Aventa eco / comfort



Rooftop Air Conditioning System

Operating instructions



certified to UL 60335-1:2016 / CAN/CSA-C22.2 No. 60335-1:16 UL 60335-2-40:2019 / CAN/CSA-C22.2 No. 60335-2-40-19 USA: 47 CFR Part 15 Subpart B Canada: ICES-003 (B) / NMB-003 (B)

To the consumer

To be kept in the vehicle.

This document is part of the product.

Read and observe this operating instruction before operating the appliance for the first time.

Installation and service must be performed by a certified service technician or service agency.



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1 About These Instructions

These instructions are part of the product.

- Always carry the operating instructions in the vehicle.
- Also make safety instructions accessible to other users.

1.1 Document number

The document number of these instructions is printed on each inside page in the footer and on the back page.

The document number consists of

- Part number (10 digits)
- Revision status (2 digits)
- Publication date (month/year)

1.2 Validity

These instructions apply exclusively to roof-mounted air conditioning systems for the North American market (USA and Canada) and relate to the following series:

- Aventa eco
- Aventa comfort

hereinafter referred to as "air conditioner" or Aventa.

1.3 Target group

These instructions are designed for users.

③ Gender-specific differentiation is dispensed with to ensure easier legibility. The appropriate terms apply accordingly to ensure equal treatment for all genders.

1.4 Icons and Meanings

lcon	Meaning
$\underline{\mathbb{N}}$	Warns about dangers for people
	Specialist
í	Additional information for under- standing or optimizing workflows.
►	lcon for an action. Something has to be done here.
*	Optional parts
(Fig. 3-1)	Reference to a graphic e.g., Figure 3 - Number 1

1.5 Warnings

Warnings are used in these instructions to warn people about damage to people and property.

► Always read and observe warnings.

Warning word	Meaning
	Danger for people.
DANGER	Non-observation results in
	death or serious injuries.
	Danger for people.
WARNING	Non-observation can result in
	death or serious injuries.
	Danger for people.
CAUTION	Non-observation can result in
	minor injuries.
NOTICE	Information on preventing
NOTICE	damage to property

1.6 Abbreviations and glossary

Term	Meaning
LED	Light Emitting Diode
Line power	Power that is supplied to the vehicle from outside. Usually a connection is set up from a power supply socket on the campsite with an extension cable to the vehicle's external socket.
IR	Infrared
LCD	Liquid Crystal Display

2 Intended Use

2.1 Intended use

The Aventa eco / comfort roof-mounted air conditioner is designed for installation on the roof of a recreational vehicle (RV) during or after its manufacturing and is intended solely for private use. The Aventa eco / comfort is designed solely for air conditioning in living areas. The Truma roof air conditioner cools the interior area quietly, efficiently and quickly to the set temperature. It can be controlled using the remote control included with delivery, the optionally available Truma CP plus (referred to below as CP plus or CP plus control panel) or with a third-party operating panel via the RV C bus.

2.2 Not intended for use

Any use apart from the intended use is prohibited.

This applies, for example, to install and operate in:

- Boats and other watercraft
- Hunting/forest cabins, weekend houses or awnings
- Mobile homes, construction trailers
- Apartments and houses
- Construction machinery, agricultural machinery
- Food trucks

Defective, improperly installed, or units used contrary to the recommended use should not be used.

2.3 Certification

- The air conditioner was approved and certified by TEi (Testing Engineers International).
- UL 60335-1:2016 / CAN/CSA-C22.2 No. 60335-1:16
- UL 60335-2-40:2019 / CAN/CSA-C22.2 No. 60335-2-40-19
- Electromagnetic compatibility was tested and certified to the following standards:
 - USA: 47 CFR Part 15 Subpart B
 - Canada: ICES-003 (B) / NMB-003 (B);

2.4 Installation, dismantling, conversion



Only qualified and trained personnel (specialists) may install, repair and perform the functional testing of the Truma product in compliance with the installation and operating instructions

and generally approved engineering practices. Specialists are people who, on the basis of their professional training and qualifications, their knowledge of and experiences with the Truma products and the applicable standards, perform the required work correctly and can identify possible dangers.

The following applies for non-specialists:

- Do not open the air conditioner.
- Do not mount the air conditioner at other places and do not install it in other vehicles.
- Do not dismantle the air conditioner, convert it or repair it yourself.
- Only have installation, dismantling or conversion work done by trained specialists.

3 Safety Instructions

3.1 General safety

Non-observation of the provisions in the operating instructions can result in serious damage to property and gravely endanger people's health or life.

- Read and follow safety instructions precisely to rule out dangers and damage to people and property.
- Observe applicable local laws, guidelines and standards on the air conditioner's use and operation.
- The refrigerant circuit contains the refrigerant R 410A and may only be opened in the workshop.
- The air inlets/air outlets on the external unit and on the air distributor or the ducted system must not be obstructed under any circumstances. Please ensure this to guarantee the air conditioner functions flawlessly.
- ► To prevent the compressor running dry, which will result in premature wear and tear, the air conditioner must not be operated at a side angle of more than 8 % / 4.5°. Do not operate cooling mode for longer than 10 minutes in the inclined position, as condensation that forms might not be able to drain and could possibly run into the vehicle.
- The condensation drains must always be free during operation.
- Operate the air conditioner at outside temperatures of 16-45 °C / 61-113 °F.
- Operate the air conditioner only when the housing and cable are not damaged.
- Do not place fingers or objects in the ventilation grilles.
- To avoid damage to the appliance, do not use sharp or hard objects.
- In case of fire, use only approved extinguishing agents; if water is used to extinguish fire, there is a risk of electric shock.

3.2 Operator/vehicle owner's obligations

3.2.1 Operating instructions for your safety

The operating instructions are an important document and part of the product. They are intended for users and contain information that is important for safety. Only the procedures specified in the operating instructions are safe.

If the operating instructions are not observed, persons may be seriously injured or the air conditioner may be damaged.

- Read and observe the section on safety before operating the appliance for the first time.
- Always keep the operating instructions near the product.

3.2.2 Safety through care and maintenance

- Installation, maintenance, and repairs should be done only by specialists who are familiar with the hazards associated with handling electrical appliances, refrigerants, and air conditioners. Improper work can result in considerable danger.
- Tasks such as opening the system, undoing fixing points, assembly and dismantling, inspection and repairs should be carried out only by specialists
- Hot/steam and high-pressure cleaners must not be used.
- When cleaning the vehicle, make sure that no water gets into the air conditioner (e.g. do not spray water directly into air conditioner openings).

3.2.3 Safety with an approved power supply

► For fault free operation and to prevent electronic damages use only a power supply with a pure sine wave (no voltage spikes) e.g. voltage transformers, generators, and inverters.

3.3 Safe operation

Electric shock from bare, damaged power cables.

With damage on a mains lead:

- Switch the power supply off, e.g. via fuses or circuit breakers (CB) on the vehicle's main distribution board. Disconnect power supply. Secure against switching on again.
- ► Have the damaged wiring replaced by the manufacture or a qualified technician.

Fire hazard caused by overheated cable drum.

If the power cord to the vehicle is coiled be aware that high current consumption can cause it to heat up.

- If the power cord to the vehicle is coiled be aware that high current consumption can cause it to heat up.
- Use cable with a minimum cross-section of 3 x AWG 12 / 3 x 3.3 mm²

3.4 Handling faults

- Have faults rectified immediately by a specialist.
- Only rectify faults yourself if their rectification is described in section "10 Faults" on page 29.

3.4.1 What to do with unusual sounds and smells

- ► Switch the roof air conditioner off.
- Have the roof air conditioner checked by a specialist.

4 Product Description

The Truma Aventa roof-mounted air conditioner is designed for installation on the vehicle roof (Fig. 1).

The air conditioner is available in two variants.

- Truma Aventa eco with 13500 BTU/h
- Truma Aventa comfort with 15000 BTU/h

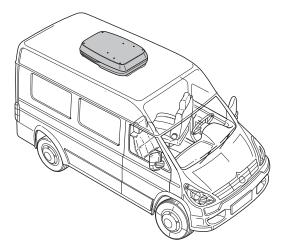


Fig. 1

4.1 Construction

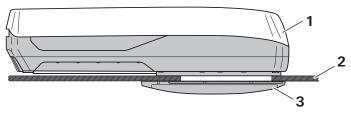
The air conditioner consists of the external unit and a remote control. The interior air distributor is another component of the air conditioner, depending on the installation.

4.1.1 External unit

The air conditioner's external unit (Fig. 2-1) is installed on the vehicle's roof (Fig. 2-2).

4.1.2 Air distributor*

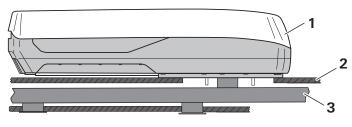
The air conditioner's air distributor (Fig. 2-3) is installed on the ceiling inside the vehicle (Fig. 2-2).





4.1.3 Ducted system

The ducted system (Fig. 3-3) for the air conditioner (Fig. 3-1) runs inside the ceiling and is part of the vehicle.





4.2 Function

Compressor air conditioners function like a refrigerator: A refrigerant circulates in a closed circulatory system. The gaseous refrigerant is liquefied in a heat exchanger under the pressure of a compressor. In the evaporator heat and moisture are removed from the supplied room air and then dissipated outside.

A fan distributes the cooled and dehumidified air via the air distribution system into the vehicle. The roof-mounted air conditioner ensures cool air inside the vehicle.

4.3 Condensation

4.3.1 External condensation drain

Condensation is drained via the vehicle's roof. Holes are provided in the bottom of the external unit for this, through which the condensation drains.

(1) With longer air conditioner operation, pools of water can form under or beside the vehicle.

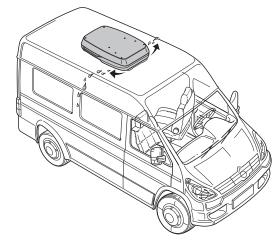


Fig. 4

In most cases the condensation would run to the front or rear of the vehicle.

4.3.2 Internal condensation drain*

The condensation is drained via an internal hose system. The tube system is configured differently depending on the vehicle manufacturer.

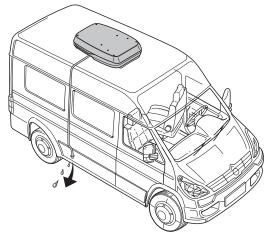


Fig. 5

4.4 Clearance

4.4.1 External unit clearance

The air conditioner draws in cooling air at both sides and, after it passes the heat exchanger, blows it out to the rear. For safe operation, the air inlets and air outlets must not be obstructed or misaligned.

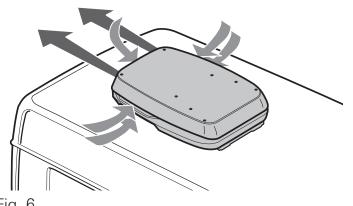
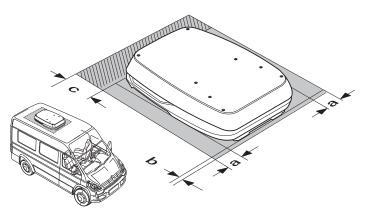


Fig. 6

Around the external unit, the distances to possible roof structures must be adhered to.



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Dimension	Value in in.	Value in mm
а	4 1⁄64 in.	102 mm
b	10 in.	25.4 mm
С	110 in.	279.4 mm

- ▶ Install later additions (solar systems, roof railing, satellite system, other roof structures) outside the clearance area.
- ► Stored items (surfboards, tents) must be outside the clearance area.

4.4.2 Internal unit/air distributor clearance

The clearance around the air distributor must guarantee unobstructed blowing out. There must also be clearance around the suction area (8-a).

The swivel range of flaps and doors must be taken into account.

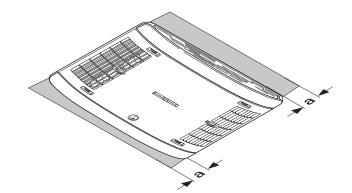


Fig. 8

Dimension	Value in in.	Value in mm
а	1 ³⁷ / ₆₄	40

4.5 Product labeling

The device type and the serial number are printed on the type plates.

4.5.1 Air conditioner type plate

There is a type plate with the air conditioner's data (Fig. 9-1) on the bottom of the air conditioner in the air distributor area.

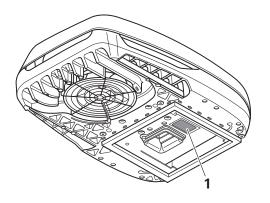


Fig. 9

A second type plate (duplicate) is also delivered with the air conditioner. After installation, the vehicle manufacturer will possibly have placed this type plate in the operating instructions or at an easy-to-access point in the vehicle.

4.5.2 Air distributor type plate

The air distributor does not have its own type plate."4.8 IR receiver" on page 13

4.5.3 Remote control type plate

There is a sticker with the remote control's data on the inside of the battery holder's cover.

- Part number
- Hardware status (HW)
- Software status (SW)
- Production date

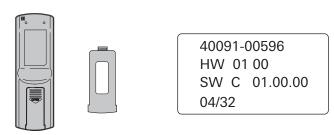


Fig. 10

4.6 Air distribution in the interior

4.6.1 Air distribution via the air distributor*

The warm room air is drawn in via the air distributor, through filters. The warm room air is cooled by the air conditioner and flows directly via the air distributor into the interior. The air distributor is below the ceiling.

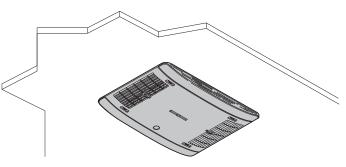


Fig. 11

The air distributor has four individually adjustable outlets. The air flow can therefore be dispensed evenly and draft-free and distributed in the vehicle.

(See: "6.13 Set air flow" on page 23).

An integrated filter system in the air distributor cleans the interior air. As the air distributor is very flat, almost complete freedom of movement is maintained.

The IR receiver for communication with the remote control is on the air distributor (See: "4.8 IR receiver" on page 13).

4.6.2 Air distribution via the vehicle roof

The warm room air is drawn in via the ducted system in the ceiling. The cooled air flows from the air conditioner via the ducted system into the interior. The ducted system is between the vehicle roof and the ceiling. It is installed by the vehicle manufacturer and varies from model to model.

See: Vehicle manufacturer's operating instructions.

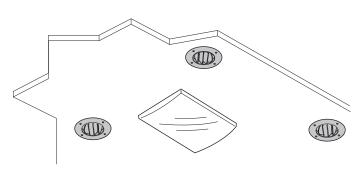


Fig. 12

4.7 Remote control

The air conditioner can be controlled with a remote control.

(1) The remote control switches off automatically after about one minute to save the battery.

NOTICE

Heat can damage the remote control

 Do not leave the remote control in direct sunlight or on heaters.

4.7.1 Button panels

The remote control has two button panels. The buttons for the most important functions are on the top button panel. It is always visible. The buttons for advanced functions are on the bottom button panel. This can be concealed with a cover.

- Push the cover down (Fig. 13-1). Bottom button panel is visible.
- Push the cover up (Fig. 13-2). Bottom button panel is concealed.







Fig. 13

4.7.2 Top button panel

The top button panel includes the following functions:

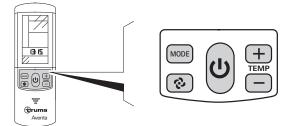


Fig. 14

lcon	Function name
MODE	MODE Select operating modes
	FAN Set fan operating level
C	ON/OFF On/Off switch
TEMP	TEMP + TEMP - Set temperature

4.7.3 Bottom button panel

The bottom button panel includes the following functions:

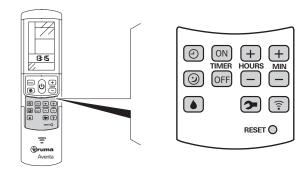


Fig. 15

lcon	Function
	TIME Show / set time
*)	NIGHT Quiet mode
	DEHUMIDIFY Dehumidify air conditioner
ON TIMER OFF	TIMER ON TIMER OFF Switch timer on/off
HOURS	HOURS + HOURS - Set hours
	SETUP Setup
	MIN + MIN - Set minutes
([:•	RESEND Send last settings
RESET O	RESET Reset

4.7.4 Display

The remote control has an LCD that shows the current settings. The display does not have background lighting.

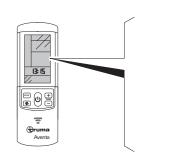




Fig. 16

lcon	Meaning
*	Cooling mode
*)	Night mode
	Dehumidify
auto	Automatic mode
Ð	Circulating air mode
7	Setup
(((.	Resend
12345	Climate zone number
C	Fan setting low
R	Fan setting medium
•	Fan setting high
88	Temperature value
°C	Degrees Celsius
۴	Degrees Fahrenheit
88:88	Time display (AM / PM)
ON OFF	On / Off

4.7.5 IR transmitter

Remote control signals are sent with infrared waves to the IR receiver in the air distributor (Fig. 17) or to the wall-mounted IR receiver (Fig. 18).

There is an IR transmitter diode for this at the top of the remote control.

Infrared waves behave like light waves.

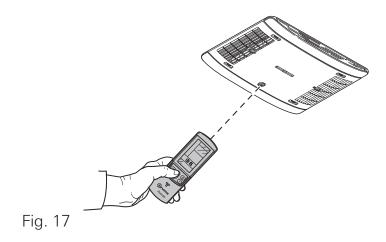
► To operate the air conditioner, point the remote control at the IR receiver.

NOTICE

Do not cover the IR receiver.

The IR receiver must be free for fault-free operation.

- Do not stick labels or similar over the IR receiver.
- ► Do not cover the IR receiver (e.g. with curtains).



4.8 IR receiver

Depending on the vehicle and installation situation, the IR receiver can be installed in the air distributor or in the wall panel. Several IR receivers can also be installed in one vehicle (multi-zone mode).

4.8.1 Air distributor IR receiver*

The remote control signals are received by an IR receiver (Fig. 19-2) on the air distributor (Fig. 19-1) and passed on to the air conditioner's control unit.

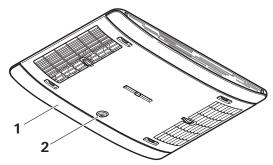


Fig. 19

4.8.2 Wall-mounted IR receiver*

The remote control signals are received by an IR receiver (Fig. 20-2) in the wall panel (Fig. 20-1) and passed on to the air conditioner's control unit.

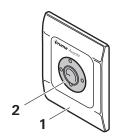


Fig. 20

Fig. 18

4.8.3 IR receiver

The IR receivers of the air distributor and the wall panel are set up the same and have the following display and control panels:

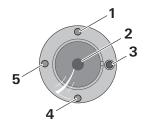


Fig. 21

- 1 Green LED
- 2 Infrared sensor
- **3** ON-OFF button
- 4 Yellow LED
- 5 Red LED

LED display	Meaning
Green LED lights	Air conditioner operating ¹
Green LED flashes	IR receiver receives signals from the remote control ²
Yellow LED lights	Power supply unstable ³
Red LED lights	Malfunction

The green LED lights when the air conditioner is switched on and goes off after approx.
 seconds. The LED lighting during the night therefore doesn't disturb anyone. The air conditioner remains switched on.

2) The green LED flashes only with correct pairing of remote control and air conditioner or climate zone.

3) See: "10 Faults" on page 29 and "6.1.2 Operation with generator or power inverter" on page 16.

4.9 Holder for remote control

There is a holder for the remote control, which, for example, can be mounted on a wall in the vehicle (Fig. 22).

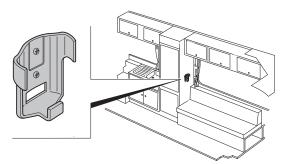
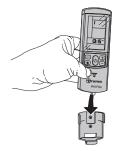


Fig. 22

 Place or remove the remote control from above into or out of the holder (Fig. 23).







4.10 Accessories

There are various accessories for the air conditioner. These can be installed with the air conditioner, depending on the vehicle manufacturer.

4.10.1 Wall-mounted IR receiver*

If a Truma air distributor is not installed on the vehicle roof, the remote control signals will be received by an external IR receiver.

The vehicle manufacturer installs the external IR receiver on an inside wall.

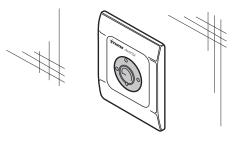


Fig. 24

4.10.2 Truma CP plus*

The air conditioner can be controlled with the Truma CP plus digital control panel (available as an option).

The CP plus control panel has an automatic climate control function. This automatically controls the room temperature together with the Truma Aventa eco / comfort air conditioner and a Truma Combi / Truma VarioHeat heater.

③ A Truma Combi / Truma VarioHeat heater must be installed to use the automatic climate control function.



Fig. 25

The vehicle manufacturer installs the CP plus on an inside wall.

Operation

 See separate CP plus control panel operating instructions.

5 Start-Up

5.1 Start-up information

- ► The installer pairs the remote control and the air conditioning system.
- If a new or replacement remote control is required, it must be paired with the IR receiver.
- Before switching on, ensure that the campsite's power supply fuse protection is adequate for the total power requirements of the vehicle.
- To perform the individual switching commands the remote control must be pointed at the IR receiver.

5.2 Pairing the remote control and air conditioning system

 Insert batteries in the remote control. The Setup icon Tlashes.
 Perform reset if the Setup icon does not flash: Press the RESET button reset of for 3 seconds, with a pen, for example.

All icons are shown briefly on the display. The Setup icon Thashes.

- Aim the remote control at the IR receiver of the corresponding air conditioning system or climate zone.
- Press and hold the SETUP button. Observe the IR receiver.
- When the green LED on the IR receiver flashes, release the SETUP button.
 The remote control has been paired with the

The remote control has been paired with the air conditioner.

The setup icon goes out and the air conditioner starts in circulating air mode with the fan at its lowest setting.

5.2.1 Just one air conditioner is installed

If only one air conditioner is installed in the vehicle, "1" is displayed on the screen. If a different number (2, 3, 4, 5) is displayed after pairing, the SETUP solution was depressed for too long.

▶ Repeat pairing until "1" is displayed.

5.2.2 Several air conditioners are installed

(See: "6.12 Multi-zone mode" on page 22) The remote control is paired with the climate zone just like an individual air conditioner is. Each remote control and climate zone must be paired separately.

After pairing, the associated number of the climate zone (1 to 5) is displayed permanently on the remote control.

6 Operation

6.1 Information on using air conditioning systems

6.1.1 Check current consumption

The air conditioning system is configured for current consumption up to 20 A.

 Before switching on, check that the campsite has adequate fuse protection (20 A).

6.1.2 Operation with generator or power inverter

The air conditioner can be operated with a power inverter or generator. The following specifications are recommended:

- Power inverter type: Pure sine-wave voltage
- Nominal voltage: 110 V 130 V AC
- Phase: 1
- Frequency: 60 Hz. +/- 5 %
- Inrush current capability: 250 ms with 115 V / 60 A RMS.
- Loads: ohmic and inductive
- Recommended power: min. 3000 W
- Truma does not define the size of the generator in recreational vehicles. When sizing the generator, the total power consumption of your RV must be considered. Generators will

lose power at high altitudes and if they are not maintained regularly.

NOTICE

The wrong power supply can cause damage to and malfunctions in the air conditioner.

 With regard to the power supply, use only sources with a pure sine wave (e.g. voltage transformer, generator) and without voltage spikes.

6.1.3 Incline

To prevent the compressor running dry, which will result in premature wear and tear, the air conditioner must not be operated at a side angle of more than 8 % (4.5°).

NOTICE

Damage caused by parking the vehicle at an angle.

It cannot be ensured that the condensate will drain. The service life and functions of the compressor will be adversely affected.

 Park the vehicle at a maximum lateral and longitudinal angle of 8 %.

6.1.4 Reduce heat radiation

To save power and cool the living area quicker:

- ▶ Park the vehicle in the shade.
- Close blinds or curtains.
- Clean the vehicle roof regularly, as dirty roofs heat up more.

6.1.5 Optimize interior climate

To ensure a healthy interior climate the difference between the inside temperature and the outside temperature should not be set too high. The circulated air is cleaned and dried during operation. A pleasant interior climate is generated by drying the high-humidity air, even with low differences in temperature.

- Ventilate the vehicle thoroughly before operating the air conditioner, to remove accumulated hot air from the vehicle.
- Keep all doors and windows closed during cooling mode, so condensation does not form on the air distributor.

 Direct the air flow in the room so it keeps the air in the room moving.

6.1.6 Settings for fast cooling

- · Set fan level to high
- Set front/rear air distribution to medium
- · Set floor/ceiling air distribution to ceiling
- (See: "6.13 Set air flow" on page 23)

6.2 Switch air conditioner on and off

The air conditioner can be switched on and off via the remote control.

① The air conditioner can also be controlled with a control panel installed in the vehicle, such as the CP plus, which is available as an option. If a third-party control panel is installed, read the operating instructions.

If the remote control is not at hand or the batteries are low, the air conditioner can also be switched on and off manually via a button on the IR receiver. The air conditioner runs in cooling mode with a low fan setting.

6.2.1 Switch air conditioner on (remote control)

► Press the ON/OFF
 button on the remote control.

The set icons are shown on the remote control's display.

The green LED on the IR receiver flashes briefly.

The air conditioner is switched on. The last settings are active.

6.2.2 Switch air conditioner off (remote control)

Press the ON/OFF

 button on the remote control.

Only the time is then shown on the remote control's display.

The green LED on the IR receiver flashes briefly.

The air conditioner is switched off.

6.2.3 Switch air conditioner on (buttons)

 Press the ON/OFF button on the IR receiver (Fig. 21-3) for one second, e.g. with a pen. The green LED on the IR receiver flashes briefly.

The air conditioner is switched on.

The air conditioner starts with the following settings: Cooling mode, fan: low, temperature: 22 °C / 72 °F.

6.2.4 Switch air conditioner off (buttons)

 Press the ON/OFF button on the IR receiver ("Fig. 21" on page 14) for one second, e.g. with a pen.

The green LED on the IR receiver flashes briefly.

The air conditioner is switched off.

6.3 Operating modes

The air conditioner operates in the following modes:

lcon	Operating mode
*	Cooling mode
auto	Automatic mode
Ð	Circulating air mode
	Dehumidify
*)	Night mode

6.3.1 Set operating mode

Press the MODE is button one or more times.

The desired operating mode is shown on the display with the corresponding icons.

The green LED on the IR receiver flashes briefly.

The desired operating mode is set.

6.3.2 Cooling mode

The room air is dehumidified and cooled in the cooling mode. The compressor switches off when the room temperature set on the remote control is reached.

The circulated air fan continues running for ventilation.

If the set room temperature is exceeded, the air conditioner automatically switches to cooling mode again.

① The air is dehumidified during the cooling process. If the air humidity is very high when the cooling process in the vehicle begins, condensation can form on the bottom of the air distributor. Therefore keep doors and windows closed and select the highest operating level.

6.3.3 Automatic mode

In automatic mode, in addition to cooling mode, the fan setting is selected from four levels according to the room temperature.

6.3.4 Circulating air mode

In the circulating air mode the interior air is circulated and cleaned by the filters.

6.3.5 Night mode

In night mode, interior and exterior fans run at low speed and therefore especially quiet. Night mode deactivates the selected fan setting (low, medium, high) and activates cooling mode.

► Press the "NIGHT" 🕑 button.

The cooling mode * and night mode * icons are shown on the display.

The green LED on the IR receiver flashes briefly.

Night mode is set.

Press the button again to switch Night mode off. The air conditioner is then operated with the previous settings again.

6.3.6 Dehumidify

Dehumidify mode reduces humidity in the room. The selected fan level setting (low, medium, high) is deactivated and cooling mode is activated.

▶ Press the DEHUMIDIFY button.

The cooling mode * and dehumidify \bullet icons are shown on the display.

The green LED on the IR receiver flashes briefly.

The air conditioner dehumidifies the room.

Press the button again to switch dehumidify mode off. The air conditioner is then operated with the previous settings.

6.4 Adjust fan

The interior air fan has three operating levels.

lcon	Operating level
€ ≥	Low
R.	Medium
•	High

► Press the FAN [®] button for the desired operating level one or more times.

The fan's desired operating level is shown on the display.

The green LED on the IR receiver flashes briefly.

The desired operating level is set.

 In the automatic mode the FAN [™] button has no function.

6.5 Set temperature unit

The temperature on the display can be shown in degrees Fahrenheit (°F) or degrees Celsius (°C).

Press the TEMP
 and TEMP
 buttons at the same time.
 The temperature display changes between

° F and ° C.

6.6 Set the room temperature

The room temperature can be set in a range from 62 $^{\circ}\text{F}$ / 16 $^{\circ}\text{C}$ to 88 $^{\circ}\text{F}$ / 31 $^{\circ}\text{C}$ in steps of one degree.

The desired room temperature is shown on the display.

The green LED on the IR receiver flashes briefly.

The desired room temperature is set.

6.7 Set clock

After replacing the battery, when changing to or from daylight saving time, or when changing to a different time zone, you have to set the time manually. If a timer is active, the time cannot be changed.

- Press the TIME button.
 The time is shown flashing on the display.
- Set the current hour with the HOURS
 and HOURS
 buttons.
 Set the current minute with the MIN
 and MIN
 buttons.
- Press the TIME
 button again or wait approx. 10 seconds.

The time is shown on the display The time is set.

① The clock shows 12 am at midday. At midnight it shows 00:00 am.

6.8 Set timer

Two timers can be programmed.

• Timer ON

The air conditioner is switched off. The time set in the Timer determines when the air conditioner is switched on.

• Timer OFF

The air conditioner is switched on. The time set in the Timer determines when the air conditioner is switched off.

The Timer can be set in a range of minimum 15 minutes to maximum 24 hours. Times set in the Timer of less than 15 minutes are rounded up to 15 minutes.

Only one Timer can be active at one time.

If a timer is active, all buttons except ON/OFF (a) , RESEND (c) , TIMER (c) and TIMER (c) have no function.

Times set in the Timer are only sent to the air conditioner when the TIMER I or TIMER For buttons have been pressed.

If the remote control goes to stand-by mode after approx. one minute and a timer is active,

then, next to the current time, the Timer set time is shown on the display with the corresponding Timer ON or Timer OFF icons.

When the timer has been programmed, no further communication between the remote control and the IR receiver is required for the Timer function to operate.

The remote control can be placed after the programming in the holder or in a drawer, for example.

6.8.1 Program Timer ON

 Switch the air conditioner on with the remote control.

The air conditioner runs with the last settings made.

- Set the desired operating mode and room temperature.
- Press the TIMER Model button.
 The Timer ON icon is shown on the display.
 The Timer flashes.
- Set the Timer set time with the HOURS = and HOURS = buttons.
 Set the minutes with the MIN = and MIN = buttons.
- Confirm the setting with the TIMER button.

The time set in the Timer is shown on the display with the ON icon.

The time set in the Timer is sent to the air conditioner.

The green LED on the IR receiver flashes briefly.

The air conditioner switches off and the Timer starts.

► Wait. After approx. one minute the remote control goes to stand by. If the ON/OFF button is pressed after Timer programming, the air conditioner switches on again and the time set in the Timer is deleted.

When the time set for Timer ON is reached, the air conditioner starts automatically with the previously selected settings.

6.8.2 Program Timer OFF

 Switch the air conditioner on with the remote control.

The air conditioner runs with the last settings made.

- Set the desired operating mode and room temperature.
- Press the TIMER me button. The Timer OFF icon is shown on the display. The Timer flashes.
- Set the Timer set time with the HOURS = and HOURS = buttons.
 Set the minutes with the MIN = and MIN = buttons.
- Confirm the setting with the TIMER In button.

The Timer is shown on the display with the OFF icon.

The time set in the Timer is sent to the air conditioner.

The green LED on the IR receiver flashes briefly.

The air conditioner runs with the previous settings and the Timer starts.

► Wait. After approx. one minute the remote control goes to stand by. If the ON/OFF button is pressed after Timer programming, the air conditioner switches off again and the time set in the Timer is deleted.

When the time set for Timer OFF is reached, the air conditioner switches off automatically.

6.8.3 Switch timer off

Press the TIMER I or TIMER button again.

No Timer is shown on the display. The green LED on the IR receiver flashes briefly.

The Timer is switched off.

6.9 Reset

The remote control settings can be reset to the factory settings with the Reset button. The remote control must then be paired with the installed air conditioner.

Factory settings:

- · Operating mode: Circulating air
- Fan: Low
- Time: 12:00
- Timer: Off
- Temperature: 72 °F / 22 °C
- Press the RESET button RESET of for 3 seconds, with a pen, for example.
 All icons flash briefly on the display.
 Only the SETUP icon will flash briefly on the display.
- ► Point the remote control at the IR receiver.
- ▶ Press and hold the SETUP button.
- Release the SETUP button when the green LED flashes on the IR receiver.
 The air conditioner's settings are reset to the factory settings.
 The SETUP icon on the display goes off and

The SETUP icon on the display goes off and the corresponding air conditioner number is shown.

The remote control has been paired with the air conditioner.

6.10 Resend

Sending the air conditioner's settings can fail if, for example, the remote control was not pointed precisely at the IR receiver. In this case the last settings made can be sent again.

► Press the RESEND button. The send icon is shown briefly on the display.

The green LED on the IR receiver flashes briefly.

Settings are sent.

6.11 Set time format

The time on the display can be shown in the 12 or 24-hour format.

► Press the TIMER I and TIMER I buttons at the same time.

The time format changes between AM / PM and 24-hour format.

If a timer is activated, the timer must be switched off via the remote control and programmed again.

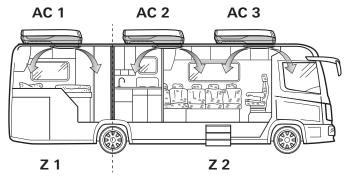
6.12 Multi-zone mode

6.12.1 Setup and function

Several air conditioners can be installed in a vehicle. The vehicle is then divided into climate zones. Up to 5 air conditioners can be provided in a climate zone and up to 5 climate zones can be managed.

In the example (Fig. 26) Zone 1 (Z 1) has one air conditioner (AC 1) and Zone 2 (Z 2) has two air conditioners (AC 2, AC 3).

The zones are spatially separated from each other. Air conditioners in a zone are coupled and use the same settings (AC 2 and AC 3).





Each climate zone has its own assigned number, which is specified by the vehicle manufacturer during installation. The air conditioners in a zone can be operated via a remote control and/ or the Truma CP plus control panel.

The associated zones are shown on the remote control with a number (1-5). This identifies the assignment between remote control and climate zone.

If all air conditioners were to be switched on at the same time in multi-zone mode, this would create high peak loads in the power supply. This could cause problems if the air conditioners' power supply is provided by an inverter or a generator. In multi-zone mode the individual air conditioners are therefore switched on one after the other with a short time delay. The air conditioners within a zone are also switched on with a time delay.

6.12.2 Pairing the remote control

See: "5.2 Pairing the remote control and air conditioning system" on page 16.

6.12.3 CP plus control panel*

The individual climate zones can also be controlled via the CP plus control panel. One CP plus remote control is required for each climate zone.

The climate zone's number is not displayed on the CP plus. There is a connection here between the control panel and the climate zone in the cabling and the spatial proximity.

For questions regarding multi-zone mode, please contact the vehicle manufacturer's service or Truma Service.

6.13 Set air flow

The air distributor has four individually adjustable outlets. The air flow can therefore be dispensed evenly and draft-free and distributed in the vehicle.

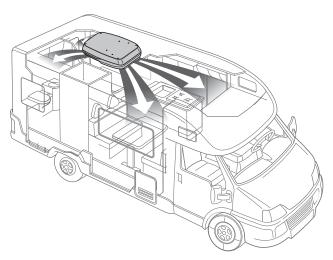
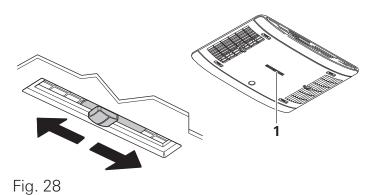


Fig. 27

6.13.1 Front / Rear

The air flow can be split with the "Front / Rear" slider (Fig. 28-1).

▶ Push the slider forward or back.



6.13.2 Ceiling / Floor

The air flow can be directed to the ceiling or the floor with the two "Ceiling / Floor" (Fig. 30-1) wheels.

► Turn wheel.

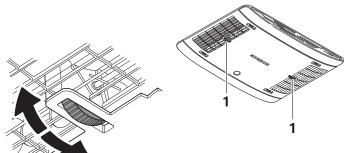


Fig. 30

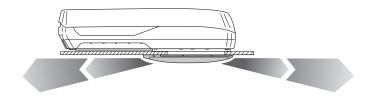


Fig. 29

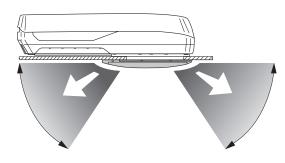


Fig. 31

6.13.3 Right / Left

The air flow can be directed to the right or left with the four "Right / Left" (Fig. 32-1) wheels. The air distributor has two individually adjustable air outlets at both the front and the rear.

► Turn wheel.

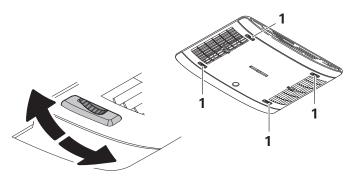
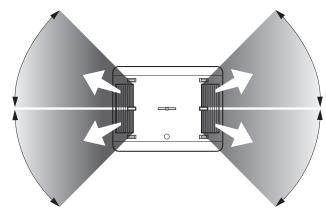


Fig. 32





7 Cleaning and Maintenance

WARNING

³ There is a danger of falling when working on vehicle roofs.

Vehicle roofs can be very smooth and slippery when wet, icy or dirty (e.g. damp foliage).

- ► Wear fall protection/safety harness.
- Work from a scaffold or a stable ladder beside the vehicle.
- ► Wear non-slip footwear.
- ► Use a second person for assistance.

When cleaning the vehicle ensure water does not enter the air conditioner when spraying, e.g. with a high-pressure cleaner.

NOTICE

Water in the air conditioner can cause damages and malfunctions.

- Do not clean the air conditioner with a hot/steam cleaner or high-pressure cleaner.
- If cleaning the vehicle with a hot/steam cleaner or high-pressure cleaner, do not spray directly into the air conditioner's openings.

Do not use any abrasive cleaning agents or sharp objects. Use a soft, damp cloth to clean the air conditioner.

Do not use gasoline, diesel, solvent, chemical cleaning agents, alcohol, surfactants, or plasticizers for cleaning.

7.1 Keep air inlets and air outlets free

The air conditioner's air inlets and air outlets on the roof must be kept free of obstructions, e.g. dirt or foliage, to ensure optimum performance and optimum air flow rate. Otherwise the function of the air conditioner will be adversely affected, which may result in damage.

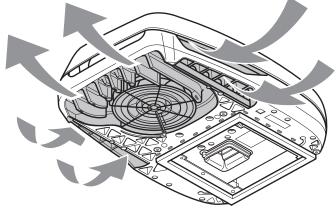
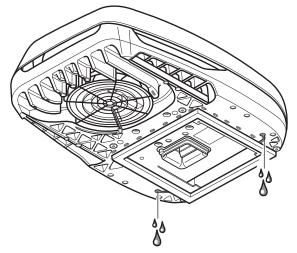


Fig. 34

7.2 Keep the condensation drain free

The air conditioner's condensation drains on the roof must be kept free of obstructions, e.g. dirt or foliage. If the condensation outlets are dirty, water can enter the interior. Otherwise the function of the air conditioner will be adversely affected, which may result in damage. The internal condensation drain must also be kept clean.





WARNING

¹ There is a danger of falling when working on vehicle roofs.

Vehicle roofs can be very smooth and slippery when wet, icy or dirty (e.g. damp foliage).

- ► Wear fall protection/safety harness.
- Work from a scaffold or a stable ladder beside the vehicle.
- ► Wear non-slip footwear.
- ► Use a second person for assistance.

8 Repair

DANGER Voltage

The air conditioner contains live parts (capacitors), which may still hold life-threatening residual voltage even after the system has been switched off. Even after the system has been switched off, internal capacitors may cause serious or fatal iniuries.

 Before disposing of or replacing capacitors, have them discharged by a specialist.



Only specialists should discharge capacitors.

WARNING **Burns from hot parts**

Parts that can get hot during operation are installed in the air conditioner.

- ► Do not open the air conditioner.
- ► Do not mount the air conditioner at other places and do not install it in other vehicles.
- ► Do not dismantle the air conditioner. convert it or repair it yourself.
- ► Only have installation, dismantling or repair work done by trained specialists.

Service and Maintenance 9

9.1 Insert/change batteries

The battery holder is on the rear of the remote control (Fig. 36).

- (i) When removing the batteries, pairing between the remote control and the air conditioning system is maintained. The time and timer are not maintained.
- ► Only use leakproof micro-batteries, type LR 3, AM4, AAA, MN 2400 (1.5 V).
- Observe the positive/negative positions when inserting new batteries.
- ▶ Then set the time and timer again.

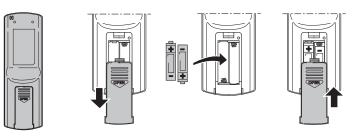


Fig. 36

Low, used batteries can leak and damage the remote control.

Remove batteries when the remote control will not been used for longer periods.

9.2 Filter change

The filters in the air distributor must be changed according to the intensity of use. It is recommended this be done at least every 12 months.

Never operate the air conditioner without filters. This can reduce power and performance.

The filters can not be cleaned.

NOTICE

Operation without a filter will cause damage and reduce the performance of the air conditioner

To ensure flawless operation, operate the air conditioner only with a filter.

 Before operation, make sure that the filter is installed in the air distributor.

Filter set, 2 (part no. 40091-16800)

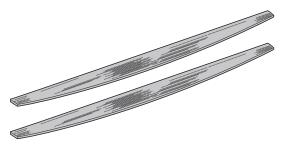


Fig. 37

 Remove both panels on the side of the air distributor (Fig. 38).

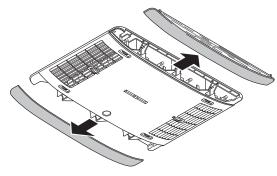


Fig. 38

- ► Remove used filters from the panels.
- ▶ Insert new filters in the panels (Fig. 39).

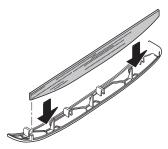


Fig. 39

 Attach panels with new filters to the air distributor. To do this, clip the panels on to the four snap-in fittings.

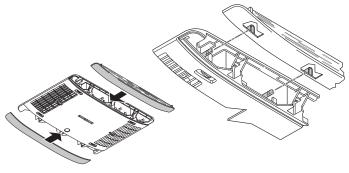


Fig. 40

10 Faults

The following measures are performed to remove faults. If these measures are not successful, please contact Truma Service.

10.1 Unstable power supply

When the air conditioner is started with a stable power supply, the compressor starts after 3 minutes.

If the power supply is not sufficiently stable (unstable voltage / frequency), the compressor tries to start, recognizes the unstable power supply (e.g. voltage / frequency instabilities in the power supply [power grid / generator / inverter]) and switches off / does not start. The indoor fan continues to run.

With an unstable power supply, this cyclical process can be repeated up to five times. After five attempts, the orange LED in the IR receiver lights up. The user must then manually switch off the air conditioner, check the recommendations listed below and restart the system. This safety mechanism is implemented to protect the air conditioner against unstable power supply situations that could damage components in the long term.

After five unsuccessful start attempts, follow the recommendations below:

- Check the power grid power supply unit.
- Check whether the inverter/generator fulfills the parameters recommended in the operating instructions.
- If other appliances are connected to the grid (TV/microwave), switch them off and try again.
- Keep power supply cables from the power grid to the air conditioner with the recommended AWG size as short as possible.
- Check whether the batteries are sufficiently charged to operate the air conditioner with the inverter.

10.2 Problems during operation

Air conditioner not cooling

The automatic defrosting is running. If a heat exchanger in the air conditioner is at risk of freezing, the defrosting starts automatically. The air conditioner then starts again with the previous settings.

The set temperature has been reached or is set too high.

► Adjust temperature setting.

Filters or panels on the air distributor are dirty.

- ► Replace filter.
- ► Clean panels.

Airways on the external unit dirty / blocked

 Clean airways on the external unit. ("Fig. 6" on page 8).

Moisture on the bottom of the air distributor

The air humidity in the room is very high

 Close doors and windows and select fan setting high.

Water dripping from the air distributor

Condensation drains on the external unit or the vehicle's condensation drain blocked. Clean condensation drains on the external unit. Air conditioner not sealed correctly to the roof. Seal is defective.

- ► Have the seal checked by a specialist service.
- ► Replace seal.

System's incline is too high.

► Park the vehicle level.

Remote control doesn't work

Battery dead.

 Check the remote control's batteries and change if required.

Air conditioner does not react to the remote control's signals

Obstructions in signal path.

 Check for obstructions between the remote control and the IR receiver.

Remote control not paired.

 Check that the remote control is paired with the IR receiver.

Yellow LED lights on the IR receiver

The air conditioner tries to start, but the compressor won't run. The external power supply for the air conditioner is unstable. This means the power inverter or generator does not provide enough power to start the compressor.

- Switch air conditioner off. The yellow LED goes off.
- Switch off higher power appliances in the vehicle (hairdryer, washing machine, toaster, etc.).
- Switch air conditioner on. The air conditioner tries to start. If the power supply is still unstable, the yellow LED lights again after a certain period (approx.

3 - 15 minutes).

Try five times with a 3-minute break between each attempt.

- Observe air conditioner's start-up current (see Technical Data).
- Have the power inverter or generator checked by a specialist service.
- Ensure that the generator is not in charging mode for the vehicle batteries.
- Charge batteries for the power inverter, check charge status.
- Install a more powerful power inverter or generator.

Red LED lights on the IR receiver

There is a control unit fault.

Switch air conditioner off, wait for a moment and switch it on again. If the red LED is still lit, contact Truma Service.

11 Disposal and Recycling

The air conditioner must be disposed of only by specialists in accordance with the administrative regulations of the respective country in which it is used. National regulations and laws must be observed.

USA:

Clean Air Act, 42 U.S. Code § 7671g, 40 CFR Part 82 Subpart F

Canada:

Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems.



The remote control and the batteries must not be disposed of in domestic waste, but rather must be recycled separately via a collection point. You then also make your contribution to reuse and recycling.

12 Technical Data

Established in line with AHRI Standard 210/240.

Madal	Avente	Avente	
Model	Aventa eco	Aventa comfort	
Cooling capacity equivalent	13,500 BTU / h	15,000 BTU /h	
Electrical rating		, 60 Hz +- 5 %	
Licenical rating	1 phase		
Compressor Rated Load	8.8 Amp	10.5 Amp	
Compressor Locked Rotor	56 Amp	58 Amp	
Fan Motor Rated Load	2.9 Amp	2.9 Amp	
Fan Motor Locked Rotor	3.0 Amp	3.0 Amp	
Refrigerant R-410A	500 g 17.6 oz	650 g 22.9 oz	
Minimum wire Size ¹ copper	3 x AWG 1	2 / 3 x 3.3 mm²	
AC Circuit pro- tection installer supplied ²	20 Amp		
Limits of use	62 – 113 °F 16 °C – 45 °C		
Max air condi- tioner incline in operation	Longitudinal 8 % (4.5°) Lateral 8 % (4.5°)		
Weight, plus installation material	38.5 kg 84.9 lbs	39.6 kg 87.3 lbs	
Adjustable tem- perature range	62 - 88 °F 16 - 31 °C		
Protection type		IPX5	
Generator size ³			

¹ For wire length over 24 ft., consult the National Electrical Code for proper sizing.

² Circuit Protection: Time delay fuse or circuit breaker required.

³ See "Information on using air conditioning systems" on page 16

12.1 Dimensions

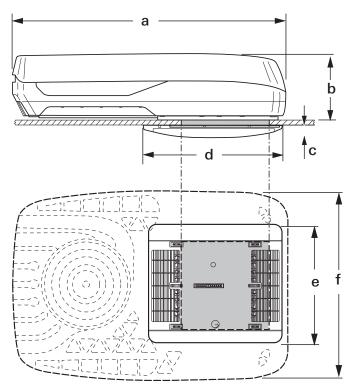


Fig. 41

Length	in.	mm
а	44 11/64	1122
b	10 15/64	260
С	1 13/16	46
d	26 27/64	671
е	20 19/32	523
f	31 27/64	798

12.2 Stickers

The following stickers are provided inside the air conditioner:

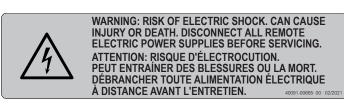


Fig. 42

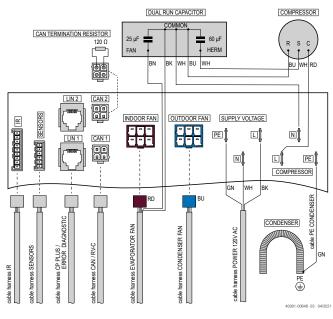


Fig. 43

13 Warranty

Truma Gerätetechnik GmbH & Co. KG ("Truma") "Aventa eco / comfort" MANUFACTURER'S LIMITED WARRANTY

(September 2014)

This limited warranty pertains solely to the "Aventa eco / comfort" (the "Product") manufactured by

Truma and sold through its affiliates and dealers in North America.

Truma warrants subject to the below stated conditions that the Product will be free from defects in material and workmanship, and will perform in accordance with the technical specifications set forth in the description of the Product for a period of twelve (12) months for newly manufactured parts from the original date of purchase. The original purchaser is advised to register the Product within two (2) months of purchase at www.truma.net in order to receive an extended warranty of an additional twelve (12) months. This limited warranty shall only apply if the Product was properly installed according to the installation instructions provided and in compliance with applicable codes.

During the warranty period, Truma will repair or replace, at its own discretion and costs, the defective Product or parts or components of such Product reported to Truma and which Truma determines was defective due to a warranty defect. Costs of diagnosis for a warranty defect are borne by Truma. Other costs of diagnosis are not included in this warranty. At the discretion of Truma, the replacement of the Product or parts or components thereof (i) may be newly manufactured, (ii) may be assembled from new or serviceable used parts that are equivalent to new parts in performance, or (iii) may have been previously installed.

The customer shall not attempt to repair the Product or resolve the problem without the prior consent of Truma. Any attempt by the customer to repair the Product or resolve the problem without the prior consent of Truma will void this warranty.

This limited warranty does not cover any defects attributable in whole or in part to (i) non-Truma products and services and / or alterations of out-of-specification supplies, (ii) accidents, misuse, negligence or failure of the customer to follow instructions for the proper use, care and cleaning of the Product, (iii) damages caused in gas pressure regulation systems due to foreign substances in the gas (i.e. oil, plasticizers), (iv) external factors (e.g., fire, flood, severe weather), (v) failure of proper transport packaging, or (vi) failure by the purchaser to comply with Truma's installation and user manual regarding the Product.

All warranty claims must be reported to Truma's authorized warranty service center in the United States:

Truma Corp Service Center, 2800 Harman Drive, Elkhart, IN 46514, toll free: (855) 558-7862, fax. (574) 538-2426, service@trumacorp.com, www.truma.net

The purchaser shall provide the following information regarding the potential warranty claim (i) serial number of the defective device, (ii) proof of purchase, (iii) purchaser's contact information.

EXCEPT AS EXPRESSLY STATED AND SET FORTH HEREIN, THERE ARE NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IM-PLIED, CONCERNING THE PRODUCT AND NO SUCH WARRANTIES OR REPRESENTATIONS SHALL BE IMPLIED UNDER ANY APPLICABLE LAW, IN EQUITY OR OTHERWISE, INCLUD-ING WITHOUT LIMITATION, A WARRANTY OF MERCHANTABILITY, A WARRANTY OF FIT-NESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY WHICH MAY BE IMPLIED UNDER COMMON LAW OR UNDER THE UNI- FORM COMMERCIAL CODE OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES OF AMERICA.

Unless further limited herein, the entire liability of Truma and the customer's exclusive remedy for damages from any cause related to or arising out of a warranty defect, regardless of the form of action, whether in contract or in tort, will not exceed the amount of the purchase price for each purchase order for the Product which is the subject matter or directly related to the causes of action asserted.

Unless prohibited under applicable state law, in no event will Truma, its agents, subcontractors, affiliates, suppliers and employees be liable for (a) any incidental, indirect, special or consequential damages, including, but not limited to, loss of use, revenue, profits or savings, substitute rental or for any other reason, even if Truma knew or should have known of the possibility of such losses or damages, (b) claims, demands or actions against the customer by any person, except as provided by applicable law.

In case you encounter any problems, please contact the Truma Service Center at 855-558-7862 or one of our authorized service partners. For details see www.truma.net.

Please have the model number and serial number handy when you call.

These information you will find on aircondition's type plate.

A sticker copy of the plate is maybe on the operating manual or somewere in the cabinet door.



http://truma.net/support.

Manufacturing

Truma Gerätetechnik GmbH & Co. KG Wernher-von-Braun-Straße 12 D - 85640 Putzbrunn Germany www.truma.com

Sales & Service

Truma Corp 2800 Harman Drive Elkhart, IN 46514 USA Toll Free 1-855-558-7862 Fax 1-574-538-2426 service@trumacorp.com www.truma.net