

Introduction

Dear Webasto Customer,

Thank you for purchasing the Thermo Pro 90 HDD water heater from Webasto. We hope that you will find it gives you reliable comfort for years to come.

The heater Thermo Pro 90 HDD works together with the vehicle's heating system to preheat the cab and engine in parking heating mode.

Regular use of the heater can provide the following advantages:

- **Improved safety** thanks to clear all-round vision from the moment you move off.
- **Reduced wear and cold-start emissions** thanks to engine preheating.
- **Achieving the comfort temperature even with engines with low waste heat** thanks to the Heating during Travel option.
- **Comfort temperature is reached automatically and in an energy-saving way in vehicles with start/stop system** thanks to corresponding heater integration (engine-off integration).

Equipment for hazardous material vehicles (ADR):

The ADR function is provided depending on the equipment.

We assume that the operation and function has been explained to you by the installing workshop/service point to your complete satisfaction. In these operating instructions we would like to once again provide you with an overview of safe use of the heater.



Note

Hazardous material vehicles may not be fitted with programmable or remote-controlled control elements.

In order to become familiar with and understand all functions of the heater, you must read this operating instructions carefully.

This ensures that you will be able to use all functions to your satisfaction and will feel safe and completely at ease with its operation.

In case of loss, please contact an authorised Webasto dealer immediately for a replacement document.

Repair or maintenance work not described in this manual may only be carried out by an authorised Webasto dealer.



Maintenance and Safety Instructions

Commissioning may not be carried out after the unit has been checked exclusively by Webasto-trained personnel. The unit may only be installed professionally in accordance with the installation instructions.

Type approval in accordance with the regulations ECE-R 122 (heating) and ECE-R 10 (EMC) is in place for the Thermo Pro 90 HDD water heater in the area covered by European Directive 70/156/EEC and/or EC/2007/46 (for new vehicle types from 29/04/2009).

The year of first commissioning is marked on the heater's type label.



Danger of explosion
and suffocation
Danger of suffocation

The heater may **not be operated**:

- at filling stations and tank facilities.
- at locations where highly flammable gases or dust can form, or at locations where highly flammable liquids or solid materials are stored (e.g. near fuel, coal and wood dust, grain storage areas, dry grass and leaves, cardboard boxes, paper, etc.).
- in closed rooms (e.g. garages), nor with time pre-selection or the Telestart function.



The heater may **not**:

- be exposed to storage temperatures above +80°C (+120°C excluding control unit). If this temperature is exceeded, the electronics can be permanently damaged.
- be operated unless the water in the heating circuit contains at least 33% quality antifreeze.

The heater:



- may only be operated with the fuel and the rated voltage specified on the type label.
- must be shut down by switching off immediately and removing the fuse in case of heavy smoking, unusual combustion noises or combustion odours.
- Restarting may not be carried out until after the unit has been checked only by Webasto-trained personnel.
- must be operated for 10 minutes with a cold engine on the lowest blower setting at least once per month.
- must be professionally checked annually, at the latest at the start of the heating period.



Liability claims:

- Failure to observe the operating instructions and the information contained in it will result in a disclaimer of liability by Webasto.

The same applies if repairs are carried out incorrectly or with the use of parts other than genuine spare parts. This will result in the invalidation of the type approval for the heater and therefore of its general operating licence/EC type approval.

- Liability claims can only be asserted for proven compliance with the maintenance and safety instructions by the applicant.

Operating Heater

Before switching on the heater (with the ignition on), the vehicle heating system should be set to “warm” and the vehicle heating blower should be set to the slowest setting (lower power consumption). Depending on the type of vehicle, the air-conditioning system can perform these settings automatically or partly autonomously. Please ask your specialist dealer to explain the optimum settings.

For ADR hazardous material vehicles only:

The Thermo Pro 90 HDD heater is switched on and off manually by means of a switch. Automatic controllers are prohibited. In vehicles of the type FL, the operation of these heaters is prohibited during loading and unloading and at the loading points. The generator signal and auxiliary drive signal are requested for this purpose.

In vehicles of type FL, the heaters are automatically switched off and the maximum ADR after-running time is 40 s in accordance with the legal specifications.

An ADR afterrunning period takes place if:

- the generator signal (D+) is discontinued or
- the auxiliary drive signal (e.g. pumping device) is present.

After the end of the ADR afterrunning period, the control unit is in ADR locking mode.

The heater can be restarted by switching it off and on again using the “ON/OFF” switch. This will not work while the pumping device belonging to the vehicle is in operation. The ADR lock will not be cancelled if the “ON/OFF” switch is activated and the operating voltage U_b is removed and reapplied.

The disconnecter (emergency off switch) may only be actuated in the event of danger since the heater will be switched off without afterrunning period (possible overheating).

Heater operation:

If the heater is switched on with a cold engine, the heater starts up in a low load range and then increases the power. Depending on temperature, this process can take approx. 2 minutes. The coolant temperature is controlled automatically throughout operation. The heater can also be switched on while travelling. The vehicle blower is only switched on when the coolant temperature is at around 30°C, avoiding unnecessary energy consumption. There is thus a delay in starting the vehicle blower, depending on the temperature. When switching off the heater, a

cooling afterrunning period is initiated; this lasts approx. 90 s.

If there is a malfunction, the heater will not switch the fuel pump on for safety reasons. In order to protect the batteries, the heater has an undervoltage trip. In order to ensure that the batteries are recharged while travelling, follow this rule of thumb: the travelling time should be greater than or equal to the preheating time.

Use of residual heat

– Activation:

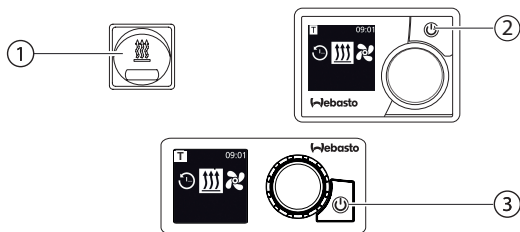
Use of residual heat is only activated when the heater is switched on. This is a fully automatic function that is activated when the engine is warm; it is used to conserve energy. Every time the heater is switched on, before the heating process, the heater checks the coolant temperature. If the coolant temperature is above 60°C, use of residual heat is automatically activated. When use of residual heat is activated, the coolant pump for the heater and the vehicle blower are automatically actuated.

– Deactivation:

Deactivation of the use of residual heat is carried out automatically by the heater control unit.

Control elements

The Thermo Pro 90 HDD can be fitted with various control elements:



– Switch (example ①)

– MultiControl or SmartControl (example ②)

– Unicontrol (example ③)

A combination of control elements is also possible.

The control elements confirm when the heaters are switched on. A detailed description of each control element is enclosed with the respective control element.

Vehicles with ADR equipment

In ADR vehicles, it is not possible to set a preselection time. The display shows the remaining operation time while the heater is in operation. The time of day can be set.

Malfunctions and troubleshooting

In the event of a malfunction, a malfunction can be displayed, depending on the type of control elements.



- In the case of control elements with display, the malfunction is shown on the display in the form of a fault code made up of a combination of digits and letters.
- In the case of control elements with lights, the malfunction is shown in the form of a flash code. After 5 fast flash pulses, the fault code is output by a sequence of long flash pulses. The long flash pulses must be counted. This number (fault code) provides information to the workshop about the type of malfunction on the heater.

If a fault code is displayed, please contact your authorised Webasto dealer. The workshop can use the fault code to narrow down the problem.

The workshop also has the option of carrying out detailed troubleshooting using computer diagnostics.

The heaters may only be repaired by trained personnel.

To request this documentation in another language, please locate and contact your local Webasto dealer. You can find your nearest dealer at:

<https://dealerlocator.webasto.com/en-int>.

To provide feedback (in English or German), please email: feedback2tdt@webasto.com

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