EN

Operating Instructions

Water Heater

Thermo Pro 50 Eco



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1 About this document

1.1 Purpose of the document

These operating instructions provide the user with information on the safe operation of the Thermo Pro 50 Eco .

NOTE
The actual availability of these functions depends on each installed heater.

NOTE
Carefully read through and follow the heater operating instructions and the safety information contained therein.

1.2 Using this document

- ✓ Before operating the Thermo Pro 50 Eco , carefully read these operating instructions as well as the operating instructions for the control element.
- ✓ Hand these operating instructions on to the following owner or user of the Thermo Pro 50 Eco .

To access further documents use one of the following options:

The Webasto Dealer Portal
(https://dealers.webasto.com)

Webasto Service app (for installation)

To download this app:

- ▶ scan the QR code below or

- ▶ go to:
  https://apps.apple.com/ (Apple App Store) or
  https://play.google.com/ (Google Play Store) as appropriate.

To use the Webasto Service App and access the online Webasto technical documentation, scan the QR code or the barcode on your Webasto product box.

Operating instructions are also available from the Webasto website at www.webasto.com. These instructions are available in a variety of other national languages on the Webasto website.

1.3 Warranty and liability

Webasto shall not assume liability for defects or damages that are the result of disregarding the installation and operating instructions. This liability exclusion particularly applies to:

- Installation or maintenance by untrained personnel.
- Improper use.
- Repairs not carried out by a Webasto service workshop.
- Use of non-genuine parts.
- Conversion of the unit without permission from Webasto.
- Mechanical damage to the equipment.
- Failure to comply with service instructions.

DANGER
Always switch off the heater before refuelling.

1.4 Use of symbols and highlighting

DANGER
This signal word denotes a hazard with a high degree of risk which, if not avoided, may lead to death or serious injury.

WARNING
This signal word denotes a hazard with a moderate degree of risk which, if not avoided, may lead to minor or moderate injury.

CAUTION
This signal word denotes a hazard with a low degree of risk which, if not avoided, will lead to minor or moderate injury.

NOTE
This signal word denotes a Special Technical Feature or (if not observed) potential damage to the product.

Refers to separate documents which are enclosed or can be requested from Webasto.

✓ Requirements for the following necessary action

2 Safety

2.1 Intended use

NOTE
The heater must not be used for safety-related purposes. It serves to provide comfort.

The heater is approved for the following applications:

- Trucks, buses in EU vehicle classes **M**, **N** and **O.**
- Agriculture and forestry machines
- Construction vehicles
- Earth-moving machinery
- Caravans, motor homes, boats, pleasure craft
- Vehicles that travel only within a delimited area (e.g. airport)

If it is installed in special-purpose vehicles, the applicable regulations must be observed. Alternative applications are possible in agreement with Webasto.

Parking heating

In parking heating mode, the water heater works together with the vehicle's heating system for

- cab and engine preheating,
- use of residual heat from the vehicle engine.

The ADR function is available depending on the equipment.

The water heater operates independently of the vehicle engine and is integrated into the cooling system, the fuel system and the electrical system of the vehicle.

Auxiliary heating

The water heater works during engine operation and provides thermal assistance to the cooling system. The water heater is integrated into the cooling system, the fuel system and the electrical system of the vehicle.

When the engine is switched off, the water heater is automatically switched off and fuel supply is interrupted within 5 seconds.

2.2 General safety information

2.2.1 Safety information on operation

DANGER
Risk of injury from the defective unit
Do not operate a defective Thermo Pro 50 Eco and put it out of service by removing the fuse:
- prolonged heavy smoke development.
- unusual burner noise.
- smell of fuel.
- permanent fault switch-offs with error messages (flash code).
- damaged heater.

▶ Contact a Webasto service workshop.

DANGER

Risk of explosion from explosive and flammable hazardous goods

For hazardous material vehicles, restriction of the heater operation (ADR) is required to prevent severe burns.

- ▶ Do not operate the heater at hazardous material loading points.
- ▶ Do not operate the heater when loading and unloading hazardous materials.

DANGER

Danger of poisoning and suffocation due to exhaust fumes

Make sure that:

- ▶ the casing rests only on the base after installation.
- ▶ the base seal is fitted correctly.
- ▶ Exhaust gasses are routed only to the outside.

WARNING

Danger of explosion and suffocation

Do not operate the heater:

- ▶ 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 such as garages that do not have an exhaust extraction unit, especially not with programmed heating start (time preselect or remote start).

NOTE

Incorrect handling

- ▶ Protect the heater against mechanical stress (e.g. dropping, impacts or knocks).
- ▶ Do not stand on the heater.
- ▶ Do not place any objects on top of the heater.
- ▶ Avoid shutting down the heater incorrectly during the after-running period. After switching off via the control element, the fan of the heater continues to run.
- ▶ Always switch off the heater via the control element.
- ▶ Do not disconnect from the power supply until the after-running period has elapsed.

2.2.2 Avoiding damage to property

NOTE

After switching off via the control element, the fan of the heater continues to run (shortened to 40 s for ADR). Switching off incorrectly, without after-run, can cause damage to the Thermo Pro 50 Eco .

- ▶ Always switch off the heater via the control element.
- ▶ The use of programmable control elements in ADR vehicles is not permitted.

NOTE

The heater is not approved for the purpose of directly heating the cargo area of ADR vehicles (hazardous substance transportation).

2.3 Variants

– Thermo Pro 50 Eco **24 V Diesel**

Water heater for "diesel" fuel.

The water heater is designed for 24 volts.

2.4 Regulations and legal requirements

The type approvals in accordance with the regulations ECE-R 122 (heating) and ECE-R 10 (EMC) for the Thermo Pro 50 Eco heater apply in the area where the European Directive 70/156/EEC and/or EC/2007/46 (for new vehicle types as from 29/04/2009) is valid.

Read and comply with warnings in these Installation instructions and in the Operating instructions.

3 Operation

DANGER

Hazardous material vehicles (ADR) must not be switched on or off using a timer control or remote control.

3.1 Control elements

NOTE

Use suitable Webasto control elements approved for use with the heater.

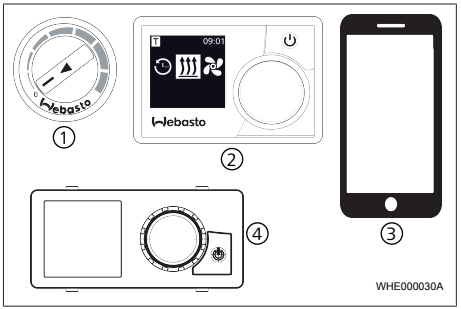


Fig.1 Control elements

① Rotary switch

② MultiControl or SmartControl

③ ThermoCall TC4 and ThermoConnect with mobile app

④ UniControl

Observe additional requirements from the operating and installation instructions for the Thermo Pro 50 Eco and the control element.

The Thermo Pro 50 Eco can be fitted with various control elements. A combination of control elements is possible.

3.2 Setting up a vehicle heating system

NOTE

Depending on the type of vehicle, the air-conditioning system can perform these settings automatically or partly autonomously. Ask your specialist dealer to explain the optimum settings.

1. Before switching on the heater (with the ignition on), set the vehicle heating system to “warm”.
2. Set the vehicle fan to the lowest setting (lower power consumption).

3.3 Switch the heater on and off

The heater is switched on and off by different switch signals. Depending on the system equipment, the switch signals are produced by a switch, control element or a climate control system.

DANGER

Danger of explosion and suffocation

For ADR vehicles: The heater must only be switched on manually via a switch. The heater must not be switched on automatically via a programmable switch.

DANGER

Overheating possible

An emergency off switch may only be actuated in the event of danger since the heater will be switched off without after-running period.

NOTE

Always switch off the heater via the control element

After switching off via the control element, the heater switches to a short controlled run-on phase. Switching off incorrectly, without after-run, can cause damage to the heater.

3.4 Heater operation

NOTE

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. In order to protect the batteries, the heater has an undervoltage trip.

3.5 Using the heater in hazardous material vehicles (ADR)

It is not possible to set a preselection time in hazardous material vehicles (ADR). The SmartControl (if present) shows how much heater operation time is left (remaining operation time).

NOTE

An ADR after-running period is applied in the following cases:

- the generator signal (D+, light machine) is discontinued.
- the pumping device (auxiliary drive) belonging to the vehicle is put into operation.

After the end of the ADR after-running period, the heater is in ADR locking mode.

NOTE

Release ADR lock:

- ▶ Put the pumping device belonging to the vehicle out of operation.
- ▶ Restart the heater by switching it off and on again using the control element.

3.6 Switching the heater on after automatic switch-off

NOTE

Possible loss of heating function

Following an automatic switch-off, the heater may need to be manually switched back on. The heater can be restarted by switching it off and on again using the control element.

3.7 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 it is switched on, the heater checks the coolant temperature before starting the heating process. If the coolant temperature is above a limit value,

residual heat utilisation is activated automatically. 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.

4 Fuel

The heater is connected to the fuel tank of the vehicle or to a separate fuel tank.

Suitable fuels:

- Diesel in accordance with DIN EN 590
- Diesel B20-B30 in accordance with DIN EN 16709

4.1 Converting from operation with summer diesel to winter diesel

✓ The tank is filled up with winter diesel (cold-resistant fuel). However, the fuel system for the heater may still contain residues of summer diesel.

▶ Switch on the heater for approx. 15 minutes (the fuel system is completely filled with cold-resistant fuel).

5 Coolant

Overheating caused by insufficient coolant or defective coolant flow

▶ Check coolant system (heater and vehicle).

▶ Contact a Webasto service workshop.

6 Combustion air

DANGER

Danger of fire

Flammable materials or liquids in the combustion air flow.

▶ Keep combustion air flow clear.

7 Exhaust

WARNING

Blockages

Check combustion air and exhaust system for blockages.

A blocked exhaust system or combustion air system can cause unsafe status of the heater!

8 Cleaning

NOTE

Do not clean the Thermo Pro 50 Eco with a high-pressure cleaner.

Carefully clean the heater using water and a cleaning agent suitable for cleaning vehicles.

9 Malfunctions

A malfunction is indicated by means of a flash code or on the control element display:

- On control elements with display, the fault codes F01 to F15 are output via the display. The fault codes F16 to F19 are shown with "- -".
- On control elements without a display (analogue), the fault code is indicated in the form of a flash pulse. The pulses are short or long. The number of long pulses corresponds to the number of the fault code. F00 is just rapid flashing.
- In event of an error occurring, check the fuse and plug connectors.
- If the fault cannot be rectified by the measure described, contact your Webasto service workshop.

NOTE

Independent maintenance work, particularly using flammable gases or liquids such as accelerators, is forbidden.

Code	Hex code	Possible cause	Action
F01	H02 / H4E / H82	No start	Switching the heater off and on

Code	Hex code	Possible cause	Action
F02	H03	Flame goes out during operation	
F03	H04 / H84	On-board power supply too low / undervoltage or overvoltage	■ Charge the vehicle battery. ■ Switching the heater off and on.
F10	H06	Heater overheats	■ Check coolant level. ■ Switch off heater. ■ Allow the heater to cool down. ■ Switch on the heater.
-	-	On vehicles for transporting hazardous goods: Vehicle engine switched off / pumping device in operation	■ Make sure that the pumping device is out of operation.
			■ Wait until the heater switches to fault lockout. ■ Switch off the heater via the control element. ■ Switch the heater on via the control element.
-	-	**Heater emits black smoke**	
-	-	Combustion air and exhaust gas guiding blocked	Check combustion air and exhaust gas routing for free passage.
In case of any other error messages not listed, contact the Webasto service workshop.			

10 Service signal

In the event of service information, the service signal is shown via the control element when the heater is switched on.

- In the case of the MultiControl / SmartControl control element, a service symbol is displayed.
- On control elements without display: indicator lamp flashes for 60 s: on for 1 s, off for 1 s.

▶ Have the heater checked by a professional.

The heater can continue to be used with limited operation.

11 Maintenance

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

NOTE

The heater:

▶ may only be operated with the rated voltage specified on the type label.

- Put the heater into operation every 4 weeks in order to prevent mechanical parts from seizing.
- At the beginning of the heating period, have the heater checked by a professional.

WARNING

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.

12 Disposal end of live

The Thermo Pro 50 Eco must not be disposed of in domestic waste.

- Observe the regional regulations for disposal of electronic products.

13 Service and customer services

The device is registered during installation by the Webasto service workshop. You will receive the registration document.

Pass the registration document on to the next owner or user of the device.

Do you have any technical questions or problem with the device?

National phone numbers of our representatives are provided on:
https://www.webasto-group.com/en/the-company/locations-worldwide/

14 CE-declaration of conformity

UK-Konformitätserklärung
UK-Declaration of Conformity

Hersteller	**Webasto Thermo & Comfort SE**
Manufacturer	Friedrichshafener Straße 9 82205 Gilching Germany

Für die Verwendung des Webasto Heizgerätesystems
For the use of the Webasto heating system

Thermo Pro 50 Eco

Richtlinie Directive	Ausgewählte Normen Designated Standards
Supply of Machinery (Safety) Regulations 2008	**EN ISO 13849-1:2008-12** **EN ISO 3744:2010** **EN ISO 12100:2011** **DIN EN 61310-2:2008-09** **DIN EN 60335-1:2012-10**
Electromagnetic Compatibility Regulations 2016	**DIN EN 61000-6-2:2005** **DIN EN 61000-6-3:2007** **DIN EN 13309:2010** **EN ISO 14982:2009** **EN ISO 13766:2006**
RoHS Regulations 2012	

Befolgen Sie die Einbauanweisung und die Bedienungsanweisung	**9026479** **9026478**
Follow the installation instruction and operating instruction	**9026479** **9026478**
Ort und Datum der Ausstellung Place and Date of issue	Gilching, den 18.06.2021

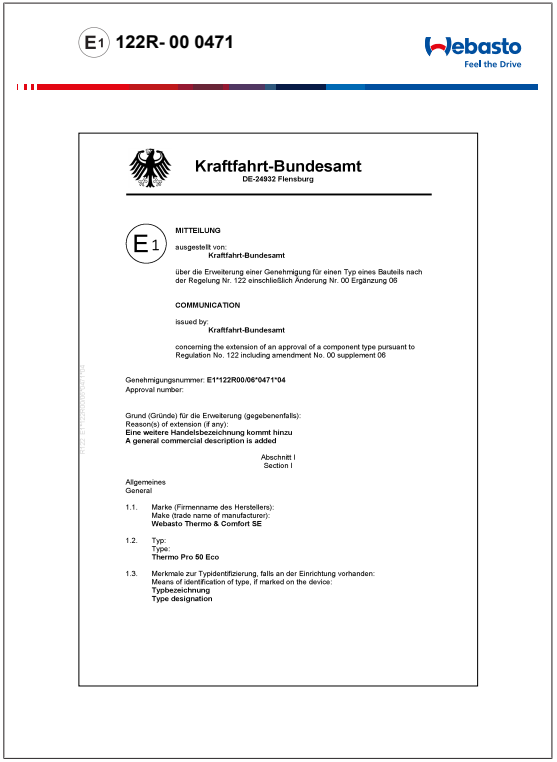
i.V.
T. Zwicker
VP BLM FOH
BLM ECHS FH/ CS Interface
Webasto Thermo & Comfort SE

i.A.
J. Belz
Product Conformity & Regul. Mgr.
Webasto Roof & Components SE

Original in deutscher Fassung.
Original in German version.

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller.
This declaration of conformity is issued under the sole responsibility of the manufacturer.

15 Type approval



E1 122R- 00 0471

Webasto
Feel the Drive

Kraftfahrt-Bundesamt
DE-24932 Flensburg

E1

MITTEILUNG

ausgestellt von:
Kraftfahrt-Bundesamt

über die Erweiterung einer Genehmigung für einen Typ eines Bauteils nach der Regelung Nr. 122 einschließlich Änderung Nr. 00 Ergänzung 06

COMMUNICATION

issued by:
Kraftfahrt-Bundesamt

concerning the extension of an approval of a component type pursuant to Regulation No. 122 including amendment No. 00 supplement 06

Genehmigungsnummer: **E1*122R00/06*0471*04**
Approval number:

Grund (Gründe) für die Erweiterung (gegebenenfalls):
Reason(s) of extension (if any):
Eine weitere Handelsbezeichnung kommt hinzu
A general commercial description is added

Abschnitt I
Section I

Allgemeines
General

1.1. Marke (Firmenname des Herstellers):
Make (trade name of manufacturer):
Webasto Thermo & Comfort SE

1.2. Typ:
Type:
Thermo Pro 50 Eco

1.3. Merkmale zur Typidentifizierung, falls an der Einrichtung vorhanden:
Means of identification of type, if marked on the device:
Typbezeichnung
Type designation



E1 122R- 00 0471

Webasto
Feel the Drive

Kraftfahrt-Bundesamt
DE-24932 Flensburg

2

Genehmigungsnummer: **E1*122R00/06*0471*04**
Approval number:

1.3.1. Stelle, an der diese Merkmale angebracht sind:
Location of that marking:
Auf dem Gehäuse und nach dem Einbau zusätzlich am Fahrzeug
On the housing and after the installation additional on the vehicle

1.4. Name und Anschrift des Herstellers:
Name and address of manufacturer:
Webasto Thermo & Comfort SE
DE-82205 Gilching

1.5. Stelle, an der das ECE-Genehmigungszeichen angebracht ist:
Location of the ECE approval mark:
Auf dem Gehäuse
On the housing

1.6. Anschrift(en) der Fertigungsanlage(n):
Address(es) of assembly plant(s):
Webasto Thermo & Comfort SE (Werk Neubrandenburg)
DE-17033 Neubrandenburg

Abschnitt II
Section II

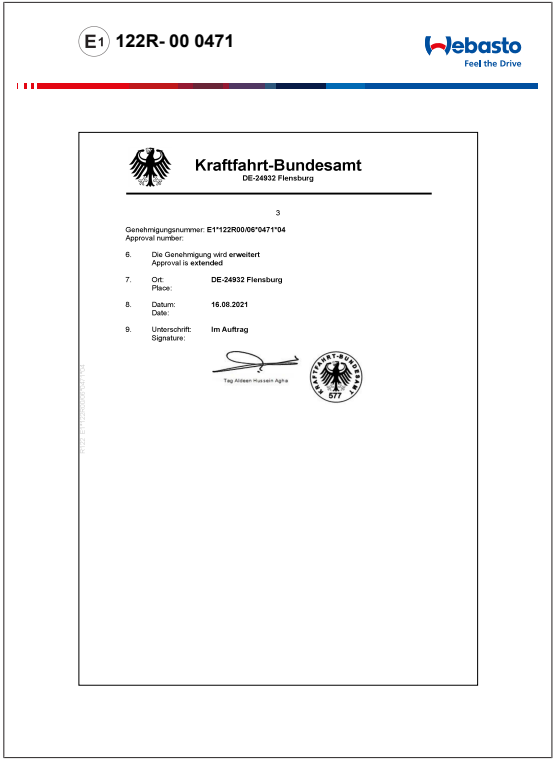
1. Zusätzliche Angaben (gegebenenfalls):
Additional information (if any):
Entfällt
Not applicable

2. Technischer Dienst, der die Prüfungen durchführt:
Technical service responsible for carrying out the tests:
DEKRA Automobil Test Center der DEKRA Automobil GmbH
DE-01998 Klettwitz

3. Datum des Gutachtens:
Date of test report:
26.07.2021

4. Nummer des Gutachtens:
Number of test report:
202162653 (4. Erweiterung)

5. Bemerkungen (gegebenenfalls):
Remarks (if any):
Entfällt
Not applicable



E1 122R- 00 0471

Webasto
Feel the Drive

Kraftfahrt-Bundesamt
DE-24932 Flensburg

3

Genehmigungsnummer: E1*122R00/06*0471*04
Approval number:

6. Die Genehmigung wird **erweitert**
Approval is **extended**

7. Ort: **DE-24932 Flensburg**
Place:

8. Datum: **16.08.2021**
Date:

9. Unterschrift: **Im Auftrag**
Signature:

Tag Aldeen Hussein Agha

KRAFTFAHRT-BUNDESAMT 577

This is a translation from the original German installation instructions. The German language is binding.
To request this Installation Documentation in another language, please locate and contact your local Webasto dealer. You can find your nearest dealer at:

Europe, Asia Pacific

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany

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82205 Gilching
Germany

UK only

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United Kingdom

www.webasto.com

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