



DCH 300
DCH 300-X

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

DANGER !

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

WARNING

WARNING !

- ▶ Draws attention to a potential threat of danger that can lead to serious injury or fatality.





CAUTION

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:

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

	Protection class II (double-insulated)
\varnothing	Diameter
n	Rated speed
/min	Revolutions per minute
	Alternating current
	Wireless communication
	Wear eye protection

1.4 Product information

Hilti products are designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any particular hazards that may be encountered. 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 stated 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

Diamond cutter	DCH 300 DCH 300-X
Generation	01
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 and stored 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 Cut-off machine safety warnings

- ▶ **The guard provided with the tool 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 wheel fragments and accidental contact with wheel.

- ▶ **Use only bonded reinforced or 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.
- ▶ **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.
- ▶ **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 diameter for your selected wheel.** Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.
- ▶ **Do not use worn down reinforced wheels from larger power tools.** Wheels intended for a larger power tool are not suitable for the higher speed of a smaller tool and may burst.
- ▶ **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.
- ▶ **The arbour size of wheels and flanges must properly fit the spindle of the power tool.** 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.
- ▶ **Do not use damaged wheels. Before each use, inspect the wheels for chips and cracks. If power tool or wheel is dropped, inspect for damage or install an undamaged wheel. After inspecting and installing the wheel, position yourself and bystanders away from the plane of the rotating wheel and run the power tool at maximum no load speed for one minute.** Damaged wheels 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 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.
- ▶ **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.
- ▶ **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 wheel.
- ▶ **Never lay the power tool down until the accessory has come to a complete stop.** The spinning wheel 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. 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.

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 line with the rotating wheel.** 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, segmented diamond wheel with a peripheral gap greater than 10 mm or toothed saw blade.** Such blades create frequent kickback and loss of control.
- ▶ **Do not "jam" the 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.
- ▶ **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 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.

2.3 Additional safety instructions

Personal safety

- ▶ When working, always guide the supply cord and the extension cable to the rear and away from the power tool. This reduces the risk of tripping over cables while work is in progress.
- ▶ If work involves break-through, always secure the area on the side opposite where the work is carried out. Pieces of debris could drop out and/or fall down and injure other persons.
- ▶ Use the product only when it is in perfect working order.
- ▶ Never tamper with or modify the power tool in any way.
- ▶ Wear protective gloves, especially when changing discs, when adjusting the guard and when installing the depth gauge.
- ▶ Use a dust removal system and suitable mobile dust extractor whenever possible. Dust from materials such as lead-based paint, certain types of wood and concrete/masonry/stone containing quartz, minerals or metal can be harmful to health.
- ▶ 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.
- ▶ Make sure that the workplace is well ventilated and, if necessary, wear a respirator appropriate for the type of dust generated. Contact with or inhalation of the dust can cause allergic reactions and/or respiratory or other diseases among operators or bystanders. Certain kinds of dust such as oakwood and beechwood dust are classified as carcinogenic, especially in conjunction with additives for wood conditioning (chromate, wood preservative). Only specialists are permitted to handle material containing asbestos.
- ▶ Wear light respiratory protection when using the power tool for dry cutting without a vacuum dust removal system. Close the cap over the dust removal hose connector.
- ▶ Do not touch rotating parts – risk of injury! Switch the power tool on only after it is in position at the workpiece.
- ▶ Take breaks between working and do relaxation and finger 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 (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present. External metal parts on the power tool can become live, for example if you inadvertently damage electric wiring.

- ▶ Do not touch the supply cord or extension cord if it is damaged while working. Unplug the supply cord from the power outlet.
- ▶ Check the power tool's supply cord at regular intervals and have it replaced by a qualified specialist if found to be damaged.
- ▶ Check extension cords at regular intervals and replace them if found to be damaged.

Using and handling the power tool

- ▶ Make sure that sparks created during use do not present a hazard. Adjust the guard to the appropriate position.
- ▶ Before use, make sure that the cutting disc is correctly installed and secured and run the cutting disc for 30 seconds under no load in a safe position. Switch off the power tool immediately if significant vibration occurs or some other fault is perceived. Under these circumstances, check the entire system to ascertain the cause.
- ▶ Do not use the power tool if it starts sharply or jerkily. The electronics might be defective. Have the power tool repaired by **Hilti** Service.
- ▶ Close the cap over the dust removal hose connector for cutting metals.

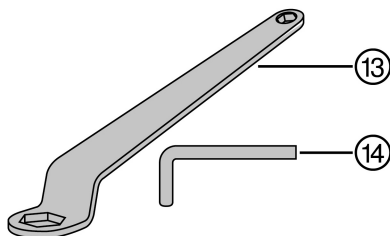
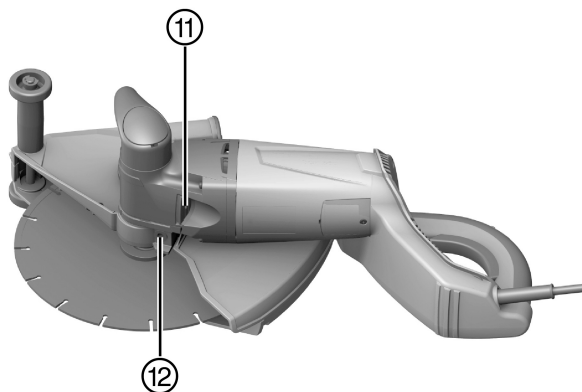
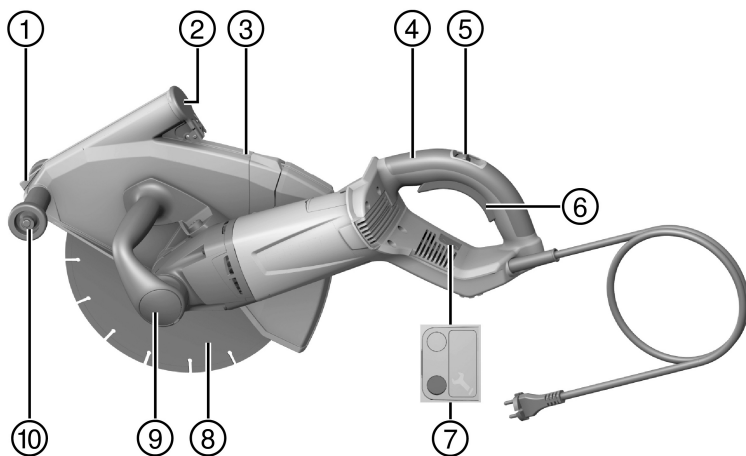
Slits cut into load-bearing walls or other structures can influence the statics of the structure, especially when reinforcing bars or load-bearing components are cut.

- ▶ Consult the responsible structural engineer, architect or person in charge of the building project before starting work.
- ▶ Guide the power tool carefully and make straight cuts in order to keep the cutting disc from jamming. Do not attempt to make curved cuts.
- ▶ Guide the power tool smoothly and do not apply lateral pressure to the cutting disc. Always bring the power tool into contact with the workpiece at right angles. Do not attempt to change the line of cut by applying lateral pressure or by bending the cutting disc while cutting is in progress. This could damage the cutting disc and cause it to break.
- ▶ Never use the power tool without the guard.

3 Description

3.1 Product overview

DCH 300

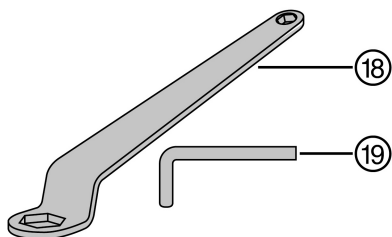
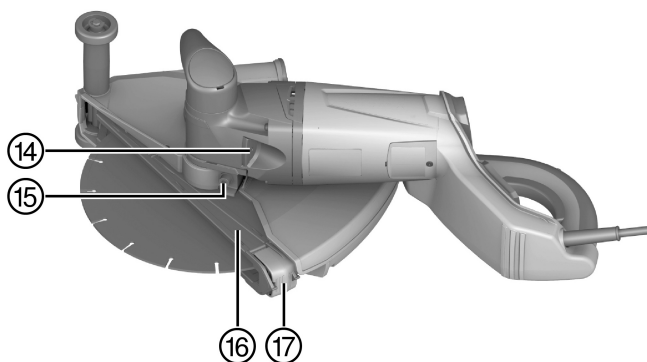
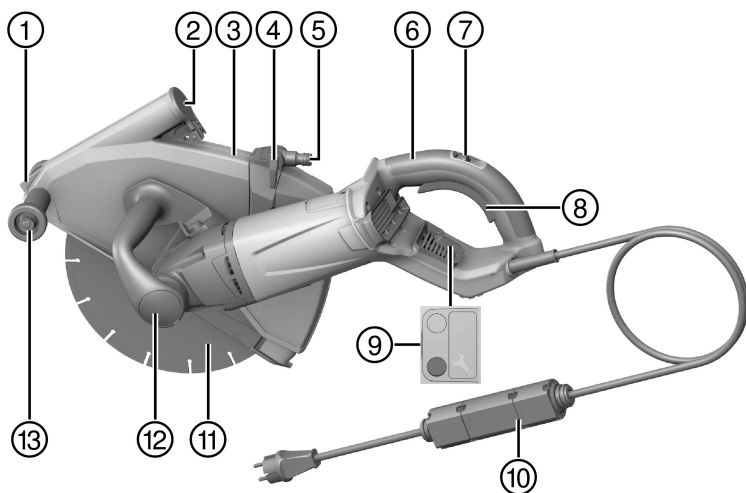


- | | | | |
|---|----------------------------|---|------------------------------------|
| ① | Cut indicator | ⑤ | Switch-on interlock release button |
| ② | Dust removal connector cap | ⑥ | On/off switch |
| ③ | Guard | ⑦ | Service indicator |
| ④ | Rear grip | ⑧ | Diamond cutting disc |

- ⑨ Front grip
- ⑩ Guide roller
- ⑪ Arbor lockbutton
- ⑫ Hood clamping screw
- ⑬ Clamping nut wrench, 24 / 10 mm AF
- ⑭ Hex key, 6 mm AF

3.2 Product overview

DCH 300-X



- | | | | |
|---|----------------------------|---|------------------------------------|
| ① | Cut indicator | ⑤ | Water connection |
| ② | Dust removal connector cap | ⑥ | Rear grip |
| ③ | Guard | ⑦ | Switch-on interlock release button |
| ④ | Water regulating valve | ⑧ | On/off switch |

- | | | | |
|---|---|---|------------------------------------|
| ⑨ | Service indicator | ⑮ | Hood clamping screw |
| ⑩ | Portable residual current device (PRCD) | ⑯ | Depth gauge |
| ⑪ | Diamond cutting disc | ⑰ | Cutting depth indicator slider |
| ⑫ | Front grip | ⑱ | Clamping nut wrench, 24 / 10 mm AF |
| ⑬ | Guide roller | ⑲ | Hex key, 6 mm AF |
| ⑭ | Arbor lockbutton | | |

3.3 Intended use

DCH 300

The product described is an electric cutter designed to be used with diamond cutting discs for dry-cutting mineral materials.product.

DCH 300-X

The product described is an electric cutter designed to be used with diamond cutting discs for cutting mineral materials with or without use of water.

When dry-cutting mineral materials, you must use a dust removal system complete with the appropriate filter e.g. the **Hilti** VC 300-17 X universal industrial vacuum cleaner.

Use a vacuum cleaner with anti-static suction hose to avoid electrostatic effects.

Optionally, the product can also be used with synthetic resin-bonded abrasive cutting discs for metal-cutting without water. Special accessories (80 mm diameter flange assembly, consisting of clamping flange and reversible flange) are required for this application.

Use the product in push mode only (cutting disc count-rotating).

Operate the product only when it is connected to a power source providing a voltage and frequency in compliance with the information stated on the type identification plate.

3.4 Possible misuse

Do not use the product in environments where there is a risk of explosion.

Do not use the product for roughing down or grinding.

Do not use the product to work on hazardous or flammable materials (e.g. asbestos, magnesium, wood).

DCH 300

Do not use the product for cutting with water.

3.5 Starting current limitation

The starting current drawn by the power tool is several times higher than its rated current. The electronic starting current limiter reduces the starting current drawn by the power tool and thus prevents the mains fuse blowing. It also allows the power tool to start smoothly, without a jolt.

3.6 Restart interlock

The diamond cutter does not restart by itself after an interruption in the electric supply. The on/off switch must first be released and then pressed again after approx. 1 second.

3.7 Electronic overload protection

The cutter is equipped with an electronic overload protection system that monitors current input.

If the current drawn by the motor is too high, e.g. due to application of excessive pressure by the user, the electronic overload protection system switches the power tool off.

To switch the power tool on again, release the on/off switch and then press it again.



The user should aim to work continuously with the tool without activation of the automatic cut-out. The user can prevent activation of this automatic cut-out by reducing the pressure applied to the tool.

3.8 Service indicator

The diamond cutter is equipped with a visual (LED) service indicator.

Status	Meaning
The service indicator lights red.	<ul style="list-style-type: none"> End of service interval – servicing is due. After the LED lights for the first time, the diamond cutter can continue to be used for several hours (running time) before the automatic cut-out is activated. Return the product to Hilti Service for servicing in good time in order to ensure that it is always ready for use.
The service indicator blinks red.	<ul style="list-style-type: none"> The product is defective. Have the product repaired by Hilti Service.

3.9 Depth gauge

The depth gauge is not one of the items supplied with the DCH 300 diamond cutter, but it is available as a retrofit (accessory).

The desired maximum cutting depth can be set with the aid of the cutting depth scale on the depth gauge. The depth gauge also improves dust removal performance.

3.10 Items supplied

Diamond cutter with hood, depth gauge (only DCH 300-X), Ø 41 mm clamping flange, M14 clamping nut, 24 / 10 mm AF wrench, 6 mm AF hex key, 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

4 Technical data

4.1 Technical data

For rated voltage, rated current, frequency and/or input power, refer to the country-specific type identification plate.

If the tool 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 tool. The operating voltage of the transformer or generator must always be within +5% and -15% of the rated voltage of the tool.

	DCH 300	DCH 300-X
Weight in accordance with EPTA procedure 01	9.4 kg	9.4 kg
Arbor thread size	M16 × 1.5	M16 × 1.5
Cutting disc mounting flange	22.2 mm	22.2 mm
Cutting disc diameter	305 mm	305 mm
Cutting disc thickness	≤ 3.5 mm	≤ 3.5 mm
Rated speed	4,900 /min	4,900 /min
Clamping nut tightening torque (for securing the cutting disc)	40 Nm ...50 Nm	40 Nm ...50 Nm

4.2 Noise information and vibration values determined in accordance with EN 60745

The sound pressure and vibration values given in these instructions have been measured in accordance with a standardized test and may be used to compare one power tool with another.

The data given represents the main applications of the electric tool. However, if the electric tool is used for different applications, with different accessory tools, or is poorly maintained, the data may vary. This may significantly increase exposure over the total working period.

An accurate estimation of exposure should also take into account the times when the power tool is switched off, or when it is running but not actually being used for a job. This may 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 emission values

Sound power level (L_{WA})	117 dB(A)
Uncertainty for the sound power level (K_{WA})	3 dB(A)
Emission sound pressure level (L_{pA})	106 dB(A)
Uncertainty for the sound power level (K_{WA})	3 dB(A)

Total vibration

Vibration emission value (a_h)	5.1 m/s ²
Uncertainty (K)	1.5 m/s ²

4.3 Selecting suitable cutting discs

- ▶ Use only cutting discs with a specification suitable for the intended application.

Cutting disc specifications

Area of application	Cutting disc specifications
Cutting mineral materials	Diamond cutting discs as per EN 13226
Cutting metal	Synthetic resin-bonded, fiber-reinforced cutting discs in accordance with EN 12413 (flat, type 41) ¹⁾

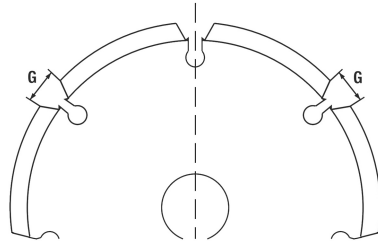
¹⁾ To allow the disc to be fitted to the tool, the special DCH 300 ABR mounting flange (accessory) must be used.

- ▶ Observe the disc mounting instructions issued by the disc manufacturer.

4.4 Dimensions and format of suitable diamond cutting discs

Diamond cutting discs must meet the following requirements in terms of dimensions and format.

Technical data	
Slot width between segments (G)	≤ 10 mm
Cutting angle	Negative



5 Operation

5.1 General information

5.1.1 Using a generator or transformer

This tool may be powered by a generator or transformer when the following conditions are fulfilled:

- The power output of the generator or transformer (in watts) must be at least twice the power rating of the tool (see type identification plate).
- The voltage provided by the power source must remain within +5 % and -15 % of the tool's rated voltage.
- Frequency: 50 to 60 Hz (never above 65 Hz)
- The power source must be equipped with automatic voltage regulation and starting boost.

ATTENTION

Risk of damage Switching on or switching off other power tools or appliances connected to the generator or transformer may cause undervoltage and/or overvoltage peaks, resulting in damage to the cutter.

- ▶ Never operate other power tools or appliances from the generator or transformer at the same time. Where applicable, use a generator or transformer designed for simultaneous operation of the cutter and vacuum cleaner.

5.1.2 Use of extension cords

WARNING

A damaged supply cord presents a hazard! Do not touch the supply cord or extension cord if damaged while working. Disconnect the supply cord plug from the power outlet.

- ▶ Check the appliance's supply cord at regular intervals and have it replaced by a qualified specialist if found to be damaged.
-
- Use only extension cords of a type approved for the application and with conductors of adequate cross-section. Otherwise the performance of the appliance may be affected and the cord may overheat.
 - Regularly check the extension cord for damage.
 - Replace damaged extension cords.
 - When working outdoors, use only extension cords that are approved and correspondingly marked for this application.

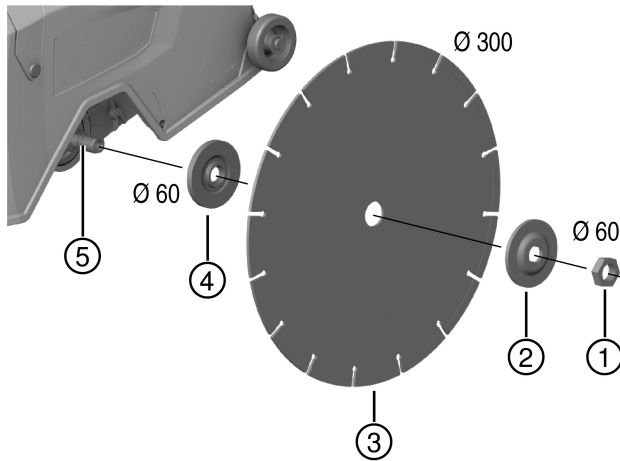
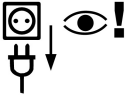
Recommended minimum conductor cross-sections and maximum power cord lengths for 120V supply voltage

Power cord	AWG 16	AWG 14	AWG 12	AWG 10
Conductor cross-section	1,31 mm ²	2,08 mm ²	3,31 mm ²	5,26 mm ²
Conductor cross-section	2,58 kcmil	4,11 kcmil	6,53 kcmil	10,4 kcmil
Power cord length	25 m	30 m	50 m	100 m
Power cord length	75 ft	100 ft	150 ft	250 ft

5.1.3 Checking the portable residual current device (PRCD)

DCH 300-X

1. Plug the power tool's supply cord into a grounded power outlet.
2. Press the **ON** button on the portable residual current device.
 - ◀ The indicator shows.
3. Press the **Test** button on the portable residual current device.
 - ◀ The indicator goes out.
 - ▼ The indicator does not goes out.
 - ▶ Do not use the power tool. Have it repaired by a qualified specialist using genuine Hilti spare parts.



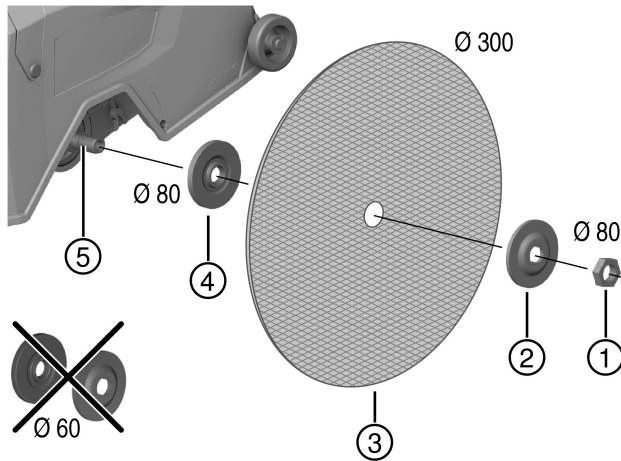
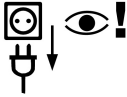
- | | |
|---------------------------|-----------------------------|
| ① M16 × 1.5 clamping nut | ④ Ø 60 mm reversible flange |
| ② Ø 60 mm clamping flange | ⑤ Arbor |
| ③ Diamond cutting disc | |

1. Observe the instructions concerning correct selection of suitable cutting discs → page 12 and the dimension and format specifications for diamond cutting discs → page 12.
2. Disconnect the mains plug from the power outlet.
3. Clean the clamping flange and the clamping nut.
4. Fit the 60 mm diameter reversible flange onto the arbor the right way round, so that it is no longer free to rotate.

i The 60 mm diameter reversible flange is used for mounting cutting discs with an arbor hole size of 22.2 mm or 25.4 mm. Check which side of the reversible flange fits the arbor hole in the cutting disc. The reversible flange must center the cutting disc.

5. Place the diamond cutting disc on the reversible flange.
6. Fit the 60 mm diameter clamping flange and the clamping nut.
7. Press the arbor lockbutton and hold it in this position.
8. Use the wrench to tighten the clamping nut securely and then release the arbor lockbutton.
9. Check to ensure that the arbor lockbutton has disengaged and that the arbor is again free to rotate.

5.3 Fitting a synthetic resin-bonded fiber-reinforced cutting disc



- | | |
|---|-----------------------------|
| ① M16 × 1.5 clamping nut | ④ Ø 80 mm reversible flange |
| ② Ø 80 mm clamping flange | ⑤ Arbor |
| ③ Synthetic resin-bonded, fiber-reinforced cutting disc | |

1. Observe the instructions concerning correct selection of suitable cutting discs → page 12.
2. Disconnect the mains plug from the power outlet.
3. Clean the clamping flange and the clamping nut.
4. Fit the 80 mm diameter reversible flange onto the arbor the right way round, so that it is no longer free to rotate.

i The 80 mm diameter reversible flange is used for mounting cutting discs with an arbor hole size of 22.2 mm or 25.4 mm. Check which side of the reversible flange fits the arbor hole in the cutting disc. The reversible flange must center the cutting disc.

5. Place the diamond cutting disc on the reversible flange.
6. Fit the 80 mm diameter clamping flange and the clamping nut.
7. Press the arbor lockbutton and hold it in this position.
8. Use the wrench to tighten the clamping nut securely and then release the arbor lockbutton.
9. Check to ensure that the arbor lockbutton has disengaged and that the arbor is again free to rotate.

5.4 Removing the cutting disc

1. Check that the supply cord has been unplugged from the power outlet.

2. If the following conditions are met, also take this action:

Conditions: The depth gauge (accessory) is fitted.

- ▶ Remove the depth gauge. → page 17

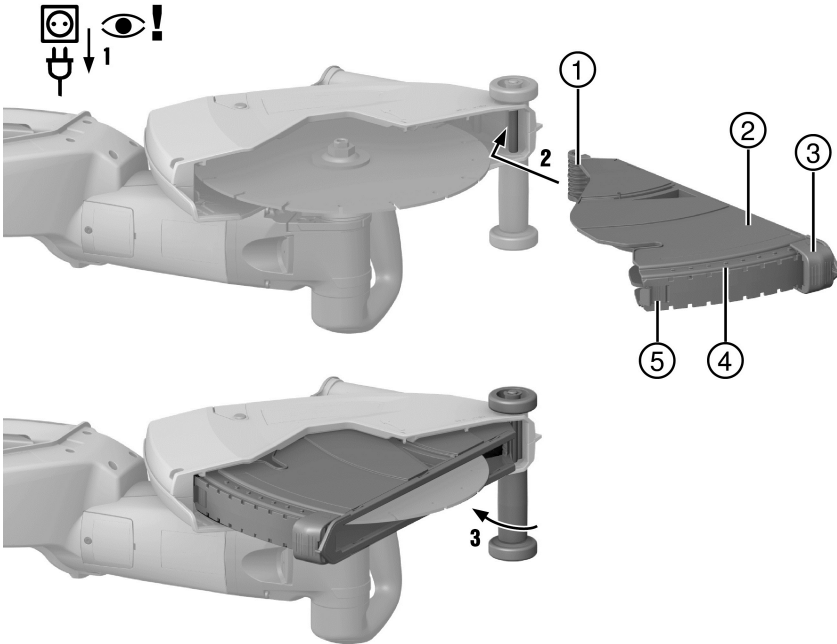
CAUTION

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

- ▶ Press the spindle lockbutton only when the spindle has stopped rotating.

3. Press and hold down the arbor lockbutton.
4. Use the hex key to slacken the clamping nut.
5. Remove the clamping nut, the clamping flange, the cutting disc and the reversible flange from the arbor, one after the other.

5.5 Fitting the depth gauge (optional)



- | | |
|----------------------------------|-----------------------|
| ① Hook | ④ Cutting depth scale |
| ② Hood extension | ⑤ Stop |
| ③ Cutting depth indicator slider | |

ATTENTION

Risk of damage. The depth gauge (accessory) will be damaged by flying sparks.

- ▶ Do not fit the depth gauge when you wish to use the power tool for working on metal.

1. Disconnect the supply cord plug from the power outlet.
2. Place the hook over the guide wheel axle.
3. Pivot the hood extension into the hood until the catch is heard to engage.

5.6 Removing the depth gauge

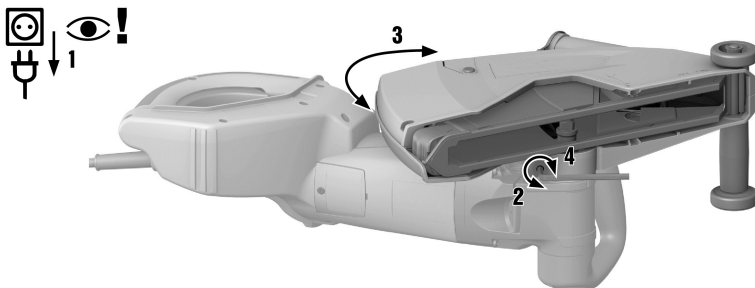
1. Disconnect the mains plug from the power outlet.
2. Press the catch and pivot the hood extension away from the hood.

5.7 Setting the cutting depth on the depth gauge

Conditions: The depth gauge (accessory) is fitted.

1. Press the cutting depth indicator slider and move the slider until the mark is at the desired cutting depth.
2. Release the cutting depth indicator slider.

5.8 Adjusting the guard



1. Unplug the supply cord from the power outlet.
2. Use the hex key to slacken the clamping screw.
3. Rotate the guard into the desired position.
4. Use the hex key to tighten the clamping screw.

5.9 Connecting the water supply

DCH 300-X

1. Connect a water hose to a water supply pipe.



The maximum permitted water supply pressure is 3 bar.

2. Close the water regulator valve to shut off the water supply to the cutter.
3. Connect the water hose to the water supply connector (proprietary system).



Regularly check hoses for damage and make sure that the maximum permissible water supply pressure of 3 bar is not exceeded.

5.10 Adjusting the water flow rate

DCH 300-X

- ▶ Turn the water regulator valve until the desired water flow rate is set.

5.11 Disconnecting the water supply

DCH 300-X

1. Shut off the water supply to the cutter.
2. Disengage the coupling (proprietary system) of the hose providing the water supply to the cutter.

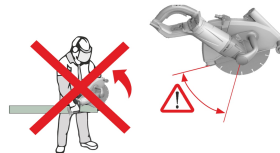
5.12 Switching on the cutter

1. Plug the supply cord into the power outlet.
2. DCH 300-X: Press the **ON** button on the PRCD.
3. Hold the tool firmly with both hands, using the front and rear grips.
4. Press the switch-on safety lock.
 - ◀ The on/off switch is unlocked.
5. Press the on/off switch.
 - ◀ The cutting disc begins to rotate.
6. Release the switch-on safety lock and reposition your thumb firmly round the rear grip.

5.13 Working safely with the cutter

Conditions: Working on mineral materials

There is a risk of kickback if the cutting disc comes into contact with the working surface in the area indicated.



- ▶ Avoid bringing the cutting disc into contact with the working surface in the area indicated.
- ▶ Always bring the guide wheels into contact with the working surface / workpiece before starting the cut.
- ▶ Allow the power tool to reach full speed before beginning cutting.
- ▶ Apply pressure to the power tool so that the cutting disc is pressed into the material slowly.
- ▶ Apply moderate pressure, adjusting the rate of advance to suit the material being cut.



A decrease in the rate of cutting progress may be an indication of blunt/dull ("polished") diamond segments. The diamond segments can be resharpened by making a few cuts in an abrasive material (**Hilti** sharpening plate or sand-lime block).

- ▶ Guide the power tool smoothly and do not apply lateral pressure to the cutting disc.

The diamond disc may overheat and suffer damage when cutting very hard mineral materials, e.g. concrete with a high hard pebble content. A trail of sparks right round the circumference of the diamond cutting disc is a sure indication of this.

- ▶ Should this occur, stop cutting and cool the diamond cutting disc by allowing the power tool to run under no load.

Dust can be kept to a minimum when working by using a suitable vacuum cleaner. Use of a vacuum cleaner also helps to cool the segments on the disc and thus reduces segment wear.

- ▶ The vacuum cleaner should be equipped with an antistatic suction hose in order to avoid electrostatic effects.

5.14 Switching the cutter off

- ▶ Release the on/off switch.
 - ◀ The motor is switched off, the cutting disc slows and stops.
 - ◀ The switch-on safety lock is re-activated.

6 Care and maintenance

WARNING

Danger of electric shock! Carrying out care and maintenance while the supply cord is connected to the power outlet presents a risk of serious injuries including burns.

- ▶ Always unplug the supply cord before carrying out all care and maintenance tasks.

Care

- ▶ Keep the product, especially its grip surfaces, clean and free from oil and grease.
- ▶ Do not use cleaning agents containing silicone.
- ▶ Never operate the product with the air vents blocked. Clean the air vents carefully using a dry brush. Do not use a sprayer, steam pressure cleaning equipment or running water for cleaning. This can endanger the electrical safety of the power tool.
- ▶ Do not permit foreign matter to penetrate inside the product.
- ▶ Clean the outside of the power tool at regular intervals with a slightly damp cloth.

Under extreme conditions, when the power tool is used on metal conductive dust can accumulate in the interior. This can impair the power tool's protective insulation.

- ▶ In cases of this nature, if possible use a stationary dust extraction system and clean the air vents at frequent intervals.

DCH 300

- ▶ In these cases, connect a portable residual current device (PRCD) between the power tool and the power source.

Maintenance

WARNING

Danger of electric shock! Improper repairs to electrical components may lead to serious injuries including burns.

- ▶ Repairs to the electrical section of the tool or appliance may be carried out only by trained electrical specialists.
- ▶ Regularly check all external parts of the power tool and the accessories for signs of damage and make sure that all the controls function correctly.
- ▶ Do not use the power tool if parts are damaged or if the controls do not function correctly. Have the power tool repaired by **Hilti Service**.

7 Transport and storage

WARNING

Fire hazard. Hot parts of the machine could ignite material lying about in the surrounding area.

- ▶ Allow the product to cool down completely before packing it away or loading it into a vehicle.

CAUTION

Risk of damage. The cutting disc may suffer damage if the power tool is transported with the disc fitted.

- ▶ Remove the cutting disc before transporting the tool.
- ▶ Remove the cutting disc. → page 15
- ▶ Store the cutting discs in accordance with the manufacturer's recommendations.

8 Troubleshooting

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

Trouble or fault	Possible cause	Action to be taken
The power tool doesn't start or switches itself off.	Interruption in the electric supply.	▶ Check the electric supply by connecting a different appliance.

Trouble or fault	Possible cause	Action to be taken
The power tool doesn't start or switches itself off.	The portable residual current device (PRCD) has tripped because of water ingress into the power tool.	<ul style="list-style-type: none"> ▶ Leave the power tool in a warm, dry place until it has thoroughly dried. ▶ Check the portable residual current device. → page 13
	The supply cord or plug is defective.	▶ Have the supply cord and plug checked by a trained electrical specialist and replaced if necessary.
	The on / off switch is defective.	▶ Have the power tool repaired by Hilti Service .
	The power tool has been overloaded (overload protection activated / application limits exceeded).	<ul style="list-style-type: none"> ▶ Release the on/off switch and then press it again. ▶ Select a suitable power tool for the application.
	The overheating protection system is active.	▶ Allow the power tool to cool down and clean the air vents.
	The restart interlock is active after disconnection or an interruption in the electric supply.	▶ Switch the power tool off and then on again.
The service indicator blinks. The power tool doesn't start.	The power tool is faulty.	▶ Have the power tool repaired by Hilti Service .
The service indicator lights. The power tool doesn't start.	The carbon brushes are worn.	▶ Have the carbon brushes checked by a trained electrical specialist and replaced if necessary.
The tool doesn't achieve full power.	The extension cord conductor cross section is too small.	▶ Use an extension cord with conductors of adequate cross section.

9 Disposal

Most of the materials from which **Hilti** products 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.

In accordance with the European Directive on waste electrical and electronic equipment and its implementation in conformance with national law, electric tools or appliances that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.



- ▶ Disposal of electric tools or appliances together with household waste is not permissible.

Cutting slurry

The disposal of cutting slurry directly into rivers, lakes or the sewerage system without suitable pretreatment presents problems of an environmental nature.

- ▶ Ask the local public authorities for information about current regulations.

We recommend the following pretreatment:

- ▶ Collect the cutting slurry (for example, using a wet-type vacuum cleaner).
- ▶ Allow the slurry to stand for some time or add a flocculation agent to help the fine particles in the cutting slurry settle and separate from the water.
- ▶ Dispose of this solid portion of the waste at a construction waste disposal location.
- ▶ Neutralize the remaining water from the cutting slurry (alkaline, pH-value > 7) by adding an acidic neutralizing agent or dilute it by adding a large quantity of water before allowing it to enter the sewerage system.

10 Manufacturer's warranty

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



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DCH 300 (01)

[2007]

DCH 300-X (01)

[2017]

2006/42/EC

EN ISO 12100

2014/30/EU

EN 60745-1

2011/65/EU

EN 60745-2-22

Schaan, 01/2018

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