

## ELECTRIC FAN HEATERS

IFH01-20H

IFH01-33H

IFH02-50H

IFH03-90H

**EN**

**OPERATING MANUAL**  
ELECTRIC HEATING DEVICE



**TK Tools**  
industrial equipment

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## 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.



### Warranty and liability

The device complies with the fundamental health and safety requirements of the applicable EU regulations and was tested at the factory for perfect functionality multiple times. However, if faults in the functionality occur and cannot be remedied with the measures in the chapter Errors and faults, please get in touch with your dealer or distributor. When making a warranty claim, supply the serial number (see nameplate).

When manufacturer's instructions or legal regulations have not been followed, or after unauthorised changes to the device are made, the manufacturer is not responsible for the resulting damages. Changes to the device or unauthorised replacement of individual parts can drastically impact the electrical safety of this product and leads to the forfeit of the warranty. Liability does not extend to damages to people or property caused by the device being used other than as described in the instructions in this operating manual. Subject to changes to technical design and model changes as part of constant development and product improvement without prior notice.

No liability is accepted for damages resulting from improper use. In such cases, entitlements to a warranty are then also forfeited.

### Legal notice

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## 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 annex).
- 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 10 / TDS 20 / TDS 30 / TDS 50 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 10 / TDS 20 / TDS 30 / TDS 50 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 device in immediate proximity to sinks, bathtubs, showers or swimming pools.

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.

### **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

### Device description

The electric heating devices IFH01-20H / 33H / IFH02-50H / IFH03-90H 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 (except TDS 10).

## Device depiction

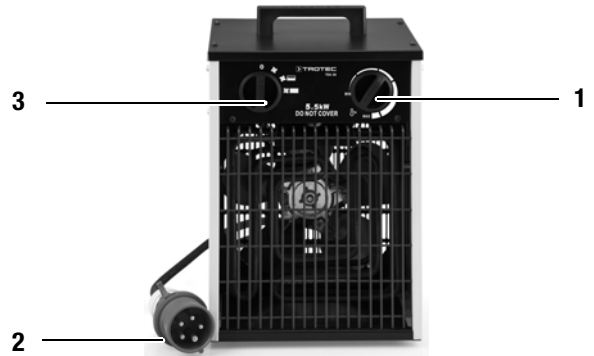
IFH01-20H



IFH01-33H



IFH02-50H



IFH03-90H



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

## 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 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 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

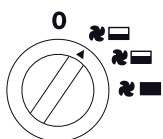
1. Plug the device into a sufficiently fused socket.
2. Turn the switch to the desired position:



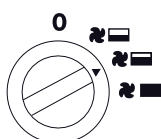
### Caution!

Always switch the device on or off via the fan stage (stage 1)!

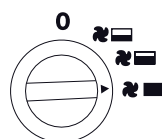
### IFH01-20H



1. Heating Stage I

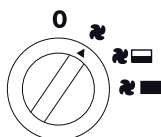


2. Heating Stage II

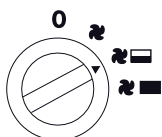


3. Heating Stage III

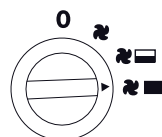
### IFH01-33H / IFH02-50H / IFH03-90H



1. Ventilation only

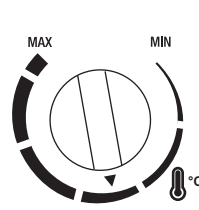


2. Heating Stage I

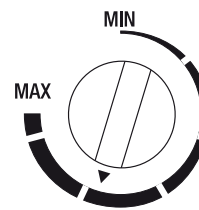


3. Heating Stage II

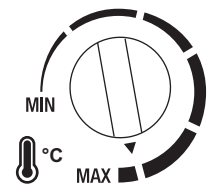
## Regulation of the room thermostat



IFH01-20H



IFH01-33H



IFH02-50H  
IFH03-90H

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.

## Switch-off

1. Keep the fan running for 3 minutes (at stage 1), before switching the device off.
2. Turn the switch into position 0.
3. Pull the plug from the mains socket.

## 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 internal thermostat does not reset automatically.	Actuate the reset switch next to the rotary switch.
The air current is reduced.	Air inlet is blocked.	Clean air inlet and remove obstruction.
	Fan motor is defective.	Have it replaced.

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## Maintenance and repair



For maintenance or repair work which requires the housing to be opened, contact the Trotec customer service.



### 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

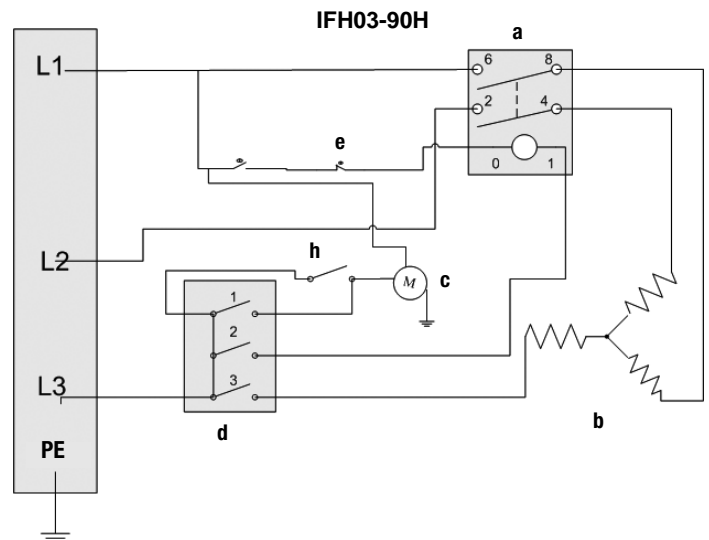
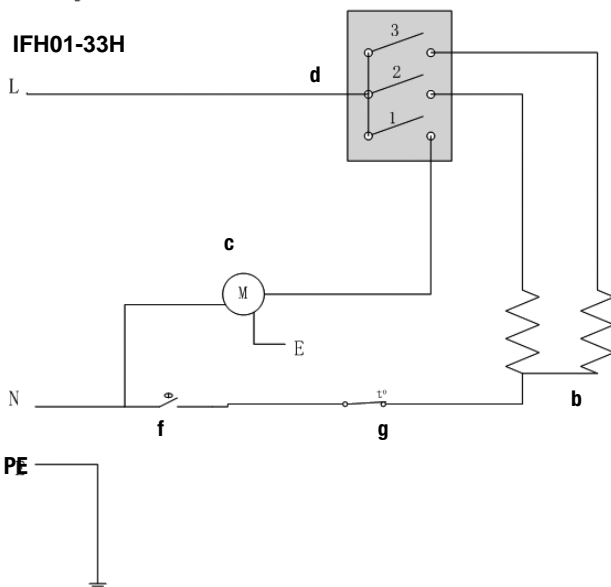
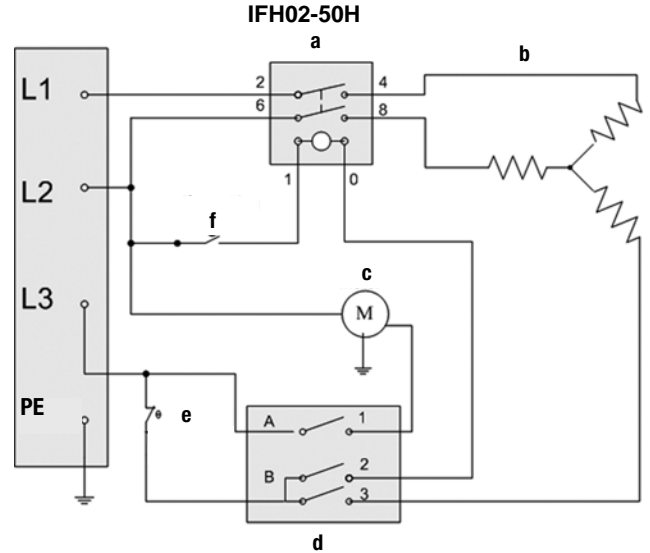
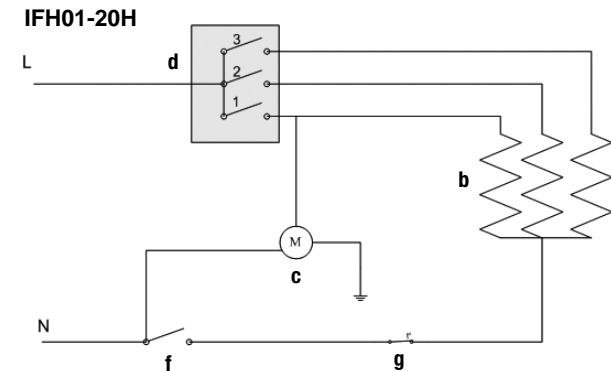
Clean the device with a soft, damp and lint-free cloth. Do not use sprays, solvents or harsh cleaners to dampen the cloth.

## Technical annex

### Technical data

Parameter	Value			
Model:	IFH01-20H	IFH01-33H	IFH02-50H	IFH03-90H
Heating capacity:	stage 1	0.65 kW	ventilation only	ventilation only
	stage 2	1.3 kW	1.65 kW	2.5 kW
	stage 3	2.0 kW	3.3 kW	5.5 kW
Air volume flow:	186 m <sup>3</sup> /h	476 m <sup>3</sup> /h	458 m <sup>3</sup> /h	708 m <sup>3</sup> /h
Nominal current:	8.7 A	14.3 A	7.22 A	13 A
Mains connection:	1/N/PE~ 230V 50/60Hz	1/N/PE~ 230V 50/60Hz	3/PE~ 400/440V 50/60Hz	3/PE~ 400/440V 50/60Hz
Connection plug:	CEE 7/7	CEE 7/7	CEE 16 A, 5-pin	CEE 16 A, 5-pin
Dimensions (length x width x height):	240 x 255 x 384 (mm)	265 x 255 x 395 (mm)	270 x 255 x 400 (mm)	283 x 355 x 515 (mm)
Weight:	3.7 kg	5.3 kg	5.6 kg	9.5 kg
Sound level:	46 dB (A)	46 dB (A)	51 dB (A)	52 dB (A)
Surrounding conditions:	-20 °C to 45 °C / max. 90 % RH		-20 °C to 45 °C / max. 90 % RH	

### Wiring diagram



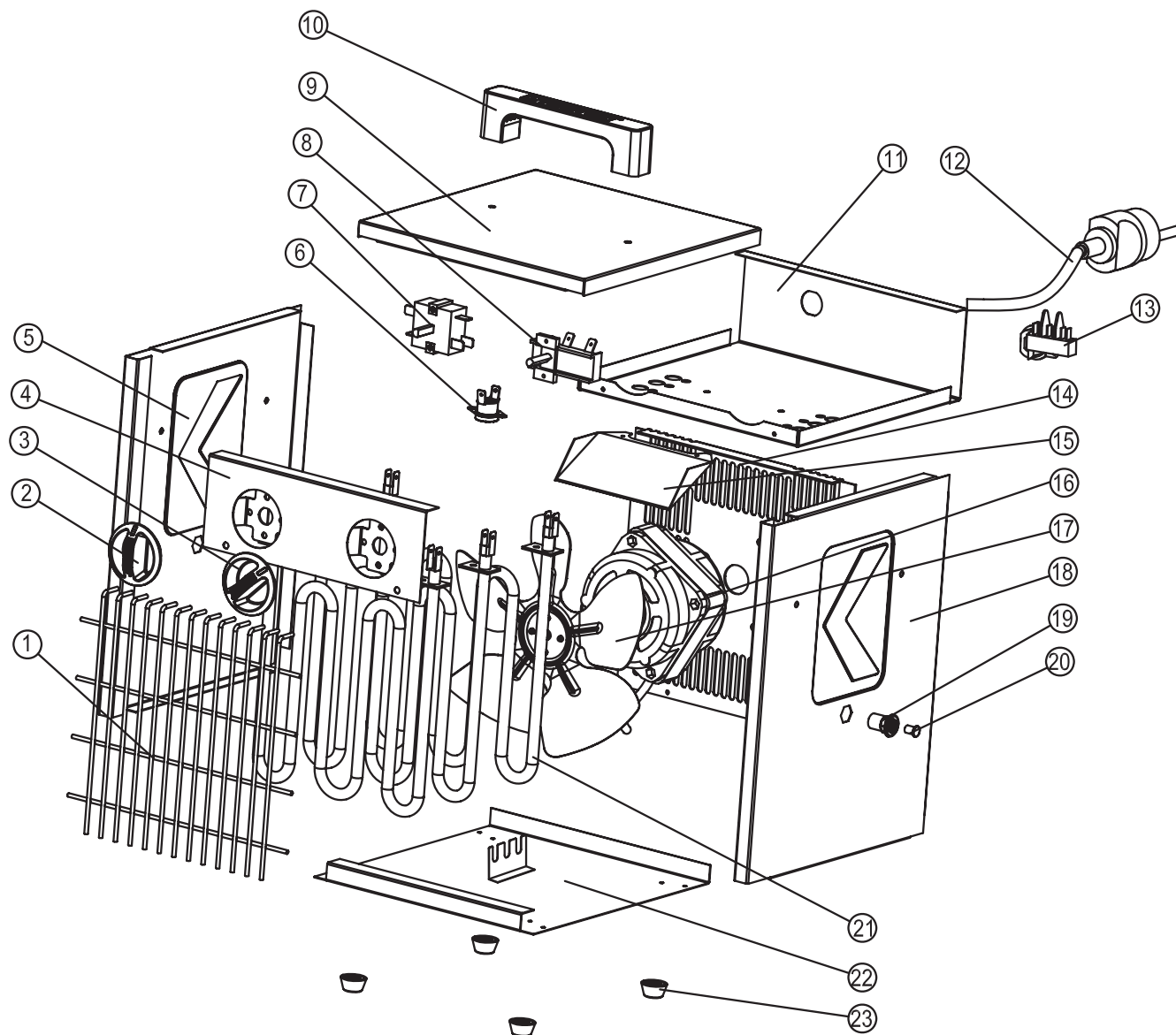
No.	Designation	No.	Designation	No.	Designation	No.	Designation
a	relay	c	motor	e	thermostat sensor	g	thermostat
b	heating elements	d	switch	f	self-resetting thermostat	h	time-delay thermostat

## Overview and list of spare parts

IFH01-20H

### Note!

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

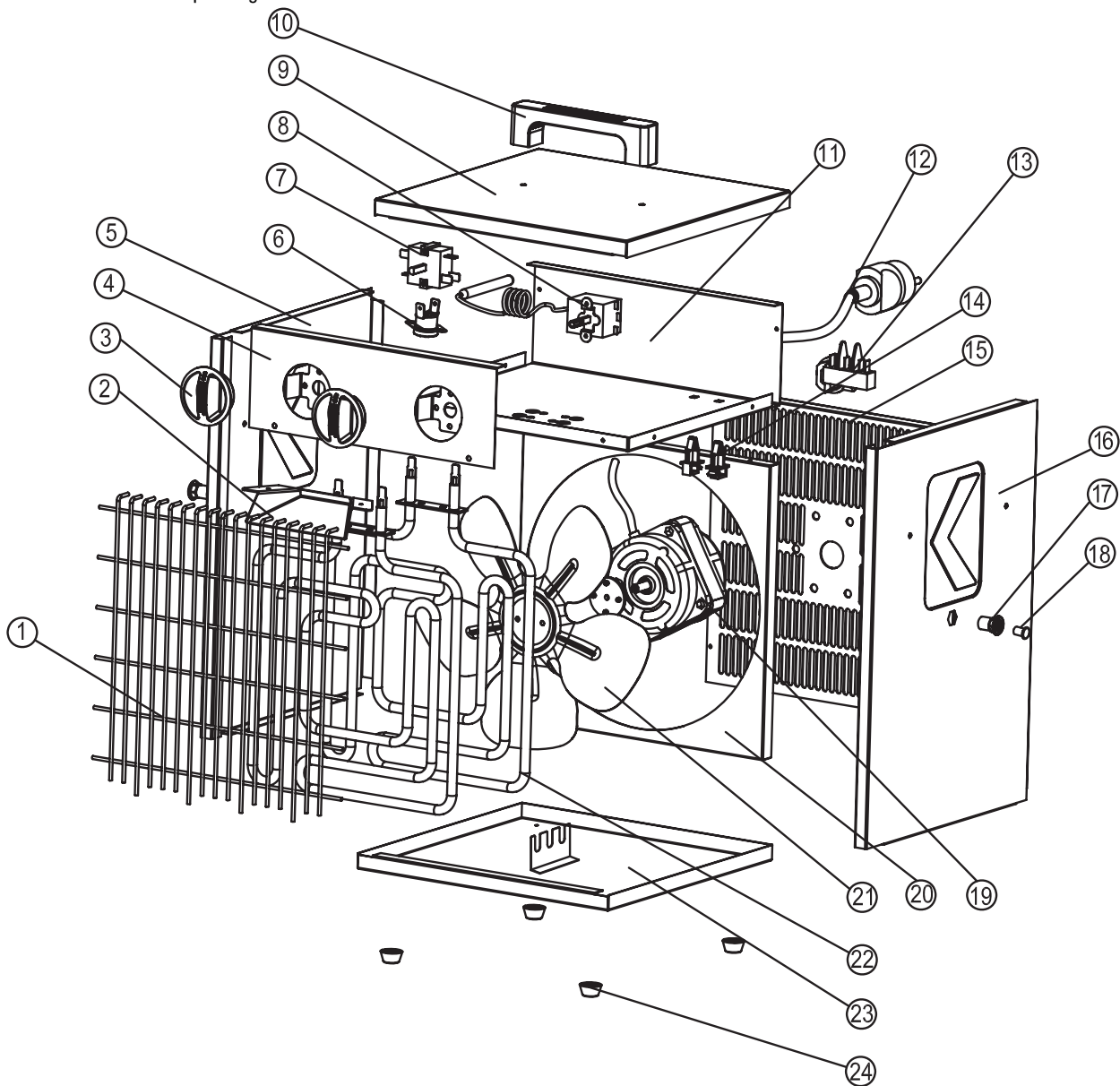


No.	Spare part	No.	Spare part	No.	Spare part
1	Front grill	9	Top panel	17	Fan
2	Switch Knob	10	Handle	18	Right panel
3	Thermostat knob	11	Middle panel	19	Pull rivet nuts
4	Control panel	12	Power cord	20	Stopples
5	Left panel	13	Wiring terminal	21	Heating elements
6	Re-set thermostat	14	Back grill	22	Bottom panel
7	Switch	15	Protection cover	23	Rubber feet
8	Bi-metal thermostat	16	Motor		

IFH01-33H

**Note!**

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

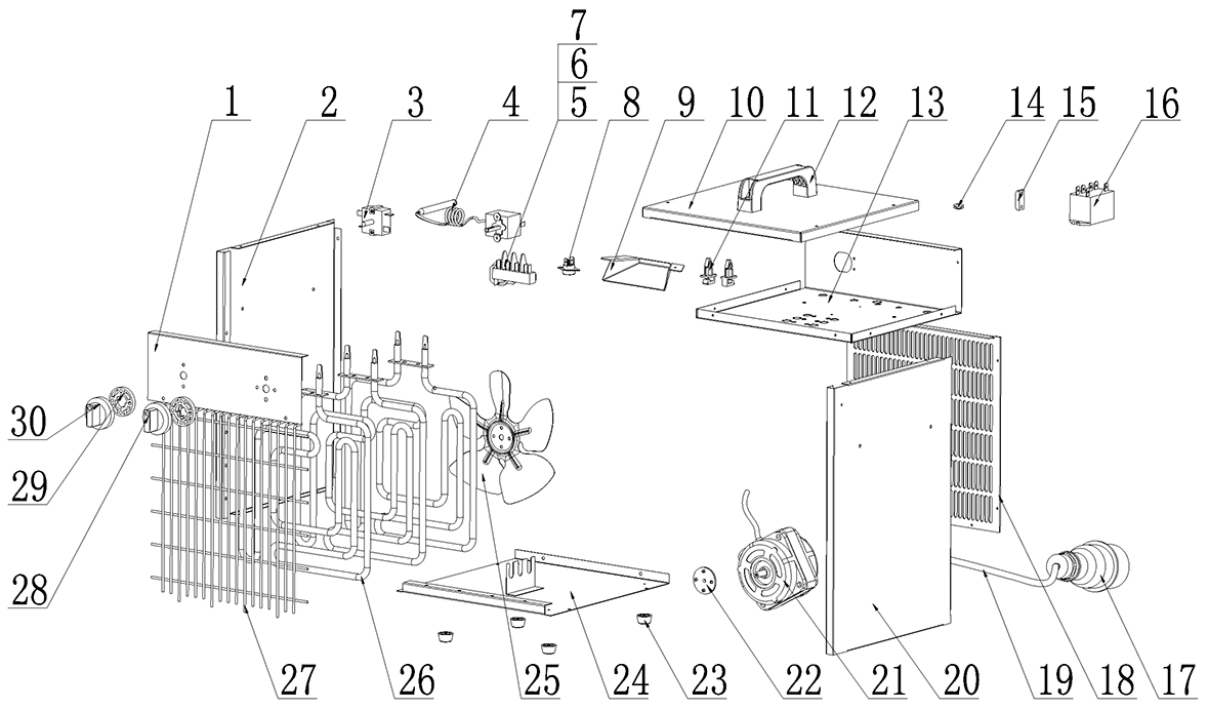


No.	Spare part	No.	Spare part	No.	Spare part
1	Front grill	9	Top panel	17	Pull rivet nuts
2	Protection cover	10	Handle	18	Stopples
3	Knob	11	Middle panel	19	Motor
4	Control panel	12	Power cord	20	Air flue
5	Left panel	13	Wiring terminal	21	Fan
6	Re-set thermostat	14	Sensor holder	22	Heating elements
7	Switch	15	Back grill	23	Bottom panel
8	Bi-metal thermostat	16	Right panel	24	Rubber feet

## IFH02-50H

### Note!

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

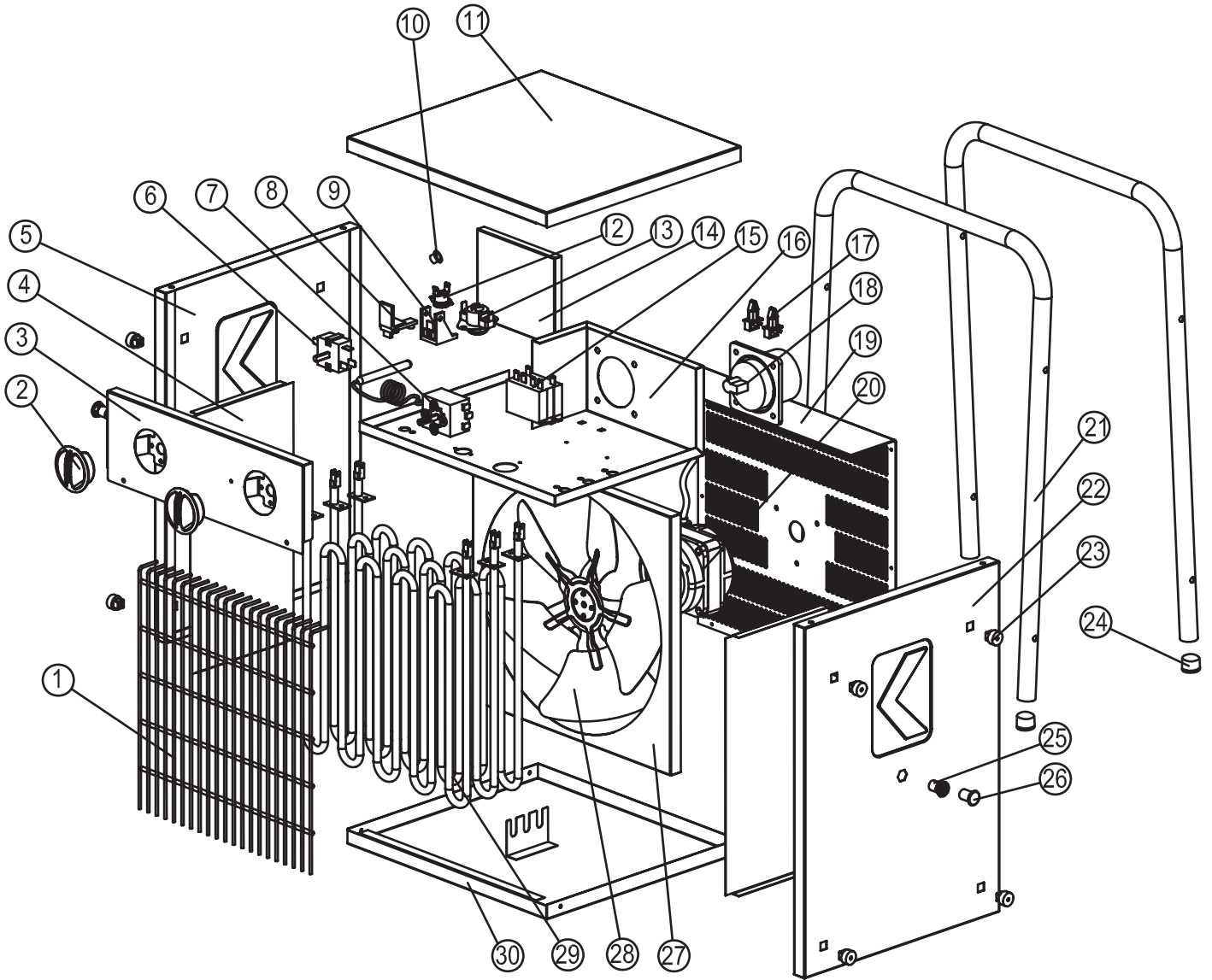


No.	Spare part	No.	Spare part	No.	Spare part
1	Control panel	11	Fixed support	21	Motor
2	Left side plate	12	Handle	22	Fan support
3	Switch	13	Inter panel	23	Feet
4	Thermostat	14	Protective ring	24	Bottom plate
5	Binding post	15	Line pressing plate	25	Fan
6	Binding post components	16	Relay	26	Heating element
7	Binding post pins	17	Industrial plug assembly	27	Front Grill
8	Re-set thermostat	18	Back grill	28	Thermostat knob
9	Protection cover	19	Power cord	29	Waterproof ring
10	Top casing	20	Right side plate	30	Switch knob

## IFH03-90H

### 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	11	Top panel	21	Metal handle
2	Knob	12	Time Delay thermostat	22	Right panel
3	Control panel	13	Non-self resetting thermostat	23	Plastic gasket
4	Heat Insulation plate	14	Back plate for plug	24	Tube cover
5	Left panel	15	Relay	25	Pull rivet nuts
6	Switch	16	Middle panel	26	Stopple
7	Capillary thermostat	17	Sensor holder	27	Air flue
8	Support for non-self resetting thermostat	18	Industrial plug	28	Fan
9	Holder for non-self resetting thermostat	19	Back grill	29	Heating element
10	Lock	20	Motor	30	Bottom panel

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## 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 of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE). 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 electric heating devices TDS 10 / TDS 20 / TDS 30 / TDS 50 were 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  $\text{CE}$  marking is found on the rear of the device.







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