TDP 370 E / TDP 750 E

EN

ORIGINAL INSTRUCTIONS
DEEP WELL PUMP

TROTEC

TRT-BA-TDP370E-TDP750E-TC220630TTRT06-004-EN

Table of contents

Information on the use of this instructions

Symbols

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

Warning
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.

Warning
Warnings marked with this symbol indicate a risk of falling.

Note
This signal word indicates important information (e.g. material damage), but does not indicate hazards.

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

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

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

TDP 370 E

https://hub.trotec.com/?id=44444

TDP 750 E

https://hub.trotec.com/?id=44445

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 or areas and do not install it there.
- 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 annex.
- 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.
- 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 power cable 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 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. 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 deep well pumps

- Only operate the device in an upright position.
- 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.
- Do not carry the device by holding it at the connection 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.
- Prevent dry running of the device! Before start-up the device must be completely submerged in the pumping medium.
- 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 TDP 370 E / TDP 750 E is exclusively designed for pumping clear water from greater depths serving as service water for the home and garden.

The device can be applied for the following purposes:

- water withdrawal from wells and shafts
- rain water withdrawal from cisterns

In either case, the water must comply with the conditions specified in the technical data.

The device is fully submersible (watertight encapsulation) and can be immersed up to 20 m into the pumping medium.

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

Reasonably foreseeable misuse

- 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, corrosive, 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.

Personnel qualification

People who use this device must:

- be aware of the dangers that occur when working with electric devices in damp areas.
- have read and understood the instructions, especially the Safety chapter.

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:

This label indicates the following safety warnings:

- Prevent dry running of the pump! Before start-up the pump must be completely submerged in the pumping medium.
- Carefully read the instructions before starting or using the pump.

This label indicates the following safety warnings:

- The device is not suitable for water with high sand content!

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.

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

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

Device may start up without warning
This symbol indicates dangers to the life and health of persons due to electrical voltage.

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

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

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.

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

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

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
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. Switch the device off.
2. Disconnect the device from the mains: 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 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 TDP 370 E / TDP 750 E is particularly well suited for pumping clear water from greater depths, e.g. from wells or shafts.

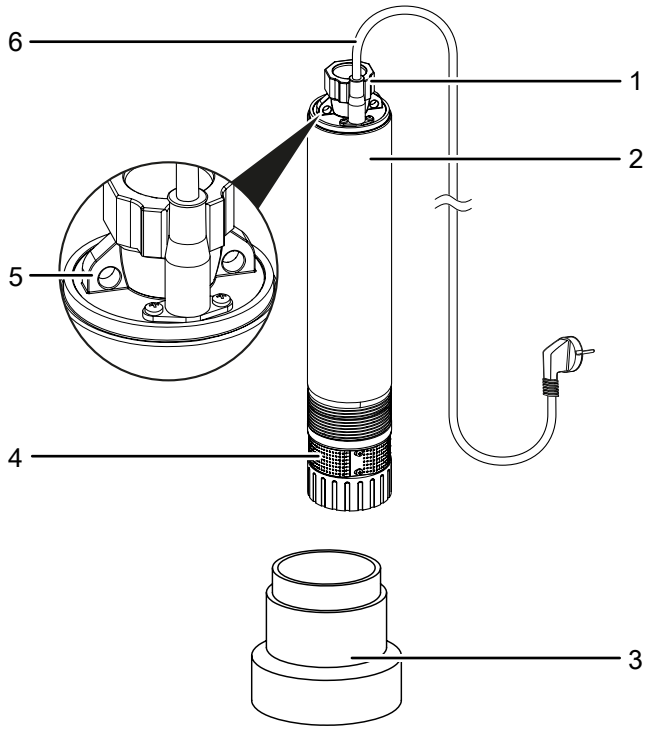
The device is able to pump up to 5100 l per hour from a working depth of up to 20 metres. In doing so, the device reaches a delivery head of up to 40 metres (TDP 370 E) or 50 metres (TDP 750 E).

The water temperature must not exceed 35 °C.

Info

The illustrations in these instructions feature the device TDP 370 E by way of example. The represented operating steps and explanations also apply to device TDP 750 E unless otherwise mentioned.

Device depiction



No.	Designation
1	Connection for pressure line with 1 ¼" internal thread
2	Pump motor
3	Spacer foot
4	Dirt strainer
5	Suspension eye
6	Power cable

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.
- Do not carry the device by holding it at the power cable or hose.

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.
- Store the appliance in an upright position where it is protected from dust and direct sunlight.
- If required, use a cover to protect the device from invasive dust.
- Check whether there is residual water left in the device, and drain any residual water to prevent rust formation.
- Put the protective cap on the pressure connection to protect the inside of the device against dust and dirt.

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.

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

Assembly and installation

Scope of delivery

- 1 x Deep well pump
- 1 x Spacer foot
- 2 x Mounting screws (spacer foot)
- 1 x Manual

Unpacking the device

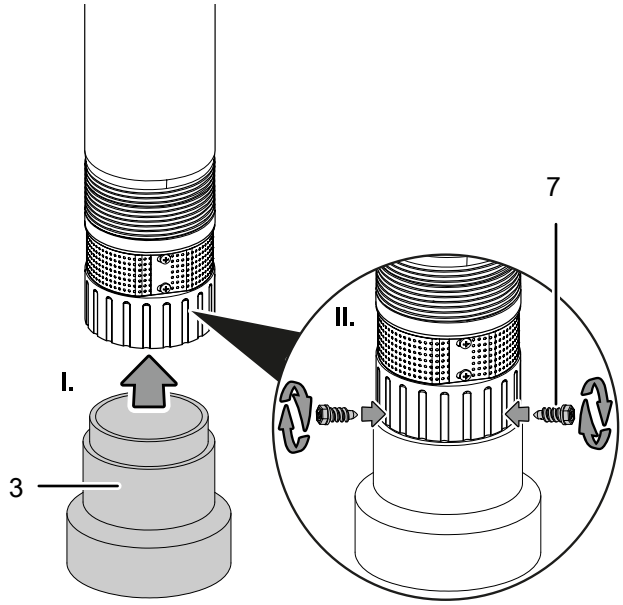
1. Open the cardboard box and take the device out.
2. Completely remove the packaging.
3. Fully unwind the power cable. Make sure that the power cable is not damaged and that you do not damage it during unwinding.

Start-up

Mounting the spacer foot

The spacer foot (3) must be attached to the device prior to initial start-up. To do so, please proceed as follows:

1. Insert the spacer foot (3) into the bottom side of the device.
2. Screw the spacer foot (3) to the bottom side of the device by using the supplied screws (7).



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 ¼" internal thread.

Please observe the following information regarding water discharge:

- The device cannot be moved flexibly when using a solid pipe.
- Please note that the conveying capacity declines with an increasing height of the pressure line.

Note

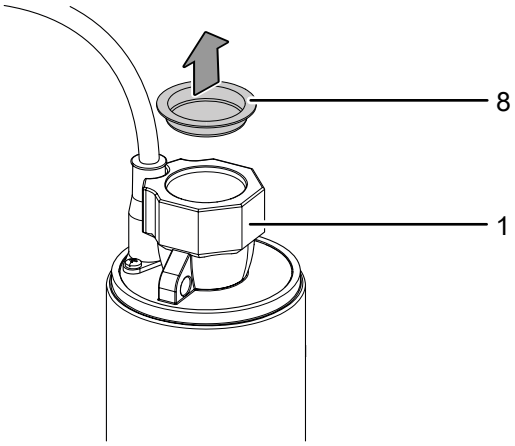
If you want to connect a flexible hose as pressure line, do not use a suction hose or a non-pressure-resistant hose. Use pressure-resistant hoses only.

Connecting the pressure line

Warning

Make sure that all parts of the pressure line are installed professionally. In case of an improper assembly or when using unsuitable parts, there is a risk of injury due to the pressurized pumping medium.

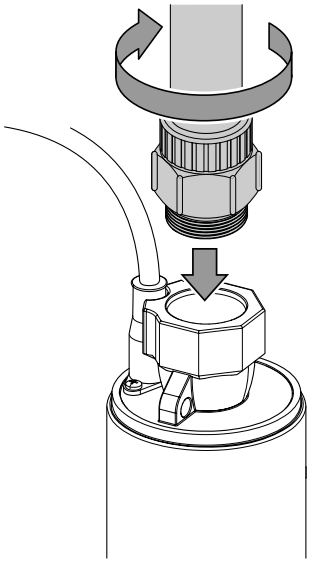
1. Remove the protective cap (8) from the pressure connection (1).



Note

Keep the protective cap (8) of the pressure connection so you can use it when storing the pump to protect the inside of the pump against dust and dirt.

2. Connect the pressure line to the pressure connection (1) using a suitable adapter (1 ¼"). To do so, apply thread seal tape (e.g. Teflon tape) to the threaded connector of the pressure line to ensure a leak-proof connection.



Installing the device

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

- The shaft/the drill hole should be vertical and the shaft walls should not have any protruding edges or projections.
- The shaft/the drill hole should have an edge length/a diameter of at least 125 mm.
- Do not leave the device running unattended.
- Check whether the hose or pipe was attached properly.
- Make sure that the power cable (6) 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. The mains socket's fusing must be sufficient.
- Make it impossible for moisture to reach mains plug or socket. **There is a risk of electric shock!**

Warning of electrical voltage

There is a risk of electric shock when submerging the device in the pumping medium.
Before submerging the device in the pumping medium, please note the following:

- Make sure that the mains plug is removed.
- Check the mains plug and the power cable (6) for damage. Do not under any circumstances use the device if you detect damages on the mains plug or power cable (6).

Warning of electrical voltage

Electric shock due to damaged power cable (6).
Do not under any circumstances use the power cable (6) for lowering, securing, positioning or lifting the device. Only use a suitable cord or rope, e.g. a nylon cord or a wire rope.

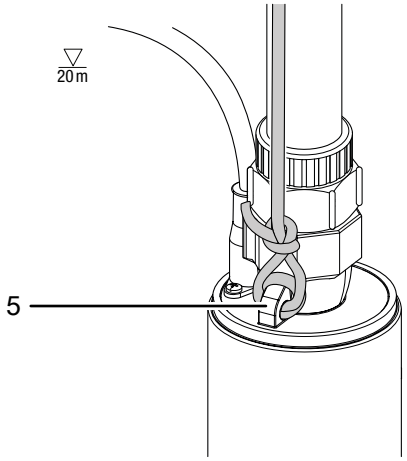
Warning

There is a risk of falling into the shaft or drill hole.
Position the device in a way that the shaft or drill hole opening is closed before, during and after operation to prevent persons or animals from falling in.

Note

At the bottom of ponds and other waterbodies deposits may have accumulated over time. To prevent the device from being damaged, it should not be lowered all the way to the ground. Observe a minimum distance of 50 cm to the ground.

1. Fasten a suitable cord or rope, e.g. a nylon cord or a wire rope, to the suspension eye (5) on top of the device.



2. Slowly lower the device and the cord/rope into the pumping medium. Pay attention to the following:
   ⇨ The device must be lowered into the pumping medium perpendicularly.
   ⇨ The device must be completely submerged in the pumping medium. Regularly check the water level to prevent the device from running dry.
   ⇨ Observe a minimum distance of 50 cm to the ground (see also schematic representation in the chapter Technical annex).
3. Attach the cord or rope to an easily accessible position, so you can pull the device back out as required.

Installation with pressure switch TDP DS / TDP DSP (optional)

Warning of electrical voltage

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

For switching a connected deep well pump on or off and for monitoring the pressure in the pipe, the device can be installed together with pressure switch TDP DS or TDP DSP.

See also chapter Available accessories.

Recommendation for usage:

- in order to install and use the device in a permanent / stationary manner, use the pressure switch TDP DS
- in order to install and use the device in a temporary / location-independent manner, use the pressure switch TDP DSP

Operation

Switching the device on

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

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

Note
Please note that the device is designed for max. 40 switch-on/switch-off operations per hour. Before every restart, wait for at least 3 minutes.

1. Plug the mains plug into a sufficiently fused mains socket.
2. After switch-on, regularly check whether the device operates correctly. Turn off the power supply if after start-up of the motor the pump shows an unusual operational behaviour (such as strong vibrations at the pump or pressure line, a fluctuating flow rate or similar). If you leave the device unattended for a longer period of time, interrupt the device's power supply.

Switching the device off

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

1. Hold onto the mains plug (6) while pulling the power cable out of the mains socket.

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 of the pumping medium by means of the cord or rope.
3. Disconnect the pressure line.
4. Clean the device according to the Maintenance chapter.
5. Store the device according to the Storage chapter.

Available accessories

Warning
Only use accessories and additional equipment specified in the instructions.
Using insertion tools or accessories other than those specified in the instructions may cause a risk of injury.

Accessories	Article number
TDP DSP (with plug)	4.610.000.291
TDP DS (without plug)	4.610.000.290

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 device to be opened must only be carried out by authorised specialist companies or by Trotec.

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

- Switch the device off.
- 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 damage.
- Check the on-site fusing.
- 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.

The device is running, but not pumping any water:

- Check whether the dirt strainer (4) is clogged. Remove any obstructions.
- Check whether the water level is too low or the device is not completely submerged. If necessary, submerge the device deeper into the water.
- Check whether the used hose diameter is too small.
- Check whether the hose line is kinked or blocked. Remove kinks and / or blockages.

The device switches off after a brief runtime:

- Check the water for dirt. If the water is too dirty, the device will become hot and the thermal protection circuit will switch the device off.
- 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 damage.
- Check the on-site fusing.

Insufficient or decreasing conveying capacity:

- Check whether the dirt strainer (4) is clogged. Remove any obstructions.
- Check the hose diameter and the delivery head. An excessive delivery head 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.

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.

Notes on maintenance

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

Safety signs and labels on the device

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

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 inside of the device with clear, lukewarm water.

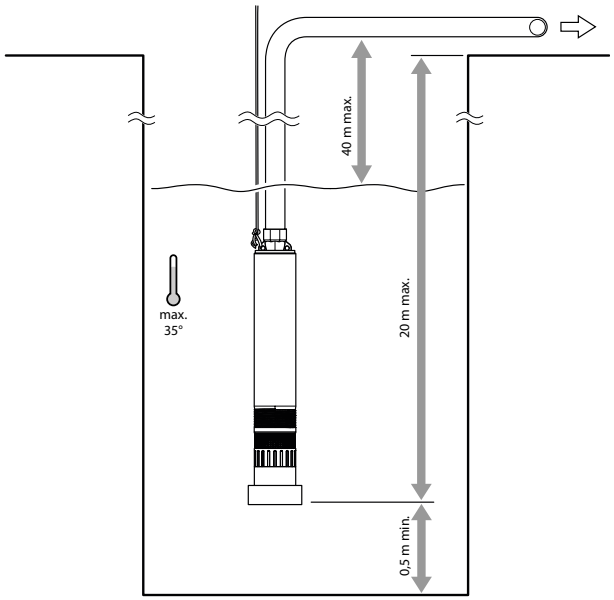
Technical annex

Technical data

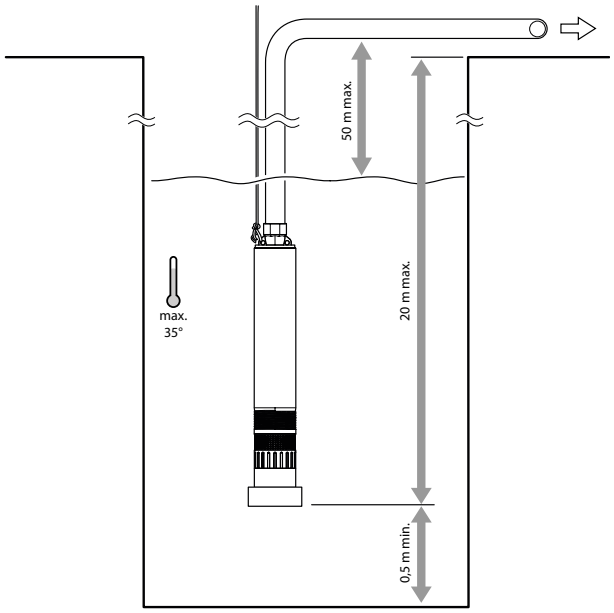
Parameter	Value	
Model	TDP 370 E	TDP 750 E
Max. flow rate	85 l/min	85 l/min
Max. delivery head	40 m	50 m
Max. submersion depth	▽ 20 m	▽ 20 m
Speed	2850 rpm	2850 rpm
Max. pressure	4 bar	5,2 bar
Min. ambient temperature	0 °C	0 °C
Max. ambient temperature	35 °C	35 °C
Power supply	220 V - 240 V ~ 50 Hz	220 V - 240 V ~ 50 Hz
Number of phases	1	1
Max. power input	700 W	1000 W
Max. pump capacity	370 W	750 W
Protection type of the pump	IPX8	IPX8
Protection class	I	I
Connection type	CEE 7/7	CEE 7/7
Cable length of the pump	23 m	23 m
Min. drill hole diameter	150 mm	150 mm
Minimum distance to the ground	50 cm	50 cm
Threaded connector, inner diameter	1 ¼"	1 ¼"
Pump dimensions (length x width x height)	125 x 125 x 690 (mm)	125 x 125 x 790 (mm)
Pump weight	10 kg	11 kg
Conditions for the pumping medium (water)		
Max. water temperature	35 °C	
Max. particle size	1.8 mm	
Max. chloride content	1.5 mg/l	
Max. hydrogen sulphide content	400 mg/l	
Min. pH	6.5	
Max. pH	8.0	

Schematic representation

TDP 370 E

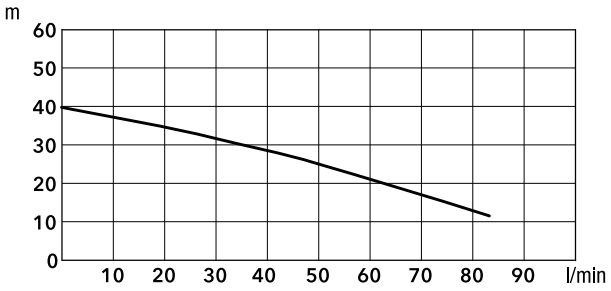


TDP 750 E

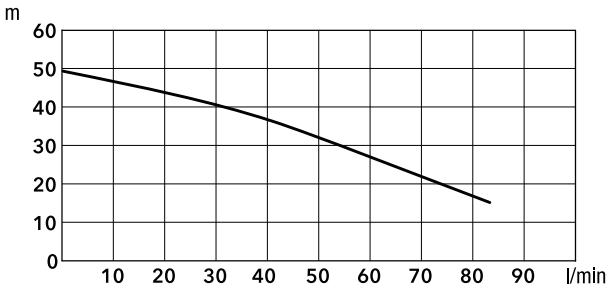


Performance chart (delivery head / flow rate)

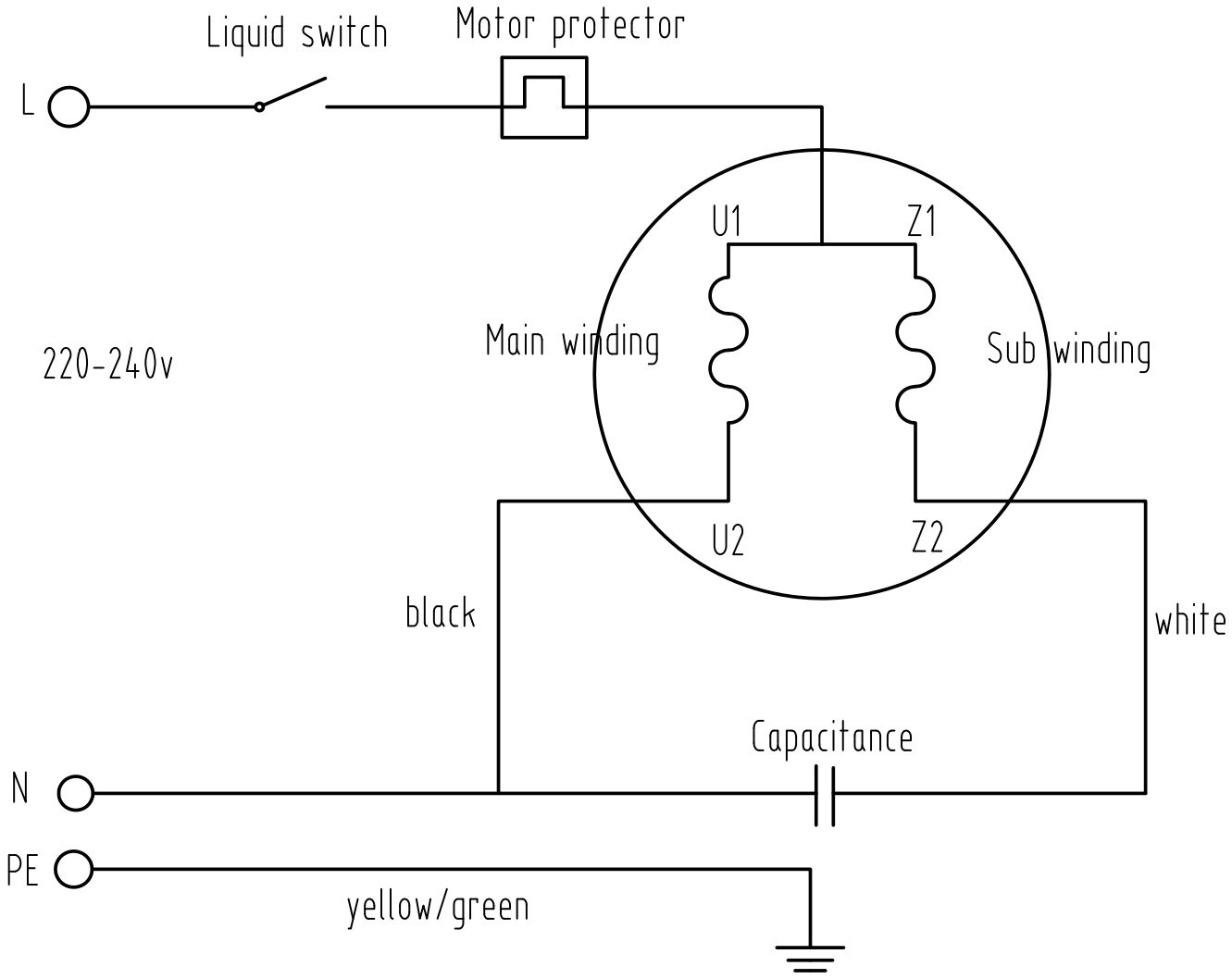
TDP 370 E



TDP 750 E

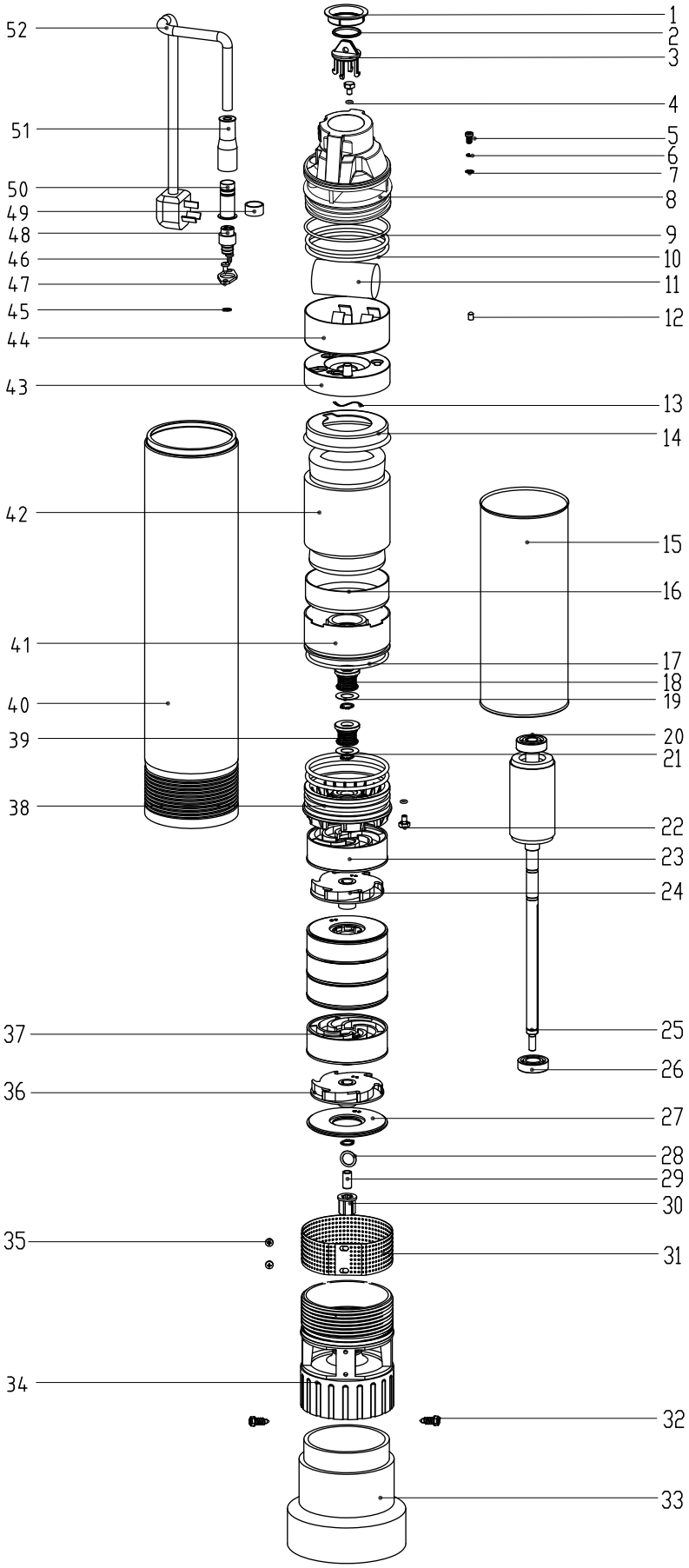


Wiring diagram



Overview and list of spare parts

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



No.	Part Name	Quantity	No.	Part Name	Quantity
1	Plastic discharge cover	1	27	Diffuser cover	5
2	O ring	1	28	Flat washer	2
3	Non-return valve	1	29	Shaft sleeve	1
4	O ring	2	30	Rubber bearing	1
5	Bolt	4	31	Filter	1
6	Spring washer	4	32	Bolt	2
7	Lock washer	1	33	Pump base	1
8	Outlet	1	34	Inlet	1
9	O ring	1	35	Bolt	2
10	O ring	4	36	Impeller	1
11	Capacitor	1	37	Diffuser	1
12	Wiring cap	3	38	Oil chamber cover	1
13	Wave-washer	1	39	Mechanical seal	1
14	Upper insulating ring	1	40	Outer casing	1
15	Motor housing	1	41	Oil chamber	1
16	Down insulating ring	1	42	Winding stator	1
17	O ring	1	43	Upper bearing seat	1
18	Mechanical seal	1	44	Capacitor box	1
19	Flat washer	2	45	Flat washer	2
20	Bearing	1	46	Bolt	2
21	Lock ring	3	47	Cable presser	1
22	Screw	2	48	Cable shield	1
23	Diffuser	4	49	Brass washer	1
24	Impeller	4	50	Cable shield	1
25	Rotor	1	51	Cable short shield	1
26	Bearing	1	52	Electric cable	1

Disposal

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

The icon with the crossed-out waste bin on waste electrical or electronic equipment is taken from Directive 2012/19/EU. It states that this device must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. You can also find out about other return options that apply for many EU countries on the website https://hub.trotec.com/?id=45090. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.

Only for United Kingdom

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

Declaration of conformity

Declaration of conformity in accordance with the EC Machinery Directive 2006/42/EC, Annex II, Part 1, Section A

We – Trotec GmbH – declare in sole responsibility that the product designated below was developed, constructed and produced in compliance with the requirements of the EC Machinery Directive in the version 2006/42/EC.

Product model / Product:	TDP 370 E TDP 750 E
Product type:	deep well pump
Year of manufacture as of:	2023

Relevant EU directives:

- 2011/65/EU
- 2012/19/EU
- 2014/30/EU
- 2015/863/EU

Applied harmonised standards:

- EN 60335-1:2012/A15:2021
- EN IEC 60335-2-41:2021/A11:2021

Applied national standards and technical specifications:

- EN IEC 55014-1:2021
- EN IEC 55014-2:2021
- 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

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

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