



KERNLOCHBOHRER[®]
PROFESSIONAL POWER TOOLS



Operating instructions

Diamond core drill

DKS-132/DC-H

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Version 0 1. Output 05/2023

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Introduction and description

The core drilling equipment of the DKS-DC series is intended for professional use and may only be operated by instructed persons. Strictly adhere to the instructions in the operating manual to avoid electric shock or fire.

Our company declines all responsibility in the event of violations of the operating instructions that may result in injury or machine damage. In addition, all currently applicable regulations of the Accident Prevention Regulations (UVV) and the Employer's Liability Insurance Association (BG) must be observed.

In connection with the corresponding drill bits, the machine is intended for drilling concrete, stone and masonry in dry cutting. The machine has a soft impact function that facilitates drilling. However, care must be taken to select the appropriate drill bit.

The machine may be serviced only by persons who have the appropriate qualification and certification.

About this guide

These operating instructions are for the model
DKS-132/DC-H

Check the machine model against the nameplate.



Thanks to the buyer

Thank you for purchasing a core drill of the DKS DryCut series from Kernlochbohrer GmbH. Please read the operating instructions carefully and observe the safety instructions. Through proper operation, you will fully appreciate the outstanding performance of our products. Keep this manual in a safe place for future reference.

If you have any questions regarding the operation of the core drill, please contact Core Drill GmbH directly. We are available to answer your questions at any time.

Note:

Kernlochbohrer GmbH reserves the right to change the design and appearance of the products and their operating instructions. Future changes to the operating instructions will be made without prior notice.

Explanation of symbols



General Danger Warning. Failure to follow these safety precautions and instructions may result in electric shock, fire and/or serious injury.

Safety regulations

- ❖ Read all precautions before start-up and keep the operating instructions. In addition, all currently applicable regulations of the Accident Prevention Regulations (UVV) and the Employer's Liability Insurance Association (BG) must be observed.
- ❖ Please follow the operating instructions carefully, as failure to follow these safety precautions and instructions may cause electric shock, fire and/or serious injury.

1. Keep your work area clean and well lit. Disorder or unlit work areas can lead to accidents.
2. Do not work with the power tool near flammable liquids, gases or dust. Power tools produce sparks that can ignite dust or fumes, causing explosions.
3. Keep children and other persons away while using the power tool. If you are distracted, you may lose control of the tool.
4. Be attentive, work with concentration and pay attention to what you are doing. Do not use a power tool when you are tired or under the influence of drugs, alcohol or medication. A moment of inattention can result in serious injury.
5. Wear suitable protective equipment and always protective goggles. Wearing suitable protective equipment such as a dust mask, non-slip safety shoes, hard hat or hearing protection reduces the risk of injury.



6. Avoid unintentional starting of the machine. Make sure that the power tool is switched off before connecting it to the power supply. If you have your finger on the switch when carrying the power tool or connect the machine to the power supply when it is switched on, this can lead to accidents.
7. Remove setting tools or wrenches before switching on the power tool. A tool or wrench that is on a rotating device can cause injury.
8. Avoid unusual postures. Ensure a secure footing and maintain your balance at all times. Do not work on a ladder. This will give you better control of the power tool in unexpected situations.

9. Wear appropriate clothing. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothing, jewelry or long hair can be caught by moving parts.
10. Do not overload the device. Use the appropriate power tool for your work. With the appropriate power tool, you will work better and more gently in the specified power range.
11. Do not use a power tool whose switch is damaged. A power tool that cannot be switched on and off is dangerous and must be repaired.
12. Unplug the power tool from the wall outlet before making any adjustments, replacing accessories, or setting aside the power tool. This safety measure prevents the power tool from starting unintentionally.
13. Keep unused power tools out of reach of children. Do not allow persons to use the device who are not familiar with it or have not read these instructions. Power tools are dangerous when used by inexperienced persons.
14. Note that the voltage must not exceed +/-5% of the nominal voltage. Higher voltages can cause irreparable damage. Note that higher voltage peaks are not generated when operating the machine via a generator.
15. The plug of the power tool must match the socket. Do not change the plug under any circumstances. Do not use adapter plugs with grounding-type forces. Unmodified plugs and matching outlets reduce the risk of electric shock.
16. Avoid body contact with grounded surfaces or grounded components such as pipes, radiators, ranges, and refrigerators.
17. Do not expose power tools to rain or wet conditions. Water entering a power tool increases the risk of electric shock.

18. Never use the cord to carry or pull the power tool or to unplug the power tool from the wall outlet. Keep it away from heat, oil, sharp edges or moving parts. Damaged, crushed or twisted cables increase the risk of electric shock.
19. When using a power tool outdoors, use only an extension cord that is suitable for outdoor use. Using a cord that is suitable for outdoor use reduces the risk of electric shock. When using with an extension cord, also make sure that the extension cord has the same cross-section as the cord on the machine.
20. The use of products such as cutters, grinders, drills that machine sand or other materials can generate dust and fumes that may contain hazardous chemicals. Check the type of material you are going to machine and use a suitable respirator.
21. Non-approved spare parts and any modification are prohibited on our products.
22. If the operation of a power tool in a damp environment is unavoidable, use a residual current circuit breaker. The use of a ground fault circuit interrupter reduces the risk of electric shock.
23. If a vacuum cleaner and suction device are required, make sure they are connected and used properly. The use of a vacuum cleaner can reduce dust-related hazards.

Technical data

Model	DKS-132/DC-H
Item no.	6193
Power	1500W
Voltage	230V
Current	10A
Weight	3,7kg
Frequency	50-60HZ
Gauge speed	1500/3000 1/min
Max. Drill diameter	132mm / 72mm
Beat frequency	24000BPM / 48000 BPM
Spindle thread	M18

Product description

DKS-132/DC-H



- | | |
|------------------------------------|-----------------------------|
| 1. Adapter M18 to M16 | 4. Motor housing |
| 2. Switch for gears 1 / 2 | 5. LED red and yellow light |
| 3. Switch for soft strike function | |

Use and care

Only use diamond core bits which are in a sharp and undamaged condition. Properly maintained diamond core bits with sharp cutting segments do not become entangled so quickly and are easier to guide.

Use the power tool, accessories and drill bits etc. in accordance with these operating instructions, taking into account the working conditions and the work to be performed. Using the power tool for operations other than its intended use could result in a hazardous situation.

Have your power tool repaired only by qualified personnel and only with original spare parts.



Precautions

1. ALWAYS wear hearing protection! When using drilling motors, the loud drilling noise in the working area can cause hearing damage.
2. When drilling, keep a sufficient distance to the core drill and do not touch any rotating parts. Protect the danger zone and keep children and other persons away from it. Falling and splashing parts can cause injuries.
3. This diamond core drill is intended for professional use only and may only be operated by trained personnel. The appropriate use of the core drill includes drilling rock, reinforced concrete and masonry.
4. The drill motor must be checked regularly (approx. every 6 months) by a certified electrician in accordance with VDE.
5. Switch off the core drill immediately if it stops for any reason. After you have determined and eliminated the cause and performed a visual inspection of the device and core bit, the core drill can be restarted.

Preparation

Subject the core drill to a brief visual inspection before each start. Also check whether the network voltage corresponds to the voltage specified on the nameplate of the tool.

Use and change of drill bits

A diamond core bit is a cylinder which is equipped with brazed or laser-welded segments. The DKS-132/DC-H core drill is only suitable for dry drilling. Please make sure that you use an appropriate core bit for dry drilling. The machine is equipped with a soft impact function. If you want to use this, please make sure that you use a corresponding core bit that is suitable for this. The drive spindle has an M18 connection. An adapter from M18 to M16 is included in the scope of delivery. Adapters are available as accessories for drills with other external threads.

For easier removal of the drill bit, you can apply waterproof grease to the spindle thread of the machine.

Make sure that you have disconnected the mains plug from the mains before changing drill bits or removing them.

The core drill and the drill bit are relatively heavy. For this reason, always wear protective gloves to prevent the sharp tool from causing injury to your hand.

To mount a drill bit on the core drill, simply screw it onto the drill spindle. To change the drill bit, use a 22mm wrench on the drill spindle and a 24mm wrench on the core bit at the same time.



After mounting the drill on the machine, run it briefly and the drill bit.

Drill and machine cooling

The gearbox of the drill motor has an oil-lubricated solid cooling system. The electric motor is air-cooled.

Speed selection

The DKS-132/DC-H is equipped with a grease gear.

Select the speed according to the drill diameter (see type plate).

Speed selection or gear change may only be performed when the core drill is switched off. Turn the gear selector either clockwise or counterclockwise to the desired position until it is engaged. If necessary, turn the drill spindle slightly with a wrench to facilitate the speed change. In this case, disconnect the machine from the power supply beforehand.



The maximum diameter and speeds indicated on the nameplate are based on an average concrete hardness. The speed varies depending on the hardness of the material. For reinforced concrete, please select a low gear to reduce the speed.

Drilling

Always switch on the machine without load.

Start the gate cut by not approaching the drill diameter with the full cutting surface of the drill. Once a V-notch cut is drilled on the drill face, line up the drill at a right angle while increasing the feed pressure.

Increase the feed pressure as soon as the cutting depth of approx. 10mm is reached.

Always keep an eye on the condition of the core drill. If you notice that it starts to smoke slightly or you notice the smell of an electric motor, relieve the core drill by withdrawing it from the core hole. Then continue drilling slowly and carefully.

When you have almost reached the end of the through hole, reduce the feed pressure at this point until the core bit exits at the other side.

If you have selected too high a speed when drilling or you are working with too high a feed pressure, this can cause the drill bit to jam.

When using the soft impact function, a low initial feed pressure is recommended.

If, during the drilling process, you notice that the feed rate decreases at the same force and metal splinters are visible, you have encountered rebar. Reduce the pressure on the drill bit to cut through this without difficulty. You can increase the pressure again when you have cut through the reinforcing iron.

If wooden beams, thick asphalt or bitumen are cut, this will increase the current. In this case, reduce the feed rate to continue drilling.

If you need to drill deeper than the effective length of your drill allows, an optional extension can be used.

Soft strike function

You can use the DKS-132/DC-H with soft impact function or in normal drilling mode. To make this selection, use the switch on the top of the machine. When dry drilling reinforced concrete, the soft impact function is recommended.



Soft strike function



normal drilling mode

Mechanical overload protection

This machine is equipped with a mechanical slip clutch to protect the operator and the machine from excessive torque forces. If the drill suddenly jams in the hole, the safety clutch disengages and the drill spindle stops.

Make sure that the load on the clutch does not exceed max. 3-4 seconds. Unload the machine immediately. Otherwise, the high wear may destroy the safety coupling. Do not continue drilling if the slipping clutch has been released, reduce the feed rate immediately and wait until the drill bit has reached the desired speed again.

Avoid jamming the drill bit during drilling.



Caution!

A worn clutch must be replaced immediately by a specialist at an authorized workshop. Working with a worn slipping clutch can lead to serious injuries.

Electronic overload protection

There are 2 LED indicators on the DKS-132/DC-H core drill. When the core drill reaches peak load for the first time, the unit starts to reduce its speed. If you continue to use it at full load or the peak load is reached again, a red LED lights up to signal the operator that the maximum power supply has been reached. Immediately reduce the feed rate until the red LED goes out.



If the core drill is in overload condition for a long time, the machine switches off for self-protection and the red LED remains lit. Disconnect the machine from the power supply and carry out a visual inspection of the machine.

Overvoltage protection

The drill motor can absorb short-term voltage peaks of up to max. 260V. Higher voltages can cause irreparable damage. Please note that if the machine is operated via a generator, they do not exceed the maximum specified value.

If the overvoltage protection trips during operation of the DKS-132/DC-H core drill, please check the power source and change it if necessary.

Overheating - Thermal protection

If the temperature of the drill motor becomes too high, the built-in thermal protection switch in the machine responds. At the same time, the yellow LED light illuminates and the motor switches off. If this happens, do not restart the motor immediately. Always allow the motor to cool down first for approx. 2-3 min.

Protection of the control unit

When the power tool operates under adverse conditions and problems such as overload, bevel failure, short circuit or even rotor-stator interference, the power tool control unit will shut down the power. The red LED light flashes in case of overload, the yellow LED light flashes in case of overheating.

Daily maintenance of the power tool

1. Check that all screws and nuts are well tightened.
2. Check if the gearbox is tight or if grease is leaking.
3. Always keep all accessories and the machine clean and dry.
4. Check the condition of the gearbox grease after the gearbox has reached approx. 200 working hours. If the gearbox grease is heavily contaminated, have the gearbox grease replaced immediately by an authorized service center. Recommended grease: SHELL GADUS S2 U460L 2, quantity of grease: 35 grams
5. After finishing the work, remove the drill bit and then clean the entire machine. Do not forget to lubricate the spindle thread. Keep the power tool out of reach of children and in a dry environment.
6. Insulation resistance measurement. Use a 500V ohmmeter to measure the insulation resistance between L1 (phase), N (neutral) and the housing. The value must not be less than 7 MΩ.

Maintenance and inspection plan

Regular inspection according to the maintenance and inspection schedule is urgently required. Shorten the intervals between maintenance if you use the product very frequently.

Maintenance points (regular inspection required)	Each time before use	In the first month or after 25 working hours	In the third month or after 50 hours of work	Every year or after 200 working hours
Leakage of the gearbox seals	√	√	√	√
Mains cable Visual inspection	√	√	√	√
Concentricity of the drilling spindle	√	√	√	√
Wear / damage to the drill spindle	-	-	√	√
Mains switch Function test	√	√	√	√
Drill spindle lubrication	√	√	√	√
Nuts and bolts	√	√	√	√
Gear grease	-	-	-	√
General cleaning	-	√	√	√

Troubleshooting

If a defect occurs during operation of the core drill, contact a nearby service station or Kernlochbohrer GmbH immediately. Never disassemble the power tool yourself.

Electrical components such as the rotor-stator, printed circuit board, power cable or plug, etc. may only be checked and repaired by a certified electrician in accordance with VDE.

Malfunction	Possible cause	Troubleshooting
Drill motor does not work	<p>Mains power supply interrupted or plug not inserted correctly.</p> <p>Power cord or switch damaged.</p> <p>Rotor stator damaged.</p>	<p>Plug in another electrical device and check the function or check the plug connection.</p> <p>Have it checked and, if necessary, replaced by a qualified electrician.</p> <p>Have it checked by a qualified electrician and replaced if necessary.</p>
Drill stops unexpectedly suddenly during drilling	<p>The gears are not engaged or disengaged properly.</p> <p>Slipping clutch worn.</p> <p>High steel content in concrete or very hard material.</p> <p>Gearbox damaged.</p>	<p>Selector lever is not engaged when turned. Turn it to the desired position until it engages.</p> <p>Have clutch friction disks replaced.</p> <p>After switching off the machine, adjust the position of the drill bit slightly with a wrench and tap the tube carefully and gently with a mallet handle until the stuck drill bit loosens. Slowly pull out the drill bit and restart the drill.</p> <p>Have the gearbox replaced by a specialist.</p>

<p>Drilling speed is much too slow</p>	<p>End of drill life or segments are not in good condition or broken off.</p> <p>Drill bit is blunt.</p> <p>High proportion of steel in the concrete or hard drilling material.</p> <p>Drill angle has become misaligned.</p>	<p>Check the drill and the segments and replace the drill if necessary.</p> <p>Re-sharpen the segments.</p> <p>Reduce the pressure on the drill to cut through the steel. Increase it again when it has cut through.</p> <p>Realign the drill angle so that the drill is perpendicular to the cut surface.</p>
<p>Drilling spindle wobbles</p>	<p>Drilling spindle is worn</p>	<p>Check whether the spindle is worn and have it replaced if necessary</p>
<p>Flying sparks on the collector</p>	<p>There is a short circuit or an interruption at the rotor coils.</p> <p>The commutator is worn out.</p>	<p>Have the rotor checked and replaced if necessary.</p> <p>Replace the rotor with a new one.</p>

Environmental protection

Raw material recovery instead of waste disposal!

To avoid transport damage, the device must be delivered in sturdy packaging. Packaging as well as the device and accessories are made of recyclable materials.

The plastic parts of the device are marked according to the material. This enables environmentally compatible, sorted disposal via the collection facilities offered.

For EU countries only

Do not dispose of power tools in household waste! According to the European Directive 2012/19/EU on waste electrical and electronic equipment and its implementation in national law, used power tools must be collected separately and recycled in an environmentally friendly manner.

Noise/Vibration

The noise of this power tool is measured according to DIN 45 635, part 21. The sound pressure level at the workplace can exceed 85dB (A); in this case, sound protection measures for the operator are required.

Wear hearing protection!



Hand/arm vibration is typically lower than 2.5m/s². Measured values determined according to EN 61 029.

The specified vibration level represents the actual applications of the power tool. However, if the power tool is used for other applications, with deviating application tools or insufficient maintenance, the vibration level may deviate. This can significantly increase the vibration load over the entire working period.

For an accurate estimation of the vibration load, the times should also be taken into account when the unit is switched off or running but not actually in use. This can significantly reduce the vibration load over the entire working period.

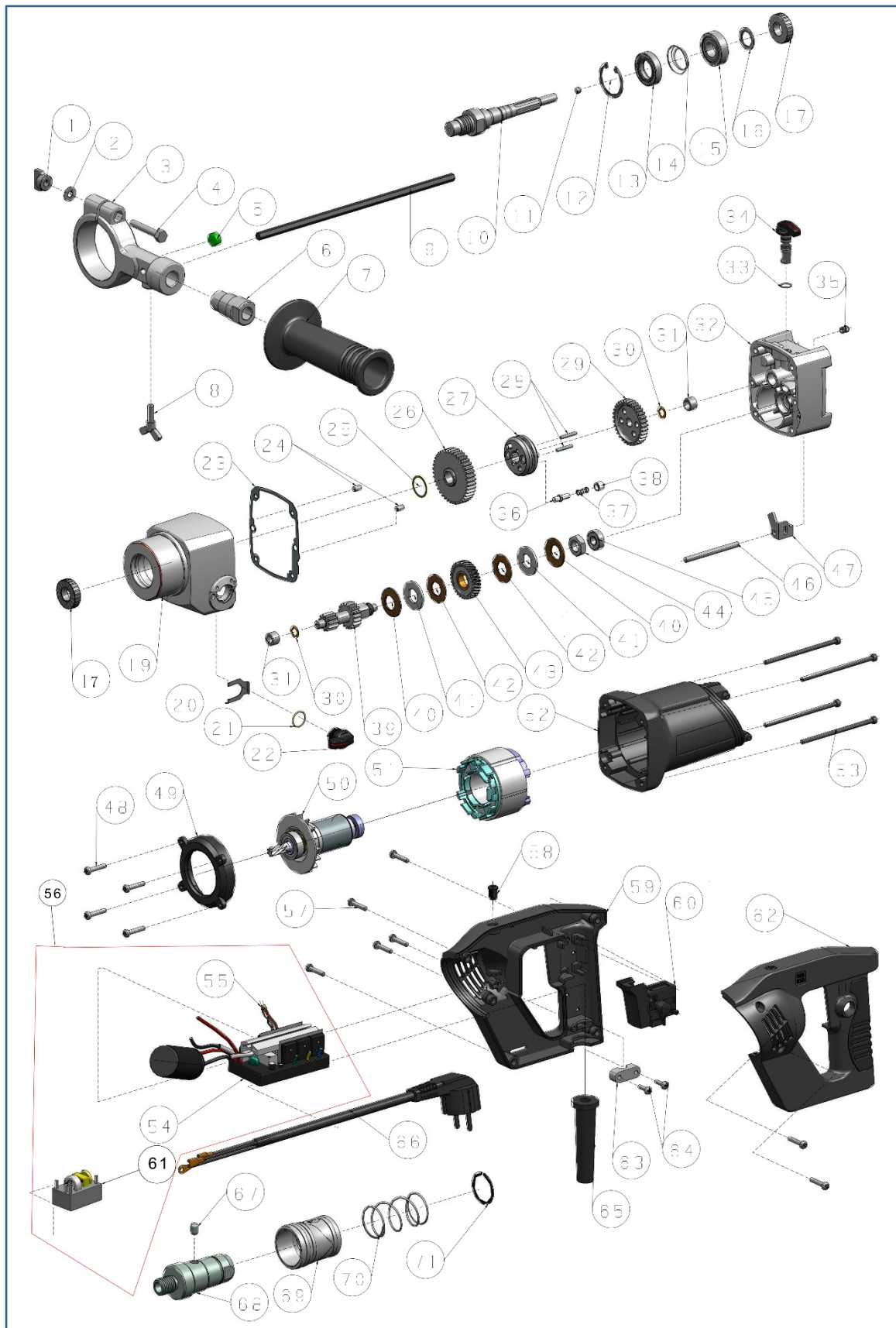
Establish additional safety measures to protect the operator from the effects of vibration, such as: Maintenance of power tool and insert tools, keeping hands warm, organization of work procedures.

Warranty

In accordance with our general terms and conditions of delivery, a warranty period for material defects of 12 months applies in business transactions with companies (proof by invoice or delivery bill). Damage caused by natural wear and tear, overloading or improper handling shall remain excluded from this. Damage caused by material or manufacturer defects will be remedied free of charge by repair or replacement. Complaints can only be accepted if the unit is sent to the supplier unassembled. Wear parts, such as rotor-stator, printed circuit board, bearings, water seals, oil seals, etc. are not covered.

Exploded view

DKS-132/DC-H



No.	Designation	Quantity	No.	Designation	Quantity
1	T-nut M6, plastic	1	37	Drive plate spring ($\Phi 5,8^* \Phi 0,6^* 10$)	4
2	Washer 12x6,2x1,5	1	38	Sleeve for drive plate pin	4
3	Front handle clamp bracket	1	39	Ritzelwelle M1.25/Z11-M1.25/Z18	1
4	Hexagon head screw M6x45	1	40*	Belleville washer	2
5	Spirit level $\Phi 12$	1	41*	Clutch disc	2
6	Connecting rod of the front handle	1	42*	Copper friction disc	2
7	Front handle, plastic	1	43*	Helical gearing M1-Z32	1
8	Wing screw M6x16	1	44	Hexagon nut M12xP1,25 T=6mm	1
9	Depth gauge dipstick	1	45	Deep groove ball bearing 607Z	1
10	Spindle shaft	1	46	Expanding pin $\Phi 5 \times 60$	1
11	Steel ball 15/64" ($\Phi 5.9531$)	1	47*	Gear stick	1
12	Inner circlip $\Phi 32$	1	48	Phillips screw with round head and self-tapping thread M4x20	4
13*	Rotary shaft seal TC 19x32x8	1	49	Wind deflector	1
14*	Micro-impact spring ($\Phi 23-\Phi 28.3 \times \Phi 1.5 \times 14$)	1	50*	Brushless motor rotor cpl. W6330 (incl. bearing)	1
15	Deep groove ball bearing 6002V	1	51*	Brushless motor stator cpl W6330 ($\Phi 63 \text{mm}$)	1
16	Ultra thin washer M15x21x0.3 SUS304	1	52	Motor housing DB-132	1
17*	Ratchet wheel Z16 DB-132	2	53	Hexagon bolt M4x65	4
19	Gearbox housing	1	54*	Control board	1
20	Flat spring of the gear switch	1	55	LED cable YELLOW/ROT	1
21*	O-Ring ($\Phi 16 \times \Phi 1$)	1	57	Phillips sheet metal screw M4x16	7
22	Getriebeschalthebel DB-132	1	58	LED socket	2
23*	Papierdichtung DB-132	1	59	D-shaped handle, right cover	1
24	Zylinderstift $\Phi 5 \times 8$	2	60*	Release switch	1
25	Ultra thin washer M18x25x0.3	1	61	EMC board	1
26	Gear M1.25-Z40	1	62	D-shaped handle, left cover	1
27	Drive plate	1	63	Cable clamp	1
28	Dowel pin $\Phi 3 \times 22$	2	64	Self-tapping Phillips screw with flat neck M3.5x12	2
29	M1.25-Z33 gear	1	65	Power cable gland	1
30	Ultra thin washer M8x12x0.3 SUS304	2	66	Power plug	1
31	Drawn cup needle roller bearings HK0808	2	67	Capsule shaped pin	1
32	Gearbox cover plate	1	68	M18-M16 adapter	1
33	O-Ring ($\Phi 8 \times \Phi 1,2$)	1	69	Adapter outer casing	1
34	Function selector switch DB-132	1	70	Adapter spring	1
35	Hexagon socket set screw M6x8	1	71	Bearing stop ring M28	1
36*	Pin of the driver plate	4			

EC Declaration of Conformity

The manufacturer/marketer
Kernlochbohrer GmbH
Geigersbühlweg 52
72663 Großbettlingen
hereby declares that the following product

Product name: Core drill

Typ: DKB-202/H-PRO,
DKB-202/P-PRO,
DKB-352/S-PRO,
DKB-502/S-PRO,
DKS-132/DC-H,
DKS-162/DC-H,
DKS-162/DC-P

complies with all relevant provisions of the applied legal regulations (hereinafter) - including their amendments in force at the time of the declaration. The sole responsibility for issuing this declaration of conformity lies with the manufacturer. This declaration refers only to the machine in the condition in which it was placed on the market; parts added and/or interventions made subsequently by the end user are not taken into account.

The following legislation has been applied:

Machinery Directive 2006/42/EG
EMC Directive 2014/30/EU

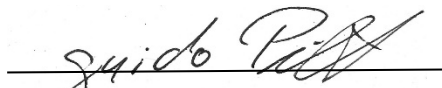
The following harmonized standards have been applied:

EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)
EN 60745-1:2015	Hand-held motor-operated electric tools Safety - Part 1: General requirements
EN 60745-2-1:2010	Hand-held motor-operated electric tools Safety - Part 2-1: Particular requirements for drills and impact drills
EN 55014-1:2006 +A2:2011	Electromagnetic compatibility - Requirements for Household appliances, power tools and similar electrical equipment - Part 1: Emission limits Part 1: Emission of interference
EN 55014-2:1997	Electromagnetic compatibility - Requirements for +A2:2008 Electric power tools and similar apparatus Part 2: Immunity - Product family standard
EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic currents
EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with a rated current ≤ 16 A per phase and not subject to a special connection condition

Name and address of the person authorized to compile the technical documentation:

Kernlochbohrer GmbH
Geigersbühlweg 52
72663 Großbettlingen

Location: Großbettlingen
Date: 17.05.2023



Guido Pillat, Chief Executive Officer