

TCH 2310 E / 2311 E

EN

OPERATING MANUAL
CONVECTOR



EN This product is only suitable for well insulated spaces or occasional use.

 TROTEC

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Notes regarding the operating manual

Symbols


 **Warning of electrical voltage**
This symbol indicates dangers to the life and health of persons due to electrical voltage.


 **Warning of hot surface**
This symbol indicates dangers to the life and health of persons due to hot surface.

 **Warning**
This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

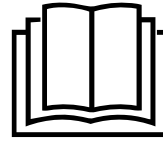
 **Caution**
This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Note
This signal word indicates important information (e.g. material damage), but does not indicate hazards.

 **Info**
Information marked with this symbol helps you to carry out your tasks quickly and safely.

 **Follow the manual**
Information marked with this symbol indicates that the operating manual must be observed.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:




TCH 2311 E
TCH 2310 E




<https://hub.trotec.com/?id=44795>


Safety

Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.

 **Warning**
Read all safety warnings and all instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.
Save all warnings and instructions for future reference.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

 **Warning**
Children of less than 3 years should be kept away from the device unless continuously supervised.
Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.

 **Warning**
Do not use the device in small rooms if persons are present who cannot leave the room independently and who are not under constant supervision.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Only put up the device in an upright, stable position on firm ground.
- Let the device dry out after a wet clean. Do not operate it when wet.
- Do not use the device with wet or damp hands.
- Do not expose the device to directly squirting water.
- Never insert any objects or limbs into the device.
- Do not cover the device during operation.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not sit on the device.
- This appliance is not a toy. Keep away from children and animals. Do not leave the device unattended during operation.
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.
- Ensure that all electric cables outside of the device are protected from damage (e.g. caused by animals). Never use the device if electric cables or the power connection are damaged!
- The mains connection must correspond to the specifications in the Technical annex.
- Insert the mains plug into a properly fused mains socket.
- Observe the device's power input, cable length and intended use when selecting extensions to the power cable. Completely unroll extension cables. Avoid electrical overload.
- Before carrying out maintenance, care or repair work on the device, remove the mains plug from the mains socket. Hold onto the mains plug while doing so.
- Switch the device off and disconnect the power cable from the mains socket when the device is not in use.
- Check the power cable and mains plug for damage. If you notice damages, do not try to take the device back into operation. Order a new power cable with mains plug from Trotec and replace the defective power cable with mains plug with the new one.
Defective power cables pose a serious health risk!
- When installing the device, observe the minimum distances from walls and other objects as well as the storage and operating conditions according to the technical data (chapter Technical annex).
- Keep a safety distance of at least 1 m between the air inlet and the air outlet of the device and all combustible materials such as textiles, curtains, beds and sofas.
- Make sure that the air inlet and outlet are not obstructed.
- Make sure that the suction side is kept free of dirt and loose objects.
- Do not place the device on combustible ground.
- Only use original spare parts, for otherwise safe and functional operation cannot be ensured.
- Allow the device to cool down before transport and/or maintenance work.
- Do not use the device if it has been dropped or if it shows visible signs of damage.
- Do not insert rechargeable batteries into the remote control.

Intended use

The device is only suitable for well insulated spaces or occasional use.

Only use the device for heating closed rooms whilst adhering to the technical data.

Intended use comprises heating the air in:

- living spaces
- storerooms
- salesrooms
- construction areas
- containers
- basements

Foreseeable misuse

- Do not place the device on wet or flooded ground.
- Do not place any objects, e.g. clothing, on the device.
- Do not use this device in the vicinity of fuel, solvents, varnishes or other easily inflammable vapours or in rooms where these substances are stored.
- Do not use the device out of doors.
- Do not use the device for heating vehicles.
- This heating device must not be used in wet rooms.
- Never immerse the device in water.
- Any use other than the intended use is regarded as a reasonably foreseeable misuse.
- Do not make any unauthorised modifications, alterations or structural changes to the device.


Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with electric devices in damp areas.
- have read and understood the operating manual, especially the Safety chapter.

Maintenance tasks which require the housing to be opened must only be carried out by specialist electrical companies or by Trotec.

Symbols on the device

Symbols	Meaning
	This symbol located on the device indicates that it is prohibited to place objects (such as towels, clothes etc.) above or directly in front of the device. In order to avoid overheating and fire hazards, the heater must not be covered.

Residual risks



Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!



Warning of electrical voltage

Before any work on the device, remove the mains plug from the mains socket!
Do not touch the mains plug with wet or damp hands.
Hold onto the mains plug while pulling the power cable out of the mains socket.



Warning of electrical voltage

Risk of electric shock!
The device must not come into contact with water, otherwise there is a risk of an electric shock!
Do not use this heating device in wet rooms!



Warning of hot surface

Parts of this appliance can become very hot and cause burns. Particular attention is to be paid when there are children or vulnerable persons present!



Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way!
Observe the personnel qualifications!



Warning

The device is not a toy and does not belong in the hands of children.



Warning

Risk of suffocation!
Do not leave the packaging lying around. Children may use it as a dangerous toy.



Warning

Improper installation entails a risk of fire.
Do not place the device on combustible ground.
Do not place the device on high-pile carpets.



Warning

In order to avoid overheating and fire hazards, the device must not be covered!

Behaviour in the event of an emergency

1. Switch the device off.
2. In an emergency, disconnect the device from the mains feed-in: Hold onto the mains plug while pulling the power cable out of the mains socket.
3. Do not reconnect a defective device to the mains.

Overheating protection

The device is provided with a safety thermostat which is activated by overheating of the device (when exceeding the operating temperature).

Once the safety thermostat has switched itself on, the device will be turned off.

When the device has cooled down sufficiently, the heating will be switched back on.

Investigate the cause of overheating.

If the safety thermostat does not switch in the event of overheating, the overheating protection will be tripped. In that case the device switches off completely. If so, please contact the customer service to have the overheating protection replaced.

Information about the device

Device description

The convector TCH 2310 E / TCH 2311 E is used to generate warm air for interior spaces.

The device generates heat by means of an electric heating element. The air surrounding the heating element is heated. The heated air rises through the air outlet and thus creates a natural suction that makes the cold room air flow into the device.

In addition, the device is equipped with a fan serving for a faster distribution of the heated air.

The device is equipped with an integrated temperature sensor which controls the heating depending on the current and the desired room temperature.

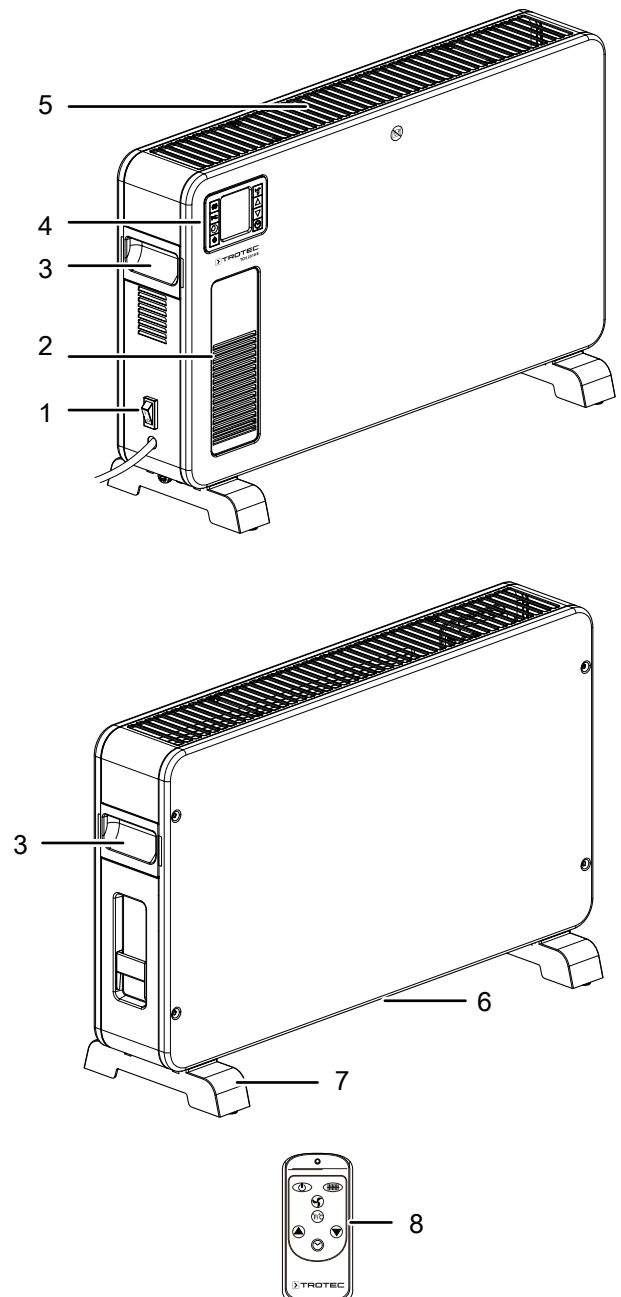
Via the control panel integrated in the housing you can set a target temperature value between 5 °C and 37 °C.

Moreover, the device is equipped with a remote control that can be used for controlling all functions and settings.

The integrated timer makes it possible to switch the device off with time delay.

The functioning of the two devices is identical, they merely differ in appearance or to be precise in colour: The device TCH 2310 E comes in white colour, the TCH 2311 E is black.

Device depiction



No.	Designation
1	On/off switch (operating control lamp)
2	Air outlet of fan
3	Transport handle
4	Control panel
5	Air outlet for convector heat
6	Air inlet
7	Foot
8	Remote control

Transport and storage

Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

To make the device easier to transport, it is fitted with a carry handle.

Before transporting the device, observe the following:

- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Do not use the power cable to drag the device.
- Allow the device to cool down sufficiently.

Storage

Before storing the device, proceed as follows:

- Switch off the device.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Allow the device to cool down sufficiently.

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- in an upright position where it is protected from dust and direct sunlight
- with a cover to protect it from invasive dust, if necessary
- Place no further devices or objects on top of the device to prevent it from being damaged.
- Remove batteries from the remote control.

Assembly and start-up

Scope of delivery

- 1 x Convector
- 1 x Remote control
- 2 x Foot
- 4 x Screw (for foot)
- 1 x Manual

Unpacking the device

1. Open the cardboard box and take the device out.
2. Completely remove the packaging.
3. Fully unwind the power cable. Make sure that the power cable is not damaged and that you do not damage it during unwinding.

Assembly



Warning of electrical voltage

Risk of injury due to incorrect assembly!

Local or national regulations may apply for installation.. We recommend to have the installation carried out by a qualified electrician.



Warning

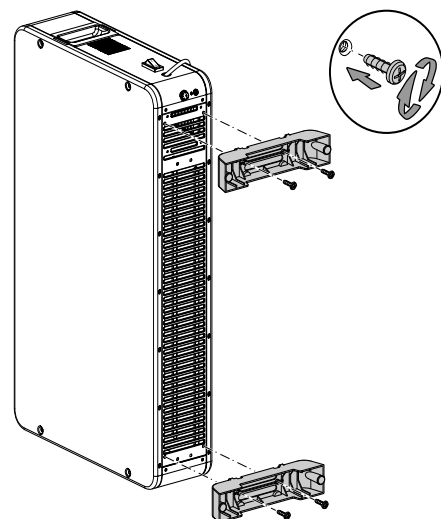
Risk of fire due to improper installation!

There is a risk of fire if the required minimum distances are not observed.

Observe the "Installation" section in the "Assembly and start-up" chapter and the technical data in the "Technical annex" chapter.

Feet assembly

1. Place the device on a table or on the packaging board with the short side pointing down.
2. Fasten both feet with two screws each.



3. Check the feet for tight fit.
4. Set the device up in an upright and stable position.

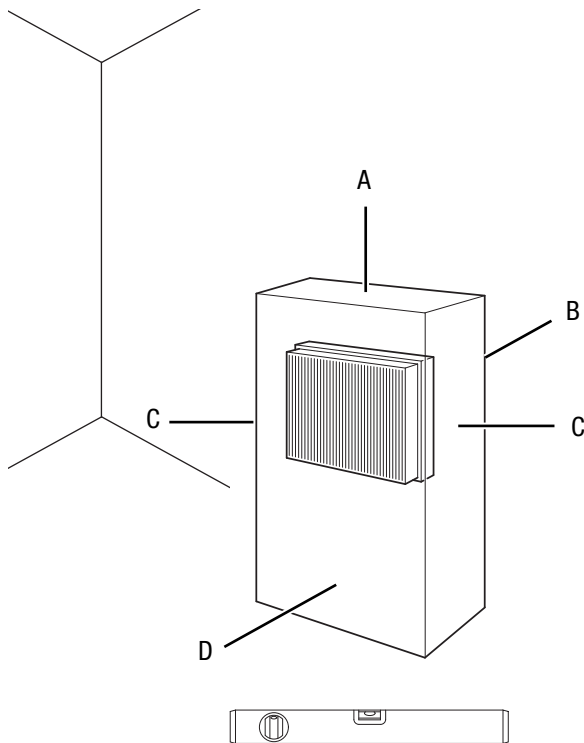
Start-up



Info

Odours might arise upon initial start-up or after a longer period of non-use.

When positioning the device, observe the minimum distance from walls or other objects as described in the chapter Technical annex.



- Before restarting the device, check the condition of the power cable. If there are doubts as to the sound condition, contact the customer service.
- Set the device up in an upright and stable position.
- Do not create tripping hazards when laying the power cable or other electric cables, especially when positioning the device in the middle of the room. Use cable bridges.
- Make sure that extension cables are completely unrolled.
- Make sure that no curtains or other objects interfere with the air flow.
- Do not position the device directly below a wall socket.
- Make sure that the device cannot come into contact with moisture or water.

Prior to initial start-up, insert batteries in the remote control.

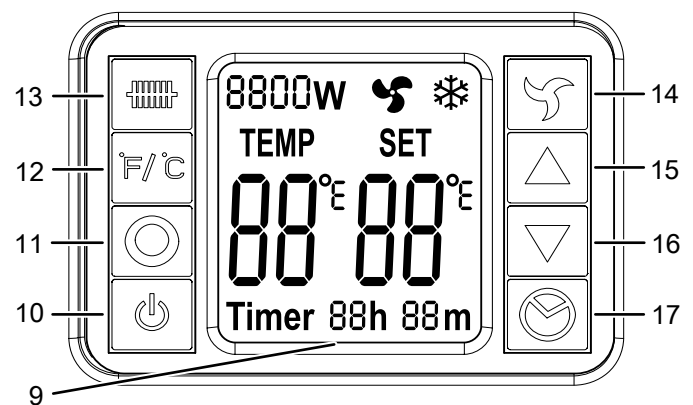
Connecting the power cable

- Insert the mains plug into a properly fused mains socket.
- Make sure that the power cable is guided along the back of the device. Never guide the power cable along the front of the device!

Operation

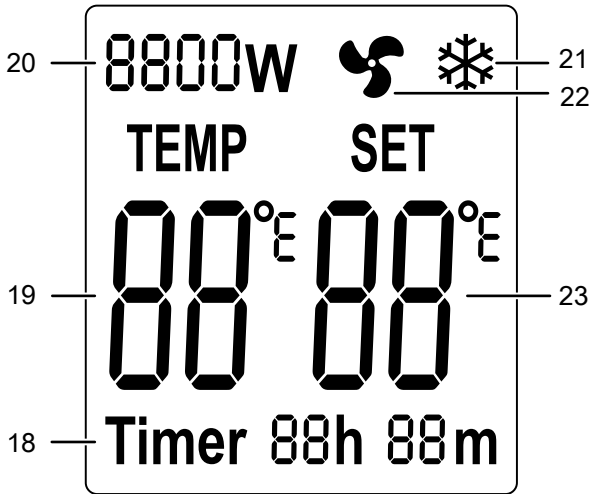
- Avoid open doors and windows.

Control panel



No.	Designation	Meaning
9	Segment display	Indicates all settings (e.g. current room temperature)
10	Power button	For switching the device on or activating standby mode
11	Infrared receiver	Receives the remote control signals
12	°C/°F button	Changing between °F/ Fahrenheit and °C/Celsius
13	Mode button	Selecting the operating mode: Heating mode Frost monitor mode
14	Ventilation button	Switching the fan on or off
15	Increase value button	Set the desired room temperature (5 °C to 37 °C)
16	Decrease value button	
17	Timer button	Switching the timer on and off, setting the number of hours of the timer (1 to 24 h)

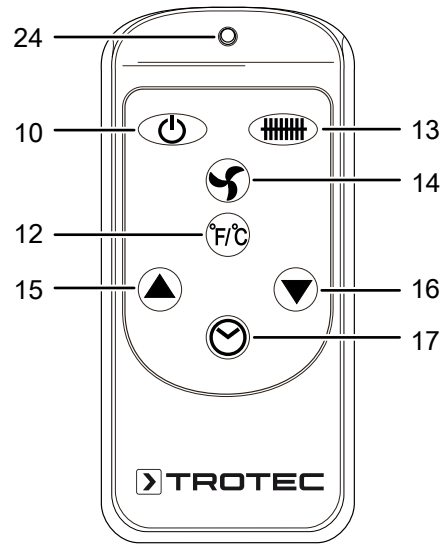
Segment display



No.	Designation	Meaning
18	Timer indication	Indication of the remaining hours and minutes of the activated timer
19	Current temperature indication	Indication of the current room temperature
20	Performance level indication	Current heating capacity indication level 1 = 1000 W level 2 = 1300 W level 3 = 2300 W
21	Frost monitor indication	Is displayed when the frost monitor mode is activated
22	Ventilation indication	Is displayed when the fan is activated
23	Target temperature indication	Indication of the desired room temperature

Remote control

All settings of the device can also be made using the remote control included in the scope of delivery.



No.	Designation	Meaning
12	°C/°F button	Changing between °F/ Fahrenheit and °C/Celsius
13	Mode button	Selecting the operating mode: Heating mode Frost monitor mode
15	Increase value button	Set the desired room temperature (5° C to 37 °C)
16	Decrease value button	
17	Timer button	Switching the timer on and off, setting the number of hours of the timer (1 to 24 h)
10	Power button	For switching the device on or activating standby mode
14	Ventilation button	Switching the fan on or off
24	Infrared transmitter remote control	Sends signals to the device



Info

The indication comes with a background illumination. The background illumination switches on as soon as one of the control panel buttons or the remote control is pressed. After approx. 1 min without any actuation, the background illumination switches back off.

Switching the device on

Once you have completely installed the device as described in the chapter Assembly and start-up, you can switch it on.

1. Set the on/off switch (1) to position I.
 - ⇒ The device is now in standby mode.
2. Press the *Power* button (10).
 - ⇒ The device is switched on.

Setting the operating mode

The device has the following operating modes:

- *Heating mode*
- *Frost monitor mode*

Adjusting the heating mode

1. Press the *Mode* button (13) until the desired heating level is selected. You can choose from three different levels.
 - ⇒ The selected performance level (20) is indicated on the segment display.

Frost monitor mode

In frost monitor mode the device heats automatically. This temperature cannot be changed.

1. Press the *Mode* button (13) until the *Frost monitor* indication (21) is displayed.
 - ⇒ The device heats automatically if the temperature falls below 5 °C.

For setting the desired room temperature

The room temperature determined by the temperature sensor is displayed on the *Current temperature* indication (19). You can set the desired room temperature at any time.

Setting the room temperature is only possible in heating mode.

The room temperature is preset to 25 °C.

1. Press the arrow button *increase value* (15) or *decrease value* (16) to adjust the desired room temperature. Setting is possible in the range between 5 °C and 37 °C in increments of 1 °C.
 - ⇒ The set room temperature is displayed in the *Target temperature* indication (23).



Info

The desired room temperature should be higher than the current room temperature.

Ventilation

1. Press the *Ventilation* button (14) to switch on the fan.
 - ⇒ The *Ventilation* indication (22) appears.
2. Press the *Ventilation* button (14) to switch off the fan.
 - ⇒ The *Ventilation* indication (22) disappears.

Setting the timer

The timer has the following functionality:

- automatic switch-off upon expiry of a preset number of hours.

The number of hours to be set can be between 1 and 24 and is adjustable in increments of 1 hour. If the timer is activated, the time is also displayed in minutes.

Note

The device must not be left unattended in a freely accessible room with an activated timer.

Automatic switch-off

✓ The device is switched on.

1. Press the *Timer* button (17).
2. Select the *Timer* button (17) to select the desired number of hours. The value range is between 1 and 24.
 - ⇒ The number of hours flashes on the *Timer* indication (18).
 - ⇒ The desired time until automatic switch-off is saved as soon as the *Timer* (18) indication stops flashing.
 - ⇒ The time left until switch-off is displayed in the *Timer* indication (18) and counted down.
 - ⇒ The device will switch to standby mode.

Note regarding automatic switch-off:

- Manually switching the device off disables the automatic switch-off function.
- If you select 0 hours, the timer will be switched off.

Shutdown



Warning of electrical voltage

Do not touch the mains plug with wet or damp hands.

1. Switch the device off by setting the mains switch to position 0.
2. Hold onto the mains plug while pulling the power cable out of the mains socket.
3. Allow the device to cool down sufficiently.
4. Clean the device according to the Maintenance chapter.
5. Store the device according to the Storage chapter.

Errors and faults



Warning of electrical voltage

Tasks which require the device to be opened must only be carried out by authorised specialist companies or by Trotec.

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The device does not start:

- Check the power connection.
- Check the power cable and mains plug for damages. If you notice damages, do not try to take the device back into operation. Order a new power cable with mains plug from Trotec and replace the defective power cable with mains plug with the new one.
- Check the on-site fusing.
- The room thermostat might be defective. Have a defective room thermostat replaced by a specialist electrical company.
- Wait for 10 minutes before restarting the device. If the device is not starting, have the electricians checked by a specialist company or by Trotec.

The device is switched on, but the heating is not operating:

- The heating resistor might have blown. Have a defective heating resistor replaced by a specialist electrical company.
- The room thermostat might be defective. Have a defective room thermostat replaced by a specialist electrical company.
- The room thermostat might be defective. Have a defective room thermostat replaced by a specialist electrical company.

The air current is reduced:

- Check the air inlet and outlet. Make sure that air inlet and outlet are not obstructed. Remove any dirt. Observe the minimum distance from walls or other objects according to the technical data.

The device does not respond to the infrared remote control:

- Check whether the distance between remote control and device is too large and reduce it if necessary.
- Make sure there are no obstacles, such as furniture or walls, between the device and the remote control. Ensure visual contact between device and remote control.
- Check the charging status of the batteries and change them if required.
- If the batteries have just been changed, check them for correct polarity.

Note

Wait for at least 3 minutes after maintenance and repair work. Only then switch the device back on.

The device still does not operate correctly after these checks:

Please contact the customer service. If necessary, bring the device to an authorised specialist electrical company or to Trotec for repair.

Maintenance

Activities required before starting maintenance



Warning of electrical voltage

Do not touch the mains plug with wet or damp hands.

- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Allow the device to cool down completely.



Warning of electrical voltage

Tasks which require the device to be opened must only be carried out by authorised specialist companies or by Trotec.

Cleaning the housing



Warning of electrical voltage

Never immerse the device in water!

Clean the housing with a soft, damp and lint-free cloth. Make sure that no moisture enters the housing. Protect electrical components from moisture. Do not use any aggressive cleaning agents such as cleaning sprays, solvents, alcohol-based or abrasive cleaners to dampen the cloth.

Wipe the housing dry after cleaning.

Technical annex
Technical data

Parameter	Value	
Model	TCH 2310 E	TCH 2311 E
Housing colour	white	black
Heating capacity	level 1 = 1000 W level 2 = 1300 W level 3 = 2300 W	level 1 = 1000 W level 2 = 1300 W level 3 = 2300 W
Setting range	5 °C to 37 °C	5 °C to 37 °C
Mains connection	220–240 V / 50–60 Hz	220–240 V / 50–60 Hz
Power input	2300 W	2300 W
Nominal current consumption	10 A	10 A
Cable length	1.5 m	1.5 m
Plug type	CEE 7/7	CEE 7/7
Type of protection	IP20	IP20
Dimensions (incl. feed, excl. wheels) (depth x width x height)	220 x 690 x 435 mm	220 x 690 x 435 mm
Minimum distance to walls and other objects	A: top: 100 cm B: rear: 100 cm C: side: 100 cm D: front: 100 cm	100 cm 100 cm 100 cm 100 cm
Weight	5 kg	5 kg
Remote control battery	Type CR 2032	Type CR 2032

Information requirements for electrical local space heaters

Parameter	Value / item	
Model	TCH 2310E	TCH 2311E
Heat output		
Nominal heat output P_{nom}	2.3 kW	2.3 kW
Minimum heat output (indicative) P_{min}	1 kW	1 kW
Maximum continuous heat output $P_{max,c}$	2.3 kW	2.3 kW
Auxiliary electricity consumption		
At nominal heat output $e_{l,max}$	NA	NA
At minimum heat output $e_{l,min}$	NA	NA
In standby mode $e_{l,sb}$	0.81	0.81 kW
Type of heat input		
Manual heat charge control, with integrated thermostat	NO	NO
Manual heat charge control with room and/or outdoor temperature feedback	NO	NO
Electronic heat charge control with room and/or outdoor temperature feedback	NO	NO
Fan assisted heat output	NO	NO
Type of heat output/room temperature control		
Single stage heat output, no room temperature control	NO	NO
Two or more manual stages, no room temperature control	NO	NO
With mechanic thermostat room temperature control	NO	NO
With electronic room temperature control	NO	NO
With electronic room temperature control plus day timer	YES	YES
With electronic room temperature control plus week timer	NO	NO
Other control options		
Room temperature control, with presence detection	NO	NO
Room temperature control, with open window detection	NO	NO
With distance control option	NO	NO
With adaptive start control	NO	NO
With working time limitation	YES	YES
With black bulb sensor	NO	NO
Contact details	Trotec GmbH Grebbeener Straße 7 D-52525 Heinsberg	

NA: not applicable

Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.



In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.

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