KERNLOCHBOHRER®
PROFESSIONAL POWER TOOLS

Operating instructions

Diamond core drill machine
DKB182/H

BA-01-000013-01-EN

Scope

These operating instructions apply only to the machine specified on the cover page.

Check the machine model against the type plate on the machine.

Original manual / Translation of the original manual

The English copy of these operating instructions is the original manual in accordance with the EU Machinery Directive.

Copies in other languages are translations of the original manual.

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The function of the machine is limited to the functions described in the accompanying technical documentation.

Table of contents

1 Information and support

1.1 Thanks to the buyer

Thank you for purchasing a machine from Kernlochbohrer GmbH.

Please read the operating instructions carefully and observe the safety instructions. By following the operating instructions, you will be able to take full advantage of the outstanding performance of our product.

If you have any questions about operating the machine, please contact Kernlochbohrer GmbH directly. We are always available to answer your questions.

1.2 Use of the operating instructions

The machine is intended for professional use and may only be operated by trained personnel. Strictly adhere to the instructions in the operating instructions.

Our company accepts no responsibility for any injuries or damage to the machine resulting from failure to observe the operating instructions.

The operating instructions are essential for the use of the machine. The operating instructions must therefore always be kept near the machine and be accessible to the designated personnel at all times.

In addition to the operating instructions, the generally applicable and local regulations on accident prevention and environmental protection must be provided; compliance with these regulations must be checked regularly.

1.3 Changes

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.

1.4 Explanation of symbols

This symbol indicates DANGER that you must be aware of when performing the following tasks in order to avoid injury to yourself, other persons or damage to property.

📖 Cross-reference to another section in the operating instructions.

☑ Prerequisite for an action.

☒ Action to be performed.

↳ Behaviour of the machine that can be expected as a result of the preceding action.

ⓘ Background information or reference to special features.

1.5 Warranty

In accordance with the general terms and conditions of delivery of Kernlochbohrer GmbH, a warranty period of 12 months applies to material defects in business transactions with companies (proof by invoice or delivery note).

Damage attributable to natural wear and tear, overloading or improper handling is excluded from this warranty.

Damage caused by material or manufacturing defects will be repaired or replaced free of charge. Complaints can only be accepted if the device is sent to Kernlochbohrer GmbH without being dismantled.

Wear parts are excluded from the warranty.

1.6 Environmental protection

1.6.1 Disposal of the product

Follow national regulations on environmentally friendly disposal and recycling of end-of-life machines and accessories.

For EU countries only:

Do not dispose of the machine in household waste! In accordance with 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.

1.6.2 Disposal of packaging

The packaging is made from recyclable materials. It must be disposed of in accordance with your local regulations.

1.7 Service

Precise information and specific questions enable faults to be rectified quickly, facilitate the ordering of spare parts and prevent incorrect deliveries.

Before contacting the service department, please collect the following information.

The model name must be provided for all enquiries and orders. This information can be found on the machine's type plate.

In the event of malfunctions, further information is required: type and extent of the malfunction, accompanying circumstances, suspected cause.

For spare parts orders, the following information is required: quantity and item number in the exploded view drawing in these Operating instructions.

ⓘ You are welcome to send us photos for spare parts orders or videos for malfunctions.

Contact details:

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2 Security

2.1 General

The machine has been constructed in accordance with the state of the art and in compliance with applicable laws, standards and safety regulations. Nevertheless, use of the machine may pose a danger to the user or third parties and may result in damage to the machine and other property.

The machine may only be used in perfect condition, for its intended purpose and in a safe and hazard-conscious manner.

In the event of damage or malfunctions, switch off the machine immediately, secure it against being switched on again and repair it or arrange for it to be repaired.

2.2 Intended use

The machine is designed exclusively for drilling concrete, reinforced concrete, stone, masonry and similar materials with appropriate drill bits using wet or dry drilling methods.

The machine can be operated both manually and with a core drilling rig. When operating with a core drilling rig, a collet with a clamping diameter of 46 mm must be used.

Care must be taken to ensure that a drill bit suitable for the drilling technique and the material to be drilled is always used. For optimum service life of the drill bit, the machine must be connected to a dust extraction system or a water supply.

The machine may only be used within the limits of its technical data. This information, for example performance data and environmental conditions, can be found in the "Technical Data" chapter.

Any other or additional use is considered improper – risk of accident! Kernlochbohrer GmbH is not liable for any resulting damage. The operator bears the sole risk.

Proper use also includes observing the operating instructions and adhering to the prescribed maintenance intervals.

2.3 Safety regulations for the operator

2.3.1 Organisational safety measures

The operating instructions must be available to the operating and maintenance personnel at all times. They must therefore always be kept at the machine's place of use.

The regulations on accident prevention and environmental protection applicable at the place of use of the machine must also be available. The operator of the machine must regularly check compliance with these regulations.

The use of noise-emitting machines may be restricted by national or local regulations.

The machine must not be operated in potentially explosive areas or in the vicinity of flammable liquids or gases or combustible dust.

All safety and hazard warnings on the machine must be legible and must not be removed.

The protective equipment required for the operation of the machine must be provided by the operator. The operator must ensure that the protective equipment is used properly by the personnel.

Operating and auxiliary materials, such as lubricants or cleaning agents, must be selected in such a way that the limit values for hazardous substances applicable at the place of use are complied with. The regulations for environmental protection and disposal applicable at the place of use must be observed.

2.3.2 Modifications to the machine

The operator may not make any modifications to the machine without the written approval of Kernlochbohrer GmbH. If the operator makes modifications without approval, the warranty shall be void. Kernlochbohrer GmbH shall not be liable for damage caused by unauthorised modifications.

2.3.3 Spare parts

Spare parts must comply with the specifications defined by Kernlochbohrer GmbH. This is always guaranteed for spare parts supplied by Kernlochbohrer GmbH. Kernlochbohrer GmbH is not liable for damage caused by the use of unsuitable spare parts.

2.3.4 Personnel

All persons assigned to the commissioning, operation and maintenance of the machine must have read and understood the operating instructions beforehand.

The machine may only be operated by persons who have been adequately instructed beforehand.

Maintenance of the machine may only be carried out by persons who have completed specialist training appropriate to this activity.

Minors are not permitted to work with the machine. Young people over the age of 16 who are being trained under supervision are exempt from this rule.

2.4 Safety regulations for personnel

2.4.1 Safe behaviour

All persons responsible for commissioning, operating and maintaining the machine must have read and understood the operating instructions beforehand.

The machine may only be operated by persons who have been adequately instructed beforehand.

Maintenance of the machine may only be carried out by persons who have completed specialist training appropriate to this activity.

Minors are not permitted to work with the machine. Young people over the age of 16 who are being trained under supervision are exempt from this rule.

Any working method on and with the machine that compromises safety must be avoided.

All safety and hazard warnings on the machine must be legible and must not be removed.

2.4.2 Safe operation

Operating the machine requires the full concentration and performance of the personnel. Persons who are overtired, unfocused or under the influence of alcohol, drugs or medication are not permitted to work on or with the machine.

Persons who are not directly involved in operating the machine must maintain a sufficient safety distance from it.

Check that the machine is in perfect condition before use. If the machine is damaged, it must not be used. In this case, secure the machine against use and repair it or arrange for it to be repaired.

To avoid compromising the functionality and safety of the machine, covers or other components of the machine must not be removed.

Before starting or putting the machine into operation, ensure that no persons are endangered by the starting machine.

Controls must not be operated carelessly or deliberately. This could result in personal injury or damage to the machine.

When using the machine, personnel must ensure that they are standing securely and maintaining an ergonomic posture.

If the machine is used in manual mode, it must always be held with both hands.

The machine must not be left unattended during use.

Avoid stopping the machine during operation under heavy load. This could lead to damage due to overheating.

Air intake and exhaust openings must not be covered during use.

The machine must not be exposed to rain or moisture and must never be immersed in water. Water entering the machine increases the risk of electric shock.

The machine must be cleaned regularly to prevent dirt from accumulating. All controls and handles must be kept clean, dry and free of grease.

When the machine is not in use, it must be stored in such a way that no one is endangered. Secure the machine against unauthorised use.

2.4.3 Protective equipment

Persons using the machine are required to wear the following protective equipment:

- Safety goggles in accordance with standard EN 166 or face protection.
- If the noise emissions generated during use of the machine exceed the limit values applicable to this workplace, suitable hearing protection must be worn.

ⓘ The following applies in Germany: Hearing protection must be worn if the daily noise exposure level exceeds 85 dB(A) or the peak sound pressure level exceeds 137 dB(C).

The generation of harmful grinding dust must be prevented by technical means (wet or dry processes with dust extraction). If this is not possible, the operating personnel and bystanders must always wear a respirator approved for the material being processed.

Wearing additional protective equipment reduces the risk of injury:

- Safety shoes with non-slip soles and toe caps.
- Cut-resistant gloves with a secure grip.
- Safety helmet

Loose-fitting clothing, long hair or body jewellery can get caught in moving parts of the machine!

Persons carrying out maintenance work on the machine are obliged to wear suitable protective equipment that is necessary for this activity.

2.5 Safety during maintenance

2.5.1 General

Maintenance of the machine may only be carried out by persons who have completed specialist training appropriate to this activity.

The maintenance activities and intervals specified in the operating instructions must be observed.

Workshop equipment appropriate to the type of activity is required to carry out maintenance activities.

Before starting maintenance work, the following safety precautions must be taken:

- Position the machine so that the area to be worked on is easily accessible.
- Set the machine to the appropriate operating mode.

After completing maintenance work:

- Reassemble the machine completely.
- If control elements or safety devices have been removed, they must be re-installed and their function checked.
- Retighten any loosened screw connections. Refit any screw locks.

Persons carrying out maintenance work on the machine are obliged to wear suitable protective equipment that is required for this activity.

2.5.2 Cleaning

Do not use corrosive, hazardous or environmentally harmful substances to clean the machine. Dispose of cleaning agents in an environmentally friendly manner.

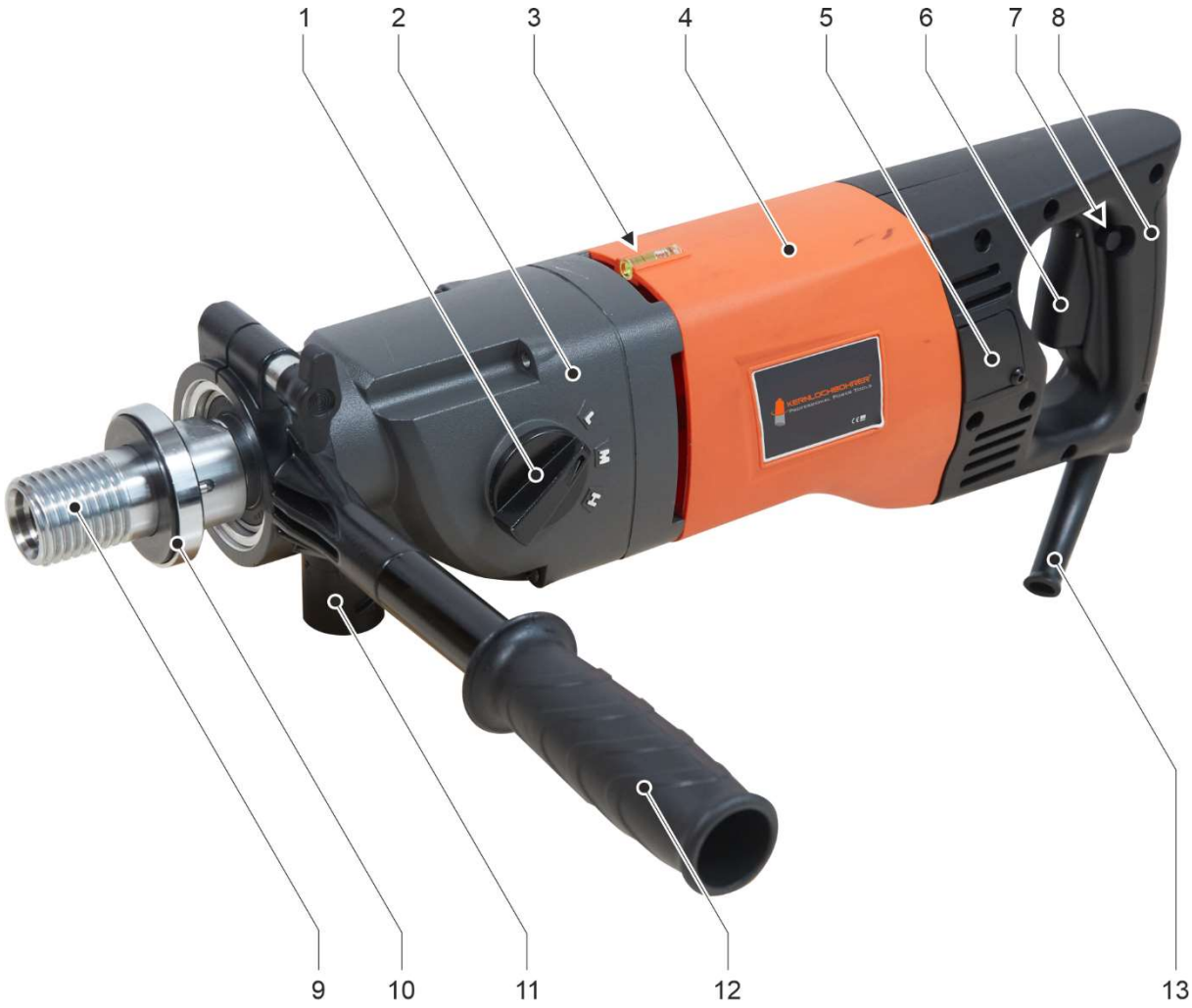
Under no circumstances should high-pressure cleaners, water jets or compressed air be used to clean the machine.

3 Technical data

Item number	1905
Power consumption	2300 W
Voltage	230 V± 5% / 50 Hz
Current consumption	10 A
Spindle thread	1 ¼" UNC & G ½"
Rotational speed Gear L Gear M Gear H	740 rpm 1630 rpm 3270 rpm
Maximum drilling diameter without core drilling rig with core drilling rig	 132 mm 182 mm
Dimensions	520 x 150 x 120 mm
Weight	6.3 kg
Permissible ambient temperature	5°C to 40°C
Permissible relative humidity	30% to 80%
Connection plug	Type F (CEE 7/4)
Power cable: Type | Length	H07RN-F 3G 1 mm² | 3 m
Vibration value	2.5 m/s²
Water supply connection	Adapter for Gardena ®
Dust extraction adapter	Adapter with Ø 35 mm bore
Case dimensions	560 x 350 x 160 mm

4 Machine description

4.1 Machine components



Machine components

1 Gear selector
2 Gearbox housing
3 Bubble
4 Motor housing
5 Carbon brush cover
6 Switch
7 Switch lock
8 Main handle
9 Drill spindle
10 Easy release ring
11 Connection for water supply or dust extraction
12 Clamping neck handle (mounted on the clamping neck)
13 Power cord with residual current device (PRCD)

Personal protection device (PRCD)

4.2 Protective devices

4.2.1 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 is activated and the drill spindle stops.

The slip clutch must not be loaded for longer than 3 to 4 seconds. If the slip clutch is activated during the drilling process, the feed pressure must be reduced immediately. Otherwise, the safety clutch may be destroyed due to high wear. Once the drill bit has returned to its normal speed, the drilling process can be continued.

Risk of injury!

A worn slip clutch must be replaced immediately by a specialist workshop.

4.2.2 Electronic overload protection

This machine is equipped with electronic overload protection.

If the machine is operated in an overload state for a prolonged period of time, it will switch off for its own protection.

Then disconnect the machine from the mains and carry out the following checks:

- Is the drill bit jammed in the hole?
- Is the gear selector switch locked in the desired position?
- Can the drill bit rotate normally?

The machine can then be restarted.

4.2.3 Carbon brush warning system

When the carbon brushes are nearing the end of their service life, the machine switches off automatically to protect the motor from further damage. The carbon brushes must then be checked and replaced if necessary. The carbon brushes must always be replaced in pairs.

📖 See chapter 6.3.2 "Replace carbon brushes".

4.3 Scope of delivery

The scope of delivery of the machine includes the following components:

- DKB182/H Diamond core drill machine
- Clamping neck handle (with clamping diameter Ø 60 mm) with clamping screw and sleeve
- Adapter for water supply; Gardena connection ®
- Adapter for dust extraction; connection hole Ø 35 mm
- 2 round sealing rings for adapters
- Open-end spanner SW 32
- Allen key
- Set (2 pieces) Replacement carbon brushes
- Pair of earplugs
- Safety goggles
- Storage case
- Operating instructions

ⓘ Kernlochbohrer GmbH offers a comprehensive range of tools and accessories for the machine:

- Core drilling rig
- Drill bits
- Adapters for drill bits
- Quick-change systems for drill bits
- Water collection rings

For information and ordering, please visit our online shop at http://www.kernlochbohrer.com.

5 Use of the machine

5.1 Specific precautions

Risk of injury!

When operating the machine, persons must always maintain a sufficient distance.

Rotating parts of the machine and falling or flying particles can cause injury.

DANGER of electric shock!

The machine does not have the appropriate protection class and must therefore not be operated in the rain or in wet rooms (e.g. bathrooms or laundry rooms).

Only drill bits with sharp and undamaged cutting segments may be used. Sharp drill bits do not jam as easily when drilling and are easier to guide.

When using the machine for vertical upward drilling, a functional water collection ring must be used. No water must be allowed to get onto the machine.

Before starting the drilling process, the intended exit point of the drill bit must be inspected. The exit point must be secured and cordoned off. It must be ensured that the exiting drill bit does not cause any personal injury or property damage.

If a malfunction occurs during operation of the machine (e.g. smell of burning), switch off the machine immediately and pull the power cord out of the socket. Otherwise, a fire, electric shock or other incident could occur. The machine may only be switched on again once the malfunction has been rectified and the machine is confirmed to be functioning properly.

5.2 Transporting the machine

Before transporting the machine:

- Switch off the machine.
- Remove the power cable from the socket.
- Disconnect the water supply or dust extraction system.

5.3 Working with the machine

5.3.1 Visual inspection of the machine

Before working with the machine, a visual inspection must be carried out:

- Check the general condition and cleanliness of the machine.
- Check that all covers and components of the machine are present.
- Check that all screws are tight.
- Air intake and exhaust openings must not be dirty or covered.
- The power cable and plug must not be damaged.

5.3.2 Operating the machine in manual mode

The machine can be operated manually or on a Core drilling rig.

If the machine is used in manual mode, the supplied clamping neck handle with a clamping diameter of Ø 60 mm must be attached to the clamping neck of the machine.

When the machine is used in manual mode, the maximum drilling diameter is 132 mm.

Only use the machine in manual mode with the clamping neck handle fitted!

Always hold the machine with both hands during the drilling process!

ⓘ When using the machine for the first time, the separately supplied clamping screw (position 79 in the spare parts drawing) must be screwed into the thread of the clamping neck handle (position 81) together with the sleeve (position 80).

Procedure:

☑ Machine not connected to the mains.

☑ Visual inspection of the machine carried out.

🕮 See chapter 5.3.1 "Visual inspection of the machine".

☒ Attach the clamping neck handle to the clamping neck of the machine.

5.3.3 Operating the machine on a core drilling rig

The machine can be operated manually or on a Core drilling rig.

If the machine is operated on a core drilling rig, the maximum drilling diameter is 182 mm.

If the machine is operated on a core drilling rig, it must be secured to it with a clamp holder with a diameter of Ø 60 mm.

ⓘ The Core drilling rig may need to be purchased separately.
Kernlochbohrer GmbH offers a comprehensive range of tools and accessories for the machine. For information and ordering, please visit the web shop at http://www.kernlochbohrer.com.

Before working with the machine, the Core drilling rig must be secured at the drilling position.

The machine must not be attached to the Core drilling rig.

🕮 Information on attaching the core drilling rig can be found in its operating instructions.

Procedure:

☑ Machine not connected to the mains.

☑ Visual inspection of the machine carried out.

🕮 See chapter 5.3.1 "Visual inspection of the machine".

☑ Core drilling rig attached to the drilling position and aligned.

☒ Attach the machine to the core drilling rig.

ⓘ The machine is attached to the core drilling rig using a clamp holder with a diameter of Ø 60 mm. This fastening material is included in the scope of delivery of the core drilling rig.

🕮 For information on mounting the machine on the core drilling rig, refer to the operating instructions for the core drilling rig.

5.3.4 Establish the water supply to the machine

ⓘ The machine is equipped for wet drilling.

In wet drilling, the water is used to cool the drill bit so that it does not overheat during drilling, which would cause increased wear.

ⓘ Only clean water may be used.

Only clean and dust-free hoses and couplings may be used.

The maximum water pressure must not exceed 3 bar.

ⓘ We recommend using an additional water collection ring to protect the machine and the working environment.

Kernlochbohrer GmbH offers a comprehensive range of tools and accessories for the machine. For information and ordering, please visit the web shop at http://www.kernlochbohrer.com.

Procedure:

☑ For manual operation: Clamping neck handle attached to machine.

🕮 See chapter 5.3.2 "Operating the machine in manual mode”.

☑ For use on a core drilling rig: Attach the machine to the core drilling rig.

🕮 See chapter 5.3.3 "Operating the machine on a core drilling rig".

☒ Attach the water supply adapter to the machine connection. Ensure that the O-ring is inserted into the adapter.

☒ Close the ball valve on the water supply adapter (in transverse position).

☒ Connect the water supply adapter to the water supply.

5.3.5 Establish dust extraction for the machine

ⓘ The machine is equipped for dry drilling.

When dry drilling, the resulting drill dust must be removed using a suitable industrial vacuum cleaner.

Procedure:

☑ For use in manual mode: Clamping neck handle attached to machine.

🕮 See chapter 5.3.2 "Operating the machine in manual mode".

☑ For use on core drilling rig: Machine attached to core drilling rig.

🕮 See chapter 5.3.3 "Operating the machine on a core drilling rig”.

☒ Attach the dust extraction adapter to the machine connection. Ensure that the O-ring is inserted into the adapter.

☒ Attach the suction hose of the industrial vacuum cleaner to the dust extraction adapter.

5.3.6 Attach the drill bit to the machine

A drill bit is a cylindrical tool equipped with soldered or laser-welded cutting segments.

To mount the drill bit on the machine, the drill spindle is equipped with a 1 ¼" UNC external thread.

ⓘ Appropriate adapters are available for drill bits with different threads.

ⓘ To prevent corrosion and facilitate removal of the drill bit, a water-resistant lubricating grease can be applied to both threads before mounting.

ⓘ The quick-release ring supplied is inserted between the drill bit and the drill spindle to facilitate removal of the drill bit.

An optionally available quick-change system can be used for even faster and easier changing of drill bits.

Risk of injury from sharp-edged cutting segments of the drill bit!

Wear cut-resistant gloves!

Aids:

Water-resistant lubricating grease

Open-end spanner with a width SW 32

Procedure:

☑ For wet core drilling: Water supply to the machine established.

🕮 See chapter 5.3.4 "Establish the water supply to the machine".

☑ For dry core drilling: Establish dust extraction for the machine.

🕮 See chapter 5.3.5 "Establish dust extraction for the machine".

☒ Screw the drill bit onto the machine's drill spindle and tighten by hand.

☒ Tighten the drill bit with a open-end spanner, while holding the machine's drill spindle in place with a 32 mm open-end spanner.

5.3.7 Connect the machine to the power supply

Please note the following points:

- Observe the electrical connection values of the machine.
  📖 See chapter 3 "Technical data".
- Before connecting the machine to the mains, ensure that the machine is switched off.
- The mains cable and mains plug must not be damaged.
- Damaged mains plugs must only be replaced by Kernlochbohrer GmbH or a qualified electrician.
- The machine is equipped with a type F (CEE 7/4) mains plug. The machine may only be operated from a protective earth socket (CEE 7/3) that is properly earthed.
- To protect the operator and reduce the risk of electric shock, the machine is equipped with a residual current device (RCD) integrated into the power cord. The machine may only be connected to the mains power supply using this residual current device.
- After plugging the mains plug into the socket, the residual current device must be tested. If the residual current device does not trip, the machine must be disconnected from the mains and checked by a qualified electrician.
- Never touch the mains plug with wet hands.
- The mains plug and socket must be clean and free of dust.
- The supplied electrical voltage must not deviate from the nominal value by more than 5%. Excessive voltages can cause irreparable damage to the machine.
- When operating the core drilling machine with power generators, voltage spikes must not occur.
- When using extension cables, the cable cross-section must be suitable for the power consumption of the machine.
- When using a cable reel, the cable must always be completely unrolled.
- If the machine is used outdoors with an extension cable, the extension cable must be approved for outdoor use.
- To remove the power cable from the socket, grasp the mains plug. Do not pull on the power cable.
- Do not use the power cord to pull or transport the machine, and keep it away from heat, solvents and oils, sharp edges and moving parts.

- If the machine is not to be used for a long period of time, switch it off and remove the mains plug from the socket.

5.3.8 Using the machine

Before starting or running the machine, ensure that the tools used to mount the drill bit have been removed from the drill spindle.

Only use the machine in manual mode with the clamping neck handle fitted!

Always hold the machine with both hands during drilling!

Tools:

Open-end spanner with a wrench size of SW 32

Procedure:

☑ Visual inspection of the machine carried out.
🕮 See chapter 5.3.1 "Visual inspection of the machine".

☑ When using the machine in manual mode: Clamping neck handle attached to machine.
🕮 See chapter 5.3.2 "Operating the machine in manual mode".

☑ When using the machine with a core drilling rig: Machine attached to the core drilling rig.
🕮 See chapter 5.3.3 "Operating the machine on a core drilling rig”.

☑ For wet core drilling: Water supply to the machine established.
🕮 See chapter 5.3.4 "Establish the water supply to the machine".

☑ For dry core drilling: Dust extraction for the machine established.
🕮 See chapter 5.3.5 "Establish dust extraction for the machine".

☑ Drill bit mounted on the machine.
🕮 See chapter 5.3.6 "Attach the drill bit to the machine ".

☑ Electrical connection of the machine established.
🕮 See chapter 5.3.7 "Connect the machine to the power supply ".

☒ Set the desired speed on the machine's speed selector switch depending on the drill diameter and material:

Gear	Speed
L	740 rpm
M	1630 rpm
H	3270 rpm

ⓘ The gear selector switch may only be operated when the machine is switched off.

Turn the gear selector switch and lock it in the desired position.

If the gear selector switch is stiff, turn the drill spindle slightly with a 32 mm open-end spanner to enable gear selection.

☒ Perform a function test of the personal protection switch (PRCD):

☒ Hold the personal protection switch in your hand and press the "TEST" button with your bare finger. Do not use gloves or other insulating objects.

↳ As soon as the personal protection switch is switched on, the electronics check whether the protective earth conductor (PE) is free of mains voltage.

☒ Switch off the personal protection switch by pressing the "RESET" button.

☒ Switch the personal protection switch back on by pressing the "TEST" button.

↳ The machine should now be able to operate.

If the personal safety switch does not trip or if it repeatedly switches off when the machine is switched on, the entire combination must be checked by a qualified electrician.

The machine must not be used in this condition!

☒ Switch on the machine at the switch and run it briefly: Check the concentricity of the drill bit.

☒ Switch on the machine at the switch without load.

ⓘ The switch lock allows the machine to be operated without having to manually activate the switch.

- ☒ If the machine is to be used for wet drilling:
  - ☒ Open the ball valve on the water connection.
  - ☒ If water continuously flows from the centre of the drill bit: Begin drilling with CAUTION.
- ☒ If the machine is to be used for dry drilling:
  - ☒ Switch on the vacuum cleaner.
  - ☒ Once the vacuum cleaner has reached maximum suction power: Begin drilling with CAUTION.
- ☒ If the machine is to be used in manual mode:
  - ☒ Begin the drilling process with a cut by not placing the full cutting surface of the drill bit on the surface: Position the machine at an angle so that the surface is drilled with a V-shaped notch.
  - ☒ Once a V-shaped notch has been made in the surface: Align the machine and drill bit perpendicular to the surface and increase the feed pressure.
- ☒ Once the cutting depth has reached 10 mm, the feed pressure can be increased.
  - ⓘ Drilling at too high a speed or with too much feed pressure can cause the drill bit to jam.
- ☒ Continuously monitor the speed of the machine during the drilling process:

  If the speed drops, reduce the feed pressure.
- ☒ If the machine is used in wet drilling:

  If the feed speed slows down at the same feed pressure and the water coming out of the hole becomes clearer but is mixed with metal chips, the drill bit has hit reinforcing steel.

  Reduce the feed pressure until the reinforcing bar is cut through.
- ☒ If the machine is used in wet drilling:

  Dust and particles formed during drilling can clog the water supply system. If the amount of water supplied to the drill bit is too low:

  Check the water supply system and clean it if necessary.
- ☒ When cutting through wooden beams, thick asphalt or bitumen, the power supply to the machine increases. In this case, reduce the feed pressure.
- ☒ If you need to drill deeper than the working length of the drill bit allows, an optional drill extension can be used.

☒ Monitor the machine continuously during the drilling process:
If light smoke appears or the smell of an overloaded electric motor is detected, relieve the load on the machine and withdraw it from the hole.
Then continue drilling slowly and with CAUTION.

☒ When you are almost at the end of the through hole:
Reduce the feed pressure until the drill bit emerges on the opposite side.

5.3.9 Switch off the machine.

Procedure:

☒ Switch off the machine motor using the switch.

☒ Close the ball valve and disconnect the water supply.

Or

Switch off the vacuum cleaner and disconnect the dust extraction system.

☒ Remove the mains plug from the socket.

☒ If necessary, remove the machine from the Core drilling rig.

☒ Remove the drill bit from the machine.

☒ If necessary, remove the adapter for the water supply or dust extraction from the machine.

☒ Check the machine for contamination. Clean the machine if necessary.

🕮 See chapter 6.3.1 "Clean and check the machine".

5.3.10 Store the machine

Procedure:

☑ Machine switched off.

🕮 See chapter 5.3.9 "Switch off the machine.".

☒ Clean the machine and allow it to dry completely.

🕮 See chapter 6.3.1 "Clean and check the machine".

☒ Store the machine in a dry, cool place protected from moisture and direct sunlight.

☒ Secure the machine against unauthorised use.

6 Maintenance

6.1 Notes on proper maintenance

Inadequate or improper maintenance can cause malfunctions and impair the operational safety and service life of the machine. Regular inspection and maintenance is therefore essential. We recommend that maintenance work only be carried out by trained personnel.

The contractually agreed warranty does not release the operator of the machine from the obligation to maintain the machine in accordance with the manufacturer's instructions from the time of commissioning. Kernlochbohrer GmbH is not liable for damage caused by inadequate maintenance.

6.2 Maintenance and inspection schedule

The intervals specified refer to normal operating conditions. In difficult conditions (heavy dust accumulation, etc.) and longer daily working hours, the specified intervals must be shortened accordingly by the operator.

Use the maintenance and inspection schedule as a guide only! Be sure to note the cross-references to the other chapters! These describe in detail how to carry out the individual tasks correctly and safely.

Interval	Category	Component	Activity	Chapter
1 day	Real time	Machine	Cleaning and testing	6.3.1
200 hours ①	Operating time	Engine	Replace carbon brushes	6.3.2

① This task must be performed after 200 hours of operating time or after the carbon brush warning system has been activated.

6.3 Inspection and maintenance

6.3.1 Clean and check the machine

Do not use sharp sponges or metal objects to clean the machine. These could damage the surface of the machine.

High-pressure cleaners, water jets or compressed air must not be used to clean the machine. The powerful water or air jet could damage the machine.

Do not use corrosive, hazardous or environmentally harmful substances to clean the machine.

Interval:

1 day real time

Tools:

- Container with a mixture of water and mild detergent (e.g. washing-up liquid).
- Cloth and brush
- Water-resistant grease

Procedure:

☑ Switch off the machine and remove the mains plug from the socket.
🕮 See chapter 5.3.9 "Switch off the machine. ".

☒ Clean the machine of dust and dirt.
- Use a damp cloth dipped in water mixed with a mild detergent.
- Do not allow water to enter the machine through the air inlet and outlet openings.

☒ Clean the air inlet and outlet openings with a brush and damp cloth.

☒ Allow the machine to dry completely.

☒ Check that all screws and nuts on the machine are tight. Tighten screws and nuts if necessary.

- ☒ Check the gearbox for grease leaks. If grease is leaking from the gearbox, contact Kernlochbohrer GmbH.
- ☒ Check the mains plug and mains cable for damage. Have damaged parts replaced by a qualified electrician.
- ☒ Perform a test run of the personal protection switch (PRCD). If the personal protection switch does not trip during the test run, have the device checked by a qualified electrician.
- ☒ Apply a thin layer of water-resistant grease to the external thread of the machine's drill spindle.

6.3.2 Replace carbon brushes

ⓘ This task must be carried out after 200 hours of operation or after the carbon brush warning system has been activated.

ⓘ The carbon brushes must always be replaced in pairs!

Interval:

200 hours of operation

Spare part:

Set (2 pieces) replacement carbon brushes (item number E29.62)

Procedure:

☑ Switch off the machine and remove the mains plug from the socket.
🕮 See chapter 5.3.9 "Switch off the machine.".

☒ Remove the cover (position 58 or 74 in the spare parts drawing) of the carbon brush.

☒ Remove the carbon brush (position 62) from the carbon brush holder (position 60).

☒ Insert the new carbon brush into the carbon brush holder.

☒ Replace the carbon brush cover.

☒ Also replace the carbon brush on the opposite side of the motor.

7 Troubleshooting

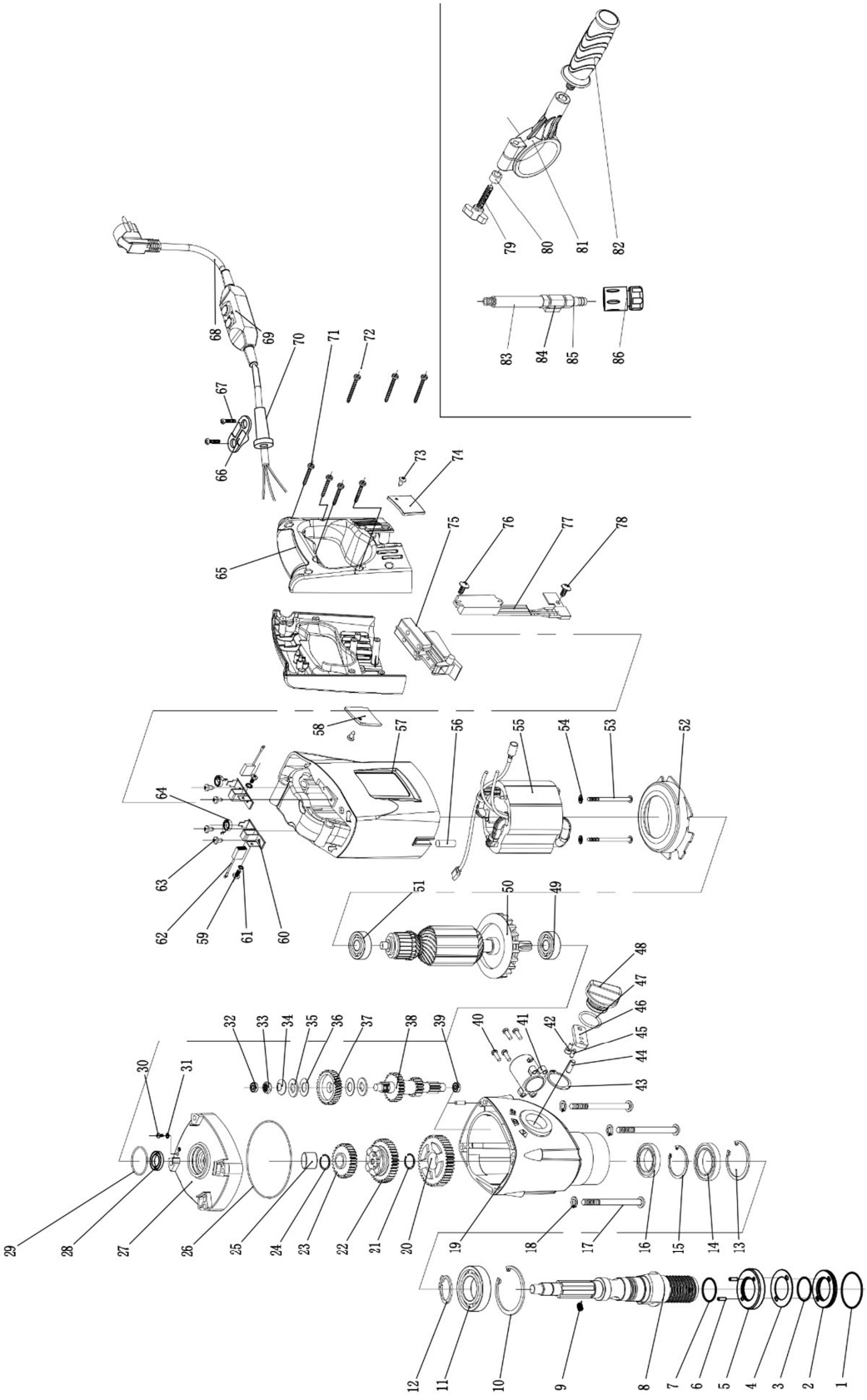
If a fault occurs during operation of the machine, please first try to rectify the fault yourself using the following information.

If you are unable to rectify the fault yourself, please contact Kernlochbohrer GmbH.

Fault	Possible cause	Troubleshooting
Machine does not start	Power supply interrupted	Plug in another electrical appliance and check that the power supply is working
	Power plug not properly inserted.	Plug the mains plug in correctly
	Personal safety switch not reset	Press the reset button on the personal safety switch
	Loose connection on the personal safety switch	Have the personal safety switch replaced by a qualified electrician
	Power cord or switch damaged	Have the power cord or switch replaced by a qualified electrician
	Rotor or stator damaged	Have checked and, if necessary, replaced by a qualified electrician
	Loose connection on carbon brushes or carbon brushes worn	Clean the carbon brush springs and adjust the spring preload. If the length of the carbon brushes is less than 6 mm: Replace the carbon brushes

Fault	Possible cause	Troubleshooting
Drill bit is stuck or jammed	Gear is not properly engaged	Turn the gear selector to the desired gear and allow it to engage
	Slip clutch worn	Have the slip clutch replaced
	High steel content in concrete or very hard material	After switching off the machine, slightly adjust the position of the drill bit with a spanner and tap the drill bit tube with caution and gentleness with a wooden hammer handle until the stuck drill core loosens. Slowly pull out the drill bit and restart the machine
	Damaged gearbox	Have the gearbox replaced
Drilling speed too slow	Drill bit has reached the end of its service life or cutting segments have broken off	Check the drill bit and replace if necessary
	Too much cooling water leads to inefficient cutting by the cutting segments	Reduce water flow
	Drill bit blunt	Resharpen cutting segments
	High steel content in concrete or very hard material	Reduce feed pressure to cut through steel or hard material. Then increase again
	Drilling angle misaligned	Realign the drilling angle so that the drill bit is perpendicular to the cutting surface

8 Spare parts



No.	Description	Qty
1	O-ring 52x1.2	1
2	Quick release ring	1
3	O-ring 34x1.5	1
4	Needle bearing 32x52x1	1
5	Quick release ring - Outer ring	1
6	Cylinder pin 4x12	2
7	O-ring 34x1.5	1
8	Spindle	1
9	Threaded pin M8x15	1
10	Internal retaining ring Ø52	1
11	Bearing 60x28	1
12	Outer retaining ring Ø28	1
13	Internal retaining ring Ø45	1
14	Water seal 27x45x8	1
15	Internal retaining ring Ø42	1
16	Oil seal 27x40x5	1
17	Round head screw M5x90	4
18	Washer Ø5	4
19	Gearbox housing	1
20	Spur gear	1
21	Retaining ring 20.5x1.2	1
22	Spur gear	1
23	Spur gear	1
24	Retaining ring Ø13	1
25	Needle bearing HK1010	1
26	O-ring 85x1.5	1
27	Cover	1
28	Oil seal 15x21x3	1
29	O-ring 31.5x1.8	1
30	Round head screw M4x10	1
31	Round head screw M4x10	1
32	Bearing 608	1
33	Nut M12x1-6	1
34	Spring washer 12.1x27.8	1
35	Shaft seal 80-1.7	2
36	Coupling disc 12.2x27.8x1	2
37	Spur gear	1
38	Front pinion	1
39	Bearing 609	1
40	Round head screw M4x16	4
41	Flange	1
42	Hexagon screw M4x10	1
43	Outer retaining ring Ø26	1

No.	Description	No.
44	Cylinder pin 5x15	1
45	Cylinder pin 4x12	1
46	Switch plate	1
47	O-ring 22.6x2.65	1
48	Shift knob	1
49	Bearing 6002	1
50	Anchor	1
51	Bearing 6200	1
52	Impact plate	1
53	Round head screw M4x80	2
54	Washer M4	2
55	Stator	1
56	Spirit level	1
57	Stator housing	1
58	Carbon brush cover	1
59	Round head screw M4x8	2
60	Carbon brush holder	2
61	Shaft seal M4	2
62	Carbon brush	2
63	Round head screw M4x8	4
64	Round head screw M4x10	1
65	Main handle	1
66	Clamping plate	1
67	Round head screw M4x12	2
68	Power cable 3x1.0 3.5 m	1
69	PRCD	1
70	Kink protection sleeve	1
71	Round head screw M4x25	4
72	Round head screw M4x45	3
73	Hexagon screw M4x8	2
74	Carbon brush cover	1
75	Switch	1
76	Round head screw M4x8	1
77	Overloader	1
78	Round head screw M4x8	1
79	Wing screw	1
80	Sleeve	1
81	Handle clamp	1
82	Handle	1
83	Hose	1
84	Ball valve	1
85	Coupling	1
86	Coupling plug	1

9 EU declaration of conformity

The manufacturer/distributor

Kernlochbohrer GmbH
Geigersbühlweg 52
72663 Großbettlingen
Germany

hereby declares that the following product

Product name:	**Diamond core drill machine**
Type:	**DKB182/H**

complies with all relevant provisions of the applicable legislation (below) – including any amendments applicable at the time of the declaration. The manufacturer is solely responsible for issuing this declaration of conformity. This declaration only applies to the machine in the condition in which it was placed on the market; parts subsequently added and/or modifications subsequently made by the end user are not taken into account.

The following legislation has been applied:

Machinery Directive 2006/42/EU

Electromagnetic Compatibility Directive 2014/30/EU

The following harmonised standards were applied:

EN 60204-1:2006/AC:2010

EN ISO 12100:2010

BS EN 62841-2-1

EN IEC 61000-6-1:2007

BS EN 61000-6-3+A1

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

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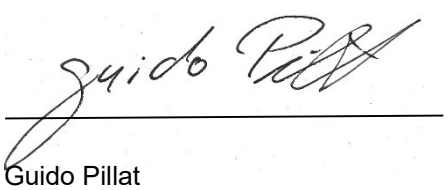
Großbettlingen 09.09.2025

Kernlochbohrer GmbH



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