

# Operation Manual

## Core Drill 61500



Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.



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Even though, the WilTec Wildanger Technik GmbH has undergone biggest possible efforts to ensure that the operating manual is complete, faultless, and up to date, mistakes cannot be entirely avoided.

If you should find a mistake or wish to make a suggestion for improvement, we look forward to hearing from you.

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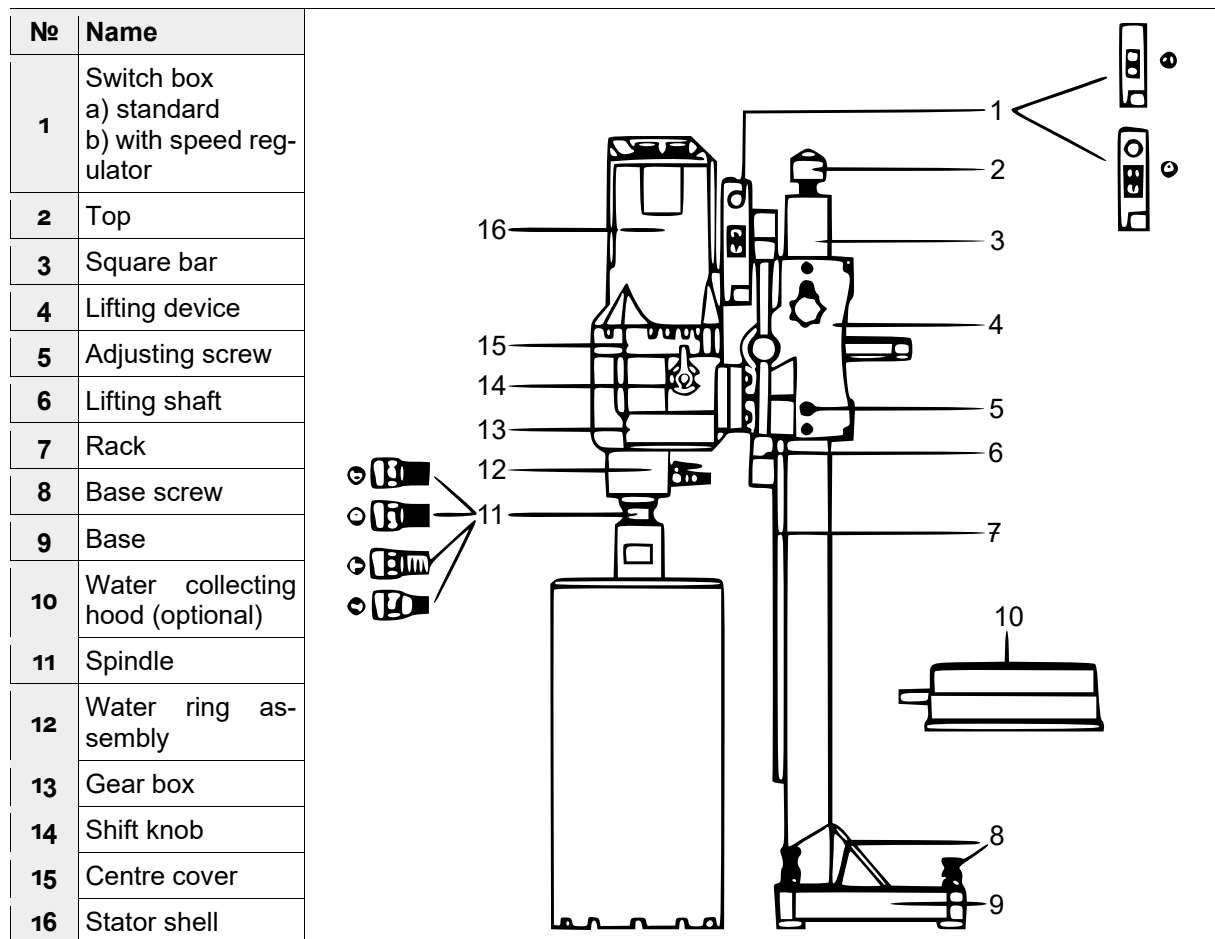
## Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**

Keep these operation instructions safe.

**⚠ Warning:** To prevent electric shock or fire, please strictly comply with the procedures in this operation manual. The machine is designed only to be operated by well-trained people. Please do not let other people operate the tool. If there is any violation of the operation instructions which might have caused personal injury or damage to the machine, the manufacturer and seller cannot be held responsible. The machine can only be maintained by qualified specialists.

## Components



## Safety instructions

### General safety instructions

- Read all precautions before operating the device and keep them for future reference.
- Follow the operating instructions strictly; failures in the compliance with these safety precautions and instructions can cause electric shock, fire, and/or heavy injuries.
- Keep your working area clean and well illuminated. Untidiness or badly illuminated working spaces can cause accidents and serious injuries.



- Do not work in explosive areas with the electric tool, where there are flammable liquids, gases, or dusts.
- Keep children and other people away from the electric tool while using it. Being distracted, can cause loss of control over the device.
- Always pay attention to what you are doing and be aware at all time while using the electric tool. Do not use the electric tool when you are tired or under the influence of drugs, alcohol, or medication. One moment of carelessness while using the tool can cause serious injuries.
- Wear personal protective equipment and always wear protective glasses. Wearing personal protective equipment like a dust mask, skid-proof shoes, a protection helmet, or hearing protection reduces the risk of injuries.
- Avoid an unintended start-up. Make sure that the electric tool is switched off before connecting it to the electricity, picking it up, or carrying it. When carrying the device with your fingers on the switch or connecting it to the electricity before checking whether the power switch is activated can lead to serious accidents.
- Remove adjusting tools or wrenches before switching on the electric tool. A tool or wrench which is located on a moving part can cause serious injuries.
- Avoid unnatural postures. Care for a safe and stable posture and keep your balance at any time. Do not work on a ladder. Keeping your posture in mind will allow you to control the tool better in case of unexpected situations.
- Wear suitable clothing. Do not wear loose clothing or jewellery. Keep hair, clothing, and gloves away from moving parts. Otherwise, they can be caught by moving parts.
- Do not overload the device. Use the appropriate tool for your work. With the appropriate tool you will work better and saver in the declared range of performance.
- Do not use an electric tool with a damaged switch. An electric tool which cannot be switched on or off is dangerous and must to be repaired before it is allowed to be used again.
- Disconnect the plug from the socket before altering settings, exchanging equipment, or when storing the device. This safety measure avoids unintended starts of the electric tool.
- Keep unused electric tools out of reach of children. Do not allow people to use the device who are not familiar with it or have not thoroughly read and understood these instructions. Electric tools are dangerous if they are used by inexperienced people.
- Voltage: Please note that the power voltage should not be more than  $\pm 5\%$  of the rated voltage. Higher voltages however can cause irreparable damages.

#### *Instruction for hand-held drills*

- Wear hearing protection when operating the device.
- Use the additional handle included in the delivery.
- Always hold the handle while operating the machine.

#### **Shifting gear**

- To improve the efficiency, some machines are designed with a 2-speed gear shift: high speed (H speed) and low speed (L speed). H speed is for drilling on soft material with a small drill bit and L speed is for drilling on hard material with a large drill bit.
- Shift when the machine stops or is nearly stopping.
- Shift in place: If the spindle does not rotate or there is some noise after starting it up, the gear may not shift in place. Turn off the machine immediately and then shift the gear to its proper place. Rotate the spindle back and forth (easy to shift) at the same time until the shift is in place.
- Do not shift when the machine is full-speed operated, overloaded, or stuck.

#### **Technical data**

<b>Tension (V)</b>	230
<b>Frequency (Hz)</b>	50
<b>Intake power (W)</b>	2080



<b>Max. speed</b> (1/min)	1700
<b>Bore diameter</b> (mm)	12–110
<b>Thread dimension</b> (mm)	20.92 (1/2") external thread / 31.75 (1 1/4") external thread
<b>Hose diameter</b> (mm)	8 / 6
<b>Hose length</b> (m)	2

### Safe operation

- Please read the manual carefully before using the tool. This machine may only be used by trained people.
- Please check the voltage before start. The power voltage should not be more than  $\pm 5\%$  of the rated voltage. Higher voltages however can cause damage, e.g., an engine fire or electric leakage.
- Wear a helmet, insulating gloves, and the right gear. Do not wear wide clothing or jewellery and keep your hair away to avoid injuries.
- This machine is designed for wet drill bits. Do not use any other bits and never increase the engine load.
- Make sure that no water enters the engine. Do not block the ventilation in case of an engine fire.
- Check the workplace before operation. Eliminate any dangers such as high voltage power lines, gas piping, water pipes, and other possible sources of danger.
- Pay attention to the safety of the lower layer if the machine should drill holes through the floor. Check the structure of the building before drilling any beam column.
- Do not work in explosive areas in which there are flammable liquids, gases, or dusts. Electric tools generate sparks which can inflame the dust or vapours.
- Make sure that you start to operate the drill machine without any load. Starting with load is prohibited and may cause damages to the machine and users. Always repair possible damaged parts of the machine in case of dropping when working in a high place.
- Use a high-quality three-core cable and make sure the cable is connected with ground. A ground fault circuit interrupter is necessary.
- **Attention: The manufacturer does not assume any responsibility for caused accidents due to the machine not being solid or fixed safety facilities are not in appropriate place.**

### Operation

- Extension bolt fixation: Drill a hole by impact drill in the set position and screw the extension bolt. Always make sure it is tight and fix the diamond drill machine on it. Adjust the four regulating screws to keep the drill machine from swinging.
- Support rod fixation: Determine the drilling location. Fix the supporting rod by adjusting the length of the push rod and adjust the fastening screws. Ensure that the drilling rig substructure is at full contact. If you drill vertically do not swing.
- Fix the drill bit and connect it to the power and water supply. Move the adjusting tools as needed and switch on the drill when it is at no load. Check the drill bit and sound and open the water tap if everything is fine. The machine can start to drill when the water flows from the drill bit.
- Take it slow at first. When the drill bit cuts in the wall you can change to normal speed. Slow down the machine if it runs into steel.
- The drill machine is equipped with mechanical and electronic protection. If the engine is running while the drill bit is not moving it means that the drill bit needs to be sharpened or the feeding speed is too fast. In that case, pull out the drill and then re-feed it. If the engine shortly stops while drilling, switch it on again and slow down the feed speed.
- After a certain period, the abrasion of the friction plate may cause slip. They might need to be realigned. This may only be done by a qualified technician.



## Cleaning and maintenance

**Warning:** Always pull the mains plug before beginning with maintenance or repairs.

- Clean the machine with a dry or moist cleaning-rag and **not** with a stream of water. Make sure the water does not get into the engine and the switch box. Keep the ventilation apertures clean and do not forget to clean the core bit thread. Also grease it and check all screws. Tighten them if necessary.
- Have your tool only repaired by qualified technician and only with original spare parts. Other parts might cause damage to a person or the machine.

### Carbon brush

After you have used the machine for about 300 hours, you should check the wear of the carbon brushes and replace them if necessary. Like any other work on the engine this must only be done by an authorised technician.

## Troubleshooting

Error	Cause	Solution
Engine does not work	Power off or plug loosed	Power up, plug in.
	Carbon brush stuck and detached from diverter	Re-install carbon brush.
	Resetting PRCD failed	Push reset button or re-start the engine.
	PRCD damaged	Change PRCD.
Slow drilling	Drill bit worn out	Change drill bit.
	Feeding speed too low	Accelerate feeding speed.
	Drill bit pasted by chips	Clean the drill bit, enhance the water pressure.
	Rotate speed too high	Change to low speed.
	Cutting on steel and slip	Reduce feeding speed, increase it after cutting through the steel.
	Too much chips in the hole	Clean the bottom of the hole, enhance water pressure.
	Less water supply or water leakage	Check ball valve and water flow.
Drill bit jam	Drill bit becoming glazed	Sharpen the drill bit with a grinder.
	Tube and drill bit or drill bit and hole wall jammed by chips; stand not secured, move location.	Switch off machine, turn the drill bit right and left with a wrench, or pull the drill bit out and break up the core sample.
	Cutting on steel and slip.	Narrow the gap.

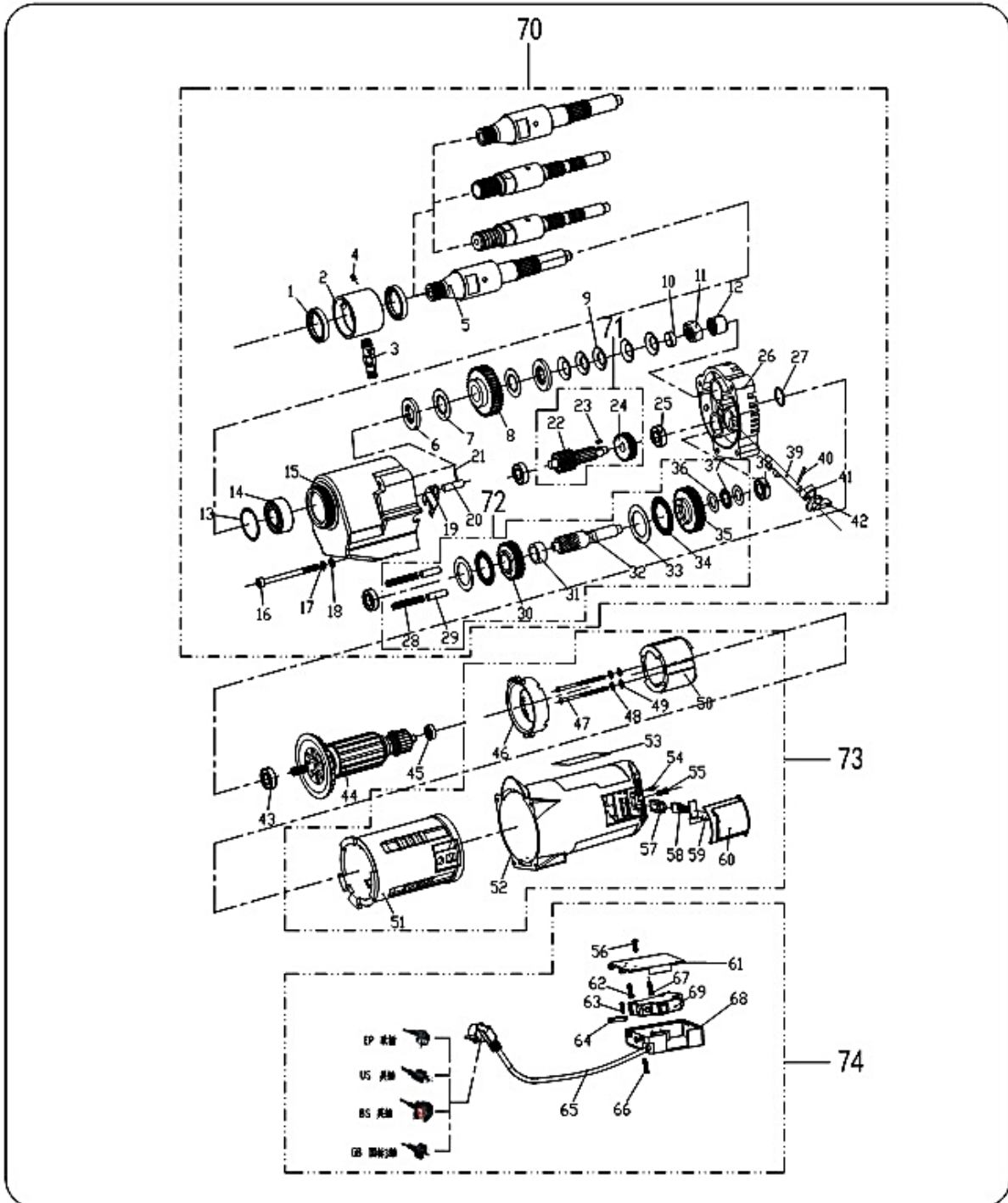


Drill blocked	Spindle not straight	Repair or replace the spindle.
	Drill bit not straight	Replace the drill bit.
	Chips cannot be flushed out of the hole	Enhance water pressure, pull out the drill bit, clean the hole.
Water cover leaking	Seal of the frame worn out	Change the seal.

### Parts list and explosion view

№	Name	Qty.	№	Name	Qty.
1	Water seal	2	36	Pad	2
2	Water circle	1	37	Locking ring	2
3	Water tap	1	38	Bearing	2
4	Top wire M4×6	1	39	F gear lever	1
5	Main axis	1	40	Shifting yoke	1
6	Flesh flat pad	2	41	Pad	1
7	Separation film	2	42	Dialling knob	1
8	Spindle gear	1	43	Bearing	1
9	Curved bullet pad	5	44	Rotor	1
10	Ring	1	45	Bearing	1
11	Nut	1	46	Bend	1
12	Roller bearings	1	47	Hexagonal screw M5×80	2
13	Inner card	1	48	Pad M5	2
14	Bearing	1	49	Pad M5	2
15	Gear box 250	1	50	Stator	1
16	Hexagonal screw M6×110	4	51	Gum shell	1
17	Pad M6	4	52	Stator shell	1
18	Pad M6	4	53	Name plate	1
19	Pressure spring	1	54	Hexagonal screw M4×10	2
20	Cylinder	1	55	Round cross screw M4×12	2
21	Shifting yoke	1	56	Cross level screw M4×10	1
22	Class I tooth shaft	1	57	Brush holder	2
23	Circlip	1	58	Carbon brush	2
24	Class I gear	1	59	Round cross screw M4×8	2
25	Bearing	2	60	Brush frame	2
26	Middle cover	1	61	Switch box cover	1
27	O-ring	1	62	Cross level screw M4×16	1
28	Pulling spring	2	63	Cross level screw M4×16	2
29	Iron ring	2	64	Threading board	1
30	Type II low-speed gear	1	65	Power cord	1

31	Ring	1	66	Cross level screw M4×20	2
32	Class II tooth shaft	1	67	Cross level screw M4×10	1
33	Shaft seal ring	2	68	Switch box	1
34	Locking ring	2	69	Switch D18	1
35	Bearing	1			





## Disposal regulations

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WiTec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with the domestic waste.

The company WiTec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).

The logo on the article or on its packaging points out that this article must not be treated as normal household waste but must be disposed to a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this article you protect the environment and the health of your fellow men. Environment and health are threatened by inappropriate disposal.



Material recycling helps reduce the consumption of raw materials.

Additional information on recycling this article can be provided by your local community, municipal waste disposal facilities, or the store where you purchased the article.

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