Our associates will ensure the tool works properly before you leave the store. If you experience issues with the tool while completing your project, simply bring it back to the Tool Rental Center to get a replacement. If you purchase Damage Protection at the time of your rental, you are not responsible for repair costs for tools that break due to normal use.

Need it? Chances are, we've got it!
HOUST
Hardware & Rentals
homegrown since 1932
woodstock, new york

DD 150-U

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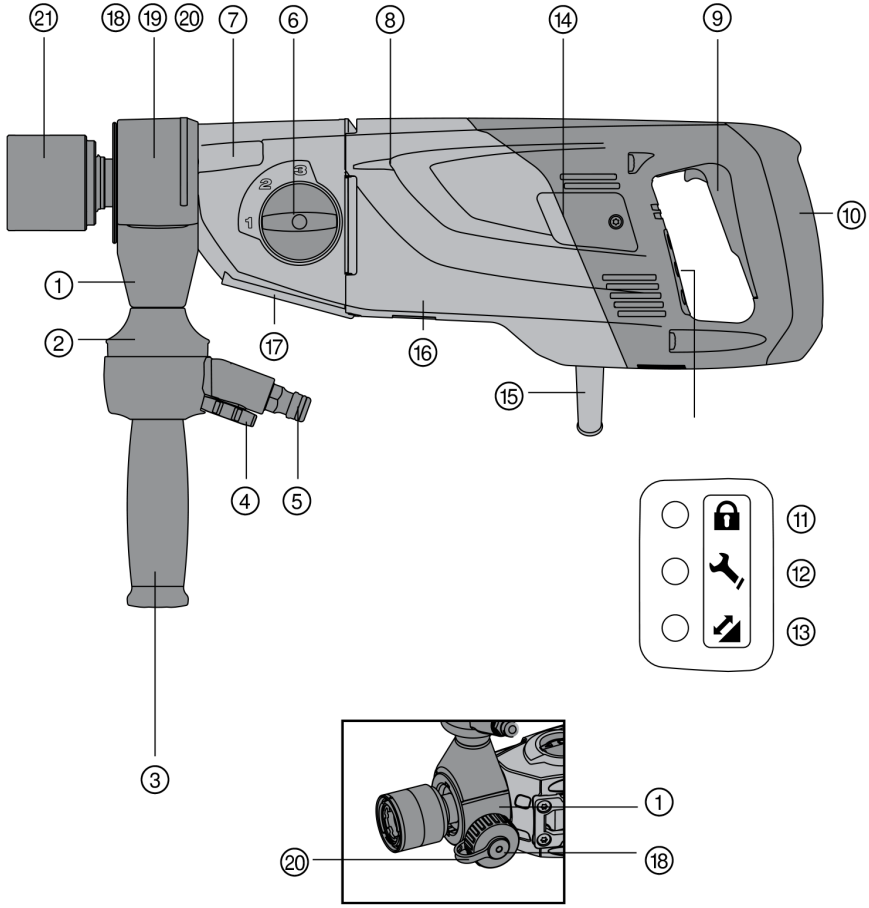

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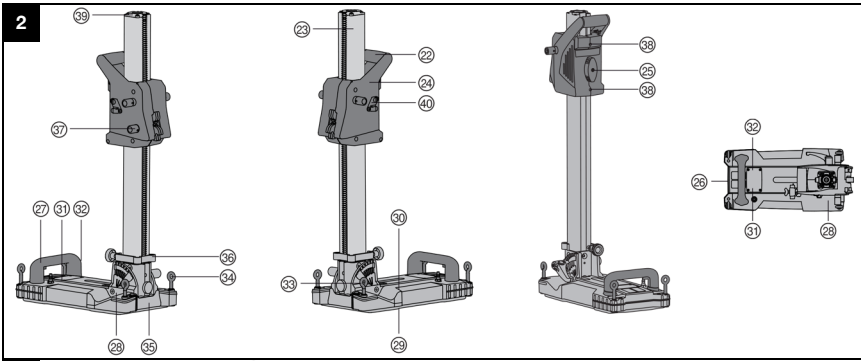
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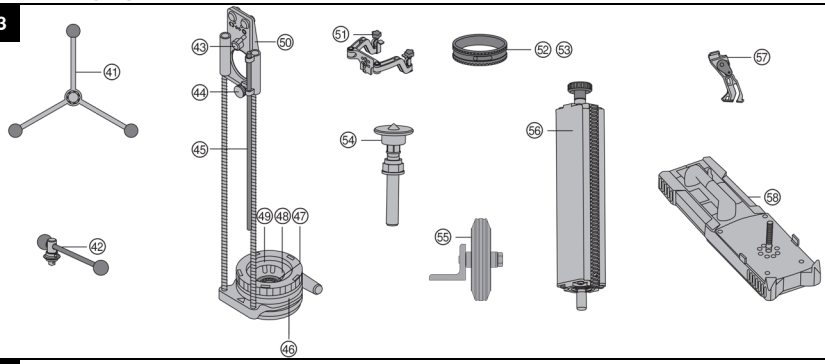
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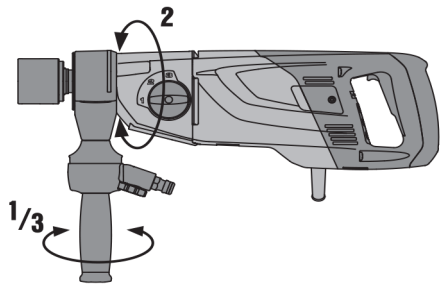
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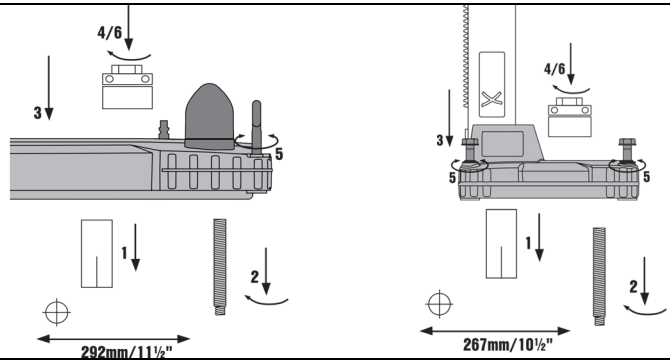
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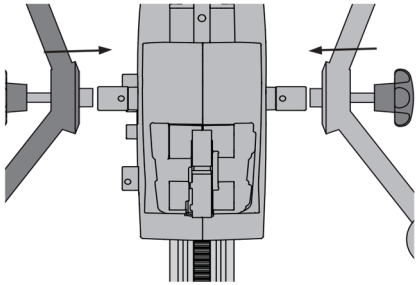

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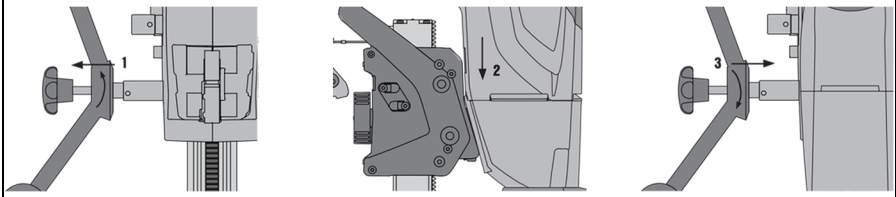

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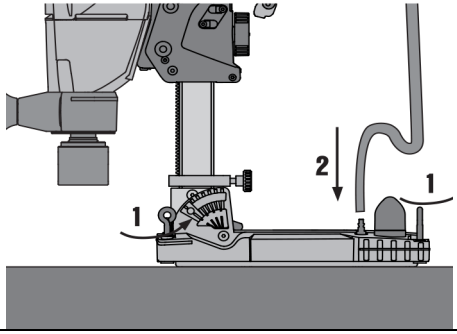

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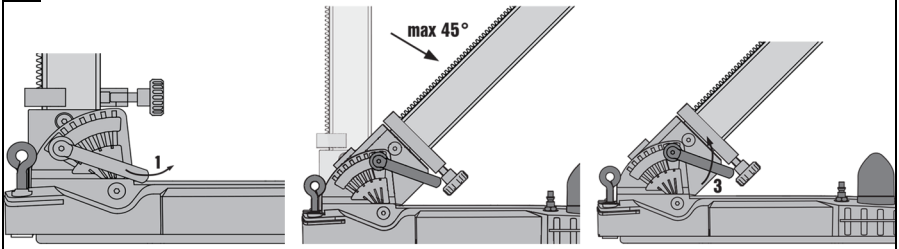

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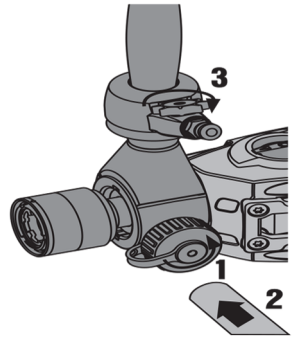

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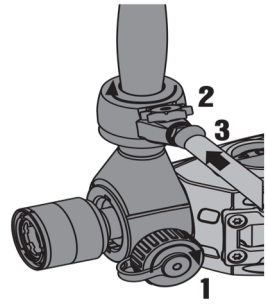

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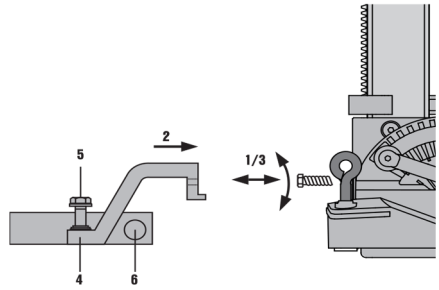

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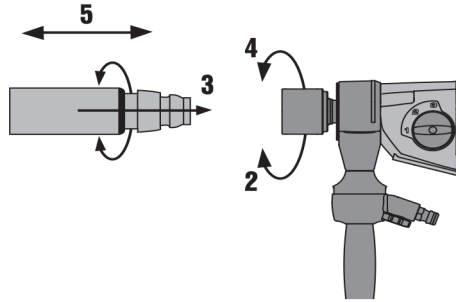

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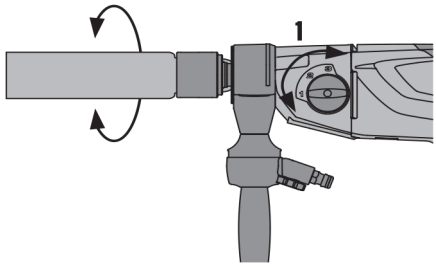

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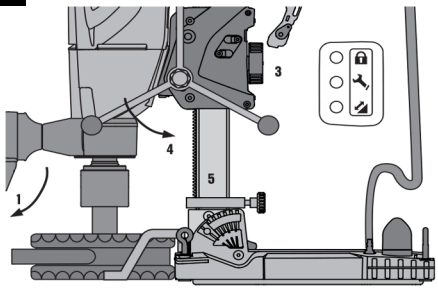

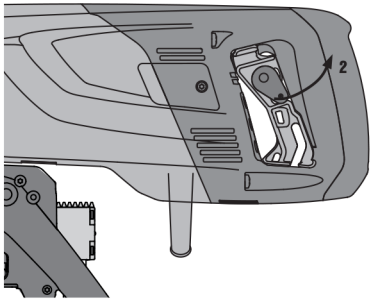

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1 Information about the documentation

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:

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.

1.3 Symbols on the product

1.3.1 "Must do" symbols

The following "must do" symbols are used on the product:

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	Wear eye protection
	Wear a hard hat
	Wear ear protection
	Wear protective gloves
	Wear protective footwear
	Wear light respiratory protection
	Read the operating instructions before use

1.3.2 Status indicator

The following symbols are used on the product:

	Theft protection indicator
	Drilling performance indicator
	Service indicator

1.3.3 Product-dependent symbols

The following symbols can be used on the product:

	Do not transport by crane
	Equipped with theft protection system
A	Amps
V	Volts
	Alternating current
W	Watts
Hz	Hertz
n_0	Rated speed under no load
ø	Diameter
mm	Millimeters
/min	Revolutions per minute
	Wireless data transfer

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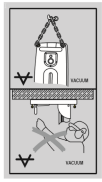
1.4 Information notices

On the drill stand, base plate and diamond core drilling machine

	**On the drill stand and the vacuum base plate** **Top**: An additional means of securing the drill stand must be employed when the machine is used for horizontal drilling with the vacuum securing method. **Bottom**: Use of the vacuum securing method for overhead drilling with the drill stand is not permissible.
	**On the diamond core drilling machine** Use of the water collection system in combination with a wet-type industrial vacuum extractor is mandatory for upward wet drilling.

1.5 Product information

HILTI 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

Diamond core drilling machine	DD 150-U
Generation:	02
Serial no.:	

1.6 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 General power tool safety warnings

⚠ **WARNING 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.

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.

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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 a 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.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

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 remove the battery pack, if detachable, 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 and accessories. 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.
- **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

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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 Diamond drill safety warnings

- **When performing drilling that requires the use of water, route the water away from the operator's work area or use a liquid collection device.** Such precautionary measures keep the operator's work area dry and reduce the risk of electrical shock.
- **Operate power tool by insulated grasping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **Wear hearing protection when diamond drilling.** Exposure to noise can cause hearing loss.
- **When the bit is jammed, stop applying downward pressure and turn off the tool.** Investigate and take corrective actions to eliminate the cause of the bit jamming.
- **When restarting a diamond drill in the workpiece check that the bit rotates freely before starting.** If the bit is jammed, it may not start, may overload the tool, or may cause the diamond drill to release from the workpiece.
- **When securing the drill stand with anchors and fasteners to the workpiece, ensure that the anchoring used is capable of holding and restraining the machine during use.** If the workpiece is weak or porous, the anchor may pull out causing the drill stand to release from the workpiece.
- **When drilling through walls or ceilings, ensure to protect persons and the work area on the other side.** The bit may extend through the hole or the core may fall out on the other side.
- **Do not use this tool for overhead drilling with water supply.** Water entering the power tool will increase the risk of electric shock.

2.3 Additional safety instructions

Personal safety

- **Do not tamper with or attempt to make alterations to the tool.**
- **Keep the grips dry, clean and free from oil and grease.**
- **Make sure that the side handle is fitted correctly and tightened securely. Always hold the tool firmly with both hands on the grips provided.**
- **Assemble the mount correctly before installing the power tool.** Correct assembly is important in order to avoid the risk of collapse.
- **Before starting to use the power tool, secure it firmly in the mount.** Slippage of the power tool in the mount can lead to loss of control.
- **Set up the mount on a firm, smooth and horizontal surface.** It will not be possible to guide the power tool smoothly and safely if the mount can slip or wobble.
- **Check the nature of the surface.** Rough surfaces may reduce holding power. Coatings or composite materials may pull away from the surface while you are working.
- **Do not overload the device and do not use it as a substitute for a ladder or platform.** Overloading the device or standing on it may shift its center of gravity to a higher position, causing it to tip over.
- **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**
- **The machine is not intended for use by debilitated persons who have received no special training. Keep the machine out of reach of children.**
- **Avoid touching rotating parts. Switch the machine on only after it is in position at the workpiece.** Touching rotating parts, especially rotating accessory tools, may lead to injury.
- **When working, always guide the supply cord, the extension cable, the suction hose and the water hose to the rear and away from the machine.** This reduces the risk of tripping over cables or hoses while work is in progress.
- **Avoid skin contact with drilling slurry.**
- Dust from material such as paint containing lead, some wood species, minerals and metal may be harmful. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory 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). **Use a dust removal system that is as effective as possible. To achieve a high level of dust collection, use a suitable vacuum extractor of the type recommended by Hilti for wood dust and/or mineral dust and which is designed for use with this tool. Ensure that the workplace is well ventilated. The**

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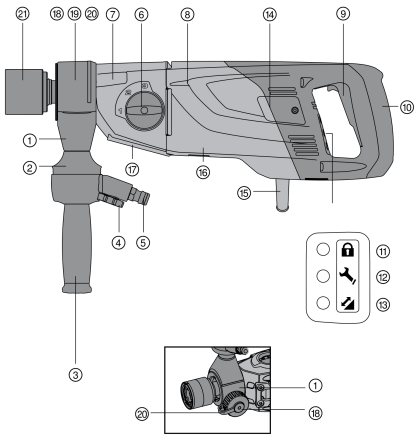
3 Description

3.1 Parts of the tool and operating controls 1



Diamond core drilling machine

① Water swivel / suction head
② Water flow rate indicator
③ Side handle
④ Water flow regulator
⑤ Water connection
⑥ Gear selector
⑦ Gearing section
⑧ Motor
⑨ On/Off switch
⑩ Grip
⑪ Theft protection indicator (optional)
⑫ Service indicator
⑬ Drilling performance indicator
⑭ Carbon brush cover
⑮ Supply cord with PRCD
⑯ Rating plate
⑰ Interface plate
⑱ Connector screws (water swivel / suction head)
⑲ Cover (water swivel / suction head)
⑳ Suction hose connector
㉑ Chuck

3.2 Drill stand 2

㉒ Grip
㉓ Column
㉔ Carriage
㉕ Carriage lock
㉖ Type identification plate
㉗ Vacuum relief valve
㉘ Vacuum hose connector
㉙ Vacuum seal
㉚ Base plate
㉛ Pressure gage
㉜ Leveling indicator
㉝ Adjusting lever
㉞ Leveling screws
㉟ Hole center indicator
㊱ Depth gage
㊲ Locking pin
㊳ Carriage play adjusting screw
㊴ End stop screw
㊵ Supply cord holder

3.3 Accessories 3

㊶ Star handle
㊷ Lever
㊸ Eccentric pin
㊹ Clamping screw
㊺ Depth gage
㊻ Water collector
㊼ Centering ring
㊽ Centering ring adapter
㊾ Seal
㊿ Machine mount
(51) Holder
(52) Water collector
(53) Seal
(54) Jack screw
(55) Wheel assembly

3.4 Intended use

The product described is an electrically powered diamond core drilling machine. It is designed to be used hand-held for the wet and dry drilling of through-holes and blind holes and, when mounted on the drill stand, for the wet drilling of through-holes and blind holes in (reinforced) mineral materials.

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The product described is 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 described and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

- The tool may be operated only when connected to a power supply providing a voltage and frequency in compliance with the information given on its type plate.
- Observe the national health and safety requirements.
- To reduce the risk of injury, use only genuine **Hilti** tools and accessories.

3.5 Drilling performance indicator

The diamond core drilling machine has an LED drilling performance indicator.

Symbol	Status	Meaning
	Orange light	Contact pressure too low
	Green light	Contact pressure ideal
	Red light	Contact pressure too high

3.6 Service indicator

The diamond core drilling machine has an LED service indicator.

Symbol	Status	Meaning
	Red light Product running	The carbon brushes are badly worn. End of service interval – servicing is due. You can continue working for a number of hours after the indicator first shows, before automatic cut-out is activated. Bring the product to **Hilti** Service in good time.
	Red light Product not running	The carbon brushes must be replaced.
	Flashing red light	The diamond core drilling machine has overheard or is damaged. See Troubleshooting.

3.7 Items supplied

Diamond core drilling machine, operating instructions.

To help ensure safe and reliable operation, use only genuine Hilti spare parts and consumables. Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local **Hilti** Center or online at: **www.hilti.com**

4 Technical data

4.1 Product properties

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

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

		DD 150-U
Rated current input	**230 V**	10.3 A
Rated power input		2,200 W
Weight of the diamond core drilling machine		8.2 kg
Weight of the drill stand with combination base plate and carriage		13.3 kg

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		DD 150-U
Dimensions, diamond core drilling machine (L×W×H)		516 mm x 129 mm x 159 mm
Dimensions, drill stand (L×W×H)		610 mm x 250 mm x 952 mm
Permissible water supply pressure		≤ 6 bar
Rated speed under no load	**1st gear**	840 /min
	2nd gear	1,640 /min
	3rd gear	3,070 /min
Protection class		Protection class I (earthed)

4.2 Ideal distance of the mark from the hole center

Anchor base plate	270 mm
Vacuum base plate	290 mm
Combination base plate	290 mm

4.3 Rated voltage

The product is available with various voltage ratings. Please refer to your product's type identification plate for details of its voltage and input power ratings.

Rated voltage	**100 V**	**110 V GB**	**110 V TW**	**120 V**	**127 V**	**220 V**	**230 V**	**240 V**
Rated current input	15 A	16 A	15 A	19.5 A	18.5 A	10 A	10.3 A	9.9 A
AC frequency	50/60 Hz	50/60 Hz	50/60 Hz	60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz

4.4 Using extension cords

Use only extension cords of a type approved for the application and with conductors of adequate gauge.
Recommended minimum conductor cross-sections and maximum power cord lengths:

Conductor cross-section → ↓ Mains (AC) voltage	**1.5 mm²**	**2.5 mm²**	**3.5 mm²**	**4.0 mm²**
100 V	Not recommended	Not recommended	25 m	Not recommended
110 V	Not recommended	15 m	Not recommended	30 m
127 V	Not recommended	20 m	Not recommended	35 m
220 V	35 m	65 m	Not recommended	105 m
230 V	40 m	70 m	Not recommended	110 m
240 V	40 m	70 m	Not recommended	110 m

4.5 Core bit diameter

Use of the water collection system in combination with a wet-type industrial vacuum extractor is mandatory for upward wet drilling.

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		1st gear	2nd gear	3rd gear
Ø core bits (stand-guided drilling, wet)	**With water collection system**	102 mm ... 162 mm	28 mm ... 87 mm	12 mm ... 25 mm
	Without water collection system	102 mm ... 162 mm	28 mm ... 87 mm	12 mm ... 25 mm
Ø core bits (hand-held drilling, wet)	**Without water collection system**	121 mm ... 131 mm	41 mm ... 111 mm	8 mm ... 36 mm
Ø core bits (hand-held drilling, dry, HDMU)	**With dust removal system**	122 mm ... 162 mm	67 mm ... 112 mm	•/•
Ø core bits (hand-held drilling, dry, PCM)	**With dust removal system**	52 mm ... 162 mm	•/•	•/•

4.6 Use of the machine with various items of equipment

Hand-held/ Mounted on the drill stand	Additional systems	Core bit diameter	Drilling direction
hand-held/dry	With dust removal system	37 mm ... 162 mm	All directions
hand-held/wet	Without water collection system	8 mm ... 132 mm	Not upwards
hand-held/wet	With water collection system	8 mm ... 62 mm	All directions
on drill stand/wet	Without water collection system	12 mm ... 162 mm	Not upwards
on drill stand/wet	With water collection system	12 mm ... 162 mm	All directions

4.7 Noise information and vibration values in accordance with EN 62841

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 represent 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 emission values

	Hand-held use	Mounted on the drill stand
Sound (power) level (L_{WA})	98 dB(A)	106 dB(A)
Uncertainty for the sound power level (K_{WA})	3 dB(A)	3 dB(A)
Sound pressure level (L_{pA})	87 dB(A)	93 dB(A)
Uncertainty for the sound pressure level (K_{pA})	3 dB(A)	3 dB(A)

Total vibration

	Hand-held use	Mounted on the drill stand
Drilling in concrete (wet) ($a_{h,\ DD}$)	7 m/s²	3.5 m/s²
Uncertainty (K)	1.5 m/s²	1.5 m/s²
Drilling with HDMU core bit in sand-lime block (dry) ($a_{h,\ DD}$)	6.5 m/s²	•/•

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	Hand-held use	Mounted on the drill stand
Uncertainty (K)	6.5 m/s²	•/•
Drilling with PCM core bit in sand-lime block (dry) ($a_{h,\ DD}$)	14.5 m/s²	•/•
Uncertainty (K)	4.5 m/s²	•/•

5 Preparations at the workplace

WARNING

Risk of injury! The drill stand can rotate or topple if not securely fastened.

- Before using the diamond core drilling machine, secure the drill stand to the work surface with anchors or with a vacuum base plate.
- Use only anchors suitable for the base material and comply with the anchor manufacturer's instructions.
- Use a vacuum base plate only when the work surface is suitable for securing the drill stand by the vacuum method.

5.1 Securing the drill stand with an anchor 5

WARNING

Risk of injury due to use of wrong anchors! The machine can break loose and cause damage.

- Use anchors suitable for the material on which you are working and observe the anchor manufacturer's instructions.

Hilti metal expansion anchors M12 and M16 are usually suitable for use as anchors for diamond core drilling equipment in uncracked concrete. Under certain conditions, however, it may be necessary to use an alternative fastening method. Contact **Hilti** Technical Service if you have questions about secure fastening.

1. Set an anchor that is suitable for the base material. Select the distance to suit the base plate used.

Technical data	
Anchor base plate	270 mm
Combination base plate	290 mm

2. Screw the anchor spindle into the anchor.
3. Slip the base plate of the diamond core drilling machine over the spindle and align it.
4. Screw the clamping nut on to the spindle but do not tighten it.
5. Use the leveling screws to level the base plate. Make sure that the leveling screws are firmly seated against the surface.
6. Use a suitable open-end wrench to tighten the clamping nut on the clamping spindle.
7. Make sure that the diamond core drilling machine is secure.

5.2 Securing the drill stand by vacuum 8

WARNING

Risk of injury if pressure is not checked !

- Before and during drilling, check that the pressure gage pointer remains in the green zone.

In order to use the drill stand with anchor base plate, establish a secure, flat-on-flat connection between vacuum base plate and anchor base plate. Screw the anchor base plate securely to the vacuum base plate. Make sure that the core bit selected for use will not damage the vacuum base plate.
If you are going to drill horizontally, use additional means of securing the diamond core drilling machine (e. g. chain secured to anchor).

Before positioning the drill stand, check that you have sufficient space for assembly and operation.

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1. Turn all the leveling screws until they project approx. 5 mm underneath the base plate.
2. Connect the vacuum connector on the vacuum base plate to the vacuum pump.
3. Locate the center point of the hole to be drilled. Draw a line from the center of the hole to be drilled in the direction in which the machine is to be positioned.
4. Make a mark on the line at the specified distance from the center of the hole to be drilled.

Technical data	
Combination base plate	290 mm
Vacuum base plate	290 mm

5. Switch on the vacuum pump and press and hold down the vacuum release valve.
6. Line up the mark on the base plate with the line.
7. When the diamond core drilling machine is correctly positioned, release the vacuum release valve and press the base plate against the work surface.
8. Use the leveling screws to level the base plate.
9. Make sure that the diamond core drilling machine is secure.

5.3 Securing the drill stand with jack screw

1. Secure the jack screw to the top end of the rail.
2. Position the drill stand on the work surface.
3. Use the 4 leveling screws to level the base plate.
4. Use the jack screw to apply tension to the drill stand and tighten the locknut on the jack screw.
5. Make sure that the diamond core drilling machine is secure.

5.4 Fitting the hand wheel 6

The hand wheel can be fitted on either side of the drill stand.

- Fit the hand wheel on to the shaft.
- Secure the hand wheel.

5.5 Fitting the side handle 4

1. Turn the side handle to release or secure it, as applicable.
2. Check that the side handle is fitted correctly and tightened securely.

5.6 Adjusting the side handle 4

1. Slacken the side handle by turning it counter-clockwise.
2. Position the side handle.
3. Secure the side handle by turning it clockwise.
4. Check to ensure that the side handle is tightened securely.

5.7 Adjusting the depth gauge (when using the drill stand)

1. Adjust the depth gauge.
2. Secure the depth gauge by tightening the clamping screw.

5.8 Securing the diamond core drilling machine in the drill stand 7

1. Turn the hand wheel counter-clockwise and pull the locking pin out.
2. Engage the interface plate on to the hook on the drill stand.
3. Push the locking pin in and use the hand wheel to tighten it securely (turn clockwise).
4. Insert the switch locking device into the grip.

> The switch locking device can be used to lock the on/off switch in the “on” position for sustained operation.

5. Close the water valve in the side handle.
6. Connect the water supply.

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5.9 Detaching the diamond core drilling machine from the drill stand

1. Lock the carriage on the rail with the carriage lock.
2. Close the water valve in the side handle.
3. Disconnect the water supply.
4. Remove the switch locking device from the grip.
5. Use the hand wheel to release the locking pin (turn counterclockwise).
6. Pull the locking pin out of the slot.
7. Pivot the machine away from the drill stand.

5.10 Enabling a machine equipped with theft protection system (TPS)

1. Plug the supply cord of the diamond core drilling machine into the power outlet.
2. Press the "Reset" or "I" button on the PRCD.
   ➥ The yellow theft protection indicator LED flashes.
3. Hold the TPS key directly against the lock symbol.
   ➥ The yellow theft protection indicator LED goes out and the machine is enabled.

If the power supply is interrupted, the product remains ready for operation for approximately 20 minutes. If the interruption is longer, the theft protection system has to be deactivated again with the TPS key.

5.11 Adjust the play between rail and carriage.

1. Use a hex. socket wrench to tighten the adjusting screws hand-tight.

Technical data	
Tightening torque	5 Nm

2. Slacken the adjusting screws slightly by turning back a 1/4 turn.
3. The carriage is correctly adjusted when it remains in position without a diamond core bit but moves down under its own weight when a diamond core bit is fitted.

5.12 Adjusting the drilling angle when using the drill stand with combination base plate 9

⚠ CAUTION

There is a risk of crushing fingers in the joint area !

- Wear protective gloves.

1. At the foot of the drill stand, release the adjusting lever until the sliding nuts are disengaged.
2. Adjust the column to the desired angle.
3. Tighten the adjusting lever until the sliding nuts are fully engaged and the column is again secured in position.

5.13 Connecting the vacuum removal system 10

1. Unscrew the cover from the water swivel / suction head.
2. Push the suction hose into the suction hose connector.
3. Close the water valve in the side handle.

5.14 Fitting the water supply connection 11

⚠ ATTENTION

Hazard due to incorrect use! Incorrect use can result in irreparable damage to the hose.

- Regularly check the hoses for damage and make sure that the maximum permissible water supply pressure of 6 bar is not exceeded.
- Make sure that the hose does not come into contact with rotating parts.
- Make sure that the hose is not damaged as the carriage advances.
- Maximum water temperature: 40 °C.
- Check the water supply system to ensure there are no leaks.

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To avoid damage to the components, use only fresh water containing no dirt particles.

1. Close the cover on the water swivel / suction head.
2. Connect the water flow regulator to the diamond core drilling machine.
3. Connect the water supply (hose coupling).

5.15 Fitting the water collection system (accessory) 12

WARNING

Danger of electric shock! There is a possibility of water flowing over the motor and cover if the vacuum removal system is faulty.

- Cease operations immediately if the vacuum removal system is not working.

The diamond core drilling machine must be at a 90° angle to the ceiling. The seal for the water collection system must be of the correct size for the diamond core bit diameter.

Use of the water collection system allows water to be led away under control, thus preventing the surrounding area from being heavily soiled. The best results are achieved with a wet-type industrial vacuum extractor.

1. Remove the screw in the drill stand at the front of the rail.
2. Push the water collector holder into position.
3. Fit the screw and tighten it.
4. Fit the water collector between the two movable arms of the water collector holder.
5. Press the water collector against the work surface by turning the two screws on the water collector holder.
6. Connect a wet-type industrial vacuum extractor to the water collector or establish a hose connection through which the water can drain away.

6 Operation

6.1 Fitting a diamond core bit in a BI+ chuck 13

CAUTION

Risk of injury when changing the tool! The tool becomes hot as a result of use. It may have sharp edges.

- Always wear protective gloves when changing the tool.

Diamond core bits must be replaced when the cutting performance and/or rate of drilling progress drops significantly. Generally, this is the case when the segments have worn down to a certain height.

1. Lock the carriage on the rail with the carriage lock. Check to ensure that it is securely fastened.
2. Open the chuck by turning it in the direction of the "Open brackets" symbol.
3. From below, push the diamond core bit into the chuck on the diamond core drilling machine, turning it until the teeth engage.
4. Close the chuck by turning it in the direction of the "Closed brackets" symbol.
5. Check that the diamond core bit is seated securely in the chuck.

6.2 Fitting the diamond core bit with an alternative type of chuck

1. Lock the drive spindle with a suitable open-end wrench.
2. Tighten the core bit with a suitable open-end wrench.

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6.3 Removing a diamond core bit from a BI+ chuck

CAUTION

Risk of injury when changing the tool! The tool becomes hot as a result of use. It may have sharp edges.

- ▸ Always wear protective gloves when changing the tool.

1. Lock the carriage on the rail with the carriage lock. Check to ensure that it is securely fastened.
2. Open the chuck by turning it in the direction of the "Open brackets" symbol.
3. Pull the sleeve on the chuck in the direction of the arrow towards the machine. This releases the core bit.
4. Remove the core bit.

6.4 Removing the diamond core bit with an alternative type of chuck

CAUTION

Risk of injury when changing the tool! The tool becomes hot as a result of use. It may have sharp edges.

- ▸ Always wear protective gloves when changing the tool.

1. Lock the drive spindle with a suitable open-end wrench.
2. Use a suitable open-end wrench to remove the core bit.

6.5 Selecting the speed 1 4

CAUTION

Risk of wear and tear Risk of damage to the gearing

- ▸ Do not attempt to change gear while the machine is running. Wait until the arbor comes to a complete stop.

- ▸ While using one hand to turn the core bit, set the switch to the recommended setting.

6.6 Portable residual current device (PRCD)

An isolating transformer must be used for diamond core drilling machines without PRCD.

1. Plug the diamond core drilling machine's supply cord into a grounded socket outlet.
2. Press the "I" or "RESET" button on the PRCD.
   ➥ The indicator lights up.
3. Press the "0" or "TEST" button on the PRCD.
   ➥ The indicator goes out.

WARNING

Risk of injury due to electric shock! Do not continue operating the diamond core drilling machine if the indicator on the ground fault circuit interrupter does not go out when the **0** or the **TEST** button is pressed.

- ▸ Have your diamond core drilling machine repaired by **Hilti** Service.

4. Press the "I" or "RESET" button on the PRCD.
   ➥ The indicator lights up.

6.7 Hand-guided dry drilling

Allowing dust to build up in quantity inside the core bit can cause imbalance.

- ▸ Remove the dust from the core bit.

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6.8 Dry-drilling with dust removal

Allowing dust to build up in quantity inside the core bit can cause imbalance.

- To prevent electrostatic effects, use an anti-static vacuum extractor.

6.9 Use of the two-part hole-starting aid

⚠ CAUTION

Risk of injury caused by incorrect use! Parts can come off the hole-starting aid if it is not pressed against the work surface.

- When a two-part hole-starting aid is used, do not run the diamond core drilling machine without the hole-starting aid pressed against the work surface.

A different hole-starting aid is required for each core bit diameter.

1. Fit the hole-starting aid into the open end of the diamond core bit.
2. When you start drilling apply only light pressure until the core bit has centered itself. Then apply more pressure. Drill a guide cut 3-5 mm deep.
3. Release the on/off switch to stop the machine. Wait until the core bit comes to a complete stop.
4. Remove the hole-starting aid from the core bit.
5. Position the core bit in the guide cut, press the on/off switch and resume drilling.

6.10 Using a vacuum extractor with power outlet for power tools

Use slotted core bits only when working without a dust removal system.

1. Secure the side handle in the desired position.
2. Optional: Install and use the two-part hole-starting aid. → page 16
3. Plug the diamond core drilling machine's supply cord into the power outlet of the vacuum extractor.
4. Plug the vacuum extractor’s supply cord into the power outlet.
5. If connected: press the "Reset" switch or the "I" button of the PRCD.
6. Center the diamond core drilling machine where the hole is to be drilled.
7. Press the on/off switch on the diamond core drilling machine.

The vacuum extractor will start after the power tool has started. When you switch off the power tool the vacuum extractor will run on for a short time before switching itself off.

6.11 Using a vacuum extractor without power outlet for power tools

Use slotted core bits only when working without a dust removal system.

1. Secure the side handle in the desired position.
2. Optional: Install and use the two-part hole-starting aid. → page 16
3. Plug the vacuum extractor’s supply cord into the power outlet.
4. If connected: press the "Reset" switch or the "I" button of the PRCD.
5. Center the diamond core drilling machine where the hole is to be drilled.
6. Press the on/off switch on the diamond core drilling machine.
7. To ensure removal of residual dust, let the vacuum extractor run on for a few seconds after you switch off the machine.

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6.12 Working without dust removal

Use slotted core bits only when working without a dust removal system.

1. Secure the side handle in the desired position.
2. Optional: Install and use the two-part hole-starting aid. → page 16
3. Plug the supply cord into the power outlet and press the “Reset” switch or the “I” button on the PRCD.
4. Center the diamond core drilling machine where the hole is to be drilled.
5. Press the on/off switch on the diamond core drilling machine.

6.13 Hand-guided wet drilling without water collection system

WARNING

Danger of electric shock! There is a possibility of water flowing over the motor and cover if the vacuum removal system is faulty.

- ▸ Cease operations immediately if the vacuum removal system is not working.

1. Secure the side handle in the desired position.
2. Optional: Install and use the two-part hole-starting aid. → page 16
3. Plug the supply cord into the power outlet and press the “Reset” switch or the “I” button on the PRCD.
4. Center the diamond core drilling machine where the hole is to be drilled.
5. Slowly open the water flow regulator until the water flows at the desired rate. The indicator on the side handle enables you to check the water flow.
6. Press the on/off switch on the diamond core drilling machine.

6.14 Hand-guided wet-drilling with the water collection system

WARNING

Danger of electric shock! There is a possibility of water flowing over the motor and cover if the vacuum removal system is faulty.

- ▸ Cease operations immediately if the vacuum removal system is not working.

Do not use the power socket on the wet vacuum extractor.

1. When using a vacuum extractor: Start the wet vacuum extractor and open the water supply.
2. Secure the side handle in the desired position.
3. Optional: Install and use the two-part hole-starting aid. → page 16
4. Plug the supply cord into the power outlet and press the “Reset” switch or the “I” button on the PRCD.
5. Center the diamond core drilling machine where the hole is to be drilled.
6. Slowly open the water flow regulator until the water flows at the desired rate. The indicator on the side handle enables you to check the water flow.
7. Press the on/off switch on the diamond core drilling machine.

6.15 Wet-drilling with the drill stand 15

WARNING

Danger of electric shock! There is a possibility of water flowing over the motor and cover if the vacuum removal system is faulty.

- ▸ Cease operations immediately if the vacuum removal system is not working.

For drilling upward, the use of a wet vacuum cleaner in conjunction with a water collection system is a mandatory requirement!

1. Slowly open the water flow regulator until the water flows at the desired rate.

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2. Switch the machine to continuous operation with the continuous running lock.
3. Release the carriage lock.
4. Turn the hand wheel until the diamond core bit is in contact with the work surface.
5. When you start drilling apply only light pressure until the core bit has centered itself. Then apply more pressure.
6. Watch the drilling performance indicator and adjust contact force accordingly.

6.16 Using the Rota-Rail (column swivel)

The Rota-Rail allows quick and easy access to the hole or core being drilled, with no need to partly or fully dismantle the system.

WARNING

Risk of injury caused by incorrect use! The drill stand can be damaged or it can break.

- Never use the Rota-Rail as a column extension.

1. Lock the carriage on the rail with the carriage lock. Check to ensure that it is securely fastened.
2. Remove the end stop screw from the end of the rail.
3. Attach the Rota-Rail so that the toothed racks are facing the same direction.
4. Tighten the screw on the Rota-Rail securely.
5. Release the carriage lock and run the carriage along the rail on to the Rota-Rail.
6. Slacken the securing screws of the Rota-Rail and turn the device to the left or right with the Rota-Rail. This will give you access to the drillhole.
7. Remove the core or change the core bit.
8. Turn the tool with the Rota-Rail back to its original position and tighten the securing screws of the Rota-Rail. Move the tool back to the column of the stand to resume work.
9. After removing the Rota-Rail, refit the end stop screw to the end of the rail.

6.17 Procedure in the event of the core bit jamming

If the bit jams the safety clutch disengages. The electronic control system then switches the motor off and subsequently on again; this is done twice without manual intervention by the user. If this does not free the core bit, the electronic control system switches the motor off for 90 seconds. You can free a jammed bit manually, as follows:

6.17.1 Using the hand wheel to free the core bit

1. Unplug the supply cord from the power outlet.
2. Free the core bit from the base material by turning the hand wheel.
3. Plug the supply cord into the power outlet.
4. Resume the drilling operation.

6.17.2 Using an open-end wrench to free the core bit

1. Unplug the supply cord from the power outlet.
2. Grip the diamond core bit with a suitable open-end wrench close to the connection end and turn the diamond core bit to free it.
3. Plug the supply cord into the power outlet.
4. Resume the drilling operation.

7 Care, maintenance, transport and storage

7.1 Care and maintenance

WARNING

Electric shock hazard! Attempting care and maintenance with the supply cord connected to a power outlet can lead to severe injury and burns.

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

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Care

- Carefully remove any dirt that may be adhering to parts.
- 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.

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.

- 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 product if signs of damage are found or if parts malfunction. Have it repaired immediately by **Hilti** Service.
- After cleaning and maintenance, fit all guards or protective devices and check that they function correctly.

To help ensure safe and reliable operation, use only genuine Hilti spare parts and consumables. Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local **Hilti Store** or online at: **www.hilti.group**.

7.2 Replacing the carbon brushes

WARNING

Risk of injury due to electric shock !

- ▸ The machine may be operated, serviced and repaired only by trained, authorized personnel. This personnel must be specially informed of any possible hazards.

1. Open the carbon brush covers on the left-hand and right-hand sides of the motor.
2. **Take note of how the carbon brushes are fitted and how the conductors are positioned.** Remove the worn carbon brushes from the diamond core drilling machine.
3. Fit the new carbon brushes, positioning them exactly the same as the old ones fitted previously.

   Take care to avoid damaging the insulation on the indicator lead as you insert the brushes.

4. Screw on the carbon brush covers on the left- and right-hand side of the motor.
5. Run in the carbon brushes by letting the machine run under no load for at least 1 minute without interruption.

   After replacing the carbon brushes, the indicator lamp will go out after the machine has run for approx. one minute.

7.3 Transport and storage

ATTENTION

Hazard due to low temperatures! Water finding its way into this product can result in damage and increases the risk of electric shock.

- ▸ When temperatures drop below zero, check that no water remains in the machine.

- ▸ Open the water flow regulator before stowing away the diamond core drilling machine.

8 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.

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8.1 The diamond core drilling machine is not in working order.

Malfunction	Possible cause	Action to be taken
 The service indicator shows nothing.	The PRCD isn't switched on.	▸ Check that the PRCD is functioning and switch it on.
	Interruption in the electric supply.	▸ Plug in another electric tool or appliance and check whether it works. ▸ Check the plug connections, supply cord, power supply line and main supply fuse.
	Water in the motor.	▸ Allow the diamond core drilling machine to dry out completely in a warm, dry place.
 The service indicator lights.	The carbon brushes are worn out.	▸ Replace the carbon brushes. → page 19
 The service indicator blinks.	The motor has overheated.	▸ Wait a few minutes until the motor has cooled down or allow the diamond core drilling machine to run under no load in order to speed up the cooling process. Switch the diamond core drilling machine off and then on again.
	Overload error.	▸ Switch the diamond core drilling machine off and then on again. ▸ Guide the diamond core drilling machine straight and/or apply less drilling pressure.
 The theft protection indicator blinks.	The diamond core drilling machine has not been unlocked (machines with optional theft protection system).	▸ Use the TPS key to unlock the diamond core drilling machine.

8.2 The diamond core drilling machine is in working order

Malfunction	Possible cause	Action to be taken
 The service indicator lights.	The carbon brush wear limit has almost been reached. The diamond core drilling machine will continue to run for a few hours until it shuts down automatically.	▸ Have the carbon brushes replaced at the next opportunity.
	The carbon brushes have been changed and must be run in.	▸ Run in the carbon brushes by letting the machine run under no load for at least 1 minute without interruption.
The diamond core drilling machine doesn't achieve full performance.	Supply network fault – undervoltage occurred.	▸ Check whether other power consumers are disrupting the power supply from the network or generator. ▸ Check the length of the extension cord used.
The diamond core bit doesn't rotate.	The gear selector isn't engaged.	▸ Operate the gear selector until it engages.

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Malfunction	Possible cause	Action to be taken
The diamond core bit doesn't rotate.	The diamond core bit has become jammed in the hole.	▸ Guide the diamond core drilling machine in a straight line. ▸ Use an open-end wrench to release the core bit: Disconnect the supply cord plug from the power outlet. Grip the diamond core bit with a suitable open-end wrench close to the connection end and release the diamond core bit by rotating it. ▸ If using a drill stand: Turn the hand wheel and try to release the diamond core bit by moving the carriage up and down.
The rate of drilling progress decreases.	Maximum drilling depth has been reached.	▸ Remove the core and use a core bit extension.
	The core is stuck in the core bit.	▸ Remove the core.
	Wrong core bit specification for the base material.	▸ Select a more suitable diamond core bit specification.
	High steel content (indicated by clear water containing metal cuttings).	▸ Select a more suitable diamond core bit specification.
	The diamond core bit is defective.	▸ Check the diamond core bit for damage and replace it if necessary.
	Wrong gear selected.	▸ Select the right gear.
	Contact pressure is too low.	▸ Increase the contact pressure.
	The machine has too little power.	▸ Select the next lower gear.
	The diamond core bit is polished.	▸ Sharpen the diamond core bit by drilling into a sharpening plate.
	The water flow rate is too high.	▸ Reduce the water flow rate by adjusting the water flow regulator.
	The water flow rate is too low.	▸ Check the water supply to the diamond core bit respectively increase the water flow rate by adjusting the water regulator.
	The carriage lock is engaged.	▸ Release the carriage locking mechanism.
	Dust is hindering drilling progress.	▸ Use a suitable dust removal system.
The hand wheel can be turned without resistance.	The shear pin is broken.	▸ Replace the shear pin.
The diamond core bit cannot be fitted into the chuck.	The core bit connection end or chuck is dirty or damaged.	▸ Clean and grease the connection end and/or the chuck or replace these parts.
Water escapes at the water swivel or gear housing.	The water pressure is too high.	▸ Reduce the water pressure.
Water escapes at the chuck during operation.	The diamond core bit isn't securely tightened in the chuck.	▸ Tighten the diamond core bit securely. ▸ Remove the diamond core bit. Rotate the diamond core bit approx. 90° about its own axis. Refit the diamond core bit.

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Malfunction	Possible cause	Action to be taken
Water escapes at the chuck during operation.	The core bit connection end / chuck is dirty.	▸ Clean and grease the connection end and/or the chuck.
	The seal at the chuck or at the connection end is defective.	▸ Check the seal and replace it if necessary.
No water is flowing.	The filter or water flow indicator is blocked.	▸ Remove the filter or water flow indicator and flush it through.
The drilling system has too much play.	The diamond core bit isn't securely tightened in the chuck.	▸ Tighten the diamond core bit securely. ▸ Remove the diamond core bit. Rotate the diamond core bit approx. 90° about its own axis. Refit the diamond core bit.
	The core bit connection end / chuck is defective.	▸ Check the connection end and chuck and replace them if necessary.
	The carriage has too much play.	▸ Adjust the play between the rail and carriage. → page 13
	Screws / bolts on the drill stand are loose.	▸ Check the security of screws / bolts on the drill stand and tighten them if necessary.
	The drill stand is inadequately fastened.	▸ Fasten the drill stand more securely.

9 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.

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

9.1 Recommended pretreatment for disposal of drilling slurry

The disposal of drilling 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.

1. Collect the drilling slurry (e.g. using a wet-type industrial vacuum extractor).
2. Allow the drilling slurry to settle and dispose of the solid material at a construction waste disposal site (adding a flocculant can accelerate the settling process).
3. Neutralize the left-over water (alkaline, pH > 7) by adding acidic neutralizing agent or diluting it with a large quantity of water before it is allowed to flow into the sewerage system.

10 China RoHS (Restriction of Hazardous Substances)

Click on the link to go to the table of hazardous substances: qr.hilti.com/r5062.
There is a link to the RoHS table, in the form of a QR code, at the end of this document.

11 Manufacturer's warranty

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

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