

Operating Instructions

Air Top 2000 STC

Air Heater



English

| | | |
|-----------|---|----------|
| 1 | General information | 3 |
| 1.1 | Purpose of the document | 3 |
| 1.2 | Using this document..... | 3 |
| 1.3 | Warranty and liability..... | 3 |
| 1.4 | Use of symbols and highlighting | 3 |
| 2 | Safety | 3 |
| 2.1 | Intended use | 3 |
| 2.2 | General safety information | 3 |
| 2.3 | Regulations and legal requirements | 4 |
| 3 | Operation | 4 |
| 3.1 | Control elements | 4 |
| 3.2 | Setting up a vehicle heating system | 5 |
| 3.3 | Switch the heater on and off | 5 |
| 3.4 | Using the heater in hazardous material vehicles (ADR) | 5 |
| 3.5 | Switching the heater on after automatic switch-off ... | 5 |
| 4 | Fuel..... | 5 |
| 4.1 | Converting from operation with summer diesel to winter diesel..... | 5 |
| 5 | Combustion air | 5 |
| 6 | Exhaust..... | 5 |
| 7 | Cleaning | 5 |
| 8 | Malfunctions | 5 |
| 9 | Service signal..... | 6 |
| 10 | Maintenance..... | 6 |
| 11 | Disposal | 6 |
| 12 | Service and customer services | 6 |
| 13 | Declaration of Conformity | 7 |
| 14 | Type approval Air Top 2000 STC | 8 |

1 General information

1.1 Purpose of the document

These operating instructions provide the user with information on the safe operation of the Air Top 2000 STC.



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 Air Top 2000 STC, 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 Air Top 2000 STC.

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 online Webasto technical documentation, please scan the QR code or the bar-code 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, may lead to minor or moderate injury.



NOTE

This symbol denotes a special technical feature, or (if not observed) potential damage to the product.



This symbol refers to separate documents which may be enclosed or can be requested from Webasto.

- ✓ Requirements for the following necessary action
 - ▶ 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 works independently of the vehicle engine and is integrated in the electrical system of the vehicle.

The heater is approved for the following applications:

- Car, light truck (LCV)
- Trucks, buses in EU vehicle classes **M**, **N** and **O**.
- Caravans, motor homes, boats, pleasure craft
- Earth-moving machinery
- Construction machines
- Industrial trucks
- Vehicles that can be used in commercial, light-industrial and industrial environments.
- Agriculture and forestry machines

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 Air Top 2000 STC 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 fire

Flammable materials or liquids in the hot air flow.

- ▶ Keep the hot air flow free.



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.



NOTE

- ▶ Do not operate heater without control unit cover in place.

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 Air Top 2000 STC.

- ▶ 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).



NOTE

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

2.3 Regulations and legal requirements

The Air Top 2000 STC heater has been type-tested and approved in accordance with ECE-R 10 (EMC) and ECE-R 122 (heater).



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.

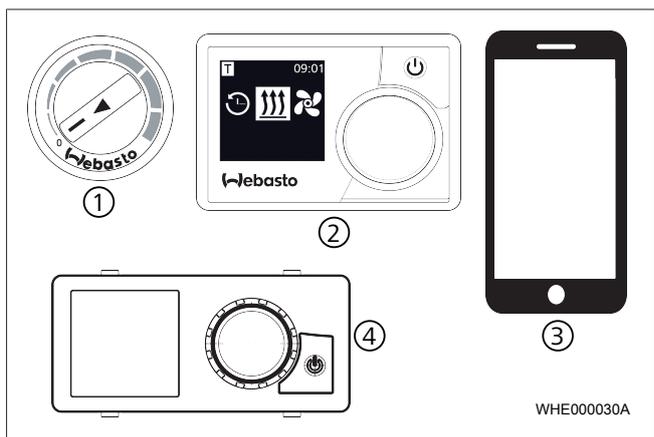


Fig. 1 Control elements

| | |
|--------------------------------|--|
| ① Rotary switch | ③ ThermoCall TC4 and ThermoConnect with mobile app |
| ② MultiControl or SmartControl | ④ UniControl |



Observe additional requirements from the operating and installation instructions for the Air Top 2000 STC and the control element.

The Air Top 2000 STC 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 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.

3.5 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.

4 Fuel

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

Suitable fuels:

- Air Top 2000 STC D: Diesel DIN EN 590; biodiesel DIN EN 14214 and HVO DIN EN 15940
- Air Top 2000 STC B: Petrol DIN EN 228

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 Combustion air



DANGER

Danger of fire

Flammable materials or liquids in the hot air flow.

- ▶ Keep the hot air flow free

6 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!

7 Cleaning



NOTE

Do not clean the Air Top 2000 STC with a high-pressure cleaner.

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

8 Malfunctions



WARNING

Check combustion air and exhaust system for blockages.

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

In the event of a malfunction, the control element can indicate a malfunction.

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 / H82 / H83 | No start | Switching the heater off and on |
| F02 | H03 | Flame goes out during operation | |
| F03 | H04 / H84 | On-board power supply too low / undervoltage or overvoltage | <ul style="list-style-type: none"> ● Charge the vehicle battery. ● Switching the heater off and on. |
| F10 | H5B / H5C / H06 / H17 | Heater overheats | <ul style="list-style-type: none"> ● Check the cold and hot air lines for free passage. ● 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 | <ul style="list-style-type: none"> ● Make sure that the pumping device is out of operation. ● Wait until the heater switches to fault lock-out. ● Switch the heater off and 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.

9 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.

10 Maintenance

- 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.

11 Disposal

The Air Top 2000 STC must not be disposed of in domestic waste.

Observe the regional regulations for disposal of electronic products.

12 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 Type approval Air Top 2000 STC







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*0216*06
Approval number:

Grund (Gründe) für die Erweiterung (gegebenenfalls):
Reason(s) of extension (if any):
Technische Änderungen
Technical modifications

Redaktionelle Änderungen
Editorial modifications

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:
Air Top 2000 ST
- 1.3. Merkmale zur Typidentifizierung, falls an der Einrichtung vorhanden:
Means of identification of type, if marked on the device:
Handelsbezeichnung
General commercial description







Kraftfahrt-Bundesamt
DE-24932 Flensburg

2

Genehmigungsnummer: E1*122R00/06*0216*06
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:
Klebeschild auf dem Gehäuse
Adhesive label 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:
21.03.2022
4. Nummer des Gutachtens:
Number of test report:
202254156 (6. Erweiterung)







Kraftfahrt-Bundesamt
DE-24932 Flensburg

3

Genehmigungsnummer: E1*122R00/06*0216*06
Approval number:

5. Bemerkungen (gegebenenfalls):
Remarks (if any):
Handelsbezeichnung(en):
General commercial description(s):
Air Top 2000 ST
Air Top 2000 STC
6. Die Genehmigung wird erweitert
Approval is extended
7. Ort:
Place: **DE-24932 Flensburg**
8. Datum:
Date: **12.04.2022**
9. Unterschrift:
Signature: **Im Auftrag**




To request this Installation 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) on this document, please email the Tech Doc and Translation team: feedback2tdt@webasto.com

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