

# **B 400**

**EN** *Operating Manual – Humidifier B 400*



TRT-BA-B400-TC-001-EN

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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.

The current version of the operating manual can be found at: [www.trotec.de](http://www.trotec.de)

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**Information about the device**

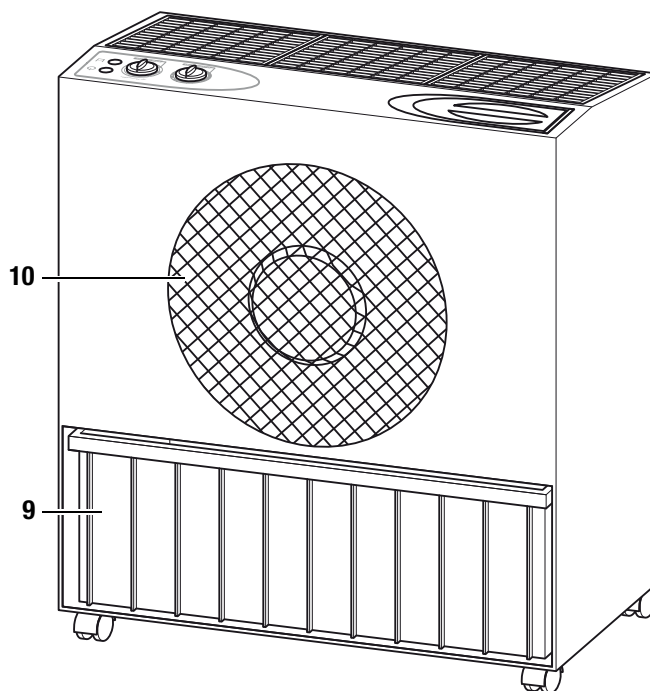
**Description of the device**

By use of the humidifier the humidity level in interior spaces can be regulated to the optimum value for art objects, pieces of furniture or electrical appliances.

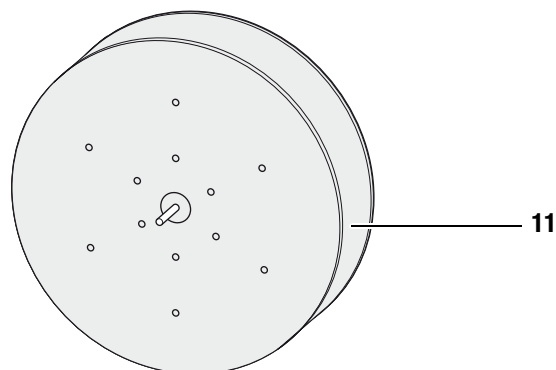
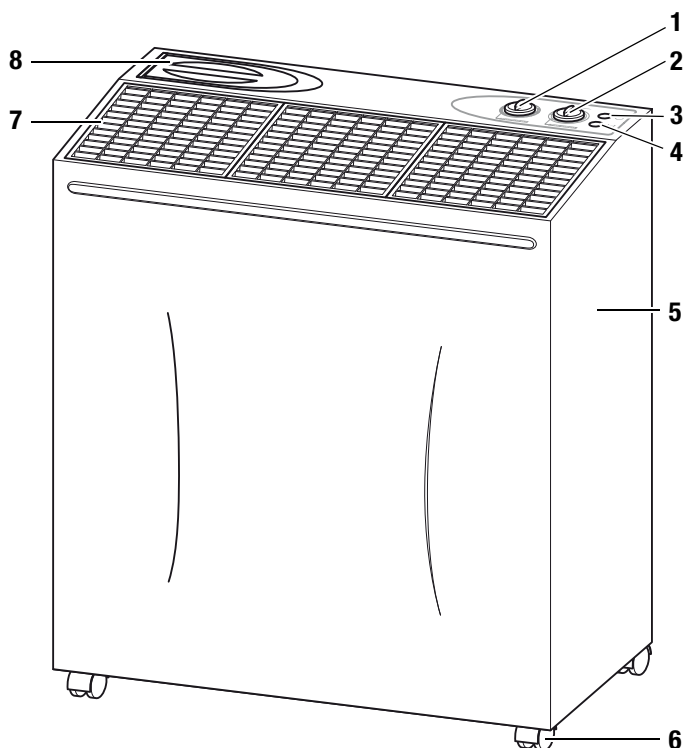
To achieve this, the water tank (9) is filled with water via the filler neck (8). Mats inside the device purify the air, filter the water and promote the evaporation of humidity. The desired humidity level can be adjusted using the control dial HYGROSTAT (1). The rotation of the evaporation mats and the fan (10) are both automatically switched on and off by the control dial HYGROSTAT (1). Thus the humidity in the room is kept at the required level. The comfort zone is reached depending on the room temperature and the humidity level. The higher the room temperature, the more humidification is required.

The fan (10) can be operated at two speed levels by use of the rotary switch FAN SPEED (2). At full speed the desired humidity level can be reached faster.

If the water level inside the tank (9) falls below 2 cm, the float turns the device off and the red water tank indicator light (4) lights up.



**Device depiction and operating elements**



No.	Operating element
1	Control dial HYGROSTAT
2	Rotary switch FAN SPEED
3	Operation indicator
4	Water tank indicator light
5	Housing
6	Wheels
7	Cover grille (air outlet)
8	Filler neck with hinged lid
9	Water tank
10	Air inlet
11	Drum with evaporation mats

## Technical data

Parameter	Value
Model	B 400
Max. evaporation capacity	60 l / 24 h
Electric connection	230 V / 50 Hz
Power input	53 W
Fuse (home)	10 A
Room size	up to 900 m <sup>3</sup>
Weight	18.6 kg
Dimensions (HxDxW)	720 x 316 x 625 mm
Water tank capacity	34 l
Minimum distance from walls of other objects	at the back: 10 cm (recommendation: 30 cm)
Sound pressure level LpA (1 m; complies with DIN 45635-01-KL3)	
Fan speed 1 (350 m <sup>3</sup> /h)	29 dB(A)
Fan speed 2 (800 m <sup>3</sup> /h)	42 dB(A)
B 400 filter fleece (6.100.004.020)	
B 400 filter fleece, round (6.100.004.040)	
Automatic water supply for B 400 (6.100.004.028)	

## Scope of delivery

- Humidifier B 400
- Cover grille
- Drum with evaporation mats
- Water tank
- Spacer
- Getting started guide

## Safety

**Read this manual carefully before starting or using the device. Store the manual near the device or its site of use!**

- Do not use the device in potentially explosive rooms.
- Do not use the device in atmospheres containing oil, sulphur, chlorine, acid or salt.
- Do not operate the device in rooms which are pressurised with acetone, undiluted acids or solvents.
- Do not expose the device to directly squirting water.
- Ensure that the air inlet and outlet are not obstructed.
- Ensure that the side of the device where the air inlet is found is kept free of dirt and loose objects.
- Never insert objects or limbs into the device.
- Do not cover or transport the device during operation.
- Do not sit on the device.
- Ensure that all electric cables outside of the device are protected from damage (e.g. from animals).
- The electrical connection must correspond to the specifications in chapter Technical data.
- Switch the device off and disconnect the power cord from the mains, when you are about to fill the water tank or the device is not in use.
- Check whether the device is switched off and all installation instructions have been followed, before connecting the power cord exclusively to a grounded outlet.
- Only use extensions to the connecting cable which are appropriate to the device power consumption, the length of its cable and its use. Avoid electrical overload.
- Only transport the device in an upright position with an emptied water tank.
- Dispose of the remaining liquid in the water tank before transport and storage. Do not drink it. There is a risk of infection!

### Intended use

Only use the device B 400 as a mobile humidifier for the humidification and filtration of room air, while adhering to and following the technical data.

**Intended use comprises humidifying the room air in:**

- museums
- warehouses, archives
- libraries
- living spaces
- call centres and computer rooms

### Personnel qualifications

People who use this device must have read and understood the operating manual, especially the chapter Safety.

### Residual risks



#### **Hazardous electric current!**

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



#### **Hazardous electric current!**

Before any work on the device, remove the mains plug from the mains socket!



#### **Caution!**

To avoid damages to the device, never operate the device without inserted evaporation mats!



#### **Danger!**

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

### 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.

## Transport

To make the device easier to transport, it is fitted with wheel.

**Before** transporting the device, proceed as follows:

1. Switch off the device using rotary switch FAN SPEED (2) (see chapter Device depiction and operating elements).
2. Remove the mains plug from the mains socket. Do not use the power cable to drag the device!
3. Empty the water tank.

## Storage

When out of use, store the device as follows:

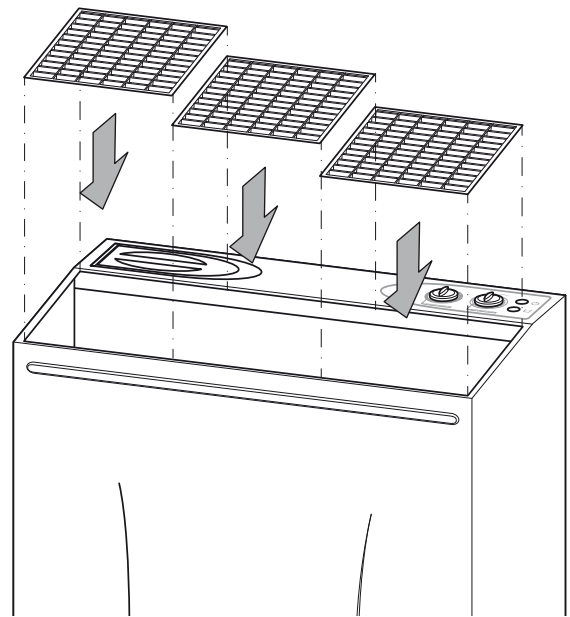
- dry,
- with a roof overhead,
- in an upright position where it is protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.

## Operation

- After being switched on, the device operates fully automatically until the float indicates that the water tank is empty and the device switches itself off.
- Avoid open doors and windows.

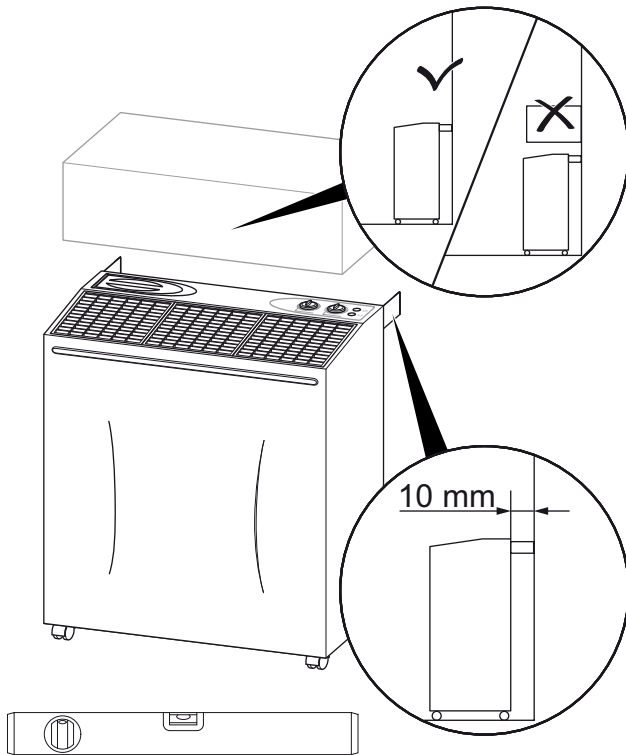
## Unpacking and assembly

- Completely remove the packing.
- Fully uncoil the power cord. Make sure the power cable is not damaged. Do not damage it during unwinding.
- Remove the styrofoam wedge from the inside of the device by pulling it out at the top.
- Make sure the float inside the water tank is not jammed and can float freely.
- Make sure that the drum is mounted correctly inside the device (see chapter Inserting the drum).
- Fit the cover grille on the device.

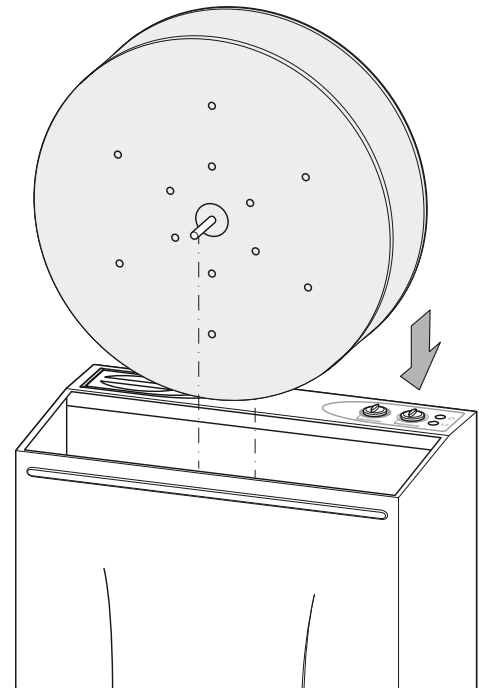


## Positioning

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



## Inserting the drum



### Caution!

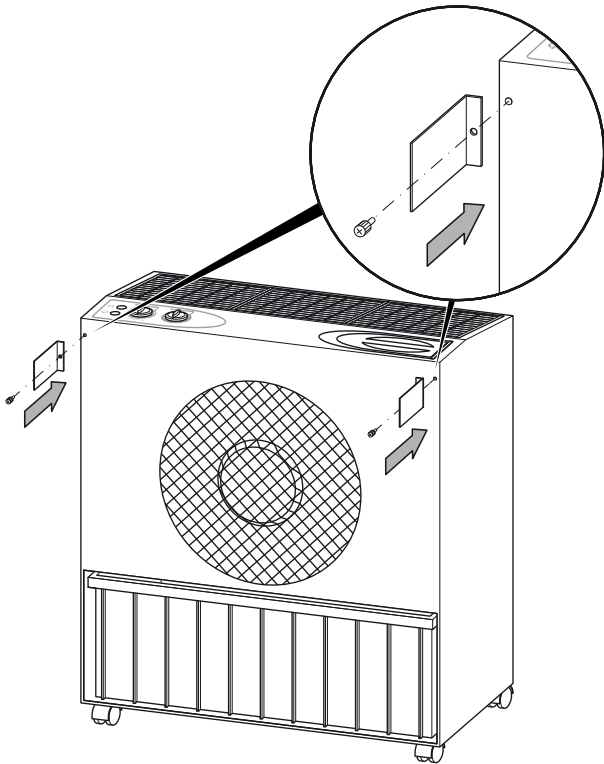
Make sure the pinion interlocks with the drum's gearing! Otherwise device and drum might be damaged.

- Set the device in an upright and stable position.
- For optimum performance set the device in the middle of a room, if possible. A heat source near the device encourages its output.
- 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.
- Do not set up the device next to furniture, paintings and other devices which can be damaged by humidity.
- Make sure that no curtains or other objects interfere with the air flow.
- Ensure that extension cords are completely unrolled.

**Mounting the spacer**

The spacers ensure a minimum distance of 10 cm to the wall. This minimum distance must be observed to guarantee the humidifier's functioning.

For optimum performance a distance of at least 30 cm is recommended.



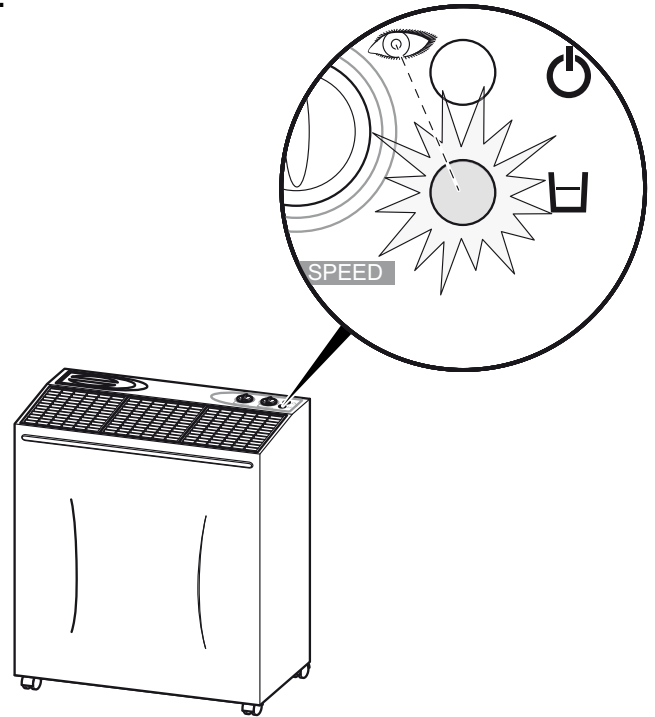
**Filling the water tank**



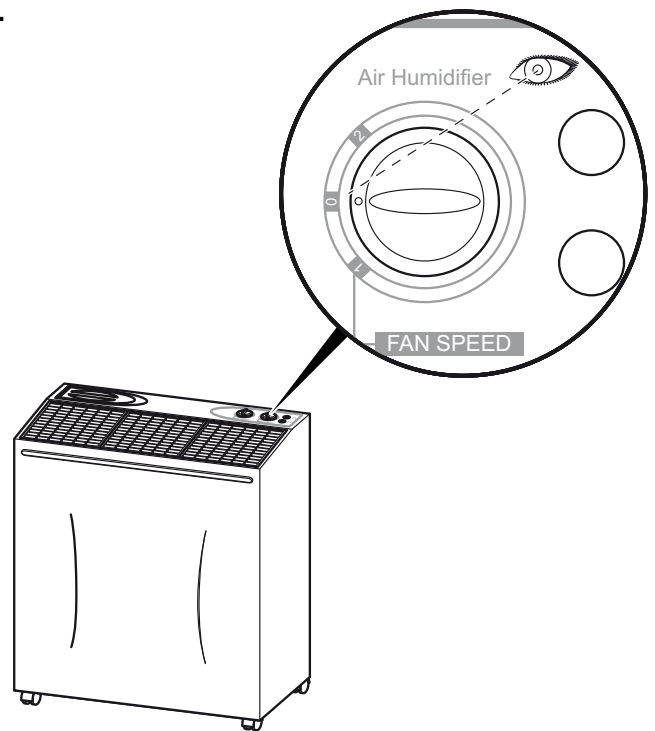
**Caution!**

When filling the water tank, make sure that no water can reach the control or interior walls of the device. Quit filling at about 2 cm below the tank's water level mark.

A.

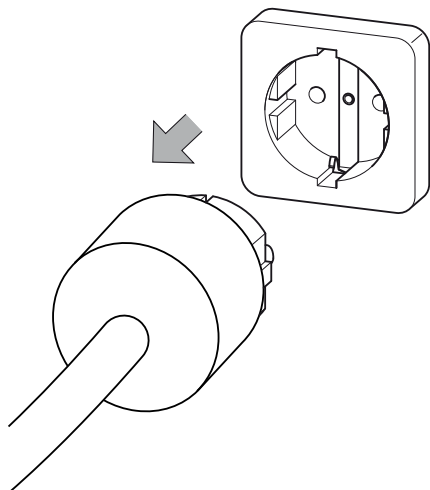


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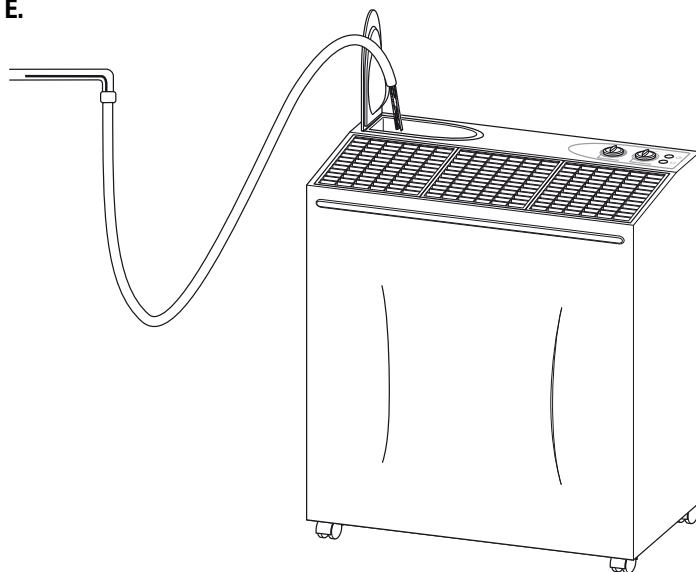




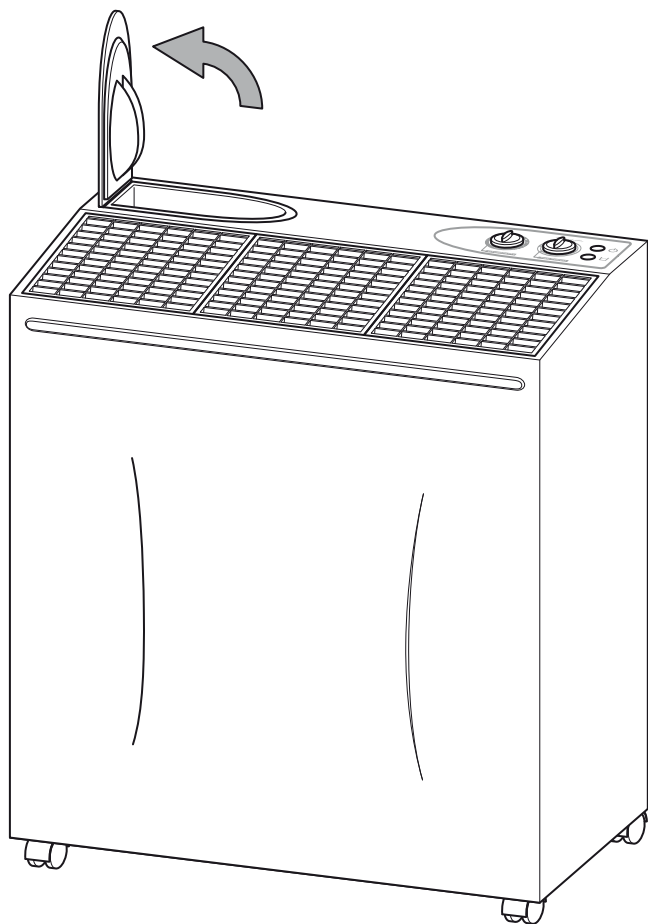
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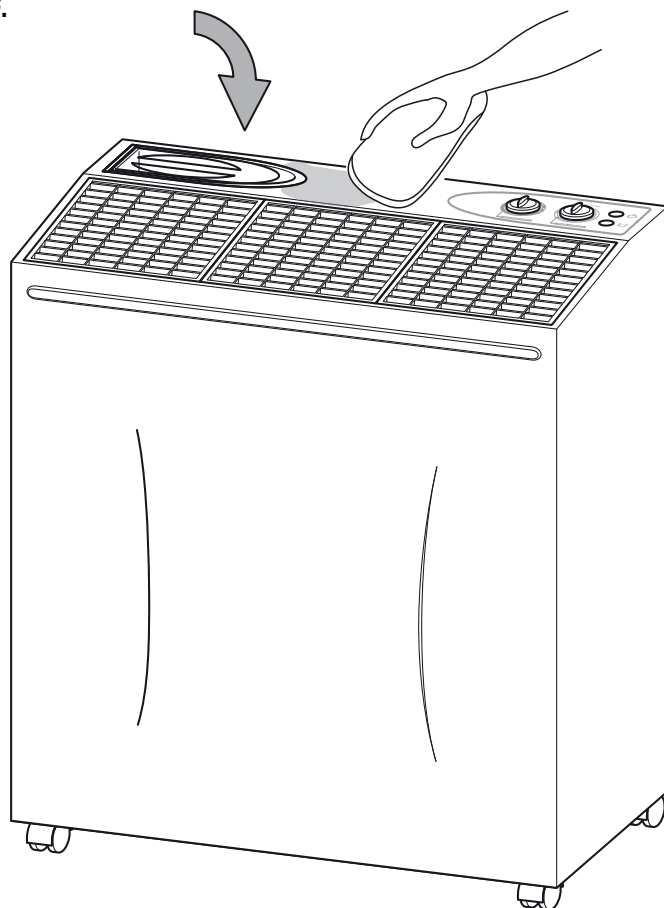
E.



D.



F.



### Switch device on

1. Ensure that the tank has been filled with water and is inserted properly.
2. Make sure the device is neither damp nor wet on the outside. Otherwise wipe it dry.
3. Insert the mains plug into a properly secured mains power socket. Do not create tripping hazards. Use cable bridges.
4. Turn the rotary switch FAN SPEED (2) to position 1 or 2. => The operation indicator light (3) lights up in green.
  - Ideally start with stage 2, so as to reach the desired humidity level at a quicker rate. Then set it to stage 1, so the humidity can be maintained with little noise emission.

### Humidification control

Set the desired humidity value by use of the control dial HYGROSTAT (1).

- The device is switched off if you turn the control dial HYGROSTAT (1) counter-clockwise all the way to the stop.
- The device constantly humidifies when you turn the control dial HYGROSTAT (1) clockwise all the way to the stop.

### Shut down procedure

1. Turn the rotary switch FAN SPEED (2) to position 0.
2. Do not touch the mains plug with wet or damp hands.
3. Remove the mains plug from the mains socket.
4. Remove the water tank and any residual fluid from it.
5. Clean the device, the water tank and especially the evaporation mats according to chapter Maintenance.
6. Store the device according to chapter Storage.

### Errors and faults

The accurate functionality of the device was tested during production a number of times. However, if functionality faults do occur, then check the device according to the following list.

#### The device does not start:

- Check the power connection (230 V/1~/50 Hz).
- Check the mains plug for damages.
- Check the fuse (home).
- Check the setting at the hygostat's control dial. The control dial must not be turned too far to the left, because otherwise the device switches off. The operation indicator light should be lighted in green.
- Have the electricians checked by a specialist company for cooling and air-conditioning or by TROTEC®.

#### The device runs, but there is no humidification:

- Check evaporation mats and drum for proper seating.
- Check the fan for proper functioning or unusual vibrations and sounds. Remove external dirt.
- Check the room temperature.
- Check evaporation mats for dirt. If necessary, clean or replace the mats.

#### The device is loud or vibrates; water leaks:

- Check, whether the device is set up in an upright position.

#### The device gets very warm, is loud or is losing performance:

- Check the air inlets and air filter are not dirty. Remove external dirt.
- Check the inside of the device for dirt (see chapter Maintenance). If necessary, clean the interior of the device using compressed air.

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

Please contact the customer service. If necessary, bring the device to a specialist company for cooling and air-conditioning or to TROTEC® for repairs.

**Maintenance**

**Maintenance intervals**

Maintenance and care interval	before every start	when necessary	at least every 2 weeks	at least every 4 weeks	at least annually
fill water tank		X			
check air inlets and outlets for dirt and foreign objects and clean if necessary	X			X	
clean housing and water tank		X			X
visually check the inside of the device for dirt		X		X	
check air inlet grid, cover grille and evaporation mats for dirt and foreign objects and clean or replace if necessary	X		X		
change evaporation mats					X
check for damages	X				
check attachment screws		X			X
carry out a test run					X

**Maintenance and care log**

Device type: ..... Device number: .....

Maintenance and care interval	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
check air inlets and outlets for dirt and foreign objects and clean if necessary																
clean housing and water tank																
visually check the inside of the device for dirt																
check air inlet grid, cover grille and evaporation mats for dirt and foreign objects and clean or replace if necessary																
change evaporation mats																
check for damages																
check attachment screws																
carry out a test run																
Remarks:																

1. Date: ..... Signature: .....	2. Date: ..... Signature: .....	3. Date: ..... Signature: .....	4. Date: ..... Signature: .....
5. Date: ..... Signature: .....	6. Date: ..... Signature: .....	7. Date: ..... Signature: .....	8. Date: ..... Signature: .....
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13. Date: ..... Signature: .....	14. Date: ..... Signature: .....	15. Date: ..... Signature: .....	16. Date: ..... Signature: .....

**Activities for before the start of maintenance**

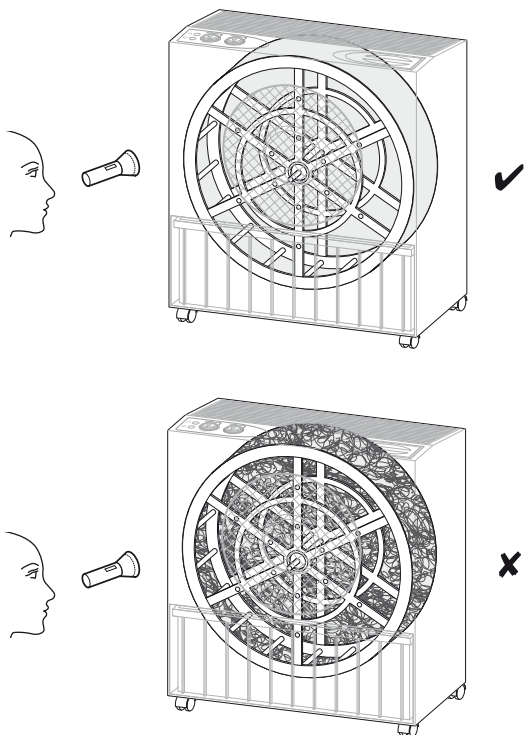
1. Do not touch the mains plug with wet or damp hands.
2. Before any work, detach the mains plug!



**Maintenance tasks at the electrical equipment must only be carried out by specialist companies for cooling and air-conditioning or by TROTEC®.**

**Visual check for dirt in the inside of the device**

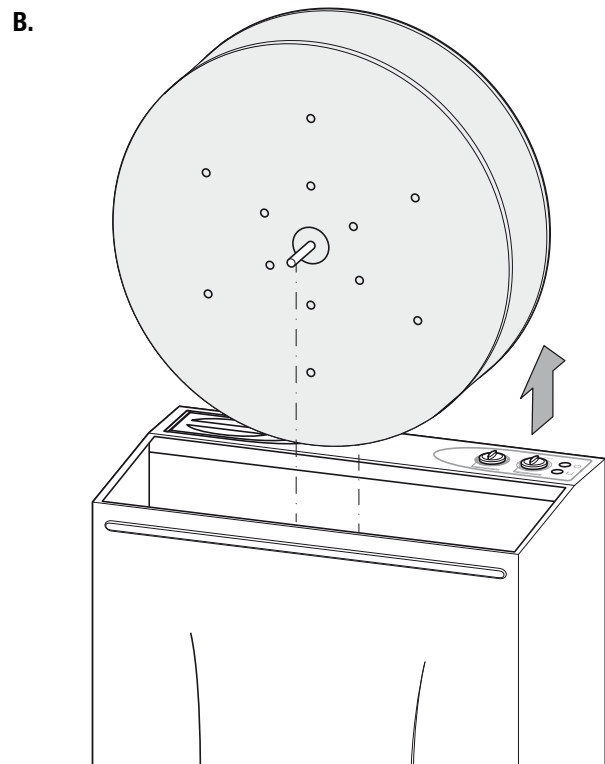
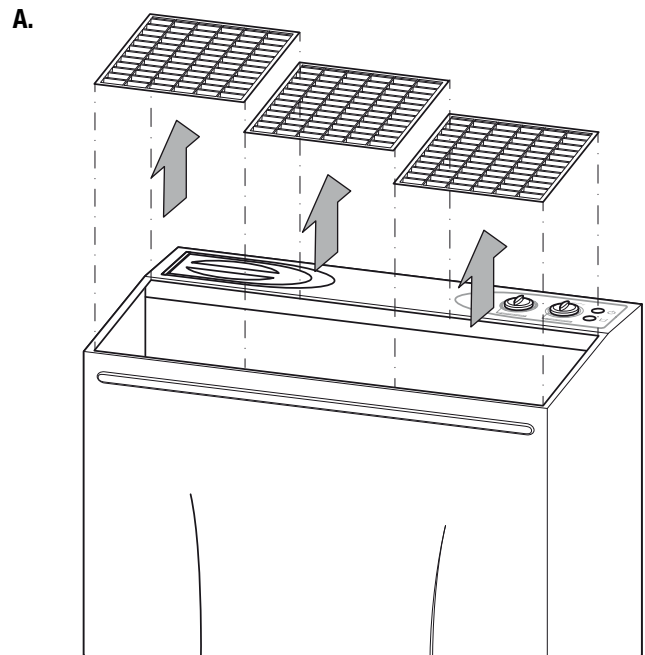
1. Remove the cover grilles (see chapter Cleaning the evaporation mats).
2. Shine a torch through the opening of the device.
3. Check the inside of the device for dirt.

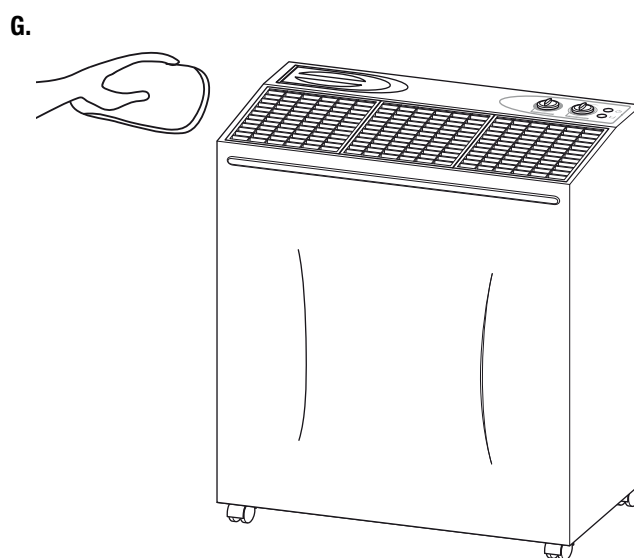
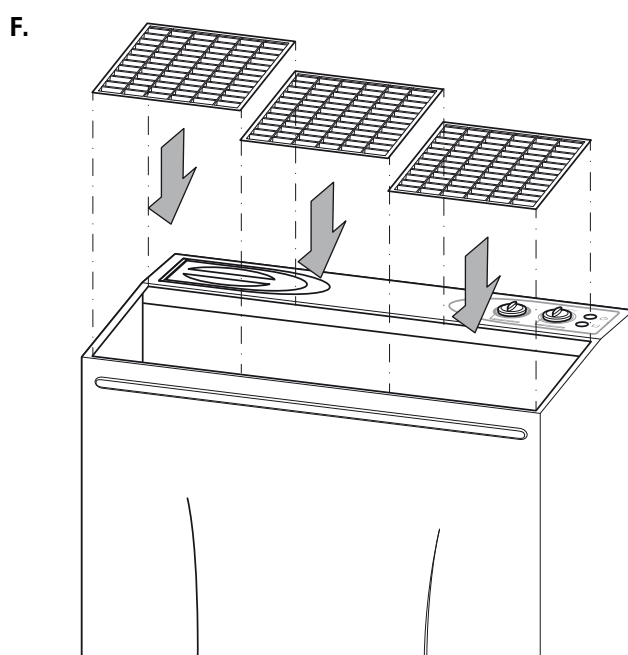
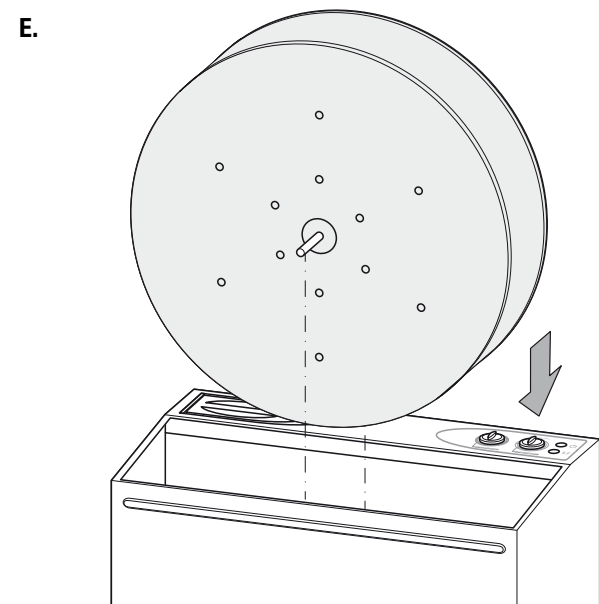
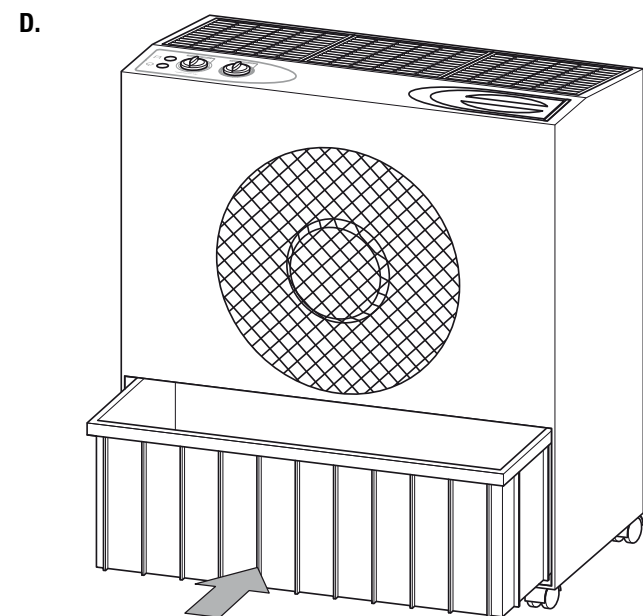
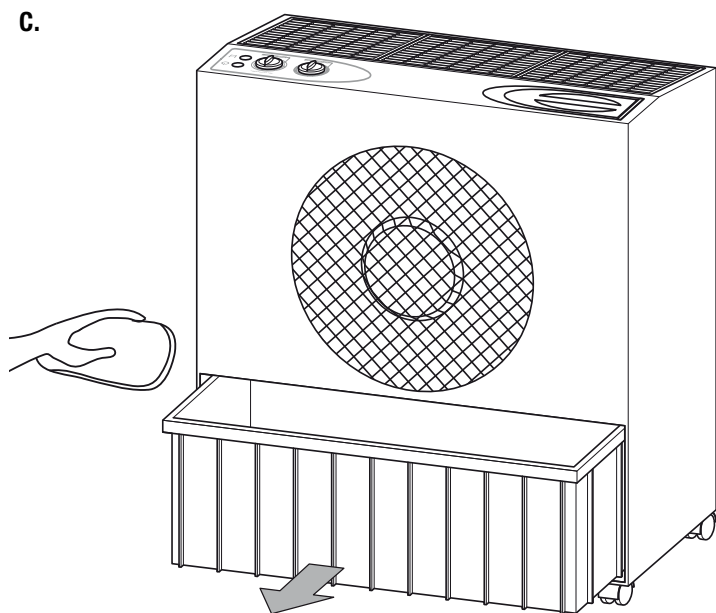


4. If you can detect a thick layer of dust, proceed as follows:
  - Make sure that the device is disconnected from the mains.
  - Remove the drum incl. mats from the device.
  - Clean the device's interior with a lint-free, soft cloth.
  - Remove the evaporation mats (see chapter Cleaning the evaporation mats).
  - Put the drum in.
  - Refit the cover grilles.
5. Plug the mains plug back into the socket.

**Cleaning housing and water tank**

1. Use a soft, lint-free cloth for cleaning.
2. Dampen the cloth with clean water. Do not use sprays, solvents, alcohol-based or abrasive cleaners to dampen the cloth.
3. Remove all calcium deposits in the water tank.
4. Make sure not to damage the float when inserting and removing the water tank.



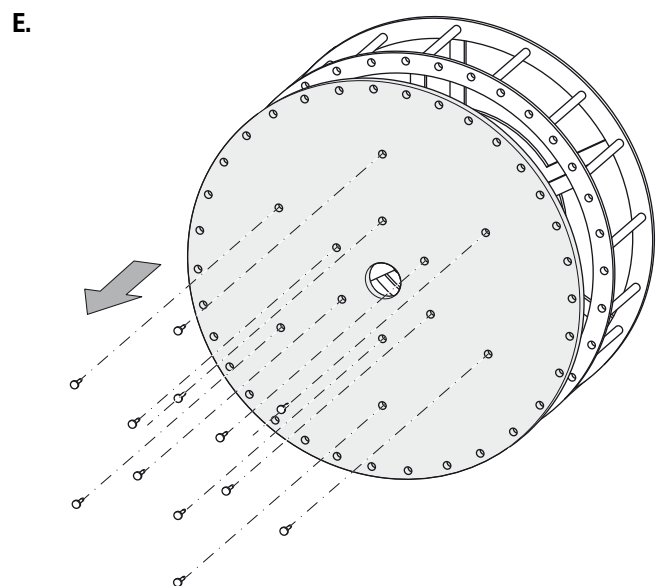
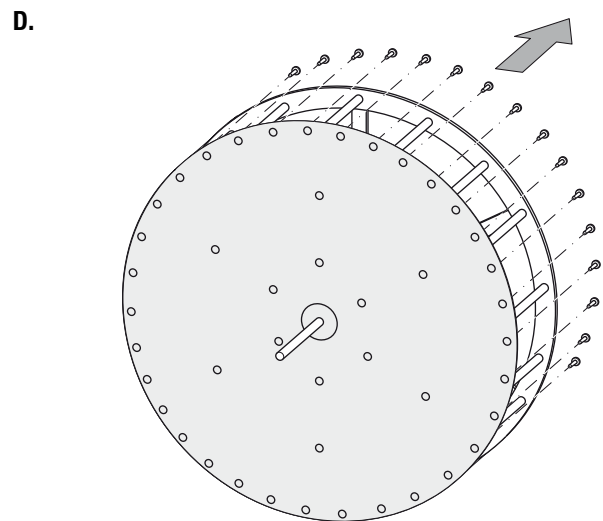
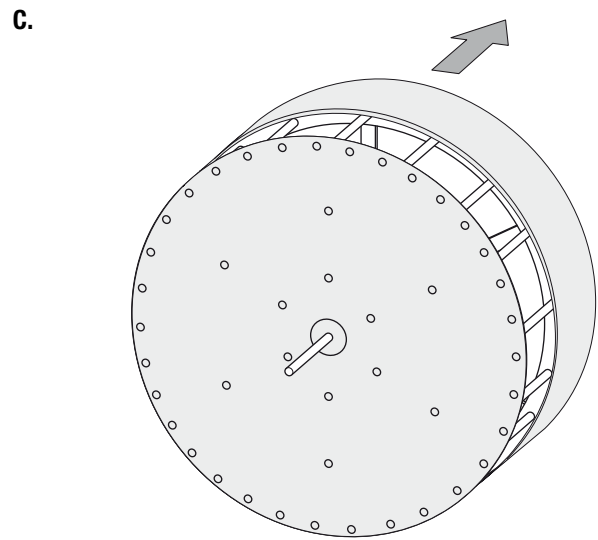
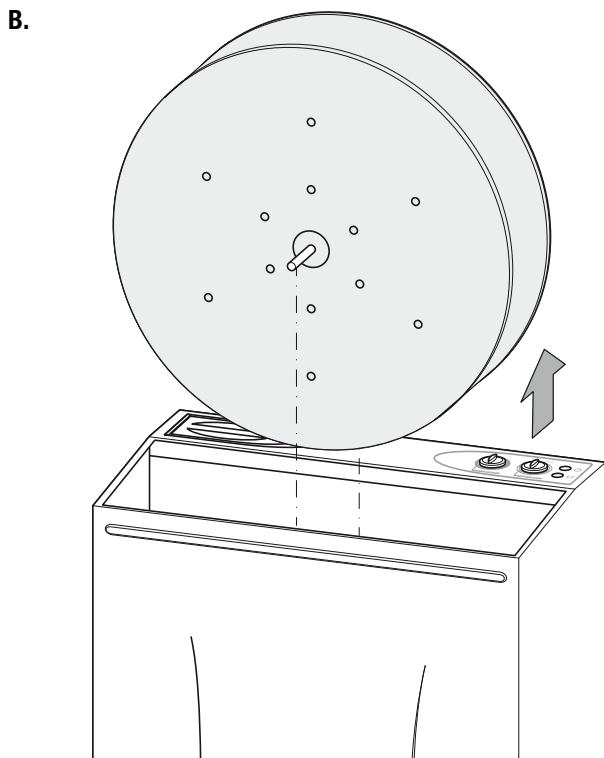
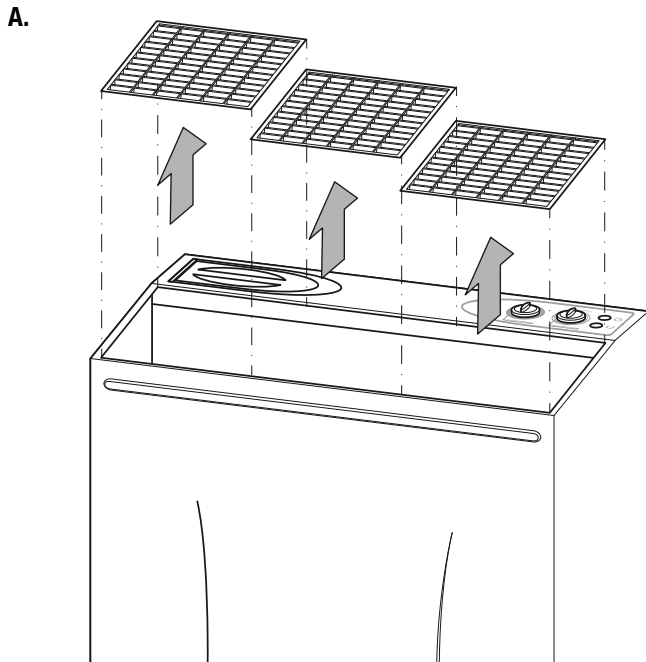


## Cleaning the evaporation mats

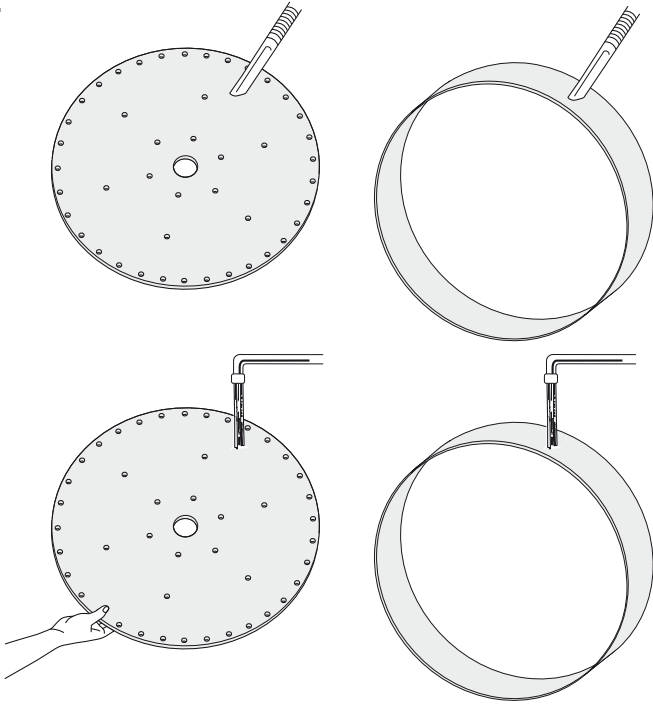


### Caution!

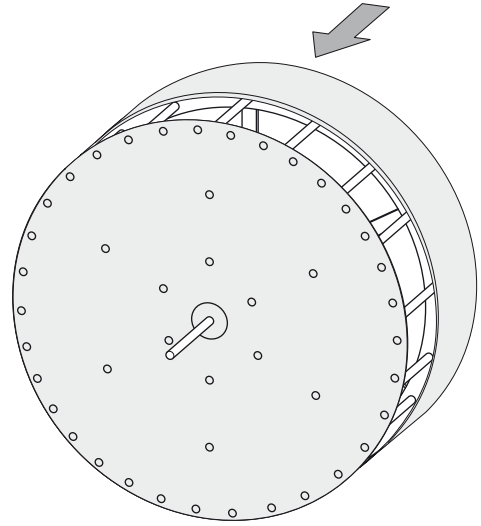
Ensure that the mats are neither worn nor damaged. The mats' edges must not be torn or misshaped. Before reinserting the evaporation mats, ensure that these are undamaged! Read the chapter Maintenance intervals and replace the mats in due time!



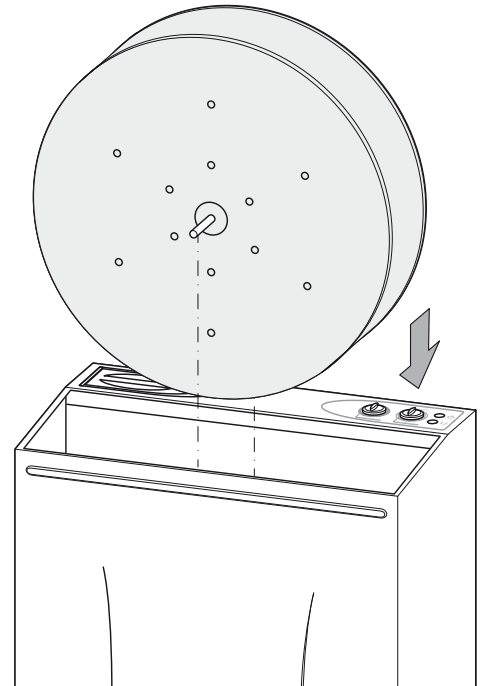
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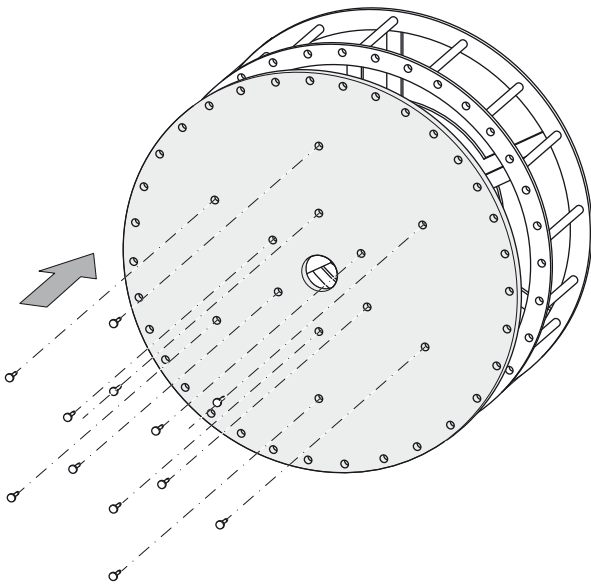
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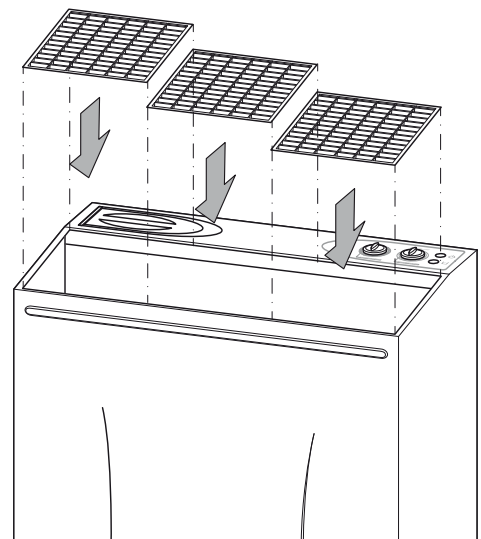
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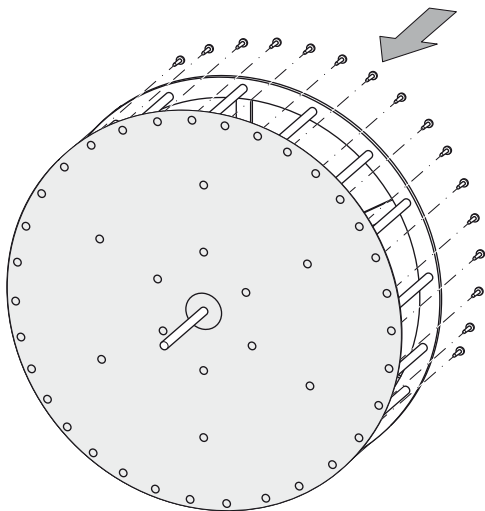
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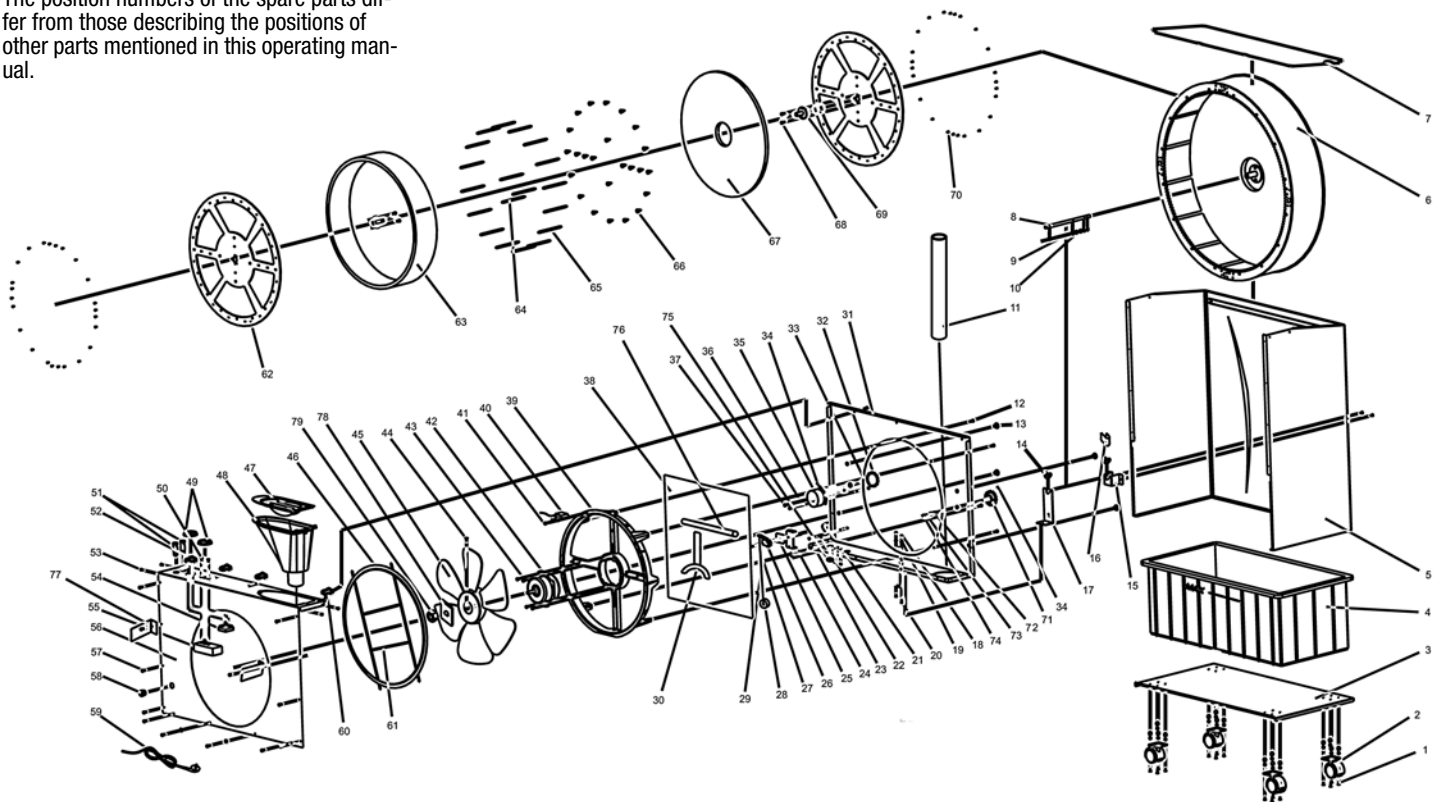
H.



## Overview and list of spare parts

### 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	screw/nut/washer	28	float	55	humidistat
2	universal wheel	29	nylon wire	56	back cabinet
3	base	30	motor protection cover	57	screw
4	water tank	31	middle cabinet	58	cabl cord clip
5	front cabinet	32	gear drive	59	cabl cord
6	drum	33	hexangonal nut	60	L type fixer block
7	grill	34	bolt	61	H type grill reinforcer
8	drum axle	35	synchronous motor	62	drum frame
9	stopper	36	spring wahser	63	foam pad - external
10	washer in nylon	37	screw	64	drum supporting pole 2
11	water pipe	38	middle mesh	65	drum supporting pole 1
12	screw	39	holding frame for motor	66	clip button for form pad
13	fixing pillar	40	condenser	67	foam pad - circle
14	bushing – axle	41	screw	68	screw
15	supporting board 1 for drum	42	main motor	69	supporting board washer
16	washer for drum axle	43	screw	70	screw
17	supporting board 3 for drum	44	screw	71	gear wheel
18	hexagonal nut	45	fan blade	72	gear axle
19	spring washer	46	rear mesh	73	washer
20	screw	47	funnel lid	74	nut
21	connection to the earth	48	funnel	75	cabl circle
22	washer	49	switch knob	76	reinforcing bar
23	screw	50	screw	77	bracket against the wall
24	holding board for switch	51	indicator light	78	fan blade stopper
25	mica sheet	52	screw	79	nut
26	switch	53	screw		
27	screw	54	speed switch		



## 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 useful life, please dispose of this instrument in a manner appropriate to the relevant legal requirements.

## Declaration of conformity

in accordance with the EC Low Voltage Directive 2006/95/EC, Annex III, Section B and the EC Directive 2004/108/EC about electromagnetic compatibility.

Herewith, we declare that the humidifier B 400 was developed, constructed and produced in compliance with the named EC directives.

The  $\text{CE}$  marking is found on the device nameplate.

Manufacturer:

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D-52525 Heinsberg

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Fax: +49 2452 962-200

E-mail: info@trotec.de

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Managing Director: Detlef von der Lieck



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