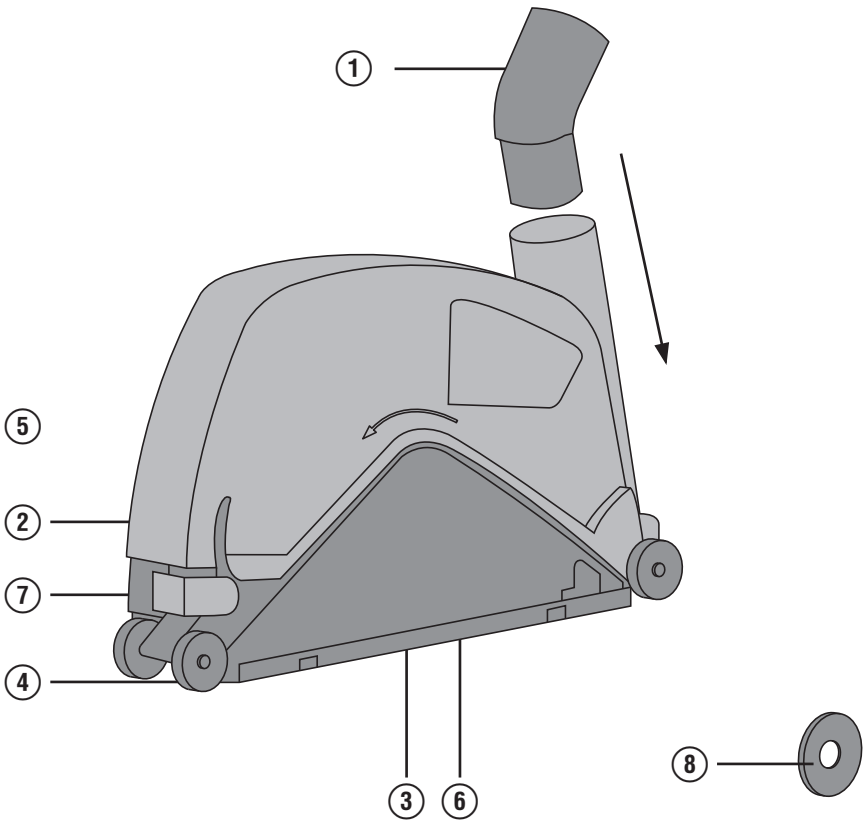
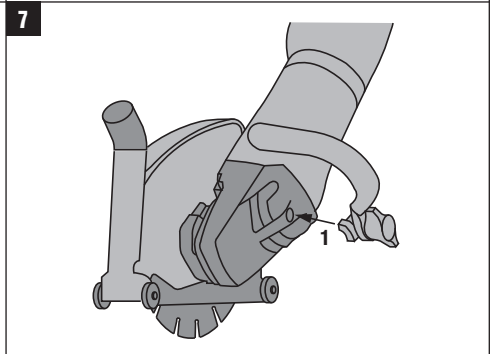
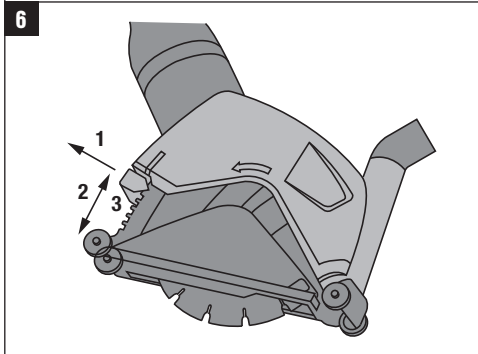
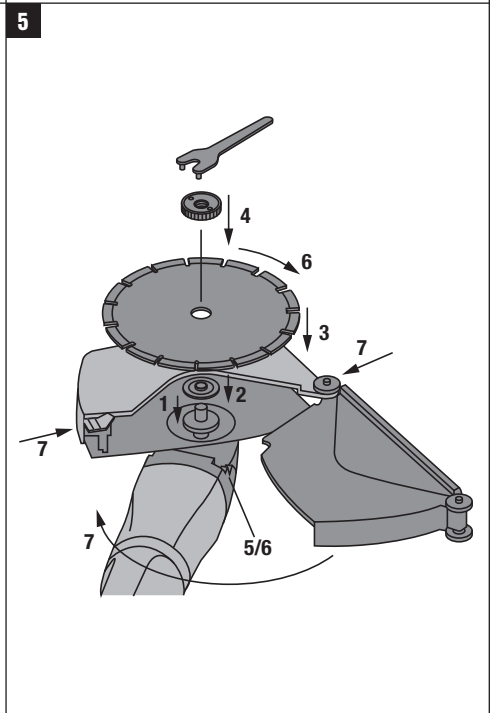
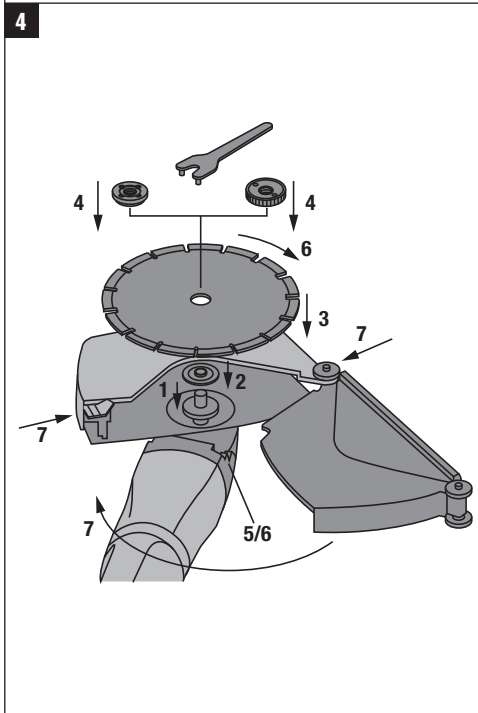
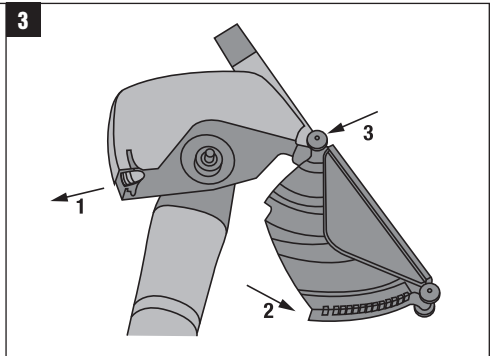
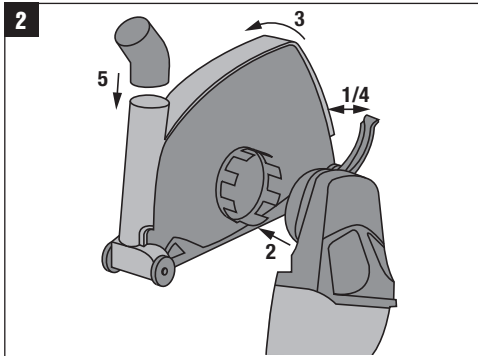
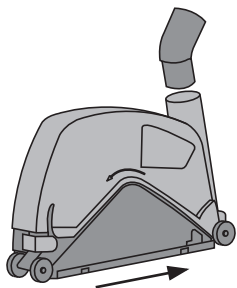


<b>Bedienungsanleitung</b>	<b>de</b>
<b>Operating instructions</b>	<b>en</b>
<b>Mode d'emploi</b>	<b>fr</b>
<b>Manual de instrucciones</b>	<b>es</b>
<b>Istruzioni d'uso</b>	<b>it</b>
<b>Gebbruksaanwijzing</b>	<b>nl</b>
<b>Brugsanvisning</b>	<b>da</b>
<b>Bruksanvisning</b>	<b>no</b>
<b>Bruksanvisning</b>	<b>sv</b>
<b>Käyttöohje</b>	<b>fi</b>
<b>Manual de instruções</b>	<b>pt</b>
<b>Οδηγίες χρήσεως</b>	<b>el</b>
<b>Használati utasítás</b>	<b>hu</b>
<b>Návod k obsluze</b>	<b>cs</b>
<b>Návod na obsluhu</b>	<b>sk</b>
<b>Instrukcja obsługi</b>	<b>pl</b>
<b>Upute za uporabu</b>	<b>hr</b>
<b>Navodila za uporabo</b>	<b>sl</b>
<b>Ръководство за обслужване</b>	<b>bg</b>
<b>Инструкция по експлуатации</b>	<b>ru</b>
<b>Instrucțiuni de utilizare</b>	<b>ro</b>
<b>Kullanma Talimatı</b>	<b>tr</b>
<b>Lietošanas pamācība</b>	<b>lv</b>
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<b>Kasutusjuhend</b>	<b>et</b>

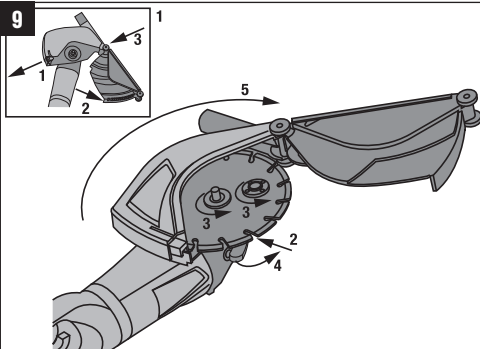




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# ORIGINAL OPERATING INSTRUCTIONS

## DC-EX 230/ 9" cutting guard

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

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

**Ensure that the operating instructions are with the appliance 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 DC EX-230/9 " cutting guard in conjunction with the DAG 230-D, DCG -DB or DCG 230-D angle grinder.

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

- ① Connector
- ② Guard upper section
- ③ Guard lower section / extension
- ④ Wheel
- ⑤ Direction-of-rotation arrow
- ⑥ Guide carriage
- ⑦ Locking mechanism, depth gauge
- ⑧ Spacing flange

## 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

#### Obligation signs



Wear eye protection.



Wear ear protection



Wear protective gloves



Wear breathing protection.

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## Symbols



Read the operating instructions before use.

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## 2 Description

### 2.1 Use of the product as directed

The DC-EX 230/9 9" cutting guard is used in conjunction with 230 mm/9" discs and a Hilti vacuum cleaner for cutting mineral materials, especially masonry. The DC-EX 230/9 " cutting guard is for use exclusively with the DAG 230-D, DCG 230-D and DCG 230-DB angle grinders without use of water.

Use a suitable vacuum cleaner from the Hilti range for the applicable application and tool combination.

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

The appliance 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 appliance 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 tools and accessories.

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

Do not tamper with or modify the cutting guard.

### 2.2 Items supplied as standard

- 1 Spacing flange
- 1 Connector
- 1 Hoop handle
- 1 Operating instructions

### 2.3 Diamond cutting discs approved for use with the appliance

Diamond cutting discs	Suitable materials	Outside diameter	Segment thickness
C2 230	Hard concrete, flint aggregates	230	2.6
C1 230	Standard concrete, pre-cast concrete, hard/abrasive sand-lime block	230	2.6
C15 230	Standard concrete, pre-cast concrete, hard/abrasive sand-lime block, screed	230	2.6
M1 230	Masonry, sand-lime block	230	2.4
M2 230	Clinker brick, clay brick, granite, ceramic tiles, stoneware, marble	230	2.5
T10 230	Marble, stoneware, ceramic tiles	230	2.1
U10 230	Pre-cast concrete, sand-lime block, brick	230	2.6

### 3 Accessories

#### Designation

Vacuum cleaner from the Hilti range

### 4 Technical data

Right of technical changes reserved.

Weight	1.93 kg (lbs)
Dimensions	330 mm X 90 mm X 220 mm (13in x 3.5in x 8.7in)
Disc diameter	230 mm (9")
Maximum cutting depth	60 mm (2.36in)
Connector	For Hilti and other standard vacuum cleaners
Cutting position mark	Indicates the position of the disc inside the guard

#### NOTE

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure. The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period. An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period. Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

#### Noise information (as per EN 60745-1):

Typical A-weighted sound power level	112 dB (A)
Typical A-weighted emission sound pressure level	101 dB (A)
Uncertainty for the given sound level	3 dB (A)

#### Vibration information in accordance with EN 60745-1

Triaxial vibration values (vibration vector sum)	measured in accordance with EN 60745-2-3
Surface grinding with the hoop handle, $a_{h,AG}$	6.0 m/s <sup>2</sup>
Uncertainty (K)	1.5 m/s <sup>2</sup>

### 5 Safety instructions

The DC-EX 230/9" cutting guard is for use exclusively with the DAG 230-D, DCG 230-D and DCG 230-DB angle grinders.

Before using the cutting guard in conjunction with the angle grinders mentioned above, read the operating instructions for the applicable angle grinder and observe all instructions.

#### 5.1 General safety precautions

Read all safety warnings and all 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.

#### 5.2 Safety instructions for abrasive cutting-off operations

##### 5.2.1 Cut-off machine safety warnings

- Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
- Always use guard provided with the tool. The guard must be securely attached to the power

tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. Position yourself and bystanders away from the plane of the rotating wheel. The guard helps to protect operator from broken diamond wheel fragments and accidental contact with the diamond wheel.

- c) **Use only diamond cut-off wheels for your power tool.** Just because an accessory can be attached to your power tool, it does not assure safe operation.
- d) **The rated speed of the diamond wheel must be at least equal to the maximum speed marked on the power tool.** Diamond wheels running faster than their rated speed can break and fly apart.
- e) **Diamond cutting wheels must be used only for recommended applications. For example: Do not grind with the side of cut-off wheel.** Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
- f) **Always use undamaged wheel flanges that are of correct diameter for your selected wheel.** Proper wheel flanges support the wheel thus reducing the possibility of diamond wheel breakage.
- g) **The outside diameter and thickness of your diamond wheel must be within the capacity rating of your power tool.** Incorrectly sized diamond wheels cannot be adequately guarded or controlled.
- h) **The arbour size of diamond wheels and flanges must properly fit the spindle of the power tool.** Diamond wheels and flanges with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- i) **Do not use damaged diamond wheels. Before each use, inspect the diamond wheels for chips and cracks. If power tool or diamond wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the diamond wheel, position yourself and bystanders away from the plane of the rotating diamond wheel and run the power tool at maximum no-load speed for one minute.** Damaged diamond wheels will normally break apart during this time.
- j) **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors gloves and shop apron capable of stopping small abrasive or workpiece fragments.** The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- k) **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken wheel may fly away and cause injury beyond immediate area of operation.
- l) **Hold the power tool by insulated gripping surfaces only, when performing an operation where the**

**diamond wheel may contact hidden wiring or its own cord.** Wheel contacting a “live” wire may make exposed metal parts of the power tool “live” and shock the operator.

- m) **Position the cord clear of the spinning diamond wheel.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning diamond wheel.
- n) **Never lay the power tool down until the diamond wheel has come to a complete stop.** The spinning diamond wheel may grab the surface and pull the power tool out of your control.
- o) **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning diamond wheel could snag your clothing, pulling the wheel into your body.
- p) **Regularly clean the power tool’s air vents.** The motor’s fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- q) **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- r) **Do not use diamond wheels that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.**
- s) **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because an accessory can be attached to your power tool, it does not assure safe operation.

#### 5.2.2 Further safety instructions for abrasive cutting-off operations

##### Kickback and related warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel. Pinching or snagging causes rapid stalling of the rotating wheel which in turn causes the uncontrolled power tool to be forced in the direction opposite of the wheel’s rotation at the point of the binding.

- a) **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up.** The operator can control torque reactions or kickback forces if proper precautions are taken.
- b) **Never place your hand near the rotating diamond wheel.** The diamond wheel may kick back over your hand.
- c) **Do not position your body in line with and behind the rotating diamond wheel.** Kickback will propel the tool in direction opposite to the wheel’s movement at the point of snagging.
- d) **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the diamond wheel.** Corners, sharp edges or bouncing have a tendency to snag the rotating diamond wheel and cause loss of control or kickback.
- e) **Do not attach a saw chain, woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.



- f) **Do not “jam” the diamond wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Overstressing the diamond wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- g) **When the diamond wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the diamond wheel from the cut while the wheel is in motion otherwise kickback may occur.** Investigate and take corrective action to eliminate the cause of wheel binding.
- h) **Do not restart the cutting operation in the workpiece. Let the diamond wheel reach full speed and carefully reenter the cut.** The diamond wheel

may bind, walk up or kick back if the power tool is restarted in the workpiece.

- i) **Support panels or any oversized workpiece to minimize the risk of the diamond wheel pinching and kickback.** Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- j) **Use extra caution when making a “pocket cut” into existing walls or other blind areas.** The protruding diamond wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

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### 5.2.3 Service

**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.

## 6 Before use

### DANGER

**Always disconnect the supply cord from the electric supply when the power tool is not in use (e.g. during breaks between working), before making adjustments, before carrying out care and maintenance and before changing core bits.** This safety precaution prevents the power tool starting unintentionally.

#### 6.1 Fitting the cutting guard to the power tool 2

1. Release the clamping lever on the power tool.
2. Fit the guard onto the drive spindle collar so that the specially-shaped locating lug engages in the recess in the mounting flange on the power tool.
3. The guard can be adjusted to the desired working position by pivoting it in a counterclockwise direction.
4. Close the clamping lever and check that the cutting guard is securely attached to the power tool.
5. Fit the hose connector to the connecting point on the guard.

#### 6.2 Opening the cutting guard 3

1. Push back the depth gauge locking lever.
2. Pivot the lower section / extension down and away from the guard.
3. The guard lower section / extension can then be disengaged from the pivot point.

#### 6.3 Fitting diamond cutting discs

### DANGER

**Check that the speed rating printed on the cutting or grinding disc is equal to or higher than the rated speed of the power tool.**

### DANGER

**Check the condition of the grinding disc before using it. Do not use discs that are broken, cracked or damaged in any way.**

#### 6.3.1 Fitting diamond discs to the DCG 230-D and DAG 230-D 4

1. **CAUTION** The clamping flange is equipped with an O-ring. **If this O-ring is missing, the clamping flange must be replaced.**  
Fit the clamping flange onto the drive spindle.
2. Fit the spacing flange onto the clamping flange on the drive spindle.
3. Fit the diamond cutting disc according to the specified direction of rotation (observe the direction-of-rotation arrow).
4. Screw on the clamping nut or the Kwik-Lock nut until it is seated against the disc.
5. **CAUTION Do not press the spindle lockbutton before the drive spindle has stopped rotating.**  
Press the spindle lockbutton and hold it in this position.
6. Use the wrench to tighten the clamping nut or, respectively, rotate the cutting disc firmly by hand in a clockwise direction until the Kwik-Lock nut is tight, and then release the spindle lockbutton.
7. Close the guard by engaging the lower section / extension at the pivot point, moving the depth gauge locking lever back and pushing in the guard extension until the desired cutting depth is set.

#### 6.3.2 Fitting diamond cutting discs to the DCG 230-DB 5

1. Fit the spacing flange onto the mounting flange on the drive spindle.
2. Fit the diamond cutting disc according to the specified direction of rotation (observe the direction-of-rotation arrow).
3. Screw on the Kwik-Lock nut until it is seated against the disc.

- CAUTION Do not press the spindle lockbutton before the drive spindle has stopped rotating.** Press the spindle lockbutton and hold it in this position.
- Turn the cutting disc firmly by hand in a clockwise direction until the Kwik-Lock nut is tightened securely and then release the spindle lockbutton.
- Close the guard by engaging the lower section / extension at the pivot point, moving the depth gauge locking lever back and pushing in the guard extension until the desired cutting depth is set.

#### 6.4 Depth adjustment **6**

- Push back the depth gauge locking lever.
- Set the desired cutting depth by pivoting the guard lower section / extension in or out.
- Allow the locking mechanism to engage in the grooves of the cutting depth scale.

#### 6.5 Fitting the hoop handle **7**

- CAUTION The hoop handle must be fitted at all times when the guard is in use.** Screw the hoop handle into the mounting point provided on the upper part of the gearing section of the power tool.  
**NOTE** Observe the instructions for fitting the hoop handle.

## 7 Operation

### CAUTION

**Wear protective gloves when changing discs.** The disc may get hot during use.

#### 7.1 Cutting position indicator **8**

### NOTE

The direction of advance movement should always be toward the dust extraction hose connector.

The mark between the guide wheels indicates the position of the cutting disc.

#### 7.2 Dismantling **9**

- Open the guard, as described in the section "Opening the guard".
- CAUTION Do not press the spindle lockbutton before the drive spindle has stopped rotating.** Press the spindle lockbutton and hold it in this position.

- Remove the diamond cutting disc by releasing the clamping nut or Kwik-Lock nut (turn counterclockwise).
- Release the clamping lever.
- Rotate the guard around the spindle axis until it can be lifted away from the angle grinder.

#### 7.3 Adjusting the grip **10**

### WARNING

**Do not adjust the grip while the tool is running. Check to ensure that the grip is engaged in one of the three possible positions.**

To allow the power tool to be used comfortably in all positions, the grip can be pivoted through 90° to the left and the right.

- Disconnect the supply cord plug from the power outlet.
- Release the locking lever by pulling it back.
- Pivot the grip to the left or right as far as it will go.
- Secure the grip in position by closing the locking lever.

**NOTE** The power tool cannot be switched on as long as the grip is not locked in one of the three possible positions.

## 8 Care and maintenance



### CAUTION

**Disconnect the supply cord plug from the power outlet.**



### DANGER

**Wear personal protective equipment. Wear eye protection.**

### DANGER

**Wear respiratory protection.**

#### 8.1 Care and maintenance of the cutting guard

Clean the clamping flange, connector, clamping nut, spindle and the depth gauge with a cleaning cloth, a brush or, if necessary, with compressed air.

## 8.2 Checking the appliance after care and maintenance

After carrying out care and maintenance, check that all protective and safety devices are fitted and that they function faultlessly.

## 9 Disposal

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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 old tools and appliances for recycling. Ask Hilti customer service or your Hilti representative for further information.

## 10 Manufacturer's warranty

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.



Hilti Corporation

LI-9494 Schaan

Tel.: +423 / 234 21 11

Fax: +423 / 234 29 65

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

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