

HILTI

TE 50
TE 50-AVR

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 signs used

1.2.1 Warnings

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



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



WARNING! Draws attention to a potential hazard that could lead to serious personal injury or fatality.



CAUTION! Draws attention to a potentially dangerous situation that could lead to minor 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

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.

3

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**.



These characters are intended to specifically draw your attention to certain points when handling the product.

1.3 Product-dependent symbols

1.3.1 Symbols on the product

The following symbols are used on the product:



Drilling with hammering action (hammer drilling)



Chiseling



Drilling without hammering



Chisel positioning



Alternating current



Protection class II (double-insulated)



Revolutions per minute

	Diameter
	Lock symbol

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

Breakers	TE 50 TE 50-AVR
Generation	02
Serial no.	

1.5 Declaration of conformity

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

The technical documentation is filed 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, instructions, illustrations and specifications provided with this power tool. Failure to follow the instructions 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 your work area clean and well lit.** Cluttered or dark work areas invite accidents.
- ▶ **Do not operate the power tool 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 power outlets reduce the 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 the power tool 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 and clothing 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.

Service

- ▶ **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

2.2 Safety instructions for power drills

Safety instructions for work of all kinds

- ▶ **Wear ear protection when hammer drilling.** Exposure to noise can cause hearing loss.
- ▶ **Use the auxiliary handle.** Loss of control can cause personal injury.
- ▶ **Always support the power tool firmly in preparation for use.** This power tool produces high torque. If the power tool is not securely supported at all times during operation loss of control can result and lead to injuries.
- ▶ **Hold the power tool by the insulated gripping surfaces only, when carrying out work in which the accessory tool or the screws can come into contact with concealed wiring or the tool's own supply cord.** If the accessory tool comes into contact with a live wire, metal parts of the power tool can also become live, resulting in an electric shock.

Safety instructions for using long drill bits

- ▶ **Do not under any circumstances attempt to work with the power tool operating at a speed higher than the maximum permissible speed for the drill bit.** A drill bit spinning at a speed higher than its maximum permissible speed when not in contact with the workpiece can develop a slight curvature and this can lead to injuries.
- ▶ **Always start drilling at a low speed and with the drill bit in contact with the workpiece.** A drill bit spinning at a speed higher than its maximum permissible speed when not in contact with the workpiece can develop a slight curvature and this can lead to injuries.
- ▶ **Do not apply too much pressure to the drill bit and apply pressure only along the drill bit's longitudinal axis.** Drill bits can bend and subsequently break or cause a loss of control and resultant injury.

Safety instructions for using mixing paddles or stirrers

- ▶ **Switch the power tool on or off only when the mixing paddle is immersed in the material for mixing.** Failure to do so can cause a loss of control with resultant risk of injury.

2.3 Additional safety instructions for rotary hammer

Personal safety

- ▶ Use the product only when it is in technically faultless condition.
- ▶ Never tamper with or modify the power tool in any way.
- ▶ Use the auxiliary grips supplied with the tool. Loss of control can cause personal injury.
- ▶ Apply appropriate safety measures at the opposite side of the workpiece in work that involves breaking through. Parts breaking away could fall out and / or fall down causing injury to other persons.
- ▶ Always hold the power tool with both hands on the grips provided. Keep the grips clean and dry.
- ▶ Hold the power tool by the insulated gripping surfaces when performing work in which the accessory tool might come into contact with concealed wiring. If the accessory tool comes into contact with a live wire, metal parts of the power tool can also become live, resulting in an electric shock.
- ▶ Avoid touching rotating parts – risk of injury!
- ▶ Wear suitable protective glasses, a hard hat, ear defenders, protective gloves and light respiratory protection while using the power tool.
- ▶ Wear protective gloves also when changing the accessory tool. Touching the accessory tool presents a risk of injury (cuts or burns).
- ▶ Wear eye protection. Flying fragments present a risk of injury to the body and eyes.
- ▶ Before starting work, check the hazard class of the dust that will be produced when working. Use an industrial vacuum cleaner with an officially approved protection class in compliance with the locally applicable dust protection regulations. Dust from materials such as lead-based paint, certain types of wood and concrete/masonry/stone containing quartz, minerals or metal can be harmful to health.
- ▶ Make sure that the workplace is well ventilated and, where necessary, wear a respirator appropriate for the type of dust generated. Contact with or inhalation of the dust can cause allergic reactions and/or respiratory or other diseases to the operator 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.
- ▶ Take breaks and do physical exercises to improve the blood circulation in your fingers. Exposure to vibration during long periods of work can lead to disorders of the blood vessels and nervous system in the fingers, hands and wrists.

Electrical safety

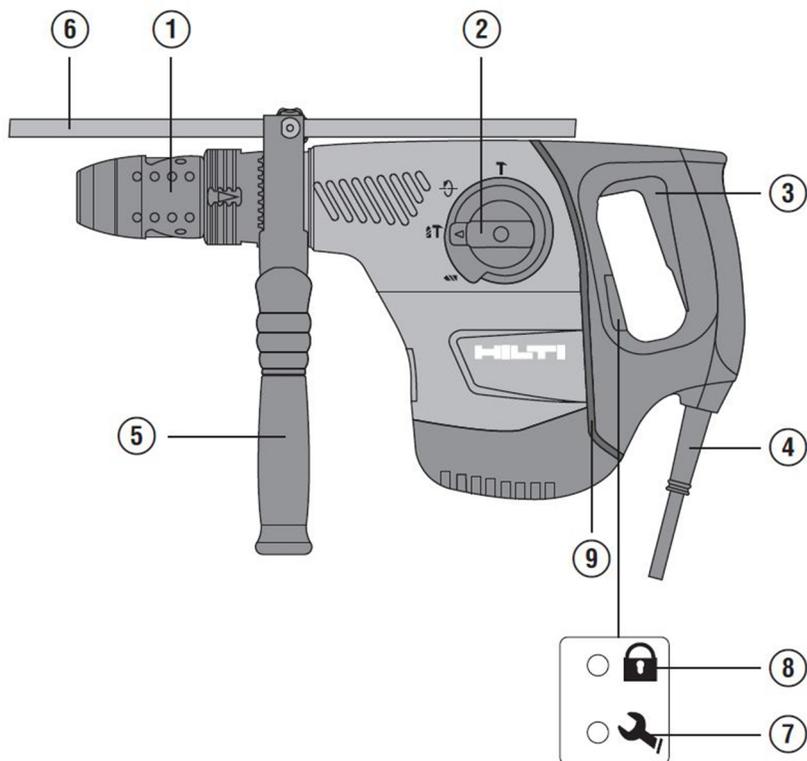
- ▶ Before beginning work, check the working area for concealed electric cables, gas pipes and water pipes. External metal parts of the power tool can become live, presenting a risk of electric shock, if you accidentally damage an electric cable.

Power tool use and care

- ▶ Immediately switch off the power tool if the accessory tool jams. The power tool might twist off-line.
- ▶ Wait until the power tool stops completely before you lay it down.

3 Description

3.1 Overview of the product



- | | |
|----------------------------|---|
| ① Chuck | ⑥ Depth gauge |
| ② Function selector switch | ⑦ Service indicator |
| ③ Control switch | ⑧ Theft protection indicator (optional) |
| ④ Supply cord | ⑨ Active Vibration Reduction AVR (only TE 50-AVR) |
| ⑤ Side handle | |

3.2 Intended use

The product described is an electrically-powered combihammer with pneumatic hammering mechanism. It is designed for drilling in concrete, masonry, wood and metal. The product can also be used for light to medium-duty chiseling on masonry and surface finishing work on concrete.

- ▶ Operation is permissible only when connected to a power source providing a voltage and frequency in compliance with the information given on the type identification plate.

3.3 Active Vibration Reduction

The tool is equipped with an Active Vibration Reduction (AVR) system which reduces vibration noticeably.

3.4 Quick-release chuck (accessory)

The quick-release chuck makes it possible to change accessory tools quickly, without need for a chuck key (keyless system). It is suitable for accessory tools with a cylindrical or hexagonal shank, such as drill bits for wood and metal, or mixing paddles, which are used in the rotary-only mode (without hammering action) .

3.5 Service indicator

The product is equipped with a service indicator LED.

3.5.1 Service indicator status

Status	Meaning
The service indicator lights red.	<ul style="list-style-type: none"> • End of service interval – servicing is due.
The service indicator blinks red.	<ul style="list-style-type: none"> • Have the combihammer repaired by Hilti Service.

3.6 Items supplied

Power tool, side handle, operating instructions, depth gauge, **Hilti** toolbox, cleaning cloth, grease.

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

4 Technical data



Note

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

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

	TE 50	TE 50-AVR
Weight in accordance with EPTA procedure 01	5.7 kg	5.8 kg
Protection class	II	II

4.1 Noise information and vibration values in accordance with EN 60745

The sound pressure and vibration values given in these instructions were measured in accordance with a standardized test and can be used to compare one power tool with another. They can also be used for a preliminary assessment of exposure. The data given represents the main applications of the power tool. However, if the power tool is used for different applications, with different accessory tools, or is poorly maintained, the data can vary. This can significantly increase exposure over the total working period. An

accurate estimation of exposure should also take into account the times when the tool is switched off, or when it is running but not actually being used for a job. This can significantly reduce exposure over the total working period. Identify additional safety measures to protect the operator from the effects of noise and/or vibration, for example: Maintaining the power tool and accessory tools, keeping the hands warm, organization of work patterns.

Noise information

	TE 50	TE 50-AVR
Sound (power) level	106 dB	104 dB
Sound pressure level	95 dB	93 dB
Uncertainty	3 dB	3 dB

Information about vibration

	TE 50	TE 50-AVR
Drilling in metal ($a_{h, D}$)	2.5 m/s ²	2.5 m/s ²
Hammer drilling in concrete ($a_{h, HD}$)	16.1 m/s ²	11.4 m/s ²
Chiseling ($a_{h, Cheq}$)	11.3 m/s ²	8.1 m/s ²
Uncertainty (K)	1.5 m/s ²	1.5 m/s ²

5 Operation

5.1 Preparations at the workplace



CAUTION

Risk of injury! Inadvertent starting of the product.

- ▶ Unplug the supply cord before making adjustments to the power tool or before changing accessories.

Observe the safety instructions and warnings in this documentation and on the product.

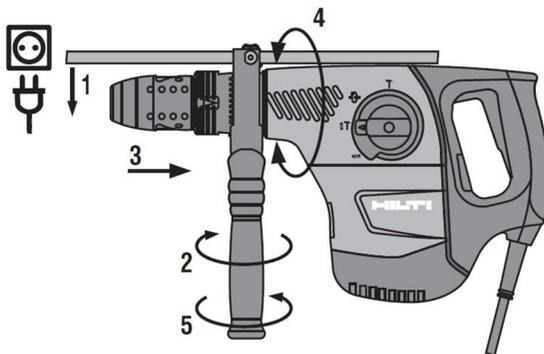
5.1.1 Fitting the side handle



CAUTION

Risk of injury! Loss of control over the combihammer.

- ▶ Check that the side handle is fitted correctly and tightened securely. Check that the clamping band is engaged in the groove provided on the tool.



1. Slide the side handle clamping band over the chuck from the front and into the recess provided.
2. Bring the side handle into the desired position.
3. Secure the side handle by turning the knob until the clamping band is tight.

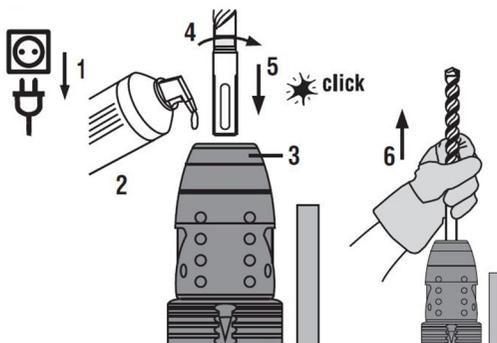
5.1.2 Fitting / removing the accessory tool



CAUTION

Risk of injury! The accessory tool gets hot during use.

- ▶ Wear protective gloves when changing the accessory tool.
- ▶ Do not place the hot accessory tool on readily flammable materials.



1. Apply a little grease to the connection end of the accessory tool.
2. Push the accessory tool into the chuck as far as it will go (until it engages).
 - ◀ The product is ready for use.
3. Pull the chuck back as far as it will go and remove the accessory tool.



Note

Use only the recommended grease supplied by **Hilti**. Use of unsuitable grease may cause damage to the product.

5.1.3 Removing the accessory tool



DANGER

Risk of fire! Risk of contact between the hot accessory tool and highly inflammable materials.

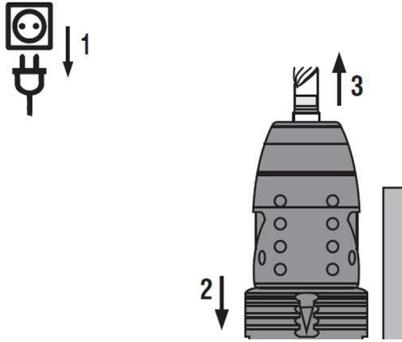
- ▶ Do not lay the hot accessory tool down on highly inflammable materials.



CAUTION

Risk of injury! The accessory tool gets hot during use.

- ▶ Wear protective gloves when changing the accessory tool.
- ▶ Do not place the hot accessory tool on readily flammable materials.



- ▶ Pull the chuck back as far as it will go and remove the accessory tool.



Note

Use only genuine **Hilti** grease. Use of unsuitable grease may cause damage to the product.

5.1.4 Chisel positioning



CAUTION

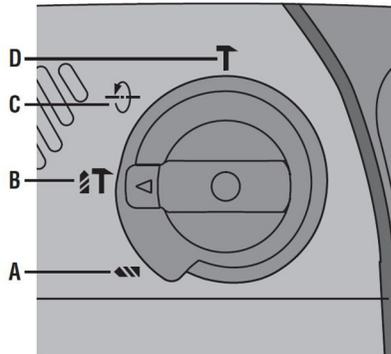
Risk of injury! Loss of control over the chisel direction.

- ▶ Do not operate the tool when the selector switch is set to “Chisel positioning”. Turn the function selector switch until it engages in the “Chiseling” position.



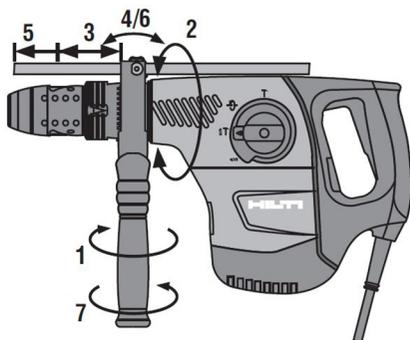
Note

The chisel can be set to 24 different positions (in 15° increments). This ensures that flat chisels and shaped chisels can always be set to the optimum working position.



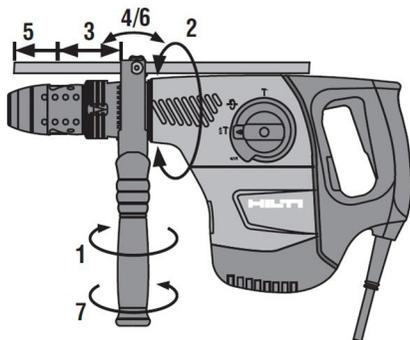
1. Set the function selector switch to the \rightarrow position.
2. Rotate the chisel to the desired position.
3. Set the function selector switch to the **T** position and make sure the switch engages.
 - ◀ The tool is ready for use.

5.1.5 Fitting the depth gauge (optional)



1. Release the side handle clamping band by turning the handle grip.
2. Slide the depth gauge from the front into the 2 guide holes provided.
3. Tighten the side handle clamping band by turning the handle grip.
 - ◀ The depth gauge is fitted. To set the drilling depth:
4. Release the screw at the depth gauge.
5. Adjust the depth gauge to the desired drilling depth.
6. Tighten the screw at the depth gauge.

5.1.6 Fitting the depth gauge (optional)



1. Release the side handle clamping band by turning the handle grip.
2. Slide the depth gauge from the front into the 2 guide holes provided.
3. Tighten the side handle clamping band by turning the handle grip.
 - ◀ The depth gauge is fitted. To set the drilling depth:
4. Release the screw at the depth gauge.
5. Adjust the depth gauge to the desired drilling depth.
6. Tighten the screw at the depth gauge.

5.2 Types of work



WARNING

Risk of electric shock! Severe injury and burns can result if any attempt is made to operate the tool without an earth/ground conductor and ground fault circuit interrupter correctly connected.

- ▶ Irrespective of whether mains power or generator power is used, always make sure that an earth/ground conductor and ground fault circuit interrupter are present in the power supply and that these are correctly connected.
- ▶ Do not use the product unless these safety measures are in place and fully operational.



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.

Full approval must be obtained from the site engineer or architect prior to beginning the work.

5.2.1 Drilling without hammering



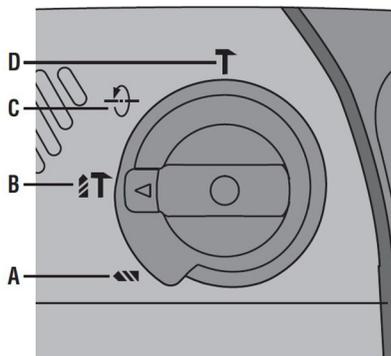
Note

Drilling without hammering action is possible when accessory tools with a special connection end are used. Accessory tools of this kind are available from **Hilti**.

Alternatively, when the keyless quick-release chuck is fitted, smooth-shank drill bits for wood or steel, for example, can be used to drill without hammering.

- ▶ Set the function selector switch to the  position.

5.2.2 Drilling with hammering action (hammer drilling)



1. Set the function selector switch to the  position.
2. Press the drill bit against the work surface.
3. Press the control switch.
 - ◀ The product starts.

5.2.3 Chiseling

- ▶ Set the function selector switch to this symbol: .

6 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**.

6.1 Troubleshooting

Trouble or fault	Possible cause	Action to be taken
The power tool doesn't start.	Interruption in the electric supply.	▶ Plug in another power tool or appliance and check whether it works.
	The supply cord or plug is defective.	▶ Have the supply cord or the plug checked by a trained electrical specialist and replaced if necessary.

Trouble or fault	Possible cause	Action to be taken
The power tool doesn't start.	The generator is in sleep mode.	▶ Apply a load to the generator by connecting a second power consumer (e.g. worklight).
	Electrical fault.	▶ Have the power tool and supply cables checked by a trained electrical specialist.
	The electronic restart interlock is activated after an interruption in the electric supply.	▶ Switch the power tool off and then on again.
Power tool does not start and the service indicator shows red.	The carbon brushes are worn out.	▶ Have the power tool checked by a trained electrical specialist and the carbon brushes replaced if necessary.
	Electrical fault.	▶ Have the tool checked by Hilti Service .
The power tool starts and the service indicator lights red.	End of service interval – servicing is due.	▶ Have the tool repaired only by a Hilti Service Center .
The power tool doesn't start and the service indicator blinks red.	A fault has occurred in the tool.	▶ Have the tool repaired by a trained electrical specialist.
The drill bit doesn't rotate.	The function selector switch is not engaged or is in the "drilling without hammering"  or hammer drilling  position.	▶ Set the function selector switch to "Drilling without hammering"  or "Hammer drilling"  .
The chisel cannot be released from the chuck.	The chuck is not pulled back fully.	▶ Pull the chuck back as far as it will go and remove the accessory tool.

7 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.



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

8 RoHS (Restriction of Hazardous Substances)

Click on the link to go to the table of hazardous substances: qr.hilti.com/r1459.

There is a link to the RoHS table, in the form of a QR code, at the end of this document.

9 Manufacturer's warranty

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



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TE50 | TE 50-AVR (01)

[2006]

2006/42/EC
2004/108/EG
2011/65/EU
2000/14/EG

EN ISO 12100
EN 60745-1
EN 60745-2-6

Paolo Luccini
Head of BA Quality and Process Management
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Hilti = registered trademark of Hilti Corp., Schaan

