

# HILTI

## UD 16 / UD 30

**Operating instructions**

**en**

**Mode d'emploi**

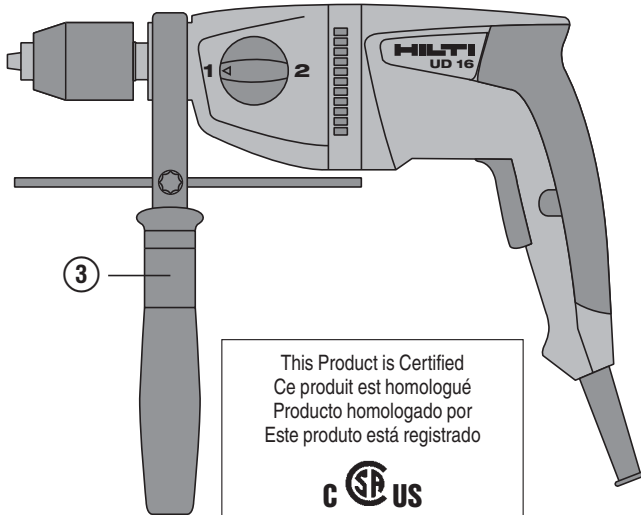
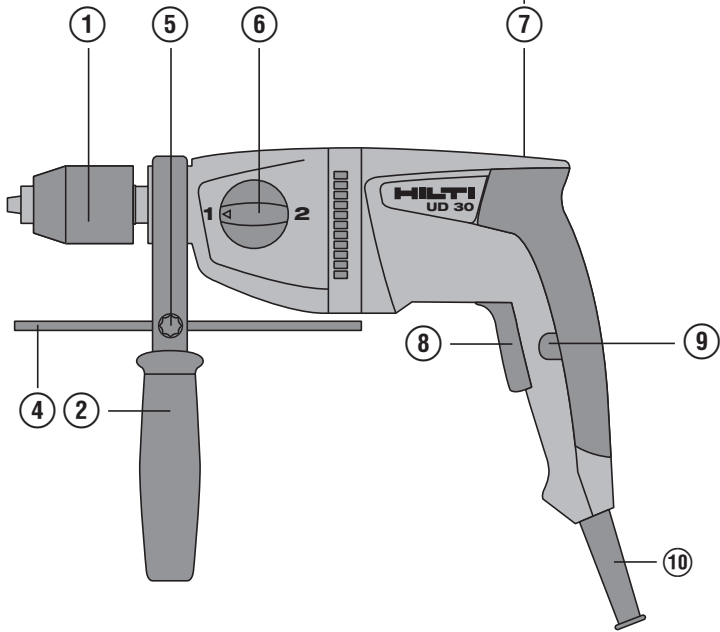
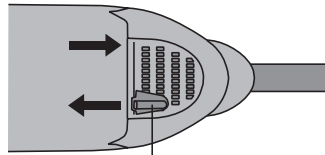
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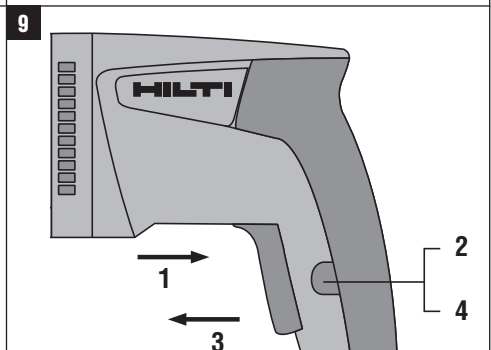
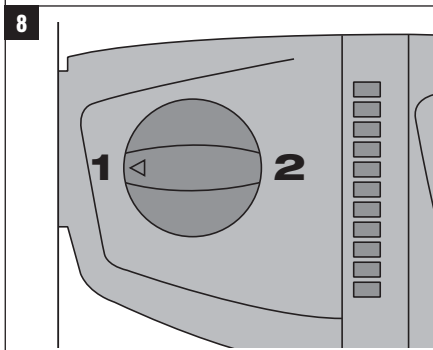
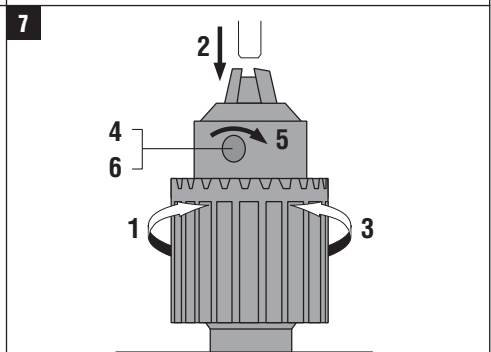
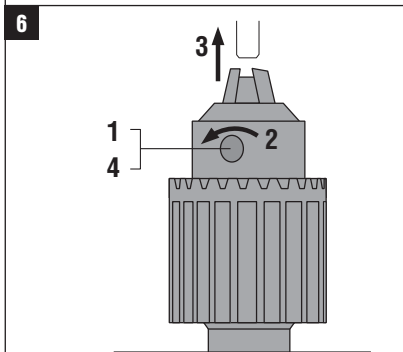
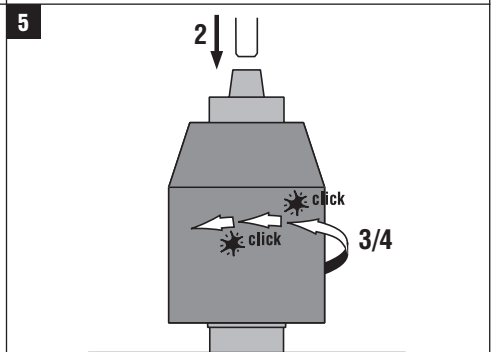
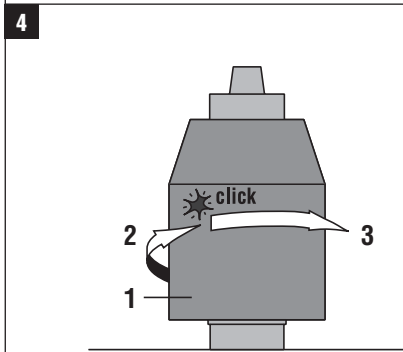
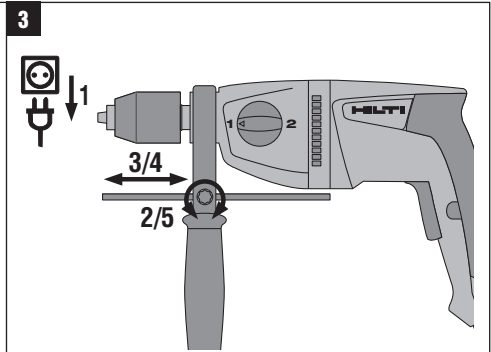
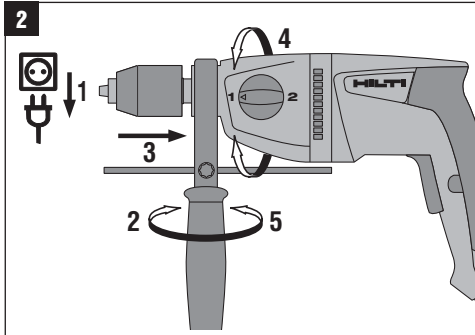
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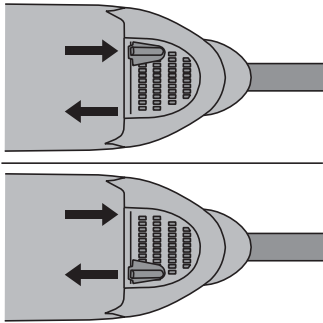


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Producto homologado por  
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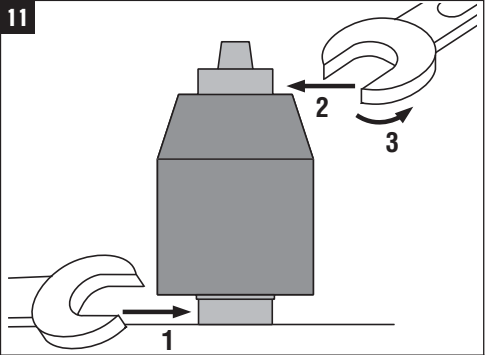




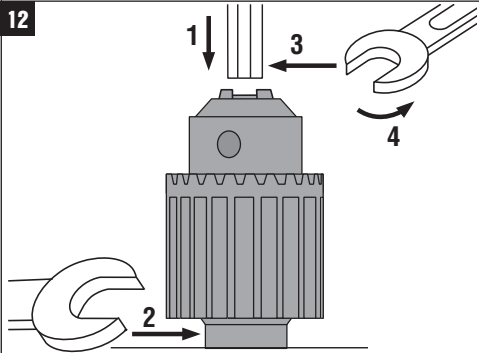
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# ORIGINAL OPERATING INSTRUCTIONS

## UD 16 - UD 30 drill

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

**Always keep these operating instructions together with the power tool.**

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

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**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 power tool" always refers to the UD 16 or UD 30 electric drill.

### Operating controls and parts **1**

- ① Chuck (keyless chuck or key chuck with key)
- ② Side handle
- ③ Sleeve (only UD 16)
- ④ Depth gauge
- ⑤ Depth gauge locking screw
- ⑥ Function selector switch
- ⑦ Forward / reverse switch
- ⑧ Control switch with electronic speed control
- ⑨ Lockbutton for sustained operation
- ⑩ Supply cord

## 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

#### Warning signs



General warning



Warning: electricity

## Obligation signs



Wear a hard hat



Wear eye protection



Wear breathing protection



Wear ear protection



Wear protective gloves

## Symbols



Read the operating instructions before use



Return waste material for recycling.

1

Drilling, 1st gear

2

Drilling, 2nd gear

A

Amps

Hz

Hertz

V

Volts



Alternating current



Double insulated

/min

Revolutions per minute

RPM

Revolutions per minute

## Location of identification data on the power tool

The type designation, item number, year of manufacture and technical status can be found on the type identification plate on the machine or tool. The serial no. can be found on the underside of the motor housing. 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: \_\_\_\_\_

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

## 2 Description

### 2.1 Use of the product as directed

The power tool is a hand-held, mains-powered electric drill for drilling in wood and metal and for screwdriving. Under certain conditions, the power tool is also suitable for mixing (see "Applications").

The working environment may be as follows: construction site, workshop, renovation, conversion or new construction, where the types of work listed above may be carried out.

The power tool may be operated only when connected to a power supply providing a voltage and frequency in compliance with the information given on its type identification plate.

Modification of the power tool or tampering with its parts is not permissible.

The power tool is designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The power tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

To avoid the risk of injury, use only genuine Hilti accessories and insert tools.

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

Nationally applicable industrial safety regulations must be observed.

Working on materials hazardous to the health (e.g. asbestos) is not permissible.

The power tool may be used only in a dry environment.

Do not use the power tool where there is a risk of fire or explosion.

## 2.2 Chuck

Keyless chuck or  
Key chuck with key

## 2.3 Switches

Control switch with electronic speed control  
Lockbutton for sustained operation  
Function selector switch  
Forward / reverse switch

## 2.4 Grips

Vibration-absorbing side handle with depth gauge  
Vibration-absorbing grip

## 2.5 Possible applications

### UD 16

Applications	Insert tool type	Drill bit sizes, 1st gear	Drill bit sizes, 2nd gear
Drilling in metal	Drill bits with smooth shank	Max. 13 mm (1/2")	Max. 6 mm (1/4")
	Stepped drill bits	Max. 35 mm (1 3/8")	Max. 10 mm (3/8")
Drilling in wood	Twist drills	Max. 30 mm (1 9/16")	Max. 30 mm (1 9/16")
	Forstner drill bits	Max. 40 mm (1 9/16")	Max. 40 mm (1 9/16")
	Hole saws	Max. 80 mm (3 5/32")	Max. 40 mm (1 9/16")
	Auger bits	Max. 30 mm (1 3/16")	-
	Flat bits (not self-cutting)	Max. 40 mm (1 9/16")	Max. 40 mm (1 9/16")
Driving	Drywall screws	6/300 mm (1/4 x 12")	-
	Frame anchors (HRD)	10/50 - 120 mm (3/8 x 2 to 4 3/4")	-
	Universal anchors (HUD)	12/60 mm (1/2 x 2 3/8")	-
Mixing dispersion paint, thin cement mortar, tile adhesive and plaster with mixing paddles	TE-MP 80	Recommended	Recommended
	TE-MP 110	Recommended	-

### UD 30 applications

Applications	Insert tool type	Drill bit sizes, 1st gear	Drill bit sizes, 2nd gear
Drilling in metal	Drill bits with smooth shank	Max. 13 mm (1/2")	1.5...8 mm (1/16" to 5/16")
	Stepped drill bits	Max. 35 mm (1 3/8")	Max. 8 mm (5/16")
Drilling in wood	Twist drills	Max. 25 mm (1")	Max. 20 mm (3/4")
	Forstner drill bits	Max. 40 mm (1 9/16")	Max. 25 mm (1")
	Hole saws	Max. 50 mm (2")	-
	Auger bits	Max. 20 mm (3/4")	-
	Flat bits (not self-cutting)	Max. 30 mm (1 3/16")	Max. 30 mm (1 3/16")
Driving	Drywall screws	6/60 mm (1/4 x 2 3/8")	-

## 2.6 Items supplied as standard

- 1 Power tool with side handle
- 1 Depth gauge
- 1 Chuck key (with keyed chuck)
- 1 Operating instructions
- 1 Hilti cardboard box or toolbox

## 2.7 Using extension cords

Use only extension cords of a type approved for the application and with conductors of adequate cross section. The power tool may otherwise lose performance and the extension cord may overheat. Check the extension cord for damage at regular intervals. Replace damaged extension cords.

### Recommended minimum conductor cross section and max. cable lengths

Conductor cross section	16 AWG	14 AWG	12 AWG
Mains voltage 110-120 V, UD 16	50 ft	100 ft	150 ft
Mains voltage 110-120 V, UD 30	50 ft	125 ft	200 ft

## 2.8 Using extension cords outdoors

When working outdoors, use only extension cords that are approved and correspondingly marked for this application.

## 2.9 Using a generator or transformer

This power tool 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 power tool. 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.

Never operate other power tools or appliances from the generator or transformer at the same time. Switching other power tools or appliances on and off may cause undervoltage and / or overvoltage peaks, resulting in damage to the power tool.

## 3 Accessories

The list of insert tools can be found in Section 2 under "Possible applications".

Designation	Item number, description
Keyless chuck	274077
UD 16 keyed chuck	274080
UD 16 chuck key (if keyed chuck is fitted)	274082
UD 30 keyed chuck	274079
UD 30 chuck key (if keyed chuck is fitted)	274081

## 4 Technical data

Right of technical changes reserved.

Power tool	UD 16	UD 30
Rated voltage	120 V	120 V
Rated current input	8.0 A	6.5 A
Mains frequency	50...60 Hz	50...60 Hz
Weight of tool without side handle	2.4 kg (5.2 lbs)	2.3 kg (5 lbs)




Power tool	UD 16	UD 30
Weight in accordance with EPTA procedure 01/2003	2.6 kg (5.7 lbs)	2.5 kg (5.5 lbs)
Dimensions (L x W x H)	342 mm (13.46") x 86 mm (3.39") x 205 mm (8.07")	337 mm (13.27") x 86 mm (3.39") x 205 mm (8.07")
Speed in 1st gear under no load	900/min	1,200/min
Speed in 2nd gear under no load	2,500/min	3,300/min
Chuck $\varnothing$	1.5... 13 mm (0.06...0.51")	1.5... 13 mm (0.06...0.51")
Maximum torque, 1st gear	80 Nm (59 lb/ft)	51 Nm (38 lb/ft)
Maximum torque, 2nd gear	29 Nm (21 lb/ft)	18.5 Nm (14 lb/ft)
Speed control	Electronic, by way of the control switch	Electronic, by way of the control switch
Forward / reverse	Switching lever with interlock to prevent switching while running	Switching lever with interlock to prevent switching while running
Tightening torque when changing the chuck	120 Nm (89 lb/ft)	120 Nm (89 lb/ft)

### Information about the power tool and its applications

Protection class	Protection class I (grounded) or protection class II (double insulated). See type identification plate.
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## 5 Safety instructions

### 5.1 General Power Tool Safety Warnings

- a)  **WARNING**  
**Read all safety warnings and instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.** The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### 5.1.1 Work area safety

- a) **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- b) **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.
- c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

#### 5.1.2 Electrical safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f) **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

#### 5.1.3 Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the

switch or energising power tools that have the switch on invites accidents.

- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

#### 5.1.4 Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

#### 5.1.5 Service

- a) **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

#### 5.2 Drill safety warnings

- a) **Wear ear protectors when impact drilling.** Exposure to noise can cause hearing loss.
- b) **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.
- c) **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.

#### 5.3 Additional safety instructions

##### 5.3.1 Personal safety

- a) **Keep the grips dry, clean and free from oil and grease.**
- b) **Check that the side handle is fitted correctly and tightened securely.**
- c) **Breathing protection must be worn if the power tool is used without a dust removal system for work that creates dust.**
- d) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**
- e) **Avoid touching rotating parts. Switch the power tool on only after bringing it into position at the workpiece.** Touching rotating parts, especially rotating insert tools, may lead to injury.
- f) **Operate the power tool only as intended and when it is in faultless condition.**
- g) **Wear protective gloves when changing insert tools as the insert tools get hot during use.**
- h) **Always lead the supply cord and extension cord away from the power tool to the rear while working.** This helps to avoid tripping over the cord while working.
- i) **Do not use damaged insert tools.**
- j) **If the work involves breaking right through, take the appropriate safety measures at the opposite side.** Parts breaking away could fall out and / or fall down and injure other persons.
- k) **Children must be instructed not to play with the power tool.**
- l) **The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
- m) **Always engage 1st gear when mixing. This will help to avoid splashing or spillage. Wear protective gloves.**

##### 5.3.2 Power tool use and care

- a) **Secure the workpiece. Use clamps or a vice to secure the workpiece.** The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.
- b) **Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.**

- c) In the event of a power failure or interruption in the electric supply, switch the power tool off, unplug the supply cord and release the switch lockbutton (if applicable). This will prevent accidental restarting when the electric power returns.

### 5.3.3 Electrical safety



- a) Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present. External metal parts of the power tool may become live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.
- b) Check the power tool's supply cord at regular intervals and have it replaced by a qualified specialist if found to be damaged. If the power tool's supply cord is damaged it must be replaced with a specially-prepared supply cord available from Hilti Customer Service. Check extension cords at regular intervals and replace them if found to be damaged. Do not touch the supply cord or extension cord if it is damaged while working. Disconnect the supply cord plug from the power outlet. Damaged supply cords or extension cords present a risk of electric shock.
- c) Dirty or dusty power tools which have been used frequently for work on conductive materials should be checked at regular intervals at a Hilti Service Center. Under unfavorable circumstances, dampness or dust adhering to the surface of the power tool, especially dust from conductive materials, may present a risk of electric shock.
- d) When working outdoors with an electric tool check to ensure that the tool is connected to the electric supply by way of a ground fault circuit interrupter (GFCI) with a rating of max. 30 mA (tripping current). Use of a ground fault circuit interrupter reduces the risk of electric shock.

- e) Use of a ground fault circuit interrupter (GFCI) with a maximum tripping current of 30 mA is recommended.

### 5.3.4 Work area

- a) Ensure that the workplace is well lit.
- b) Ensure that the workplace is well ventilated. Exposure to dust at a poorly ventilated workplace may result in damage to the health.
- c) **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 exposures 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, eyes, or to remain on your skin may promote absorption of harmful chemicals.

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### 5.3.5 Personal protective equipment



The user and any other persons in the vicinity must wear ANSI Z87.1-approved eye protection, a hard hat, ear protection, protective gloves and breathing protection while the machine is in use.

## 6 Before use



### 6.1 Fitting and adjusting the side handle 2

#### CAUTION

Remove the depth gauge from the side handle and the insert tool from the chuck in order to avoid injury.

1. Disconnect the supply cord plug from the power outlet.
2. Release the side handle clamping band by turning the handle counterclockwise.

3. **CAUTION** With the UD 16 it is essential to ensure that the sleeve is fitted in the grip section of the side handle.

Slip the side handle (clamping band) over the chuck and push it onto the collar around the gearing section as far as it will go.

4. **CAUTION** Check that the ribs on the clamping band engage in the grooves in the collar around the gearing section.

**CAUTION** If the side handle slips in the event of the drill bit sticking while drilling, check that the ribs on the side handle clamping band engage securely with the collar on the power tool. Have any damaged parts replaced. The side handle will otherwise be unable to take up the torque generated by the electric tool.

Pivot the side handle into the desired position (it engages at a number of set positions).

5. Secure the side handle by turning the grip clockwise.

### 6.2 Use of extension cords and generators or transformers

See section "Description / use of extension cords".

## 7 Operation



### DANGER

Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.

### WARNING

Do not attempt to use the tool to unscrew screws or nuts or to free sticking drill bits when the maximum torque in reverse rotation (see technical data) is inadequate. There is a risk that the chuck may become detached from the tool.

### WARNING

The electric supply voltage must comply with the information given on the type identification plate on the power tool.

### CAUTION

Use clamps or a vice to hold the workpiece securely.

### 7.1 Preparing for use

#### 7.1.1 Fitting and adjusting the depth gauge

1. Disconnect the supply cord plug from the power outlet.
2. Release the depth gauge locking screw.
3. Push the depth gauge into the opening provided.
4. Adjust the depth gauge to the desired drilling depth.
5. Tighten the depth gauge locking screw securely.

### 7.2 Operation



### CAUTION

Working on the material may cause it to splinter. **Wear eye protection and protective gloves. Wear breathing protection if no dust removal system is used.** Splintering material presents a risk of injury to the eyes and body.

### CAUTION

The work generates noise. **Wear ear protectors.** Exposure to noise can cause hearing loss.

### CAUTION

The insert tool and the chuck get hot during use. **Wear protective gloves when changing insert tools.**

### 7.2.1 Keyless chuck

### CAUTION

**Disconnect the mains plug from the power outlet.**

### NOTE

The keyless chuck may have to be rotated slightly by hand before the built-in drive spindle lock engages.

## NOTE

Depending on the type of chuck fitted, either the broad adjusting ring or the rear gripping ring on the chuck must be held securely by hand.

### 7.2.1.1 Opening the keyless chuck 4

1. Grip the rotatable sleeve.
2. Turn the sleeve counterclockwise.  
**NOTE** First, the locking mechanism will be released automatically.
3. Continue turning the sleeve until the insert tool is released.

### 7.2.1.2 Closing the keyless chuck 5

1. Open the keyless chuck far enough to allow the shank of the tool to be inserted.
2. Insert the shank of the tool in the keyless chuck.
3. Tighten the chuck by turning the rotatable sleeve firmly in a clockwise direction.
4. After the jaws of the chuck begin to grip the tool, continue turning the rotatable sleeve in a clockwise direction until the keyless chuck engages and locks automatically.  
**NOTE** The chuck must be heard to engage (several clicks).

## 7.2.2 Key chuck

### CAUTION

**Disconnect the mains plug from the power outlet.**

## NOTE

Use the key supplied to open the chuck and to tighten it after inserting a tool.

### 7.2.2.1 Opening the key chuck 6

1. Insert the chuck key in one of the three holes provided in the chuck.
2. Open the chuck by turning the key in a counterclockwise direction.
3. Remove the tool from the chuck.
4. Remove the chuck key.

### 7.2.2.2 Closing the key chuck 7

1. Open the key chuck far enough to allow the shank of the tool to be inserted.
2. Insert the shank of the tool in the chuck.
3. Close the jaws by turning the rotatable toothed ring until the tool is gripped by the chuck.
4. Insert the chuck key in one of the three holes provided in the chuck.
5. Tighten the chuck by turning the chuck key in a clockwise direction until the tool is held securely.
6. Remove the chuck key.

## 7.2.3 Possible applications

### CAUTION

In accordance with the applications for which it is designed, the power tool produces a high torque. **Always use the side handle and hold the power tool with both**

**hands.** The user must be prepared for sudden sticking and stalling of the insert tool.

### CAUTION

If stalling occurs, switch off the motor immediately. The power tool may suffer damage if stalled for longer than 2-3 seconds.

### CAUTION

**Do not operate the function selector switch while the motor is running.**

## NOTE

The forward / reverse switch must be set to the "forward" position.

### 7.2.3.1 Rotary drilling, 1st and 2nd gear 8

1. Turn the function selector switch to the 1st or 2nd gear rotary drilling position until it engages. It may be necessary to turn the drive spindle slightly.
2. Bring the side handle into the desired position and check that it is fitted correctly and secured.
3. Plug the supply cord into the power outlet.
4. Position the power tool and drill bit at the point where the hole is to be drilled.
5. Press the control switch slowly (drill at a low speed until the drill bit centers itself in the hole).
6. Press the control switch fully to continue working at full power.
7. Adjust the pressure applied to the power tool according to the material you are working on. This will ensure the optimum rate of drilling progress.

### 7.2.3.2 Mixing

1. Turn the function selector switch to the 1st gear rotary drilling position until it engages. It may be necessary to turn the drive spindle slightly.
2. Bring the side handle into the desired position and check that it is fitted correctly and secured.
3. Plug the supply cord into the power outlet.
4. Position the mixing paddle in the container holding the substance to be mixed.
5. To begin mixing, press the control switch slowly.
6. Press the control switch fully to continue working at full power.
7. Guide the mixing paddle carefully in order to avoid splashing and spillage.

### 7.2.3.3 Screwdriving

## NOTE

Set the forward / reverse switch to suit the screwdriving operation to be carried out.

1. Turn the function selector switch to the 1st or 2nd gear rotary drilling position until it engages. It may be necessary to turn the drive spindle slightly.
2. Bring the side handle into the desired position and check that it is fitted correctly and secured.
3. Plug the supply cord into the power outlet.

- Press the control switch slowly until the screw grips and is guided by the material into which it is being driven.
- Continue pressing the control switch, applying power appropriate to the material you are working on.
- Reduce speed toward the end of the screwdriving operation in order to avoid damage.

#### 7.2.4 Control switch with electronic speed control

The speed of the power tool can be varied continuously up to maximum speed by slowly increasing pressure on the control switch.

#### 7.2.5 Lockbutton for sustained operation

The lockbutton for sustained operation is used to lock the control switch in the "on" position. The motor then runs constantly at full speed.

##### 7.2.5.1 Switching on in sustained operating mode

- Press the control switch and hold it in this position.
- Press the lockbutton and hold it in this position.
- Release the control switch.
- Release the lockbutton.

##### 7.2.5.2 Switching off after sustained operation

Press the control switch again to release the lockbutton.

#### 7.2.6 Forward / reverse

##### CAUTION

**Do not operate the forward / reverse switch while the motor is running.**

Turn the switch lever to the "forward" or "reverse" position, depending on the work to be carried out.

### 7.3 Changing the chuck

#### 7.3.1 Removing the keyless chuck

- Grip the flat section of the drive spindle with a 17 mm AF open-end wrench.

- Grip the hexagonal section of the keyless chuck with a 19 mm AF ring or open-end wrench.
- Turn the 19 mm AF open-end wrench in a counter-clockwise direction.  
The keyless chuck will be unscrewed from the drive spindle.

#### 7.3.2 Removing the key chuck

- Insert a short length of hexagonal steel in the chuck and then tighten the chuck jaws until the hexagonal steel is held securely (use the chuck key).
- Grip the flat section of the drive spindle with a 17 mm AF open-end wrench.
- Grip the hexagonal steel with a suitable wrench.
- Turn the 17 mm AF open-end wrench in a counter-clockwise direction.  
The key chuck will be unscrewed from the drive spindle.

#### 7.3.3 Fitting the keyless chuck

- Screw the keyless chuck onto the drive spindle by hand as far as it will go.
- Grip the flat section of the drive spindle with a 17 mm AF open-end wrench.
- Grip the hexagonal section of the keyless chuck with a 19 mm AF ring or open-end wrench.
- Tighten the chuck to the specified torque (see technical data).

#### 7.3.4 Fitting the key chuck

- Insert a short length of hexagonal steel in the chuck and then tighten the chuck jaws until the hexagonal steel is held securely (use the chuck key).
- Screw the key chuck onto the drive spindle by hand as far as it will go.
- Grip the flat section of the drive spindle with a 17 mm AF open-end wrench.
- Grip the hexagonal steel with a suitable wrench.
- Tighten the chuck to the specified torque (see technical data).

## 8 Care and maintenance

##### CAUTION

**Ensure that the power tool is disconnected from the electric supply.**

#### 8.1 Care of insert tools

Clean off dirt and dust deposits adhering to the insert tools and protect them from corrosion by wiping the insert tools from time to time with an oil-soaked rag.

#### 8.2 Care of the power tool

##### 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 power tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material.

Never operate the power 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 power tool. Clean the outside of the power 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 power tool.

### 8.3 Maintenance

#### WARNING

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

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are

damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

### 8.4 Checking the power tool after care and maintenance

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

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## 9 Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't start.	Interruption in the electric supply.	Plug in another electric appliance and check whether it works.
	The supply cord or plug is defective.	Have it checked by a trained electrical specialist and replaced if necessary.
	The control switch is defective.	Have it checked by a trained electrical specialist and replaced if necessary.
The power tool doesn't achieve full power.	The extension cord is too long or its gauge is inadequate.	Use an extension cord of an approved length and / or of adequate gauge.
	The control switch is not pressed fully.	Press the control switch as far as it will go.
The drill bit makes no progress.	The forward/reverse switch is set to reverse rotation.	Set the forward/reverse switch to forward rotation.
	The drill bit is blunt or damaged.	Hone the drill bit or replace it.
The drill bit doesn't rotate.	The chuck is not tightened securely.	Retighten the chuck.

## 10 Disposal



Most of the materials from which Hilti power tools or appliances 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 power tools or appliances for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

## 11 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 the 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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