MITS AIR™

MODEL : MITSWZ-28EC

INSTALLATION & OPERATION MANUAL

Packaged Thru-the-Wall Inverter Heat Pump

ALWAYS MAKE SURE THAT THIS MANUAL REMAINS WITH THE ODESSEY PACKAGED THRU-THE-WALL HEAT PUMP OR OWNER OF THE PRODUCT.

READ THIS MANUAL BEFORE INSTALLING, OPERATING, OR PERFORMING MAINTENANCE ON THE ODESSEY PACKAGED ROOM AIR HEATPUMP UNIT.

The figures in this manual may be different with the material objects, please refer to the material objects for reference.

Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

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ODESSEY PACKAGED THRU-THE-WALL HEAT PUMP UNIT

1. GENERAL INFORMATION

1.1 INTRODUCTION

- Do not dispose of any packaging until installation of the unit is completed.
- After having removed the packing, check that all the contents are intact and complete. See list of accessories. In the event of missing parts, contact your retailer.
- This unit has been designed to heat or cool the air of a room and should only be used for this purpose.
- The manufacturer cannot be held liable for damage caused to property or injury to persons or animals due to incorrect installation, regulation and maintenance or improper use.
- This unit contains R32 refrigerant. At the end of its life, the disposal of this unit must be in accordance with the regulation governing the recycling of this product. Please contact your local authority for regulatory advice.
- Do not switch on before having totally assembled the unit and before installing in its correct operating position.
- Before starting the appliance, check that it is correctly earthed, according to the legislation in force in the country concerned.

1.2 IMPORTANT SAFETY INSTRUCTIONS

When using electrical appliances, basic safety precautions should always be followed:

- Do not place objects on the product or allow objects to obstruct the inlet or outlet openings.
- Extreme care should be taken when any product is used by, or near children and pets, and whenever the product is left operating and unattended.
- Before operating the product remove the unit from its packaging and check it is in good condition.
- Do not operate any product with a damaged cord or plug, or after the unit malfunctions, has been dropped, or damaged in any manner.
- Do not pull, remove or twist the power cord, even if disconnected from the main electrical supply.
- Never place the power cord under a carpet or rug or other location where it creates a tripping hazard.
- Do not attempt to repair or adjust any electrical or mechanical functions on this unit as this may void warranty.
- Always operate the product from a power source of the same voltage, frequency and rating as indicated on the product identification plate.
- This unit is not intended for use in wet or damp locations.
- Do not place the unit near an open flame. cooling or heating appliance, or hot surface.
- Do not operate the unit in areas where gasoline or other flammables are used or stored.
- Do not carry out any cleaning or maintenance or access internal parts until the unit has been disconnected from the main electrical supply.
- Do not alter the safety or regulating devices without the permission and instructions of the manufacturer.
- Repair or maintenance work must be carried out by an authorized servicer in compliance with the instructions given in this booklet.
- Do not alter the appliance. Since hazardous situations could be created, the manufacturer of the appliance will not be liable for any damage or injury caused.
- This instruction booklet is an integral part of the appliance and should therefore be carefully preserved and always accompany the appliance in the event of transfer to another owner or another installation.

The appliance is not accessible to general public.

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 should be supervised to ensure that they do not play with the appliance.

WARNING
Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.)
Do not pierce or burn.
Be aware that refrigerants may not contain an odour.

The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation;
- a warning that the appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).

The appliance shall be stored so as to prevent mechanical damage from occurring.

The compliance with national gas regulations shall be observed;
Min applicable area of this machine is 15m .
Please ensure that there are no obstacles in front of the machine, keep ventilation openings clear of obstruction.
Servicing shall be performed only as recommended by the manufacturer.

Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification. Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.

Before servicing the appliance
Checks to the area:
Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system

Work procedure:
Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapour being present while the work is being performed.

General work area:
All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

Checking for presence of refrigerant:
The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

Presence of fire extinguisher:
If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

No ignition sources:
No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of

installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks.

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Checks to the refrigeration equipment:
Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance. The following checks shall be applied to installations using flammable refrigerants:
-- the charge size is in accordance with the room size within which the refrigerant containing parts are Installed;
-- the ventilation machinery and outlets are operating adequately and are not obstructed;
-- if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
-- marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
-- refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Checks to electrical devices:
Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.
Initial safety checks shall include:
that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;that no live electrical components and wiring are exposed whiule charging, recovering or purging the system; that there is continuity of earth bonding.

Repairs to sealed components:
During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
Ensure that apparatus is mounted securely.
Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in NOTE *The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.*

Repair to intrinsically safe components:
Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.
Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak

Cabling:
Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of ageing or continual vibration from sources

such as compressors or fans.

Detection of flammable refrigerants:
Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

Leak detection methods:
The following leak detection methods are deemed acceptable for systems containing flammable refrigerants.
Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed/extinguished.
If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

Removal and evacuation:
When breaking into the refrigerant circuit to make repairs-or for any other purpose-conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:
- remove refrigerant;
- purge the circuit with inert gas;
- evacuate;
- purge again with inert gas;
- open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. The system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times.
Compressed air or oxygen shall not be used for this task.
Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.This operation is absolutely vital if brazing operations on the pipework are to take place.
Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

Charging procedures:
In addition to conventional charging procedures, the following requirements shall be followed.
-- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
-- Cylinders shall be kept upright.
-- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
-- Label the system when charging is complete (if not already).
-- Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning:
Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.
a) Become familiar with the equipment and its operation.
b) Isolate system electrically.
c) Before attempting the procedure ensure that:
- mechanical handling equipment is available, if required, for handling refrigerant cylinders;

- all personal protective equipment is available and being used correctly;
- the recovery process is supervised at all times by a competent person;
- recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.
e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
f) Make sure that cylinder is situated on the scales before recovery takes place.
g) Start the recovery machine and operate in accordance with manufacturer's instructions.
h) Do not overfill cylinders. (No more than 80 % volume liquid charge).
i) Do not exceed the maximum working pressure of the cylinder, even temporarily.
j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
k) Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Recovery:

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants.
In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition.
Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.
The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged.
Do not mix refrigerants in recovery units and especially not in cylinders.
If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

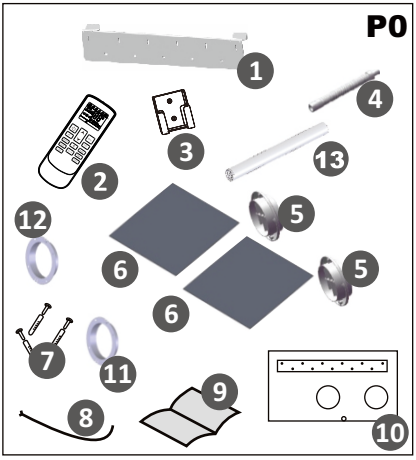
1.3 RECEIVING THE GOODS

The unit is delivered in a protective packaging and is accompanied by an instruction manual. This manual is an integral part of the unit and should therefore be carefully read and preserved. When the unit is unpacked, please check that the unit and accessory pack are complete and undamaged.

1.4 HANDLING

- Be fully aware of the weight of the unit before attempting to lift it. Take all necessary precautions to avoid damaging the product or causing personal injury.
- It is advisable to remove the packaging only when the unit has been located in the installation position.
- Carefully remove the adhesive strips positioned on the unit.
- Packaging components must be disposed correctly and not left within reach of children, since they are a potential source of danger.

1.5 LIST OF ACCESSORIES(P0)



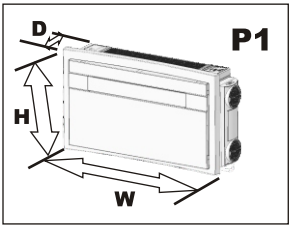
1. FASTENING BRACKET
2. REMOTE CONTROL
3. REMOTE CONTROL HOLDER
4. DRAINAGE PIPE
5. EXTERNAL GRATING x 2
6. PLASTIC SHEET AIR PIPE x 2
7. SCREWS KIT
8. GRATING FIXING CORD x 2
9. INSTRUCTION MANUAL
10. INSTALLATION TEMPLATE FOR WALL DRILLING (See page 19)
11. 6.3 inch RING
12. 5.9 inch RING
13. FRESH AIR PIPE

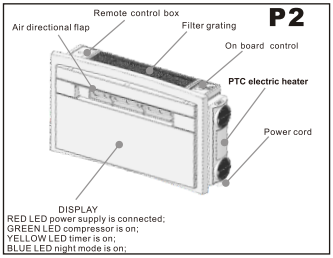
This product has been manufactured to comply with ETL.

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

Any batteries used in the remote control contain materials, which are hazardous to the environment. They must be removed from the remote control when they reach the end of their life and disposed of responsibly.

1.6 TECHNICAL FEATURES(P1,P2)





Model	MITSWZ-28EC
Cooling capacity	8881Bth/h, 2603W
Heating capacity	7895Bth/h, 2314W
Electric heater capacity	6824Bth/h, 2000W
Power input in cooling (W)	675
Power input in heating (W)	689
Power input for electric heater	6824Bth/h, 2000W
EER (Btu/w)	13.16
COP (Btu/w)	11.46
Air flow	253 CFM / 430 m^3/h
Fan speed setting	3+Auto
Dehumidification capacity (L/24h)	23.8
Noise level indoor dB(A)	48
Noise level outdoor dB(A)	58
Power supply (V/Ph/Hz)	208/230/1/60
Refrigerant type	R32
Refrigerant charged	16.6 oz / 470 g
Dimension HxWxD	22.8x43.1x9.6 inch / 580x1095x245 mm
Weight	114.6 lb / 52 kg
Inlet/Outlet hole diameter	6.4 inch / 162 mm
Fresh air pipe diameter	2 inch / 50 mm

ALL PERFORMANCE DATA AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

STANDRD TEST OPERATING CONDITIONS IN COOLING AND DEHUMIDIFICATION MODE

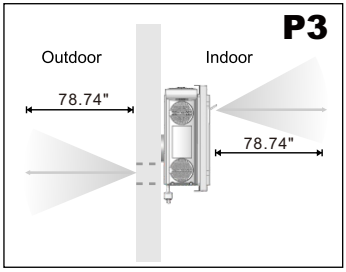
- Inside 80.06°F DB; 66.92°F WB
- Outside 95°F DB; 75.02°F WB

STANDARD TEST OPERATING CONDITIONS IN HEATING MODE

- Outside 46.94°F DB; 42.98°F WB
- Inside 69.98°F DB; 60.08°F WB

2. INSTALLATION

2.1 POSITIONING THE UNIT(P3)



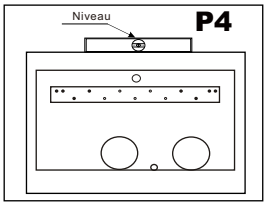
To maintain the best performance from your unit and to prevent breakdowns or hazards, you must position it correctly.
Please follow the guidelines and instruction below in full, as failure to do so could cause potential installation problems.

- The unit must be installed on an exterior wall that has access to outside air with a minimum of 78.74" inches outside clearance.
- The unit must be fitted leaving space around the unit as illustrated in the installation template.
- The wall on which the unit is installed must be sturdy and able to withstand the weight of the unit.

After determining the best place for installation as described above, please check to ensure that the wall can be drilled in the chosen area without interfering with other structures or installations (beams, studs, pipes, wires, etc.).

Please also ensure that there are no obstacles on the outside of the wall, which may obstruct air circulation through the drilled holes, for example: plants and their leaves, fences, drain pipes, overflows and gratings, etc.).
Any obstruction could interfere with the correct performances of the unit.

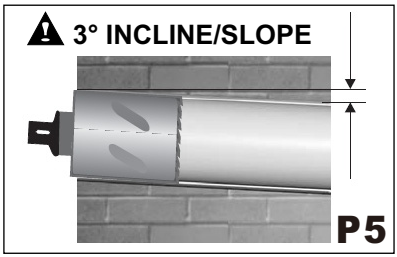
2.2 PAPER TEMPLATE (P4)



Fasten the template to the wall once the following guidelines have been checked.

- Do not drill any holes until you are completely confident that there are no obstacles in the area you wish to drill and there are no obstructions, which could be hidden by the construction of the wall, for example: electrical wiring water, gas pipes or supporting lintels or beams.
- Ensure that a level is used, as the unit must be level.

2.3 DRILLING THE WALL (P5)



Please note: If you are drilling the hole above ground floor level, please ensure while the holes are drilled the outside area is supervised, until drilling has been completed.

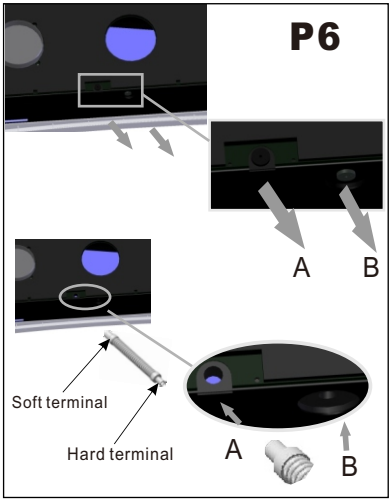
INTAKE AND OUTLET AIR HOLES, FRESH AIR HOLE AND CONDENSATE DRAIN HOLE

This operation should be carried out using the proper tools (diamond tip or core borer's drills with high twisting torque and adjustable rotation speed).

- Fasten the template to the wall taking care to check the distance from the floor or ceiling. Keep it horizontal by using a level.
- Use a pilot drill to mark the centre of each core hole to be drilled, and then use a 6.38" core boring head to drill the two holes for intake and outlet the air.
- Use a pilot drill to mark the centre of the core hole to drilled, and then use a 1.97" core boring head to drill the hole for fresh air.
- Use a pilot drill to mark the centre of the core hole to be drilled, and then use a 1.18" core boring head to drill the hole for condensate drain.
- All holes should be drilled in one operation.
- For detail holes sizing and dimension for the holes, please refer to the template on page 27.

It is recommended that the holes must have a slightly downward slope of 3-5 degree to prevent any backflow of water in the pipes.

DRAINAGE HOLE (P6)

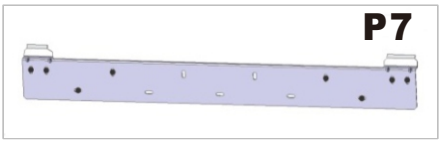


This unit has two alternative drainage methods to mange condensate. Before installing the unit, choose the most suitable method for your application. There are 2 drain connections on the unit, one is vertical to the floor which is named "A" and the other one is horizontal to the floor which is named "B" as shown in P6.

Method "A": Employing this method allows the condensate to drain to the outdoors. Begin by drilling a hole through the wall measuring 1.18" in the position shown on the paper template. Drainage occurs by gravity, thus it is essential to have a minimum downward slope of at least 3 degrees throughout the drain line's length. Connect the drain pipe (from soft terminal) to the unit (hole "A") after unplugging the black rubber cap (see picture P6). **Note:** If method "A" is used, do not unplug the black rubber cap for drainage hole "B".

Method "B": Drainage occurs indoors to an external floor drain, water tank, or sump pump. Unplug the black rubber cap of system "B" (see picture P6), then connect the drain pipe (from soft terminal) to the unit hole "B" after unplugging the black rubber cap. Place the hard terminal into a water tank, floor drain, or sump pump. **Note:** If system "B" is used, do not unplug the black rubber cap for drainage hole "A".

2.4 FASTENING THE BRACKET (P7)



- Drill holes for anchoring the bracket to the wall using the (6) holes shown in back on the paper template.
- The anchor bolts provided require (6) Ø 0.31" holes.

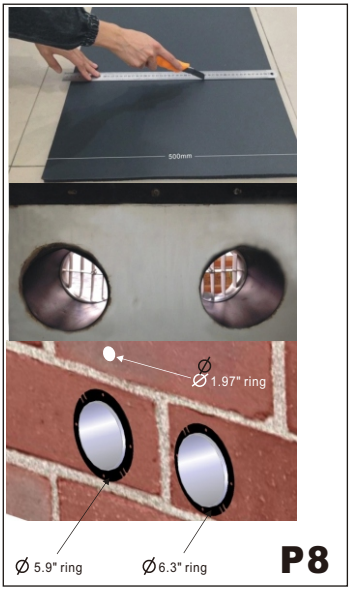
NOTICE: If the wall is not sturdy enough, it is advisable to use extra anchor bolts using the holes shown in grey on the paper template.

NOTICE: The wall should be inspected to determine if the manufacturer provided bolts are adequate for the installation depending on the application. Due to building construction variations, it may be necessary for the installing contractor to use a different type of anchorage

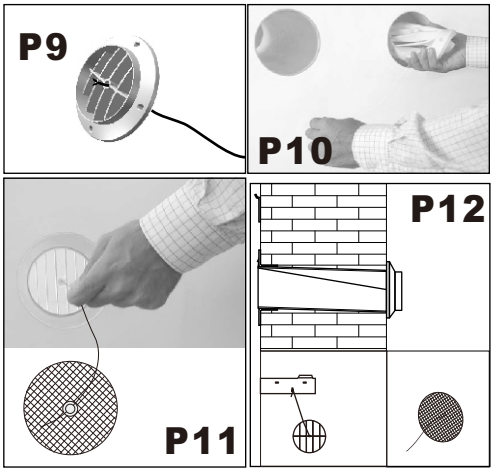
to maintain the intended installation of the unit to the wall. The manufacture is not liable in case of underestimation of the structural consistency of the anchorage made at the time of installation.

2.5 INSTALLATION OF THE PIPES (P8)

- After drilling the holes, the plastic sheet supplied with the air conditioner need to be fitted through them.
- Measure the depth if the wall and cut supplied plastic sheet.
- Roll the sheet and insert it into the hole, playing attention to the joint line, which must be always upper position. Remember that the sheet must have the same inclination of the holes(min 3°).
- Insert the rings into the holes.
- Please centre the pipes into the holes in the wall and insulate and seal their perimeters to prevent air and humidity infiltration using polyurethane foam and using plaster as finishing on the inside wall.
- Insert the fresh air pipe ⌀1.97" into the little hole, keep the net side with outdoor. (This function is optional for customer.)



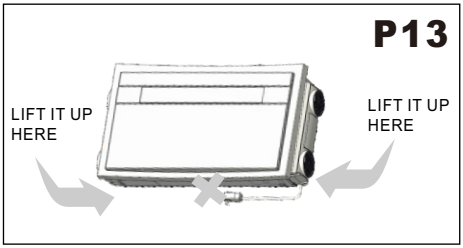
2.6 FITTING THE GRATINGS AND THE METAL GRILLE (P9, P10, P11, P12) - CONT'D

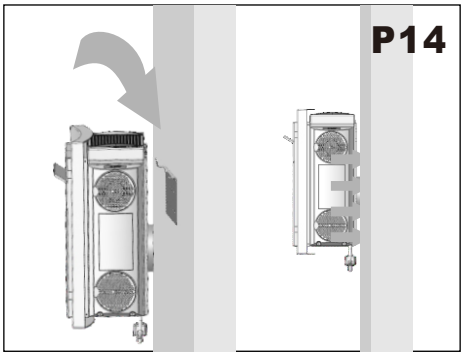


To fit the external two gratings and the metal grille, please proceed as follows:

- Familiarize yourself with the fitting of the flexible grating and the metal grille to the tube before installation.
- Insert the cords through the centre of the grating. Note: The flexible grating fits on the outside of the tube and the metal grille fits inside.
- Insert the supplied cord into the hole in the center of the metal grille (see P11). Then insert the supplied cord into the hole in the center of the grating (see P11). Fold the outer grating in half grasping the cord with your free hand. Insert your arm inside the pipe with the grating and push all the way to the outside. Let the grating unfold and pull the cord toward you.
- With a little patience and manipulation, the 2 gratings will fit the end of the tubes.
- Grasping the cord, insert your fingers between the fins and pull the grating toward you until it is properly fitted to the pipe, keeping the fins in vertical position. Then tighten the cord and fasten it to the dent on the internal flanges (see P12).

2.7 FITTING THE UNIT ON THE BRACKET (P13, P14)





After checking again that the fastening bracket is securely fastened to the wall, and that any necessary preparations for electric connection and condensate drainage have been made, fasten the unit to its supporting bracket.

- Lift up by holding the sides at the bottom.
- Tilt the unit slightly toward you to engage the unit the bracket flange.
- The unit can now be pushed firmly against the wall.

Carefully inspect the installation to make sure that the insulated back panel fits firmly against the wall, there are no gaps at the back of the unit and wall, and that the two plastic semicircles on the back side of the unit are placed inside of the two plastic pipes fixed inside the wall.

The unit shall not be installed inside a laundry room.

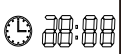
The unit must be positioned so that the plug is accessible.

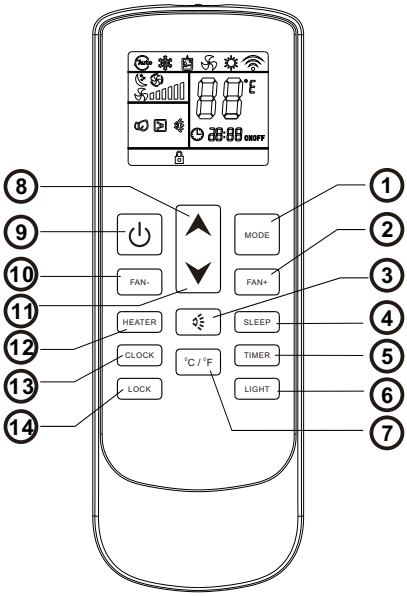
The unit shall be installed in accordance with the National Electrical Code N.E.C. (C.E.C. in Canada) and any other local ordinances.

All electrical and electronic products should be disposed of separately from the municipal waste stream via specific collection facilities designated by the government or the local authorities to recycle or dispose of refrigerant bearing products to prevent unintended discharging of refrigerant into the air.
For more detailed information about disposal of your old unit, please contact your municipality, the waste disposal service or the store where you purchased the product.

3. USE AND MAINTENANCE

3.1 INTRODUCTION OF LCD ICONS

Icons	Meaning	Icons	Meaning
	Auto		Airflow direction
	Cooling		Fan speed
	Dry		Sleep
	Fan		Auto fan
	Heating		Temp
	Light (optional only)		Clock
	Heater (optional only)		Timer
	Lock		



3.2 REMOTE CONTROL FUNCTIONS

① **MODE** BUTTON: Set up the air conditioner operating mode

② **FAN SPEED** BUTTON: Set up the fan speed

③ **LOUVER SWING** BUTTON: Adjust the airflow direction

④ **SLEEP** BUTTON: Automatically adjusting the setting temperature according the circadian rule.

⑤ **TIMER** BUTTON: Set up the time the air conditioner starts;
Set up the time the air conditioner stops.

⑥ **LIGHT** BUTTON(optional only): Switch on the light or UPI than the unit has this fuction

⑦ **TEMP** BUTTON: Set temperature unit to ^{0}C or ^{0}F

⑧ **UP** BUTTON: Increase the temperature and time

⑨ **ON/OFF** BUTTON: Turn on or turn off the air conditioner

⑩ **FAN SPEED** BUTTON: Set up the fan speed down

⑪ **DOWN** BUTTON: Decrease the temperature and time

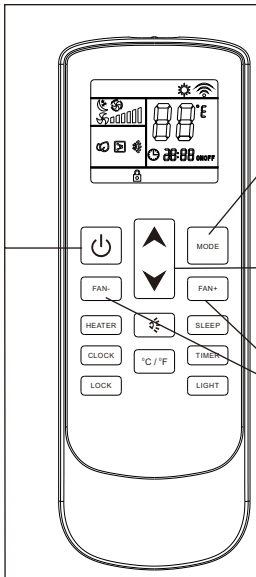
⑫ **ELECTRICAL HEATER** BUTTON(optional only): In heating mode, when the indoor temperature is below 25°C (i.e. 77°F), pressing this button will turn on the electric heater (if available) to provide additional auxiliary electric heating.

⑬ **CLOCK** BUTTON: Adjust the clock

⑭ **LOCK** BUTTON: Lock the remote control set

NOTE: Memory Mode is an automatic function of the unit that allows the unit to run in the last mode it operated in when it is turned back on after being off.

3.3 Heating mode



Sequence of the operations

1 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.

2 Press the **MODE** button, set up the mode to heat " ☼ ", the air conditioner will run in heating.

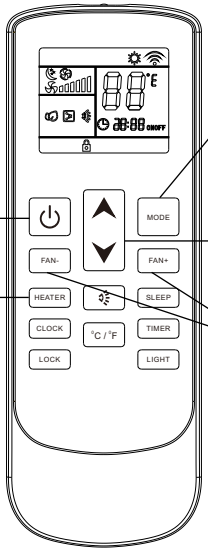
3 Press **UP** " ▲ " or **DOWN** " ▼ " button , to adjust the setting up temperature.

4 Press the **FAN SPEED** button " **FAN+** " or " **FAN-** " , set up the fan speed, " 𝄐 " is low speed, " 𝄐 "is middle speed, " 𝄐 " is high speed, " ֍ " is auto speed.
For auto fan, the speed is chosen by the difference of room temperature and setting temperature.

5 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner. Next time when this button is pressed, the air conditioner will operates in this mode by memory.

3.4 Super heating mode: *Allows the electric heater to run in addition to the heat pump when additional heat is needed. particularly when outdoor temperature are blew $5^{0}C$.*

Sequence of the operations



1 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.

2 Press the **MODE** button set up the mode to heat " ☼ ", the unit will run in heating.

3 Press **UP** " ▲ " or **DOWN** " ▼ " button, to adjust the setting up temperature.

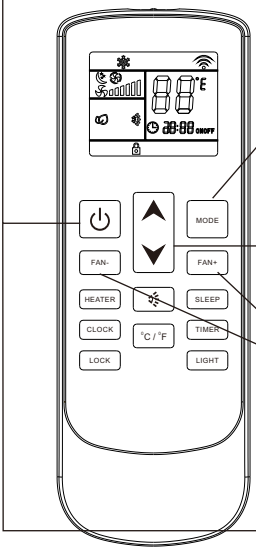
4 Press the **FAN SPEED** button "**FAN+**" or "**FAN-**", set up the fan speed, "🌀" is low speed, "🌀" is middle speed, "🌀" is high speed, " 🌀 " is auto speed. For auto fan, the speed is chosen by the difference of room temperature and setting temperature.

5 Press the assistant **ELECTRICAL HEAT** button " HEATER ", the icon will display on the LCD, starting the assistant heat; press this button again, stop the assistant heat.

6 Press the **ON/OFF** button " ⏻ ", switch off the unit. Next time when this button is pressed, the unit will operates in this mode by memory.

3.5 Cooling mode

Sequence of the operations



1 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.

2 Press the **MODE** button, set up the mode to cool " ❄ " , the air conditioner will run in cooling.

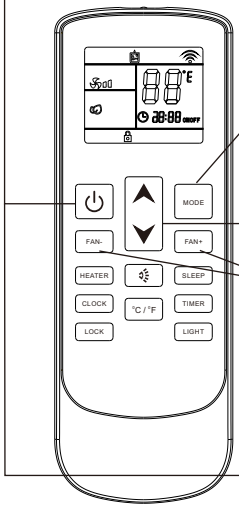
3 Press **UP** " ▲ " or **DOWN** " ▼ " button, to adjust the setting up temperature.

4 Press the **FAN SPEED** button " **FAN+** " or " **FAN-** " , set up the fan speed, " 𝄐 "is low speed, " 𝄐 " is middle speed, " 𝄐 " is high speed, " 𝄐 " is auto speed. For auto fan, the speed is chosen by the difference of room temperature and setting temperature.

5 Press the **ON/OFF** button " ⏻ ", switch off the air conditioner. Next time when this button is pressed, the air conditioner will operates in this mode by memory.

3.6 Dry mode: *Allows the unit to dehumidify and remove moisture in the air within the area the unit is installed.*

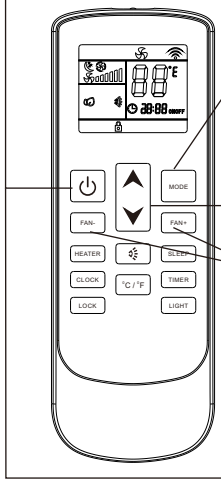
Sequence of the operations



1. Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.
2. Press the **MODE** button, set up the mode to dry " 🖻 ", the air conditioner will run in dehumidifying.
3. Press **UP** " ▲ " or **DOWN** " ▼ " button, to adjust the setting up temperature.
4. **FAN SPEED** button " **FAN+** " or " **FAN-** " is disable, indoor fan speed always is low in dry mode.
5. Press the **ON/OFF** button " ⏻ ", switch on the air conditioner. Next time when this button is pressed, the air conditioner will operates in this mode by memory.

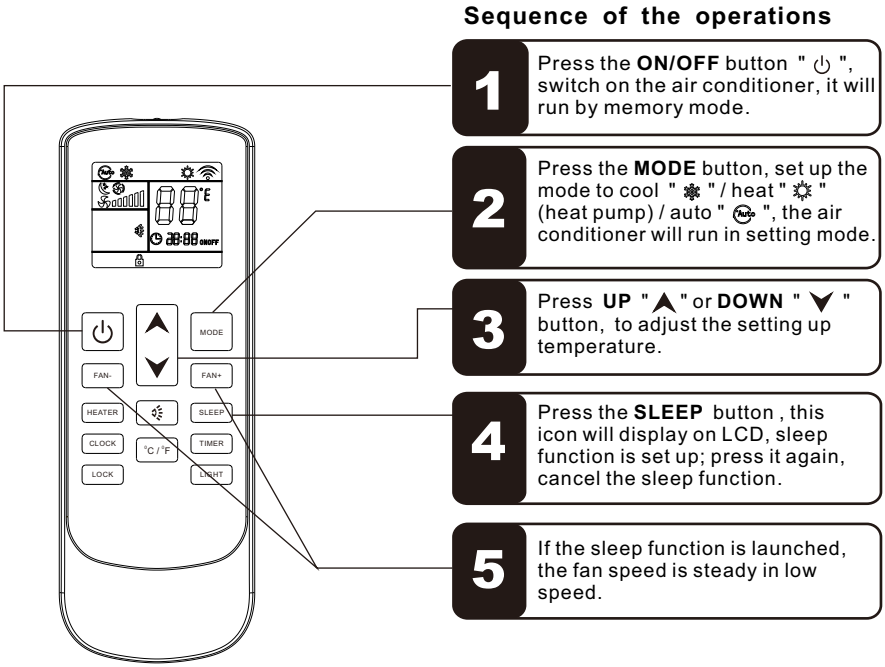
3.7. Fan mode: *Allows the fan to run without cooling or heating the space.*

Sequence of the operations

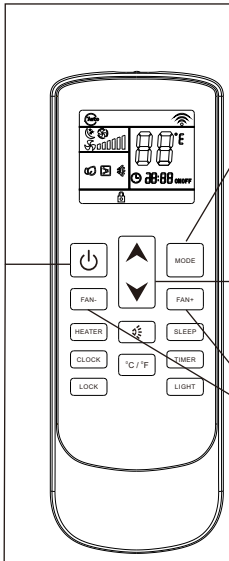


1. Press the **ON/OFF** button " ⏻ ",switch on the air conditioner, it will run by memory mode.
2. Press the **MODE** button, set up the mode to fan " 🌀 " , the air conditioner will run in fan.
3. Press **UP** " ▲ " or **DOWN** " ▼ " button, to adjust the setting up temperature.
4. Press the **FAN SPEED** button " **FAN+** " or " **FAN-** ", set up the fan speed, " 🌀 " is low speed, " 🌀 " is middle speed, " 🌀 " is high speed, " 🌀 " is auto speed.
   For auto fan, the speed is chosen by the difference of room temperature and setting temperature.
   Room temperature-setting temperature＞41°F high speed.
   Room temperature-setting temperature＞37.4°F middle speed.
   Room temperature-setting temperature＞33.8°F low speed.
5. Press the **ON/OFF** button " ⏻ ", switch off the air conditioner. Next time when this button is pressed, the air conditioner will operates in this mode by memory.

3.8 Sleep mode: *The sleep mode changes the set temperature of the unit over time while you sleep to provide optimal comfort in an effort to match the body's natural temperature changes during sleep. To activate sleep mode, simply press the sleep button. In the sleep mode, the set temperature of the unit will either increase in cooling mode or decrease in heating mode by 1 degree after an hour, then by another degree an hour later. The sleep mode function can be cancelled by pressing the sleep button at any time.*



3.9 Auto mode: *The unit will automatically adjust its operation according to the room temperature.*



Sequence of the operations

1 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.

2 Press the **MODE** button, set up the mode to auto " Auto ", the air conditioner will run in auto mode. (Reference to "emergency operation")

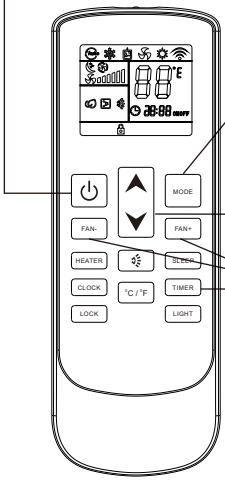
3 According to the difference of room temperature and setting temperature automatically choose the running mode(cool, heat, fan). The temperature setting button UP " ▲ " and DOWN " ▼ " are disable.
When room temperature ≤ 68°F, run with heat mode.
When 68°F < room temperature < 77°F, run with fan mode.
When room temperature ≥ 77°F, run with cool mode.

4 Press the **FAN SPEED** button " **FAN+** " or " **FAN-** ", set up the fan speed, " " is low speed, " " is middle speed, " " is high speed, " " is auto speed.
For auto fan, the speed is chosen by the difference of room temperature and setting temperature.

5 Press the **ON/OFF** button " ⏻ ", switch off the air conditioner. Next time when this button is pressed, the air conditioner will operates in this mode by memory.

Timers can be used to turn the unit off or on when not needed, such as when you are not at home.

3.10 Timer off function



Sequence of the operations

1 Press the **ON/OFF** button " ⏻ ", switch on the air conditioner, it will run by memory mode.

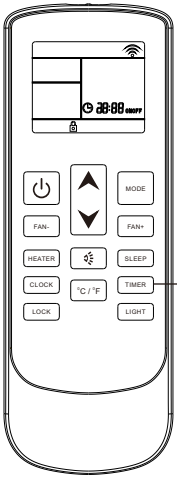
2 Press the **MODE** button set up the mode to which you want.

3 Press **UP** " ▲ " or **DOWN** " ▼ " button, to adjust the setting up temperature.

4 Press the **FAN SPEED** button " **FAN+** " or " **FAN-** " , set up the fan speed, " " is low speed, " " is middle speed, " " is high speed, " " is auto speed. For auto fan, the speed is chosen by the difference of room temperature and setting temperature.

5 Press the **TIME** button " TIMER " , set up the time air conditioner switch off. Press the button " ▲ "each time, adjusting up 1 hour; Press the button " ▼ " each time, adjusting up 10 minutes; press the timer button to confirm the data entered. When the time is over, the air conditioner will be switched off automatically. If press this button again before the air conditioner switch off, the timer off setting will cancelled.

3.11 Timer on function

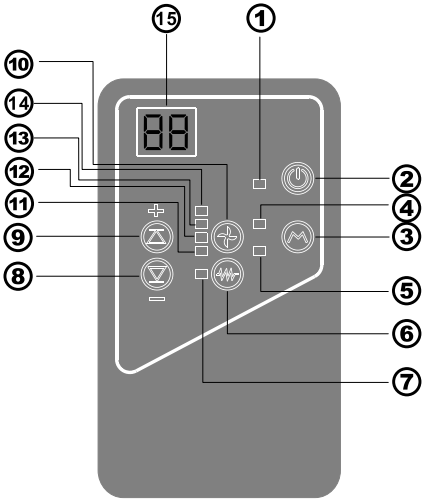


Sequence of the operations

1 The air conditioner is switched off.

2 Press the **TIME** button " TIMER " , set up the time which the air conditioner switch on. Press the button " ▲ " each time, adjusting up 1 hour; Press the button " ▼ " each time, adjusting up 10 minutes. Set up the operation **MODE, TEMPERATURE, FAN SPEED** etc.,press the timer button to confirm the date entered. when the time is arrived, the air conditioner will start automatically. If the **TIMER ON** button is pressed again, the **TIMER ON** setting will be cancelled.

3.12 On board control function



1) Running LED: When lit indicates that the compressor is running
2) On/Off button: Turns the unit on/off
3) Mode button: Allows you to select the desired mode - heating/cooling/dry/auto
4) Cooling LED: When lit indicates the unit is running cooling mode
5) Heating LED: When lit indicates the unit is running heating mode
6) Super Heating Mode button: Switches ON/OFF Super Heating Mode
7) Super Heating Mode LED: When lit indicates the Super Heating Mode is ON or OFF.
8) Down button: Reduces the set temperature.
9) Up button: Increases the set temperature.
10) Fan speed button: Selects the desired fan speed – low/medium/high/auto.
11) Auto fan speed LED: When lit indicates the auto fan speed mode is active.
12) Low fan speed LED: When lit indicates the low fan speed mode is active.
13) Medium fan speed LED: Indicates the medium fan speed mode is active.
14) High fan speed LED: Indicates the high fan speed mode is active.
15) Temperature display window: The window will show both the set temperature and room temperature. Whenever a temperature is set, it will flash on the display 15 times while flashing. Following that, room temperature will be shown on the display for 70 seconds and finally, the display will turn off .

3.13 2000W Electric Heater Function

3.13.1 Heating Mode 1 (Heat Pump + Electric Heater Function) as the default setting.

1. When entering Heating Mode, the Electric Heater signal (from remote controller, or on-board-control, or Wi-Fi APP) is **not switched**, the electric heater function is executed automatically:

The Electric Heater automatic opening requires all of the following conditions to be met:

a. Indoor Air Temperature IAT ≤ 15°C (i.e. 59°F)
b. In Heating Mode.

The Electric Heater function is closed when any of the following conditions are met:

a. Indoor Air Temperature (IAT) ≥ 22°C (i.e. 72°F)
b. Indoor Air Temperature (IAT) > set temperature +2°C (i.e. 4°F)
c. Received the Electric Heater closed signal (from remote controller, or on-board-control, or Wi-Fi APP)

2. In heating mode, when receiving the Electric Heater signal (from remote controller, or on-board-control, or Wi-Fi APP) switched, the electric heater function is executed manually:

The Electric Heater function is turned on when all of the following conditions are met:

a. The device is operating in heating mode:
b. Received the Electric Heater opened signal (from remote controller, or on-board-control, or Wi-Fi APP)
c. Indoor Air Temperature (IAT) < set temperature

The Electric Heater function is closed when any of the following conditions are met:

a. Switch to another mode or turn off the device
b. Receive the Electric Heater function closed signal (from remote controller, or on-board-control, or Wi-Fi APP)
c. Indoor Air Temperature IAT > set temperature +2°C (i.e. 4°F)
4. Indoor Air Temperature IAT ≥ 25°C(i.e.77°F) (when set temperature is 25°C, 77°F, IAT should be ≥ 26°C, i.e.79°F)

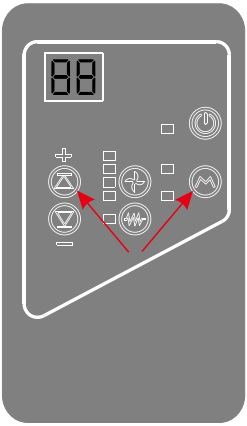
3. Notes:

a. The Electric Heater has no power failure memory (i.e. Auto Restart).
b. Defrosting process does not affect ct Electric Heater operation.
b. During the defrosting process, the electric heater cable under the condenser coil keeps working.

3.13.2 Optional Heating Mode 2 (Only Electric Heater Operation)

1. Heating Mode 2 Entry: in standby mode: in on-board-control panel, press the Mode Key and the Temperature + Key simultaneously for 3 seconds continuously, and the Display shows "HA" for 5 seconds, then extinguished, and the buzzer will beep twice, enable the Only Electric Heater Operation function.

2. Heating Mode 2 Exit: in standby mode: in on-board-control panel, press the Mode Key and the Temperature + Key simultaneously for 3 seconds continuously, and the Display shows



"HE" for 5 seconds, then extinguished, and the buzzer will beep twice, disable the Only Electric Heater Operation function. In Heating Model after the device is turned on, **the Heating Mode 1 (Heat Pump + Electric Heater Function)** will be effected.

3. In Heating Mode or Auto Mode (heating), the indoor fan, the swing flap, compressor and outdoor motor are off, only the Electric Heater is operated on 2 sides.

4. The Electric Heater operation requires the following conditions:
   1. In Heating Mode or Auto Mode (heating),
   2. Indoor Air Temperature IAT ≤ set temperature ST + 1 °C (i.e. 2°F)

5. The Electric Heater is turned off when any of the following conditions occur:
   a. Indoor Air Temperature IAT > set temperature ST + 3 °C (i.e. 6°F)
   b. Manually switched to another mode or turned off.

6. Notes:
   In Heating Mode 2 (Only Electric Heater Operation) after the device is turned on, the following signals are disabled (from remote controller, or on-board-control, or Wi-Fi APP):
   fan speed control, louver swing, sleep, timer function, UV disinfection signal(if any).

3.14 Eco Mode Function (i.e. Door/Window Mode Function)

This function can only be operant in Cooling Mode and in Heating Mode.

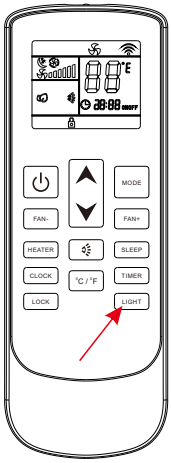
I. Effected in Cooling Mode:

In cooling mode, when the compressor runs continuously for 30 minutes, the indoor air temperature T1 (reference point) at that time is recorded. After that, the indoor air temperature is judged.
If the current indoor air temperature is higher than T1 (reference point) by 3°C (i.e. 6°F) or more, and the compressor is running at that time, the Door/Window Mode will be entered.

The operation of the Door/Window Mode function:
1.The set temperature for the Door/Window Mode is 30°C (i.e. 86°F)
2.The display is on automatically and remain to show " EC ".

II. Effected in Heating Mode:

In heating mode, when the compressor runs continuously for 30 minutes, the indoor air temperature T1 (reference point) at that time is recorded, and then the indoor air temperature is judged.
If the current indoor air temperature is lower than T1 (reference point) by 3°C (i.e. 6°F) or more, and the compressor is running at that time, the Door/Window Mode will be entered.



The operation of the Door/Window Mode function:

1.The set temperature for the Door/Window Mode is 18°C (i.e. 65°F)

2.The display is on automatically and remain to show " EC ".

III. Exit of the Door/Window Mode function in Cooling or Heating Mode:

After receiving any control signal from the remote controller, the on-board-control, or Wi-Fi APP, the Door/Window Mode function is exited, and the continuous running time of the compressor is reset and the time is re-started, the display shows normally:

IV. Notes:

1. The Door/Window Mode is a factory-defaulted function.
2. In standby mode, press Light Key in Remote Controller for 6 times in 10 seconds continuously, the buzzer will emit a long beep sound "di--", which can disable the Door/Window Mode function (disabled after that, the conditions will not enter the energy-saving mode);
3. In standby mode, in 10 seconds, press Light Key in Remote Controller for 6 times continuously again, the buzzer will emit a short beep sound "didi", which will enable the Door/Window Mode function again.

3.15 Wi-Fi APP & Network Installation Guide

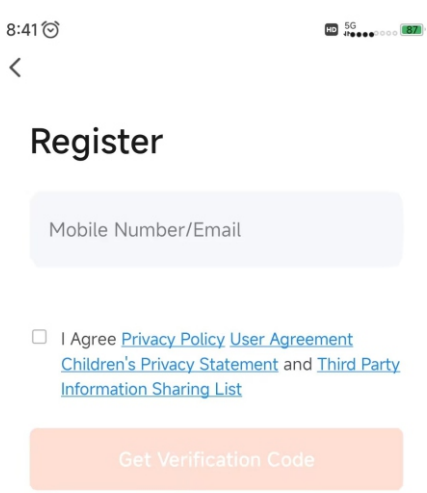
1. Download and install the APP

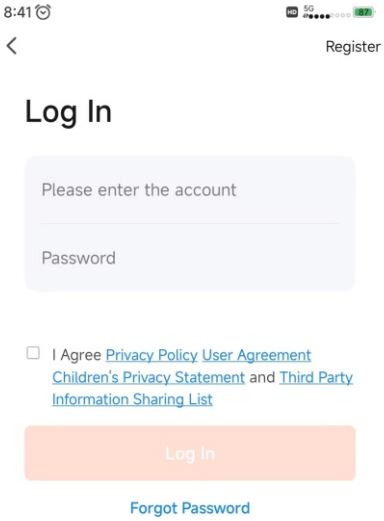
Tuya

Smart Life

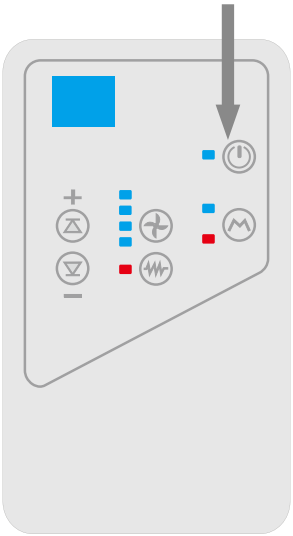
Scan the QR codes above to download and install the APP (Tuya or Smart Life optional).

2. Open the APP, register an account and log in

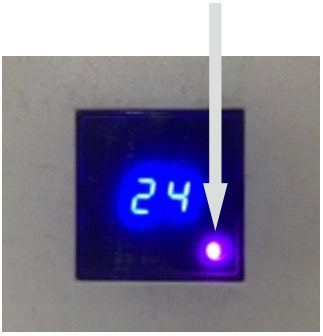




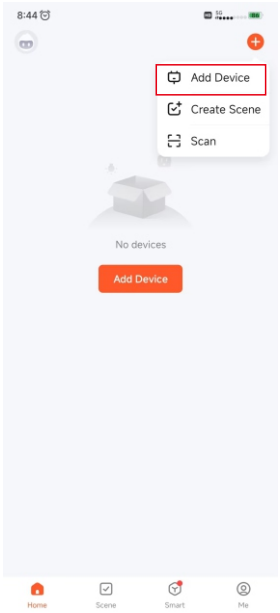
3. Long press the power on/off button on-board-command panel for 5S, then release the button, and wait until the Wi-Fi indicator blinks in the display to start the network distribution operation



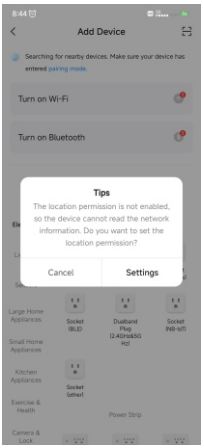
This Wi-Fi indicator blinks



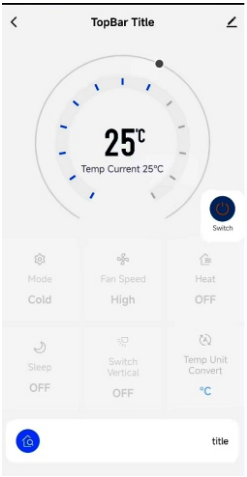
4. Turn on Bluetooth of the device, on the APP interface, tap "+, Add Device".



5. According to the APP wizard, enable the required permissions and connect the device to the network. After the connection is successful, the Wi-Fi indicator keeps on; If the networking fails, follow the instructions in this APP page to perform operations again.



After the network is successfully, the air conditioner control page is displayed

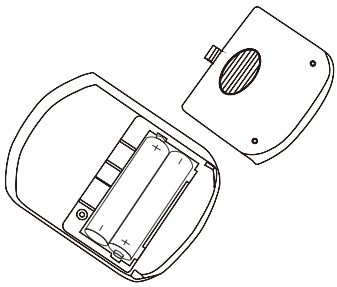


Note: If you want to reconnect other devices after the network is successfully connected, long press the power on/off button for 5S when the Wi-Fi indicator keeps on, then release the button. When the indicator changes to blink, the network can be re-connected.

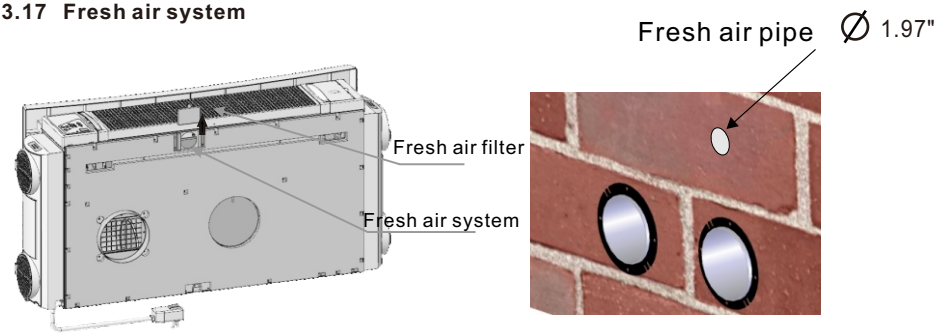
The Wi-F indicator changes to blink for network re-connection

3.16 Installation and changing batteries

- Open the battery cover, hold the hook and lightly pull up.
- Insert 2 x AAA batteries with the positive (+) the same direction as marked on the plastic surface.
- Reinstall the cover of battery.
- Test the remote for proper operation by pressing the **ON/OFF** button "⏻" .
    - ○ If no icons are displayed, please install the batteries again in the correct position.



3.17 Fresh air system



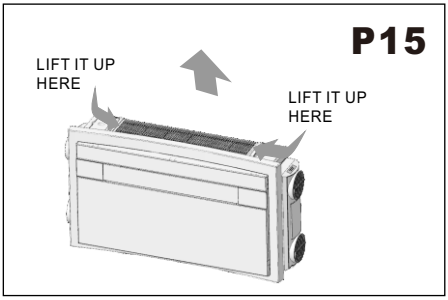
There is fresh air system in the back of the unit. The air conditioner will change the room air automatically with air from outdoors entering the room. The filter should be clean regularly to maintain the fresh air flow. Take out the filter as shown in the picture on the above, wash it (do not use hot water) and only when it is dried replace it in same way.

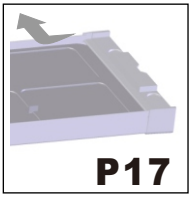
ATTENTION:

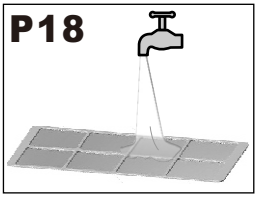
1.Do not use the unit without the filter.

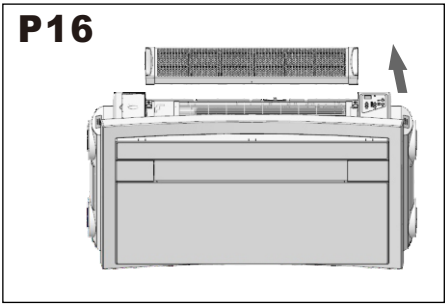
2. Do not use the fresh air system in heating mode below 41ºF.

3.18 MAINTENANCE(P15, P16, P17, P18)









How to proceed:

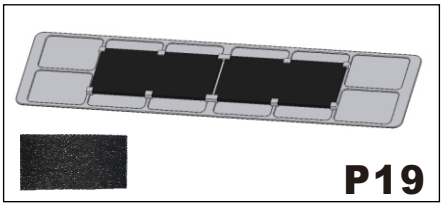
- Disconnect the unit from the electrical supply.
- Extract the filter (P15) in the same direction as the arrows.
- Remove the filter along the slot as shown in P17.
- Proceed to wash them (do not use hot water) and only when are dried completely, replace them in the same way.

Filter cleaning:

The filters should be regularly cleaned to keep the unit running efficiently. Clean the filters every two weeks.

ATTENTION: Do not use the unit without filters as it could seriously damage the unit.

ACTIVATED CARBON FILTER (P19)



The unit includes an activated carbon filter, which not only has the function of eliminating suspended particles the standard filter has, but also eliminates smaller particles such as free chlorine, odors, colors and toxic articles that are too small to filter out by using standard filter. The activated carbon filter should be changed every three months depends on the indoor air quality.
NOTICE: Do no attempt to wash or vacuum the dust from the active carbon filter in an effort to clean it; this filter must be replaced with a new active carbon filter only.

Cleaning the unit:

- Disconnect the unit from the electrical supply.
- Wipe external surfaces clean with a damp cloth.
- Do not use an abrasive cloth and/or harsh detergents or solvents, as this may damage the surfaces.
- Do not use excessively wet washcloths or sponges, as excess water could damage the unit and compromise safety if it gets inside electrical components.

3.19 TROUBLESHOOTING POSSIBLE PROBLEMS

- The unit does not work.
- The unit does not heat or cool the room
- Strange smell in the room.
- Water drips from the unit.
- The remote control does not work.
- The unit does not work for 3 minutes when switched on.

POSSIBLE SOLUTIONS

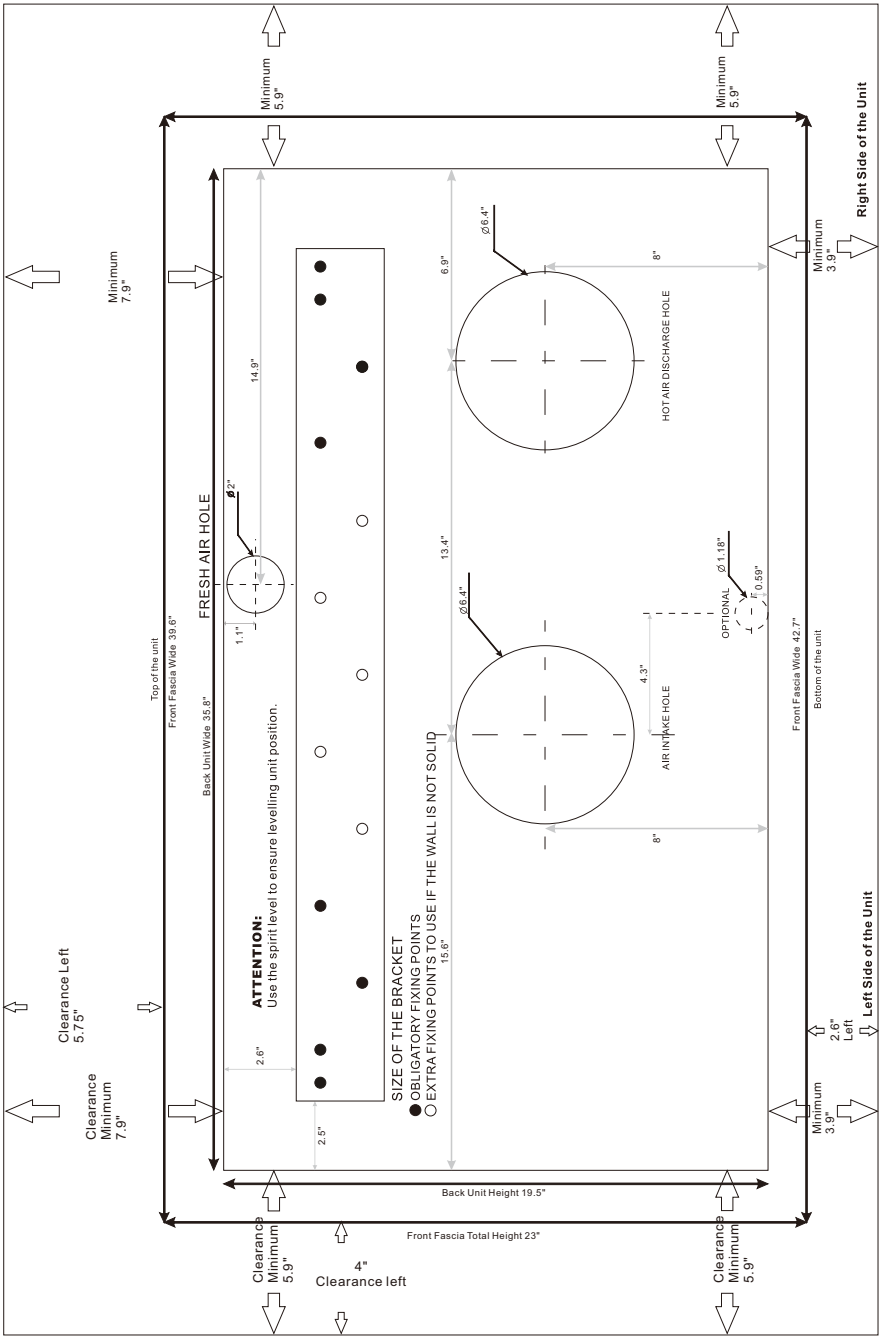
1. Check the Timer settings to ensure the unit is not programmed to be off/on.
2. Ensure that there is power to the unit and the power cord is not damaged.
3. The filter could be dirty. Clean the filter.
4. The room temperature is too high, wait until the temperature goes down.
5. The temperature may not be properly set. Check it to ensure the desired setting is selected.
6. The outdoor grilles could be obstructed, remove any obstacles.
7. Excessive humidity/moisture in the air may require more time to heat or cool the room.
8. Ensure that the unit and condensate drain pipe has been installed properly per the installation instructions.
9. If the remote controller does not work, the batteries may be exhausted or they are inserted incorrectly.
10. The compressor will not work for the first three minutes that the unit is powered on in order to protect the compressor. Wait for 3 minutes and the compressor will start to work.

If the supply cord damaged, it must be replaced by manufacturer or an authorized servicer with a manufacturer supplied replacement power cord in order to avoid a hazard.

The max operation temperature for the unit:

- Max cooling:
  - Outdoor DB 109.4°F / WB 78.8°F
  - Indoor DB 89.6°F / WB 73.4°F
- Min heating:
  - Outdoor DB 23°F / WB 21.2°F
  - Indoor DB 69.98°F

Heating or cooling may not work outside of these temperature ranges.


Minimum 7.9"
Clearance Left 5.75"
Clearance Minimum 7.9"
Minimum 5.9"
Minimum 5.9"
Right Side of the Unit
Minimum 3.9"
Top of the unit
Front Fascia Wide 39.6"
Back Unit Wide 35.8"
FRESH AIR HOLE
Ø2"
1.1"
14.9"
ATTENTION:
Use the spirit level to ensure levelling unit position.
2.6"
2.5"
SIZE OF THE BRACKET
● OBLIGATORY FIXING POINTS
○ EXTRA FIXING POINTS TO USE IF THE WALL IS NOT SOLID
15.6"
6.9"
13.4"
Ø6.4"
Ø6.4"
8"
HOT AIR DISCHARGE HOLE
OPTIONAL
Ø 1.18"
0.59"
4.3"
AIR INTAKE HOLE
8"
Front Fascia Wide 42.7"
Bottom of the unit
Minimum 3.9"
2.6" Left
Left Side of the Unit
Back Unit Height 19.5"
Front Fascia Total Height 23"
Clearance Minimum 5.9"
4" Clearance left
Clearance Minimum 5.9"