

# TDS 20 R / TDS 30 R / TDS 50 R

**EN**

**OPERATING MANUAL**  
ELECTRICAL FAN HEATER





## Table of contents

Notes regarding the operating manual .....	1
Safety .....	1
Information about the device .....	2
Transport and storage .....	3
Operation .....	3
Errors and faults .....	3
Maintenance and repair .....	3
Technical data .....	4
Disposal .....	8
Declaration of conformity .....	8

## Notes regarding the operating manual

### Symbols



#### Hazardous electric current!

Warns about hazards from electric current which can lead to injuries or even death.



#### Danger!

Warns of a hazard which can lead to personal injury.



#### Caution!

Warns of a hazard which can lead to damage to property.

### TDS 20 R

The current version of the operating manual can be found at:

<http://download.troec.com/?sku=141000002&id=1>



### TDS 30 R

The current version of the operating manual can be found at:

<http://download.troec.com/?sku=141000003&id=1>



### TDS 50 R

The current version of the operating manual can be found at:

<http://download.troec.com/?sku=141000008&id=1>



## Legal notice

This release replaces all previous versions. No part of this publication may be reproduced without written permission from Trotec. The same applies for electronically processing, duplicating or spreading the publication. Subject to technical changes. All rights reserved. Trademarks are used without guarantee that they may be used freely and primarily following the spelling of the manufacturer. Product names are registered. Changes to construction in the interests of constant improvements to the product, as well as changes to the shape and colour are reserved.

The scope of delivery may vary from product images. This document was created with all due care. Trotec accepts no liability whatsoever for possible mistakes or omissions.

© Trotec

## Safety

**Carefully read the operating manual before using the device and keep it within reach!**



#### Danger!

**Improper use of the heating device can result in severe injuries due to burns, fire hazard or electric shocks.**



- Ensure a minimum distance of 50 cm to combustible substances. Do not use the device in rooms where fuel, solvents, varnishes or other easily inflammable vapours are stored. Do not use the device in immediate proximity to curtains.
- Keep away from children and animals. Do not leave the device unattended during operation.
- Only connect the device to the mains, if voltage and frequency correspond to the values given on the nameplate.
- Only use extension cables with an adequate cross-section for this capacity. Extension cables must always be reeled off completely.
- Disconnect the device from the mains, if it is not in use.
- Observe the storage and operating conditions (see chapter Technical data).
- Unplug the device from the mains before starting with maintenance, service or repair work.
- Never cover the device with anything, otherwise it could overheat. Fire hazard.

**Intended use**

Only use the devices TDS 20 R / 30 R / 50 R to heat enclosed spaces such as storage facilities, salesrooms, flats as well as to heat construction areas and containers whilst adhering to the technical data.

**Improper use**

Do not place the devices TDS 20 R / 30 R / 50 R on wet or flooded ground. Do not use the device outdoors. Do not place any objects on the device for drying. Do not use this heating device in immediate proximity to sinks, bathtubs, showers or swimming pools.








Using the device in any other way than described as intended use is considered improper.

**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.

**Residual risks**

-  **Hazardous electric voltage!** Work on the electrical components must only be carried out by an authorised specialist company!
-  **Hazardous electric voltage!** Before any work on the device, remove the mains plug from the mains socket!
-  **Danger!** The device is not a toy and does not belong in the hands of children.
-  **Danger!** Improper handling entails a risk of burning and electric shock. Only use the device as intended!
-  **Danger!** Do not leave the packaging lying around. Children may use it as a dangerous toy.
-  **Danger!** Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!
-  **Caution!** In order to avoid overheating and fire hazards, the heater must not be covered.

**Behaviour in the event of an emergency**

1. Disconnect the device from the mains power in an emergency.
2. Do not reconnect a defective device to the mains power.

**Information about the device**

**Description of the device**

The electrical fan heaters serve to generate and distribute warm air, e.g. in interior spaces.

The device generates heat by means of a heating element. The air surrounding the heating element is heated. The heated air is blown into the room by a fan.

The device comes with an integrated thermostat and so generates a constant flow of warm air.

Fan operation without heating function is also possible.

**Device depiction**



No.	Operating element
1	selection switch fan and heating levels
2	rotary switch thermostat

## Transport and storage

- Remove all packing materials which serve to protect the device during transport.
- Should the heating device be damaged, please contact the responsible dealer, where the purchase was made.

## Storage

- If you have do not use the device for extended periods of time, thoroughly clean it before putting it away.
- Store it in a dry location and protect it against dust.
- Before restarting the device, check the condition of the power cable. If there are doubts as to the sound condition, contact the customer service.

## Operation



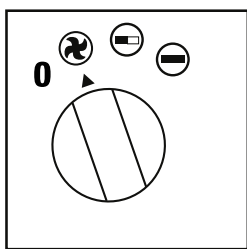
### Warning!

**Read and observe the warnings and instructions in the Safety chapter. Abide by it to ensure a safe operation of this heating device.**

Check whether the power cable is intact. If the power cable is damaged, it must be replaced by the manufacturer, his customer service or similarly qualified personnel. Make sure that the electrical properties of the socket correspond to the values specified in the operating manual or on the nameplate. Place the device on dry, even ground. Make sure that the device cannot come into contact with moisture or water at this installation site.

## Switch-on

1. Connect the power cable to the mains.
2. Turn the switch to the desired position:



- 0** Off
- Ventilation
- Heating operation stage I
- Heating operation stage II

## Switch-off

1. Keep the fan running for 3 minutes, before switching the device off.
2. Turn the switch into position **OFF**.
3. Disconnect the power cable from the mains.

## Regulation of the room thermostat



Adjust the room temperature by turning the rotary switch of the room thermostat.

When the set value is exceeded, the heating switches off while the fan keeps running.

## Overheating protection

The device is provided with a safety thermostat, which is activated by overheating of the device. In such an event the device switches off automatically.

When the safety thermostat is activated, allow the device to cool down. Only then start to look for a cause of the overheating. Should the problem continue to exist, please contact the customer service.

## Errors and faults

Fault	Cause	Remedy
The device is switched on, the fan is operating, the heating is not.	The heating resistor has blown.	Have it replaced.
	Room thermostat is defective.	Have it replaced.
The device does not switch on.	Motor is defective.	Have it replaced.
	Mains voltage is interrupted.	Unplug and check mains connection.
The air current is reduced.	Air inlet is blocked.	Clean air inlet and remove obstruction.
	Fan motor is defective.	Have it replaced.

## Maintenance and repair



**For maintenance or repair work which requires the housing to be opened, contact the Trotec customer service. Devices which have been opened unlawfully are void of any warranty and warranty claims.**



## Activities required before starting maintenance

- Do not touch the mains plug with wet or damp hands.
- Before any work, detach the mains plug!

## Cleaning the housing

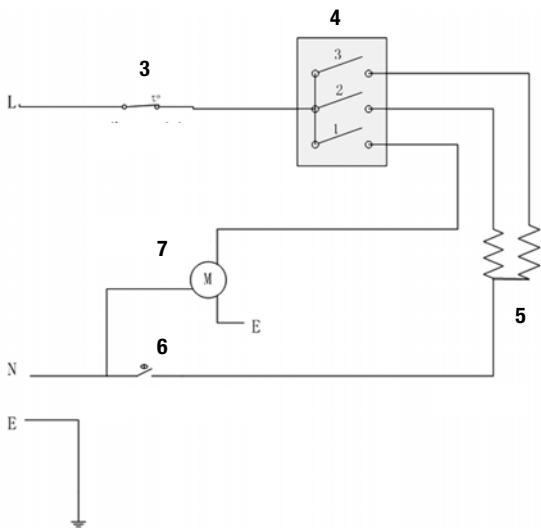
Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Do not use any sprays, solvents, alcohol-based cleaning agents or abrasive cleaners, but only clean water to moisten the cloth.

**Technical data**

Parameter	Value		
Model:	<b>TDS 20 R</b>	<b>TDS 30 R</b>	<b>TDS 50 R</b>
Air flow rate, max.:	411 m <sup>3</sup> /h	580 m <sup>3</sup> /h	844 m <sup>3</sup> /h
Heating capacity:	Stage I:	1500 W	2500 W
	Stage II:	3000 W	5000 W
Input voltage:	1~/N/PE 230 V / 50 Hz	3~/PE 400 V / 50 Hz	3~/PE 400 V / 50 Hz
Mains connection:	Schuko plug CEE 7/7	CEE plug, 5-pin, 16 A, 6 h	CEE plug, 5-pin, 16 A, 6 h
Nominal current:	13 A	7.2 A	13 A
Operating temperature:	-20 °C to +45 °C	-20 °C to +45 °C	-20 °C to +45 °C
Humidity during operation:	max. 90 % RH	max. 90 % RH	max. 90 % RH
Storage conditions:	-25 °C to +40 °C with 20 % to 80 % RH	-35 °C to +40 °C with 20 % to 80 % RH	-35 °C to +40 °C with 20 % to 80 % RH
Dimensions (height x width x depth):	275 x 210 x 195 (mm)	330 x 275 x 225 (mm)	370 x 315 x 250 (mm)
Weight:	3.2 kg	4.9 kg	6.5 kg
Sound pressure level:	53 dB(A)	56 dB(A)	56 dB(A)

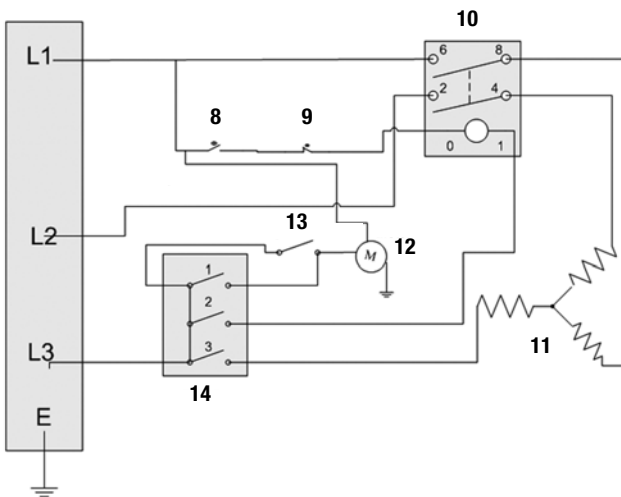
**Circuit diagram**

**TDS 20R**



No.	Designation
3	thermostat
4	switch
5	heating
6	self-resetting thermostat
7	motor

**TDS 30 R / TDS 50 R**



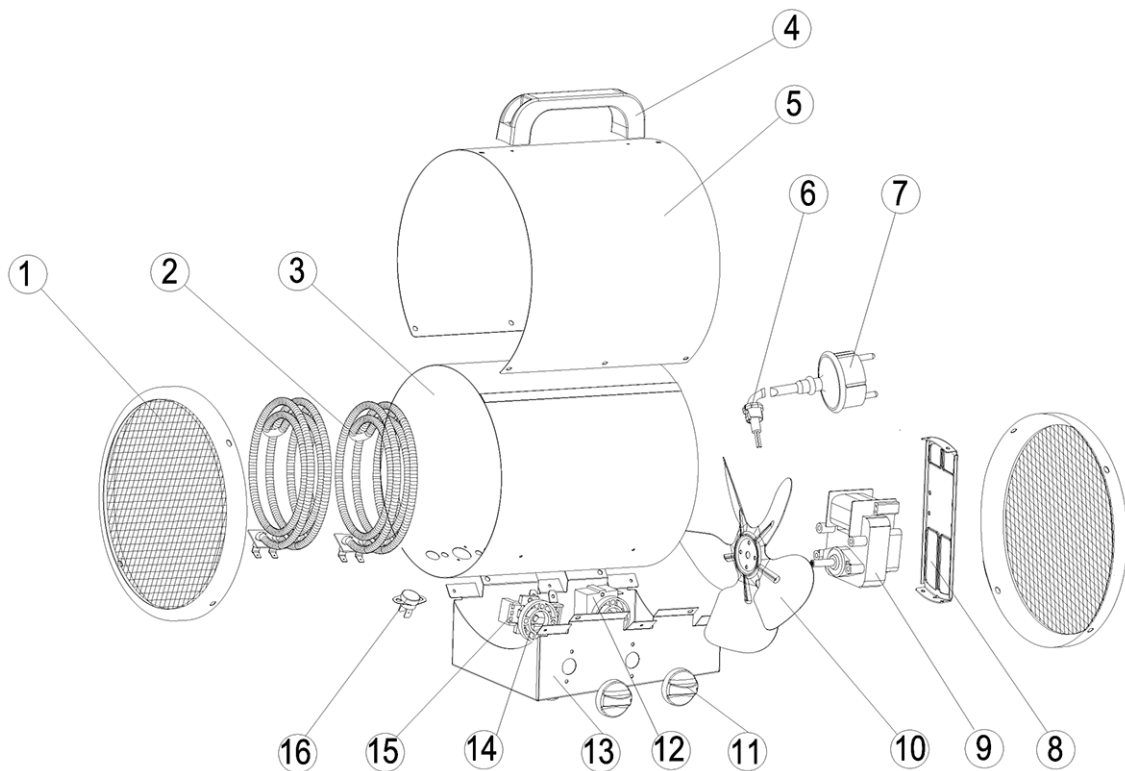
No.	Designation
8	self-resetting thermostat
9	thermostat sensor
10	relay
11	heating element
12	Motor
13	time-delay thermostat
14	switch

## Overview and list of spare parts

### TDS 20 R

**Note!**

The position numbers of the spare parts differ from those describing the positions of other parts mentioned in this operating manual.

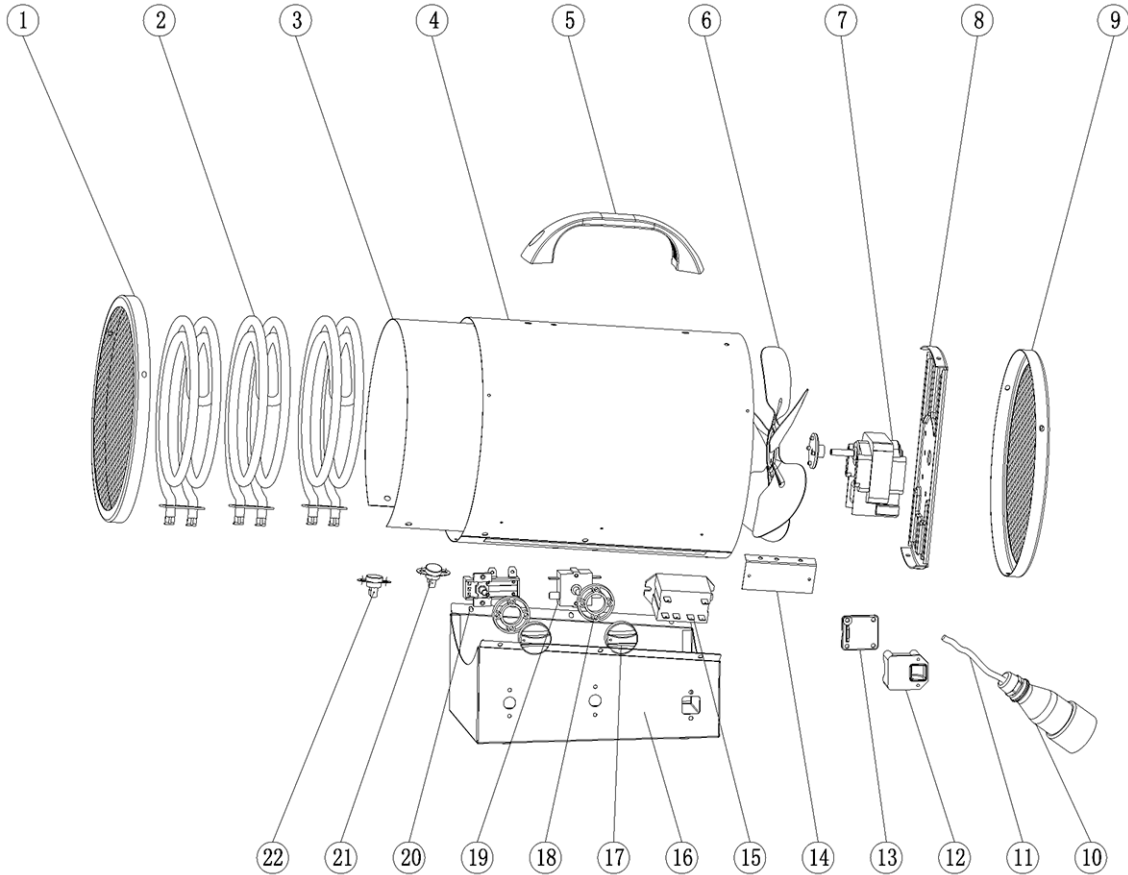


No.	Spare part	No.	Spare part	No.	Spare part
1	Grill	7	Power cord	13	Control box
2	Heating element	8	Motor support	14	Sealing ring
3	Inner casing	9	Motor	15	Thermostat
4	Handle	10	Fan	16	Thermostat cut-out
5	Outer casing	11	Knob		
6	Power cord lock	12	Switch		

**TDS 30 R**

**Note!**

The position numbers of the spare parts differ from those describing the positions of other parts mentioned in this operating manual.



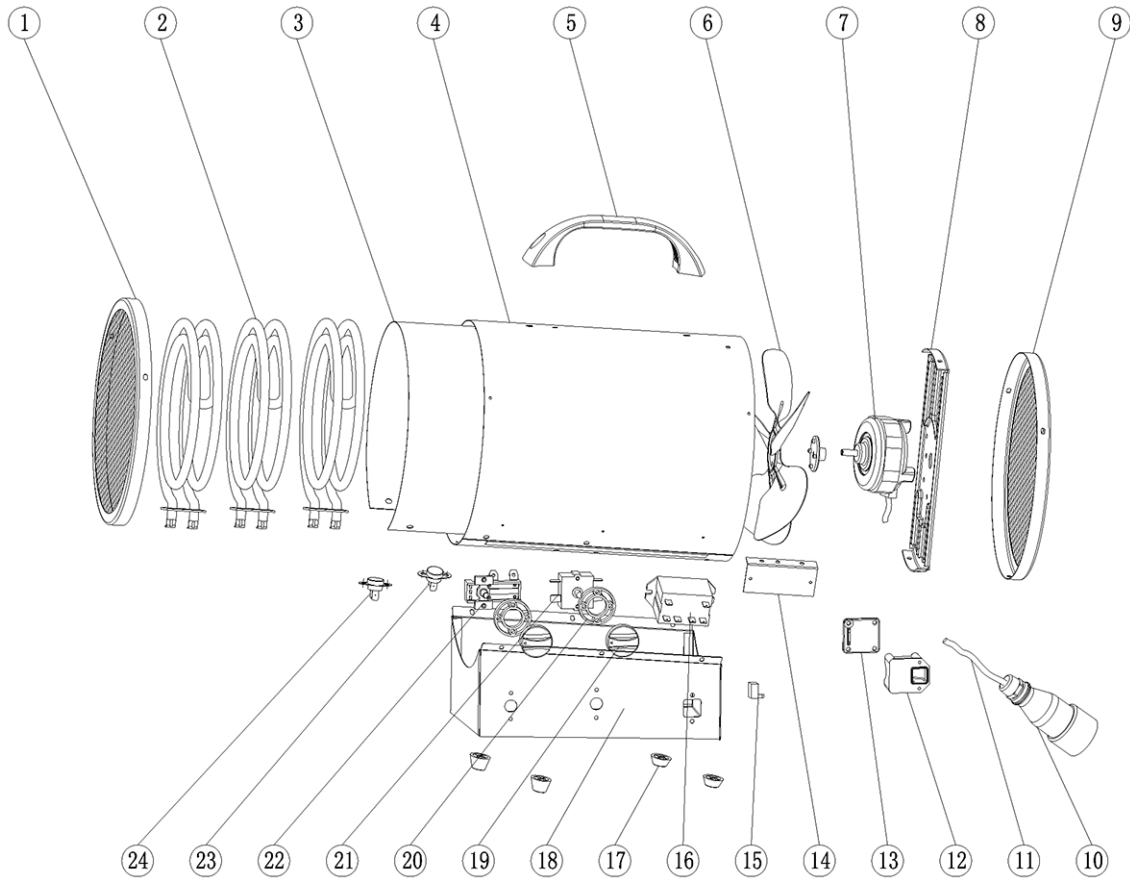
No.	Spare part	No.	Spare part	No.	Spare part
1	Front grill	9	Back grill	17	Knob
2	Heating element	10	Industrial plug assembly	18	Sealing ring
3	Inner casing	11	Cord	19	Switch
4	Outer casing	12	Line pressing board seats	20	Plastic adjustment thermostat
5	Handle	13	Line pressing plate cover	21	Re-set thermostat
6	Fan	14	Relay Holder	22	Time delay thermostat
7	Motor	15	Relay		
8	Motor bracket	16	Foundation		



## TDS 50 R

### Note!

The position numbers of the spare parts differ from those describing the positions of other parts mentioned in this operating manual.



No.	Spare part	No.	Spare part	No.	Spare part
1	Front grill	9	Back grill	17	Bottom studs
2	Heating element	10	Industrial plug assembly	18	Foundation
3	Inner casing	11	Cord	19	Knob
4	Outer casing	12	Line pressing board seats	20	Sealing ring
5	Handle	13	Line pressing plate cover	21	Switch
6	Fan	14	Relay Holder	22	Plastic adjustment thermostat
7	Motor	15	Capacitance	23	Re-set thermostat
8	Motor bracket	16	Relay	24	Time delay thermostat

## Disposal



In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and Council of 27th January 2003 concerning old electrical and electronic equipment. At the end of its life, please dispose of this device according to the valid legal requirements.

## Declaration of conformity

in accordance with the EC Low Voltage Directive 2006/95/EC and the EC Directive 2004/108/EC about electromagnetic compatibility.

Herewith, we declare that the electrical fan heater TDS 20 R / TDS 30 R / TDS 50 R was developed, constructed and produced in compliance with the named EC directives.

Applied harmonised standards:

EN 60335-1:2012

EN 60335-2-30:2009/A11:2012

EN 62233:2008

EN 55014-1:2006/A1:2009 and A2:2011

EN 55014-2:1997/A1:2001 and A2:2008

EN 61000-3-2:2006/A1:2009 and A2:2009

EN 61000-3-3:2013

Further applied standards:

EN 62321:2009

The  $\text{C} \in$  marking is found on the rear of the device.

Manufacturer:

Trotec GmbH & Co. KG

Grebbeener Straße 7

D-52525 Heinsberg

Phone: +49 2452 962-400

Fax: +49 2452 962-200

E-mail: [info@trotec.com](mailto:info@trotec.com)

Heinsberg, 31 March 2014

Managing Director: Detlef von der Lieck



**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)