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COOPER & HUNTER CH-M18AHU OWNER'S MANUAL & INSTALLATION MANUAL



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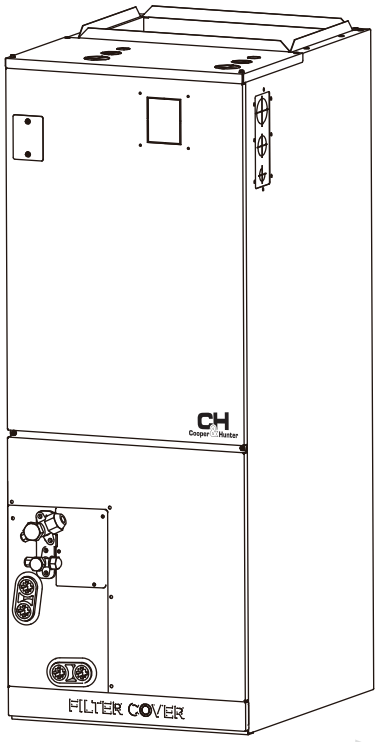
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Cooper & Hunter

AIR-HANDLER AIR CONDITIONERS

Owner's Manual & Installation Manual

MODELS:
CH-M18AHU
CH-M24AHU



IMPORTANT NOTE:
Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

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Safety Precautions

Read Safety Precautions Before Operation and Installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.

WARNING

This symbol indicates the possibility of personnel injury or loss of life.

CAUTION

This symbol indicates the possibility of property damage or serious consequences.

⚠ WARNING

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

This appliance is not intended for use by persons(including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

⚠ WARNINGS FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. Call your dealer for instructions to avoid electric shock, fire or injury.
- **Do not** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **Do not** use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **Do not** operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- **Do not** operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.
- **Do not** expose your body directly to cool air for a prolonged period of time.
- **Do not** allow children to play with the air conditioner. Children must be supervised around the unit at all times.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.
- 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, service agency, or the gas supplier.

CLEANING AND MAINTENANCE WARNINGS

- Turn off the device and disconnect the power before cleaning. Failure to do so can cause electrical shock.
- **Do not** clean the air conditioner with excessive amounts of water.
- **Do not** clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.

⚠ CAUTION

- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time.
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- **Do not** operate the air conditioner with wet hands. This may cause electric shock.
- **Do not** use device for any other purpose than its intended use.
- **Do not** climb onto or place objects on top of the outdoor unit.
- **Do not** allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.
- 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.

⚠ ELECTRICAL WARNINGS

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Do not** pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- **Do not** modify the length of the power supply cord or use an extension cord to power the unit.
- **Do not** share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- The product must be properly grounded at the time of installation, or electrical shock may occur.
- For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. Connect cables tightly, and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections can overheat and cause fire, and may also cause shock. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
- All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
- If connecting power to fixed wiring, an all-pole disconnection device which has at least 3mm clearances in all poles, and have a leakage current that may exceed 10mA, the residual current device(RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

TAKE NOTE OF FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board ,examples of such are T5A/250VAC and T10A/250VAC.

⚠ WARNINGS FOR PRODUCT INSTALLATION

1. Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
2. Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
   (In North America,installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.)
3. Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
4. Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and can cause the unit to fail.
5. Install the unit in a firm location that can support the unit's weight. If the chosen location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and damage.
6. Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
7. For units that have an auxiliary electric heater, **do not** install the unit within 1 meter (3 feet) of any combustible materials.
8. **Do not** install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause fire.
9. Do not turn on the power until all work has been completed.
10. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
11. How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections .
12. Excessive Weight Hazard - Use two or more people when moving and installing the unit. Failure to do so can result in back or other type of injury.

Note about Fluorinated Gasses(Not applicable to the unit using R290 Refrigerant)

1. This air-conditioning unit contains fluorinated greenhouse gasses. For specific information on the type of gas and the amount, please refer to the relevant label on the unit itself or the "Owner's Manual - Product Fiche " in the packaging of the outdoor unit. (European Union products only).
2. Installation, service, maintenance and repair of this unit must be performed by a certified technician.
3. Product uninstallation and recycling must be performed by a certified technician.
4. For equipment that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO_2 equivalent or more, but of less than 50 tonnes of CO_2 equivalent, If the system has a leak-detection system installed, it must be checked for leaks at least every 24 months.
5. When the unit is checked for leaks, proper record-keeping of all checks is strongly recommended.

Note

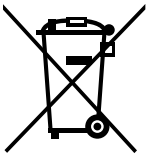
The allowed static pressure range of the air conditioner on site is 0-200Pa.

Test static pressure

MODEL	12-24K	30-36K	48-60K
PRESSURE	25Pa	37Pa	50Pa

Disposal Guidelines

This marking shown on the product or its literature, indicates that waste electrical and eletrical equipment should not be mixed with general household waste.



Correct Disposal of This Product

(Waste Electrical & Electronic Equipment)

This appliance contains refrigerant and other potentially hazardous materials. When disposing of this appliance, the law requires special collection and treatment. **Do not** dispose of this product as household waste or unsorted municipal waste.

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

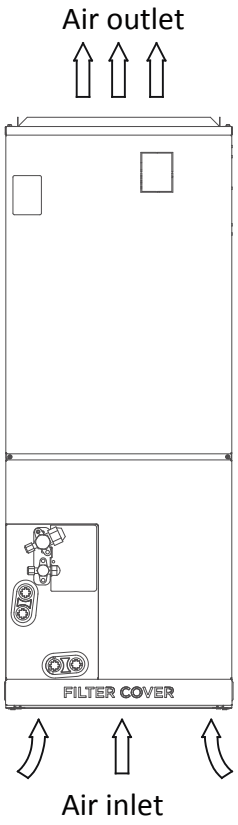
- Dispose of the appliance at designated municipal electronic waste collection facility.
- When buying a new appliance, the retailer will take back the old appliance free of charge.
- The manufacturer will take back the old appliance free of charge.
- Sell the appliance to certified scrap metal dealers.

Special notice

Disposing of this appliance in the forest or other natural surroundings endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.

Indoor Unit Parts And Major Functions

Unit Parts



Operating Conditions

Use the system under the following temperatures for safe and effective operation. If the air conditioner is used under different conditions, it may malfunction or become less efficient.

Inverter Split Type

	COOL mode	HEAT mode	DRY mode
Room Temperature	62°F - 90°F (17°C - 32°C)	32°F - 86°F (0°C - 30°C)	50°F - 90°F (10°C - 32°C)
Outdoor Temperature	32°F - 122°F (0°C - 50°C)	5°F - 75°F (-15°C - 24°C)	32°F - 122°F (0°C - 50°C)
	5°F - 122°F (-15°C - 50°C) (For models with low temp. cooling systems.)		
	32°F - 126°F (0°C - 52°C) (For special tropical models)		32°F - 126°F (0°C - 52°C) (For special tropical models)

FOR OUTDOOR UNITS WITH AUXILIARY ELECTRIC HEATER

When outside temperature is below 32°F(0°C), we strongly recommend keeping the unit plugged in at all time to ensure smooth on going performance.

Fixed-speed Type

	COOL mode	HEAT mode	DRY mode
Room Temperature	62°F-90°F(17°C-32°C)	32°F-86°F (0°C-30°C)	50°F-90°F (10°C-32°C)
Outdoor Temperature	64°F-109°F (18°C-43°C)	19°F-75°F (-7°C-24°C)	52°F-109°F (11°C-43°C)
	19°F-109°F (-7°C-43°C) (For models with low-temp cooling systems)		64°F-109°F (18°C-43°C)
	64°F-126°F (18°C-52°C) (For special tropical models)		64°F-126°F (18°C-52°C) (For special tropical models)

NOTE: Room relative humidity less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please sets the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

To further optimize the performance of your unit, do the following:

- Keep doors and windows closed.
- Limit energy usage by using TIMER ON and TIMER OFF functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

Features

Refrigerant Leak Detection System (some models)

In the event of a refrigerant leak, the LCD screen will display “EL0C” and the LED indicator light will flash.

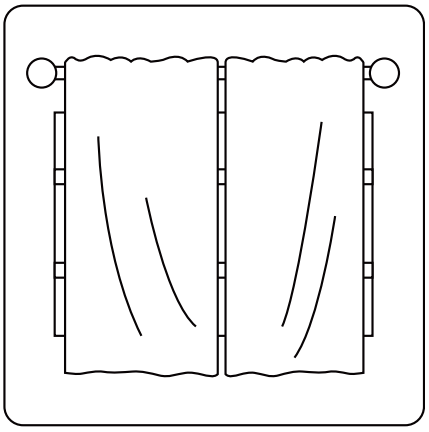
NOTE:

1. Under normal working conditions, the switch, wind speed and temperature can not be adjusted by remote control.
2. Requirements of wire controller:
   Control AXU function for live heating

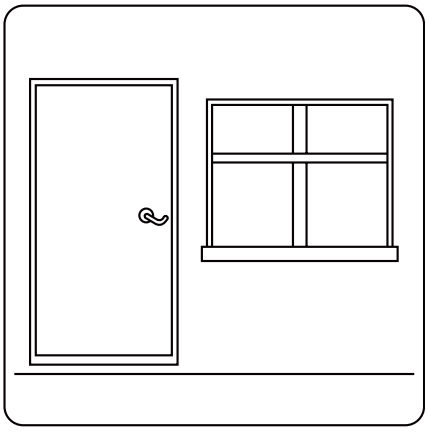
The default temperature of the first power-on is set to 16 degrees for refrigeration and 30 degrees for heating. When the temperature stops, the temperature is set at the room temperature at that time.

Energy Saving Tips

- **DO NOT** set the unit to excessive temperature levels.
- While cooling, close the curtains to avoid direct sunlight.
- Doors and windows should be kept closed to keep cool or warm air in the room.
- **DO NOT** place objects near the air inlet and outlet of the unit.
- Clean the air filter every two weeks.
- Adjust louvers properly and avoid direct airflow.



Closing curtains during heating also helps keep the heat in



Doors and windows should be kept closed

Care and Maintenance

Cleaning Your Indoor Unit

⚠ BEFORE CLEANING OR MAINTENANCE

ALWAYS TURN OFF YOUR AIR CONDITIONER SYSTEM AND DISCONNECT ITS POWER SUPPLY BEFORE CLEANING OR MAINTENANCE.

- Contact an authorized service technician for repair or maintenance. Improper repair and maintenance may cause water leakage, electrical shock, or fire, and may void your warranty.
- **DO NOT** substitute a blown fuse with a higher or lower amperage rating fuse, as this may cause circuit damage or an electrical fire.
- Make sure the drain hose is set up according to the instructions. Failure to do so could cause leakage and result in personal property damage, fire and electric shock.
- Make sure that all wires are connected properly. Failure to connect wires according to instructions can result in electrical shock or fire.

⚠ CAUTION

Only use a soft, dry cloth to wipe the unit clean. If the unit is especially dirty, you can use a cloth soaked in warm water to wipe it clean.

- **Do not** use chemicals or chemically treated cloths to clean the unit
- **Do not** use benzene, paint thinner, polishing powder or other solvents to clean the unit. They can cause the plastic surface to crack or deform.
- **Do not** use water hotter than 104°F (40°C) to clean the front panel. This can cause the panel to deform or become discolored.
- **DO NOT** wash the unit under running water. Doing so creates an electrical hazard. Clean the unit using a damp, lint-free cloth and neutral detergent. Dry the unit with a dry, lint-free cloth.

⚠ WARNING: DO NOT REMOVE OR CLEAN THE FILTER BY YOURSELF

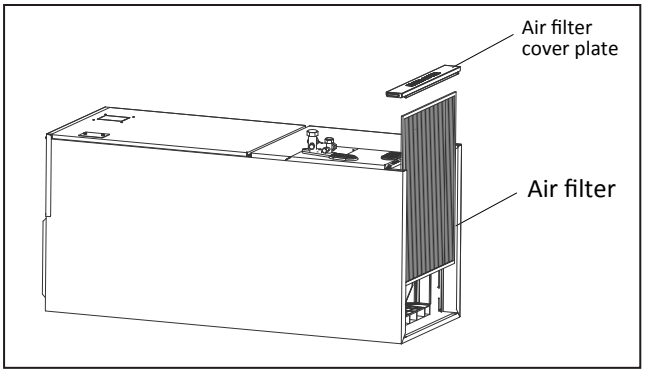
Removing and cleaning the filter can be dangerous. Removal and maintenance must be performed by a certified technician.

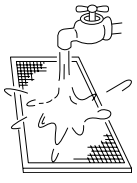
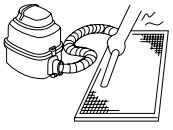
How To Clean The Air Filter

The filter prevents dust and other particles from entering the indoor unit. Dust buildup can reduce the efficiency of the air conditioner. For optimum efficiency, clean the air filter every two weeks or more frequently if you live in a dusty area. Replace the filter with a new one if it's heavily clogged and cannot be cleaned.

NOTE: In households with animals, you will have to periodically wipe down the grille to prevent animal hair blocking airflow.
This product filter is only used for energy efficiency sampling test, the user needs to use a filter that meets the requirements of UL900.

1. Remove filter cover plate.
2. Remove the air filter.
3. Clean the air filter by vacuuming the surface or washing it in warm water with mild detergent.



If using water, the inlet side should face down and away from the water stream.	If using a vacuum cleaner, the inlet side should face the vacuum.
	

⚠ CAUTION

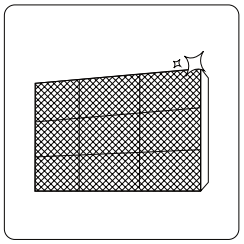
- Before changing the filter or cleaning, turn off the unit and disconnect its power supply.
- When removing filter, do not touch metal parts in the unit. The sharp metal edges can cut you.
- Do not use water to clean the inside of the indoor unit. This can destroy insulation and cause electrical shock.
- Do not expose filter to direct sunlight when drying. This can shrink the filter.

⚠ CAUTION

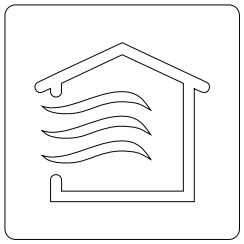
- Any maintenance and cleaning of outdoor unit should be performed by an authorized dealer or a licensed service provider.
- Any unit repairs should be performed by an authorized dealer or a licensed service provider.

Maintenance – Long Periods of Non-Use

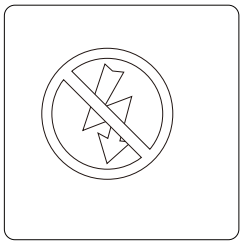
If you plan not to use your air conditioner for an extended period of time, do the following:



Clean all filters



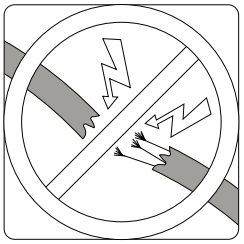
Turn on FAN function until unit dries out completely



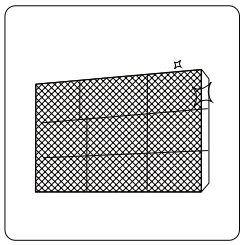
Turn off the unit and disconnect the power

Maintenance – Pre-Season Inspection

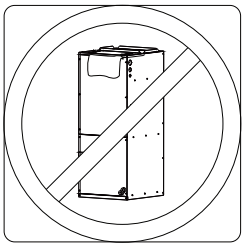
After long periods of non-use, or before periods of frequent use, do the following:

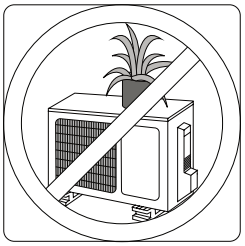


Check for damaged wires



Clean all filters





Make sure nothing is blocking all air inlets and outlets



Check for leaks

Troubleshooting

⚠ SAFETY PRECAUTIONS

If any of the following conditions occurs, turn off your unit immediately!

- The power cord is damaged or abnormally warm
- You smell a burning odor
- The unit emits loud or abnormal sounds
- A power fuse blows or the circuit breaker frequently trips
- Water or other objects fall into or out of the unit

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT AN AUTHORIZED SERVICE PROVIDER IMMEDIATELY!

Common Issues

The following problems are not a malfunction and in most situations will not require repairs.

Issue	Possible Causes
Unit does not turn on when pressing ON/OFF button	The Unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
	Cooling and Heating Models: If the Operation light and PRE-DEF (Pre-heating/ Defrost) indicators are lit up, the outdoor temperature is too cold and the unit's anti-cold wind is activated in order to defrost the unit.
	In Cooling-only Models: If the "Fan Only" indicator is lit up, the outdoor temperature is too cold and the unit's anti-freeze protection is activated in order to defrost the unit.
The unit changes from COOL/HEAT mode to FAN mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises	A squeaking sound is heard when the system is OFF or in COOL mode. The noise is also heard when the drain pump (optional) is in operation.
	A squeaking sound may occur after running the unit in HEAT mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and outdoor unit make noises	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.
	Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.

Issue	Possible Causes
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become moldy and should be cleaned.
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.

NOTE: If problem persists, contact a local dealer or your nearest customer service center. Provide them with a detailed description of the unit malfunction as well as your model number.

Troubleshooting

When troubles occur, please check the following points before contacting a repair company.

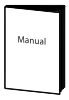
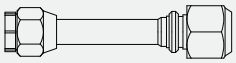
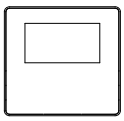
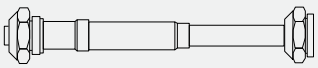
Problem	Possible Causes	Solution
Poor Cooling Performance	Temperature setting may be higher than ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Remove the filter and clean it according to instructions
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
	Excessive heat is generated by sunlight	Close windows and curtains during periods of high heat or bright sunshine
	Too many sources of heat in the room (people, computers, electronics, etc.)	Reduce amount of heat sources
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant

Problem	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power is turned off	Turn on the power
	The fuse is burned out	Replace the fuse
	The Unit's 3-minute protection has been activated	Wait three minutes after restarting the unit
	Timer is activated	Turn timer off
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Evacuate and recharge the system with refrigerant
	System circuit is blocked	Determine which circuit is blocked and replace the malfunctioning piece of equipment
	The compressor is broken	Replace the compressor
	The voltage is too high or too low	Install a manostat to regulate the voltage
Poor heating performance	The outdoor temperature is extremely low	Use auxiliary heating device
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant

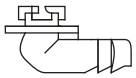
Accessories

The air conditioning system comes with the following accessories. Use all of the installation parts and accessories to install the air conditioner. Improper installation may result in water leakage, electrical shock and fire, or equipment failure.

Accessories (Packed with the indoor unit)

Name	Shape	Quantity
Owner's Manual & Installation Manual		2
Remote controller (some models)		1
Battery (some models)		2
Transfer connector (some models)		1
Wired controller (some models)		1
Fasten belt		2
Sponge		4
Transfer connector (some models)		1
Copper nut (some models)		2

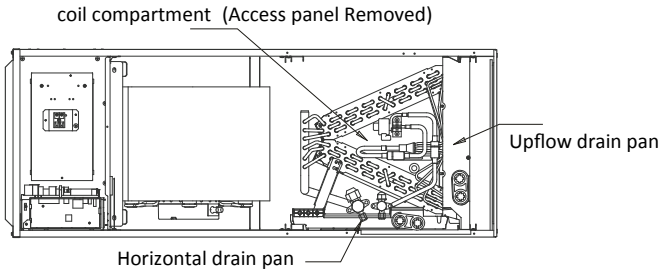
Accessories (Packed with the outdoor unit) (some models)

Name	Shape	Quantity
Drain joint (some models)		1
Seal (some models)		1

NOTE :
The remote control is only used to adjust the parameters.

Indoor Unit Installation

Indoor Unit Parts



Safety Precautions

⚠ WARNING

- Securely install the indoor unit on a structure that can sustain its weight. If the structure is too weak, the unit may fall and cause personal injury, unit and property damage, or death.
- **DO NOT** install the indoor unit in a bathroom or laundry room as excessive moisture can short the unit and corrode the wiring.
- Danger of explosion. Keep flammable materials and vapors, such as gasoline, away from air handler. Place air handler so that heating elements are at least 18 inches (46 cm) above the floor for a garage installation. Failure to follow these instructions can result in death, explosion, or fire.

⚠ CAUTION

- Install the indoor and outdoor units, cables and wires at least 3.2’ (1m) from televisions or radios to prevent static or image distortion. Depending on the appliances, a 3.2’ (1m) distance may not be sufficient.
- If the indoor unit is installed on metal, it must be electrically grounded.

⚠ IMPORTANT

Please apply sealant around the places where the wires, refrigerant pipes and condensate pipes enter the cabinet.

Indoor Unit Installation Instructions

The indoor unit should be installed in a location that meets the following requirements:

- ☑ Enough room for installation and maintenance.
- ☑ Enough room for the connecting pipe and drainpipe.
- ☑ The ceiling is horizontal and its structure can sustain the weight of the indoor unit.
- ☑ The air inlet and outlet are not impeded.
- ☑ The airflow can fill the entire room.
- ☑ There is no direct radiation from heaters.

⚠ CAUTION

DO NOT install the unit in the following locations:

- ⊘ Areas with oil drilling or fracking
- ⊘ Coastal areas with high salt content in the air
- ⊘ Areas with caustic gases in the air, such as near hot springs
- ⊘ Areas with power fluctuations, such as factories
- ⊘ Enclosed spaces, such as cabinets
- ⊘ Areas with strong electromagnetic waves
- ⊘ Areas that store flammable materials or gas
- ⊘ Rooms with high humidity, such as bathrooms or laundry rooms

⚠ IMPORTANT

Use duct tape and/or Permagum to seal closed any space around the holes where the drain lines exit the cabinet. Warm air must not be allowed to enter throughany gaps or holes in the cabinet.

⚠ WARNING

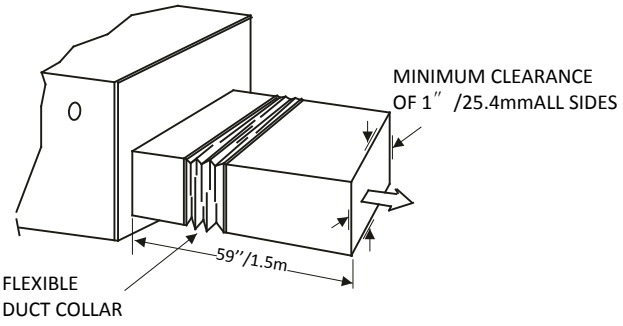
There must be an airtight seal between the bottom of the air handler and the return air plenum. Use fiberglass sealing strips, caulking, or equivalent sealing method between the plenum and the air handler cabinet to ensure a tight seal. Return air must not be drawn from a room where this air handler or any gas-fueled appliance (i.e., water heater), or carbon monoxide-producingdevice (i.e., wood fireplace) is installed.

RECOMMENDED DISTANCES BETWEEN THE INDOOR UNIT

The distance between the mounted indoor unit should meet the specifications illlustrated in the following diagram.

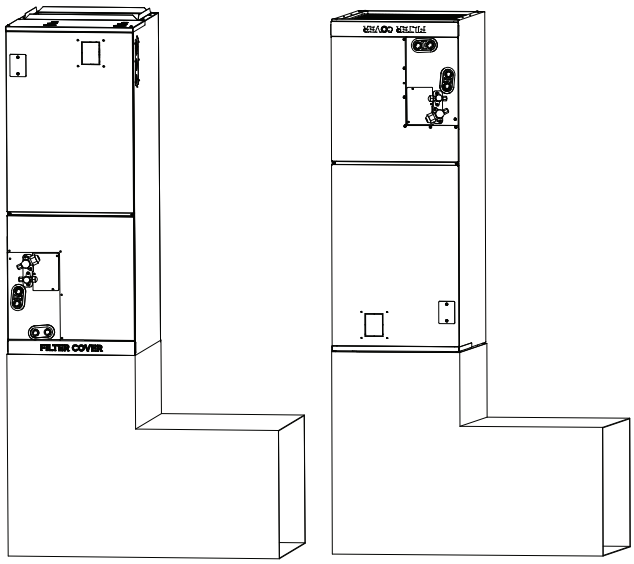
Horizontal installations

Plenum Clearances



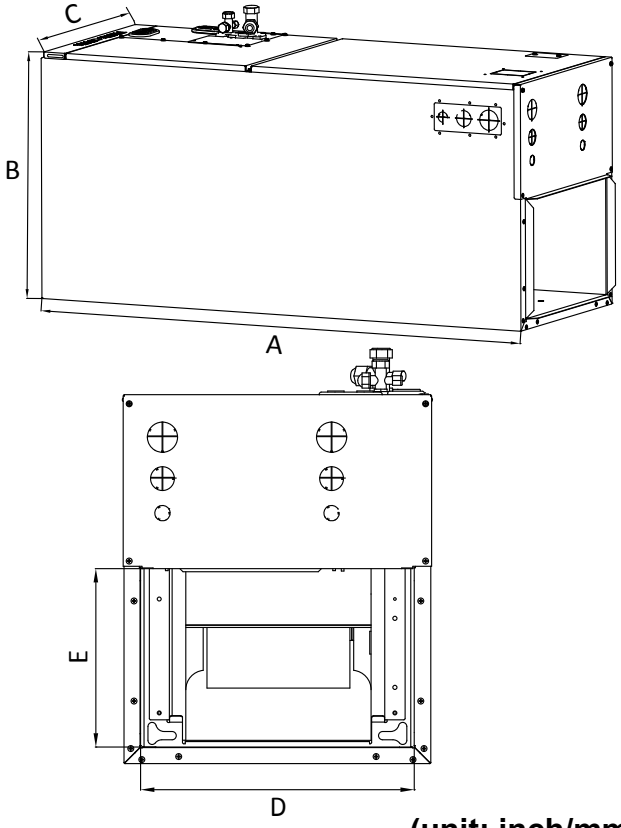
The outlet side pipe length is 59''/1.5m.

Vertical installations



Fixing instructions: When installed vertically (upward or downward), the lower end of the air outlet needs to be connected to the L-shaped metal air duct and fastened by screws.

Indoor parts installation size



(unit: inch/mm)

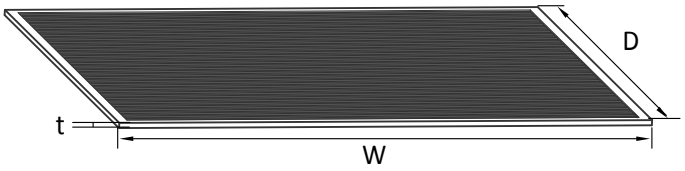
Model A （for North America models）

Dimensions \ MODEL(Btu/h)		12K~24K	30K~48K	60K
Length of A	inch	45	49	53
	mm	1143	1245	1346
Length of B	inch	21	21	21
	mm	533	533	533
Length of C	inch	17-1/2	21-1/50	24-1/2
	mm	445	534	622
Length of D	inch	15-3/4	19-5/16	22-27/32
	mm	400	490	580
Length of E	inch	10-1/4	10-1/4	10-1/4
	mm	260	260	260

Model B

Dimensions \ MODEL(Btu/h)		60K
Length of A	inch	49
	mm	1245
Length of B	inch	21
	mm	533
Length of C	inch	21-1/50
	mm	534
Length of D	inch	19-5/16
	mm	490
Length of E	inch	10-1/4
	mm	260

Recommended size of filter **(unit: inch/mm)**



Model A （for North America models）

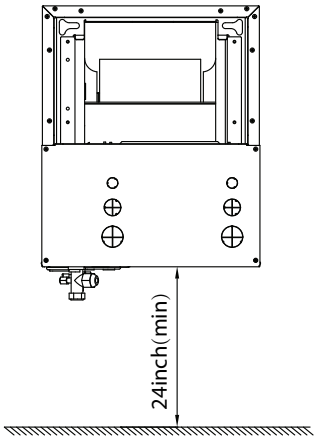
MODEL(Btu/h)	W		D		t	
	inch	mm	inch	mm	inch	mm
12-24K	16	406.4	20	508	1	25.4
30-48K	19-1/2	495.3	20	508	1	24.4
60K	23	584.2	20	508	1	25.4

Model B

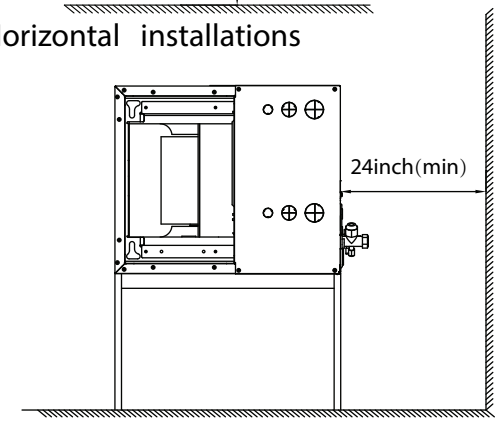
MODEL(Btu/h)	W		D		t	
	inch	mm	inch	mm	inch	mm
60K	19-1/2	495.3	20	508	1	25.4

Installation place

Vertical installations



Horizontal installations



DUCT CONNECTIONS: Air supply and return may be handled in one of several ways best suited to the installation (See table for dimensions for duct inlet and outlet connections). The vast majority of problems encountered with combination cooling systems can be linked toimproperly designed or installed duct systems, it is therefore highly important to the success of an installation that the duct system be properly designed and installed.

Use flexible duct collars to minimize the transmission of vibration/noise into the conditioned space. Where return air duct is short, or where sound is liable to be a problem, sound absorbing glass fiber should be used inside the duct. Insulation of duct work is a must where it runs through an uncooled space during the cooling season. The use of a vapor barrier is recommended to prevent absorption of moisture from the surrounding air into the insulation. The supply air duct should be properly sized by use of a transition to match unit opening. All ducts should be suspended using flexible hangers and never fastened directly to the structure. This unit is not designed for nonducted (freeblow) applications. Duct work should be fabricated and installed in accordance with local and/or national switchs.

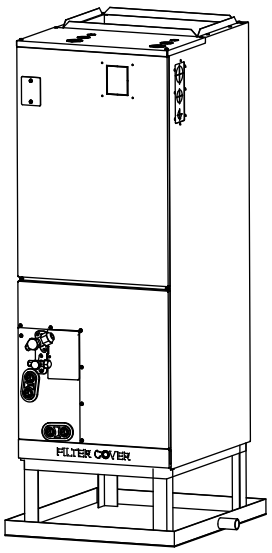
⚠ IMPORTANT

A field-fabricated secondary drain pan, with a drain pipe to the outside of the building, is required in all installations over a finished living space or in any area that may be damaged by overflow from the main drain pan. In some localities, local codes may require a secondary drain pan for any horizontal installation.

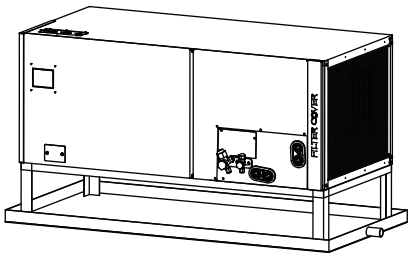
Mount positions

The units can be installed in a vertical (down and up)and Horizontal(right and left) configuration.

Vertical up installations

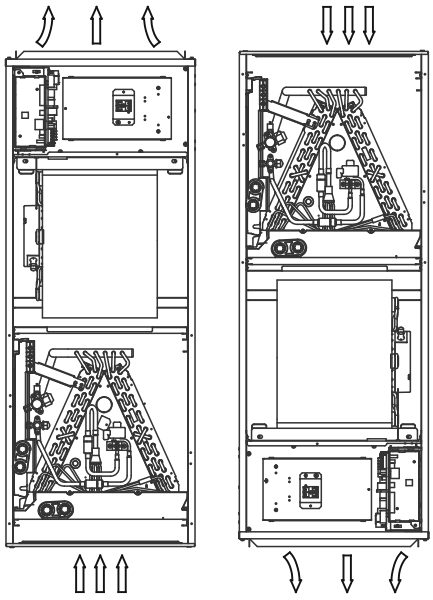


Horizontal installations

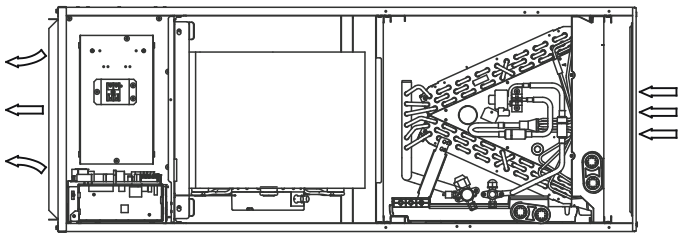


NOTE: For installation, an drain pan (not supplied) must be installed.

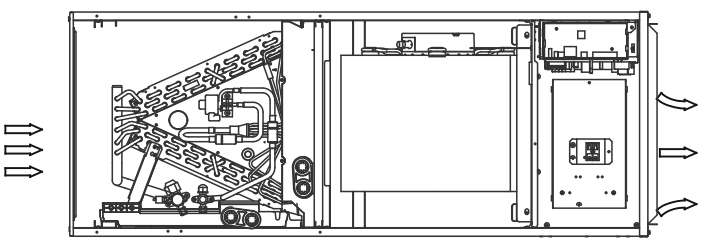
The unit may be installed in one of the upflow, downflow, horizontal left or horizontal right orientations .



upflow downflow



horizontal left

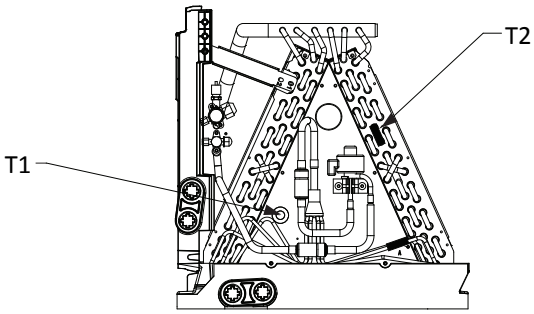


horizontal right

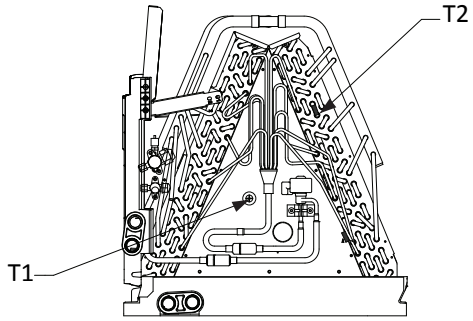
NOTE: Vertical up and horizontal left installation does not need to change thedirection of evaporator.

Indication of the position of each temperature temperature sensor of the evaporator:

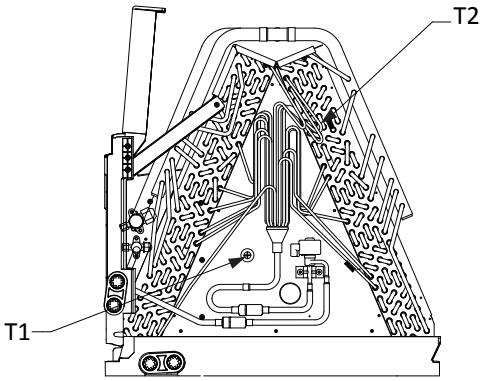
12-24K model



30-48K model



60K model



T2 : Evaporator central temperature sensor
T1 : room temperature sensor (some models)

Regular installation instructions

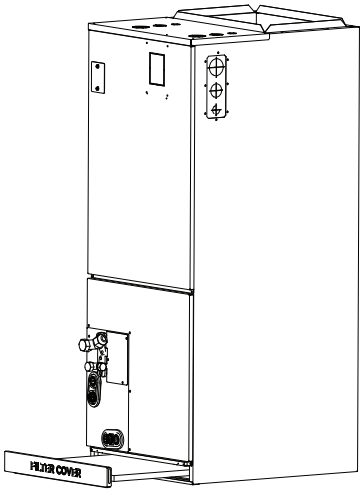
Please follow these steps to perform Vertical up installation and Horizontal left installation:

1. Open the upper cover.
2. Open the cover of the electronic control box.
3. Connect the wire according to the wiring diagram.
4. Connect the pipes.
5. Install the drainage pipes.

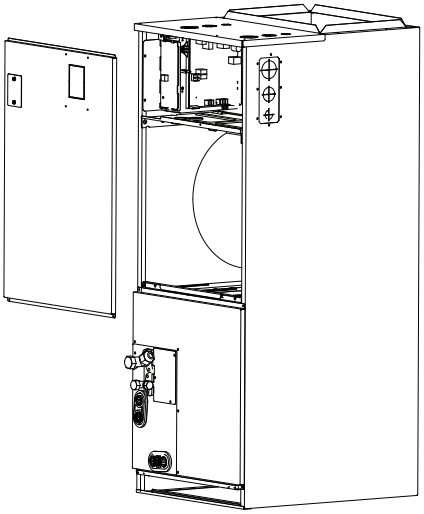
Reversing installation instructions

For the Horizontal right installation and Vertical down installation, the direction of the evaporator should be changed . Please do it according to the following steps:

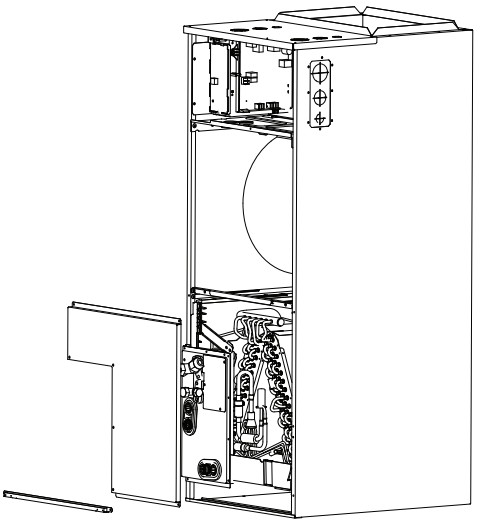
1. Remove the cover plate of the filter ,then take the filter off.



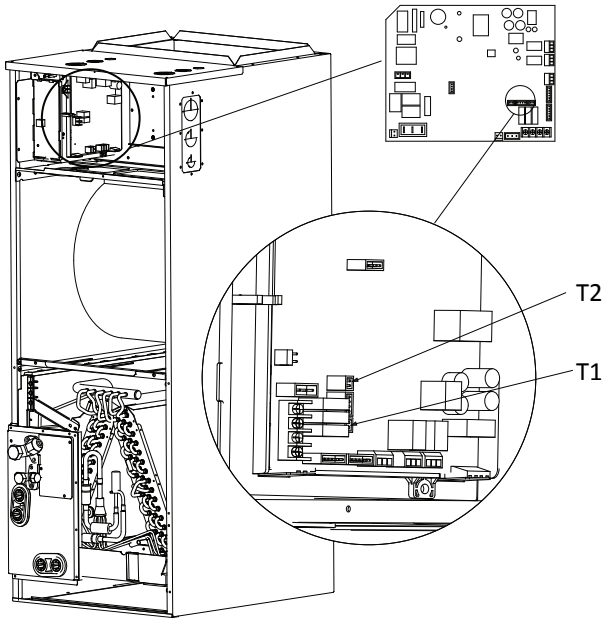
2. Remove the upper cover assembly.



3. Remove evaporator cover plate.

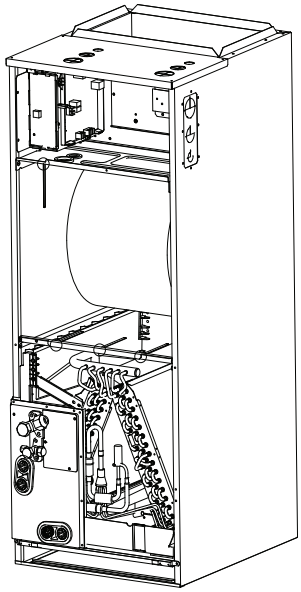


4. Remove T1, T2 temperature sensor plug、electronic expansion valve wiring Disassemble T1, T2 temperature sensor and electronic expansion valve

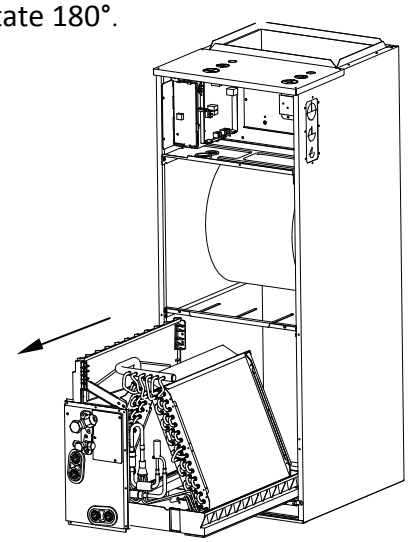


NOTE: T1 is only available for some models.

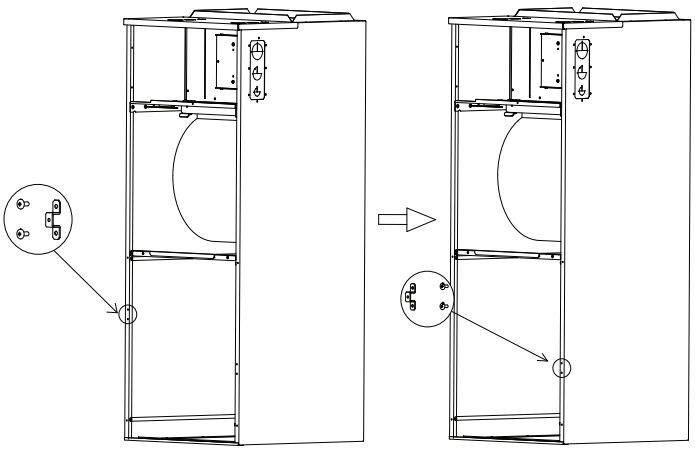
5. Remove T1、T2 temperature sensor and electronic expansion valve wire ties.



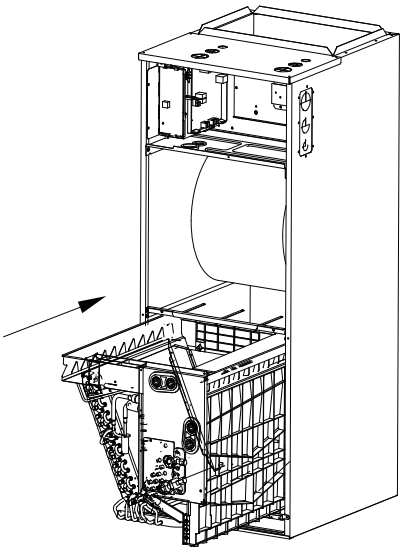
6. Take out the evaporator and drain pan and rotate 180°.



7. Adjust the position of the mounting parts.

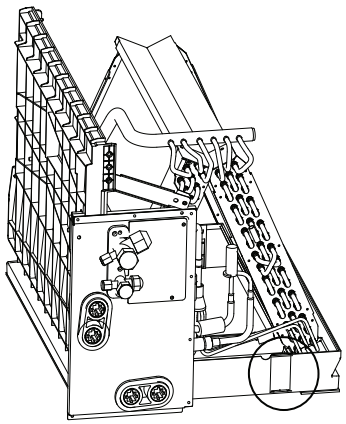


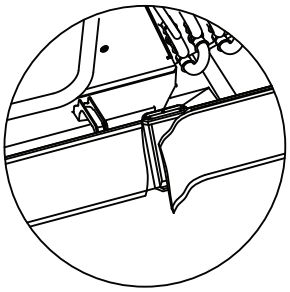
8. Reinstall the evaporator and drain pan.



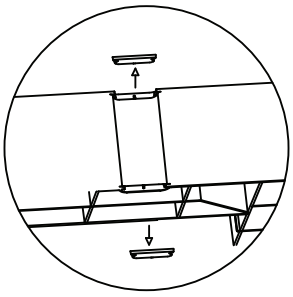
9. Reinstall T1, T2 temperature sensor plug electronic expansion valve and tie up the temperature sensor wires.

NOTE: The wire body needs to pass through the wire groove from the water receiving tray and be stuck on the hook of the water receiving tray.

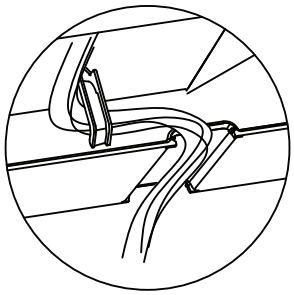




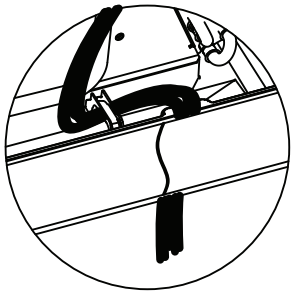
Break the sponge.



Remove knockouts as shown in the figure.

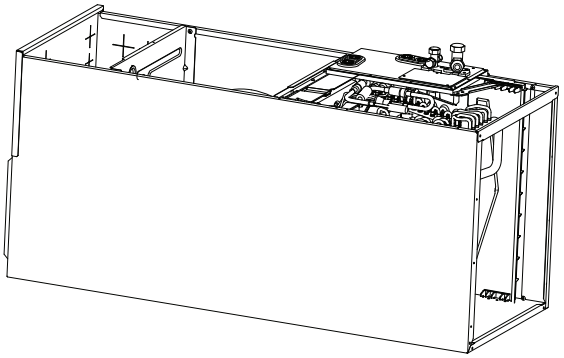


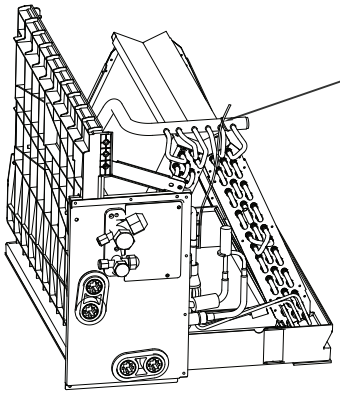
Hook the wire into the buckle and go down from the wire slot.



Sponge paste reset.

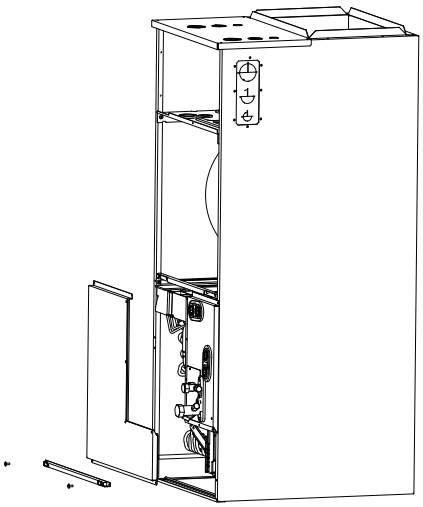
10. The evaporator is assembled in place.





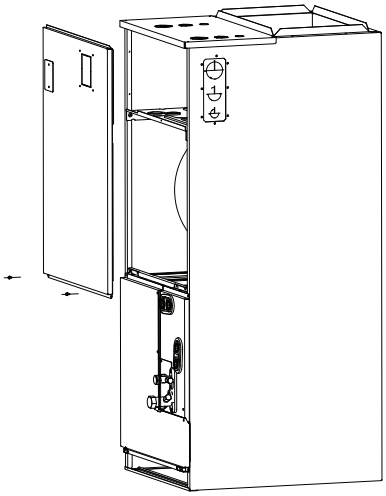
Use cable ties to bind and fix the environmental temperature sensitive bag as shown in the figure.

11. Reinstal evaporator cover plate.

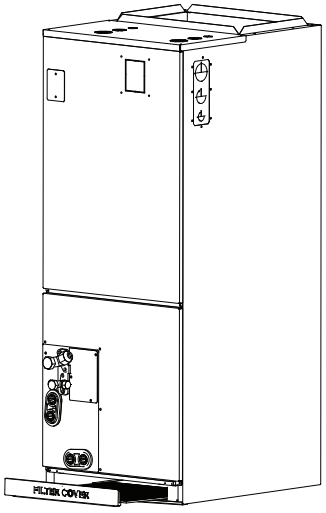


12. Connect the wire according to the wiring diagram.

13. Reassemble the upper cover.



14. Reinstal the filter and filter cover plate.



15. Connect the pipes.
16. Install the drainage pipes.

Installation of Electric Auxiliary Heat Module (for some models)(not supplied)

Accessories

Name	Shape	Quantity
Owner's and Installation manual		1
Seal sponge		1
Screw		7
Rubber cap		1
Electric auxiliary heating wiring diagram		1
Air switch label		1

NOTE:

Installation must be performed by an authorized dealer or specialist. Please make necessary protection when installing the unit.

Specification series of electric auxiliary heat module:
3kW, 5kW, 8kW, 10kW, 15kw, 20kW, 25kW.
The electric auxiliary heat module is only used for installation on the AHU internal machine.
If the unit needs to be equipped with electric auxiliary heat module, please check the electric auxiliary heat module specification that can be matched with the unit first to avoid unnecessary consequences caused by improper matching.

Selection and matching of internal machine and electric auxiliary heating components

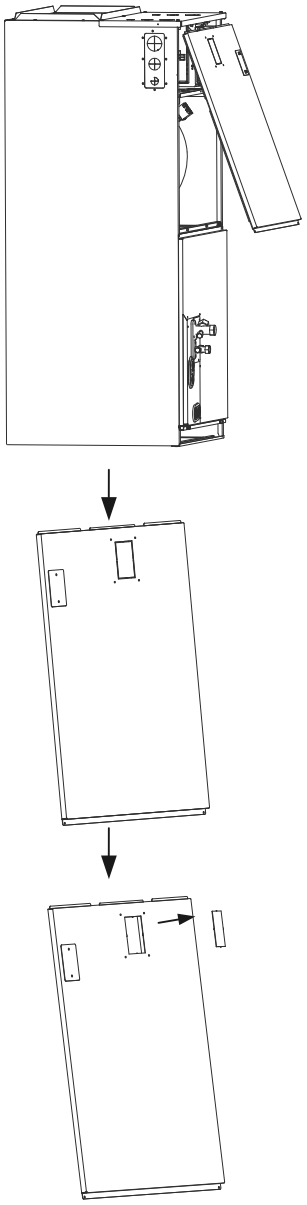
MODEL (Btu/h)	3kW	5kW	8kW	10kW	15kW	20kW	25kW
12K	Y	Y	Y	-	-	-	-
18K	Y	Y	Y	Y	-	-	-
24K	-	Y	Y	Y	Y	-	-
30K	-	Y	Y	Y	Y	-	-
36K	-	Y	Y	Y	Y	Y	-
48K	-	-	Y	Y	Y	Y	-
60K	-	-	-	Y	Y	Y	Y

Installation Requirements

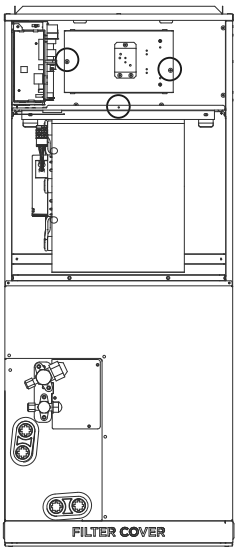
Before installation, please check the list of electric auxiliary heat modules and physical objects. After transportation, check whether the electric heating is damaged. If any damage is found, please contact the after-sales personnel immediately.

Electric Auxiliary Heat Module installation and wiring operation

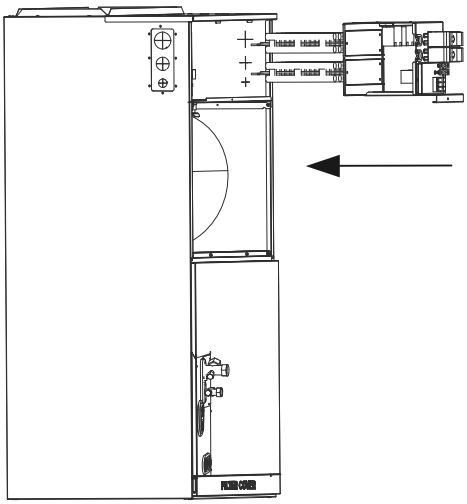
1. Remove the upper cover and use professional tools to destroy the knock-out holes of the upper cover.

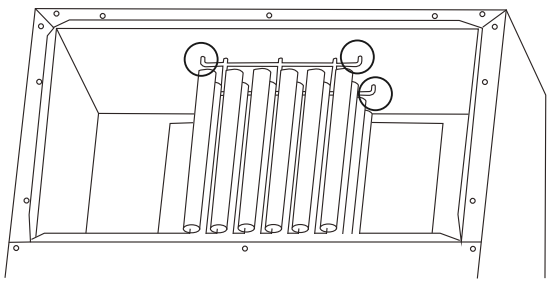


2. Remove the terminal block and power cord, loosen the screws, and remove the electric auxiliary heating cover.

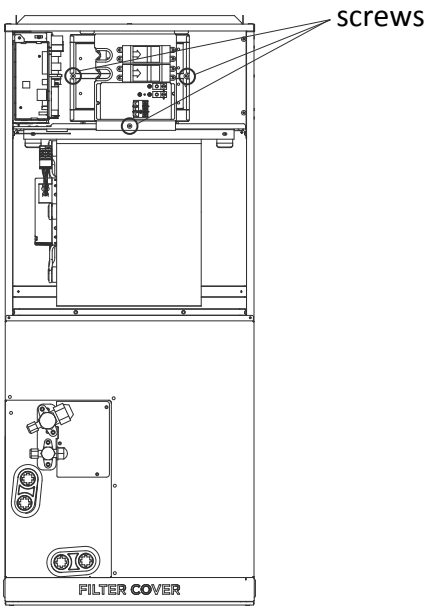


3. Install the electric auxiliary heating component into the chassis shell along the front direction, and note that the front end needs to be inserted into the shell assembly hole.

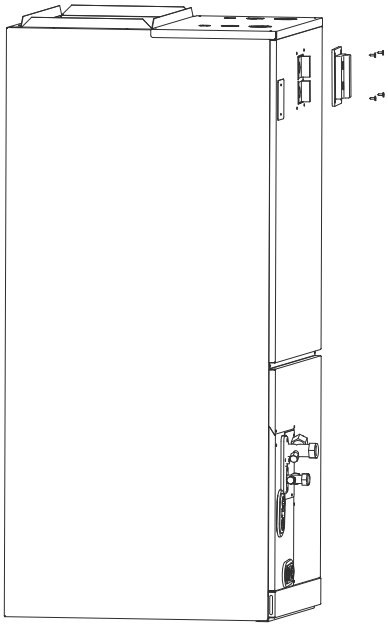




4. Tighten the fixing screws.



5. Wiring according to the wiring nameplate.
6. Install the upper cover.
7. Install waterproof case.



After the electric heating wiring is connected, please confirm before power on:

- Check all wiring and ensure reliable connection of wire body.
- Check the electric heating fixing screw, and the screw is fixed reliably.
- The size selection of power wire meets the power supply requirements.

Specifications	Number of circuit breakers	Number of relays	Number of power cord groups	Number of power cord grounding screws
3kW	1	1	2	2
5kW	1	1	2	2
8kW	1	2	2	2
10kW	1	2	2	2
15kw	2	3	3	3
20kW	2	4	3	3
25kW	3	5	4	4

NOTE:

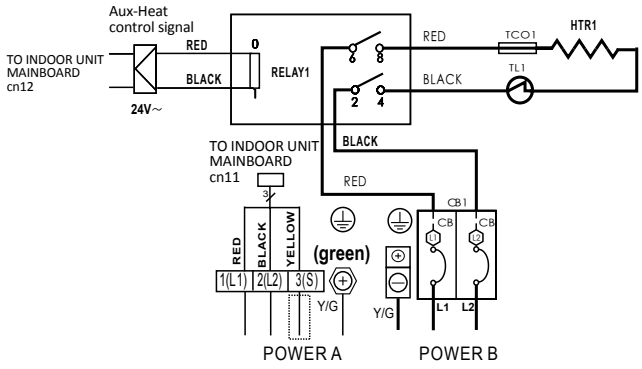
- Electric auxiliary heating wiring diagram packed with the accessories.
- Please paste the wiring diagram in the inside cover after the installation of electric auxiliary heating modules is completed ,for convenience of later maintenance.

NOTE:

After installing the electric auxiliary heat module , stick the air switch label near the upper cover air switch.

3KW/5KW HEAT KIT

:thermal cut-out
:thermal link, self-resetting



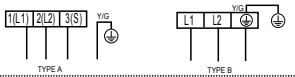
NOTE1:
This symbol indicates the element is optional, The wiring type of the actual unit shall prevail.

NOTE2:
Please attach the nameplate to the cover of the electric control box. All the round holes located on the plate represent numbers. Please refer to the Installation Manual for details.

Round hole number	Relay number	Round hole number	Circuit breaker number
○	RELAY1	○	CB1
○○			
○○○			
○○○○			
○○○○○			

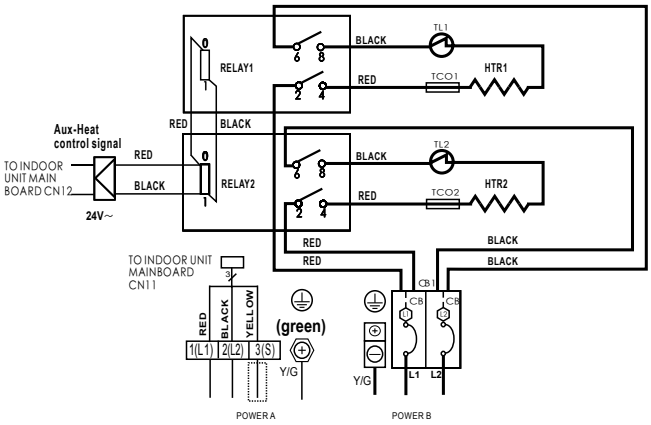
NOTE3: TO BE WIRED IN ACCORDANCE WITH NEC AND LOCAL CODES.
NOTE4: POWER A,B,C,D ARE DIFFERENT POWERS.

The wiring mode of power supply A shall be based on the type of original wiring terminal of AHU; for type A, S position must be connected to the ourdoor S; for type B, S position shall not be connected.



8KW/10KW HEAT KIT

:thermal cut-out
:thermal link, self-resetting



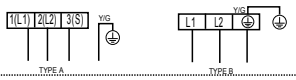
NOTE1:
This symbol indicates the element is optional, The wiring type of the actual unit shall prevail.

NOTE2:
Please attach the nameplate to the cover of the electric control box. All the round holes located on the plate represent numbers. Please refer to the Installation Manual for details.

Round hole number	Relay number	Round hole number	Circuit breaker number
○	RELAY1	○	CB1
○○	RELAY2		
○○○			
○○○○			
○○○○○			

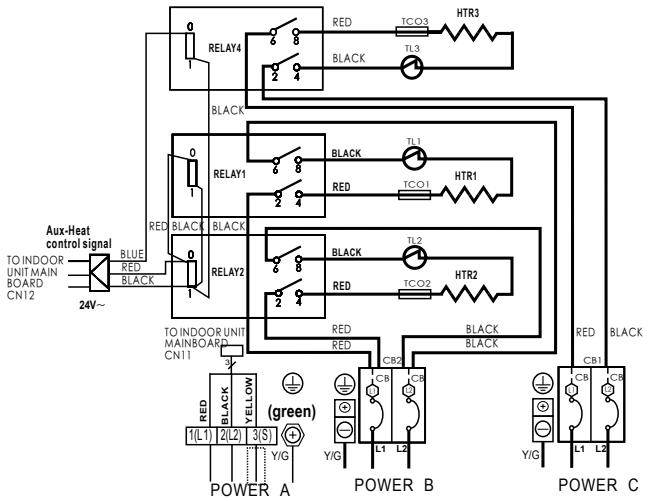
NOTE3: TO BE WIRED IN ACCORDANCE WITH NEC AND LOCAL CODES.
NOTE4: POWER A,B,C,D ARE DIFFERENT POWERS.

The wiring mode of power supply A shall be based on the type of original wiring terminal of AHU; for type A, S position must be connected to the ourdoor S; for type B, S position shall not be connected.



15KW HEAT KIT

:thermal cut-out
:thermal link, self-resetting



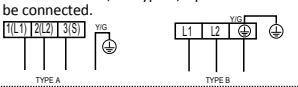
NOTE1:
This symbol indicates the element is optional, The wiring type of the actualunit shall prevail.

NOTE2:
Please attach the nameplate to the cover of the electric control box. All the round holes located on the plate represent numbers. Please refer to the Installation Manual for details.

Round hole number	Relay number	Round hole number	Circuit breaker number
○	RELAY1	○	CB1
○○	RELAY2	○○	CB2
○○○	RELAY4		
○○○○			
○○○○○			

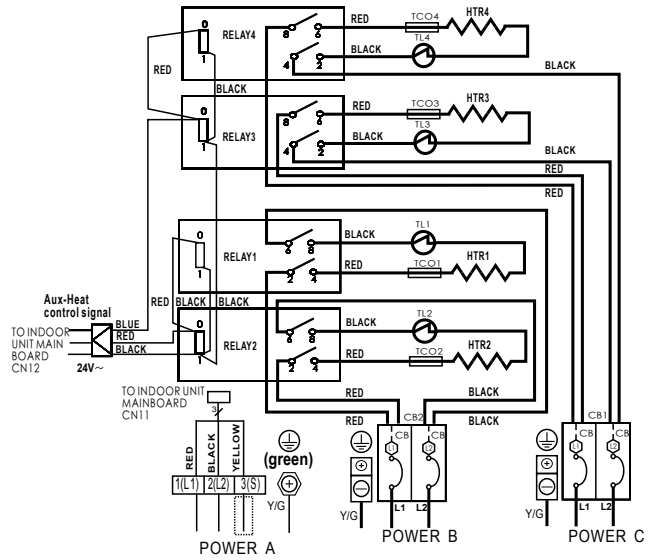
NOTE3: TO BE WIRED IN ACCORDANCE WITH NEC AND LOCAL CODES.
NOTE4: POWER A,B,C,D ARE DIFFERENT POWERS.

The wiring mode of power supply A shall be based on the type of original wiring terminal of AHU; for type A, S position must be connected to the ourdoor S; for type B, S position shall not be connected.



20KW HEAT KIT

:thermal cut-out
:thermal link, self-resetting



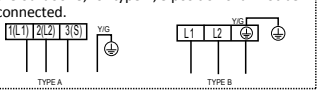
NOTE1:
This symbol indicates the element is optional, The wiring type of the actual unit shall prevail.

NOTE2:
Please attach the nameplate to the cover of the electric control box. All the round holes located on the plate represent numbers. Please refer to the Installation Manual for details.

Round hole number	Relay number	Round hole number	Circuit breaker number
○	RELAY1	○	CB1
○○	RELAY2	○○	CB2
○○○	RELAY3		
○○○○	RELAY4		
○○○○○			

NOTE3: TO BE WIRED IN ACCORDANCE WITH NEC AND LOCAL CODES.
NOTE4: POWER A,B,C,D ARE DIFFERENT POWERS.

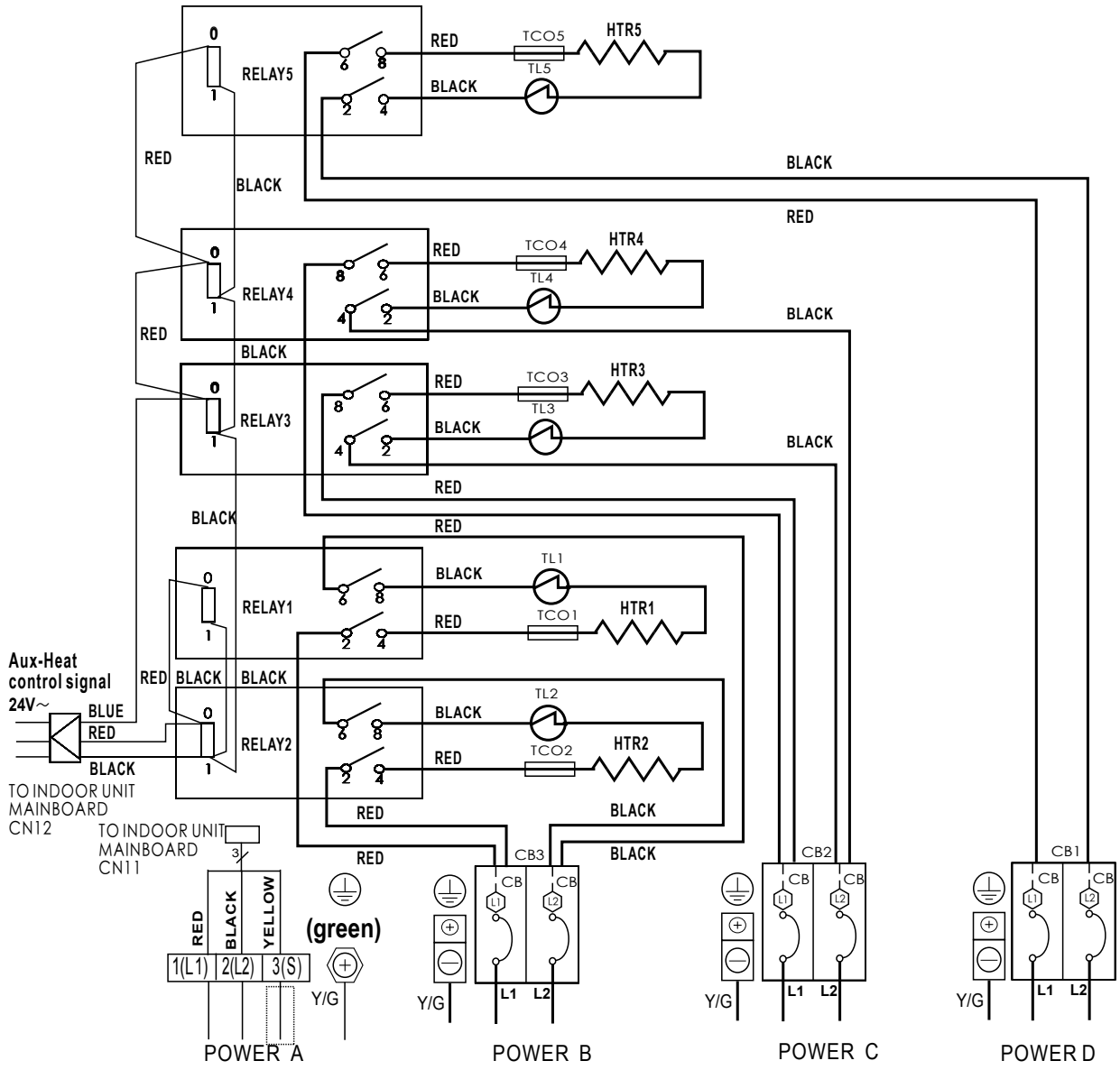
The wiring mode of power supply A shall be based on the type of original wiring terminal of AHU; for type A, S position must be connected to the ourdoor S; for type B, S position shall not be connected.



25KW HEAT KIT

: thermal cut-out

: thermal link, self-resetting



NOTE1: ▭
This symbol indicates the element is optional, The wiring type of the actual unit shall prevail.

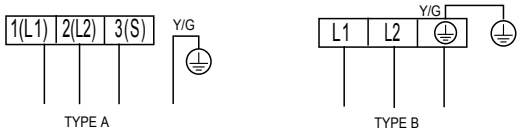
NOTE2:
Please attach the nameplate to the cover of the electric control box. All the round holes located on the plate represent numbers. Please refer to the Installation Manual for details.

NOTE3: TO BE WIRED IN ACCORDANCE WITH NEC AND LOCAL CODES.

NOTE4: POWER A,B,C,D ARE DIFFERENT POWERS.

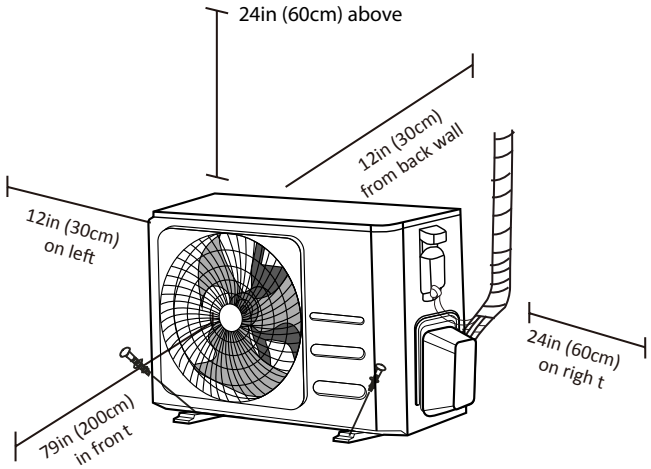
Round hole number	Relay number	Round hole number	Circuit breaker number
○	RELAY 1	○	CB1
○○	RELAY 2	○○	CB2
○○○	RELAY 3	○○○	CB3
○○○○	RELAY 4		
○○○○○	RELAY 5		

The wiring mode of power supply A shall be based on the type of original wiring terminal of AHU; for type A, S position must be connected to the ourdoor S; for type B, S position shall not be connected.



Outdoor Unit Installation

Install the unit by following local switchs and regulations , there may be differ slightly between different regions.



Installation Instructions – Outdoor unit

Step 1: Select installation location

Before installing the outdoor unit, you must choose an appropriate location. The following are standards that will help you choose an appropriate location for the unit.

Proper installation locations meet the following standards:

- ☑ Meets all spatial requirements shown in Installation Space Requirements above.
- ☑ Good air circulation and ventilation
- ☑ Firm and solid—the location can support the unit and will not vibrate
- ☑ Noise from the unit will not disturb others
- ☑ Protected from prolonged periods of direct sunlight or rain
- ☑ Where snowfall is anticipated, take appropriate measures to prevent ice buildup and coil damage.

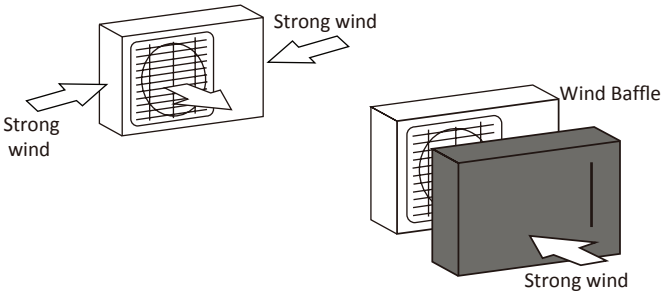
DO NOT install unit in the following locations:

- ⊘ Near an obstacle that will block air inlets and outlets
- ⊘ Near a public street, crowded areas, or where noise from the unit will disturb others
- ⊘ Near animals or plants that will be harmed by hot air discharge
- ⊘ Near any source of combustible gas
- ⊘ In a location that is exposed to large amounts of dust
- ⊘ In a location exposed to a excessive amounts of salty air

SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

If the unit is exposed to heavy wind:

Install unit so that air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds.
See Figures below.



If the unit is frequently exposed to heavy rain or snow:

Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.

If the unit is frequently exposed to salty air (seaside):

Use outdoor unit that is specially designed to resist corrosion.

Step 2: Install drain joint (Heat pump unit only)

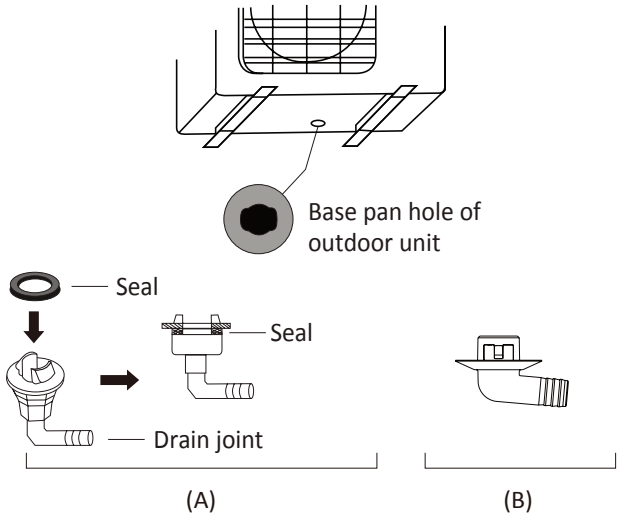
Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. NOTE: There are two different types of drain joints depending on the type of outdoor unit.

If the drain joint comes with a rubber seal (see **Fig. A**), do the following:

1. Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.
2. Insert the drain joint into the hole in the base pan of the unit.
3. Rotate the drain joint 90° until it clicks in place facing the front of the unit.
4. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

If the drain joint doesn't come with a rubber seal (see **Fig. B**), do the following:

1. Insert the drain joint into the hole in the base pan of the unit. The drain joint will click in place.
2. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.



IN COLD CLIMATES

In cold climates, make sure that the drain hose is as vertical as possible to ensure swift water drainage. If water drains too slowly, it can freeze in the hose and flood the unit.

Step 3: Anchor outdoor unit

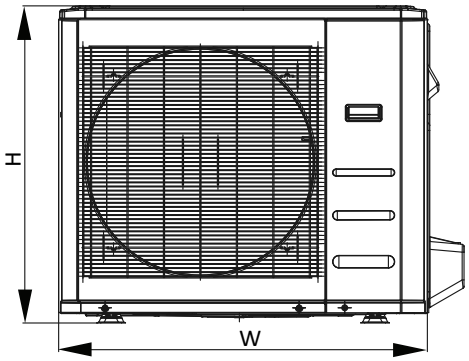
The outdoor unit can be anchored to the ground or to a wall-mounted bracket with bolt(M10). Prepare the installation base of the unit according to the dimensions below.

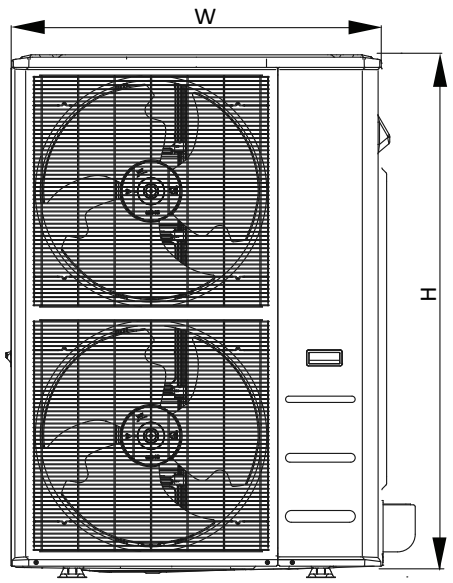
UNIT MOUNTING DIMENSIONS

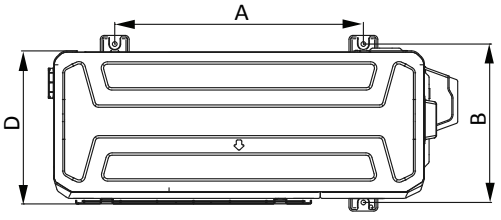
The following is a list of different outdoor unit sizes and the distance between their mounting feet. Prepare the installation base of the unit according to the dimensions below.

Outdoor Unit Types and Specifications

Split Type Outdoor Unit







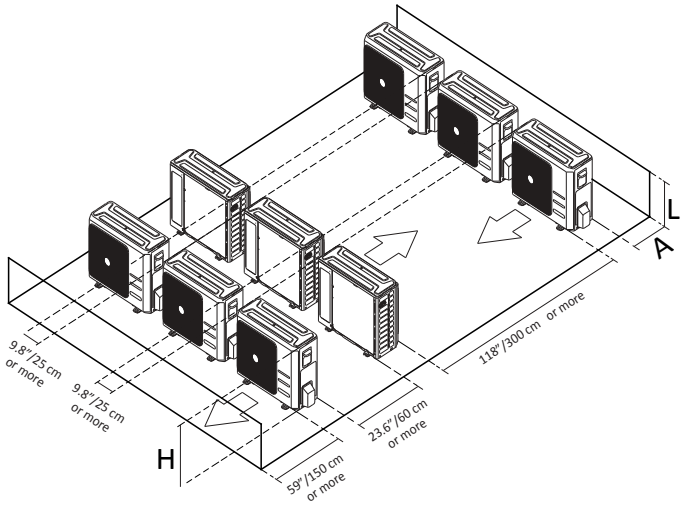
(unit: inch/mm)

Outdoor Unit Dimensions						Mounting Dimensions			
W		H		D		A		B	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
31-11/16	805	21-13/16	554	13	330	20-1/8	511	12-1/2	317
35	890	26-1/2	673	13-15/32	342	26-1/8	663	13-15/16	354
37-1/4	946	31-29/32	810	16-5/32	410	26-1/2	673	15-7/8	403
37-1/2	952	52-1/2	1333	16-11/32	415	24-35/36	634	15-29/32	404

Rows of series installation

The relations between H, A and L are as follows.

	L	A
L ≤ H	L ≤ 1/2H	16in/25 cm / 9-13/ or more
	1/2H < L ≤ H	16in/30 cm / 11-13 or more
L > H	Can not be installed	



If you will install the unit on the ground or on a concrete mounting platform, do the following:

1. Mark the positions for four expansion bolts based on dimensions chart.
2. Pre-drill holes for expansion bolts.
3. Place a nut on the end of each expansion bolt.
4. Hammer expansion bolts into the pre-drilled holes.
5. Remove the nuts from expansion bolts, and place outdoor unit on bolts.
6. Put washer on each expansion bolt, then replace the nuts.
7. Using a wrench, tighten each nut until snug.

⚠ WARNING

WHEN DRILLING INTO CONCRETE, EYE PROTECTION IS RECOMMENDED AT ALL TIMES.

If you will install the unit on a wall-mounted bracket , do the following:

⚠ CAUTION

Make sure that the wall is made of solid brick, concrete, or of similarly strong material. **The wall must be able to support at least four times the weight of the unit.**

1. Mark the position of bracket holes based on dimensions chart.
2. Pre-drill the holes for the expansion bolts.
3. Place a washer and nut on the end of each expansion bolt.
4. Thread expansion bolts through holes in mounting brackets, put mounting brackets in position, and hammer expansion bolts into the wall.
5. Check that the mounting brackets are level.
6. Carefully lift unit and place its mounting feet on brackets.
7. Bolt the unit firmly to the brackets.
8. If allowed, install the unit with rubber gaskets to reduce vibrations and noise.

Drainpipe Installation

The drainpipe is used to drain water away from the unit. Improper installation may cause unit and property damage.

⚠ CAUTION

- Insulate all piping to prevent condensation, which could lead to water damage.
- If the drainpipe is bent or installed incorrectly, water may leak and cause awater-level switch malfunction.
- In HEAT mode, the outdoor unit willdischarge water. Ensure that the drain hoseis placed in an appropriate area to avoidwater damage and slippage.
- **DO NOT** pull the drainpipe forcefully. This could disconnect it.

NOTE ON PURCHASING PIPES

Installation requires a polyethylene tube (Internally threaded tube 3/4 inch), which can be obtained at your local hardware store or dealer.

⚠ IMPORTANT

After removal of drain pan plug(s), check drain hole(s) to verify that drain opening is fully open and free of any debris. Also check to make sure that no debris has fallen into the drain pan during installation that may plug up the drain opening.
Seal around the exiting drain pipe, liquid and suction lines to prevent infiltration of humid air.
On units of this type, where the blower "draws" rather than "blows" air through the coil, traps must be installed in the condensate drain lines (primary and auxiliary, if used). Traps prevent the blower from drawing air through the drain lines into the air supply.

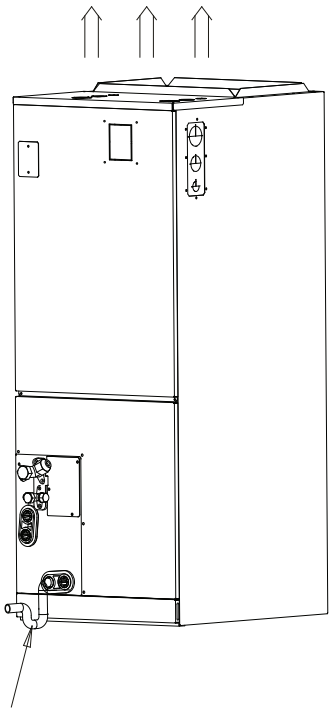
Indoor Drainpipe Installation

1. Cover the drainpipe with heat insulation to prevent condensation and leakage.

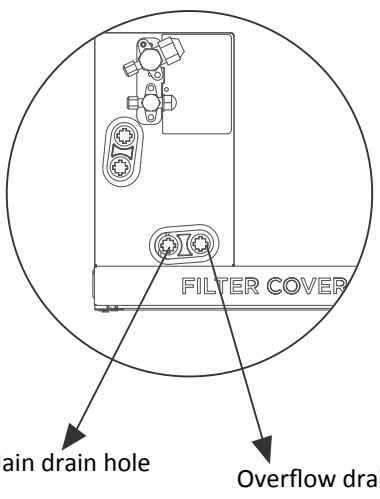
These units operate with a positive pressure at the drain connections and a drain trap is required.

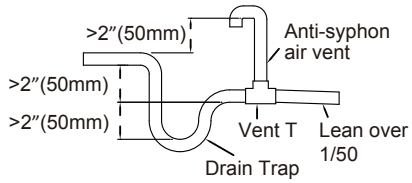
The trap needs to be installed as close to the unit as possible. Make sure the top of the trap is below the connection to the drain pan to allow complete drainage of the pan.

VERTICAL DISCHARGE



PRIMARY DRAIN



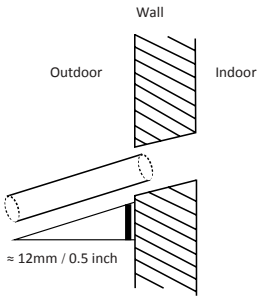


NOTE: Horizontal runs must also have an anti-siphon air vent(standpipe) install ahead of the horizontal run to eliminate air trapping.

NOTE ON DRAINPIPE INSTALLATION

- When using an extended drainpipe, tighten the indoor connection with an additional protection tube to prevent it from pulling loose.
- The Figure shows how to trap or plug all drains during vertical discharge.
- The Figure shows how to trap or plugall drains during right-hand discharge.
- The seal plug are supplied as accessories and should be screwed tightly only by hand.
- Incorrect installation could cause water to flow back into the unit and flood.

2. Using a 2.5" (65mm) core drill, drill a hole in the wall. Make sure that the hole is drilled at a slight downward angle, so that the outdoor end of the hole is lower than the indoor end by about 0.5" (12mm). This will ensure proper water drainage . Place the protective wall cuff in the hole. This protects the edges of the hole and will help seal it once you finish installation.



NOTE: When drilling the hole, make sure to avoid wires, plumbing, and other sensitive components.

3. Pass the drain hose through the wall hole. Make sure the water drains to a safe location where it will not cause water damage or a slipping hazard.

NOTE: The drainpipe outlet should be at least 1.9" (5cm) above the ground. If it touches the ground, the unit may become blocked and malfunction. If you discharge the water directly into a sewer, make sure that the drain has a U or S pipe to catch odors that might otherwise come back into the house.

Refrigerant Piping Connection

Safety Precautions

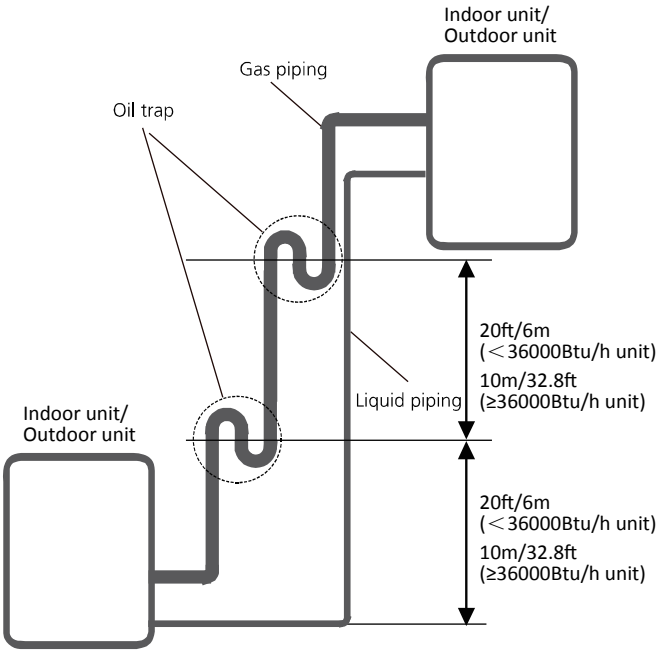
⚠ WARNING

- All field piping must be completed by a licensed technician and must comply with the local and national regulations.
- When the air conditioner is installed in a small room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage. If the refrigerant leaks and its concentration exceeds its proper limit, hazards due to lack of oxygen may result.
- When installing the refrigeration system, ensure that air, dust, moisture or foreign substances do not enter the refrigerant circuit. Contamination in the system may cause poor operating capacity, high pressure in the refrigeration cycle, explosion or injury.
- Ventilate the area immediately if there is refrigerant leakage during the installation. Leaked refrigerant gas is both toxic and flammable. Ensure there is no refrigerant leakage after completing the installation work.

⚠ CAUTION

Oil traps

If oil flows back into the outdoor unit's compressor, this might cause liquid compression or deterioration of oil return. Oil traps in the rising gas piping can prevent this.
An oil trap should be installed every 20ft (6m) of vertical suction line riser (＜36000Btu/h unit).
An oil trap should be installed every 32.8ft (10m) of vertical suction line riser (≥36000Btu/h unit).



Notes On Pipe Length and Elevation

Ensure that the length of the refrigerant pipe, the number of bends, and the drop height between the indoor and outdoor units meets the requirements shown in the following table:

The Maximum Length And Drop Height Based on Models. (Unit: m/ft.)

Type of model	Capacity (Btu/h)	Length of piping	Maximum drop height
North America, Australia and the eu frequency conversion Split Type	<15K	25/82	10/32.8
	≥15K - <24K	30/98.4	20/65.6
	≥24K - <36K	50/164	25/82
	≥36K - ≤60K	65/213	30/98.4
Other Split Type	12K	15/49	8/26
	18K-24K	25/82	15/49
	30K-36K	30/98.4	20/65.6
	42K-60K	50/164	30/98.4

Name	Shape		Quantity(PC)
Connecting pipe assembly	Liquid side	Φ 1/4in(6.35)	Parts you must purchase separately. Consult the dealer about the proper pipe size of the unit you purchased.
		Φ 3/8in(9.52)	
	Gas side	Φ 1/2in(12.7)	
		Φ 5/8in(16)	
		Φ 3/4in(19)	
		Φ 7/8in(22)	

Connection Instructions – Refrigerant Piping

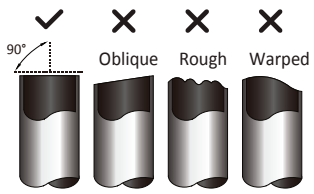
⚠ CAUTION

- The branching pipe must be installed horizontally. An angle of more than 10° may cause malfunction.
- **DO NOT** install the connecting pipe until both indoor and outdoor units have been installed.
- Insulate both the gas and liquid piping to prevent water leakage.

Step 1: Cut pipes

When preparing refrigerant pipes, take extra care to cut and flare them properly. This will ensure efficient operation and minimize the need for future maintenance.

1. Measure the distance between the indoor and outdoor units.
2. Using a pipe cutter, cut the pipe a little longer than the measured distance.
3. Make sure that the pipe is cut at a perfect 90° angle.



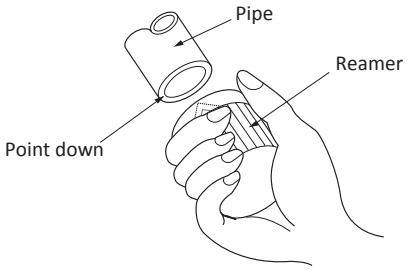
⊘ DO NOT DEFORM PIPE WHILE CUTTING

Be extra careful not to damage, dent, or deform the pipe while cutting. This will drastically reduce the heating efficiency of the unit.

Step 2: Remove burrs.

Burrs can affect the air-tight seal of refrigerant piping connection. They must be completely removed.

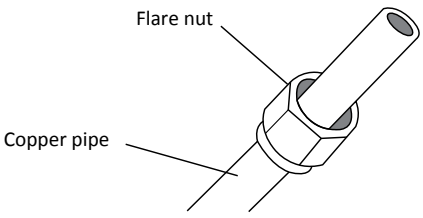
1. Hold the pipe at a downward angle to prevent burrs from falling into the pipe.
2. Using a reamer or deburring tool, remove all burrs from the cut section of the pipe.



Step 3: Flare pipe ends

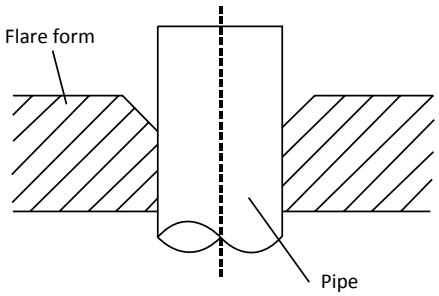
Proper flaring is essential to achieve an airtight seal.

1. After removing burrs from cut pipe, seal the ends with PVC tape to prevent foreign materials from entering the pipe.
2. Sheath the pipe with insulating material.
3. Place flare nuts on both ends of pipe. Make sure they are facing in the right direction, because you can't put them on or change their direction after flaring.



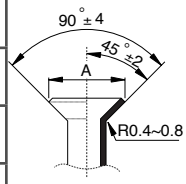
4. Remove PVC tape from ends of pipe when ready to perform flaring work.

5. Clamp flare form on the end of the pipe.
   The end of the pipe must extend beyond the flare form.



6. Place flaring tool onto the form.
7. Turn the handle of the flaring tool clockwise until the pipe is fully flared. Flare the pipe in accordance with the dimensions.

PIPING EXTENSION BEYOND FLARE FORM

Pipe gauge	Tightening torque	Flare dimension (A) (Unit: inch/mm)		Flare shape
		Min.	Max.	
Ø 6.35	18-20 N.m (183-204 kgf.cm)	8.4/0.33	8.7/0.34	
Ø 9.52	25-26 N.m (255-265 kgf.cm)	13.2/0.52	13.5/0.53	
Ø 12.7	35-36 N.m (357-367 kgf.cm)	16.2/0.64	16.5/0.65	
Ø 16	45-47 N.m (459-480 kgf.cm)	19.2/0.76	19.7/0.78	
Ø 19	65-67 N.m (663-683 kgf.cm)	23.2/0.91	23.7/0.93	
Ø 22	75-85N.m (765-867 kgf.cm)	26.4/1.04	26.9/1.06	

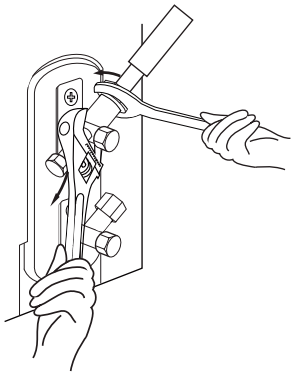
8. Remove the flaring tool and flare form, then inspect the end of the pipe for cracks and even flaring.

Step 4: Connect pipes

Connect the copper pipes to the indoor unit first, then connect it to the outdoor unit. You should first connect the low-pressure pipe, then the high-pressure pipe.

1. When connecting the flare nuts, apply a thin coat of refrigeration oil to the flared ends of the pipes.
2. Align the center of the two pipes that you will connect.
3. Tighten the flare nut as tightly as possible by hand.
4. Using a spanner, grip the nut on the unit tubing.
5. While firmly gripping the nut, use a torque wrench to tighten the flare nut according to the torque values in above table.

NOTE: Use both a spanner and a torque wrench when connecting or disconnecting pipes to/from the unit.

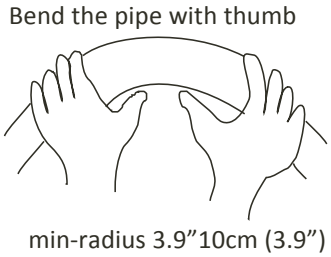


⚠ CAUTION

- Ensure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
- Make sure the pipe is properly connected. Over tightening may damage the bell mouth and under tightening may lead to leakage.

NOTE ON MINIMUM BEND RADIUS

Carefully bend the tubing in the middle according to the diagram below. **DO NOT** bend the tubing more than 90° or more than 3 times.



6. After connecting the copper pipes to the indoor unit, wrap the power cable, signal cable and the piping together with binding tape.

NOTE: DO NOT intertwine signal cable with other wires. While bundling these items together, do not intertwine or cross the signal cable with any other wiring.

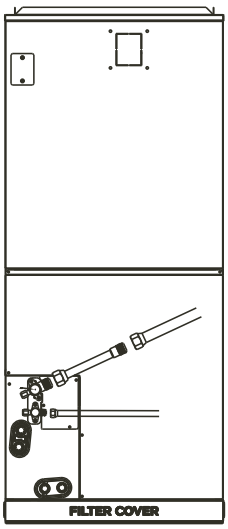
7. Thread this pipeline through the wall and connect it to the outdoor unit.
8. Insulate all the piping, including the valves of the outdoor unit.
9. Open the stop valves of the outdoor unit to start the flow of the refrigerant between the indoor and outdoor unit.

⚠ CAUTION

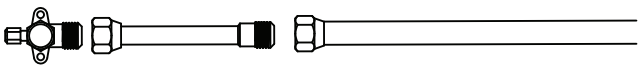
Check to make sure there is no refrigerant leak after completing the installation work. If there is a refrigerant leak, ventilate the area immediately and evacuate the system (refer to the Air Evacuation section of this manual).

60K Air-Handler Air Conditioners Refrigerant Piping Connection （for North America models）

Complete the indoor unit connection pipe assembly as shown below, use flare-to-braze (3/4" to 7/8") adapters to connect 7/8 "Line set. If you connect it in a way other than the one shown in the figure, it will cause the performance of the product to decrease.

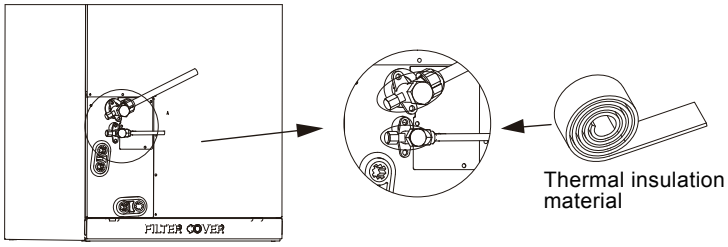


3/4" Service valve 7/8" Line set



Flare-to-braze (3/4" to 7/8")

After the unit is installed, Wrap the valve body with insulation material and make sure the valve is sealed.



Wiring

BEFORE PERFORMING ANY ELECTRICAL WORK, READ THESE REGULATIONS

1. All wiring must comply with local and national electrical switchs, regulations and must be installed by a licensed electrician.
2. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
3. If there is a serious safety issue with the power supply, stop work immediately. Explain your reasoning to the client, and refuse to install the unit until the safety issue is properly resolved.
4. Power voltage should be within 90-110% of rated voltage. Insufficient power supply can cause malfunction, electrical shock, or fire.
5. If connecting power to fixed wiring, a surge protector and main power switch should be installed.
6. If connecting power to fixed wiring, a switch or circuit breaker that disconnects all poles and has a contact separation of at least 1/8in (3mm) must be incorporated in the fixed wiring. The qualified technician must use an approved circuit breaker or switch.
7. Only connect the unit to an individual branch circuit outlet. Do not connect another appliance to that outlet.
8. Make sure to properly ground the air conditioner.
9. Every wire must be firmly connected. Loose wiring can cause the terminal to overheat, resulting in product malfunction and possible fire.
10. Do not let wires touch or rest against refrigerant tubing, the compressor, or any moving parts within the unit.
11. If the unit has an auxiliary electric heater, it must be installed at least 1 meter (40in) away from any combustible materials.
12. To avoid getting an electric shock, never touch the electrical components soon after the power supply has been turned off. After turning off the power, always wait 10 minutes or more before you touch the electrical components.
13. Make sure that you do not cross your electrical wiring with your signal wiring. This may cause distortion and interference.
14. The unit must be connected to the main outlet. Normally, the power supply must have a impedance of 32 ohms.
15. No other equipment should be connected to the same power circuit.
16. Connect the outdoor wires before connecting the indoor wires.

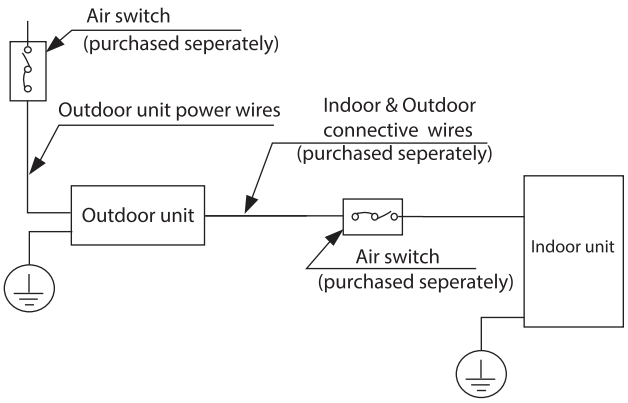
⚠ WARNING

BEFORE PERFORMING ANY ELECTRICAL OR WIRING WORK, TURN OFF THE MAIN POWER TO THE SYSTEM.

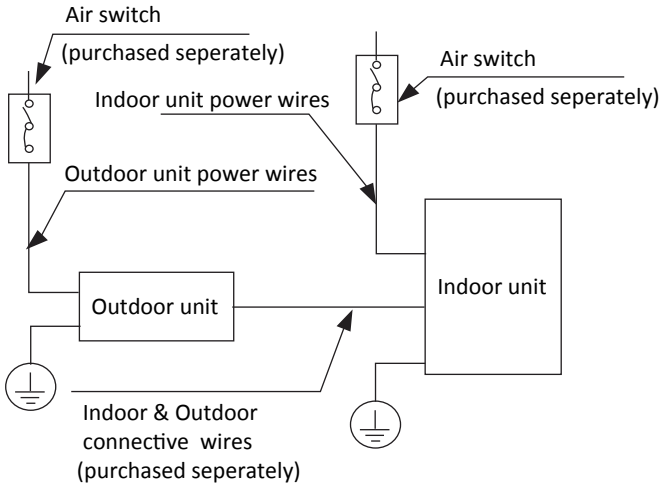
NOTE ON AIR SWITCH

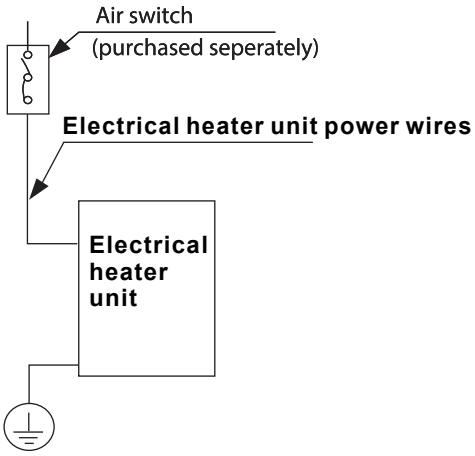
When the maximum current of the air conditioner is more than 16A, an air switch or leakage protection switch with protective device shall be used(purchased seperately) . When the maximum current of the air conditioner is less than 16A, the power cord of air conditioner shall be equipped with plug (purchased seperately) .

(A)



(B)





NOTE: The cographs are for explanation purpose only. Your machine may be slightly different. The actual shape shall prevail.

Outdoor Unit Wiring

⚠ WARNING

Before performing any electrical or wiring work, turn off the main power to the system.

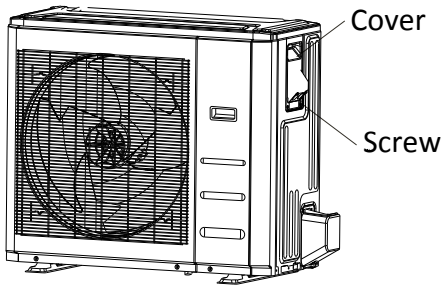
1. Prepare the cable for connection
   a. You must first choose the right cable size.

NOTE:
In North America, choose the cable type according to the local electrical switchs and regulations.
In North America, please choose the right cable size according to the Minimum Circuit Ampacity indicated on the nameplateof the unit.

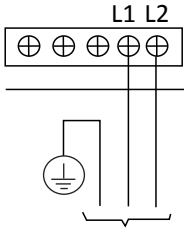
   b. Using wire strippers, strip the rubber jacketfrom both ends of the signal cable to reveal approximately 5.9” (15cm) of wire.
   c. Strip the insulation from the ends.
   d. Using a wire crimper, crimp u-lugs on the ends.

NOTE: When connecting the wires, strictly follow the wiring diagram found inside the electrical box cover.

2. Remove the electric cover of the outdoor unit. If there is no cover on the outdoor unit, take off the bolts from the maintenance board and remove the protection board.

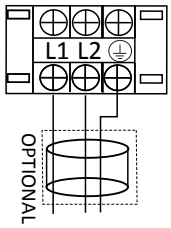


3. Connect the u-lugs to the terminals
   Match the wire colors/labels with the labels on the terminal block. Firmly screw the u-lug of each wire to its corresponding terminal.



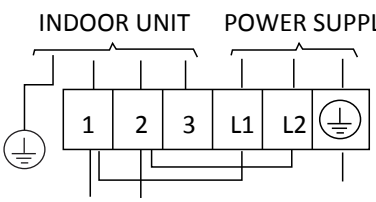
TO POWER SOURCE

Outdoor Unit A



TO POWER SOURCE

Outdoor Unit B

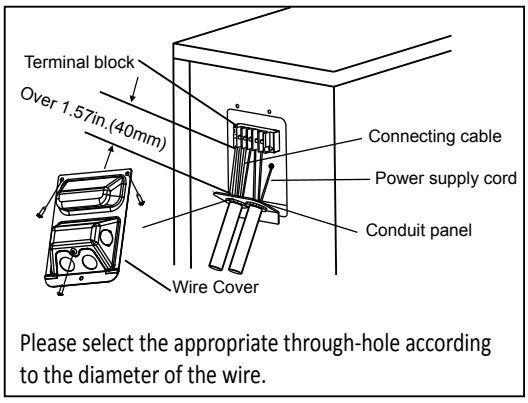


Outdoor Unit C

4. Clamp down the cable with the cable clamp.
5. Insulate unused wires with electrical tape. Keep them away from any electrical or metal parts.
6. Reinstall the cover of the electric control box.

In North America

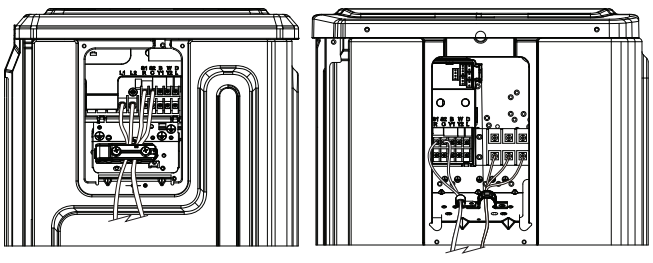
1. Remove the wire cover from the unit by loosening the 3 screws.
2. Dismount caps on the conduit panel.
3. Temperarily mount the conduit tubes(not included) on the conduit panel.
4. Properly connect both the power supply and low voltage lines to the corresponding terminals on the terminal block.
5. Ground the unit in accordance with local switchs.
6. Be sure to size each wire allowing several inches longer than the required length for wiring.
7. Use lock nuts to secure the conduit tubes.



Please select the appropriate through-hole according to the diameter of the wire.

⚠ WARNING

- RISK OF ELECTRIC SHOCK CAN CAUSE INJURY OR DEATH. DISCONNECT ALL REMOTE ELECTRIC POWER SUPPLIES BEFORE SERVICING.

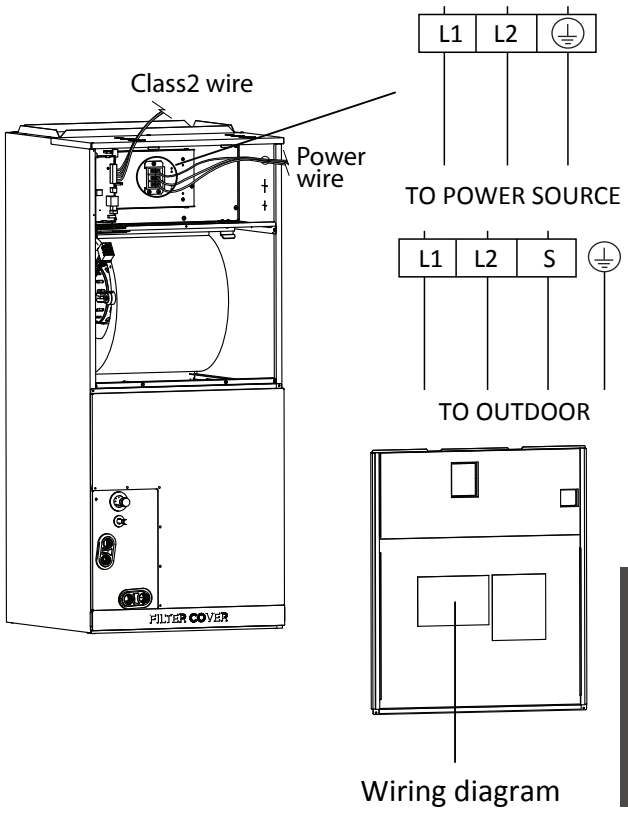

Outdoor Unit A Outdoor Unit B

⚠ WARNING

- ISOLATE THE POWER SUPPLY LEADS AND COMMUNICATION LEADS BY THE STRAIN RELIF AND KEEP POWER SUPPLY LEADS AWAY FROM COMMUNICATION LEADS.

Indoor Unit Wiring

1. Prepare the cable for connection.
   a. Using wire strippers, strip the rubber jacket from both ends of the signal cable to reveal about 5.9” (15cm) of the wire.
   b. Strip the insulation from the ends of the wires.
   c. Using a wire crimper, crimp the u-lugs to the ends of the wires.
2. Open the front panel of the indoor unit. Using a screwdriver,remove the cover of the electric control box on your indoor unit.
3. Thread the power cable and the signal cable through the wire outlet.
4. Connect the u-lugs to the terminals.
   Match the wire colors/labels with the labels on the terminal block. Firmly screw the u-lug of each wire to its corresponding terminal. Refer to the Serial Number and Wiring Diagram located on the cover of the electric control box.



Wiring diagram

⚠ CAUTION

- While connecting the wires, please strictly follow the wiring diagram.
- The refrigerant circuit can become very hot. Keep the interconnection cable away from the copper tube.

⚠ WARNING

ISOLATE THE POWER SUPPLY AND COMMUNICATION LEADS AS SHOWN IN THE DIAGRAM,KEEP POWER SUPPLY LEADS AWAY FROM COMMUNICATION LEADS.

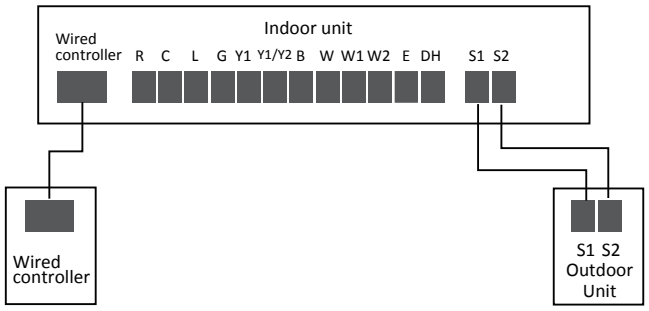
5. Clamp down the cable with the cable clamp. The cable must not be loose or pull on the u-lugs.
6. Reattach the electric box cover.

Specific wiring method

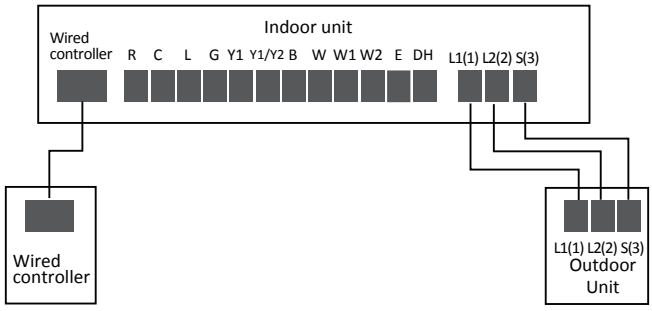
Connection method A:

Refer to the wiring method of internal and external machine communication and wired controller as follows:

(A)



(B)



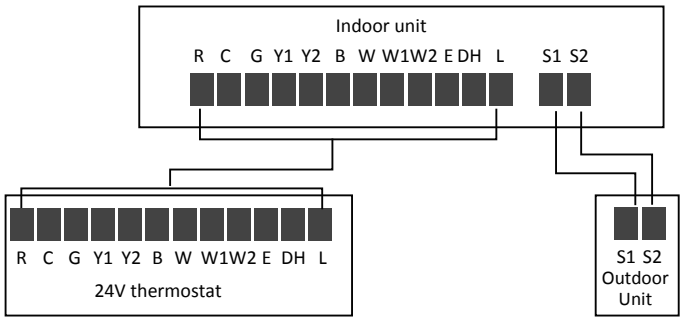
⚠ WARNING

Please refer to the wiring nameplate for the wiring method. Do not connect the power cord to the communication line, as this may damage the system.

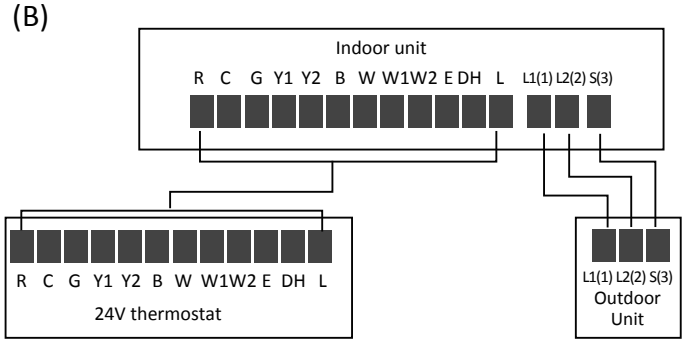
Connection method B:

To use a 24V thermostat, you need to refer to the following wiring:

(A)



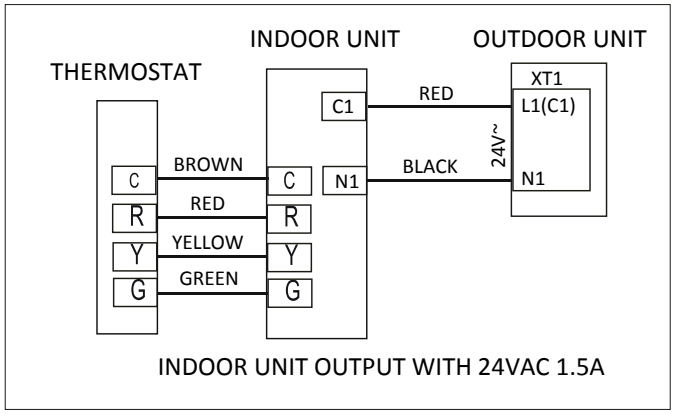
(B)



NOTE: The wiring method of the thermostat and the internal machine refers to the wiring of the non-communication scheme.

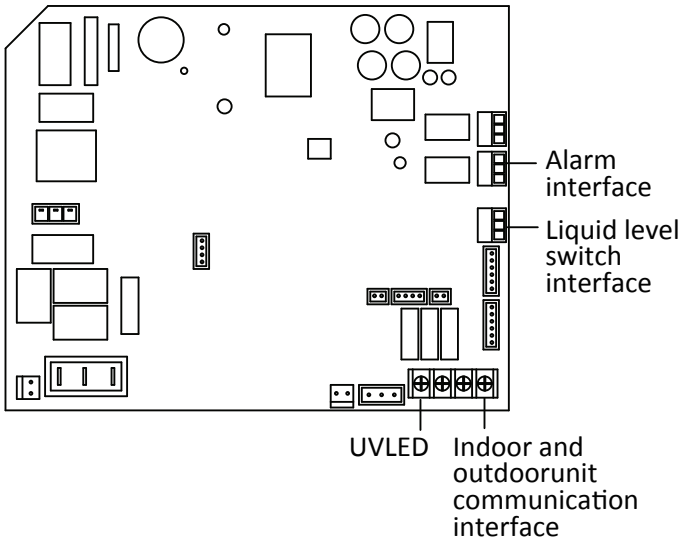
Connection method C:

Cooling and Fixed-speed Type Only System Wiring Diagram



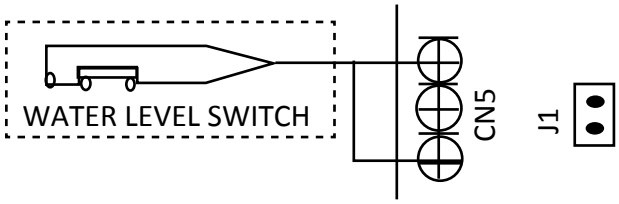
Suggestion: It is suggested that you use was a thermostat from Honeywell, series of non-programmabled thermostats, including the TH5220D.

Optional function wiring:

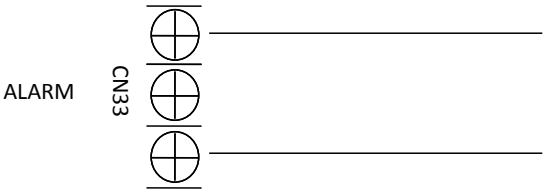


• Liquid level switch interface

The unit has a liquid level detection interface. If you choose this function, you need to purchase a liquid level switch by yourself, connect to the CN5 interface, and remove J1. When the water receiving pan is full, the water level switch is disconnected, the water level switch is reported, and the whole machine stops.

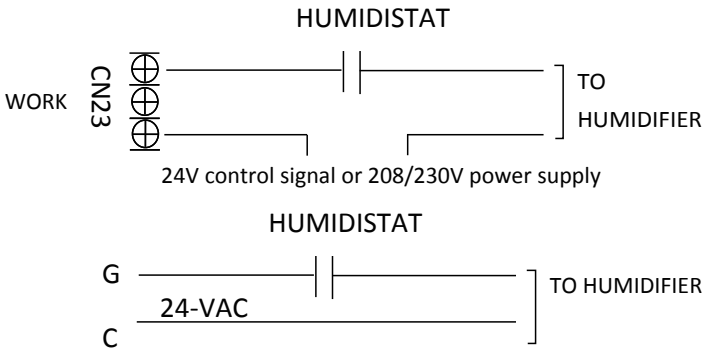


• The fault warning



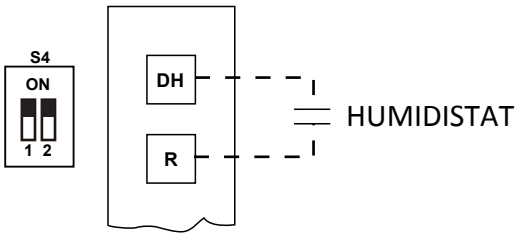
When there is a fault in the relay to close, otherwise the relay disconnected. This port is a passive outlet, you need to input a voltage signal.

• Humidification control wiring



Passive signal port CN33, when the fan is running, the relay is closed, it needs to be connected with 24V control signal or 208/230V power supply, then CN33 and serial humidistat and humidifier; Active 24V signal, connect the G and C ports of the control panel in series with the humidistat and then connect the humidifier. If the thermostat or zone controller has a HUM interface, connect the humidifier directly to the HUM and C ports. When the humidity drops below the set value of the humidistat, the humidistat is turned on, and the humidifier receives a signal or power source and starts humidifying operation.

• Dehumidification control wiring

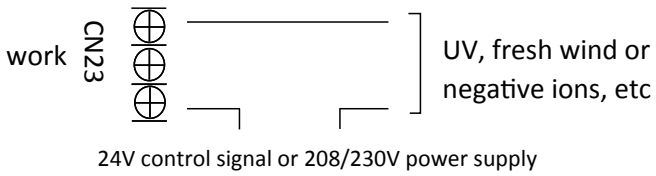


S4-1 DIP switch of
Perform disconnection and short-circuit to achieve partition, control or dehumidifcation

Dehumidification control requires indirect humidifier at DH and R. Set S4-1 as OFF.
When the humidity rises and exceeds the set value of the humidifier, the 24V signal of DH changes to 0V, the refrigeration system starts the dehumidification operation, and the air volume drops to 80% of the nominal refrigeration air volume.

When the partition control, DH is connected to the DH port of the partition controller. When the 24V signal of DH changes to 0V, the air volume drops to 80% of the nominal refrigeration air volume.

• UV, fresh air or negative ion wiring



The WORK port is linked with the fan. When the fan is running, the relay is closed; if an active 24V signal is required, it can be directly connected to the G and C ports.

Control Logic

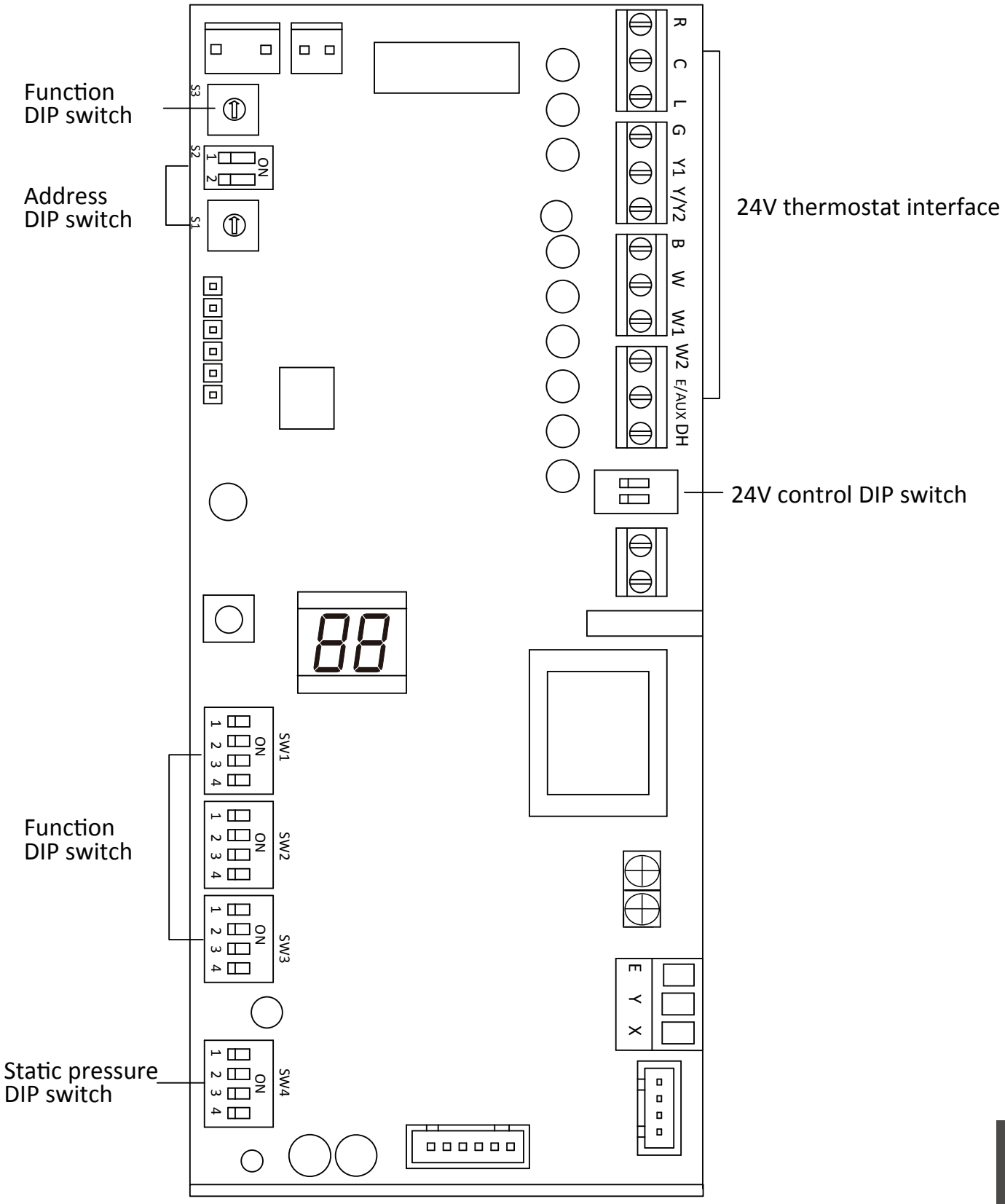
Indoor unit Connector

Connector	Purpose
R	24V
C	COM
G	Fan
Y	First period cooling
Y/Y2	Second period cooling
B	Heating(Four-way valve)
W	Heating operation
W1	Electric heating operation 1
W2	Electric heating operation 2
E/AUX	Emergency heating
DH/DS/BK	Drying regionally
L	Error signal

LED DISPLAY

The control displays active faults switchs on the LED display. When the control displays the fault switch and the LED flashes quickly, there is something wrong with the system. Refer to the detailed fault switchs.

DIP Switch Definitions



Function DIP switch:

• SW1
The dialing code mainly controls and selects the type of unit. It is suggested to adjust under the guidance of the engineering staff.

SW1-1: Switch communication mode function, (ON: 24V wire controller; OFF: non-24V wire controller, default)

SW1-2: This dial code can be used to set whether to stop the fan when the cold air is released, OFF stops the fan, ON does not stop the fan, default OFF

SW1-3: Select single cold and heat pump functions. ON: single cooling; OFF: heating and cooling, default

SW1-4: The dialing function is to select indoor and outdoor unit or indoor unit. The default OFF means the indoor and outdoor unit, at this time you need to connect the outdoor unit equipped with the AHU set. When the user uses the temperature control to control the indoor and outdoor unit, they need to switch the dialing code to ON, which means the independent indoor unit; at this time, the indoor unit module does not communicate with the outdoor unit, and does not process the information of the outdoor unit. The wire controller cannot be used, it needs to be connected to a 24V thermostat.

• SW2
This dial code mainly controls the opening form of the electric auxiliary heat.

SW2-1: This dial code can control the temperature difference when the electric heating is turned on. OFF: 36°F/2°C, default; ON: 34°F /1°C, 3-level temperature setting, consistent with user thermostat setting.
Note: When E/AUX controls electric heating, there is no temperature difference, and it starts directly.

SW2-2, SW2-3: This two-digit dialing code can control the delayed start of electrically-assisted heat.
When the temperature difference is too large, the delayed start and the delayed start time can be selected.

SW2-2	1-bit dialing, ON 36°F/2.5°C, OFF without delay
SW2-3	1 bit dialing, OFF 15 minutes, ON 30 minutes, 15 minutes by default, delayed opening time

SW2-4: This dial code controls the allowable opening temperature of electric heating or compressor, OFF allows the opening temperature of electric heating (using the set temperature of S3 as the upper limit temperature of electric heating), and ON the allowable opening temperature of the compressor (using S3 as the upper limit temperature of electric heating). The lower limit temperature at which the compressor can allow operation.)

• S3
Ambient temperature controlled by electric heating or compressor, 0 means no temperature protection is turned on, 1-F is -20-8°C, and each scale represents 2°.

SW3-1
This dialing code can set the continuous operation time of increasing the set temperature by 32°F~37°F 0.5°C~3°C before reaching the temperature.
The default is OFF 1.5h, ON 30min.

SW3-2
This dialing code can set Y/Y2 signal setting temperature adjustment deviation, ON: 34°F /1°C; OFF: 36°F/2 ° C.

SW3-3
This dialing code can set W2 signal setting temperature adjustment deviation, ON: 36°F/2°C; OFF: 37°F/3 ° C.

Address DIP switch:

Address dialing S1+S2: When the user uses the centralized controller, the address dialing is required.

Network address: The address silkscreen is NET address, which is composed of a 16-bit address rotary code S2 plus a two-digit DIP switch S1 [Set during engineering installation, no network function does not need to be set]
When S2 is 00 (the dialing code is not connected), the network address value is the value of S2;
When S2 is 10 (corresponding to the switch of the hardware connected to the 10K resistor), the network address value is S2 plus 32;

When S2 is 01 (corresponding to the dial code of the 5.1K resistor connected to the hardware is turned on), the network address value is the value of S2 plus 16;
When S2 is 11 (all dialing codes are on), the network address value is the value of S2 plus 48.

Determined by dial code S2 1-10K 2-5.1K

Dial code selection	Website address
	S2 + 48
	S2 + 32
	S2 + 16
	S2

Static pressure DIP switch:

SW4
This dialing code is only valid for 1-3. Composition of binary code, respectively corresponding to different wind profile static pressure.

000 is the default; 000/001/010/011/100/101/110/111, with different capacities of indoor unit and electric heating and PSC for selection and use, corresponding to different air volumes, see air volume table for details.

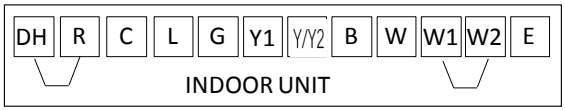
Air volume table

Model	000 gear (default) air volume(CFM)	001 air volume(CFM)	010 air volume(CFM)	011 air volume(CFM)
18K	660	630	600	570
	10KW	10KW、8KW	8KW	5KW、3KW
24K	880	850	830	800
	15KW	15KW、8KW	10KW、8KW	5KW、3KW
30K	1100	1040	990	930
	15KW	15KW、10KW	10KW、8KW	8KW、5KW
36K	1320	1255	1190	1125
	20KW	15KW	10KW、8KW	8KW、5KW
48K	1760	1675	1580	1490
	20KW	15KW、10KW	10KW、8KW	8KW
60K	2195	2055	1920	1775
	25KW	20KW、15KW	15KW、10KW	10KW

NOTE:

The wind gear DIP switch can only change the air volume when the electric heating is turned on, and the air conditioner cooling and heating air volume remains unchanged. If the DIP switch is wrong, the default wind gear will be run.

24V control DIP switch:



S4-2 DIP switch off
Perform disconnection and short-circuit to achieve partition, control or dehumidification

S4-1 DIP switch off
Disconnect and short circuit to realize heating segment

High, medium and low air volume parameters

18K			24K			30K			36K			48K			60K		
The PWM duty cycle	Static pressure	Air volume (CFM)	The PWM duty cycle	Static pressure	Air volume (CFM)	The PWM duty cycle	Static pressure	Air volume (CFM)	The PWM duty cycle	Static pressure	Air volume (CFM)	The PWM duty cycle	Static pressure	Air volume (CFM)	The PWM duty cycle	Static pressure	Air volume (CFM)
	0	489		0	598		0	422		0	879		0	946		0	1151
	25	493		25	613		25	705		25	883		25	943		25	1133
	37	490		37	625		37	713		37	888		37	942		37	1136
	50	488		50	630		50	705		50	892		50	948		50	1132
Low	75	501	Low	75	632	Low	75	708	Low	75	893	Low	75	947	Low	75	1128
	100	497		100	635		100	711		100	893		100	940		100	1134
	125	495		125	631		125	707		125	892		125	940		125	1130
	150	492		150	624		150	704		150	890		150	933		150	1133
	200	489		200	614		200	702		200	873		200	925		200	1126
	250	488		250	624		250	698		250	826		250	925		250	1118
	0	524		0	692		0	813		0	1010		0	1155		0	1367
	25	528		25	690		25	811		25	1001		25	1156		25	1358
	37	532		37	685		37	813		37	1001		37	1154		37	1362
	50	542		50	695		50	816		50	1000		50	1154		50	1361
Mid	75	523	Mid	75	693	Mid	75	815	Mid	75	995	Mid	75	1143	Mid	75	1360
	100	524		100	692		100	811		100	995		100	1147		100	1352
	125	533		125	688		125	809		125	996		125	1149		125	1353
	150	523		150	684		150	801		150	983		150	1143		150	1348
	200	521		200	670		200	807		200	996		200	1140		200	1340
	250	519		250	654		250	801		250	969		250	1113		250	1316
	0	573		0	752		0	899		0	1137		0	1325		0	1608
	25	577		25	746		25	895		25	1123		25	1328		25	1590
	37	580		37	750		37	902		37	1119		37	1337		37	1586
	50	576		50	756		50	898		50	1120		50	1337		50	1560
High	75	579	High	75	750	High	75	900	High	75	1112	High	75	1330	High	75	1561
	100	574		100	746		100	909		100	1111		100	1333		100	1554
	125	573		125	741		125	901		125	1113		125	1338		125	1549
	150	576		150	745		150	908		150	1101		150	1335		150	1545
	200	577		200	735		200	905		200	1094		200	1321		200	1543
	250	574		250	714		250	899		250	1088		250	1321		250	1548

Air Evacuation

Preparations and Precautions

Air and foreign matter in the refrigerant circuit can cause abnormal rises in pressure, which can damage the air conditioner, reduce its efficiency, and cause injury. Use a vacuum pump and manifold gauge to evacuate the refrigerant circuit, removing any non-condensable gas and moisture from the system.

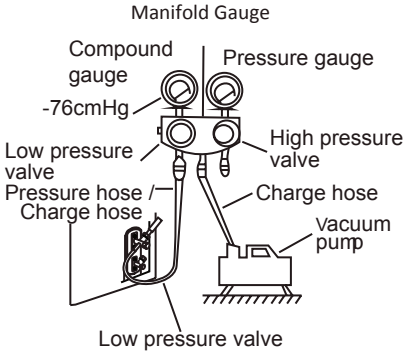
Evacuation should be performed upon initial installation and when unit is relocated.

BEFORE PERFORMING EVACUATION

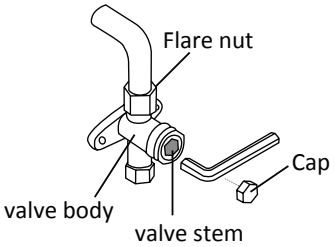
- ☑ Check to make sure the connective pipes between the indoor and outdoor units are connected properly .
- ☑ Check to make sure all wiring is connected properly.

Evacuation Instructions

1. Connect the charge hose of the manifold gauge to service port on the outdoor unit's low pressure valve.
2. Connect another charge hose from the manifold gauge to the vacuum pump.
3. Open the Low Pressure side of the manifold gauge. Keep the High Pressure side closed.
4. Turn on the vacuum pump to evacuate the system.
5. Run the vacuum for at least 15 minutes, or until the Compound Meter reads -76cmHG (-10^5Pa).



6. Close the Low Pressure side of the manifold gauge, and turn off the vacuum pump.
7. Wait for 5 minutes, then check that there has been no change in system pressure.
8. If there is a change in system pressure, refer to Gas Leak Check section for information on how to check for leaks. If there is no change in system pressure, unscrew the cap
9. from the packed valve (high pressure valve). Insert hexagonal wrench into the packed valve (high pressure valve) and open the valve by turning the wrench in a 1/4 counterclockwise turn. Listen for gas to exit the system, then close the valve after 5 seconds.
10. Watch the Pressure Gauge for one minute to make sure that there is no change in pressure. The Pressure Gauge should read slightly higher than atmospheric pressure.
11. Remove the charge hose from the service port.



12. Using hexagonal wrench, fully open both the high pressure and low pressure valves.
13. Tighten valve caps on all three valves (service port, high pressure, low pressure) by hand. You may tighten it further using a torque wrench if needed.

OPEN VALVE STEMS GENTLY

When opening valve stems, turn the hexagonal wrench until it hits against the stopper. Do not try to force the valve to open further.

Note on Adding Refrigerant

Some systems require additional charging depending on pipe lengths. The standard pipe length varies according to local regulations. For example, in North America, the standard pipe length is 25' (7.5m). In other areas, the standard pipe length is 16'5m (16'). The refrigerant should be charged from the service port on the outdoor unit's low pressure valve. The additional refrigerant to be charged can be calculated using the following formula:

	Liquid Side Diameter		
	ϕ1/4"(6.35)	ϕ3/8"(9.52)	ϕ1/2"(12.7)
R22 (orifice tube in the indoor unit):	(Total pipe length - standard pipe length)x 30g (0.32oZ)/m(ft)	(Total pipe length - standard pipe length)x 65g(0.69oZ)/m(ft)	(Total pipe length - standard pipe length)x 115g(1.23oZ)/m(ft)
R22 (orifice tube in the outdoor unit):	(Total pipe length - standard pipe length) x15g(0.16oZ)/m(ft)	(Total pipe length - standard pipe length) x30(0.32oZ)/m(ft)	(Total pipe length - standard pipe length) x60g(0.64oZ)/m(ft)
R410A: (orifice tube in the indoor unit):	(Total pipe length - standard pipe length) x30g(0.32oZ)/m(ft)	(Total pipe length - standard pipe length) x65g(0.69oZ)/m(ft)	(Total pipe length - standard pipe length) x115g(1.23oZ)/m(ft)
R410A: (orifice tube in the outdoor unit):	(Total pipe length - standard pipe length) x15g(0.16oZ)/m(ft)	(Total pipe length - standard pipe length) x30g(0.32oZ)/m(ft)	(Total pipe length - standard pipe length) x65g(0.69oZ)/m(ft)
R32 :	(Total pipe length - standard pipe length)x 12g(0.13oZ)/m(ft)	(Total pipe length - standard pipe length)x 24g(0.26oZ)/m(ft)	(Total pipe length - standard pipe length)x 40g(0.42oZ)/m(ft)

⚠ **CAUTION** **DO NOT** mix refrigerant types.

Test Run

Before Test Run

A test run must be performed after the entire system has been completely installed. Confirm the following points before performing the test:

a) Indoor and outdoor units are properly installed.
b) Piping and wiring are properly connected.
c) No obstacles near the inlet and outlet of the unit that might cause poor performance or product malfunction.
d) Refrigeration system does not leak.
e) Drainage system is unimpeded and draining to a safe location.
f) Heating insulation is properly installed.
g) Grounding wires are properly connected.
h) Length of the piping and additional refrigerant stow capacity have been recorded.
i) Power voltage is the correct voltage for the air conditioner.

⚠ CAUTION

Failure to perform the test run may result in unit damage, property damage, or personal injury.

Test Run Instructions

1. Open both the liquid and gas stop valves.
2. Turn on the main power switch and allow the unit to warm up.
3. Set the air conditioner to COOL mode.
4. For the Indoor Unit
   a. Double check to see if the room temperature is being registered correctly.
   b. Ensure the manual buttons on the indoor unit works properly.
   c. Check to see that the drainage system is unimpeded and draining smoothly.
   d. Ensure there is no vibration or abnormal noise during operation.
5. For the Outdoor Unit
   a. Check to see if the refrigeration system is leaking.
   b. Make sure there is no vibration or abnormal noise during operation.
   c. Ensure the wind, noise, and water generated by the unit do not disturb your neighbors or pose a safety hazard.
6. Drainage Test
   a. Ensure the drainpipe flows smoothly. New buildings should perform this test before finishing the ceiling.
   b. Remove the test cover. Add 2,000ml of water to the tank through the attached tube.
   c. Turn on the main power switch and run the air conditioner in COOL mode.
   d. Listen to the sound of the drain pump to see if it makes any unusual noises.
   e. Check to see that the water is discharged. It may take up to one minute before the unit begins to drain depending on the drainpipe.
   f. Make sure that there are no leaks in any of the piping.
   g. Stop the air conditioner. Turn off the main power switch and reinstall the test cover.

NOTE: If the unit malfunctions or does not operate according to your expectations, please refer to the Troubleshooting section of the Owner's Manual before calling customer service.

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LIMITED WARRANTY STATEMENT
AIR HANDLER

The warranty should be registered on our website www.cooperandhunter.us or by submitting the card below within 60 days of installation. The warranty is only valid when unit is installed by a licensed HVAC technician and registered within 60 days of installation date. If you decide to submit card, send by e-mail to warranty@cooperandhunter.us

PRODUCT REGISTRATION:

Model No.: _____

Serial No.: _____ Date of Installation: _____

Owner Name: _____

Address of Installation:_____

Installing Contractor: _____

License Number: _____

Address: _____

Phone No. / E-mail: _____

Place Of Purchase: _____

Date of Purchase: _____

Visit our website for:
- Product Information
- Warranty Registration
- Installation Manual
- User Guides and more

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For warranty service or repair:
Contact your installing contractor

C&H distributor (hereinafter "Company") warrants this product against failure due to defect in materials or workmanship under normal use and maintenance as follows. All warranty periods begin on the date of original installation. if the date cannot be verified, the warranty period beginsone hundred twenty (120) days from date of manufacture. Damage resulting from failure to use, install or maintain the product in a manner consistent with our/manufacturer's recommendations shall render the warranty void. Cooper&Hunter, at its option, may request a report from a qualified technician prior to honoring a warranty claim. if a part fails due to defect duringthe applicable warranty period. Company will provide a new or remanufactured part, at Company's option, to replace the failed defective part at no charge for the part. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below.

• A limited warranty covers 5 yrs for commercial applications and 10 yrs for residential applications

• Limited warranty covers 1 year for Cooper&Hunter accessories

- Warranty applies only to air handler units which are installed and used exclusively with Cooper&Hunter equipment and accessories.
- Limited warranty applies only to systems that are properly installed by a state certified or licensed HVAC contractor under applicable local and state law in accordance with all applicable building codes and permits; C&H installation and operation instructions and good trade practices.
- Warranty applies only to products remaining in their original installation location.
- Defective parts must be returned to the distributor through a registered servicing dealer for credit.

LIMITATIONS OF WARRANTIES: ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

THIS WARRANTY DOES NOT COVER:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of defective parts, replacement parts, or new units.
2. Product cleaning required prior to warranty service and repair.
3. Normal maintenance as outlined in the installation and servicing instructions or user's manual, including filter cleaning and/or replacement and lubrication
4. Failure, damage, or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration,
or improper operation.
5. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
6. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive enviorments (rust, etc.) or other conditions beyond the control of Company.
7. Failure or damage of coils or piping due to corrosion on installations within one (1) mile of a sea coast or a corrosive body.
8. Parts not supplied or designated by Company, or damages resulting from their use.
9. Products installed outside the continental USA and Canada.
10. Electricity or fuel costs, or increases in electricity or fuel costs for any reason whatsoever, including additional or unusual use of supplemental electric heat.
11. Any cost to replace, refill, or dispose of refrigerant, including the cost of refridgerant
12. Shipping damage or damage as a result of transporting the unit.
13. Accessories such as condensate pumps, line sets, and so forth.
14. Any special, indirect, or consequential property or commercial damage of any nature whatsoever. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

Design and specifications are subject to change without notice for product improvement.
Consult with the sales agency or manufacturer for details.

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details. Any updates to the manual will be uploaded to the service website, please check for the latest version.

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