

9K BTU UNDER-BENCH AIR CONDITIONER

MODEL: FACB09HM

LIPPERT NO.: 2022011806

USER MANUAL



* Picture shown here is for reference only.

CAUTION

FOR SAFE OPERATION, THIS UNIT MUST:

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

WARNING: Failure to do so can result in property damage, personal injury and or death.

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GENERAL INFORMATION

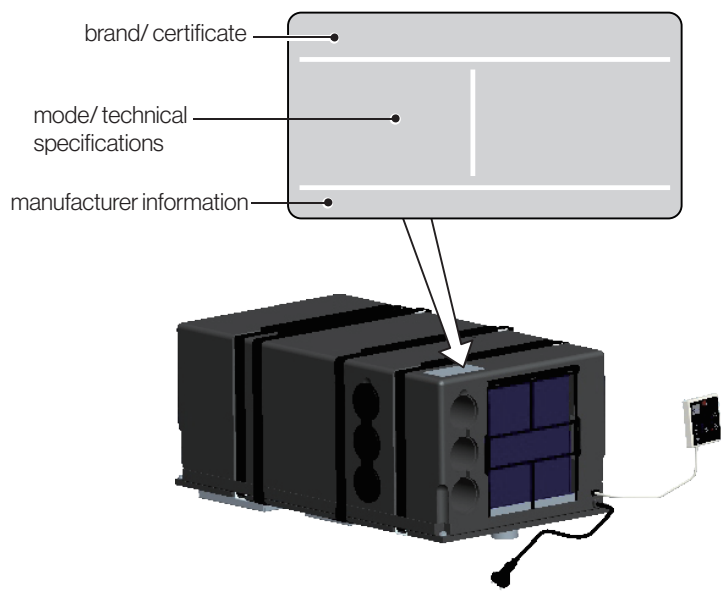
Scope of the manual

This manual has been drawn by the Manufacturer is an integral part of the machine. The information it contains, if observed, can guarantee correct use of the machine.

WARNING

This operation may be a source of danger.

Manufacturer and machine identification



Machine description

This machine has been designed and built to be installed on vehicles (motor homes, caravans, special vehicles, etc.) in order to improve the internal temperature. When the weather is hot it supplies cool and dehumidified air; When the weather is cold it supplies hot air without however replacing the vehicle's original heating system. In both cases the air temperature is adjustable.

User tips

NOTE: The machine performance can be improved by taking some precautions.

- Improve the vehicle's heat insulation by eliminating openings and covering the glass surface with reflecting curtains.
- Avoid frequently opening doors and windows when not necessary
- Select the appropriate temperature and fan speed. Direct the air vents suitably.
- In order to avoid machine malfunctioning and risks of injury, take the following precautions:
- Do not obstruct the ventilation air inlet and outlet with cloth, paper or any other items;
- Do not put your hands or any other items into the

openings;

- Do not spray water inside the machine;
- Keep flammable substances well away from the machine.
- Clean the air filter periodically.

Description of the controls

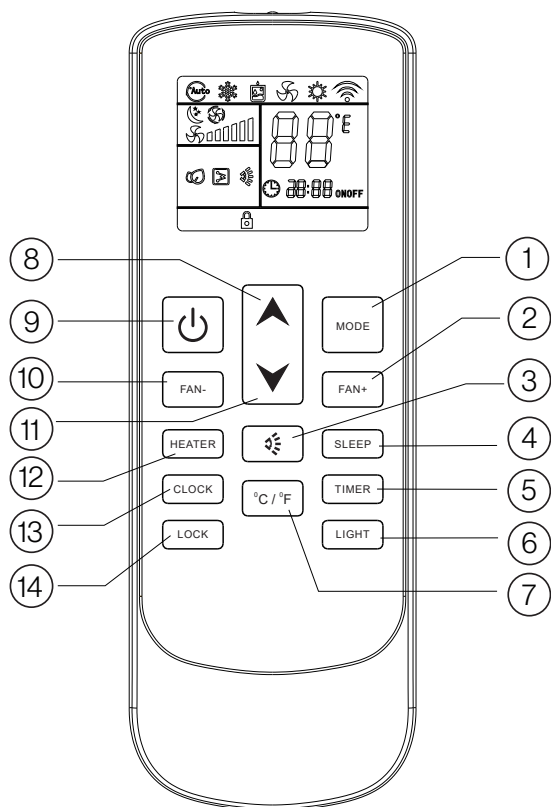
At the time of switching on,the system waits for a few minutes before operating the compressor.

Press the **"MODE"** button to move between the possible states (Auto, Cooling, Dry, Fan, and Heating), and wait two seconds on the selected state for this to be confirmed by the system with an audible warning (the buzzer is inside the machine). Always point the remote control towards the to send all the signals

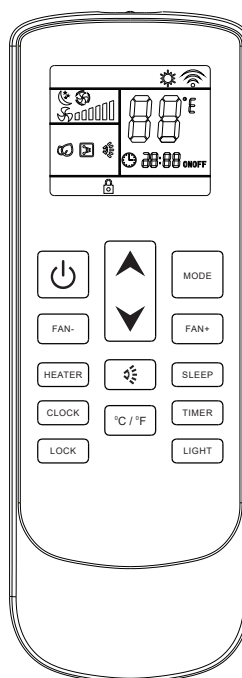
Introduction of LCD icons

Icons	Meaning	Icons	Meaning
	Auto		Airflow direction
	Cooling		Fan speed
	Dry		Sleep
	Fan		Auto fan
	Heating		Temp
	Light		Clock
	Electrical Heat		Timer
	Lock		

Remote control functions



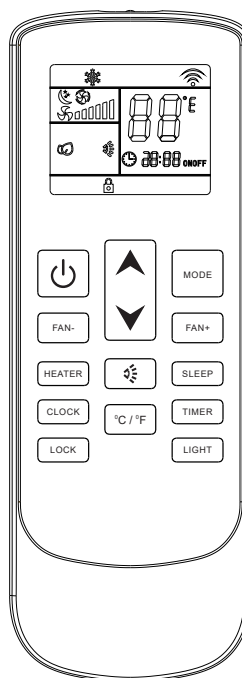
Heating mode



- 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, "🌀": Low speed, "🌀🌀": Middle speed, "🌀🌀🌀": High speed, "🌀🌀🌀🌀": 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 operate in this mode by memory.

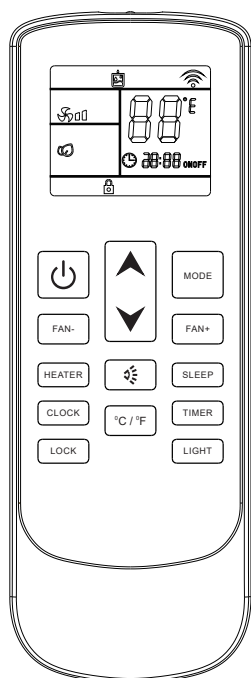
NO.	BUTTON	FUNCTION
①	MODE	Set up the air conditioner operating mode
②	FAN SPEED	Set up the fan speed
③	LOUVER SWING	Adjust the airflow direction
④	SLEEP	Automatically adjusting the setting temperature according to the circadian rule.
⑤	TIMER	Set up the time the air conditioner starts
		Set up the time the air conditioner stops.
⑥	LIGHT	Switch on the light or UPI than what unit has this function
⑦	TEMP	Set temperature unit to °C or °F
⑧	UP	Increase the temperature and time
⑨	ON/OFF	Turn on or turn off the air conditioner
⑩	FAN SPEED	Set up the fan speed down
⑪	DOWN	Decrease the temperature and time
⑫	ELECTRICAL HEAT	Switch on the electrical heat in order to get enough heating capacity in cold winter.
⑬	CLOCK	Adjust the clock
⑭	LOCK	Lock the remote control set

Cooling mode



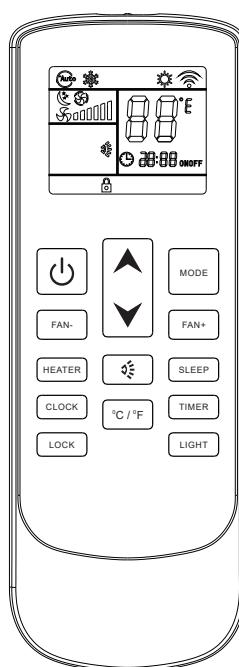
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button, set up the mode to cool "❄️", the air conditioner will run in cooling.
- 3 Press **UP** "▲" or **DOWN** button "▼", to adjust the setting up temperature.
- 4 Press the **FAN SPEED** button "FAN+" or "FAN-", set up the fan speed, "🌀": Low speed, "🌀🌀": Middle speed, "🌀🌀🌀": High speed, "🌀🌀🌀🌀": 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 operate in this mode by memory.

Dry mode



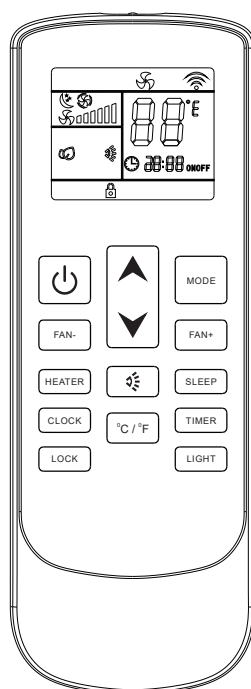
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button, set up the mode to dry "☐", the air conditioner will run in dehumidifying.
- 3 Press **UP** "▲" or **DOWN** "▼" button, to adjust the setting up temperature.
- 4 **FAN SPEED**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

Sleep mode



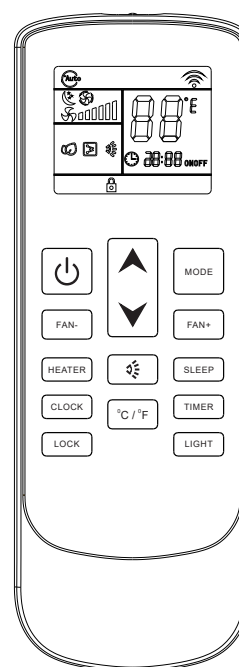
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button, set up the mode to cool "❄️" / heat "🔥" (heat pump) / auto "🌀", the air conditioner will run in setting mode.
- 3 Press **UP** "▲" or **DOWN** button "▼", to adjust the setting up temperature.
- 4 Press the **SLEEP** button, this icon will display on LCD, sleep function is set up; press it again, cancel the sleep function.
- 5 If the sleep function is launched, the fan speed is steady in low speed.

Fan mode



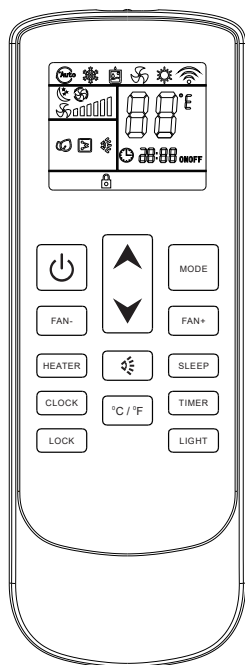
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button, set up the mode to fan "🌀", the air conditioner will run in fan.
- 3 Press **UP** "▲" or **DOWN** button "▼", to adjust the setting up temperature.
- 4 Press the **FAN SPEED** button "FAN+" or "FAN-", set up the fan speed, "🌀" : Low speed, "🌀🌀" : Middle speed, "🌀🌀🌀" : High speed, "🌀🌀🌀🌀" : Auto speed.
For auto fan, the speed is chosen by the difference of room temperature and setting temperature.
Room temperature-setting temperature
> 5°C high speed.
> 3°C middle speed.
> 1°C 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.

Auto mode



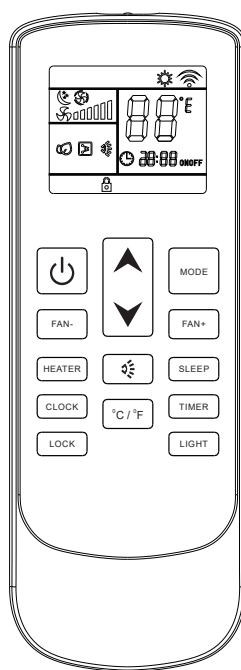
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button, set up the mode to auto "🌀", the air conditioner will run in auto mode. (Reference to "emergency operation")
- 3 According to the difference of room temperature and setting temperature automatically choose the running mode(cool, heat, fan). The temperature setting button **UP** "▲" or **DOWN** "▼", are disable.
When room temperature ≤ 20°C, run with heat mode.
When 20°C < room temperature < 25°C, run with fan mode.
When room temperature ≥ 25°C, run with cool mode.
- 4 Press the **FAN SPEED** button "FAN+" or "FAN-", set up the fan speed, "🌀" : Low speed, "🌀🌀" : Middle speed, "🌀🌀🌀" : High speed, "🌀🌀🌀🌀" : 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.

Timer off mode



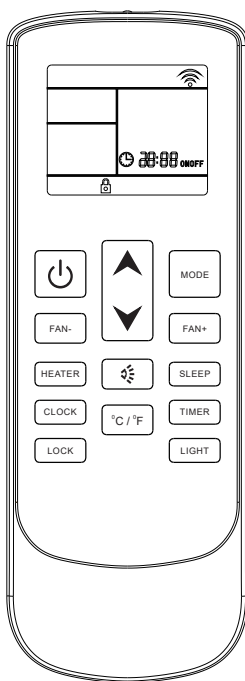
- 1 Press the **ON/OFF** button "⏻" switch on the air conditioner, it will run by memory mode.
- 2 Press the **MODE** button set up the mode to which you want.
- 3 Press **UP** "▲" or **DOWN** "▼" button, to adjust the setting up temperature.
- 4 Press the **FAN SPEED** button "FAN+" or "FAN-", set up the fan speed, "🌀": Low speed, "🌀🌀": Middle speed, "🌀🌀🌀": High speed, "🌀🌀🌀🌀": Auto speed. For auto fan, the speed is chosen by the difference of room temperature and setting temperature.
- 5 Press the **TIME OFF** 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 1 minute; 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 be cancelled.

Electrical heat function



- 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, "🌀": Low speed, "🌀🌀": Middle speed, "🌀🌀🌀": High speed, "🌀🌀🌀🌀": 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.

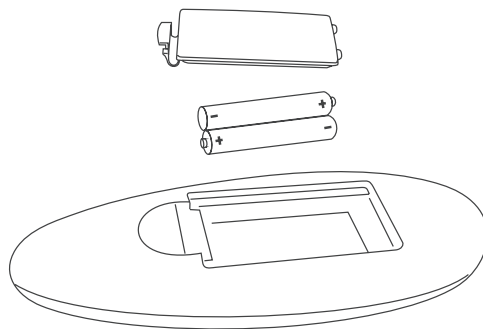
Timer on function



- 1 The air conditioner is switched off.
- 2 Press the **TIME ON** 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 1 minute. Set up the operation **MODE, TEMPERATURE, FAN SPEED** etc., When the time is arrived, the air conditioner will start automatically. If the **TIME ON** button is pressed again, the **TIME ON** setting will be cancelled.

Installing and changing the remote control batteries

1. Take off the battery cover.
2. Insert the two batteries supplied (size AAA), paying attention to their polarity.
3. Fit the battery cover back on.
4. Check the remote control works properly by pressing the on button: if, on pressing the button, no icon appears on the display then you need to re-install the batteries checking their polarity. The machine is connected to the power supply and ready for use.

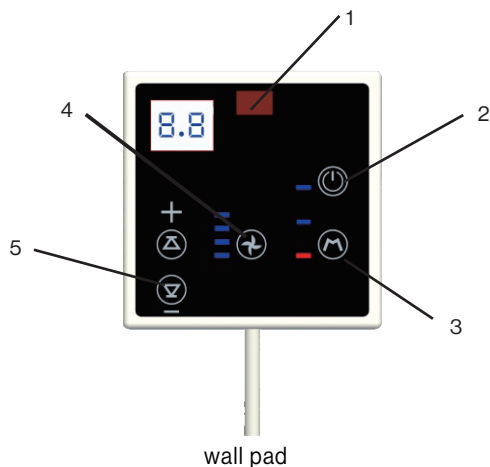


Description of the wall pad

- Signal receiver
- Press the **ON/OFF** button to switch ON or OFF the air conditioner, it will run in memory mode.
- Press the **MODE** button to select cooling or heating

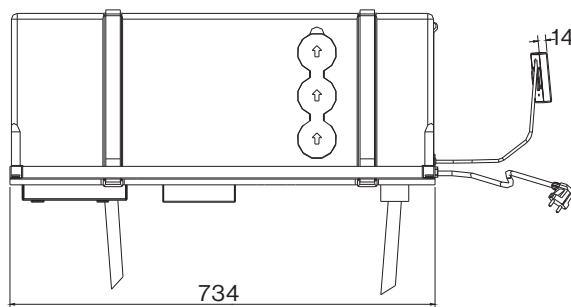
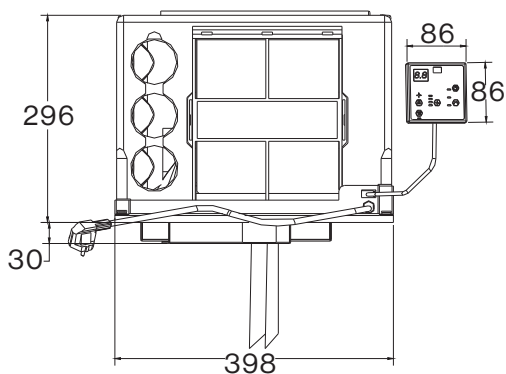
mode.

- Press the **FAN** button to select fan speed.
- Press the **UP** or **DOWN** button to select the desired temperature.



wall pad

Technical data

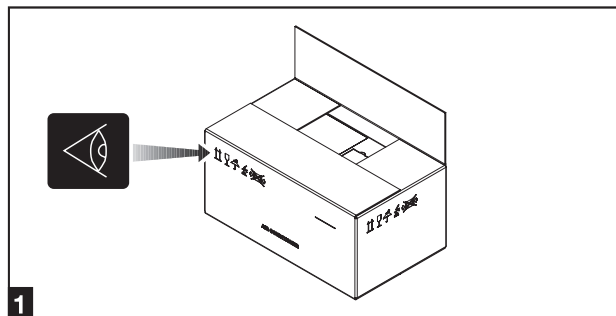


Refrigerant type/quantity	R410A / 500g
Cooling capacity(Btu/h)	9000
Heating capacity(Btu/h)	9000
Power Watts(Cooling)	925
Amps(Cooling)	4.2
Power Watts(Heating)	1250
Amps(Heating)	5.3
Breakaway current(A)	20(150ms)
Additional heating element(Watt)	500
Electricity supply	230 Vac/ 50 Hz
Protection class	IP X5
Treated volume of air(max)(m³/h)	350
Max volume (recommended with insulated walls)(m³)	30
Weight(kg)	27.8
E.E.R.	2.5
C.O.P.	2.6
Ventilation	3(Speed No.)
Outside operation temperature	From -7 C to +43 C

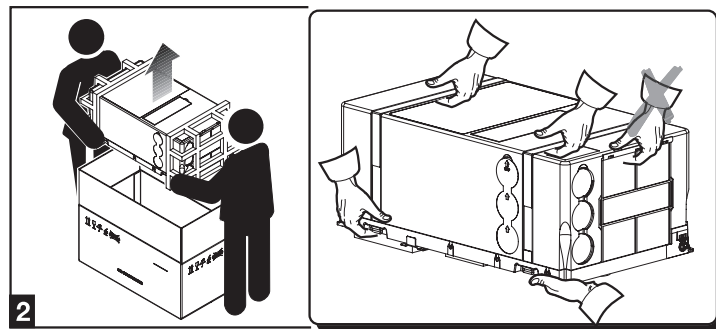
INSTALLATION

Installation can be performed by persons with specific technical knowledge. In addition to this requirement, installers must have adequate working conditions in order to ensure their safety and that others.

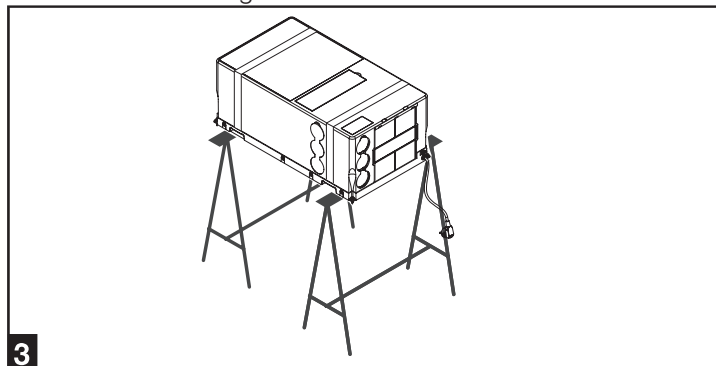
Packing, unpacking and handling

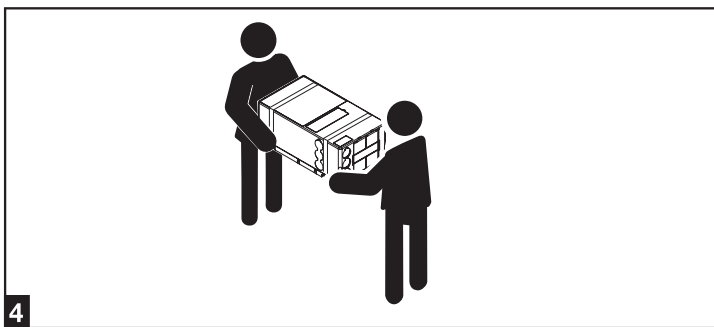


1. Observe the instructions given on the packing.



2. Lift the machine, checking it is sound.
Note: Lift it using the handles or the belts on the base.





3. Transfer the machine to the place of installation in conditions of safety.

Choice of the place of installation

To accomplish uniform climate control in a vehicle, the machine must be installed as near the middle as possible, in a housing or a similar device.

Position the machine so as to ensure easy access for servicing and to facilitate disassembly and installation. Place the assembly template in the compartment intended for installation and check the space available for the openings in the floor.

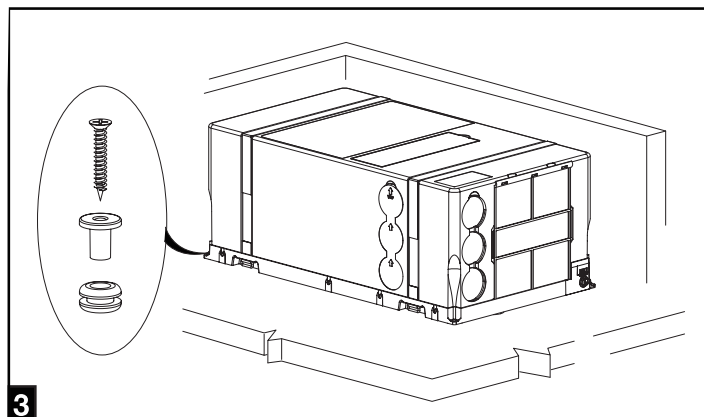
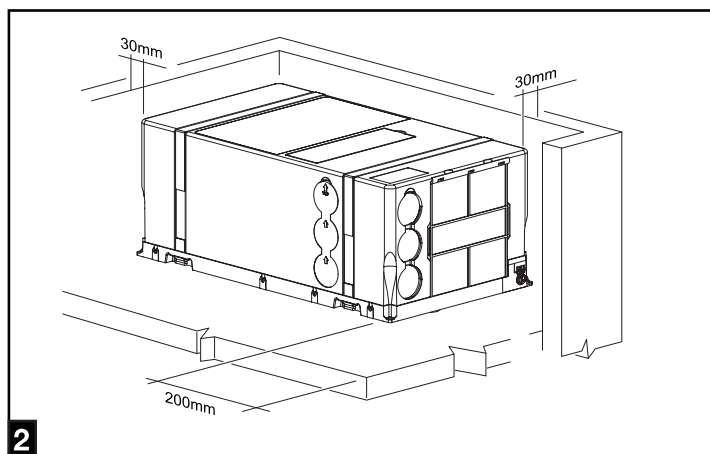
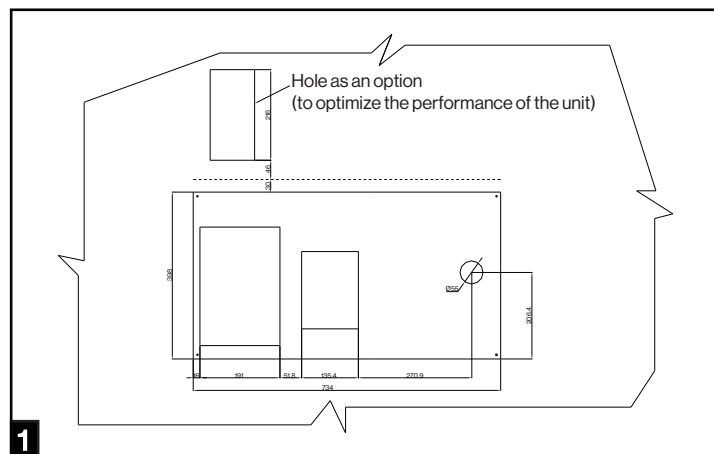
To minimize the transmission of noise and vibration during operation, the machine must have a minimum clearance on each side of 1½" (30 mm) from the walls and fittings. The machine must be installed on the floor.

To make renewing the filter easier, keep a distance of 7⅞" (200 mm) between the front of the machine and the walls of the compartment.

If fitting in external compartments (e.g., false bottoms), the air to be treated must be drawn in from the vehicle's passenger compartment.

Drawing in outside air can significantly reduce the power of the system.

Preparing the opening and fixing



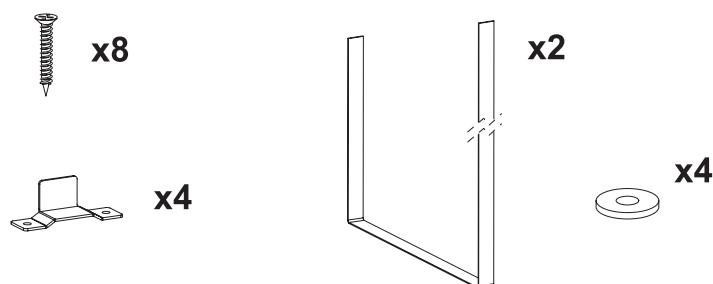
- To install the machine it is necessary to create openings in the floor. The openings in the floor of the vehicle must be accessible and, therefore, must not be covered by parts of the chassis frame behind or the like.
- These openings must not be reached by splashes from the wheels; fit a splash guard or something similar if necessary.
- Take care to leave a gap of at least 1½" (30mm) between the machine and the adjacent walls. Secure the machine to the floor using the kit provided.

⚠ WARNING

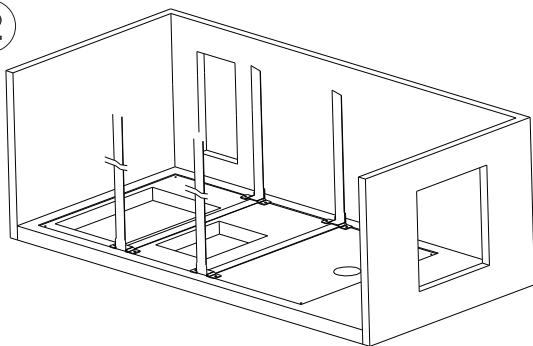
The machine must preferably be installed level. Maximum angle 10° to prevent condensation coming out. Before making the holes, always check there are no cables, gas pipes, parts of the chassis frame or the like underneath or hidden. Seal the machined surfaces of the openings in the floor with water-repellent products.

Fixing systems

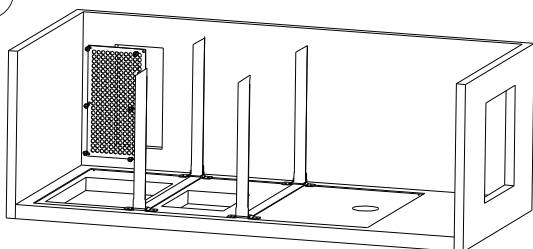
Parts supplied for the a/c fixing



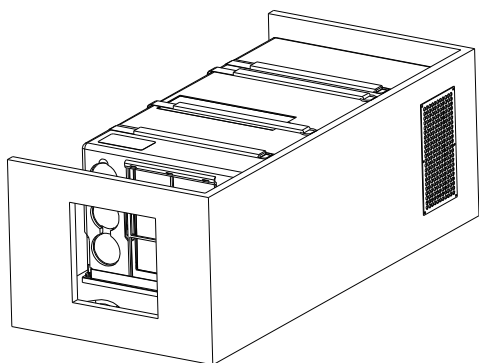
2



3

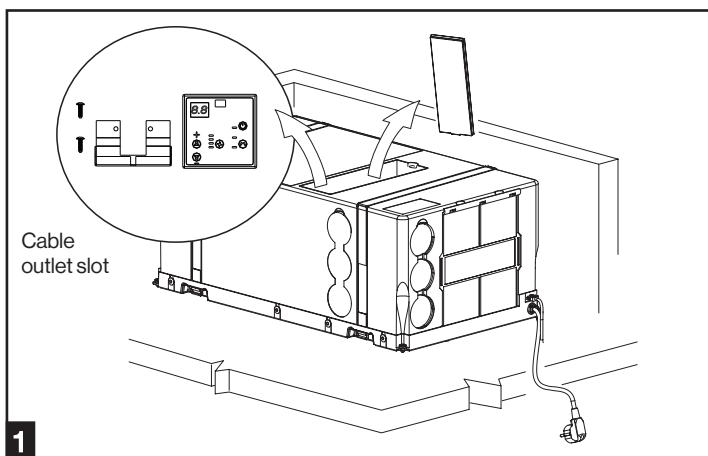


4

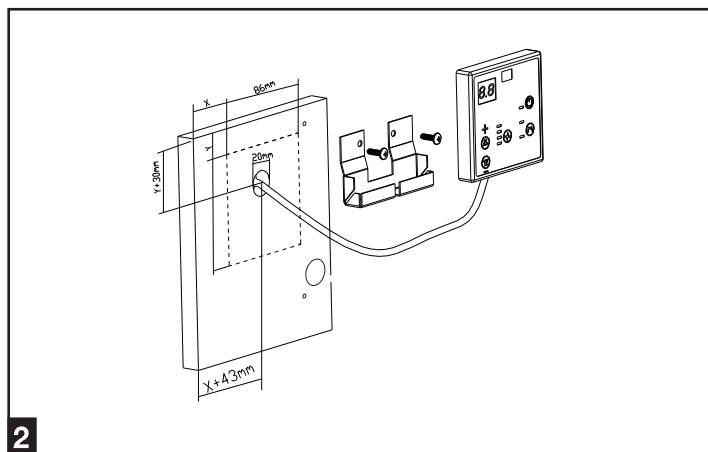


Fitting the infrared wall pad

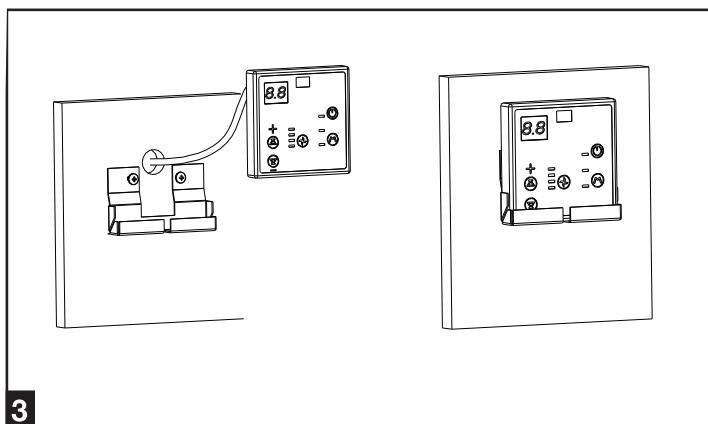
1. On the top of machine, there is a pocket for wall pad, remote control with battery and support, and extension cable.
2. To fix wall pad on the wall, you need to make a diameter $\frac{1}{5}$ " (20mm) hole for cable to pass through. (refer to drawing2).
3. Using 2 wooden screws to fix support to the wall, connect extension cable to wall pad then put wall pad into its support.



1



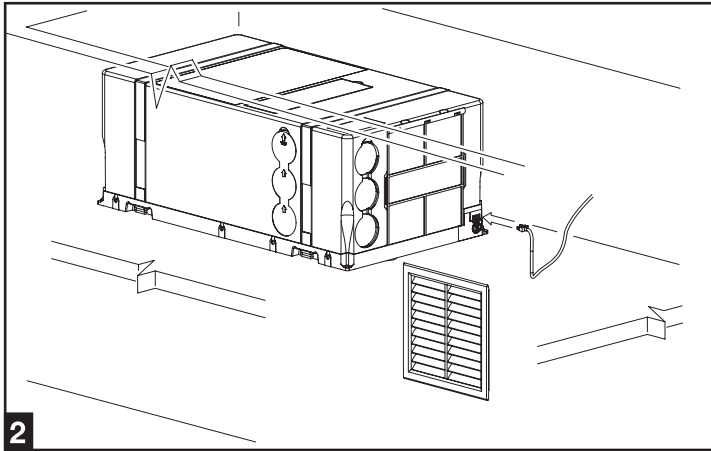
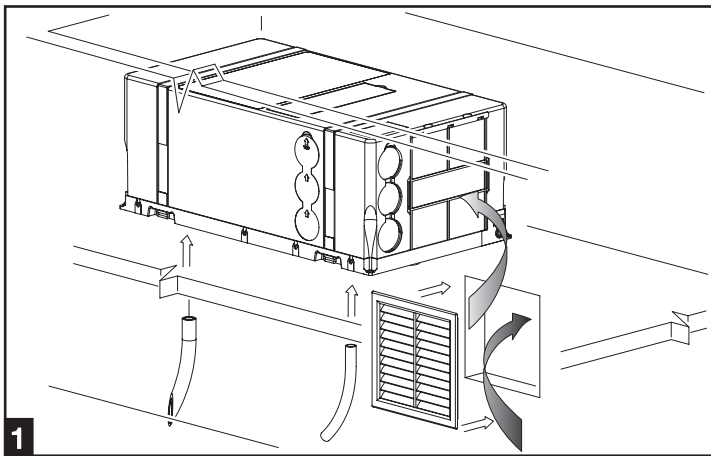
2



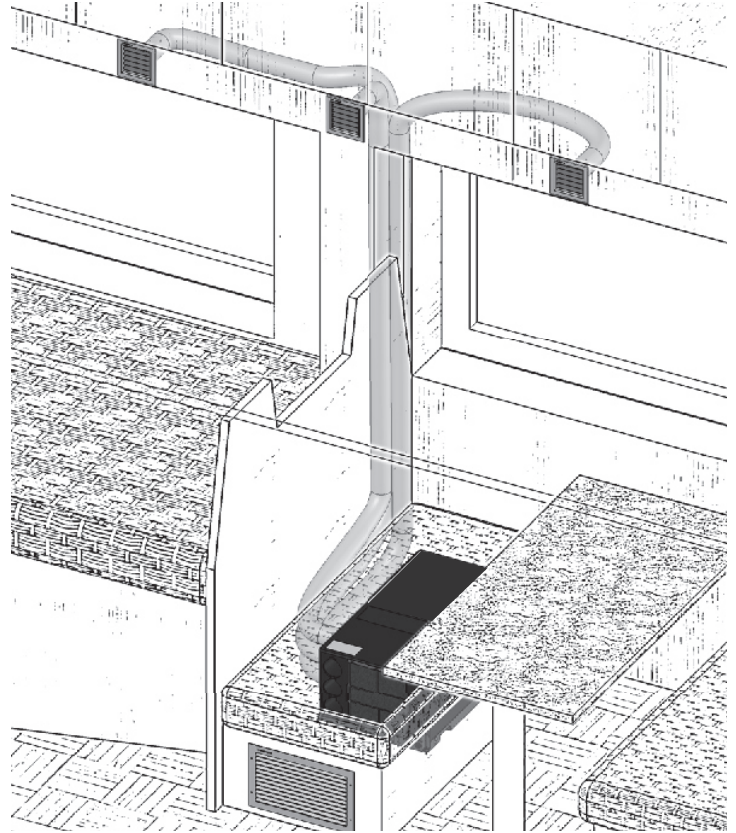
3

Compartment opening and electrical hook-up

1. Make a hole in the compartment where the machine has been installed to permit recirculation of the internal air; Close this hole with a grille supplied that allows at least 300cm² of air to pass through. Install the condensation drain pipes provided, connect the receiver extension to the machine and lastly power up by inserting its plug into a socket outlet 220V - 50Hz.
2. Before switching on, make sure that the campsite column and the extension used are able to withstand the power input required by the machine (see technical data or dataplate)



The recirculation air is drawn in through a grille or through other openings with a total cross-section of at least 300cm². The recirculation air opening must be made near the machine, if this is not the case then make sure that the air flow cannot be obstructed by anything (if necessary, create an air duct between the opening and the machine). The recirculation air must be taken from inside the passenger compartment; if it were taken from the outside then machine efficiency would suffer.



Air ducting

Make the air ducting with trade parts that are not supplied. It is recommended to use cardboard pipe for air conditioning with an aluminium core and external covering of PVC with an inside nominal diameter of 2 $\frac{9}{32}$ " (60 mm). This pipe has an outside diameter of 2 $\frac{1}{2}$ " (64mm). The ventilation pipes are joined by pressing them together thanks to the tapered hole on the air outlet.

The pipes can be connected either on the outlet on the coil side or, by removing the guard and closing the front holes, on the side outlet.

To achieve the best efficiency it is recommended to:

- Lay the air pipes so they are as short and straight as possible;
- Not use pipes any longer than 196 $\frac{4}{5}$ " (5m);
- Not place the pipes near sources of heat.

TROUBLESHOOTING, MAINTENANCE AND RECYCLING

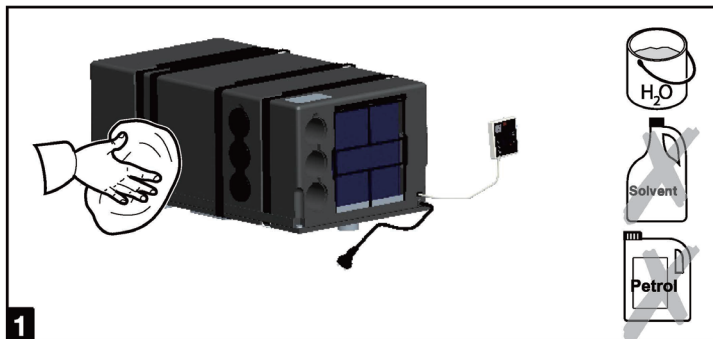
Trouble, causes, remedies

English

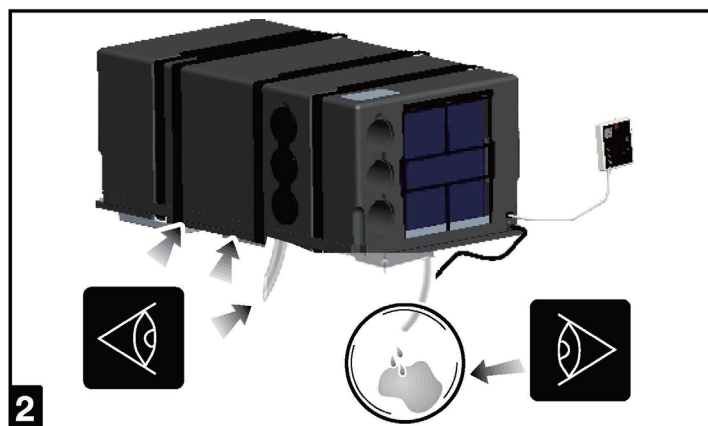
CAUSE	SOLUTION
The machine does not cool	The temperature is lower than 18 °C Check the set point temperature Defective thermal protection The mode button is not in the right position Low gas charge Damaged compressor Dirty heat exchange coils Defective external fans
The machine does not heat	The temperature is higher than 30 °C Check the set point temperature Defective thermal protection The mode button is not in the right position Damaged electric heating element Low gas charge Damaged compressor Dirty heat exchange coils Damaged 4-way valve
Air no longer circulates inside the vehicle	Dirty heat exchange coils Defective internal fan Obstructed air filter
Water seeps into the vehicle	Clogged condensation drain holes
The machine will not start	Defective thermal protection Damaged compressor No power arrives Voltage too low (less than 200V) Defective electric condenser
The machine stops working	Defective thermal protection Dirty heat exchange coils Obstructed air filter Defective external fans Voltage too low (less than 200V) Defective electric condenser

Maintenance

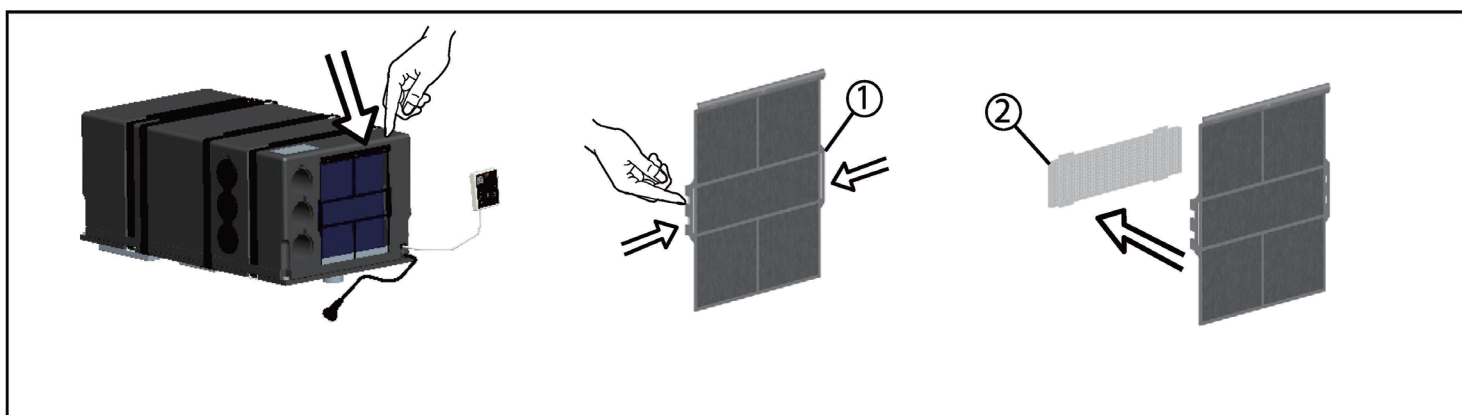
Routine maintenance



- 1. Cleaning:** Do it periodically, removing the dust with a moist cloth. If necessary, use a non-aggressive detergent. Never use petrol or solvents.



- 2. Checking:** Do it periodically, making sure that:
- The condensation drain holes are not obstructed.
 - The openings in the floor are not obstructed.



- 3. Filters cleaning (1):** periodically carry out this operation; wash the filters (N.1) with a detergent solution and allow to dry before refitting.
- Active Carbon filter (2) (optional):** It's recommended to change the active carbon filters (N.2) every year.

Special maintenance

For better efficiency it is advisable to have your dealer/workshop perform special cleaning before using:

1. Heat exchange coils;
2. Condensation drain holes

Decommissioning and recycling

For scrapping and recycling, observe the national law. Please contact your environmental authorities or authorized boards.



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