

## DD 160 diamond coring system

**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.**

Contents	Page
1 General information	22
2 Description	24
3 Accessories	26
4 Technical data	26
5 Safety instructions	27
6 Before use	30
7 Operation	33
8 Care and maintenance	36
9 Troubleshooting	37
10 Disposal	39
11 Manufacturer's warranty	39
12 EC declaration of conformity (original)	40

**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" always refers to the DD 160 diamond core drilling machine.

#### Operating controls, parts and indicators (motor unit and drill stand) **1**

##### DD 160 diamond core drilling machine

- ① On / off switch
- ② Theft protection indicator
- ③ Service indicator
- ④ Drilling performance indicator
- ⑤ Gear selector
- ⑥ Gearing section
- ⑦ Motor
- ⑧ Carbon brush cover
- ⑨ Water swivel

- ⑩ Chuck
- ⑪ Supply cord with PRCD
- ⑫ Carriage lock
- ⑬ Carriage play adjustment screws
- ⑭ Carriage
- ⑮ Hand wheel shaft
- ⑯ Supply cord holder
- ⑰ Drill stand
- ⑱ End stop screw
- ⑳ End stop screw

##### Drill stand with combination base plate **2**

- ⑱ End stop screw
- ⑲ Rail
- ⑳ Vacuum release valve
- ㉑ Pressure gauge
- ㉒ Leveling indicator
- ㉓ Vacuum hose connector
- ㉔ Combination base plate
- ㉕ Grip
- ㉖ Adjusting lever
- ㉗ Hole center indicator
- ㉘ Leveling screw
- ㉙ Vacuum seal

##### Drill stand with anchor base plate **2**

- ⑳ End stop screw
- ㉑ Rail
- ㉒ Anchor base plate, small
- ㉓ Leveling screw

##### Various accessories **3**

- ㉔ Star handle
- ㉕ Lever
- ㉖ Depth gauge
- ㉗ Jack screw
- ㉘ Rota-Rail (column swivel)
- ㉙ Wheel assembly
- ㉚ Vacuum base plate

##### Water collection system **3**

- ㉛ Holder
- ㉜ Water collector
- ㉝ Seal

en

## 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 Explanation of the pictograms and other information

#### Prohibition signs



Transport by crane is not permissible.

#### Warning signs



General warning



Warning: electricity



Warning: hot surface

#### Obligation signs



Wear eye protection.



Wear a hard hat.



Wear ear protection.



Wear protective gloves.



Wear safety shoes.

#### Symbols



Read the operating instructions before use.



Lock symbol



Equipped with theft protection system



Service indicator



Return waste material for recycling.



Volts



Alternating current



Amps



Watts



Hertz



Nominal speed under no load



Diameter



Millimeters

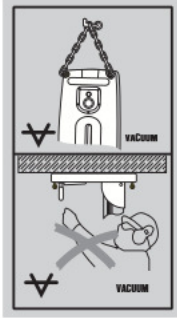


Revolutions per minute



Drilling performance indicator

#### On the drill stand and the vacuum base plate



Upper: An additional means of securing the drill stand must be employed when the machine is used for horizontal drilling with the vacuum securing method.

Lower: Use of the vacuum securing method for overhead drilling with the drill stand is not permissible.

On the machine



Use of the water collection system in conjunction with a wet-type industrial vacuum cleaner is a mandatory requirement for working on ceilings.

On the machine



Operate the system only with a properly functioning PRCD.

Location of identification data on the machine

The type designation and serial number can be found on the type identification 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: \_\_\_\_\_

en

Generation: 02 \_\_\_\_\_

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

## 2 Description

### 2.1 Use of the product as directed

The DD 160 is an electrically-powered, rig-type diamond core drilling machine for drilling through-holes and blind holes in (reinforced) mineral materials using diamond core bits and the wet drilling technique (hand-held use is not permissible).

The machine must be adequately secured to the working surface with an anchor or vacuum base plate before use.

To avoid injury, use only genuine Hilti core bits and DD 160 accessories.

Observe the safety rules and operating instructions for the accessories used.

Observe the information printed in the operating instructions concerning operation, care and maintenance.

Nationally applicable industrial safety regulations must be observed.

The machine, accessories and cutting tools may present hazards when handled incorrectly by untrained personnel or when used not as directed.

Use of the water collection system in conjunction with a wet-type industrial vacuum cleaner is a mandatory requirement for working overhead.

An additional means of securing the drill stand must be employed when the machine is secured with the vacuum base plate (accessory) for horizontal drilling.

Do not strike the base plate with a hammer or other heavy object when making adjustments to it.

Tampering with or modification of the machine, drill stand and accessories is strictly prohibited.

#### WARNING

The machine may be operated only when connected to an adequately-rated electric supply equipped with an earth (ground) conductor.

#### WARNING

Drilling into materials hazardous to the health (e.g. asbestos) is not permissible.

#### DANGER

Use only the genuine Hilti accessories or ancillary equipment listed in the operating instructions. Use of accessories or ancillary equipment not listed in the operating instructions may present a risk of personal injury.

### 2.2 Use of the machine with various items of equipment

Equipment	Core bit diameters	Drilling direction
Without water collection system and wet-type industrial vacuum cleaner	25...202 mm	Not upwards
With water collection system	25...162 mm	Not upwards
With water collection system and wet-type industrial vacuum cleaner	25...162 mm	All directions

### 2.3 Gears and corresponding core bit diameters

Gear	Core bit diameters (mm)	Core bit diameters (inches)	No-load speed /min
1	152...202	6...8	420
2	72...142	2¾...5½	700
3	25...67	1...2½	1,570

## 2.4 Status indicator

LED indicators	State	Description / information
Theft protection indicator (2)	Blinking yellow light	The machine's theft protection system is active and must be unlocked with the TPS key.
Service indicator (3)	Red light and the machine starts	The carbon brushes are badly worn. After the lamp lights for the first time, the machine may continue to be used for several hours before the automatic cut-out is activated. Have the carbon brushes changed in good time so that the machine is always ready for use.
	Red light and the machine doesn't start	The carbon brushes must be changed.
	Blinking red light	Temporary fault, see Troubleshooting section.
Drilling performance display (4)	Orange light	Contact pressure too low
	Green light	Optimum contact pressure
	Red light	Contact pressure too high

en

## 2.5 TPS theft protection system (optional)

The machine may be optionally equipped with the TPS theft protection system. If equipped with this feature, the machine can be unlocked and made ready for operation only through use of the corresponding TPS key.

## 2.6 Items supplied as standard

- 1 Machine with hand wheel or lever
- 1 Operating instructions
- 1 Cardboard box

## 2.7 Using extension cords

Use only extension cords of a type approved for the application and with conductors of adequate gauge.

**Recommended minimum conductor gauge (cross section) and max. cable lengths**

Conductor cross section	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	3.5 mm <sup>2</sup>	4.0 mm <sup>2</sup>
Mains voltage 100 V	Not recommended	Not recommended	25 m	Not recommended
Mains voltage 110 V	Not recommended	15 m	Not recommended	30 m
Mains voltage 127 V	Not recommended	20 m	Not recommended	35 m
Mains voltage 220 V	35 m	65 m	Not recommended	105 m
Mains voltage 230 V	40 m	70 m	Not recommended	Not recommended
Mains voltage 240 V	40 m	70 m	Not recommended	110 m

Do not use extension cords with 1.25 mm<sup>2</sup> conductors. Use only extension cords equipped with an earth conductor.

## 2.8 Using a generator or transformer

This machine may be powered by a generator or transformer when the following conditions are fulfilled: The unit must provide a power output in watts of at least twice the value printed on the type identification plate on the machine. The operating voltage must remain within +5% and -15% of the rated voltage at all times, frequency must be in the 50 – 60 Hz range and never above 65 Hz, and the unit must be equipped with automatic voltage regulation and starting boost.