

# Saphir comfort RC AU



**Installation instructions**

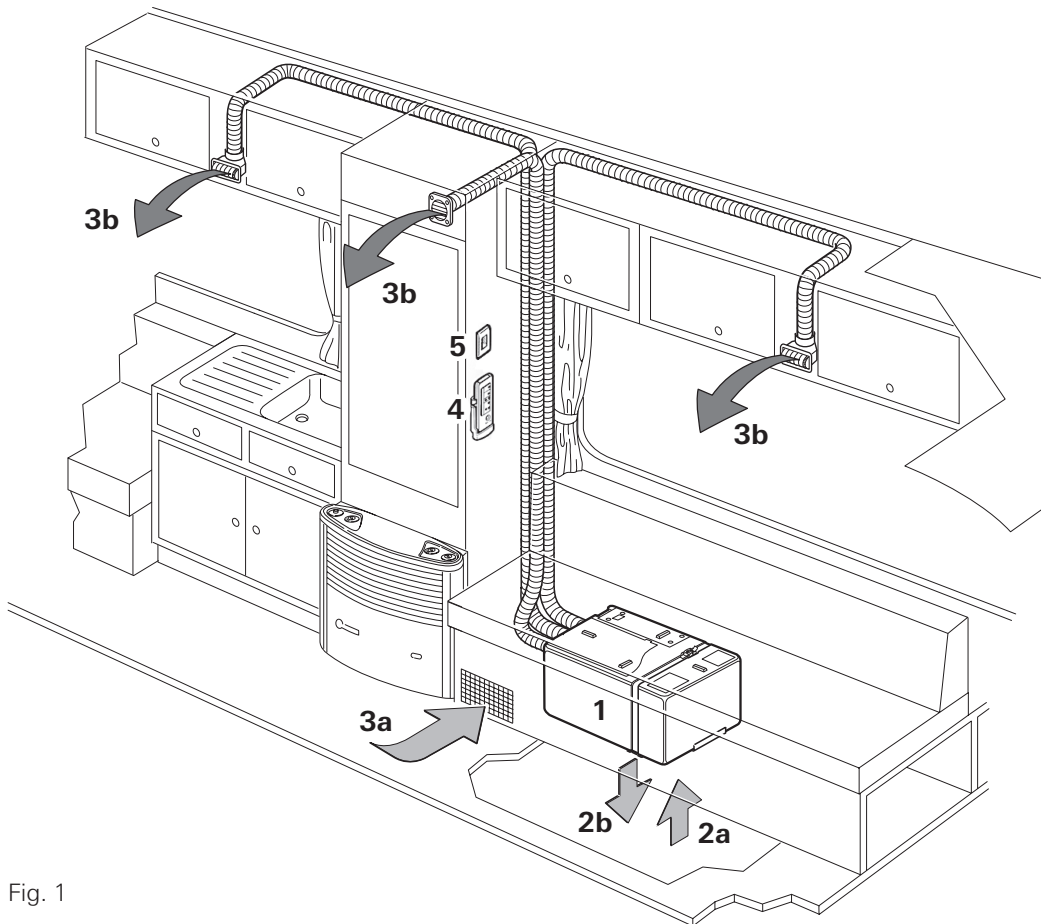


Fig. 1



Fig. 2

## Installation example

- 1 Saphir comfort RC AU
- 2a Supply air intake
- 2b Supply air outlet
- 3a Circulated air intake
- 3b Air outlets
- 4 Infrared (IR) remote control
- 5 Infrared (IR) receiver


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## Symbols used

 The device must only be installed and repaired by an expert.

 Symbol indicates a possible hazard.

 Note containing information and tips.

## Technical data

Determined on the basis of EN 14511 or Truma test conditions

### Designation

Saphir comfort RC AU, comfort air conditioning system

### Number of structural units

1

### Dimensions L x W x H

628 x 400 x 290 mm

### Weight

approx. 23.5 kg

### Power supply

230 V – 240 V ~, 50 Hz

### Maximum cooling power

2.4 kW

### Heating power

1.7 kW

### Effective power consumption

0.98 kW

### Starting current

20 A (150 ms)

### Power consumption

4.2 A / 35 °C

### Protection class

IP X5

### Energy Efficiency Rate (EER)

2.4

### Volume flow (cold air)

max. 380 m<sup>3</sup>/h

### Refrigerant

R 407C

### Refrigerant content

see type plate on unit

### Compressor oil

Diamond MA32, 300 cm<sup>3</sup>

### Noise

depending on installation situation

### Maximum incline of vehicle during operation

5° / 8 %

### Usage limits

+4 °C to +43 °C.

- An interior air sensor prevents the compressor from operating at temperatures of less than +16 °C during cooling.
- An anti-freeze sensor prevents non-permitted ice formation on the evaporator coil.
- A temperature switch prevents excessive current and temperature at the compressor.



Right reserved to make technical changes!

## Installation instructions



Only competent and trained staff (experts) are permitted to install and repair the Truma product and to carry out the function test, at the same time observing the installation and operating instructions and the currently recognised technical regulations. Experts are persons who, based on their specialist instruction and training, their knowledge and experience with Truma products and the relevant standards, can carry out the necessary work properly and identify potential hazards.

### Scope of delivery

- 1 Saphir comfort RC AU
- 1 Remote control with batteries
- 1 IR receiver
- 4 Fastening brackets with screws, 1 clamping strap
- 2 Condensation traps
- 2 Floor grilles
- 1 Installation template
- 1 set of operating instructions / installation instructions

### Intended use

This device has been designed for installation in motor homes and caravans and is intended for use in the private sector.

### Regulations

Guarantee claims, warranty claims and acceptance of liability will be ruled out in the event of the following:

- Modifications to the device (including accessories)
- Failure to use original Truma parts as replacement parts and accessories
- Failure to follow the installation and operating instructions

### Selecting a location

### Installation dimensions

The dimensions are in mm.

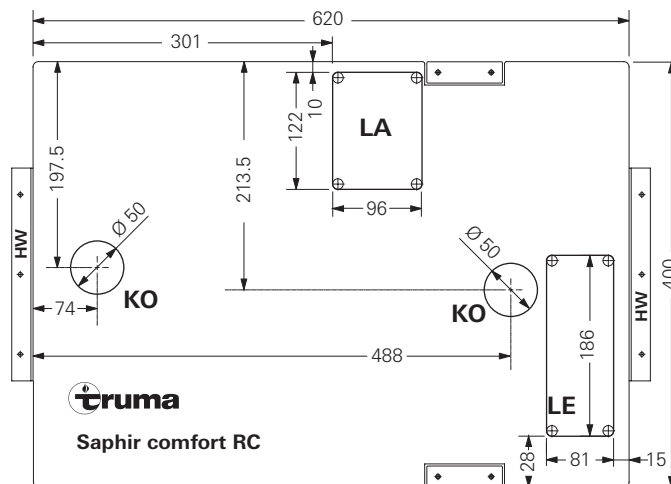


Fig. 3

The device must always be installed so that it is easy to access at all times for service work, and also easy to remove and install.

**i** In the event of restricted installation space being available, the 2 connector cables (power and IR receiver cable) must be of sufficient length for the device to be pulled out with the cables attached and the cover to be opened.

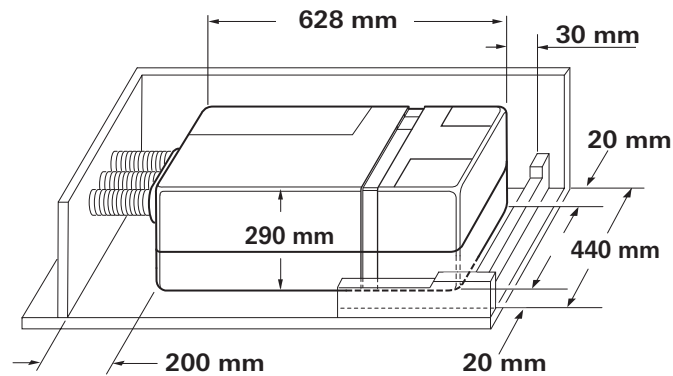


Fig. 4

**i** In order to achieve homogeneous vehicle cooling, the air conditioning system must be installed in a **central** location in a stowage box or the like so that the cold air is evenly distributed in the caravan or motor home.

The air conditioning system is attached to the floor, which must be level and smooth. The air inlet (LE), the air outlet (LA) and the connections (11) may need to be fitted with additional gaskets if the system is attached to a channelled floor, for example.

The room air that is going to be cooled is drawn in again from the vehicle interior by the device via openings with a total area of at least 300 cm<sup>2</sup>.

**!** The circulated air is cleaned and dried during the operation of the device. For this reason, suitable measures must be taken to ensure that the air to be cooled is drawn out of the vehicle interior if the equipment is installed in external stowage spaces (e.g. false floor). Drawing in air from the outside can have a detrimental effect on the effectiveness of the air conditioning system.

If possible, position the device so that the frame of the vehicle is between the air inlet (LE) and the air outlet (LA).

Insert the installation template into the stowage box in which the equipment is being installed and check the amount of space available for floor apertures. The air conditioning system should have at least 20 mm of clearance at the sides and 30 mm at the rear from walls and furniture items in order to prevent noise transmission during operation. The minimum clearance at the front is 200 mm, so that the fluff / particle filter can be changed.

**!** The openings in the floor of the vehicle must be freely accessible, and must not be blocked by frame sections or the like behind them! The openings must not be within range of the wheel spray. A splash guard must be fitted if necessary.

## Installing the air conditioning system

Place installation template in stowage compartment and fix in position.

Mark the mounting holes for the 2 brackets (2 – HW) and the 2 side fastening brackets (3).

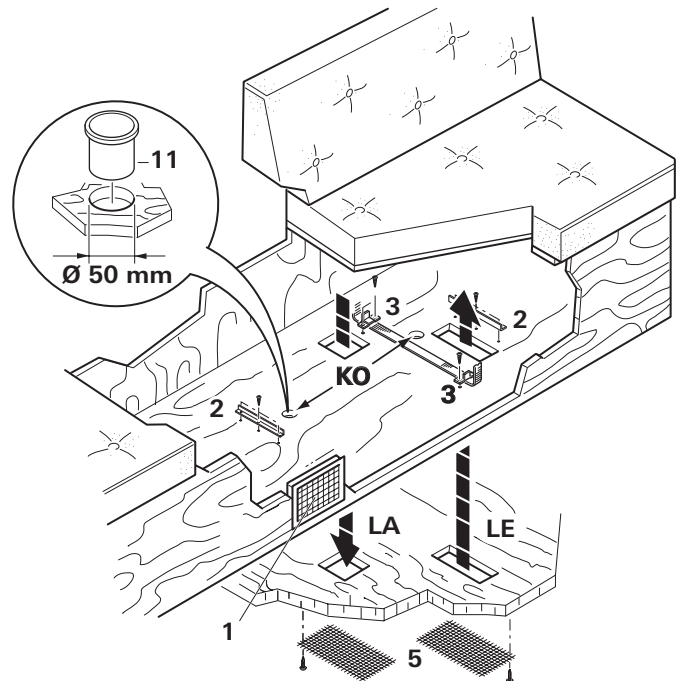


Fig. 5

Mark floor opening "LE" for the supply air intake, "LA" for the supply air outlet and "KO" for the condensation drains.

Remove template and cut out the marked floor openings.

**Before drilling, always check for underlying / concealed cables, gas lines, frame sections and the like!**

Then seal the edges of the openings in the floor of the vehicle with underbody protection.

Screw on the 2 side fastening brackets (3) with 2 screws each and the 2 brackets (2 – HW – leg must be pointing towards the outside!) with 3 screws each.

Insert connections (11) for condensation drain (KO) from above.

Seal connections (11) for condensation drain all round from below using body sealant.

**i** **When installing the unit, please ensure that the connections (11) of the condensation drain are located in the recess in the floor of the vehicle. Otherwise there is a risk of water penetrating the interior! In order to provide perfect air circulation the apertures in the base of the equipment and the floor must be exactly aligned. If this is not the case the equipment is not guaranteed to operate correctly!**

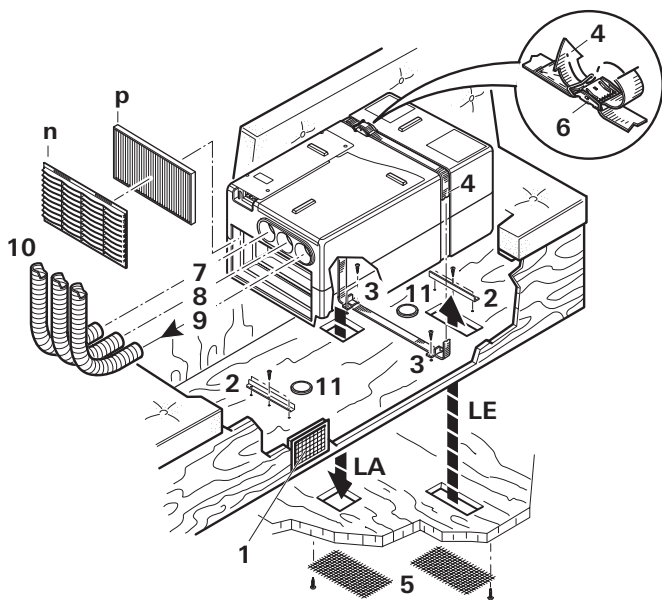


Fig. 6

Lead clamping strap (4) through the 2 fastening brackets (3) – lettering on clamping strap should be facing the floor.

Position air conditioning system in stowage compartment between brackets (2 – HW) and fastening brackets (3). Secure air conditioning system with clamping strap (4). Ensure that the clamping strap is in the provided recesses on the device. Guide clamping strap (4) through buckle (6) as shown in illustration and tighten.

**!** The air conditioning system must be attached **at all sides** using the brackets provided in order to prevent unintentional movement if vigorous movements occur (e.g. hard braking).

Attach the two floor grilles (5) for “LE” and “LA” to the floor of the vehicle from below with suitable screws or clips (not provided).

## Cold air distribution and circulated air return

### Air distribution

**i** The same ducts (cold air ducts) are used for heating / cooling mode.

A cold air duct KR 65 Ø 65 mm (10) with at least one outlet must be connected to all three cold air outlets of the device (7, 8 + 9).

Slide the cold air ducts (10) into the cold air outlets of the device and route to the air outlet nozzles. Ensure that the cold air ducts are firmly seated in the cold air outlets. For noise reduction purposes, Truma can supply a sound muffler for installing in the cold air system (part no. 40040-60100).

The swivel air outlet SCW 2 (black – part no. 39971-01 or beige – part no. 39971-02), the end outlet EN-O (part no. 40171-07) with lamella inset LA (part no. 40721-01/02/03/04/05) or the rectangular air outlet RL (part no. 40280-01) with connector piece ANH (part no. 40290-02) would be suitable as an outlet for the air into the vehicle interior.

### Important notes

The cold air distribution is designed individually using the modular principle for each vehicle model. A wide range of accessories is available for this purpose.

In order to achieve the maximum cooling power we recommend:

- Route cold air ducts to air outlet nozzles as short and straight as possible.
- The total accumulated length of cold air duct that may be used is 15 m.

- Connect the longest cold air duct (max. 8m) to the right-hand cold air outlet (9), since this has the highest air throughput.
- In order to avoid condensation, do not route the cold air ducts in the vicinity of inflowing outside air (or behind the refrigerator).

### Circulated air return

The circulated air is drawn in again by the device, either via an additional rectangular air grille (1 – part no. 40040-29200) or through 3 round air grilles (part no. 40040-20400) e.g. in the stowage box wall, or via several small openings with a total area of at least 300 cm<sup>2</sup>.

### Important note

The ventilation from the vehicle interior to the installation area must be in the immediate vicinity of the equipment to provide perfect air exchange. Covers must be fitted if necessary to prevent the circulated air return from being affected by stowed objects.

**i** If installation in close proximity is not possible, Truma can provide a flexible air conditioning intake as an accessory (part no. 40090-59100).

## Installing the IR receiver

The receiver (12) should preferably be fitted to the wardrobe in such a way that the remote control can be pointed at it without obstructions (length of connector cable 3 m). A 3 m cable extension is available if necessary (part no. 40090-89100).

**i** If the receiver cannot be flush-mounted, Truma can supply an on-surface frame (13) – part no. 40000-52600 – as an accessory on request.

Drill Ø 55 mm hole. Lead IR receiver cable (17) through hole towards the rear and secure receiver with 4 screws (14 – not included in scope of delivery). Then fit cover frame (15) and route cable (17) to air conditioning system.

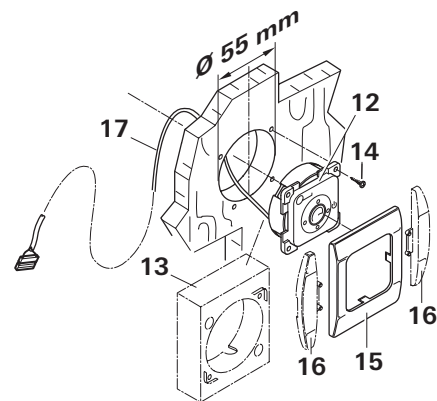


Fig. 7

**i** To finish off the cover frame, Truma can supply side parts (16) in 8 different colours as an accessory (please ask your dealer).

## 230 V electrical connection and connection of IR receiver

**!** The 230 V electrical connection must always be made by an expert (in accordance with VDE 0100, part 721 or IEC 60364-7-721, for example, in Germany). The instructions shown here do not constitute a request to non-experts to make the electrical connection, but serve as additional information for an expert who is employed to do the work!

Make the connection to the mains via the 150 cm long connector cable (20) to a line that is protected with a 10 A fuse in the vehicle.

It is imperative that connection is carried out with care while observing the correct cable colours!

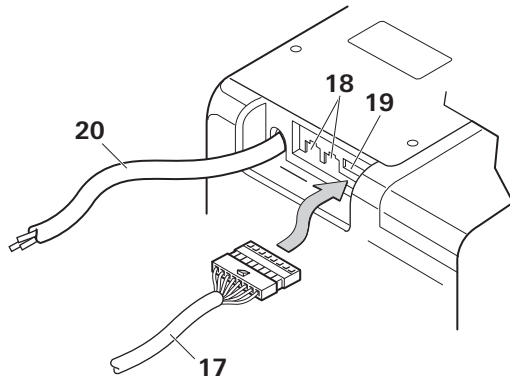


Fig. 8

Plug connector of IR receiver cable (17) into the socket (19).

**i** The connection (18) is a Com connection for communication purposes, and is not needed to operate the device.

The cables must be long enough for the device to be pulled out of the false floor with the cables attached. All cables must be secured with clamps!

An insulating device for providing all-pole insulation from the mains with contact clearance of at least 3.5 mm must be provided at the vehicle end for carrying out maintenance and repair work.

## Function test / IR remote control mounting

Position IR remote control mounting as close as possible to the IR receiver (12) so that the air conditioning system can be operated without removing the remote control from the mounting.

All device functions must subsequently be tested as described in the operating instructions.

The operating instructions must be handed over to the vehicle owner.



In Australia, always notify the Service Australia if problems are encountered; in other countries the relevant service partners should be contacted ([www.truma.com](http://www.truma.com)).

Having the equipment model and the serial number ready (see type plate) will speed up processing.