



Boiler Gas / Boiler Gas/Elektro

(GB) Operating instructions

Page 2

To be kept in the vehicle!

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Operating instructions

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Trade name (version)

Boiler gas (BG 10)
Boiler gas/electric (BGE 10)

Symbols used



Symbol indicates possible hazards.



Note containing information and tips.

Read the safety instructions and operating instructions carefully before starting the appliance.

Intended use

Proper use

The appliance is approved solely for installation and operation in caravans and construction trailers of vehicle class O, motor homes of vehicle class M1 and mobile homes if the gas system is installed in accordance with EN 1949. The national legislation and regulations for operating and testing gas installations (e.g. DVGW Work Sheet G 607 in Germany) must be observed.

The appliance may be used only to heat drinking water.

If the appliance is operated while the vehicle is in motion, facilities must be installed to prevent uncontrolled emission of liquefied gas in the event of an accident (according to UN-ECE regulation 122).

If the appliance is being used for commercial purposes, the operator must ensure that special statutory and insurance regulations of the respective destination country are observed (e.g. DGUV regulations in Germany).

Improper use

All other uses not listed under proper use are improper and therefore prohibited. This applies for example to installation and operation in:

- Motor buses of vehicle classes M2 and M3,
- Commercial vehicles of vehicle class N,
- Boats and other water vessels,
- Hunting/forestry huts, weekend homes or awnings.
- Installation in trailers and vehicles used to transport hazardous goods is prohibited
- Heating of liquids other than drinking water (e.g. cleaning, descaling, disinfectant and preserving agents) is prohibited.
- Defective appliances must not be used.
- Appliances installed and utilised in contravention of the operating and installation instructions must not be used.

Safety instructions



To ensure safe and proper use, carefully read and observe the operating instructions and other documents supplied with the product, and keep them in a safe place for future reference. The respective valid laws, directives and standards must be observed.

Not following the rules in the operating and installation instructions can result in serious material damage and serious risk to the health or life of persons. The appliance's operator or user is solely responsible for such damage.



The use of upright gas cylinders **from which gas is taken in the gas phase**, is mandatory for the operation of gas pressure regulation systems, gas equipment and gas systems. Gas cylinders from which gas is taken in the liquid phase (e.g. for fork lifts) must not be used, since they would result in damage to the gas system.



What must I do if I smell gas?

- Avoid ignition sources, e.g. extinguish all naked flames, do not actuate any electrical switches or use any mobile phones or radios in the vehicle, do not start the vehicle's engine, do not operate any appliances, do not smoke.
- Open windows and doors
- Evacuate all persons from the vehicle.
- Shut off gas cylinders and/or shut off the gas supply from the outside.
- Have the entire gas system inspected and repaired by qualified experts.
- Do not put the gas system back into operation until after it has been inspected and repaired.



Danger of fire/explosion during refuelling!

The appliance must not be operated during refuelling:

- the vehicle,
- the caravan's towing vehicle or
- other appliances.

Switch off the LP gas appliance at the control panel. Shut off the gas supply to the LP gas appliance. Make sure that the LP gas appliance can definitely not be switched on under any circumstances.



Repairs may only be carried out by an expert!



Hot water can be dangerous and cause burn injuries, particularly for toddlers, children, older or infirm persons. Check the water temperature every time before showering or bathing.



This appliance may be used by children from 8 years old and by persons with reduced physical, sensory or mental capabilities or with a lack of experience only if they are supervised or have been instructed in the safe use of the appliance and understand the resulting risks.



Children must not be allowed to play with the appliance.



In order to prevent any hazards caused by unintentional resetting of the over-temperature sensor, the appliance must not be supplied with power via an external switching device such as a time switch, or connected to a power circuit that is regularly switched on and off by a device.



The operating pressure of the gas supply (30 mbar) must be the same as the operating pressure of the appliance (see type plate).



The appliance, the gas system and the exhaust duct for the combustion products must be inspected by a recognised expert in accordance with the national regulations (e.g. DVGW Worksheet G 607 in Germany) or, if there are no such regulations, at least every two years.

- A recognised specialist must carry out a leak test after changes have been made to the liquid gas system.
- The vehicle owner is responsible for having the check carried out.



Any unusual burner noise or flame blow-off suggests a fault in the gas pressure regulation system, and makes it necessary to check the gas pressure regulation system.



Never use objects (e.g. spray cans, candles) or flammable materials, liquids, gaseous substances or vapours in the vicinity of the appliance, in the installation compartment or in the appliance itself.




It is prohibited to use products containing chlorine on and inside the appliance.





Only gas pressure regulating systems that comply with EN 16129 (in vehicles) with a fixed output pressure of 30 mbar may be used for the gas systems. The flow rate of the gas pressure regulation system must at least match the maximum consumption of all the appliances installed by the system manufacturer.


Operation while driving

 For heating while driving, the UN ECE regulation 122 stipulates a safety shut-off device to prevent the uncontrolled escape of gas in the event of an accident. The Truma MonoControl CS gas pressure regulation system fulfils this requirement. National regulations and rules must be followed. If no safety shut-off device (e.g. MonoControl CS) is installed, the gas cylinder must be closed while driving and notices must be attached in accordance with the valid regulations.

Important operating notes

 Drain the boiler if there is a risk of frost! No claims may be made under the warranty if this instruction is not followed.

 If the cowl has been placed near or directly beneath a window that can be opened, the appliance must be equipped with an automatic shut-off device in order to prevent operation with the window open.

 Always fit the cowl cover (k) when the boiler is not in use. Failure to do so may cause the appliance to malfunction as a result of water, dirt or insects.

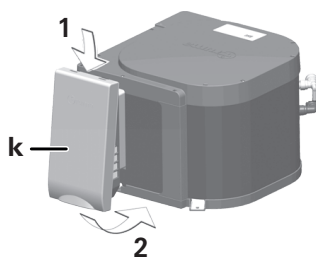





Figure 1


 Before commencing a journey, fit the cowl cover with the boiler switched off. Please ensure that it is secure and has locked into place (risk of accident). Defective cowl covers must not be used.


No claims may be made under the warranty if this instruction is not followed. It is essential to remove the cowl cover before starting up the boiler.

 Even if the cold water system is being operated without the boiler, the boiler will still fill with water. To avoid frost damage, the water in the boiler must be drained by operating the drain valve, even if the boiler has not been used.

Alternatively, two hot water-resistant shut-off valves can be fitted upstream of the cold and hot water connection.

 If connected to a central water supply (rural or urban connection), or if more powerful pumps are being used, a pressure reducer must be used which will prevent pressures higher than 2.8 bar from occurring in the boiler.

 During the initial start-up of a brand new appliance, small quantities of fumes and a slight odour may briefly occur. When the appliance is started up after a particularly long period of non-use, there may be some smoke and/or smell due to dust or dirt. It is a good idea to allow the appliance to run at maximum output for a few minutes for the purpose of self-cleaning and to ensure that the area is well ventilated.

 The materials of the appliance that come into contact with water are safe for drinking water (see Manufacturer's Declaration, www.truma.com – Manufacturer's Declaration).

Preparation

! The entire water supply must be thoroughly rinsed with warm, clear water before being used for the first time.

The installer or vehicle owner must affix the yellow warning information sticker that is provided with the appliance to the vehicle in a location that is clearly visible to all users. Missing stickers can be requested from Truma.

Filling the Truma Boiler with water

Check that the drain valve in the cold water supply is closed: the lever should be in the horizontal position (e).

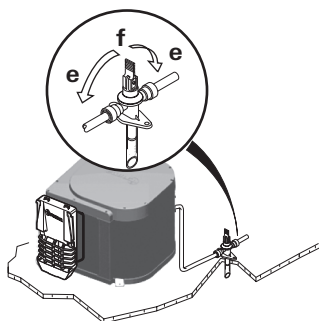


Figure 2

e = Lever position "Closed"
f = Lever position "Drain"

Turn on the hot water tap in the bathroom or the kitchen. In the case of thermostatic or single-lever mixer taps, set to "warm".

Switch on the power for the water pump (main switch or pump switch).

Leave the fittings open for as long as it takes for the boiler to displace the air and fill up and for water to flow.

In the event of frost, filling may be prevented by frozen residual water. The boiler can be thawed by turning it on briefly (no more than 2 minutes). Frozen lines can be thawed by heating the interior.

Starting up – gas mode

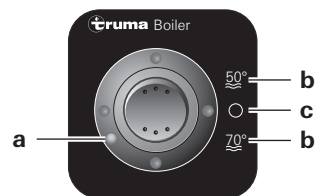


Figure 3

a = Red LED "Fault"
b = Boiler "On", 50 °C or 70 °C
c = Boiler "Off"

! Never operate the boiler when it is empty.

If the cowl has been placed directly beneath an opening window, the boiler must be equipped with an automatic shut-off device in order to prevent operation with the window open.

Remove the cowl cover.

Open the gas cylinder and the quick-acting valve in the gas supply line.

Turn the boiler on using the switch on the control panel (b).

When operating vehicle-specific switches: see vehicle manufacturer's operating instructions or markings on switches.

i If the gas supply line is full of air, it may take up to a minute before gas is available to burn. If the appliance switches to "Fault", repeat the start-up procedure by switching off (wait for 5 minutes!) and switching on again.

Start-up – electrical mode

only Boiler gas/electric BGE 10

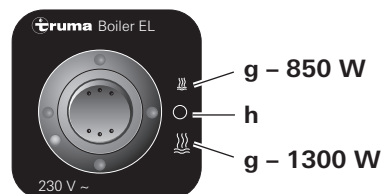


Figure 4

g = Boiler "On" 850 W or 1300 W
h = Boiler "Off"

! Never operate the boiler when it is empty!

Switch on the boiler at the control panel (g).

When operating vehicle-specific switches: see vehicle manufacturer's operating instructions or markings on switches.

! The water temperature cannot be preselected, automatic temperature limit at approx. 70 °C! The appliance can be operated with gas and electricity simultaneously in order to speed up the heating of the boiler contents.

i The electric heating element is fitted with an overtemperature sensor. In the event of a fault, switch off at the control panel. Check the water content, topping up if necessary (close drain valve). Wait for 10 minutes, then switch on again.

Red LED "Fault"

The red LED (Figure 3 – a) will light up if there is a fault. Possible causes are described on page 8. To clear the fault, switch the appliance off, wait for 5 minutes and switch it on again.

Switching off

Switch off the boiler at the control panel (Figure 3 – c; Figure 4 – h). Fit the cowl cover. Drain the boiler if there is a risk of frost. If the boiler is not being used for a long time, close the quick-acting valve in the gas supply line and gas cylinder.

Draining the boiler



If the caravan is not being used during the frosty period, the Truma Boiler must be drained!

Switch off the power for the water pump (main switch or pump switch).

Turn on the hot water taps in the bathroom and kitchen.

Open drain valve: lever vertical, position (f).

The boiler will now be drained directly to the outside via the drain valve. Check that all the water has drained out of the boiler (10 litres)

Cleaning

We recommend the use of suitable commercially available products to clean, sterilise and maintain the boiler. Products containing chlorine are not suitable.

The boiler should be heated to 70 °C at regular intervals to prevent infestation by micro-organisms.

Clean the appliance and the ventilation slots with a dry, lint-free cloth.

Fuses

The 12 V fuse for the boiler is on the electronic control unit on the appliance.

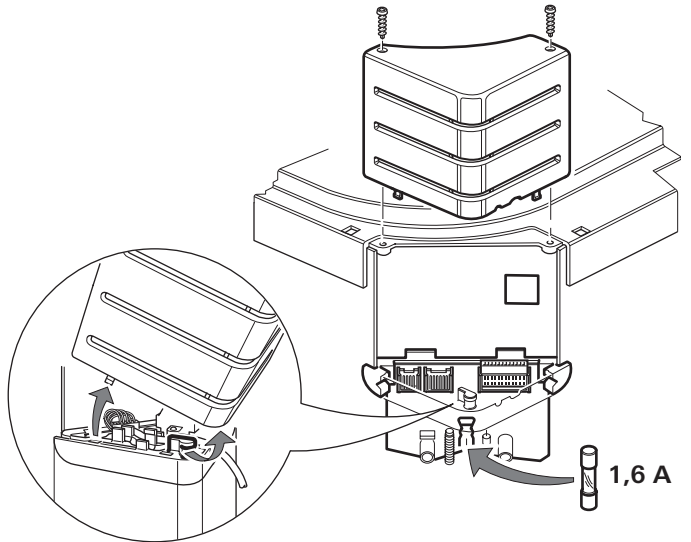


Figure 5

i The fine wire fuse on the electronic control unit must always be replaced with a fuse of the same type: 1.6 A (slow-acting), EN 60127-2-3.

Disposal

The appliance must be disposed of in accordance with the administrative regulations of the respective country in which it is used. National regulations and laws (in Germany, for example, the End-of-Life Vehicle Regulation) must be observed.

Technical data

determined in accordance with EN 15033 or Truma test conditions

Manufacturer

Truma Gerätetechnik GmbH & Co. KG
Postfach 1252
85637 Putzbrunn (Munich)
Germany

Protection class

IP21

Water capacity

10 litres

Pump pressure

max. 2.8 bar

System pressure

max. 4.5 bar

Gas type

Liquid gas (propane / butane)

Operating pressure

30 mbar

Nominal heat load

$Q_n = 1.5 \text{ kW (H}_i\text{)}; 120 \text{ g/h; C}_{11}; I_{3B/P(30)}$

Heating time from approx. 15 °C to approx. 70 °C

Gas mode: approx. 31 min.

Electrical mode: approx. 29 min. (BGE 10)

Gas and electrical mode: approx. 16 min. (BGE 10)

Power supply

12 V ---

230 V \sim / 50 Hz

Power consumption at 12 V ---

Ignition: 0.16 A

Heating: 0.12 A

Standby: 0.05 A

Power consumption at 230 V \sim (Boiler gas/electric)

Heating: (3.7 A) 850 W / (5.7 A) 1300 W

Standby – gas consumption

approx. 70 W

Weight without water

(Boiler gas)

6.9 kg

(Boiler gas/electric)

7.4 kg

Destination countries

AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR,
HU, IE, IS, IT, LI, LT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI,
SK, TR

CE 0085



E1 10R-05 2604

Subject to technical changes.

Dimensions

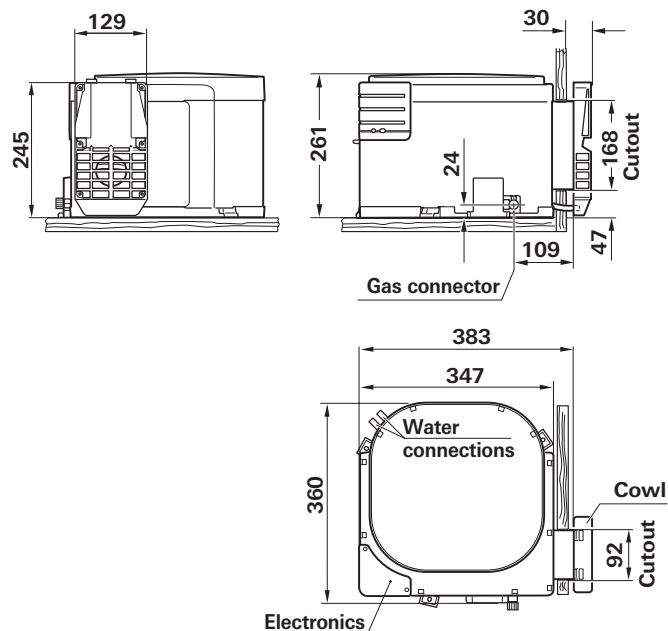


Figure 6 – All dimensions in mm.

Troubleshooting guide

Fault	Cause	Remedy
Gas mode		
Boiler does not operate after switching on.	<ul style="list-style-type: none"> – No 12 V $\overline{\text{---}}$ power supply. – Window open. 	<ul style="list-style-type: none"> – Check the battery voltage (min. operating voltage 10.5 V $\overline{\text{---}}$). – Check boiler fuse (see Maintenance, "Fuses"). – Close window above cowl.
After switching on, boiler does not operate and red LED comes on after about 30 sec.	<ul style="list-style-type: none"> – Cowl cover is fitted. – No gas supply. – Incorrect gas pressure. – Air in gas supply. 	<ul style="list-style-type: none"> – Remove cowl cover and/or check for soiling and remove if necessary. – Check gas valves and cylinder. – Check gas valves and cylinder. – To clear the fault (and bleed off air), switch the appliance off, wait for 5 minutes and switch it on again.
After a long period of operation, boiler switches to "Fault" and red LED comes on.	<ul style="list-style-type: none"> – Overtemperature sensor has activated. 	<ul style="list-style-type: none"> – Check the water content, topping up if necessary (close drain valve). – To clear the fault, switch the appliance off, wait for 5 minutes and switch it on again.
Electrical mode (BGE 10)		
Boiler does not operate after switching on.	<ul style="list-style-type: none"> – No 230 V \sim power supply. – Overtemperature sensor has activated. – Heats up too slowly with switch set to 850 W. 	<ul style="list-style-type: none"> – Connect vehicle to the local central power supply and/or check residual current protective device. – Check the water content, topping up if necessary (close drain valve). – The electric heating element is fitted with an overtemperature sensor. In the event of a fault, switch off at the control panel, wait for 10 minutes, then switch on again. – Please contact Truma Service.
Water supply		
Water dripping from drain valve.	<ul style="list-style-type: none"> – Water pressure too high. 	<ul style="list-style-type: none"> – Check water pressure (max. 2.8 bar). When connecting to a central water supply a pressure reducer must be used.
Warm water coming out of cold water tap.	<ul style="list-style-type: none"> – Hot water flowing back into cold water supply. 	<ul style="list-style-type: none"> – Fit a non-return valve to the cold water supply (see installation instructions, "Water connection").

If these actions do not remedy the problem, please contact Truma Service.

Manufacturer's Warranty (European Union)

1. Scope of Manufacturer's Warranty

As the Manufacturer of the appliance, Truma undertakes a warranty towards the Consumer that covers any material and/or manufacturing defects of the appliance.

This Warranty is applicable in EU member states as well as in Iceland, Norway, Switzerland and Turkey. A Consumer is the natural person who was the first one to purchase the appliance from the Manufacturer, OEM or dealer and who neither resold the appliance in a commercial or self-employed professional capacity nor installed it for a third party in such a capacity.

The Manufacturer's Warranty covers any of the aforementioned defects that occur within 24 months upon concluding the purchase agreement between the seller and the Consumer. The Manufacturer or an authorised service partner undertakes to remedy such defects through subsequent fulfilment, i.e. at its discretion either by repairing or replacing the defective item. Any defective parts shall become the property of the Manufacturer or the authorised service partner. If the appliance is no longer manufactured at the time of defect notification and if replacement delivery has been opted for, then the Manufacturer may deliver a similar product.

If the Manufacturer remedies a defect under its Warranty commitment, the term of the Warranty shall not start again with regard to the repaired or replaced parts; rather, the original warranty period shall continue to be applicable to the appliance. Only the Manufacturer itself and an authorised service partner shall be entitled to conduct a warranty job. Any costs that occur in the event of a warranty claim shall be settled directly between the authorised service partner and the Manufacturer. The Warranty does not cover additional costs arising from complicated removal or installation jobs on the appliance (e.g. dismantling of furnishings or parts of the vehicle body), and neither does it cover travel expenses incurred by the authorised service partner or the Manufacturer.

No further-reaching claims shall be permitted, especially damage claims presented by the Consumer or third parties. This provision shall not affect the validity of the German Product Liability Act (Produkthaftungsgesetz).

The voluntary Manufacturer's Warranty does not affect the Consumer's legally valid claims for defects against the seller in the relevant country of purchase. In individual countries there may be warranties that can be issued by the relevant dealer (official distributor, Truma Partner). In such cases the warranty can be implemented directly through the dealer from whom the Consumer bought the appliance. The warranty regulations of the country in which the appliance was purchased by the Consumer for the first time shall also be applicable.

2. Warranty exclusions

No warranty claim shall be applicable under the following circumstances:

- Improper, unsuitable, faulty or negligent use and any use that is not compliant with the intended purpose
- Improper installation, assembly or commissioning, contrary to operating or installation instructions
- Improper operation or operation contrary to operating or installation instructions, particularly any disregard for maintenance, care or warning notes,
- Instances where installations, repairs or any other procedures have been conducted by non-authorised parties
- Consumable materials and parts which are subject to natural wear and tear
- Installation of replacement, supplementary or accessory parts that are not original manufacturer's parts or which have not been approved by the manufacturer. This applies in particular if the appliance is subject to networked control, if the control units or the software have not been approved by Truma or if the Truma control unit (e.g. Truma CP plus or Truma iNet Box) has not been exclusively used

for controlling Truma appliances or appliances approved by Truma.

- As a consequence of damage arising from foreign substances (e.g. oil, or plasticisers in the gas), chemical or electrochemical influences in the water, or cases when the appliance has come into contact with unsuitable substances (e.g. chemical products, flammable substances or unsuitable cleaning agents)
- Damage caused by abnormal environmental or unsuitable operating conditions
- Damage caused by force majeure or natural disasters or any other influences not within Truma's responsibility
- Damage resulting from improper transport
- End customer's or third-party modifications of the appliance, including any replacement, supplementary or accessory parts, or installation of the same, especially concerning the exhaust gas system or the cowl.

3. Making a warranty claim

The warranty must be claimed with an authorised service partner or at the Truma Service Centre. All the relevant addresses and phone numbers can be found at www.truma.com, in the "Service" section.

The Manufacturer's address is:
Truma Gerätetechnik GmbH & Co. KG
Truma Servicezentrum
Wernher-von-Braun-Straße 12
85640 Putzbrunn, Germany

To ensure a smooth procedure, we would be grateful if you could have the following details ready before contacting us:

- Detailed description of the defect
- Serial number of the appliance
- Date of purchase

The authorised service partner or the Truma Service Centre will then specify the further procedure. To avoid transport damage, the affected appliance must only be shipped by prior arrangement with the authorised service partner or the Truma Service Centre.

If the warranty claim is recognised by the Manufacturer, then the transport expenses shall be borne by the same. If no warranty claim is applicable, the Consumer will be notified accordingly and any repair and transport expenses shall then be the Consumer's liability. We ask you not to send in an appliance without prior arrangement.



Should problems occur, please contact the Truma Service Centre or one of our authorised service partners (see www.truma.com).

In order to avoid delays, please have the unit model and serial number ready (see type plate).

Service