TSP 7900 E / TSP 10000 EF

EN

ORIGINAL INSTRUCTIONS
SAND FILTER PUMP

TROTEC

TRT-BA-TSP7900E-TSP10000EF-TC25TTRT10087-001-EN

Table of contents

Information on the use of these instructions

Symbols

Danger
This signal word indicates a hazard with a high risk level which, if not avoided, will result in serious injury or death.

Warning
This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.

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

Caution
This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

Notice
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:

TSP 7900 E

https://hub.trotec.com/?id=47697

TSP 10000 EF

https://hub.trotec.com/?id=47698

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 done by children without supervision.

General safety

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in an 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.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.

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 mains connection must correspond to the specifications in the Technical annex.
- Insert the mains plug into a properly fused mains socket.
- 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 a special cord or assembly available from the manufacturer or its service agent.
  Defective power cables pose a serious health risk!
- 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.
- 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. Make sure that the power supply cable is not crushed, kinked or subjected to other mechanical stresses.
- 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. The use of extension cables which are not approved for outdoor use can result in injuries due to electric shock.
- 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.

Device-specific safety warnings for sand filter pumps

- Do not position the device in damp shafts. There is a risk of short circuit as well as damage caused by corrosion!
- Check the device for proper functioning on a regular basis.
- Observe the technical specifications. The specified limit values must not be exceeded under any circumstances in order to ensure the safety of your product.
- 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.
- Never operate the device in the rain. Keep the device away from environmental influences such as wet conditions or frost. In particular, keep the electrical connections dry and make sure they are located in a flood-proof area.
- Never operate the device when dry or with the suction line closed. The intake opening of the suction line must always be submerged in the pumping medium.
- Do not operate the pump without water. Operating the pump without water causes it to overheat during operation. This causes considerable damage to the pump and filter, and also poses a risk of burns.

- Check the device for damage at regular intervals prior to use. Pay particular attention to the mains cable and plug. In the event of damage or functional restrictions, the device may only be used again after it has been repaired by an expert. Only original spare parts may be used for this purpose.
- Always disconnect the device from the mains before carrying out maintenance work such as cleaning or changing the filter medium.
- When the device is not being used, observe the specified storage conditions.
- The device is designed for water temperatures between 5 °C and 40 °C. Keep within the specified temperature range to avoid damage caused by excessively low or high temperatures.
- Make sure that the installation is carried out by authorised personnel or a technician. The technician must carefully read the enclosed instructions before installation.
- Chemicals or vapours emitted from them can cause corrosion and malfunctions of the filter or other device parts. This may result in property damage or serious injury. Do not store pool chemicals near the sand filter pump.

Intended use

The device TSP 7900 E / TSP 10000 EF is exclusively designed for the mechanical treatment of water for swimming pools in private use whilst adhering to the technical data.

The device can be used with the following filter medium:

- filter quartz sand
- filter glass / glass granules
- filter balls

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

Reasonably foreseeable misuse

- The device is not suitable for use as a recirculation pump for ponds.
- The device is not suitable for increasing the pressure of existing water supply networks.
- The device must not be used for aggressive, abrasive, caustic, corrosive, combustible or explosive pumping media, e.g.:
  - brine
  - food
  - cleaning agents
  - fuels
  - oils
  - greases
  - petroleum
  - nitro-cellulose thinner
  - waste water from lavatories and urinal installations
- The device is not suitable for pumping potable water.
- The device must not be used as a feed pump for service water or waste water.
- The device must not be used at freezing temperatures.
- The device is not intended for commercial water treatment purposes or other commercial applications and must not be used for such purposes.
- Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Personnel qualification

People who use this device must:

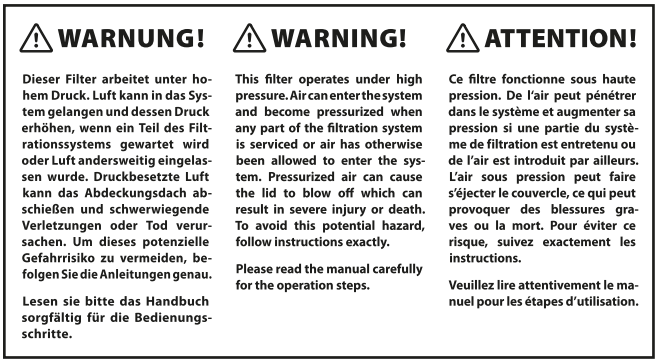
- have basic knowledge of how to safely handle electrical equipment.
- have read and understood the instructions, especially the Safety chapter.

Safety signs and labels on the device

Notice

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:



⚠ WARNUNG!

Dieser Filter arbeitet unter hohem Druck. Luft kann in das System gelangen und dessen Druck erhöhen, wenn ein Teil des Filtrationssystems gewartet wird oder Luft andersweitig eingelassen wurde. Druckbesetzte Luft kann das Abdeckungsdach abschießen und schwerwiegende Verletzungen oder Tod verursachen. Um dieses potenzielle Gefahrrisiko zu vermeiden, befolgen Sie die Anleitungen genau.

Lesen sie bitte das Handbuch sorgfältig für die Bedienungsschritte.

⚠ WARNING!

This filter operates under high pressure. Air can enter the system and become pressurized when any part of the filtration system is serviced or air has otherwise been allowed to enter the system. Pressurized air can cause the lid to blow off which can result in severe injury or death. To avoid this potential hazard, follow instructions exactly.

Please read the manual carefully for the operation steps.

⚠ ATTENTION!

Ce filtre fonctionne sous haute pression. De l'air peut pénétrer dans le système et augmenter sa pression si une partie du système de filtration est entretenu ou de l'air est introduit par ailleurs. L'air sous pression peut faire s'éjecter le couvercle, ce qui peut provoquer des blessures graves ou la mort. Pour éviter ce risque, suivez exactement les instructions.

Veuillez lire attentivement le manuel pour les étapes d'utilisation.

This label contains the following safety warning:

Warning

This filter operates under high pressure. Air can enter the system and become pressurized when any part of the filtration system is serviced or air has otherwise been allowed to enter the system. Pressurized air can cause the lid to blow off, which can result in severe injury or death. To avoid this potential hazard, follow instructions exactly.
Please read the manual carefully for the operation steps.

Follow the manual

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

Warning of electrical voltage

Information marked with this symbol indicates dangers to the life and health of persons due to electrical voltage.

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.

Staying in water prohibited

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

Residual risks

Warning of electrical voltage

Work on the electrical components must only be carried out by an authorised specialist company!

Warning of electrical voltage

Before any work on the device, remove the mains plug from the mains socket!
Do not touch the mains plug with wet or damp hands.
Hold onto the mains plug while pulling the power cable out of the mains socket.

Warning

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

Warning

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

Warning

There is a danger of suffocation for children due to packaging material! Keep packaging films and parts away from children. There is a risk of death due to suffocation.

Notice

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. Disconnect the device from the mains by removing the mains plug from the socket. When doing so, be sure to hold the plug, not the cable.
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.

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

Information about the device

Device description

The device TSP 7900 E / TSP 10000 EF is used for the mechanical cleaning of swimming pool water.

The device is equipped with a pump that draws in the pool water and feeds it to the filter tank. The filter tank is filled either with quartz sand (not included in the scope of delivery) or filter balls and filters impurities out of the water flowing through it. The water cleaned in this way is then returned to the swimming pool. The "backwash" function flushes and drains accumulated contaminations from the filter medium.

The device is designed for water temperatures between 5 °C and 40 °C.

For a permanent installation, the device's base plate is fitted with drill holes allowing the device to be bolted to the ground.

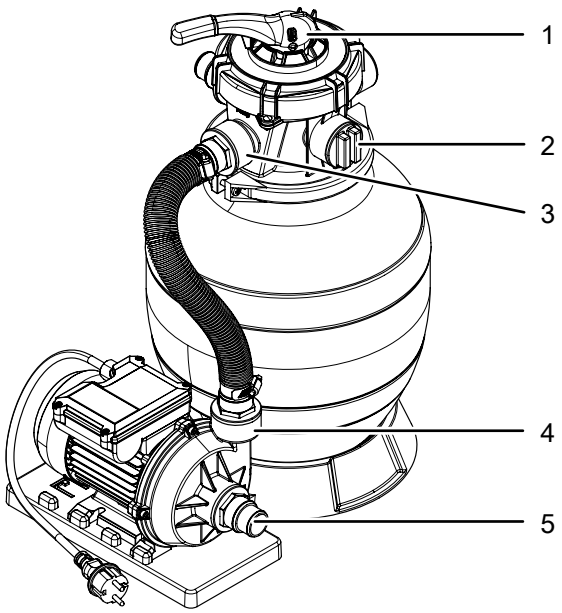
The device TSP 10000 EF differs in terms of its higher delivery rate and is equipped with a prefilter that protects the pump impeller from coarse contamination.

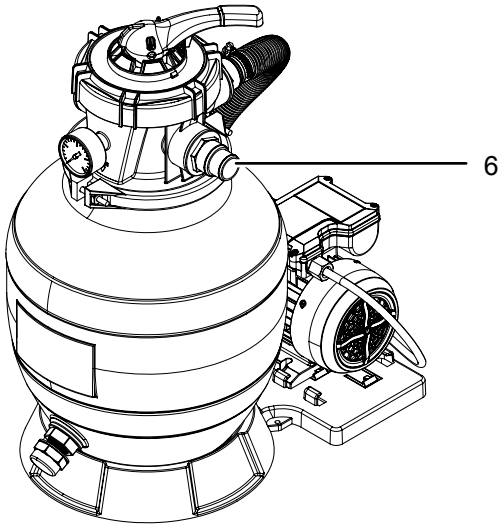
Info

The illustrations in the rest of these instructions feature the device TSP 7900 E by way of example. The represented operating steps and explanations also apply to device TSP 10000 EF unless otherwise mentioned.

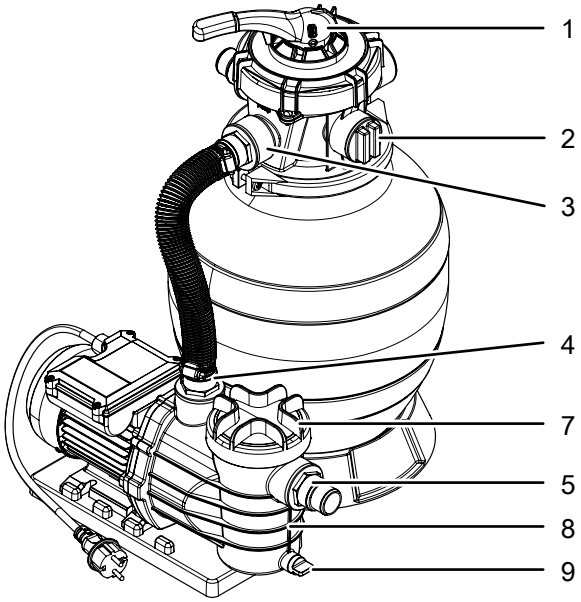
Device depiction

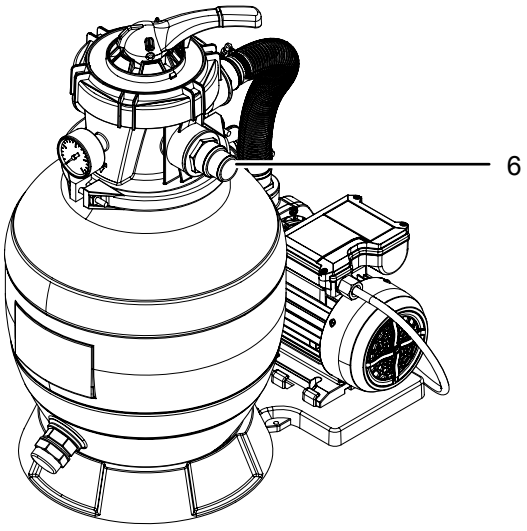
TSP 7900 E

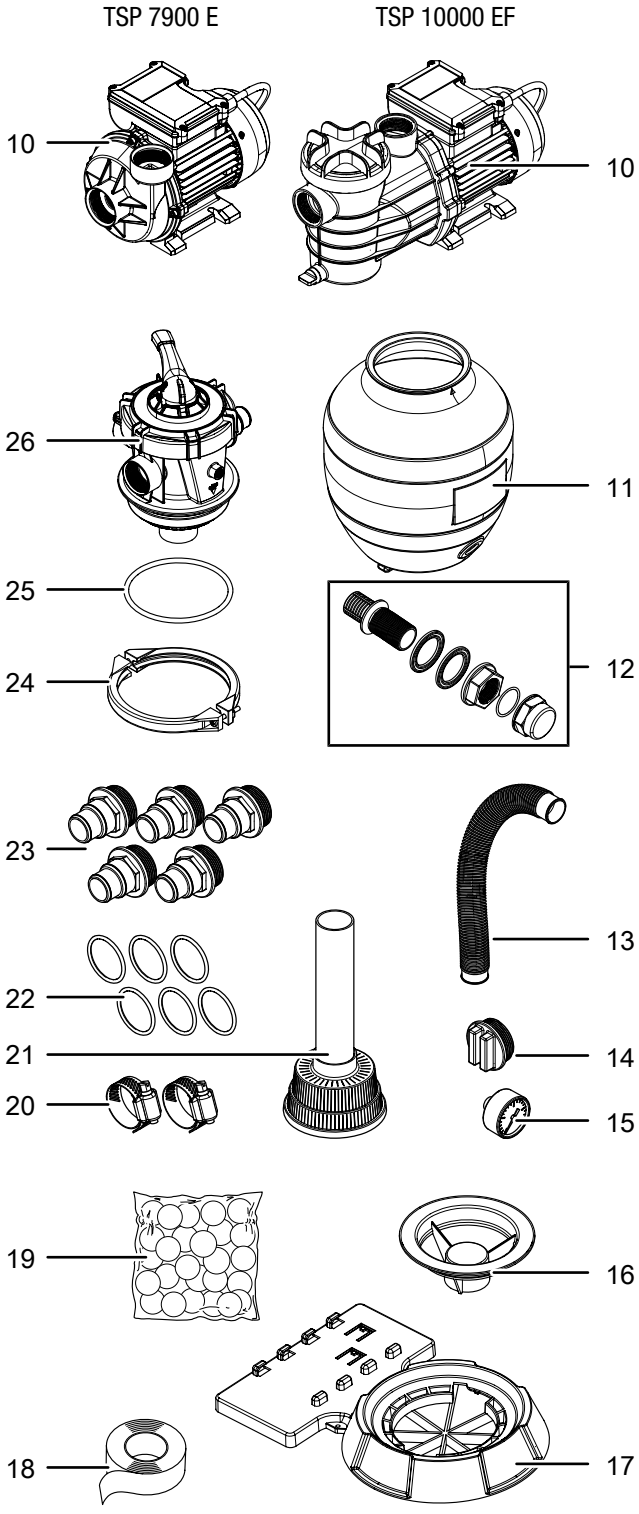




TSP 10000 EF







No.	Designation
1	Function lever for operating mode
2	"waste" hose connection (backwash connection)
3	"pump" hose connection (connection to pump)
4	pressure line pump connection (connection to filter tank)
5	suction line pump connection (feed line from swimming pool)
6	"return" hose connection (return line to swimming pool)
7	Prefilter cap (TSP 10000 EF)
8	Prefilter (TSP 10000 EF)
9	Prefilter drain screw (TSP 10000 EF)
10	Pump (TSP 7900 E / TSP 10000 EF)
11	Filter tank
12	Drain valve
13	Connection hose
14	"waste" cap
15	Pressure gauge
16	Funnel
17	Base plate
18	Teflon tape
19	Filter balls
20	Hose clamp
21	Riser pipe
22	Seal ring for hose adapter / "waste" cap
23	Hose adapter
24	2-piece flange clamp
25	Seal ring for 7-way valve
26	7-way valve

Transport and storage

Notice

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:

- Disconnect the device from the mains by removing the mains plug from the socket. When doing so, be sure to hold the plug, not the cable.
- Do not carry the device by holding it at the power cable or hose.

Storage

If you do not use the device for an extended period of time or if you wish to store it for the winter, decommission it in accordance with the chapter Decommissioning for winter storage. In addition, please observe the following storage conditions:

- Check whether there is any residual water left inside the pump and drain it to prevent rust formation.
- Store the device in a dry location and protected from frost and heat.
- Store the device in a location where it is protected from dust and direct sunlight.
- If required, use a cover to protect the device from invasive dust.

For restart, please proceed according to the Start-up chapter.

Assembly and installation

Scope of delivery

- 1 x Pump
- 1 x Filter tank
- 1 x Base plate
- 1 x 7-way valve
- 1 x Pressure gauge
- 1 x 2-piece flange clamp
- 1 x Seal ring for 7-way valve
- 1 x Drain valve
- 1 x Connection hose
- 2 x Hose clamp
- 5 x Hose adapter
- 1 x Cap 1½"
- 6 x Seal ring
- 1 x Teflon tape
- 2 x Filter balls 200 g
- 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

Notes on installing the sand filter pump

- The pump's suction line must have a minimum diameter of 1½" (40 mm).
- The suction line should be laid as straight as possible. Bends and angles should be minimised. Make sure that no air bubbles can form in the suction line.
- The device must be mounted on a solid, level foundation. The pump base must be securely screwed into the ground.
- Pipelines and fasteners must be installed in a way that they are structurally separated from the pump. The pipelines must not put any strain on the pump connections.

Positioning

Warning of electrical voltage

Do not position the device in damp shafts. There is risk of short circuit!

Notice

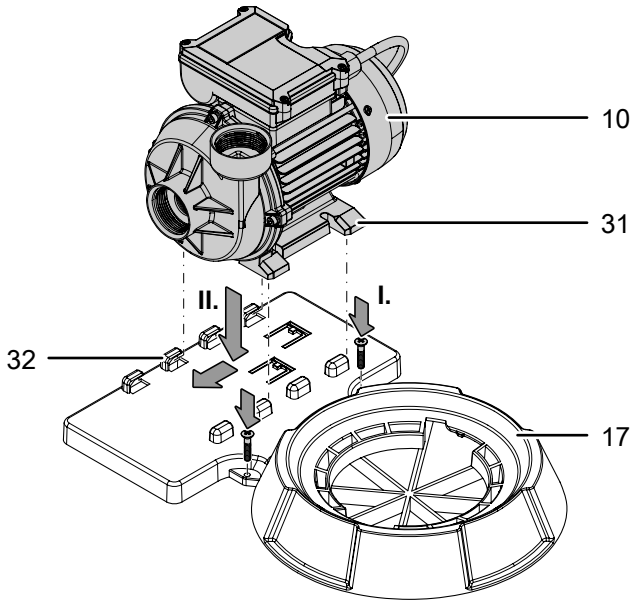
Positioning the device in damp shafts can result in damage to the device caused by corrosion!

Select a suitable location for positioning the device. It must meet the following requirements:

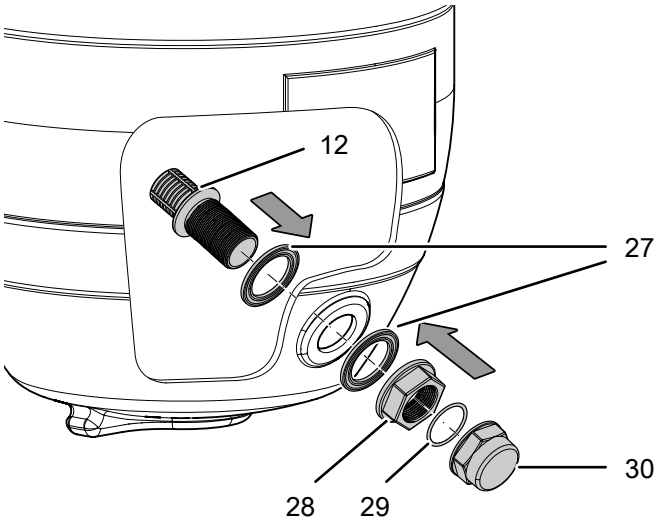
- Sufficient distance from the pool and water source to prevent water from splashing onto or flowing towards the pump.
- The installation site must be in a well-ventilated, dry area that is protected from floods and weather conditions.
- The ground must be horizontal, level and sufficiently stable. It must be able to safely support both the weight of the device and the volume conveyed during operation.
- Easy accessibility for regular maintenance and servicing work.

Installing the sand filter pump

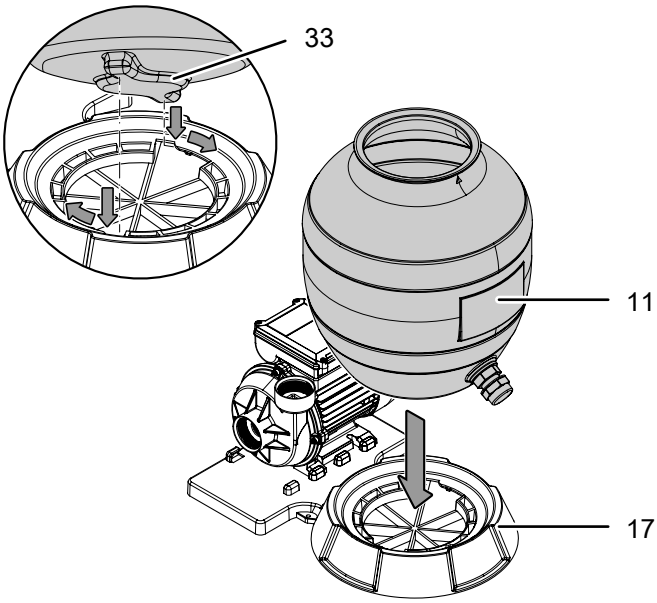
1. Position the pump (10) on the base plate (17).
2. Make sure that the pump's foot (31) engages with the corresponding guides (32) on the base plate.
3. Slide the pump into the guides until it clicks into place.



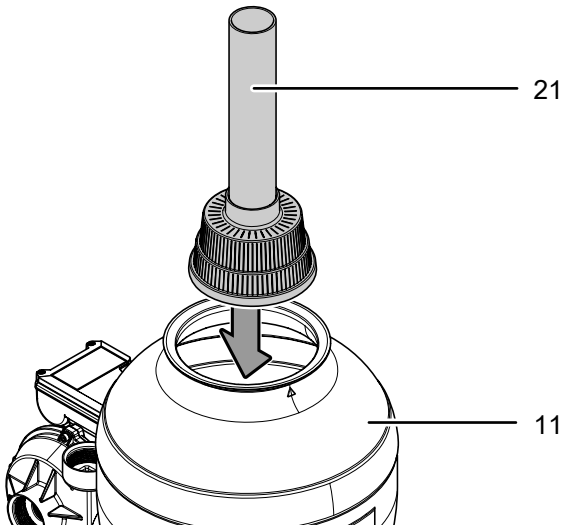
4. Slide a seal ring (27) onto the drain valve (12) and insert the drain valve into the lower opening of the filter tank (11) from the inside.
5. Slide the second seal ring (27) onto the drain valve from the outside and tighten the drain valve with the lock nut (28).
6. Place the seal ring (29) in the cap (30) and screw the cap on.



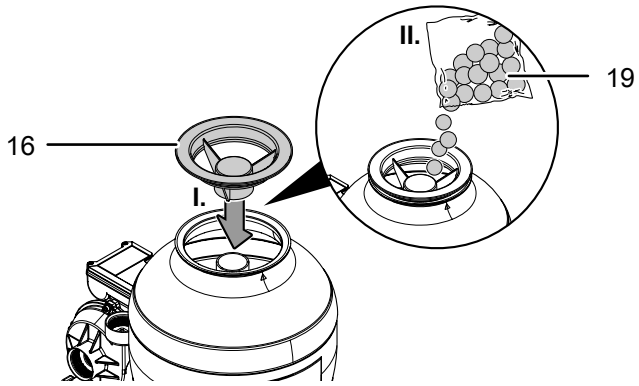
7. Position the filter tank (11) on the base plate (17) so that the feet (33) of the filter tank engage in the designated recesses. Turn the filter tank clockwise until it clicks into place.



8. Insert the riser pipe (21) into the filter tank (11).



9. Place the funnel (16) on the opening of the filter tank and fill the filter tank with the filter balls (19) provided.

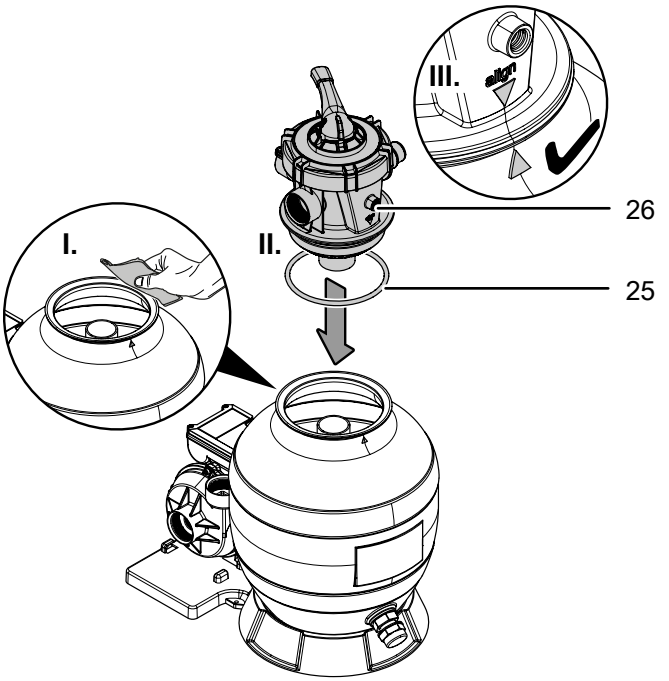


Info

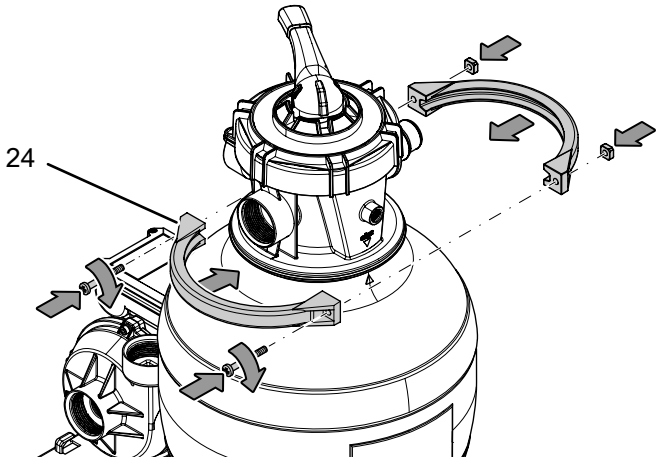
As an alternative, you can use quartz sand as a filter medium and fill the filter tank (11) with approx. 13 kg of sand.

10. Remove the funnel (16) and clean the tank's neck thoroughly.
11. Guide the seal ring (25) over the underside of the 7-way valve (26).

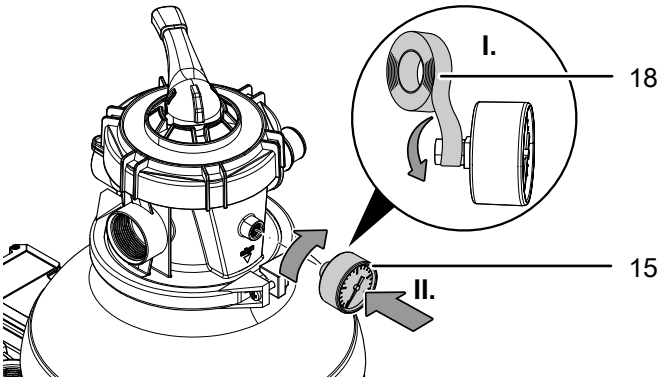
12. Align the triangular mark on the 7-way valve (26) with the triangular mark on the filter tank. Make sure that the "pump" hose connection (3) is facing the pump side.



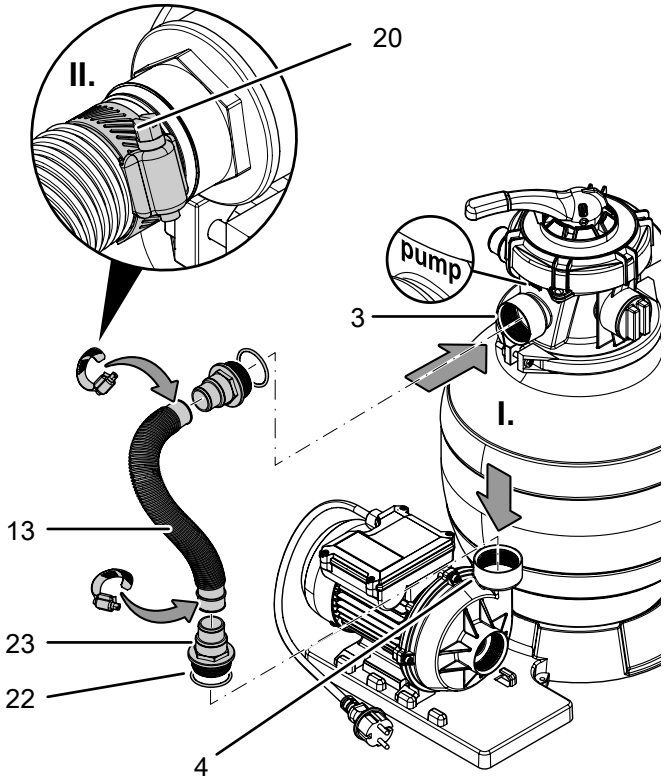
13. Fit the flange clamp (24) around the flange of the filter tank and the 7-way valve.



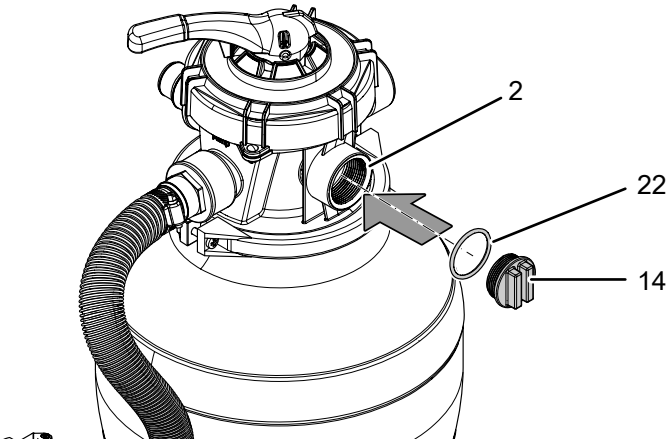
14. Wrap Teflon tape (18) around the thread of the pressure gauge (15) in a counter-clockwise direction and fit the pressure gauge (15) to the 7-way valve.



15. Connect the "pump" hose connection (3) on the 7-way valve to the pressure line connection (4) of the pump using the connection hose (13), the hose clamps (20) and the hose adapters (23). Take care to fit the seal rings (22) to the hose adapters (23) before screwing them on.



16. Screw the cap (14) onto the "waste" hose connection (2) of the 7-way valve. Take care to insert the seal ring (22) into the cap (14) before screwing it on.



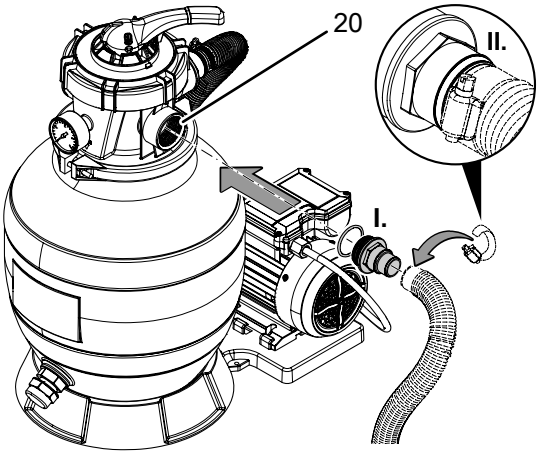
Connecting the sand filter pump to the swimming pool

Notice

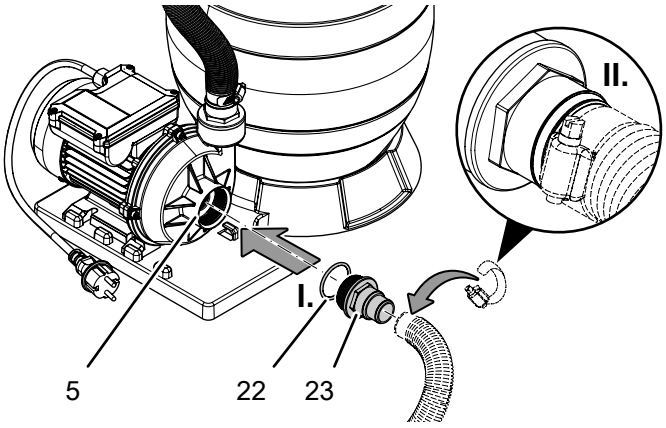
The connection hoses used must be suitable for use in swimming pools and pool filter systems.
All connections must be able to be made without tension; pipes must not place any load on the pump or valve connections.

Please proceed as follows to connect the sand filter pump to the swimming pool:

1. Connect the return line to the swimming pool to the "return" hose connection (6) of the 7-way valve using a suitable hose (not included in the scope of delivery). Use the hose adapter with hose clamp for connection to the 7-way valve. Insert the seal ring into the hose adapter before screwing on the adapter.



2. Connect the feed line from the swimming pool to the suction line connection (5) of the pump using a suitable hose (not included in the scope of delivery). Also use the hose adapter (23) for the pump connection. Insert the seal ring (22) into the hose adapter before screwing on the adapter.



Checking the assembly

Once assembly is complete, the entire installation must be checked. Please ensure that:

- all seals are correctly fitted,
- all hose clamps are tight,
- the hoses are laid free of tension,
- there are no visible leaks,
- all components are assembled and ready for operation.

Filling the sand filter pump with water

To bleed the system and successfully start the suction process, please follow the steps below:

1. Check all connections for proper fit and tightness. Make sure that all connections are properly installed.
2. Press the function lever (1) of the 7-way valve fully down and turn it to the "backwash" position.
3. Wait until the filter tank (11) fills with water via the connected pool pipe.
4. Allow the water to flow in until it continuously emerges from the "waste" backwash connection (2).
5. Start the pump (10) by plugging the mains plug into the mains socket. Once water is flowing evenly from the "waste" backwash connection (2), let the pump run for approx. 2 minutes.
6. Switch off the pump and set the function lever (1) to the "rinse" position.
7. Fit the cap (14) onto the "waste" backwash connection (2) and make sure that the seal ring (22) is correctly positioned in the cap (14).
8. Restart the pump and run it for approximately 30 seconds to 1 minute.
9. Switch off the pump, set the function lever (1) to the "filtration" position and restart the pump.
10. Make a note of the pressure displayed on the pressure gauge (15) and keep this note. Regularly compare the recorded value with the currently displayed pressure to determine the right time for backwashing.

The sand filter pump is ready for operation.

Operation

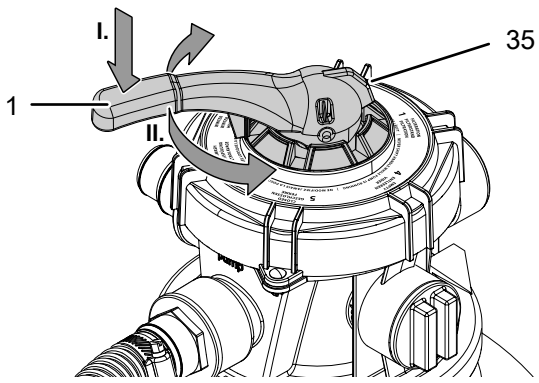
Selecting the operating mode

Please proceed as follows to select the operating mode:

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

Notice
Do not adjust the function lever while the pump is operating.
The pump may be damaged if the flow is interrupted. Always switch off the pump first by removing the mains plug from the mains socket. Only then change the operating mode.

1. Press the function lever (1) down.
2. Hold down the function lever (1) and turn it until the front part (35) of the function lever points to the desired function.



3. Release the function lever.
4. Start the pump by plugging the mains plug into the mains socket.

Functional principles of the operating modes

The device features seven operating modes, which can be selected using the function lever (1) on the 7-way valve (26). The operating modes are identified by numbers as follows:

1 Filtration
2 Backwash
3 Rinse
4 Empty
5 Closed
6 Circulate

Operating mode 1 "filtration"

In filtration mode, the water sucked in by the pump is passed through the filter medium. Contaminants are retained and the cleaned water is returned to the swimming pool. This operating mode represents normal filter operation.

The water sucked in by the pump is fed into the filter tank for filtration. The water flows through the filter medium and is thus freed from contaminants. Then the water is returned to the swimming pool.

Operating mode 2 "backwash"

The backwash mode is used to clean the filter medium. The water flow is reversed so that accumulated contaminations are transported from the filter tank into the drain.

1. Check the pressure displayed by the pressure gauge. Perform backwashing when the pressure is 8–10 psi (0.55–0.69 bar) above the start-up pressure determined during commissioning.
2. Switch off the pump.
3. Set the function lever of the 7-way valve to the "backwash" operating mode.

4. Connect a suitable hose (not included in the scope of delivery) to the "waste" backwash connection and guide it to a suitable drain.
5. Start the pump and let it run for approx. 2 minutes until the rinsing water coming out is clear.
6. Switch off the pump and continue with the "rinse" operating mode.

Operating mode 3 "rinse"

The rinse mode is used to discharge any waste water remaining in the filter tank after backwashing into the drain. This prevents unfiltered water from entering the swimming pool.

1. With the pump switched off, set the function lever to "rinse".
2. Start the pump and let it run for 30–60 seconds until the water at the drain appears clear.
3. Switch off the pump.
4. Set the function lever to "filtration".
5. Restart the pump to resume normal filter operation.

Operating mode 4 "empty"

In empty mode, the water from the swimming pool does not pass through the filter medium, but is discharged directly into the drain via the "waste" connection. This operating mode is used to lower the water level and remove coarse dirt.

1. Connect a suitable hose (not included in the scope of delivery) to the "waste" backwash connection.
2. Guide the hose to the designated drain.
3. Start the pump to drain the water from the swimming pool.

Operating mode 5 "closed"

In closed mode, all water passages inside the 7-way valve are blocked.

Notice

Do not set the function lever to "closed" mode while the pump is operating.
The pump may be damaged by the lack of flow.

Operating mode 6 "circulate"

In circulate mode, the water from the swimming pool is circulated without passing through the filter and returned directly.

Decommissioning for winter storage

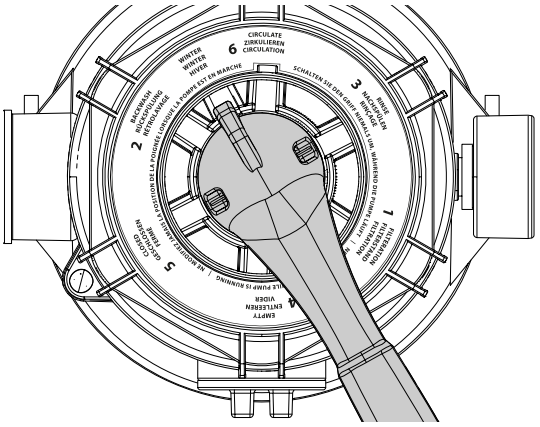
Warning of electrical voltage

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

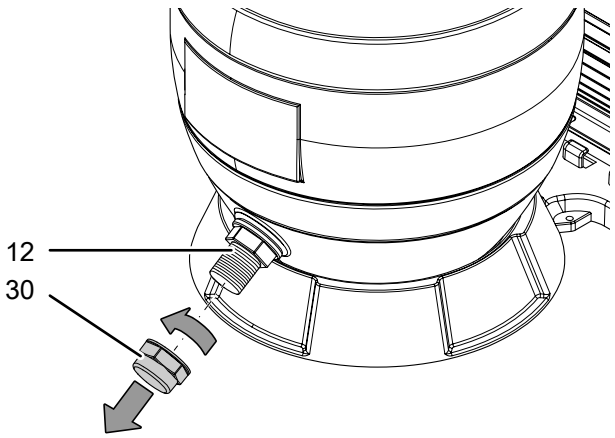
Notice

If there is a danger of frost, drain all water from the device to prevent the device from being damaged. Before restart, the device must be filled with water again.

1. Hold onto the mains plug while pulling the power cable out of the mains socket.
2. Shut off the feed and return lines to the swimming pool and disconnect all connection hoses.
3. Set the function lever to "winter" mode. The "Winter" position serves to protect the 7-way valve and the filter tank from frost damage during the winter months.

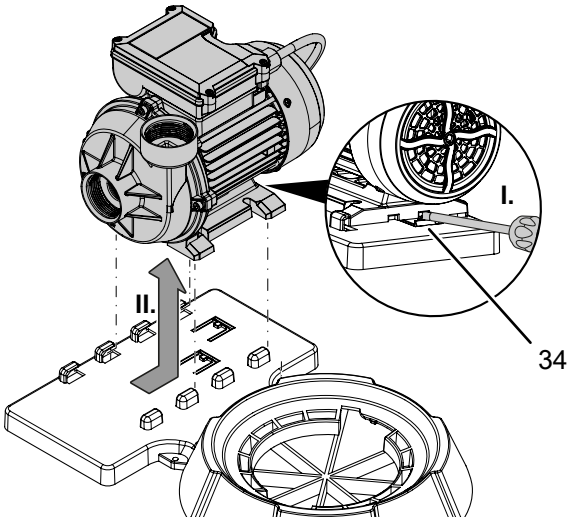


4. Loosen the flange clamp on the 7-way valve and remove the 7-way valve from the filter tank.
5. Open the drain valve (12) on the filter tank by removing the cap (30) and allow the water to drain completely.



6. Turn the filter tank counter-clockwise to release it from the base plate.
7. Remove the filter medium from the filter tank and store it in a dry place in a suitable container.

8. Remove the riser pipe from the filter tank and clean both components by rinsing them with clean water.
9. Detach the pump from the base plate by first pressing down the tab (34) with a suitable tool.



10. Drain the residual water from the pump.
11. Clean the device according to the Maintenance chapter.
12. Store the device according to the Storage chapter.

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. Set the function lever to "closed" mode.

Errors and faults

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

- Switch the device off.
- Disconnect the device from the mains by removing the mains plug from the socket. When doing so, be sure to hold the plug, not the cable.

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.
- Switch off the power supply and check the pump for possible blockages on the impeller.
- 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 the manufacturer.
- The water temperature is above 40 °C and the thermal protection circuit is activated.

The device is running, but not sucking in any water:

- Check whether the water level in the suction area is sufficient.
- Check the position of the function lever.
- The pump is sucking in air. Check the hose connections of the suction line for tightness. Bleed the pump by filling it with water.

The pump is running, but the flow rate is too low:

- Check whether the hose line is kinked or blocked. Remove kinks and / or blockages.
- The filter medium is dirty. Perform backwashing regularly.
- The prefilter insert is clogged (TSP 10000 EF only). Remove coarse dirt and clean the prefilter insert.

Noises during pump operation:

- Defective bearing. Contact an authorised specialist workshop or the manufacturer for repair.
- Coarse dirt inside the pump housing. Pull out the mains plug and check the inside of the pump for coarse dirt and foreign objects such as small stones.

Thermal circuit breaker trips:

- Low input voltage. The voltage at the motors must not exceed or fall below the nominal voltage by more than 6 %. Have an authorised electrician check the voltage. Make sure that the pump is not connected to an extension cable. Report the low power supply to the responsible authorities.
- The water temperature is above 40 °C. Only operate the device within the permissible temperature range.

The device still does not operate correctly after these checks:

Contact the manufacturer's customer service. If necessary, take the device to an authorised specialist electrical company or to the manufacturer for repair.

Maintenance

Activities required before starting maintenance

Warning of electrical voltage
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.

Notes on maintenance

Safety signs and labels on the device

Check the safety signs and labels attached to the device at regular intervals. Replace illegible safety signs!

Replacing the filter medium

1. Switch off the pump by pulling the mains plug.
2. Shut off the feed and return lines to the swimming pool and disconnect any connection hoses.
3. Set the function lever to "closed" mode.
4. Loosen the flange clamp on the 7-way valve and remove the 7-way valve from the filter tank.
5. Open the drain valve on the filter tank by removing the cap and allow the water to drain completely.
6. Turn the filter tank counter-clockwise to release it from the base plate.
7. Remove the filter medium from the filter tank by pouring it into a suitable container.
8. Remove the riser pipe from the filter tank and clean both components by rinsing them with clean water.
9. Mount the filter tank on the base plate and reinsert the riser pipe.
10. Fill the tank with new filter medium. Use the funnel for this purpose and observe the information on filling quantities in the technical data.
11. Reattach the 7-way valve and fit the flange clamp.
12. Fit the hoses for the feed and return flow to the swimming pool as well as the cap on the drain valve.

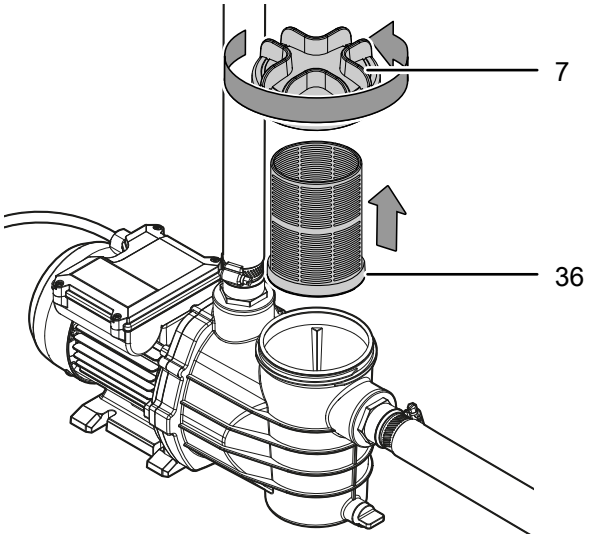
Cleaning

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.

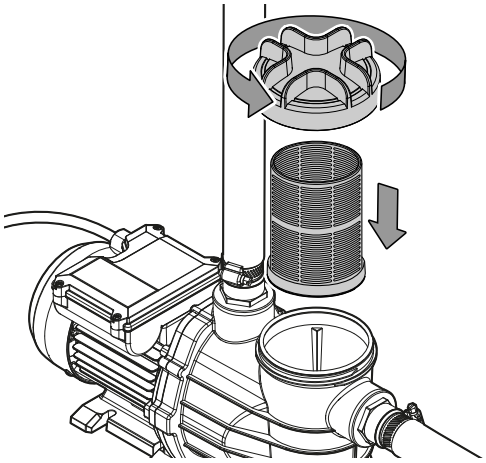
Cleaning the prefilter insert (TSP 10000 EF)

The prefilter insert must be cleaned as soon as it is contaminated. This is brought to light e.g. by a reduced pump capacity (see chapter Errors and faults).

1. Loosen the cap (7) on the pump's prefilter and unscrew it.
2. Remove the prefilter insert (36).



3. Tap the prefilter insert against a flat surface.
4. If necessary, clean the prefilter insert with soapsuds, then rinse with clear water.
5. Allow the prefilter insert to dry.
6. Reinsert the prefilter insert and reattach the cap. Ensure a tight fit of the cap and tighten it using a wrench if necessary.

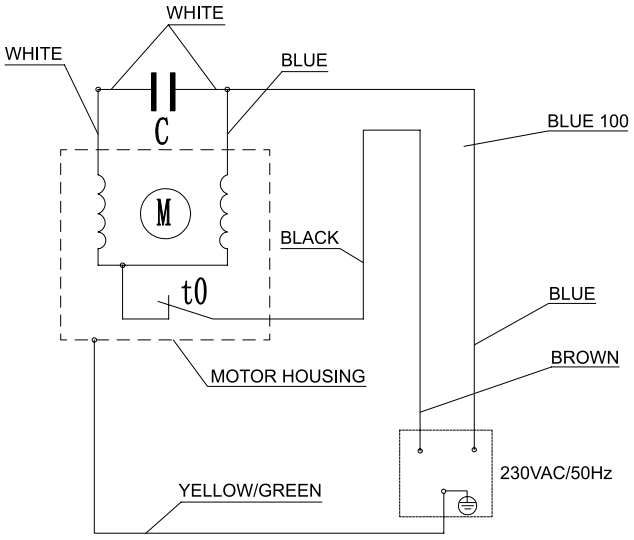


Technical annex

Technical data

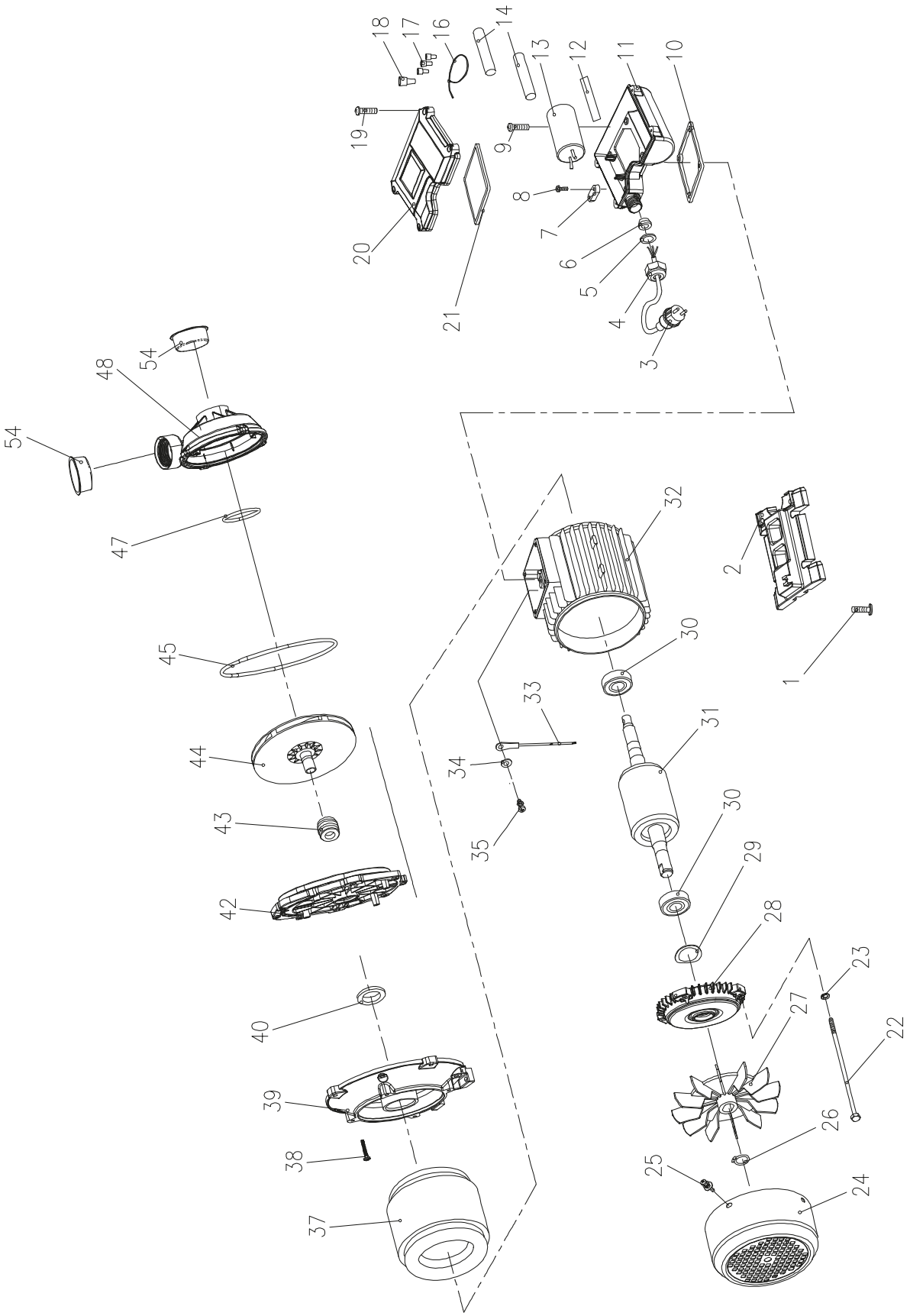
Parameter	Value	Value
Model	TSP 7900 E	TSP 10000 EF
Max. flow rate	7900 l/h	10000 l/h
Max. delivery head	7.5 m	10 m
Max. suction height	0 m	1.5 m
Max. pump pressure	0.75 bar	1 bar
Water temperature min. – max.	5 °C – 40 °C	5 °C – 40 °C
Filter tank volume	20 l	20 l
Filter medium: quartz sand filter glass / glass granules filter balls	 13 kg 10 kg 400 g	 13 kg 10 kg 400 g
Power supply	220 – 240V ~ 50 Hz	220 – 240V ~ 50 Hz
Power consumption	250 W	400 W
Connection type	CEE 7/7	CEE 7/7
Cable length	1.8 m	1.8 m
Protection type of the pump	IPX5	IPX5
Protection type of the mains plug	IP44	IP44
Protection class	I	I
Weight	7.5 kg	9.5 kg
Dimensions (length x width x height)	300 x 485 x 670 mm	300 x 485 x 670 mm
Max. particle size	2.5 mm	2.5 mm
Pressure connection of pump	1½" internal thread	1½" internal thread
Suction connection of pump	1½" internal thread	1½" internal thread
Hose adapter	32 mm / 38 mm	32 mm / 38 mm
Sound values according to EN ISO 3744:1995		
Sound pressure level L_{pA}	85 dB(A)	85 dB(A)
Sound power level L_{WA}	70 dB(A)	70 dB(A)
Uncertainty K_{WA}	2.16 dB(A)	2.16 dB(A)

Circuit diagram TSP 7900 E / TSP 10000 EF

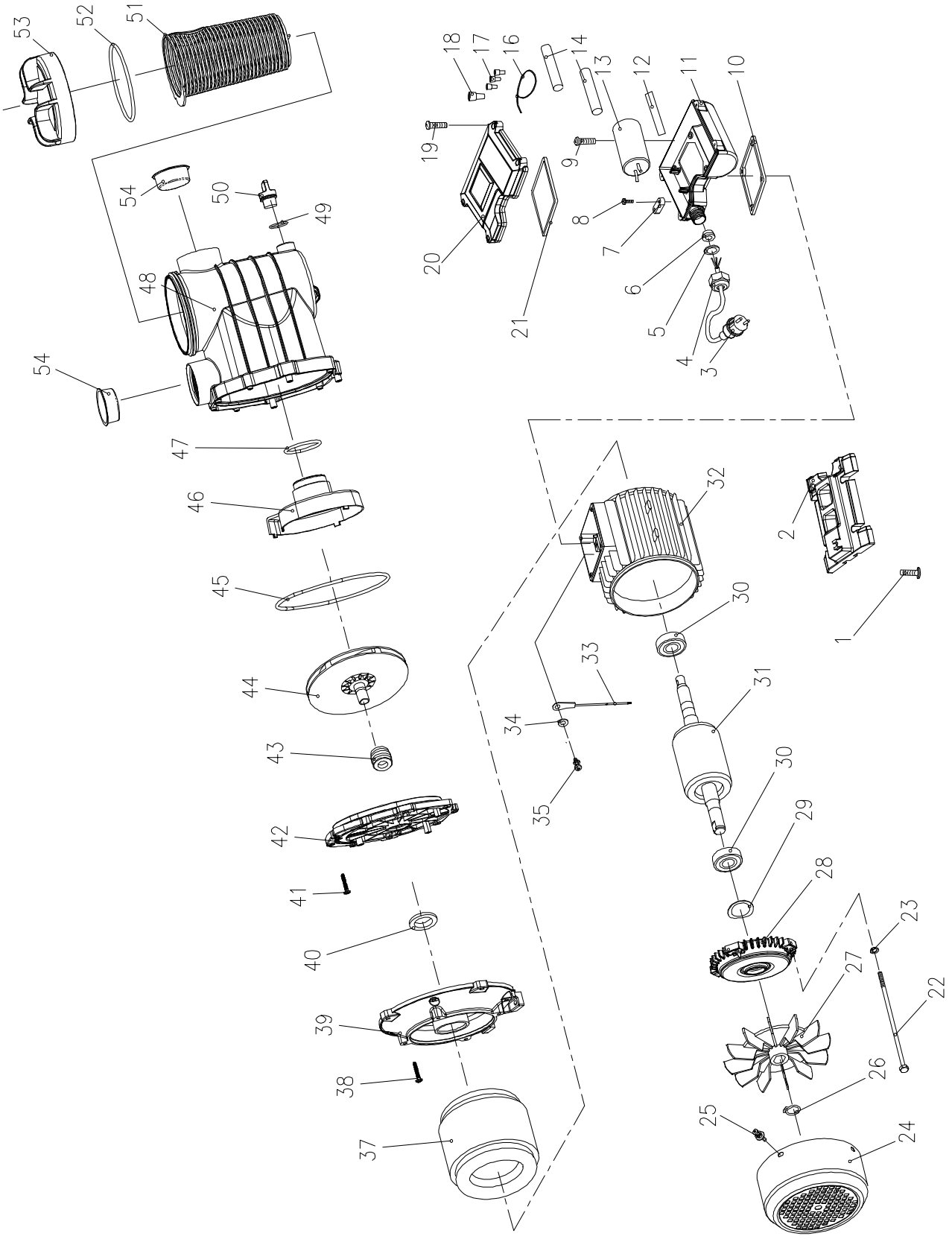


Overview and list of spare parts

TSP 7900 E



TSP 10000 EF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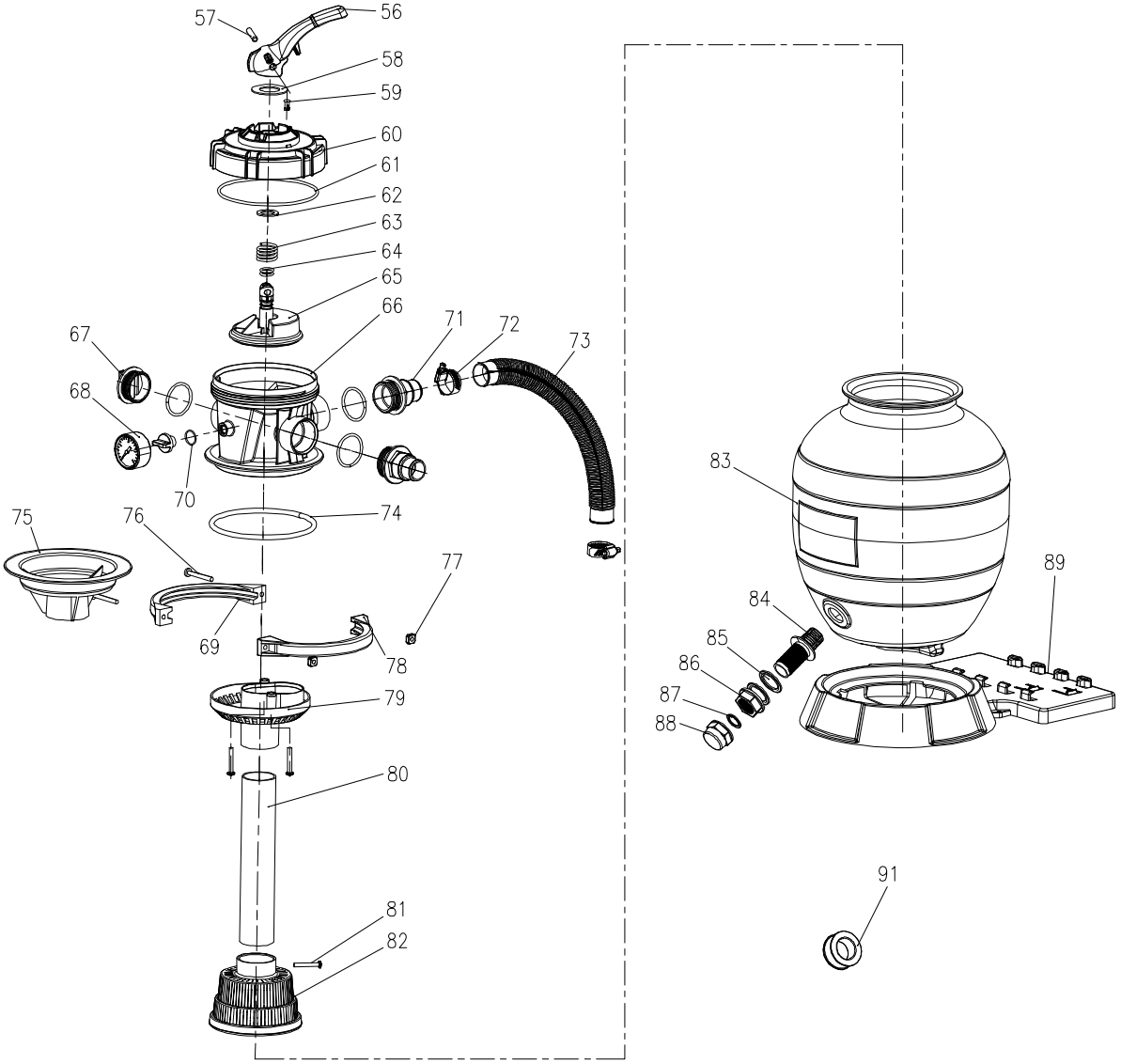
TSP 7900 E / TSP 10000 EF

No.	Part Name	Quantity	No.	Part Name	Quantity
1	Cross head tapping screw	3	27	Fan	1
2	Base	1	28	Rear cover	1
3	Power cord	1	29	Corrugated gasket	1
4	Connector nut	1	30	Bearing	2
5	Gasket	1	31	Rotor	1
6	Cable gland	1	32	Aluminum housing	1
7	Block	1	33	Grounding lead unit	1
8	Customization tapping screw	2	34	External serrated lock washer	1
9	Customization tapping screw	4	36	Screw component	1
10	Seal gasket	1	37	Stator	1
11	Junction box bottom	1	38	Cross head tapping screw	2
12	Double-sided film	12 cm	39	Front cover	1
13	Capacitor	1	40	Water proof ring	1
14	Insulating varnished sleeving	15 cm	41	Cross head tapping screw	10
15	Insulating varnished sleeving	7,5 cm	42	Sealing pad	1
16	Tie	1	43	Mechanical seal	1
17	Nylon secure line pressing cap	3	44	Impeller	1
18	Nylon secure line pressing cap	1	45	O-ring	1
19	Customization tapping screw	4	46	Diffusor plate	1
20	Junction box cover	1	47	O-ring	6
21	O-ring (TSP 7900 E)	50 cm	48	Pump head	1
21	O-ring (TSP 10000 EF)	100 cm	49	O-ring	1
22	Hex bolt	4	50	Plug cover	1
23	Spring washer	4	51	Filter cup	1
24	Fan cover	1	52	O-ring	1
25	Screw component	4	53	Transparent cover	1
26	Shaft retaining ring	1	54	Dust cover	2

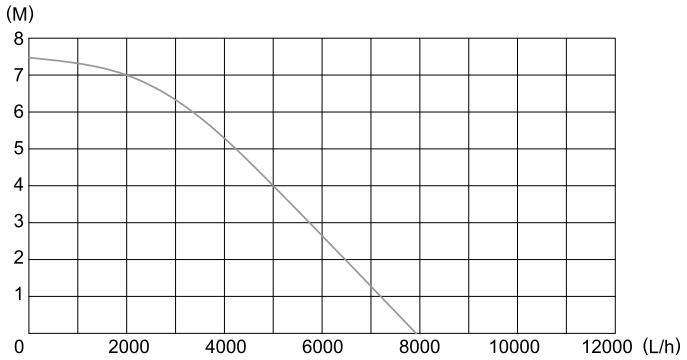
TSP 7900 E / TSP 10000 EF



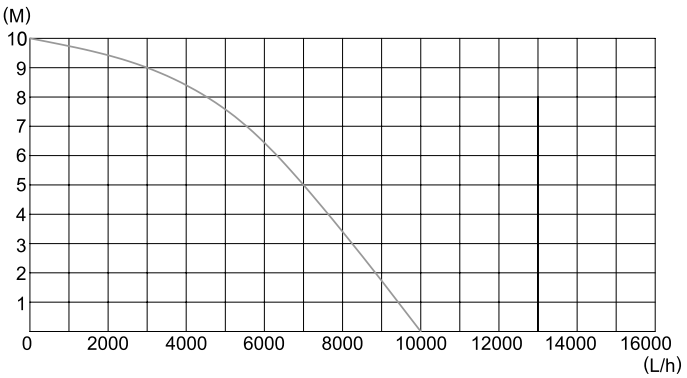
No.	Part Name	Quantity	No.	Part Name	Quantity
56	Handle	1	75	locating ring	1
57	Cylindrical pin	1	76	Cross head tapping screw	2
58	Plastic gasket	1	77	Nut	2
59	Pin	1	78	Block ring	2
60	End cap	1	79	Filter cover	1
61	O-ring	1	80	PVC pipe	1
62	Plastic gasket	1	81	Tapping screw	1
63	Spring	1	82	Filter screen assembly	1
64	O-ring	2	83	Filter barrel	1
65	Valve spool	1	84	Joint	1
66	Valve body	1	85	Seal gasket	2
67	Sealing cover	1	86	Hexagon bolt	1
68	Piezometer	1	87	Seal gasket	1
69	Drain plug	1	88	Sealing cover	1
70	O-ring	1	89	Pump base	1
71	Output connector	5	91	PTFE tape	1
72	Knob	2	92	Screw component	1
73	Pipe	1	93	Filter cotton	400
74	O-ring	1	94	Screw	4

Performance chart (delivery head / flow rate)

TSP 7900 E



TSP 10000 EF



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 wheeled bin indicates that this device and any associated components must not be disposed of with household waste at the end of their life, in accordance with the Waste Electrical and Electronic Equipment Directive (2012/19/EU) and national laws.

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.

EU Declaration of Conformity

ORIGINAL EU Declaration of Conformity for a machine in accordance with 2006/42/EC, Annex II, Part 1, Section A		
1.	Machine:	Sand filter pump
2.	Manufacturer:	Trotec GmbH Grebbener Str. 7 52525 Heinsberg Germany online@trotec.de
3.	./.	
4.	This declaration of conformity is issued under the sole responsibility of the manufacturer.	
5.	Object of the declaration:	TSP 7900 E / TSP 10000 EF Year of manufacture: as of 2025
6.	The object of the declaration described in point 5 is in conformity with the following Union harmonisation legislation:	• 2006/42/EC • 2014/30/EU • 2011/65/EU
7.	Applied harmonised standards: • EN 61000-3-3:2013 (Official Journal C 173 – 13/05/2016) • EN IEC 63000:2018 (Official Journal L 155 – 18/05/2020) • EN 60335-1:2012 EN 60335-1:2012/AC:2014 EN 60335-1:2012/A11:2014 EN 60335-1:2012/A13:2014 EN 60335-1:2012/A15:2021 (Official Journal L 115 – 13/04/2022) • EN IEC 60335-2-41:2021 IEC 60335-2-41:2012 EN IEC 60335-2-41:2021/A11:2021 (Official Journal L 194 – 02/08/2023) • EN ISO 12100:2010 (Official Journal C 110 – 08/04/2011)	
	Common specifications applied: ./.	
	Other applied standards and specifications: • EN IEC 55014-1:2021 • EN IEC 55014-2:2021 • EN IEC 61000-3-2:2019 • EN IEC 61000-3-2:2019/A1:2021 • EN 61000-3-3:2013/A1:2019 • EN 61000-3-3:2013/A2:2021 • EN 62233:2008	
8.	./.	
9.	The machine is subject to the conformity assessment procedure on the basis of an internal production control.	
10.	Other information:	Authorised representative compiling the technical documentation: Trotec GmbH Grebbener Str. 7 52525 Heinsberg Germany

Heinsberg, 1st December 2025

Joachim Ludwig (Managing Director)

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