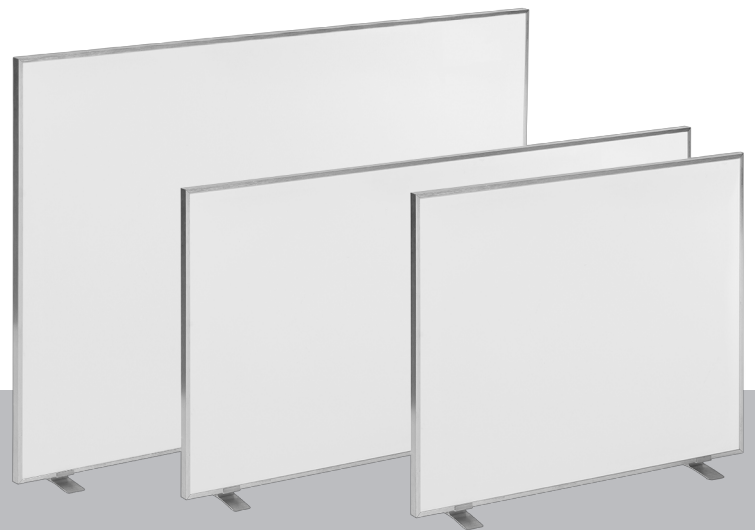


# TIH 300 S / TIH 400 S / TIH 500 S / TIH 700 S / TIH 900 S / TIH 1100 S

**EN**

**OPERATING MANUAL**  
INFRARED HEATING PANEL



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:



<https://hub.trotec.com/?id=40358>



<https://hub.trotec.com/?id=40359>



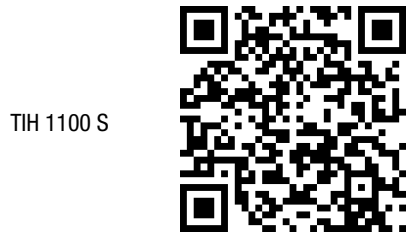
<https://hub.trotec.com/?id=40364>



<https://hub.trotec.com/?id=40365>



<https://hub.trotec.com/?id=40360>



<https://hub.trotec.com/?id=40366>



## 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 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.
- Do not use the device in aggressive atmosphere.
- Set the device up in an upright and stable position.
- 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 or transport 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 electrical connection must correspond to the specifications in chapter Technical data.
- Insert the mains plug into a properly secured 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.
- Do not under any circumstances use the device if you detect damages on the mains plug or power cable. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. Defective power cables pose a serious health risk!
- During the installation of the device observe the minimum distances from walls and other objects as well as the storage and operating conditions specified in the Technical data chapter.
- Never drill into the heating panel.
- Do not use the device in immediate proximity to curtains.
- Do not place the device on combustible ground.
- Do not transport the device during operation.
- Allow the device to cool down before transport and / or maintenance work.
- Do not use this device near bathtubs, shower trays, swimming pools or other water containers. Risk of electric shock!
- The device must be set up in a way that the switches and controllers cannot be touched by a person in a bathtub or shower.

**Intended use**

This product is only designed for use inside well insulated rooms or for occasional use.

Only use the device for heating surfaces indoors.

The device is suitable for wall mounting.

Intended use comprises:

- Heating surfaces
  - in living spaces,
  - in storage facilities,
  - in salesrooms,
  - in construction areas,
  - in containers.

**Improper use**

- Do not use the device outdoors.
- The device must not be mounted to wooden walls.
- Do not place the device on wet or flooded ground.
- Do not place any objects, e.g. clothing, on the device.
- Do not use the device for heating in vehicles.
- 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.
- The device may not be used as a heating device for babies / children or animals.
- The device may not be installed inside a shower or directly above a bathtub.
- The device must not be used near swimming pools.
- Do not use this device in the immediate vicinity of sinks, bathtubs or other water containers.  
Never immerse the device in water.
- Any operation other than as described in this manual is prohibited. Non-observance renders all claims for liability and guarantee null and void.

Any unauthorised changes, modifications or alterations to the device are forbidden.




**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.
	This symbol located on the device indicates that it is prohibited to spray the device.
	This symbol located on the device indicates dangers to the life and health of persons due to hot surface.

**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!  
Hold onto the mains plug while pulling the power cable out of the mains socket.
-  **Warning of hot surface**  
Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present!
-  **Warning of hot surface**  
The surface of the device warms up during operation. Do not touch the device surface during operation and observe the minimum distance!
-  **Warning**  
A falling device can cause injuries! **Always transport and assemble the device with the help of other persons.** Never stand below the device when it is suspended. Ensure adequate stability of the device's wall fixing.
-  **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**  
 Risk of injury due to infrared radiation!  
 Do not stay in the device's immediate vicinity for too long. Do not look directly into the device for too long. Observe the minimum distances.

**Warning**  
 Improper installation or mounting entails a risk of fire.

**Warning**  
 In order to avoid overheating and fire hazards, the heater must not be covered.

### Behaviour in the event of an emergency

1. 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.
2. Do not reconnect a defective device to the mains.

### Information about the device

#### Device description

The device TIH 300 S / TIH 400 S / TIH 500 S / TIH 700 S / TIH 900 S / TIH 1100 S is used to quickly generate instant heat.

The device is based on the functional principle of heat generation by infrared radiation. Persons or objects are heated directly.

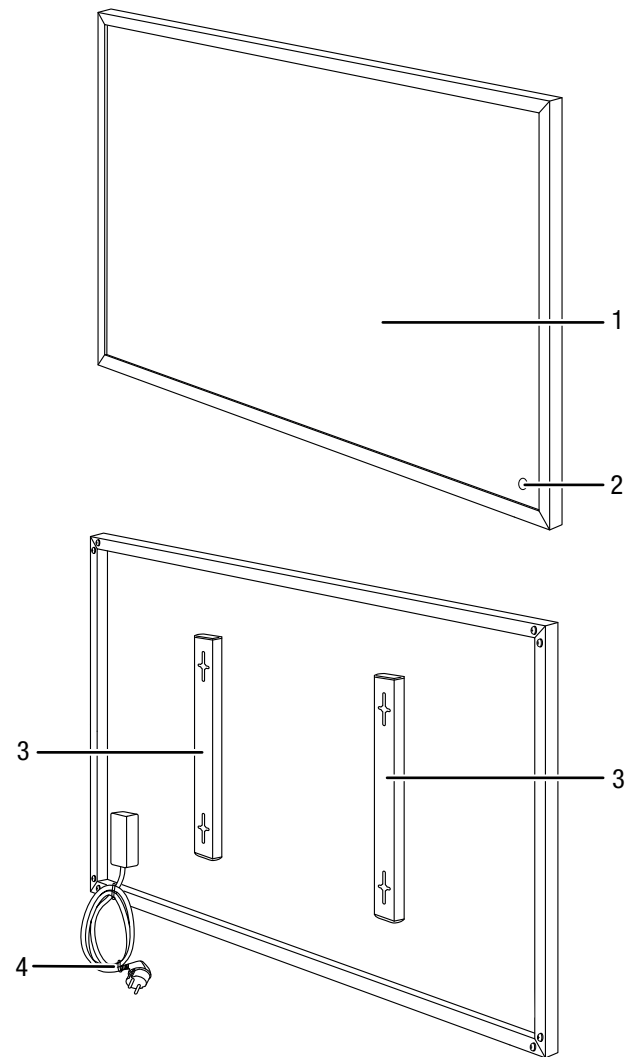
The heating panels ensure an even heat distribution in the room.



#### Info

The illustrations in this operating manual feature the device TIH 700 S by way of example. However, the depicted operating steps and explanations also apply to the devices TIH 300 S, TIH 400 S, TIH 500 S, TIH 900 S and TIH 1100 S unless otherwise mentioned.

### Device depiction



No.	Designation
1	Heating element
2	Operating control lamp
3	Wall attachment
4	Power cable

## 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

Before transporting the device, observe the following:

- 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:

- 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.

## Assembly and installation

### Scope of delivery

- 1 x IR heating panel
- 4 x Screw
- 4 x Dowel
- 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

Upon delivery the device is already preassembled. The optional feet still need to be mounted.

### Wall mounting

When mounting the device to a wall, observe the minimum distances from walls and other objects as specified in the Technical data chapter.

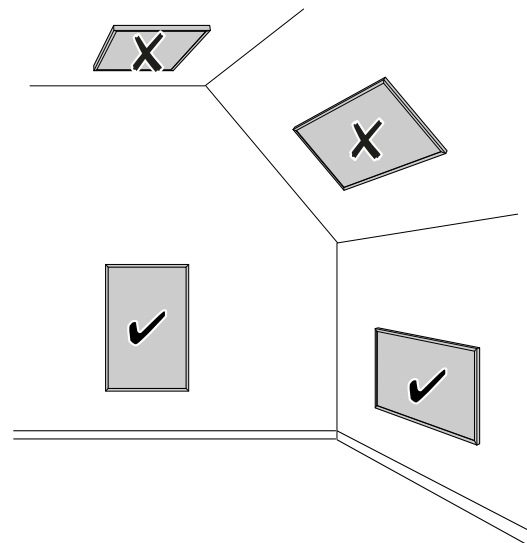


### Warning

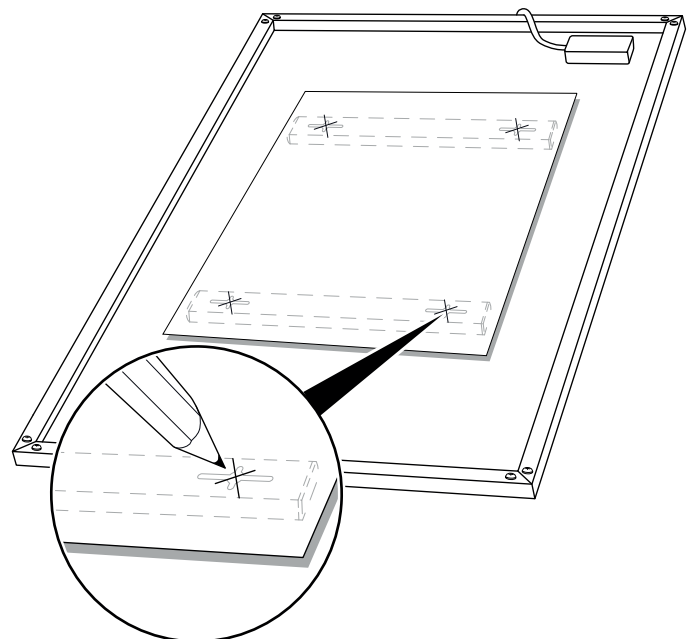
#### Fire hazard!

- Do not install the device directly behind a door.
- Never install the device on a wooden wall.
- Never install the device in a way that it radiates directly onto walls or other objects.

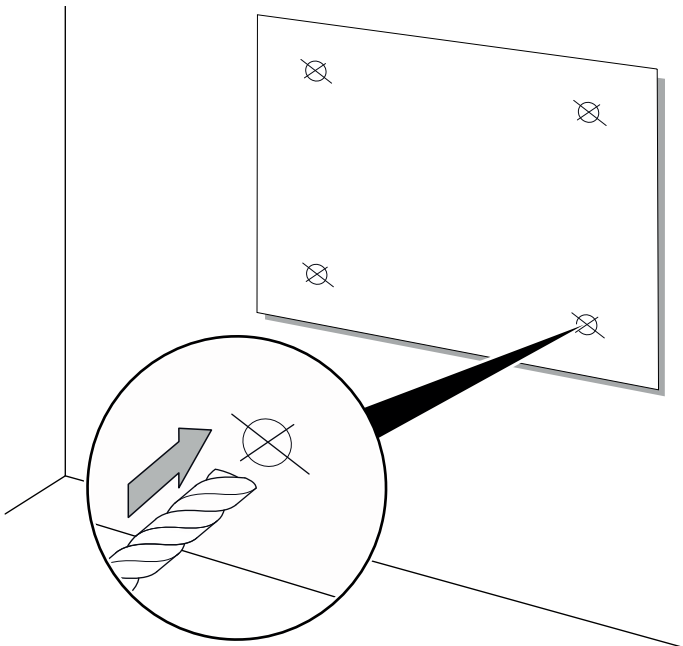
- Only install the device as shown below:



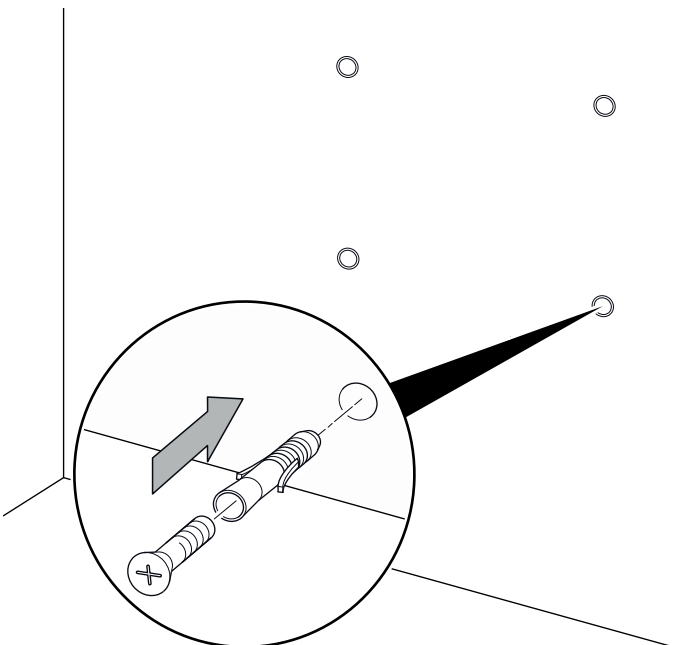
1. Spread out a suitable template over the back of the device and mark the positions for the bore holes.



2. Attach the template to the wall using adhesive tape or similar.
3. Drill the holes into the wall at the positions marked on the template.

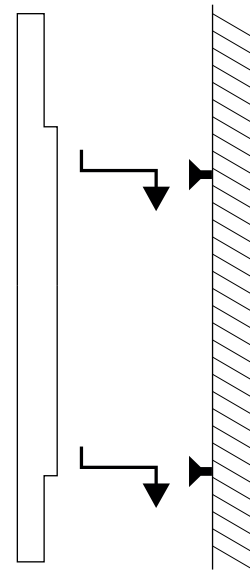


4. Remove the template from the wall.
5. Insert suitable wall plugs into the drill holes.



6. Insert the screws into the wall plugs and fasten the screws.
  - ⇒ The screws should protrude approx. 0.5 cm from the wall plugs.

7. Hang the device in.



#### Assembling the feet (optional)

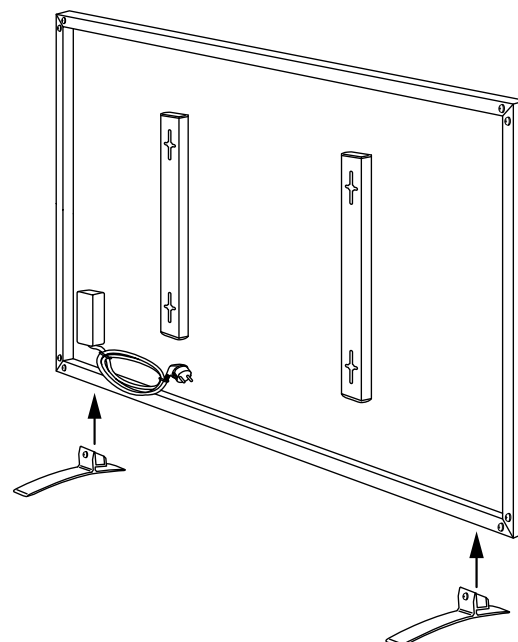
The feet can optionally be attached to the device in order to be able to position the device in the room.

The accessories for the feet are not included in the scope of delivery.

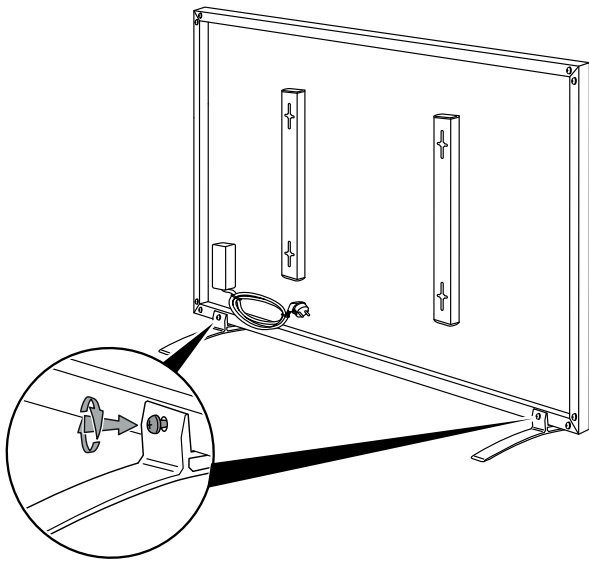
When positioning the device, observe the minimum distance from walls or other objects as described in the Technical data chapter.

For assembling the feet, please proceed as follows:

- ✓ Work together with another person who helps you to lift the device during assembly of the feet.
1. Hold the feet available.
  2. Lift the device with the help of another person.



3. Place the device on the feet.
4. The second person keeps on holding the device.
5. Screw down the feet.



6. Check whether the device is standing in a stable and upright position.

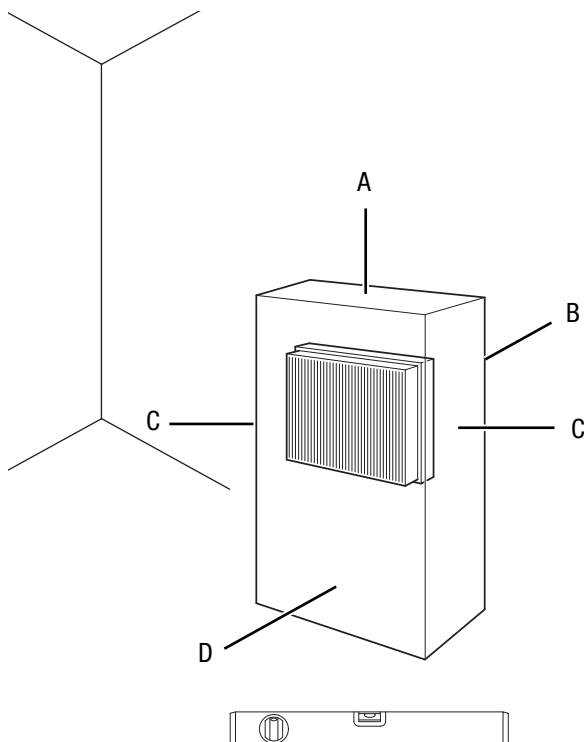
**Start-up**



**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 Technical data chapter.



- 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 or suspend the device horizontally.
- 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 there are no curtains or similar objects in the immediate vicinity.

**Connecting the power cable**

- Insert the mains plug into a properly secured mains socket.

**Operation**



**Info**

Avoid open doors and windows.

**Switching the device on**

Once you have completely installed or positioned the device as described in the Start-up chapter, you can switch it on.

1. Plug the mains plug into a sufficiently 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!

⇒ The operating control lamp (2) is illuminated.

**Shutdown**



**Warning of electrical voltage**

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

1. Hold onto the mains plug while pulling the power cable out of the mains socket.
  - ⇒ The operating control lamp (2) goes off.
2. Allow the device to cool down completely.
3. Clean the device according to the Maintenance chapter.
4. Store the device according to the Storage chapter.

**Available accessories**

Accessories	Article number
Set of 2 feet (for TIH 300 S / TIH 400 S)	1.410.003.001
Set of 2 feet (for TIH 500 S / TIH 700 S / TIH 900 S / TIH 1100 S)	1.410.003.099
Assembly support fastening clamps	1.410.003.004
Socket thermostat BN30	6.100.007.009



## Errors and faults



### Warning of electrical voltage

**Tasks which require the housing 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.
- Check the on-site fusing.
- 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 surface of the device bulges outward:

- The material expands due to heating. This is a perfectly normal process. No measures are required.

#### The surface of the device only heats up slightly:

- The mains voltage does not meet the requirements. Check the mains voltage.
- The ambient temperature is low. This is a perfectly normal process. No measures are required.

#### The device makes noises after switch-on:

- The material expands due to heating. The insulation expands as well and generates the noises. This is a perfectly normal process. No measures are required.

#### Note

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

#### Your device still does not operate correctly after these checks?

Please contact the customer service. If necessary, bring the device to an authorized 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 housing to be opened must only be carried out by authorised specialist companies or by Trotec.**

### Cleaning the device



#### Warning of electrical voltage

Never immerse the device in water!

Clean the device with a soft, damp and lint-free cloth. Ensure 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	TIH 300 S	TIH 400 S	TIH 500 S
Article number	1.410.003.008	1.410.003.010	1.410.003.012
Heating capacity	300 W ± 5 %	450 W ± 5 %	580 W ± 5 %
Mains connection	1/N/PE ~ 230 V / 50 Hz	1/N/PE ~ 230 V / 50 Hz	1/N/PE ~ 230 V / 50 Hz
Nominal current	1.3 A	2.0 A	2.6 A
Connection type	CEE 7/7 (Schuko)	CEE 7/7 (Schuko)	CEE 7/7 (Schuko)
Cable length	1.9 m	1.9 m	1.9 m
Efficiency	98 %	98 %	98 %
Surface temperature	70-90 °C	70-90 °C	70-90 °C
Type of protection	IP 54	IP 54	IP 54
Weight	2.5 kg	3.5 kg	5 kg
Dimensions (width x height x depth)	605 x 505 x 22 (mm)	705 x 605 x 22 (mm)	905 x 605 x 22 (mm)
Minimum distances	top (A): 50 cm rear (B): 0 cm sides (C): 10 cm front (D): 30 cm	50 cm 0 cm 10 cm 30 cm	50 cm 0 cm 10 cm 30 cm

Parameter	Value		
Model	TIH 700 S	TIH 900 S	TIH 1100 S
Article number	1.410.003.014	1.410.003.016	1.410.003.018
Heating capacity	700 W ± 5 %	900 W ± 5 %	1100 W ± 5 %
Mains connection	1/N/PE ~ 230 V / 50 Hz	1/N/PE ~ 230 V / 50 Hz	1/N/PE ~ 230 V / 50 Hz
Nominal current	3.2 A	3.9 A	4.8 A
Connection type	CEE 7/7 (Schuko)	CEE 7/7 (Schuko)	CEE 7/7 (Schuko)
Cable length	1.9 m	1.9 m	1.9 m
Efficiency	98 %	98 %	98 %
Surface temperature	70-90 °C	70-90 °C	70-90 °C
Type of protection	IP 54	IP 54	IP 54
Weight	6.5 kg	8 kg	9 kg
Dimensions (width x height x depth)	1,205 x 605 x 22 (mm)	1,205 x 755 x 22 (mm)	1,205 x 905 x 25 (mm)
Minimum distances	top (A): 50 cm rear (B): 0 cm sides (C): 10 cm front (D): 30 cm	50 cm 0 cm 10 cm 30 cm	50 cm 0 cm 10 cm 30 cm

Information requirements for electrical local space heaters

Parameter	Value/item		
	TIH 300 S	TIH 400 S	TIH 500 S
Model	TIH 300 S	TIH 400 S	TIH 500 S
<b>Heat output</b>			
Nominal heat output $P_{nom}$	0.3 kW	0.4 kW	0.5 kW
Minimum heat output (indicative) $P_{min}$	NA	NA	NA
Maximum continuous heat output $P_{max,c}$	0.3 kW	0.4 kW	0.5 kW
<b>Auxiliary electricity consumption</b>			
At nominal heat output $e_{l,max}$	0.312 kW	0.418 kW	0.566 kW
At minimum heat output $e_{l,min}$	NA	NA	NA
In standby mode $e_{l,sb}$	NA	NA	NA
<b>Type of heat input</b>			
Manual heat charge control, with integrated thermostat	NA	NA	NA
Manual heat charge control with room and/or outdoor temperature feedback	NA	NA	NA
Electronic heat charge control with room and/or outdoor temperature feedback	NA	NA	NA
Fan assisted heat output	NA	NA	NA
<b>Type of heat output/room temperature control</b>			
Single stage heat output, no room temperature control	NO	NO	NO
Two or more manual stages, no room temperature control	NO	NO	NO
With mechanic thermostat room temperature control	NO	NO	NO
With electronic room temperature control	NO	NO	NO
With electronic room temperature control plus day timer	NO	NO	NO
With electronic room temperature control plus week timer	YES	YES	YES
<b>Other control options</b>			
Room temperature control, with presence detection	NO	NO	NO
Room temperature control, with open window detection	NO	NO	NO
With distance control option	NO	NO	NO
With adaptive start control	YES	YES	YES
With working time limitation	NO	NO	NO
With black bulb sensor	NO	NO	NO
Contact details	Trotec GmbH & Co. KG Grebener Straße 7 D-52525 Heinsberg		

NA = not applicable

Information requirements for electrical local space heaters

Parameter	Value/item		
	TIH 700 S	TIH 900 S	TIH 1100 S
Model	TIH 700 S	TIH 900 S	TIH 1100 S
<b>Heat output</b>			
Nominal heat output $P_{nom}$	0.7 kW	0.9 kW	1.1 kW
Minimum heat output (indicative) $P_{min}$	NA	NA	NA
Maximum continuous heat output $P_{max,c}$	0.7 kW	0.9 kW	1.1 kW
<b>Auxiliary electricity consumption</b>			
At nominal heat output $e_{l,max}$	0.732 kW	0.942 kW	1.150 kW
At minimum heat output $e_{l,min}$	NA	NA	NA
In standby mode $e_{l,sb}$	NA	NA	NA
<b>Type of heat input</b>			
Manual heat charge control, with integrated thermostat	NA	NA	NA
Manual heat charge control with room and/or outdoor temperature feedback	NA	NA	NA
Electronic heat charge control with room and/or outdoor temperature feedback	NA	NA	NA
Fan assisted heat output	NA	NA	NA
<b>Type of heat output/room temperature control</b>			
Single stage heat output, no room temperature control	NO	NO	NO
Two or more manual stages, no room temperature control	NO	NO	NO
With mechanic thermostat room temperature control	NO	NO	NO
With electronic room temperature control	NO	NO	NO
With electronic room temperature control plus day timer	NO	NO	NO
With electronic room temperature control plus week timer	YES	YES	YES
<b>Other control options</b>			
Room temperature control, with presence detection	NO	NO	NO
Room temperature control, with open window detection	NO	NO	NO
With distance control option	NO	NO	NO
With adaptive start control	YES	YES	YES
With working time limitation	NO	NO	NO
With black bulb sensor	NO	NO	NO
Contact details	Trotec GmbH & Co. KG Grebbener 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. For further return options provided by us please refer to our website [www.trotec24.com](http://www.trotec24.com).

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.

Trotec GmbH & Co. KG

Grebener Str. 7  
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

✉ [info@trotec.com](mailto:info@trotec.com)

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