



TU ESPACIO DE VIDA CONFORTABLE

AIRE ACONDICIONADO 12V | 2000W | FULL INVERTER

OpenAir

Referencia: 1003613951

Gama Adventure



INSTRUCCIONES DE MONTAJE

ES

MOUNTING INSTRUCTIONS

EN

INSTRUCTIONS DE MONTAGE

FR

MONTAGEANWEISUNGEN

GE

ISTRUZIONI DI MONTAGGIO

IT



Firstly, may we congratulate you on your decision to purchase the 12 V **OPENAIR** air conditioning unit from our Adventure range. You are now the owner of a high-performance air conditioning unit manufactured by Dirna Bergstrom for use in mobile homes and other recreational vehicles, with or without the engine running.

OPENAIR is a technologically advanced solution that optimises performance and reduces energy consumption in your vehicle's auxiliary battery. These are the features that make it unique on the recreational vehicle climate control market.



Read this document carefully before

installing the product. Keep this document for future reference. The original documentation was written in Spanish, all other languages are translations.

All product manuals are available in digital version (PDF) at

<https://www.bergstromspain.com/>

All sales and warranty transactions are subject to the latest version of our general terms and conditions of sale, as published on our website <https://www.bergstromspain.com/>

The manual includes the latest technological advances in this range at the time of publication. However, continuous improvement means there may be minor differences.

Explanation of symbols



- **Warning:** A safety alert indicating a situation which, if not avoided, could result in death or serious injury.



- **Hazard:** Cutting hazard. Indicates a situation that could lead to cuts.



- **Hazard:** Electrocutation hazard. Indicates a situation that could lead to electrocution.



- **Alert:** Safety alert informing about a situation which, if not avoided, could result in damage to the unit or other materials.



- **Information:** Additional information on installing or handling the product.



- **Fragile:** Indicates a situation in which care must be taken to avoid damage to the unit and other materials.



Explanation of liabilities

- **Dirna Bergstrom** accepts no liability for any damage caused in the following cases:

- Damage to the product due to mechanical influences and surges.
- Modifications to the equipment without the manufacturer's express consent.
- Use of the equipment for purposes not described in this document.
- Improper handling or installation of the air conditioning unit.

- When installing **OPENAIR** on the roof, bear in mind that vehicles with a skylight normally have a structure strong enough for the weight of the unit. However, whenever it is necessary to make a cut in the roof, or when the roof material used with the skylight is not strong enough (fibreglass, plastic, etc.), **the installer must decide, under his/her sole responsibility**, on the need to reinforce the roof in order to avoid any deformation, breakage, water ingress, etc., and must provide the necessary means to prevent this from happening.

OPENAIR is a versatile unit that can be installed every 90° in order to adapt to the available space on the vehicle's roof, meaning it does not interfere with the rest of the accessories.



Warnings during assembly

- This equipment may only be installed, repaired, and maintained by technical personnel with due training in vehicle air conditioning, potential hazards and applicable standards.
- Read the assembly instructions carefully before installing **OPENAIR**. Follow the instructions carefully during installation.
- Switch off the ignition key before starting to install the unit.
- Disconnect the vehicle's battery before starting to install **OPENAIR**.
- Install **OPENAIR** securely to prevent it from falling.
- Use appropriate tools for each operation.
- During installation, ensure the connection of the electrical components, checking that they are fitted correctly.

- If the cable passes through sharp-edged walls during installation, use ducts or guides to prevent any damage to it.



- **Important alert:** Make sure the polarities are not reversed when connecting the unit. If this happens, the control board will not come on and the unit will not work.



Tools required for assembly

- Ratchet with 13 mm wrench.
- Torx screwdriver.
- 13 mm open-end wrench.
- Cutter.



Proper use of the product

- **OPENAIR** is a high-performance roof-mounted air conditioning unit for use in motorhomes and other recreational vehicles. Installation in any other type of vehicle is not recommended.
- Using it in any way other than as envisaged will void the unit's warranty and exempt the manufacturer from any liability.
- See the product's user manual if you are not sure how to use **OPENAIR**.



Associated documentation

- Quick guide: 1003303110
- User manual: 1003303114
- List of spare parts: 1003303116
- Troubleshooting: 1003303115



Dirna Bergstrom uses excellence assurance processes in accordance with international quality management standards ISO 9001, Automotive Quality IATF 16949, and Environmental Management ISO 14001 to ensure the highest quality of its products. Certified by IQNet Quality System.



ER-0022/1999



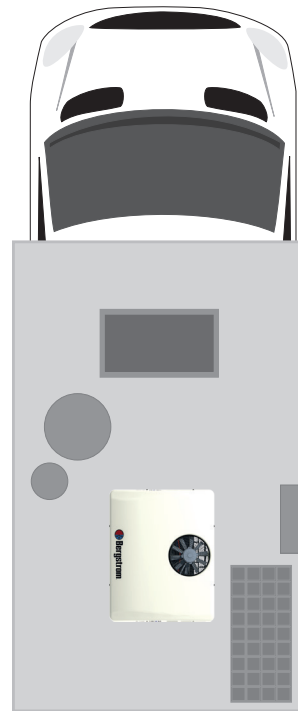
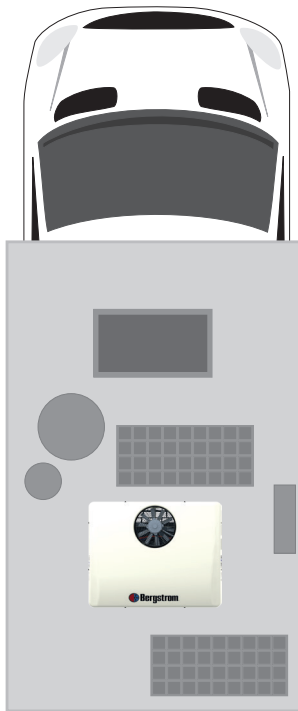
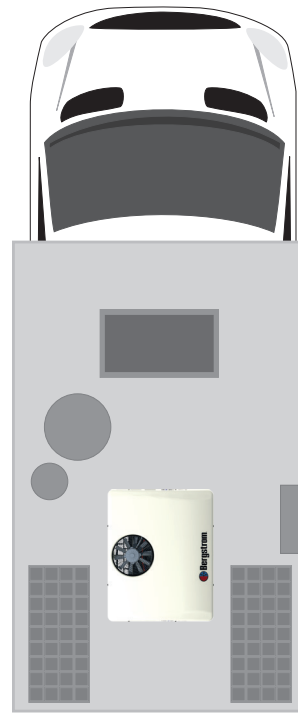
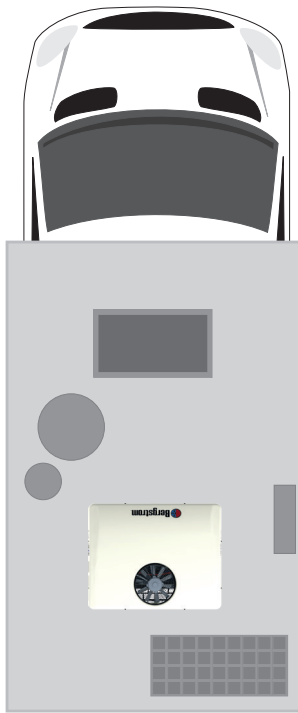
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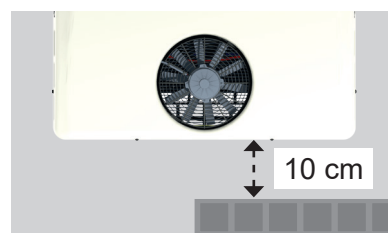
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ASSEMBLY OPTIONS



Attention: To ensure proper ventilation of the equipment and avoid poor operation, a space of at least 10 cm must be kept clear along the back of the unit.

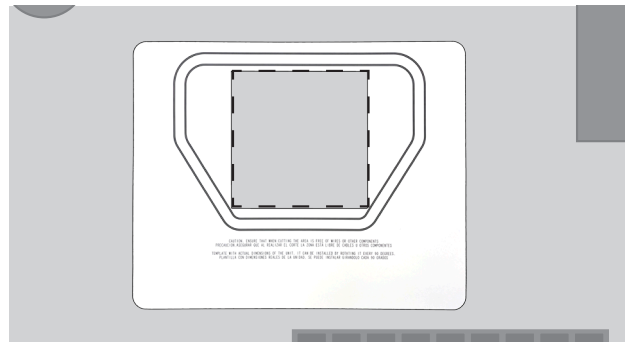
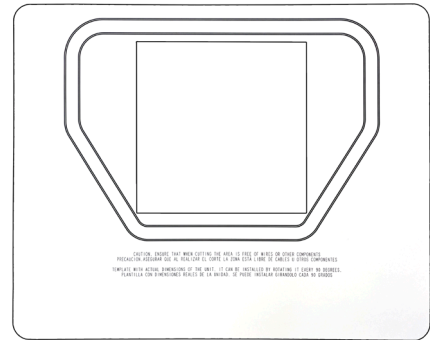


OPERATIONS BEFORE INSTALLING OPENAIR IN VEHICLES WITH NO ROOF HATCH

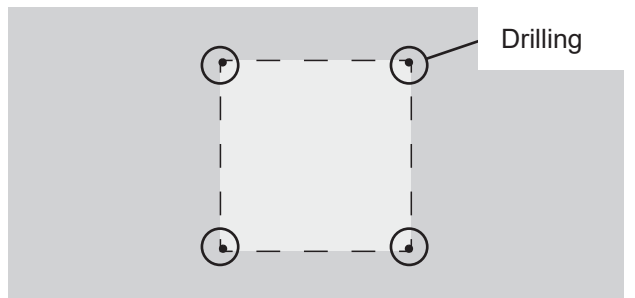
1 Take the cutting template from the **OPENAIR** equipment box and place it on the roof of the vehicle to mark the position where the unit will be installed.

Caution: Check that the marking on the outside does not interfere with any element inside the vehicle when mounting the interior console.

Note: **OPENAIR** is a versatile unit that can be installed every 90° in order to adapt to the available space on the vehicle's roof, meaning it does not interfere with the rest of the accessories.



2 From outside the vehicle, from inside the vehicle, mark the 400 x 400 mm space where the unit will sit. Drill (4) holes in the 4 corners of the marked space.



3 From outside the vehicle, join the holes by cutting the roof using a jigsaw. Complete the cut from the inside by cutting the batting and the false ceiling.

Caution: Take care when making the cut, as there may be a cable duct inside.



REQUIREMENTS TO INSTALL OPENAIR IN VEHICLES WITH A ROOF HATCH



Caution: OPENAIR can only be installed in vehicles with a hatch that are equipped with:

- 400 x 400 mm roof opening
- Roof 30 to 60 mm thick

4

Remove the hatch and the frame of the vehicle where the **OPENAIR** unit will be installed.



OPENAIR UNIT INSTALLATION PROCESS

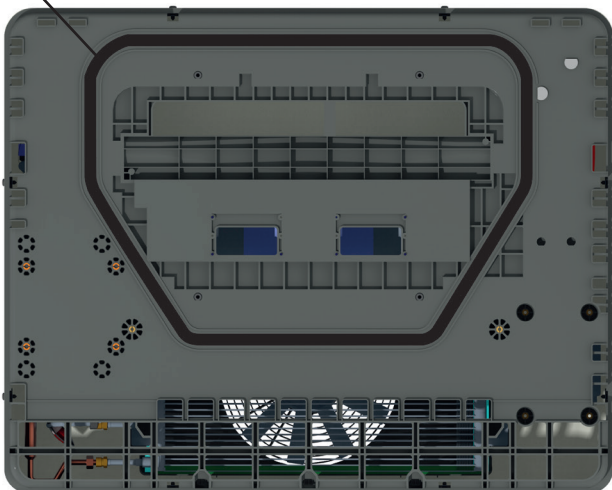
5

Lift the unit and attach the 25x25 EPDM seal on the base of the unit, following the marked area.

Caution: If the EPDM seal is installed in any other location, the equipment will not work properly and may cause the ingress of water.



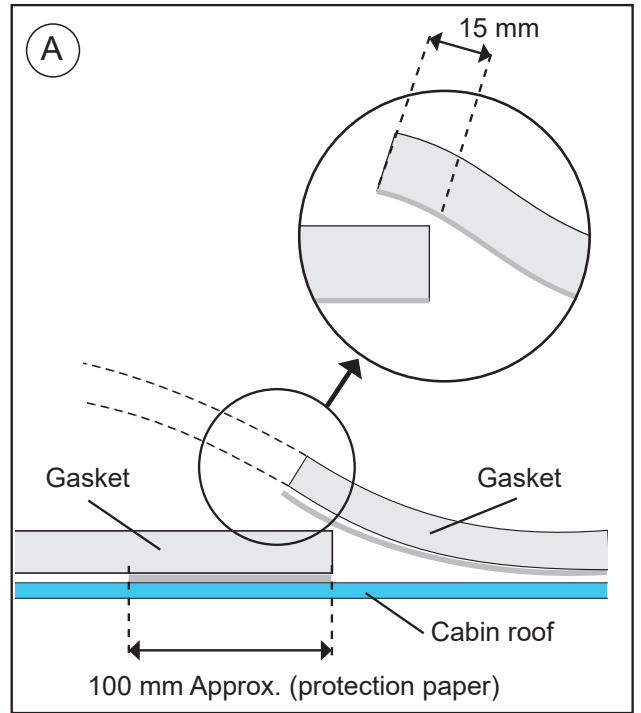
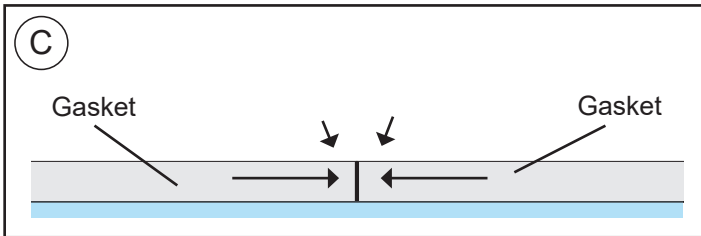
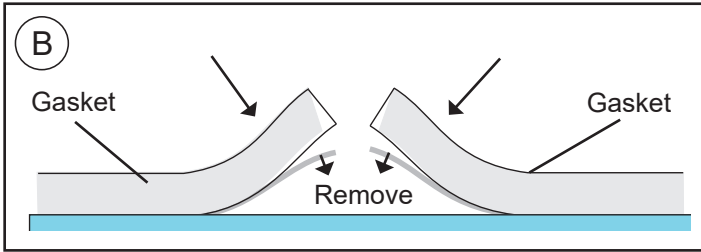
EPDM seal





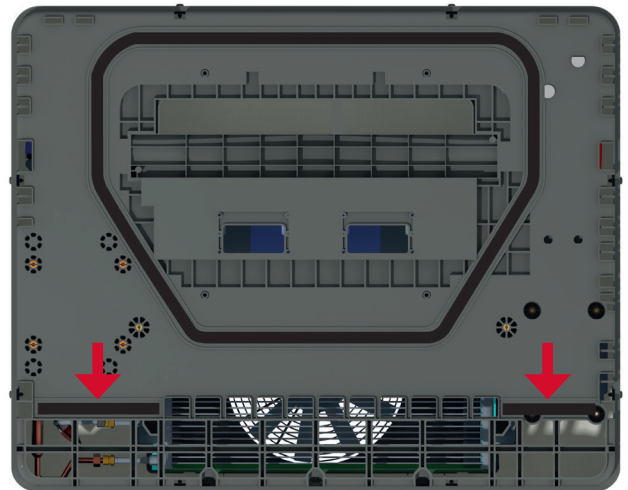
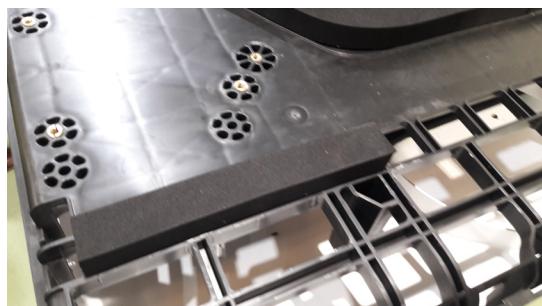
HOW TO CUT EPDM GASKET TO AVOID WATER FILTRATION INTO THE CABIN

- A- Glue gasket, keeping 100 mm of protection paper at each side.
- B- Remove the two pieces of paper.
- C- Glue by pressing both ends.



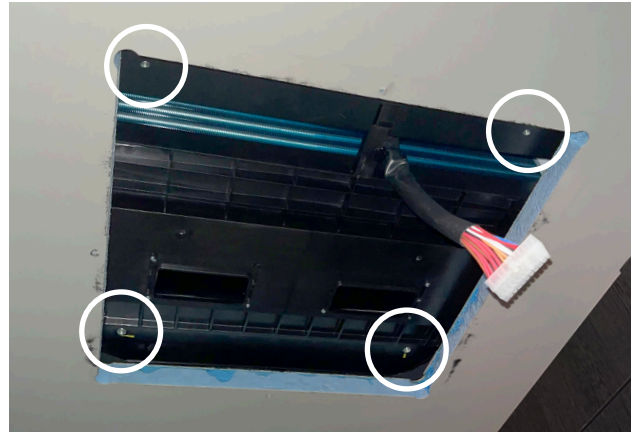
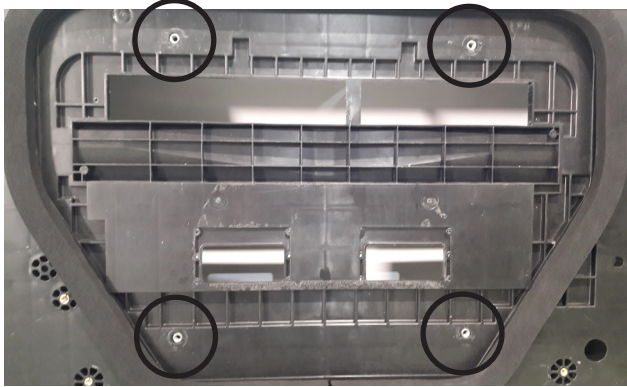
6

Using the excess assembly seal, cut (2) pieces and attach them to the back of the base in the area shown.



7

Place the unit on the roof by aligning it from inside, ensuring that the (4) fastening brackets on the base of the unit are aligned in the hole in the roof.

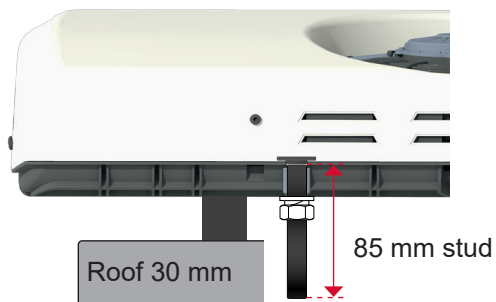


8

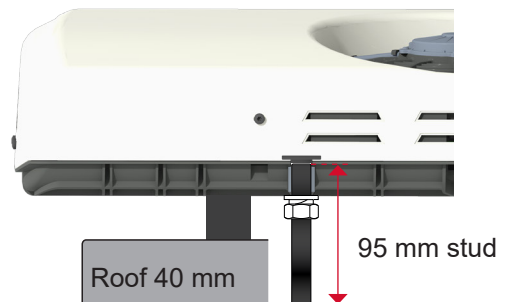
Mount (4) studs in the fastening points on the base of the unit, choosing their length based on the thickness of the vehicle's roof.

- 30 mm thick: 85 mm stud
- 40 and 50 mm thick: 95 mm stud
- 60 mm thick: 110 mm stud

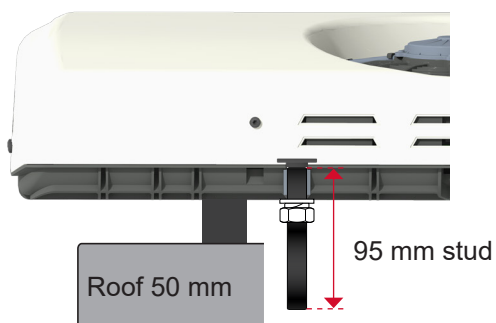
30 mm thick



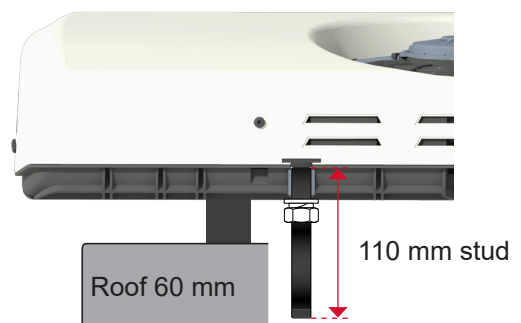
40 mm thick



50 mm thick

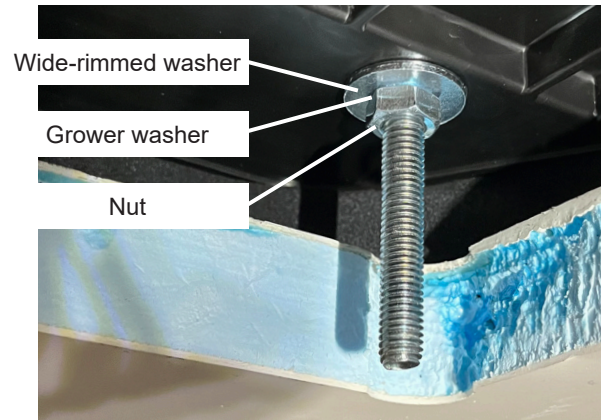


60 mm thick



9

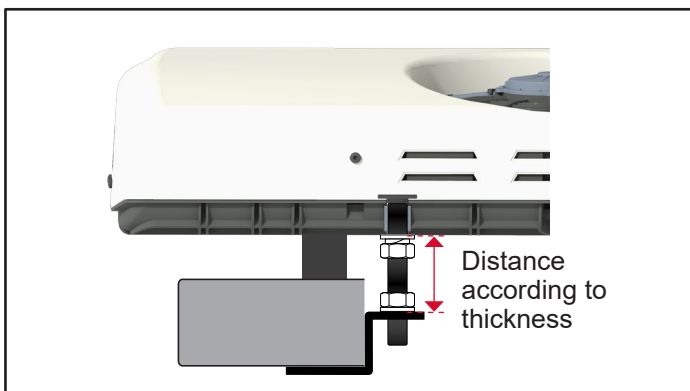
Fasten the (4) studs to the base on the unit with (1) wide-rimmed washer, (1) grower washer and (1) nut on each one.



10

Mount (1) nut and (1) wide-rimmed washer on each stud at the following approximate distances from the base of the unit:

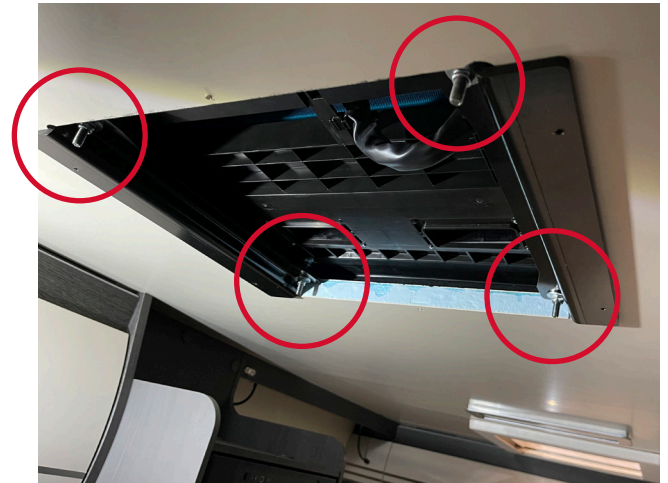
- 30 mm thick: Between 32 and 35 mm
- 40 mm thick: Between 42 and 45 mm
- 50 mm thick: Between 52 and 55 mm
- 60 mm thick: Between 62 and 65 mm



11

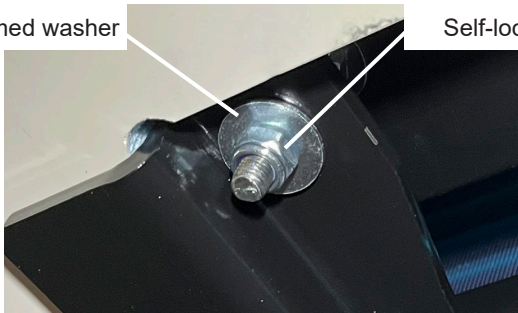
Place fastening brackets on the studs on the base of the unit and fasten the brackets with (1) wide-rimmed washer and (1) self-locking nut on each stud.

Caution: The assembly brackets should be installed longitudinally in the vehicle's direction of travel, such that the air outlet faces the front and rear of the vehicle when the console is installed.



Wide-rimmed washer

Self-locking nut



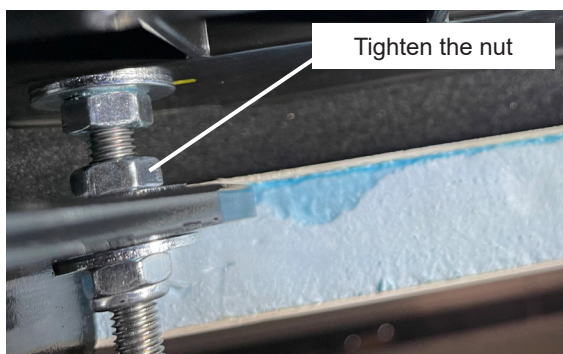
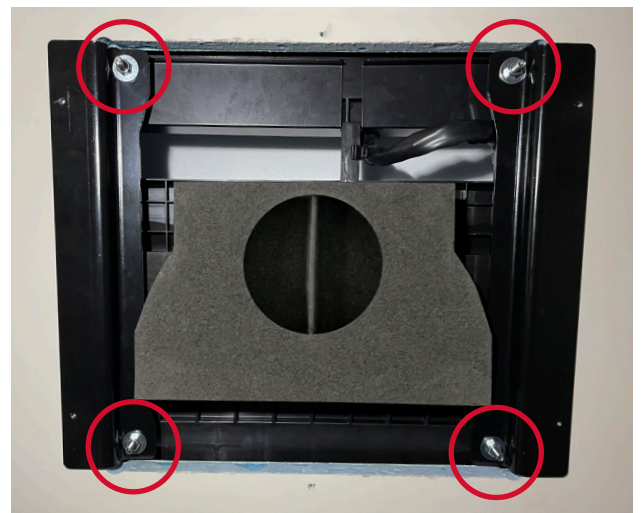
12

Tighten the self-locking nuts of the fastening brackets by compressing the unit's outer EPDM seal between 3 and 6 mm.

Important: The EPDM seal must be tight with the base of the unit, as shown in the diagram, in order to prevent any leakages of water inside the cabin.

13

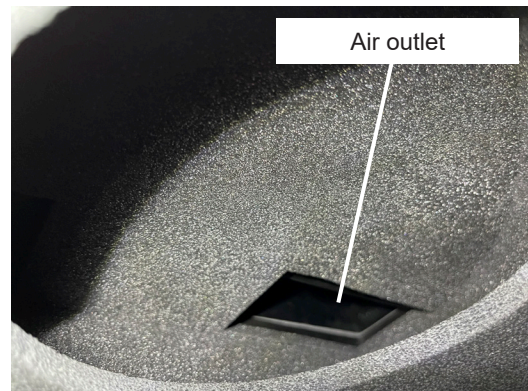
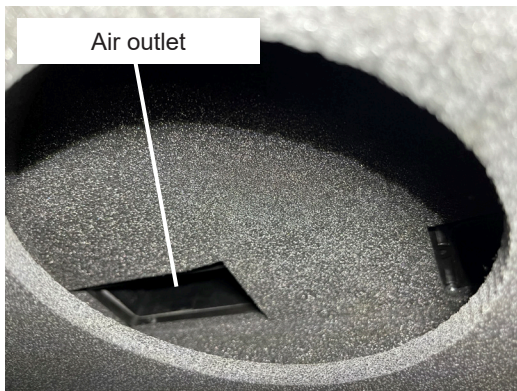
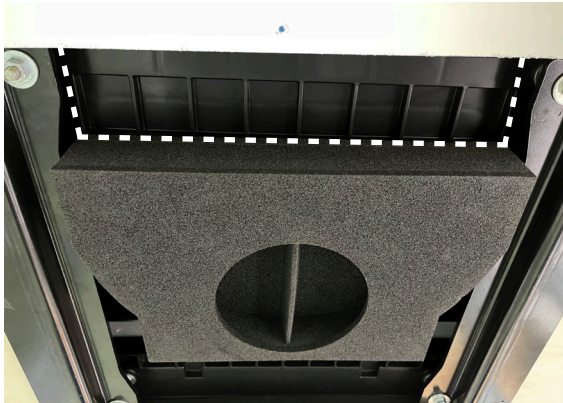
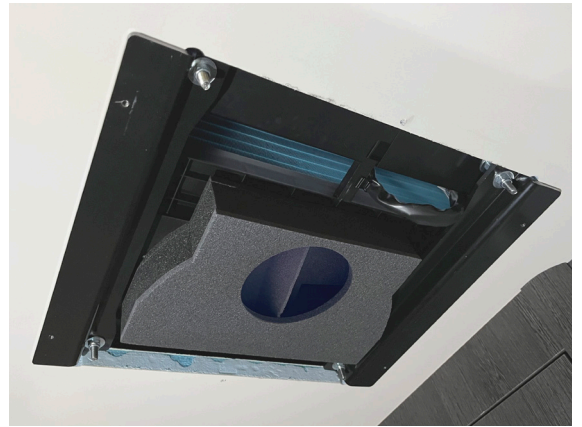
Tighten (4) top nuts of the brackets to complete the fastening process. The brackets should be fastened securely to the roof, ensuring they remain flush and level. Any other situations may lead to problems when installing the interior console.



14

Attach the duct system to the base of the unit, taking the marks on the base as a reference.

Important: Make sure the blower's air outlets face the duct system's inlets.



15

Depending on the thickness of the vehicle's roof, add a supplementary seal by attaching it aligned on the duct system:

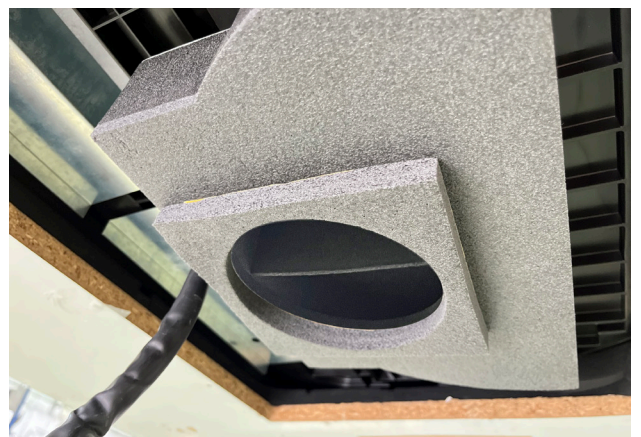
Thickness:

30 mm: Duct system only.

40 mm: Duct system + (1) supplementary seal.

50 mm: Duct system + (1) supplementary seal.

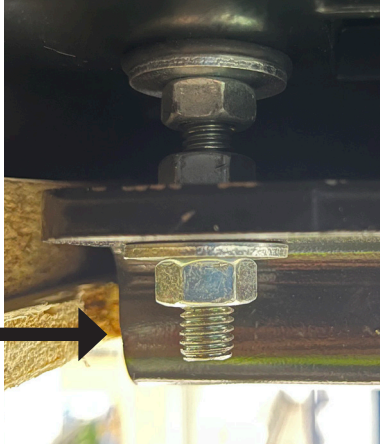
60 mm: Duct system + (2) supplementary seal.



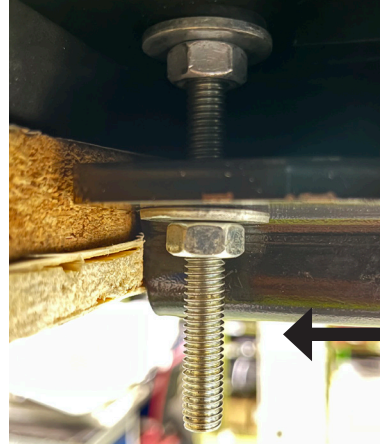
16

Tighten the fixing nuts M8/125 of the support brackets, taking into account that the fixing studs must not protrude below the bottom of the support brackets.

Correct position of the stud without protruding below the bottom of the support bracket.



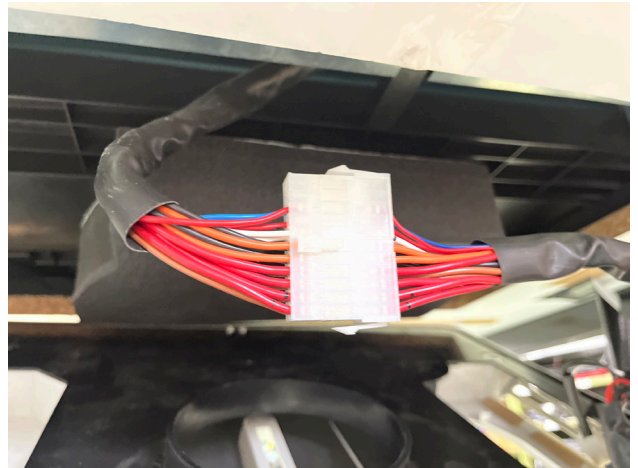
Incorrect position of the stud protruding from the bottom of the bracket.



17

Connect the interior console cabling to the unit's cabling.

Caution: Before securing the interior console, ensure that the cable is not positioned between the duct system and the console, in order to guarantee good airflow.



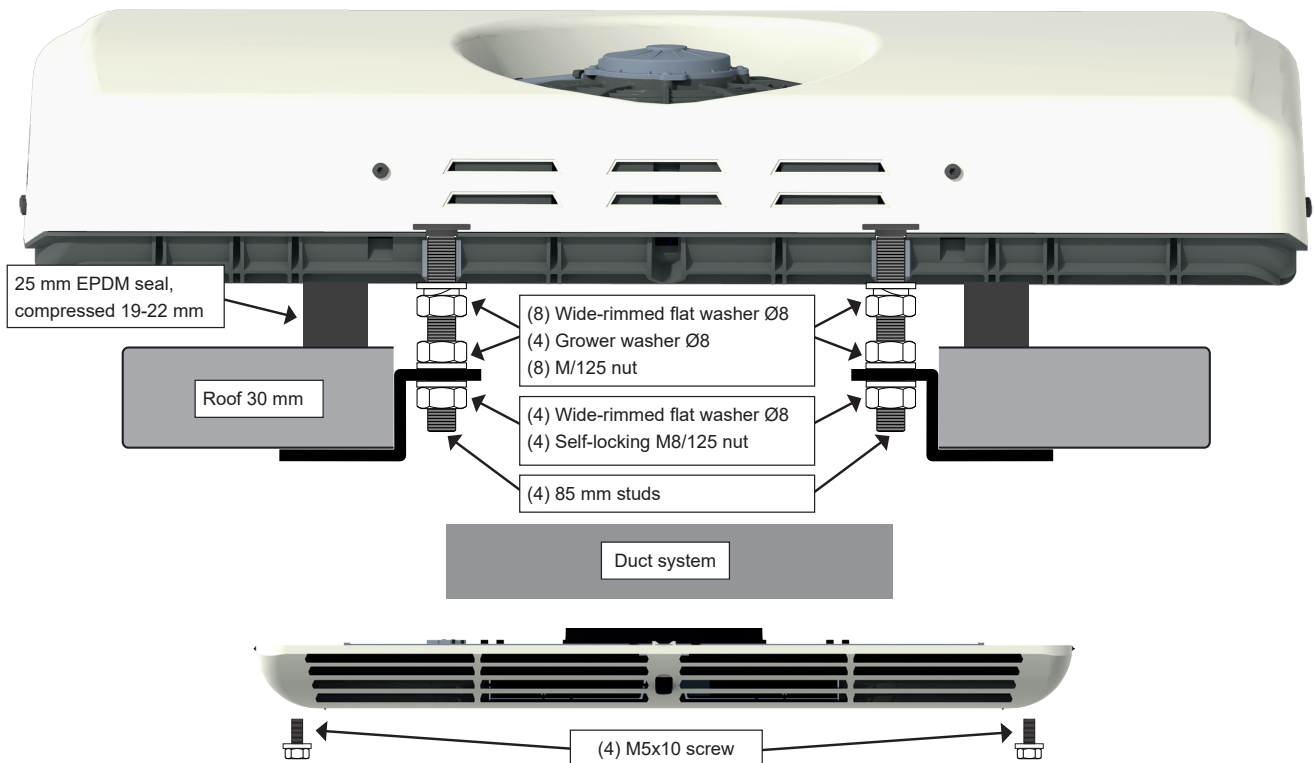
18

Mount the console with (4) M5x10 screws. The installer can choose the display's final position by placing it to the right or left of the direction of travel.

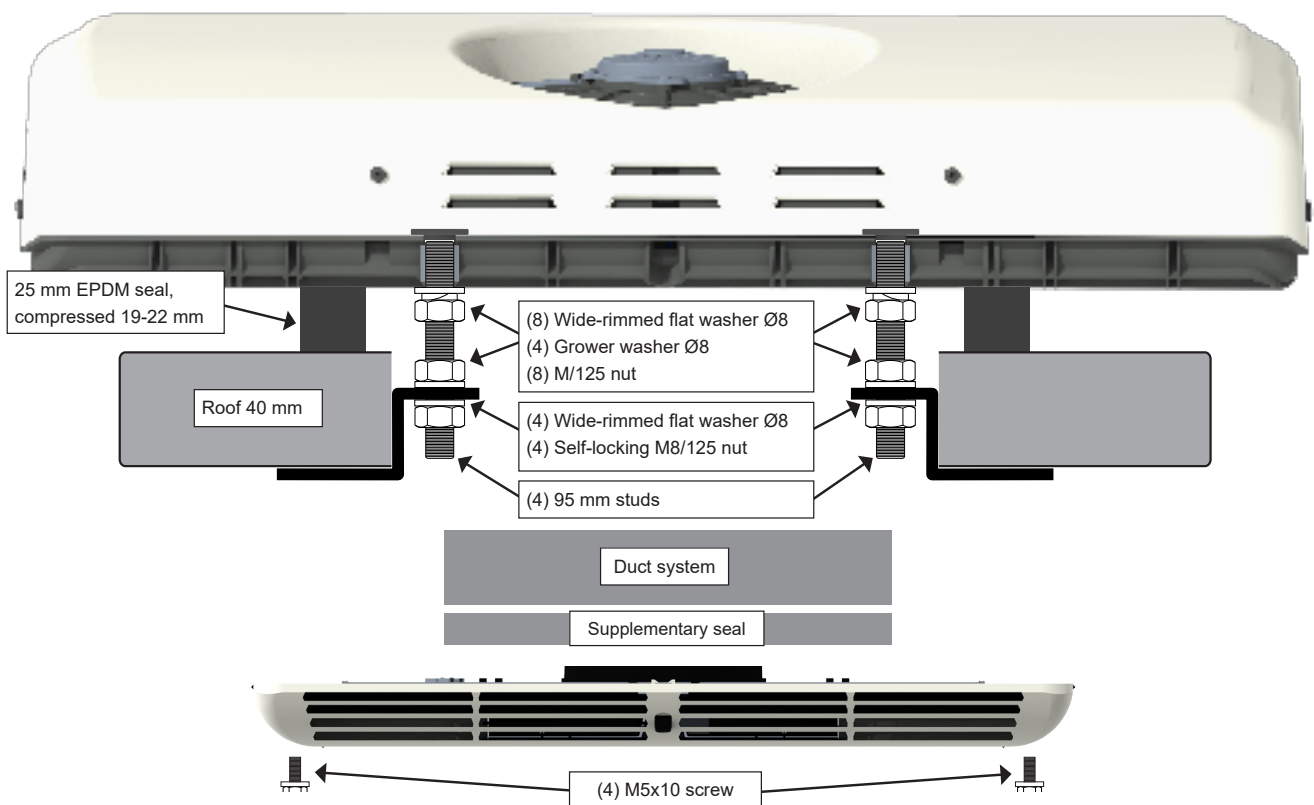


ASSEMBLY DRAWINGS

30 mm thick

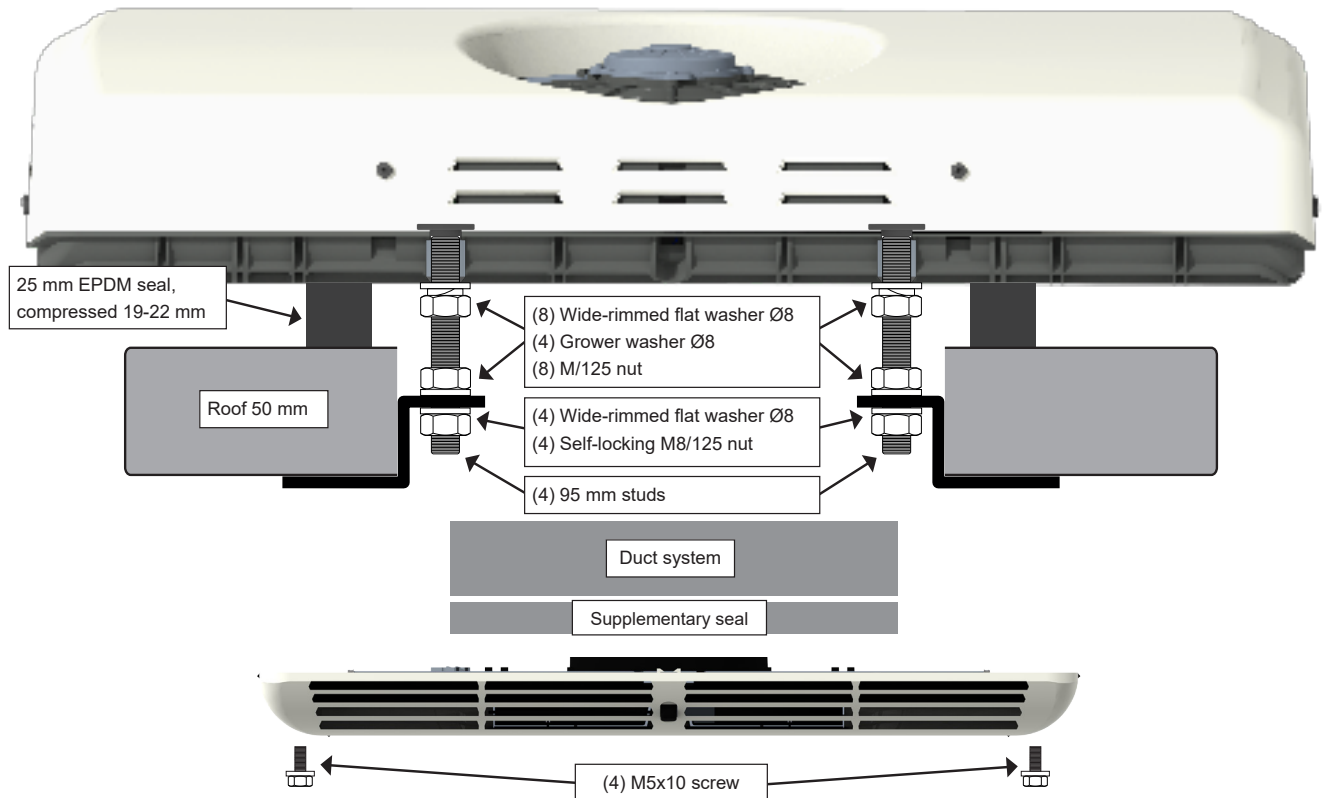


40 mm thick

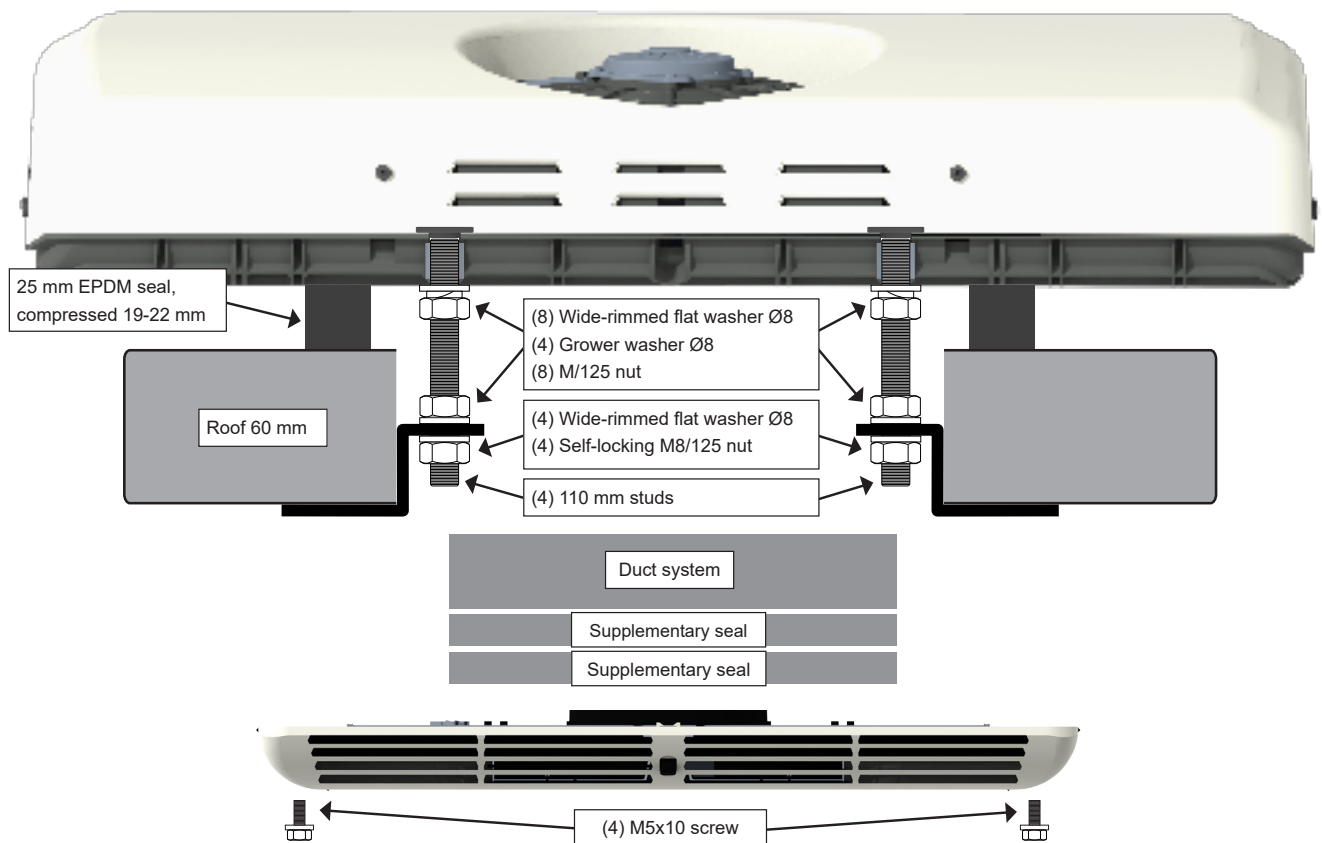


ASSEMBLY DRAWINGS

50 mm thick



60 mm thick



POWER AND BATTERY SIGNAL CABLE ASSEMBLY



Caution: OPENAIR does NOT include a battery power cable. **Bergstrom** has several installation options as optional products sold separately.

If none of these options are purchased, the recommended battery power and signal wiring are:

Power cabling:

Cable type: FLRY-B

Minimum section: 25 mm²

Signal cabling:

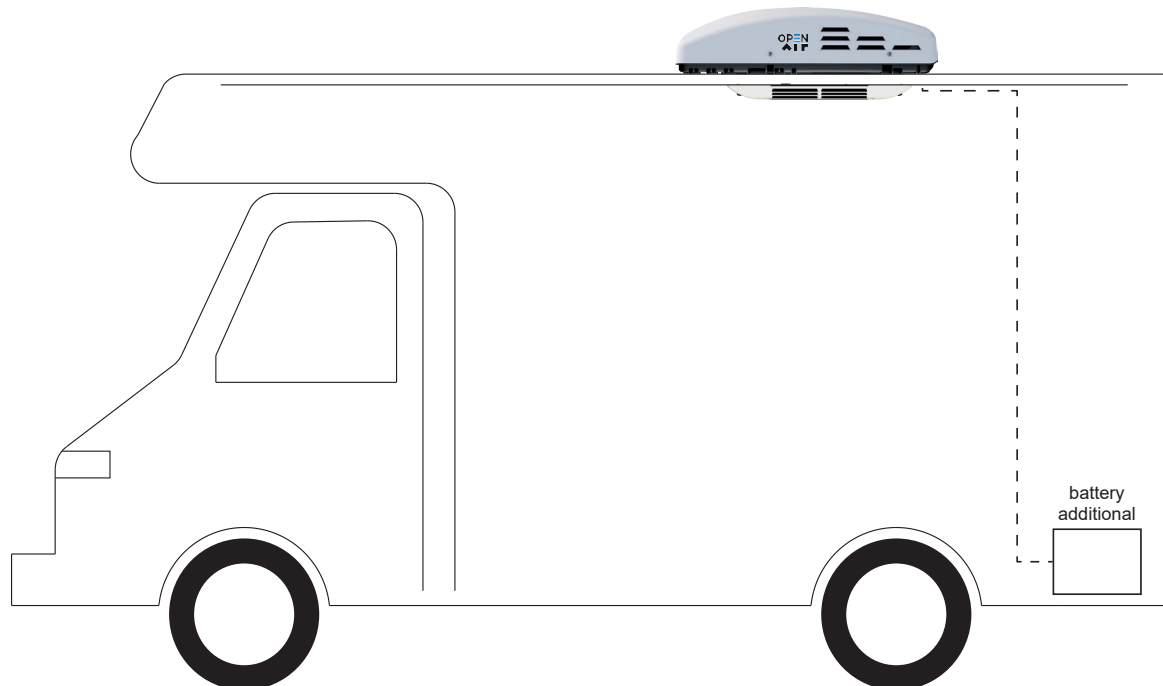
Cable type: FLRY-B

Minimum section: 1,5 mm²

INSTALLATION OPTIONS

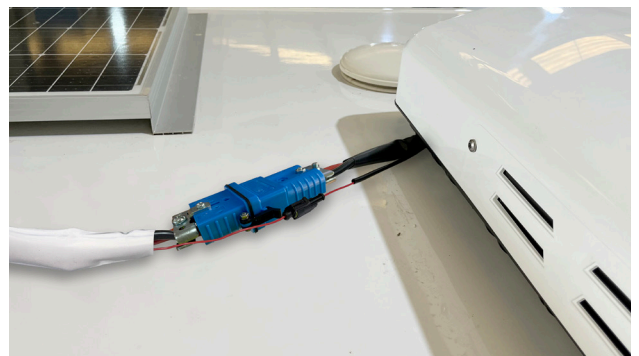
Reference	Description
1003599692	Electrical connectors kit
1003599704	Battery power cable 10 m
1003599705	Battery power cable 8 m

OVERVIEW



19

Connect the power and signal cables to the unit.



20

The installer will choose the best way to route the cable to the battery.

Important: A 100 A fuse must be installed in the power supply cable next to the battery.

21

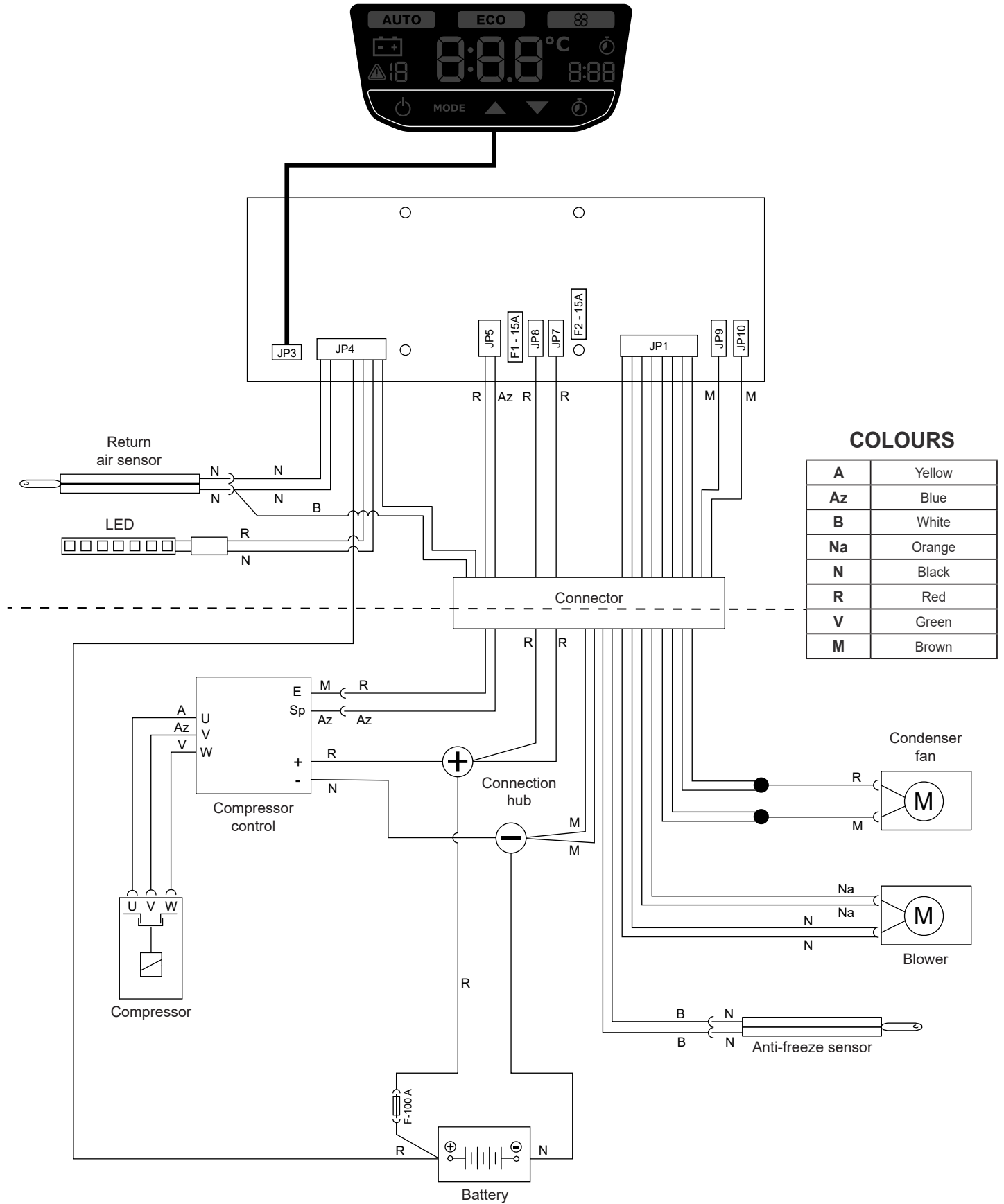
Connect the power and signal (positive) cables to the battery.

Important: To ensure proper operation of the equipment, the power cable and signal cable must be connected directly to the battery.



Important: Before starting up the unit, see the User Manual (reference 1003303114) at www.bergstromspain.com to ensure it is configured correctly.

WIRING DIAGRAM



NOTAS

A series of horizontal dotted lines for taking notes, spanning the width of the page.



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