

# DH 25 S / DH 65 S

# EN

OPERATING MANUAL  
CONDENSER DRYER



 TROTEC

**Table of contents**

**Notes regarding the operating manual**..... 1

**Safety** ..... 2

**Information about the device**..... 3

**Transport and storage**..... 4

**Set-up and installation**..... 4

**Start-up**..... 5

**Operation** ..... 6




**Maintenance** ..... 7

**Technical annex**..... 9

**Declaration of conformity** ..... 14

**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.

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



DH 25 S



<http://download.trotec.com/?sku=1125000204&id=1>

DH 65 S



<http://download.trotec.com/?sku=1125000207&id=1>

**Legal notice**

This release replaces all previous versions. No part of this publication may be reproduced without written permission from Trotec GmbH & Co. KG. The same applies for electronically processing, duplicating or spreading the publication. Subject to technical changes. All rights reserved. Trademarks are used without guarantee that they may be used freely and primarily following the spelling of the manufacturer. Product names are registered.

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

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

© Trotec GmbH & Co. KG

**Warranty and liability**

The device complies with the fundamental health and safety requirements of the applicable EU regulations and was tested at the factory for perfect functionality multiple times.

However, if faults in the functionality occur and cannot be remedied with the measures in the chapter Errors and faults, please get in touch with your dealer or distributor.

When making a warranty claim, supply the serial number (see nameplate).

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

No liability is accepted for damages resulting from improper use. In such a case, any warranty claims be voided also.

## 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!**

- Do not use the device in potentially explosive rooms.
- Do not use the device in aggressive atmosphere.
- Set the device up in an upright and stable position.
- Let the device dry out after a wet clean. Do not operate it when wet.
- 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 sit on the device.
- 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 device as a stationary industrial dryer for drying and dehumidifying room air whilst adhering to 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 device 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!

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**

This device uses the principle of condensation to automatically dehumidify rooms also in colder surroundings.

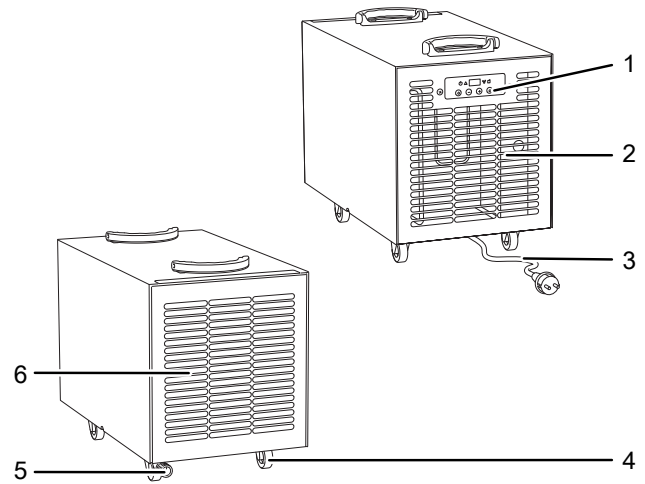
The fan sucks damp room air through the air inlet, the air filter, the evaporator and to the condenser located behind it. The air is cooled at the cold evaporator until it is below the dew point. Water vapour contained in the room air precipitates on the evaporator fins as either condensation or frost. 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 which is prepared in this way 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 continuously or only during the defrost phase into the condensation tray. The condensate is fed through a pipe connection and out of the device. To do so, a condensation drain hose is connected to the hose connector of the device and the condensate is drained.

For efficient operation at low ambient temperatures the device comes equipped with a hot gas automatic defrost system.

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

Because of the heat dissipation, which develops during operation, the room temperature can rise by approx. 1 to 3 °C.

**Device depiction**



No.	Designation
1	control panel
2	air outlet
3	power cable
4	4 wheels, 2 of them lockable
5	hose connector for condensation drain hose
6	air inlet

## Transport and storage

### Transport

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

Before transporting the device, proceed as follows:

1. Pump out any possibly remaining condensate. Check for dripping condensation.
2. Pull the plug from the mains socket. Do not use the power cable to drag the device.
3. Only wheel the device on a level and smooth surface.

### Storage

Drain any possibly remaining condensate.

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

- Dry.
- Protected from dust and direct sunlight.
- With a cover to protect it from invasive dust, if necessary.

## Set-up and installation

### Positioning

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

- Set the device up in a level and stable position.
- When positioning the device, keep a sufficient distance to heat sources.
- When positioning the device, particularly in wet areas, secure it locally with an RCD (residual current device) which complies with the respective regulations.

### Waiting periods

- After longer transports or if the device was not transported in a horizontal position wait for at least 2 hours before taking the device into operation.

### 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 storage facilities and archives, the humidity should not exceed approx. 50 %.

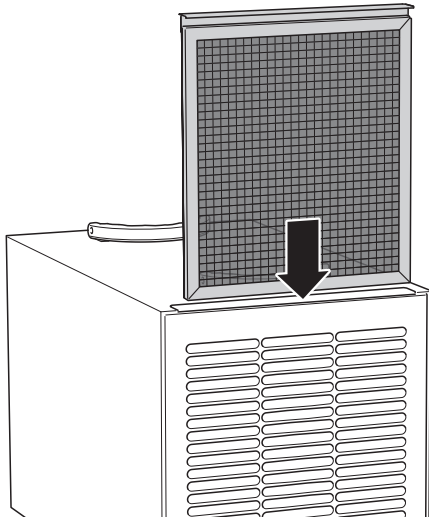
## Start-up

### Mains connection

- Plug the power plug into a sufficiently fused socket.

### Inserting the air filter

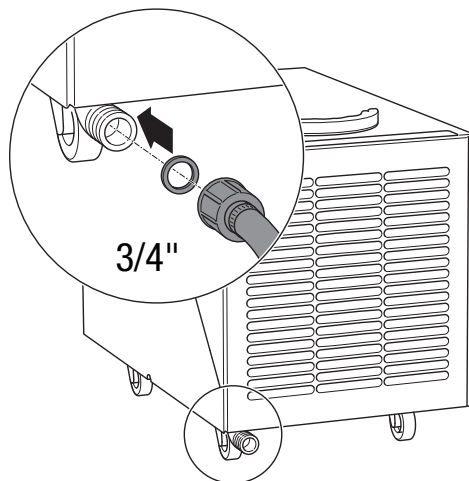
- Insert the air filter into the device as follows:



### Connecting the condensation drain hose

The condensate forming during operation has to be drained via a hose.

- Connect a suitable hose with a 3/4 " hose connector to the device.



### Switching the device on

- Ensure that the condensation drain hose has been laid and connected properly. Do not create tripping hazards.
  - Ensure that the condensation drain hose is not bent or jammed and that there are no objects on the condensation drain hose.
  - Ensure that the condensation can run off properly.
1. Discharge any condensate from the device.
  2. Press the power button to switch the device on.
    - ⇒ The POWER indicator (16) is illuminated.
    - ⇒ The WORKING indicator (10) flashes.
    - ⇒ The device starts running after approx. 4 minutes.
  3. Regulate the desired room humidity level via the plus and minus buttons.
    - ⇒ Once the set humidity value is reached, the device switches over into standby mode and the WORKING indicator (10) goes out.
    - ⇒ When the humidity level exceeds the set value, the WORKING indicator (10) goes back on and the device starts up.

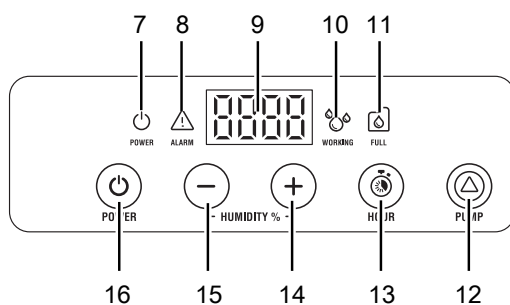
### Note!

If you switch the device off and immediately afterwards back on, it will take approx. 4 minutes for the device to start up again.

## Operation

- After being switched on, the device operates fully automatically.
- The fan runs permanently in dehumidification mode until the set nominal value is reached or the device switched off.
- Avoid open doors and windows.
- After a runtime of approximately 35 minutes the device will switch over to defrost mode for a duration of about 3 minutes, if required.

## Operating elements



No.	Designation
7	POWER indicator – device switched on
8	ALARM indicator – fault message
9	Display
10	WORKING indicator – operation indicator
11	FULL indicator – check condensate outlet
12	PUMP button for draining residual water from the condensation tank
13	HOUR button for programming the time
14, 15	Buttons + and - for programming the humidity in % or the time in h
16	POWER button for switch-on and -off

## Setting the humidity level

You can adjust the preset humidity level at any time during operation.

1. Press the button + (14) or - (15) in order to set the desired value (ranging from 30 % to 80 % in steps of 1 %).
  - ⇒ The display flashes during setting.
2. The display will again be illuminated steadily approx. 4 s after the last input.
  - ⇒ The new room humidity has been set.

## Setting continuous operation

1. Press the button - (15) until *Cont* is indicated on the display.

## Setting the timer

There are two ways to use the timer:

- After a predefined time, the device switches itself on automatically.
- After a predefined time, the device switches itself off automatically.

Proceed as follows if the device shall automatically switch on after a set time:

1. Press the HOUR button (13) once.
2. Adjust the desired length of time until automatic switch-on in hourly increments by use of the buttons + (14) or - (15).
3. Press the HOUR button again to set the automatic switch-off time. Press the button again to leave the menu.
4. Press the POWER button (16) to switch over to automatic operation.
5. The device switches on after the predefined time. It runs until the set time until switch-off is up or until the device is manually switched off.

To set the automatic switch-off timer, please proceed as follows:

1. Press the HOUR button (13) twice.
2. Adjust the desired length of time until automatic switch-off in hourly increments by use of the buttons + (14) or - (15).
3. Press the HOUR button (13) again to exit the timer settings.

## Automatic defrost

At low ambient temperatures the evaporator can freeze up during dehumidification. The device will then carry out an automatic defrost. 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.

## Memory function

In case of brief power failures the device memorizes the programmed nominal value for humidity. The pre-programmed start and stop times for automatic operation are not saved.

**Shutdown**

1. Press the POWER button (16).
2. Simultaneously actuate the PUMP button (12) and the + button (14) for 4 seconds to empty the condensation tank.
3. Do not touch the mains plug with wet or damp hands.
4. Remove the mains plug from the mains socket.
5. Remove the condensation drain hose and any residual fluid from it.
6. Clean the device, and especially the air filter, according to the chapter Maintenance.
7. Store the device according to the Storage chapter.

**Maintenance**

**Activities required before starting maintenance**

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



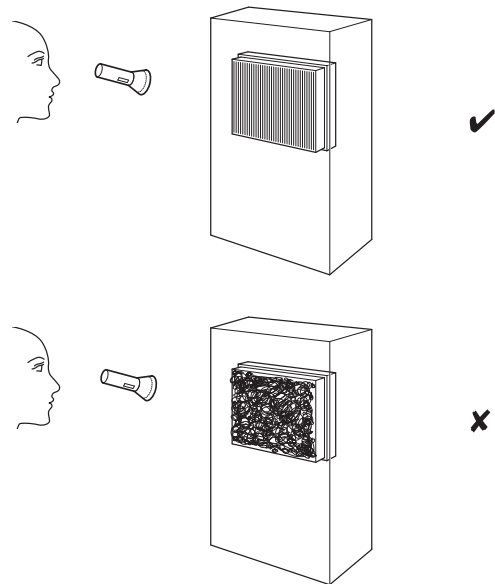
**Danger!**



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

**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. If you see a thick layer of dust, have the inside of the device cleaned by a specialist company for cooling and air-conditioning or by Trotec.
4. Put the air filter back in.



**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.



## Cleaning the air filter

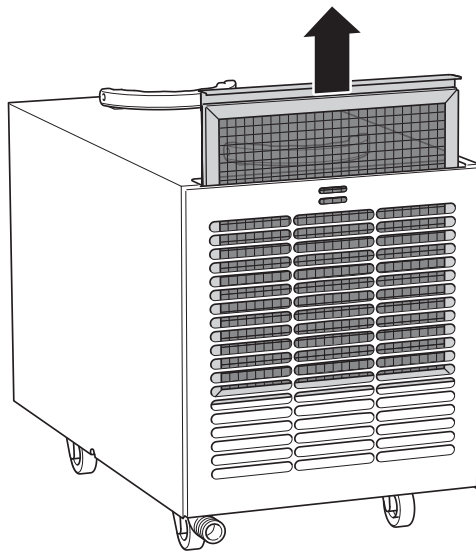
The air filter has to be cleaned as soon as it is dirty. This is brought to light e.g. by a reduced cooling capacity (see chapter Errors and faults).



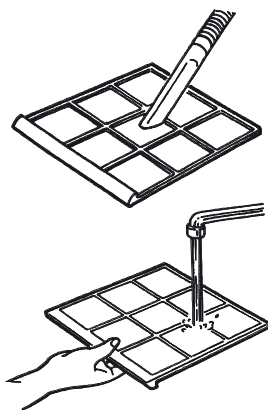
### Caution!

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

A.



B.



C.



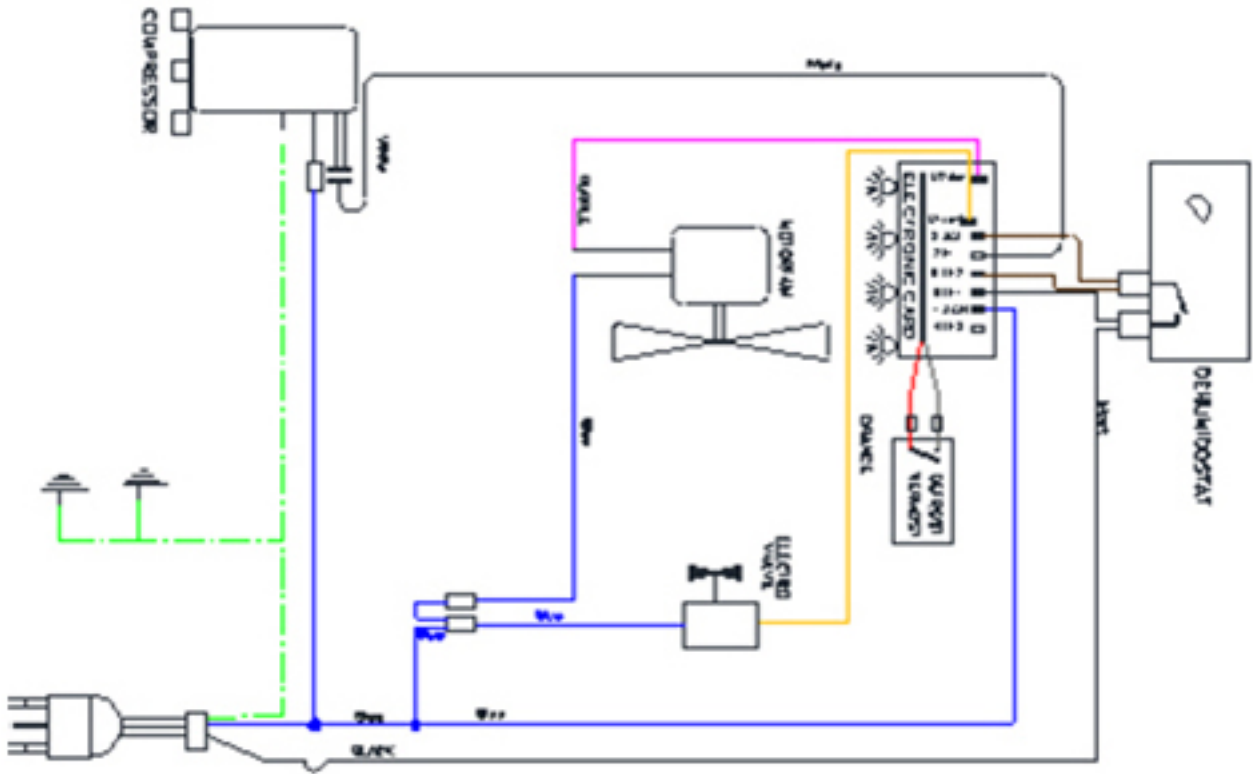
- Reinsert the cleaned, dry filter in the device in reverse order.

**Technical annex**
**Technical data**

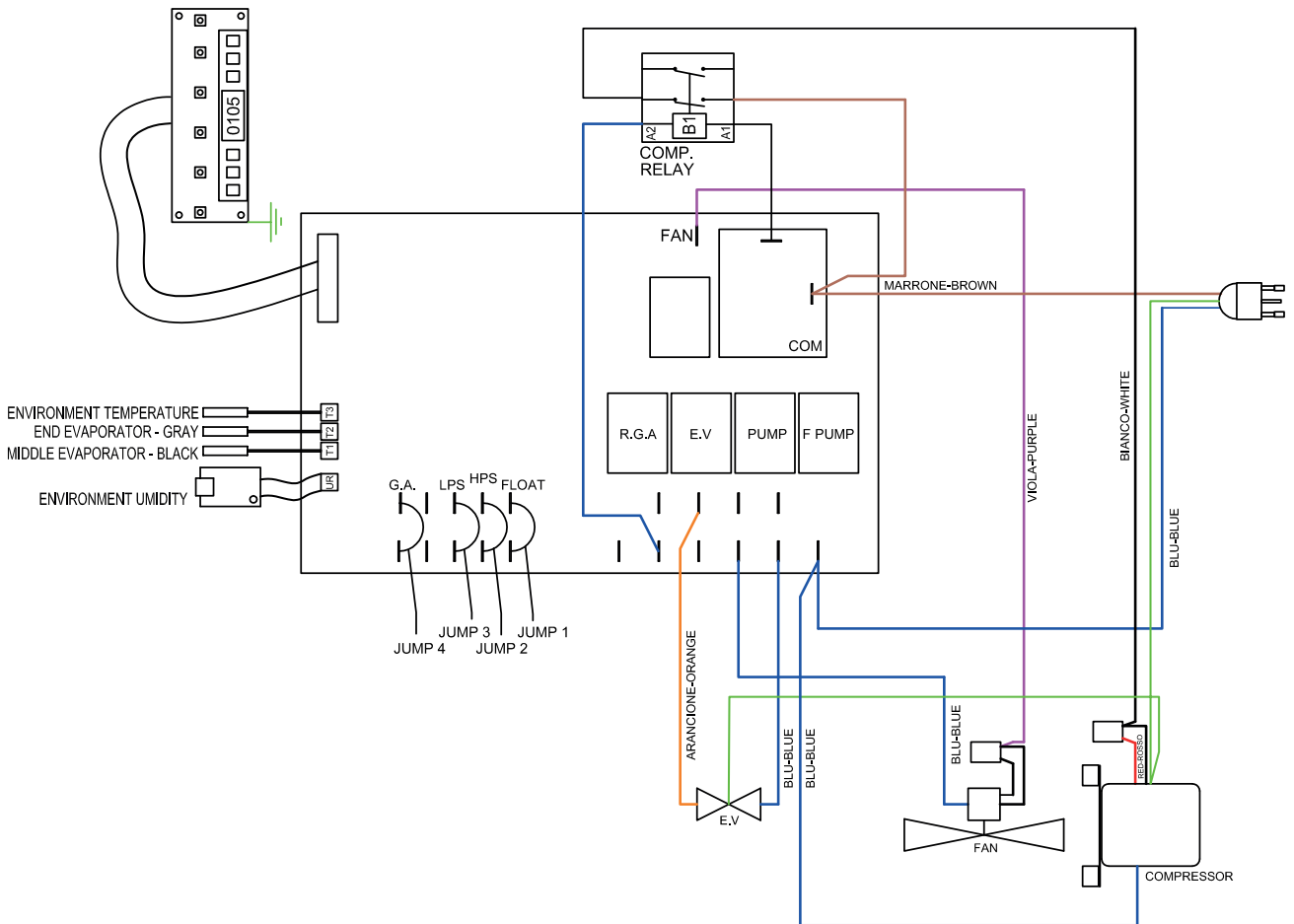
Parameter	Value	
Model	DH 25 S	DH 65 S
Dehumidification performance / 24 h at 30 °C / 80 % RH	40 l	80 l
Amount of air	450 m <sup>3</sup>	1100 m <sup>3</sup>
Pressure suction side	1.3 MPa	1.3 MPa
Pressure outlet side	3.5 MPa	3.5 MPa
Operating range temperature	1 to 38 °C	1 to 38 °C
Operating range humidity		
below 30 °C	35 to 98 % RH	35 to 98 % RH
30 °C to 32 °C	35 to 90 % RH	35 to 90 % RH
32 °C to 35 °C	35 to 70 % RH	35 to 70 % RH
Mains connection	1/N/PE~ 230 V / 50 Hz	1/N/PE~ 230 V / 50 Hz
Nominal capacity	0.77 kW	1.4 kW
Nominal current	3.1 A	6.6 A
Peak starting current	14 A	28 A
Refrigerant	R410A	R410A
Amount of refrigerant	580 g	820 g
Sound level at a distance of 3 m	51 dB (A)	52 dB (A)
Minimum distance to walls/objects		
front	30 cm	30 cm
rear	60 cm	60 cm
Depth	580 mm	667 mm
Width	343 mm	517 mm
Height	457 mm	553 mm
Weight net	34 kg	53 kg

Wiring diagram

DH 25 S



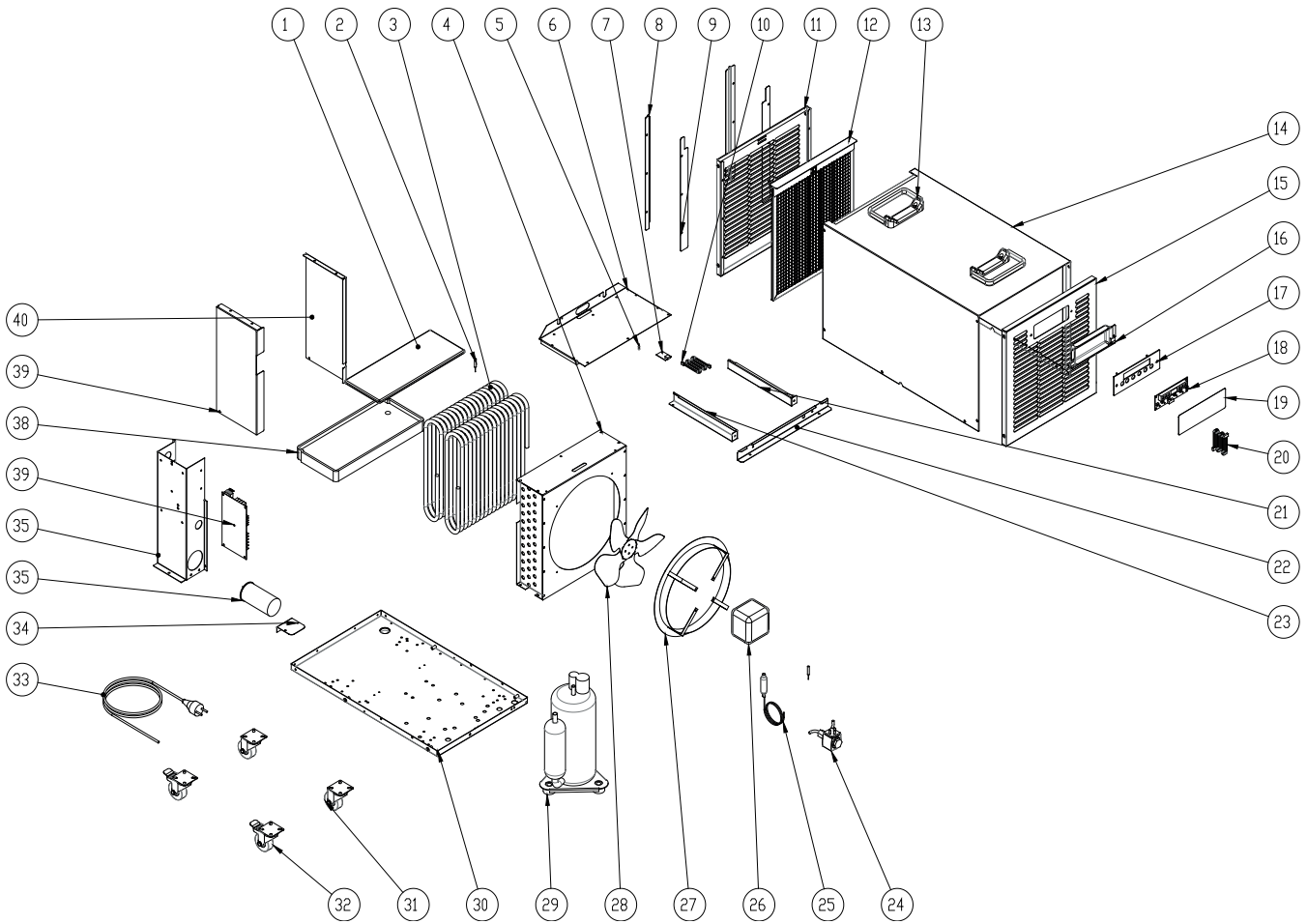
DH 65 S



**Exploded assembly drawing DH 25 S**

**Note!**

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



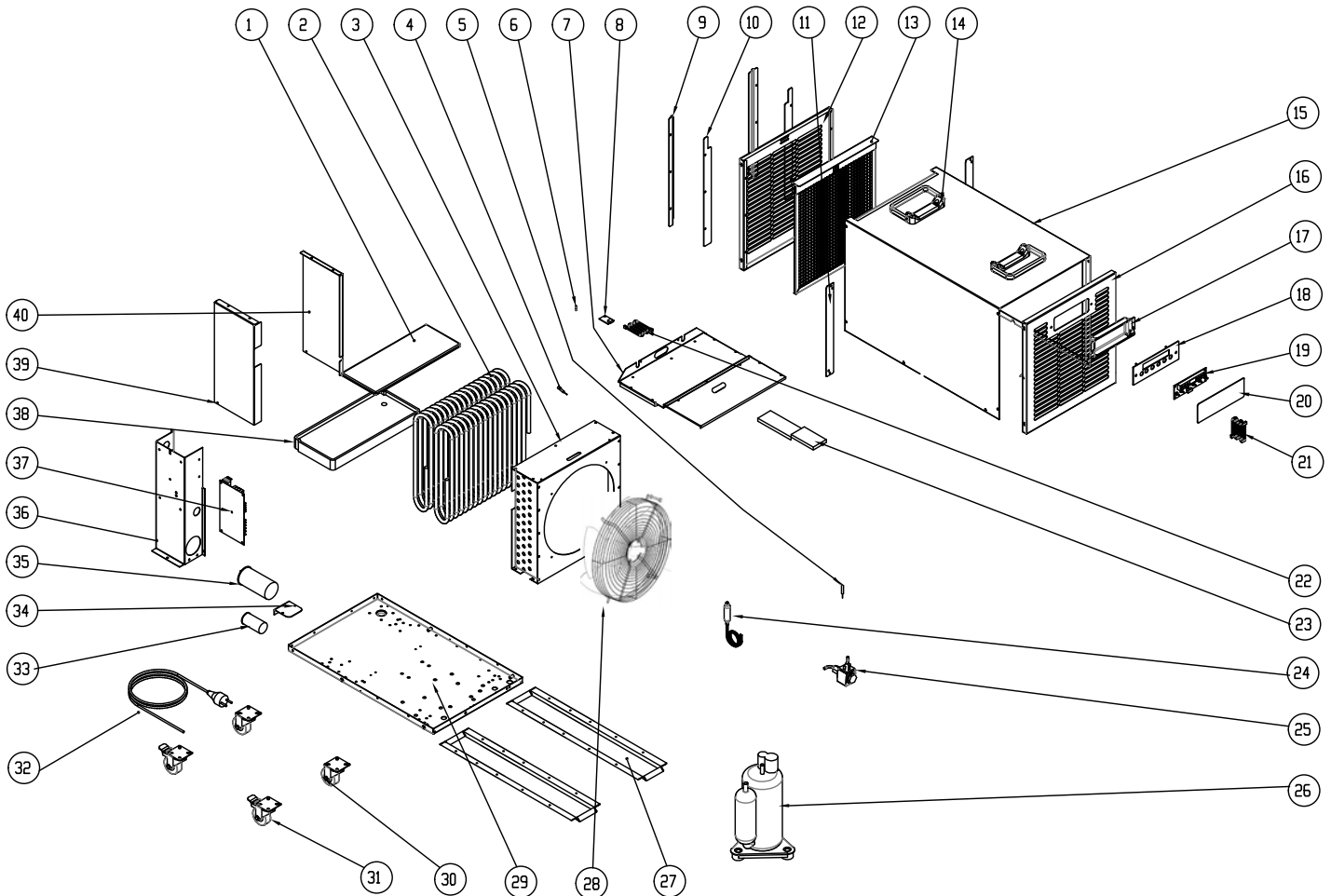
**Spare parts list DH 25 S**

No.	Spare part	No.	Spare part	No.	Spare part
1	Foam Top	15	Supply grid	29	Compressor PA82 rotary R410A
2	Temperature probe L=1 MT	16	Suction display protection	30	Bottom
3	Double assembled evaporator	17	Display PCB support	31	Wheels Ø50 with plate
4	Condenser coil	18	Display digit for new PCB	32	Wheels Ø50 with plate and brake
5	Temperature probe standard L=1 MT	19	Label	33	Plug Schuko black
6	Evap.metal top	20	Wiring connection of the display L=1 MT	34	Capacitor support
7	Humidity probe	21	Right lane humidity sensor	35	Electric panel
8	Trotec filter rail	22	Bottom lane humidity sensor	36	Electric capacitor 40µF
9	Trotec filter rail_2	23	Left lane humidity sensor	37	PCB digit HGD vers. SoftWare 0104
10	Wiring connection of the humidity probe L=1	24	Electric valve Ø 3 mm	38	Tray
11	Trotec Suction grid	25	Capillary and filter	36	Tamp. dx evap.dwl
12	Trotec air filter	26	Motor fan 10W 230V50/60Hz	40	Tamp. sx evap.dwl
13	Handle	27	Fan motor ring Ø 238		
14	Cover	28	Fan Ø 230		

## Exploded assembly drawing DH 65 S

### Note!

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



## Spare parts list DH 65 S

No.	Spare part	No.	Spare part	No.	Spare part
1	Foam Top	15	Cover	29	Bottom
2	Double assembled evaporator coil	16	Supply grid	30	Wheel Ø50 with plate
3	Condenser coil	17	Suction display protection	31	Wheel Ø50 with plate and brake
4	Temperature probe L=1 MT color black	18	Display PCB support	32	Power chord Schuko black
5	Temperature probe L=1 MT color grey	19	Display digit for new PCB	33	Fan motor capacitor
6	Temperature probe standard L=1 MT	20	Display label	34	Compressor capacitor support
7	Evaporator metal top	21	Wiring connection of the display L=1 MT	35	Compressor capacitor 40µF
8	Humidity probe for new PCB	22	Wiring connection of the humidity probe L=1 MT	36	Electric panel
9	Filter rail	23	Right lane humidity sensor	37	PCB digit HGD vers. SoftWare 0104 230 V PCB only
10	Filter rail_2	24	Capillary + mechanical filter	38	Evaporator tray
11	Risers	25	Electric valve Ø 3 mm	39	Tamp.dx Evaporator
12	Suction grid	26	Compressor PA160 R410A	40	Tamp.sx Evaporator
13	Air filter	27	Omega support for wheels		
14	Handle	28	Motor fan 100W 230V50/60Hz		

## Disposal



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

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



### EC Declaration of Conformity

(Translation of the original)

in accordance with EC Machinery Directive 2006/42/EC

#### Trotec GmbH & Co. KG

Grebbener Straße 7

D-52525 Heinsberg

herewith declares, that due to its design and construction, and in the version introduced by us, the following machinery conforms with the relevant fundamental requirements of the listed EC directives.

#### Important note:

In case of improper use, installation, maintenance etc. or unauthorized changes of the factory-supplied device version, this declaration loses its legal validity.

Device version:	condenser dryer	
Series:	DH 25 S / DH 65 S	
Year of manufacture:	as of 01/2015	
Applicable regulations:	2006/42/EG 2006/95/EG 2004/108/EG 2011/65/EG	Machinery Directive Low Voltage Directive EMC Directive RoHS
Applied harmonised standards:	EN 60335-2-40:2003 EN 55014-1:2006 EN 55014-2:2006 EN 50581:2012	

Producer and authorised representative of the technical documentation:

Trotec GmbH & Co. KG	Grebbener Straße 7	D-52525 Heinsberg
+49 2452 962-400	+49 2452 962-200	info@trotec.com



Managing Director:  
Detlef von der Lieck

Heinsberg,  
01.06.2015

Trotec GmbH & Co. KG

Grebener Str. 7  
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

✉ [info@trotec.com](mailto:info@trotec.com)

[www.trotec.com](http://www.trotec.com)