HILTI TE 60-ATC-AVR Combihammer Instruction Manual

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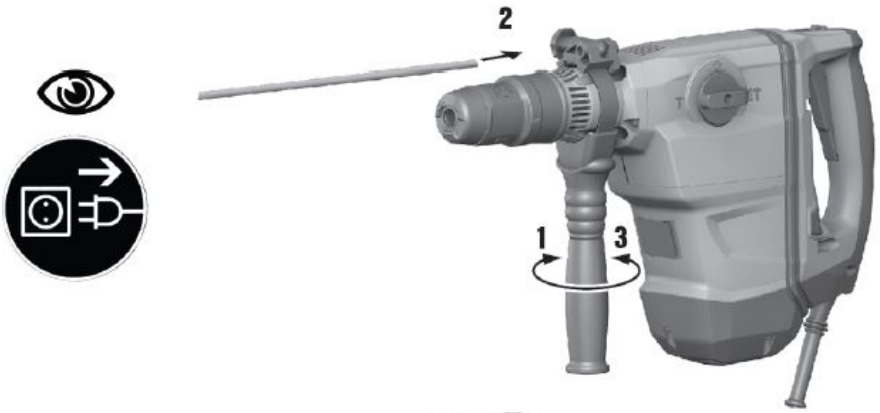
HILTI TE 60-ATC-AVR Combihammer

Usage Procedure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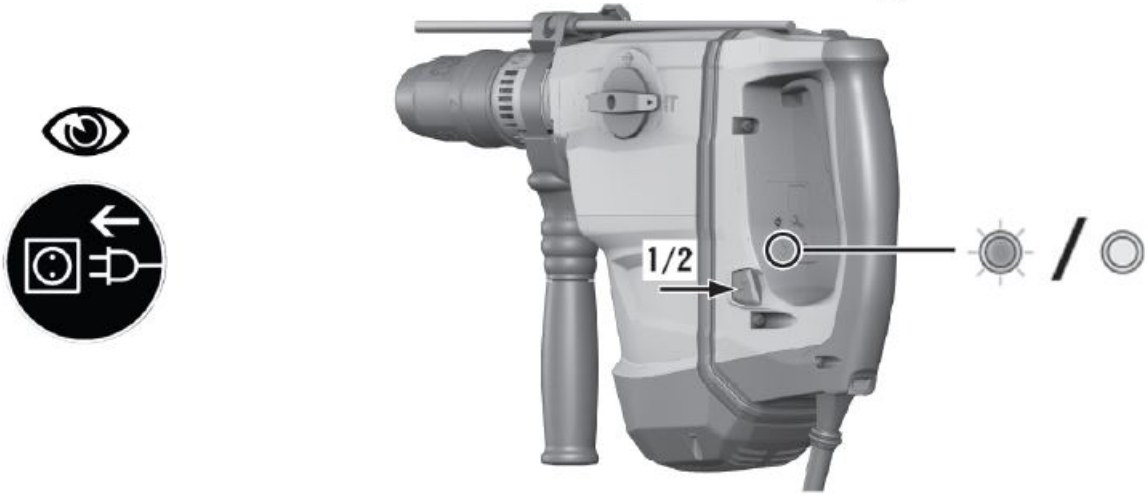
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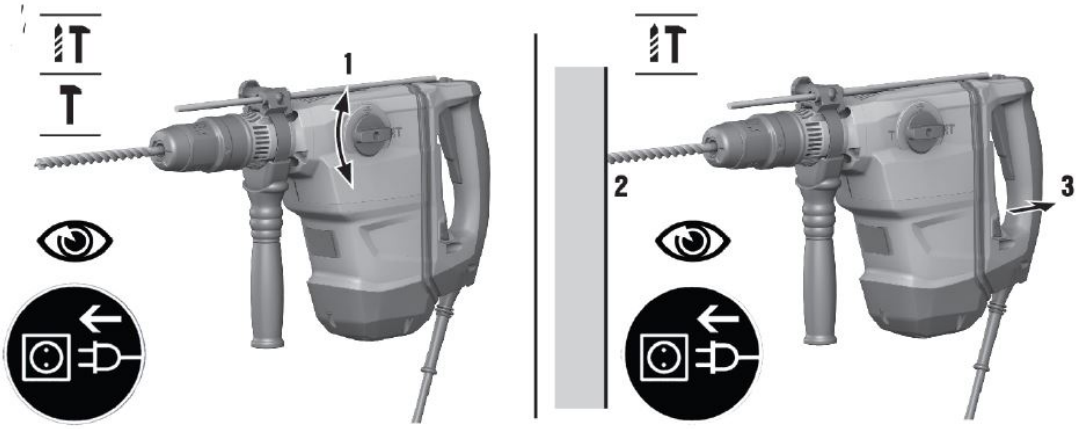
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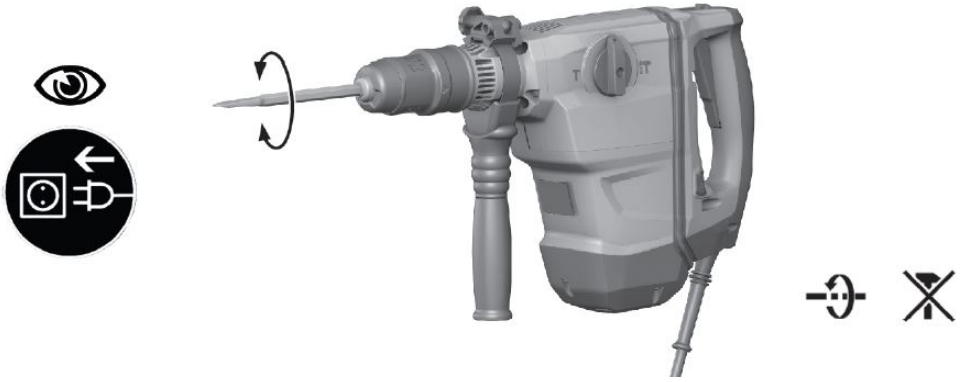


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Original operating instructions

About this documentation

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.

Explanation of symbols used

Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used. Draws attention to a potential threat of danger that can lead to serious injury or fatality.

DANGER

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

CAUTION

Draws attention to a potentially dangerous situation that could lead to personal injury or damage to the equipment or other property.

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

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 instruct ions
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 prod uct overview section
	This symbol is intended to draw special attention to certain points when handling the product.

Product dependent symbols

	Drilling without hammering action
	Drilling with hammering action hammer drilling
	Chiseling
	Chisel positioning
	Forward / reverse
	Protection class II double-insulated
	Protective earth / ground (only TE 60-AVR
Ø	Diameter
n_0	Rated speed under no load
/min	Revolutions per minute

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 may present hazards when used incorrectly by untrained personnel or when used not as directed. The type designation and serial number are printed on the type identification 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

Combihammer	TE 60-ATC/AVR
Generation	04
Serial no.	

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.

Safety

General power tool safety warnings

Save all warnings and instructions for future reference.

Work area safety

- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical safety

- 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, 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 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.

Hammer safety warnings

Wear ear protectors. Exposure to noise can cause hearing loss. Use auxiliary handles, if supplied with the tool. Loss of control can cause personal injury.Hold power tool by insulated gripping 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.\

Additional safety instructions for rotary hammer drill

Personal safety

- Use the product and accessories only when they are in perfect working order.
- Never tamper with or modify the product or accessories in any way.
- Use auxiliary handles supplied with the product. 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 tool with both hands on the grips provided. Keep the grips clean and dry.
- Hold the product 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.
- Do not touch rotating parts – risk of injury!
- Wear eye protection, a hard hat and ear protection and suitable respiratory protection while the product is in use.
- Wear protective gloves when changing the accessory tool. Touching the accessory tool can result in cuts and burns.
- Wear eye protection. Flying fragments can injure the body and eyes.
- Dust produced by grinding, sanding, cutting and drilling can contain dangerous chemicals. Some examples are: lead or lead-based paints; brick, concrete and other masonry products, natural stone and other products containing silicates; certain types of wood, such as oak, beech and chemically treated wood; asbestos or materials that contain asbestos.
- Determine the exposure of the operator and bystanders by means of the hazard classification of the materials to be worked. Implement the necessary measures to restrict exposure to a safe level, for example by the use of a dust collection system or by the wearing of suitable respiratory protection. The general measures for reducing exposure include: working in an area that is well ventilated, avoidance of prolonged contact with dust, directing dust away from the face and body, wearing protective clothing and washing exposed areas of the skin with water and soap.
- Take frequent breaks and do physical exercises to improve the blood circulation in your fingers. High vibration during long periods of work can lead to disorders of the blood vessels and nervous system in the fingers, hands and wrists.

Electrical safety

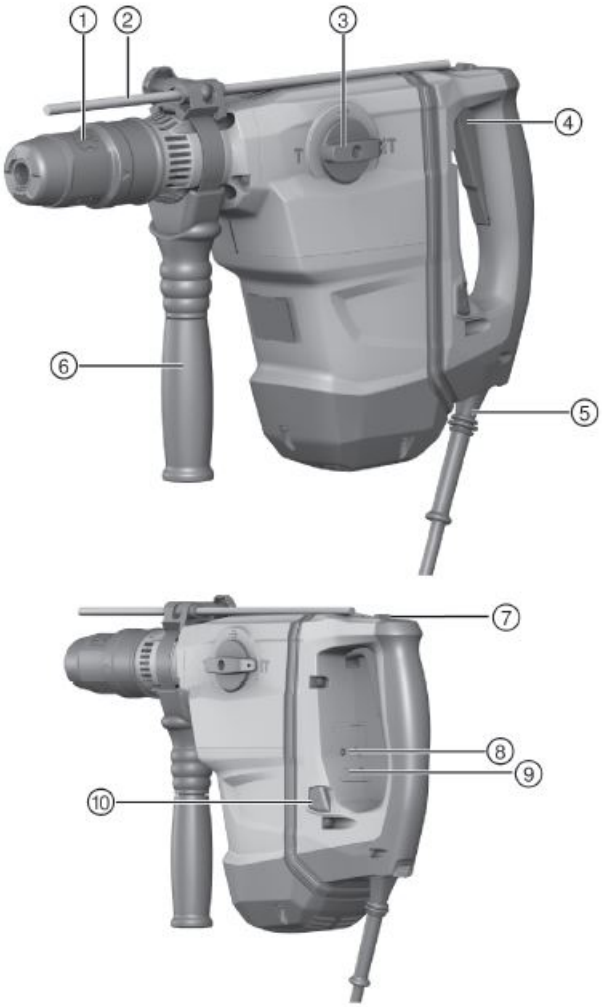
Before beginning work, check the working area for concealed electric cables or gas and water pipes. External metal parts of the product could give you an electric shock or cause an explosion if you accidentally damage an electric cable or a gas or water pipe.

Power tool use and care

Switch the product off immediately if the accessory tool jams. The product might twist off line. Wait until the product has come to a complete stop before you lay it down.

Description

Overview of the product 1



1. Chuck
2. Depth gauge
3. Function selector switch
4. Control switch
5. Supply cord
6. Side handle
7. Lockbutton for continuous operation
8. Service indicator
9. Reduced-power indicator
10. Power reduction button (50% power)

Version with detachable supply cord 2

1. Lockbutton;
2. Connector on electric tool
3. Supply cord with keyed, releasable plug connector.

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. The tool may be operated only when connected to a power source providing a voltage and frequency in compliance with the information given on the type identification plate.

Possible misuse

This product is not suitable for working on hazardous materials. This product is not suitable for working in a damp environment.

Undercut anchors

The product is suitable for setting undercut anchors. Use only suitable setting tools.

ATC

The product is equipped with the ATC Active Torque Control) quick-acting electronic cut out. If the accessory tool sticks or stalls, the product will suddenly pivot about its own axis in the opposite direction. ATC detects this sudden pivoting movement of the product and switches the product off immediately. For ATC to function correctly, the product must be free to pivot. After an ATC cut-out, switch the product off and then on again.Active Vibration Reduction The tool is equipped with an Active Vibration Reduction (AVR) system which reduces vibration noticeably.

Quick release chuck accessory

The quick release chuck makes changing accessory tools a quick operation with no additional tools needed. It is suitable for accessory tools with cylindrical or hexagonal shank used in the Without hammering actionmode.

Service indicator

The product is equipped with a service indicator LED.

Service indicator status

Status	Meaning
The service indicator lights.	End of service interval servicing is due.
The service indicator blinks.	Have the combihammer repaired by Hilti Service.

Items supplied
Combihammer, side handle.

Accessories and spare parts

Further information about other system products approved for use with your product can be found by scanning this QR code or online at: **www.hilti.group**

Technical data

Combihammer

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. The information given applies to a rated voltage of 230 V. The data may vary in the event of deviations from the rated voltage and for country-specific versions. Please refer to the power tool’s rating plate for details of its voltage, frequency, current and input power ratings.

	TE 60AVR	TE 60-ATC/AVR
Rated power input	1,350 W	1,350 W
Rated current input	7.2 A	7.2 A
Weight in accordance with EPTA proce- dure 01/2003	6.8 kg	7.8 kg
Single impact energy in accordance with EPT A procedure 05	7.8 J	7.8 J
Hammer drill bits, Ø	12 mm to 55 mm	12 mm to 55 mm
Ø Breach bits	40 mm to 80 mm	40 mm to 80 mm
Ø Percussion core bits	45 mm to 100 mm	45 mm to 100 mm
Ø PCM diamond core bits	•/•	42 mm to 102 mm
Ø drill bits for metal	10 mm to 20 mm	10 mm to 20 mm
Ø Drill bits for wood	10 mm to 32 mm	10 mm to 32 mm
Chuck	TEY	TEY

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 electric tool with another. They may be used for a preliminary assessment of exposure. The data given represents the main applications of the electric tool. However, if the electric tool i 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 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: maintenance of the electric tool and the accessories, keeping the hands warm organization of work patterns.

Noise emission values in accordance with EN 60745

	TE 60AVR	TE 60-ATC/AVR
Sound power level (L_{WA})	107 dB(A)	111 dB(A)
Uncertainty for the sound power level (K_{WA})	3 dB(A)	3 dB(A)
Sound pressure level (L_{pA})	96 dB(A)	100 dB(A)
Uncertainty for the sound pressure level (K_{pA})	3 dB(A)	3 dB(A)

Total vibration in accordance with EN 60745

	TE 60AVR	TE 60-ATC/AVR
Chiseling ($a_{h,Cheq}$)	9.0 m/s²	6.0 m/s²
Hammer drilling in concrete ($a_{h,HD}$)	9.6 m/s²	6.4 m/s²
Uncertainty (K)	1.5 m/s²	1.5 m/s²

Operation

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.

Fitting the side handle 3

Release the side handle clamping band by turning the handle grip. Slide the side handle clamping band over the chuck from the front and into the recess provided. Bring the side handle into the desired position. Tighten the side handle clamping band by turning the handle grip.

Fitting the depth gauge (optional) 4

Release the side handle clamping band by turning the handle grip. Slide the depth gauge from the front into the 2 guide holes provided. Tighten the side handle clamping band by turning the handle grip.

Setting the power level (optional)

After the supply cord is connected to the AC supply, the product is always set by default to full power. Press the power reduction button. The product runs at reduced power (50 %). The reduced-power LED lights. Press the power reduction button again. The product runs at full power.The reduced-power LED goes out.

Fitting the accessory tool 6

Apply a little grease to the connection end of the accessory tool. Use only genuine Hilti grease. Using the wrong grease can result in damage to the product. Push the accessory tool into the chuck as far as it will go until it engages. After fitting the accessory tool, grip it and pull it in order to check that it is securely engaged. The product is ready for use.

Removing the accessory tool 6

CAUTION
Risk of injury by the accessory tool
The accessory tool might be hot or have sharp edges. Wear protective gloves when changing the accessory tool. Pull the chuck back as far as it will go and remove the accessory tool.

Types of work

CAUTION
Risk of injury Loss of control over the product
Check that the side handle is fitted correctly and tightened securely. Check that the clamping band is engaged in

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

Drilling with hammering

Set the function selector switch to this symbol. Set the desired power level. Press the drill bit against the work surface. Press the control switch. The product starts.

Drilling without hammering

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 quickrelease 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 symbol.

Chiseling 9

Set the function selector switch to symbol.

Switch sustained operation on and off 10.

When chiseling, the control switch can be locked in the on position. Push the lockbutton for continuous operation forward. Press the control switch fully. The product then runs in sustained operating mode. Push the lockbutton for continuous operation back. The product switches off.

Care and maintenance

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.

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

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 electricalspecialists. 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 electric tool if damaged or if its parts malfunction. Have the tool repaired by Hilti Service immediately. After cleaning and maintenance, fit all guards or protective devices and check that they function correctly. 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**

Connecting the detachable supply cord

CAUTION
Risk of injury
Due to leakage current as a result of dirty contacts. Connect the detachable electric connector to the electric tool only when it is clean and dry and when the supply cord is unplugged from the power outlet. Push the keyed,

detachable electric plug connector into the tool as far as it will go, until it is heard to engage. Plug the supply cord into the power outlet.

Disconnecting the detachable supply cord

Unplug the supply cord from the power outlet. Press the release button and pull the keyed, detachable electric plug connector out of the socket. Pull the supply cord connector out of the power tool.

Transport and storage

Do not transport electric tools with accessory tools fitted. Always unplug the supply cord before storing an electric tool or appliance. Store tools and appliances in a dry place where they cannot be accessed by children or unauthorized persons. Check electric tools or appliances for damage after long periods of transport or storage.

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.

Trouble or fault	Possible cause	Action to be taken
No hammering action.	The product is too cold.	Bring the tip of the accessory tool into contact with the working surf ace, switch the power tool on and allow it to run. If necessary, repea t the procedure until the hammeri ng mechanism begins to operate.
Product does not develop full p ower.	The extension cord is too long and/or its gauge is inadequate.	Use an extension cord of an appr oved length and/or of adequate g auge.
	The control switch is not fully pressed.	Press the control switch as far as it will go.
	The voltage provided by the elec- tric supply is too low.	Connect the combihammer to a differ ent electric supply.
	The reduced-power 50% power butto n is engaged.	Press the reduced-power button.
The drill bit does not rotate.	The function selector switch is not co rrectly engaged, is set to Chiseling , or is set to Chisel positioning.	Move the function selector switch to the “Hammer drilling” position while the motor is not rotating.
The drill bit cannot be re- lease d.	The chuck is not pulled back fully.	Pull the chuck back as far as it wil l go and remove the accessory to ol.
	The side handle is not fitted correctly.	Release the side handle and refit it co rrectly so that the clamping band and side handle engage in the r ecess.

Trouble or fault	Possible cause	Action to be taken
Product does not start.	Interruption in the electric supply.	Plug in another electric tool or applia nce and check whether it works.
	The electronic restart interlock is acti vated after an interruption in the elect ric supply.	Switch the product off and then on ag ain.
	The supply cord or plug is defective.	Have the supply cord or the plug checked by a trained electrical specialist and replaced if necessary.
	The detachable supply cord is not fitt ed correctly.	Fit the detachable supply cord to the power tool correctly.
	Generator with sleep mode.	Apply a load to the generator by conn ecting a second power consumer e.g. worklight. After this, switch the product off and then o n again.
The service indicator lights.	The carbon brushes are worn.	Have the product checked by a traine d electrical specialist have the carbon brushes replaced, if necessary.
The service indicator blinks.	Damage to the product or service limi t time reached.	Have the product repaired by Hilti Ser vice.

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.

Manufacturer's warranty
Please contact your local Hilti representative if you have questions about the warranty conditions.

EC Declaration of Conformity UK Declaration of Conformity

- TE 60-AVR (04) I TE 60-ATC/AVR (04)
- Serial Numbers: 1-99999999999.
- 2006/42/EC I Supply of Machinery Safety Regulations 2008.
- 2014/30/EU I Electromagnetic Compatibility Regulations 2016.
- 2011/65/EU I The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.
- EN 60745-1:2009 +A11:2010
- EN 55014-1:2017 +A11:2020
- EN 61000-3-2:2019

- EN 60745-2-6:2010
- EN 55014-2:2015
- EN 61000-3-3:2013 + A1:2019

Hilti Corporation LI-9494 Schaan

- Tel.:+423 234 21 11
- Fax:+423 234 29 65

www.hilti.group

Documents / Resources

	HILTI TE 60-ATC-AVR Combihammer [pdf] Instruction Manual Combihammer, TE 60-ATC-AVR

References

- Power Tools, Fasteners and Software for Construction - Hilti USA