TWP 4005 E / TWP 7505 E / TWP 9005 E



EN

OPERATING MANUAL
SUBMERGED CLEAR WATER PUMP, NEAR-GROUND SUCTION

TROTEC

TRT-BA-TWP4005E-TWP7505E-TWP9005E-TC2018-62-002-EN

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Notes regarding the operating manual

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 operating manual must be observed.

Other symbols used on the device:

General warning sign
This symbol indicates that you must be aware of the dangers that can occur when working with the device.

Device may start up without warning
This symbol indicates that the device may start up without warning when it is switched on.

Do not use damaged power cables or mains plugs
This symbol indicates that the device must no longer be operated if the power cable is damaged.

Staying in water prohibited
This symbol indicates that the device must not be operated with persons or animals in the water.

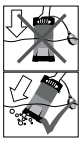
Do not use at freezing temperatures
This symbol indicates that the device must be protected from frost.

Keep out of the reach of children – not a toy
This symbol indicates that the device is not a toy and is thus not suitable for children.

Do not pull the mains plug by the power cable
This symbol indicates that you must not pull the mains plug out of the socket by the power cable.

Pull the mains plug
This symbol indicates that the mains plug must be removed from the socket when the device is not in use.

Not suitable for pumping potable water
This symbol indicates that the device is not suitable for pumping potable water.



Submerge pump at a slight angle
This symbol indicates that the pump must be submerged into the water at a slight angle to allow the remaining air to escape.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:

TWP 4005 E

http://hub.trotec.com/?id=40406

TWP 7505 E

https://hub.trotec.com/?id=42885

TWP 9005 E

https://hub.trotec.com/?id=42886

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.

General safety

- Do not use the device in potentially explosive rooms.
- Do not use the device in aggressive atmosphere.
- Check accessories and connection parts for possible damage prior to every use of the device. Do not use any defective devices or device parts.
- 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.
- 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 data chapter.

General safety warnings – Electrical safety

- The device is to be supplied with a rated residual current of no more than 30 mA by means of an RCD (Residual Current protective Device).
- 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 electrical connection must correspond to the specifications in chapter Technical data.
- Insert the mains plug into a properly secured mains socket.
- Switch the device off and disconnect the power cable from the mains socket when the device is not in use.
- Do not under any circumstances use the device if you detect damages on the mains plug or power cable.
  If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
  Defective power cables pose a serious health risk!
- Should the connection line of the device be damaged, it must be replaced by the manufacturer, his customer service or similarly qualified personnel in order to avoid hazards.
- Should there be a risk of flooding, install the plug connections in a flood-proof area. **There is a risk of electric shock!**
- Make sure that the mains voltage corresponds to the specifications on the nameplate.
- Have all electrical installations carried out by an expert according to the national regulations and the device-specific requirements.
- Do not use the power cable to drag the device.

- Hold onto the mains plug while pulling the power cable out of the mains socket.
- Protect the power supply cable against heat, oil and sharp edges.
- Only use splash-proof extension cables intended for outdoor use whilst observing the device's power input. Before using cable drums, always unroll the cable completely. Check the cable for damage.
- Before performing any work on the device, in case of leaks in the water system, before taking work breaks or when not in use, remove the mains plug from the mains socket.

General safety warnings – Personal safety

- Never use the device with persons or animals in the water or pumping medium or if they could access it. **There is a risk of electric shock!**
- Never insert any objects or limbs into the device.
- This appliance is not a toy! Keep away from children and animals. Do not leave the device unattended during operation.

Device-specific safety warnings for submerged pumps

- Do not leave the device running unattended to ensure an early detection of when the device runs dry or switches off automatically. This would damage the device. Regularly check the float for proper functioning.
- Please bear in mind, that the device is not suitable for continuous operation (e.g. for watercourses in garden ponds). Check the device for proper functioning on a regular basis.
- Keep in mind, that lubricants are used within the device. These might potentially cause damages or contaminations if emitted. Do not use the device for drinking water or in garden ponds with either a fish population or valuable plants.
- The device is not to be carried by holding it at the power supply cable or hose. Do not fasten it there either.
- Do not place any objects on the device – not even to weight it down. The device will sink to the ground due to its own weight.
- After the set-up of the device, its mains plug must be readily accessible during operation.
- Wear sturdy shoes to protect yourself against electric shock.
- Before taking the device into operation, have the following checked by an expert:
  - earthing, neutral conductor and RCD must be functioning properly and correspond to the national regulations,
  - electrical plug connections must be protected from moisture.
- Provide appropriate frost protection.

Intended use

The device TWP 4005 E / TWP 7505 E / TWP 9005 E is only suited for draining, conveying and pumping over the following media:

- clear water
- non-corrosive suds (e.g. leaking washing machine)
- slightly chlorinated water

When doing so, the water must not contain any suspended matter exceeding a maximum particle size of 5 mm.

The device is fully submersible (watertight encapsulation) and can be immersed up to 7 m into the conveyed medium.

The water temperature must not exceed 35 °C.

The device may temporarily be used for e.g.:

- pumping out flooded basements
- emptying tanks and containers
- the water withdrawal from wells and shafts

Improper use

- The device is not suitable for continuous operation (e.g. as recirculation pump for ponds).
- Using the device in swimming pools and the like is prohibited.
- The device is not suitable as permanent, automatic overflow protection of e.g. wells or fountains or for the regulation of the groundwater level. Use a stationary waste water pumping system for building and property drainage for these purposes.
- The device is not suitable for increasing the pressure of existing water supply networks.
- The device is not suitable for pumping potable water.
- The device must not be used for aggressive, abrasive, caustic, combustible or explosive pumping media, e.g.:
  - brine
  - sandy water
  - food
  - cleaning agents
  - fuels (e.g. petrol, diesel)
  - oils
  - greases
  - petroleum
  - nitro-cellulose thinner
  - waste water from lavatories and urinal installations
- The device must not be used at freezing temperatures.
- Any unauthorised modifications, alterations or structural changes to the device are forbidden.
- Any operation other than as described in this manual is prohibited. Non-observance renders all claims for liability and guarantee null and void.

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

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

Warning

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

Warning

The device is not a toy and does not belong in the hands of children.

Warning

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

Note

If you store or transport the device improperly, the device may be damaged.
Note the information regarding transport and storage of the device.

Behaviour in the event of an emergency

1. In an emergency, disconnect the device from the mains feed-in: Hold onto the mains plug while pulling the power cable out of the mains socket.
2. Do not reconnect a defective device to the mains.

Overheating protection

The device is provided with a thermal protection circuit which is activated by overheating of the device and then switches the device off.

Allow the device to cool down and switch it off. Investigate the cause of overheating. Should the problem persist, please contact the customer service.

Information about the device

Device description

The submerged clear water pump TWP 4005 E / TWP 7505 E / TWP 9005 E is suited for draining, conveying and pumping over clear water with the contained suspended matter not exceeding a maximum particle size of 5 mm.

The device comes with near-ground suction and can extract clear water up to a residual height of 3 mm.

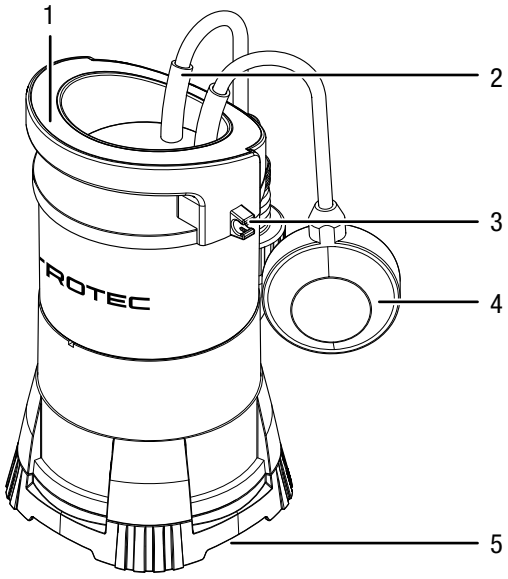
A float ensures the automatic switch-on and switch-off at a respectively defined height. Additionally, the switch-on/-off height can be finely adjusted within the specified range by means of a locking device, see technical data.

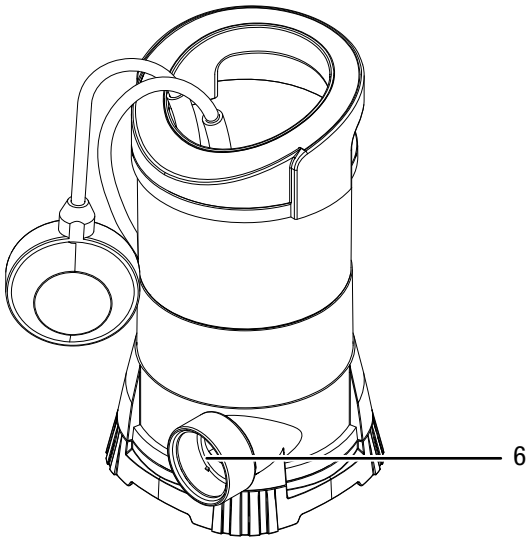
The water temperature must not exceed 35 °C.

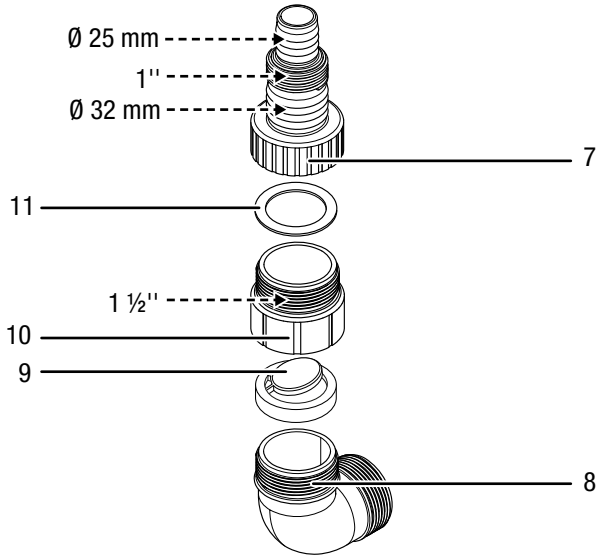
Info

The illustrations in this operating manual feature the device TWP 4005 E by way of example. However, the depicted operating steps and explanations also apply to the devices TWP 7505 E and TWP 9005 E unless otherwise mentioned.

Device depiction







No.	Designation
1	Transport handle / attachment for nylon cord
2	Power cable
3	Float switch locking device
4	Float switch
5	Air intake opening
6	Connection with 1 ½" internal thread
7	Reducer
8	Elbow
9	Backflow preventer
10	Retainer (for backflow preventer)
11	Seal ring

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

Before transporting the device, observe the following:

- 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.

Storage

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

- dry and protected from frost and heat
- in an upright position where it is protected from dust and direct sunlight
- with a cover to protect it from invasive dust, if necessary
- Place no further devices or objects on top of the device to prevent it from being damaged.

If you do not use the device for an extended period of time, it must be cleaned thoroughly after its last application and before recommissioning. Deposits and residues could lead to start-up difficulties.

Assembly and installation

Scope of delivery

- 1 x Submerged clear water pump
- 1 x Reducer for inner diameters 25 mm and 32 mm as well as for 1'' internal threads
- 1 x Backflow preventer with seal (preassembled)
- 1 x Retainer for backflow preventer
- 1 x Seal ring
- 1 x Elbow
- 1 x Nylon cord (12 m)
- 1 x Manual

Unpacking the device

1. Open the cardboard box and take the device out.
2. Completely remove the packaging.
3. Fully unwind the power cable. Make sure that the power cable is not damaged and that you do not damage it during unwinding.

Start-up

Connecting the pipe or hose line

The device may be operated using either a hose line or a pipe. Ex factory, the device is delivered with a 1 ½'' internal thread.

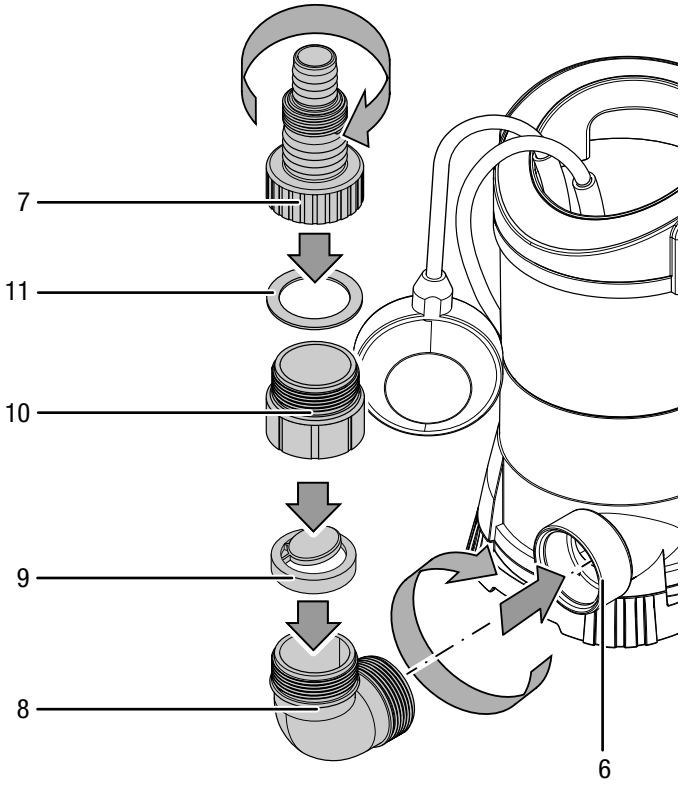
Please observe the following information regarding the water discharge:

- Please note that making use of the reducer (7) might decrease the device performance. The reducer (7) should be shortened to the used diameter so as not to decrease the device performance unnecessarily.
- Please note that the device cannot be moved as flexibly when using a solid pipe.
- Please note that the maximum particle size is to be reduced in proportion to the hose or pipe diameter.
- Please note that the conveying capacity declines with an increasing length of the water discharge line.

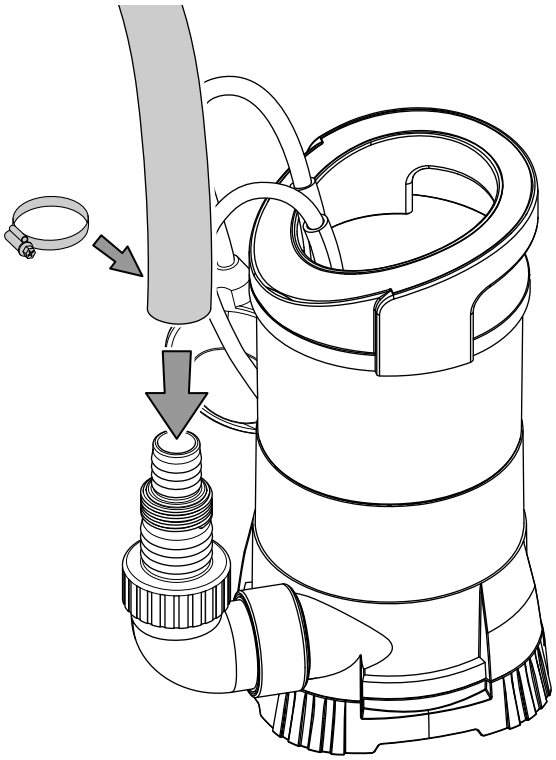
Hose line

Info
If required, you can cut the reducer (7) off at the desired diameter.
At delivery the reducer (7) is already assembled with backflow preventer (9) and retainer (10).

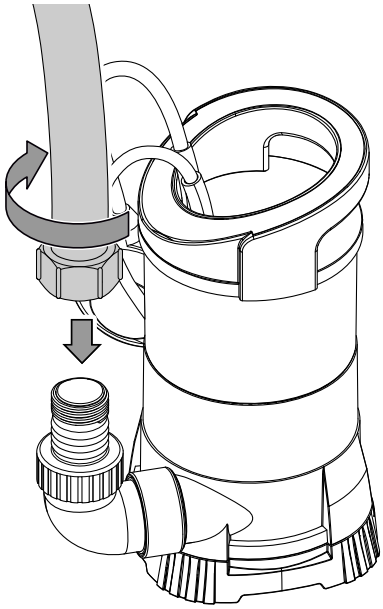
1. Screw the elbow (8) onto the connection with 1 ½" internal thread (6).
2. Screw the retainer (10) including backflow preventer (9) onto the elbow (8). Make sure that the backflow preventer (9) is positioned correctly.
3. Put the seal ring (11) onto the retainer (10) including backflow preventer (9). The profiled side rests on the retainer (10).
4. Screw the reducer (7) onto the retainer (10) with backflow preventer (9).



5. When using a hose without thread:
   Slide an appropriate hose clamp onto the hose.
6. Push the hose (inner diameter 25 mm or 32 mm) onto the reducer (7) all the way to the stop.



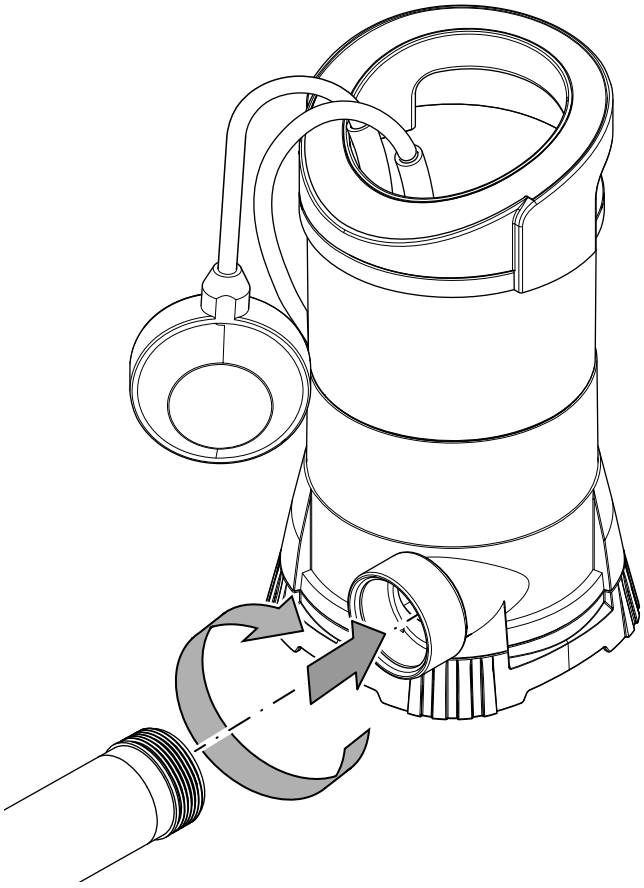
7. Affix the hose by means of the hose clamp.
8. When using a hose with internal thread (1''):
   Screw the hose connection onto the reducer (7).



9. Alternatively, you can also screw a hose with internal threading (1 ½") directly onto the elbow (8).

Pipe

1. If possible, screw the pipe directly into the connection with 1 ½" internal thread (6) or use a suitable adapter.



Adjusting the float switch

The device comes equipped with a float switch (4) which switches the device on or off automatically according to the water level. Check the float switch (4) for proper functioning at regular intervals.

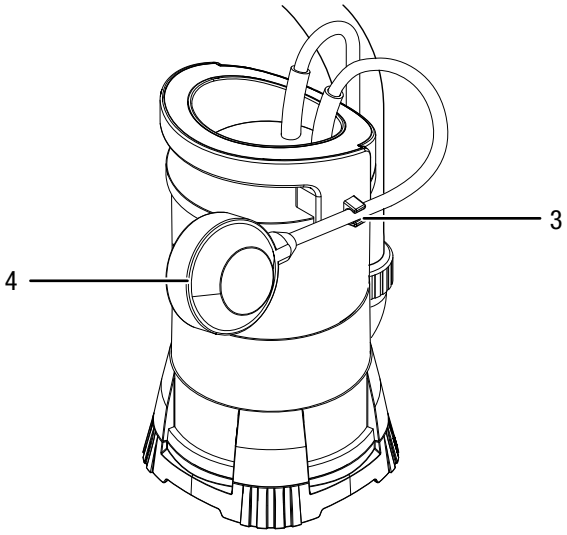
Switching point	Water level
TWP 4005 E	
Height for switch-on	Approx. 420 mm
Height for switch-off	Approx. 180 mm
TWP 7505 E / TWP 9005 E	
Height for switch-on	Approx. 600 mm
Height for switch-off	Approx. 180 mm

The pumping height can be regulated by means of the float switch (4) and its position in the float switch locking device (3).

Please observe the following information regarding the float switch (4):

- Make sure that the float switch (4) always has enough clearance and is not permanently activated. This could prevent the automatic switch-off causing the device to run dry. This would damage the pump.
- Make sure that the float switch (4) is able to move freely and does not suffer from a limited mobility caused by obstacles.
- Observe a sufficient distance between float switch (4) and float switch locking device (3), for this could prevent the automatic switch-off causing the device to run dry.
- Make sure that the position of float switch (4) is adjusted in a way, that it does not lie flat on the ground. This could prevent the automatic switch-off causing the device to run dry.

1. If required, lock the float switch (4) in the desired position by pushing the cable into the float switch locking device (3) at the side of the pump.



Positioning the device

Please observe the following information regarding the device set-up and before switching the device on:

- The float switch (4) must be able to move freely. The shaft into which the device is lowered must not restrict the mobility of the float switch (4) in any way.
- Do not leave the device running unattended.
- Make sure that the device is firmly placed on the ground or safely suspended.
- When using the device in bodies of water with natural, muddy ground, set the device up at a slightly elevation position, e.g. on bricks.
- Check whether the hose or pipe was attached properly.
- Make sure that the power cable (2) is not under tensile load and has enough clearance.
- Make sure that the mains connection corresponds to the specifications provided in the technical data.
- Check the mains socket for its proper condition and sufficient fusing.
- Make it impossible for moisture to reach mains plug or socket. **There is a risk of electric shock!**

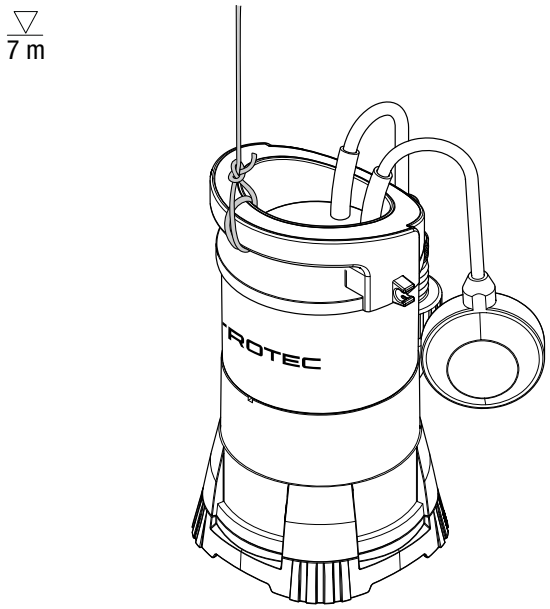
Warning of electrical voltage

Electric shock from damaged power supply cable. Make sure not to hold or suspend the device by the power supply cable under any circumstances.

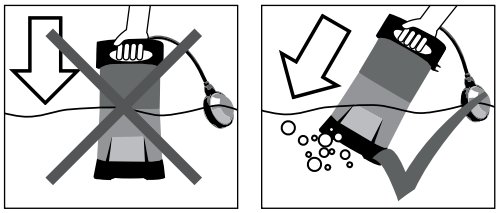
Note

At the bottom of ponds and other waterbodies deposits may have accumulated over time. To prevent the device from being damaged, do not lower it all the way to the ground unless you are certain that the water is clean, in other words that the size of the dirt particles in the water does not exceed 5 mm.

1. Fasten the supplied nylon cord to the transport handle (1) at the top of the device.



2. Lower the device into the water at a slight angle to allow any remaining air to escape.



3. If you want the device to be positioned on the ground, ensure that the latter is even.
4. Attach the nylon cord to an easily accessible position, so you can pull the device back out after pumping has been completed.

Operation

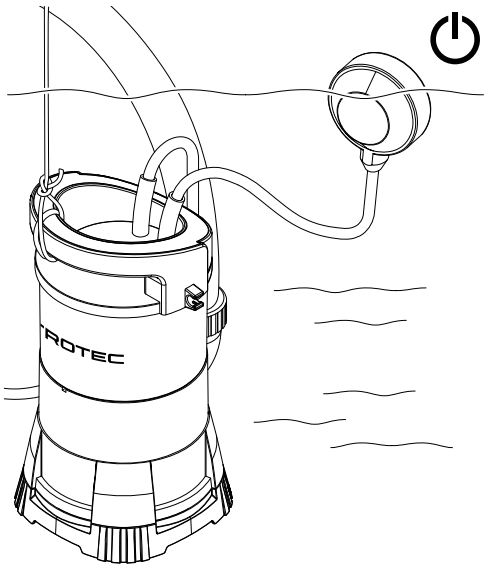
Switching the device on

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

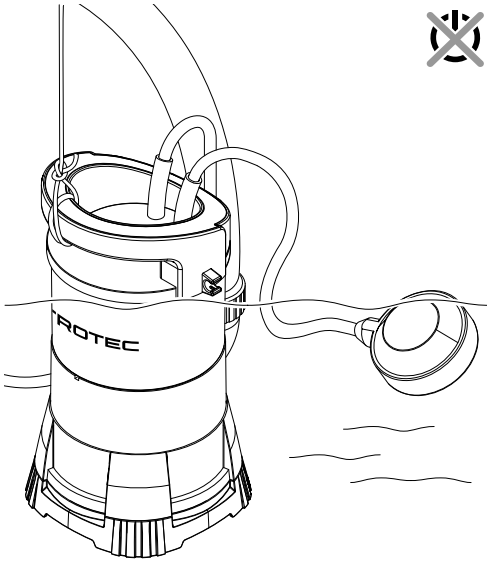
Warning of electrical voltage

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

1. Plug the mains plug into a sufficiently fused mains socket.
   ⇨ The device will be switched on when the float switch (4) is situated above the set or the maximum switch-on height.



   ⇨ The device will be switched off as soon as the float switch (4) reaches the set or the minimum switch-off height.



Info

The device comes equipped with a backflow preventer (9). It prevents the water from flowing back from the line through the device at the end of the pumping process.

Manual operation

You can also use the device in manual operation.

In manual operation it is possible to siphon off the media to a residual height of 3 mm.

Please note that for manual operation the starting water level must amount to at least 80 mm, but must not exceed the maximum of 180 mm.

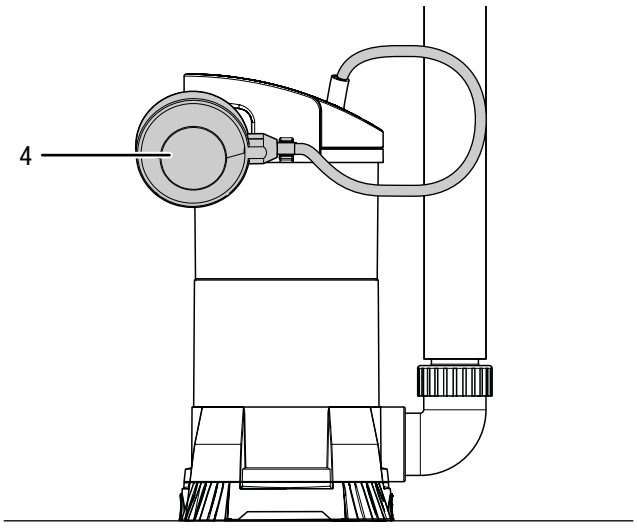
Warning of electrical voltage

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

Note

Running dry can cause damage to the device.
Switch the device off before it can run dry.

1. Hold onto the mains plug while pulling the power cable out of the mains socket.
2. If necessary, pull the device out by means of the nylon cord.
3. Lock the float switch (4) in the following position:



   ⇨ With the float switch affixed in this position, the device is switched on permanently.

4. Lower the device into the water at a slight angle to allow any remaining air to escape. Make sure that the position of the float switch (4) does not change.
5. Plug the mains plug into a sufficiently fused mains socket.
   ⇨ The device switches on.
6. Oversee the pumping process.
7. When the device starts to suck in air, disconnect the power cable from the mains socket by holding onto the mains plug.

Info
If the device switches off again after only a brief period of operation, the float switch might have come loose. Fix the float switch again as depicted.

Shutdown

Warning of electrical voltage
Do not touch the mains plug with wet or damp hands.

1. Hold onto the mains plug while pulling the power cable out of the mains socket.
2. Pull the device out by means of the nylon cord.
3. Clean the device according to the Maintenance chapter.
4. Store the device according to the Storage chapter.

Errors and faults

Warning of electrical voltage
Do not touch the mains plug with wet or damp hands.

Warning of electrical voltage
Tasks which require the housing to be opened must only be carried out by authorised specialist companies or by Trotec.

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

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 damages.
- Check the on-site fusing.
- Check whether the float switch is located above the automatic switch-on position.
- The device might have overheated and the thermal protection circuit is activated.

  If so, wait for approx. 10 minutes before restarting the device. If the device is not starting, have the electrics checked by a specialist company or by Trotec.
- The water temperature is above 35 °C and the thermal protection circuit is activated.
- Check whether there are any foreign objects in the air intake opening (5), the reducer (7) and / or the hose or pipe.

The device is running, but not pumping any water:

- Check the inside of the device for any remaining air. To do so, lower the device into the water at a slight angle and wait for the entire air to escape.
- Check whether the minimum water level has been reached, see technical data. In order to start pumping, the device requires a minimum water level.
- Check whether the hoses are blocked and whether the water contains any suspended matter with a particle size of more than 5 mm, which could clog up the device.
- Check whether the used hose diameter is too small.
- Check whether the hose line is kinked or blocked. Remove kinks and / or blockages.
- Check whether the reducer (7), the backflow preventer (9) and / or the elbow (8) are blocked.

The device is not switching off automatically:

- The float switch is hindered from lowering. Check whether the float switch can move freely. Remove any blockages or ensure sufficient freedom of movement for the float switch.

The device switches off after a brief runtime:

- Check whether the water temperature is too high. The device might have overheated due to a too high water temperature and the thermal protection circuit is activated.
- Check the power connection.
- Check the power cable and mains plug for damages.
- Check the on-site fusing.
- Check whether the hoses are blocked and whether the water contains any suspended matter with a particle size of more than 5 mm, which could clog up the device. The device might have overheated due to the blockage and the thermal protection circuit is activated.

Insufficient or decreasing conveying capacity:

- Check whether the hoses are blocked and whether the water contains any suspended matter with a particle size of more than 5 mm, which could clog up the device.
- Check the hose diameter and the pump height. An excessive pump height paired with a small hose diameter can cause a reduction of the conveying capacity.
- Check whether the hose line is kinked or blocked. Remove kinks and / or blockages.

Note

Wait for at least 3 minutes after maintenance and repair work. Only then switch the device back on.

Your device still does not operate correctly after these checks?

Please contact the customer service. If necessary, bring the device to an authorized 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.

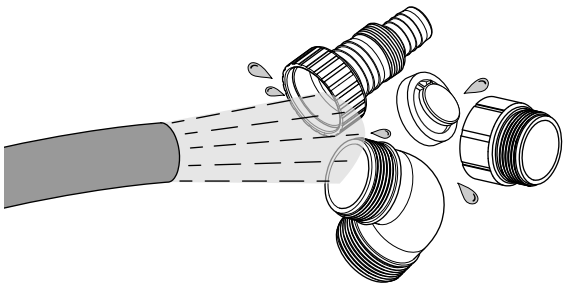
- Switch the device off.
- Hold onto the mains plug while pulling the power cable out of the mains socket.

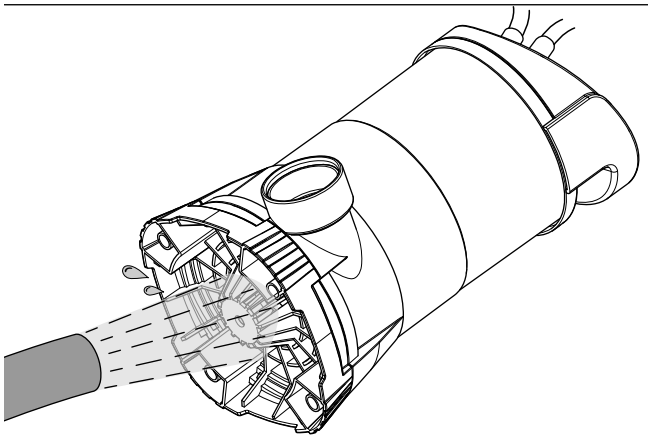
Notes on maintenance

Inside the device, there are no parts that need to be maintained or lubricated by the user.

Cleaning

- Clean the device with a soft, damp and lint-free cloth. 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.
- Rinse the reducer (7) as well as the other connections using clear water.
- Rinse the air intake opening (5) with clear water.





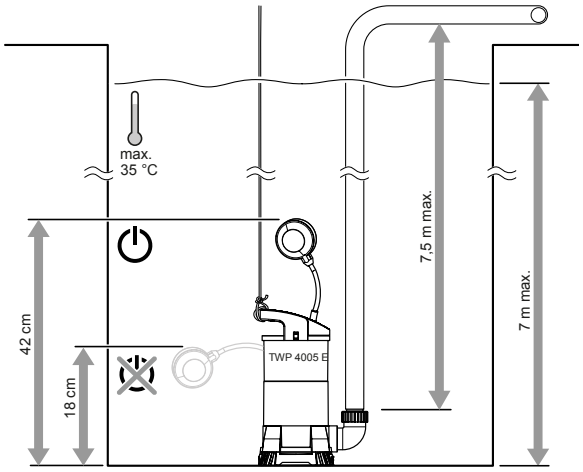
Technical annex

Technical data

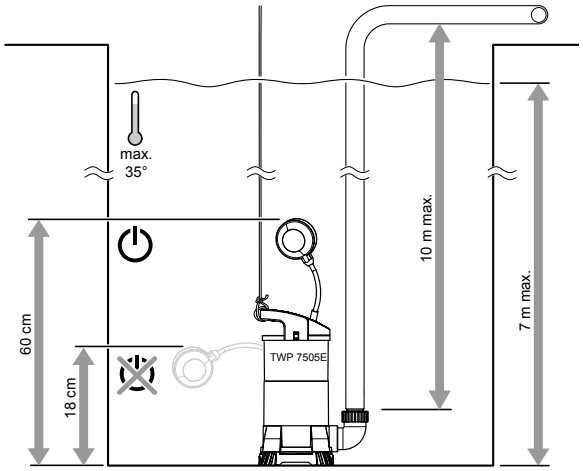
Parameter	Value		
Model	TWP 4005 E	TWP 7505 E	TWP 9005 E
Article number	4.610.000.005	4.610.000.007	4.610.000.009
Max. feed rate	7000 l/h	13000 l/h	14000 l/h
Max. pump height	7.5 m	10 m	11.5 m
Max. submersion depth	▽ 7 m	▽ 7 m	▽ 7 m
Max. water temperature	35 °C	35 °C	35 °C
Power supply	230 V - 240 V ~ 50 Hz	230 V - 240 V ~ 50 Hz	230 V - 240 V ~ 50 Hz
Power consumption	400 W	750 W	900 W
Protection type	IPX8	IPX8	IPX8
Minimum operating depth	80 mm	80 mm	80 mm
Max. water level after suction	3 mm	3 mm	3 mm
Connection type	CEE 7/4	CEE 7/4	CEE 7/4
Cable length	10 m	10 m	10 m
Protection class	I	I	I
Weight	3.6 kg	4 kg	5 kg
Dimensions (length x width x height)	160 x 160 x 290 (mm)	160 x 160 x 335 (mm)	160 x 160 x 335 (mm)
Max. particle size	5 mm	5 mm	5 mm
Height for switch-on	420 mm	600 mm	600 mm
Height for switch-off	180 mm	180 mm	180 mm
Hose connection, inner diameter	25 mm; 32 mm	25 mm; 32 mm	25 mm; 32 mm
Threaded connection	1"; 1 ½"	1"; 1¼"; 1 ½"	1"; 1¼"; 1 ½"

Schematic representation

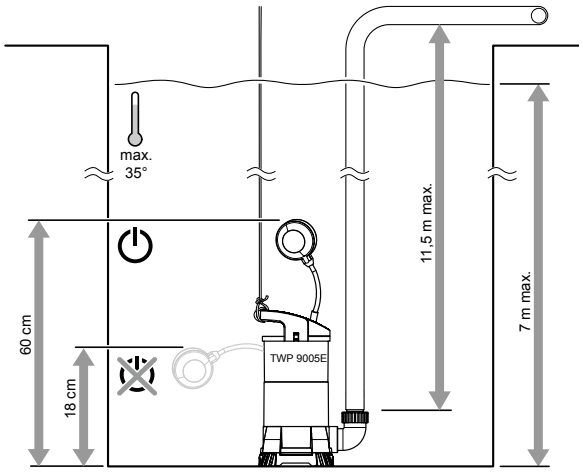
TWP 4005 E



TWP 7505 E

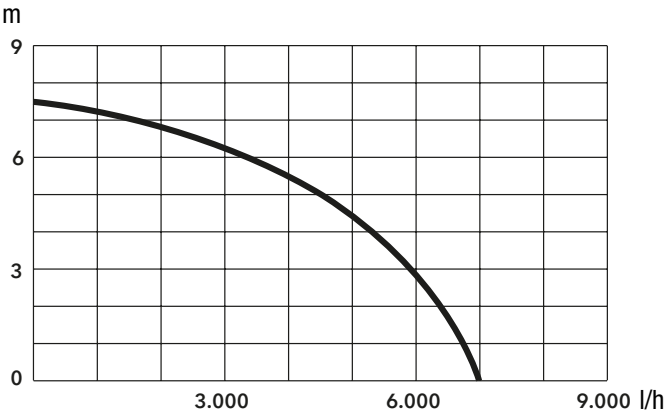


TWP 9005 E

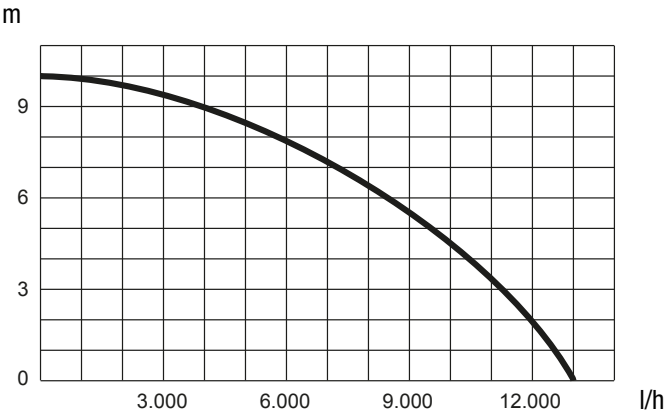


Performance chart (pump height / feed rate)

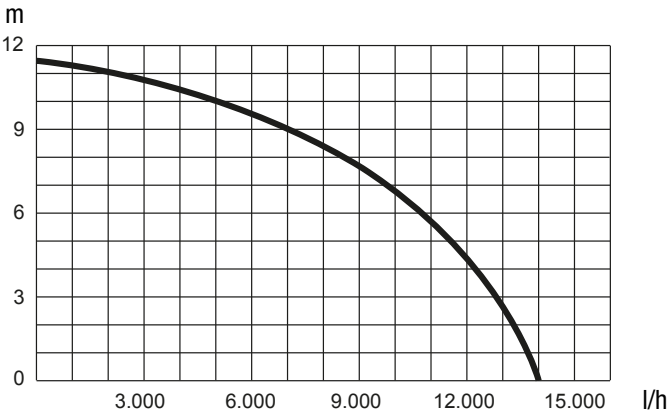
TWP 4005 E



TWP 7505 E



TWP 9005 E



Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. For further return options provided by us please refer to our website www.trotec24.com.

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.

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