

# DO NOT PRINT THIS PAGE

## Printing Notes:

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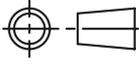
**Ink:** Black

**Resolution:** 150 DPI or above

**Printing method:** Offset Printing

**Binding:** Saddle Stitch

**Folded size:** 210 x 285 mm (W x H)

This drawing contains proprietary information and trade secrets of The Furrion Company, Inc. Unauthorized use or copying is prohibited.							
METRIC [INCH]							
METRIC [INCH]							
CRITICAL DIMENSION CHECKING IS COMPULSORY							
VOLUME	cm <sup>3</sup>	V1.0	18-Oct-22	NEW	Grace Sun	XX	
MASS	grams	REV.	DATE	MODIFICATIONS	NAME	ECN NO.	
DENSITY	g/cm <sup>3</sup>	MATERIAL: SEE NOTES		Furrion Property Holding Ltd			
GENERAL TOLERANCES EXCEPT AS NOTED 0 TO 6mm = ±0.1 >6 TO 30mm = ±0.2 >30 TO 80mm = ±0.3 >80 TO 180mm = ±0.4 >180mm = ±0.5 ANGULAR = ± 3°		FINISH SPEC: SEE NOTES		COMPOSITE-NO	SHEET 1 OF 1		
		SCALE: 1:1	DATE: 18-Oct-22	DRAWN BY: Grace Sun	APPROVED BY: Mandy Tse	REVISION	1.0
		NAME: IM for Low Cost Trim Kit Rooftop Air Conditioner - Electronic				PART NO. IM-FHA00125	

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# 9K BTU UNDER-BENCH AIR CONDITIONER

FACB09HM[2022011806]

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## USER MANUAL



\* Picture shown here is for reference only.

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries. Always respect all safety warnings identified with these symbols. A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.

**⚠ DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**⚠ WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**⚠ CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate personal injury, or property damage.

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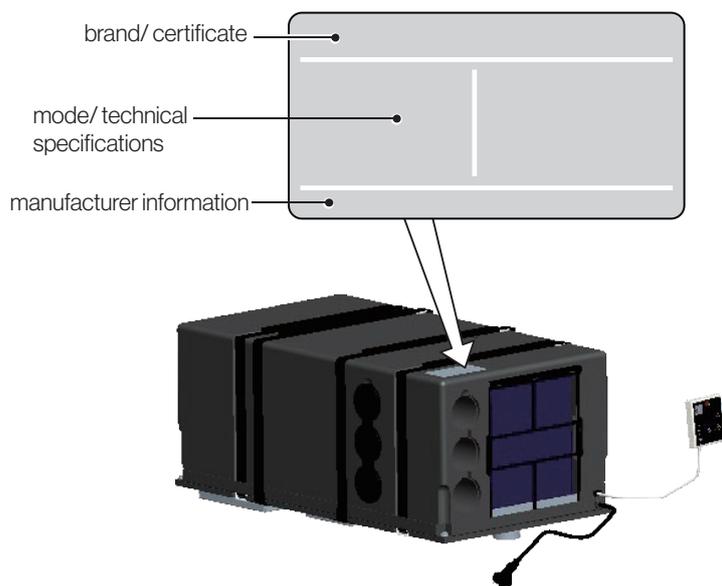
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# GENERAL INFORMATION

## Scope of the manual

This manual contains important information to guarantee correct use of the device. Include this manual when you pass on the device to another person.

## Manufacturer and machine identification



## Introduction

This air-conditioner is for use in recreational vehicles, motor homes, caravans, etc. It will cool or heat the interior of the Camper to the desired / optimal temperature. When the weather is hot it supplies cool and dehumidified air and when the weather is cold it supplies hot air.

## User tips & precautions

**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.
- 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

Press the “**MODE**” button to toggle between the various operating modes - Auto, Cooling, Drying, Fan and Heating. The unit will set the mode (a beep sound can be heard) after 2 seconds of releasing the button.

### Note:

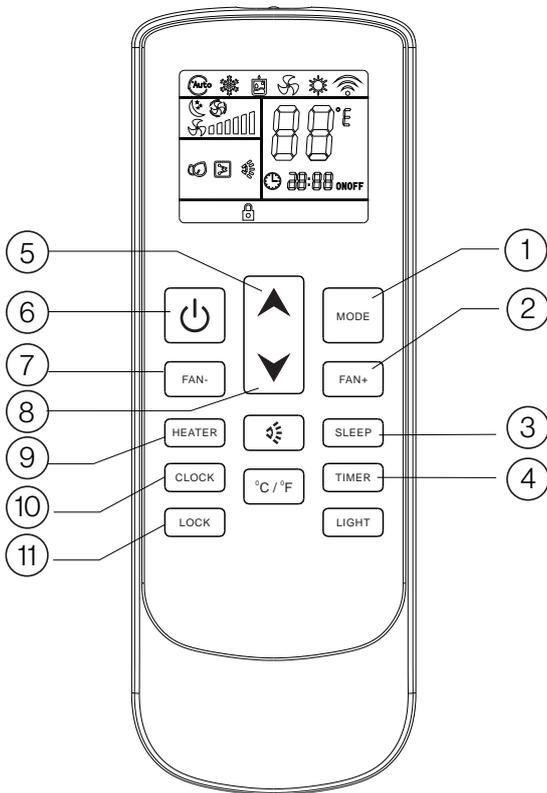
To avoid damage, the compressor will turn on up to 3 minutes later after the desired mode is selected.

For optimal reception of the remote control, point the unit towards the wall-unit.

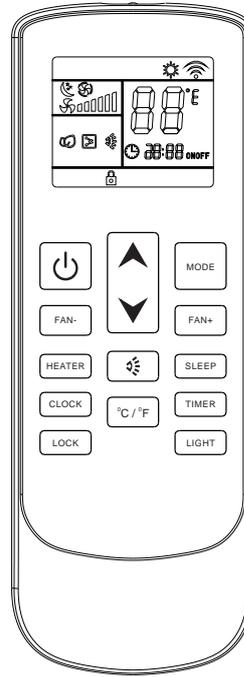
## Introduction of LCD icons

Icons	Meaning	Icons	Meaning
	Auto		Fan speed
	Cooling		Sleep
	Dry		Auto fan
	Fan		Temp
	Heating		Clock
	Electrical Heat (not applicable for this model)		Timer
	Lock		

## Remote control functions



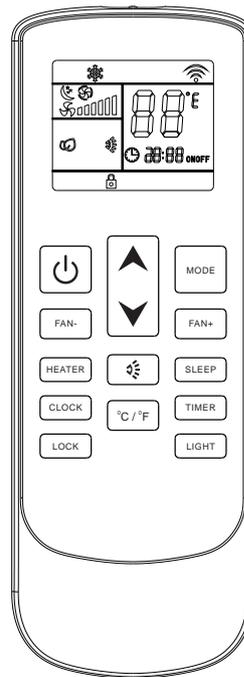
## Heating mode



- 1 Press the **⏻** button to turn on the air conditioner.
- 2 Press the **MODE** button to select heating mode.
- 3 Press **UP ▲** or **DOWN ▼** button to set the desired temperature.
- 4 Press the **FAN+** or **FAN-** button to set the fan speed:  
 : Low speed  
 : Medium speed  
 : High speed  
 : Auto speed  
**NOTE:** In auto setting, the speed is chosen automatically based on the difference between room temperature and set temperature (the bigger the difference, the faster the fan will run).
- 5 Press the **⏻** button to switch off the air conditioner.

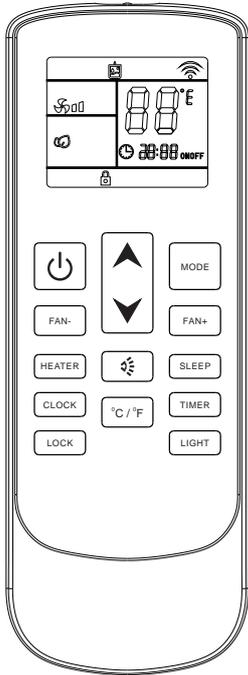
NO.	BUTTON	FUNCTION
①	MODE	Set the air conditioner operating mode.
②	FAN+	Increase the fan speed.
③	SLEEP	Enter sleep mode, and the ambient temperature will be regulated automatically.
④	TIMER	Set or cancel the timer function.
⑤	▲	Increase the temperature/time.
⑥	⏻	Turn on or turn off the air conditioner.
⑦	FAN-	Decrease the fan speed.
⑧	▼	Decrease the temperature/time.
⑨	HEATER	Not applicable for this model.
⑩	CLOCK	Adjust the clock.
⑪	LOCK	Lock the remote control set.

## Cooling mode



- 1 Press the **⏻** button to turn on the air conditioner.
- 2 Press the **MODE** button to select cooling mode.
- 3 Press **UP ▲** or **DOWN ▼** button to set the desired temperature.
- 4 Press the **FAN+** or **FAN-** button to set the fan speed:  
 : Low speed  
 : Medium speed  
 : High speed  
 : Auto speed  
**NOTE:** In auto setting, the speed is chosen automatically based on the difference between room temperature and set temperature (the bigger the difference, the faster the fan will run).
- 5 Press the **⏻** button to switch off the air conditioner.

## Dry mode

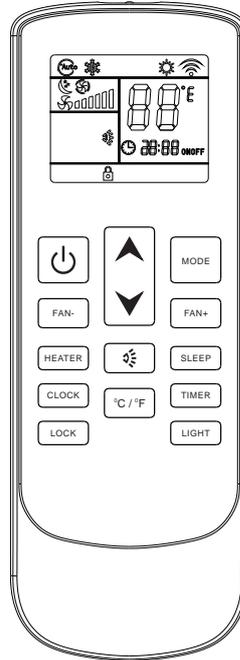


- 1 Press the button to turn on the air conditioner.
- 2 Press the **MODE** button to select dry mode.
- 3 Press **UP ▲** or **DOWN ▼** button to set the desired temperature.
- 4 Press the button to switch off the air conditioner.

**NOTE:** In dry mode, the fan speed will be set the low speed and it cannot be changed.

## Sleep mode

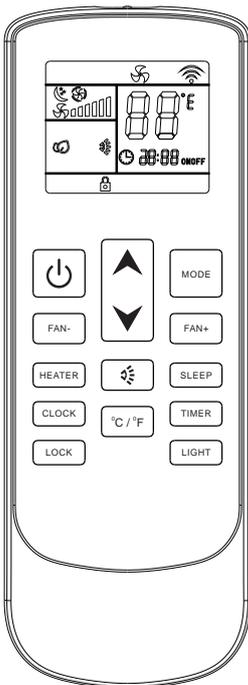
The sleep mode regulates the temperature so as to keep you comfortable through the different stages of your sleep. In sleep mode, the air conditioner unit will regulate the ambient temperature automatically so that you don't feel too cold and consume too much power.



- 1 Press the button to turn on the air conditioner.
- 2 Press the **MODE** button to select the desired mode to cool /heat (heat pump)/auto , the air conditioner will run in set mode.
- 3 Press **SLEEP** button to turn on sleep mode.
- 4 Press **UP ▲** or **DOWN ▼** button to set the desired temperature.
- 5 In sleep mode, press the **SLEEP** button once, the SLEEP icon will be displayed on the LCD, press again to exit sleep mode.

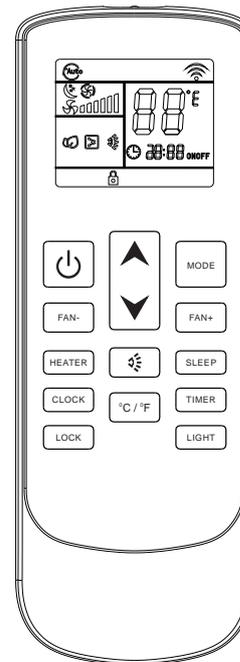
**NOTE:** The fan will be running in low fan speed in sleep mode.

## Fan mode



- 1 Press the button to turn on the air conditioner.
- 2 Press the **MODE** button to select fan mode.
- 3 Press the **FAN+** or **FAN-** button to set the fan speed:  
 : Low speed  
 : Medium speed  
 : High speed
- 4 Press the button to switch off the air conditioner.

## Auto mode

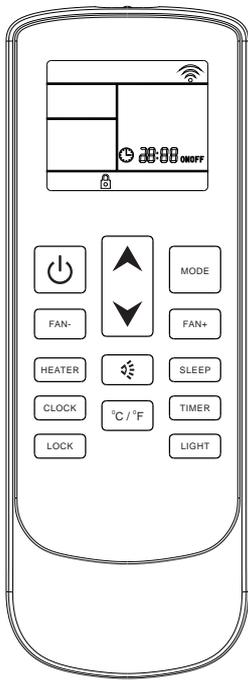


- 1 Press the button to turn on the air conditioner.
- 2 Press the **MODE** button to select auto mode.
- 3 Press the **FAN+** or **FAN-** button to set the fan speed:  
 : Low speed  
 : Middle speed  
 : High speed  
 : Auto speed  
**NOTE:** In auto setting, the speed is chosen automatically based on the difference between room temperature and set temperature (the bigger the difference, the faster the fan will run).
- 4 Press the button to switch off the air conditioner.

**NOTE:** In auto mode, the unit will choose to run in cool/heat/fan mode automatically based on the temperature of the coach.

- When the room temperature  $\leq 20$  C , the unit will run in heat mode.
- When the room temperature is between 20 C and 25 C , the unit will run in fan mode.
- When the room temperature  $\geq 25$  C , the unit will run in cool mode.

## Timer Function



### Timer ON

When the air conditioner is switched off, press the **TIMER** button to turn on the air conditioner automatically at the set time.

1 Press the ▲ button to set the hour and press the ▼ button to set the minute.

2 Set the air conditioner operating mode, temperature, fan speed etc.

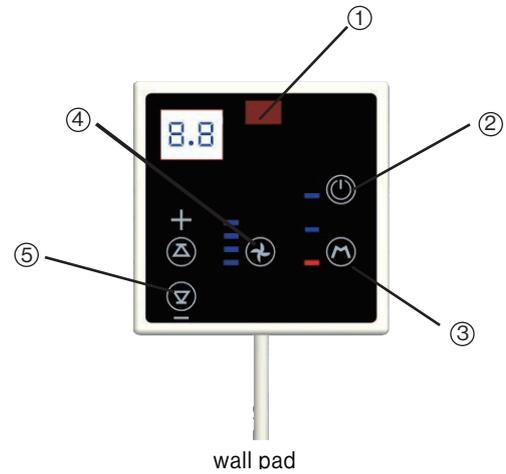
The air conditioner will be turned on automatically at the set time.

**NOTE:** If the **TIMER** button is pressed again, the timer on setting will be canceled.

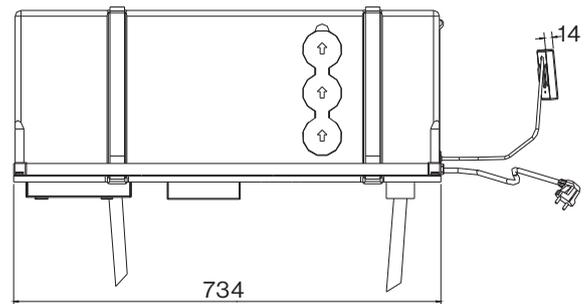
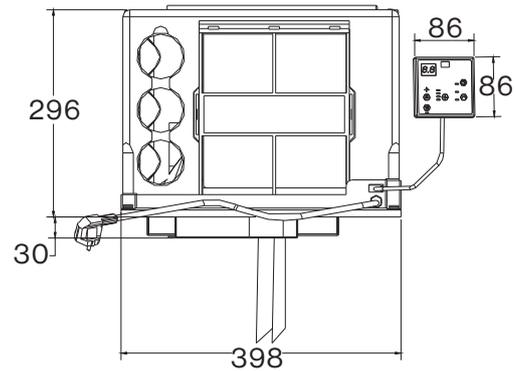
### Timer OFF

When the air conditioner is running, press the **TIMER** button to turn off the air conditioner automatically at the set time.

1 Set the switch off time by pressing the ▲ button to set the hour and press the ▼ to set the minute.

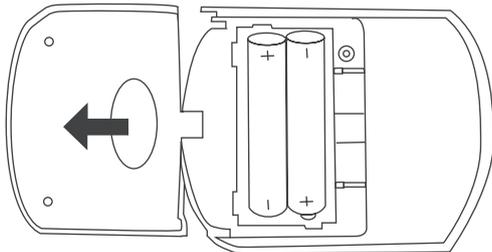


## Technical data



## Install/Replace the Remote Control Batteries

1. Remove the battery compartment cover.
2. Install two AAA batteries (supplied). Ensure batteries are inserted with the proper polarity.
3. Close with the battery compartment cover.



## Description of the wall control unit

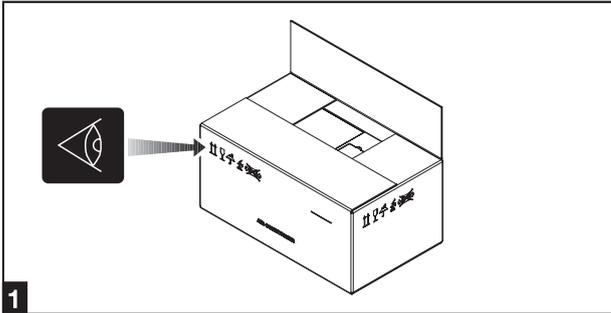
No	Function
①	Infrared remote control receiver
②	Press the <b>ON/OFF</b> button to turn on the air conditioner.
③	Press the <b>MODE</b> button to select cooling or heating mode.
④	Press the <b>FAN</b> button to select fan speed.
⑤	Press the <b>UP</b> or <b>DOWN</b> button to select the desired temperature.

Refrigerant type/quantity	R410A / 500g
Cooling capacity(W)	2637
Heating capacity(W)	3223
Input power - Cooling mode (Watt)	925
Input current - Cooling Mode (Amps)	4.2
Input power - Heating mode (Watt)	1250
Input current - Heating Mode (Amps)	5.3
Additional heating element(Watt)	500
Input supply voltage	220-240 V(AC)/ 50 Hz
Protection class	IP X5
Maximum outlet airflow(max)(m³/h)	350
Maximum coach size (with insulated walls)(m³)	30
Weight(kg)	27.8
E.E.R. / C.O.P	2.5 / 2.6
Fan	3 speed levels
Operating temperature	From -7 °C to +43 °C

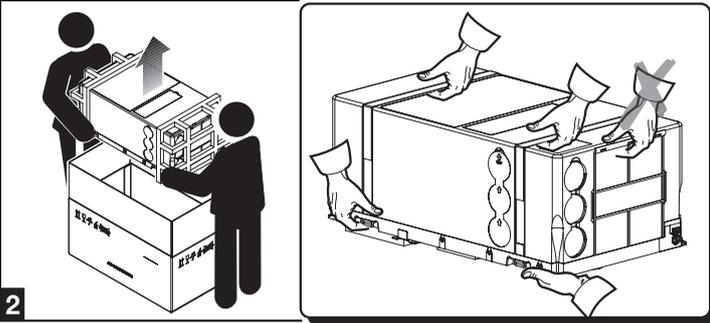
# INSTALLATION

Installation and repair of the air conditioner must only be carried out by qualified personnel who are familiar with the risks involved and the relevant regulations. Inadequate repairs may cause serious hazards.

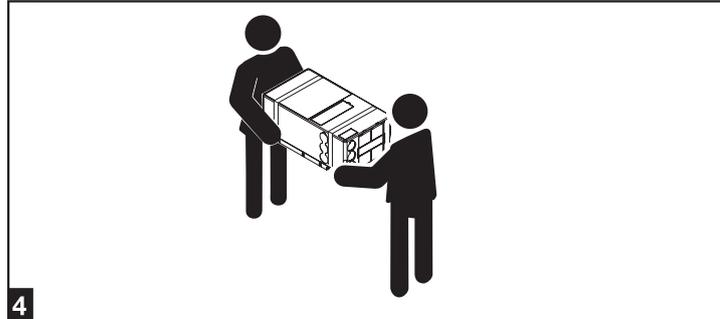
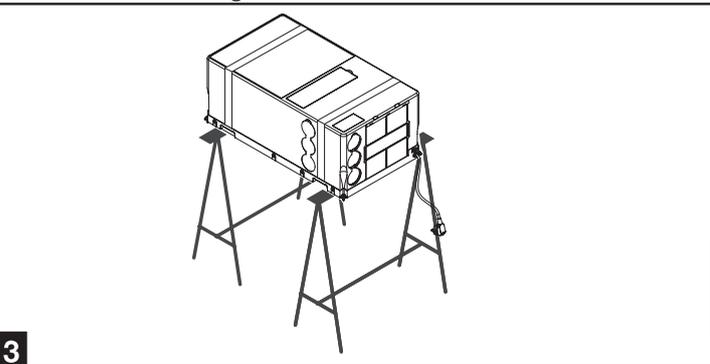
## Packing, unpacking and handling



1. Observe the instructions given on the packing.



2. Lift unit out of the box. Check for any damages.  
**Note:** Lift it using the handles or belts on the base.



3. Move the machine to the installation site under safe conditions.

## Choice of installation location

To accomplish uniform climate control in a vehicle, the air conditioner must be installed in the center of coach (as much as possible). The unit shall be placed into the storage bay or within (under) a cabinet.

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.

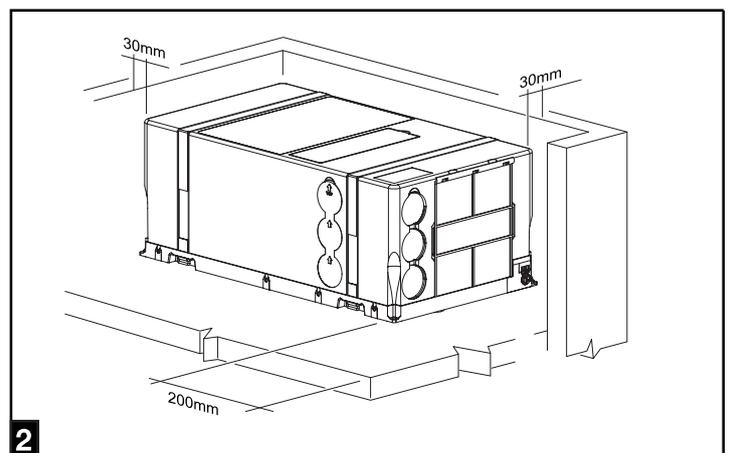
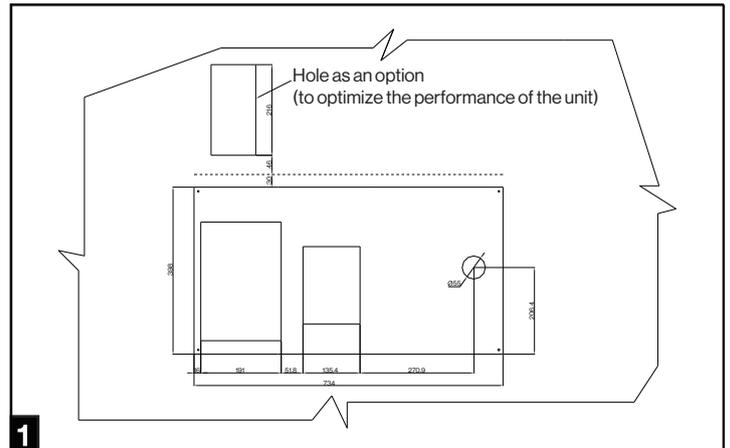
To minimize the transmission of noise and vibrations during operation, the machine must have a minimum clearance on each side of 1 1/8" (30 mm) from the walls and fittings. The unit shall be mounted onto / secured to the vehicle's floor.

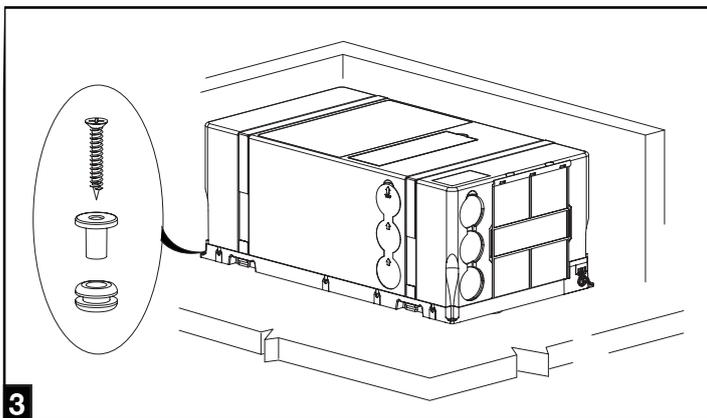
Keep a distance of 7 9/16" (200 mm) between the front of the unit and the walls of the compartment.

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

Taking air in from / having a leak to the exterior of the coach can significantly reduce the performance of the air conditioner.

## Preparing the opening and fixing





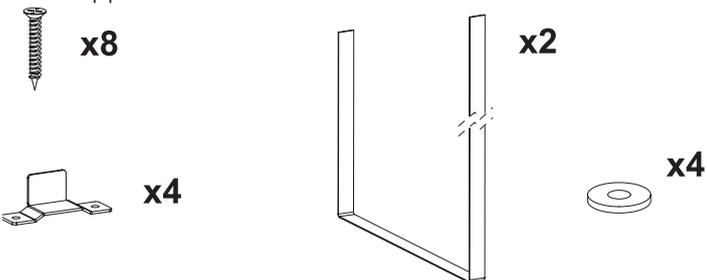
- To install the unit it is necessary to create openings in the floor. The openings in the floor of the vehicle must be accessible and, therefore, must not be covered by parts of the chassis frame behind or the like.
- These openings must not be reached by splashes from the wheels; fit a splash guard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

### ⚠ WARNING

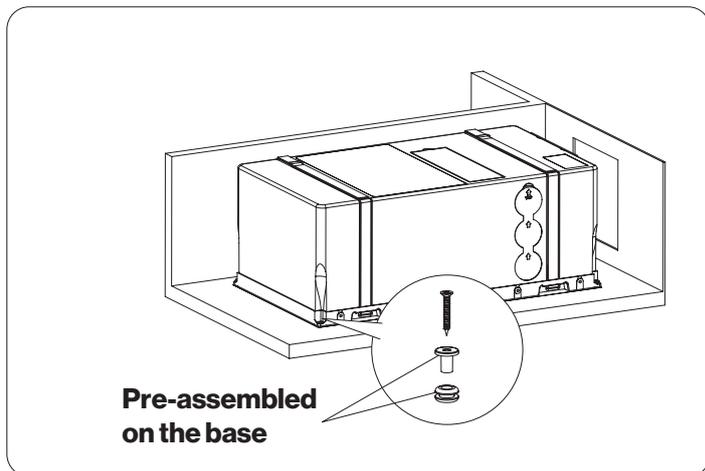
The unit must be installed leveled. Maximum allowed angle is 10° to prevent condensing water to enter the coach interiors. Before making the holes, always check there are no cables, gas pipes, parts of the chassis frame or the like underneath or hidden. Seal the machined surfaces of the openings in the floor with water-repellent sealants.

### Mounting options:

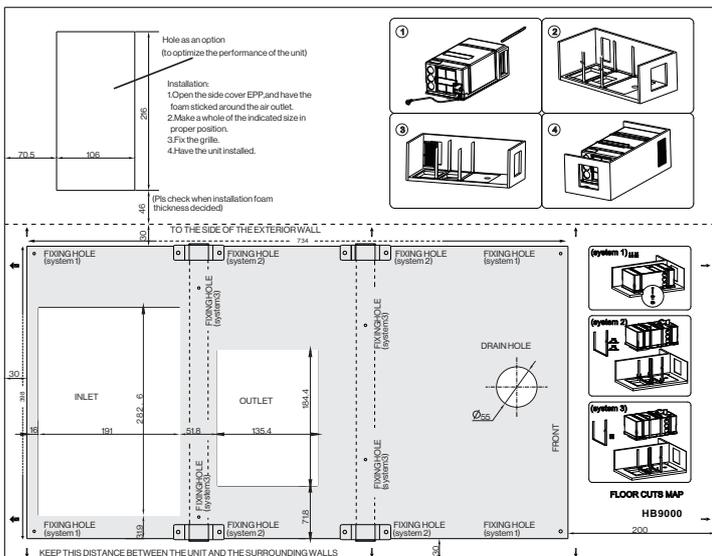
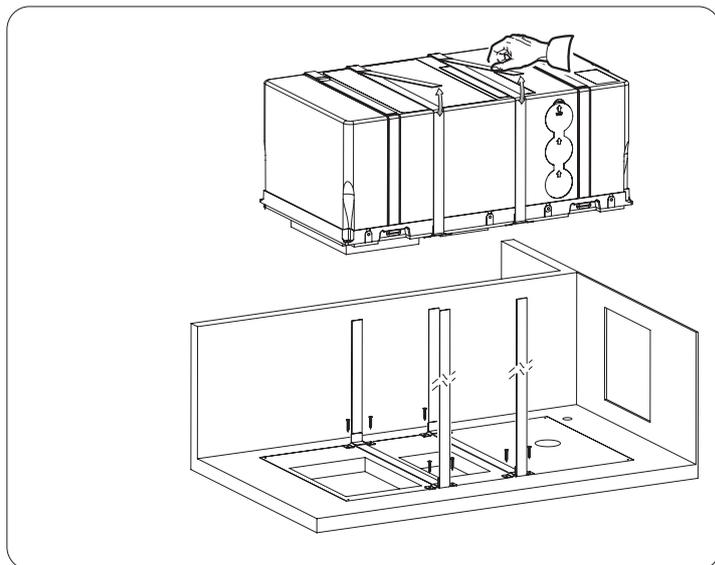
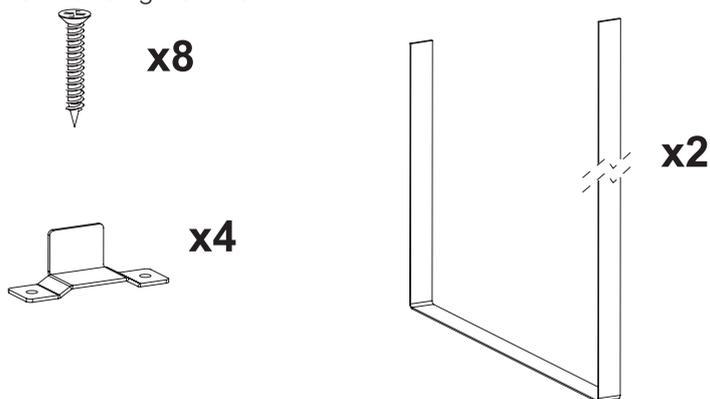
Parts supplied for the air-conditioner installation.



Option 1: Use 4 screws(ST4.0\*35mm) to bolt unit to the floor using the built in grommets and spacers.

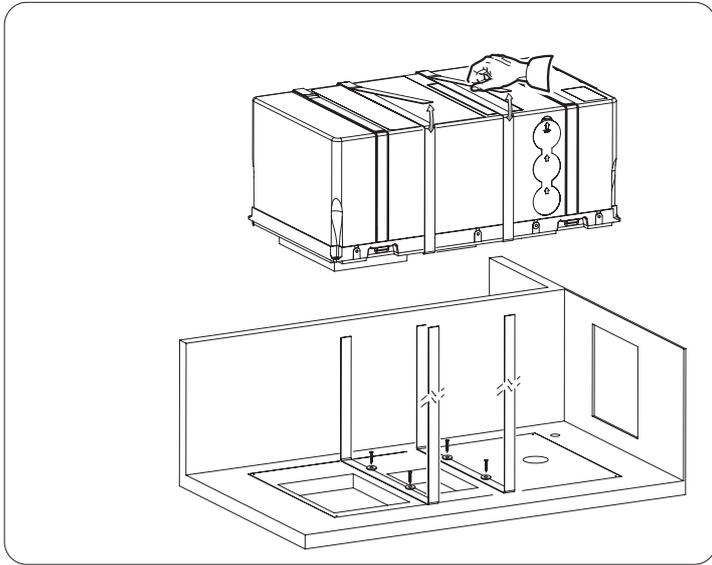


Option 2: Mount the brackets to the floor by using the supplied 8 screws(ST4.0\*35mm). Pull through the belts as shown and tighten them.



x1

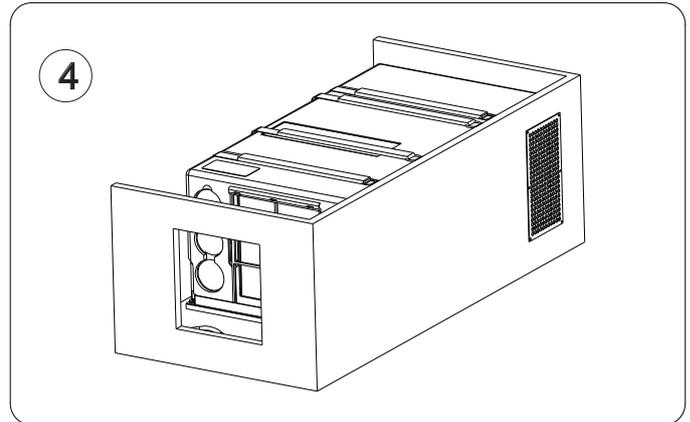
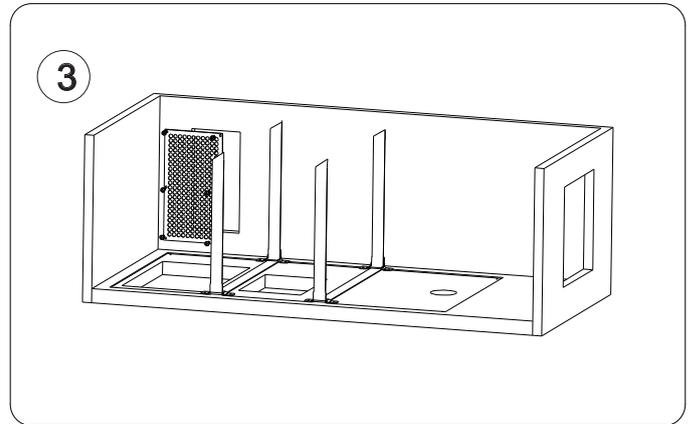
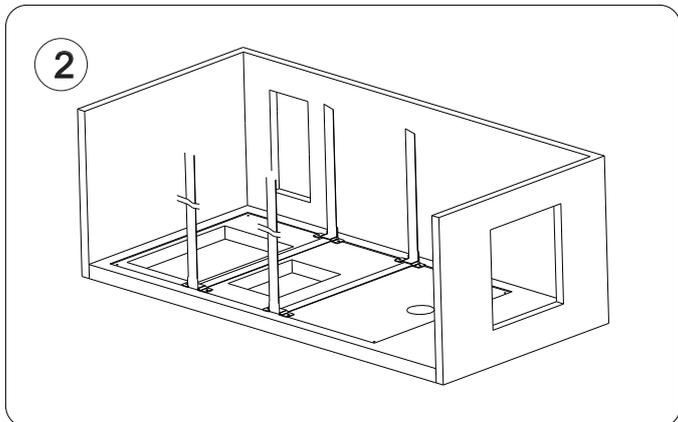
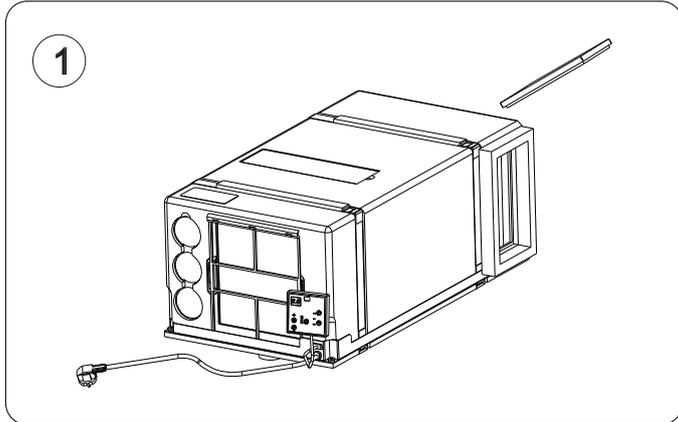
Option 3: Mount the belts with 4 supplied washers and 4 screws(ST4.0\*35mm) . Fasten belts afterwards.



### Optional Installation Method:

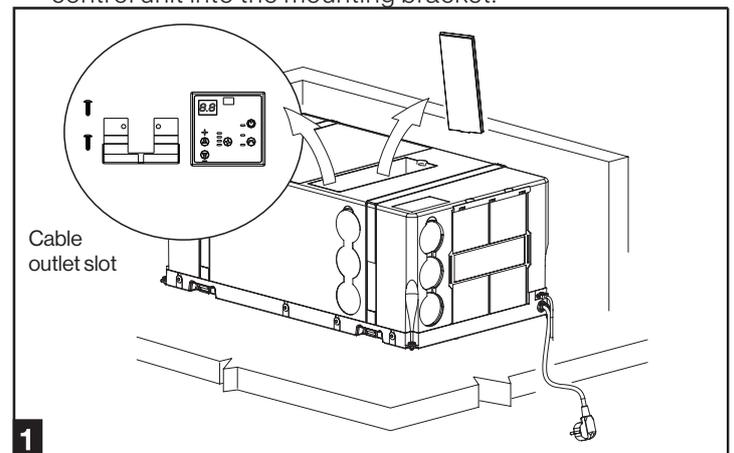
To improve the performance of the air-conditioner, an additional hole at the side can be added. Refer to steps below:

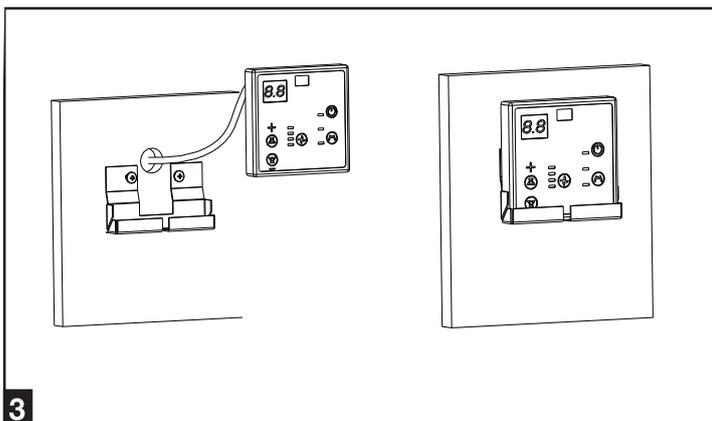
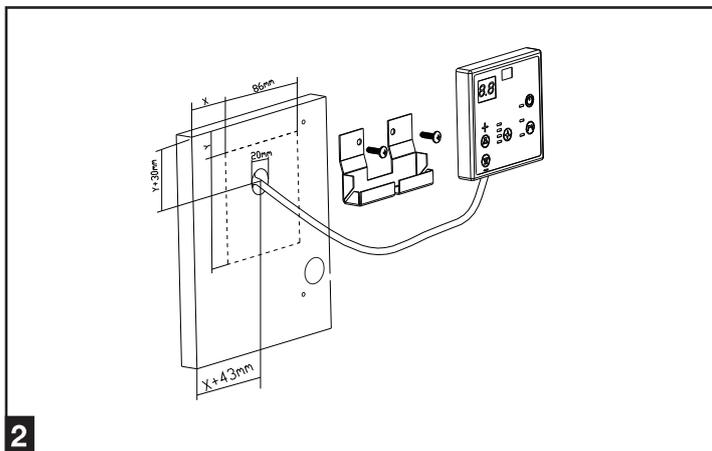
1. Open the side cover foam, and keep the foam around the air inlet.
2. Make a  $4\frac{3}{16}$ " x  $8\frac{1}{2}$ " (106 x 216mm) large hole at the given location as per installation template.
3. Fix the grille.
4. Secure the unit (see mounting).



### Fitting the wall control unit

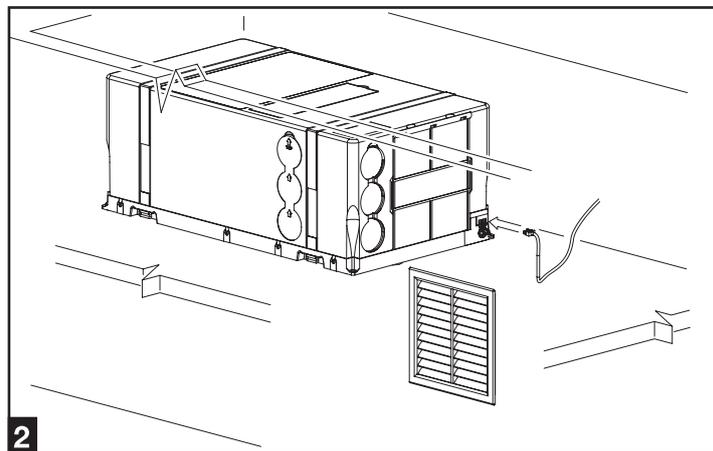
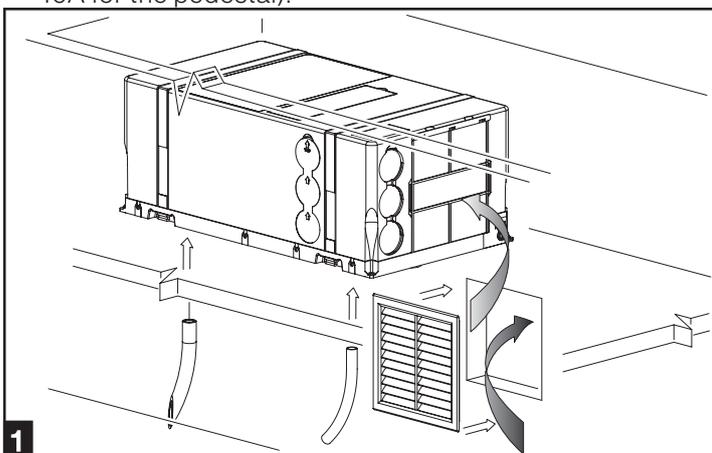
1. On top of the unit, there is a compartment which contains the wall unit, the extension wire and the remote control unit (Include batteries and wall mount).
2. To fix control onto the wall, you need to make a diameter  $\frac{4}{5}$ " (20mm) hole for cable to pass through.(refer to drawing 2).
3. Mount the bracket with 2 screws(ST4.0\*12mm) onto the wall. Connect the wire to the main-unit. Place the wall control unit into the mounting bracket.





## Compartment opening and electrical hook-up

1. The return air hole  $9\frac{1}{16}'' \times 8\frac{3}{16}''$  (246x208mm) shall be closed off with the by packed air vent grille and 8 screws (ST4.0\*10mm). In case other types of air vent grilles are used, ensure the total hole opening area is bigger than 300mm<sup>2</sup>
2. Install the condensation drain pipes provided (so that the condensing water drips outside the coach). Connect the cable of the wall control unit. Connect the unit to a fused wall-outlet, with a voltage of 220-240V/50Hz.
3. Before turning on the air-conditioner, ensure that the wall-outlet and the campground pedestal can supply the required amperage (min. 10A breaker for the wall-outlet; 16A for the pedestal).



## Air ducting

Make the air ducting with flexible hoses (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  $2\frac{9}{25}''$  (60 mm). This pipe has an outside diameter of  $2\frac{1}{2}''$  (64mm). The ventilation duct pipes are secured by pressing them into the tapered holes on the unit.

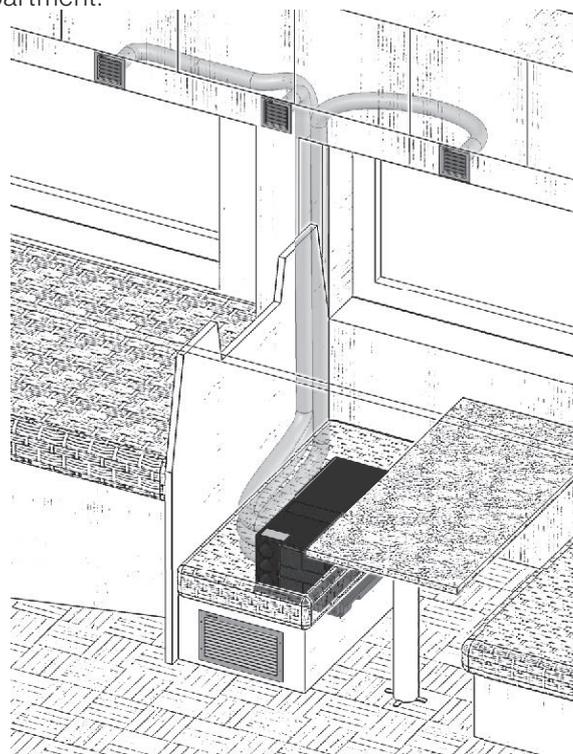
The pipes can be connected either on the outlet on the coil side or, by removing the guard and closing the front holes, on the side outlet.

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 16  $\frac{1}{2}$  feet;
- Not place the pipes near sources of heat.

The return air is drawn in through a grille or through other openings with a total cross-section of at least 300cm<sup>2</sup>. The return air opening must be made near the machine. If this is not possible make sure that the airflow is not obstructed by anything (if necessary, create an air duct between the opening and the unit).

The return air must be taken from inside the passenger compartment.



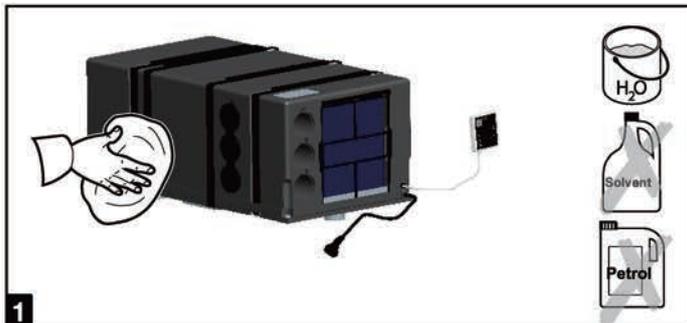
# TROUBLESHOOTING, MAINTENANCE AND RECYCLING

## Trouble, causes, remedies

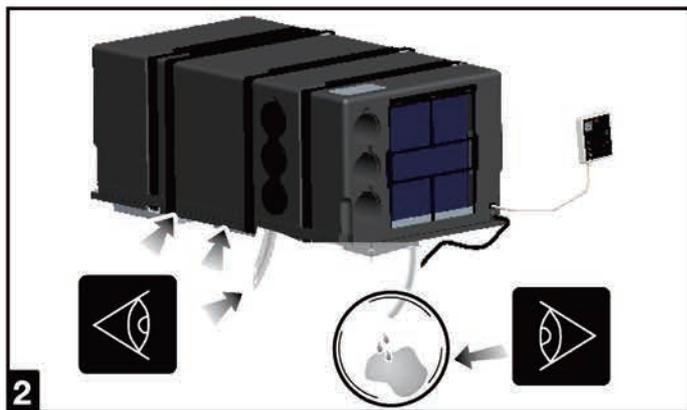
CAUSE	SOLUTION
<b>The machine does not cool</b>	The temperature is lower than 18 °C Check the set point temperature Defective thermal protection Wrong mode has been selected Low gas charge Damaged compressor Dirty heat exchange coils Defective external fans Installation error of return air
<b>The machine does not heat</b>	The temperature is higher than 30 °C Check the set point temperature Defective thermal protection Not selected the right operating mode Damaged electric heating element Low gas charge Damaged compressor Dirty heat exchange coils Damaged 4-way valve
<b>Air no longer circulates inside the vehicle</b>	Dirty heat exchange coils Defective internal fan Obstructed air filter
<b>Water seeps into the vehicle</b>	Clogged condensation drain holes
<b>The machine will not start</b>	Defective thermal protection Damaged compressor No power from the campground pedestal or generator. Voltage too low(less than 200V) Defective electric condenser
<b>The machine stops working</b>	Defective thermal protection Dirty heat exchange coils Obstructed air filter Defective external fans Voltage too low(less than 200V) Defective electric condenser

## Maintenance

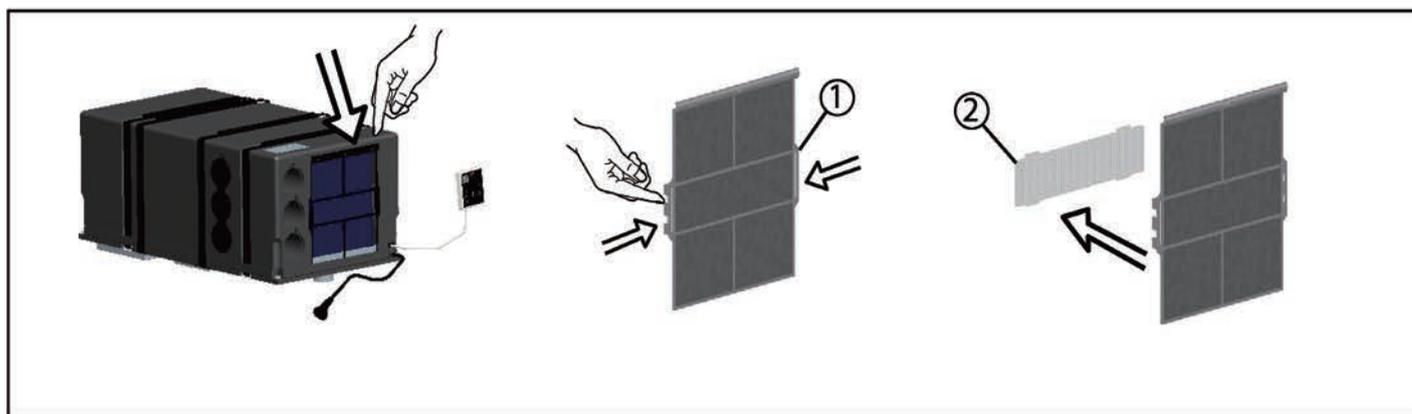
### Routine maintenance



- 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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