

TTW 100000

EN

ORIGINAL INSTRUCTIONS
WIND MACHINE



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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:




TTW 100000



<https://hub.trotec.com/?id=46620>

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.

- 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 device 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 technical data when selecting extensions to the power cable. Completely unroll the extension cable. Avoid electrical overload.
- Never use just one extension cable for the simultaneous operation of several fans.
- Do not kink the cable and prevent contact with oil, grease, chemicals, hot surfaces or sharp and abrasive objects.
- 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.
- Check the power cable and mains plug for damage. If you notice damages, do not try to take the device back into operation. Order a new power cable with mains plug from Trotec and replace the defective power cable with mains plug with the new one.
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 there are no loose items or dirt located in the immediate surroundings of air inlet and air outlet.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Make sure that the suction side is kept free of dirt and loose objects.
- Do not transport the device during operation.
- Do not tilt the fan during operation.
Make sure to always switch the device off, before adjusting the inclination angle.
- Wear hearing protection and eye protection when spending a longer period of time in the vicinity of the device.

Intended use

When using the wind machine TTW 100000 for air circulation, observe the technical data and the safety instructions.

The device is designed for the generation of powerful, large-volume air circulation, e.g. for tunnel ventilation, simulation of a strong wind for device tests for film and theatre.

The device must be exclusively operated using the frequency converter (FC) supplied.

The device is suited for both indoor and outdoor use.

Foreseeable misuse

The wind machine TTW 100000 is not suited for installation in fluids or on flooded or boggy grounds.

Using it as a smoke extractor or using transport media other than atmospheric air is impermissible.

Do not use this device in immediate proximity to bathtubs, showers or swimming pools.

Any unauthorised changes, modifications or alterations to the device are forbidden.

Personnel qualifications

People who use this device must:



- be aware of the dangers that occur when using high-performance fans.
- have read and understood the instructions, especially the Safety chapter.

Safety signs and labels on the device

Note

Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.

The following safety signs and labels are attached to the device:

Safety symbol	Meaning
	Wear hearing protection when spending a longer period of time in the vicinity of the device.
	Wear eye protection when you are near the device.

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 of electrical voltage

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



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.



Warning

Only operate the device when the brakes are locked and the inclination adjustment mechanism is engaged!



Caution

Risk of injury from parts being whirled up!



Use suitable eye protection when you operate the device.



Caution

Risk of injury due to parts being whirled up by the strong air current.
Before switching the device on, make sure that there are no loose parts (clothing, hair etc.) located near the air inlet or outlet!

Note

Do not use abrasive cleaners or solvents to clean the device.

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.

Overheating protection

The device is equipped with an automatic overheating protection.

If the motor overheats (exceeds the operating temperature), the device will be switched off.

When the device has cooled down sufficiently, it will be switched back on.

Information about the device

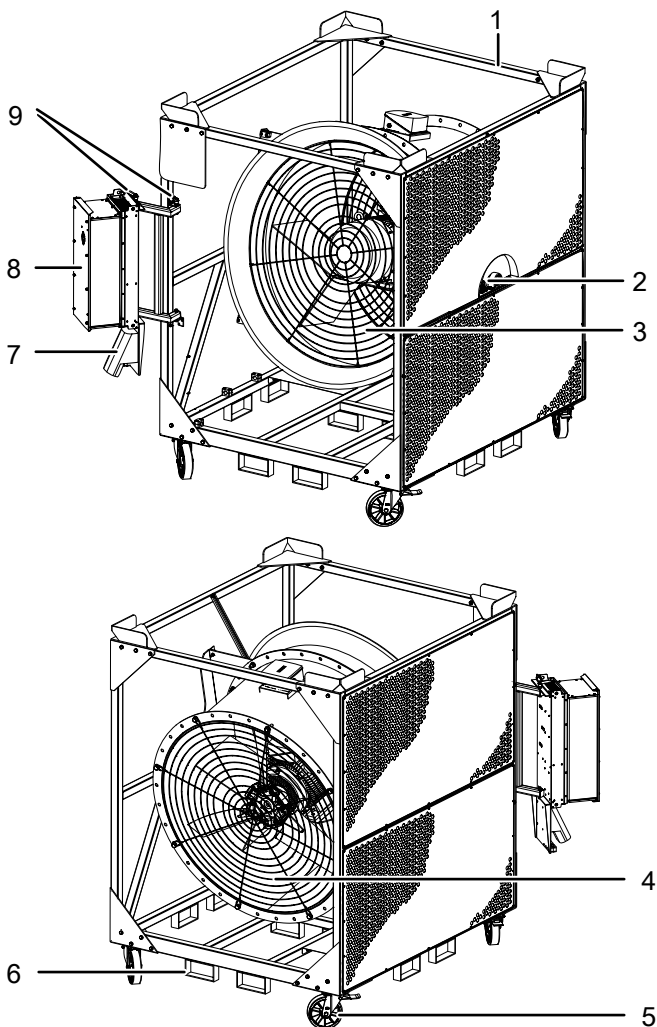
Device description

The wind machine serves to generate mobile air circulation for the industry and entertainment sectors, e.g. for tunnel ventilation, simulation of a strong wind for device tests for film and theatre.

The device circulates larger quantities of air at a low speed. The TTW 100000 is equipped with a weatherproof three-blade impeller. The fan housing is manufactured of galvanized high speed steel in safety yellow, the wire protective grid is powder-coated. The device must be exclusively operated using the frequency converter (FC) supplied. The fan is installed in a robust, galvanised transport frame with parking brakes.

The frame is stackable.

Device depiction



No.	Designation
1	Transport frame
2	Locking bolt
3	Air inlet with protective grid
4	Air outlet
5	Transport wheel with parking brake
6	Forklift guide
7	Mains plug
8	Frequency converter with control panel
9	Locking lever

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.
- Do not use the power cable to drag the device.
- Loosen the locking lever (9) at the mount of the frequency converter and screw the frequency converter into the transport frame (1) so that it cannot be damaged during transport. Retighten the locking lever afterwards, preventing the frequency converter from loosening during transport.
- Only wheel the device on firm and level surfaces.

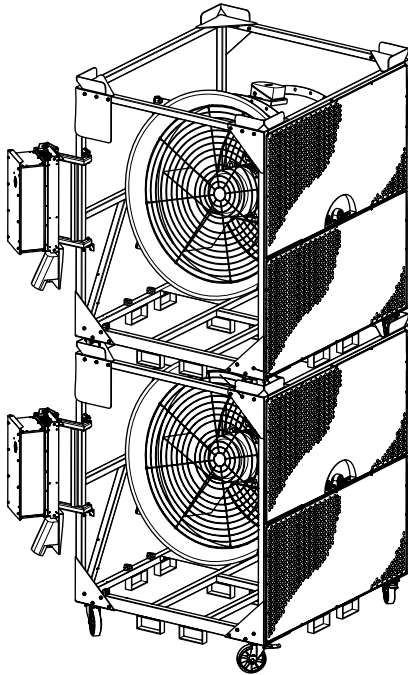
While transporting the device, observe the following:

- Only instructed persons are allowed to perform the transport.
- The device must **not** be lifted using a crane.
- Only wheel the device with transport frame on firm, level ground. Make sure that nobody is situated in the direction of movement. Avoid pulling the device, this increases the risk of tripping and injury.

Storage

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.
- The devices can be stacked on top of each other.



Warning

Risk of injury!

Do not take the devices into operation when stacked.

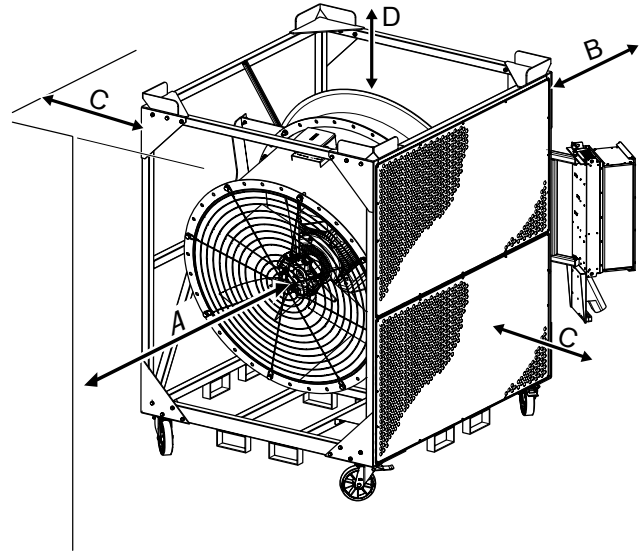
Assembly and start-up

Scope of delivery

- 1 x device
- 1 x Manual

Start-up

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



- If a defect at the fan could cause property damage, we recommend the application of a suitable alarm system (air pressure switch, temperature sensor etc.).
- Before starting the device, check the condition of the power cable. If there are doubts as to their sound condition, contact the customer service.
- Only put up the device in an upright, stable position on firm ground.
- Make sure the device is only placed on firm, dry and vibration-free ground.
- Make sure that extension cables are completely unrolled.
- Make sure that the air inlet and outlet are not obstructed.
- When positioning the device, keep a sufficient distance to heat sources.
- Before inserting the connecting cable into a live socket, connect it with the plug on the device first, since otherwise there is a risk of death when it is touched.
- Insert the mains plug of the connecting cable into a properly fused mains socket.
- Align the device to the air outlet direction.
- Apply and lock the parking brakes on the transport wheels.

- Loosen the locking levers on the mount of the frequency converter and turn the frequency converter so that it can be controlled continuously during operation. Objects, obstacles or walls must not obstruct operation. Retighten the locking lever afterwards to ensure that the frequency converter is secured during operation.

Aligning the fan



Warning

Never align the fan during operation!



Warning

Risk of crushing! Proceed with extreme caution when adjusting the inclination. Wear protective gloves.

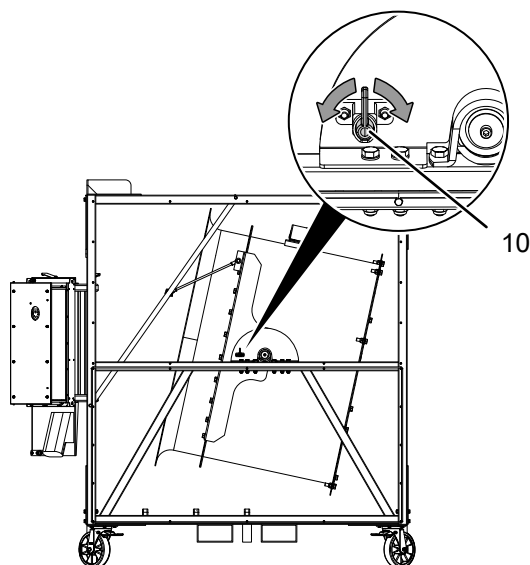


Info

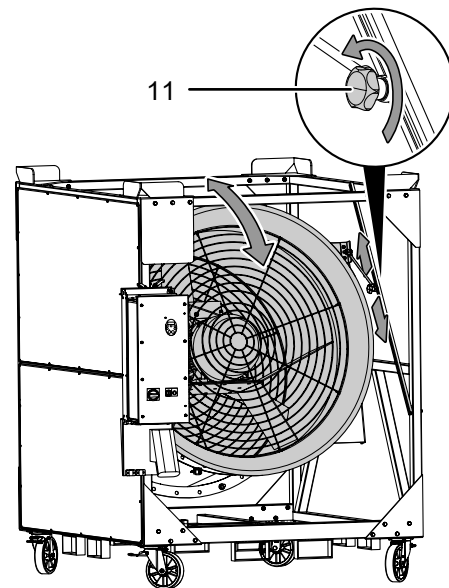
Alignment of the fan requires two persons.

The device can blow out the air horizontally and can be adjusted gradually until it has reached a vertical position. Please proceed as follows to adjust the inclination:

- Turn the locking bolt (10) at the side of the device, so that the bolt is drawn from the perforated plate for adjusting the inclination.



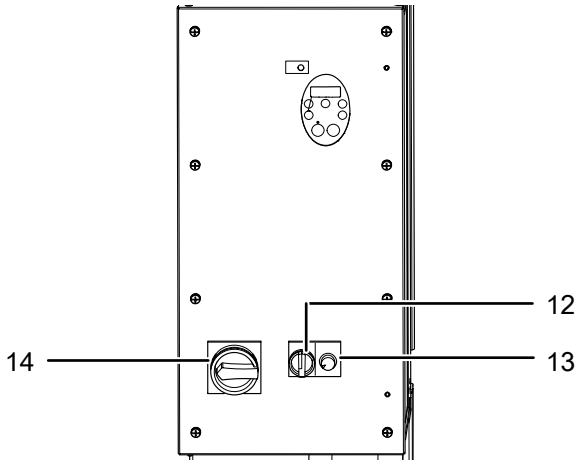
- Loosen the star handle (11) in the transport frame.
⇒ The axle of the fan is free and can be rotated.
- Turn the fan to the desired inclination angle.



- Turn the locking bolt so that the handle is in a vertical position and the bolt goes against the inside of the perforated plate.
- Turn the fan so that the locking bolt snaps into the desired hole of the perforated plate.
- Retighten the star handle.
- Before starting up the device, ensure that the fan has a firm stand and that it cannot move.

Operation

Operating elements



No.	Designation	Meaning
12	Rotary switch of the fan	Position 0 = off Position 1 = on
13	Rotary button for the fan speed	Controls the fan speed steplessly
14	Main switch	Position 0 = device is switched off Position 1 = device is in standby mode



Info

Operation takes place exclusively via the operating elements specified. Operation of the keypad above the operating elements is not necessary.

Switching the device on

- ✓ The device has been completely installed as described in the Assembly and start-up chapter.
- 1. Switch the device on by turning the main switch (14) to position "1".

Switching the fan on

- ✓ The suction area (also underneath the device) is free from dust, dirt and loose parts that can be drawn in.
- ✓ The air outlet area is cleared from any obstacles
- 1. Turn the rotary switch of the fan (12) to position "1".
- 2. Carefully adjust the rotary button for the fan speed (13) so that the fan slowly starts running.

3. When starting it up for the first time, check the rotational direction of the fan. The rotational direction is marked on the fan housing.
 - ⇒ Alter the direction of rotation if the rotational direction of the fan does not correspond to the rotational direction marked. When doing so, do **not** open the frequency converter or the motor box of the fan, but make the change on the plug side.
4. Set the rotary button for the fan speed (13) slowly to the desired level.

Note: Keep the suction area and air outlet area in view during operation. Switch off the device immediately if you recognise any hazards or if loose parts are drawn towards the fan.

Shutdown



Warning of electrical voltage

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

1. Turn the rotary button for the fan speed (13) to the lowest level.
2. Turn the rotary switch of the fan (12) to position "0".
3. Switch off the device by turning the main switch (14) to position "0".
4. Hold onto the mains plug while pulling the power cable out of the socket.
5. Clean the device according to the Maintenance chapter.
6. Store the device according to the Storage chapter.

Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

The fan is not running:

- Check whether the device is switched on.
- Check the power connection.
- Check the power cable and mains plug for damages.
- Check the on-site fusing.

The fan operates only for a brief period, then switches off:

- Check whether the protective grid at the air inlet is obstructed in some way. If applicable, remove foreign objects.
- The motor bearing might be damaged. Please contact the customer service.

The motor or fan is noisy or runs unevenly:

- The fan is soiled. Clean the fan according to the Maintenance chapter.
- The fan or the blower unit is damaged. Please contact the customer service. If necessary, bring the device to an authorized specialist electrical company or to Trotec for repair.
- The motor bearing might be damaged. Please contact the customer service. If necessary, bring the device to an authorized specialist electrical company or to Trotec for repair.

The fan produces grinding noises:

- The fan blades are dirty or foreign objects are located in the rotation range of the fan. Clean the fan blades or the blower unit according to the Maintenance chapter.
- The fan blades might be damaged. Please contact the customer service. If necessary, bring the device to an authorized specialist electrical company or to Trotec for repair.

The device vibrates heavily:

- Check the floor space of the fan. Position the device on a level and firm surface.
- Check the screwed connections, particularly between blower unit and tubular frame. If necessary, retighten the screws.
- Check the fan blades for dirt and clean them if required.
- There might be an imbalance in the fan blades. Please contact the customer service. If necessary, bring the device to an authorized specialist electrical company or to Trotec for repair.

The fan changes its position during operation:

- Check the parking brakes for tight fit and retighten them if necessary.

The air flow rate is low:

- Check whether the protective grid is blocked and clean it if required.

The device still does not operate correctly after these checks:

Please contact the customer service. If necessary, bring the device to an authorised specialist electrical company or to Trotec for repair.

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.
- Allow the device to cool down completely.

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.

Cleaning the fan and device interior

- Check fan and protective grid for perfect condition before and after each application.
- Clean the fan at regular intervals.
- Use compressed air to remove particles, lint, dust and dirt from motor, impeller and protective grid. Do not in any event use a high-pressure cleaner to clean the fan.
- If required during cleaning, remove the protective grid by unscrewing the eight screws, and put it back in its original place after the work has been completed.

Further maintenance activities

- Also follow the supplied maintenance instructions for the fan.
- Observe the relubrication intervals for the motor (see fan card)!

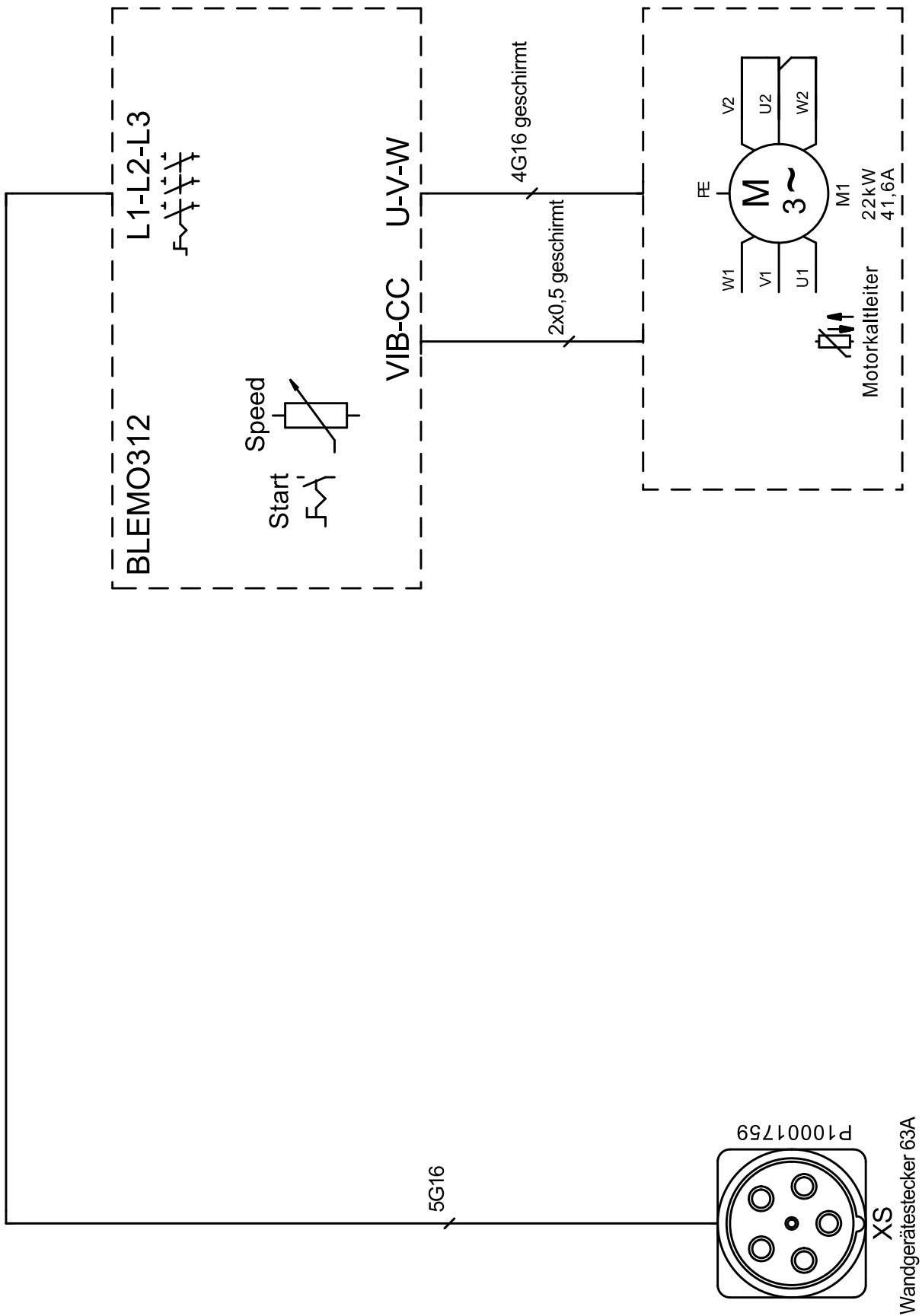
Repair work should only be carried out by TROTEC GmbH.

Technical annex

Technical data

Parameter	Value
Max. amount of air	109,000 m ³ /h
Air current	Blowing out
Fan stages	Stepless (frequency converter)
Max. transport medium temperature	40 °C/104 °F
Voltage	400 V / 50 Hz (max. 44 A)
Max. power input	22 kW
Fusing	63 A
Type of protection	IP 55
Plug	CEE 63 A, 5-pole
Sound level	88 dB (A) at a distance of 3 m
Mobility	Wheeled / stackable
Dimensions (L x W x H)	183 x 162 x 218 cm
Minimum distance to walls and other objects	At the front/air outlet side (A): 3 m At the rear / suction side (B): 50 cm At the sides (C): 50 cm At the top (D): 50 cm
Weight	790 kg (incl. frequency converter)

Wiring diagram

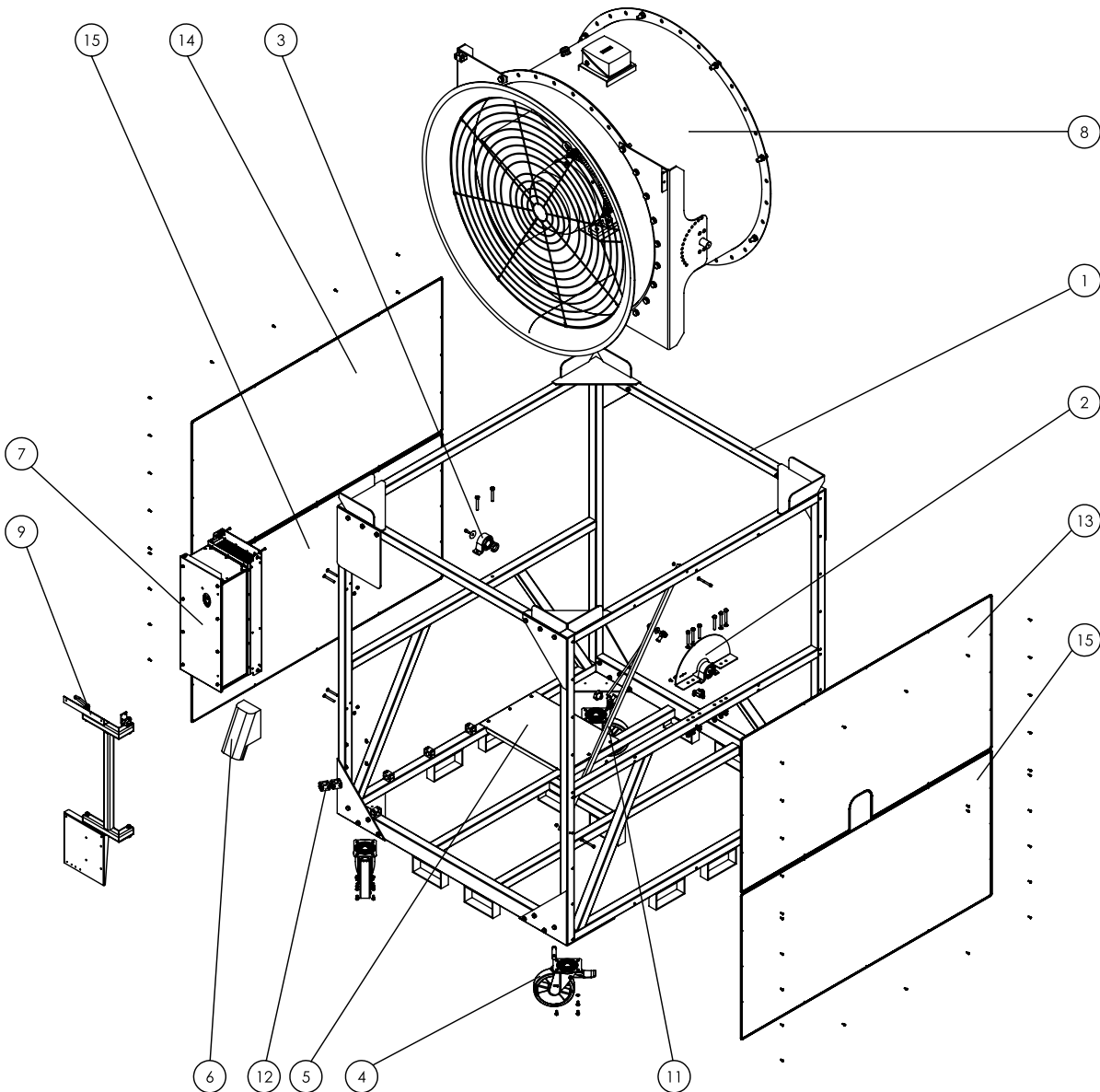


Overview and list of spare parts



Info

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



No.	Designation	No.	Designation	No.	Designation
1	Frame	6	Wall-mounted device plug	11	Mounting rail
2	Adjustment plate	7	Frequency converter	12	Pipe clamp
3	Ball pedestal bearing	8	Fan	13	Perforated plate
4	Wheel	9	Frequency converter mount	14	Perforated plate
5	Cable protection plate	10	Mounting rail	15	Perforated plate

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 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.

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: TTW 100000

Product type: wind machine

Year of manufacture as of: 2022

Relevant EU directives:

- 2014/30/EU
- 2014/35/EU

Applied harmonised standards:

- EN ISO 12100:2010
- EN ISO 13849-1:2015
- EN ISO 13849-2:2012
- EN ISO 13854:2019
- EN ISO 13857:2019
- EN ISO 14118:2018
- EN ISO 14120:2015
- EN 60204-1:2018
- EN 61800-5-2:2007

Applied national standards and technical specifications:

- None

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

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Place and date of issue:

Heinsberg, 05.05.2022



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