

# HILTI

## DD 200

Operating instructions

en

Mode d'emploi

fr

Manual de instrucciones

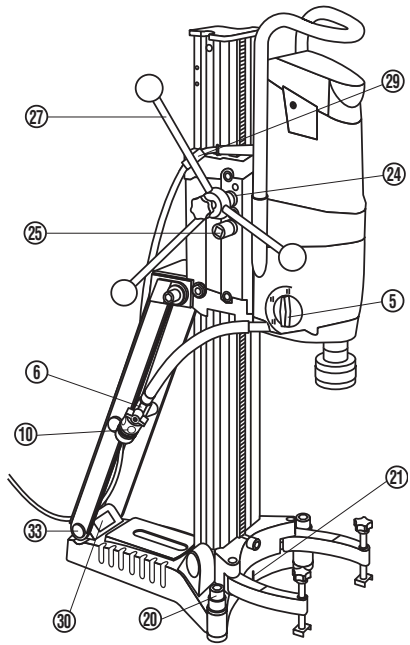
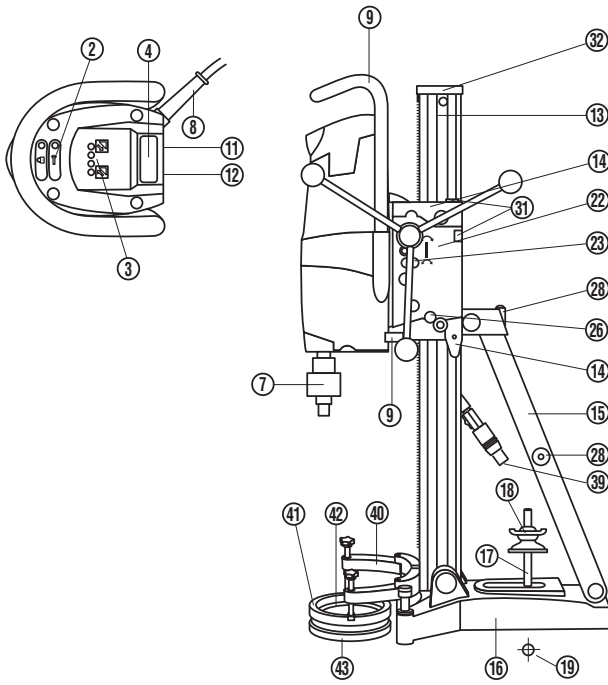
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Manual de instruções

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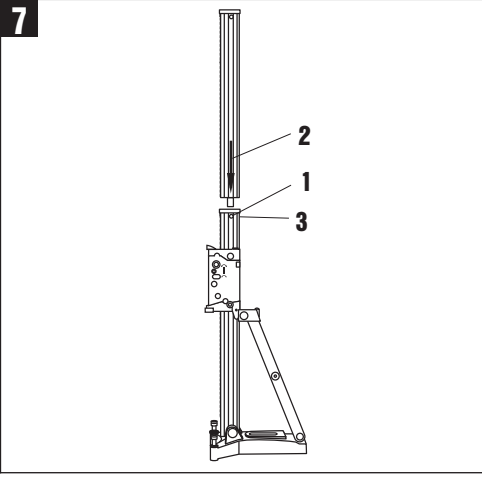
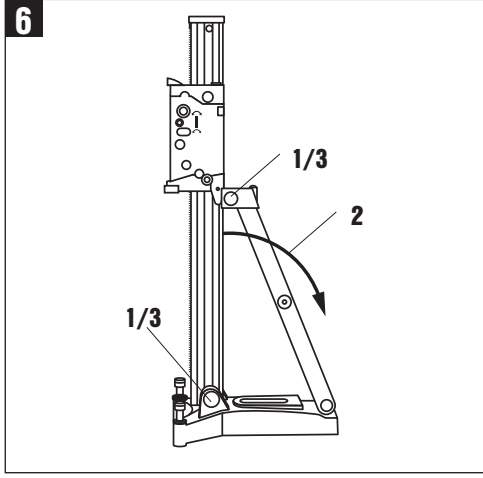
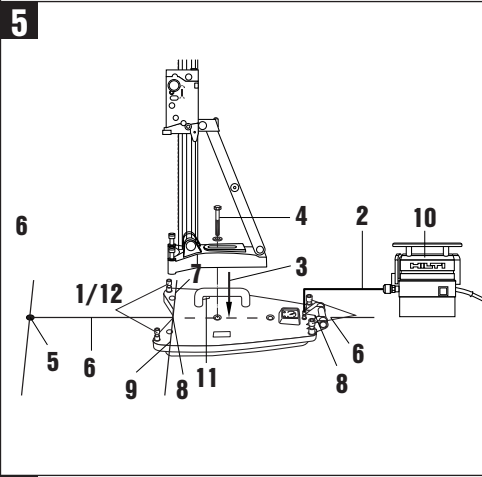
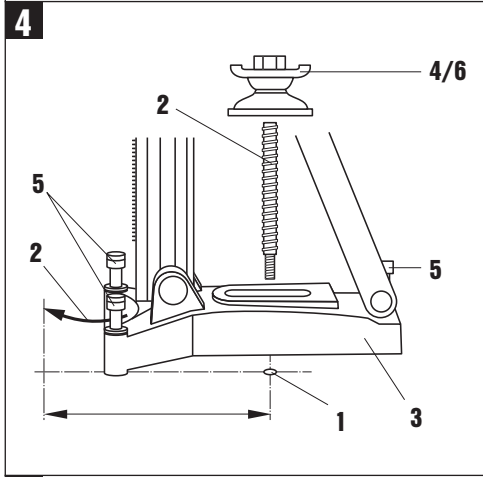
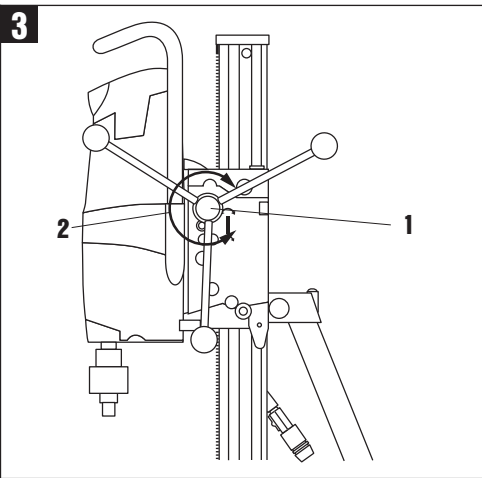
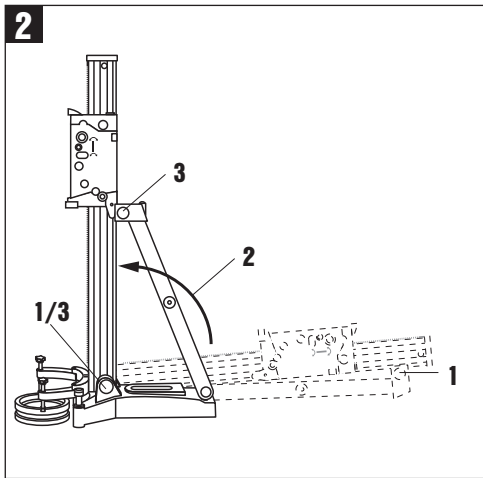


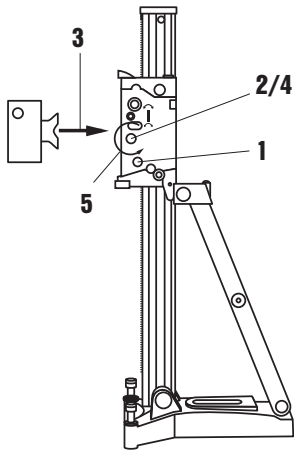
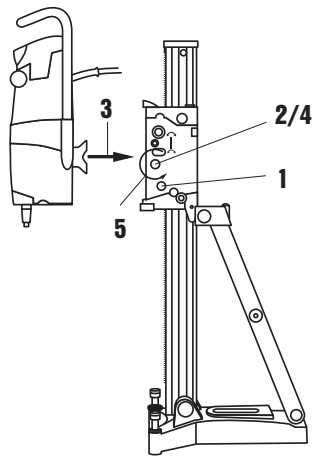
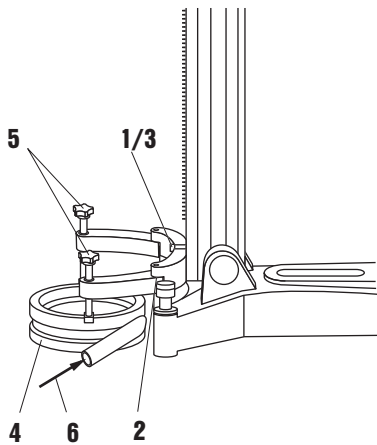
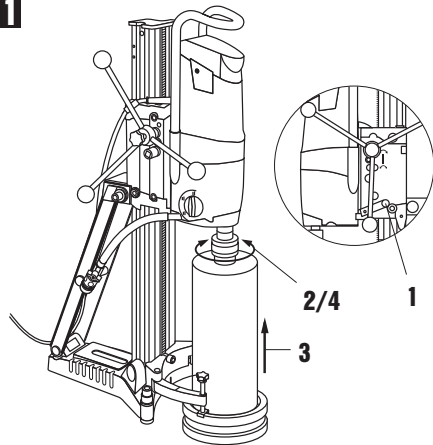
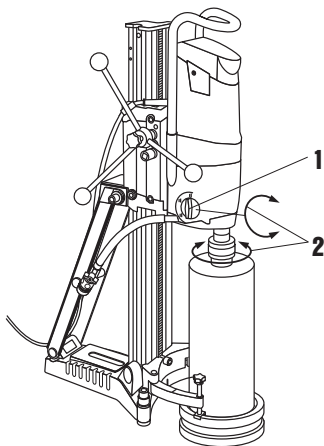
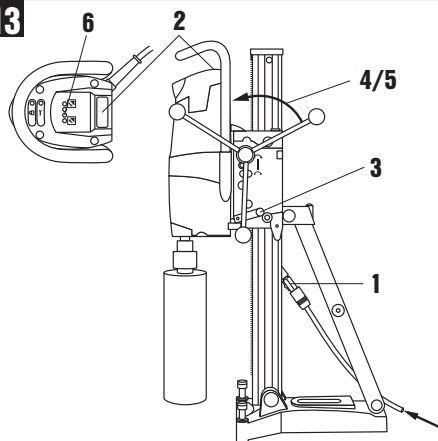
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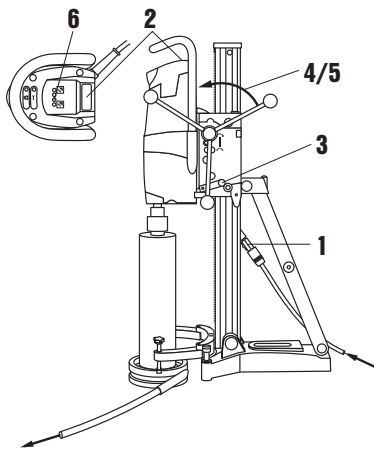
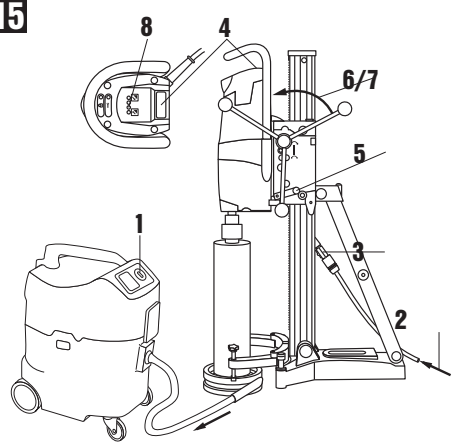
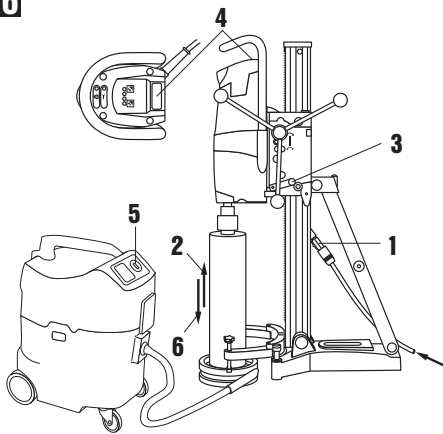
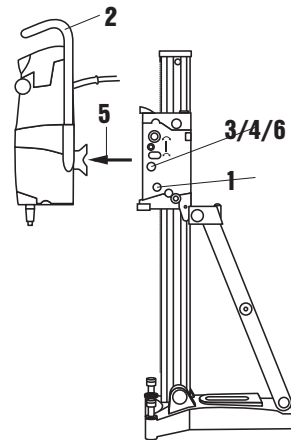
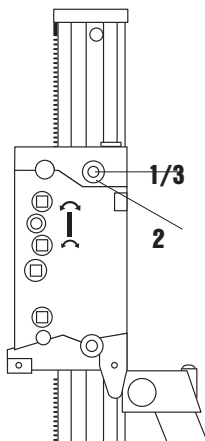


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# DD 200 diamond core drilling system

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***It is essential that the operating instructions are read before the machine is operated for the first time.***

***Always keep these operating instructions together with the machine.***

***Ensure that the operating instructions are with the machine when it is given to other persons.***

## Operating controls, parts and indicators Drilling rig (drive unit and drill stand)

### Drive unit

- ② Service indicator
- ③ Drilling performance indicator
- ④ On / off switch
- ⑤ Gear selector switch
- ⑥ Water flow regulator
- ⑦ Chuck
- ⑧ Supply cord with GFCI
- ⑨ Carrying grips (2)
- ⑩ Water hose connector
- ⑪ Type plate
- ⑫ Interface

### Drill stand

- ⑬ Column
- ⑭ End cap
- ⑮ Strut
- ⑯ Base plate
- ⑰ Clamping spindle
- ⑱ Clamping nut
- ⑲ Anchor
- ⑳ Leveling screws

- ㉑ Hole center indicator
- ㉒ Carriage
- ㉓ Drive unit (eccentric) locking bolt
- ㉔ Direct drive
- ㉕ Reduction gear
- ㉖ Carriage locking mechanism
- ㉗ Hand wheel
- ㉘ Carrying grip
- ㉙ Supply cord guide
- ㉚ Type plate
- ㉛ Leveling indicators (2)
- ㉜ End stop
- ㉝ Wheel assembly mounting point

## ACCESSORIES

### Vacuum base plate

- ㉞ Pressure gauge
- ㉟ Vacuum release valve
- ㊱ Vacuum seal
- ㊲ Vacuum hose connector
- ㊳ Wheel assembly mounting point

### Water flow indicator

- ㊴ Water flow indicator

### Water collector system

- ㊵ Water collector holder
- ㊶ Water collector
- ㊷ Seal
- ㊸ Seal

## 1. General information

### 1.1 Safety notices and their meaning

#### -DANGER-

Draws attention to imminent danger that will lead to serious bodily injury or fatality.

#### -WARNING-

Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

#### -CAUTION-

Draws attention to a potentially dangerous situation that could lead to slight personal injury or damage to the equipment or other property.

#### -NOTE-

Draws attention to an instruction or other useful information.

### 1.2 Pictograms

#### Prohibition signs



Transport by crane is not permissible.

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**Warning signs**



General warning



Warning: electricity



Warning: hot surface

**Obligation signs**



Wear eye protection



Wear a safety helmet



Wear ear protection



Wear safety gloves



Wear safety boots

**Symbols**



Read the operating instructions before use.



Recycle waste material

**A**

Amps

**V**

Volts

**W**

Watts

**Hz**

Hertz

**/min**

Revolutions per minute

**rpm**

Revolutions per minute

**~**

Alternating current

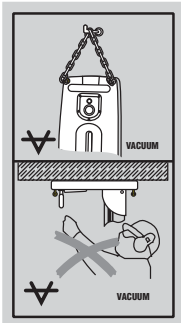
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Nominal speed under no load

**∅**

Diameter

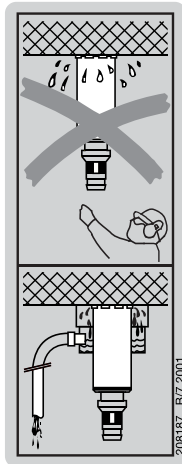
**On the vacuum baseplate**



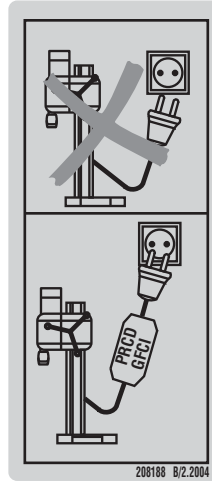
Top:  
An additional means of securing the drill stand must be employed when used for horizontal drilling with vacuum attachment.

Below:  
Use of only the vacuum baseplate to secure the drill stand for overhead drilling is not permissible.

**On the tool**



Use of the water collector system in conjunction with a wet-type vacuum cleaner is mandatory when working overhead on ceilings.



Use of a correctly functioning GFCI (ground fault circuit interrupter) is mandatory.

**1** These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions. In these operating instructions, the designation "the machine" refers to the DD 200 core drilling machine.

**Location of identification data on the machine**

The type designation and serial number can be found on the rating plate on the machine. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type: DD 200

Serial no.: \_\_\_\_\_

Type: DD-HD 30

Serial no.: \_\_\_\_\_



## 2. General safety rules

### 1. WARNING!

#### Read and understand all instructions.

Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

#### SAVE THESE INSTRUCTIONS

### 2. Work Area

Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.

Keep bystanders, children and visitors away while operating a power tool. Distractions can cause you to lose control.

### 3. Electrical Safety

Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.

Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

When operating a power tool outside, use an outdoor extension cord marked «W-A» or «W». These cords are rated for outdoor use and reduce the risk of electric shock.

### 4. Personal Safety

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

Remove adjusting keys or wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.



Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

### 5. Tool Use and Care

Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

Do not use tool if the switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

### 6. Service

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

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When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or

failure to follow Maintenance Instructions may create a risk of electric shock or injury.

### 3. Specific safety rules and symbols

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- Approval must be obtained from the site engineer or architect prior to beginning drilling work. Drilling work on buildings and other structures may influence the statics of the structure, especially when steel reinforcing bars or load-bearing components are cut through.
- It is recommended that rubber gloves and non-slip shoes are worn when working outdoors.
- Check that all core bits are in good condition before use. Do not use deformed or damaged core bits.
- Ensure that the workplace is well ventilated.
- When drilling through-holes, the area below the ceiling, floor or behind the wall where the drilling is taking place must be secured as the drilled-out core may fall out.
- To avoid tripping and falling when working, always lead the supply cord, extension cord and water hose away to the rear.
- Keep the supply cord, extension cord, water hose and vacuum hose away from rotating parts of the machine.
- **WARNING: Before beginning drilling, check that there are no live electric cables located in the area where the hole is to be made.**
- Concealed electric cables or gas and water pipes present a serious hazard if damaged while you are working. Accordingly, check the area in which you are working beforehand (e.g. using a metal detector). External metal parts of the machine may become live, for example, when an electric cable is drilled into inadvertently.
- Do not work from a ladder.



- Keep the grips dry, clean and free from oil and grease.
- Never leave the machine unattended.
- When not in use, the machine must be stored in a dry place.
- If a GFCI is supplied with the power tool, never operate the power tool without the GFCI.
- Check the GFCI each time before use.
- Avoid skin contact with drilling slurry.
- Wear respiratory protection when the work creates dust, e.g. during dry drilling. Connect a vacuum cleaner to the drilling system. Drilling into materials that present a health hazard (e.g. asbestos) is not permissible.



- Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.

- Make sure that the machine is correctly and securely attached to the drill stand.
- Do not touch rotating parts.
- Make sure that all clamping screws are tightened correctly.
- After detaching the column extension, the end cap (with built-in, safety-relevant end stop function) must be refitted to the drill stand.



- Check the condition of the extension cord and replace it if damage is found.
- Check the condition of the machine and its accessories. Do not operate the machine or its accessories if damage is found, if the machine is incomplete or if its controls cannot be operated faultlessly.
- Do not touch the supply cord in the event of it suffering damage while working. Disconnect the supply cord plug from the socket.
- In the event of a power failure, switch the machine off and unplug the supply cord.
- Avoid using extension cords with multiple sockets and the simultaneous use of several machines connected to one extension cord.
- Never operate the machine when it is dirty or wet. Dust (especially dust from conductive materials) or dampness adhering to the surface of the machine may, under unfavorable conditions, cause an electric shock to be received. Dirty or dusty machines should thus be checked at a Hilti service center at regular intervals, especially used frequently for working on conductive materials.
- **The tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
- **Children must be instructed not to play with the tool.**
- **WARNING: Some dust created by grinding, sanding, cutting and drilling contains chemicals known to cause cancer, birth defects, infertility or other reproductive harm; or serious and permanent respiratory or other injury.** Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks, concrete and other masonry products and natural stone, arsenic and chromium from chemically treated lumber. Your risk from these exposure varies, depending on how often you do this type of work. **To reduce exposure to these chemicals, the operator and bystanders should work in a well-ventilated area, work with approved safety equipment, such as respiratory protection appropriate for the type of dust generated, and designed to filter out microscopic particles and direct dust away from the face and body. Avoid prolonged contact with dust. Wear protective clothing**

and wash exposed areas with soap and water. Allowing dust to get into your mouth, nose, eyes, or to remain on your skin may promote absorption of harmful chemicals.



- The core bit may become hot during use. Wear protective gloves when changing core bits.
- The machine is intended for professional use.
- The machine may be operated, serviced and repaired only by authorized, trained personnel. This personnel must be informed of any special hazards that may be

encountered.

- Exercise your fingers during pauses between work to improve blood circulation in your fingers.
- The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves and safety footwear while the machine is in use.



Wear eye protection



Wear a hard hat



Wear ear protection



Wear protective gloves



Wear safety boots

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## 4. Functional description

### 4.1 Use of the equipment as intended

The DD 200 and DD HD-30 form a drilling rig designed for wet core drilling in mineral materials using diamond core bits (hand-held use is not permissible). The drive unit must always be mounted on the drill stand when in use and the drill stand secured adequately by means of an anchor or vacuum base plate. Manipulation or modification of the drive unit, drill stand or accessories is not permissible. To avoid the risk of injury, use only original Hilti accessories and insert tools. Observe the information printed in the operating instruc-

tions concerning operation, care and maintenance. Observe the safety rules and operating instructions for the accessories used. Do not use a hammer or other heavy object when making adjustments to the baseplate. The drive unit, drill stand, accessories and insert tools may present hazards when used incorrectly by untrained personnel or not as directed. The machine may be operated only when connected to an adequately rated electric supply equipped with an earth / ground conductor.

Equipment	Core bits	Drilling direction
System with water collector and wet-type vacuum cleaner	1–10" (25–250 mm) dia.	All directions
System without water collector and wet-type vacuum cleaner	1–16" (25–400 mm) dia.	Not upwards
System with water collector	1–10" (25–250 mm) dia.	Not upwards

Use of the water collector system in conjunction with a wet-type vacuum cleaner is mandatory when working overhead on ceilings. Horizontal drilling in conjunction with the vacuum base plate (accessory) is permissible only when an additional means of securing the drill stand is employed. Drilling into materials hazardous to the health (e.g. asbestos) is not permissible.

See figure **1** and the explanations of operating controls and the tool components on page 1.

### The following items are supplied:

- power tool
- operating instructions

## 5. Technical data

Drive unit	DD 200
Rated voltage	120 V
Rated power input	2400 W
Rated current	20 A
Rated frequency	60 Hz
Nominal speed under no load	320 / 640 / 1300 /min
Max. permissible water supply pressure	6 bar
Dimensions (LxWxH)	24.8x5.9x6.8 in (630x150x173 mm)
Weight (drive unit)	30.6 lbs (13.9 kg)
Weight (drill stand)	40.3 lbs (18.3 kg)
Drilling depth	max. 20 in (500 mm) without extension
Protection class	protection class I (grounded)

## 6. Before use



### -NOTE-

The mains voltage must correspond with the information printed on the type plate. Ensure that the machine is disconnected from the electric supply.

#### 6.1 Use of extension cords

Use only extension cords of a type approved for the application and with conductors of adequate cross section. Recommended minimum conductor cross section and max. cable lengths

Mains voltage	Conductor cross section					
	mm <sup>2</sup>			AWG		
Conductor cross section	1.5	2.0	2.5	3.5	14	12
100 V	not permissible	not permissible	not permissible	25 m	not permissible	–
110–120 V	not permissible	not permissible	20 m	–	not permissible	75 ft
220–240 V	30 m	–	50 m	–	–	–

Do not use extension cords with 1.25 mm<sup>2</sup> or 16 AWG conductor cross sections.

#### 6.2 Use of a generator or transformer

This machine may be powered by a generator or transformer which fulfils the following conditions:

- AC voltage, output power at least 4000 VA
  - The operating voltage must be within +5% and –15% of the rated voltage at all times.
  - Frequency range 50 – 60 Hz, never above 65Hz
  - Automatic voltage regulation with starting boost
- Never operate other machines or appliances on the generator or transformer at the same time. Switching other machines or appliances on and off may cause undervoltage and / or overvoltage peaks, resulting in damage to the machine.

#### 6.3 Preparations

<b>-CAUTION-</b>	
  	<ul style="list-style-type: none"> <li>• The machine, the diamond core bit and the drill stand are heavy.</li> <li>• There is a risk of pinching parts of the body.</li> <li>• Wear a hard hat, protective gloves and safety boots.</li> </ul>

##### 6.3.1 Setting up the drill stand 2

### -NOTE-

If the drill stand has been folded up to facilitate transport, proceed as follows:

1. Release the screws at the top end of the strut and at the column pivot.

2. Pivot the column into the vertical position (as far as it will go).
3. Tighten the screw at the top end of the strut and at the column pivot securely.

### -NOTE-

The end cap must be fitted on the end of the column. It serves as a protector and as the end stop.

##### 6.3.2 Fitting the hand wheel 3

### -NOTE-

The hand wheel can be fitted on the left or right side of the carriage, on either of the two axles. The upper axle drives the carriage directly while the lower axle drives the carriage by way of reduction gearing.

1. Fit the hand wheel to one of the two axles on either the left or right side of the carriage.
2. Secure the hand wheel with the screw provided.

##### 6.3.3 Fastening the drill stand with an anchor 4

### -WARNING-

Use an anchor suitable for the material on which you are working and observe the anchor manufacturer's instructions.

### -NOTE-

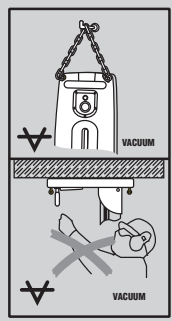
Hilti M16 metal expansion anchors are usually suitable for fastening diamond core drilling equipment to uncracked concrete. Under certain conditions it may be necessary to use an alternative fastening method. Please contact Hilti Technical Service if you have any questions about secure fastening.

1. Set the anchor, of a type suitable for the material on which you are working, ideally at a distance of 330 mm (13") from the center of the point where the hole is to be drilled.
2. Screw the clamping spindle (accessory) into the anchor.
3. Position the drill stand over the spindle and bring it into alignment with the aid of the hole center indicator. When the spacer is used (accessory), the hole center indicator cannot be used to align the drill stand.
4. Screw the clamping nut onto the spindle but do not tighten it.
5. Level the base plate by way of the three leveling screws. The two level indicators on the carriage serve as a leveling aid.
6. Use a 27 mm AF open-end wrench to tighten the clamping nut on the spindle. Alternatively, the rear leveling screws can be tightened. The strut can be pivoted out of the way to facilitate access.
7. Check that the drill stand is fastened securely.

### 6.3.4 Fastening the drill stand with the vacuum base plate (accessory) **5**

#### **-CAUTION-**

Check the surface on which the vacuum base plate is to be mounted. An uneven, rough surface can significantly reduce the effectiveness of the vacuum fastening system. Coatings or laminated surfaces may be pulled away while working with the vacuum base plate.



#### **-CAUTION-**

Suitable for use only with core bits of up to 300 mm diameter and without use of a spacer.

#### **-NOTE-**

The hand grip on the vacuum base plate is equipped with a vacuum valve which can be used to release the vacuum.

Overhead drilling with the drill stand secured only by the vacuum base plate is not permissible.

1. Turn the four leveling screws back until they project approx. 5 mm beneath the vacuum base plate.
2. Connect the hose between the vacuum base plate and the vacuum pump.
3. Position the drill stand on the vacuum base plate.
4. Fit the screw and washer provided.
5. Mark the center point of the hole to be drilled.
6. Draw a line approximately 800 mm in length from the center mark toward the approx. position at which the drill stand is to be secured.
7. Make a mark on the 800 mm line at a distance of 165 mm (6½") from the hole center mark.
8. Bring the marks on the vacuum base plate into alignment with the 800 mm line.
9. Position the center of the front edge of the vacuum base plate on the line at the 165 mm (6½") mark.

**-NOTE- Before using the vacuum pump, make yourself familiar with the information contained in its operating instructions and observe these instructions.**

10. Switch on the vacuum pump and press the vacuum release valve.
11. Once the drill stand has been positioned correctly, remove your finger from the vacuum release valve and press the base plate against the work surface.

**-CAUTION-** Ensure that the pressure gauge pointer remains within the green area before beginning drilling and during the drilling operation.

12. Use the four leveling screws to level the vacuum base plate. The 2 built-in level indicators on the carriage serve as leveling aids. Note: Do not attempt to level the anchor base plate on the vacuum base plate. This is not permissible.
13. An additional means of securing the drill stand must be employed when drilling horizontally (e.g. a chain

attached to an anchor, ...)

14. Check that the drill stand is fastened securely.

### 6.3.5 Adjusting the angle of the drill stand (adjustable to max. 45°) **6**

#### **-CAUTION-**

Take care to avoid pinching your fingers at the pivot. Wear protective gloves.

1. Release the screw at the pivot at the lower end of the column and at the strut at the top end.
2. Bring the column into the desired position. The angle scale on the rear serves as an adjustment aid.
3. Retighten the two screws securely.

### 6.3.6 Using the column extension (accessory) **7**

1. Remove the end cap (with built-in end stop) from the top end of the column and refit it to the end of the column extension.
2. Fit the cylindrical section of the column extension into the end of the column on the drill stand.
3. Secure the column extension by tightening the eccentric locking bolt.
4. A depth gauge (accessory) may be fitted on the column as an additional end stop.
5. The end cap (with built-in end stop) must be refitted to the column on the drill stand when the column extension is subsequently removed. The end stop is a safety-relevant part and must always be used.

### 6.3.7 Fitting the spacer (accessory) **8**

#### **-NOTE-**

The distance between the drilling axis and the drill stand must be increased by fitting the spacer when diamond core bits with a diameter greater than 12 in (300 mm) are to be used. The hole center indicator cannot be used in conjunction with the spacer. These instructions presume that the drive unit is not already fitted.

1. Lock the carriage in position on the column (activate the carriage locking mechanism).
2. Release the drive unit locking bolt.
3. Pull out the locking bolt.
4. Fit the spacer onto the carriage.
5. Push the locking bolt into the carriage as far as it will go.
6. Tighten the locking bolt securely.

### 6.3.8 Mounting the drive unit on the drill stand **9**

#### **-NOTE-**

Ensure that the drive unit is disconnected from the electric supply.

1. Lock the carriage in position on the column (activate the carriage locking mechanism).
2. Pull out the drive unit locking bolt.
3. Fit the drive unit onto the carriage or spacer.
4. Push the locking bolt into the carriage or spacer as far as it will go.
5. Tighten the locking bolt securely.
6. Clip the supply cord into the supply cord guide on the carriage cover.
7. Check that the drive unit is mounted securely.

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### 6.3.9 Connecting the water supply

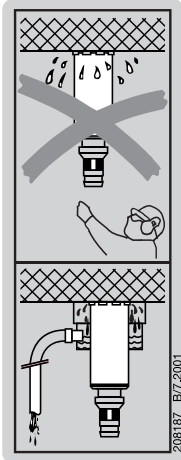
1. Close the water flow regulator on the drive unit.
2. Connect the water supply hose to the hose connector.

#### -NOTE-


A water flow indicator (accessory) can be connected between the water supply hose and the hose connector on the drive unit.

#### -CAUTION-

Check the hoses for damage at regular intervals and ensure that the maximum permissible water supply pressure of 6 bar is not exceeded.



### 6.3.10 Fitting the water collector system

(accessory) 

#### -NOTE-

Use of the water collection system permits water to be drained away from the core bit thus avoiding soiling the surrounding area. We recommend use of the water collector system with core bits of up to 10 in (250 mm) diameter. Best results are achieved in conjunction with a wet-type vacuum cleaner.


Use of the water collection system in conjunction with a wet-type vacuum cleaner is mandatory for overhead drilling. The drill stand must be set up at 90° to the ceiling. The water collector seal must be of a size suitable for the core bit diameter used.

1. Release the screw on the drill stand (at the front lower end of the column).
2. Slide the water collector holder into place behind the screw from below.
3. Tighten the screw securely.
4. Fit the water collector between the two moveable arms of the water collector holder.
5. Secure the water collector by way of the two screws on the water collector holder.
6. Connect the water collector to a wet-type vacuum cleaner. Alternatively, the water can be allowed to flow away through a length of hose attached to the connector.

### 6.3.11 Adjusting the depth gauge (accessory)

1. Turn the hand wheel until the core bit contacts the material in which the hole is to be drilled.
2. Set the desired drilling depth by adjusting the distance between the carriage and the depth gauge.
3. Secure the depth gauge by tightening the clamping screw.

### 6.3.12 Fitting a diamond core bit

(drive unit with Hilti BL chuck) 

#### -DANGER-

**Do not use damaged core bits. Check the core bits for chipping, cracks, or heavy wear each time before use. Do not use damaged tools.** Fragments of the workpiece or a broken core bit may be ejected and cause injury beyond the immediate area of operation.


#### -NOTE-

Diamond core bits must be replaced when the cutting performance and/or rate of drilling progress drops significantly. This generally is the case when the segments reach a height of less than 2 mm.

#### -CAUTION-

Fitting and positioning the core bit incorrectly can lead to hazardous situations as parts can break and fly off. **Check that the core bit is seated correctly.**

1. Lock the carriage in position on the column (activate the carriage locking mechanism) and check that the drill stand is fastened securely.
2. Open the chuck by turning it in the direction of the "open" symbol (open brackets).

	<p style="text-align: center;"><b>-CAUTION-</b></p> <ul style="list-style-type: none"> <li>● The core bit may become hot during use or during sharpening.</li> <li>● It may burn your hands.</li> <li>● Wear protective gloves when changing the core bit.</li> </ul>
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3. Push the connection end of the diamond core bit into the chuck on the drive unit from below until it engages with the gear teeth.
4. Close the chuck by turning it in the direction of the "closed" symbol (closed brackets).
5. Check that the diamond core bit it is held securely (check by hand for play and try to pull it away from the chuck).

### 6.3.13 Selecting drilling speed

#### -CAUTION-


Do not change gear while the motor is running. Wait until rotation has stopped.



1. Select the gear according to the core bit diameter to be used.
2. Move the gear selector switch to the desired setting while rotating the core bit by hand.



## 7. Operation



<b>-CAUTION-</b>	
	<ul style="list-style-type: none"> <li>• The machine and the core drilling operation emit noise.</li> <li>• Excessive noise may damage the hearing.</li> <li>• Wear ear protection.</li> </ul>

<b>-CAUTION-</b>	
	<ul style="list-style-type: none"> <li>• The core drilling operation may cause hazardous fragments to fly off.</li> <li>• Flying fragments may cause injury to the eyes or other parts of the body.</li> <li>• Wear eye protection and a hard hat.</li> </ul>
	

### 7.1 Switching on and checking the GFCI ground fault interrupter

1. Plug the drive unit supply cord into an electric socket with earth connection.
2. Press the "ON" button on the GFCI ground fault interrupter (the indicator must light).
3. Press the "TEST" button on the GFCI ground fault interrupter (the indicator must go out).

#### **-DANGER-**

If the indicator continues to light, further operation of the machine is not permissible. Have the machine repaired by a qualified specialist using genuine Hilti spare parts.

4. Press the "ON" button on the GFCI ground fault interrupter (the indicator must light).

### 7.2 Core bit diameters and corresponding gears

Gear	Core bit diameter
1	152–400 mm (6" – 16")
2	82–162 mm (3 <sup>1</sup> / <sub>4</sub> " – 6 <sup>3</sup> / <sub>8</sub> " )
3	25– 82 mm (1" – 3 <sup>1</sup> / <sub>4</sub> " )

**When coring heavily reinforced or very hard concrete (e.g. flint or high-performance concrete), particularly with diameters 82 mm (3<sup>1</sup>/<sub>4</sub>") and 152–162 mm (6"–6<sup>3</sup>/<sub>8</sub>" ), it is recommended to use the lower gear.**

### 7.3 Operating the drilling machine without the water collector system and wet vacuum cleaner

#### **-NOTE-**

The water flows away in uncontrolled fashion. Overhead drilling is not permissible!

#### **-CAUTION-**

Do not allow water to come into contact with the drive unit.

#### 7.3.1 Switching on

1. Open the water flow regulator slowly until the desired volume of water is flowing.
2. Press the on / off switch on the drive unit (switch position " I ").
3. Release the carriage lock.
4. Turn the hand wheel until the core bit comes into contact with the material in which the hole is being drilled.
5. Apply only light pressure until the core bit has become centered and then gradually increase the pressure.
6. Regulate the pressure applied to the core bit by observing the drilling performance indicator (optimum drilling performance is achieved when the green lamps in the display light).

### 7.4 Operating the drilling machine with the water collector system (accessory)

#### **-NOTE-**

The water is allowed to flow away through a length of hose. Overhead drilling is not permissible!

#### **-CAUTION-**

Do not allow water to come into contact with the drive unit.

#### 7.4.1 Switching on

1. Open the water flow regulator slowly until the desired volume of water is flowing.
2. Press the on / off switch on the drive unit (switch position " I ").
3. Release the carriage lock.
4. Turn the hand wheel until the core bit comes into contact with the material in which the hole is being drilled.
5. Apply only light pressure until the core bit has become centered and then gradually increase the pressure.
6. Regulate the pressure applied to the core bit by observing the drilling performance indicator (optimum drilling performance is achieved when the green lamps in the display light).

### 7.5 Operating the drilling machine with the water collector system and wet-type vacuum cleaner (accessories)

#### **-NOTE-**

Drilling at an angle in an upwards direction is not permissible (the water collector is not functional). The core bit fills with water during overhead drilling.

#### **-CAUTION-**

Water must not be allowed to run over the drive unit.

#### **-NOTE-**

The wet-type vacuum cleaner must be switched on man-

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ually before beginning drilling and switched off manually at the end of the drilling operation.

### 7.5.1 Switching on 15

1. Switch on the wet-type vacuum cleaner. Do not use automatic mode.
2. Ensure that the water supply is connected and ready for use.
3. Open the water flow regulator.
4. Press the on / off switch on the drive unit (switch position “I”).
5. Release the carriage lock.
6. Turn the hand wheel until the core bit comes into contact with the material in which the hole is being drilled.
7. Apply only light pressure until the core bit has become centered and then gradually increase the pressure.
8. Regulate the pressure applied to the core bit by observing the drilling performance indicator (optimum drilling performance is achieved when the green lamps in the display light).

### 7.6 Switching off 16

1. Close the water flow regulator.
2. Withdraw the diamond core bit from the hole.  
Caution: The core bit fills with water during overhead drilling. After overhead drilling, the water must first be allowed to drain from the core bit. This is done by disconnecting the water supply hose from the connector on the drive unit and then opening the water flow regulator valve (do not allow the water to flow back through the water flow indicator). The water must not be allowed to run over the drive unit.
3. Engage the carriage lock.
4. Switch off the drive unit.
5. Switch off the vacuum cleaner, if used.
6. To ensure that the drill stand remains in balance, lower the core bit until in contact with the working surface or fold out the hole center indicator (this is not effective if using the vacuum baseplate).
7. If necessary, remove the core from the core bit.

### 7.7 Removing the drive unit from the drill stand 17

#### -NOTE-

Ensure that the machine is disconnected from the mains supply.

1. Secure the carriage on the column by engaging the carriage lock.
2. Hold the drive unit securely with one hand on the carrying grip. **-CAUTION-** The drive unit may otherwise fall from the drill stand!
3. Release the drive unit eccentric locking bolt with the other hand.
4. Pull out the eccentric locking bolt.
5. Remove the drive unit from the carriage.
6. Push the eccentric locking bolt back into the carriage as far as it will go.

### 7.8 Disposing of drilling slurry

see Section 11 “Disposal”.

### 7.9 Procedure in the event of the core bit sticking

The slip clutch will be activated if the core bit sticks. The power tool must then be switched off by the operator. To release the core bit, proceed as follows:

#### Using an open-end wrench to release the core bit

1. Disconnect the supply cord plug from the power outlet.
2. Grip the core bit close to the connection end with a suitable open-end wrench and rotate the core bit to release it.
3. Plug the supply cord back into the power outlet.

#### Using the spider wheel to release the core bit

1. Disconnect the supply cord plug from the power outlet.
2. Release the core bit by rotating it with the spider wheel.
3. Plug the supply cord back into the power outlet.
4. Continue the drilling operation.

### 7.10 Transport and storage



#### -NOTE-

- Transport the drive unit, drill stand and diamond core bit as separate units.
- Use the wheel assembly (accessory) to facilitate transport.
- Open the water flow regulator before storing the power tool. Especially at temperatures below freezing, take care to ensure that no water remains in the power tool.



## 8. Care and maintenance

Disconnect the supply cord plug from the socket.

### Care of insert tools and metal parts

Remove any dirt adhering to the core bits and protect their surfaces from corrosion by rubbing them with an oily cloth from time to time.

#### 8.1 Care of the machine

##### -CAUTION-

**Keep the power tool, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents which contain silicone.**

The outer casing of the tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Never operate the tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the tool.

Clean the outside of the tool at regular intervals with a slightly damp cloth. Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the tool.

#### 8.2 Maintenance

Check all external parts of the machine for damage at regular intervals and check that all controls operate faultlessly. Do not operate the machine if parts are damaged or when the controls do not function faultlessly. If necessary, the machine should be repaired at a Hilti repair center.

Repairs to the electrical section of the machine may be carried out only by trained electrical specialists.

#### 8.3 Replacing the carbon brushes

The indicator lamp with the wrench symbol lights when the carbon brushes require to be replaced.



Failure to observe the following instructions may present a possibility of coming into contact with a dangerous high voltage. The machine may be operated, serviced and repaired only by authorized, trained personnel. This personnel must be informed of any special hazards that may be encountered.

1. Disconnect the drive unit from the electric supply.
2. Remove the covers from the right and left sides of the drive unit.
3. Remove the used carbon brushes from the drive unit. Note how the brushes are fitted.
4. Fit the new carbon brushes exactly as the old carbon brushes (Spare part no.: 279526).
5. Screw the covers back on to the right and left sides of the machine.

#### 8.4 Adjusting play between the column and the carriage

The play between the column and the carriage can be adjusted by way of 4 eccentrically-mounted rollers. The 4 rollers shown in the illustration can be adjusted. First remove the drive unit from the drill stand and run the carriage up to the top of the column by turning the hand wheel. The 4 rollers can then be adjusted as follows:

1. Use a 5 mm AF hex. socket wrench to unscrew the locking screw slightly (do not remove the screw).
2. Use a 19 mm AF open-end wrench to turn the eccentric axle, thus pushing the roller slightly toward the column.
3. Tighten the locking screw.

#### 8.5 Checking the equipment after care and maintenance

All functions must be checked after care and maintenance.

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## 9. Tools and accessories

Water flow indicator	305939
Depth gauge	305535
Water collector holder	305536
Column extension	305537
Vacuum base plate	305538
Vacuum pump	332158; 92053 (USA)
Spacer	305539
Wheel assembly	305541
Clamping spindle	305940
Clamping nut	251834
Water collector 25-162	232221
Water collector 92-250	232243
Water collector 8-87	232204
Hand wheel	9843

## 10. Troubleshooting

Fault	Possible cause	Remedy
The machine doesn't start	Fault in the electric supply	Plug in another electric appliance and check whether it works. Check the plug connections, electric supply, GFCI and mains fuse.
	Supply cord or plug defective	Have it checked by a trained electrical specialist and replaced if necessary.
	Switch defective	Have it checked by a trained electrical specialist and replaced if necessary.
The motor runs but the core bit doesn't rotate	Machine switched off by the automatic cut-out carbon brushes	Have it checked by a trained electrical specialist and replaced if necessary.
	Gearing defective	Have the machine repaired at a Hilti service center.
Rate of drilling progress decreases	Gear selector switch not engaged	Move the gear selector switch until it is felt to engage.
	Water pressure / water flow rate too high	Reduce the flow with the water flow regulator.
	Core sticks inside the diamond core bit	Remove the core.
	Maximum drilling depth reached	Remove the core and use a core bit extension.
	Diamond core bit defective	Check the core bit for damage and replace it if necessary.
	Gearing defective	Have the machine repaired at a Hilti service center.
	Diamond core bit segments polished	Sharpen the core bit on a sharpening plate with water running.
The slip clutch releases prematurely or slips permanently	Diamond core bit segments polished	The wrong core bit specification has been used. Seek advice from Hilti.
	The slip clutch releases prematurely or slips permanently	Have the machine repaired at a Hilti service center.

The motor cuts out	The machine stops running	Reduce the pressure applied.
	Electronics defective	Have the machine repaired at a Hilti service center.
	Electric power failure	Check the plug connections, electric supply, GFCI and mains fuse.
	Cooling fan defective	Have the machine repaired at a Hilti service center.
Water leakage at the water swivel or gear housing	Carbon brushes worn	Have the machine repaired at a Hilti service center.
	Shaft seal defective	Have the machine repaired at a Hilti service center.
The diamond core bit cannot be fitted into the chuck	Water pressure too high	Reduce the water pressure.
	Chuck or connection end dirty or damaged	Clean the connection end / chuck or replace if necessary.
Water leakage at the chuck during operation	Chuck or connection end dirty	Clean the connection end / chuck.n
	Core bit not screwed securely into the chuck	Tighten it securely.
	Chuck seal or core bit connection end defective	Check the seal and replace it if necessary.
Excessive play in the drilling system	Screw at the top end of the strut and / or at the column pivot point is loose	Tighten the screws.
	Core bit not screwed securely into the chuck	Tighten it securely.
	Drive unit locking mechanism loose	Tighten the drive unit locking mechanism.
	Leveling screws or clamping spindle not tightened	Retighten the leveling screws clamping spindle.
	Excessive play at the carriage	Adjust the play at the carriage guide rollers.
	Excessive play at the chuck	Check that the chuck runs true and replace it if necessary.
	Connection end defective	Check the connection end and replace it if necessary.

## 11. Disposal

Most of the materials from which Hilti tools or machines are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old machines or tools for recycling. Please ask your Hilti customer service department or Hilti sales representative for further information.

Should you wish to return the machine or tool yourself to a disposal facility for recycling, proceed as follows: Dismantle the machine or tool as far as possible without the need for special tools. Use absorbent paper to wipe oily parts clean and collect any oil or grease that runs out. This paper should also be disposed of correctly. **On no account should oil or grease be allowed to enter the waste water system or find its way into the ground.**

**Separate the individual parts as follows:**

Part / assembly	Part / assembly	Part / assembly
Transport packaging	Paper	Paper recycling
Motor housing	Plastic* / synthetic rubber / magnesium alloy	Plastics recycling / scrap metal
Drill stand	Steel / aluminium / plastic*	Scrap metal / plastics recycling
Motor (rotor / stator)	Steel / copper	Scrap metal
Gearing parts	Steel / aluminium / plastic*	Scrap metal
Screws, small parts	Steel	Scrap metal
Supply cord	Copper / synthetic rubber	Scrap metal
Drilling slurry		* *

\* Plastic parts carry a mark indicating the material from which they are made.

\*\* With regard to environmental aspects, allowing drilling slurry to flow directly into rivers, lakes or the sewerage system without suitable pre-treatment is problematical. Ask the local authorities for information about applicable regulations.

**We recommend the following pre-treatment:**

Collect the drilling slurry (e.g. use a wet-type industrial vacuum cleaner).

Allow the slurry to settle and dispose of the solid material at a construction waste disposal site (the addition of a flocculent may accelerate the settling process).

Water from the drilling slurry (alkaline, pH value > 7) should be neutralized by adding an acidic neutralizing agent or large quantity of water before it is allowed to flow into the sewerage system.

## 12. Manufacturer's warranty – tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

**Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular,**

**Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.**

For repair or replacement, send tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.



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[www.hilti.com](http://www.hilti.com)

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