EIBENSTOCK
Elektrowerkzeuge

GB

Original Instructions

ESD 162

Important Instructions

Important instructions and warning notices are put on the machine by means of symbols:

Before you start working, read the operating instructions of the machine.

Work concentrated and carefully. Keep your work-place clean and avoid dangerous situations.

In order to protect the user, take precautions.

In order to protect yourself, implement the following actions:

Use ear protection

Wear safety goggles

Wear a helmet

Use protective gloves

Wear protective boots

Warning of dangerous voltage

Warning of hot surface

Danger of being crushed

Danger of being ripped or cut

Technical Data

Percussion Diamond Core Drill ESD 162

Nominal voltage	120 V ~
Rated current	19,0 A
Frequency:	50/60 Hz
No-Load speed:	0-1100 rpm
Percussion frequency:	max. 22000/min
Bit holder:	1 ¼“ UNC - R½¨ i
Max. drilling diameter concrete:	3 1/4”- 6 3/8”) (brickwork up to 8”)
Protection class:	I
Degree of protection:	IP 20
Weight:	approx. 14,8 lbs.

Interference suppression acc.to: EN 55014 and EN 61000

Available add-ons:

Item	Order No.
Diamond drill rig BST 162H	0963W000
Fastening set concrete/stone	35720000
Diamond drill bit dry Ø 82, 102, 132 and 162mm	
Copper ring for easier drill bit removal	35450000
Wet/dry deduster DSS 35 M iP	09919000

Supply

Diamond core drill with 2 open-end wrench (SW32 and SW41) and instruction manual in transport case.

Application for Indented Purpose

The diamond core drill **ESD 162** is indented only for professional use and may be used only by instructed personnel. With an appropriate drill bit, the tool can be used for drilling of concrete, stone, bricks, sand-lime bricks and pore concrete. **For drilling jobs with diameters above 8” mm (6 3/8” in reinforced concrete) it is a must to use a suitable drill rig. The machine may be used exclusively in conjunction with a vacuum cleaner of dust category M.** Concrete and reinforced concrete are to be drilled only with soft impact. The user alone is liable for damage caused by improper use.

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. Save all warnings and instructions for future reference.

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.

Do not expose power tools to rain or wet conditions.

Water entering a power tool will increase the risk of electric shock.

- 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.
- Don't use the machine if a part of the housing is damaged or in case of damages on the switch, the cable or plug.
- 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.
- After interruption of your work, restart the tool only after having made sure that the drill bit is moving freely.
- 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 cloves and boots.
- **The tool may be used only in two-hand operation or with the drill rig. 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 in a carefully considered way and do not use the tool if you are lacking consideration.**
- **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **During manual operation, work with a special circumspection when dry drilling with dimensions between 102 and 132mm!**

For further safety instructions, see the enclosure.

Electrical Connection

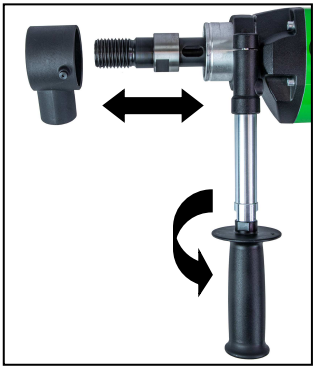
The **ESD 162** is made in protection class 1.
Prior to putting the tool into operation, check the mains voltage for conformity with the requirements of the tool's nameplate.
Voltage variations between + 6 % and – 10 % are permissible.
Use only extension cable with sufficient cross-section (min. 2,5 mm^2). A cross-section which is to small could lead to excessive power loss and to overheating the motor and the cable.

ecommended extension cord sizes for use with portable electric tools:

Length of Cord in Feet										
110 V		*25 Ft.*	*50 Ft.*	*100 Ft.*	*150 Ft.*	*200 Ft.*	*250 Ft.*	*300 Ft.*	*400 Ft.*	*500 Ft.*
Nameplate Ampere Raiting	*0-2*	*18*	*18*	*18*	*16*	*16*	*14*	*14*	*12*	*12*
	2-3	*18*	*18*	*16*	*14*	*14*	*12*	*12*	*10*	*10*
	3-4	*18*	*18*	*16*	*14*	*12*	*12*	*10*	*10*	*8*
	4-5	*18*	*18*	*14*	*12*	*12*	*10*	*10*	*8*	*8*
	5-6	*18*	*16*	*14*	*12*	*10*	*10*	*8*	*8*	*6*
	6-8	*18*	*16*	*12*	*10*	*10*	*8*	*6*	*6*	*6*
	8-10	*18*	*14*	*12*	*10*	*8*	*8*	*6*	*6*	*4*
	10-12	*16*	*14*	*10*	*8*	*8*	*6*	*6*	*4*	*4*
	12-14	*16*	*12*	*10*	*8*	*6*	*6*	*6*	*4*	*2*
	14-16	*16*	*12*	*10*	*8*	*6*	*6*	*4*	*4*	*2*
	16-18	*14*	*12*	*8*	*8*	*6*	*4*	*4*	*2*	*2*
	18-20	*14*	*12*	*8*	*6*	*6*	*4*	*4*	*2*	*2*

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

Additional Handle



For manual drilling, the **ESD 162** 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 turning the handle in direction of the arrow.

Before mounting or dismounting the handle clamp, the dust exhaustion must be disconnected from the gearing collar.

Switching ON and OFF

Short-time operation

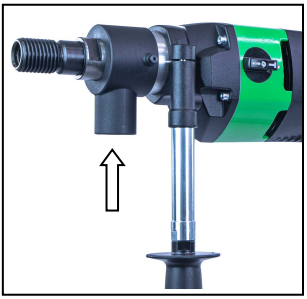
ON: Press the ON/OFF switch
OFF: Release the ON/OFF switch

Long-time operation

ON: Keeping the ON/Off 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.

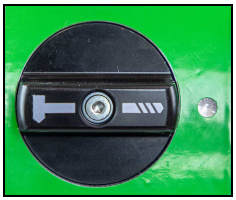
Dust Exhaustion



Dust which occurs during your work is hazardous to health. That is why it is advisable to use a deduster (Dust class M) and to wear a dust mask on dry drilling. Place the adapter for the dedusting unit onto the tool's connector and turn into the direction of the arrow up to the stop. As a suitable wet/dry deduster, our DSS 35 M iP is available as add-on. The use of a dedusting system is also a prerequisite for optimal cutting performance of the bit (air cooling).

Engaging and Disengaging of the percussion

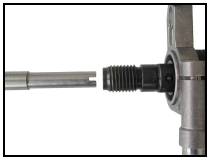
The machine is equipped with mechanical soft impact for drilling in hard materials, such as concrete and hard sand-lime bricks.
This can be enabled or disabled as follows.



Drill symbol on mark
- drilling without soft impact

Hammer symbol on mark
- drilling with soft impact

Manual Drilling



Insert the centering point so that the recesses in the centering point latch on the catches of the working spindle.

Fix the required dry drill bit on the working spindle.
Always deactivate the soft impact to start drilling!

Check for appropriate gear selection. Operate the ON/OFF switch and drill until the segments are approximately 5 mm in the material. Remove the centering point. To drill in concrete, activate the soft impact.
Refix the drill bit to the existing groove and complete your 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, to not dry 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.

Drill Bits

Diamond drill bits with a 1 ¼" UNC female thread can be screwed directly onto the working spindle.
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 threat or a copper ring between spindle and drill bit will simplify removal of the drill bit.

After Drilling

When you have finished drilling:
- Pull the drill bit out of the hole.
- Turn the motor off.

Removal of the core when it sticks in the drill bit:
- Separate the drill bit from the motor (if possible).

- Put the drill bit in a vertical position.
- Knock carefully on the pipe by using a wooden hammer shank till the drilling core slips out. Never throw the drill bit against a wall by force or set about it with tools, such as hammer or jaw wrench. Otherwise, the pipe could go out of shape and neither the drilling core can be extracted nor the drill bit is reusable.

Removal of the core by blind holes:
Break off the core with a cotter or lever, or in pieces. Lift the core out with appropriate tongs or drill a hole with a dowel in the core, screw an eyebolt in and pull the core out.

Rig Drilling

The drill rig does not belong to the supply.
For this purpose, please refer to the drill rig's operating instructions.

Overload Protection

To protect the user, motor and drill bit, the **ESD 162** is equipped with a mechanical, electrical and thermal overload protection.

Mechanical: In the event of a sudden jamming of the drill bit, the machine's kickback is limited to a reaction torque controllable by the operator by means of a slip clutch.

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

Safety Clutch

The safety clutch should absorb shock and excessive stress. It is an aid and not an absolute protection. Therefore you have to handle and drill carefully. **To keep it in good condition, the clutch should slip for a very short time (max. 2 seconds) in each case only. Slipping for longer periods destroys the safety clutch. After excessive wearing the clutch has to be renewed by an authorized service shop.**

Care and Maintenance

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

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:

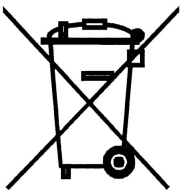
- Clean the tool after completion of your work. Apply some grease onto the drilling spindle thread. The ventilation slots must always be clean and unclogged. Make sure that now water gets into the tool during cleaning.
- After the first 150 hours of operation, the gearing oil must be changed.
  Gearing 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.

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts.
EIBENSTOCK's application service team will gladly answer questions concerning our products and their accessories.

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 2012/19/EU 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 / Vibration

Measured sound values determined according to EN 62841-2-1.
Typically the A-weighted noise levels of the product are:

Sound pressure level	L_{pA}	95 dB(A)
Sound power level	L_{wA}	106 dB(A)
Uncertainty	K	3 dB

Wear ear protectors!

Vibration total values a_h and uncertainty K determined according to EN 62841-2-1:

Vibration emission value	a_h	13,5 m/s^2
Uncertainty	K	0,3 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.

Dust Protection

Dust from material such as paint containing lead, some wood species, minerals and metal may be harmful. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory diseases to the operator or bystanders. Certain kinds of dust are classified as carcinogenic such as oak and beech dust especially in conjunction with additives for wood conditioning (chromate, wood preservative). Material containing asbestos must only be treated by specialists.

- Where the use of a dust extraction device is possible it shall be used.
- To achieve a high level of dust collection, use industrial vacuum cleaner DSS 35 M iP for wood and/or minerals together with this tool.
- The work place must be well ventilated.
- The use of a dust mask of filter class P2 is recommended.

Trouble Shooting

In case of breakdown, switch the motor off and disconnect it from the power. Repairs of the electrical parts may only be performed by an authorised service specialist.

Error	Possible Cause	Error Recovery
Machine does not work.	mains current supply interrupted	plug in another electric appliance and check the functioning
	line cord or plug damaged	have it checked by an electric specialist and replaced if necessary
	switch damaged	have it checked by an electric specialist and replaced if necessary
motor runs, drill bit does not rotate	gearbox damaged	have the tool repaired by an authorised service workshop
drilling speed too slow	drill bit damaged	check if drill bit is damaged and replace it if necessary
	drill bit polished	sharpen the drill bit with a sharpening stick while using the flush
motor shuts down	the tool stops	lead the tool in a straight manner
	overload protection of the motor has reacted	discharge the tool and restart it by pressing the switch a couple of times
	carbon brushes are worn out - auto-stop brush switch off	both brushes must be replaced with original brushes by an electrical specialist

Auto-stop brushes

In order to protect the motor, this power tool is equipped with auto-stop brushes. When the carbon brushes are worn out, the machine switches itself off. In this case both brushes must be replaced at the same time with original brushes by an electrical specialist.

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.

EU - Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardization documents:

EN 62841-1:2016-07
EN 62841-2-1:2020-07
EN IEC 55014-1:2022-12
EN IEC 55014-2:2022-10
EN 61000-3-2+A1:2019-03-05
EN 61000-3-3:2023-02
EN IEC 63000:2019-05

according to the provisions of the directives 2011/65/EU, 2014/30/EU, 2006/42/EG

Technical file (2006/42/EC) at:
Elektrowerkzeuge GmbH Eibenstock
Auersbergstraße 10
D – 08309 Eibenstock

Lothar Lässig
General Manager
06.12.2023

Frank Markert
Head of Engineering

GB - Declaration of Conformity

We declare as the manufacturer under our sole responsibility that the product described under "Technical Data" fulfills all the relevant provisions of the following regulations S.I. 2008/1597 (as amended), S.I. 2017/1206 (as amended), S.I. 2012/3032 (as amended) and that the following designated standards have been used:

BS EN 62841-1:2016-07
BS EN 62841-2-1:2020-07
BS EN IEC 55014-1:2022-12
BS EN IEC 55014-2:2022-10
BS EN 61000-3-2+A1:2019-03-05
BS EN 61000-3-3:2023-02
BS EN IEC 63000:2019-05

Technical file (S.I. 2008/1597) at:
Elektrowerkzeuge GmbH Eibenstock
Auersbergstraße 10
D – 08309 Eibenstock

Lothar Lässig
General Manager
06.12.2023

Frank Markert
Head of Engineering

Subject to change without notice.

Your distributor

Elektrowerkzeuge GmbH Eibenstock
Auersbergstraße 10
D – 08309 Eibenstock
www.eibenstock.com
+49 (0) 37752 5030

11/2023