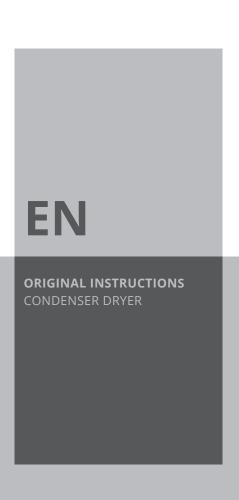
# DH 105 S / DH 115 S / DH 145 SH









## **Table of contents**

| Notes regarding the instructions | 2  |
|----------------------------------|----|
| Safety                           | 2  |
| Information about the device     | 4  |
| Transport and storage            | 6  |
| Assembly and start-up            | 7  |
| Operation                        | 9  |
| Errors and faults                | 12 |
| Maintenance                      | 13 |
| Technical annex                  | 16 |
| Disposal                         | 21 |
| Declaration of conformity        | 21 |

## Notes regarding the instructions

# **Symbols**



#### **Warning of electrical voltage**

This symbol indicates dangers to the life and health of persons due to electrical voltage.



#### 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 instructions must be observed.

You can download the current version of the instructions via the following link:

DH 105 S



https://hub.trotec.com/?id=40772



DH 115 S



https://hub.trotec.com/?id=40773

DH 145 SH



https://hub.trotec.com/?id=43937

# **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.

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.



- Only put up the device in an upright, stable position on firm ground.
- 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 the device during operation.
- 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 mains connection must correspond to the specifications in the Technical annex.
- Insert the mains plug into a properly fused 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 power cable 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!
- When positioning the device, observe the minimum distances from walls and other objects as well as the storage and operating conditions specified in the Technical annex.
- Make sure that the air inlet and outlet are not obstructed.
- Make sure that the suction side is kept free of dirt and loose objects.

- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition
- Only transport the device in an upright position with an emptied condensation tank or drain hose.
- Discharge the collected condensate before transport and storage. Do not drink it. Health hazard!

#### Intended use

Only use the device as industrial dryer for drying and dehumidifying room air whilst adhering to the technical data and safety instructions.

Intended use comprises:

- drying and dehumidifying:
  - production plants, underground rooms
  - store rooms, archives, laboratories
  - rooms and areas after water damage caused by burst pipes or flooding
- keeping dry of:
  - instruments, devices, files
  - electric control devices, boiler plants, turbines and pipe systems in power plants
  - moisture-sensitive goods, loads, etc.

#### Foreseeable misuse

- 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 out of doors.
- Do not make any unauthorised modifications, alterations or structural changes to the device.
- Any use other than the intended use is regarded as a reasonably foreseeable misuse.

#### **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 instructions, especially the Safety chapter.

Maintenance tasks which require the housing to be opened must only be carried out by specialist companies for cooling and air-conditioning or by Trotec.



#### **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!

Do not touch the mains plug with wet or damp hands. Hold onto the mains plug while pulling the power cable out of the mains socket.



#### **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.

#### **Note**

Do not operate the device without an air filter inserted into the air inlet!

Without the air filter, the inside of the device will be heavily contaminated. This could reduce the performance and result in damage to the device.

## Behaviour in the event of an emergency

- 1. Switch the device off.
- 2. 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.
- 3. Do not reconnect a defective device to the mains.

# Information about the device

## **Device description**

The device uses the principle of condensation to automatically dehumidify rooms.

The fan sucks damp room air through the air inlet, the air filter, the evaporator and to 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 condensation or rime. The dehumidified, cooled air is slightly warmed at the condenser and blown out again. The drier air thus conditioned mixes with the air in the room. 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 into the condensation tray continuously or only during the defrost phases. The condensation is fed through a pressure-resistant pipe connection and out of the device by a condensate pump. To do so, a condensation drain hose is connected to the hose connector of the device and the condensate is drained.

The device has a control panel for operating and controlling the functions.

Once the maximum fill level of the condensation tank is reached, the condensation tank indicator light (see chapter Operating elements) on the control panel is illuminated. The device switches off. The condensation tank indicator light only goes out again upon draining the residual water from the condensation tank at the push of a button.

The device comes with a hot gas automatic defrost system. Here, the hot gas of the refrigerant circuit is used actively for fast and effective defrosting. This makes the device operate effectively even at temperatures below 15 °C.

Because of the heat radiation generated during operation, the room temperature may rise slightly.

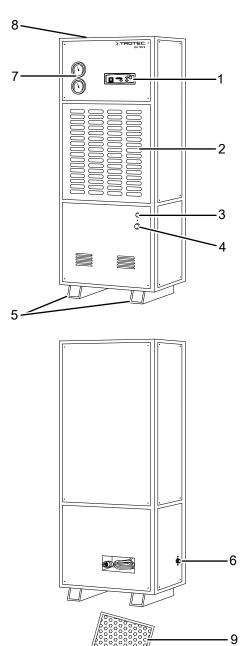
#### Note

The condensate pump is fitted with a float switch. It completely switches off the condenser dryer when a critical filling level is reached in the condensation tray. Additionally, an acoustic signal will be emitted and the condensation tray indicator light is illuminated. After troubleshooting, the condenser dryer must be switched back on by hand.

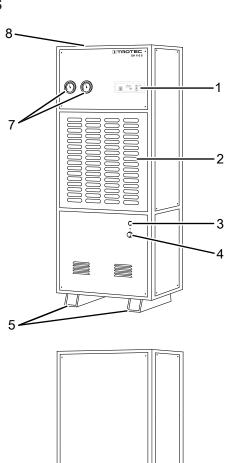


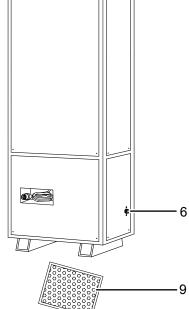
# **Device depiction**

# DH 105 S



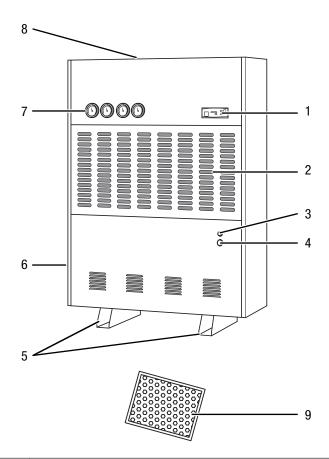
**DH 115 S** 







#### **DH 145 SH**



| No. | Designation   |
|-----|---|
| 1   | Control panel   |
| 2   | Air inlet with air filter                                     |
| 3   | button for draining residual water from the condensation tray |
| 4   | condensation tray indicator light with buzzer                 |
| 5   | Feet  |
| 6   | Condensation drain hose connection                            |
| 7   | Pressure indication   |
| 8   | Air outlet  |
| 9   | Air filter  |

# **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**

Always utilize the help of another person to transport the device. Do not try to transport the device without the help of another person. To lift the device, use a forklift or an elevating truck as appropriate.

**Before** transporting the device, observe the following:

- Wait until the condensate pump stops pumping condensate.
- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Drain the remaining condensate from the device and the condensation drain hose (see chapter Maintenance).
- Remove the condensation drain hose.
- Do not use the power cable to drag the device.

After transporting the device, proceed as follows:

- Set up the device in an upright position after transport.
- After having transported the device in horizontal position, leave the device to rest for 12 to 24 hours, so the refrigerant can accumulate within the compressor.
   Wait 12 to 24 hours before switching the device back on!
   Acting contrary might lead to compressor damage and a malfunctioning device. Any warranty claims will be voided in this case.

#### **Storage**

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

- Drain the remaining condensate from the device and the condensation drain hose (see chapter Maintenance).
- Hold onto the mains plug while pulling the power cable out of the mains socket.

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

- dry and protected from frost and heat
- 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 start-up**

## Scope of delivery

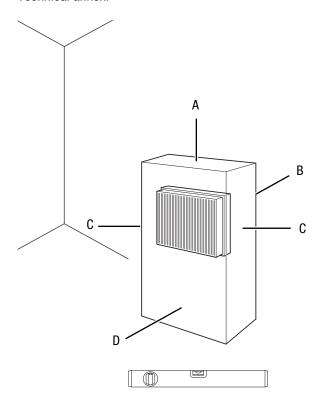
- 1 x device
- 1 x Condensation drain hose
- 1 x Manual

## **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.

## Start-up

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



- Before restarting the device, check the condition of the power cable. If there are doubts as to the sound condition, contact the customer service.
- Only put up the device in an upright, stable position on firm ground.
- 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.
- When positioning the device, keep a sufficient distance to heat sources.

- Make sure that no curtains or other objects interfere with the air flow.
- When positioning the device, particularly in wet areas, secure it locally with an RCD (residual current device) which complies with the respective regulations.

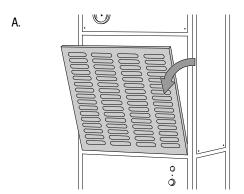
#### Inserting the air filter

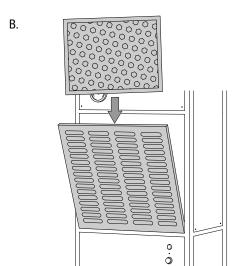
#### Note

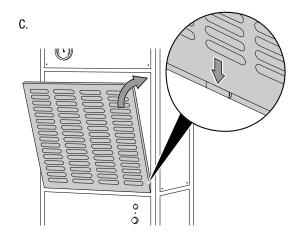
Do not operate the device without an air filter inserted into the air inlet!

Without the air filter, the inside of the device will be heavily contaminated. This could reduce the performance and result in damage to the device.

 Make sure that the air filter is installed before switching the device on.





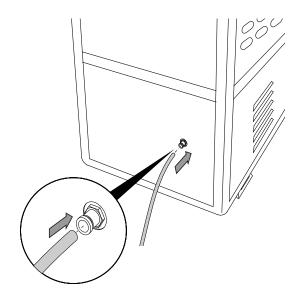




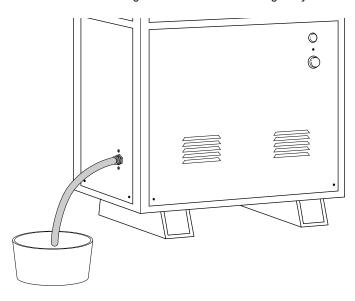
## Positioning the condensation drain hose

For continuous operation or unattended dehumidification, please connect the supplied condensation drain hose to the device.

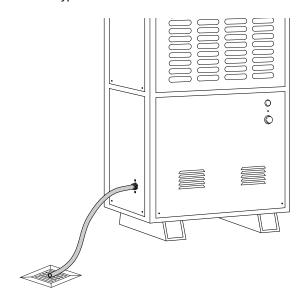
- ✓ A suitable hose (diameter: 15 mm) is ready for use.
- ✓ The device is switched off.
- 1. Connect the condensation drain hose to the condensation hose connection (6) at the device.



- 2. Make sure that the condensation drain hose is properly connected to the device and free of damage.
- 3. Depending on the application, position the end of the condensation drain hose as follows:
  - ⇒ Place a sufficiently dimensioned container (at least 90 litres) beside the device and insert the hose end. Check the filling level of the container regularly.

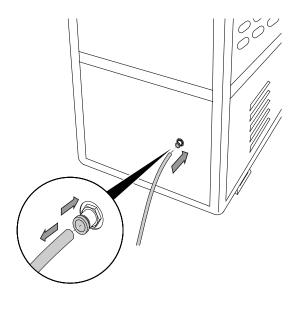


⇒ Position the end of the condensation drain hose above a water drain. For larger distances, a longer hose of the same type can also be used.



# Removing the condensation drain hose

Press the blue ring on the outside of the quick coupling together and at the same time pull the hose.





#### **Mains connection**

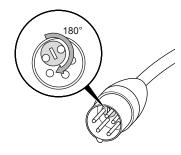
A 3/N/PE three-phase socket with clockwise rotating field is required to connect the device. The device is delivered with a CEE phase inverter, 32 A, 6 h.

• Insert the plug into the respective CEE socket.

If the device does not start up automatically and the error message *E5* appears in the segment display, the rotating field in the phase inverter must be corrected.

Correct the rotating field in the phase inverter as follows:

- 1. Pull the plug from the mains socket.
- 2. Use a suitable flat-head screwdriver.
- 3. Rotate the element for phase inversion by 180°.
  - ⇒ Phases are now inverted.

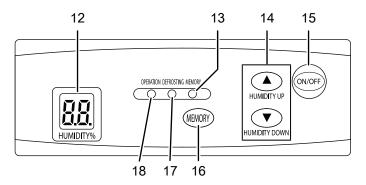


4. Plug the plug back into the socket.

# **Operation**

- Avoid open doors and windows.
- After being switched on, the device operates fully automatically.
- The fan runs permanently until the set nominal value is reached or the device switched off.

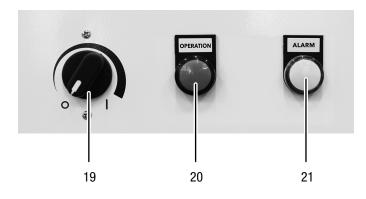
## Control panel DH 105 S / DH 115 S



| No. | Designation           | Meaning   |
|-----|-----------------------|---|
| 12  | Segment display       | Display of the selected humidity in percentage or <i>CO</i> for continuous operation mode (value < 30 %) (The default value is 60 % RH.) Display of error codes |
| 13  | <i>MEMORY</i> LED     | Illuminated when the current humidity setting is saved.   |
| 14  | HUMIDITY UP<br>button | Increasing the desired relative room humidity For deactivating continuous operation   |
|     | HUMIDITY DOWN button  | Decreasing the desired relative room humidity For activating continuous operation   |
| 15  | ON/OFF button         | Switching the device on and off   |
| 16  | MEMORY button         | Saves the current humidity setting.   |
| 17  | DEFROSTING LED        | Illuminated when automatic defrosting is in progress.   |
| 18  | OPERATION LED         | Illuminated during ongoing operation.   |

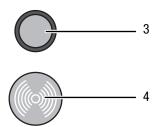


#### Operating elements DH 145 SH



| No. | Designation               | Meaning  |
|-----|---------------------------|--|
| 19  | Humidity control<br>dial  | Switching the device on and off Setting the desired relative room humidity For activating continuous operation |
| 20  | OPERATION indicator light | Illuminated during ongoing operation.  |
| 21  | ALARM indicator light     | Illuminated when the wrong rotating field is set in the mains plug.  |

# Operating elements condensate pump



| No. | Designation            | Meaning                               |
|-----|------------------------|---------------------------------------|
| 3   | Residual water         | For draining residual condensate from |
|     | <i>draining</i> button | the condensation tray (optional)      |
| 4   | Condensation tray      | Illuminated and emits an acoustic     |
|     | indicator light        | signal when the condensation tray is  |
|     |                        | full (optional).                      |

## Switching the device on

Once you have completely installed the device as described in the chapter Assembly and start-up, you can switch it on.

DH 105 S / DH 115 S:

- 1. Press the ON/OFF button (15).
  - ⇒ The device is switched on.
  - ⇒ The *OPERATION* LED (18) is illuminated.
- 2. Press the *ON/OFF* button (15) again to switch the device off

The device switches off automatically when the condensation tray is full. The condensation tray indicator light (4) lights up and the buzzer emits an acoustic signal.

#### DH 145 SH:

- 1. Turn the *humidity* control dial (19) clockwise.
  - ⇒ The device is switched on.
- 2. Turn the *humidity* control dial (19) counter-clockwise into the position *Off* (**0**) to switch the device off.

The device switches off automatically when the condensation tray is full. The *condensation tray* indicator light (4) lights up and the buzzer emits an acoustic signal.

#### Setting the desired room humidity

DH 105 S / DH 115 S:

The desired relative room humidity can be preselected.

- 1. Repeatedly press the buttons *HUMIDITY UP* (14) or *HUMIDITY DOWN* (14) to select the desired relative humidity value. Setting is possible in the range between 30 % and 90 %.
  - ⇒ The desired relative humidity level is indicated on the segment display (12).

The device keeps running until reaching the desired relative room humidity.

Once the desired relative room humidity is exceeded, the compressor and fan switch back on.



#### DH 145 SH:

You can set the desired humidity level by use of the *humidity* control dial (19).

- 1. Turn the *humidity* control dial (19) clockwise to set a smaller value for the desired humidity level.
- 2. Turn the *humidity* control dial (19) counter-clockwise to set a higher value for the desired humidity level.

The device keeps running until reaching the desired relative room humidity. Once the desired relative room humidity is exceeded, the compressor and fan switch back on.

#### **Memory function for room humidity**

DH 105 S / DH 115 S only:

The desired relative room humidity can be saved.

- 1. Set the desired relative room humidity.
- 2. Press the MEMORY button (16).
  - ⇒ The value for the desired relative room humidity is saved.
  - ⇒ The *MEMORY* LED (13) is illuminated.

The next time the device is started, the saved value will be set automatically.

## **Setting continuous operation**

DH 105 S / DH 115 S:

The device dehumidifies the air constantly and regardless of the relative room humidity.

The desired relative room humidity cannot be adjusted in this operating mode.

- 1. Repeatedly press the *HUMIDITY DOWN* button (14) until *CO* is displayed by the segment display (12).
  - ⇒ *Continuous operation* mode is selected.

#### DH 145 SH:

- 1. Turn the *humidity* control dial (19) to maximum (1).
  - ⇒ *Continuous operation* mode is selected.

#### **Automatic defrosting**

At low ambient temperatures, ice may form at the evaporator during dehumidification. The device will then carry out an automatic defrost. Dehumidification is briefly interrupted during defrosting. The fan keeps running.

The DEFROSTING LED (17) is illuminated.

The duration of the defrost process can vary. Do **not** switch off the device during automatic defrost. Do **not** remove the mains plug from the mains socket.

Automatic defrosting is interrupted once you actuate the ON/OFF button (15) or the HUMIDITY UP (14) or the HUMIDITY DOWN button (14) at the DH 105 S / DH 115 S or the humidity control dial (19) at the DH 145 SH.

#### **Pressure indication**

DH 105 S / DH 115 S only:

By means of the pressure indication (7) and the pressure gauges you can check the pressure levels in the refrigerant circuit.

- To do so, compare the displayed values to the target values specified on the nameplate. Should the pressure values at the suction or pressure side be atypical, there might be an error in the refrigerant circuit (leakage, pipe blockage, compressor damage).
- Keep watching the display. If the values deviate permanently, please contact a specialist company or Trotec.

#### Shutdown



#### Warning of electrical voltage

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

- Switch off the device.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- If necessary, remove the condensation drain hose and any residual fluid from it.
- Empty the condensation tank, if need be.
- Clean the device according to the Maintenance chapter.
- Store the device according to the Transport and 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.

#### Note

The device is equipped with a safety timer. Switch-ons and switch-offs can be delayed by up to 3 minutes.

#### The device does not start:

- Check the power connection.
- Check the power cable for damages.
- Check the on-site fusing.
- Check the filling level of the condensation tray and empty it, if necessary. The indicator light for the condensation tray (4) must not be illuminated and the buzzer must not emit an acoustic signal.
- Check the rotating field and correct it, if necessary (see chapter Assembly and installation).
- Have the electrics checked by a specialist company for cooling and air-conditioning or by Trotec.

# The device is running, but there is no formation of condensate:

- 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 desired humidity level. The humidity in the room where the device is positioned must be at least 3 % higher than the target value. If necessary, reduce the set relative humidity.
- Check the condensate pump for proper functioning or unusual vibrations and sounds. Remove external dirt (see chapter Maintenance).
- Check the air filter for dirt. If necessary, clean or replace the air filter (see chapter Maintenance).
- Check the exterior of the condenser and the condensate pump for dirt (see chapter Maintenance). If the inside of the device is dirty, have it cleaned by a specialist company or by Trotec.

#### The device is loud or vibrates:

- Check the air filter for dirt. If necessary, clean or replace the air filter (see chapter Maintenance).
- Check whether the device is set up in a stable and upright position.

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

- Check the air inlets and air filters for dirt. Remove external dirt.
- Check the inside of the device and especially the fan, the fan housing, the evaporator, the condenser and the condensate pump for external dirt (see chapter Maintenance). If the inside of the device is dirty, have it cleaned by a specialist company for cooling and airconditioning or by Trotec.

# 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 repair.

#### **Error codes**

The following error messages can be displayed on the segment display:

DH 105 S / DH 115 S only

| Error code | Cause  | Remedy  |  |  |
|------------|--|---|--|--|
| E1         | Error message of the humidity sensor                   | Use the drying unit at a humidity level which complies with the technical data.                         |  |  |
| E2         | Error message of the sensor in the refrigerant circuit | Switch the device off and contact the customer service.   |  |  |
| E5         | Wrong rotating field in the phase inverter             | Correct the rotating field in<br>the phase inverter as<br>described in the chapter<br>Mains connection. |  |  |



# Maintenance

#### **Maintenance intervals**

Device number: .....

| Maintenance and care interval  | before every<br>start-up | as needed | at least every<br>2 weeks | at least every<br>4 weeks | at least every<br>6 months | at least<br>annually |
|--|--------------------------|-----------|---------------------------|---------------------------|----------------------------|----------------------|
| Empty the condensate pump, condensation tray and/or condenser dryer                                      |                          | Х         |                           |                           |                            |                      |
| Check air inlets and outlets for dirt<br>and foreign objects and clean<br>if necessary                   | X                        |           |                           | X                         |                            |                      |
| Clean the exterior   |                          | Х         |                           |                           |                            | Х                    |
| Visually check the inside of the device for dirt   |                          | Х         |                           | Х                         |                            |                      |
| Check air inlet grid(s) and air filter(s) for dirt and foreign objects and clean or replace if necessary | X                        |           | Х                         |                           |                            |                      |
| Replace the air filter(s)  |                          |           |                           |                           | Х                          |                      |
| Check for damage   | Х                        |           |                           |                           |                            |                      |
| Check the attachment screws  |                          | Х         |                           |                           |                            | Х                    |
| Test run   |                          |           |                           |                           |                            | Х                    |

## Maintenance and care log

Replace the air filter(s)
Check for damage

Test run Comments

Check the attachment screws

Device type: .....

| 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<br>and foreign objects and clean<br>if necessary                   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Clean the exterior   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Visually check the inside of the device for dirt   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Check air inlet grid(s) and air filter(s) for dirt and foreign objects and clean or replace if necessary |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |

1. Date: ..... 2. Date: ..... 3. Date: ..... 4. Date: ..... Signature: ..... Signature: ......Signature: ..... Signature: ..... 5. Date: ..... 6. Date: ..... 7. Date: ..... 8. Date: ..... Signature: ..... |Signature: .....|Signature: .....|Signature: .....|Signature: .....| 9. Date: ..... 10. Date: ..... 11. Date: ..... 12. Date: ..... Signature: ..... Signature: ......Signature: ..... Signature: ..... 13. Date: ..... 16. Date: ..... Signature: ..... Signature: .....



#### **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.



#### **Warning of electrical voltage**

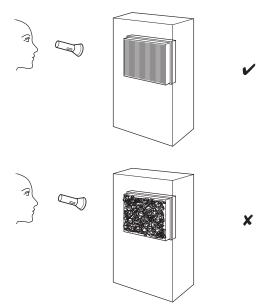
Tasks which require the device to be opened must only be carried out by authorised specialist companies or by Trotec.

## Cleaning the housing

Clean the housing with a soft, damp and lint-free cloth. Make sure 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.

## Visual inspection of the inside of the device for dirt

- 1. Remove the air filter.
- 2. Use a torch to illuminate the openings of the device.
- 3. Check the inside of the device for dirt.
- 4. If you see a thick layer of dust, have the inside of the device cleaned by a specialist company for cooling and airconditioning or by Trotec.
- 5. Put the air filter back in.



#### 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 airconditioning or by Trotec.

#### Cleaning the air filter

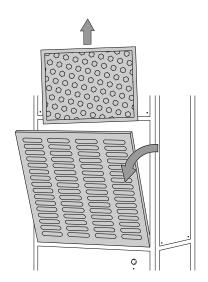


## Warning

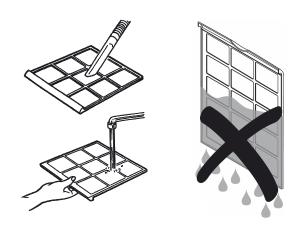
Ensure that the air filter is not worn or damaged. The corners and edges of the air filter must not be deformed or rounded. Before reinserting the air filter, make sure that it is undamaged and dry!

The air filter has to be cleaned as soon as it is dirty. This is brought to light e.g. by a reduced capacity (see chapter Errors and faults).

1. Remove the air filter from the device.

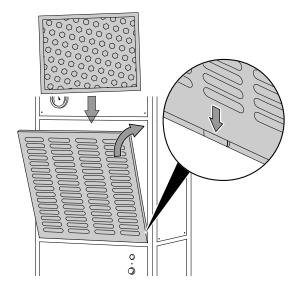


2. Clean the filter using a slightly damp, soft, lint-free cloth. If the filter is heavily contaminated, clean it with warm water mixed with a neutral cleaning agent.





- 3. Allow the filter to dry completely. Do not insert a wet filter into the device!
- 4. Reinsert the air filter into the device.



# **Condensate discharge**

Drain remaining condensate from the device as follows:

- 1. Press the button for draining residual water (3).
  - ⇒ The condensate pump transports the remaining condensate out of the condensation tray.
  - ⇒ The condensation tray has been drained completely when the condensate pump does not deliver any more condensate.
- 2. Remove the condensation drain hose and any residual fluid from it
- 3. Allow the hose to dry prior to storage.



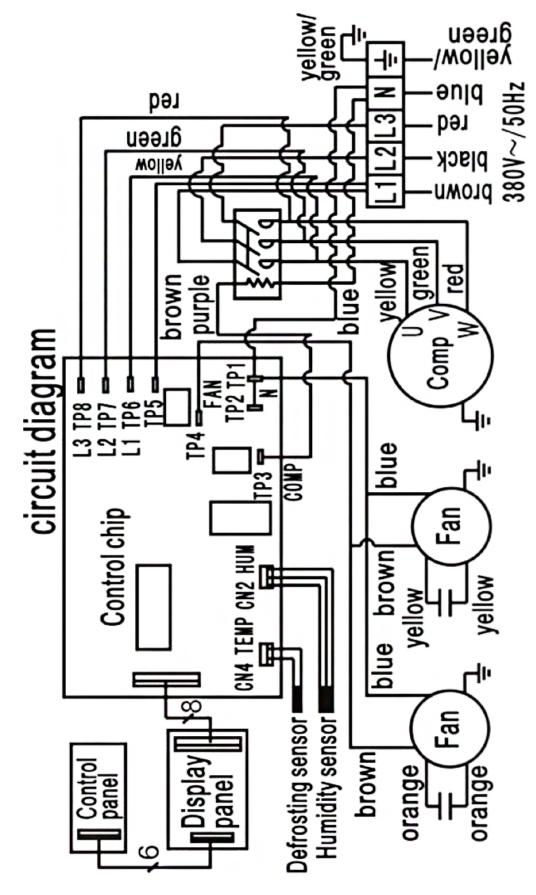
# **Technical annex**

# **Technical data**

| Parameter  | Value               |                        |                        |  |  |  |  |  |  |  |
|--|---------------------|------------------------|------------------------|--|--|--|--|--|--|--|
| Model  | DH 105 S            | DH 115 S               | DH 145 SH              |  |  |  |  |  |  |  |
| Dehumidification performance @ 30 °C and 80 % RH | 175 I / 24 h        | 245 I / 24 h           | 485 I / 24 h           |  |  |  |  |  |  |  |
| Air flow rate                                    | 1700 m³/h           | 2150 m <sup>3</sup> /h | 4300 m <sup>3</sup> /h |  |  |  |  |  |  |  |
| Operating range (temperature)                    | 5 °C to 32 °C       | 5 °C to 32 °C          | 5 °C to 32 °C          |  |  |  |  |  |  |  |
| Operating range (relative humidity)              | 30 % to 90 % RH     | 30 % to 90 % RH        | 30 % to 90 % RH        |  |  |  |  |  |  |  |
| Pressure suction side                            | 1.65 MPa            | 1.65 MPa               | 1 MPa                  |  |  |  |  |  |  |  |
| Pressure outlet side                             | 3.1 MPa             | 3.1 MPa                | 2.5 MPa                |  |  |  |  |  |  |  |
| Mains connection                                 | 380 V / 50 Hz       | 380 V / 50 Hz          | 400 V / 50 Hz          |  |  |  |  |  |  |  |
| Power consumption, max.                          | 3.0 kW              | 4.9 kW                 | 9.8 kW                 |  |  |  |  |  |  |  |
| Nominal current                                  | 5.2 A               | 8.5 A                  | 16.6 A                 |  |  |  |  |  |  |  |
| Refrigerant                                      | R410A               | R410A                  | R407C                  |  |  |  |  |  |  |  |
| Amount of refrigerant                            | 1400 g              | 1730 g                 | 3200 g                 |  |  |  |  |  |  |  |
| GWP factor                                       | 2088                | 2088                   | 1774                   |  |  |  |  |  |  |  |
| CO <sub>2</sub> equivalent                       | 2.92 t              | 3.61 t                 | 5.68 t                 |  |  |  |  |  |  |  |
| Sound pressure level (at a distance of 1 m)      | 68 dB(A)            | 70 dB(A)               | 68.5 dB (A)            |  |  |  |  |  |  |  |
| Dimensions (length x width x height)             | 470 x 615 x 1653 mm | 470 x 775 x 1635 mm    | 460 x 1195 x 1730 mm   |  |  |  |  |  |  |  |
| Minimum distance to walls and other objects      |                     |                        |                        |  |  |  |  |  |  |  |
|  | 50 cm               | 50 cm                  | 50 cm                  |  |  |  |  |  |  |  |
| B: rear:   |                     | 50 cm                  | 50 cm                  |  |  |  |  |  |  |  |
| C: side:   |                     | 50 cm                  | 50 cm                  |  |  |  |  |  |  |  |
| D: front:  |                     | 50 cm                  | 50 cm                  |  |  |  |  |  |  |  |
| Weight   | 124 kg              | 150 kg                 | 235 kg                 |  |  |  |  |  |  |  |

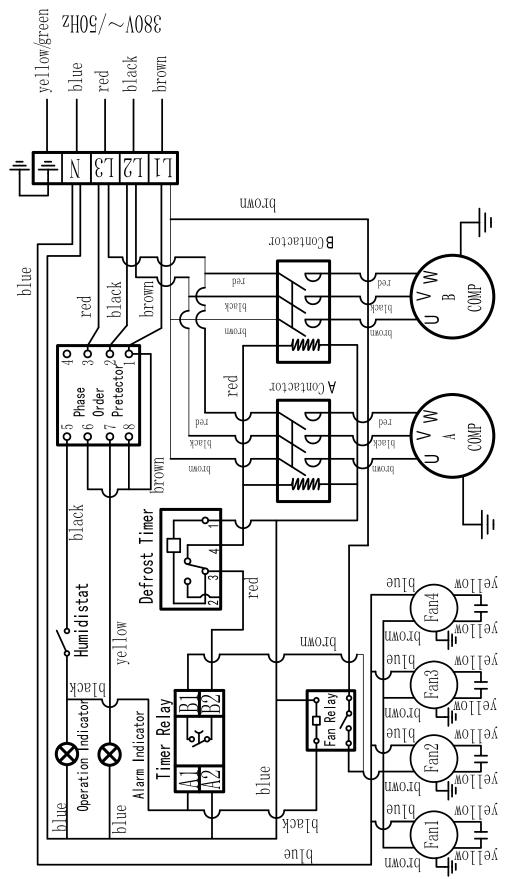


## Wiring diagram DH 105 S / DH 115 S





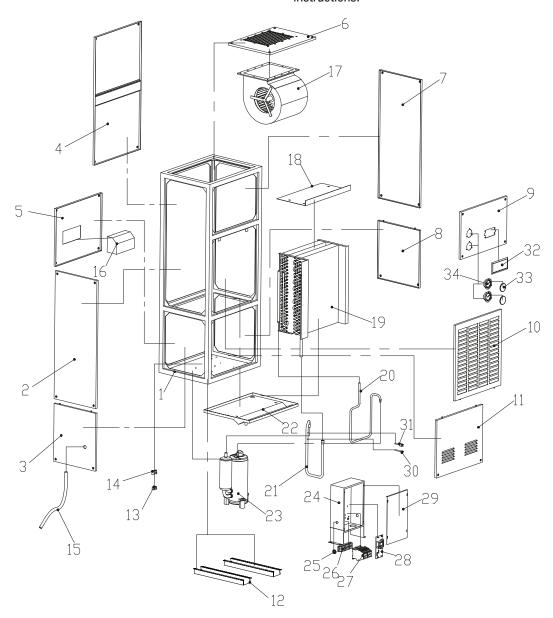
## Wiring diagram DH 145 SH





# Overview of spare parts DH 105 S / DH 115 S

**Note:** The position numbers of the spare parts differ from those describing the positions of the components mentioned in these instructions.

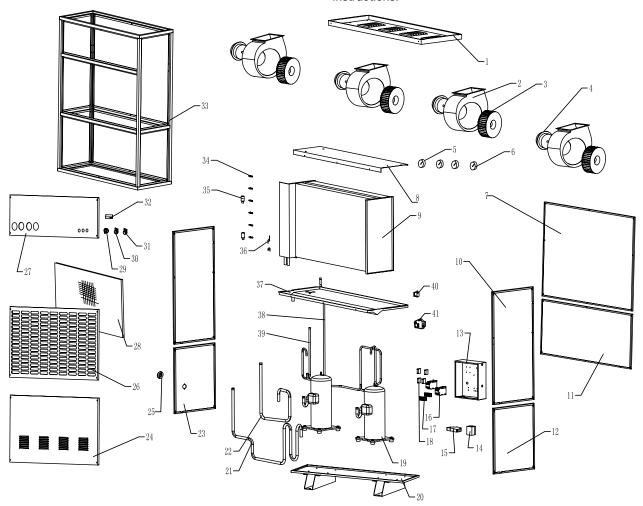


| No. | Spare part               | No. | Spare part                     | No. | Spare part           |
|-----|--------------------------|-----|--------------------------------|-----|----------------------|
| 1   | frame                    | 13  | wire slot                      | 25  | coil                 |
| 2   | left upper cover plate   | 14  | cover for slot                 | 26  | terminal             |
| 3   | left lower cover plate   | 15  | water tube                     | 27  | AC relay             |
| 4   | rear upper cover plate   | 16  | wire box                       | 28  | circuit board        |
| 5   | rear lower cover plate   | 17  | 250 fan                        | 29  | electric box cover   |
| 6   | cover plate              | 18  | cover                          | 30  | ejector pin          |
| 7   | right upper cover plate  | 19  | evaporator and condenser parts | 31  | pressure switch      |
| 8   | right lower cover plate  | 20  | high pressure tube             | 32  | control panel        |
| 9   | front upper cover plate  | 21  | low pressure tube              | 33  | pressure gauge cover |
| 10  | front middle cover plate | 22  | defrost tray                   | 34  | pressure gauge       |
| 11  | front lower cover plate  | 23  | compressor                     |     |                      |
| 12  | skids                    | 24  | electrical box                 |     |                      |



# Overview of spare parts DH 145 SH

**Note:** The position numbers of the spare parts differ from those describing the positions of the components mentioned in these instructions.



| No. | Spare part                 | No. | Spare part             | No. | Spare part                  |
|-----|----------------------------|-----|------------------------|-----|-----------------------------|
| 1   | Top Cover                  | 15  | Timer Relay            | 29  | Rotary Knob                 |
| 2   | Volute                     | 16  | AC Contactor           | 30  | Running Indicator (Green)   |
| 3   | Blade                      | 17  | 5-Pose Terminal        | 31  | Warning Indicator (Yellow)  |
| 4   | Motor                      | 18  | Capacitor              | 32  | Temperature Switch          |
| 5   | Exhaust Pressure Meter     | 19  | Compressor             | 33  | Frame                       |
| 6   | Intake Pressure Meter      | 20  | Base Plate Set         | 34  | 3-Way Fluid Intake Tube     |
| 7   | Rear Plate (Upper)         | 21  | Muffler A (Compressor) | 35  | Filtering Device            |
| 8   | Condensate Cover-Plate     | 22  | Muffler B (Compressor) | 36  | Capillary                   |
| 9   | Heat-Exchanger Set         | 23  | Left Plate (Lower)     | 37  | Water Pan                   |
| 10  | Left & Right Plate (Upper) | 24  | Lower Front Plate      | 38  | Exhaust Pipe A (Compressor) |
| 11  | Rear Plate (Lower)         | 25  | Water Outlet Port      | 39  | Exhaust Pipe B (Compressor) |
| 12  | Right Plate (Lower)        | 26  | Air-Intake Grille      | 40  | Relay                       |
| 13  | Electronics Box            | 27  | Upper Front Plate      | 41  | Defrost Timer               |
| 14  | Phase-Protect Relay        | 28  | Filter                 |     |                             |



# **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. You can also find out about other return options that apply for many EU countries on the website https://hub.trotec.com/?id=45090. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

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.

The device is operated with fluorinated greenhouse gas, which can be dangerous for the environment and contribute to global warming when emitted to the atmosphere.

Further information is provided on the nameplate.

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

# **Declaration of conformity**

Declaration of conformity in accordance with the EC Machinery Directive 2006/42/EC, Annex II, Part 1, Section A

We – Trotec GmbH – declare in sole responsibility that the product designated below was developed, constructed and produced in compliance with the requirements of the EC Machinery Directive in the version 2006/42/EC.

Product model / product: DH 105 S

DH 115 S DH 145 SH

**Product type:** condenser dryer

Year of manufacture as of: 2021

**Relevant EU directives:** 

• 2014/30/EU: 29/03/2014

#### **Applied harmonised standards:**

- EN 55014-1:2017
- EN 60335-1:2012
- EN 60335-1:2012/A11:2014
- EN 60335-1:2012/A13:2017
- EN 60335-2-40:2003
- EN 60335-2-40:2003/A1:2006
- EN 60335-2-40:2003/A2:2009
- EN 60335-2-40:2003/A11:2004
- EN 60335-2-40:2003/A12:2005
- EN 60335-2-40:2003/A13:2012
- EN 61000-3-11:2000
- EN 61000-3-2:2014

#### **Applied national standards and technical specifications:**

- EN 55014-2:2015
- EN 62233:2008

## Manufacturer and name of the authorised representative of the technical documentation:

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Place and date of issue:

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