



AG 125-A22

English





#### 1 Information about the documentation

# 1.1 About this documentation

- Read this documentation before initial operation or use. This is a prerequisite for safe, trouble-free
  handling and use of the product.
- Observe the safety instructions and warnings in this documentation and on the product.
- Always keep the operating instructions with the product and make sure that the operating instructions are with the product when it is given to other persons.

#### 1.2 Explanation of symbols used

#### 1.2.1 Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used:



#### DANGER!

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



#### WARNING!

Draws attention to a potential threat of danger that can lead to serious 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.

#### 1.2.2 Symbols in the documentation

The following symbols are used in this document:



Read the operating instructions before use.



Instructions for use and other useful information



Dealing with recyclable materials



Do not dispose of electric equipment and batteries as household waste

## 1.2.3 Symbols in the illustrations

The following symbols are used in illustrations:

0	These numbers refer to the corresponding illustrations found at the beginning of these operating instructions
	instructions

- The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text
- Item reference numbers are used in the **overview illustrations** and refer to the numbers used in the **product overview section**
- This symbol is intended to draw special attention to certain points when handling the product.



Wireless data transfer



#### 1.3 Product-dependent symbols

#### 1.3.1 Symbols on the product

The following symbols are used on the product:

	Wear eye protection.
n	Rated speed
/min	Revolutions per minute
RPM	Revolutions per minute
Ø	Diameter

# 1.4 Product information

permitted to operate, service and maintain the products. This personnel must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

The type designation and serial number are printed on the rating plate.

Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

#### **Product information**

Angle grinder	AG 125-A22	
Generation	02	
Serial no.		

# 1.5 Declaration of conformity

We declare, on our sole responsibility, that the product described here complies with the applicable directives and standards. A copy of the declaration of conformity can be found at the end of this documentation. The technical documentation is filed here:

Hilti Entwicklungsgesellschaft mbH | Tool Certification | Hiltistrasse 6 | 86916 Kaufering, Germany

#### 2 Safety

#### 2.1 Safety instructions

## 2.1.1 General power tool safety warnings



**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.

#### Work area safety

- ▶ Keep work area clean and well lit. Cluttered or 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 children and bystanders away while operating a power tool. Distractions can cause you to lose control.

#### **Electrical safety**

- 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.
- ▶ Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.



#### Personal safety

- ▶ 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.
- ▶ 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.
- ▶ Prevent unintentional starting. Ensure the switch is in the off-position before connecting to 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.
- ▶ 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.
- ▶ Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- ▶ 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.
- ▶ 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.

#### Power tool use and care

- ▶ 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.
- ▶ 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.
- Disconnect 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.
- ► 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.
- 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.
- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ 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.

# Battery tool use and care

- ▶ Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- ▶ Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- ▶ When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- ▶ Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

#### 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.

#### 2.1.2 Safety instructions common to grinding and cutting-off operations

- ► This power tool is intended for use as a grinder or cut-off tool. Observe all safety warnings, instructions, illustrations and specifications provided with this tool. Failure to follow all instructions listed below can result in electric shock, fire and/or serious injury.
- ▶ This power tool is not suitable for use as a sander, wire brush or polisher. Use of the power tool for purposes for which it is not intended may be hazardous and cause injury.



- ▶ Do not use accessories not specifically intended and recommended for this power tool by the tool manufacturer. The fact that an accessory can be attached to your power tool does not necessarily mean that it can be used in safety.
- ► The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can disintegrate and fly apart.
- ► The outside diameter and the thickness of the accessory tool must be within the ranges stated for your power tool. Incorrectly sized accessory tools cannot be adequately guarded or controlled.
- Accessory tools with a threaded insert must match the thread of the arbor. Flange-mounted accessory tools must have a hole diameter matching the mandrel diameter of the flange. Accessory tools not correctly fixed to the power tool rotate unevenly, vibrate excessively and can cause control of the tool to be lost.
- ▶ Do not use damaged accessory tools. Always check accessory tools before use. Check abrasive wheels for chipping and cracks. Check grinding discs for cracks and heavy wear and tear, and check wire brushes for loose or broken wires.
- ▶ If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory tool, position yourself and bystanders away from the plane of the rotating tool and run the power tool at maximum no-load speed for one minute. If an accessory tool has been damaged it will normally break during this test period.
- ▶ Wear personal protective equipment. Wear a face shield, eye protection or safety goggles, as appropriate to the application.
- ▶ As appropriate, wear a dust mask, ear defenders, protective gloves or a workshop apron to keep off abrasive particles and particles of workpiece material. Make sure your eyes are protected against the flying debris created by various machining operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- 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 accessory may fly away and cause injury beyond the immediate area of operation.
- ▶ Hold the power tool by the insulated gripping surfaces only, when carrying out work in which the accessory tool can come into contact with concealed wiring. If the accessory tool comes into contact with a live wire, metal parts of the power tool can also become live, causing the operator to receive an electric shock.
- ▶ Never lay the power tool down before the accessory tool has come to a complete stop. If the rotating accessory tool were allowed to touch the surface on which you are going to place the power tool, you could lose control of the power tool.
- ▶ Never start the power tool while carrying it around. Your clothing could be snagged by the rotating accessory tool, pulling the accessory tool into your body.
- ► Clean the ventilation slots of the power tool at regular intervals. The motor's fan draws dust into the housing and a build-up of metallic dust can cause electrical hazards.
- ▶ Do not operate the power tool near flammable materials. Sparks could ignite these materials.

# Kickback and the appropriate safety instructions

MARNING! Snagging or jamming brings the rotating accessory tool to an abrupt stop. If this happens the power tool whips round in the direction opposite to the accessory tool's direction of rotation, the grinding disc can catch and break out or cause a kickback.

By adopting suitable precautionary measures the operator can control the kickback and reaction forces:

- Maintain a firm grip on the power tool and position your body and arms to absorb kickback forces.
- ► Always use the auxiliary handle, if provided, for maximum control over kickback forces or torque reaction during start-up.
- ► Always keep your hand well clear of the rotating accessory tool. Kickback could cause the accessory tool to pass across your hand.
- ► Keep your body clear of where the power tool will move if kickback occurs. Kickback will propel the power tool in the direction opposite to the wheel's direction of rotation at the point of snagging.
- ▶ Exercise special care when working at corners, sharp edges, etc. Avoid allowing the accessory tool to bounce off or jam in the workpiece. The rotating accessory tool has a tendency to jam at corners and sharp edges, or if it bounces off the workpiece. This causes loss of control or kickback.
- Do not attach a saw chain, woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.



#### Safety instructions for grinding and abrasive cutting:

- ► Use only abrasive wheel types approved for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
- ▶ Offset grinding discs must be fitted in such a way that their grinding face does not project past the plane of the guard edge. An incorrectly fitted grinding disc projecting past the plant of the guard edge cannot be adequately shielded.
- ▶ The guard must be securely attached to the power tool and positioned for maximum safety, so that the smallest possible segment of the abrasive disc is exposed toward the operator. The guard helps protect the operator from flying fragments, accidental contact with the abrasive disc, and flying sparks that could ignite clothing.
- ▶ Use abrasive discs for the recommended applications only.
- ▶ Never try to use the flat of an abrasive cut-off wheel for grinding. Abrasive cut-off wheels are intended for peripheral grinding. Side forces applied to these wheels can cause them to shatter.
- Always use an undamaged clamping flange of the correct size and shape for your selected grinding disc. The correct flange supports the grinding disc, reducing the risk of disc breakage. Flanges for cut-off wheels can differ from those for other grinding discs.
- Do not use worn-down, originally larger-diameter grinding discs from larger power tools. Grinding discs intended for a larger power tool are not suitable for the higher speed of a smaller tool and can break.

#### Further safety instructions for abrasive cutting:

- ▶ Do not stall the cut-off wheel or apply excessive pressure. Do not attempt to make excessively deep cuts. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
- ▶ Keep clear of the areas in front of and behind the rotating cut-off wheel. When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
- ▶ If the wheel binds or when you interrupt 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 rotating cut-off wheel from the cut, because kickback can occur. Investigate and take corrective action to eliminate the cause of wheel binding.
- ▶ Do not switch the power tool on again while the wheel is in the cut. Let the wheel reach full speed and carefully re-insert it into the cut. The wheel can bind, walk up or kick back if the power tool is restarted with the wheel in the cut.
- Support panels or large workpieces to minimize the risk of the wheel binding and causing kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece on both sides of the cutting wheel, both close to the line of cut and near the edge of the workpiece.
- ▶ Use extra caution when plunge cutting into existing walls or other blind areas. Kickback can occur if the wheel slices into gas or water pipes, electric wiring or other objects during the plunge cut.

## 2.1.3 Additional safety instructions

#### Personal safety

- Only use the product if it is in perfect working order.
- Never tamper with or modify the tool in any way.
- Avoid touching rotating parts risk of injury!
- Wear protective gloves also when changing the accessory tool. Touching the accessory tool presents a risk of injury (cuts or burns).
- ▶ Before starting work, check the hazard class of the dust that will be produced when working. Use an industrial vacuum cleaner with an officially approved protection class in compliance with the locally applicable dust protection regulations. Dust from materials such as lead-based paint, certain types of wood and concrete/masonry/stone containing quartz, minerals or metal may be harmful to health.
- Make sure that the workplace is well ventilated and, where necessary, wear a respirator appropriate for the type of dust generated. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory or other diseases among operators or bystanders. Certain kinds of dust are classified as carcinogenic such as oak and beech dust, especially in conjunction with additives for wood conditioning (chromate, wood preservative). Material containing asbestos may be handled only by specialists.
- Take breaks between working and do physical exercises to improve the blood circulation in your fingers. Exposure to vibration during long periods of work can lead to disorders of the blood vessels and nervous system in the fingers, hands and wrists.



#### **Electrical safety**

▶ Before beginning work, check the working area for concealed electric cables or gas and water pipes. External metal parts of the power tool may give you an electric shock if you damage an electric cable accidentally.

#### Using and handling power tools with care

- Do not use cutting discs for grinding.
- ► Tighten the accessory tool and flange securely. If the accessory tool and flange are not tightened securely, the accessory tool may work loose from the spindle due to the braking effect of the motor after switching off.
- ► Comply with the manufacturer's instructions for handling and storing grinding discs.

#### 2.1.4 Battery use and care

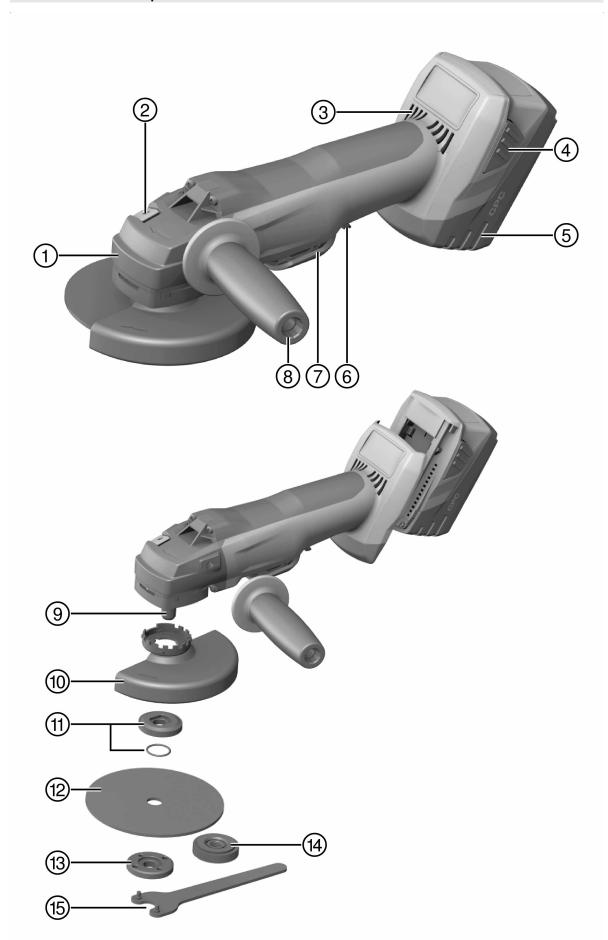
- Observe the special regulations and instructions applicable to the transport, storage and use of Li-ion batteries.
- ▶ Do not expose batteries to high temperatures, direct sunlight or fire.
- ▶ Do not disassemble, crush or incinerate batteries and do not subject them to temperatures over 80 °C.
- ▶ Do not use or charge batteries that have suffered mechanical impact, have been dropped from a height or show signs of damage. In this case, always contact your **Hilti Service**.
- ▶ If the battery is too hot to touch it may be defective. In this case, place the product in a non-flammable location, well away from flammable materials, where it can be kept under observation and allowed to cool down. In this case, always contact your **Hilti Service**.





# 3 Description

# 3.1 Overview of the product





- Guard release button
- Spindle lockbutton
- (3) Air vents
- Release button with additional function (charge status display activation)
- (5) Battery
- 6 Switch-on interlock release button
- 7 On/off switch
- 8 Vibration-absorbing side handle

- 9 Spindle
- Standard guard
- (1) Clamping flange with O-ring
- 4 Abrasive cutting disc / abrasive grinding disc
- (13) Clamping nut
- (4) Kwik lock clamping nut (optional)
- (15) Wrench

#### 3.2 Intended use

The product described is a hand-held cordless angle grinder. It is designed to be used for cutting and grinding metals and mineral materials, and for drilling tiles without use of water. It can be used only for dry grinding / cutting.

- The power tool may be used for cutting, slitting and grinding mineral materials only when equipped with the corresponding guard (optional accessory).
- A dust removal hood together with a suitable **Hilti** vacuum cleaner must be used for working on mineral materials such as concrete or stone.
- ▶ Use only **Hilti** Li-ion batteries of the B 22 series with this product.
- Use only Hilti battery chargers of the C4/36 series for charging these batteries.

## 3.3 Items supplied

Angle grinder, side handle, standard guard, front cover, clamping flange, clamping nut, wrench, operating instructions.

Other system products approved for use with this product can be found at your local **Hilti Store** or online at: **www.hilti.group** | USA: **www.hilti.com** 

# 3.4 Temperature-dependent motor protection

The temperature-dependent motor protection system monitors current input and motor temperature and thus prevents the power tool overheating.

If the motor is overloaded through application of excessive working pressure, the power tool's performance drops noticeably or it may stall completely.

If the power tool stalls or slows significantly due to overloading, release the pressure applied to the tool and then allow it to run under no load for approx. 30 seconds.

#### 3.5 Guard with front cover



When grinding with straight grinding discs and cutting with cutting discs in metalworking applications, use the standard guard with front cover.



## 3.6 DC-EX 125/5"C compact dust hood for cutting (accessory)



When cutting mineral materials with diamond cutting discs, use the DC-EX 125/5" C compact hood. **CAUTION** Use of this hood for working on metal is prohibited.

# 3.7 DG-EX 125/5" dust hood for grinding (accessory)



The grinding system is suitable only for occasional use with diamond cup wheels for grinding mineral materials.

**CAUTION** Use of this hood for working on metal is prohibited.

# 3.8 Li-ion battery charge status display

The charge status of the Li-ion battery is displayed after one of the two battery release buttons is pressed.

Status	Meaning	
4 LEDs light.	Charge status: 75 % to 100 %	
3 LEDs light.	Charge status: 50 % to 75 %	
2 LEDs light.	Charge status: 25 % to 50 %	
1 LED lights up.	Charge status: 10 % to 25 %	
1 LED blinks.	Charge status: < 10 %	



Indication of the charge status is not possible while the power tool is in operation or immediately after operation. If the battery charge status LEDs blink, please refer to the information given in the Troubleshooting section.



#### 4 Consumables

Only synthetic resin-bonded, fiber-reinforced discs with maximum Ø 125 mm which are approved for use at a rotational speed of at least 11,000/min and a peripheral speed of 80 m/s may be used.

The maximum permissible grinding disc thickness is 6.4 mm and the maximum permissible cutting disc thickness is 3 mm.

ATTENTION! When cutting or slitting with abrasive cutting discs always use the standard guard with the additional front cover, or a fully enclosing dust hood.

#### **Discs**

	Application	Designation	Material
Abrasive cutting disc	Cutting, slitting	AC-D	Metal
Diamond cutting disc	Cutting, slitting	DC-TP, DC-D (SPX, SP, P)	Mineral
Abrasive grinding disc	Rough grinding	AG-D, AF-D, AN-D	Metal
Diamond grinding disc	Rough grinding	DG-CW (SPX, SP, P)	Mineral
Diamond core bit	Drilling in tiles	DD-M14	Mineral

#### Suitability of discs for the equipment used

Item	Equipment	AC-D	AG-D	AF-D	AN-D	DG-CW	DC-D	DD-M14
Α	Guard	Х	Х	Х	Х	Х	Х	Х
В	Front cover (in combination with A)	Х	_	_	_	_	Х	_
С	DG-EX 125/5" dust hood for grinding	_	_	_	_	Х	_	_
D	DC-EX 125/5"C dust hood for cutting (only in conjunction with A)	_	_	_	_	_	Х	_
Е	Side handle	Х	Х	Х	Х	Х	Х	Х
F	DCBG 125 hoop handle (optional for E)	Х	Х	Х	Х	Х	Х	Х
G	Clamping nut	Х	Х	Х	Х	Х	Х	_
Н	Clamping flange	Х	Х	Х	Х	Х	Х	_
1	Kwik lock (optional for G)	Х	Х	Х	Х	_	Х	_

# 5 Technical data

	AG 125-A22
Rated voltage	21.6 V
Rated speed	9,500 /min
Maximum disc diameter	125 mm
Weight in accordance with EPTA procedure 01	2.7 kg
Drive spindle thread (arbor size)	M14
Spindle length	22 mm

# 5.1 Noise information and vibration values in accordance with EN 60745

The sound pressure and vibration values given in these instructions were measured in accordance with a standardized test and can be used to compare one power tool with another. They can also be used for a preliminary assessment of exposure. The data given represents the main applications of the power tool. However, if the power tool is used for different applications, with different accessory tools, or is poorly maintained, the data can vary. This can significantly increase exposure over the total working period. An accurate estimation of exposure should also take into account the times when the tool is switched off, or when it is running but not actually being used for a job. This can significantly reduce exposure over the total working period. Identify additional safety measures to protect the operator from the effects of noise



and/or vibration, for example: Maintaining the power tool and accessory tools, keeping the hands warm, organization of work patterns.

#### **Noise information**

Emission sound pressure level (L <sub>pA</sub> )	83 dB(A)
Uncertainty for the sound pressure level (K <sub>pA</sub> )	3 dB(A)
Sound (power) level (L <sub>WA</sub> )	94 dB(A)
Uncertainty for the sound power level (K <sub>WA</sub> )	3 dB(A)

#### Vibration information

Other applications, such as cutting, may produce vibration values that deviate from the given values.

Surface grinding with the vibration-absorbing side handle (a <sub>h,AG</sub> )	3.8 m/s <sup>2</sup>
Uncertainty (K)	1.5 m/s <sup>2</sup>

### 6 Before use

# 6.1 Inserting the battery



# **⚠** CAUTION

Risk of injury. Due to the angle grinder starting unintentionally.

Before fitting the battery, check that the angle grinder is switched off and that the safety lock is activated.

# **△** CAUTION

Electrical hazard. Dirty contacts may cause a short circuit.

▶ Before inserting the battery, check to ensure that the battery terminals and the contacts in the angle grinder are free from foreign objects.

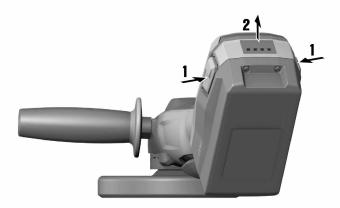
# **CAUTION**

Risk of injury. If the battery is not fitted correctly it may drop out and fall.

- ► Check that the battery is securely seated in the tool so that it cannot drop out and fall, thereby presenting a hazard to other persons.
- ► Fit the battery and check that the battery is securely seated in the power tool.



#### 6.2 Removing the battery



Remove the battery.

#### 6.3 Fitting the side handle

Screw the side handle into one of the threaded bushings provided.

#### 6.4 Fitting or removing the guard

## **↑** CAUTION

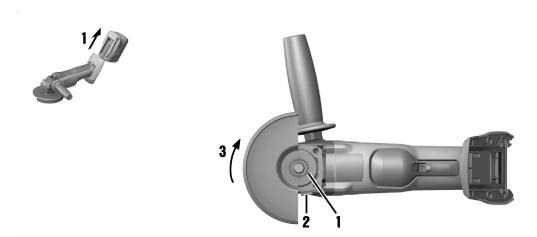
Risk of injury. The accessory tool may be hot or have sharp edges.

- Wear protective gloves when fitting, removing or adjusting the accessory tool or other parts and when troubleshooting.
- Observe the instructions for fitting the applicable guard.

# 6.4.1 Fitting the guard



The guard is equipped with locating lugs that ensure only guards of a type suitable for use with the power tool can be fitted. The locating lugs of the guard fit into the guard mount on the power tool.



- 1. Fit the guard onto the drive spindle collar so that the two triangular marks on the guard and on the power tool are in alignment.
- 2. Press the guard onto the drive spindle collar.
- 3. Press the guard release button.
- 4. Rotate the guard until it engages and the guard release button jumps back into its original position.

#### 6.4.2 Adjusting the guard

- Press the guard release button and then rotate the guard until it engages in the desired position.
- 14 English



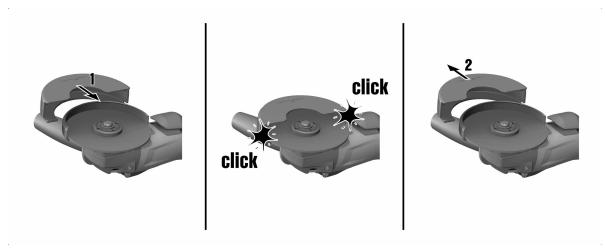
## 6.4.3 Removing the hood

- 1. Press the guard release button and then rotate the guard until the triangular marks on the guard and the power tool are in alignment.
- 2. Remove the guard.

# 6.5 Fitting or removing the front cover

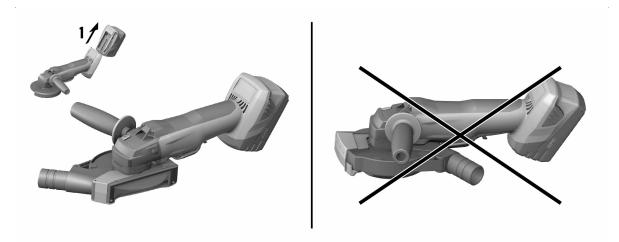


The front cover, when used, is clipped onto the guard.



- 1. Position the front cover with the closed side on the standard guard and push it on until it engages.
- 2. To remove it, release the catch for the front cover and then lift the front cover away from the standard guard.

# 6.6 Positioning the DC-EX 125/5"C dust hood (for cutting)



Position the compact guard so that the on/off switch remains easily accessible and operable at all times.

# 6.7 Fitting and removing accessory tools

#### **CAUTION**

Risk of injury. The accessory tool may be hot.

▶ Wear protective gloves when changing the accessory tool.





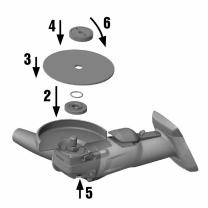
Diamond discs must be replaced when their cutting or grinding performance drops significantly. This generally is the case when the segments reach a height of less than 2 mm.

Other discs must be replaced when their cutting performance drops significantly or other parts of the angle grinder (not the disc) come into contact with the material you are working on.

Abrasive discs must be replaced when their expiry date has been reached.

### 6.7.1 Fitting an accessory tool





- 1. Remove the battery. → page 14
- 2. Check that the O-ring is in place in the clamping flange and that it is undamaged.

#### Result

The O-ring is damaged.

There is no O-ring in the clamping flange.

- ► Fit a new clamping flange with O-ring.
- 3. Fit the clamping flange onto the drive spindle (keyed fit to prevent slipping/rotation).
- 4. Fit the accessory tool.

#### **WARNING**

Risk of injury. The accessory tool may work loose due to the braking effect of the motor.

- Wait until the accessory tool has come to a standstill before touching or gripping the accessory tool or the clamping nut.
- ► Secure the accessory tool by tightening the clamping flange and clamping nut firmly so that no parts work loose from the spindle due to the braking effect of the motor.
- 5. Screw on the clamping nut corresponding to the type of accessory tool fitted.
- 6. Press the spindle lockbutton and hold it in this position.
- 7. Use the pin wrench to tighten the clamping nut securely, then release the spindle lockbutton and remove the wrench.

# 6.7.2 Removing the accessory tool

1. Remove the battery. → page 14

#### **↑** CAUTION

**Risk of breakage and irreparable damage.** If the spindle lockbutton is pressed while the spindle is rotating, this may cause the accessory tool to work loose or detach from the power tool.

- Press the spindle lockbutton only when the spindle has stopped rotating.
- 2. Press the spindle lockbutton and hold it in this position.
- 3. Release the clamping nut by gripping it with the wrench and turning the nut counterclockwise.
- 4. Release the spindle lockbutton and remove the accessory tool.



#### 6.7.3 Fitting an accessory tool secured with a Kwik lock nut

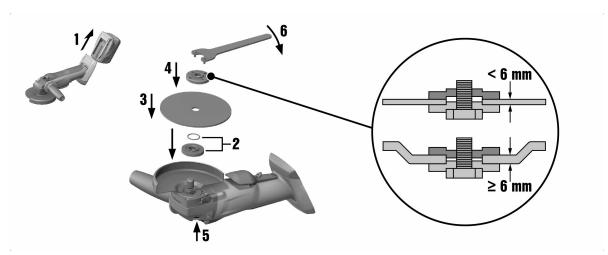
# **⚠** CAUTION

Risk of breakage. Heavy wear (abrasion) may cause the Kwik lock nut to break.

- When working with the power tool, make sure that the Kwik lock nut doesn't come into contact with the working surface.
- Do not use a damaged Kwik lock nut.



The optional **Kwik lock** nut can be used instead of the standard clamping nut. Accessory tools (discs etc.) can then be changed without need for additional tools (keyless system).



- 1. Remove the battery. → page 14
- 2. Clean the clamping flange and the quick-release clamping nut.
- 3. Fit the clamping flange onto the drive spindle.
- 4. Fit the accessory tool.
- 5. Screw on the **Kwik lock** nut until it is seated against the accessory tool.
  - The name Kwik lock should be visible when the nut is screwed on.
- 6. Press the spindle lockbutton and hold it in this position.
- 7. Turn the accessory tool firmly by hand in a clockwise direction until the **Kwik lock** nut is tightened securely and then release the spindle lockbutton.

# 6.7.4 Removing an accessory tool secured with a Kwik lock nut

1. Remove the battery. → page 14

# **CAUTION**

**Risk of breakage and irreparable damage.** If the spindle lockbutton is pressed while the spindle is rotating, this may cause the accessory tool to work loose or detach from the power tool.

- Press the spindle lockbutton only when the spindle has stopped rotating.
- 2. Press the spindle lockbutton and hold it in this position.
- 3. Release the Kwik lock nut by turning it counterclockwise by hand.
- 4. If the **Kwik lock** nut cannot be released by turning it by hand, use a pin wrench to turn the nut in a counterclockwise direction.

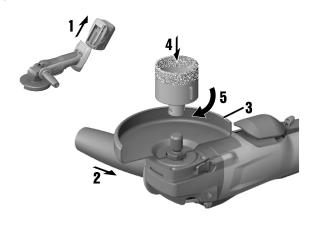


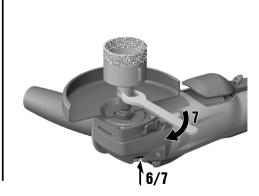
Never use a pipe wrench! A pipe wrench could damage the **Kwik lock** nut.

5. Release the spindle lockbutton and remove the accessory tool.



#### 6.7.5 Fitting the core bit





- 1. Remove the battery. → page 14
- 2. Fit the side handle. → page 14
- 3. Fit the guard. → page 14
- 4. Place the core bit in position and tighten it hand-tight.
- 5. Press and hold down the arbor lockbutton.
- 6. Tighten the core bit with a suitable open-end wrench.
- 7. Then release the spindle lockbutton and remove the open-end wrench.

# 7 Operation

# 7.1 Grinding

# **⚠** CAUTION

Risk of injury. The accessory tool may suddenly stick or stall.

▶ Use the power tool with the side handle (or optional hoop grip) fitted and always hold the power tool securely with both hands.

#### 7.2 Cutting

▶ When cutting, apply moderate feed pressure and do not tilt the power tool or the cutting disc (when working, hold at approx. 90° to the surface being cut).



For best results when cutting profiles and square tube, start cutting at the smallest cross section.

## 7.3 Rough grinding

# **⚠** CAUTION

Risk of injury. The abrasive cutting disc could shatter and flying fragments may cause injury.

- Never use abrasive cutting discs for grinding.
- Move the power tool to and fro while maintaining a 5° to 30° angle of attack and applying moderate pressure.
  - This will avoid overheating and discoloration of the workpiece and help ensure an even surface finish.

# 7.4 Switching on (tool equipped with switch-on safety interlock)



The on / off switch with safety lock (switch-on interlock) gives you full control of the switch function and avoids unintentional starting.





- 1. Push the safety lock forward.
  - ¬ The on/off switch is unlocked.
- 2. Press the on/off switch as far as it will go.
  - The power tool's motor runs at no-load speed.

# 7.5 Switching off (tool equipped with switch-on safety interlock)

- Release the on/off switch.
  - The safety lock jumps automatically into the locked position.

#### 8 Care and maintenance of cordless tools

# **WARNING**

#### Risk of injury with battery inserted!

Always remove the battery before carrying out care and maintenance tasks!

## Care and maintenance of the tool

- Carefully remove stubborn dirt from the tool.
- Clean the air vents carefully with a dry brush.
- Use only a slightly damp cloth to clean the casing. Do not use cleaning agents containing silicone as these may attack the plastic parts.

## Care of the Li-ion batteries

- · Keep the battery free from oil and grease.
- Use only a slightly damp cloth to clean the casing. Do not use cleaning agents containing silicone as these may attack the plastic parts.
- · Avoid ingress of moisture.

#### Maintenance

- Check all visible parts and controls for signs of damage at regular intervals and make sure that they all function correctly.
- Do not operate the cordless tool if signs of damage are found or if parts malfunction. Have the tool repaired by **Hilti** Service immediately.
- After cleaning and maintenance, fit all guards or protective devices and check that they function correctly.

# 9 Transport and storage of cordless tools

## **Transport**

### **⚠** CAUTION

# Accidental starting during transport!

- Always transport your products with the batteries removed!
- Remove the battery.
- Transport the tool and batteries individually packaged.
- Never transport batteries in bulk form (loose, unprotected).



Check the tool and batteries for damage before use after long periods of transport.

#### Storage

# **△** CAUTION

#### Accidental damage caused by defective or leaking batteries!

- Always store your products with the batteries removed!
- Store the tool and batteries in a place that is as cool and dry as possible.
- ▶ Never store batteries in direct sunlight, on heating units or behind a window pane.
- Store the tool and batteries in a place where they cannot be accessed by children or unauthorized persons.
- ► Check the tool and batteries for damage before use after long periods of storage.

## 10 Troubleshooting

If the trouble you are experiencing is not listed in this table or you are unable to remedy the problem by yourself, please contact **Hilti** Service.

#### 10.1 Troubleshooting

Trouble or fault	Possible cause	Action to be taken
The battery runs down more quickly than usual.	Very low ambient temperature.	<ul> <li>Allow the battery to warm up slowly to room temperature.</li> </ul>
The battery doesn't engage with an audible click.	The retaining lugs on the battery are dirty.	<ul> <li>Clean the retaining lugs and refit the battery.</li> </ul>
1 LED blinks. The power tool does not run.	Low battery.	<ul> <li>Change the battery and charge the empty battery.</li> </ul>
	The battery is too hot or too cold.	<ul> <li>Allow the battery to cool down or warm up slowly to room temperature.</li> </ul>
All 4 LEDs blink. The power tool does not run.	The tool has been overloaded.	Release the control switch and then press it again. Then allow the power tool to run under no load for approx. 30 seconds.
The angle grinder or battery gets very hot.		
The tool does not achieve full power.	A battery with inadequate capacity was used.	<ul> <li>Use a battery with adequate capacity.</li> </ul>
The motor has no braking effect.	Low battery.	<ul> <li>Change the battery and charge the empty battery.</li> </ul>
	The power tool was overloaded briefly.	<ul> <li>Release the control switch and then press it again.</li> </ul>

#### 11 Disposal

Most of the materials from which **Hilti** tools and appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can be returned to **Hilti** for recycling. Ask **Hilti** Service or your Hilti representative for further information.

#### **Battery disposal**

Improper disposal of batteries can result in health hazards from leaking gases or fluids.

- ▶ DO NOT send batteries through the mail!
- ► Cover the terminals with a non-conductive material (such as electrical tape) to prevent short circuiting.
- ▶ Dispose of your battery out of the reach of children.
- ▶ Dispose of the battery at your **Hilti Store**, or consult your local governmental garbage disposal or public health and safety resources for disposal instructions.





Do not dispose of power tools, electronic equipment or batteries as household waste!

# 12 Manufacturer's warranty

▶ Please contact your local **Hilti** representative if you have questions about the warranty conditions.







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