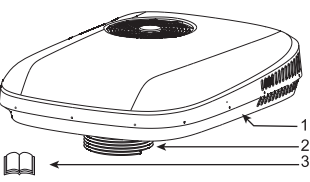
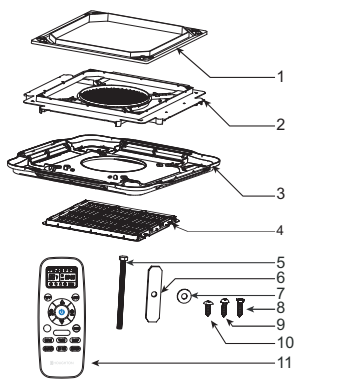
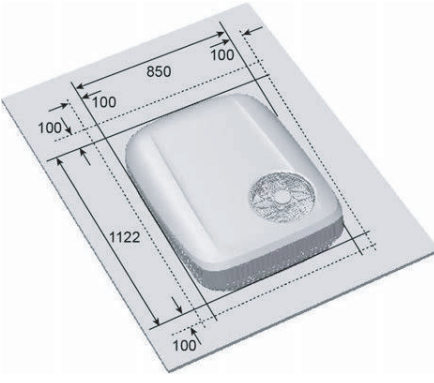


2 Packing List

Outdoor unit		Qty
	1. BELAIRE air-conditioner outdoor unit	1
	2. Air inlet duct	1
	3. Manual	1
Indoor unit		Qty
	1. Roof mount	1
	2. Plenum mounting bracket	1
	3. Plenum assembly	1
	4. Return air filter	1
	5. M8 × 120 mm hex head bolt	4
	6. Metal clamping bar	4
	7. Large M8 washer	4
	8. Countersunk head self-tapping screw	10
	9. Plenum screw - ST4×19 pan head screw	4
	10.Truss head tapping screw	4
	11.Remote control & bracket	1

3 Installation Guidance

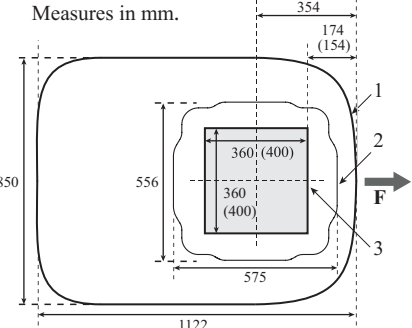
Installation instructions
- Read this Manual thoroughly before installation and understand the guidance. - Do not add other parts or restructure the product in the installation. - Consult with HOUGHTON or the local distributor in the case of unusual applications or installation conditions that are not specifically covered by this manual.
Installation requirements
- The RV or caravan roof shall be able to support the air-conditioner's weight. - Minimum thickness of roof is 25mm; maximum thickness of roof is 70mm. - If the roof's thickness is greater than 70mm, you can purchase a "Thick roof kit " to suit your unit from HOUGHTON or the local distributor.
3.1 Installation position



Before the installation, consider the installation position:

- The air-conditioner outdoor unit shall be installed in the center of the roof to ensure balanced air flow.
- The installation position of the outdoor unit shall be consistent with the traveling direction of the caravan.
- Before installing ensure that there is sufficient room for the plenum assembly to be installed.
- Consider the installation position and ensure that outlets are at least 400mm away from cupboards, walls&bulkheads that can redirect conditioned air back to the return air intake. If an outlet is closer than 400mm from an obstruction, then it should be sealed closed. Failure to do this will result in a unit that frequently cycles on and off.
- 360×360mm (400×400mm) cutting position shall avoid roof cladding joints where ever possible.
- There shall be a space of 100mm minimum all around the roof top unit to ensure suitable air flow and access for maintenance.

Measures in mm.

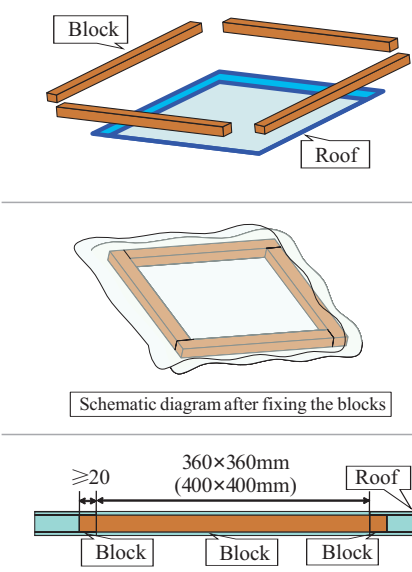


- The figure below shows the footprint of BELAIRE air-conditioner and the clearance required on the ceiling for the plenum installation.Measure from the reference position of the 360×360mm (400×400mm) square hole.Remember to add 100mm clearance around roof top unit perimeter.

NOTE

- Angle of inclination of the air-conditioner shall not be larger than 5° and the back part of the air-conditioner shall not be higher than the front part.
- For advice on installations outside of these limits please contact with HOUGHTON or the local distributor.

3.2 Load bearing of roof

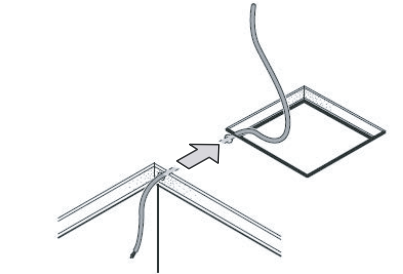


- The roof shall be able to bear the weight of the air-conditioner and shall be level without accumulating water. It is suggested that the caravan manufacturer confirms the suitability of the roof for load bearing.

- If the installation hole is not preexisting then consult your caravan manufacturer for the most suitable way to cut the installation hole.

- The 360×360mm(400×400mm) hole shall be boarded up with wood sections that are at least 20mm thick. This boarding is to ensure that the roof will not crush from the installation bolts and that air conditioned air does not enter the ceiling space.

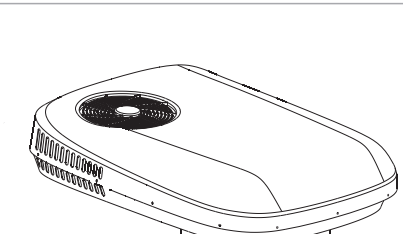
3.3 Power supply



- Determine the route of the electrical supply cable from distribution board to air conditioning unit
- Fix the cable to prevent wear from road vibration
- Ensure air conditioner is on a dedicated RCD protected supply circuit that can be isolated.

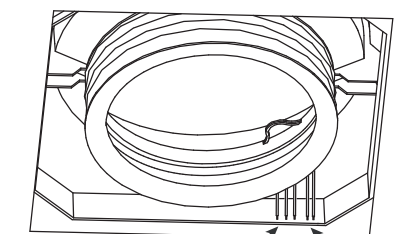
Important - do not run sealant inside the mounting bolt holes.This will cause breaks in the seal.Always run the sealant around the outside of the bolt holes as shown.

3.4 Installation of roof mount



- Make sure the roof is clean and dry and free from oil or grease.
- Confirm orientation by starting with the "this side up" logo upwards.
- Turn the part over and on the reverse side , apply the suitable RV Roof sealant uniformly over the path shown.
- Turn the part over again and make sure "This side up" is up. Press down firmly over the installation hole and remove any sealant that has squeezed out to form an effective seal.

3.5 Installation of outdoor unit

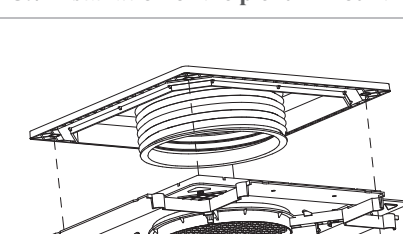


- Remove the outdoor unit from the carton and move it to the installation position on the roof.
- Put the outdoor unit over the previously installed roof mount. Adjust the position to make sure they mate and the four bolt holes on the corners align.

NOTE

- The outdoor unit is heavy. Always have a second person to help carrying the unit.
- Use the M8 bolts and check if the holes are aligned with the holes of the plenum mounting bracket.If not then use a long screw driver inserted up through the two holes to assist with alignment.

3.6 Connect the power supply and 485 communication



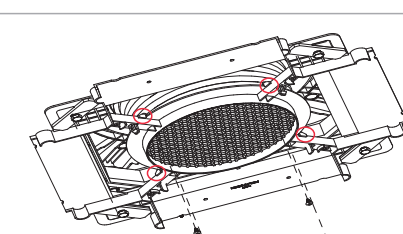
NOTE

- Match the corresponding active, neutral and the ground wire to make sure the power line is not loose or improperly connected, otherwise a short circuit or fire could be caused.

NOTE

- Any replacement of such supply cord is intended to be made by the manufacturer, its service agent or similar qualified person.

3.7 Installation of the plenum mounting bracket

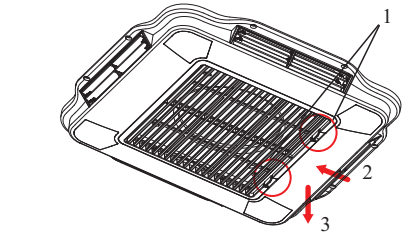


- Connect M8 bolts, washers and metal clamping bars in order shown.
- Lift the plenum mounting bracket toward the air conditioner.
- Insert M8 bolts, washers and metal clamping bars into the 4 corner holes of the plenum mounting bracket. Screw the bolts into their receiving threads by hand to ensure engagement.
- Ensure all bolts have started correctly for at least 2 or 3 rotations to avoid cross threading.
- Ensure the metal clamping bars align with the corresponding recess in the plenum mounting bracket as the bolts are tightened.
- Evenly tighten up all four bolts.

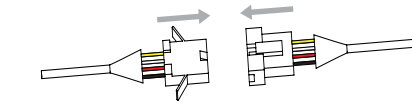
NOTE

- Tighten the bolts to 5-7 Nm torque. Do not exceed 7Nm(5.2 lbf ft).

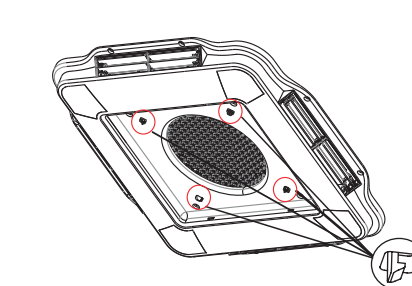
3.9 Installation of the plenum assembly



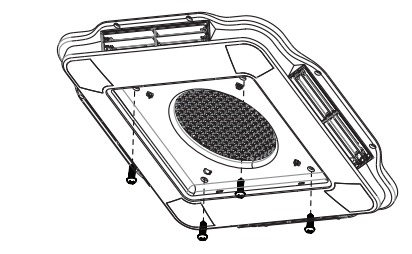
- Remove the air filter from the plenum by pushing both tabs inwards and then downwards.



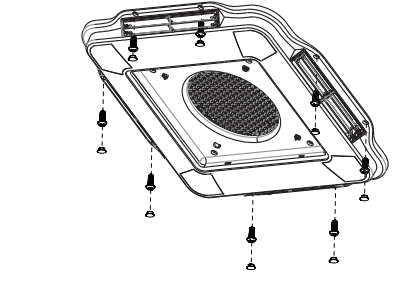
- Connect the socket and plug of the display panel and outdoor unit.
- Note that colors of the wires match: yellow to yellow, red to red, etc.



- Attach the plenum assembly to the plenum mounting bracket by engaging the two parts.



- Fix the plenum assembly on the plenum mounting bracket with four ST4×19 pan head screws.

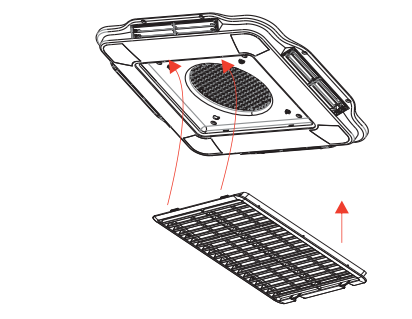


- Remove the screw caps from around the perimeter of the plenum.
- Fix the plenum to the ceiling using the 8 countersunk head screws.
- Replace the screw caps to the plenum.

NOTE

- This section is not compulsory but may be used- if required to pull the plenum up to the ceiling and remove any gaps.

3.10 Installation of the air filter



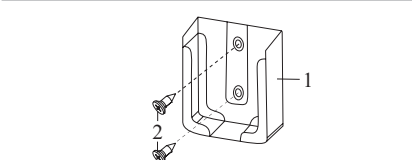
Install the air filter as shown:

- Insert the two large tabs on the filter in the corresponding slots.
- Move the filter upwards and make sure the tabs engage into the small slots on the opposite side.

NOTE

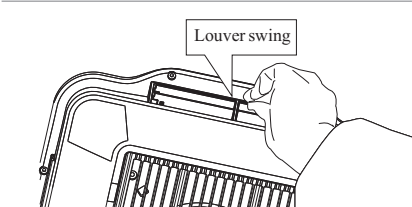
- Installation is complete.

3.11 Holder remote control



- Install the holder for the remote control in a convenient location,using 2 countersunk screws.

Adjust the louver



- Adjust direction and angle of louver by moving blade around its axis. The 2 blades move together. Louvers on opposite sides are symmetrical.

4 Quick Start Guide

➤ STEP 1

Switch on the power to the air-conditioner at the isolation breaker.

➤ STEP 2

Using the remote control, start the air-conditioner by pressing "ON" button and then select fan function by pressing the"MODE" button.

➤ STEP 3

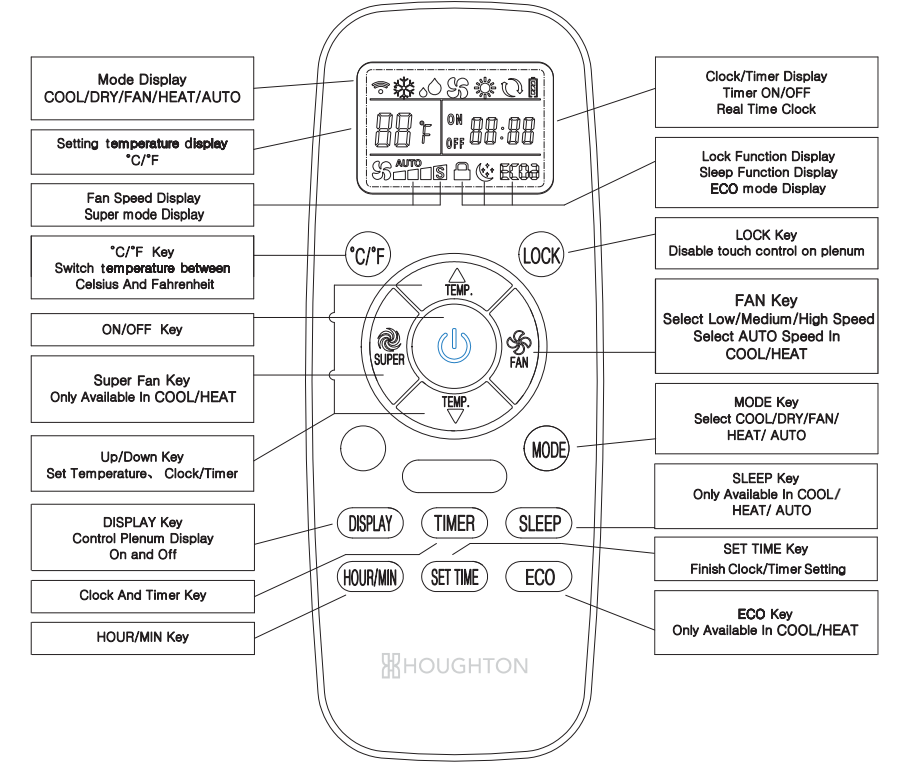
Operate in low FAN, medium FAN and high FAN in turn to check normal operation.

➤ STEP 4

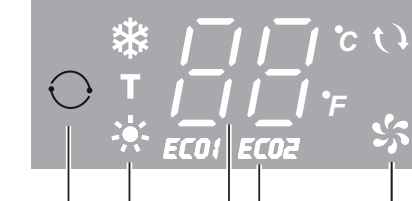
Select COOL or HEAT mode, adjust the set point temperature to three degrees lower/higher than the room temperature. The unit will start to blow cool/warm air after the compressor starts.

5 Remote control operation

Remote control



Plenum display



Display description of plenum :

- Touch screen key
- Mode display
- Economy mode display
- Temperature display (temperature range:16℃—30℃)

- You can control the basic functions of the air-conditioner with the touch screen key on the plenum display. This is useful if the remote control is lost or does not function.
- Press the touch screen key at the plenum. With each touch you cycle through the modes:



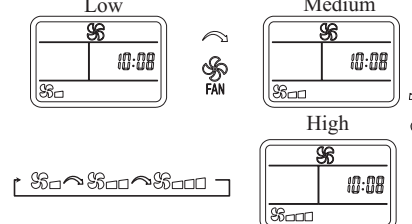
- Cooling only air-conditioner skip heat mode.
- In case the plenum touch screen key is locked by the remote controller, operations of the key would be not available. Press the lock key on the remote controller again to unlock.

5.1 Switching the unit ON/OFF



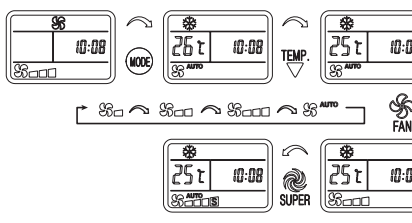
- Press the on/off "ON" key, the machine turns on, the buzzer of the plenum beeps once and the running mode and temperature will be displayed.
- Press the on/off "ON" key again, unit turns off and the plenum will display nothing.

5.2 FAN mode



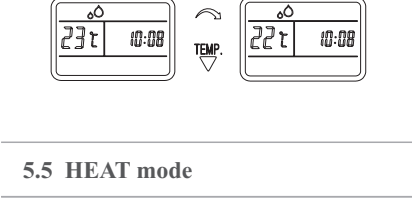
- Press the "MODE" key, select the "FAN" mode.
- Press the "FAN" key to select between Low/Medium/High FAN.
- The plenum will display "FAN" and the indoor room temperature.

5.3 COOL mode



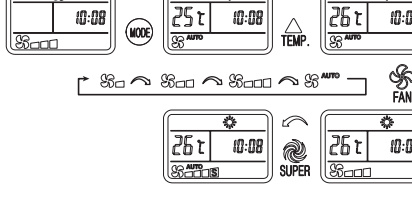
- Press the "MODE" key, select the "COOL" mode.
- Press the down "DOWN" key to set a temperature lower than room temperature.
- Press the "FAN" key to select different speed fan.
- Press the "FAN" key to select super speed.
- The plenum will display "COOL" and the setting temperature.

5.4 DRY mode



- Press the "MODE" key, select the "DRY" mode.
- Press the down "DOWN" key to set the temperature 1℃ lower than the room temperature and the plenum will display "DRY" and the setting temperature.

5.5 HEAT mode



- Press the "MODE" key, select the "HEAT" mode.
- Press the up "UP" key to increase the room temperature.
- Press the "FAN" key to select select different speed fan.
- Press the "FAN" key to select super speed.
- The plenum will display "HEAT" and the setting temperature.

NOTE

- When operating in heating mode in low ambient temperatures the unit will periodically defrost the outside heat exchanger. The plenum will display"dF" during defrosting and then return to heating once the defrost is completed.

