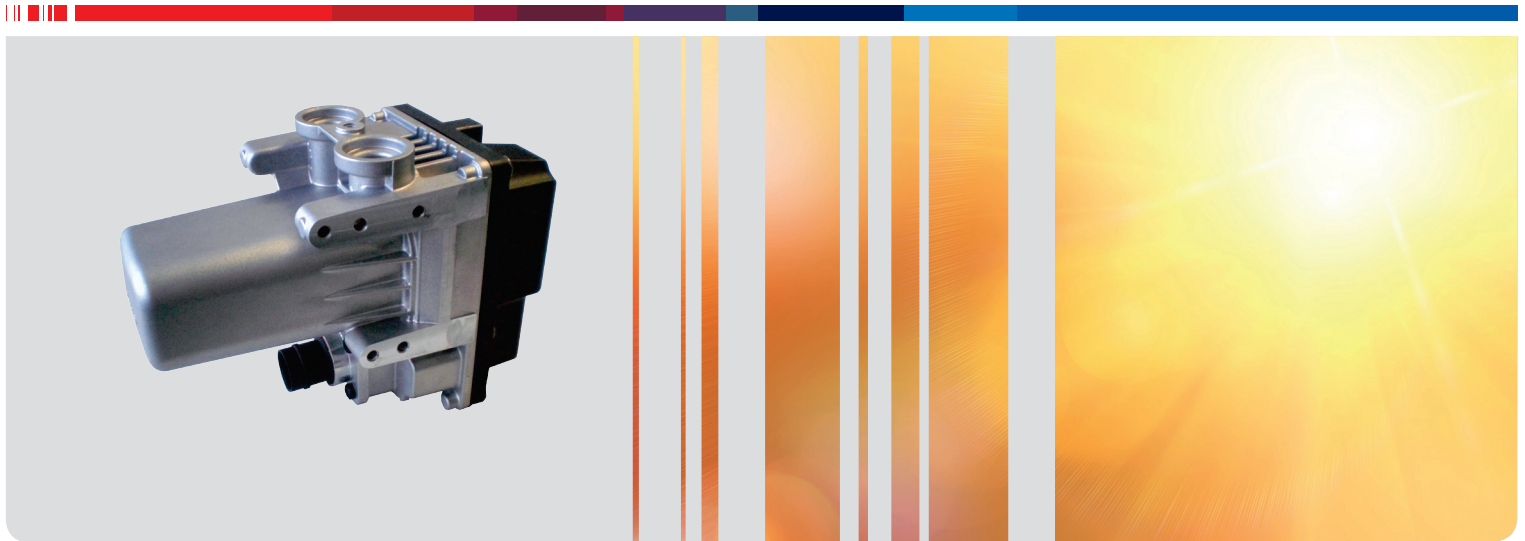


## Installation Instructions

Electrical water heater

eThermo Top Eco 20 P

eThermo Top Eco 30 P



English

# Contents

<b>1 About this document.....</b>	<b>3</b>	<b>6 Statutory regulations governing installation .....</b>	<b>9</b>
1.1 Purpose of the document.....	3	6.1 Noise emission.....	9
1.2 Using this document.....	3	6.2 CE-declarations of conformity .....	10
1.3 Use of symbols and highlighting.....	3	6.3 Type approval .....	12
1.4 Intended use .....	3	<b>7 Wiring diagrams.....</b>	<b>14</b>
1.5 Warranty and liability .....	3	7.1 Legend to wiring diagrams.....	16
<b>2 Important safety and operating instructions .....</b>	<b>3</b>	<b>8 Technical data .....</b>	<b>16</b>
<b>3 Installation .....</b>	<b>4</b>	<b>9 Product registration .....</b>	<b>16</b>
3.1 Heater.....	4		
3.2 Installation requirements.....	4		
3.3 Securing the heater to the vehicle .....	5		
3.4 Type label .....	5		
3.5 Coolant system.....	5		
<b>4 Electrical connection .....</b>	<b>7</b>		
4.1 Earth connection of installation cable (with ring terminal end).....	8		
4.2 Installing the installation cable and extension cable.....	8		
4.3 Integrated connector and bracket, vehicle side.....	9		
4.4 Installing the 12 V wiring harness.....	9		
4.5 Activation of vehicle blower .....	9		
4.6 Electrical connection of coolant pump.....	9		
4.7 Control element connection (optional) .....	9		
<b>5 Initial start-up .....</b>	<b>9</b>		

# 1 About this document

## 1.1 Purpose of the document

These Installation Instructions are part of the product and contain information required by the fitter for safe installation of the eThermo Top Eco 20 P | 30 P.

## 1.2 Using this document

► Before installing the eThermo Top Eco 20 P | 30 P, read these Installation Instructions and the Operating Instructions for the control element, if available.

## 1.3 Use of symbols and highlighting



### DANGER

This signal word denotes a hazard with a high degree of risk which, if not avoided, will 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

The note denotes a special technical feature or potential damage to the product.

Text with the symbol ✓ describes an action or requirement for the following necessary action. Text with the symbol ► describes a necessary action. Texts with the symbol 📄 refer to separate documents which are enclosed or can be requested from Webasto.

## 1.4 Intended use

In parking heating mode, the electric water heater works together with the vehicle's heating system to preheat the cab and engine.

The heater works independently of the vehicle engine and is integrated in the cooling system and the electrical system of the vehicle.

The heater eThermo Top Eco 20 P | 30 P is currently approved for the following applications:

### ■ Car

The heater eThermo Top Eco 20 P | 30 P is currently **not** approved for the following applications:

- Industrial premises, residential premises, business and commercial premises or small businesses
- Trucks, buses (vehicle classes N and O)
- Construction machinery, agriculture and forestry machinery, earth-moving machinery, industrial trucks
- Caravans, campers, motor homes



### NOTE

Please contact your authorised Webasto dealer with any questions.

## 1.5 Warranty and liability



### DANGER

- Installing or repairing Webasto heating systems incorrectly can cause electric shocks or fire. This can lead to serious injury or death.
  - Webasto shall not assume liability for defects or damage that are the result that the installation and operating instructions as well as the instructions contained therein being disregarded. This liability exclusion particularly applies for:
    - installation by untrained personnel
    - improper use
    - repairs that have been carried out by a service workshop other than Webasto
    - use of non-genuine parts
    - Conversion of the heater without permission from Webasto
- If faulty always replace the complete heater.

## 2 Important safety and operating instructions



### DANGER

- To guard against electric shocks, the heater may only be connected when the 230 V socket outlet with earthing contact is protected with an RCD switch (circuit breaker) with a rated residual current of max. 30 mA. If you have any questions, please contact a qualified electrician. The heater may only be connected to power grids that are protected with a minimum current and designed accordingly (10 A for eThermo Top Eco 20 P, 16 A for eThermo Top Eco 30 P). The device should be properly connected to a 230 V/50 Hz socket outlet with earthing contact. This should also be checked against the data on the type label.
- Before each use, check the power cable and 230 V socket outlet with earthing contact for defects. If you find any defects, you must not operate the heater until the defects have been fixed by a Webasto service workshop.



### DANGER

- Before starting up the vehicle, the power cable must be removed from the 230 V socket outlet with earthing contact and from the vehicle. Do not use the power cable to pull the connector out of the 230 V socket outlet with earthing contact; always use the connector itself.
- The power cable must not be connected to the 230 V power grid while coiled.
- The power cable must be protected from damage caused by hot, moving or sharp objects.
- If the 230 V heater supply cables mounted in the vehicle are accidentally overextended, you **MUST** check whether the 230 V heater supply cables, the integrated connector or other parts of the vehicle heating system have been damaged. A damaged heater supply cable **MUST** be replaced by a Webasto service workshop.

## 3 Installation

### 3.1 Heater

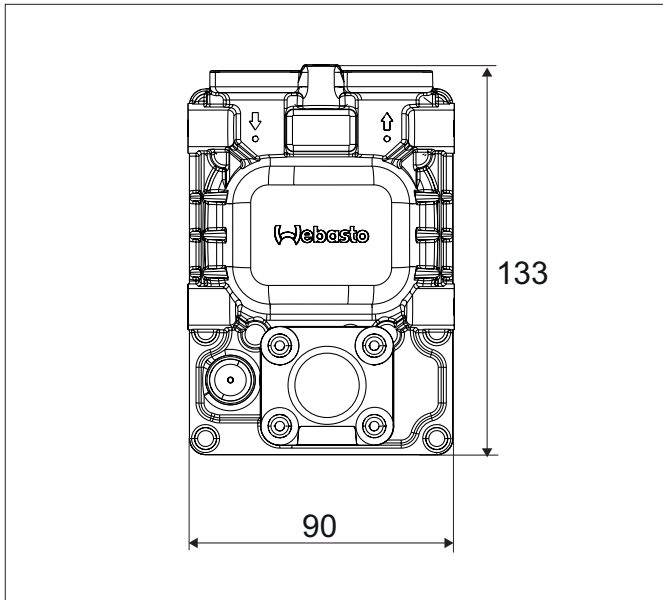


Fig. 01: Dimensions (front)

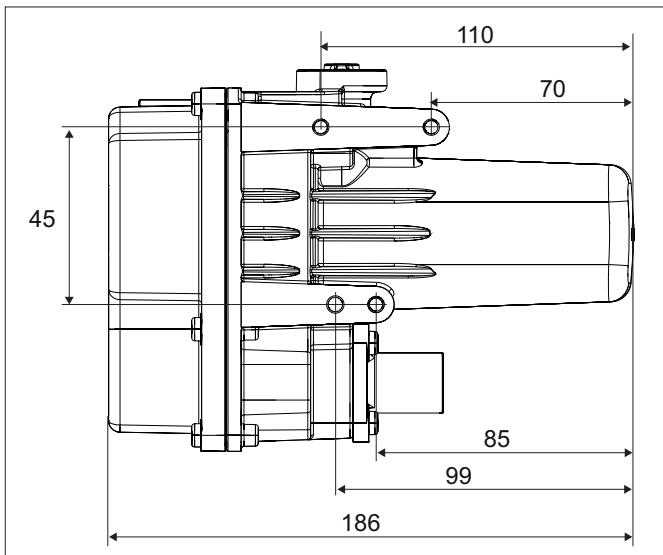


Fig. 02: Dimensions (from the side)

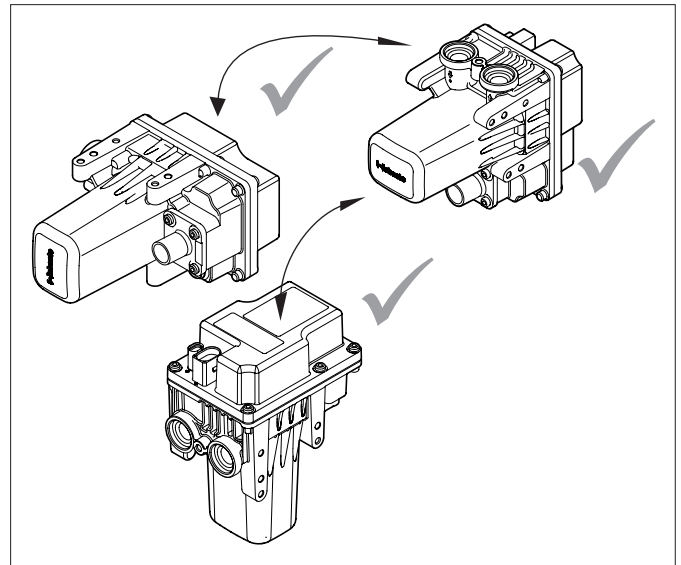


Fig. 03: Permissible installation positions



### NOTE

The heater should preferably be installed horizontally.

### 3.2 Installation requirements

- ✓ The heater must not be installed in the interior of the vehicle.
- ✓ Body sections and any other components in the vicinity of the heater must be protected from excessive heat.
- ✓ The heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be met if the installation ensures an adequate distance to all parts, suitable ventilation and by the use of fire resistant materials or by the use of heat shields.
- ✓ The heater should preferably be installed in the engine compartment.
- ✓ Ensure the heater is bled automatically.
- ✓ The openings of the heat exchanger must not point downwards.
- ✓ The heater must not be installed:
  - in the direct radiated heat range of exhaust systems
  - below the fording level of the vehicle
  - above the coolant expansion tank.
- ▶ Position the heater in line with the installation requirements.
- ▶ Connect coolant system: see section „3.5 Coolant system“ on page 5.
- ▶ Connect wiring harness and connector: see section „4 Electrical connection“ on page 7.

### 3.3 Securing the heater to the vehicle

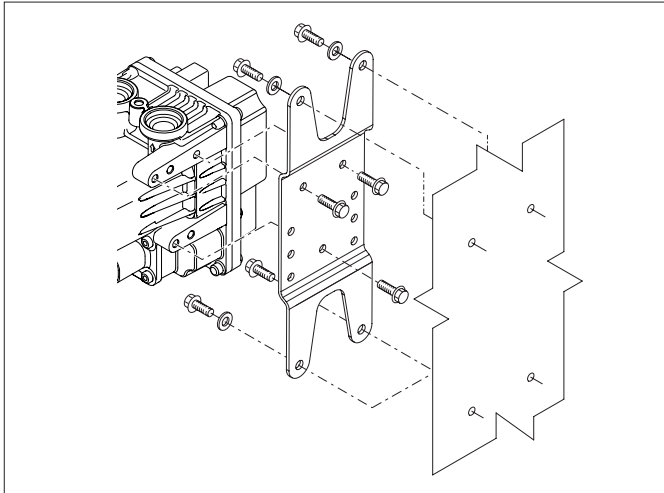


Fig. 04: Example installation of a bracket



#### WARNING

Do not install the heater eThermo Top Eco 20 P | 30 P in the vehicle crash zone.



#### NOTE

- First secure the heater bracket to the heater, then install the heater.
- The heater mounting screws are approved for bracket plate thicknesses of 1.5 to 3.0 mm.

- Secure the heater bracket to the heater using at least 3 heater-specific screws M5 with 8 Nm torque.
- The heater bracket must be secured to the vehicle body or to an intermediate bracket using at least 4 screws M6.

### 3.4 Type label

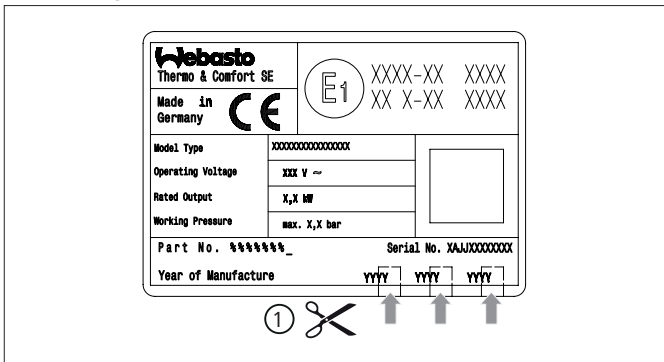


Fig. 05: Type label on heater

Except for the year of installation, remove all the year numerals on the type label. See ①.

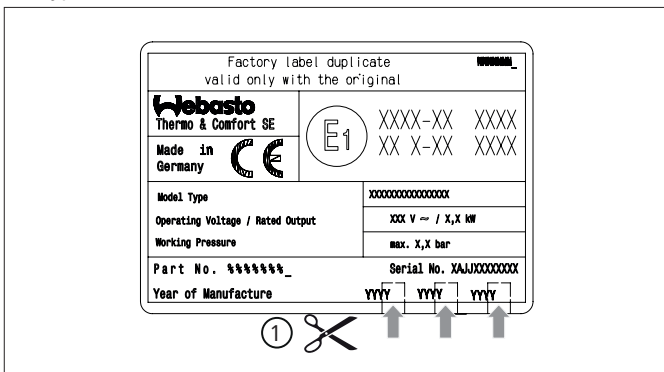


Fig. 06: Type label duplicate, for vehicle (if necessary)

If the type label is not visible after installing the heater: Secure the type label duplicate such that it is clearly visible in a protected area on the vehicle.

Except for the year of installation, remove all the year numerals on the type label duplicate. See ①.

### 3.5 Coolant system



#### WARNING

#### Danger of scalding

- Only open the coolant circuit when the coolant is cold.

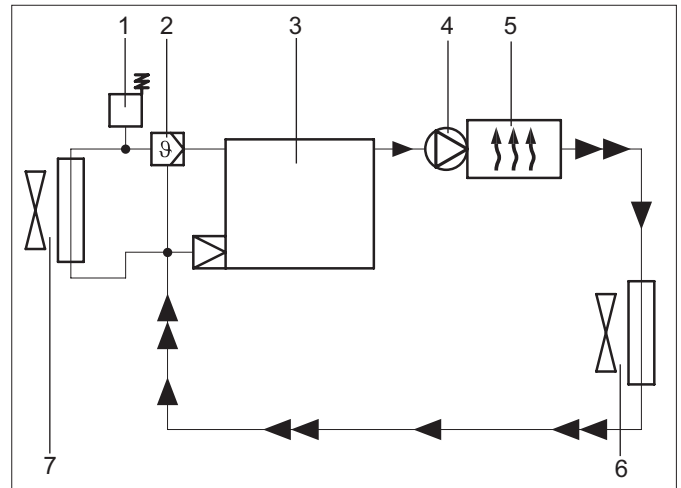


Fig. 07: Example installation of coolant system

Legend:

- Vehicle coolant expansion tank
- Vehicle thermostat
- Vehicle engine
- Coolant pump
- Heater
- Heat exchanger for vehicle heating system
- Vehicle cooler

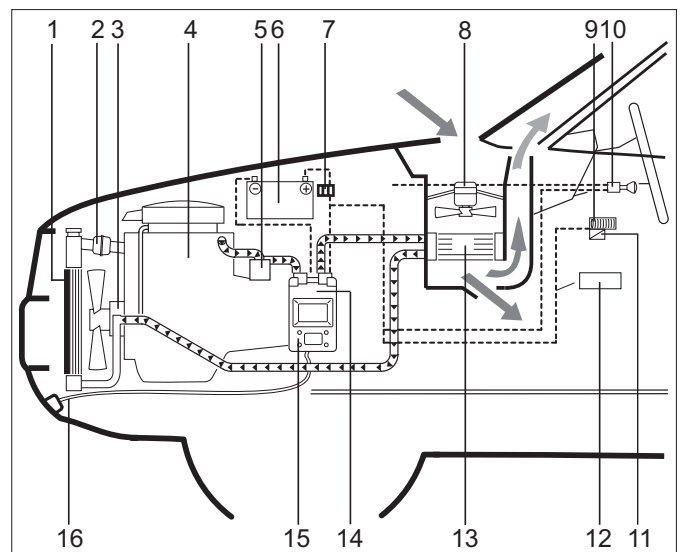


Fig. 08: Example installation of the heater in a vehicle

Legend:

- Radiator
- Coolant thermostat
- Coolant pump
- Internal combustion engine

5. Coolant pump for heater
6. Battery
7. Fuse holder
8. Fan of the vehicle heating system
9. Fuse block in vehicle
10. Switch for fan of the vehicle heating system
11. Control element (optional)
12. Vehicle blower relay
13. Heat exchanger for vehicle heating system
14. Control unit (in the heater)
15. eThermo Top Eco 20 P | 30 P
16. Extension cable / installation cable / integrated connector



**NOTE**

You must ensure that the heater, coolant lines and coolant pump are bled when stationary.

- ▶ Install the heater on the vehicle coolant system as shown in Fig. 08.
- ▶ Install the heater in the coolant system upstream of the inlet for the vehicle heat exchanger.

**Coolant connection piece**

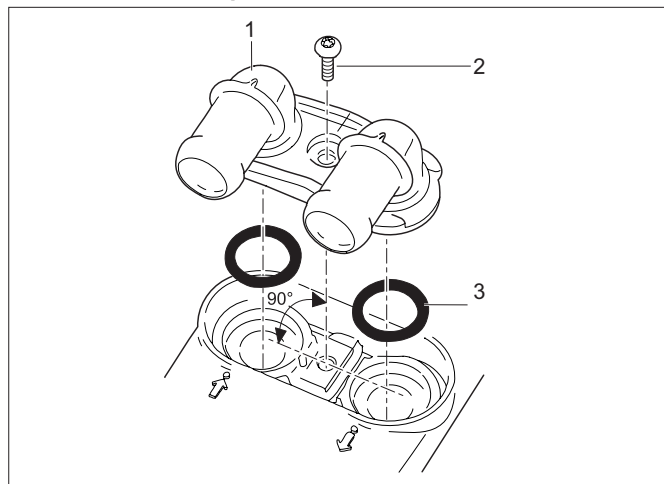


Fig. 09: Coolant connection piece

Legend:

1. Coolant connection piece
2. Screw
3. O-ring



**NOTE**

First secure the coolant connection piece to the heater, then install the heater.

- ✓ The contact surfaces of the O-rings in the heat exchanger must be clean and must not show any signs of damage.
- ✓ The O-rings must be wetted with coolant before being inserted into the heat exchanger.
- ▶ Position the O-rings in the openings in the heat exchanger. Insert the coolant connection piece into the holding plate and move into the required installation position.
- ▶ Secure the holding plate with coolant connection piece onto the heat exchanger (self-tapping screw DG 5X15 mm, torque 7 Nm).
- ▶ Ensure the heater is self-bleeding; direct the coolant outlet connection piece upwards between 0° and 90°. See Fig. 03.

**Coolant hoses**

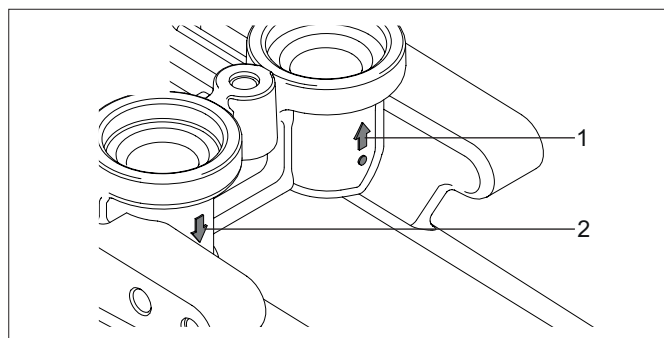


Fig. 10: Coolant connection

Legend:

1. Coolant outlet
  2. Coolant inlet
- ▶ Install the coolant hoses without kinks and – for problem-free bleeding – as far as possible with an upward slope away from the heater.
  - ▶ The coolant hoses should comply with DIN 73411 material class B as a minimum (internal diameter 18 mm).
  - ▶ Secure hose connections against slipping using clips.

- ▶ When connecting the coolant hoses to the coolant circuit, pay attention to the correct direction of flow of the coolant.
- ▶ The clips must be installed on the heat exchanger connection piece between the bead and the hose stop.

#### Coolant pump

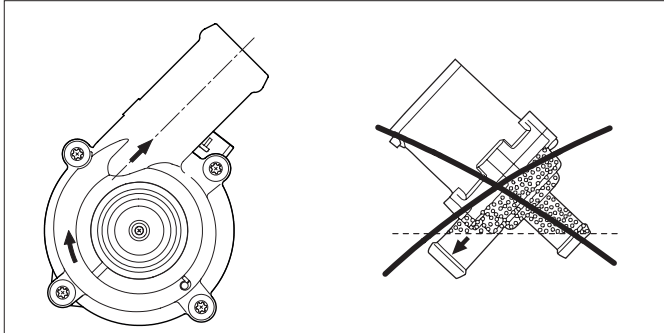


Fig. 11: Coolant pump installation position

- ✓ The coolant pump must be installed in the coolant system on the coolant inlet of the heater, on the delivery side (see Fig. 07, Fig. 08).
- ✓ Ensure the direction of flow of the coolant pump (arrow marking) is correct with respect to the vehicle coolant circuit.
- ▶ Choose the installation position of the coolant pump such that the coolant pump is self-bleeding. The air volume contained in the coolant pump must be able to escape upwards independently via the connection pieces. See Fig. 11.

#### Checking the coolant system



##### NOTE

Once the heater and all coolant-carrying components have been installed, the entire coolant system should be checked for leaks (at the system pressure specified by the vehicle manufacturer).

## 4 Electrical connection



##### DANGER

To avoid electric shocks and safeguard against electric shocks and the risk of fire:

- Do not adapt the heater supply cables or shorten or lengthen them yourself.
- The electric cables must be protected from damage caused by hot, moving or sharp objects.



##### NOTE

Select the length variant of the extension cable to suit the application.

See „Fig. 17: Wiring diagram without control element“

See „Fig. 18: Wiring diagram with optional control element or commercially available timer switch“

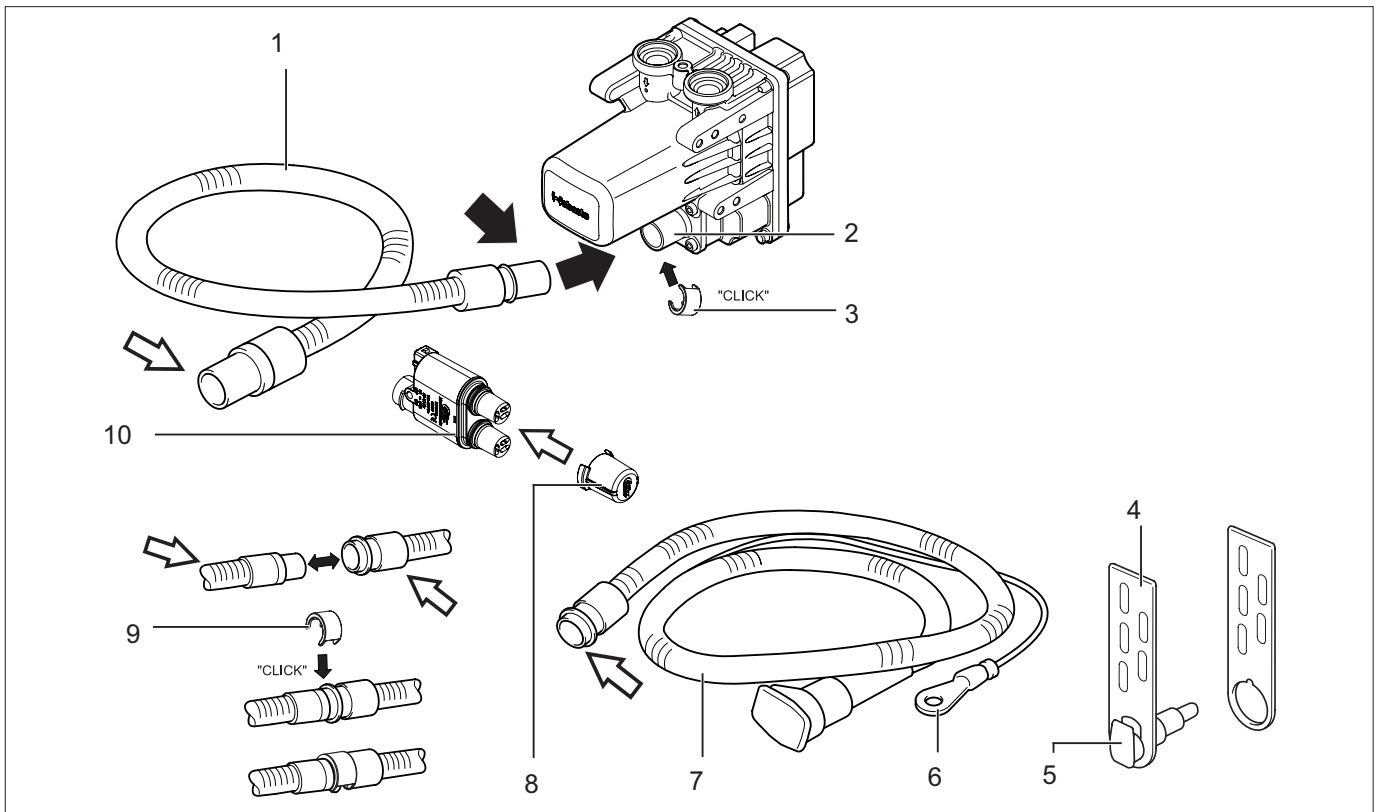


Fig. 12: Heater supply cables

Legend:

1. Extension cable
2. 230 V heater connection (connector X5)
3. Safety interlock
4. Connector bracket
5. Integrated connector
6. Earthing wire of installation cable
7. Installation cable
8. Protection hood
9. Safety interlock
10. Relay

Connect heater as shown in wiring diagram.

- ✓ The vehicle power supply must be disconnected when the heater is installed.
- ✓ When laying the wiring harness in the vehicle, keep it clear of sharp body parts.
- ✓ Do not lay the wiring harness too close to hot vehicle parts.
- ▶ Make sure the electrical system is earthed correctly.  
eThermo Top Eco 20 P: 230 V, **min. 10 A**  
eThermo Top Eco 30 P: 230 V, **min. 16 A**
- ▶ Always comply with legal requirements.

#### 4.1 Earth connection of installation cable (with ring terminal end)

See Fig. 12; Item 6:

- ▶ Connect the earth connection to an original earthing point using the screws provided.



#### NOTE

If you need to create a new earthing point on the vehicle body:

Drill in line with the vehicle manufacturer's specifications. Clean the holes well and apply degreaser if necessary. Do not damage any electric cables or pipes while drilling.

- ▶ Remove paint from earthing point.
- ▶ Degrease earthing point.
- ▶ After installation, apply corrosion protection to all electrical and mechanical connections.

#### 4.2 Installing the installation cable and extension cable

See Fig. 12; Item 1, 2, 3:

- ▶ Plug the connector extension cable firmly into the heater connector (X5).
- ▶ Secure the connector extension cable using the safety interlock.
- ▶ Lay the extension cable.
- ▶ Optional: firmly plug in the heater supply cable relay.
- ▶ Firmly plug in the installation cable.
- ▶ Secure all connectors using safety interlocks.
- ▶ Secure protection hood on relay (if present).
- ▶ Lay the installation cable.



### 4.3 Integrated connector and bracket, vehicle side



#### NOTE

- The integrated connector should be firmly connected to the vehicle (attach the connector bracket to e.g. the registration-plate frame or vehicle bumper).
- Make sure that the female connector of the power cable can be plugged in without difficulty.

- ▶ Install connector bracket.
- ▶ Install the integrated connector of the installation cable firmly on the connector bracket.

### 4.4 Installing the 12 V wiring harness

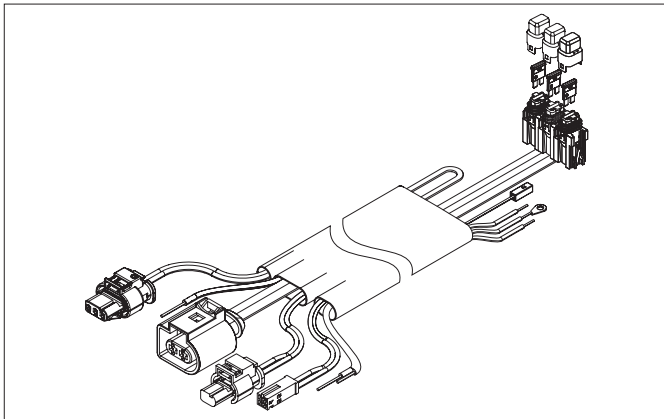


Fig. 13: 12 V wiring harness



Observe the vehicle-specific installation documentation, if present.



#### NOTE

The heater may only be connected to a 12 V on-board power supply.

See Fig. 13:

- ▶ Lay and secure the 12 V wiring harness.
- ▶ Use the wiring diagram and connect the connectors provided. Note label on wiring harness if present.

### 4.5 Activation of vehicle blower

The vehicle blower is controlled by the heater via the signal from the coolant pump. See wiring diagram.

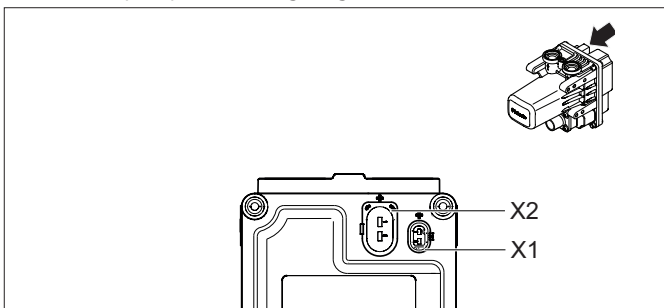


Fig. 14: Connectors for coolant pump and battery charge retention.

Legend:

- X1: Connection for coolant pump and signal for fan actuation
- X2: 12 V connection to vehicle battery for charge retention

### 4.6 Electrical connection of coolant pump

- ▶ Use the wiring diagram (Fig. 17 or Fig. 18) and connect the connectors provided.

### 4.7 Control element connection (optional)

- ✓ Optional control element, e.g. ThermoCall TC, MultiControl
- ✓ Only in combination with relay design of heater supply cable
- ✓ Install relay fuse holder, see wiring diagram.
- ▶ Use the wiring diagram (Fig. 18) and connect plug provided to the control element. Note label on wiring harness if present.



You will find further information in the installation instructions for the control element.

## 5 Initial start-up



#### NOTE

Observe coolant status (level and bleeding) of the vehicle. Operating a heater that is not correctly filled can damage the device.



#### NOTE

Observe the vehicle manufacturer's specifications during initial start-up.

- ▶ Observe the following requirements:

1. Heater is fully installed.
2. Bleed the coolant system by operating the vehicle engine.
3. Check the coolant system for leaks.
4. Optional: Switch on the heater via the control element (see control element operating instructions).
5. Connect power cable, see Operating Instructions.
6. Check heater operation.
7. Allow the coolant system to cool.
8. Check the coolant system leaks at the system pressure specified by the vehicle manufacturer.

## 6 Statutory regulations governing installation

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general homologation of the vehicle.


For vehicles with an EU type approval, an entry is not required in accordance with § 19 section 4 of appendix VIII b of StVZO.

Country-specific registration regulations must be complied with.

### 6.1 Noise emission

The noise emissions from the Webasto eThermo Top Eco 20 P | 30 P heater are below the threshold specified in section 1.7.4.2. u) of the Machinery Directive 2006/42/EC.

## 6.2 CE-declarations of conformity

<b>CE-Konformitätserklärung CE-Declaration of Conformity</b>		
<b>Hersteller</b>	<b>Webasto Thermo &amp; Comfort SE</b>	
<b>Manufacturer</b>	Friedrichshafener Straße 9 82205 Gilching	
<b>Für die Verwendung des Webasto Heizgerätesystems For the use of the Webasto heating system</b>		
<b>eThermo Top Eco 20 P</b>		
<b>Richtlinie</b>	<b>Harmonisierte Normen</b>	
<b>Directive</b>	<b>Harmonised Standards</b>	
2006/42/EG Maschinenrichtlinie	EN ISO 12100:2011 EN 61310-2:2008 EN 60335-1:2012/A11:2014	
2006/42/EG machinery directive		
2014/30/EU EMV	EN 61000-6-3:2007/A1:2011/AC:2012 EN 61000-6-2:2005/AC:2005	
2014/30/EU EMC		
2011/65/EU RoHS		

Webasto Thermo & Comfort SE  
Friedrichshafener Straße 9  
82205 Gilching

Telefon +49 (89) 8 57 94-0  
Fax +49 (89) 8 57 94-4 48

Sitz: Gilching  
Handelsregister:  
München HRB 185600

Vorsitzender des Aufsichtsrats:  
Franz-Josef Kortüm

Vorstandsmitglieder:  
Axel Schultmeyer  
Michael Kranefuss

UST-ID: DE280008826

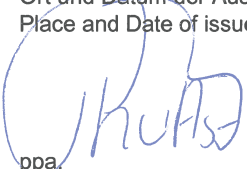
Bankverbindung:  
Hypovereinsbank München  
BLZ: 700 202 70  
Konto: 276 83 21

IBAN: DE65 7002 0270 0002 7683 21  
SWIFT: HYVEDEMMXXX


[www.webasto.com](http://www.webasto.com)

Ort und Datum der Ausstellung  
Place and Date of issue

Gilching, den 28.06.2017



ppa.  
P. van Ast  
EVP Aftermarket  
Webasto Thermo & Comfort SE



i.A.  
J. Belz  
Product Conformity & Regul. Mgr.  
Webasto 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.**

Fig. 15: CE-declaration of conformity eThermo Top Eco 20 P

**CE-Konformitätserklärung  
CE-Declaration of Conformity**



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

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

**eThermo Top Eco 30 P**

Richtlinie	Harmonisierte Normen
Directive	Harmonised Standards
2006/42/EG Maschinenrichtlinie	EN ISO 12100:2011 DIN EN 61310-2:2008-09 EN 60335-1:2012/A11:2014
2006/42/EG machinery directive	
2014/30/EU EMV	EN 61000-6-3:2007/A1:2011/AC:2012 EN 61000-6-2:2005/AC:2005
2014/30/EU EMC	
2011/65/EU RoHS	

Webasto Thermo & Comfort SE  
Friedrichshafener Straße 9  
82205 Gilching

Telefon +49 (89) 8 57 94-0  
Fax +49 (89) 8 57 94-4 48

Sitz: Gilching  
Handelsregister:  
München HRB 185600

Vorsitzender des Aufsichtsrats:  
Franz-Josef Kortüm

Vorstandsmitglieder:  
Axel Schulmeyer  
Michael Kranefuss

UST-ID: DE280008826

Bankverbindung:  
Hypovereinsbank München  
BLZ: 700 202 70  
Konto: 276 83 21

IBAN: DE65 7002 0270 0002 7683 21  
SWIFT: HYVEDEMMXXX

www.webasto.com

Ort und Datum der Ausstellung  
Place and Date of issue

Gilching, den 20.03.2017

ppa.  
P. van Ast  
EVP Aftermarket  
Webasto Thermo & Comfort SE


i.A.  
J. Belz  
Product Conformity & Regul. Mgr.  
Webasto 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.**

Fig. 16: CE-declaration of conformity eThermo Top Eco 30 P

## 6.3 Type approval

**E1 122R-00 0531** 

**Kraftfahrt-Bundesamt**  
DE-24932 Flensburg

**E1** MITTEILUNG  
ausgestellt von:  
**Kraftfahrt-Bundesamt**

die Erteilung der Genehmigung  
für einen Typ eines Bauteils nach der Regelung Nr. 122

COMMUNICATION  
issued by:  
**Kraftfahrt-Bundesamt**

approval granted  
of a component type pursuant to Regulation No. 122

Numer der Genehmigung: 000531      Erweiterung Nr. [REDACTED]  
Approval No.:      Extension No.:

Grund (Gründe) für die Erweiterung (gegebenenfalls):  
Reason(s) of extension (if applicable):  
entfällt  
not applicable

**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:  
**eThermo Top Eco 20 P**

1.2.1 Handelsbezeichnung(en):  
General commercial description(s):  
**eThermo Top Eco 20 P**

eThermo Top Eco 20 P

**E1 122R-00 0531** 

**Kraftfahrt-Bundesamt**  
DE-24932 Flensburg

3

Numer der Genehmigung: 000531  
Approval No.:



4. Nummer des Gutachtens:  
Number of test report:  
[REDACTED]

5. Gegebenenfalls Bemerkungen:  
Remarks (if any):  
entfällt  
not applicable


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

7. Datum:  
Date: [REDACTED]

8. Unterschrift:  
Signature: **Im Auftrag**

*Ulrike Althoff*   
Ulrike Althoff 

eThermo Top Eco 20 P

**E1 122R-00 0531** 

**Kraftfahrt-Bundesamt**  
DE-24932 Flensburg

2

Numer der Genehmigung: 000531  
Approval No.:

1.3 Merkmale zur Typidentifizierung, falls an der Einrichtung vorhanden:  
Means of identification of type, if marked on the device:  
Handelsbezeichnung  
general commercial description

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 Giechling**

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 (falls zutreffend):  
Additional information (where applicable):  
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-01898 Klettwitz**

3. Datum des Gutachtens:  
Date of test report:  
[REDACTED]

eThermo Top Eco 20 P

**ECE R122 E1 00 0512** 

**Kraftfahrt-Bundesamt**  
DE-24932 Flensburg

**E1** MITTEILUNG  
ausgestellt von:  
**Kraftfahrt-Bundesamt**

die Erteilung der Genehmigung  
für einen Typ eines Bauteils nach der Regelung Nr. 122

COMMUNICATION  
issued by:  
**Kraftfahrt-Bundesamt**

approval granted  
of a component type pursuant to Regulation No. 122

Numer der Genehmigung: 000512      Erweiterung Nr. [REDACTED]  
Approval No.:      Extension No.:

Grund (Gründe) für die Erweiterung (gegebenenfalls):  
Reason(s) of extension (if applicable):  
entfällt  
not applicable

**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:  
**eThermo Top Eco 30 P**

1.2.1 Handelsbezeichnung(en):  
General commercial description(s):  
**eThermo Top Eco 30 P**

eThermo Top Eco 30 P


**Kraftfahrt-Bundesamt**  
 DE-24832 Flensburg

2

 Nummer der Genehmigung: 000512  
 Approval No.:

- 1.3 Merkmale zur Typidentifizierung, falls an der Einrichtung vorhanden:  
 Means of identification of type, if marked on the device:  
**Handelsbezeichnung**  
 general commercial description
- 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 Giechling**
- 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 (falls zutreffend):  
 Additional information (where applicable):  
**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-01968 Klettwitz**
3. Datum des Gutachtens:  
 Date of test report:  
**[REDACTED]**

eThermo Top Eco 30 P


**Kraftfahrt-Bundesamt**  
 DE-24832 Flensburg

3

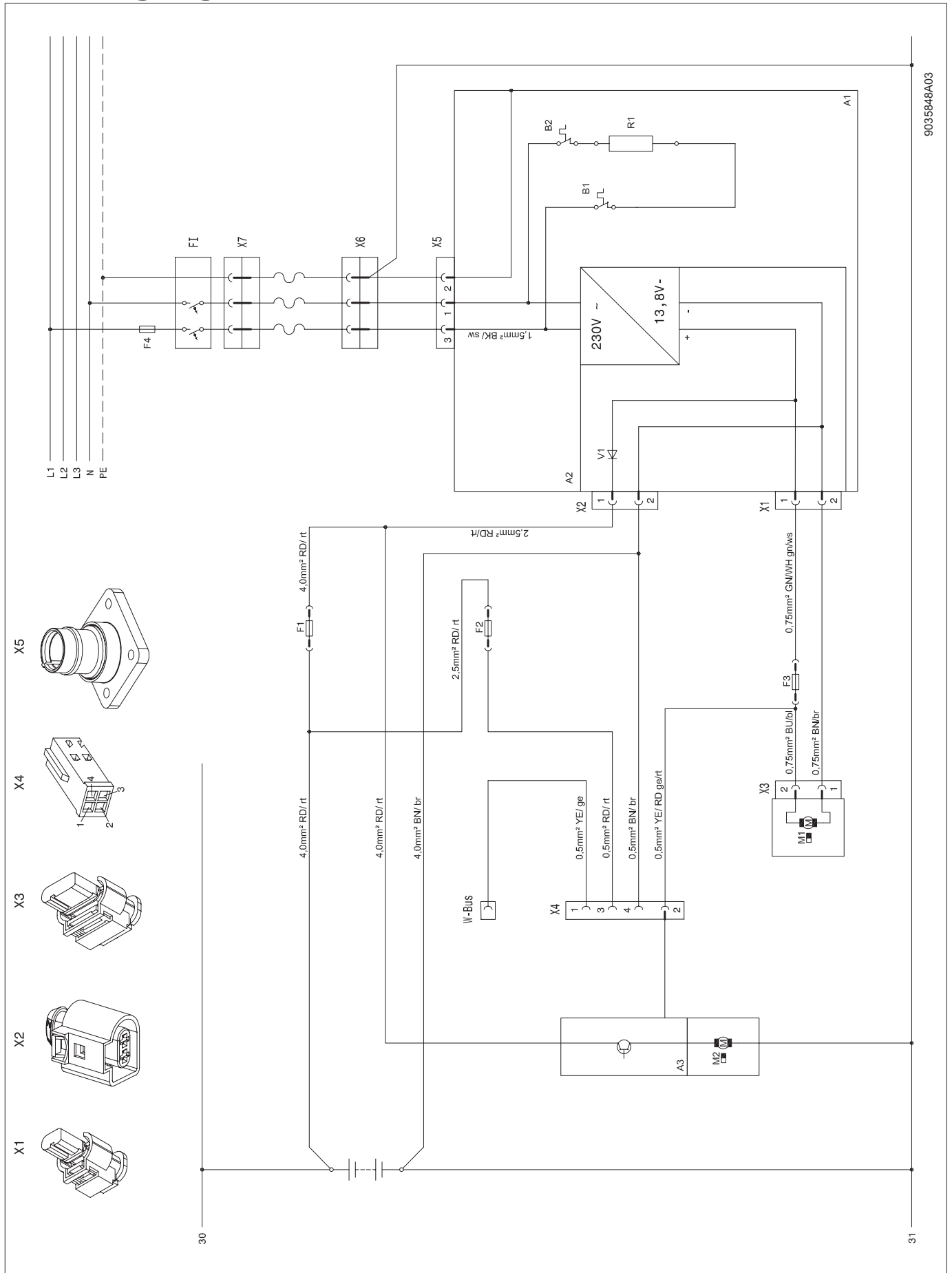
 Nummer der Genehmigung: 000512  
 Approval No.:

4. Nummer des Gutachtens:  
 Number of test report:  
**[REDACTED]**
5. Gegebenenfalls Bemerkungen:  
 Remarks (if any):  
**entfällt**  
 not applicable
6. Ort:  
 Place: **DE-24832 Flensburg**
7. Datum:  
 Date: **[REDACTED]**
8. Unterschrift:  
 Signature **Im Auftrag**

  
 (Jörg Burgkhardt)


eThermo Top Eco 30 P

# 7 Wiring diagrams



9035648A03

Fig. 17: Wiring diagram without control element

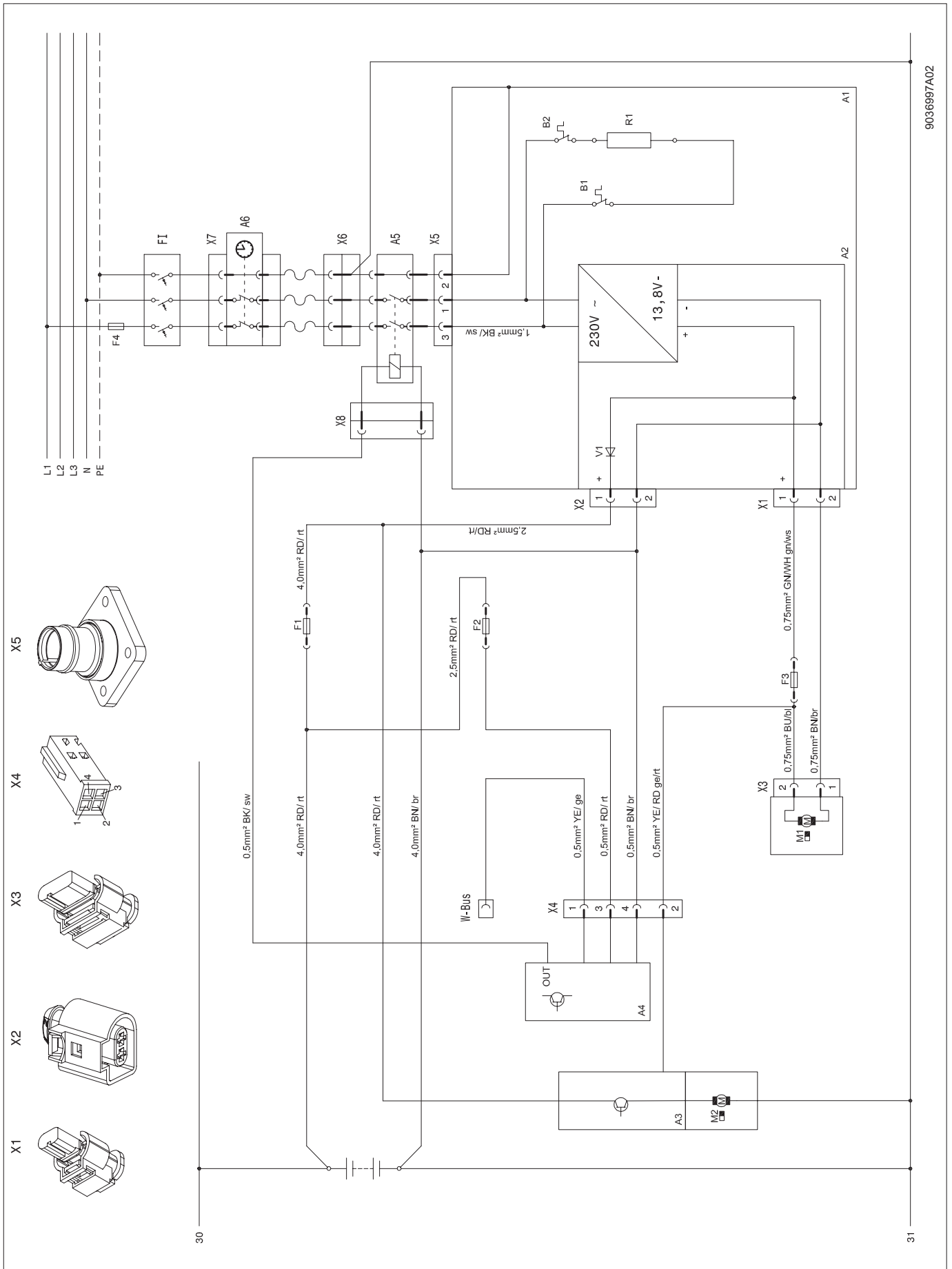


Fig. 18: Wiring diagram with optional control element or commercially available timer switch

## 7.1 Legend to wiring diagrams

See „Fig. 17: Wiring diagram without control element“

See „Fig. 18: Wiring diagram with optional control element or commercially available timer switch“

No.	Description	Remarks
A1	Heater	eThermo Top Eco 20 P   30 P
A2	Control unit	Power pack
A3	Control unit	Fan controller
A4	Control element	Optional, Telearstart, ThermoCall, MultiControl, ThermoConnect or UniControl
A5	230V relay	Optional, together with control element.
A6	Timer switch	Not included in scope of delivery
B1	Thermostat	Control thermostat
B2	Thermostat	Overheating protection
F1	Fuse 25A	Blade fuse
F2	Fuse 5A	DIN 72581-3
F3	Fuse 3A	
F4	Fuse 16A	-
Fl	Earth leakage circuit breaker	-
M1	Motor	Coolant pump
M2	Motor	Vehicle blower
R1	Tubular heating element	-
V1	Diode	-
X1	2-pin plug connection	To Item A1
X2	2-pin plug connection	To Item A1
X3	3-pin plug connection	To Item M1
X4	4-pin plug connection	Connection for fan actuation signal and optional control unit
X5	3-pin plug connection	To Item A1
X6	3-pin plug connection	Connector side with hood
X7	3-pin plug connection	Power socket, power connector (with earthing contact)
X8	2-pin plug connection	To Item A5

### Cable colours

Abbreviation	Colour
bl	blue
br	brown
ge	yellow
gn	green
gr	grey
or	orange
rt	red
sw	black
vi	violet
ws	white

### PIN assignment X1

Pin No.	Remarks
1	Coolant pump plus
2	Coolant pump minus

### PIN assignment X2

Pin No.	Remarks
1	Battery plus (terminal 30)
2	Battery minus (terminal 31)

### PIN assignment X5

Pin No.	Remarks
1	Neutral conductor N
2	Protective earth conductor PE
3	Outer conductor L

## 8 Technical data

Heater (230 V / 12 V)	e Thermo Top Eco	
	20 P	30 P
Design	Water heater (electrical operation)	
Power connection [V] (50 Hz)	220 - 230	
Heating capacity [kW]	2	3
Operating voltage [V] (50Hz)	220 - 230	
Output voltage [V]	12.0 - 14.0	
Rated power consumption over control range [kW]	2	3
Permissible ambient temperature (Operation) [°C]	-40 / +80	
Permissible ambient temperature (Storage) [°C]	-40 / +120	
Permissible working pressure [bar]	< 2.5	
Capacity of the heat exchanger [l]	0.25	
Heater dimensions [mm]	See Fig. 01 and Fig. 02	
Heater weight, empty [kg]	1.2	
IP class Heater	IP 5K4K, IPX9K	

Coolant pump (12 V)	
Volume flow against 0.1 bar [l/h]	900
Rated voltage [V]	12
Operating voltage range [V]	10.5 - 17
Rated power consumption [W]	14
Dimensions of coolant pump (length) [mm]	109
Diameter [mm]	48.5
Weight [kg]	0.3

## 9 Product registration

Register the product on the internet under:  
<https://dealers.webasto.com>







Original Installation Instructions. If your language is missing, it can be requested from Webasto.

The telephone number of the respective country can be obtained from the Webasto service point flyer or the homepage of your respective Webasto country representative.

Webasto Thermo & Comfort SE  
Postfach 1410  
82199 Gilching  
Germany

Company address:  
Friedrichshafener Str. 9  
82205 Gilching  
Germany

Technical Extranet: <https://dealers.webasto.com>

[www.webasto.com](http://www.webasto.com)

