



PACKAGED TERMINAL AIR CONDITIONER/HEAT PUMP

# Owner's Manual

EN

**PTAC Series**

**North America Products**

**Model: CH-PTW-09HPGF  
CH-PTW-12HPGF  
CH-PTW-HE15HP**



**IMPORTANT NOTE:**

Before using your appliance, please read this manual and SAFETY MANUAL(if any) carefully and keep it for future reference.



# CONTENTS

Safety precautions .....	01
--------------------------	----

## **Installation instructions**

Before you get start .....	07
----------------------------	----

Before the installation .....	08
-------------------------------	----

Installation overview .....	09
-----------------------------	----

Customize your features .....	17
-------------------------------	----

## **Operation instructions**

Control Panel .....	25
---------------------	----

Care and Maintenance .....	28
----------------------------	----

Troubleshooting .....	30
-----------------------	----

# Safety Precautions

**Must read the warning message.**

Inside you will find many helpful hints on how to use and maintain your air conditioner properly. Just a little preventive care on your part can save you a great deal of time and money over the life of your air conditioner. You'll find many answers to common problems in the chart of Troubleshooting Tips. If you review our chart of Troubleshooting Tips first, you may not need to call for service at all.

To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring of instructions may cause harm or damage. The seriousness is classified by the following indications.

## Explanation of Symbols



### **Warning**

The signal word indicates a hazard with a medium level of risk which, if not avoided, may result in death or serious injury.



### **Caution**

The signal word indicates a hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.



### **Never do this**

This signal indicates the prompt operation is prohibited., if not avoided, may result in Product damaged or injury.



### **Always do this**

This signal means that the operation can be performed.

## WARNING

- Plug in power plug properly. Otherwise, it may cause electric shock or fire due to excess heat generation. Do not operate or stop the unit by inserting or pulling out the power plug. It may cause electric shock or fire due to heat generation. Do not damage or use an unspecified power cord. It may cause electric shock or fire.  
Always install a circuit breaker and a dedicated power circuit. Incorrect installation may cause fire and electric shock. Do not operate with wet hands or in damp environment. It may cause electric shock. Do not direct airflow at room occupants only. This could damage your health. Always ensure effective grounding. Incorrect grounding may cause electric shock. Do not allow water to run into electric parts. It may
- cause failure of machine or electric shock. Do not modify power cord length or share the outlet with other appliances. It may cause electric shock or fire due to heat generation.
- Unplug the unit if strange sounds, smell, or smoke comes from it. It may cause fire and electric shock. Do not use the socket if it is loose or damaged. It may cause fire and electric shock. Do not open the unit during operation. It may cause electric shock.
- Keep firearms away. It may cause fire. Do not use the power cord close to heating appliances. It may cause fire and electric shock. Do not use the power cord near flammable gas or combustibles, such as gasoline, benzene, thinner, etc. It may cause an explosion or fire.
- Ventilate room before operating air conditioner if there is a gas leakage from another appliance. It may cause explosion, fire and, burns. Do not disassemble or modify unit. It may cause failure and electric shock.

## CAUTION

- When the air filter is to be removed, do not touch the metal parts of the unit. It may cause an injury.  
Ventilate the room well when used together with a stove, etc. An oxygen shortage may occur.
- Do not use strong detergent such as wax or thinner but use a soft cloth. Appearance may be deteriorated due to change of product color or scratching of its surface. Do not clean the air conditioner with water. Water may enter the unit and degrade the insulation. It may cause an electric shock. Do not use for special purposes. Do not use this air conditioner to preserve precision devices, food, pets, plants, and art objects. It may cause deterioration of quality, etc.
- Stop operation and close the window in storm or hurricane. Operation with windows opened may cause wetting of indoor and soaking of household furniture. When the unit is to be cleaned, switch off, and turn off the circuit breaker.
- Do not clean unit when power is on as it may cause fire and electric shock, it may cause an injury.
- Always insert the filters securely. It can be caused failure if operated without filters. Please clean filter once every two weeks.

## CAUTION

- Hold the plug by the head of the power plug when taking it out. It may cause electric shock and damage. Turn off the main power switch when not using the unit for a long time. It may cause failure of product or fire.
- Do not place obstacles around air-inlets or inside of air-outlet. It may cause failure of appliance or accident. Do not place heavy object on the power cord and ensure that the cord is not compressed. There is danger of fire or electric shock. Don't drink water drained from air conditioner. It contains contaminants and could make you sick.
- Use caution when unpacking and installing. Sharp edges could cause injury.
- If water enters the unit, turn the unit off at the power outlet and switch off the circuit breaker. Isolate supply by taking the power-plug out and contact a qualified service technician.
- 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 super vision 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.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The appliance shall be installed in accordance with national wiring regulations.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.
- Do not operate your air conditioner in a wet room such as a bathroom or laundry room.
- The appliance with electric heater shall have at least 3.2 ft/1m space to the combustible materials.
- Contact the authorised service technician for repair or maintenance of this unit.
- Contact the authorised installer for installation of this unit.

## NOTE

This air conditioner is designed to be operated under the following conditions:

Cooling operation	Outdoor temp.	64-(109/79)°F / 18-(43/26)°C (64-125°F / 18-52°C for special tropical models)
	Indoor temp.	62-(90/73)° F / 17-(32/23)°C
Heating operation	Outdoor temp.	23-(76/64)° F / -5-(24/18)°C
	Indoor temp.	32-(80/66) °F / 0-(27/19)°C

Note: (109/78) °F. It means the dry bulb temperature is 109°F and the wet bulb temperature is 78°F

**Note:**Performance may be reduced outside of these operating temperatures.

## Operation of Current Device

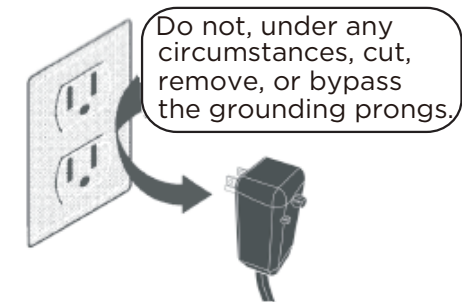
The power supply cord contains a current device that senses damage to the power cord. To test your power supply cord do the following:

- Plug in the Air Conditioner.
- The power supply cord will have TWO buttons on the plug head. Press the TEST button, you will notice a click as the RESET button pops out.
- Press the RESET button again, you will notice a click as the button engages.
- The power supply cord is now supplying electricity to the unit. (On some products this is also indicated by a light on the plug head).

### NOTE

- The power supply cord with this air conditioner contains a current detection device designed to reduce the risk of fire. In the event that the power cord is damaged, it cannot be repaired – it must be replaced with a cord from the product manufacturer.
- Do not use this device to turn the unit on or off.
- Always make sure the RESET button is pushed in for correct operation.
- The power supply cord must be replaced if it fails to reset when either the TEST button is pushed or if it cannot be reset. A new one can be obtained from the product manufacturer.
- If power supply cord is damaged, it cannot be repaired. It MUST be replaced by one obtained from the product manufacturer.
- When 265V units are to be installed, the power supply must be permanent wiring. Permanent wiring may be done through the accessory subbase. An exposed cord connection on 265V units are not permitted.

### Grounding type wall receptacle



Power supply cord with 3-prong grounding plug and current detection device.

## WARNING

### Electrical Information

The complete electrical rating of your new room air conditioner is stated on the serial plate. Refer to the rating when checking the electrical requirements.

- Be sure the air conditioner is properly grounded. To minimize shock and fire hazards, proper grounding is important. The power cord is equipped with a three-prong grounding plug for protection against shock hazards.
- Your air conditioner must be used in a properly grounded wall receptacle. If the wall receptacle you intend to use is not adequately grounded or protected by a time delay fuse or circuit breaker, have a qualified electrician install the proper receptacle. Ensure the receptacle is accessible after the unit installation.
- Do not run air conditioner without side protective cover in place. This could result in mechanical damage within the air conditioner.

Avoid fire hazard or electric shock. Do not use an extension cord or an adapter plug. Do not remove any prongs from the power cord.

### For Your Safety

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

### Prevent Accidents

To reduce the risk of fire, electrical shock, or injury to persons when using your air conditioner, follow basic precautions, including the following:

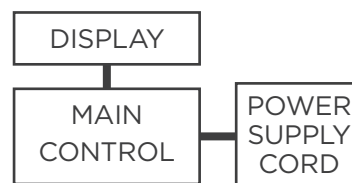
- Be sure the electrical service is adequate for the model you have chosen. This information can be found on the serial plate, which is located on the side of the cabinet and behind the grille.
- Be sure the air conditioner has been securely and correctly installed according to the installation instructions in this manual. Save this manual for possible future use in removing or installing this unit. When handling the air conditioner, be careful to avoid cuts from sharp metal fins on front and rear coils.

## Electronic Work (265V model is not included)



### WARNING:

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



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

## ⚠ WARNING

### Electrical Requirements

Electrical Shock and Personal Injury Hazard  
Electrical ground is required on this appliance.

#### **DO NOT ground to a gas line.**

If cold water pipe is interrupted by plastic, non-metallic gaskets, or other insulating materials,

#### **DO NOT use for grounding.**

Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

**DO NOT modify power supply cord plug.** If it does not fit outlet, have a proper outlet installed by a qualified electrician.

**DO NOT have a fuse in the neutral or grounding circuit.** A fuse in the neutral, or grounding circuit could result in an electrical shock.

#### **DO NOT use an extension cord with this appliance.**

Failure to follow these instructions could result in electrical shock, serious injury, or death.

### Observe all local governing codes and ordinances.

#### **Do not, under any circumstances, remove the power supply cord grounding prong.**

NOTE: If codes permit, and a separate grounding wire is used; it is recommended that a qualified electrician determine that the grounding path is adequate and not interrupted by plastic, nonmetallic gaskets, or other insulating materials.

#### **Receptacle wiring**

Receptacle wiring should be a minimum of 14 gauge. Use copper wire only. It is your responsibility to provide proper and adequate receptacle wiring, installed by a qualified electrician.


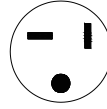

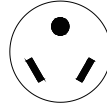


#### **Electrical requirements**

A time delay fuse or time delay circuit breaker is also required. A separate circuit, serving only this appliance, MUST be provided.

NOTE: for details about the parameters of the electric heating function, see the nameplate on the unit.

## 💡 NOTE

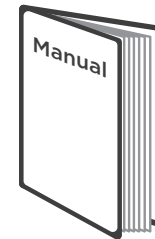
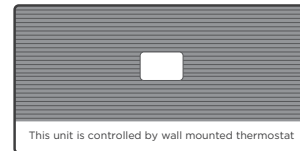
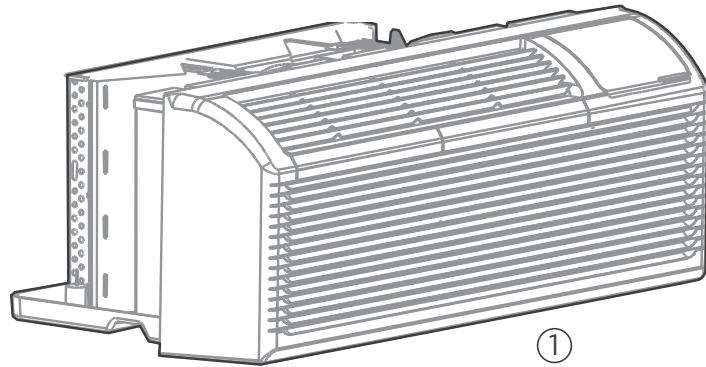
The shape may be different according to its model:

Power Card						
Power Supply	230V,15A	230V,20A	230V,30A	265V,15A	265V,20A	265V,30A

# Before you get start

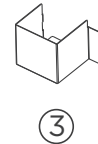
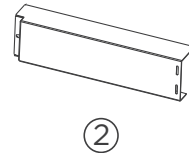
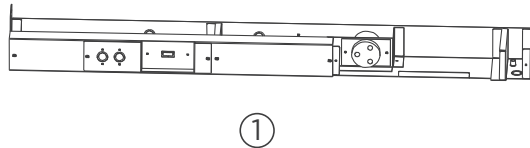
## Contents of the package and preparation

### What is in the Package



- ① Unit
- ② Control panel sticker
- ③ Owner's manual

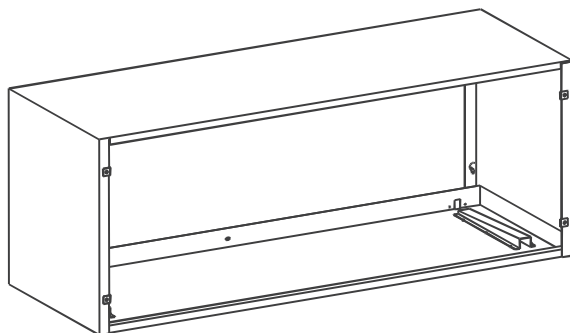
### Subbase kit (for 265V model only, optional)



- ① Subbase
- ② Cover panel I
- ③ Cover panel II
- ④ Screws x8

Subbase kit Model: MWP-S3500/20A (used for cord connected units with 3.5kw Electric Heater)

### What you need to purchase



Wall sleeve

**\*Not Included**

### Prepare the following tools



Gloves



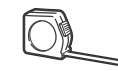
Screwdriver



Pencil



Drill



Ruler or tape measure



Level

**\*Not Included**

# Before the installation

## Preparations before installation



The installation must be carried out in strict accordance with the instructions in this manual.



Installing your AC should take about 60 minutes.



We recommend doing this with a helper.



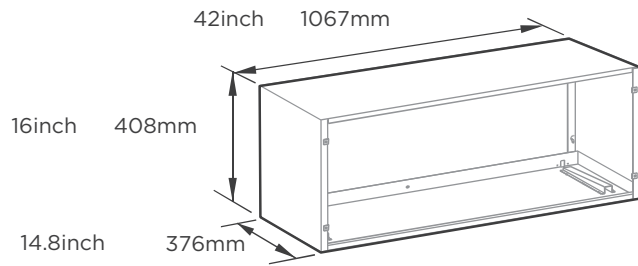
We're here if you need us, please contact your local distributor for assistance.

## ! INSTALLATION SIZE AND POSITION REQUIREMENTS

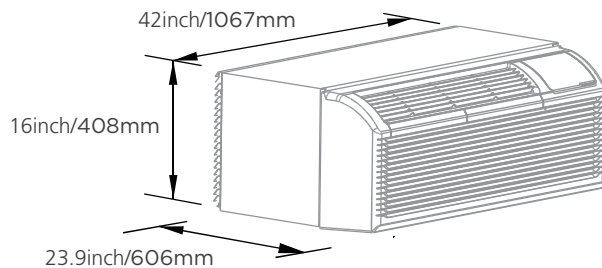
### ! CAUTION

Be careful! There are sharp edges that can cause serious cuts.

### Installation size confirmation :

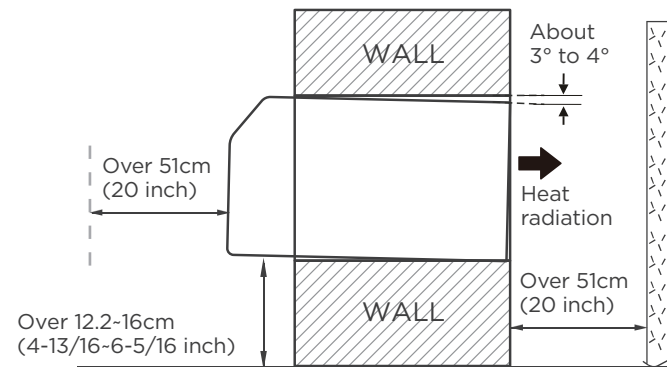


Wall sleeve size requirements (wall hole size should refer to the wall sleeve size)



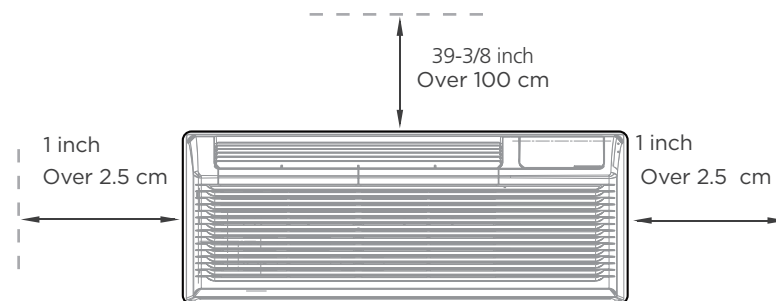
Product size

### Confirmation of installation position :



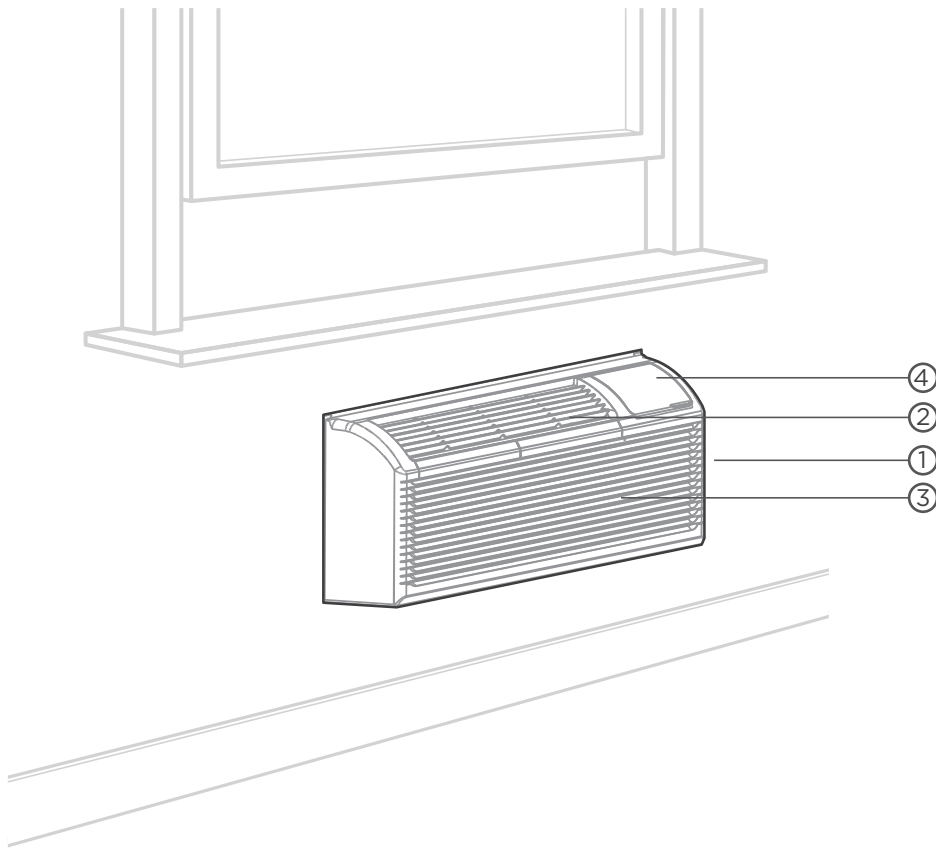
### NOTE

To make the appliance work better, please do not place a barrier in the air outlet.



# Installation overview

## Installing Unit into the wall



- ① Unit
- ② Outlet
- ③ Air Intake
- ④ Control panel cover

### **NOTE**

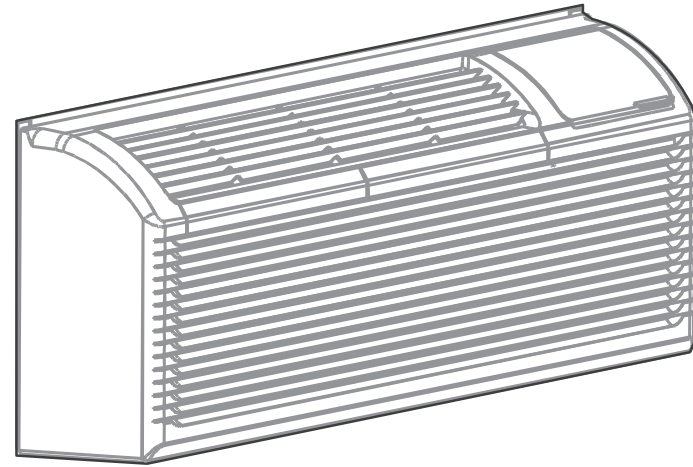
Illustrations in this manual are for explanatory purposes. The actual shape of your unit may be slightly different. The actual shape shall prevail.

## Type 1: Instructions for non-265V models

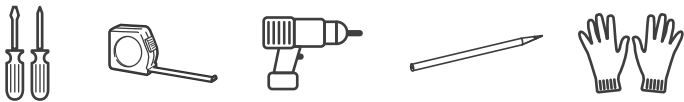
# Complete Unit installation

### NOTE

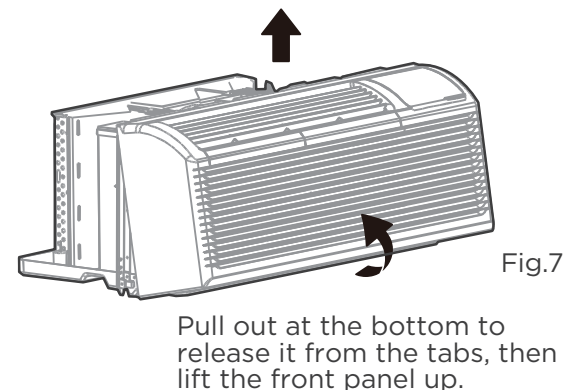
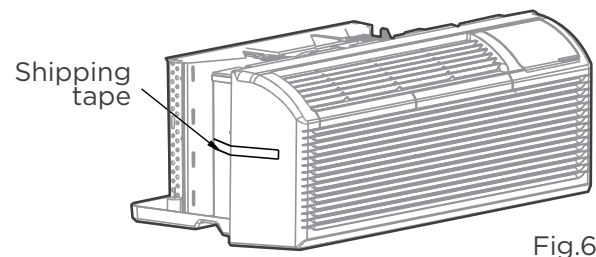
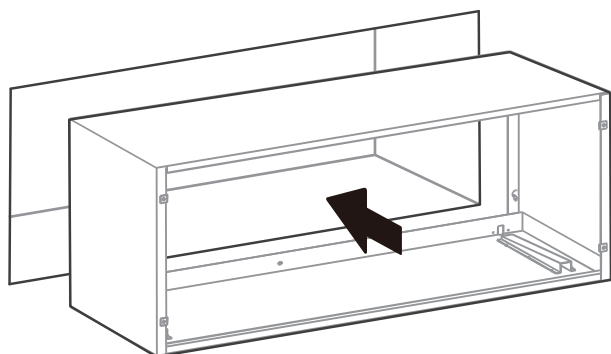
Please doing this with a helper,  
or even two helpers.



### What you need.



# Preparations for Unit Installation



1

## Attach Wall sleeve.

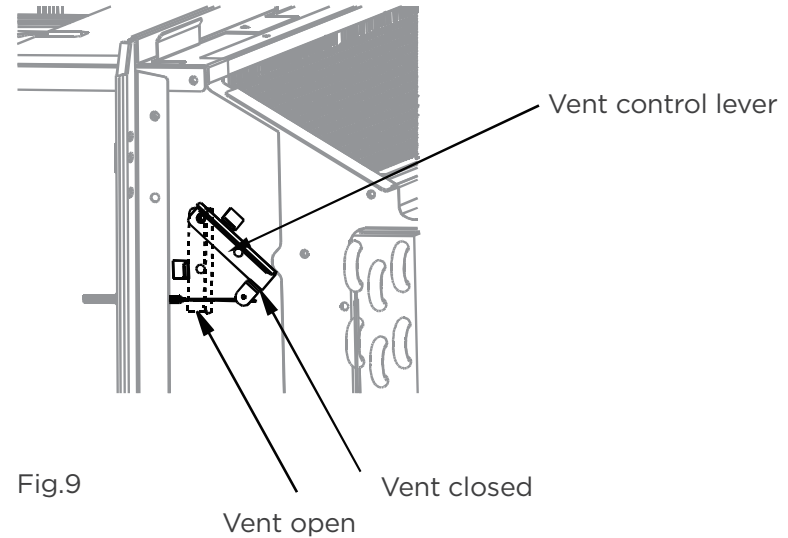
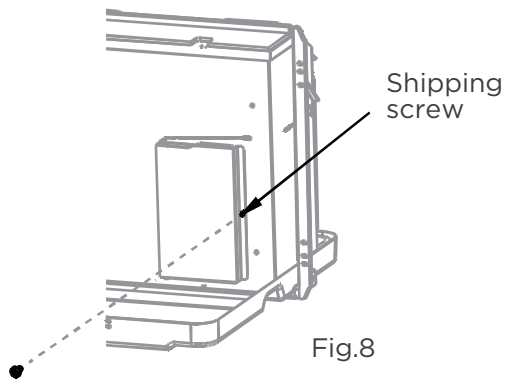
Refer to the installation instruction of sleeve assembly for details. To avoid vibration and noise, make sure the wall sleeve is installed securely and firmly.

2

## Prepare for unit installation.

Carefully remove shipping tapes from the front panel. (See Fig.6)  
Remove the front panel. (See Fig.7)

# Unit Installation



3

## Install and fix the main part of the unit.

Remove the shipping screw from the vent door. (See Fig.8)

Rotate the vent control lever to either open or close the vent door. (See Fig.9)



### NOTE:

When vent control lever set at CLOSE, only the air inside the room is circulated and filtered. When set at OPEN, some outdoor air will be drawn into room. This will reduce heating or cooling efficiency.



### CAUTION:

- Do not put obstacles around air-inlet or inside of air-outlet of the unit, such as window curtain etc.
- Always insert the filter securely, clean filter once every two weeks as required.

## Install the unit into the wall sleeve

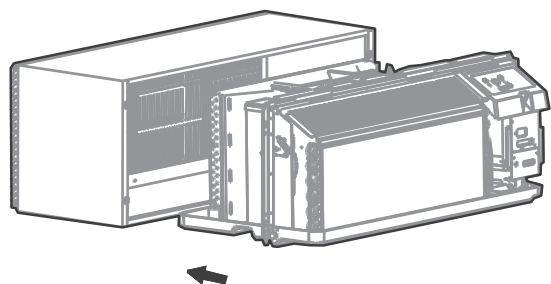


Fig.10

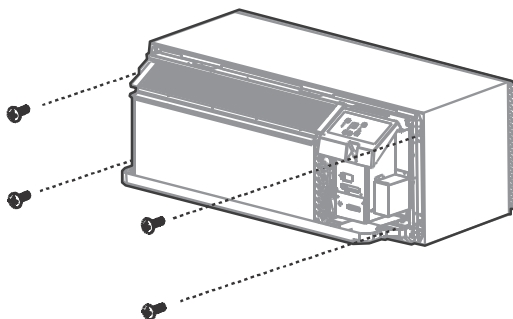


Fig.11

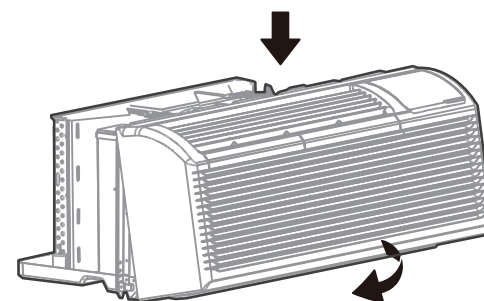


Fig.12

**4**

### Install the unit into the wall sleeve

Lift unit level and slide unit into wall sleeve until firmly against front of wall sleeve and secure with 4 screws and washers (supplied in the SLEEVE ASSEMBLY ) through the unit flange holes. (See Fig.10 and Fig.11)

**5**

### Reinstall front panel.

Place tabs over top rail . Push Inward at bottom until panel snaps into place. (See Fig.12)

## Type 2: Instructions for 265V model (Optional)

# Complete Subbase kit installation

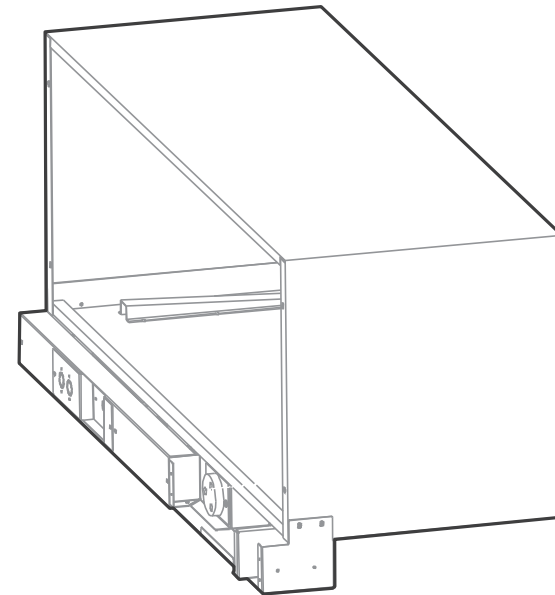
### ⚠ CAUTION

- When the model you purchase is 265V model, install it with Subbase kit and connect power wiring on site.
- The product plug must be inserted into the power jack of the Subbase kit for use.
- All wiring operations and power requirements must be operated and used in accordance with local regulations and policies.

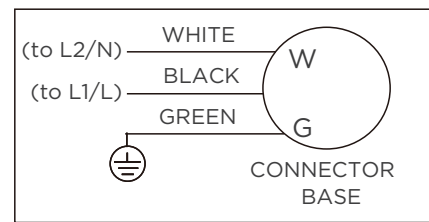
### ⚠ WARNING:

- To avoid the risk of property damage, personal injury or death due to electrical shock, disconnect the electrical power before working on this product.
- The instructions provided with the selected subbase kit must be carefully followed. It is the responsibility of the installer to ensure the connection of components is done in accordance with these instructions and national wiring regulations.
- Before performing any electrical or wiring work, turn off the main power to the system.

### What you need.



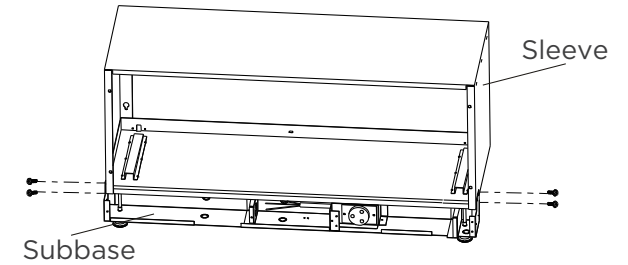
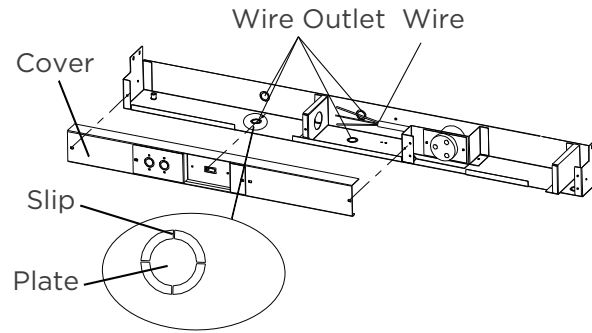
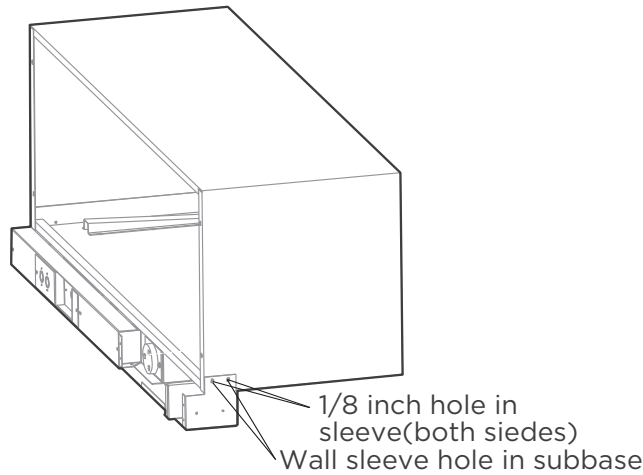
### Electronic Work (for 265V model only)



### NOTE:

- The drawings are for explanation purpose only. Your machine may be slightly different. The actual shape shall prevail.
- An all-pole disconnection means should be installed to connect the subbase and main power supply.

# Preparations for subbase Installation



1

## Drill four 1/8-inch holes.

Drill four 1/8-inch holes in the sleeve to line up with the wall sleeve holes in subbase as shown below.

2

## Prepare for unit subbase's wiring.

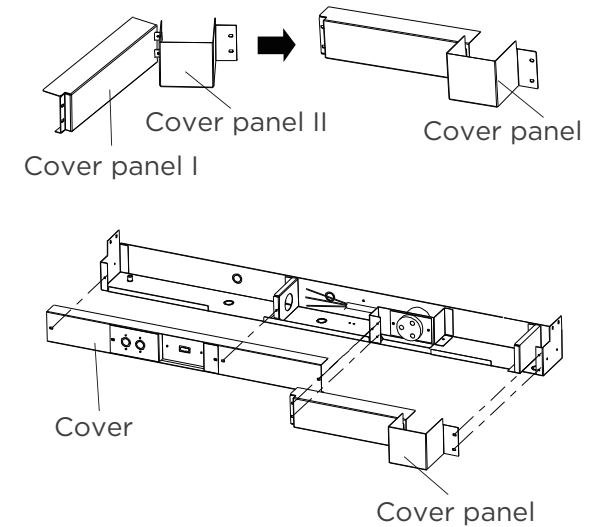
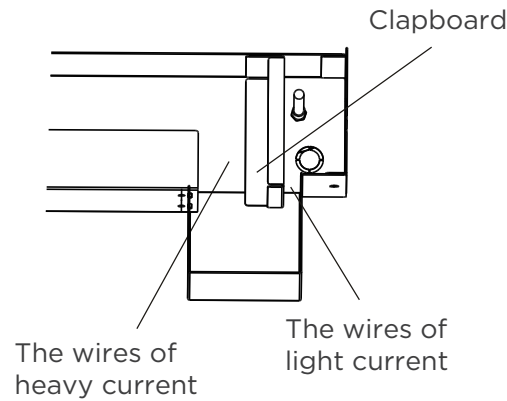
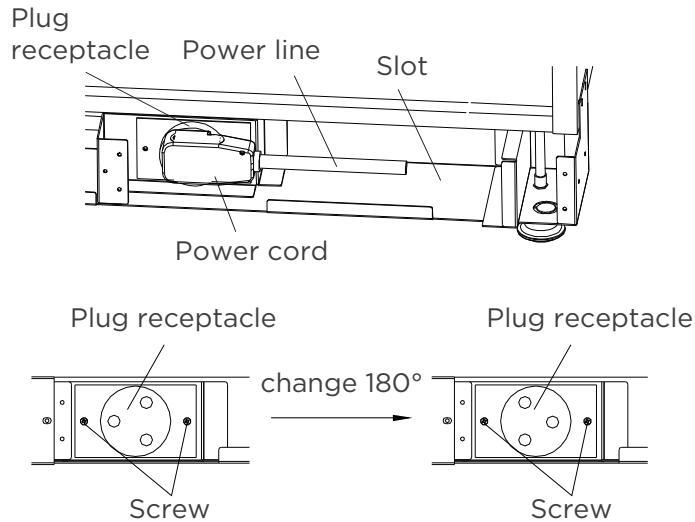
Remove the COVER by loosening 3 screws, select one from the four wire outlets according to your need and remove the plate by clipping four slips as shown below. Then burnish the wire outlet and spray anticorrosive paint to it to avoid cutting and rusting the wires. Insert conduit into the wire outlet and connect the wires of the conduit with the SUBBASE in accordance with all electrical codes.  
NOTE: Make sure the appliance is properly grounded.

3

## Install the subbase to the sleeve.

Install the SUBBASE to the SLEEVE with four screws as shown above and tighten them.

# Subbase kit Installation



4

## Install the unit to the sleeve.

Install the unit into the SLEEVE (refer to the installation instructions of the unit) and plug the power cord of the unit into the plug receptacle of the SUBBASE as shown below. The power line can be wound and placed in the slot of the SUBBASE.

NOTE: The direction of the plug receptacle can be changed 180° by loosening two screws and re-installing it as shown below so that it is suitable for different power cords.

5

## Assemble the Subbase.

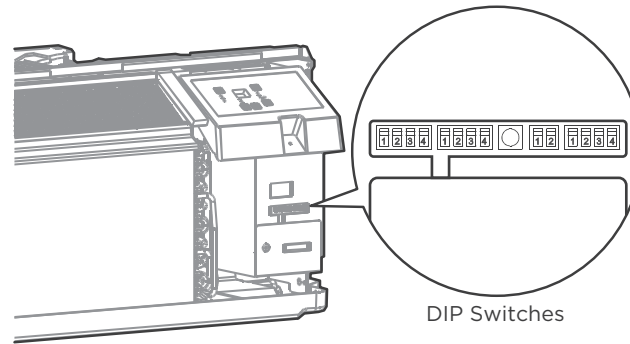
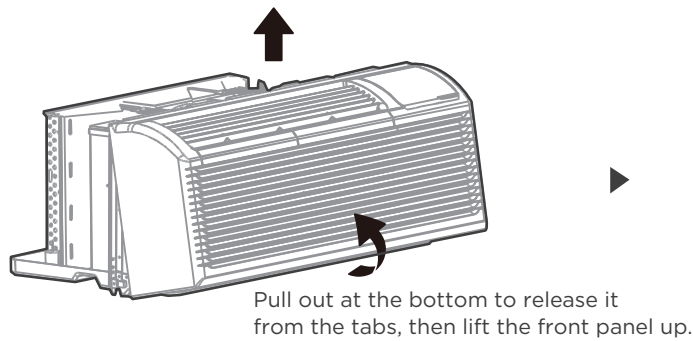
Reset the COVER PANEL II into the COVER PANEL I and rotate a certain angle as shown. And install the COVER and COVER PANEL to the SUBBASE with 7 screws securely as shown.

# Customize your features

## NOTE

Unit must be powered OFF to effectively change their status.

## DIP SWITCHES CONFIGURATIONS



Please refer to the following table for DIP SWITCHES CONFIGURATIONS operation.

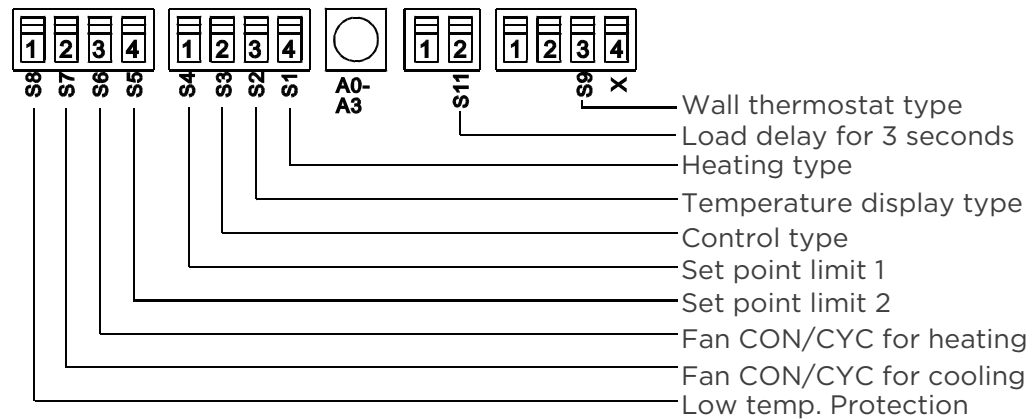
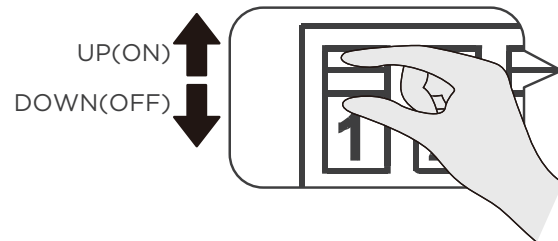


Table 1— DIP SWITCHES CONFIGURATIONS

No.	UP(ON)	DOWN(OFF)	Remarks
<b>S1</b>	Electric Heat Only	Electric Heat and Pump Heat	For Heat Pump unit only
<b>S3</b>	Wall Thermostat Enable	Control Panel Enable	
<b>S4*S5</b>	UP*UP:60°F-86°F(16°C-30°C); UP*DOWN:65°F-78°F(18°C-26°C); DOWN*UP:63°F-80°F(17°C-27°C); DOWN*DOWN:68°F-75°F(20°C-24°C);		Two configurations (S4*S5) combine to select set point range.
<b>S6</b>	Fan Continuous Run for Heating	Fan Cycle for Heating	
<b>S7</b>	Fan Continuous Run for Cooling	Fan Cycle for Cooling	
<b>S8</b>	Low temp. Protection enable	Low temp. Protection disable	Optional
<b>S9 (S3UP)</b>	Use other types of wall Thermostat	Use other types of wall Thermostat	you can consult with the sales agency or manufacturer for details
<b>S9 (S3 DOWN)</b>	Use Control Panel only	Use Control Panel or other types of wall Thermostat	Use control Panel or some types of wall Thermostat, the other one must be turned off
<b>Sw11</b>	Load delay for 3 seconds	Normal	Optional

### Low temp. Protection(optional)

If unit senses a room temperature below 32°F(0°C), the fan motor and electric strip heat will turn on and warm the room to 40°F(4.4°C). The fan stops a short time after the temperature is satisfied.

### Heat and Cool Fan CON/ CYC Dip-switches

Allows the fan to operate in continuous or cycle modes while the unit is in heating and cooling mode.

#### CON(Continuous)

Allows fan to run continuously,circulating air even when the temperature setting has been satisfied.This switch helps to maintain the room temperature closer to the thermostat setting.

#### CYC(Cycle)

This setting allows the fan to cycle on and off with the compressor or electric heater. The fan stops a short time after the temperature setting is satisfied.

### Electric Heat Only (for heat pump unit only)

This setting is typically used for Emergency Heating.

### Setpoint Temperature Limits

Provides a restricted range of temperature control.

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Provides a restricted range of temperature control.

### Electric Heat Only (for heat pump unit only)

This setting is typically used for Emergency Heating.

### Wall Thermostat control

A wired wall thermostat can be connected to the unit .If it is,this dip switch must be moved to the Wall Thermostat Enable Position,before the wall thermostat will begin control.

# DIP SWITCHES CONFIGURATIONS by PANEL CONTROL(Optional)

## NOTE

Unit must be powered OFF to effectively change their status.

- Press the up and down buttons together for 3 seconds to activate the dip switches configurations by panel control (see Fig.4).
- See Table 1 for Dip Switches configurations and functions by panel control.

**NOTE:** Press the up and down buttons together for 3 seconds again or no operation within 30 seconds to exit the dip switches configurations by panel control and the unit will save the last settings.

- Display function settings with 2 digitals in LED display window, high (left) for dip switches, low (right) for functions (see Fig.4).
- Press up button to set the dip switches, press down button to set the functions.

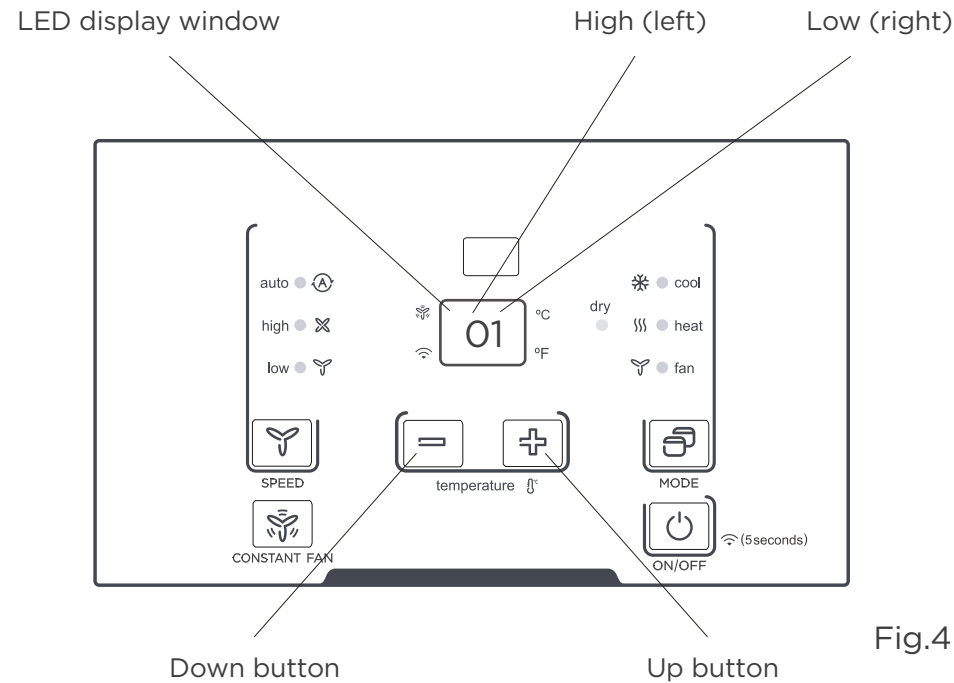


Fig.4

Table1 — DIP SWITCHES CONFIGURATIONS by PANEL CONTROL

No.	High(left)	Low(right)		Remarks
/	0	1-by panel control	0-by dip switches	
S1	1	1-electric heat only	0-electric heat and pump heat	For Heat Pump unit only
S3*S9	3	3-use control panel or some types of wall thermostat; 2-use other types of wall thermostat; 1-use other types of wall thermostat; 0-control panel enable.		You can consult with the sales agency or manufacturer for details
S4*S5	4	4-62°F-86°F(17°C-30°C); 3-60°F-86°F(16°C-30°C); 2-65°F-78°F(18°C-26°C); 1-63°F-80°F(17°C-27°C); 0-68°F-75°F(20°C-24°C);		
S6	6	1-fan continuous run for heating	0-fan cycle for heating	Not available for“1-use other types of wall thermostat”
S7	7	1-fan continuous run for cooling	0-fan cycle for cooling	
S8	8	1-low temp. protection enable	0-low temp. protection disable	Optional
SW7	A	1-front desk control disable	0-front desk control enable	Optional
Sw11	B	1-Load delay for 3 seconds	0-normal	Optional

**NOTE:**

1. The LED display window will show 00 when you first enter the setting mode, only when you set 01 you can start the next settings.
2. To activate front desk control function, you need to pull the dip switch SW7 to DOWN(OFF) , and then set the panel control to A0 .
3. After all set, press up and down buttons together for 3 seconds to exit the operation interface and cut off the power. When re-power on, the settings are activated.

# WALL THERMOSTAT TERMINAL (Optional)

## IMPORTANT

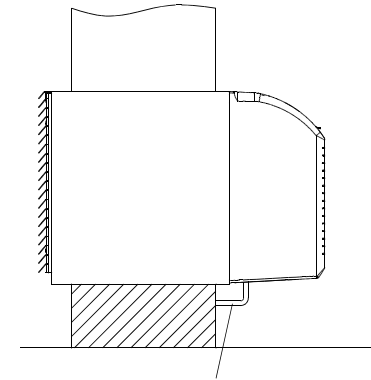
Only trained, qualified personnel should access electrical panel on unit and install electrical accessories. Please contact your local electrical contractor, dealer, or distributor for assistance.

1

## Thermostat Wire Routing

Thermostat wire is field supplied. Recommended wire gauge is 18 to 20 gauge solid thermostat wire.

**NOTE:** It is recommended that extra wires are run to unit in case any are damaged during installation. Thermostat wire should always be routed around or under, NEVER through, the wall sleeve. The wire should then be routed behind the front panel to the easily accessible terminal connector.

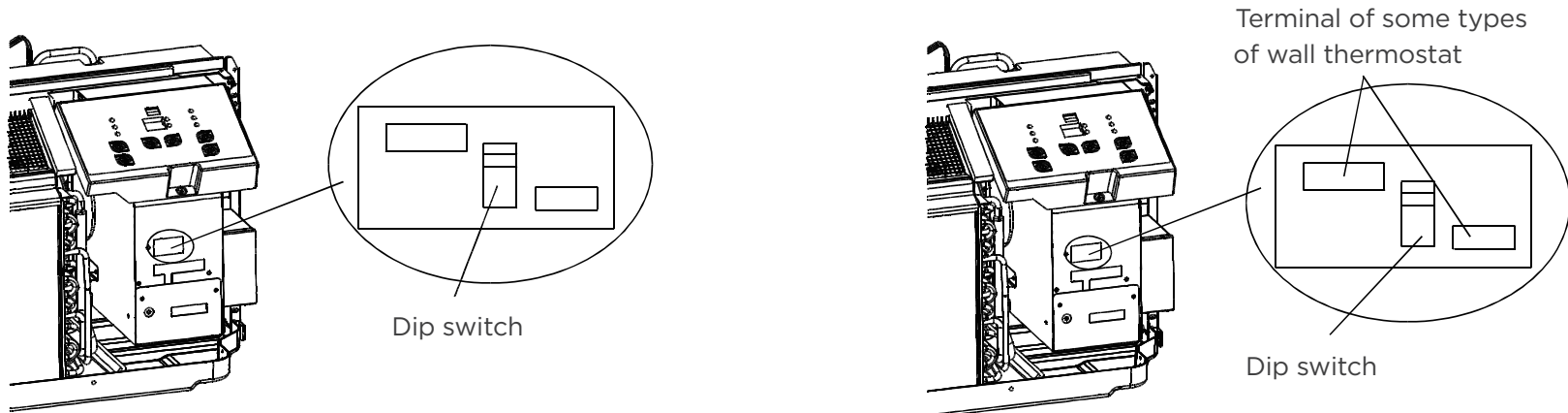


THERMOSTAT WIRE ROUTING  
(UNDER SLEEVE, BEHIND FRONT PANEL)

Fig. A - Proper Wire Routing Beneath Unit

**NOTE:** Refer to thermostat installation instructions for details on installing wall thermostat.

# WALL THERMOSTAT TERMINAL (Optional)



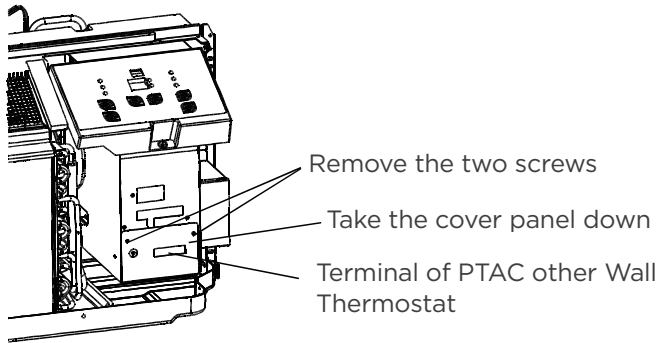
2

## Installation instruction of some types of wall Thermostat (you can Consult with the sales agency or manufacturer for details)

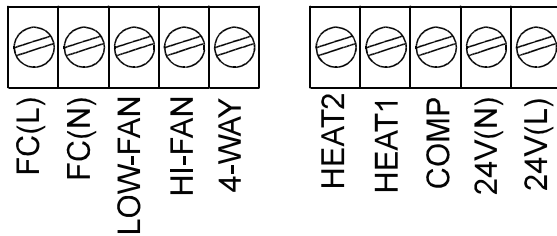
Pull the dip switch to the DOWN(OFF) position as shown below.

Insert the wire connector of the wall thermostat into the relevant terminal according to different shapes as shown above.

# WALL THERMOSTAT TERMINAL (Optional)



Terminal of PTAC Wall Thermostat (MODE A)



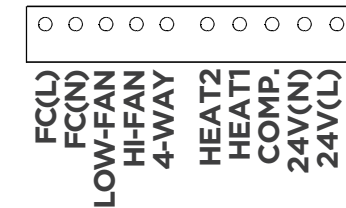
3

## Installation instruction of PTAC Wall Thermostat

Remove the two screws as shown below and take the cover panel down.

TERMINAL	DESIGNATION	MODE B Wire color
FC(L)	Front desk control terminal L	Brown
FC(N)	Front desk control terminal N	Pink
LOW-FAN	Low fan speed	Purple
HI-FAN	High fan speed	Green
4-WAY	4-way valve; Reverse cycle (Energized in Heat) For heat pump models	Blue
HEAT2	Electrical heater 2	White
HEAT1	Electrical heater 1	White
COMP	Compressor	Yellow
24V(N)	24V AC terminal N (Neutral), Common	Black
24V(L)	24V AC terminal L	Red

Terminal of PTAC Wall Thermostat (MODE B)



### ⚠ CAUTION

#### UNIT DAMAGE HAZARD

- Failure to follow this caution may result in equipment damage or improper operation.
- Improper wiring may damage unit electronics. Common busing is not permitted. Damage or erratic operation may result.

## NOTE:

- Use terminal 4-way for heat pump connection only.
- Suggest set the compressor protection time more than 3 minutes in . If set less than 3 minutes, the compressor will restart delay 3 minutes still.
- Wall thermostat must be heating changeover 4-way valve.
- For thermostats that have only one fan speed output (on or auto),the fan speed is determined by how the terminal connector is wired. If Low fan is desired, wire the G output from the thermostat to (LOW-FAN) on the units terminal block.
- If High fan is desired, wire the G output from the thermostat to (HI-FAN) on the units terminal block.
- The range of set temperature of Wall thermostat must be in consonance with the range of DIP switch setting.
- Wall thermostat must be set the type properly in consonance with the unit type : heat pump or no heat pump.
- If the has only one electrical heater output, connect the two terminals of HEAT 1 and HEAT 2, the unit can operate two electrical heaters (only for the unit has two electrical heaters). Otherwise operate one electrical heater.
- Please do not remove the control panel.

## • FRONT DESK CONTROL

The controller can handle a switch signal from FC(L) and FC(N) input, called front desk control. Input must be 24VAC. If system doesn't receive a 24VAC signal, it will turn unit off; otherwise, the unit runs in normal control.

The DIP switch can control the FRONT DESK CONTROL feature. The DIP switch is on the DOWN position, the unit will be turn off; otherwise,the unit runs in normal control. See FigB.

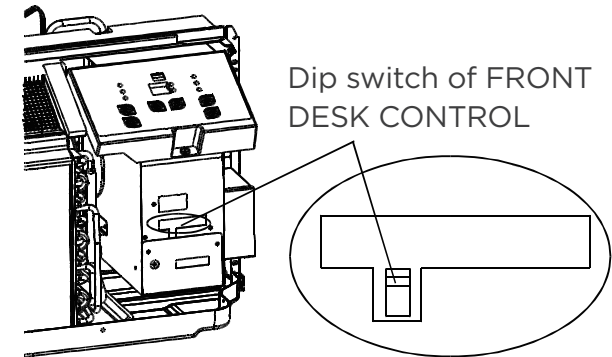


Fig B.

# OPERATION INSTRUCTIONS

## Control Panel

### NOTE

The control panel keypad will look like the following Fig.1. For some models with REMOTE SIGNAL RECEPTOR, the unit can be controlled by the control panel alone or by the remote. NOTE: Some models have no REMOTE SIGNAL RECEPTOR.

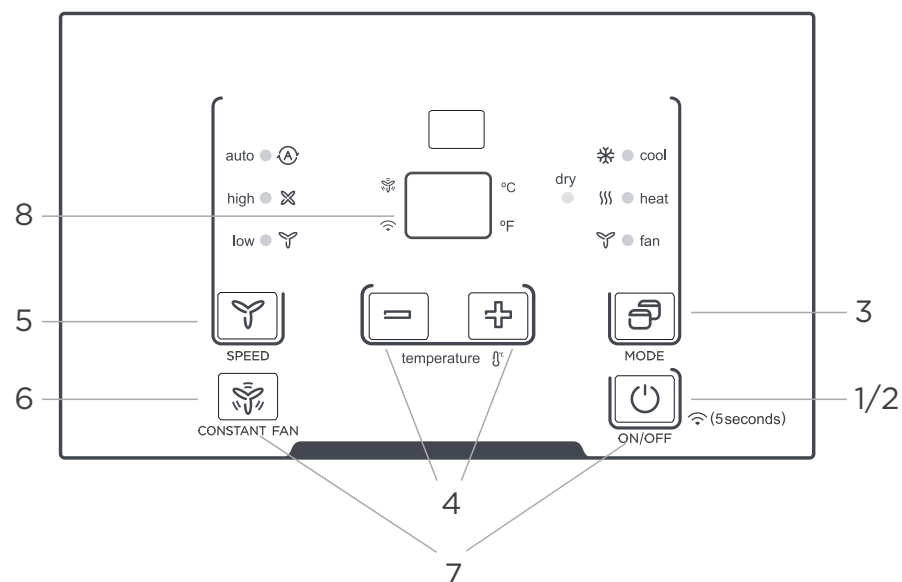






Fig.1

### Description

Description		
1	<b>POWER - Function</b>	· Press the POWER button to turn the unit on or off.
2	<b>Wireless Function (some model)</b>	· For the first time to use Wireless function, press the button for 5 seconds to initiate the Wireless connection mode. The LED DISPLAY shows 'AP' to indicate you can set Wireless connection. If Connection (router) is successful within 8 minutes, the unit will exit Wireless connection mode automatically and the Wireless indicator illuminates. If connection is failure within 8 minutes, the unit exits Wireless connection
3	<b>Mode - Function</b>	· Push this button to cycle through the modes from COOL-DRY-HEAT-FAN-COOL. The indicator light beside the "MODE" option will illuminate, identifying the mode selected. · COOL:..Cooling begins automatically when the room temperature is above the set point, and stops when the room temperature is 4°F(2°C) below the set point. But the compressor will run 5 minutes at least in COOL mode before stopping.

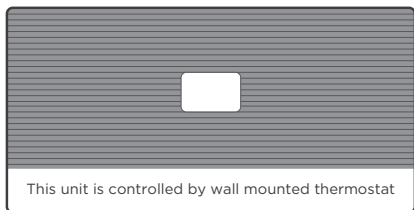
## Description

		<ul style="list-style-type: none"> <li>· HEAT:For heat pump models,the unit can alternate to run between in reverse cycle heat mode and electric heater mode according to the difference between the setting temperature andthe room temperature.</li> <li>· The fan motor cycles with the compressor stop.</li> </ul> <p>DRY : In this mode, the air conditioner will generally operate in the form of a dehumidifier. Since the conditioned space is a closed or sealed area, some degree of cooling will continue.</p> <p>NOTE: The reverse cycle and electric heater cannot be run at the same time. In following cases, it is normal that the reverse cycle does not operate.</p> <ol style="list-style-type: none"> <li>1.When the outdoor temperatrue is lower than 40°F/4°C or the room temperature falls to 8°F/4.5°C below the set point temperature.</li> <li>2.There is a 3-minute minimum compressor run time at any setting to prevent short cycling. The indoor fan motors starts before the compressor and stops after the compressor cycles off.</li> <li>3.Push the S1 on the DIP SWITCHES to UP (ON) position.</li> <li>4.When frost builds up to the evaporator coils,the unit will defrost automatically and the compressor will cycle off.</li> </ol> <p>NOTE: When you select AUTO mode, the FAN speed will be automatically adjusted at the setting temperature and room temperature.</p> <p>4.FAN: Fan operation only without heating and cooling.</p> <p>NOTE: If the unit has DIP SWITCHES feature,the temperature DIP range can be set led is controlled by DIP SWITCHES.See DIP SWITCHES CONFIGURATIONS on page 8 for details.</p>
4	 <b>Up and Down buttons</b>	<ul style="list-style-type: none"> <li>· Push the UP (or DOWN) button to increase (or decrease) the set temperature of the unit in cooling or heating mode.The temperature can be set by increments of 1°F (1°C).The setting temperature appears in the display.</li> </ul> <p>NOTE:Press and hold “+”and“-” buttons together for 3 seconds will alternate the temperature display between °F &amp;°C scale.</p>
5	 <b>FAN (FAN SPEED) - Function</b>	<ul style="list-style-type: none"> <li>· Every time you push this button,the fan speed cycles through the settings as follows:AUTO-HIGH-LOW-AUTO.</li> </ul> <p>NOTE: When you select AUTO mode, the FAN speed will be automatically adjusted at the setting temperature and room temperature.On Dry mode, the fan speed is controlled at Low speed automatically.</p>
6	 <b>CONSTANT FAN - Function</b>	<ul style="list-style-type: none"> <li>· In cooling mode, press the button to turn on or off the constant fan function. When the function is turned on, the constant fan light will illuminate, identifying the fan continuous run for cooling. When the function is turned off, the constant fan light will go out, identifying the fan cycle run with compressor stop.</li> </ul> <p>NOTE: Every time the unit is turned on, the function will work as the <b>DIP SWITCHES CONFIGURATIONS</b></p>
7	 <b>PANEL LOCKING - Function</b>	<ul style="list-style-type: none"> <li>· Long press the open key and continuous air function key for 5 seconds at the same time.Quick check immediately response, no 5 seconds.Turn on or off the lock panel function.The remote control still works. Fast entry, and exit when unlocking function.</li> </ul> <p>NOTE: It will be display 'LL' when you locked the control panel.</p>

## Description

8	<b>DISPLAY</b>	<p>· Shows the set temperature in°F or °C. While on Fan only mode,it shows the room temperature.</p> <p><b>Control code (on some models):</b>  <b>LC</b> - Pads on the control panel is not available.The unit can be setted by using wire cotroller only.  <b>FC</b> - Pads on the control panel and wire controller are not available.  The unit can be setted by using FRONT DESK CONTROL only.</p> <p><b>Error codes:</b>  E0-Failure of EEPROM parameter  E3-The fan stall error  E4: Main control and Display communication error  AS - Room temperature sensor error;  ES - Evaporator temperature sensor error;  CS - Condenser temperature sensor error;  OS - Outside temperature sensor error;  HS - Exhaust temperature sensor error;  LE - Wire cotroller error;  <b>NOTE:</b>When error occurs,unplug the unit and plug it back in.If error repeats, call for service.</p> <p><b>Other codes:</b>  LO - Room temperature is lower than 32°F/0°C;  HI - Room temperature is higher than 99°F/37°C;  FP - Low temp. Protection.  NOTE: All the illustrations in this manual are for explanation purpose only. Your air conditioner may be slightly different. The actual shape shall prevail.</p>
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## Accessories



Control panel sticker

**NOTE:** When the unit displays LC (Pads on the control panel is not available.The unit can be setted by using wire cotroller only). You can install the Accessory on the control panel.

**NOTE: For some models, there is corresponding operation happened after 3 seconds when pressing any button.**

**NOTE: When there are wide differences between USERS MANUAL and Remote controller Illustration on function description, the description on USERS MANUL shall prevail.**

# CARE AND MAINTENANCE

## CAUTION

- **UNIT DAMAGE HAZARD** Failure to follow this caution may result in equipment damage or improper operation. Airflow restriction may cause damage to the unit.

## FRONT PANEL AND CASE

- Turn unit off and disconnect power supply. To clean, use water and a mild detergent. use bleach and abrasives. Some commercial cleaners may damage the plastic parts.

## OUTDOOR COIL

- Coil on outdoor side of unit should be checked regularly. Unit will need to be removed to inspect dirt build-up that will occur on the inside of the coil. If clogged with dirt and soot, coil should be professionally cleaned. Clean inside and outside of outdoor coils regularly.

**NOTE:** Never use a high-pressure spray on coil.

## CAUTION

Failure to follow this caution may result in equipment damage or improper operation.

- Do not operate unit without filters in place. If a filter becomes torn or damaged, it should be replaced immediately.
- Operating without filters in place or with damaged filter will allow dirt and dust to reach indoor coil and reduce cooling, heating, airflow and efficiency of unit. Airflow restriction may cause damage to unit.

- The most important thing you can do to maintain unit efficiency is to clean the filters once every two weeks as required. Clogged filters reduce cooling, heating and airflow.

### - Keeping filters clean will:

Decrease cost of operation.

Save energy.

Prevent clogged indoor coil.

Reduce risk of premature component failure.

### -Removing Air Filter

#### - To Clean Air Filters:

Vacuum off heavy soil. Run water through filter. Dry thoroughly before replacing.

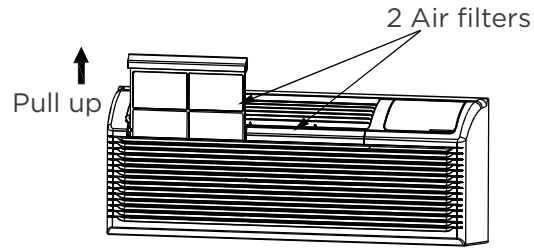


Fig. 13

### -Replacing Air Filter

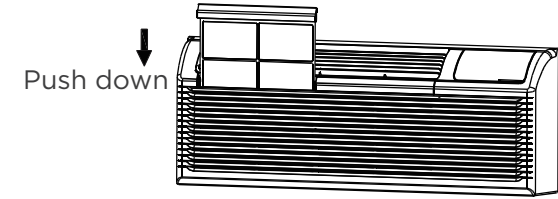


Fig. 14

### - VENT DOOR FILTER:

#### **IMPORTANT:TURN UNIT OFF BEFORE CLEANING.**

- If the vent door is open,access requires the removal of the unit from the wall sleeve.Clean the vent filter twice a year or as required.
- Make sure to remove the shipping screw from the vent door.(See.Fig.8)
- Rotate the vent control lever to open the vent door. (See. Fig.15)
- Remove four screws from the vent door filter. (See.Fig.15)
- First pull out the vent door steel wire from the hole of the vent door, then take off the vent door and filter. (See.Fig.15)
- Clean the filter.Dry thoroughly before replacing.
- Replac the vent door and filter,reinstall the four screws.
- Reinsert the vent door steel wire into the hole of the vent door.

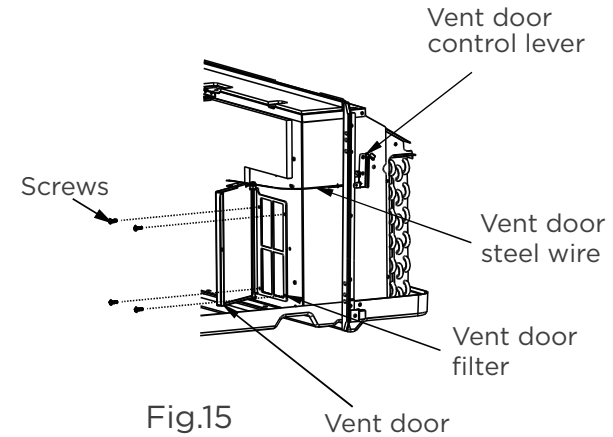


Fig.15

# TROUBLESHOOTING

Before calling for service, review this list. It may save you time and money. This list includes common occurrences that are not the result of defective workman-ship or materials in this appliance.

Problem	Solution
<b>UNIT DOES NOT START</b>	Unit may have become unplugged. Check that plug is plugged securely in wall receptacle. NOTE: Plug has a test/reset button on it. Make sure that the plug has not tripped.
	Fuse may have blown. Replace the fuse. See Note 1.
	Unit may be off. Reset circuit breaker. See Note 1.
	Unit may be in a protection mode. Turn unit on (bottom right button on keypad).
<b>UNIT NOT COOLING/ HEATING ROOM</b>	Unit air discharge section is blocked. Make sure that curtains, blinds or furniture are not restricting or blocking unit airflow.
	Temperature setting is not high or low enough. NOTE: Setpoint limits may not allow the unit to heat or cool the room to the temperature desired. Check section on dipswitch settings. Reset to a lower or higher temperature setting.
	Unit air filters are dirty. Remove and clean filters.
	Room is excessively hot or cold when unit is started. Allow sufficient amount of time for unit to heat or cool the room. Start heating or cooling early before outdoor temperature, cooking heat or gatherings of people make room uncomfortable.
	Vent door left open. Close vent door.
	Unit may be in a protection mode. Check dipswitch and wall thermostat settings for desired comfort.
	Compressor is in time delay. Wait approximately 3 minutes for compressor to start.
<b>DISPLAY HAS STRANGE NUMBERS/CHARACTERS ON IT</b>	The unit may be in a protection mode.
	The unit may be in a protection mode.
<b>UNIT MAKING NOISES</b>	Clicking, gurgling and whooshing noises are normal during operation of unit.
<b>WATER DRIPPING OUTSIDE</b>	If a drain kit has not been installed, condensation runoff during very hot and humid weather is normal. See Note 2. If a drain kit has been installed and is connected to a drain system, check gaskets and fittings around drain for leaks and plugs.
<b>WATER DRIPPING INSIDE</b>	Wall sleeve is not installed level. Wall sleeve must be installed level for proper drainage of condensation. Check that installation is level and make any necessary adjustments.

Problem	Solution
<b>ICE OR FROST FORMS ON INDOOR COIL</b>	<p>Low outdoor temperature. When outdoor temperature is approximately 55OF or below, frost may form on the indoor coil when unit is in Cooling mode.Switch unit to FAN operation until ice or frost melts.</p> <hr/> <p>The filters are dirty. Remove and clean filters.</p>
<b>COMPRESSOR PROTECTION</b>	<p>Power may have cycled,so compressor is in a restart protection.  Random Compressor restart - Whenever the unit is plugged in,or power has been restarted, a random compressor restart will occur. After a power outage,the compressor will restart after approximately 3 minutes.  Compressor Protection - To prevent short cycling of the compress or, there is a random startup delay of 3 minutes and a minimum compressor run time of 3 minutes.</p>
<b>ELECTRIC HEATING FAILURE</b>	<p>Clean the evaporator once every three months by professional people.</p>

**NOTES:**

1. If circuit breaker is tripped or fuse is blown more than once,contact a qualified electrician.
2. If unit is installed where condensation drainage could drip in an undesirable location,an accessory drain kit should be installed and connected to drain system.

