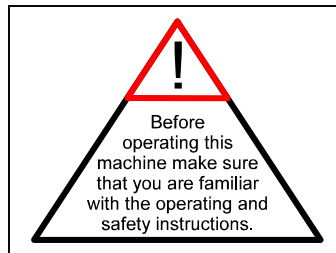


**MODEL 2 1320 0010
3-SPEED ELECTRIC CORE DRILL**

OPERATING MANUAL



Contents

1	General	3
1.1	Preface	3
1.2	Liability and warranty	3
2	Safety	4
2.1	General	4
2.2	Intended use	4
2.3	On-the-job safety	5
2.3.1	On-the-job safety symbols	5
2.3.2	Safety instructions	6
2.3.3	Noise regulations	7
2.3.4	Environmental protection	7
3	Description of electrical core drilling machine type: 2 1320 0010	8
3.1	Scope of delivery	8
3.2	Equipment elements	8
3.3	Accessories	9
4	Transport and storage	9
5	Operation	10
5.2	Putting into service	10
5.2.1	Cooling water connection	10
5.2.2	Attaching hand grip and spot drilling aid	11
5.2.3	Attaching the drill bit	11
5.3	Drilling	12
5.3.1	Spot drilling	12
5.3.2	Drilling	13
5.3.3	After drilling	13
6	Cleaning and maintenance	13
6.1	Cleaning	13
6.2	Maintenance	14
7	Fault remedy	14
8	Appendix	15
8.1	Technical specifications	15
8.2	Address of customer service	15
8.3	Spare parts list	16

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1 General

1.1 Preface

Spitznas Maschinenfabrik GmbH is one of the leading suppliers of high quality machines for drilling, grinding sawing etc.

The electrical core drill unit type: 2 1320 0010 is based on experience and continuous development activities in our house.

These operating instructions solely refer to the electrical core drill unit type: 2 1320 0010, i.e. specifications mentioned hereunder cannot be transferred to other equipment, even from our company.

If additional genuine accessories are used with the core drill unit, the instructions in these operating manuals must also be strictly observed.

Before starting operation check the complete scope of delivery. Should parts be missing or damaged, report this immediately to the customer service.

Furthermore, the machine shall only be operated by persons who have read and understood the complete operating manual and who have been instructed in the operation of this machine by experienced experts.

During use one shall particularly comply with all safety regulations in the operating instructions as well as all valid country specific safety and accident prevention instructions.

Only in this way the remaining risk caused by the core drill machine can be minimized.

The appendix to these operating instructions contains a list of technical specifications, the manufacturer's address and a spare parts list.

1.2 Liability and warranty

All information and notes on operation and maintenance of the core drill unit are given under due consideration of our previous experience and findings and to the best of our knowledge.

We reserve the right for technical modifications within the framework of further development of the core drill unit mentioned in these operating instructions.

Only accessories and spare parts approved by Spitznas Maschinenfabrik GmbH may be used.

Unintended use of the core drill unit, use of non-genuine approved accessories and spare parts as well as the non-observance of information in these operating instructions release the manufacturer from any warranty claims.

Drawings, graphics and photos are not of scale 1:1.

Illustrations in the operating instructions may show accessories and installations, which are not part of the scope of delivery.

Translations are made to the best of knowledge. Spitznas Maschinenfabrik GmbH does not assume liability for translation errors.

Distribution of these operating instructions to third parties, even in parts, is prohibited and shall incur compensation claims.

2 Safety

2.1 General

The electrical core drill unit type: 2 1320 0010 complies with the latest technical standard and is safe to operate.

However, dangers may arise from this core drill unit if it is operated by untrained personnel in an unprofessional way or if it is used for purposes it is not intended for.

The person operating this core drill unit must therefore have read and understood the complete operating instructions. Additional instruction/training shall be performed by experienced experts.

This applies also if the respective person has already worked with such a or a similar core drill unit or has been trained accordingly.

Apart from the on-the-job safety regulations in these operating instructions, all applicable general as well as country specific safety and accident prevention instructions must be strictly observed and complied with.

All instructions in this manual must be strictly applied!

Furthermore, all information on stickers and tags on the core drill unit must be observed. These must be in legible condition or shall otherwise be immediately replaced.

The operating instructions must always be available for operators.

If the core drill unit is used with genuine accessories approved for this unit, one must additionally observe the safety regulations in the operating instructions for these accessories.

2.2 Intended use

Safe operation of the electrical core drill unit type: 2 1320 0010 can only be assured if the unit is used for purposes it is intended for, as specified in these operating instructions.

The electrical core drill unit type: 2 1320 0010 shall solely be used to drill reinforced concrete, concrete, all types of building bricks and natural stone.

**Any use exceeding the above mentioned applications is considered as unintended use!
The manufacturer does not assume liability for damage resulting from this.**

Compliance with the conditions for initial start-up, operation and maintenance specified by the manufacturer as well as the use of accessories approved by the manufacturer and the specified consumable are part of the intended use.

2.3 On-the-job safety

2.3.1 On-the-job safety symbols

On-the-job safety symbols mark special notes, which may prevent dangers for persons, environment and/or core drill unit, if observed.

Non-observance of safety regulations can lead to the rejection of any compensation claims!

Meaning of the on-the-job safety symbols:



Danger!

highlights a direct danger. Death or severe injury (deformities) will be caused, if this is not avoided.



Warning!

highlights a possibly dangerous situation. Death or severe injury may be caused, if this is not avoided.



Caution!

highlights a dangerous situation. Light or minor injury may be caused, if this is not avoided.



Notice!

highlights a possibly damaging situation. If this is not avoided, the core drill unit or anything in its vicinity may be damaged.



Important!

highlights application related tips and other particularly useful information for the operator.

2.3.2 Safety instructions

- The core drill unit must only be operated by authorized, trained and instructed persons. The person must be physically fit for this work. High retaining forces may occur during drilling.
- Wear your personal safety gear, including goggles, breathing mask, ear defenders, work clothes, work boots and hard hat.
Observe additional legal regulations.
- Work clothes must fit tightly to the body. Long hair must be covered with a hair net.
- Work only in places where the operator is not threatened by external dangers, e.g. suspended loads. The drilling location must be easily accessible and the floor must be safe to stand on.
- During drilling no other persons should remain in the danger zone.
- Connect the core drill unit only if no faults are found or known.
- If the mains supply cable is damaged or cut do not touch the cable, but pull the mains plug out. Do not operate the unit with a damaged cable.
- Connect the core drill unit to the electrical power and cooling water supply only as specified. Necessary suitable extension leads/hoses must be in a technically perfect condition. Extension leads must be spray water protected.
- Before drilling check that no supply lines, e.g. gas, water, electric power, can be damaged, if necessary ask the appropriate authorities for advice.
- Do not drill without sufficient water cooling.
- Always hold the core drill unit with both hands.
- When using a ladder or a scaffold check the stability and the technical condition. Use only stable ladders and scaffolds.
- Do not try to drill workpieces for which the drill bit has not been designed.
Information on drill bits is available from the respective manufacturer.

- Avoid entering of water into the unit. Danger of electrical shock. If water has entered into the unit, switch the unit off immediately and restart it only after having it examined by the customer service.
- In case of unexpected blocking of the drill bit the enormous force of the core drill unit will cause a sudden dangerous reaction. Switch the machine off immediately.
- Always switch the core drill unit off and wait until it has stopped before laying it down.
- If possible use the hand grip and guide the machine with both hands.
- Pull the mains plug out before changing the drill bit. Remove the chuck key. Use only suitable tools for changing.

2.3.3 Noise regulations

The A-rated noise level of the machine is normally: Sound pressure level 86 dB (A);
Measuring point at 1 m distance, without load, mean value from three measurements.



Warning!

Noise
Permanent hearing damage possible.
Wear ear defenders.

2.3.4 Environmental protection

Machine, accessories and packaging material should be subjected to an ecological recycling. Environmentally hazardous drill dusts (depending on material to be drilled) must be completely extracted and disposed of environmentally in compliance with the valid country specific regulations.

Polluted cooling water (depending on the material to be drilled) must be collected and disposed of environmentally in compliance with the valid country specific regulations.

3 Description of the electrical core drill unit type: 2 1320 0010

3.1 Scope of delivery

The electrical core drill unit comes in a strong metal case.

Fig. 1

- 1 Metal case
 - 2 Hand grip
 - 3 Spot-drilling aid (2 pieces)
 - 4 Cooling water connection
 - 5 Core drill unit type: 2 1320 0010
- not shown: Operating instructions

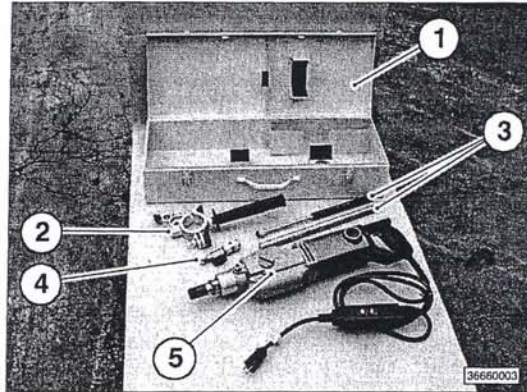


Fig. 1



Important!

Upon delivery check the scope of delivery for completeness. Report missing parts or damage immediately to the customer service.

3.2 Equipment elements

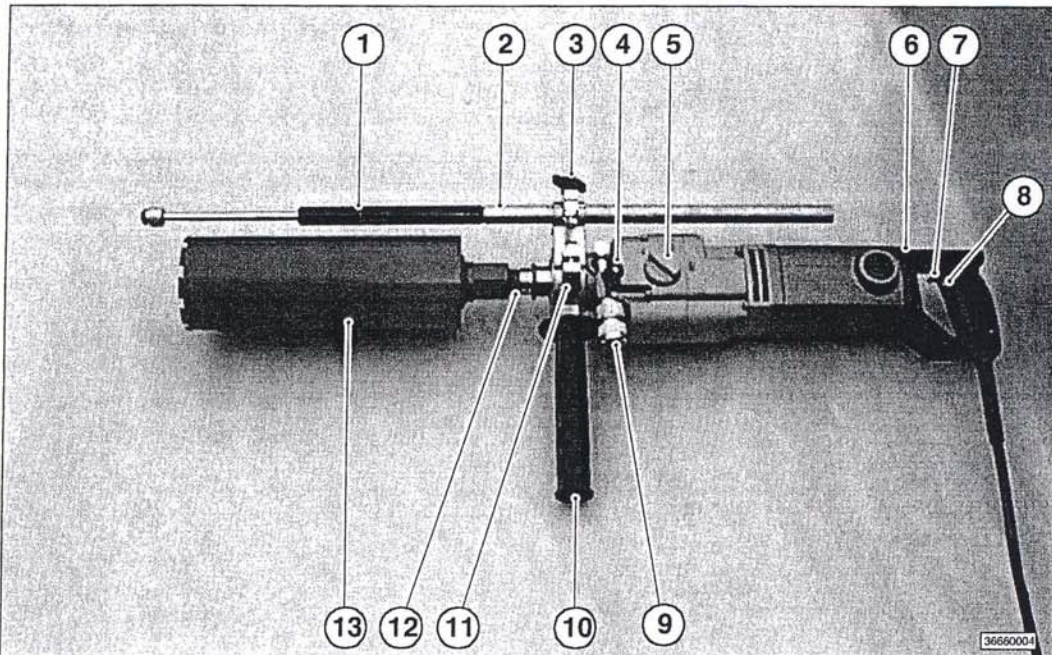


Fig. 2

- | | |
|---|---|
| 1 Spot-drilling aid (gas strut) | 8 ON-OFF-switch |
| 2 Spot-drilling aid (extension) | 9 Cooling water connection |
| 3 Wing screw for spot-drilling aid adjustment | 10 Hand grip |
| 4 Water valve | 11 Wing screw for hand grip adjustment |
| 5 Stepped switch for pre-selection of speed | 12 Drill bit receptacle G $\frac{1}{2}$ " - $\frac{1}{4}$ " UNC |
| 6 Reset button for motor protection switch | 13 Drill bit (not part of delivery) |
| 7 Locking button | |

The electrical supply line (Fig. 3/1) is fitted with an integrated personal safety switch (Fig. 3/2). At a differential current of 30 mA the personal safety switch interrupts the voltage supply. In case of undervoltage the core drill unit is also automatically switched off.

Button „Reset“ (Fig. 3/3)
To reset an activated personal safety switch.

Button „Test“ (Fig. 3/4)
To check the function of the personal safety switch. Actuation of this button generates a differential current, which in turn must trigger the personal safety switch.

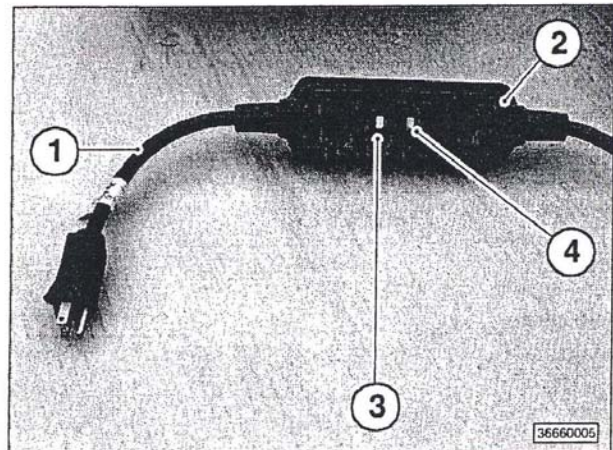


Fig. 3



Warning!

Electric voltage

Danger of electric shock.

Do not operate the core drill unit with a defective or manipulated personal safety switch. The function should be checked every time before starting operation or once every day.

3.3 Accessories

Spitznas Maschinenfabrik GmbH offers accessories for the electrical core drill unit type: 2 1320 0010, e.g. drill stands.



Important!

When operating the electrical core drill unit in connection with approved accessories, the instructions in the operation manuals for the accessories must also be complied with. This applies particularly for the safety regulations.

4 Transport and storage

The electrical core drill unit type: 2 1320 0010 comes in a sturdy metal case. This case provides sufficient space for all parts belonging to the scope of delivery.

After use and for transport the cleaned core drill unit should be paid into the metal case, together with the accessories.

It should be stored in a dry place.

5 Operation

This chapter describes the operation of the electrical core drill unit type: 2 1320 0010 for free-hand drilling. In this case the core drill unit must be guided with both hands.

5.2 Putting into service



Warning!

Before starting work with the electrical core drill unit pull the plug out of the mains socket. This applies especially when inserting or removing the drill bit, when assembling the hand grip and when connecting the cooling water supply.

5.2.1 Cooling water connection

Before turning cooling water connection (Fig. 4) into the electrical core drill unit check both seal rings (Fig. 4/1). Replace deformed or damaged seal rings immediately.



Danger!

**Electric voltage
Danger of electric shock.**

Leaks in the cooling water installation, e.g. caused by faulty seals, must be strictly avoided. Cooling water may otherwise enter into the core drill unit. After opening the cooling water supply check the complete supply line system for leaks.

Push the cooling water hose into the hose coupling and tighten by turning sleeve (Fig. 4/2) accordingly.

Turn the cooling water connection into the electrical core drill unit and tighten with an appropriate open end spanner.

Before opening the cooling water supply make sure that shut-off cock (Fig. 5/1) is closed.

Lever across direction of line - cock valve closed
closed

Lever in direction of line - cock valve open

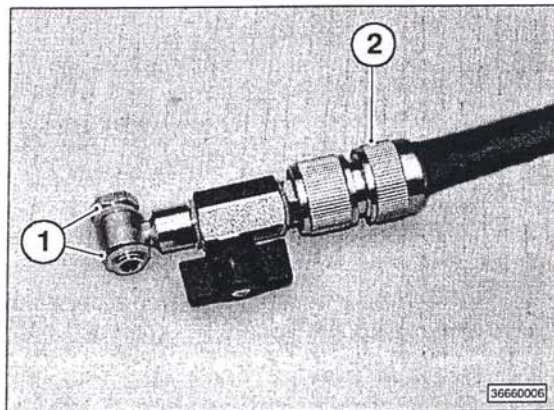


Fig. 4

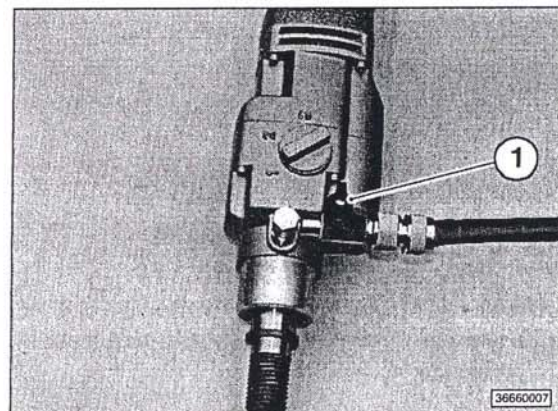


Fig. 5

5.2.2 Attaching hand grip and spot-drilling aid

Push the hand grip over the shaft of the core drill machine against the stop. Tighten both wing screws (Fig. 6/1) evenly.

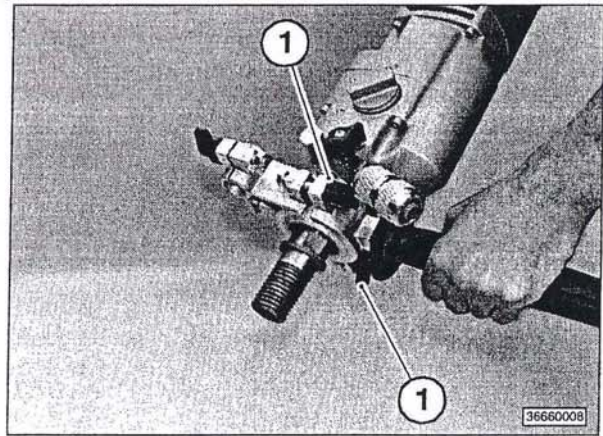


Fig. 6

Join extension rod (Fig. 7/1) and gas strut (Fig. 7/3), push it into the receptacle in the hand grip and tighten wing screw (Fig. 7/2).



Notice!

The spot-drilling aid can only be adjusted after attaching the drill bit.

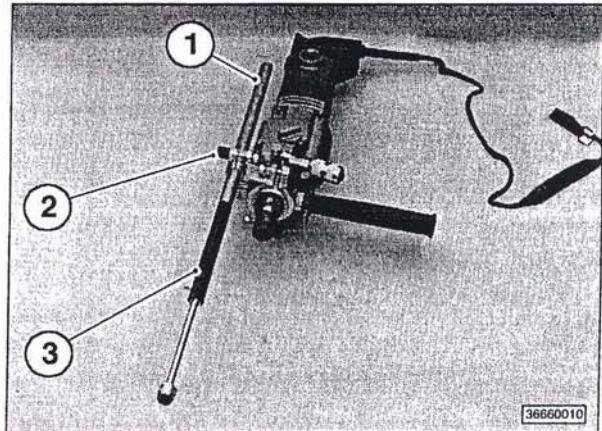


Fig. 7

5.2.3 Attaching the drill bit

Thread drill bit (Fig. 8/1) onto drill receptacle (Fig. 8/2). Clean dirty threads before attaching the drill bit.



Warning!

Sudden dangerous reaction force. Thread the drill bit always completely onto the drill receptacle.

When using the spot-drilling aid adjust buffer (Fig. 8/3) by moving the gas strut so that it just protrudes over the drill bit or is flush with the drill bit

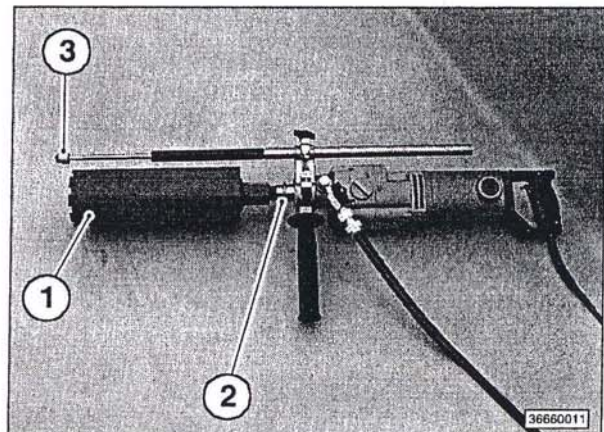


Fig. 8

5.3.2 Drilling



Notice!

During drilling apply only so much pressure that the rotary speed is not reduced too much. Let the friction clutch slip for max. 2-3 seconds, otherwise excessive wear.

For longer drilling periods the ON-OFF-switch can be locked with the locking button. The lock can be released by pressing the ON-OFF-switch once again.

For deeper bores it may be necessary to remove the spot-drilling aid or to retract the gas strut, if the spring way of the gas strut is fully used up.

5.3.3 After drilling

- Switch the core drill unit off.
- Close the cooling water supply (Lever across the direction of line).
- Pull out the mains plug of the electrical core drill unit.
- Secure core drill and core.
- Loosen the core drill with a suitable tool from the core drill unit.
- Pull drill bit with core out of the bore.
- If the core drill unit is no longer needed remove spot-drilling aid and cooling water connection, clean all parts and place them into the metal case.

6 Cleaning and maintenance



In order to maintain a safe operation the electrical core drill unit must be regularly cleaned and serviced. Maintenance must only be performed by Spitznas Maschinenfabrik GmbH or an authorized customer service. The specified maintenance intervals must be strictly complied with.

6.1 Cleaning



Warning!

**Electric voltage
Danger of electric shock!
Cleaning must only take place with the unit disconnected from the mains supply.
Never let liquid cleansers seep into the machine.**

After use remove all dirt deposits, e.g. by wiping off with a dry cloth.

Furthermore, blow the dust out of the ventilation slots once every week. Use only dry compressed air for this purpose.

6.2 Maintenance

Call the customer service to perform the listed maintenance work.

Maintenance interval	Maintenance work
every 100 operating hours	Have grease in gearbox changed.
every year	Have machine serviced.
as required	Have worn carbon brushers replaced.
as required	Have friction clutch checked, if necessary adjusted/replaced.

7 Fault remedy



Warning!

In case of a fault or after detecting a damage the electrical core drill unit may only be restarted after the fault has been rectified. Identify the machine clearly, so that no-one will try to operate it by mistake. Work on/in the unit must only be performed by the manufacturer or the authorized customer service.

Fault	Possible cause	Remedy
Motor does not turn, even though mains plugs is plugged in and ON-switch is actuated	Motor protection switch has triggered	Wait for 10 sec then press the reset button for the motor protection switch
	Personal safety switch has triggered	Press "reset" button on personal safety switch
	Mains cable defective	Have mains cable replaced
	Motor defective	Inform manufacturer or customer service
Motor switches off	Motor protection switch has triggered	Wait for 10 sec then press the reset button for the motor protection switch. Reduce the load during drilling.
Core drill stops already under low load	Friction clutch worn	Inform manufacturer or customer service

8 Appendix

8.1 Technical specifications

Mains voltage:	110 V
Current draw:	20 A
Power input:	2000 W
Power output:	1400 W
Idle speed:	450/1080/2100 min ⁻¹
Drill bit receptacle:	1 1/4" UNC male, R 1/2" female
Drill bit - Ø (stone):	max. 160 mm
Cooling water quality:	Tap water (free of dirt)
Cooling water pressure/temperature:	4bar/ max. 60 °C
Cooling water connection:	Gardena-System
Weight (core drill unit only):	9,4 kg
Weight (cpl. scope of delivery):	16,1 kg
Length of core drill unit:	590 mm
Dimensions of equipment case (l.x.w.x.h):	710 mm x 270 mm x 170 mm
Sound level:	86 dB (A)

Measuring point in 1 m distance, without load, mean value from three measurements

8.2 Address of customer service

Germany:
Spitznas
Maschinenfabrik GmbH
P.O.Box 11 02 09, D-42530 Velbert
Fellerstraße 4, D-42555 Velbert-Langenberg

Phone (0 20 52) 6 05-0
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