



AG 450-7 (S/D)

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:

2	These numbers refer to the corresponding illustrations found at the beginning of these operating instructions
3	The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text
⑪	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 Symbols on the product

1.3.1 Product-dependent symbols

The following symbols are used on the product:

	Wear protective goggles
RPM	Revolutions per minute
/min	Revolutions per minute
n	Rated speed
Ø	Diameter
	Protection class II (double-insulated)

1.4 Product information

products are designed for professional users and only trained, authorized personnel are 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 → page 2

Product information

Angle grinder	AG 450-7 (S/D)
Generation	03
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 issued by the certification department 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 General power tool safety warnings

WARNING

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.

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

- ▶ **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.
- ▶ **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.
- ▶ **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.
- ▶ **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.
- ▶ **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.

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 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.
- ▶ **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 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.
- ▶ **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.

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.

2.2 Safety warnings common for grinding, sanding, wire brushing, polishing or abrasive cutting-off operations:

- ▶ **This power tool is intended to function as a grinder, wire brushing or cut-off tool. 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.
- ▶ **Operations such as sanding or polishing are not recommended to be performed with this power tool.** Operations for which the power tool was not designed may create a hazard and cause personal injury.
- ▶ **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- ▶ **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 break and fly apart.
- ▶ **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
- ▶ **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- ▶ **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
- ▶ **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop 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.
- ▶ **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 immediate area of operation.
- ▶ **Hold the power tool by insulated gripping surfaces only, 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.
- ▶ **Position the cord clear of the spinning accessory.** If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- ▶ **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
- ▶ **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- ▶ **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.
- ▶ **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- ▶ **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.

Kickback and related warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- ▶ **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.
- ▶ **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- ▶ **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
- ▶ **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause 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 warnings specific for grinding and abrasive cutting-off operations:

- ▶ **Use only wheel types that are recommended 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.
- ▶ **The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip.** An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
- ▶ **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.** The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.
- ▶ **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.
- ▶ **Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.** Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
- ▶ **Do not use worn down wheels from larger power tools.** Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

Additional safety warnings specific for abrasive cutting-off operations:

- ▶ **Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** 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.
- ▶ **Do not position your body in line with and behind the rotating 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.
- ▶ **When 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 cut-off 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.
- ▶ **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- ▶ **Support panels or any oversized workpiece to minimize the risk of 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.
- ▶ **Use extra caution when making a "pocket cut" into existing walls or other blind areas.** The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

Safety warnings specific for wire brushing operations:

- ▶ **Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush.** The wire bristles can easily penetrate light clothing and/or skin.
- ▶ **If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard.** Wire wheel or brush may expand in diameter due to work load and centrifugal forces.

2.3 Additional safety instructions

Personal safety

- ▶ Use the tool only when it is in technically faultless condition.
- ▶ Never tamper with or modify the tool in any way.
- ▶ Always hold the power tool with both hands on the grips provided. Keep the grips clean and dry.
- ▶ Avoid touching rotating parts – risk of injury!
- ▶ Wear ANSI Z87.1 approved protective glasses, a hard hat, ear protection, protective gloves and light respiratory protection while using the power tool.
- ▶ 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.
- ▶ The power tool is not intended for use by debilitated persons who have received no special training. Keep the power tool out of reach of children.
- ▶ Apply appropriate safety measures at the opposite side of the workpiece in work that involves breaking through. Pieces of debris could drop out and / or fall down and injure other persons.
- ▶ Slits cut in load-bearing walls of buildings or other structures may influence the statics of the structure, especially when steel reinforcing bars or load-bearing components are cut through. Consult the responsible structural engineer, architect or person in charge of the building project before beginning the work.
- ▶ Before beginning the work, check the hazard classification of the dust that will be produced. Use an industrial vacuum cleaner with an officially approved protection classification in compliance with locally applicable dust protection regulations.
- ▶ Use a dust removal system and suitable vacuum cleaner whenever possible. Dust from materials, such as paint containing lead, some wood species, concrete/masonry/stone containing silica, and minerals as well as metal, may be harmful.
- ▶ 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 to the operator 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.
- ▶ To reduce the risk of injury, use only genuine **Hilti** accessories and accessory tools.
- ▶ Observe the national health and safety requirements.

Electrical safety

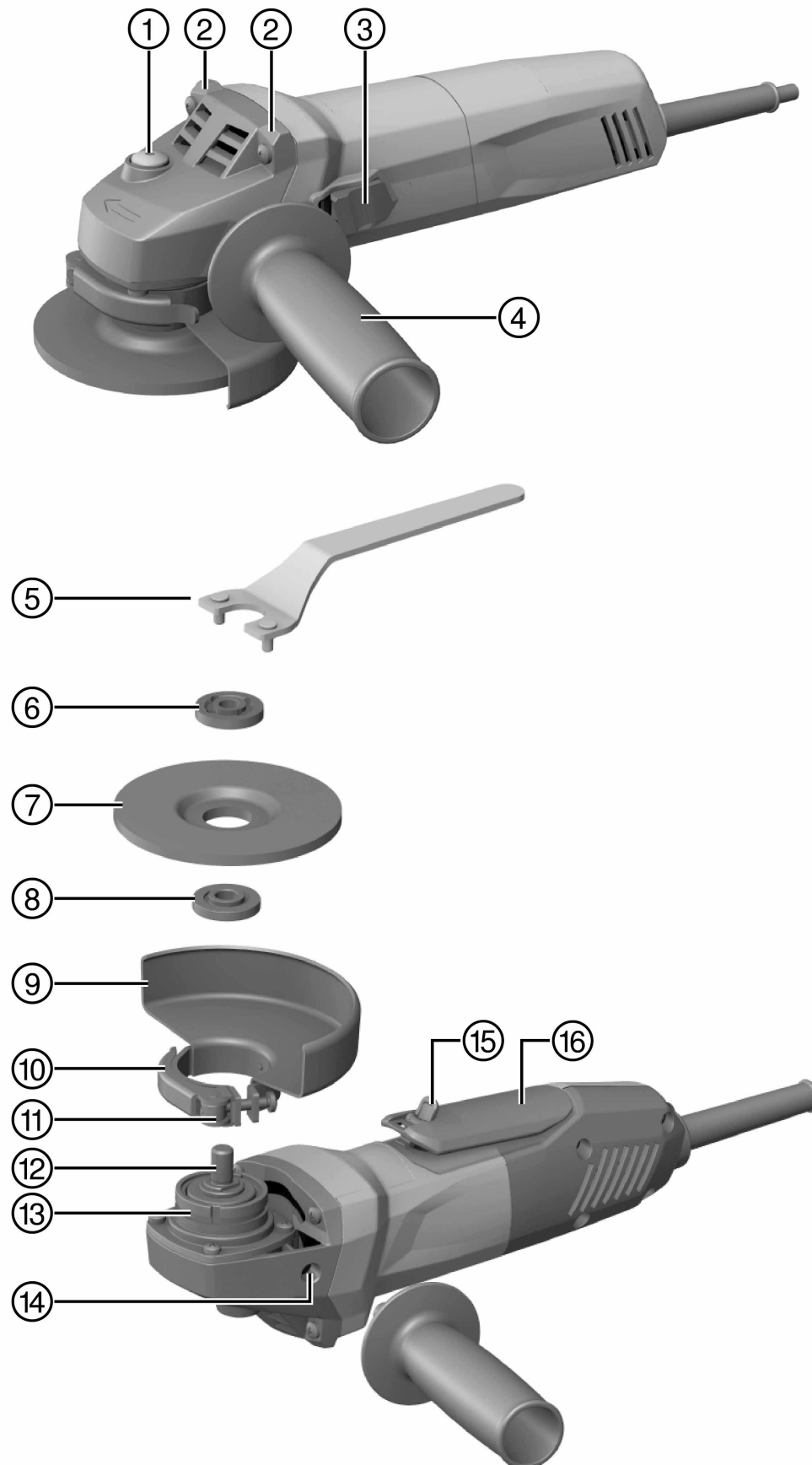
- ▶ Before beginning work, check the working area for concealed electric cables or gas and water pipes. External metal parts of the power tool may give you an electric shock if you damage an electric cable accidentally.
- ▶ Do not touch the supply cord or extension cord if it is damaged while working. Disconnect the mains plug from the power outlet. Check the tool's supply cord at regular intervals and have it replaced by **Hilti** Service if damage is found. Check extension cords at regular intervals and replace them if found to be damaged.
- ▶ Dirty or dusty power tools that have been used frequently for work on conductive materials should be checked at regular intervals by **Hilti** Service. Dust (especially dust from conductive materials) or dampness adhering to the surface of the tool may, under unfavorable conditions, lead to electric shock.

Using and handling power tools with care

- ▶ Secure the workpiece. A workpiece clamped in a vice or secured by some other clamping device is more secure than when held only by hand.
- ▶ Wait until the power tool stops completely before you lay it down.
- ▶ Switch the electric tool off and unplug the supply cord in the event of an interruption in the electric supply in order to avoid inadvertent restarting when the power returns.
- ▶ Grinding discs must be stored and handled carefully in accordance with the manufacturer's instructions.
- ▶ Have the tool checked by **Hilti** Service after breakage of a disc, if the tool has been dropped or has fallen, or in the event of other mechanical damage.

3 Description

3.1 Product overview



- | | |
|--|--|
| ① Arbor lockbutton | ⑨ Standard guard |
| ② Steadying rib | ⑩ Clamping lever |
| ③ On/off switch | ⑪ Adjusting screw |
| ④ Side handle | ⑫ Arbor |
| ⑤ Wrench | ⑬ Keyed locating lug |
| ⑥ Clamping nut | ⑭ Threaded bushing for handle |
| ⑦ Abrasive cutting disc / abrasive grinding disc | ⑮ Switch-on interlock release button |
| ⑧ Clamping flange | ⑯ On/off switch with dead-man function |

3.2 Intended use

The product described is a hand-held electric angle grinder. It is designed for cutting, grinding and brushing metal and mineral materials without use of water. It can be used only for dry grinding / cutting.

Operate the tool only when it is connected to a power supply providing a voltage and frequency in compliance with the information given on its type identification plate.

- The tool can be used for cutting, slitting and grinding mineral materials only in combination with the appropriate guard (optional accessory).
- It is recommended that a dust removal system consisting of matched components, i.e. dust removal hood and a suitable **Hilti** vacuum cleaner, be used for working on mineral materials such as concrete or stone. This protects the operator and extends the life of the product and accessory tools used.

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 Front cover for the disc guard



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

4 Consumables

Use only synthetic-resin-bonded, fiber-reinforced discs with a maximum Ø of 4.5" which are approved for a rotational speed of at least 11500/min and a peripheral speed of 80 m/s.

The maximum grinding disc thickness is 1/4" and the maximum cutting disc thickness is 1/8".

WARNING! When cutting or slitting with cutting discs, always use the standard guard with additional cover plate.

Discs

	Application	Designation	Material
Abrasive cutting disc	Cutting, slitting	AC-D	Metal
Diamond cutting disc	Cutting, slitting	DC-D, DC-TP	mineral
Abrasive grinding disc	Rough grinding	AG-D, AF-D, AN-D	Metal
Wire brushes	Wire brushes	3CS, 4CS, 3SS, 4SS	Metal

Suitability of discs for the equipment used

Item	Equipment	AC-D	AG-D	AF-D	AN-D	DC-D	3CS/3SS/ 4CS/4SS	AG-D type 27
A	Guard	X	X	X	X	X	X	—
B	Front cover (in combination with A)	X	—	—	—	X	—	—
C	Side handle	X	X	X	X	X	X	X
D	Clamping nut (not for use with accessories with integrated thread)	X	X	X	X	X	—	—
E	Clamping flange (not for use with accessories with integrated thread)	X	X	X	X	X	—	—
F	Type 27 guard	—	—	—	—	X	—	X

5 Technical data

If the product is powered by a generator or transformer, the generator or transformer's power output must be at least twice the rated input power shown on the rating plate of the product. The operating voltage of the transformer or generator must always be within +5 % and -15 % of the rated voltage of the product.

The information given applies for a rated voltage of 120 V. Actual figures can vary for country-specific versions and if the voltage supply differs. For rated voltage, frequency, input power and rated current, refer to the rating plate.

	AG 450-7 (S/D)
Rated current input	7 A
Rated speed	11,500 /min
Rated frequency	60 Hz
Weight	4.4 lb (2.0 kg)
Maximum disc diameter	4.5 in
Drive spindle thread	5/8"-11
Thread length	3 3/8"

6 Before use

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.

6.1 Fitting the side handle

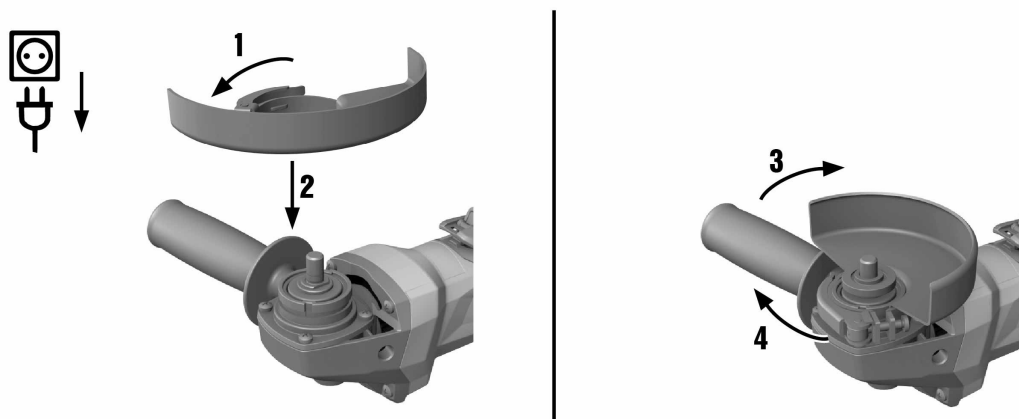
- ▶ Screw the side handle into one of the threaded bushings provided.

6.2 Guard

- ▶ Observe the instructions for fitting the applicable guard.

6.2.1 Installing the guard

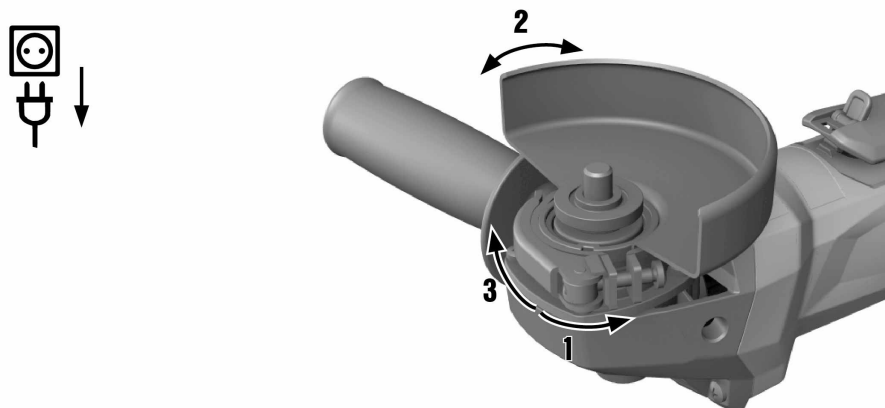
i The guard is keyed to ensure that only guards of a type suitable for use with the product can be installed. The keyed locating lug also prevents the guard from coming into contact with the tool.



1. Open the clamping lever.
2. Fit the guard on to the arbor collar so that the keyed locating lug engages in the recess provided.
3. Turn the guard to the required position.
4. Secure the guard by closing the clamping lever.

i The guard is preset to the correct clamping diameter by the adjusting screw. If tension is too low when the guard is fitted, the adjusting screw can be tightened slightly to increase the clamping force.

6.2.2 Adjusting the guard

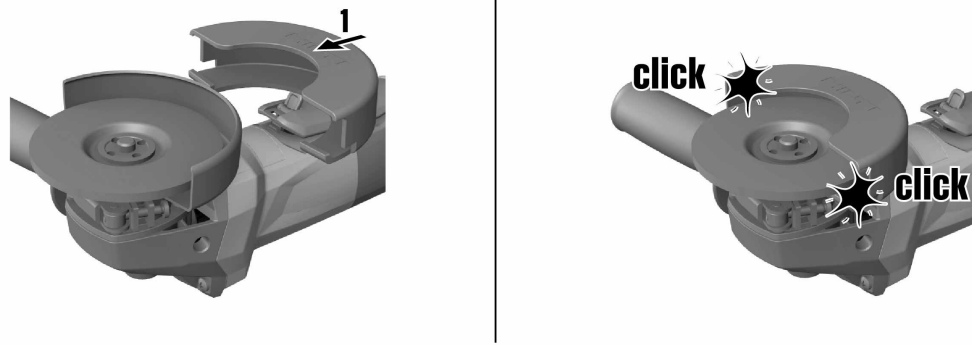


1. Release the clamping lever.
2. Rotate the guard to the required position.
3. Secure the guard by closing the clamping lever.

6.2.3 Removing the hood

1. Release the clamping lever.
2. Rotate the guard until the keyed locating lug is aligned with the keyed locating groove and then remove the guard.

6.2.4 Fitting or removing the front cover



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.

6.3 Fitting and removing accessory tools

CAUTION

Risk of injury. The accessory tool may be hot.

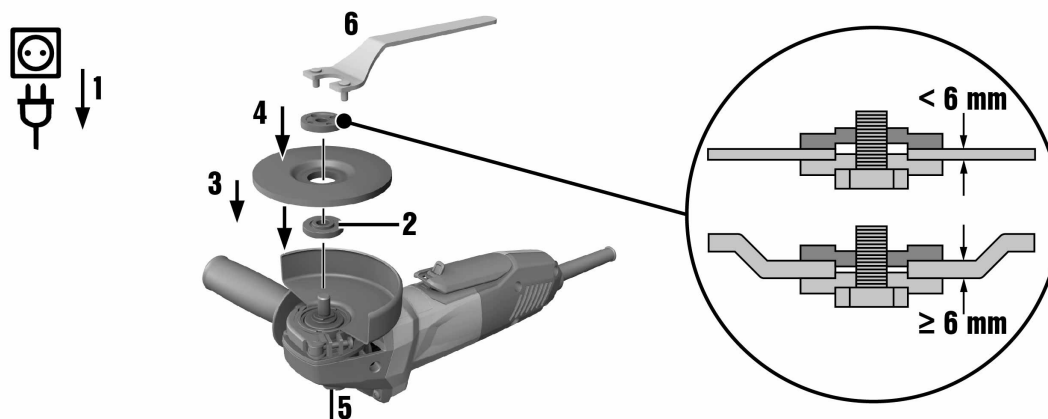
- ▶ Wear protective gloves when changing the accessory tool.

Diamond discs must be replaced when their cutting or grinding performance drops significantly. This generally is the case when the diamond segments reach a height of less than 2 mm (1/16").

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.

6.3.1 Fitting an accessory tool



1. Disconnect the supply cord plug from the power outlet.
2. Clean the clamping flange.
3. Fit the clamping flange onto the drive spindle.
4. Fit the accessory tool.
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 wrench to tighten the clamping nut securely and then release the spindle lockbutton.

6.3.2 Removing the accessory tool

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

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.

6.3.3 Fitting a threaded accessory tool

1. Disconnect the supply cord plug from the power outlet.
2. Screw the accessory tool onto the drive spindle.
3. Press the spindle lockbutton and hold it in this position.
4. Use an open-end wrench to tighten the accessory tool securely and then release the spindle lockbutton.

6.3.4 Removing a threaded accessory tool

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

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. Use an open-end wrench to release the accessory tool.
 4. Release the spindle lockbutton and remove the accessory tool.

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 fitted and always hold it securely with both hands.
-

7.1.1 Cutting

- ▶ When cutting, apply moderate feed pressure and do not tilt the product or the cutting disc to either side (hold at approx. 90° to the cutting plane).
-



For best results when cutting profiles and small-section rectangular tubes, start cutting at the smallest cross section.

7.1.2 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 product 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.

7.2 Switching on and off

7.2.1 Switching on

Option: AG 450-7 S

1. Plug the supply cord into the power outlet.
2. Press the rear section of the on/off switch.
3. Slide the on/off switch forward.
4. Lock the on/off switch.
 - ◁ The motor runs.

7.2.2 Switching off

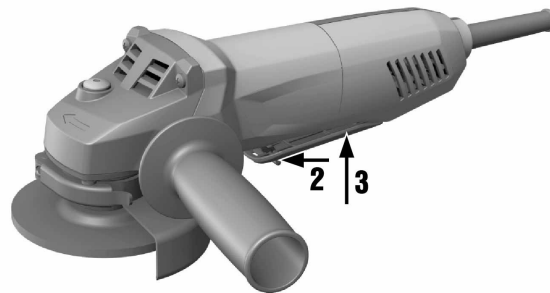
Option: AG 450-7 S

- ▶ Press the rear section of the on/off switch.
 - ◁ The on/off switch jumps into the off position and the motor stops.

7.2.3 Switching on

Option: AG 450-7 D

 The on/off switch with built-in safety lock enables the user to check the switch function and prevents inadvertent starting of the product.



1. Plug the supply cord into the power outlet.
2. Press the safety lock to unlock the on/off switch.
3. Fully depress the on/off switch.
 - ◁ The motor runs.

7.2.4 Switching off

Option: AG 450-7 D

- ▶ Release the on/off switch.
 - ◁ The safety lock jumps back automatically into the locked position and the motor stops.

8 Care of the product



DANGER

Electric shock due to breakdown of protective insulation. When working on metal under extreme conditions, conductive dust may accumulate inside the power tool, thereby adversely affecting the protective insulation.

- ▶ Use a stationary dust extraction system when working under extreme conditions.
- ▶ Clean the air vents frequently.
- ▶ Use a ground fault circuit interrupter (GFCI) in the electric power supply line to the power tool.



WARNING

Electrical hazards. Improper repairs to electrical parts may lead to serious injuries.

- ▶ Electrical parts may be repaired only by trained electrical specialists.
- ▶ Never operate the product when the air vents are blocked. Clean the air vents carefully using a dry brush. Do not allow foreign objects to enter the interior of the product.
- ▶ Keep the product, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents containing silicone.
- ▶ Clean the outer surfaces of the tool with a slightly damp cloth at regular intervals. Do not use a spray, steam pressure cleaning equipment or running water for cleaning.



Frequent work on conductive materials (e.g. metal, carbon fiber) may make shorter maintenance intervals necessary. Take your individual workplace risk assessment into account.

8.1 Checks after care and maintenance work

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

9 Transport and storage

- ▶ Do not transport the power tool with an accessory tool fitted to it.
- ▶ Always unplug the supply cord before storing the power tool.
- ▶ Store the product in a dry place where it cannot be accessed by children or unauthorized persons.
- ▶ After long periods of transport or storage, check the power tool for damage before use.

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
Product does not start.	Interruption in the electric supply.	▶ Plug in another electric tool or appliance and check whether it works.
	The supply cord or plug is defective.	▶ Have the supply cord and plug checked by a trained electrical specialist and replaced if necessary.
	The carbon brushes are worn.	▶ Have the product checked by a trained electrical specialist; have the carbon brushes replaced, if necessary.
Product does not work.	Product is overloaded.	▶ Release the on/off switch and then press it again. Then allow the product to run under no load for approx. 30 seconds.

Trouble or fault	Possible cause	Action to be taken
Product does not develop full power.	The extension cord conductor cross section (gauge) is inadequate.	► Use an extension cord with an adequate conductor cross section.

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.



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- Do not dispose of power tools, electronic equipment or batteries as household waste!
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12 Manufacturer's warranty

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