Montážní návod – Topení Truma S 5004-2 (EN verze)

Table of Contents

Symbols used

Symbol indicates a possible hazard.

Risk of burns! Hot surface.

Please pay attention to the ESD regulations! Electrostatic charge can destroy the electronics. Ensure that potential compensation is present before touching the electronics.

Note containing information and tips.

Installation instructions

The heater must be installed and repaired only by a qualified technician. Read the installation instructions carefully before working, and then comply with them!

Disregarding safety instructions or erroneous installation can put people in danger and cause damage to property.

Intended use

This heater was designed for installation in caravans and other trailers. The S 3004 / S 3004 P heater is also suitable for installation in motor homes. Installation in boats is not permitted.

S 3004 / S 3004 P

The 3004 / S 3004 P heater is approved for installation in passenger transport motor vehicles (vehicle class M1 motor homes) with no more than 8 seats (excluding the driver's seat) and for installation in trailers (vehicle class O caravans).

The equipment must not be installed in buses (vehicle classes M2 and M3) or vehicles for transporting hazardous goods.

If the equipment is installed in special vehicles, the applicable regulations must be followed.

S 5004

The S 5004 heater is approved for installation in trailers (vehicle class O caravans).

The equipment must not be installed in motor homes (vehicle class M1), buses (vehicle classes M2 and M3) or vehicles for transporting hazardous goods.

If the equipment is installed in special vehicles, the applicable regulations must be followed.

Heating while driving

For heating while driving, the regulation (EC) No. 661/2009 and the binding UN/ECE regulation R 122 stipulate a safety shut-off device for motor homes and caravans. The Truma MonoControl CS gas pressure regulation system satisfies this requirement.

Installing a safety shut-off device such as the Truma MonoControl CS gas pressure regulation system with appropriately configured gas installation means that a type-tested liquid gas heater may be used in line with the aforementioned regulations while driving throughout Europe.

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)
– Modifications to the exhaust duct and the cowl
– Failure to use original Truma parts as replacement parts and accessories
– Failure to follow the installation and operating instructions.

This may also invalidate the device operating permit, which in many countries also denotes cancellation of the vehicle operating permit.

The year when the equipment was first taken into operation must be indicated with a cross on the type plate (66).

The installation of the device in vehicles must comply with the technical and administrative regulations of the respective country of use (e.g. EN 1949). The national legislation and regulations (e.g. DVGW Work Sheet G 607 in Germany) must be observed.

More information about the regulations in the relevant destination countries can be requested from our foreign representatives (see www.truma.com).

Special information for installation

The device and its exhaust duct must always be installed so that they are easy to access at all times for service work, and also easy to remove and install.

Location of the heater

The driver must not come into contact with the heater from his seat. The heater must not be installed directly behind the driver's seat.

Using the installation template, check whether the floor cut-out for the combustion air intake should be on the left or the right. **The combustion air must not be taken from the vehicle interior. The combustion air must always be supplied from outside. The combustion air intake must not be subjected to wheel spray, otherwise fit a spray guard.**

⚠ The floor cut-out for the device must be installed so that no contaminated air (exhaust fumes, petrol vapour or oil vapour) can penetrate the interior of the vehicle.

⚠ **There must not be any heat-sensitive materials beneath the device** (cut out the carpet floor). On PVC floors, discolouration may occur due to heating of the heater base. There must also be no flammable / heat-sensitive materials on the vehicle underbody close to the combustion air infeed.

If the heater is installed **on a floor base, false floor** or the like, **it is essential to use the air intake extension** (part no.30030-04800, length 50 cm). The air intake extension must protrude into the air flow approx 5 to 10 cm below the lowest part of the vehicle (pay attention to ground clearance of the vehicle). 2 air intake extensions are required for the S 5004.

The floor base or false floor must be sealed off from the vehicle interior and made from non-combustible material, or have an inner lining made from sheet metal. **To prevent the accumulation of unburnt gas, the floor base must have a vent** of at least 2cm^2 **at the lowest point** or be open at the bottom.

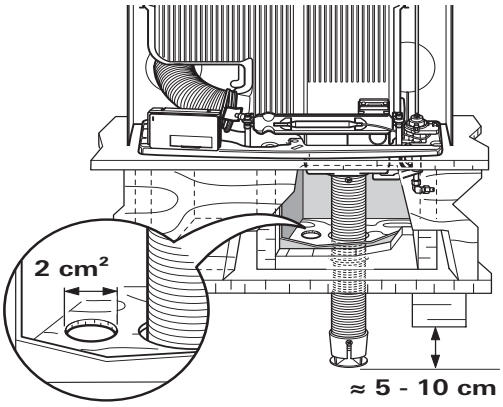


Fig. 1

Location of the roof cowl

The heater must always be operated with a roof cowl. This must always be installed vertically or with a maximum incline of 15 degrees!

The location of the roof cowl must be chosen so that it is in the air flow at all times during heater operation. Roof structures may interfere with the function of the heater.

The manufacturer of the vehicle or heater installer must determine a combination of cowl top / extension depending on the installation situation in the vehicle by means of test drives and coordinate this with Truma if necessary. Depending on the vehicle model and the roof structures, a T2 (part no. 30700-02) or T3 (part no. 30700-03) cowl top may be required. The T3 cowl top has been specially developed for motor homes.

If necessary, an AKV cowl extension (part no. 30010-20800) must also be installed. This must be secured with a screw.

⚠ An open roof window / sun roof in the vicinity of the roof cowl may allow exhaust gas to penetrate the interior of the vehicle. The cowl must therefore never be positioned near this opening. If this is not completely possible, the heater must not be used when the roof window / sun roof is open. In order to make this clear, the installer must also affix a sticker (part no. 30090-37100) to the roof window / sun roof in a clearly visible location.

Electrical connection (optional)

A 12 V power supply is not required to operate an S 3004 heater with piezo ignitor (S 3004 P) or auto ignitor (1.5 V).

12 V connection
If a Truma TEB-3 fan or lighting for the control panels is installed, a 12 V mains supply is required (alternating current ripple is < 1.2 Vpp).

The heater must be connected to the fuse-protected on-board power supply (5 A).

230 V connection ~, 50 Hz
When using a Truma TN-3 fan, a connection to the 230 V AC supply and an external control panel are needed.

Safety instructions
The unit must only be installed and repaired by an expert.

Make sure that the power supply is disconnected! Pull out the mains plug!

In-vehicle installations must comply with the technical and administrative regulations of the respective country of use (e.g. EN 1648, VDE 0100-721). National regulations and rules must be followed.

Water supply

If a water supply is being installed in the vehicle, it must be ensured that sufficient room is left between the water hoses and the heat source (e.g. heater, warm air duct).

A water hose may only be routed at a distance of 1.5 m from the heater at the warm air duct. The Truma SC hose clip (part no. 40712-01) can be used with this distance or more. With parallel routing (e.g. through a wall) a spacer (e.g. insulation) must be fitted in order to avoid contact.

Other

If a perforated drawer is installed over the heater that is used for drying objects, for example, an intermediate shelf made from non-coated wood must be installed (minimum depth 280 mm or 380 mm for S 5004). The covers of the installation compartment must be made from temperature-resistant material (not PVC or the like).

If the vehicle floor is being coated with underfloor protection, all heater parts located beneath the vehicle must be covered so that the resulting spray mist does not cause heater system malfunctions. Remove covers again when the work is complete.

In order to achieve even and quick warm air distribution and to minimise the surface temperatures at the warm air outlet grille, we recommend installing a Truma TEB-3 or TN-3 fan. The S 5004 heater must be equipped with at least one fan. A special installation box is available for operation with two fans.

Preparation work and installation box

For problem-free operation of the device it is important for the bottom edges of the installation box and the heater base to be on the same plane, and the base to be positioned in accordance with the installation template so that the control knob is not too high or too low.

Attach the installation template to the floor of the installation cut-out for the installation box. The arrow must point exactly to the leading edge of the cut-out (R = right-hand installation, L = left-hand installation).

Saw out the floor cut-out and prepare the 5 points for the fastening screws.

Seal interfaces and allow them to dry completely. **Do not use any flammable / heat-sensitive materials.**

Fig. A (right-hand installation) / fig. B (left-hand installation)

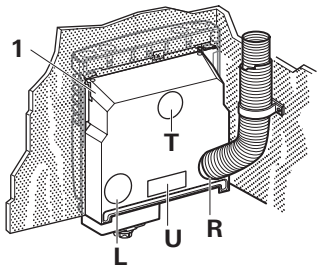
Insert the frame halves (4) into the floor cut-out, push outwards and screw down (pretension by bending open the legs beforehand if necessary so that the frame sits properly).

The sealing means that an additional seal between the frame halves and the floor is not required.

If the vehicle manufacturer stipulates a seal, surplus sealing material, particularly detached threads, must be removed. **Do not use any flammable / heat-sensitive materials.**

Break out the pre-punched breakthrough for the exhaust pipe on the installation box (1) (R = right-hand installation, L = left-hand installation). The exhaust pipe of the S 5004 heater can also be led through from the side if the installation depth is low (R1 or L1).

S 3004 / S 3004 P



S 5004

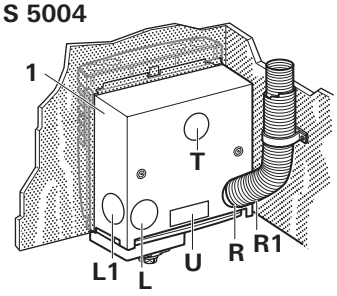


Fig. 2

If a Truma fan and / or the Truma Ultraheat additional electric heater is installed, remove the cover (T or U) and pre-attach this to the installation box in accordance with the respective enclosed installation instructions.

S 3004 / S 3004 P

Break out the pre-punched breakthrough for the control rod (7) on the installation box (1) (DR = right-hand installation, DL = left-hand installation).

⚠ Close off any unintentionally broken out unused DR / DL breakthroughs.

– Attach the fan (20) to the installation box with 3 screws (3.5 x 19).

– Place support (60) onto base (1a) of the installation box and engage.

Internal control panel

– Push the control panel cable (23 – silicon) for the fan through the recess in the support and clip into the provided cable guide.

External control panel

– The control panel cable (no picture) must not touch the heater, the fan or the warm air duct. Secure the cable properly.

– Secure the installation box (1) in the installation cut-out with 6 screws (3 x 12), each angled towards the outside. If this is not possible, the installation box can be secured at the side to the front of the installation cut-out with 4 screws.

– Secure the support (60) with 3 screws (3.5 x 16).

– Fit the cover (61) to the 2 centring aids (60a) on the support. Swivel in from above until it snaps into position.

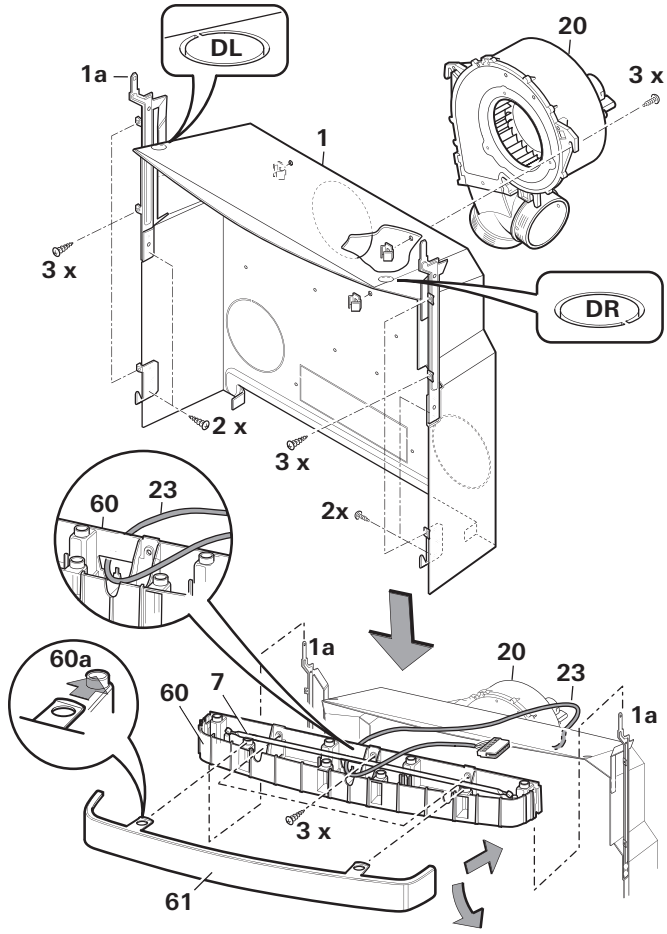


Fig. 3

S 5004

– Place the installation box outer part and inner part on top of each other and fasten with 7 screws (3.5 x 9.5) – right-hand installation (R) and left-hand installation (L).

– Secure the fan(s) (20) to the installation box with 3 screws (3.5 x 19). If no fan is installed the screws must be screwed in anyway to prevent the installation box from rattling.

– Place support (60) onto base (1a) in the installation box and snap into place.

Internal control panel

– Push the control panel cable (23 – silicon) for the fan through the recess in the support and clip into the provided cable guide.

External control panel

– The control panel cable(s) (no picture) must not touch the heater, the fan or the warm air duct. Secure the cable(s) properly.

– Secure the installation box in the installation cut-out with 6 screws (3 x 12), each angled towards the outside. If this is not possible, the installation box can be secured at the side to the front of the installation cut-out with 4 screws.

– Secure the support (60) with 4 screws (3.5 x 16).

– Slide on the panel (61) from the front until it snaps into position.

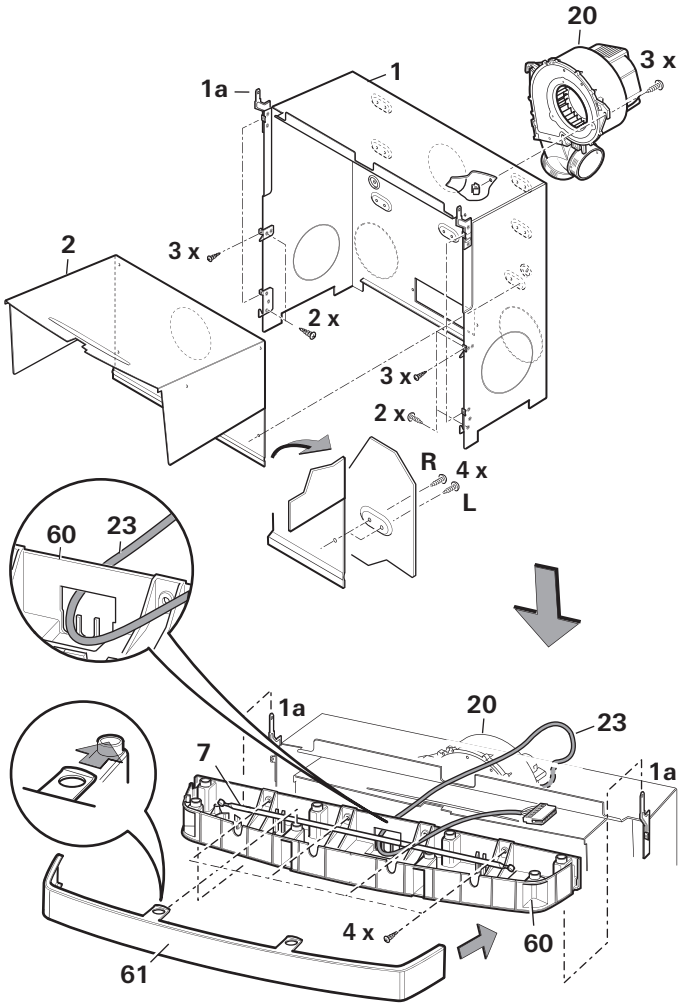


Fig. 4

Installing the heater

S 3004 / S 3004 P

Fig. A (right-hand installation) / fig. B (left-hand installation)

⚠ The thermostat sensor (5) must always be fitted to the front of the heater (room side). The thermostat sensor (5) and capillary pipe (6) must not touch the heat exchanger or the heater panelling or be kinked under any circumstances.

Left-side installation only
Remove thermostat sensor (5) carefully at the snap-in clips and place on the opposite side (mirror-inverted) until it snaps into position.

– Place heater in the floor cut-out.

– Secure device with 5 screws (3) 5.5 x 25 to the prepared points in the corners and secure in the middle at the front. Reinforce the floor structure at the screw-in points using battens, for example.

– Remove control rod (7) from the support (60), insert through the bush of the support from underneath and engage in the safety pilot valve (8).

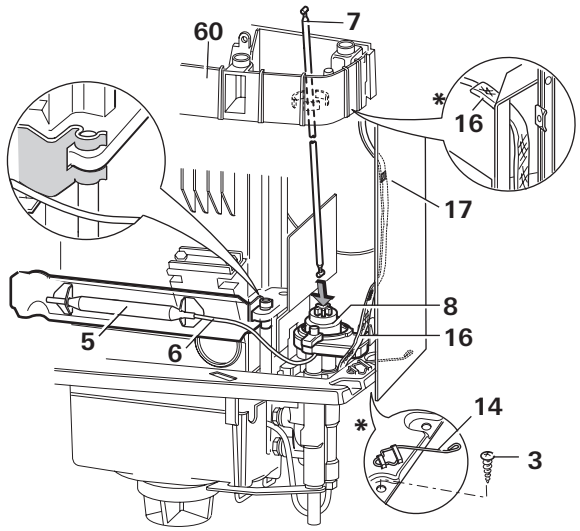


Fig. 5 / * S 3004 P only

S 3004 P – piezo ignitor preparation

– Push the earth spring (14) out of the transportation lock so that it is touching the installation box (otherwise the ignitor will not function).

– Secure electrode cable (16) at control rod side using cable clip (17) of installation box. Route electrode cable via installation box and slide through recess in support.

– The piezo ignitor must be installed at the control rod side. Bend up the right (R) or left (L) ground contact of the installation box.

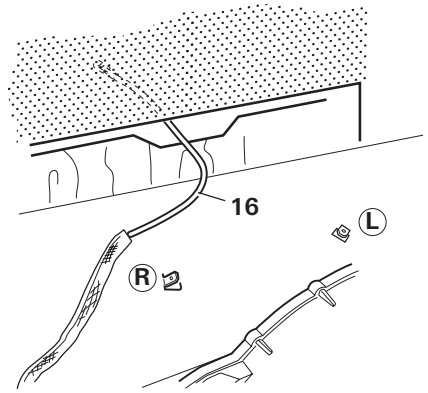


Fig. 6

S 5004

Fig. A (right-hand installation) / fig. B (left-hand installation)

⚠ The thermostat sensor (5) must always be fitted to the front of the heater (room side). The thermostat sensor (5) and capillary pipe (6) must not touch the heat exchanger or the heater panelling or be kinked under any circumstances.

Left-side installation only
Remove thermostat sensor (5) carefully at the snap-in clips and place on the opposite side (mirror-inverted) until it snaps into position.

– Place heater in the floor cut-out.

– Clip thermostat sensor (5) with heat screen onto screws.

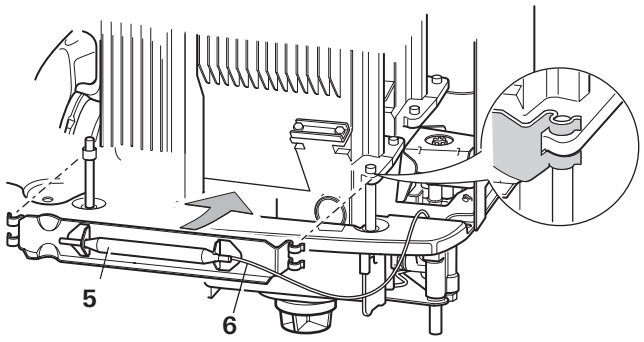


Fig. 7

– Secure device with 5 screws (3) 5.5 x 25 to the prepared points in the corners and secure in the middle at the front. Reinforce the floor structure at the screw-in points using battens, for example.

– Remove control rod (7) from the support (60), insert through the bush of the support from underneath and engage in the safety pilot valve (8).

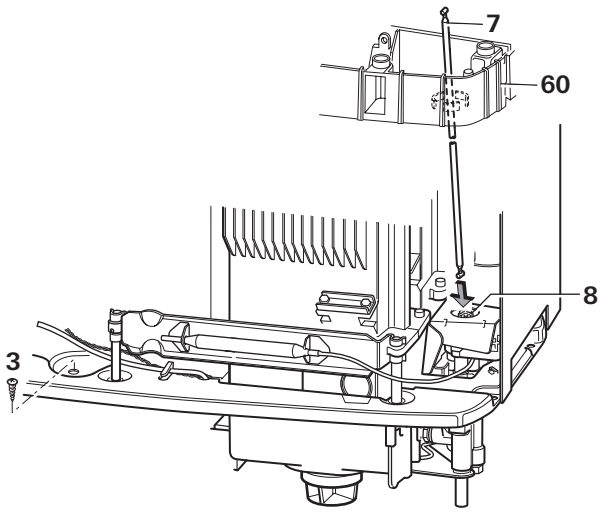


Fig. 8

S 3004 / 5004 – auto ignitor removal/installation

– To install the exhaust pipe, pull the auto ignitor (9) out of the support.

– Before installing the auto ignitor, check that the plug connections (11 + 12) are seated correctly.

– Insert the auto ignitor into the lugs (10) as far as it will go.

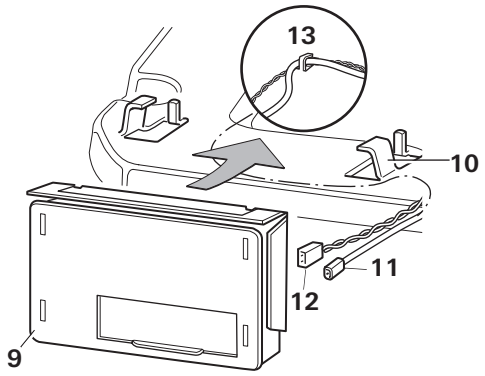


Fig. 9

Roof cowl

S 3004 / S 3004 P only
Cut opening with diameter of 60 mm + 1 mm. Distance between centre of opening and side walls must be at least 55 mm.

S 5004 only
Cut opening with diameter of 70 mm + 1 mm. Distance between centre of opening and side walls must be at least 60 mm.

If the roof has a double layer, line cavity with suitable heat-resistant material (21) to stiffen roof so that it is not deformed when the screws are tightened and remains watertight.

Insert cowl through roof from above and tighten from inside with screwing ring (31). Secure screwing ring with screw (32).

S 3004 / S 3004 P **S 5004**

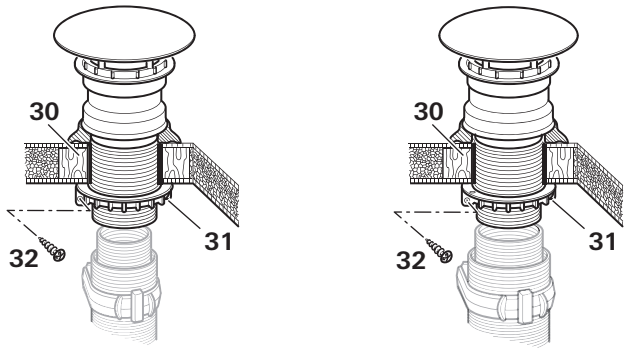


Fig. 10

The pipe is sealed by the provided rubber seal – no additional sealing required.

Exhaust duct

For the S 3004 / S 3004 P / S 5004 only the Truma stainless steel exhaust duct AE 3 for the S 3004 / S 3004 P or AE 5 for the S 5004 with Truma insulating duct ÜR or ÜR 5 must be used, since the devices have only been type tested and type approved with these ducts.

Length of the exhaust pipe

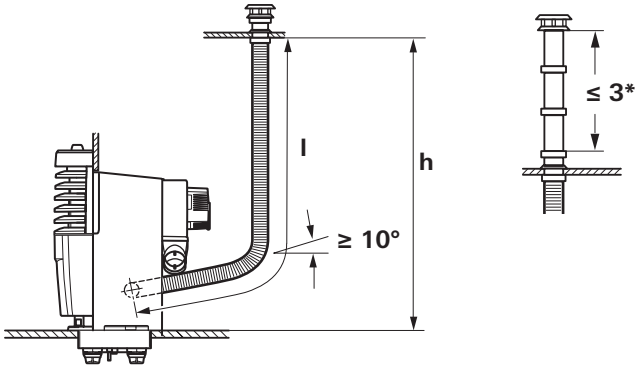


Fig. 11

	minimum		maximum	
	h [m]	l [m]	h [m]	l [m]
S 3004 / S 3004 P	1.6	1.8	2.5	3.0
S 5004	1.9	2.1		

*

⚠ If two or three 15 cm extensions are used, they must be removed before the vehicle is in motion so that they are not lost (risk of accident). Remaining extensions must be screwed in place.

The use of the duct bender (“Biege-Boy”, part no. 30030-33000) makes it easier to bend the stainless steel duct and fitting the O-ring.

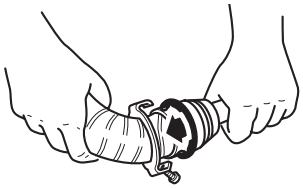


Fig. 12

Connect exhaust pipe to heater
Slide sealing plate (33 – claw points to exhaust connection of heater) about 3 cm onto the exhaust pipe (37). Slide on pressure ring (36). Carefully guide O-ring (34) over cut edge of duct by expanding it and insert exhaust pipe into the exhaust connection as far as it will go.

Slide O-ring, pressure ring and sealing plate onto exhaust connection. Hook sealing plate (33) into lugs of exhaust connection by rotating and secure by tightening screw (35). Check that exhaust pipe is firmly seated.

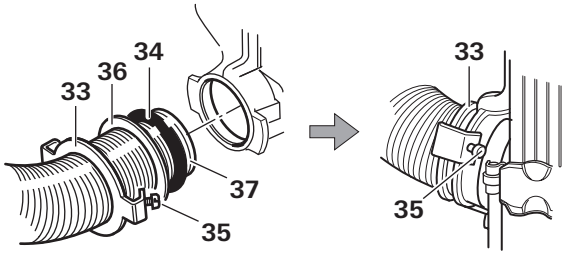


Fig. 13

⚠ A new O-ring (34) must be fitted whenever the exhaust pipe has been removed.

Slide insulating duct (38) onto exhaust pipe (must extend from cowl to rear wall of installation box).

Route ducts upwards against the wall with as little bending as possible. Slide exhaust pipe (37) into cowl as far as it will go and secure with sheet metal screw (39 – 3.5 x 16).

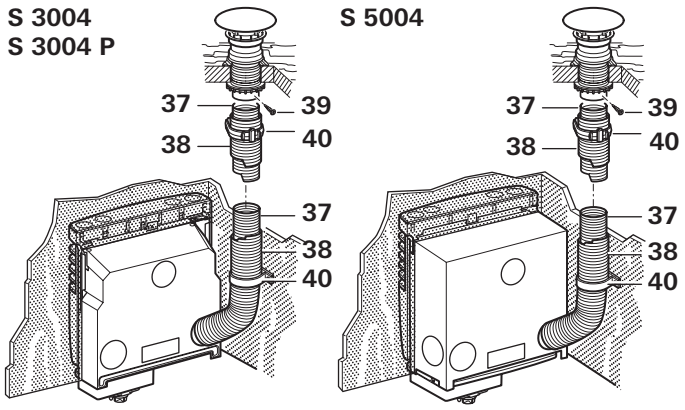


Fig. 14

⚠ The exhaust duct (37) with insulating duct (38) must be ascending along its entire length and securely and permanently installed using several clamps (40), since otherwise a water pocket may form that will prevent the exhaust gas from exiting freely.

Gas connection

Fig. A
The operating pressure of the gas supply (30 mbar) must correspond with the operating pressure of the unit (see type plate – 66).

The gas supply line must be attached to the connection (52) with an 8 mm outer diameter with a cutting ring screw.

⚠ **The gas connection to the heater must not be bent!** When the connecting nipple is being tightened it must be carefully counterheld with a spanner!

The duct routing must make it possible for the heater to be removed again for service work.

Before connecting to the heater, please ensure that the gas lines are free of dirt, shavings and the like!

Liquid gas systems must comply with the technical and administrative regulations of the respective country of use (e.g. EN 1949 for vehicles). The national legislation and regulations (e.g. DVGW Work Sheet G 607 in Germany) must be observed.

Control panels / cover

Attach control panels

The position of the knob socket (50) for the control knob (51 – gas) is determined by the installation of the heater (right-hand or left-hand installation). The control panels for the fans can be installed in any free opening in the cover (62).

S 3004 P only
The piezo ignitor (18) must be installed next to the control knob for gas.

Push the knob socket (50) for the control knob (51 – gas) and the piezo ignitor (18, if present) and the control panel (22 – for TEB-3 fan) into the recesses (pay attention to right-hand or left-hand installation!). Attach connector of fan to control panel.

Close off each free recess in the cover (62) with blank covers.

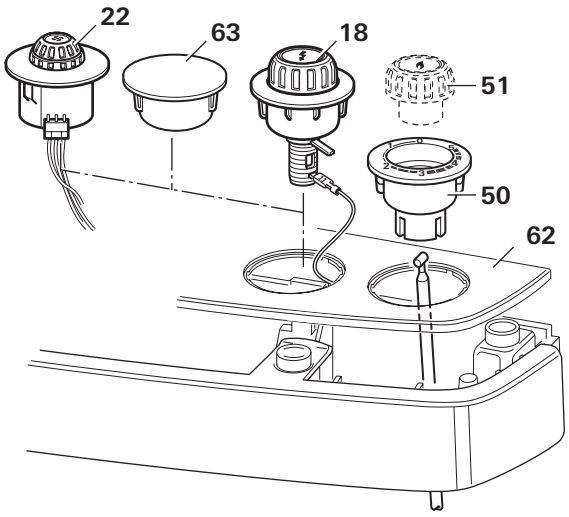


Fig. 15

Version with lighting

Please pay attention to the ESD regulations!

The cover is supplied with pre-installed sensor electronics. Attach the connectors of the control panels to the sensor PCB in any order. Secure the cables at the clamping brackets.

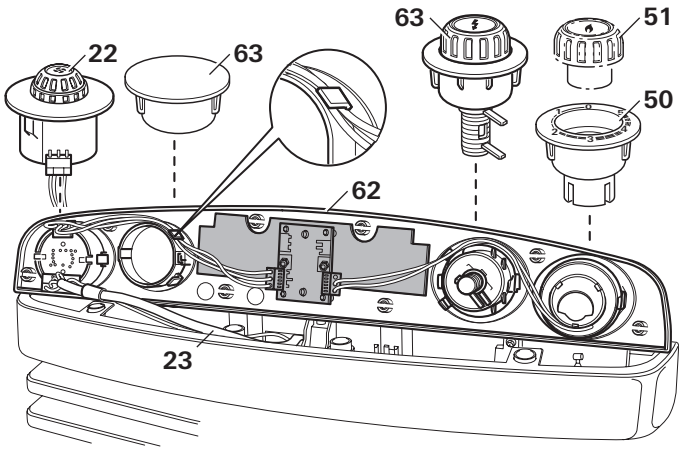


Fig. 16

The lighting is supplied with power via the TEB-3 fan.

If device S 3004 / S 3004 P / S 5004 is being operated without the TEB-3 fan, a separate 12 V line (part no. 30090-38100) from the fuse-protected on-board power supply must be routed for the lighting (alternating current ripple <1.2 Vpp).

S 3004 P only
Connect spade connector of electrode cable (16) to piezo ignitor (18). Slide earth cable (15) through the recess in the support and attach to to right (R) or left (L) earth contact of installation box.

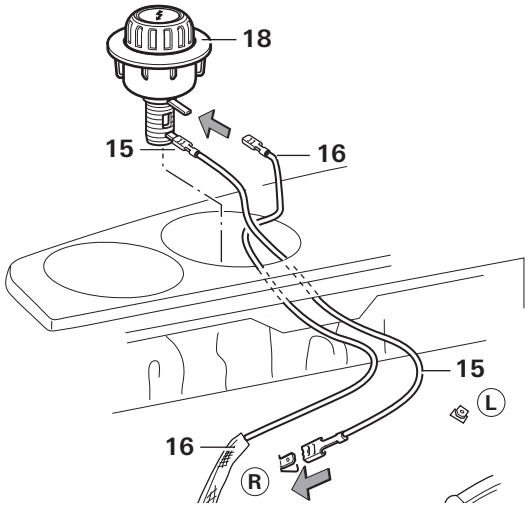


Fig. 17

Fit cover (62) to support (60) and engage. Ensure that the cables are routed without kinking and do not become trapped.

Fit control knob (51 – gas) to control rod (7) in such a way that the mark points to the "0" position.

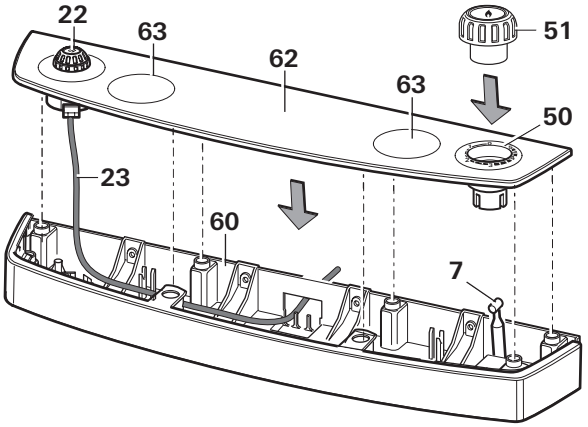


Fig. 18

Fig. B
Clip shield (65) into Mica window recess of cover (right for right-hand installation and left for left-hand installation).

Attaching the cover

Hook cover into the lower bearings (1) and swivel in (2) until catch audibly engages. Pull to make sure the cover is firmly attached.

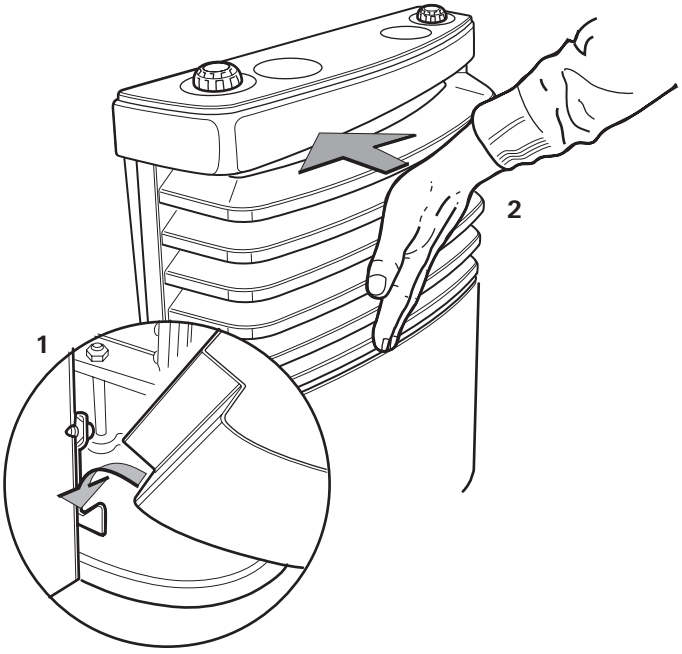


Fig. 19

Removing the cover

Do not remove the cover unless the heater is switched off and has cooled down.

The cover is unlocked by pushing the two locking levers (64) outwards simultaneously. It can be swivelled out and lifted from the lower bearings.

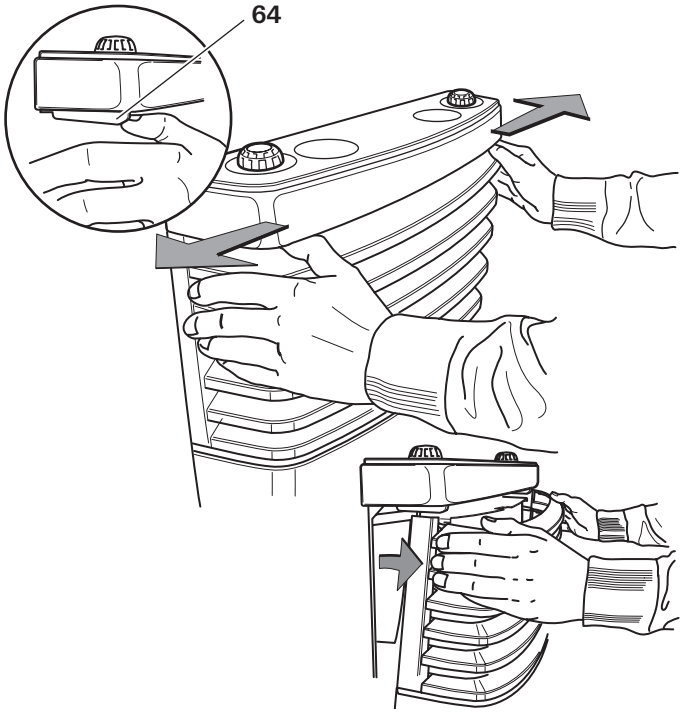


Fig. 20

Function test

The leak tightness of the gas supply line must be tested using the pressure drop method after installation. A test certificate (in Germany e.g. according to DVGW Work Sheet G 607) must be issued.

Version with lighting
The sensor electronics of the lighting calibrate themselves whenever the 12V supply voltage is applied. This can take several seconds. Do not touch the cover during calibration.

Then test all device functions as described in the operating instructions.

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

Warnings

The stickers enclosed with the device must be affixed by the installer or vehicle owner in a location in the vehicle that is clearly visible to all users! Missing stickers can be requested from Truma.

Technical data

(determined in accordance with EN 624 or Truma test conditions)

Type of gas
Liquid gas (propane / butane)
Operating pressure
30 mbar (see type plate)
Rated thermal output
S 3004 / S 3004 P: 3500 W
S 5004: 6000 W
Gas consumption
S 3004 / S 3004 P: 30 – 280 g/h
S 5004: 60 – 480 g/h
Additional information according to EN 624
S 3004 / S 3004 P: Q_n = 4.0 kW (Hs); 290 g/h; C_{51}; $I_{3B/P}$
S 5004: Q_n = 6.8 kW (Hs); 490 g/h; C_{51}; $I_{3B/P}$
Destination countries
BE, BG, RO, DK, DE, EE, FI, FR, GB, GR, UK, IS, IE, IT, LV, LT, LU, MT, NL, NO, AT, PL, PT, SE, CH, SK, SI, ES, CZ, HU, CY
Operating voltage
1.5 V (auto ignitor with battery mode)
Power consumption
225 mW (Ignition)
Weight
S 3004 / S 3004 P: approx. 10.3 kg (without fan)
S 5004: approx. 17.5 kg (without fan)
CE product ID number
S 3004 / S 3004 P: CE-0085CM0287
S 5004: CE-0085CM0288

CE **0085**

Subject to technical changes.