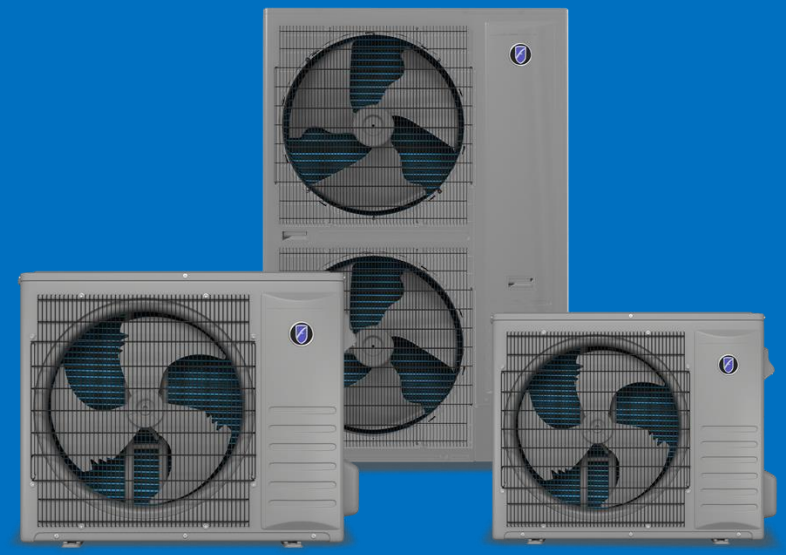
BREEZE

THE UNIVERSAL HEAT PUMP

Quick Start Guide: Breeze Premier 2025 R-454B Models

FRIEDRICH

Product Portfolio - Overview



Breeze Premier ODU

Breeze Air Handlers

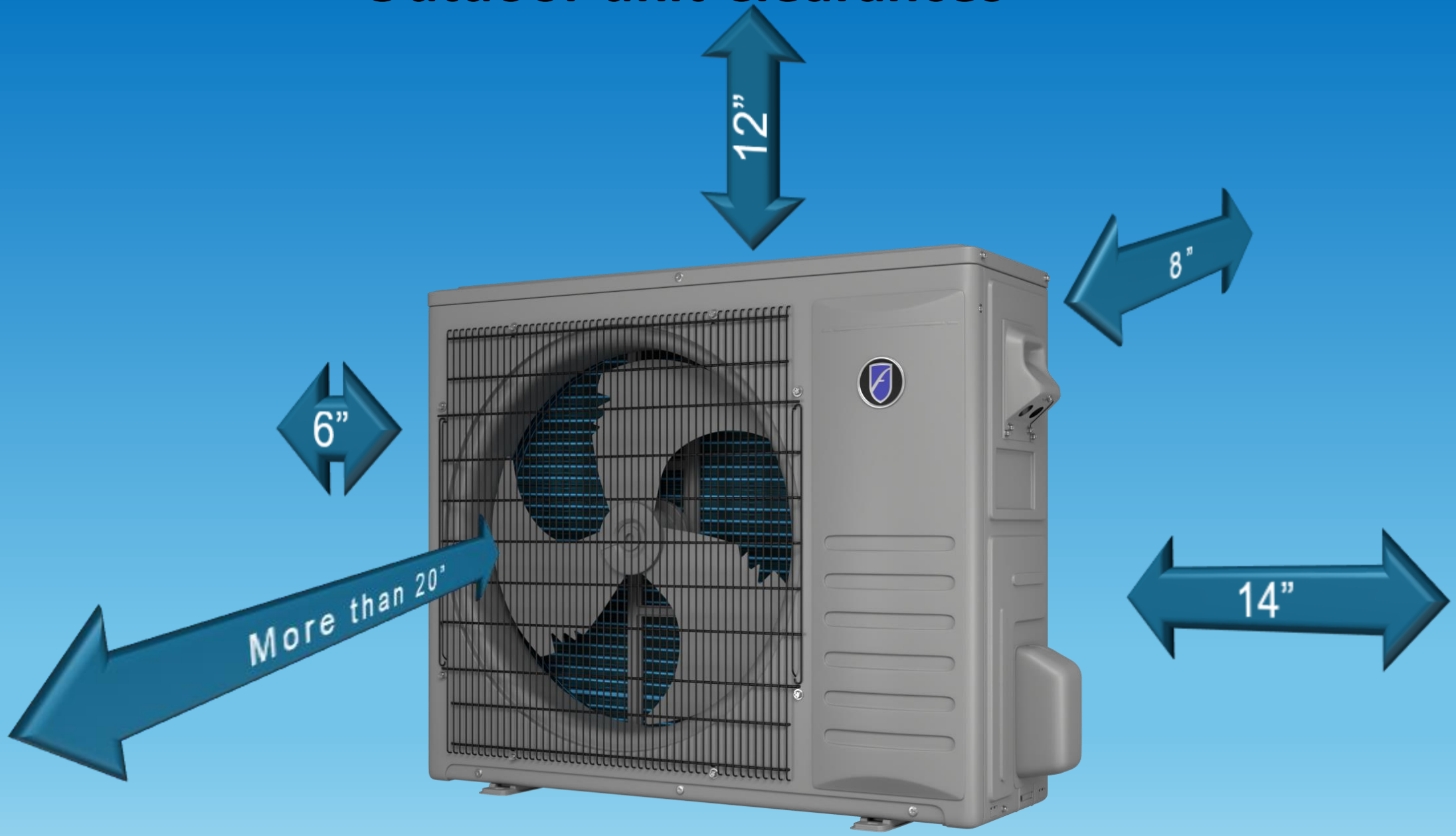
CUSTOMIZED COMFORT

Matched & Unmatched Universal Flexibility

- Universal compatibility (must use R-454B)
- Accommodates long piping runs up to 246 ft. and height differentials up to 98 ft.
- Precision Inverter® delivers efficiencies of up to 19.0 SEER2 and 10 HSPF2.
- Operates in extreme temperatures down to -22° F in heat pump mode, with cooling in temperatures as low as 5°F.
- Built-in base pan heater, crankcase heater, and onboard diagnostics.
- Soft-StartTM technology for quiet start-up, and precise temperature control.
- Quiet operation as low as 35 dB(A).
- Ultra-compact design with a 40% smaller footprint than traditional top discharge units.
- Multi-position Air Handler with optional auxiliary heater kits.
- ENERGY STAR® Certified for Cold Climate models available.

Eligible for many federal, local tax credits, rebate incentives & Exclusive Features.

Outdoor unit Clearances



Heat Pump Diagnostic Checker

– Fault codes, Parameters, & Test Mode Settings

All Outdoor units have a diagnostic checker for Fault code retrieval and running Parameter check.

Do not remove the power before retrieving the error codes.

Outdoor Dip Switches located on the Diagnostic Checker of the Heat Pump.

Parameters can be checked as following table below.

Parameter Code	Descriptions	Parameter Code	Descriptions
P.0	Fault codes	P.27	Outdoor DC Motor 2 target speed
P.1	Compressor actual frequency	P.29	The current opening of the outdoor expansion valve
P.2	Compressor driving frequency	A.1	Unit A fault codes
P.4	Compressor target frequency	A.2	Unit A valve actual opening
P.5	Compressor exhaust temperature	A.4	Unit A liquid pipe temperature
P.6	Outdoor suction Temperature	A.5	Unit A gas pipe temperature
P.7	Outdoor ambient temperature	A.6	Unit A coil temperature
P.8	Outdoor coil temperature	A.7	Unit A ambient temperature
P.9	Outdoor defrosting temperature	A.8	Unit A set temperature
P.10	IPM module temperature	A.9	Unit A capacity
P.11	Outdoor capacity requirement	A.10	Unit A set fan speed
P.12	IPM fault codes	A.11	Unit A actual suction overheating (cooling)
P.13	Outdoor DC Motor 1 target speed		
P.14	AC input current		
P.15	AC input voltage		
P.16	DC bus voltage		
P.17	Compressor phase current		
P.18	Frequency limit code		
P.20	Target suction overheating		
P.21	Target exhaust overheaingt		
P.22	Actual suction overheating (heating)		
P.23	Actual exhaust overheating (heating)		

NOTES:
P11 is expressed as a coeffficient and is only used for developmental purposes or R&D. This code is not for trouble-shooting.
P12 is the Driver Fault. Code will first dhow up as 45 fault code. Then when you call up the P12, it will show the sub fault code.

Outdoor unit additional charge requirements

Unit is factory charged For 25’ LF of copper line.

Use chart to calculate Additional charge.

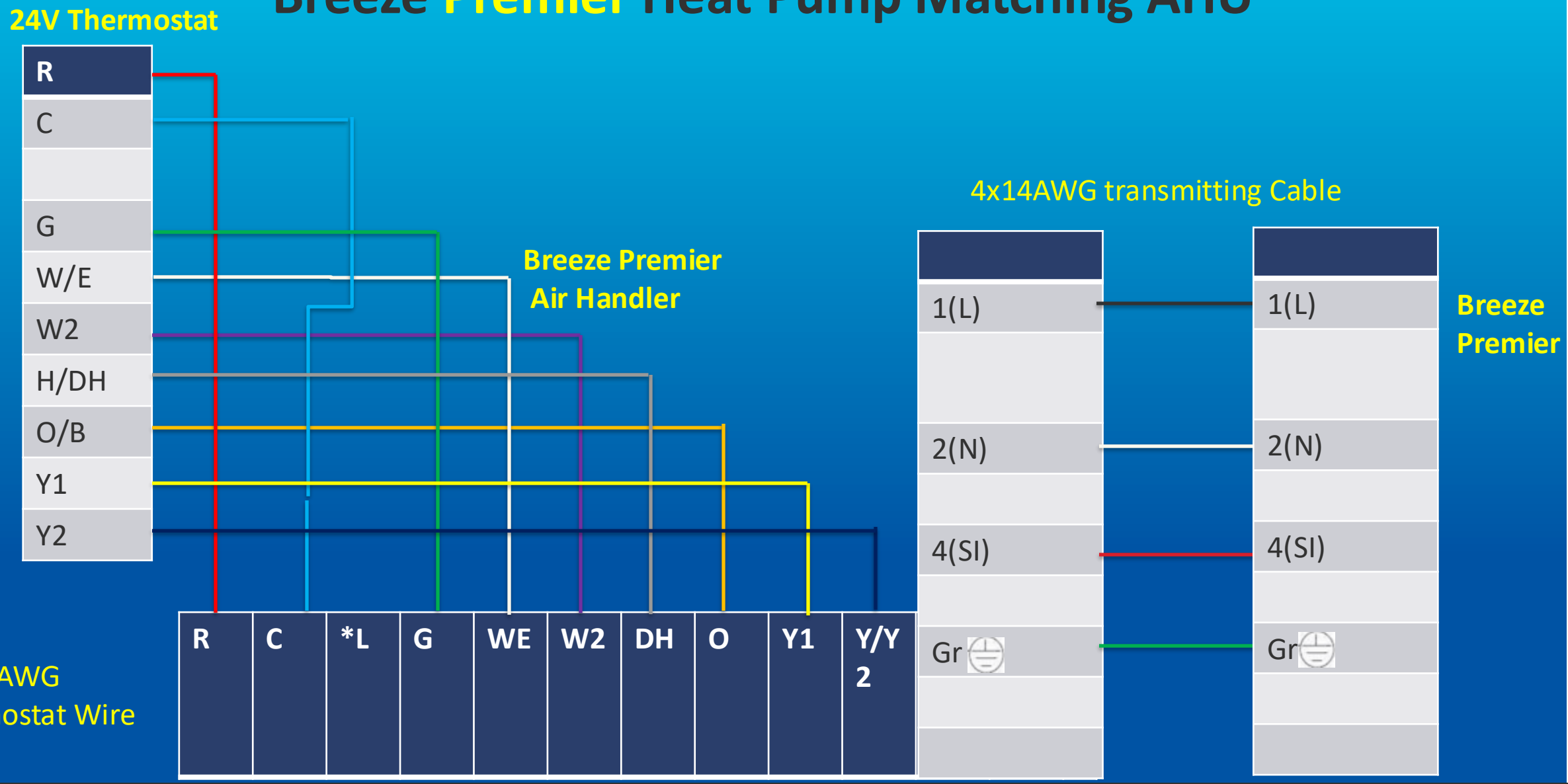
Amount of refrigerant additionally charged

If the pipe length is less than 25ft.(7.5 m), there is no need for additional charging after triple evacuation. When the length of the pipe is greater than 25ft.(7.5 m), calculate according to the following table.

Capacity (Btu/h)	Amount of refrigerant pre-charged before leaving the factory/W_0[oz(g)]	Amount of refrigerant additionally charged X [oz(g)]	
		pipe length(L)≤ 25ft.(7.5m)	pipe length(L)≥ 25ft.(7.5m)
24K*	74.1(2100)	0	X=0.38(oz/ft) [35(g/m)]× [L-25ft.(7.5m)]
36K	112.8(3200)	0	X=0.38(oz/ft) [35(g/m)]× [L-25ft.(7.5m)]
48K	172.8(4900)	0	X=0.38(oz/ft) [35(g/m)]× [L-25ft.(7.5m)]

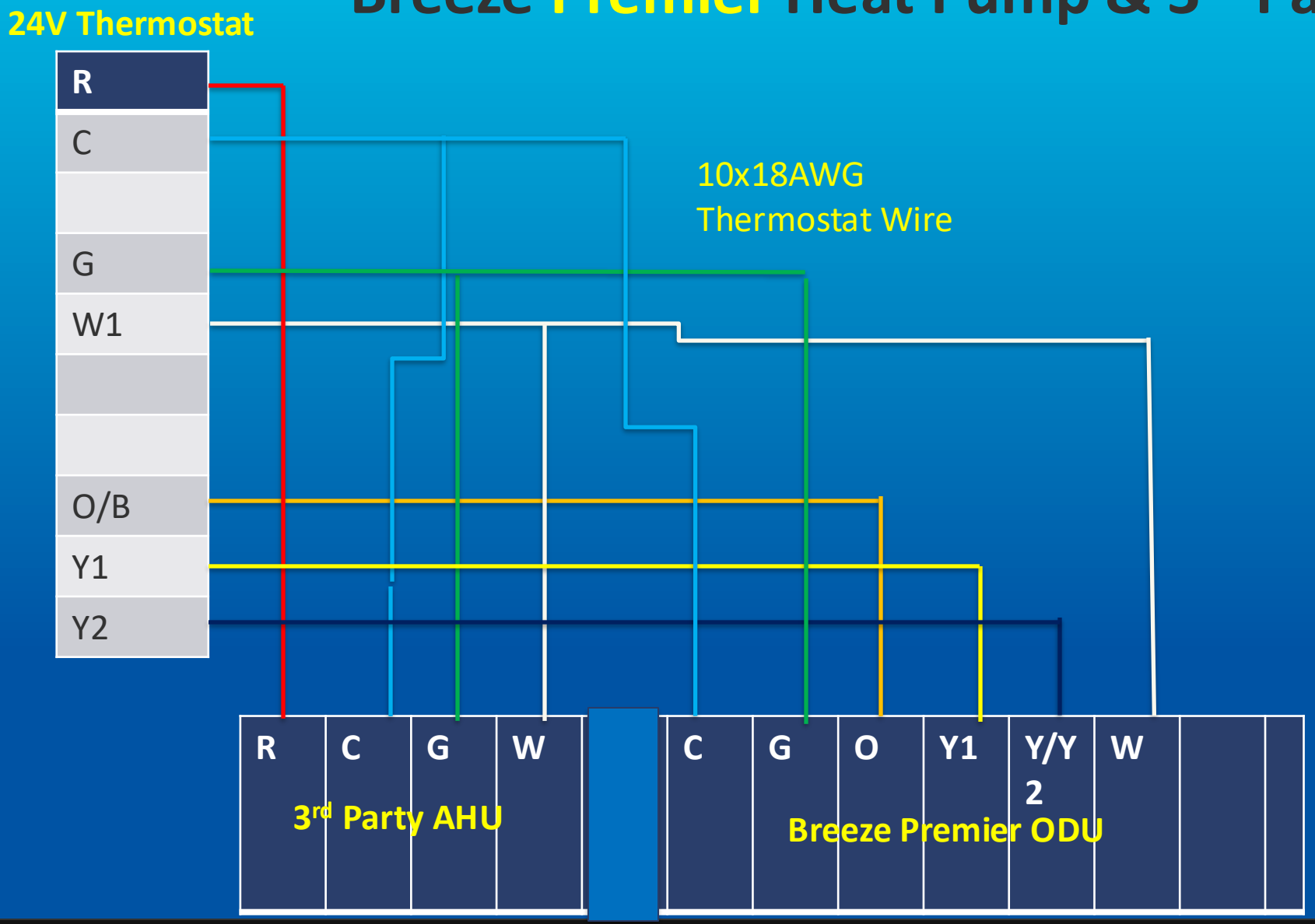
*: For 24K unit, when it connect to AHU indoor unit, an additional refrigerant charge of 7.05 oz (200g) is required for the outdoor unit system configuration.

Breeze Premier Heat Pump Matching AHU



*L terminal is an Optional alert/alarm contact for A2L purposes.

Breeze Premier Heat Pump & 3rd Party AHU



Breeze-Premier Air Handler Diagnostic Checker

Capacity (Btu/h)	The Range of Static Pressure	Function Code Set
18K/24K/36K/ 48K/60K	0-0.80 in. H_2O (0-200Pa)	0-200 function code value equals static pressure value, more than 145 is 0.58 in. H_2O (145Pa). [default: 0.58 in. H_2O (145Pa)]

Note: The pressure loss of filter is included in the data above.

Air handler has a diagnostic checker for Fault code retrieval, running Indoor Parameter check & for setting Static pressure.

Do not remove the power before retrieving the error codes.

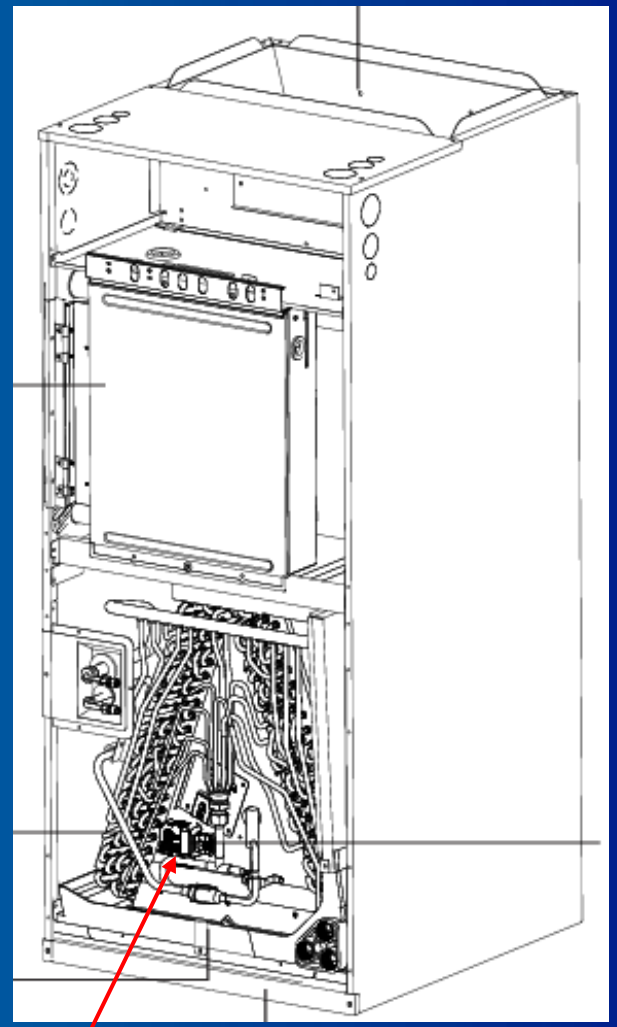
Parameter	Prarameter
P.1	Display Static Pressure
P.3	Set Static Pressure
P.13	Monitor Indoor Fan RPM
P.19	Adjust Indoor Fan RPM
A.1	Unit A Fault Code
A.2	Unit A Valve Actual Opening
A.3	The opening of the A valve is set
A.6	Unit A Coil Temperature
A.7	Unit A Ambient Temperature

A2L Sensor Sequence of Operation

Breeze Air Handler is using an EPA approved A2L Sensor Device, intended to control and protect homeowners and dwellings for A2L refrigerant equipment. The system will operate in the following manner when the buildup and release of A2L refrigerant is detected below:

NOTE: A2L sensor is factory installed and wired into the air handler control board.

1. The Breeze air handler's A2L sensor monitors the internal cabinet for unsafe refrigerant leak levels. In case of no refrigerant leak, the unit runs normal based of thermostat set points and commands.
2. If there are refrigerant leaks, and the refrigerant sensor detects concentration levels that reach the alarm threshold, the refrigerant sensor outputs a 12v control signal to forcibly turn on high speed blower to dilute the air/gas mixture. Simultaneously the control board will forcibly turn off signal to the outdoor unit stopping the compressor and outdoor fan.(This signal activates in standby mode as well and will not allow the outdoor unit to start).
3. During a refrigerant leakage detection condition, the terminal "L" outputs a 24v fault signal. When connecting the same brand of indoor unit, it is recommended to be matched with a wired controller with fault signal detection inputs or connect the terminal "L" of the indoor unit to an audible horn/alarm/bell or thermostat input to display on screen.
4. After the alarmed levels of A2L gases are removed/diluted the system will automatically restart.



Warranty Disclosure

- 7-year All parts out of the box
- 10-year Compressor out of the box
- *Warranty Commencing on the date of installation or 120 days after original End-user purchase date
- 10-year Parts / 10-Year Compressor with system product registration.
- 5-year Parts / 5-Year Compressor Commercial Use Installation

FRIEDRICH

BREEZE™
THE UNIVERSAL HEAT PUMP