

Drilling motors

DB 1700 N



KERN-DEUDIAM

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Operating Instructions

Important Instructions

Warning notices:



Warning of general danger



Warning of dangerous voltage



Warning of hot surface



Danger of being crushed



Danger of being ripped or cut

During work you should wear goggles, ear protectors, protective gloves, and sturdy work clothes!



Use ear protection



Wear safety goggles



Wear a helmet



Use protective gloves



Wear protective boots

Specifications

Diamond Core Drill DB 1700 N

| | |
|-----------------|----------|
| Nominal voltage | 110 V AC |
| Power drain | 1.700 W |
| Order No. | |

| | |
|----------------------------------|-----------------------|
| Frequency: | 40-60 Hz |
| Max. drilling diameter: | 132 mm |
| Bit holder: | M 18 |
| Protection class: | II |
| Degree of protection: | IP 20 |
| Weight: | approx. 6.8 kg |
| Interference suppression acc.to: | EN 55014 and EN 61000 |

| Gear | No load speed | Rated speed | Max. drilling diameter |
|------|---------------|-------------|------------------------|
| I | 0-1050 rpm | 0-800 rpm | 132 mm |
| II | 0-21000 rpm | 0-1570 rpm | 70 mm |

Supply

Diamond core drill with cable-integrated cable PRCD protective switch, wet-type connector with ball valve and GARDENA connector and instruction manual in transport case.

Application for Indented Purpose

The diamond core drill DB 1700 N is indented only for professional use and may be used only by instructed personnel.

It may be used either with or without a suitable diamond drill rig. For wet drilling jobs with diameters above 80 mm and drilling in the 1st gear, it is a must to use a suitable drill rig.

Drilling in the 1st gear without drill rig is prohibited! On careless use, counter torques may cause danger to the user!

Safety Instructions



Safe use of the tool is only possible if the user had studied the instruction manual and safety instructions completely and is strictly following the instructions contained therein.

Additionally, the general safety instructions of the leaflet supplied with the tool must be observed. Prior to the first use, the user should absolve a practical training.



If the mains cable gets damaged or cut during the use, do not touch it, but instantly pull the plug out of the socket. Never use the tool with damaged mains cable.



Prior to drilling in walls and ceilings, check them for hidden cables, gas and water pipes and other media.

Check the working area, e.g. using a metal detector.

Prior to the start of your work, consult a statics specialist to determine the exact drilling position.

If drilling through ceilings, secure the place below, because the may fall downward.



The tool must neither be wet nor used in humid environment.

- Do not use the tool in an environment with danger of explosion.
- Do not use the tool standing on a ladder.
- Do not drill into asbestos-containing materials.
- Do not carry the tool at its cable, and always check the tool, cable and plug before use. Have damages only repaired by specialists. Insert the plug into the socket only when the tool switch is off.
- Modifications of the tool are prohibited.
- Unplug the tool and make sure that the switch is off if the tool is not under supervision, e.g. during preparation and take-down works, at power failures, for insertion or mounting accessories.
- Unplug the tool if it stops for any reason. So you avoid sudden starts in unattended condition.
- Do not use the tool if its shell, switch, cable or plug are damaged.
- Always lead the mains and extension cables as well as the dedusting hose from the tool to the back.
- Electrical tools have to be inspected visually by a specialist in regular intervals.
- On using the tool, in no case cooling water may seep into the motor or the electric components.
- If water comes out of the drainage hole at the gear neck, stop your work and have the tool repaired by an authorised service centre.
- Perform overhead drilling only with suitable protective appliances (water catcher).
- After interruption of your work, restart the tool only after having made sure that the drill bit is moving freely.
- The tool may be used only in two-hand operation or with the drill rig.
- Keep the handles dry, clean, and free of oil and grease.
- Do not touch rotating parts.
- Persons under 16 years are not allowed to use the tool.
- During use, the user and other persons standing nearby have to wear suitable goggles, helmets, ear protectors, dust mask, protective clothes and boots.

- During manual operation, always hold the tool with both hands and be fall-safe. Consider the tool's reaction torque in case of blocking.
- Always work with concentration. Always work in a carefully considered way and do not use the tool if you are lacking consideration.

For further safety instructions, see the enclosure.



Electrical Connection

The **DB 1700 N** is designed according to protective class II. For the user's safety, the tool may be operated only with a leakage current protector. That is why the tool includes an integrated PRCD protective switch in an earth contact socket.

Attention!



- The PRCD protective switch must not lay in water.
- PRCD protective switches must not be used to switch the tool on and off.
- Before starting your work, check the proper function by pressing the TEST button

Use only three-conductor cable with earth conductor and sufficient cross section (ref. to table). Too small a cross section may cause malfunction of the tool.

Recommended minimum cross sections and maximum cable lengths

| Mains voltage | Cross section in sq. mm | |
|---------------|-------------------------|------|
| | 1.5 | 2.5 |
| 110V | 20 m | 40 m |

Prior to putting the tool into operation, check the mains voltage for conformity with the requirements of the tool's nameplate.

Voltage variations between + 6 % and – 10 % are permissible.

The tool includes a start-up speed limiter to prevent fast expulsion fuses from unintended responding.

Additional Handle

For manual drilling, the DB 1700 N may be used only together with its additional handle which comes with the tools. Place it on the gearing collar from the front and fix it by counterclockwise rotation.

Switching ON and OFF

Short-time operation

- ON: Press the ON/OFF switch
- OFF: Release the ON/OFF switch

Long-time operation

- ON: Keeping the ON/Of switch pressed, push in the arrestor button.
- OFF: Press and release the ON/OFF switch again.



Attention!

Use the arrestor button only during operation with drill rig.

Its use during manual operation is not allowed.

If the machine stops for any reason or due to power failure, immediately release the arrestor button by pressing the ON/OFF switch.

If this button is not released, the tool may unintentionally restart if the PRCD protective switch is operated and cause a danger to the user.

Changing Gears

Choose the proper speed according to the drill bit size used.

Select at the speed selector by pressing-in, shifting and engaging.

If the selector is on "o" position, the speed can vary from 0 to 800 rpm.

If the selector is on "oo" position, the speed can vary from 0 to 1570 rpm.

CAUTION: - always check the drill bit manufactures recommendation for use
- gear shifting **only** when the machine is stopped and **clockwise**

Manual Drilling

For wet drilling, we recommend the use of a dimpling aid with water removal (order No. 35847). This type is a must for overhead drilling.



Insert the gas spring with the water collecting ring and the guide ring appropriate for the drill bit diameter into the tension disk. Shift the gas spring up to complete coverage of the bit segments by the water collecting ring. Tighten the wing screw.

On drilling overhead, make sure that the water supply is opened only after having switched the water remover on and the removing unit was fixed to the wall or ceiling.

Open the ball valve and switch the tool on.

Hold the tool tight with both hands. Locate the tool slightly inclined. Once the drill bit is in the material (approx. 1/8 to 1/4 of the circumference), bring the tool into an angle of 90 degrees and continue drilling.

Take care that the drill bit is not out of line.

Advance the tool according to bit diameter and machine power. Observe the LED in the handle.

If it lights red, reduce your pressing force.

In case the bit gets jammed, do not try to release it by switching the tool on and off. This would cause premature wearing of the safety clutch. Switch the tool off immediately and unfix the drill bit by turning to the left or right using an appropriate open-end wrench. Cautiously pull the tool out of the borehole.

Overload Protection

To protect the user, motor and drill bit, the DB 1700 N is equipped with a mechanical, electrical and thermal overload protection.

Mechanical: In case of sudden jamming of the drill bit, the drilling spindle is unclutched from the motor by means of a slip clutch.

Electrical: To warn the user against overstressing the tool by applying too high an advance force, the handle includes a LED. It does not light during idle run or at normal load. At overload, it lights red. In that case the tool must be stress-relieved. In case of longer non-observation of the red indication, the electronics will independently switch the tool off. After relieving is switching the tool off and on, the work can be continued as normal.

Thermal: In case of permanent overload, a thermocouple protects the motor against destruction. In that case, the tool switches off and can only be restarted after a certain cooling-down period (approx. 2 minutes). The cooling-down time depends on the temperature of the motor winding and ambient temperature.

Safety Clutch

The slip clutch served for compensation of shocks and overload.

To keep its functionality, it should not slip for more than 2 seconds. In case of excessive wearing, it can be replaced by an authorized service centre.

Drill Bits

Use only appropriate drill bits for the material to be drilled in. You can protect your tool by using only well balanced drill bits without deformation.

Make sure that the diamond segments have sufficient cutting clearance towards the bit body.

Changing Drill Bits



Attention!

When you use or sharpen the machine, it might heat up enormously. You could burn your hands or get cut or ripped by the segments. Therefore, always use protective gloves when changing the drill bit.

The drilling spindle has a right-hand thread.

To ease screwing on and off, always use a SW 32 open-end wrench at the drilling spindle.

Never use a hammer, because this may damage both the drill bit and the tool.

Some water-resistant grease on the drilling spindle thread or a copper ring between spindle and drill bit will simplify removal of the drill bit.

Attention!

The bits may have got hot due to use or sharpening. There is a danger of burning ones hands or injuring oneself at the segments' edges.

When changing the drill bits, you should always wear protective gloves.

Care and Maintenance



Before the beginning of the maintenance- or repair works you have to disconnect plug from the mains.

It is a must to unplug the tool before starting any service or repair works. Repairs may be executed only by appropriately qualified and experienced personnel. After every repair, the unit has to be checked by an electrical specialist.

According to its design, the tool requires a minimum of care and maintenance. However, the following maintenance works and component checks have to be performed in regular intervals:

- Clean the tool after completion of your work. Apply some grease onto the drilling spindle thread. The ventilation slots must always be clean and unclogged. Make sure that now water gets into the tool during cleaning.
- After the first 150 hours of operation, the gearing oil must be changed. Gearing oil changes bring about an essential increase of the tool's lifetime.
- After approx. 250 hours of operation, the carbon brushes must be checked and, if necessary, be replaced by an authorized specialist (use only original carbon brushes).
- Once per quarter of a year, an electrical specialist should check the switch, cable and plug.

Environmental Protection

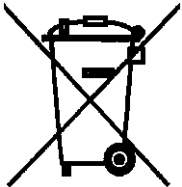


Raw material recycling instead of waste disposal

To avoid damages in transit, the tool is supplied in a sturdy packing. The packing as well as the tool and its accessories are made of recyclable materials which enable environmentally friendly and sortwise disposal by the local reception points.

Only for EU countries

Do not dispose of electric tools together with household waste material!



In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Noise Emission

The indication of noise emission is measured after DIN 45 635, part 21. The level of acoustic pressure on work site could exceed 85 dB (A); in this case protection means must be used.



Wear ear protectors!

Hand-arm vibration :

Measured values determined according to EN 60 745.

| | |
|--------------------------|----------------------------|
| Vibration emission value | a_h 3,3 m/s ² |
| Uncertainty | K 0,5 m/s ² |

The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Warranty

According to the general supply conditions for business dealings, suppliers have to provide to companies a warranty period of 12 months for redhibitory defects. (To be documented by invoice or delivery note).

Damage due to natural wear, overstressing or improper handling are excluded from this warranty.

Damages due to material defects or production faults shall be eliminated free of charge by either repair or replacement.

Complaints will be accepted only if the tool was returned in non-dismantled condition to the manufacturer or an authorized Eibenstock service centre.

CE Declaration of Conformity

On sole responsibility we declare that this product is in conformity with the following standards and standard documents:

EN 60 745, EN 55 014, EN 61 000,
according to the regulations 2006/95/EC, 89/336/EEC, 98/37/EC

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