

EN

ORIGINAL INSTRUCTIONS
INSULATION DRYING UNIT



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Information on the use of this instructions

Symbols



Warning of electrical voltage

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



Warning of hot surface

This symbol indicates dangers to the life and health of persons due to hot surface.



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

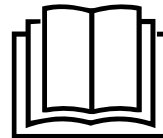
Information marked with this symbol helps you to carry out your tasks quickly and safely.



Follow the manual

Information marked with this symbol indicates that the instructions must be observed.

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



Qube+



<https://hub.trotec.com/?id=40717>

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.
- 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.

- Occasionally observe the device 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.
- 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.
- Never insert any objects or limbs into the device.
- 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!
- Only use original spare parts, for otherwise safe and functional operation cannot be ensured.

Intended use

Use this device for insulation drying processes of floating screed, flat roofs (warm roof constructions) and cavity floors with the vacuum method, adhering to the technical data and the safety instructions. This device is intended to transport non-aggressive and non-explosive gaseous media.

Any use other than the intended use is regarded as misuse.

Reasonably foreseeable misuse

- Do not place the device on wet or flooded ground, e.g. near floor drains.
- Do not place any objects, e.g. clothing, on the device.
- Do not use the device out of doors.
- Do not use the device in the immediate vicinity of swimming pools, bathtubs and showers.
- Never immerse the device in water.
- Do not use this device to draw in foaming media, aggressive cleaning agents and acetone-based fluids.
- Do not use this device to inflate bouncy castles or similar objects.
- Do not transport any media other than those complying with the intended use.
- Do not use this device to draw in large quantities of water. If, during insulation drying, you notice that there are large amounts of water left in the insulation layer, the water must be sucked off with a water extractor before using the device.
- Do not make any unauthorised modifications, alterations or structural changes to the device.

Personnel qualification

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.

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

Risk of electric shock!

The device is not protected against water.

There is a risk of electric shock!

Never use the device in areas where dripping, spraying or running water can enter the device! Never immerse the device in water!



Warning of electrical voltage

Risk of electric shock!

Risk of an electric shock if the device comes into contact with water!

Do not use this device in the immediate vicinity of bathtubs, showers or swimming pools!



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 of hot surface

Risk of injury due to hot surfaces at the outlet opening.



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.

Note

Overheating of motor electronics

Permanent or repeated overheating may destroy the motor electronics. Avoid overheating the device and provide sufficient air circulation. If necessary, direct the warm air out of the room. Room temperatures above 35 °C are to be avoided during operation. Exchange the F7 air filter (23) for the cooling air of the motor after every application or at least every 4 weeks.

Also observe the information in the Set-up chapter.

Note

Observe the overvoltage protection.

The device comes equipped with an overvoltage protection. When checking for electrical safety, please bear in mind that the test voltage has to be reduced to 250 V.

Note

Damage to the turbine due to sucked-in particles.

If impurities enter into the turbine, this might damage the turbine. The turbine is suited for transporting clean air only. Always exchange the filters on every construction site to prevent contamination.

Behaviour in the event of an emergency

1. Switch the device off.
2. 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 Qube+ consists of only one device and is 50 % lighter and 50 % smaller than a comparable MultiQube tower. A multi-device installation with complex hose connections can be omitted without replacement. Just set it up, plug it in, switch it on – all done! No further equipment technology is required. The device comes ready for connection with all integrated parts: a powerful fan motor, a water separator, a 4-stage filter system and an efficient silencer – ultra-compact, united in a robust, stackable aluminium construction, offering clearly more advantages and at the same time causing considerably less costs than multi-device solutions.

Globally unique integral solution:

- VX 5 turbine
- Water separator WA 4i
- HEPA filter module
- Silencer NR 19

Equipment features:

- Adaptronic power control for flexible low-pressure surface drying operations ranging from 8 m² to 85 m²
- Globally unique HiDry automatism for all power stages
- Optiflow NT multi-function display
- Non-wearing touchscreen control panel
- Counter for operating hours and energy consumption (MID-compliant)
- Night operation – whisper mode
- 2 TTKwic quick couplings for drainage connection of dehumidifiers
- Flexible 4-stage filter system
- DA 4 interface
- Efidry humidity sensor connection
- Residual water draining
- Connection for discharge of hot process air
- Service socket (tamper-proof)
- Cable holder
- Key lock to prevent maloperation
- ECO level (stage 1) for small surfaces
- Height-adjustable telescopic push handle

The device is equipped with a touch control panel with LC display. It provides information on the operating stage, air flow rate etc. The background colour of the LC display changes according to the traffic light principle to indicate how suitable your drying installation is. An optimal air flow rate is indicated by a green background colour during operation. If the display is illuminated in yellow, this means that the installation is OK but the flow conditions for the dry air are not optimal. Drying can be carried out without any difficulties while the display is yellow. A red background indicates an uneconomic operation. The compressor should not be permanently operated in this condition.

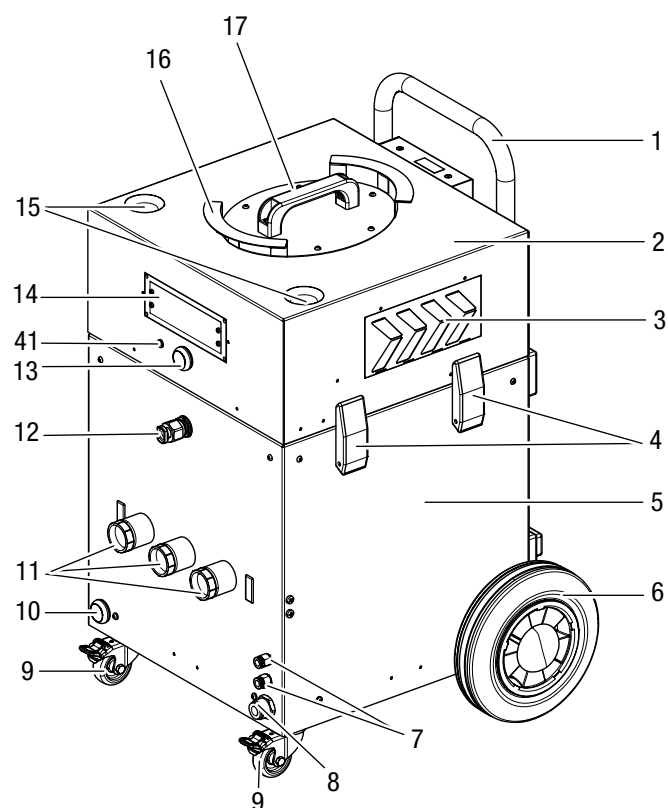
Practical benefits:

- The most light, compact and powerful system unit on the market
- 50 % smaller than a comparable MultiQube installation, up to 75 % smaller than constructions from competitors
- Flexible filter system with optional HEPA filter usage
- Total weight only 27 kg
- Stackable

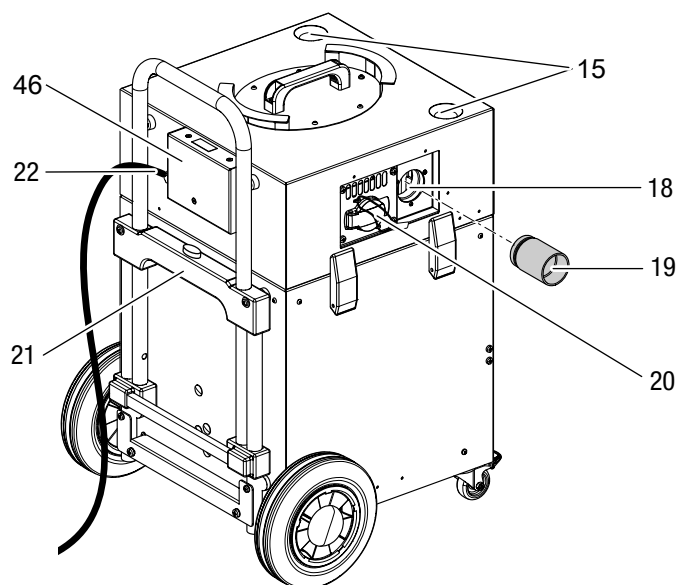
With the device all *negative time factors* can be eliminated in one sweep – this way less devices are needed and moved, stock requirements are reduced, more equipment can be transported to the damage site per tour, less time is needed for set-up and disassembly as well as for cleaning. All in all, your working, space and warehouse productivity can be increased many times over by using the Qube+!

Device depiction

Qube+



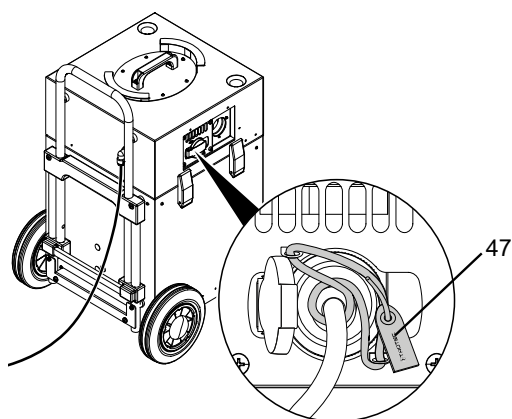
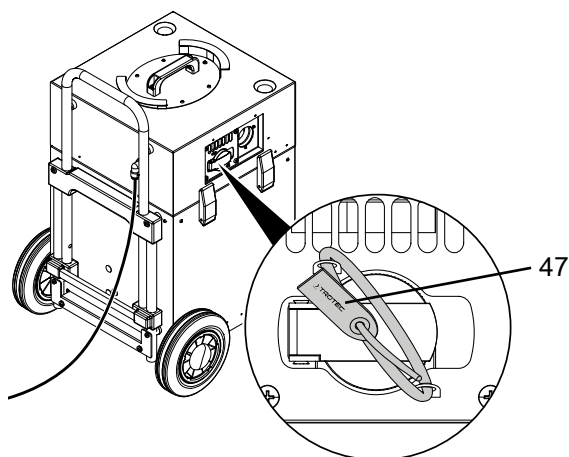
No.	Designation
1	Telescopic push handle
2	Upper part with turbine
3	Air inlet for cooling
4	Tension lock
5	Lower part with pump
6	Wheel
7	TTKwic connections
8	Drain hose connection
9	Castor with parking brake
10	Residual water draining button
11	Hose connectors
12	DA 4 sensor connection
13	Power button
14	Touchscreen control panel
15	Castor retainer (for storage)
16	Power cable retainer
17	Carrying handle upper part
41	Communication port



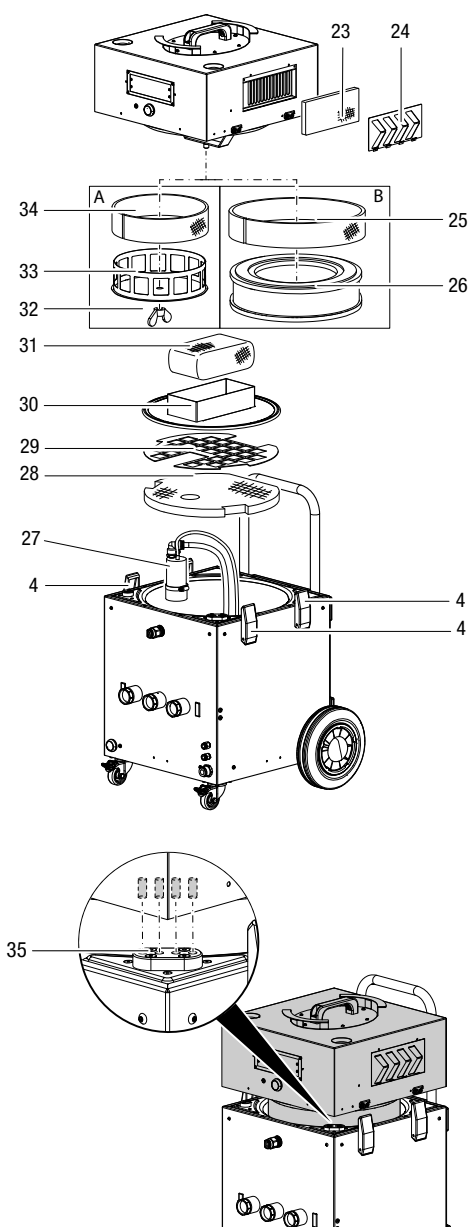
No.	Designation
18	Connection for discharge of process air
19	Connector 50 mm
20	Service socket (tamper-proof)
21	Holder for storage with release button for the height-adjustable telescopic push handle
22	Power cable
46	MID meter
47	Seal

Note

To satisfy the MessEG regulations the service socket is fitted with Trotec PlugSafe, so it can be safely sealed both with an inserted plug or when shut. Using PlugSafe and a seal it can be ensured that no additional or no other power consumer than the one already connected can be plugged into the service socket. This is in compliance with the MessEG requirements.



Schematic detail view with filters



No.	Designation
23	F7 air filter
24	Air filter cover
25	F8 filter sleeve for HEPA filter (optional)
26	HEPA filter (optional)
27	Pump
28	Coarse filter
29	Coarse filter fixation grid
30	Demister holder
31	Demister
32	Wing nut
33	Cage
34	G4 filter sleeve
35	Spring contacts for electrical connection

Transport and storage

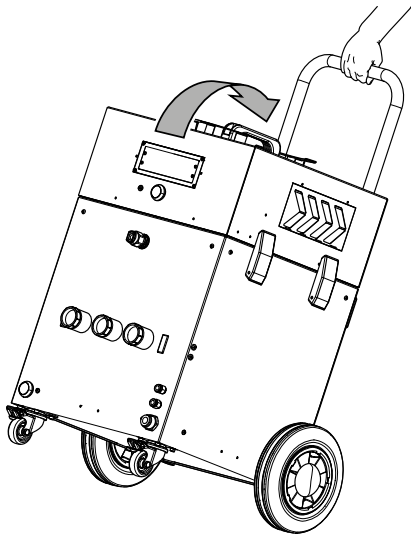
Note

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

Transport

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



Before transporting the device, observe the following:

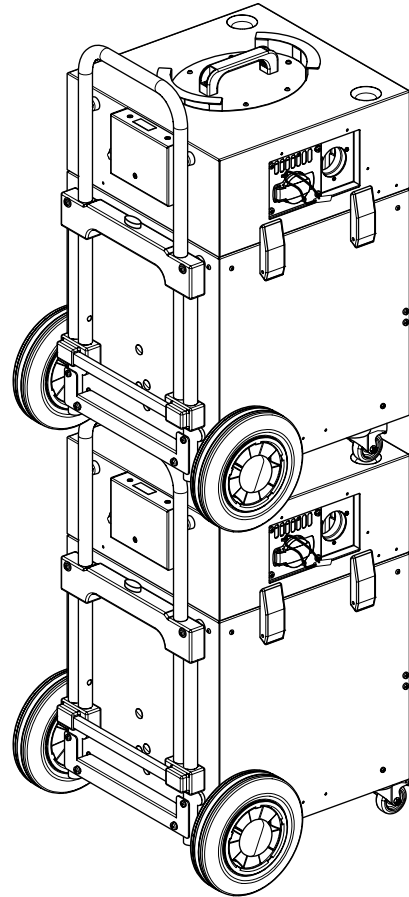
- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Drain any residual water from the device.
- Remove the connected hoses and components.
- Prior to every transport check whether the upper and lower part of the device are firmly connected via the tension locks.
- Only wheel the device on firm and level surfaces.

Storage

Before storing the device, proceed as follows:

- Hold onto the mains plug while pulling the power cable out of the mains socket.

The devices can also be stacked on top of one another.



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

- Store the device in a dry location and protected from frost and heat.
- If required, use a cover to protect the device from invasive dust.

Assembly and installation

Scope of delivery

Accessories and supplies contained in the scope of delivery of the Qube+:

Quantity and designation	Art. no.
1 x water separator bottom filter mat	7.160.000.206
1 x G4 filter sleeve	7.160.000.214
1 x F7 Z-line filter for filtering the sucked-in motor cooling air	7.160.000.213
1 x 50 mm hose connection for process air discharge	7.200.000.001
1 x drain hose, length 5 m, Ø 12 mm	7.331.000.476
1 x coarse filter fixation grid	7.241.001.245

Further accessories and supplies:

Accessories	Art. no.
38 mm connector	7.200.000.002
HEPA filter module, H13 high-efficiency particulate air filter as per DIN EN 1822-1, filtration efficiency > 99.97 % / 0.3 µm, incl. F8 prefilter sleeve (DIN EN 779)	7.160.000.221
F8 filter sleeve for HEPA filter module, filter class 8 (DIN EN 779)	7.160.000.215
F8 filter sleeve	7.160.000.216
connection cable VX-DA for data transmission to the DA 4	7.333.000.015
sound protection hood	6.100.000.070
protective cover	6.100.003.15

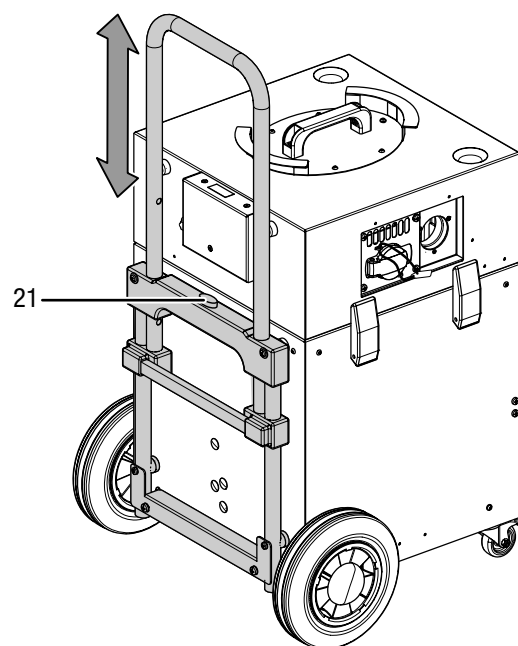
Assembly

Remove the packaging. Remove any transport locks from the supply connections.

The wheels are already preassembled.

The telescopic push handle is preassembled and can be adjusted in height:

Press and hold the height adjustment button (21) to adjust the extendable length of the telescopic push handle.

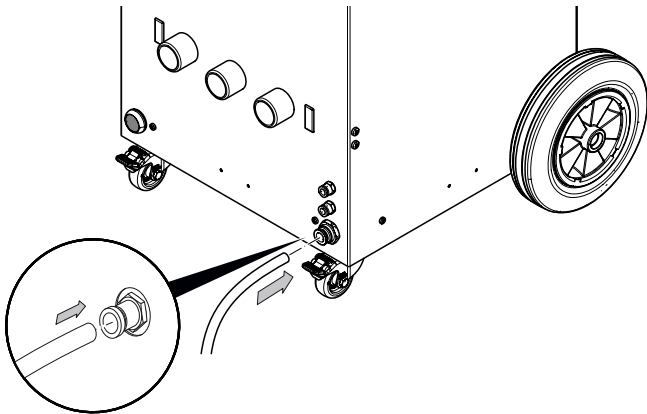


Connecting the drain hose

The device must be connected to an appropriate drain or collection container via a drain hose so that the device can drain the accumulated water from the water tank if required.

Observe the following when connecting the drain hose:

- Please note that the collection container must be sufficiently dimensioned. The end of the drain hose should not extend into the water.
 - Please note that only unpolluted water may be discharged into the drain.
 - The drain must be able to take the respective water quantity.
 - Height differences of up to 10 m are permissible.
 - Dispose of contaminated water in accordance with the national regulations.
1. Connect the drain hose (Ø 12 mm) to the drain hose connection (8).



2. Guide the other hose end to a drain or collection container.
- Regularly inspect the drain hose and hose connection for kinks and dirt. Remove kinks and clean the drain hose, if required.

TTKwic quick couplings

As standard, the device comes with two integrated TTKwic quick couplings (7), where condensate discharge hoses of up to two used dehumidifiers plus condensate pump can be connected. The entire water discharge is then taking place centrally via the drain hose of the device.

Note

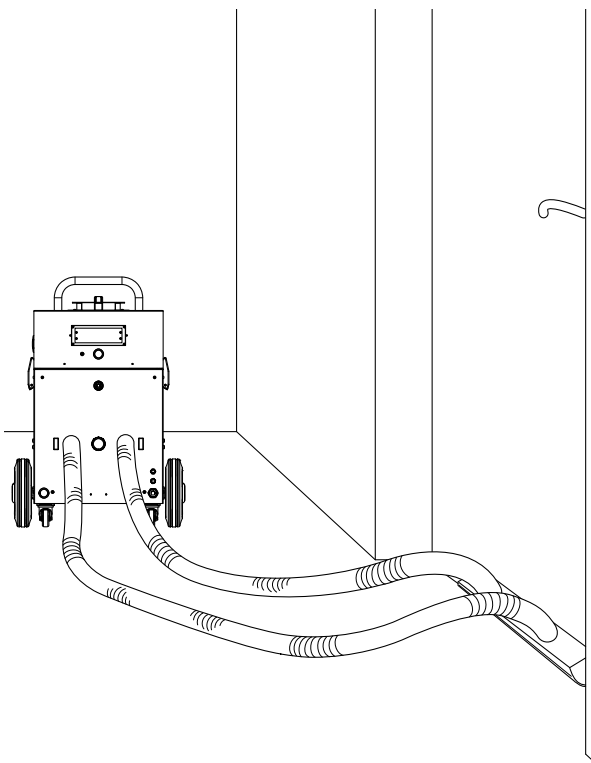
When using the TTKwic connections of the device, please make sure that the device is switched on. If the device is switched off, the accumulated condensation will not be pumped out and may overflow. Should the device – while using the TTKwic connections – create much less noise during operation or stop working altogether, set the device to a lower performance level or switch on TTKwic mode, see chapter Operation.

Positioning the device

When setting up the device, make sure that the warm air generated by the device is discharged. The room temperature should not exceed 35 °C.

- If required, ensure that the process air is discharged by connecting a suitable discharge hose to the process air discharge connection (18).
- Provide sufficient fresh air supply by ventilating the room at regular intervals.
- Should the discharge of warm air not be an option, the device can also be installed outside of the room to be dried and the hose connection can be established by means of a PlanoPro door gap nozzle (art. no. 6.100.000.160).

Such an installation may look like this, for example:



The device comes equipped with an overheating protection. This serves to prevent excessive ambient temperatures. It protects the materials and devices located in the room.

Start-up

- Use suitable hoses (observe number and diameter) to set up the drying installation.
- Remove the sealing caps from the connectors to which you want to connect a hose. If a connector is not needed, the sealing cap must remain on the connector.

Note

Connectors **without** a sealing cap or a connected hose may cause water to escape and thus result in water damages.

Carefully check the connectors before switching the device on.

- For drying operations, only use cables and sockets complying with the regulations. In addition to the 16 A fuse, the socket should also be secured by a 30 mA residual current device (RCD).

Note

We recommend using a suitable mat if the device is placed on sensitive ground.

Inserting the filters

Check whether the filters have been properly inserted into the device:

- G4 filter sleeve or optional F8 filter sleeve or HEPA filter with F8 filter sleeve

Note

Exchange the filters at the latest when relocating to another construction site to prevent contamination.

- demister
- coarse filter (filter mat) with coarse filter fixation
- pump filter



Info

The coarse filter fixation should rest on the coarse filter to prevent the coarse filter from floating unintentionally.

Mains connection

- Plug the mains plug into a sufficiently fused socket.

Switching the device on

Press the power button (13) to switch the device on. The following working stages are available:

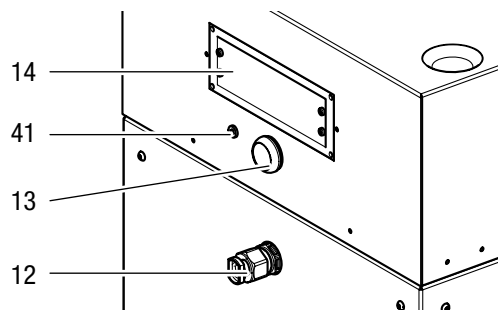
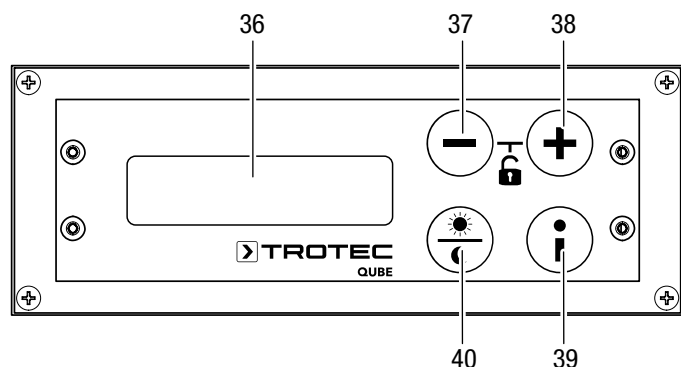
- 4 power stages 1-4
- stage 5: boost mode
- whisper mode
- TTKwic mode

Check the installation via the LC display:

- green: optimal air volume flow
- yellow: limit range
- red: air flow rate too low – installation must be optimized

Operation

Operating elements



No.	Designation	Meaning
12	DA 4 sensor connection	Data transfer to the DA4 Qube
13	Power button	Switching the device on and off
14	Touch control panel	For setting the stages Indication of the whisper mode duration For deactivating whisper mode
36	LC display	Indication of different device functions
37	Minus button	For decreasing the power stage
38	Plus button	For increasing the power stage
39	Operating hours button	Display of the number of operating hours
40	Whisper mode button	For de-/activating whisper mode
41	Communication port	For data transfer to the DA 4 control unit



Warning of electrical voltage

Risk of electric shock!

The device is not protected against water.

There is a risk of electric shock!

Never use the device in areas where dripping, spraying or running water can enter the device! Never immerse the device in water!

Setting the power stages and operating modes

The device comes with 4 power stages, a boost mode, a whisper mode and the TTKwic mode.

Whisper mode can be activated by pressing the *whisper mode* button (40).

Setting the power stages and the boost mode

In boost mode, the motor runs at its maximum performance.

Choose from the power stages 1 to 4 or boost mode by pressing the buttons *plus* (38) or *minus* (37).

Setting whisper mode

In whisper mode, the compressor runs with a max. motor power of 60 %, thus reducing the noise emission (e.g. at night). Whisper mode is automatically left after 10 h and the compressor starts to run at its previously chosen power stage again.

Press the *whisper mode* button (40) to activate or deactivate whisper mode.

- A countdown (10 h) on the control panel indicates the remaining whisper mode duration.

Setting TTKwic mode

In this operating mode the device's motor is turned off and only the pump operates. So if a dehumidifier transports water into the device by means of a condensate pump, the accumulated water will be pumped off when the tank's maximum filling level is reached.

Press the *whisper mode* button (40) followed by *minus* (37) to activate TTKwic mode. Press the *whisper mode* button (40) followed by *plus* (38) to deactivate TTKwic mode.



Info

In whisper mode you can enable or disable TTKwic mode at any time.

The whisper mode duration (10 h) also applies to the TTKwic mode.

Key lock

To prevent an accidental maladjustment of the device settings, the device is fitted with a key lock function.

Simultaneously press and hold the *plus* (38) and *minus* (37) buttons for approx. 5 s to enable or disable the key lock. Pay attention to the indication on the display.

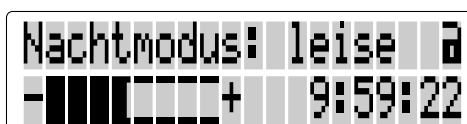
The key lock indication in the top right corner of the LC display (36) changes according to the selected setting:

- Padlock closed: The key lock is activated.
- Padlock open: The key lock is deactivated.

Example for an enabled key lock function:



Example for a disabled key lock function:



Info

The key lock will be activated automatically after approx. 10 min of non-use.

Displaying the operating hours

Pressing the *operating hours* button (39) while the device is switched on allows you to see the number of operating hours.

The energy consumption can be read at the rear of the Qube+. The counter has an MID certificate qualifying it for billing purposes.

In accordance with calibration regulations, restoration companies are so-called "meter users" or "users of measurement readings", which binds them to observe the German Weights and Measures Act (MessEG). The MessEG regulates the recording and transfer of measurement readings based on which the power consumption costs of the devices shall be determined.



Info

If a load is connected to the service socket, its energy consumption will also be measured by the energy meter.

Connecting the DA 4 (external control unit)

The communication port (41) is used for data transfer to the DA 4 control unit. The data may then be forwarded (USB and modem or USB only).

Additionally, the internal sensor of the DA 4 must be connected via the sensor connection (12).

Emptying the tank



Info

The drain hose must be connected and guided to an appropriate drain or collection container.

Filling level sensors inside the tank control the automatic operation of the pump. Once a certain filling level is reached in the tank, the pump will start to operate automatically:

- The message *abpumpen... (pumping off)* appears on the LC display.
- The pump drains the accumulated water via the connected drain hose.
- If the pump cannot drain the water fast enough, the motor's fan will be switched off. The message *Behälter voll! (tank full)* appears on the LC display. The maximum tank filling level has been reached. The pump drains the accumulated water.
- Once the tank has been emptied, the fan motor will switch back on and the drying operation will continue.

Shutdown



Warning of electrical voltage

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

- Remove the residual water by pressing the button for residual water draining (10).
- Press the *power* button (13) to switch the device off.
- Wait until the motor has come to a standstill.
- Remove any hose connections.
- Reinsert the sealing plugs removed during start-up.

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.
- Check the power cable and mains plug for damage.
- Check the on-site fusing.
- Check whether the overheating protection has tripped.

The device comes equipped with an overheating protection. If the temperature within the device exceeds the permissible value, the air flow rate will be reduced automatically. *Temperatur 1!* will be displayed. If the temperature increase continues nonetheless, the device will be switched off and *Temperatur 2!* appears on the display.

If necessary, direct the warm air out of the room. A room temperature of more than 35 °C is to be avoided during operation. Also observe the information in the Set-up chapter.

Little or no air is sucked in or blown out:

- Check the installation and add relief openings to improve the air circulation and to operate the compressor within its operating range if necessary.

Motor is not running:

- Check the display. If *Behälter getrennt! (tank disconnected)* is indicated, the upper part may not be correctly positioned on the lower part. Check whether the upper and lower part are properly connected to one another.
- Check whether voltage is applied.
- Check the electrical connections and safety installations.

Motor switches off during operation or its performance is reduced:

- The device has been overheated due to improper operation and switched off by the thermal protection of the motor. This may be due to the following causes:
 - High counter pressure on the outlet side has led to overheating.
 - Too strong flow resistance on the suction side has led to overheating in suction mode.
- Wait until the motor has cooled down. Then switch the device back on.
- Check the installation and add relief openings to improve the air circulation and to operate the compressor within its operating range if necessary.
- Check whether the air filter of the turbine is soiled or clogged.
- If the room temperature exceeds 35 °C, provide better ventilation. If necessary, guide the warm air out of the room.

The 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 fault messages may appear on the LC display:

Fault message	Cause	Remedy
<i>Behälter getrennt!</i> (tank disconnected)	The electrical contact between the upper and lower part is disrupted. The motor switches off.	Check whether the upper and lower part of the device are firmly connected via the tension locks. Check the contacts of the upper and lower part. Clean if necessary.
<i>Pumpe Abkühlphase..</i> (cooling phase pump)	The pump is in continuous operation.	No action required. The cooling phase lasts 15 min. Then the device starts up again and resumes operation with the previously selected settings.
<i>Behälter voll!</i> (tank full)	The water tank is full.	No action required. The pump drains the accumulated water via the drain hose. The motor switches off. The motor will only switch back on and the Qube will only continue to operate once the water has been drained.
<i>Pumpe prüfen!</i> (check pump)	The pump is blocked and can no longer operate.	Press the button for draining residual water (10). If the pump is still blocked, switch the device off. Clean tank and pump thoroughly.
	The pump is in operation but there is no water in the tank.	Switch the Qube off and back on. If the message appears again, check the water level sensor and clean this area thoroughly.
	Too much water in the insulation layer or an unconnected drain hose causes the pump to operate continuously.	Check the drain hose for proper fit. There must be no kinks or loops in the hose that could prevent the water from being drained off. Check for potential leakage.

Fault message	Cause	Remedy
<i>abpumpen...</i> (pumping off)	The pump drains the accumulated water.	No action required. If the pump is to run permanently, the water should be removed with an industrial suction unit in a first step.
<i>Filter wechseln!</i> (change filter)	The G4 or F8 filter sleeve or the HEPA filter is clogged.	Exchange the filter sleeve. In case a HEPA filter is used and the message continues to be shown on the display, the HEPA filter itself must be exchanged as well.
<i>12V Netzteil prüfen</i> (check 12 V power adapter)	Wiring fault at power adapter.	Please contact the customer service.
<i>Temperatur 1!</i> (temperature 1)	The temperature within the device exceeds the permissible value, this tripped the overheating protection.	No action required. The air flow rate will be adjusted automatically. Investigate the cause of overheating if required to prevent further overheating.
<i>Temperatur 2!</i> (temperature 2)	The temperature within the device exceeds the permissible value, this tripped the overheating protection. The device has switched off.	Investigate the cause of overheating. If necessary, direct the warm air out of the room. A room temperature of more than 35 °C is to be avoided during operation. Also observe the information in the Set-up chapter.

Maintenance

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.

Note

Observe the overvoltage protection.

The device comes equipped with an overvoltage protection. When checking for electrical safety, please bear in mind that the test voltage has to be reduced to 250 V.



Info

Via the following link you will find an explanation of how to clean the Qube+ and what to observe for this process:

https://www.youtube.com/watch?v=8_G8kCDMHIM

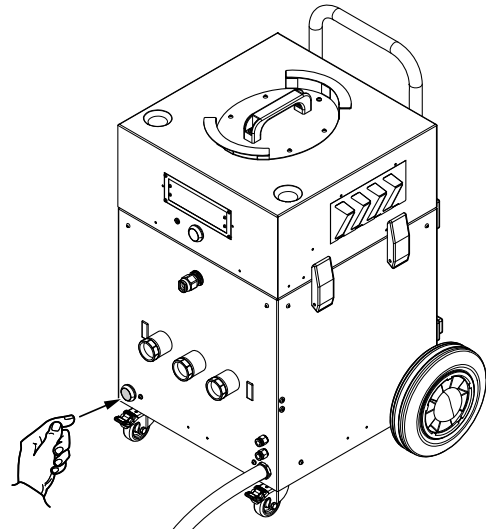
Cleaning the housing

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.

Draining residual water

The residual water should always be drained before the device is transported.

Press the button for residual water draining (10) to drain the water left in the tank.



Exchanging or removing the drain hose

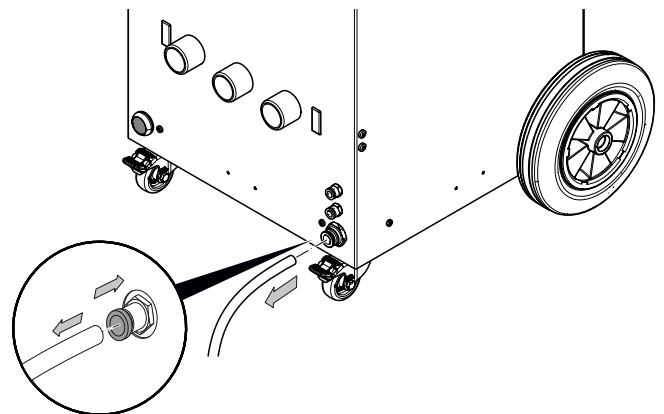
The drain hose should be cleaned if dirt is visible.

If there are signs of wear or damage, the drain hose should be exchanged.

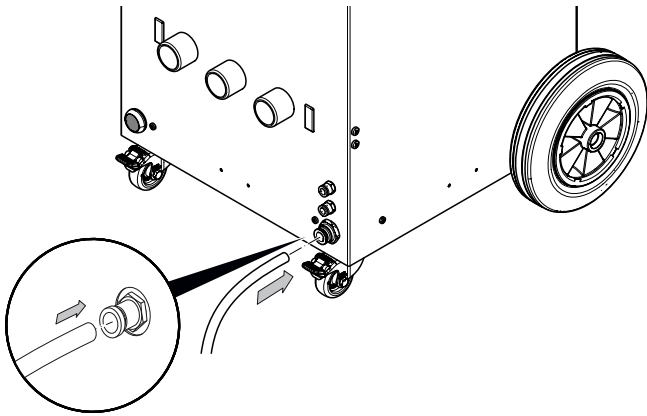
Remove the drain hose before transporting the device.

- ✓ The device is switched off and disconnected from the mains.
- ✓ The residual water has been drained.

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



2. If required, connect a new drain hose.



Cleaning or replacing the filters

The filters must be cleaned or replaced as soon as they are dirty. Exchange all air filters (23, 25, 26, 34) at the latest when relocating to another construction site to prevent contamination.

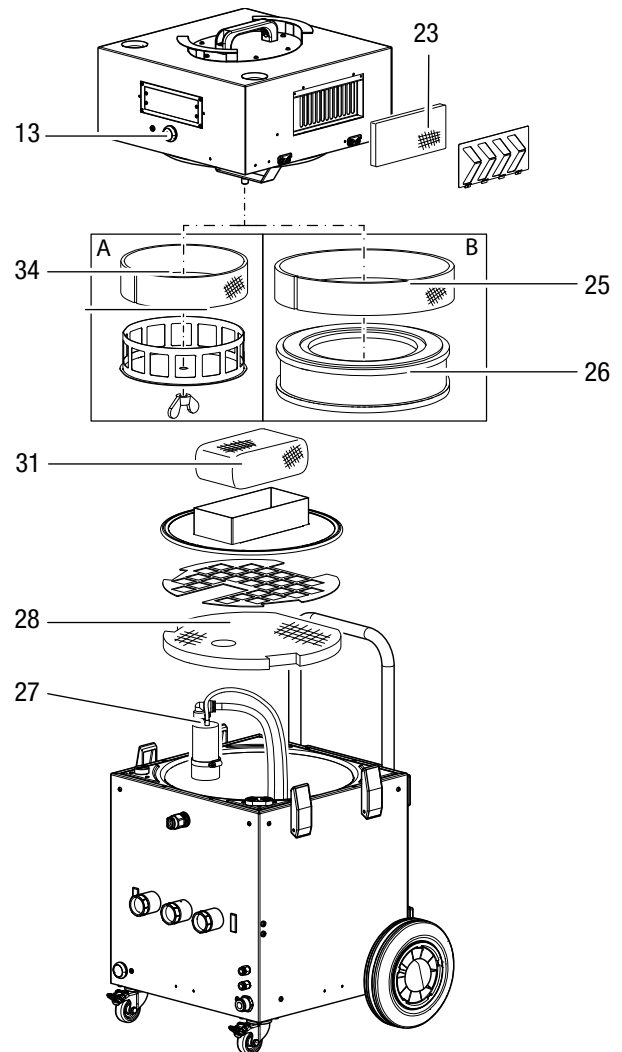
If the *Filter wechseln!* (*change filter*) message appears on the display, the filter inside the device (G4 or F8 filter sleeve or HEPA filter) must be replaced as a matter of urgency as it does not allow a sufficient quantity of air to pass.

Observe the following **before** cleaning or replacing the filter:

- Press the power button (13) to switch the device off.
- Disconnect the device from the mains.
- Drain the residual water from the tank.

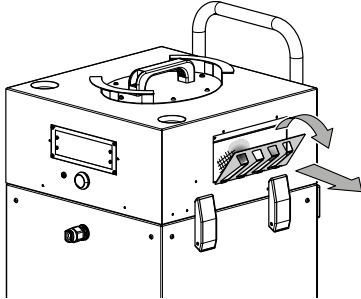
The device is equipped with different filter types:

- G4 filter sleeve (34) (F8 filter sleeve also an option here)
- F8 filter sleeve for HEPA filter, optional (25)
- HEPA filter, optional (26)
- demister (31)
- coarse filter (28)
- air filter (23)
- pump filter (part of 27)

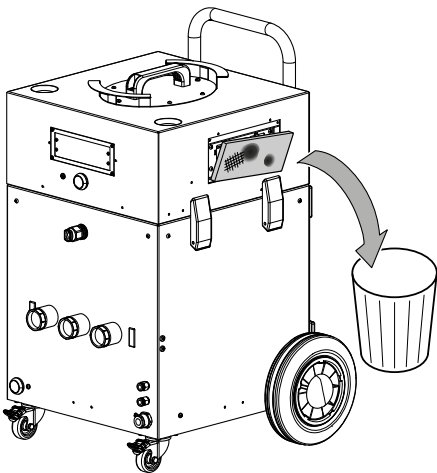


Replacing the air filter

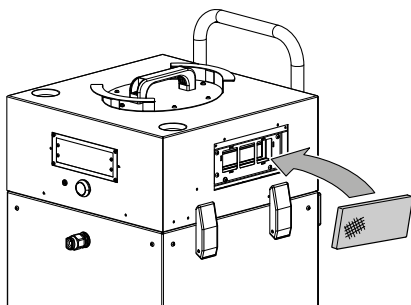
- ✓ The device is switched off and disconnected from the mains.
 - ✓ The residual water has been drained.
1. Remove the cover from the air filter.



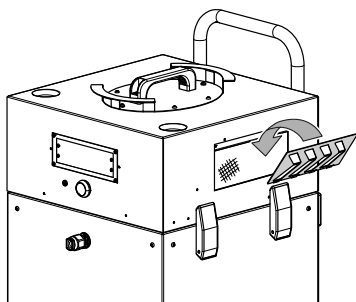
2. Remove the air filter.



3. Install a new air filter.



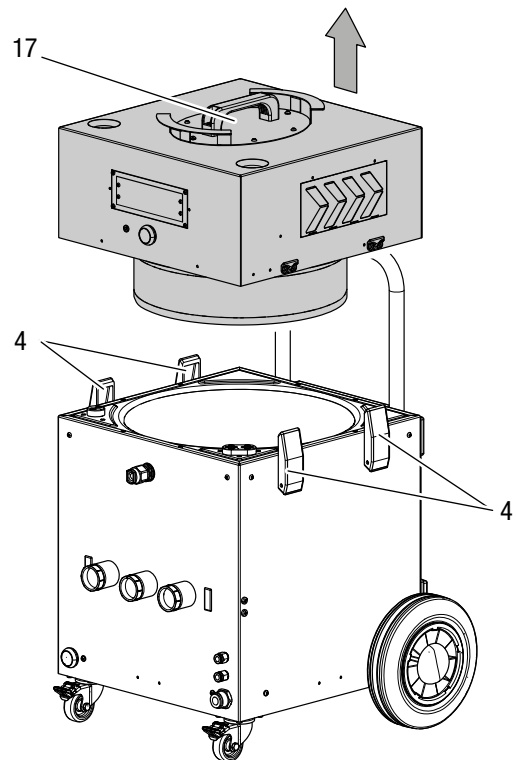
4. Reattach the cover to the air filter.



Replacing the G4 filter sleeve

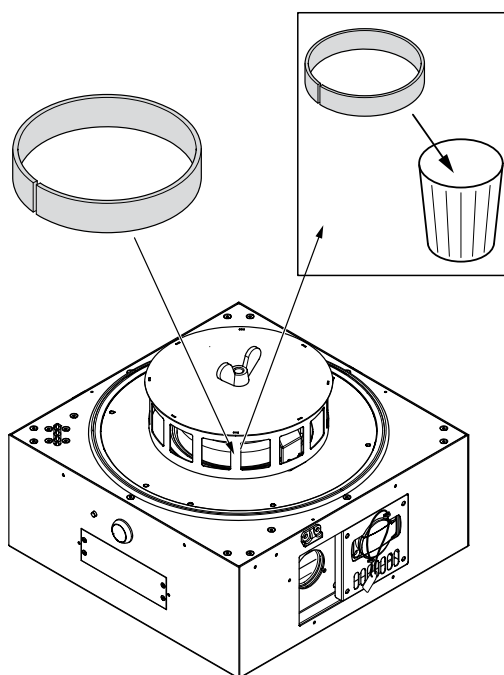
Exchange the filters at the latest when relocating to another construction site to prevent contamination. If the *Filter wechseln! (change filter)* message appears on the display beforehand, the G4 filter sleeve inside the device must be replaced as it does not allow a sufficient quantity of air to pass.

- ✓ The device is switched off and disconnected from the mains.
 - ✓ The residual water has been drained.
1. Open the 4 tension locks (4).
 2. Lift the upper part at the carrying handle (17) and place it onto a stable base.



3. Turn the upper part so that the bottom side with the filter points upwards.

4. Remove the G4 filter sleeve from the cage.

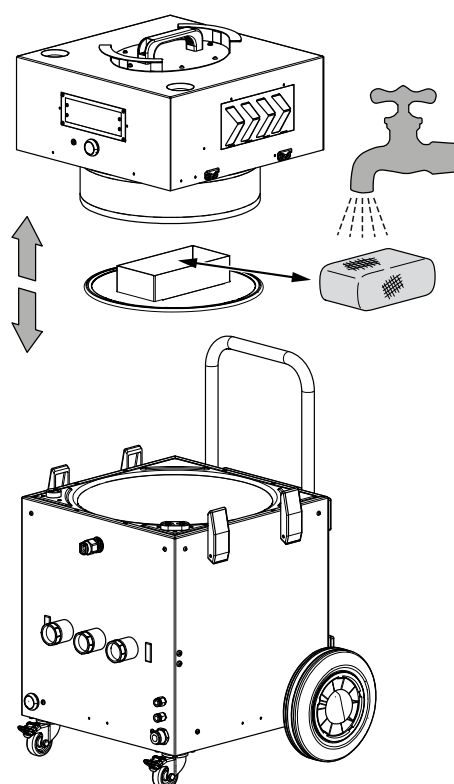


5. Place a new G4 filter sleeve around the cage and close the Velcro® fastener. Make sure that the sleeve surrounds the cage completely.
6. Put the upper part back on the device and close the tension locks.

Cleaning the demister

- ✓ The device is switched off and disconnected from the mains.
- ✓ The residual water has been drained.
- ✓ The upper part has been removed (see Replacing the G4 filter sleeve).

1. Take the demister out of the holder in the lower part of the device.
 2. Rinse the demister under running water.
- ⇒ Exchange the demister if required (e.g. in case of damages).

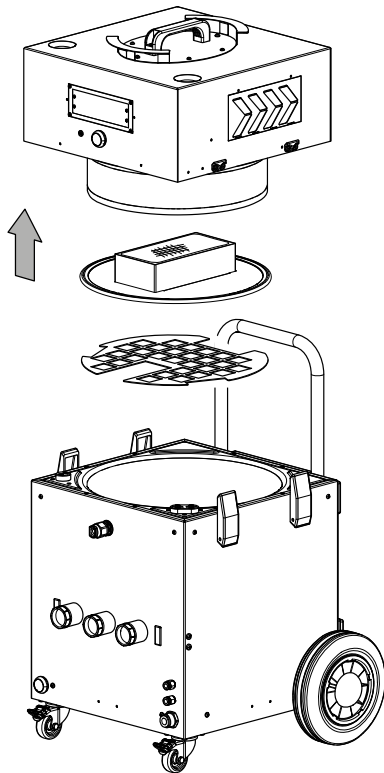


3. Put the demister back into the holder.
4. Put the upper part back on the device and close the tension locks.

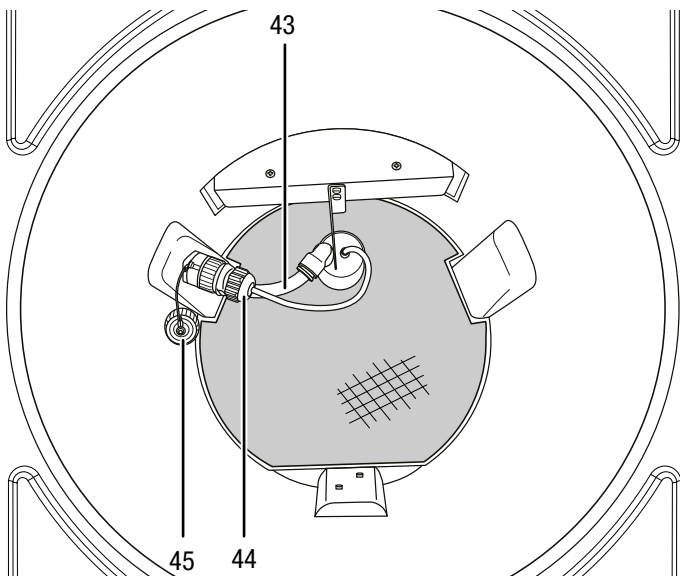
Cleaning the pump filter

- ✓ The device is switched off and disconnected from the mains.
- ✓ The residual water has been drained.
- ✓ The upper part has been removed (see Replacing the G4 filter sleeve).

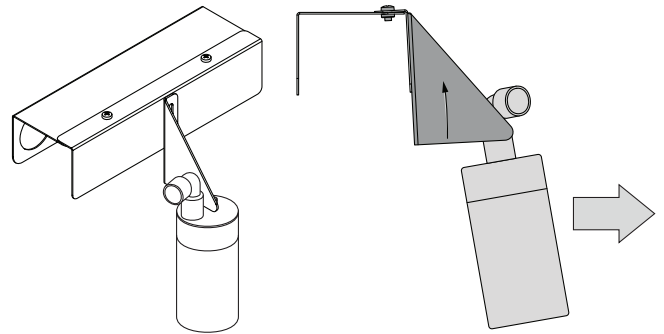
1. Take the demister along with the holder out of the lower part of the device.
2. Remove the coarse filter fixation.



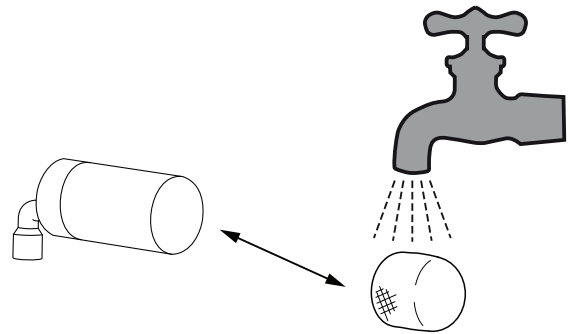
3. Loosen the connecting plug (44) of the electrical connection on the tank wall. Close the cap (45) of the plug connection to avoid contamination.



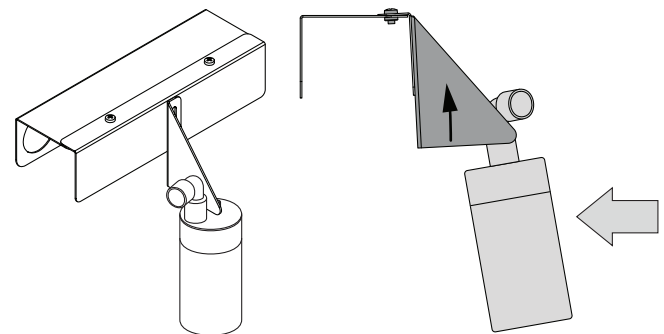
4. Loosen the quick coupling of the hose (43) on the tank wall.
5. Slightly lift the sheet that is fixing the pump.



6. Take out the pump.
 7. Detach the pump filter from the pump.
 8. Rinse the pump filter under running water.
- ⇒ Exchange the pump filter if required (e.g. in case of damages).



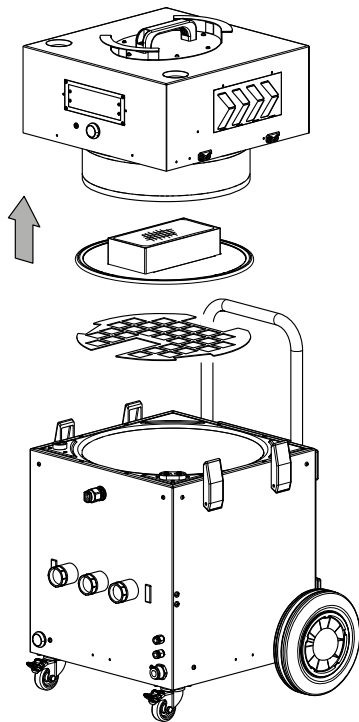
9. Mount the pump filter to the pump.
10. Slightly lift the sheet that is fixing the pump and refit the pump.



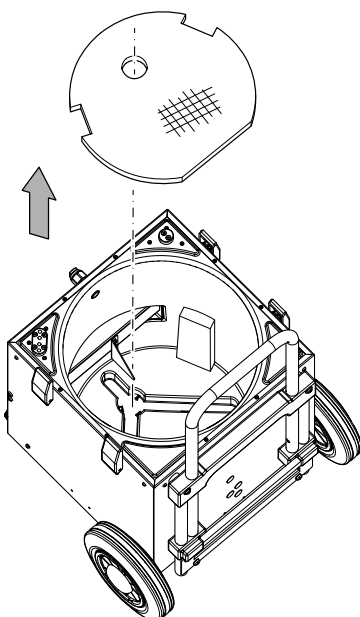
11. Check the pump for tight fit.
12. Plug the hose (43) back into the quick coupling.
13. Open the cap (45) of the pump's electrical connection and put the plug (44) back in.
14. Refit the coarse filter fixation. The coarse filter fixation should rest on the coarse filter.
15. Refit the demister along with the holder.
16. Put the upper part back on the device and close the tension locks.

Cleaning the coarse filter (filter mat)

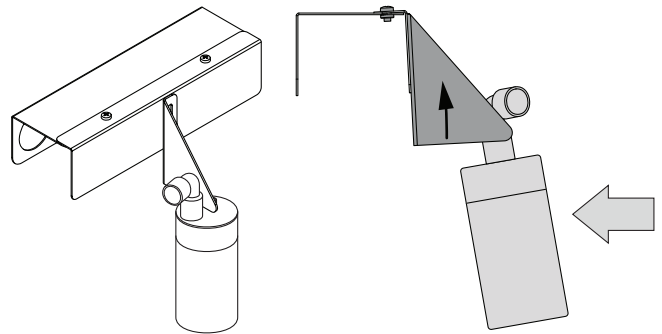
- ✓ The device is switched off and disconnected from the mains.
 - ✓ The residual water has been drained.
 - ✓ The upper part has been removed (see Replacing the G4 filter sleeve).
1. Take the demister along with the holder out of the lower part of the device.
 2. Remove the coarse filter fixation.



3. Remove the pump as described in chapter Cleaning the pump filter, step 3 to 6.
4. Remove the coarse filter.



5. Rinse the coarse filter and the coarse filter fixation under running water.
 - ⇒ Exchange the coarse filter and the coarse filter fixation if required (e.g. in case of damages).
6. Put the coarse filter back in.
7. Slightly lift the sheet that is fixating the pump and refit the pump.



8. Check the pump for tight fit.
9. Plug the hose (43) back into the quick coupling.
10. Open the cap (45) of the pump's electrical connection and put the plug (44) back in.
11. Refit the coarse filter fixation. The coarse filter fixation should rest on the coarse filter.
12. Refit the demister along with the holder.
13. Put the upper part back on the device and close the tension locks.

Replacing the G4 filter sleeve by an F8 filter sleeve (optional)

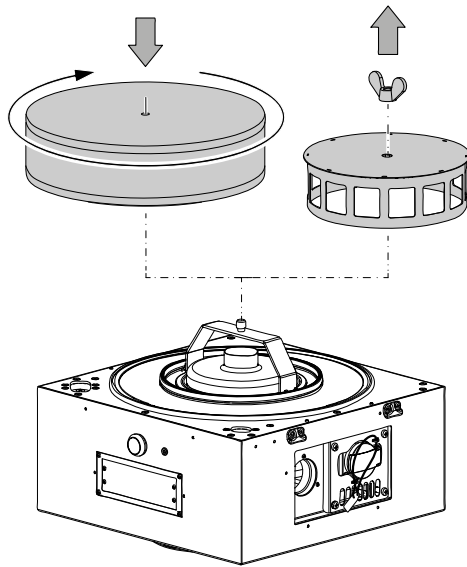
If a finer ambient air filtration is required, the G4 filter sleeve can be replaced by an F8 filter sleeve.

1. Please proceed as described in chapter Replacing the G4 filter sleeve.
2. Replace the G4 filter sleeve by the F8 filter sleeve (7.160.000.216). In doing so, make sure that the coarse fleece is positioned on the outside and the finer fleece on the inside of the cage.

Replacing the G4 filter sleeve by a HEPA filter (optional)

If required, the G4 filter sleeve can be replaced by a HEPA filter.

- ✓ The device is switched off and disconnected from the mains.
- ✓ The residual water has been drained.
- 1. Proceed as described in steps 1 to 3 in the chapter Replacing the G4 filter sleeve.
- 2. Loosen the wing nut and remove the cage with the G4 filter sleeve.
- 3. Detach the HEPA filter from the upper part. (As from year 2020, the HEPA filter is to be mounted with a wing nut.)



- 4. Put the upper part back on the device and close the tension locks. Make sure that the contacts of the upper and lower part are properly aligned with one another.

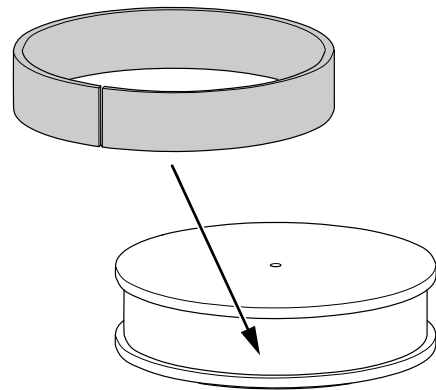
Exchanging the HEPA filter and the F8 filter sleeve (optional)

Exchange the filters at the latest when relocating to another construction site to prevent contamination. If the *Filter wechseln!* (change filter) message appears on the display, the filter inside the device must be replaced as it does not allow a sufficient quantity of air to pass. Always exchange the HEPA filter on every construction site to prevent contamination. If the *Filter wechseln!* message appears on the display during operation, you can exchange the F8 filter sleeve in a first step. If this is not sufficient (*Filter wechseln!* message still displayed), the HEPA filter must be exchanged as well.

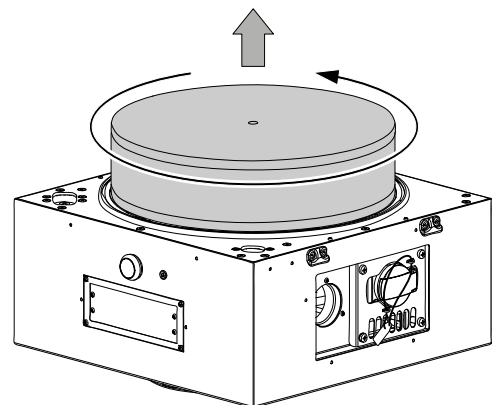
- ✓ The device is switched off and disconnected from the mains.
- ✓ The residual water has been drained.
- 1. Please proceed as described in steps 1 and 2 in the chapter Replacing the G4 filter sleeve.
- 2. Turn the upper part so that the bottom side with the HEPA filter points upwards.

- 3. Unscrew the HEPA filter from the upper part. (As from year 2020, the HEPA filter is to be mounted with a wing nut.)

- 4. Remove the F8 filter sleeve from the HEPA filter.



- 5. Place the new F8 filter sleeve around the HEPA filter. Make sure that the sleeve surrounds the filter completely. Ensure that the coarse fleece is on the outside and the finer fleece is on the inside of the HEPA filter.
- 6. Screw the HEPA filter onto the upper part. (As from year 2020, the HEPA filter is to be mounted with a wing nut.)



- 7. Put the upper part back on the device and close the tension locks.

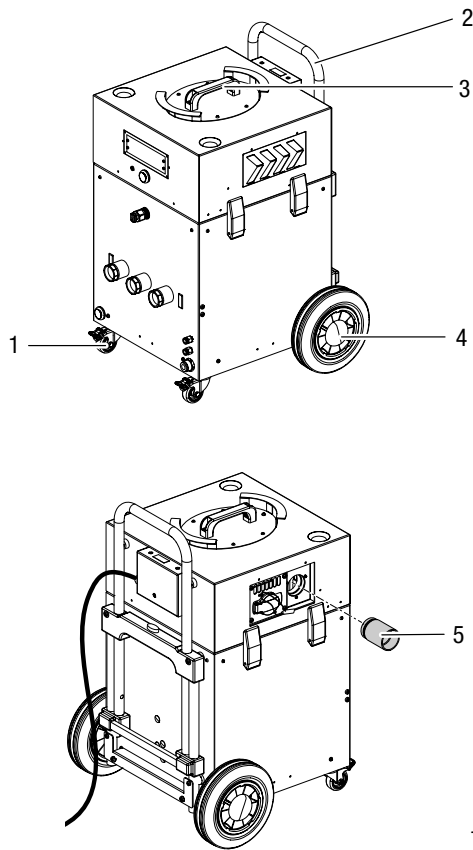
Technical annex

Technical data

Technical data and equipment		Qube+
Suitable for surfaces sized up to (low pressure)	power stage 1	10 m ²
	power stage 2	25 m ²
	power stage 3	50 m ²
	power stage 4	85 m ²
Maximum pressure (low pressure)		220 mbar
Air flow rate (freely blowing) ¹⁾		250 m ³ /h
Defined volumetric flow optimum (sucking in) of the HiDry automatism incl. HEPA filter	whisper mode	90 m ³ /h
	power stage 1	50 m ³ /h
	power stage 2	90 m ³ /h
	power stage 3	140 m ³ /h
	power stage 4	160 m ³ /h
	boost stage	180 m ³ /h
Motor power (depending on the performance level)		0.2 to 1.2 kW
Sound level (distance 3 m, depending on the performance level)		48 dB(A) to 59 dB(A)
Volume collection container		10 l
Input voltage		230 V / 50 Hz
Weight		27 kg
Dimensions L x W x H (telescopic push handle down / up)		490 x 500 x 735 / 925 mm
Mobility	carrying handle	■
	stackable	■
	rollable	■
	carriage design	■
Hose connections insulation drying		3 x ø 38 mm
TTKwic dehumidifier quick couplings		2 x
Waste water connection		■
DA -4 interface		■
Efidry humidity sensor connection		■
Service socket (tamper-proof)		■
50 mm connector for compressed air discharge		■
Residual water draining		■
Overflow sensor with automatic switch-off		■
Baffle plate for coarse filtration		■
Stainless steel demister for water separation and fine filtration		■
Robust and non-wearing touchscreen control panel design		■
Optiflow NT multi-function display		■
Operating hours counter		digital ²⁾
Power meter, MID-compliant ³⁾		■
Plain text status indication		■ ²⁾
Illumination for power control		■ ²⁾
HEPACONTROL filter change indicator		■

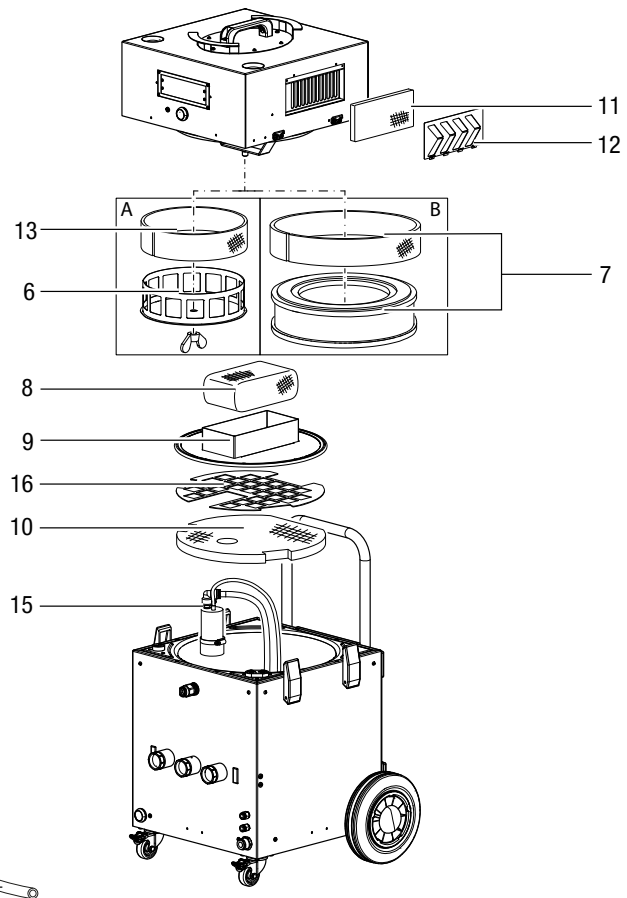
Technical data and equipment	Qube+
TTKwic operating mode	■
Height-adjustable telescopic push handle	■
Cable holder with fixable plug	■
Thermal protection	■
Maintenance quick release fasteners	■
¹⁾ maximum air flow rate of the fan motor (not integrated) ²⁾ via Optiflow NT multi-function display ³⁾ What does MID-compliant mean? In some areas, the Measuring Instruments Directive (MID) replaces the previous regulation of national authorization and subsequent calibration. As a result, all energy meters in Europe used for energy consumption-based billing have to be MID-compliant from now on. Therefore, the Qube+ holds a separate certified, MID-compliant counter.	

Exploded assembly drawing



Info

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



List of spare parts

Pos. no.	Article number	Designation
1	7.600.000.006	Swivel castor 50/19
2	P10006255	Telescopic push handle
3	7.310.000.897	Handle
4	7.600.000.001	Pain bearing wheel 200/50 with black end cap
5	7.200.000.001	Connector 50 mm aluminium
6	P10003459	Housing Qube+ filter insert
7	7.160.000.221	HEPA filter module H13 incl. F8 prefilter sleeve
8	P10000203	Demister insert
9	P10002223	Housing Qube+ demister holder
10	P10006736	Qube+ water separator bottom filter mat
11	7.160.000.213	F7 Z-line filter
12	P10003460	Housing Qube+ cover air aperture
13	7.160.000.214	G4 filter sleeve
14	7.331.000.476	Drain hose (5 m)
15	7.170.001.201	Pump with plug
16	7.241.001.245	Coarse filter fixation

Additional spare parts available on request.

Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



The icon with the crossed-out waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device 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.

Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

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: Qube+

Product type: insulation drying unit

Year of manufacture as of: 2023

Relevant EU directives:

- 2011/65/EU
- 2014/30/EU

Applied harmonised standards:

- EN 60335-1:2012 (OJ L 115 - 13/04/2022)
- EN 60335-1:2012/AC:2014
- EN 60335-1:2012/A11:2014
- EN 60335-1:2012/A13:2017
- EN 60335-1:2012/A15:2021
- EN 60335-2-40:2003 (OJ C 348 - 28/11/2013)
- 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 60335-2-40:2003/A13:2012/AC:2013
- EN 60335-2-40:2003/AC:2006
- EN 60335-2-40:2003/AC:2010

Applied national standards and technical specifications:

- EN IEC 55014-1:2021
- EN IEC 55014-2:2021
- EN IEC 61000-3-2:2019
- EN 61000-3-3:2012/A1:2019
- EN 61000-3-3:2013/A2:2021
- EN 61000-3-3:2013/A2:2021/AC:2022

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

Trotec GmbH

Grebbeener Straße 7, D-52525 Heinsberg

Phone: +49 2452 962-400

E-mail: info@trotec.de

Place and date of issue:

Heinsberg, 22.09.2023

Joachim Ludwig, Managing Director

Trotec GmbH

Grebbener Str. 7
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

info@trotec.com

www.trotec.com