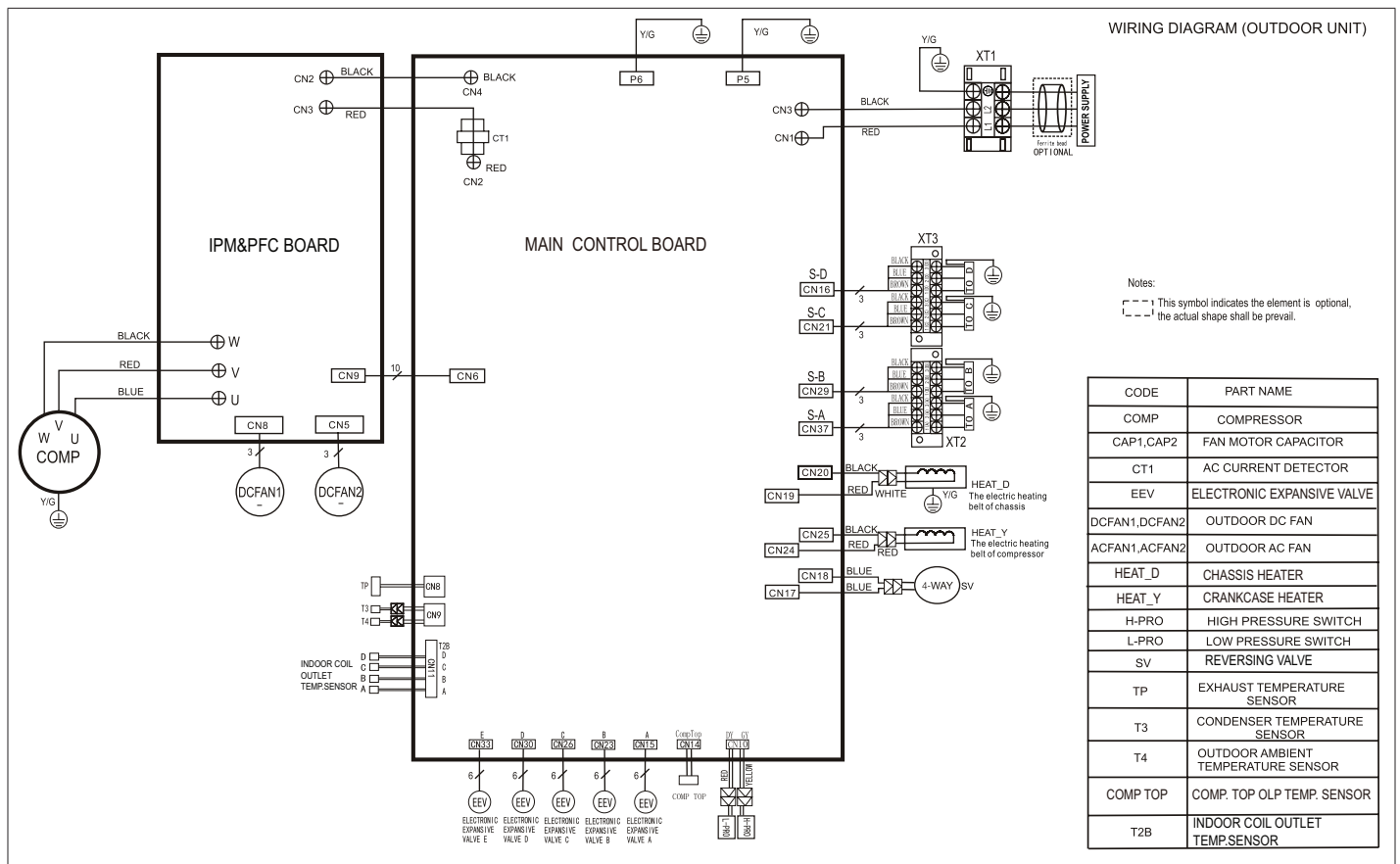


Figure 33. MLB036S4M-\*P Outdoor Unit Wiring Diagram

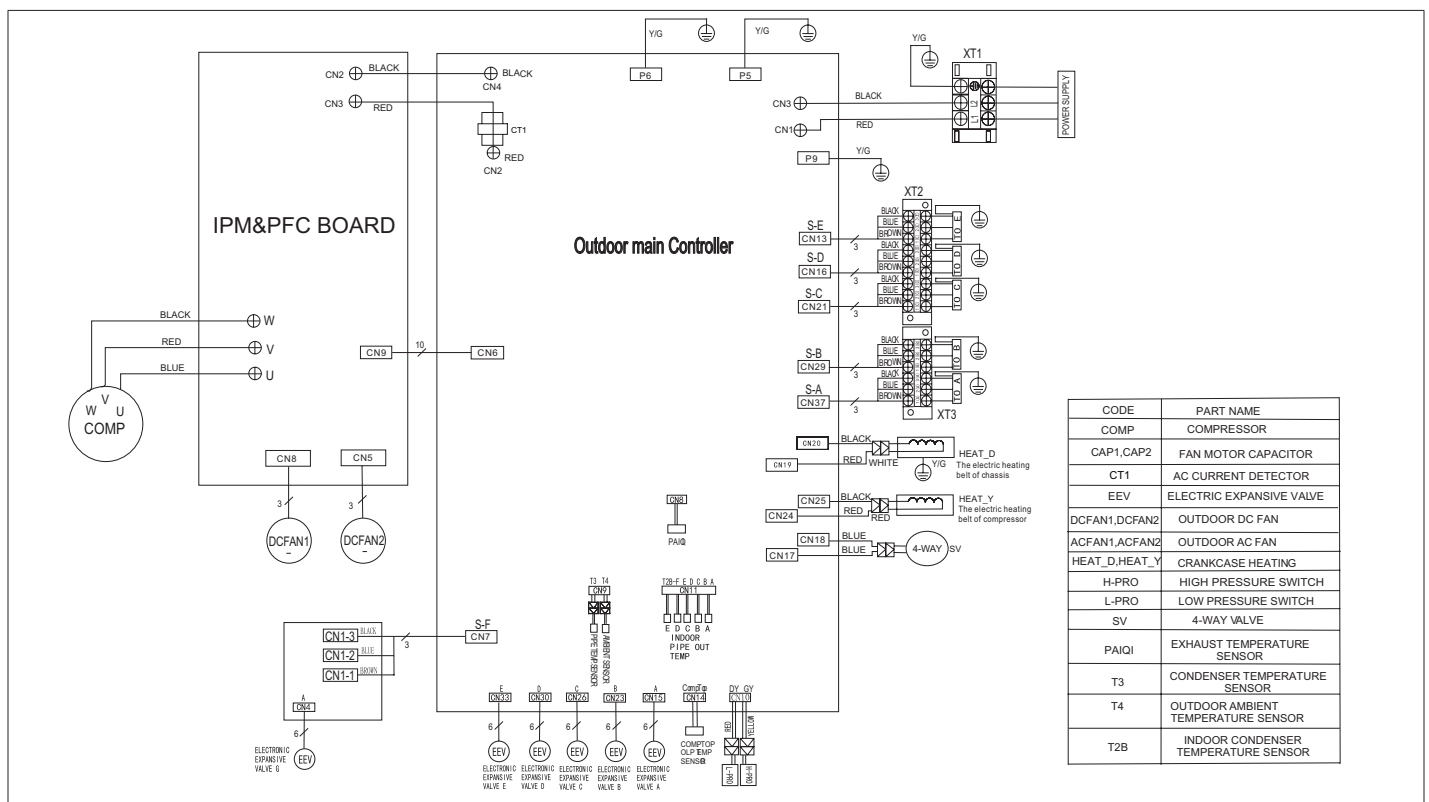


Figure 34. MLB048S4M-\*P Outdoor Unit Wiring Diagram

## Unit Start-Up

# IMPORTANT

Units should be energized 24 hours before unit start-up to prevent compressor damage as a result of slugging.

1. Inspect all factory-installed and field-installed wiring for loose connections.
2. Verify that the manifold gauge set is connected.
3. Add additional refrigerant charge if required before opening valves and while system is still under a vacuum.
4. Open the liquid and gas line master valves and each individual port's service valve to release the refrigerant charge contained in outdoor unit into the system.
5. Replace the stem caps and tighten to the value listed in "Table 7. Torque Requirements" on page 20.
6. Check voltage supply at the outdoor unit terminal strip. The voltage must be within the range listed on the unit's nameplate. If not, do not start the equipment until you have consulted with the power company and the voltage condition has been corrected.
7. Refer to the included user guide to operate the system using the provided remote control.
8. Visually check for binding of both indoor and outdoor fans.

## Refrigerant Charge

The outdoor unit is factory-charged with refrigerant. Calculate the additional refrigerant required according to the length of the liquid pipe (one way) between the outdoor unit and indoor unit connections.

Be sure to add the proper amount of additional refrigerant. Failure to do so may result in reduced performance.

**Table 15. Refrigerant Charge**

System	Pre-charge Pipe Length	Amount of Refrigerant to add
Two-port	50 ft. (15 m)	0.16 oz ((L1 ft + L2 ft) - 50 ft) 0.005 kg ((L1 m + L2 m) - 15 m)
Three-port	75 ft. (23 m)	0.16 oz ((L1 ft + L2 ft + L3 ft) - 75 ft) 0.005 kg ((L1 m + L2 m + L3 m) - 23 m)
Four-port	100 ft. (30 m)	0.16 oz ((L1 ft + L2 ft + L3 ft + L4 ft) - 100 ft) 0.005 kg ((L1 m + L2 m + L3 m + L4 m) - 30 m)
Five-port	125 ft. (38 m)	0.16 oz ((L1 ft + L2 ft + L3 ft + L4 ft + L5 ft) - 125 ft) 0.005 kg ((L1 m + L2 m + L3 m + L4 m + L5 m) - 38 m)

## Multi-Zone Outdoor Unit Error Codes

The error code display is located on the main controller board of all multi-zone outdoor units.

**Table 16. MLB and MPC Multi-Zone Outdoor Unit Error Codes**

Display	Malfunction and Protection Indication
<b>EL01</b>	Communication malfunction between indoor and outdoor units.
<b>FL14</b>	Capability mismatch between indoor unit and outdoor unit
<b>EC50</b>	Outdoor temperature sensor error.
<b>EC51</b>	Outdoor EEPROM error.
<b>EC52</b>	Condenser coil temperature sensor (T3) malfunction.
<b>EC53</b>	Outdoor ambient temperature sensor (T4 ) malfunction.
<b>EC54</b>	Compressor discharge temperature sensor TP is in open circuit or has short circuited
<b>EC55</b>	Outdoor IPM module temperature sensor malfunction
<b>EC56</b>	Outdoor T2B sensor error.
<b>EC57</b>	Refrigerant pipe temperature sensor error.
<b>EC07</b>	Outdoor DC fan motor malfunction/fan speed out of control.
<b>EC71</b>	Over current failure of outdoor DC fan motor.
<b>EC72</b>	Lack phase failure of outdoor DC fan motor.
<b>PC00</b>	Inverter module (IPM) protection.
<b>PC02</b>	Top temperature protection of compressor.
<b>PC06</b>	Discharge temperature protection of compressor.
<b>PC08</b>	Outdoor over-current protection.
<b>PC0A</b>	High temperature protection of condenser.
<b>PC0F</b>	PFC module protection.
<b>PC0L</b>	Low temperature protection of outdoor unit.
<b>PC10</b>	Outdoor unit low AC voltage protection.
<b>PC11</b>	Outdoor unit main control board DC bus high voltage protection.

**Table 16. MLB and MPC Multi-Zone Outdoor  
Unit Error Codes**

<b>Display</b>	<b>Malfunction and Protection Indication</b>
<b>PC12</b>	Outdoor unit main control board DC bus high voltage protection / 341 Machine Check Error (MCE) error.
<b>PC30</b>	System high pressure protection
<b>PC31</b>	System low pressure protection
<b>PC40</b>	Communication error between outdoor main chip and compressor driven chip
<b>PC42</b>	Compressor start failure of outdoor unit
<b>PC43</b>	Outdoor compressor lack phase protection
<b>PC44</b>	Outdoor unit zero speed protection
<b>PC45</b>	Outdoor unit IR chip drive failure
<b>PC46</b>	Compressor speed has been out of control
<b>PC49</b>	Compressor over-current failure
<b>PCA1</b>	Condensation protection of refrigerant pipe
<b>PH90</b>	High temperature protection of Evaporator
<b>PH91</b>	Low temperature protection of Evaporator
<b>LC06</b>	High temperature protection of Inverter module (IPM)