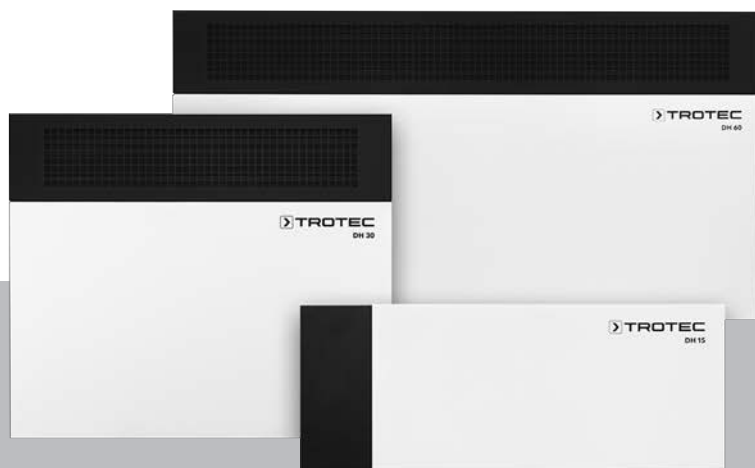


DH 15 / DH 30 / DH 60

EN

OPERATING MANUAL  
DEHUMIDIFIER



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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 property damage.

Some of the illustrations in this operating manual feature device DH 30 by way of example. However, the depicted operating steps and explanations also apply to the devices DH 15 and DH 60 unless otherwise mentioned.

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



DH 15



<http://download.trotec.com/?sku=1125000111&id=1>

DH 30



<http://download.trotec.com/?sku=1125000116&id=1>

DH 60



<http://download.trotec.com/?sku=1125000121&id=1>

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Changes to construction in the interests of constant improvements to the product, as well as changes to the shape and colour are reserved.

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## 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 device number (see the rear of the device).

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 a case, any warranty claims be voided also.

## 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 aggressive atmosphere.
- 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 reach or put objects into the device.
- Do not cover or transport the device during operation.
- Do not use the device with wet or damp hands.
- Ensure that all electric cables outside of the device are protected from damage (e.g. from animals). Never use the device if the cable or power connection is damaged!
- Only use extensions to the connecting cable which are appropriate to the device power consumption, the length of its cable and its use. Completely unroll extension cables. Avoid electrical overload.
- Unplug the device from the mains before starting with maintenance, service or repair work.

## Intended use

Only use the devices DH 15 / DH 30 / DH 60 as stationary industrial dryers for drying and dehumidifying room air, while adhering to and following the technical data.

Intended use comprises:

- drying and dehumidifying:
  - production plants, underground rooms
  - store rooms, archives, laboratories
  - rooms and areas after water damages from burst pipes or flooding
- keeping dry of:
  - instruments, devices, files
  - electrical control centres
  - moisture-sensitive goods, loads, etc.

## Improper use

Do not place the devices DH 15 / DH 30 / DH 60 on wet or flooded ground. Do not use the device outdoors. Do not place any objects, e.g. wet clothing, on the device for drying. Any unauthorised modifications, such as alterations or structural changes 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 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!



### **Danger!**

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



### **Danger!**

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.



### **Danger!**

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

## Behaviour in the event of an emergency

1. In an emergency, disconnect the device from the mains feed-in: Switch the device off and disconnect it from the mains.
2. Do not reconnect a defective device to the mains.

## Information about the device

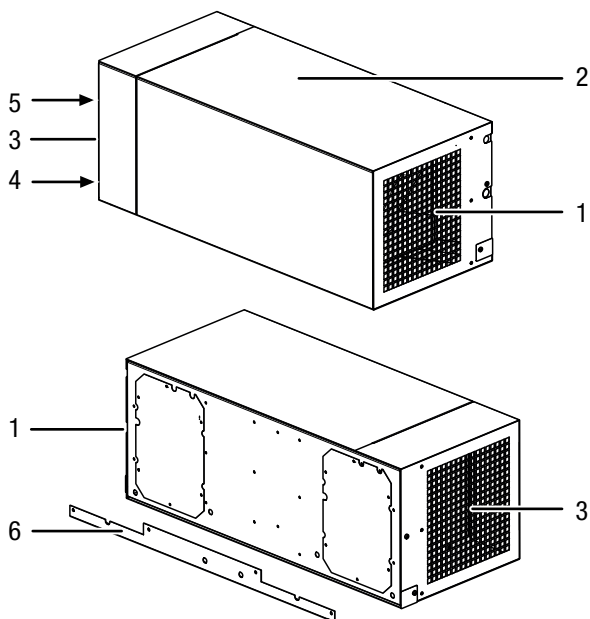
### Description of the device

The dehumidifiers of the DH series uses the principle of condensation to automatically dehumidify rooms. The fan sucks damp room air through the air inlet (3), the evaporator and the condenser located behind it. The air is cooled at the cold evaporator until it is below the dew point. Water vapour contained in the room air precipitates on the evaporator fins as either condensation or rime. The dehumidified, cooled air is rewarmed at the condenser and blown out at a temperature of approx. 5 °C above room temperature. The drier air thus conditioned mixes with the air in the room via the air outlet (1). The humidity in the room where the device is positioned is reduced as air constantly circulates through the device. Depending on the air temperature and the relative humidity, the condensed water either drops continuously or only during the defrost phase through the pre-assembled condensation drain hose (4) and is discharged from the device. To set the desired humidity level, a hygrostat with control dial (5) is provided in the device's interior. This control dial can be easily accessed once the housing has been removed. The device can reduce the relative humidity of a room to approx. 30 %. Because of the heat radiation which is tied up in operation, the room temperature can rise by approx. 1-3 °C.

A high humidity level in the air provides the perfect breeding ground for mould. However, the room air must not be too dry either. Materials such as leather or rubber become porous, and wood becomes brittle and fissured.

## Device depiction

### DH 15

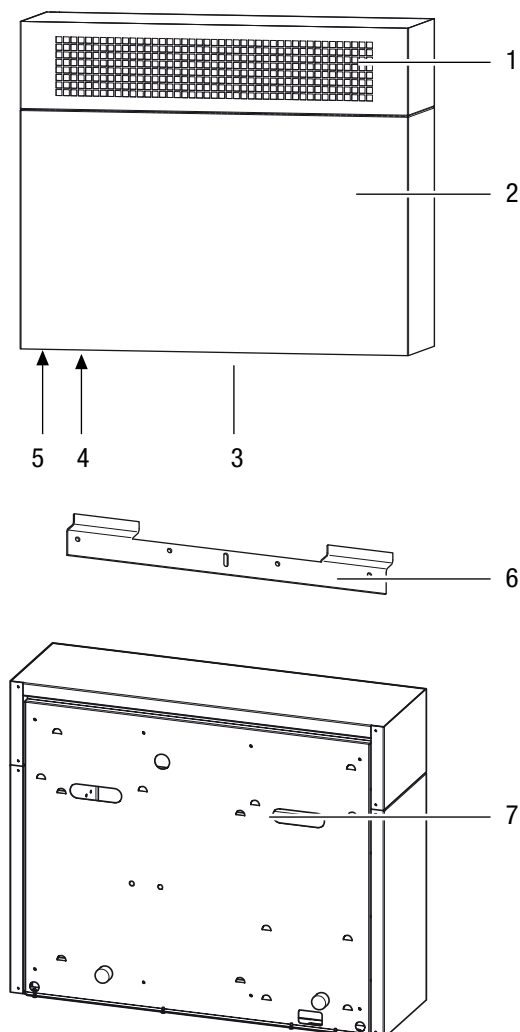


No.	Designation
1	Air outlet
2	Housing
3	Air inlet
4	Hose connector for condensation drain hose (inside the device)
5	Control dial hygrostat (tamper-proof installation inside the device)
6	Wall holder
7	Suspension

### Scope of delivery

- Dehumidifier
- Wall holder
- Condensation drain hose
- Power cable with Schuko plug CEE 7/7
- Operating manual

### DH 30 / DH 60

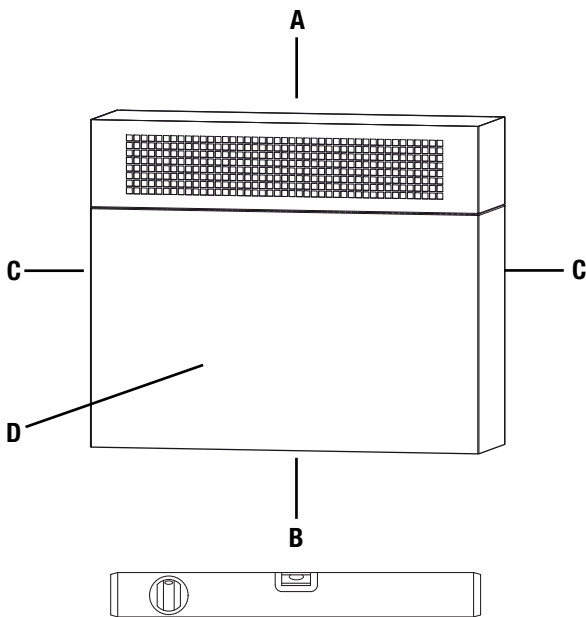


**Transport, assembly and preparation for start-up**

Always transport and assemble the device with the help of another person; the DH 60 must be assembled by 3 persons. Do not try to assemble the device without the help of another person. To lift the device, use a forklift or an elevating truck as appropriate.

Observe the following instructions:

- When assembling the device, keep a sufficient distance to heat sources.
- When assembling the device, especially in wet areas, secure the device locally with an RCD (Residual Current protective Device) which complies with the relevant regulations.
- Make sure that extension cables are completely unrolled.
- Insert the mains plug into a properly secured mains socket.
- When assembling the device, observe the minimum distance from adjacent walls or other objects as described in the Technical Data chapter.

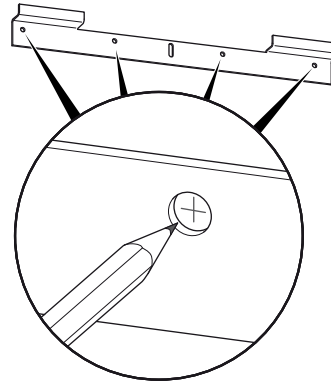


**Assembly**

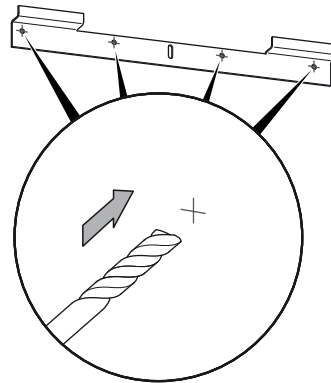
Assemble the device as follows: Check the condensation drain hose for proper fit and adjust the hygrostat to the desired humidity level before you put the faceplate back on the device.

**DH 30 / DH 60**

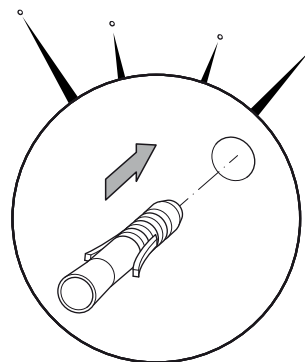
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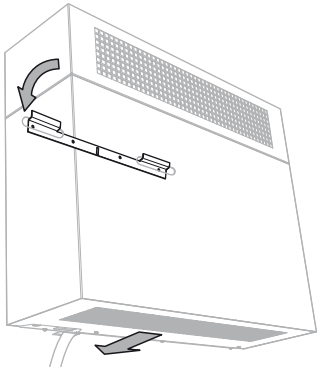
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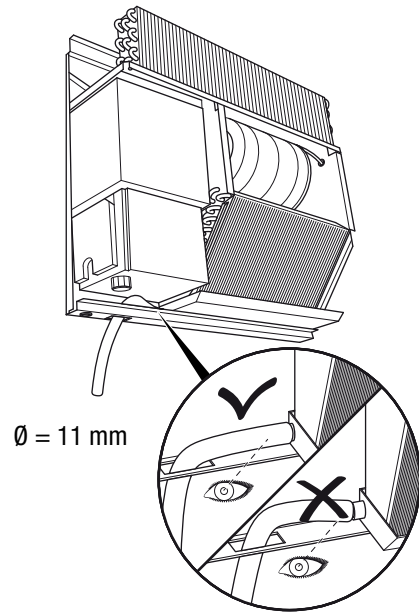
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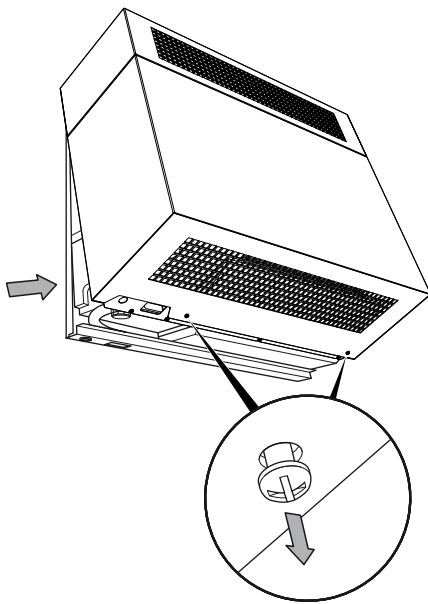
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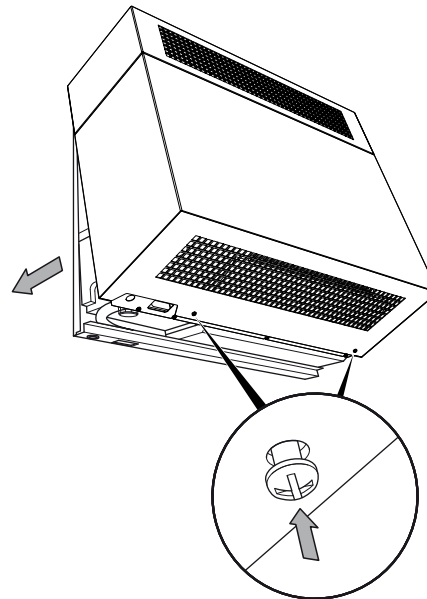
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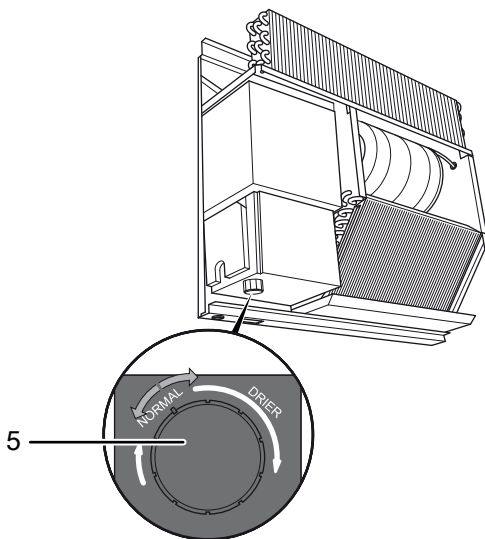
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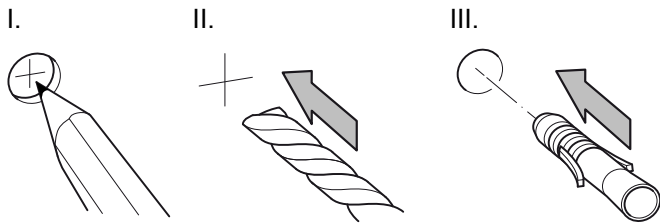
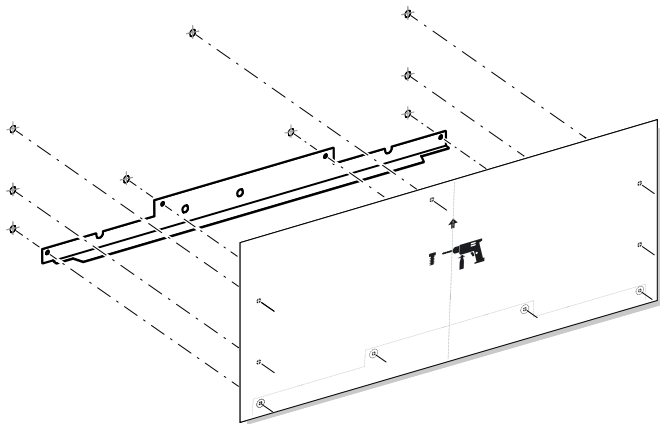


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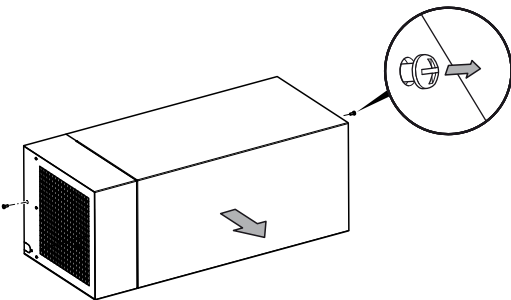


**DH 15**

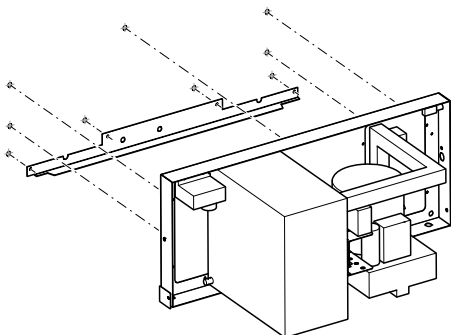
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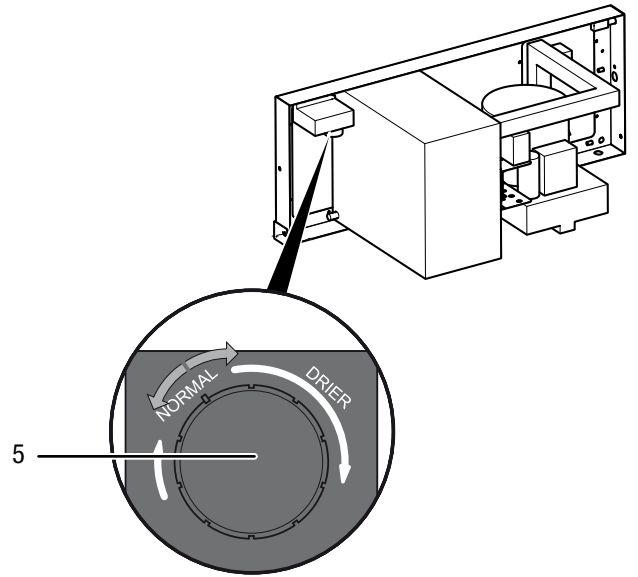
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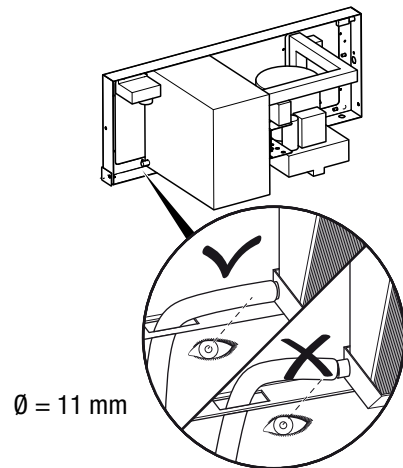
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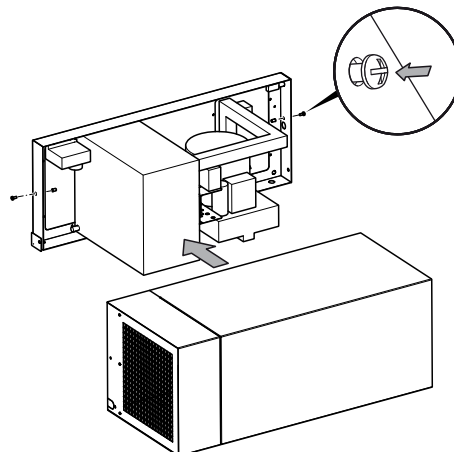
4.



5.



6.





## Storage

Drain any possibly remaining condensate.

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

- In an upright and stable position.
- Dry.
- Protected from dust and direct sunlight.
- With a cover to protect it from invasive dust, if necessary.

## Operation

- After being switched on, the device operates fully automatically.
- To ensure that the built-in sensor can correctly detect the humidity, the fan continues to operate until the device is switched off.
- Avoid open doors and windows.

## Notes regarding the dehumidification performance

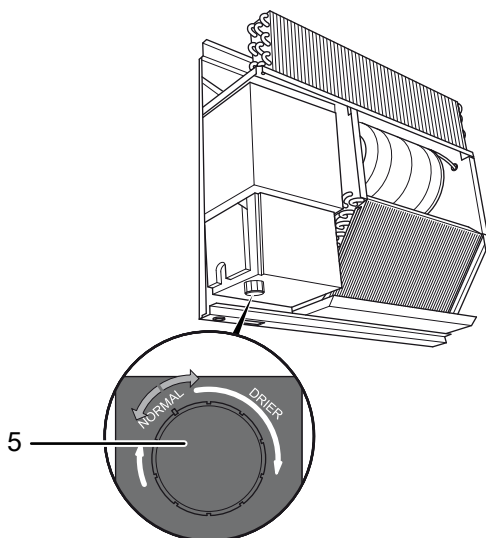
The dehumidification performance depends on:

- the layout of the room
- the room temperature
- the relative humidity

The higher the room temperature and relative humidity, the greater the dehumidification performance.

For use in living rooms, a relative humidity of approx. 50 to 60 % is sufficient. In store rooms and archives, the humidity should not exceed approx. 50 %.

## Operating elements

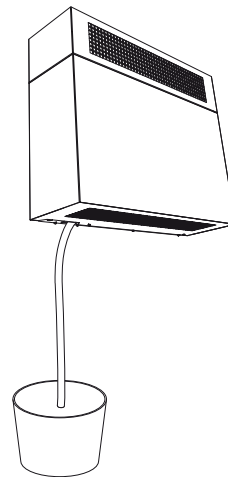


## Positioning the condensation drain hose

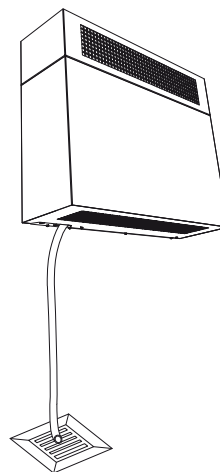
Note:

The condensation drain hose is already installed when the device is delivered.

1. Ensure that the condensation drain hose is properly connected to the device and is free of damage.
2. Depending on the application, position the end of the condensation drain hose as follows:
  - ⇒ Place a sufficiently dimensioned container (at least 20 litres) beside the device and insert the hose end. Check the filling level of the container regularly.



- ⇒ Position the end of the condensation drain hose near a water drain. For larger distances, a longer hose of the same type can also be used.



3. Regularly check the condensation drain hose for obstructions or kinks.

No.	Designation
5	Control dial hygostat

**Switching the device on**

1. Ensure that the condensation drain hose has been laid and connected properly. Do not create tripping hazards.
2. Ensure that the condensation drain hose is not bent or jammed and that there are no objects on the condensation drain hose.
3. Ensure that the condensation can run off properly.
4. Insert the mains plug into a properly secured mains socket.

**Regulating the room humidity level**

Set the desired humidity level via the control dial (5) of the hygrostat.

**Automatic defrost**

If the room temperature is below 15 °C, the evaporator will freeze during dehumidification. The device will then carry out an automatic defrost. The duration of the defrost process can vary.

**Shutdown**

1. Remove the mains plug from the mains socket.
2. Remove the residual fluid from the condensation drain hose.
3. Clean the device according to the Maintenance chapter.
4. Store the device according to the Storage chapter.

**Errors and faults**

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 (230 V/1 ~/50 Hz).
- Check the power cable for damages.
- Check the fuse (home).
- Check the preselected humidity level at the hygrostat's control dial. The humidity in the room must be above the selected range. Reduce the preselected desired humidity level.
- Have the electrics checked by a specialist company for cooling and air-conditioning or by Trotec.

**The device is running, but no condensate forms:**

- Check whether the condensation drain hose is positioned correctly.
- Check the room temperature. Observe the device's permissible operating range according to the technical data.
- Ensure that the relative humidity complies with the technical data.
- Check the preselected humidity level at the hygrostat's control dial. The humidity in the room must be above the selected range. Reduce the preselected desired humidity level.

**The device is loud or vibrates; condensate is leaking:**

- Check, whether the device is mounted horizontally.

**The device gets very warm, is loud or loses power:**

- Check the air inlet for dirt. Remove external dirt.
- Check the inside of the device for dirt. If necessary, clean the interior of the device using compressed air.

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

Have the device repaired by authorised expert staff or by Trotec.

## Maintenance

## Maintenance intervals

Maintenance and care interval	before every start-up	as needed	at least every 2 weeks	at least every 4 weeks	at least every 6 months	at least annually
Check the air inlets and outlets for dirt and foreign objects and clean if necessary	X			X		X
Clean the exterior		X				X
Visually check the inside of the device for dirt		X				X
Check for damage	X					X
Check the attachment screws		X				X
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 the air inlets and outlets for dirt and foreign objects and clean if necessary																
Clean the exterior																
Visually check the inside of the device for dirt																
Check for damage																
Check the attachment screws																
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 required before starting maintenance**

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

**Danger!**

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

**Cleaning the housing**

Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Do not use abrasive cleaners.

**Refrigerant circuit**

- The entire refrigerant circuit is a maintenance-free, hermetically sealed system and may only be maintained or repaired by specialist companies for cooling and air-conditioning or by Trotec.

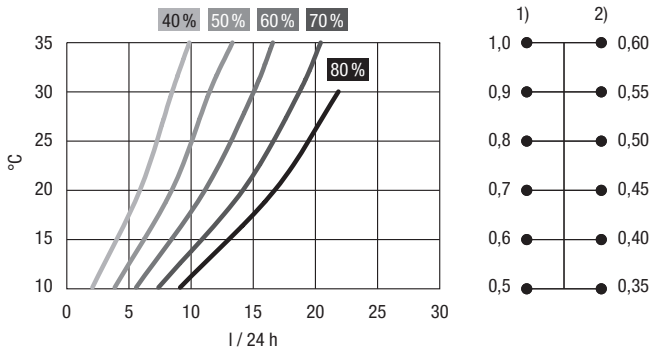
## Technical annex

## Technical data

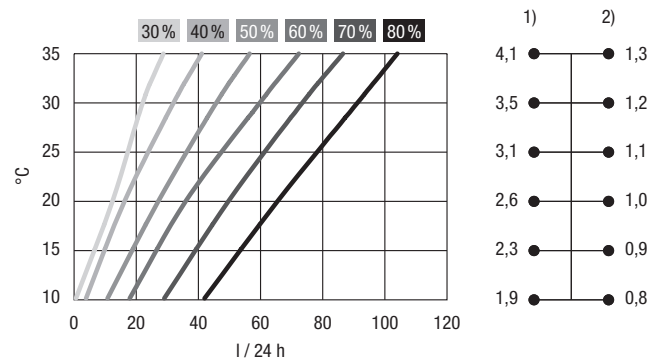
Parameter	DH 15	DH 30	DH 60
Dehumidification performance	see dehumidification diagrams		
Mains connection	1/N/PE~ 230 V / 50 Hz		
Power cable	CEE 7/7 / l = 3.5 m		
Power input	0.43 kW	0.75 kW	1.2 kW
Nominal/peak current	3.8 A / 18 A	4.4 A / 15.8 A	7.5 A / 30 A
Heat emission	0.9 kW	1.9 kW	3.5 kW
Coefficient of performance	1.6	2.5	2.9
Refrigerant	R407C	R407C	R407C
Amount of refrigerant	0.34 kg	0.5 kg	0.8 kg
Air volume (freely blowing)	225 m <sup>3</sup> /h	700 m <sup>3</sup> /h	1,280 m <sup>3</sup> /h
Sound pressure level @ 3 m	49 dB(A)	52 dB(A)	54 dB(A)
Operating range temperature	0 to 40 °C	0 to 40 °C	0 to 40 °C
Setting range relative humidity	30 % to 60 % RH		
Max. permissible relative humidity	90 % RH		
Weight	37.1 kg	46.8 kg	70 kg
Dimensions (width x depth x height) incl. wall holder	840 x 365 x 330 (mm)	790 x 265 x 651 (mm)	1,255 x 265 x 690 (mm)
Minimum distance to walls or other objects:	A: top: 12.5 cm B: bottom: 12.5 cm C: side: 12.5 cm D: front: 12.5 cm	12.5 cm 12.5 cm 12.5 cm 12.5 cm	12.5 cm 12.5 cm 12.5 cm 12.5 cm

## Dehumidification diagrams

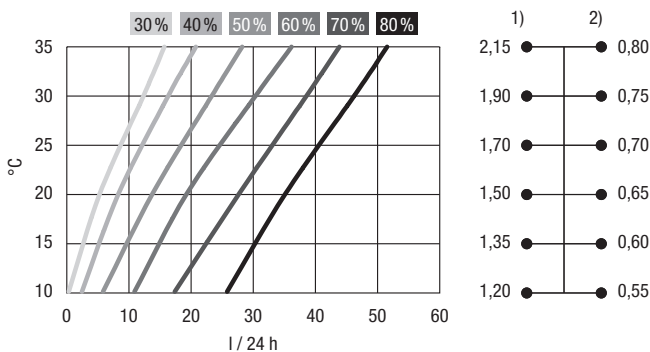
DH 15



DH 60

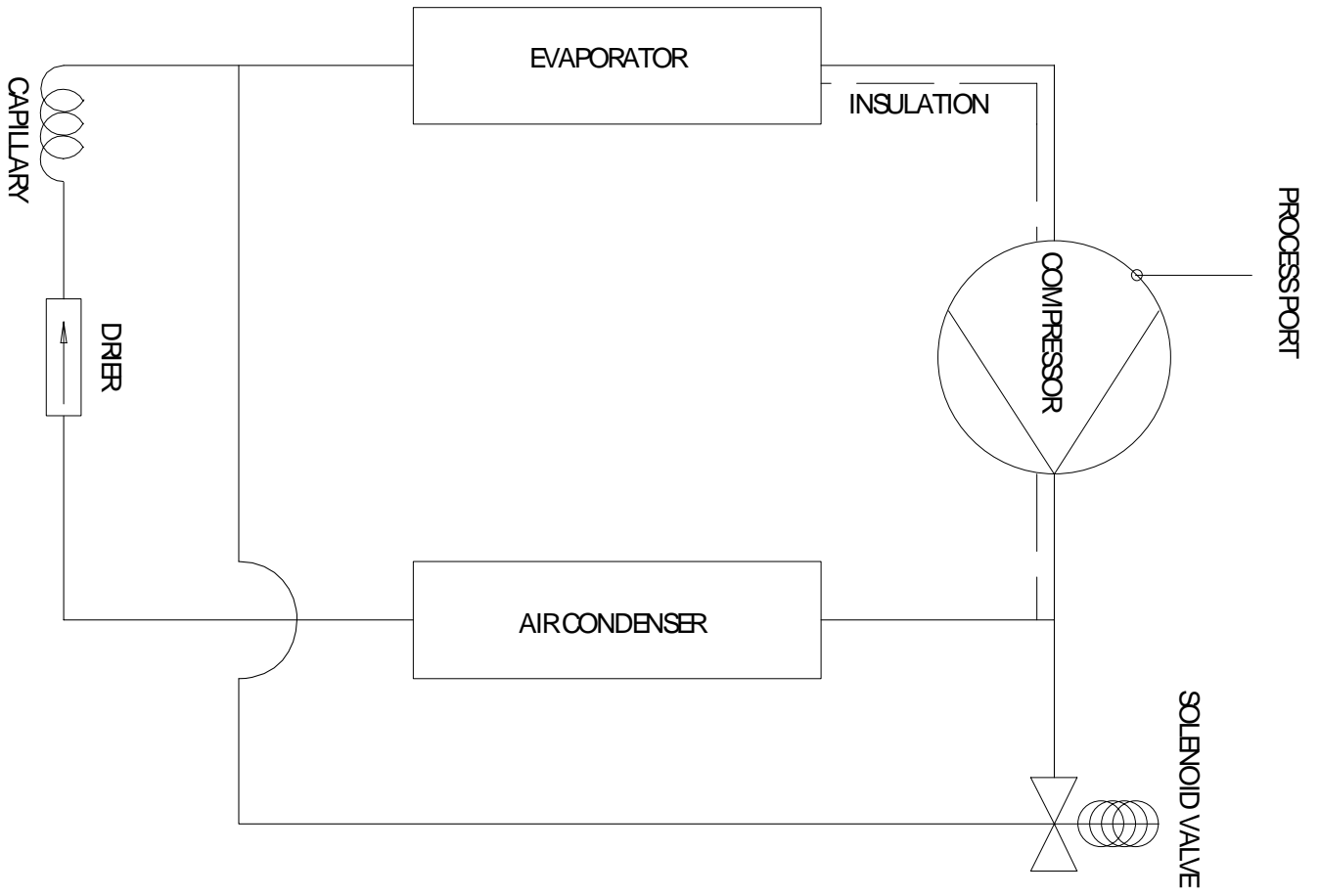


DH 30



No.	Designation
1)	Heat emission in kW at 60 % RH
2)	Power input in kW at 60 % RH

**Refrigerant circuit diagram**



## 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 relevant legal requirements.

The device uses an environmentally and ozone-neutral cooling agent (see Technical Data).

Dispose of the refrigerant appropriately and according to the national regulations.

## 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 device DH 15 / DH 30 / DH 60 was developed, constructed and produced in compliance with the named EC directives.

Applied harmonised standards:

EN 60335-1:2001/A2:2006

EN 60335-2-40:2002/A1:2005

EN 62233:2005

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

Manufacturer:

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Heinsberg, 01.09.2015



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