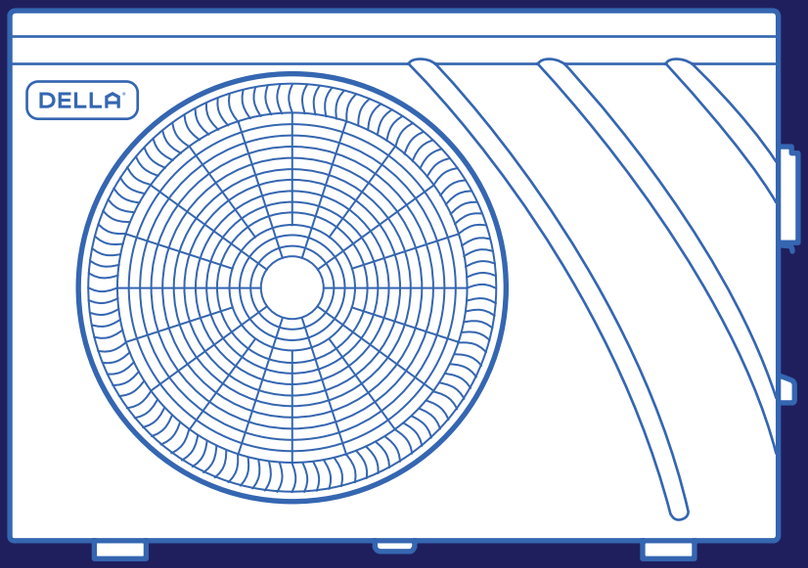
DELLA®



Omi Edge Series

Instruction Manual
Installation and Operation Guide

Table of Content

Warning and Safety

- Read this guide before installation. Failure to follow the safety instructions may result in property damage, serious injury, or death.
- Please keep this manual.

DANGER

Danger:
Indicates an IMMINENTLY hazardous situation that, if not avoided, will result in death, serious injury, or serious property damage.

WARNING

Warning:
Indicates a POTENTIALLY hazardous situation that, if not avoided, will result in death, serious injury, or serious property damage.

CAUTION

Caution:
Indicates a POTENTIALLY hazardous situation that, if not avoided, will result in minor to moderate injury. It may also be used to indicate unsafe practice.

Attention:
Pay additional attention to the instruction.

DO NOT:
Indicates prohibited actions and / or practice.

About Refrigerant

DANGER

- The heat pump inverter contains R32 refrigerant. Check if there is any leakage during installation. Refrigerants have no odor and can be toxic and flammable. Rapid evaporation of refrigerant may cause frostbite, cardiac arrhythmia, and / or irritation, as well as cause environmental damage.
- In the case of refrigerant leakage, shut down the appliance and disconnect from the power supply. Inspection and repairs must be performed by a qualified HVAC technician.

WARNING

- When Installing or using the appliance with R32 refrigerant, beware of the following symbols displayed on the unit.
  - This symbol means this appliance uses a flammable refrigerant.
    If the refrigerant is leaded and exposed to an external ignition source, there is a risk of fire.
  - This symbol means that read the operation instruction carefully.
  - This symbol means that personnel handling the equipment should reference to the installation manual.
  - This symbol means information is available in the installation or operation instruction manual.
- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized.
- Work shall be taken under a controlled procedure to minimize the risk of flammable gas or vapor being present while installation, repair, or any work on the unit is being performed.
- Check the work area with refrigerant detector prior to and during work to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants.
- Ensure the work area is open or adequately ventilated. A degree of ventilation shall continue during the period that the work is carried out. Ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Warning and Safety

About Installation

- Do not install or use this appliance near flammable substances such as alcohol, gasoline, paint, etc. Or pressurized containers such as spray cans.
- Do not store, install or use this appliance in a room with continuously operating ignition sources such as open flames, gas appliances, or electric heaters.
- Do not alter, change, or modify the appliance.

- Prevent children from accessing the work area during installation to prevent unforeseeable accident.
- Carry out a test run after the installation.
- Wear protective gloves and clothing during installation to prevent cuts or injuries.
- The unit must be installed on a stable and leveled ground.
- Make sure the surrounding space clearance of the unit are observed for optimal operation.

About Power and Electricity

- Ensure that the power voltage corresponds to that stamped on the rating plate.
- Make sure this appliance is connected to a power supply with a disconnect box.
  Do not use power plug or wall socket for power. Improper installation may result in fire or electric shock.
- Make sure electrical components do not directly contact with water.
- Electrical wiring should be performed by licensed electrician in accordance with local electrical codes.
- The machine must be properly bonded to the bonding grid in accordance with local electrical codes.
- Regularly check for any electrical leakage. Do not use the machine if a leakage is detected until the problem is properly addressed.

- Do not bend, tug, or compress the power cable during installation to prevent damaging the power cord. Damaged electrical cord should be replaced by a qualified electrician.

About Operation

- Do not disconnect the appliance from the power supply before shutting off the appliance. This might create a spark and potentially cause a fire.
- Do not place flammable substances near the appliance.
- Do not climb onto or place any objects on the appliance.
- Do not insert any objects into the appliance to prevent damage or injury.
- Do not obstruct the air inlet or outlet.
- Do not operate the appliance with wet hands.

- Only use the appliance as instructed in this booklet. These instructions are not intended to cover every possible condition and situation. As with any electrical household appliance, common sense and caution are therefore always recommended for usage and maintenance.
- Children shall not play with the appliance.

Warning and Safety

Encountering Troubles

- In the case of the appliance emitting smoke, burning smell, leaking water, or making unusual noise, shut down the appliance and disconnect from the power supply immediately. Contact a qualified technician for inspection and repair.

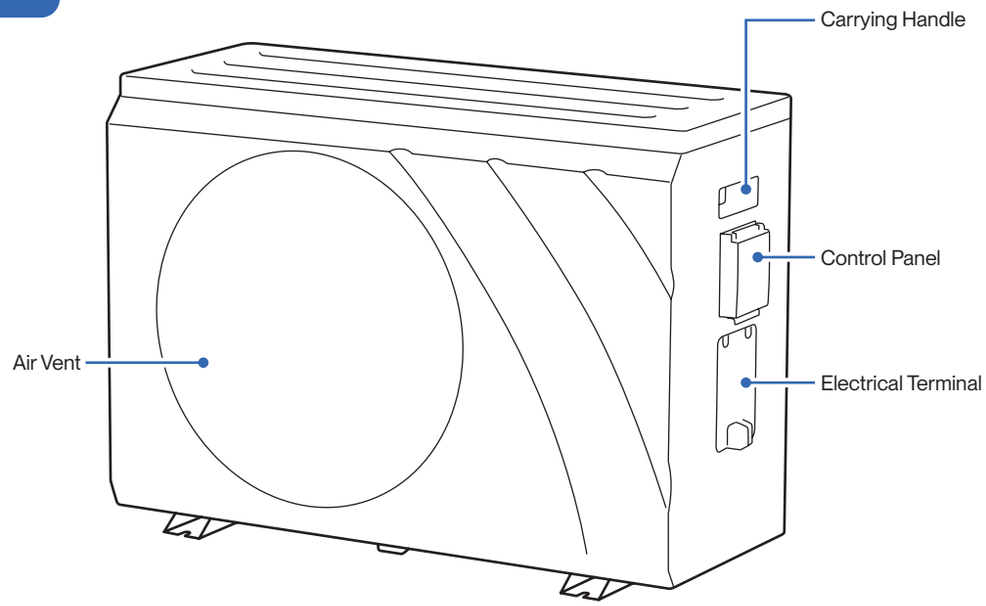
About Handling and Maintenance

- Do not attempt to disassemble, alter, or modify the appliance.

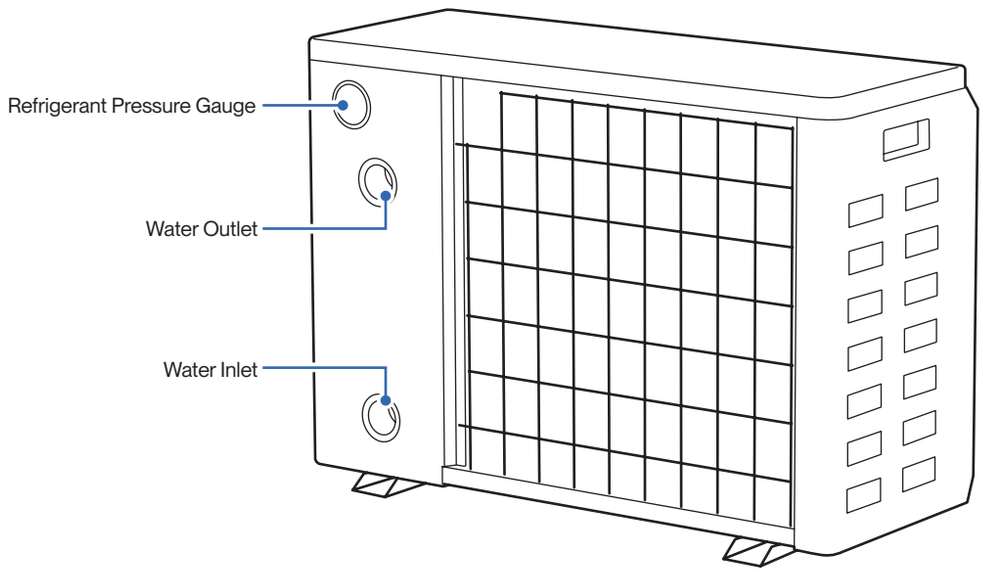
- Repairs should be carried out by a professional or qualified technician only. Incorrect repair could expose the user to potential electric shock or other kinds of hazard.
- Power should be disconnected and product should be OFF before servicing.

Name of Parts

Front

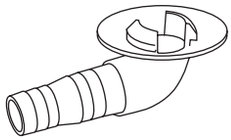


Back



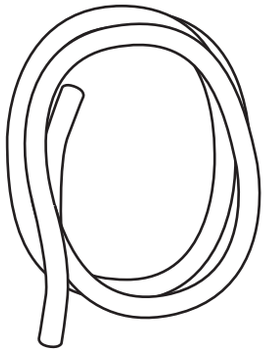
Name of Parts

Package Contents



Drain Hose Connector

1x

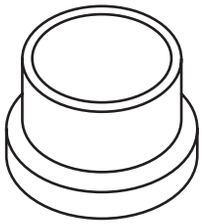


Drain Hose

1x

Rubber Foot Pad

4x



1.5" Union Fitting Slip Joint & Nut

2x

Parts / Tools Needed (Not Included)

- Electrical Cable
- Schedule 40 PVC pipe
- PVC cement
- PVC Valves
- Disconnect Box
- PVC Pipe Cutting Tools

Product Specification

		PH-024-1V-S	PH-028-1V-S	PH-038-2V-S
Power Supply		110 - 120 V / 60 Hz / 1P	110 - 120 V / 60 Hz / 1P	208 - 230V / 60 Hz / 1P
Max. Current		15 A	17.5A	10.2 A
Max. Circuit Ampacity		19 A	23 A	15 A
Breaker Size		25 A	30 A	20 A
Recommended Electrical Wire		12 AWG	12 AWG	14 AWG
Noise Level		45 dBA	48 dBA	50 dBA
Dimension		32.91" x 13.19" x 23.39"	32.91" x 13.19" x 23.39"	35.28" x 14.29" x 25.24"
Net Weight		81.57 lb	83.78 lb	99.21 lb
Refrigerant (Type, Charge, GWP)		R32, 12.35 oz, 675	R32, 15.52 oz, 675	R32, 25.40 oz, 675
Operation Pressure	Low Side	1.6 MPa	1.6 MPa	1.6 MPa
	High Side	4.15 MPa	4.15 MPa	4.15 MPa
Maximum Allowable Pressure		4.40 MPa	4.40 MPa	4.40 MPa
Water Pipe Fitting		1.5"	1.5"	1.5"
Water Flow Volume		13.21 gal / m	16.07 gal / m	21.58 gal / m
Recommended Pool Volume (Indoor)		4203 - 7519 gal	4615 - 8733 gal	8575 - 12630 gal
Recommended Pool Volume (outdoor)		1910 - 3575 gal	2098 - 4050 gal	3898 - 5961 gal
Operating Ambient Temperature Range	Heat Mode	5°F - 109°F / -15°C - 43°C	5°F - 109°F / -15°C - 43°C	5°F - 109°F / -15°C - 43°C
	Cool Mode	59°F - 109°F / 15°C - 43°C	59°F - 109°F / 15°C - 43°C	59°F - 109°F / 15°C - 43°C
Set Temperature Range	Heat Mode	47°F - 104°F / 8°C - 40°C	47°F - 104°F / 8°C - 40°C	47°F - 104°F / 8°C - 40°C
	Cool Mode	47°F - 83°F / 8°C - 28°C	47°F - 83°F / 8°C - 28°C	47°F - 83°F / 8°C - 28°C
Heating Capacity	80.6°F Air 80% Humidity 80°F Water In	23890 btu/h	28670 btu/h	38560 btu/h
Power Input		1520 w	1715 w	1915 w
COP		4.6 w/w	4.9 w/w	5.9 w/w
Heating Capacity	80.6°F Air 63% Humidity 80°F Water In	22180 btu/h	27300 btu/h	36180 btu/h
Power Input		1495 w	1720 w	1927w
COP		4.34 w/w	4.65 w/w	5.5 w/w
Heating Capacity	50°F Air 63% Humidity 80°F Water In	10240 btu/h	13680 btu/h	22180 btu/h
Power Input		746 w	1000 w	1605 w
COP		4.02 w/w	4.01 w/w	4.05 w/w
Cooling Capacity	95°F Air 84.2°F Water In 80.6°F Water Out	12570 btu/h	13440 btu/h	17950 btu/h
Power Input		851 w	980 w	1241 w
EER		4.33 w/w	4.02 w/w	4.24 w/w
CO_2 Equivalent		0.2363 t	0.297 t	0.486 t

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Product Specification

		PH-048-2V-S	PH-059-2V-S	PH-082-2V-S
Power Supply		208 - 230V / 60 Hz / 1P	208 - 230V / 60 Hz / 1P	208 - 230V / 60 Hz / 1P
Max. Current		11.6 A	16.2 A	23.5 A
Max. Circuit Ampacity		16 A	22 A	33 A
Breaker Size		25 A	30 A	40 A
Recommended Electrical Wire		14 AWG	10 AWG	10 AWG
Noise Level		52 dBA	54 dBA	56 dBA
Dimension		35.28" x 14.29" x 25.24"	35.28" x 14.29" x 25.24"	41.57" x 15.79" x 29.13"
Net Weight		109.1 lb	109.1 lb	142.2 lb
Refrigerant (Type, Charge, GWP)		R32, 29.98 oz, 675	R32, 29.98 oz, 675	R32, 38.8 oz, 675
Operation Pressure	Low Side	1.6 MPa	1.6 MPa	1.6 MPa
	High Side	4.15 MPa	4.15 MPa	4.15 MPa
Maximum Allowable Pressure		4.40 MPa	4.40 MPa	4.40 MPa
Water Pipe Fitting		1.5"	1.5"	1.5"
Water Flow Volume		25.54 gal / m	32.14 gal / m	44.47 gal / m
Recommended Pool Volume (Indoor)		9219 - 14509 gal	9398 - 18036 gal	12419 - 25450 gal
Recommended Pool Volume (outdoor)		4190 - 6859 gal	4272 - 8527 gal	5645 - 12017 gal
Operating Ambient Temperature Range	Heat Mode	5°F - 109°F / -15°C - 43°C	5°F - 109°F / -15°C - 43°C	5°F - 109°F / -15°C - 43°C
	Cool Mode	59°F - 109°F / 15°C - 43°C	59°F - 109°F / 15°C - 43°C	59°F - 109°F / 15°C - 43°C
Set Temperature Range	Heat Mode	47°F - 104°F / 8°C - 40°C	47°F - 104°F / 8°C - 40°C	47°F - 104°F / 8°C - 40°C
	Cool Mode	47°F - 83°F / 8°C - 28°C	47°F - 83°F / 8°C - 28°C	47°F - 83°F / 8°C - 28°C
Heating Capacity	80.6°F Air 80% Humidity 80°F Water In	48800 btu/h	59040 btu/h	82250 btu/h
Power Input		2252 w	3090 w	4630 w
COP		6.35 w/w	5.6 w/w	5.20 w/w
Heating Capacity	80.6°F Air 63% Humidity 80°F Water In	46080 btu/h	55800 btu/h	76450 btu/h
Power Input		2270 w	3056 w	4435 w
COP		5.95 w/w	5.35 w/w	5.05 w/w
Heating Capacity	50°F Air 63% Humidity 80°F Water In	31400 btu/h	30380 btu/h	40140 btu/h
Power Input		2190 w	2210 w	2920 w
COP		4.2 w/w	4.01 w/w	4.02 w/w
Cooling Capacity	95°F Air 84.2°F Water In 80.6°F Water Out	20130 btu/h	25180 btu/h	25250 btu/h
Power Input		1528 w	1979 w	2751 w
EER		3.86 w/w	3.73 w/w	2.69 w/w
CO_2 Equivalent		0.57375 t	0.5738 t	0.7425 t

Product Specification

		PH-107-2V-S
Power Supply		208 - 230V / 60 Hz / 1P
Max. Current		30 A
Max. Circuit Ampacity		40 A
Breaker Size		50 A
Recommended Electrical Wire		8 AWG
Noise Level		58 dBA
Dimension		41.57" x 15.79" x 29.13"
Net Weight		182.98 lb
Refrigerant (Type, Charge, GWP)		R32, 45.86 oz, 675
Operation Pressure	Low Side	1.6 MPa
	High Side	4.15 MPa
Maximum Allowable Pressure		4.40 MPa
Water Pipe Fitting		1.5"
Water Flow Volume		59.45 gal / m
Recommended Pool Volume (Indoor)		14330 - 33158 gal
Recommended Pool Volume (outdoor)		6514 - 15634 gal
Operating Ambient Temperature Range	Heat Mode	5°F - 109°F / -15°C - 43°C
	Cool Mode	59°F - 109°F / 15°C - 43°C
Set Temperature Range	Heat Mode	47°F - 104°F / 8°C - 40°C
	Cool Mode	47°F - 83°F / 8°C - 28°C
Heating Capacity	80.6°F Air 80% Humidity 80°F Water In	107160 btu/h
Power Input		6930 w
COP		4.53 w/w
Heating Capacity	80.6°F Air 63% Humidity 80°F Water In	101520 btu/h
Power Input		6790 w
COP		4.38 w/w
Heating Capacity	50°F Air 63% Humidity 80°F Water In	46310 btu/h
Power Input		3330 w
COP		4.07 w/w
Cooling Capacity	95°F Air 84.2°F Water In 80.6°F Water Out	26100 btu/h
Power Input		3787 w
EER		2.02 w/w
CO_2 Equivalent		0.8775 t

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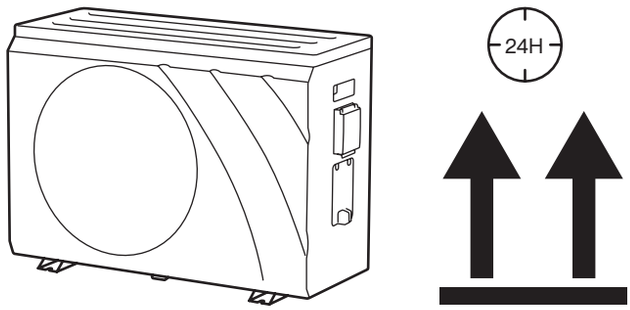
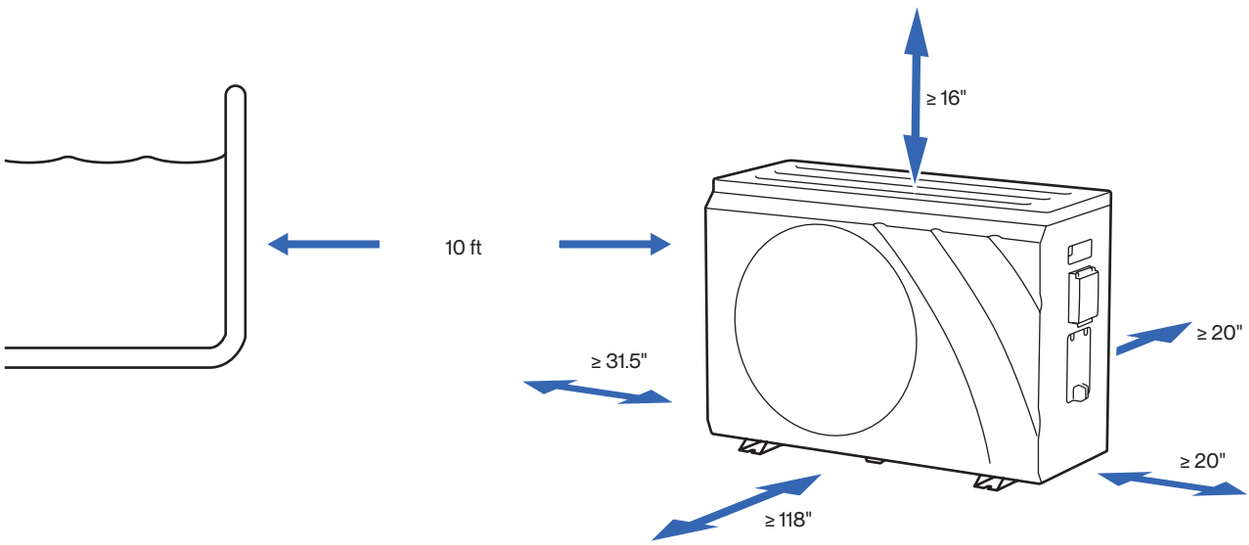
Installation Info

- Before installation, make sure the product is placed on a flat and stable platform in its upright position for at least 24 hours to prevent lubricating oil from damaging the compressor.



Installation Location and Clearance



- The pool heat pump must be placed on a flat and stable ground.
- Keep the heat pump at least 20 inches from any wall or obstacles.
- Keep the heat pump at least 10 ft from any body of water.
- Do not place the heat pump near any open ignition sources such as open flames, gas appliance, or electric heater.
- Do not install the heat pump in areas subject to flooding, standing water, or poor drainage.

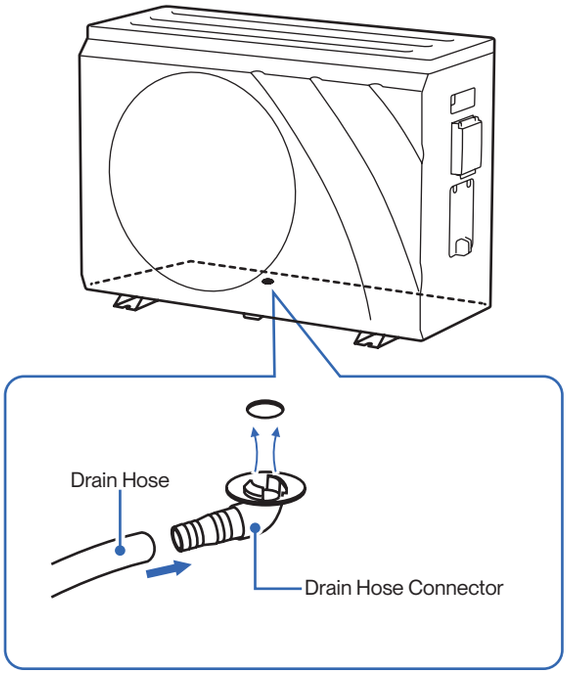
Attention Installer:

- This unit is supplied with a waterproof energy efficiency plate. This plate must be permanently affixed to the unit or provided to the owner. It contains the energy efficiency rating and instruction for efficient operation.

Installation

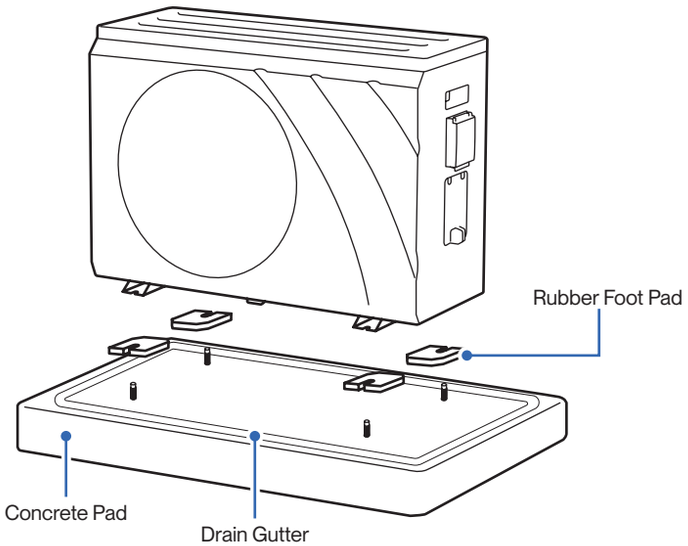
Connect the Drain Hose

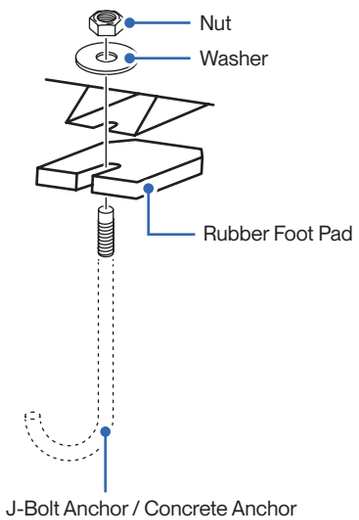
1. Attach the drain hose connector to the bottom of the heat pump.
2. Connect one end of the drain hose to the connector and lead the other end to a water drain.



Placing the Heat Pump

1. The heat pump should be placed on a flat and stable ground.
2. A concrete pad or concrete slab can be used as a base for the heat pump. Make sure the pad is leveled.
3. Place rubber foot pads between the concrete pad and the heat pump.
4. Secure the heat pump onto the concrete pad.



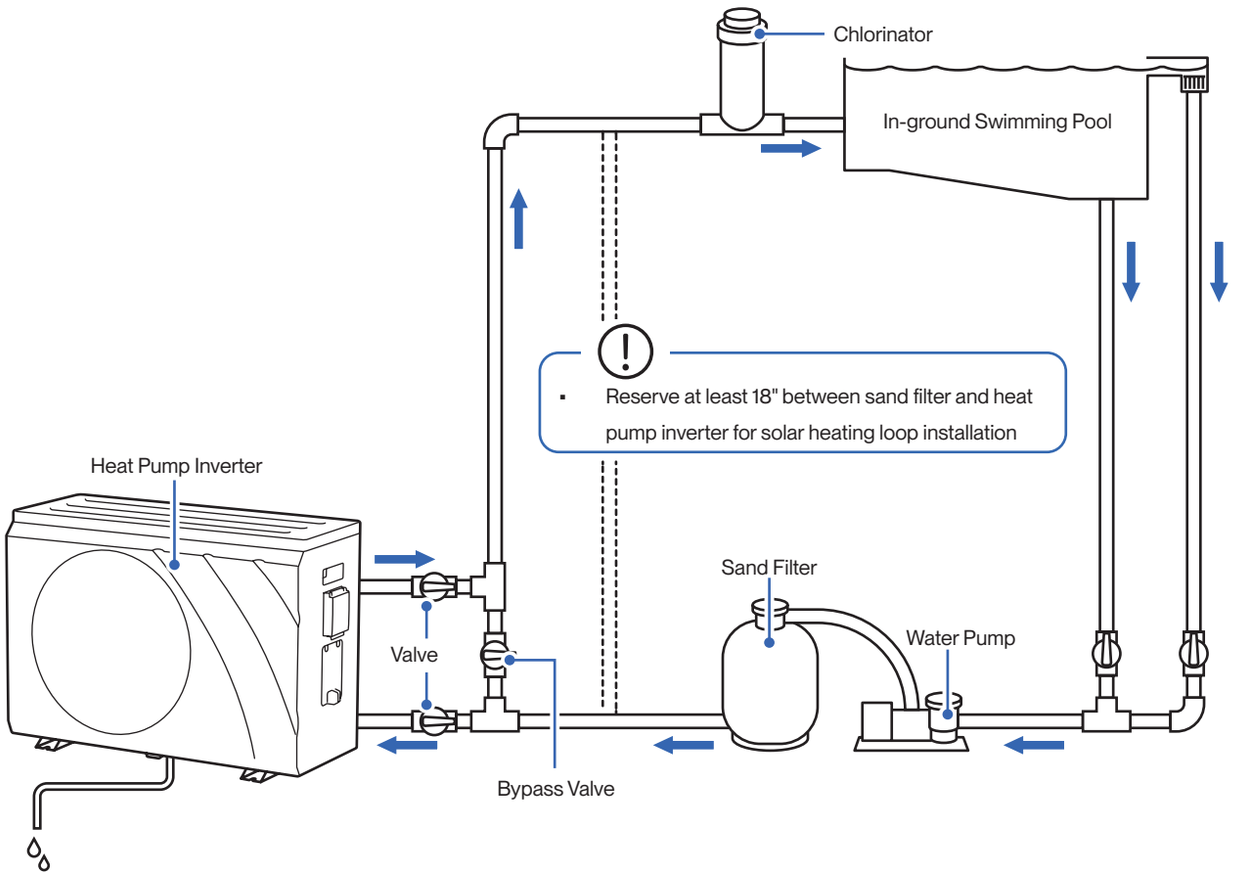


Installation

Installation

Plumbing Work

Single Unit Setup

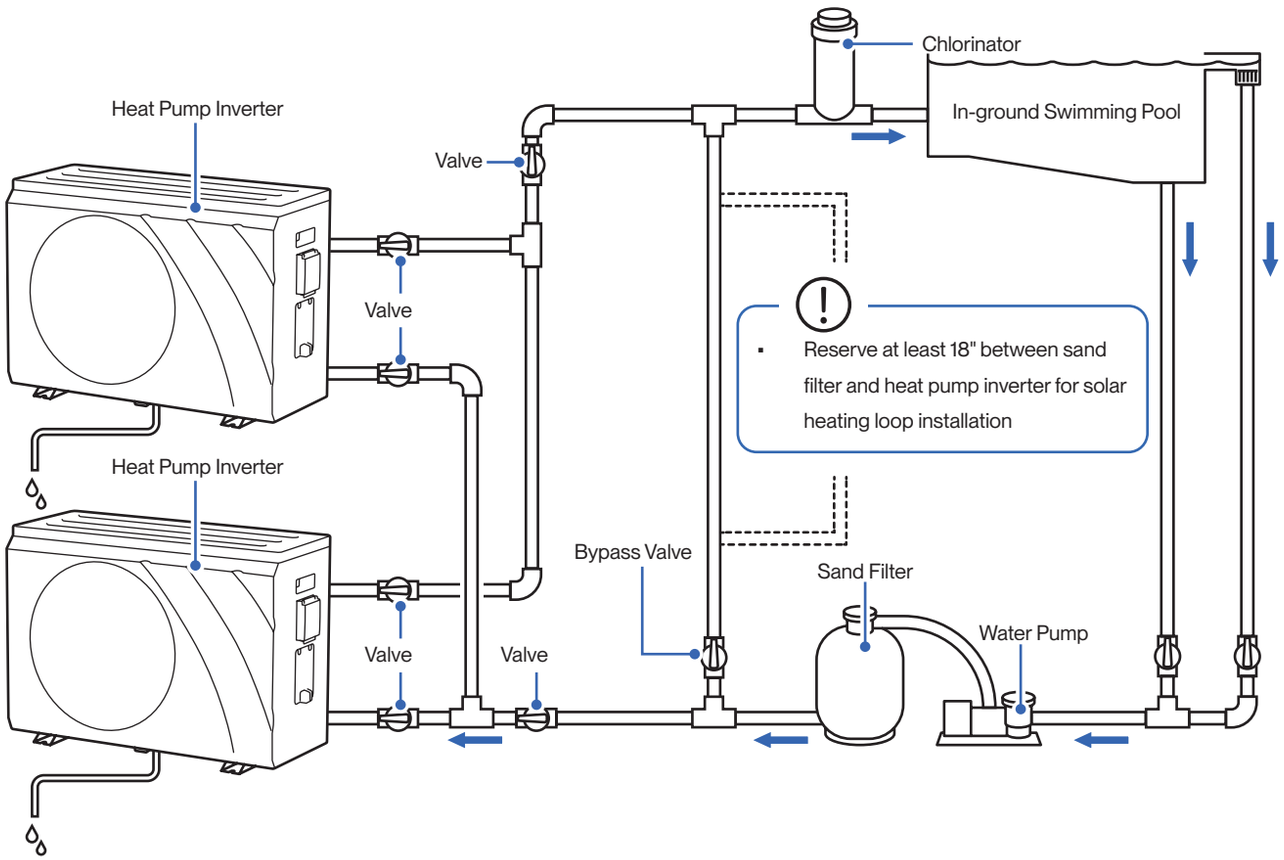


- This heat pump is designed to be used with rigid PVC pipe only.
- Do not use this heat pump with flexible PVC piping.
- A filter pump is necessary for water circulation. This heat pump must be connected and operated along with a filter pump

Installation

Plumbing Work

Multi-Unit Setup

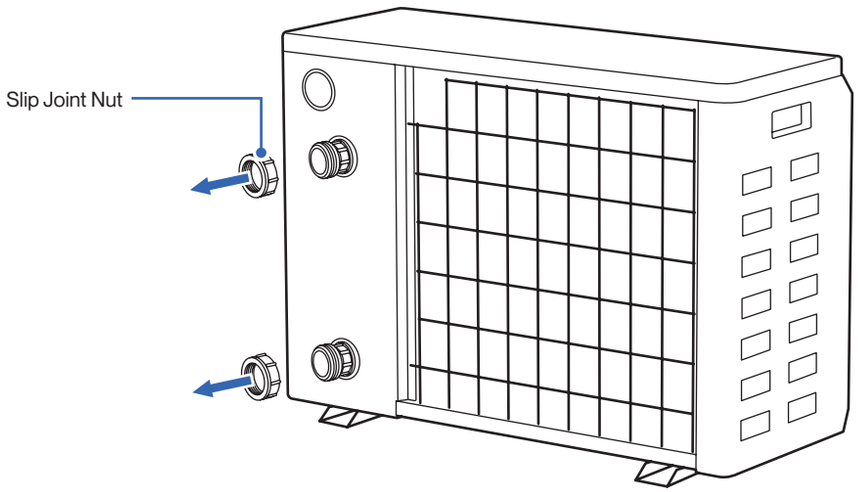


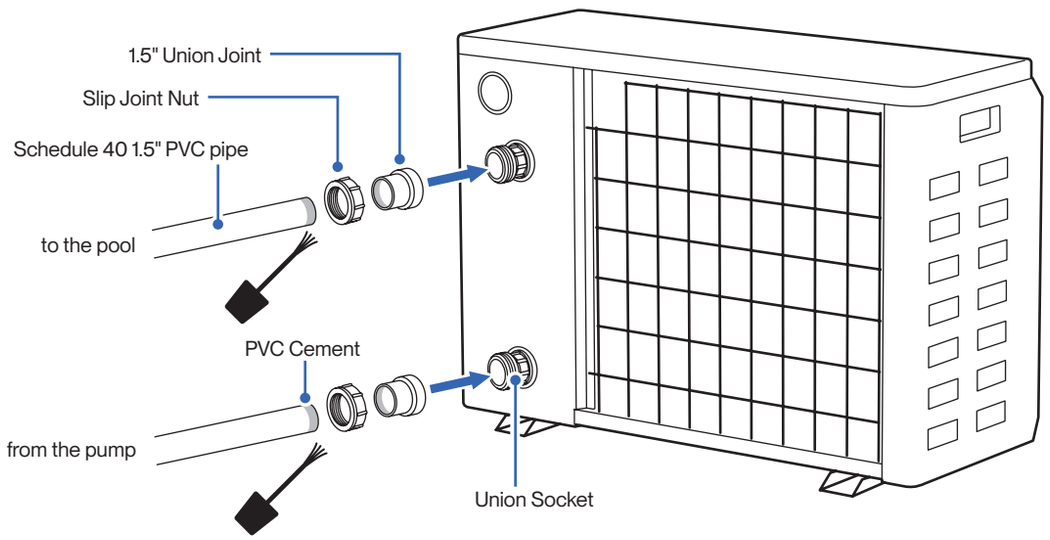
- This heat pump is designed to be used with rigid PVC pipe only.
- Do not use this heat pump with flexible PVC piping.
- A filter pump is necessary for water circulation. This heat pump must be connected and operated along with a filter pump

Installation

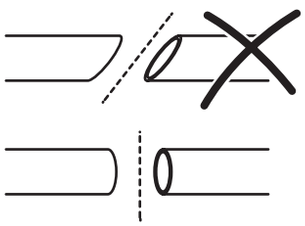
Plumbing Work

1. Attach union sockets to the water inlet and water outlet on the heat pump inverter.
2. Attach 1.5" union fittings to the PVC pipes. A thin layer of PVC cement should be applied on the outside of the PVC pipe and the inside of the union fitting.
3. Screw the union fitting with the PVC pipe to the union socket.





- Make sure PVC pipes are cut perpendicular.
- Sand off rough edges on the pipes after cutting.
- Pre-assemble the water circuit before gluing together and connecting to the heat pump to check the circuit fits your installation.
- PVC pipe adhesive should be allowed to dry for at least 2 hours before introducing water into the circuit.



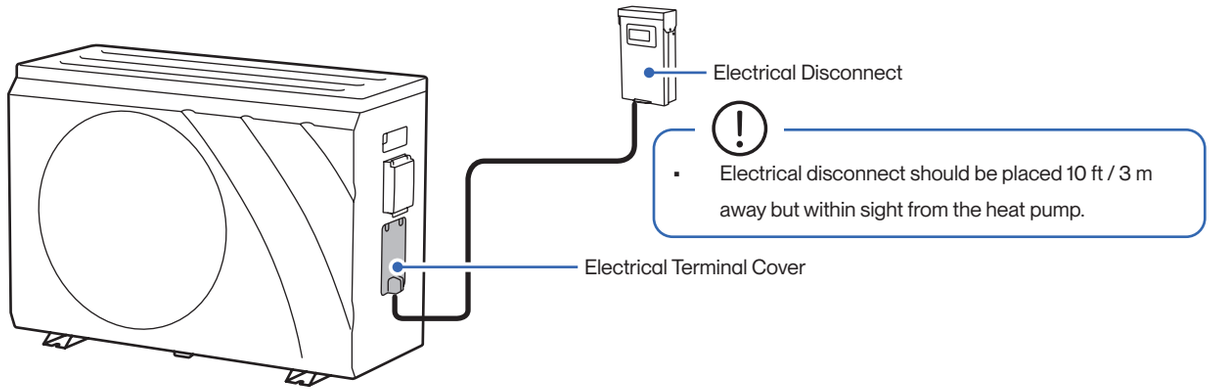
Installation

Power Connection

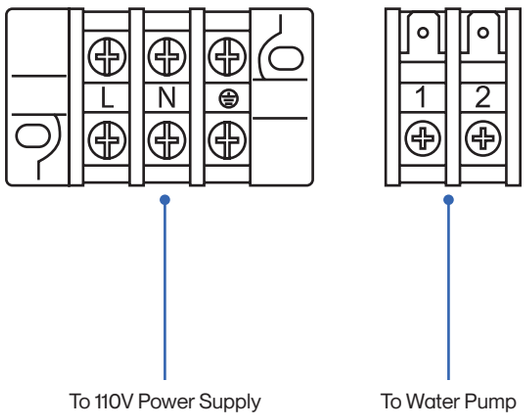
WARNING

- This product must be grounded and connected to the pool bonding grid with a minimum #8 AWG bare solid copper conductor.
- A fuse or overload protection device with a suitable capacity must be installed.
- Failing to connect the wires correctly will cause short circuit, a fire, and property damage.

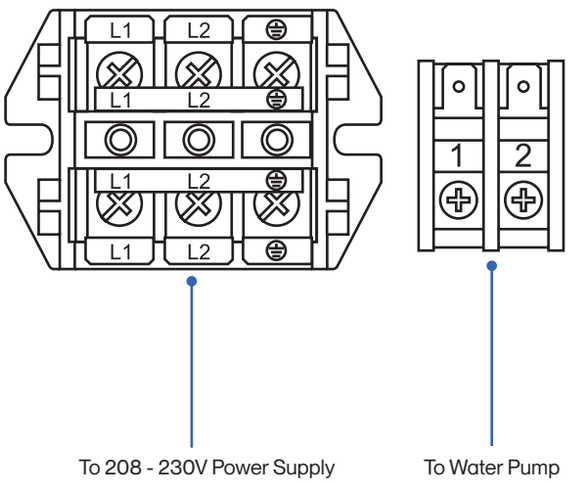
1. Remove the electrical terminal cover from the heat pump.
2. Connect the wires from the water pump and the power supply to the terminal.
3. Place the cover back to its original place.



110V system



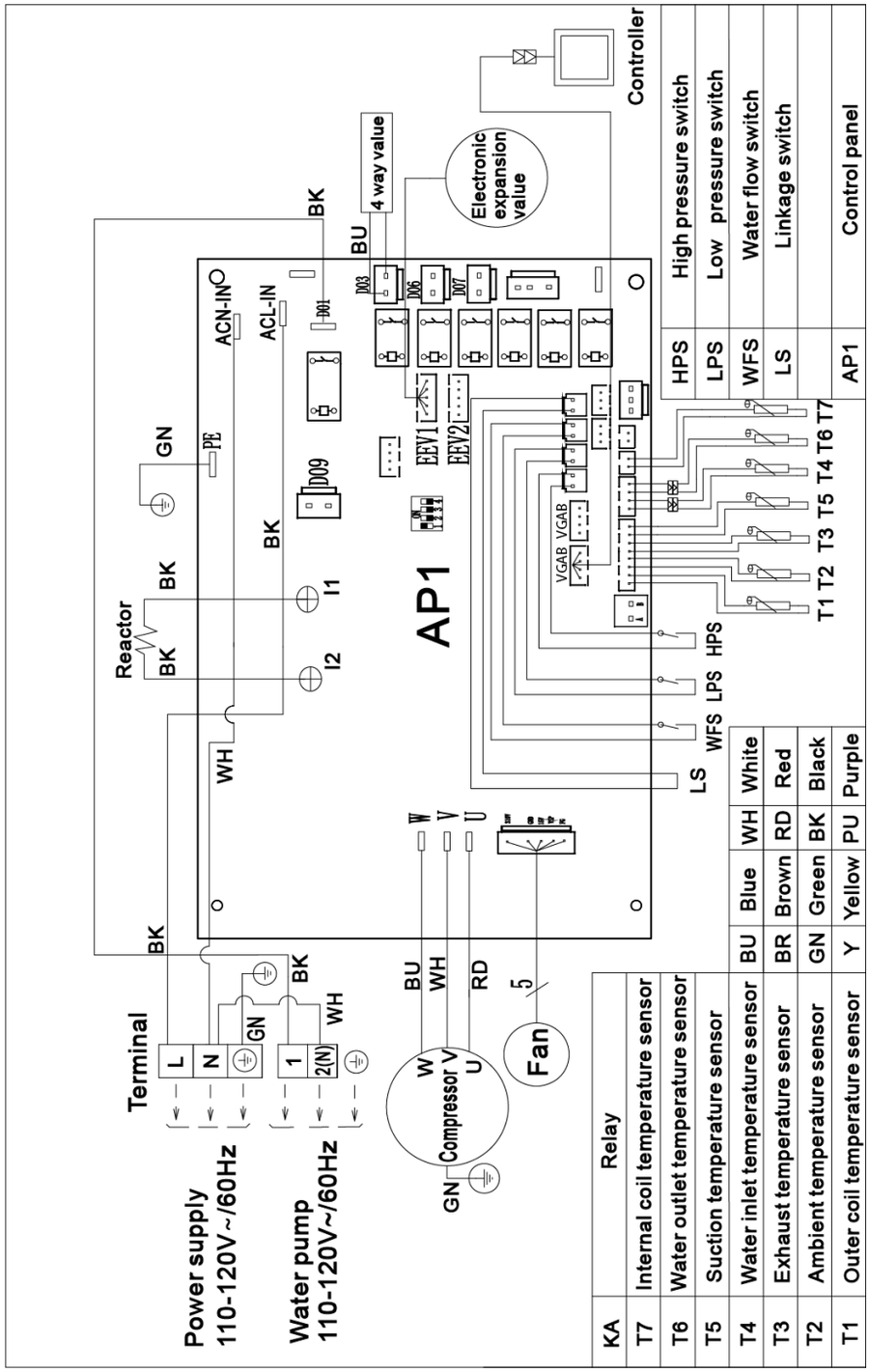
220V system



Installation

Circuit Diagram

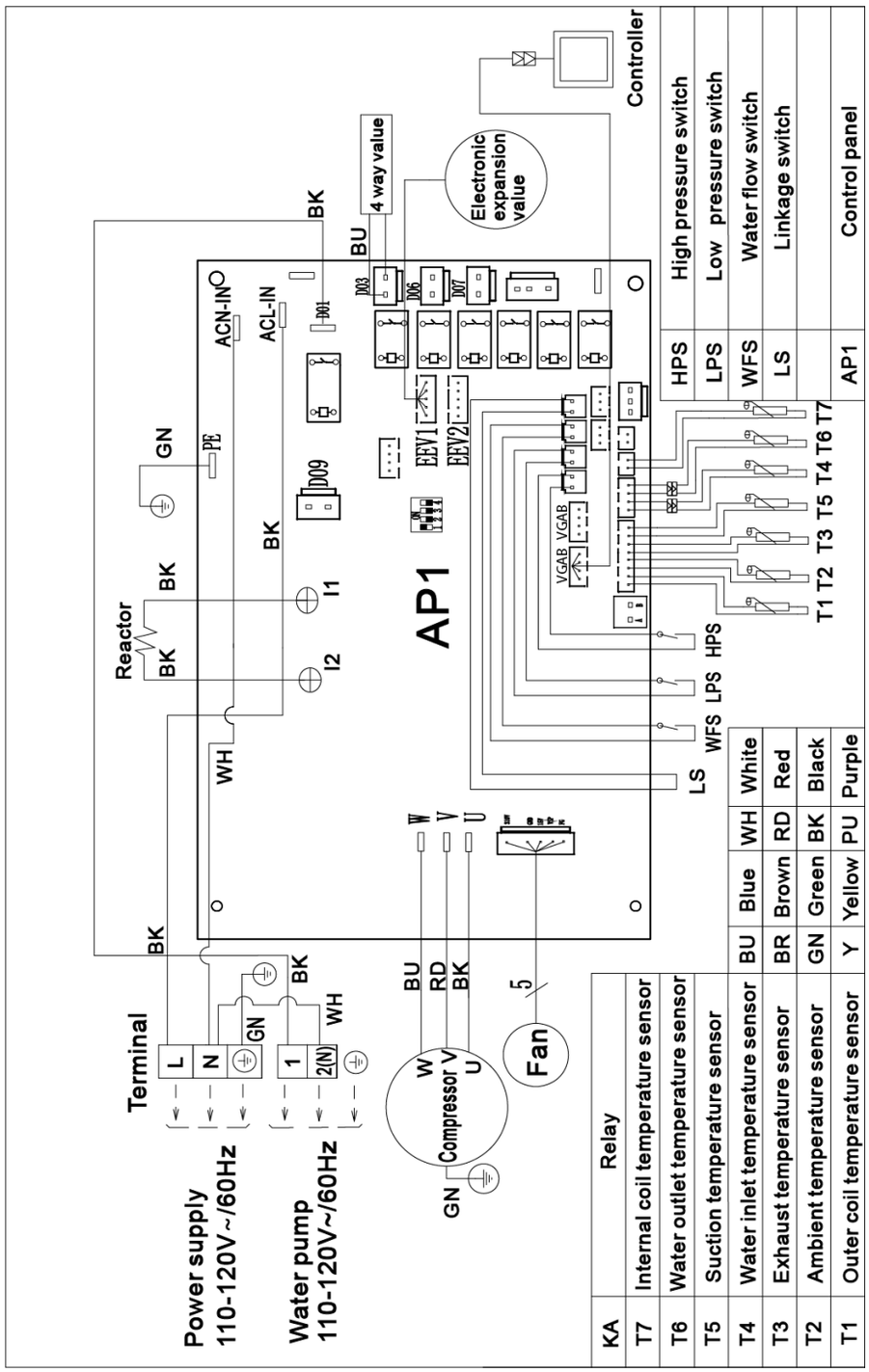
PH-024-1V-S



Installation

Circuit Diagram

PH-028-1V-S



KA	Relay	BU	Blue	WH	White
T7	Internal coil temperature sensor	BR	Brown	RD	Red
T6	Water outlet temperature sensor	GN	Green	BK	Black
T5	Suction temperature sensor	Y	Yellow	PU	Purple
T4	Water inlet temperature sensor				
T3	Exhaust temperature sensor				
T2	Ambient temperature sensor				
T1	Outer coil temperature sensor				

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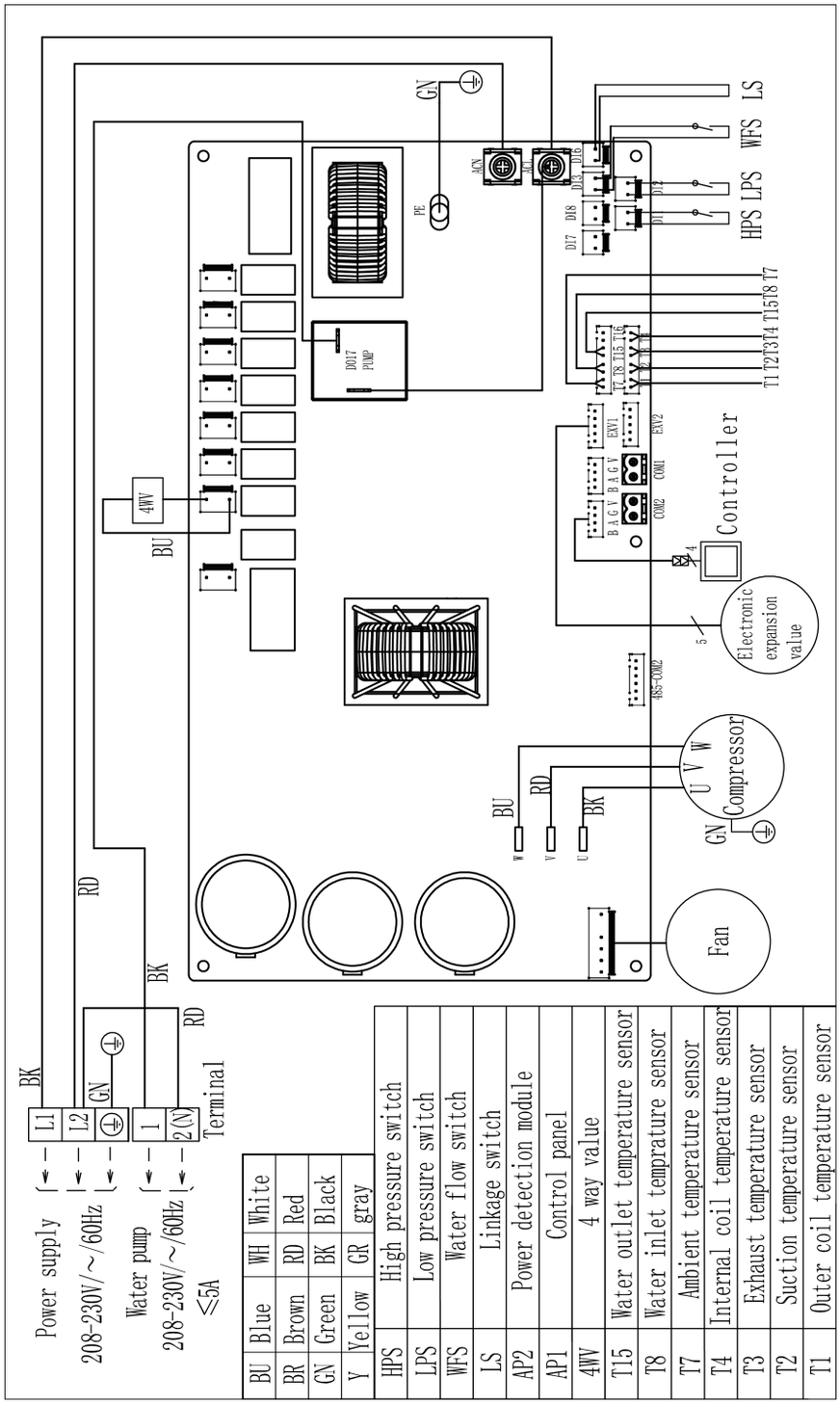
Installation

Circuit Diagram

PH-038-2V-S
PH-048-2V-S
PH-059-2V-S



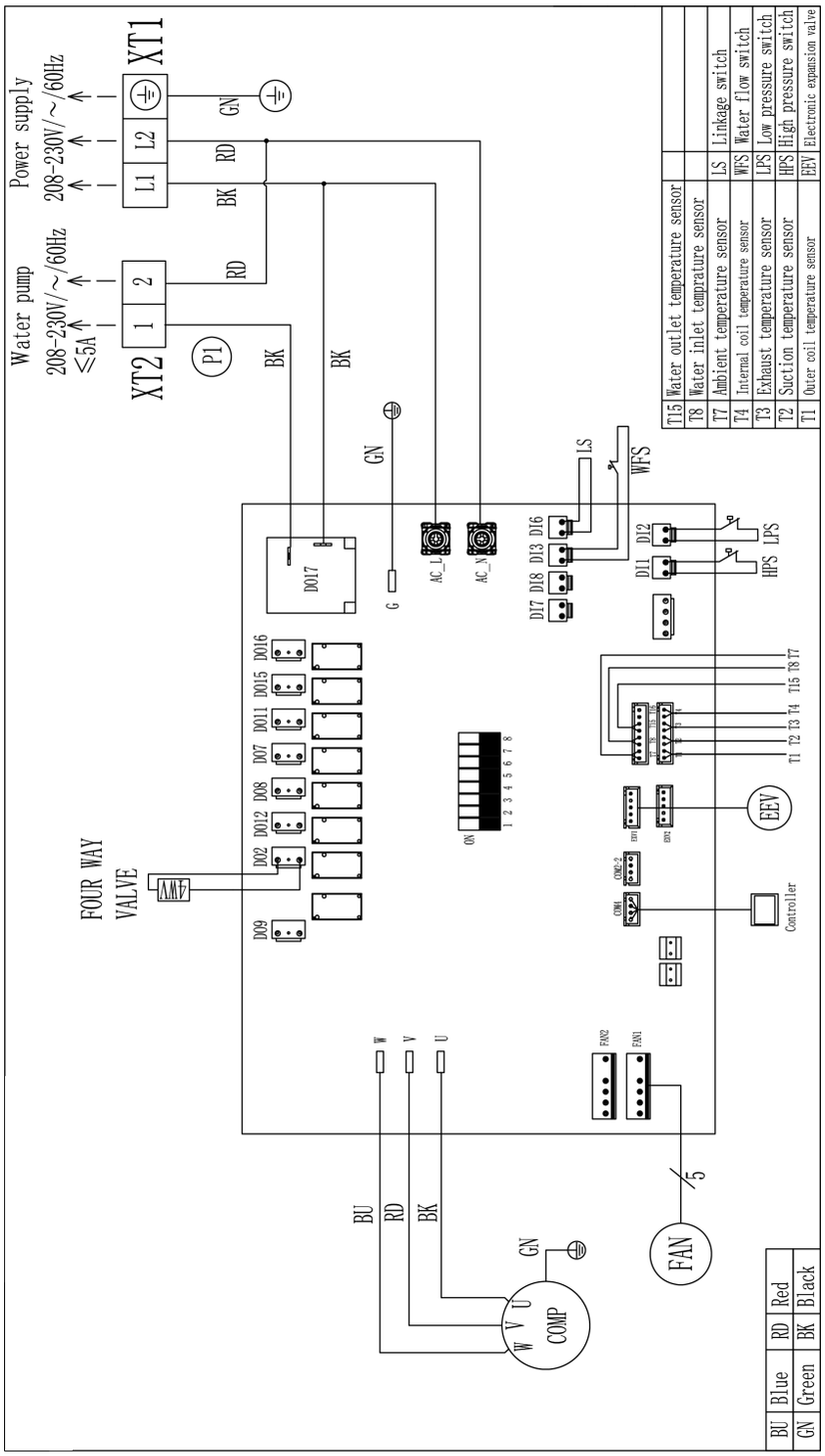
BU	Blue	WH	White
BR	Brown	RD	Red
GN	Green	BK	Black
Y	Yellow	GR	gray

HPS	High pressure switch
LPS	Low pressure switch
WFS	Water flow switch
LS	Linkage switch
AP2	Power detection module
AP1	Control panel
4WV	4 way value
T15	Water outlet temperature sensor
T8	Water inlet temprature sensor
T7	Ambient temperature sensor
T4	Internal coil temperature sensor
T3	Exhaust temperature sensor
T2	Suction temperature sensor
T1	Outer coil temperature sensor

Installation

Circuit Diagram

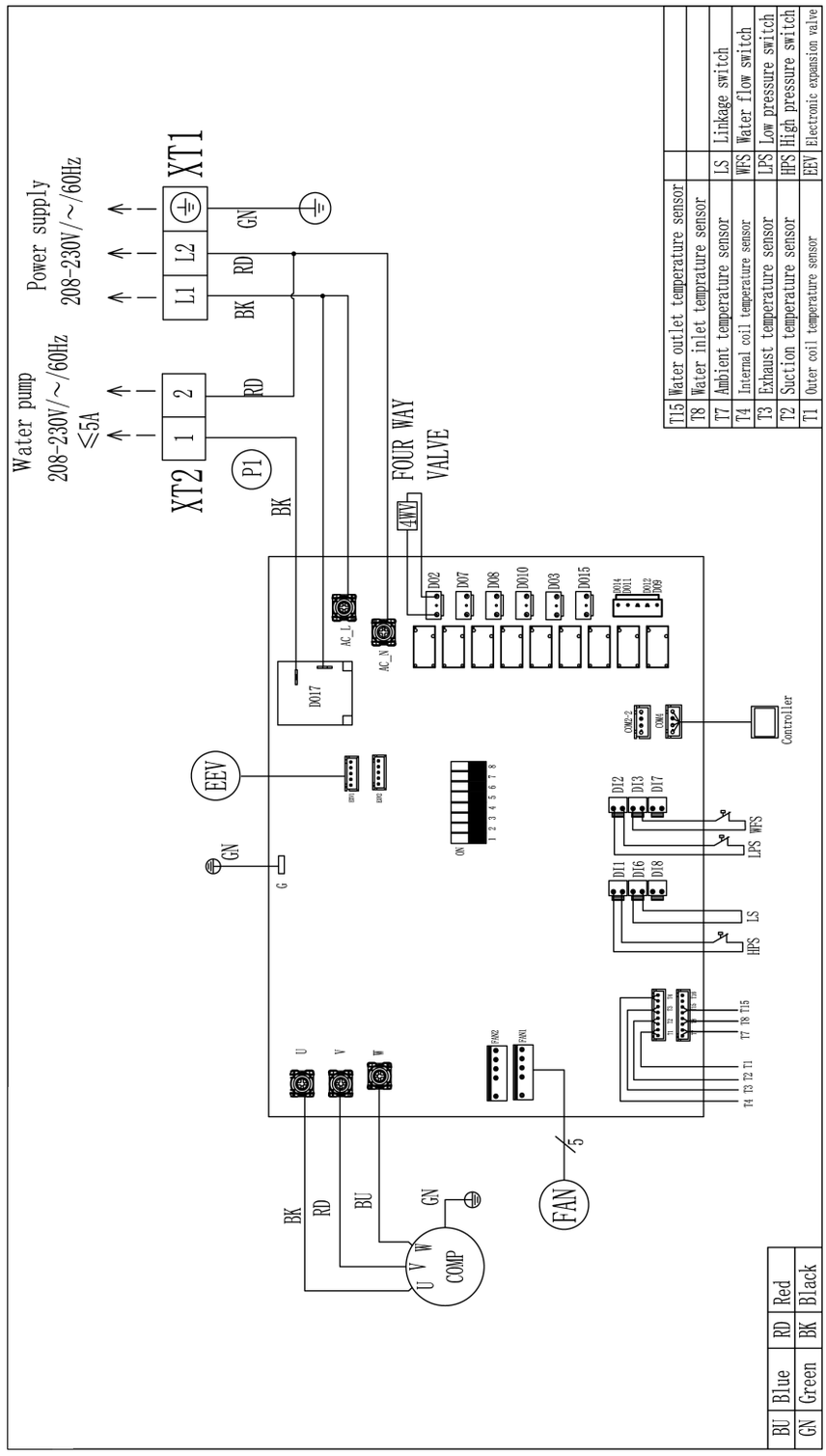
PH-082-2V-S



Installation

Circuit Diagram

PH-107-2V-S



Before Using

Operation Tips

- Before powering ON the heat pump and filter pump, make sure all plumbing connections are securely tightened.
- Make sure the power supply voltage matches the unit's rated voltage.
- Make sure the unit is grounded.
- Ensure the air vent are not obstructed.
- Power ON your filter pump to circulate the water. Check for any possible leaks and verify the water flows properly.
- Power ON the heat pump. Page 26
- After powering ON the unit for a few minutes, check if the cooling fan is blowing air.
- Depending on the initial water temperature and ambient air temperature, it might take some time to heat the water to your desired temperature. Using a swimming pool cover can dramatically limit heat loss and shorten the heat up time.

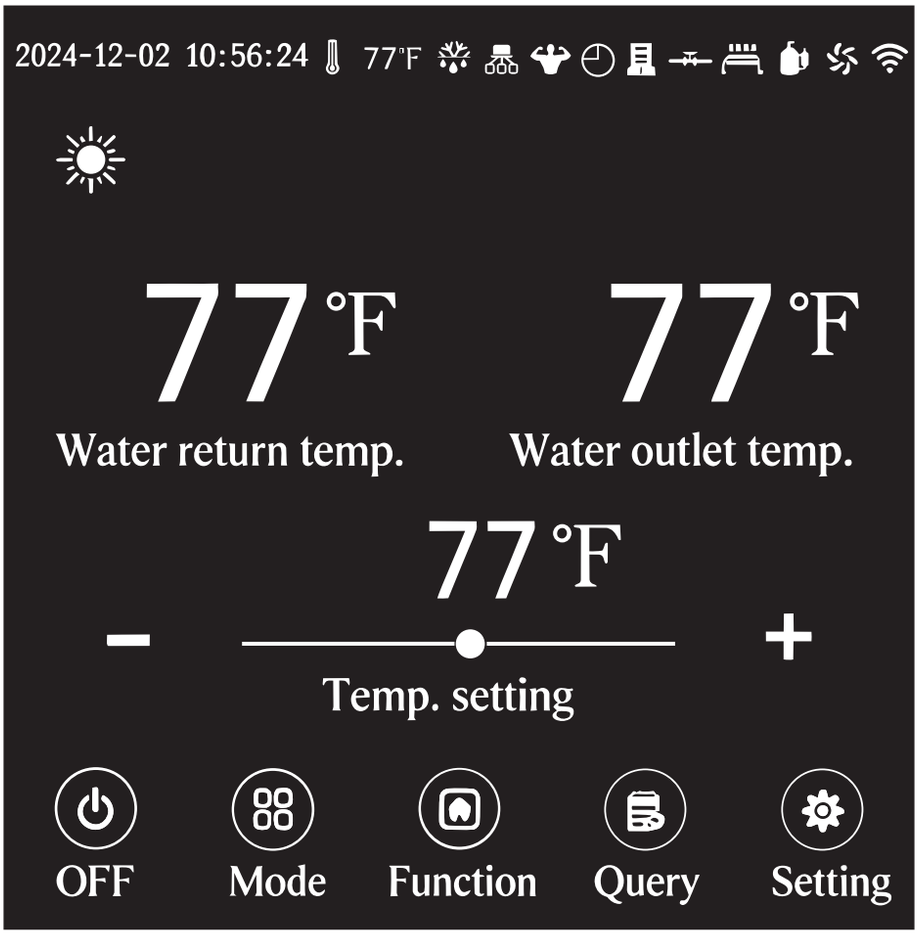
- The U.S. Consumer Product Safety Commission (CPSC) warns that pool or spa water temperature should never exceed 104°F / 40°C to aboid drowning from drowsiness or heat stroke.
- Pregnant women should stick to the 100°F / 38°C maximum rule. Soaking in water above 102°F / 38.9°C can cause fetal damage during the first 3 months of pregnancy.
- Special caution regarding high water temperature is suggested for young children.
- Avoid drinking alcoholic beverages while, or prior to, soaking in hot water to reduce the risk of increased body temperature, heat stroke, or unconsciousness which subsequently result in drowning.

Before Using

Before Using

Control Panel

- Touch the display screen to activate. The screen will shows "Welcome" for 3 seconds before entering the main interface.
- The screen will turn off after 2 minutes of inactivity.



Before Using

Control Panel

Icon	Function
	**Power Button** Power ON / OFF the air conditioner
	**Mode Button** Select operation mode
	**Function Button** Select Function
	**Query Button** Access parameter query menu
	**Setting Button** Access to setting menu
	**Defrost Icon** Indicate the unit is defrosting
	**Cascade Icon** Indicate the unit network is operating normally
	**Strong Mode Icon** Indicate the unit is operating in strong mode for increased performance
	**Auto Mode Icon** Indicate the unit is operating in auto mode
	**Eco Mode Icon** Indicate the unit is operating for energy efficiency
	**Timer Icon** Indicate activated timer
	**Water Pump Icon** Indicate the water pump is operational
	**Compressor Icon** Indicate the compressor is operating normally
	**Fan Icon** Indicate the fan is operational
	**Wi-Fi Icon** Indicate the unit successfully connects to Wi-Fi

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Basic Operation

Power ON / OFF

Press ⏻ on the control panel.

Select Operation Mode

Press ⊞ on the control panel to access mode selection menu.

- Select your desired operation mode in the mode selection menu.
  - ☀ Heating Mode
  - ❄ Cooling Mode
  - A Auto Mode
  - ☾☀ ECO Heating Mode
  - ☾❄ ECO Cooling Mode
  - 🐂☀ Boost Heating Mode
  - 🐂❄ Boost Cooling Mode

Press Main button on the upper right corner of the display to return to main menu.

Adjust Temperature

Press − + on the control panel to set your desire water temperature.

Advance Function

Select Function

Press on the control panel to access function selection menu.

- Select these following functions in the selection menu.
  - User Functions
  - Timing Functions
  - Wi-Fi Distribution
  - Factory Function (Only professional or certified technician should adjust factory function)

Press Main button on the upper right corner of the display to return to main menu.

User Function

Press to enable forced defrosting.

- The unit start to defrost when not in cooling mode.

Press to enable waterway empty mode.

- Use this function to drain the system.

Timing Function

Recurring schedule: Press "Repeat" on the display and set your desired timer, the unit will repeat the scheduled timer everyday

Weekly Schedule: Select any day of the week from Monday to Sunday to set specific timer for each day.

Setting Timer: Set the ON and OFF timer on the screen and to enable to timer. Press "Enter" to save the setting.

Wi-Fi Distribution

Intelligent Distribution Network: Automatic Wi-Fi setup. Ensure the device is connected to a 2.4GHz Wi-Fi network.

AP Distribution Network: Configure access point setting manually. A 2.4GHz Wi-Fi network is also needed for this connection.

Advance Function

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Advance Function

Parameter Query

Press on the control panel to access parameter query menu.

- Select these following functions in the selection menu.
  - User Parameters
  - System Parameters
  - Notification Information

User Parameters

- Allow modification to temperature parameters for different operation modes.

System Parameters

- Allow user to check system parameters.

Notification Information

- Allow user to check error codes in the case of malfunctions or errors.

Advance Function

Advance Function

Setting

Press on the control panel to access setting menu.

- Select these following functions in the selection menu.
  - Date and Time
  - Display and Sound
  - Temperature Display
  - Factory Parameters
  - Restore Factory Settings
  - About

Date and Time

- Change date and time setting for the unit, which is essential for timer and schedule function to operate properly,

Display and Sound

- Allow user to change display brightness.
- Set your preferred language.
- Allow user to disable control panel's sound.

Temperature Display

- Allow user to change temperature unit between °F and °C.

Factory Parameters

- Allow user to query the running status of the unit.

Restore Factory Settings

- Allow user to restore settings into factory default.

About

- Shows the controller and motherboard version number.

Advance Function

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Advance Function

Operation Parameter Query

Code	Description	Range
1	Compressor Operating Frequency	Measured Value
2	Fan Motor Operating Frequency	Measured Value
3	Electronic Expansion Valve Steps	Measured Value
4	Reserved	Measured Value
5	AC Input Voltage	Measured Value
6	AC Input Current	Measured Value
7	Compressor Chase Current	Measured Value
8	Compressor IPM temperature	Measured Value
9	Reserved	Measured Value
10	Reserved	Measured Value
11	External Ambient Temperature	Measured Value
12	Outer Coil (Fin)	Measured Value
13	Internal Coil (Plate heat Exchanger)	Measured Value
14	Air Suction Temperature	Measured Value
15	Air Exhaust Temperature	Measured Value
16	Water Return Temperature	Measured Value
17	Water Outlet Temperature	Measured Value
18	Reserved	Measured Value
19	Reserved	Measured Value

Advance Function

Code	Description	Range
20	Unit Tooling Number	Measured Value
21	Reserved	Measured Value
22	Reserved	Measured Value
23	Driver Manufacturer	Measured Value
24	Reserved	Measured Value
25	Reserved	Measured Value
26	Reserved	Measured Value
31	Four-Way Valve	Measured Value
32	Reserved	Measured Value
33	High Pressure Switch	Measured Value
34	Low Pressure Switch	Measured Value
35	Water Flow Switch	Measured Value
36	Linkage Switch	Measured Value
37	EVU Switch	Measured Value
38	SG Switch	Measured Value
39	SG Status	Measured Value

Advance Function

Advance Function

Wi-Fi Set up

To set up the DELLA+ app to control your heat pump.

1. Search “DELLA+” on Apple app store or Google Play, or scan the QR code below to download the application.
2. Register an account in the app.
3. Follow the in app instructions to add and pair your Heat Pump to the app and complete the Wi-Fi set up. You can also scan the device QR code in the DELLA+ app for a quick device search.

DELLA+ App Download

Download on the App Store

GET IT ON Google Play

You can also scan the download QR code

Device QR code

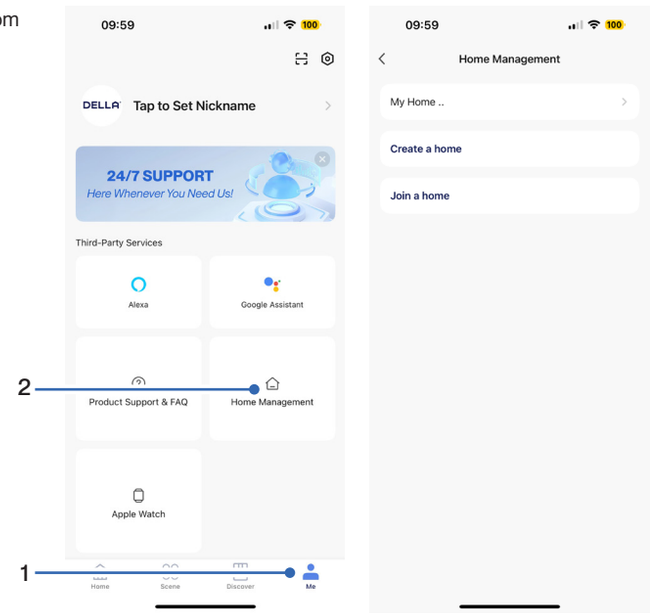
Scan this QR code in your Della+ app to quickly add device.

Household Set up (Optional)

Create and Join home to control your Heat Pump via the Della+ app from multiple devices and multiple accounts.

1. Click "Me" on the Della+ app.
2. Choose "Home Management".
3. Follow the in app instructions to create or join a home.

NOTE: Pairing your Heat Pump with a different account outside the household will remove the original pairing. Only one household can be paired at a time.



- The Della+ application is free, however, data charges may apply when downloading or using the application.
- Della+ can be altered without notice for quality improvement and also be deleted depending on the circumstances of manufacturing firms.
- All trademarks, logo, brand names are the property of their respective companies. Use of these names, brands, and trademarks does not imply endorsement. Della assumes no responsibility with regard to the performance or use of these products.

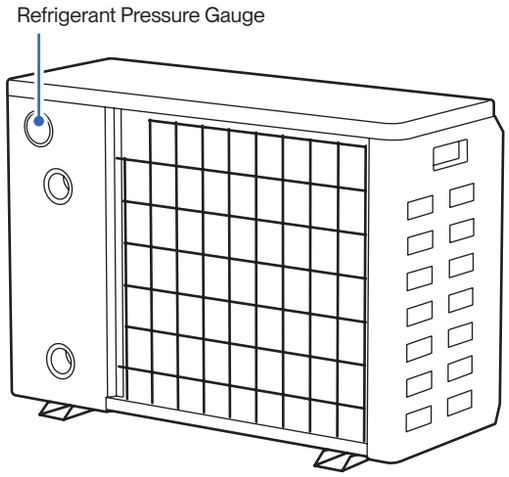
QUICK TIPS

Check out detailed tutorial on the most updated application on dellahome.com/support.

Advance Function

Refrigerant Pressure Gauge

The gauge is for monitoring the refrigerant pressure in the heat pump.



When the heat pump is in operation:

- The gauge's needle indicates the refrigerant pressure.
- In normal operation, refrigerant pressure should be between 250 to 400 psi.

When the heat pump is shut down:

- The refrigerant pressure should be between 150 to 300 psi.

If left unused for a long period of time:

- If the heat pump is left unused for a long period of time, check the refrigerant pressure gauge and make sure the pressure is at least 80 psi.

In the case of the refrigerant pressure drop too low, the heat pump will display an error code and goes into safe mode. Low refrigerant pressure would indicate refrigerant leakage. A qualified technician should diagnose any possible cause and replace or repair parts in necessary.

Anti-Freeze Function

- When the heat pump is in standby, the system automatically monitors the ambient temperature and water temperature.
  When ambient temperature is below 41°F / 5°C or water temperature is below 37°F / 3°C the heat pump will turn on its compressor and the circulating pump to prevent water from freezing. The heat pump will activate circulating pump for 2 minutes in every 10 minutes during anti-freeze operation.

Advance Function

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Care and Maintenance

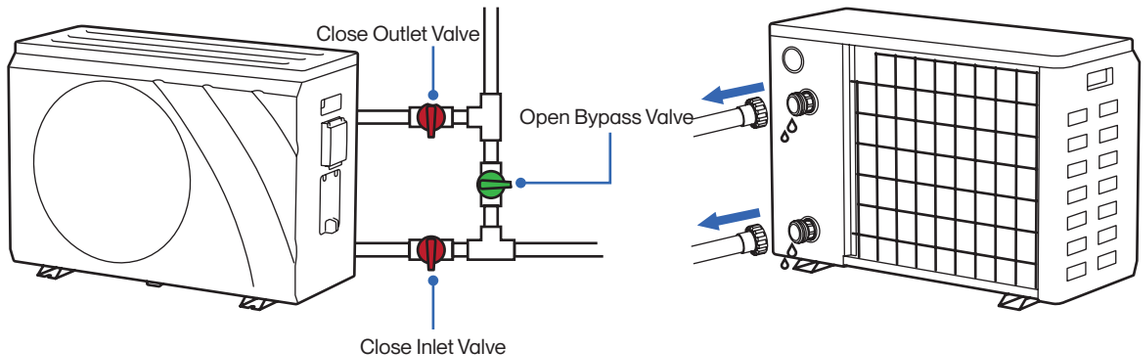
Regular Maintenance

- Check pool's water supply system and make sure water level does not drop too low to prevent air from entering the heat pump which might reduce performance and reliability of the unit.
- Regularly check the filtration system and make sure the filter is not clogged.
- Make sure air flow from the compressor fan is not obstructed.
- Regularly check the plumbing work and make sure there is no water leak and the pipes are not damaged.
- Check the power supply and cable connection often. Make sure there is no damage on any electrical components.
- Clean the heat pump's external casing using a slightly damped cloth. Do not use detergents or other chemical cleaners that might damage the surface.
- Monitor pressure gauge and refrigerant level annually, contact a professional or qualified technician for repairs if necessary.

Planning to Not Operate the Heat Pump for a Long Period

- Discharge all the water from the heat pump if you are planning to not operate the heat pump for a long period such as in winter season. Loosen the water inlet fitting to drain out all the residual water to prevent water from sitting still or freeze damage the unit.
- Ensure all condensation is drained out of the unit.
- Cover the unit with protective cover.

1. To drain the heat pump, open the bypass valve, then close the ball valves connected to the heat pump's inlet and outlet.
2. Disconnect the union joints and let water drain out from the heat pump.
3. Reconnect the union joints after draining the heat pump.



Using the Heat Pump After a Long Idle Period

- Inspect the heat pump for any debris or damage.
- Make sure all piping are connected and all connections are tighten.
- Before powering ON the heat pump, make sure the filter pump is turned ON and water is flowing through the heat pump.
- Allow the unit to be in stand by mode for 12 hours before tuning ON after power is off for more than 24 hours.

Testing Ground Circuit Fault Interrupter

- After the unit has been in operation for a period of time (around 1 month), test the ground circuit fault interrupter (GCFI) by pressing the TEST button while the unit is powered on. The GCFI should automatically disconnect the power each time the TEST button is pressed.
- If the protector operates normally, continue using the unit. If it does not trip as expected, investigate the cause and perform further testing if necessary. If the leakage protector is found to be fauly, it must be repaired or replaced.

Care and Maintenance

Troubleshooting

WARNING

Switch off the heat pump immediately and cut off the power supply in the event of:

- Strange, loud noises during operation.
- Faulty electronic control board.
- Faulty fuses or switches.
- Frequent circuit breaker tripping during operation.
- Abnormally hot or damaged power cord or plug.
- Very strong smells discharging from the appliance.

Error Code

Error Code	Description	Solution / Remark
E03	Water Flow Switch Fault	Check water flow, water pump, and plumbing work Check water flow switch
E05	High Pressure Switch Fault	High voltage switch failed Excessive refrigerant Fan not working properly Abnormal water circulation Contaminated refrigeration system Water scale built up on heat exchanger
E06	Low Pressure Switch Fault	Low voltage switch failed Low refrigerant Fan not working properly Refrigeration system clogged
E09	Line Controller and Motherboard Communication Failure	Check communication connection
E11	Limited Time Protection	
E12	Exhaust Air Temperature Too High	Damaged sensor Low refrigerant
E15	Water Inlet Temperature Sensor Failure	Damaged motherboard / Sensor

Having Problems?

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Troubleshooting

Error Code	Description	Solution / Remark
E16	Coil Sensor Failure	Damaged motherboard / Sensor
E18	Exhaust Air Sensor Fault	Damaged motherboard / Sensor
E21	Environmental Sensor Failure	Damaged motherboard / Sensor
E22	Return Water Sensor Failure	Damaged motherboard / Sensor
E29	Suction Sensor Fault	Damaged motherboard / Sensor
E38	DC Fan Failure	Fan drive board or fan motor damaged
E96	Abnormal Communication Between Compressor Driver and Main Control Board	Poor or broken signal cable contact
E98	Abnormal Communication Between Fan Motor and Main Control Board	Poor or broken signal cable contact

Disposal Guideline

This appliance contains refrigerant and other potentially hazardous materials. When disposing of the appliance, follow all federal, state, and local regulations. DO NOT dispose of this product as normal household waste or unsorted municipal waste.

When disposing of this appliance, you have the following options:

- Dispose of the appliance at a designated municipal electronic waste collection facility.
- When buying a new appliance, the retailer will take the old appliance.
- The manufacturer may take back the old appliance.
- Sell the appliance to a certified scrap metal dealer.

Having Problems?

Warranty

QUICK TIPS

Scan the QR code or visit our page on **dellahome.com/pages/warranty** to sign up for warranty coverage on your new DELLA appliance.

dellahome.com/pages/warranty

Warranty

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Compliance Information

Radio Frequency Interference

Model: PH-024-1V-S/PH-028-1V-S/PH-038-2V-S/PH-048-2V-S/PH-048-2V-S/PH-059-2V-S/
PH-082-2V-S/PH-107-2V-S

FCC ID: 2ANDL-WBR1D

FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

www.dellahome.com
support@dellahome.com
800-863-4143
6:00 a.m. – 4:00 p.m. PST Monday – Friday