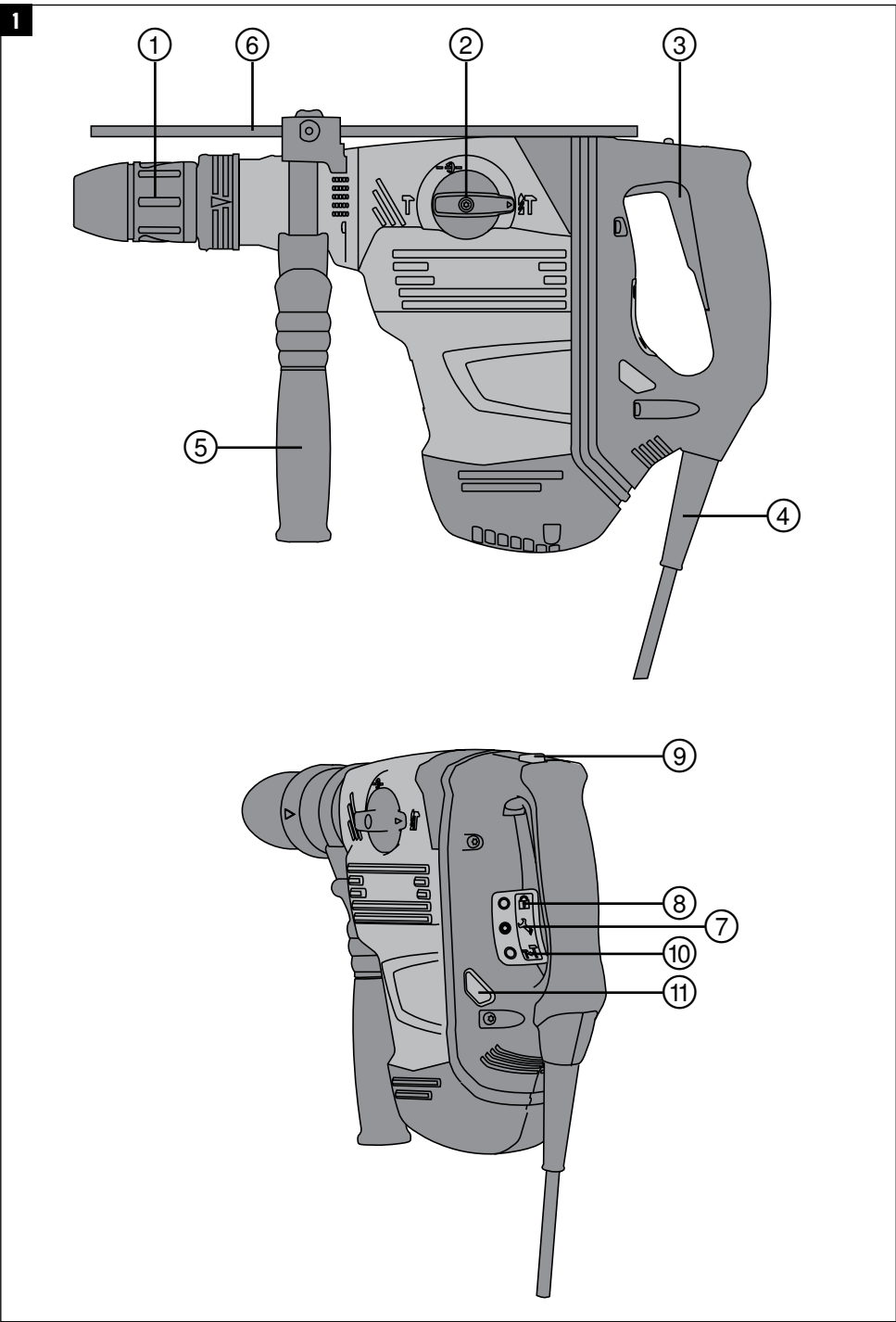


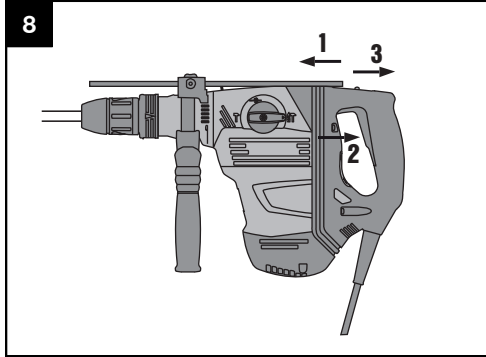
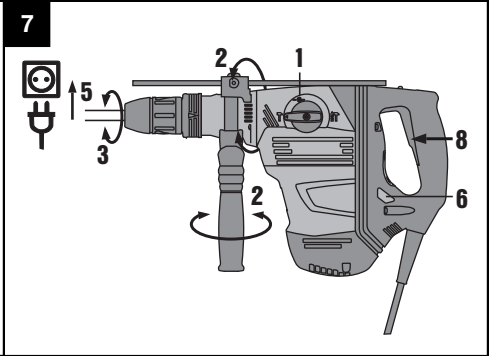
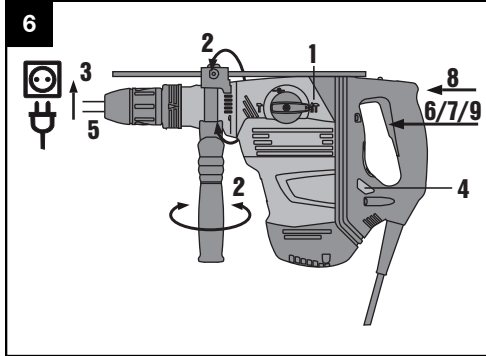
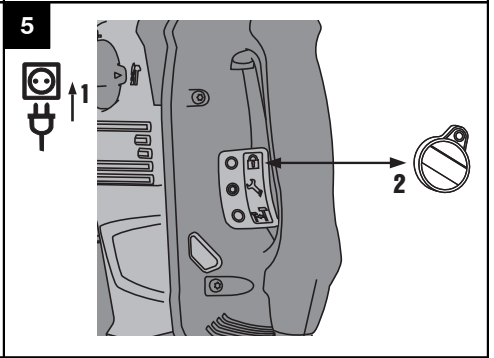
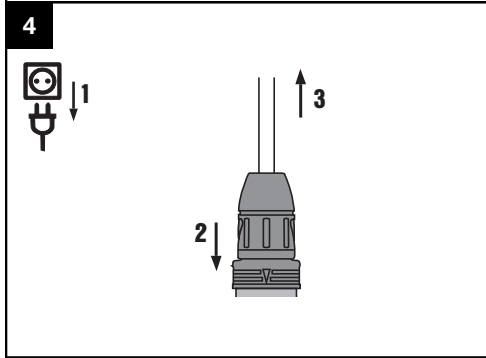
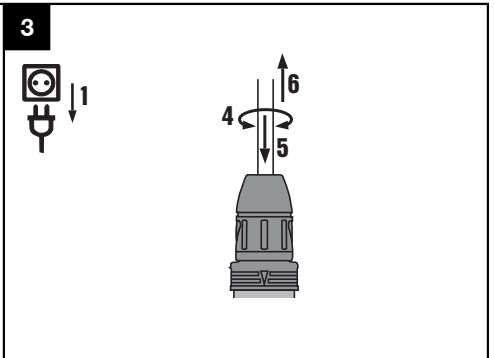
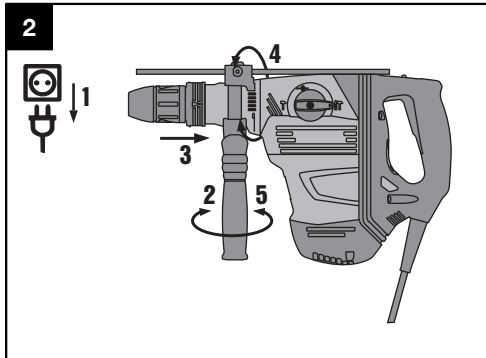
# HILTI

## TE 60 / TE 60-ATC-AVR

<b>Bedienungsanleitung</b>	<b>de</b>
<b>Operating instructions</b>	<b>en</b>
<b>Mode d'emploi</b>	<b>fr</b>
<b>Istruzioni d'uso</b>	<b>it</b>
<b>Gebruiksaanwijzing</b>	<b>nl</b>
<b>Bruksanvisning</b>	<b>sv</b>
<b>Instrukcja obsługi</b>	<b>pl</b>







# ORIGINAL OPERATING INSTRUCTIONS

## TE 60 / TE 60-ATC-AVR combihammer

**It is essential that the operating instructions are read before the power tool is operated for the first time.**

**Always keep these operating instructions together with the power tool.**

**Ensure that the operating instructions are with the power tool when it is given to other persons.**

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3 Insert tools, accessories, consumables	18
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9 Troubleshooting	25
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**1** These numbers refer to the illustrations. You can find the illustrations at the beginning of the operating instructions.

In these operating instructions, the designation "the power tool" always refers to the TE 60 / TE 60-ATC-AVR combihammer.

### Parts, operating controls and indicators **1**

- ① Chuck
- ② Function selector switch
- ③ Control switch
- ④ Supply cord
- ⑤ Side handle
- ⑥ Depth gauge (optional)
- ⑦ Service indicator
- ⑧ Theft protection indicator (optional)
- ⑨ Control switch lock
- ⑩ Reduced (50%) power indicator (optional)
- ⑪ Button for reduced (50%) power (optional)

## 1 General information

### 1.1 Safety notices and their meaning

#### DANGER

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

#### WARNING

Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

#### CAUTION

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

#### NOTE

Draws attention to an instruction or other useful information.

### 1.2 Explanation of the pictograms and other information

#### Warning signs



General warning



Warning: electricity



Warning: hot surface

## Obligation signs



Read the operating instructions before use.



Wear eye protection



Wear a hard hat



Wear ear protection



Wear protective gloves



Wear breathing protection

## Symbols



Return materials for recycling



Hammer drilling



Chiseling



Chisel position adjustment



Volts



Amps



Watts



Alternating current

Hz

Hertz

$n_0$

Rated speed under no load

/min

Revolutions per minute

∅

Diameter



Double insulated



Equipped with theft protection system



Lock symbol

## Location of identification data on the power tool

The type designation can be found on the type identification plate and the serial number on the side of the motor housing. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type:

---

Generation: 03

---

Serial no.:

---

## 2 Description

### 2.1 Use of the product as directed

The power tool is an electrically-powered combihammer with pneumatic hammering mechanism. The ATC (Active Torque Control) feature incorporated in the TE 60-ATC provides greater working comfort for the user when drilling.

The tool is designed for drilling in concrete, masonry, metal and wood and can also be used for chiseling.

The power tool is equipped with electronic overload protection. If the power tool is overloaded for a continuous period, motor speed will be reduced automatically and, if necessary, the motor may be stopped completely. When the control switch is released and then pressed again, the motor immediately regains full power. When restarting, care should thus be taken to ensure that the power tool is held securely with both hands.

Under certain conditions, the power tool is suitable for use for mixing (see "Tools, accessories" and "Operation").

The power tool is designed for professional use and may be operated, serviced and maintained only by trained, authorized personnel. This personnel must be informed of any special hazards that may be encountered. The power tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

Working on materials hazardous to the health (e.g. asbestos) is not permissible.

The working environment may be as follows: construction site, workshop, renovation, conversion or new construction.

The power tool may be used only in a dry environment.

Take the influences of the surrounding area into account. Do not use the power tool or appliance where there is a risk of fire or explosion.

The power 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 identification plate.

Observe the information printed in the operating instructions concerning operation, care and maintenance.

To avoid the risk of injury, use only genuine Hilti accessories and insert tools.

Modification of the power tool or tampering with its parts is not permissible.

## 2.2 Chuck

TE-Y (SDS max) quick-change “click” chuck (TE 60 / TE 60-ATC-AVR)

## 2.3 Switches

Speed-control switch for smooth hole-starting / chiseling

Function selector switch: Hammer drilling, chiseling, chisel adjustment (24 positions)

Power selector switch for full or reduced (50%) power (ATC)

Control switch lockable for chiseling

## 2.4 Grips

Vibration-absorbing, pivotable side handle

Vibration-absorbing grip (ATC)

## 2.5 Protective devices

Mechanical safety clutch

Electronic restart interlock to prevent the power tool starting unintentionally after an interruption in the electric supply (see section “Troubleshooting”).

ATC "Active Torque Control" (TE 60-ATC-AVR)

## 2.6 Lubrication

Gearing and hammering mechanism with separate lubrication chambers

## 2.7 Active Vibration Reduction (AVR)

The power tool is equipped with an AVR Active Vibration Reduction system which reduces vibration significantly compared to power tools without AVR.

## 2.8 TPS theft protection system (ATC)

The power tool may be equipped with the TPS Theft Protection System as an option. If the power tool is equipped with this feature, it can be unlocked and made ready for operation only through use of the corresponding TPS key.

## 2.9 LED indicators

Service indicator LED (see section “Care and maintenance / service indicator”)

Theft protection system indicator (ATC) (see section “Operation / TPS theft protection system (optional)”)

Reduced (50%) power indicator (see section “Operation / hammer drilling / chiseling”)

## 2.10 Items supplied as standard

- 1 Power tool with side handle
- 1 Grease
- 1 Cleaning cloth
- 1 Operating instructions
- 1 Hilti toolbox

## 2.11 Using extension cords

Use only extension cords of a type approved for the application and with conductors of adequate cross section. The power tool may otherwise lose performance and the extension cord may overheat. Check the extension cord for damage at regular intervals. Replace damaged extension cords.

**Recommended minimum conductor cross section and max. cable lengths**

Conductor cross section	1.5 mm <sup>2</sup>	2.0 mm <sup>2</sup>	2.5 mm <sup>2</sup>	3.5 mm <sup>2</sup>
Mains voltage 100 V		20 m		40 m
Mains voltage 110-127 V	20 m	25 m	30 m	40 m
Mains voltage 220-240 V	30 m		50 m	

Do not use extension cords with 1.25 mm<sup>2</sup> conductor cross section.

## 2.12 Using extension cords outdoors

When working outdoors, use only extension cords that are approved and correspondingly marked for this application.

## 2.13 Using a generator or transformer

This power tool may be powered by a generator or transformer when the following conditions are fulfilled: The unit must provide a power output in watts of at least twice the value printed on the type identification plate on the power tool. The operating voltage must remain within +5% and -15% of the rated voltage at all times, frequency must be in the 50 – 60 Hz range and never above 65 Hz, and the unit must be equipped with automatic voltage regulation and starting boost.

Never operate other power tools or appliances from the generator or transformer at the same time. Switching other power tools or appliances on and off may cause undervoltage and / or overvoltage peaks, resulting in damage to the power tool.

## 3 Insert tools, accessories, consumables

Designation	Short designation	Description
Hammer drill bits	TE 60 / TE 60-ATC-AVR	∅ 12...40 mm
Breach bits	TE 60 / TE 60-ATC-AVR	∅ 40...80 mm
Percussion core bits	TE 60 / TE 60-ATC-AVR	∅ 45...100 mm
PCM diamond core bits	TE 60-ATC-AVR	∅ 42...102 mm
Chisels	TE 60 / TE 60-ATC-AVR	Pointed, flat and shaped chisels with TE-Y connection end
Wood drill bits		∅ 10...32 mm
Metal drill bits		∅ Max. 20 mm

Designation	Short designation	Item number, description
Side handle, complete		
Depth gauge, complete		2021281
Anchor-setting tools	TE 60 / TE 60-ATC-AVR	Setting tools with TE-Y connection end
Chuck adapter	TE FY-BA-C	Adapter
TPS Theft Protection System with Company Card, Company Remote and TPS-K key		206999, optional
Quick-release chuck		For wood and metal drill bits with smooth or hex. shank
Mixing paddles for non-flammable materials, with smooth or hex. shank		∅ 80...120 mm
Dust removal system	TE DRS-B, TE DRS-S, TE DRS-BK	

The TE 60 (3) is suitable for setting HDA undercut anchors when used with the specified setting tool

Size	Electrogalvanized	HDA-P, HDA-T, electrogalvanized	HDA-PF, HDA-TF, sherardized	HDA-PR, HDA-TR, stainless steel	Setting tool
M 10	x	x	x	x	TE-Y-HDA-ST 20 M10
M 12	x	x	x	x	TE-Y-HDA-ST 22 M10

## 4 Technical data

Right of technical changes reserved.

### NOTE

The power tool is available in various voltage ratings. Please refer to the type identification plate for details of the power tool's voltage and power rating.

Power tool	TE 60 / TE 60-ATC-AVR
Rated power	1,300 W
Rated voltage / rated current	Rated voltage 110 V: 14.8 A Rated voltage 230 V: 6.9 A
Mains frequency	50... 60 Hz
Weight in accordance with EPTA procedure 01/2003, TE 60	6.4 kg
Weight in accordance with EPTA procedure 01/2003, TE 60-ATC-AVR	7.7 kg
Dimensions (L x W x H), TE 60	480 mm x 115 mm x 274 mm
Dimensions (L x W x H), TE 60-ATC-AVR	490 mm x 115 mm x 293 mm
Hammer drilling speed	350/min
Single impact energy in accordance with the EPTA procedure 05/2009 (full power setting)	7.3 J
Single impact energy in accordance with EPTA procedure 05/2009 (half power setting), TE 60-ATC-AVR	3.6 J

### NOTE

This equipment complies with the applicable standard provided that the maximum permissible mains supply impedance ( $Z_{max}$ ) at the point where the user's installation is connected to the public supply network is less than or equal to  $0.378 + j0.236 \Omega$ . It is the responsibility of the installer or user of the equipment to ensure, by consultation with the supply network operator if necessary, that the equipment is connected only at a point in the supply with an impedance of less than or equal to  $Z_{max}$ .

### Other information about the power tool

TE 60 / TE 60-ATC-AVR chuck	TE-Y
Protection class as per EN	Protection class II (double insulated)

### NOTE

The vibration emission level given in this information sheet has been measured in accordance with a standardized test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure. The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period. An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period. Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organization of work patterns.

### Noise and vibration information (measured in accordance with EN 60745-2-6):

Typical A-weighted sound power level for the TE 60 with ATC and AVR	112 dB (A)
Typical A-weighted sound power level, TE 60	107 dB (A)
Typical A-weighted emission sound pressure level for the TE 60 (with ATC and AVR)	101 dB (A)
Typical A-weighted emission sound pressure level, TE 60	96 dB (A)
Uncertainty for the given sound level	3 dB (A)

en



### Triaxial vibration values for the TE 60-ATC-AVR (vibration vector sum)

Hammer drilling in concrete, $a_{h, HD}$	7.5 m/s <sup>2</sup>
Chiseling, $a_{h, Cheq}$	7 m/s <sup>2</sup>
Uncertainty (K) for triaxial vibration value	1.5 m/s <sup>2</sup>

### Triaxial vibration value for the TE 60 (vibration vector sum)

Hammer drilling in concrete, $a_{h, HD}$	18.5 m/s <sup>2</sup>
Chiseling, $a_{h, Cheq}$	15.5 m/s <sup>2</sup>
Uncertainty (K) for triaxial vibration value	1.5 m/s <sup>2</sup>

## 5 Safety instructions

### NOTE

The safety rules in section 5.1 contain all general safety rules for power tools which, in accordance with the applicable standards, must be listed in the operating instructions. Accordingly, some of the rules listed may not be relevant to this tool.

#### 5.1 General Power Tool Safety Warnings

a)  **WARNING**

**Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.** The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### 5.1.1 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.

#### 5.1.2 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.

#### 5.1.3 Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

### 5.1.4 Power tool use and care

- a) **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.
- b) **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.
- c) **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) **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.
- e) **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.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **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.

### 5.1.5 Service

- a) **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.

### 5.2 Hammer safety warnings

- a) **Wear ear protectors.** Exposure to noise can cause hearing loss.
- b) **Use auxiliary handles, if supplied with the tool.** Loss of control can cause personal injury.
- c) **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.

### 5.3 Additional safety instructions

#### 5.3.1 Personal safety

- a) **Always hold the power tool securely with both hands on the grips provided. Keep the grips dry, clean and free from oil and grease.**

- b) **Breathing protection must be worn if the power tool is used without a dust removal system for work that creates dust.**
- c) **Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**
- d) **Avoid touching rotating parts. Switch the power tool on only after bringing it into position at the workpiece.** Touching rotating parts, especially rotating insert tools, may lead to injury.
- e) **Always lead the supply cord and extension cord away from the power tool to the rear while working.** This helps to avoid tripping over the cord while working.
- f) **When using the power tool for mixing, set the function selector switch to "Hammer drilling" and wear protective gloves.**
- g) **Children must be instructed not to play with the power tool.**
- h) **The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
- i) **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 to the operator or bystanders. Certain kinds of dust are classified as carcinogenic such as oak and beech dust especially in conjunction with additives for wood conditioning (chromate, wood preservative). Material containing asbestos must only be treated by specialists. Where the use of a dust extraction device is possible it shall be used. To achieve a high level of dust collection, use a suitable vacuum cleaner of the type recommended by Hilti for wood dust and/or mineral dust together with this tool. Ensure that the workplace is well ventilated. The use of a dust mask of filter class P2 is recommended. Follow national requirements for the materials you want to work with.**

#### 5.3.2 Power tool use and care

- a) **Secure the workpiece. Use clamps or a vice to secure the workpiece.** The workpiece is thus held more securely than by hand and both hands remain free to operate the power tool.
- b) **Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck correctly.**

#### 5.3.3 Electrical safety

- a) **Before beginning work, check the working area (e.g. using a metal detector) to ensure that no concealed electric cables or gas and water pipes are present.** External metal parts of the power tool may become live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.
- b) **Check the power tool's supply cord at regular intervals and have it replaced by a qualified specialist if found to be damaged. If the machine's**

supply cord is damaged it must be replaced with a specially-prepared and approved supply cord available from Hilti Customer Service. Check extension cords at regular intervals and replace them if found to be damaged. Do not touch the supply cord or extension cord if it is damaged while working. Disconnect the mains plug from the power outlet. Damaged supply cords or extension cords present a risk of electric shock.

- c) **Dirty or dusty power tools which have been used frequently for work on conductive materials should be checked at regular intervals at a Hilti Service Center.** Under unfavorable circumstances, dampness or dust adhering to the surface of the power tool, especially dust from conductive materials, may present a risk of electric shock.
- d) **When working outdoors with an electric tool check to ensure that the tool is connected to the electric supply by way of a ground fault circuit interrupter (RCD) with a rating of max. 30 mA (tripping current).** Use of a ground fault circuit interrupter reduces the risk of electric shock.
- e) **Use of a ground fault circuit interrupter (RCD residual current device) with a maximum tripping current of 30 mA is recommended.**

### 5.3.4 Work area

- a) **Ensure that the workplace is well ventilated.** Exposure to dust at a poorly ventilated workplace may result in damage to the health.
- b) **If the work involves breaking right through, take the appropriate safety measures at the opposite side.** Parts breaking away could fall out and / or fall down and injure other persons.

### 5.3.5 Personal protective equipment



**The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves and breathing protection while the tool is in use.**

## 6 Before use



### 6.1 Fitting and adjusting the side handle 2

1. Disconnect the supply cord plug from the power outlet.
2. Release the side handle clamping band by turning the handle counterclockwise.
3. Slide the side handle clamping band over the chuck and onto the cylindrical section at the front end of the power tool.
4. Pivot the side handle into the desired position.
5. **CAUTION Check that the clamping band is engaged in the groove provided on the power tool.** Secure the side handle by turning the grip clockwise.

### 6.2 Fitting the depth gauge (optional)

1. Release the side handle clamping band by turning the handle counterclockwise.
2. Push the depth gauge into the two guide holes in the side handle clamp.
3. Tighten the side handle securely by turning the grip section. This also clamps the depth gauge in position.

### 6.3 Unlocking the power tool

Please refer to the section "Operation / TPS theft protection system (ATC)".

### 6.4 Use of extension cords and generators or transformers

See section "Description / use of extension cords".

## 7 Operation



### CAUTION

In accordance with the applications for which it is designed, the power tool produces a high torque. **Always use the side handle and hold the power tool with both hands.** The user must be prepared for sudden sticking and stalling of the insert tool.

### CAUTION

**Always check to ensure that the selector switch is set to the correct function.**

### CAUTION

**Use clamps or a vice to hold the workpiece securely.**

### CAUTION

**Check the insert tool for damage or uneven wear each time before use.**

## 7.1 Preparing for use

### CAUTION

**Wear protective gloves when changing insert tools as the insert tools get hot during use.**

### 7.1.1 Adjusting the depth gauge

1. Release the screw at the depth gauge.
2. Adjust the depth gauge to the desired drilling depth.
3. Tighten the screw at the depth gauge firmly.

### 7.1.2 Fitting the insert tool 3

1. Disconnect the supply cord plug from the power outlet.
2. Check that the connection end of the insert tool is clean and lightly greased. Clean it and grease it if necessary.
3. Check that the sealing lip of the dust shield is clean and in good condition. Clean the dust shield if necessary or have it replaced if the sealing lip is damaged.
4. Push the insert tool into the chuck and rotate it while applying slight pressure until it engages in the guide grooves.
5. Push the insert tool further into the chuck until it is heard to engage.
6. Check that the insert tool has engaged correctly by pulling it.

### 7.1.3 Removing the insert tool 4

1. Disconnect the supply cord plug from the power outlet.
2. Open the chuck by pulling back the insert tool locking sleeve.
3. Pull the insert tool out of the chuck.

## 7.2 Operation



### CAUTION

Working on the material may cause it to splinter. **Wear eye protection and protective gloves. Wear breathing protection if no dust removal system is used.** Splintering material presents a risk of injury to the eyes and body.

### CAUTION

The work generates noise. **Wear ear protectors.** Exposure to noise can cause hearing loss.

### CAUTION

**Improve the blood circulation in your fingers by relaxing your hands and exercising your fingers during breaks between working.**

## 7.2.1 TPS theft protection system (ATC)

### NOTE

The ATC version of the tool can be equipped with the optional theft protection system. If the power tool is equipped with this feature, it can be unlocked and made ready for operation only through use of the corresponding TPS key.

### 7.2.1.1 Unlocking the power tool 5

1. Plug the supply cord into the power outlet. The yellow theft protection indicator LED blinks. The power tool is now ready to receive the signal from the TPS key.
2. Hold the TPS key against the lock symbol. The power tool is unlocked as soon as the yellow theft protection indicator LED no longer lights.

**NOTE** If, for example, the electric supply is briefly interrupted due to a power failure or disconnected when moving to a different workplace, the power tool remains ready for operation for approx. 20 minutes. In the event of a longer interruption, the TPS key must be used again to unlock the power tool.

### 7.2.1.2 Activation of the theft protection system for the power tool

### NOTE

Further detailed information on activation and use of the theft protection system can be found in the operating instructions for the theft protection system.

### 7.2.2 Hammer drilling 6

### NOTE

Working at low temperatures: The hammering mechanism works only when the power tool has reached a minimum operating temperature. Bring the tip of the drill bit or chisel into contact with the workpiece and allow the power tool to run under no load until it reaches the minimum operating temperature. If necessary, repeat this procedure until the hammering mechanism begins to operate.

1. Turn the function selector switch until it engages in the "Hammer drilling" position. Do not operate the function selector switch while the motor is running.
2. Bring the side handle into the desired position and check that it is fitted correctly and secured.
3. Plug the supply cord into the power outlet.
4. Set the desired drilling power (optional).

**NOTE** After connecting the supply cord to the electric supply, the power tool is always set to full drilling power.

**NOTE** To set the power tool to reduced (50%) drilling power, press the reduced-power button. The drilling power LED then lights. To reselect full drilling power, press the reduced-power button again.

5. Position the power tool and drill bit at the point where the hole is to be drilled.
6. Press the control switch slowly (drill at a low speed until the drill bit centers itself in the hole).
7. Press the control switch fully to continue working at full power.
8. Do not apply excessive pressure. This will not increase the power tool's hammering performance. Lower pressure extends the life of the insert tool.
9. Reduce drilling speed shortly before breaking through in order to avoid spalling.

### 7.2.3 Active Torque Control (TE 60-ATC-AVR)

In addition to the mechanical slip clutch, the tool is also equipped with ATC (Active Torque Control). This system offers additional comfort while drilling as it causes rapid shutdown upon sudden rotation of the power tool about the drill bit axis, e.g. when the drill bit sticks due to hitting a rebar or when the drill bit is tilted unintentionally. When the torque control system has become activated, the power tool can be restarted by releasing the control switch and re-engaging it after the motor has stopped rotating (a "click" indicates that the power tool is again ready for operation). Always choose a working position in which the electric tool is free to rotate in a counterclockwise direction (as seen by the operator). If this rotation is not possible, the ATC system will be unable to react.

### 7.2.4 Chiseling

#### NOTE

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

#### CAUTION

Do not operate the power tool when the selector switch is set to "Chisel adjustment".

1. To adjust the position of the chisel, turn the function selector switch until it engages in the "Chisel adjustment" position.
  2. Bring the side handle into the desired position and check that it is fitted correctly and secured.
  3. Rotate the chisel to the desired position.
  4. To lock the chisel in the desired position, turn the function selector switch until it engages in the "Chiseling" position. Do not operate the function selector switch while the motor is running.
5. To begin chiseling, plug the power tool's supply cord into the power outlet.
  6. Set the desired chiseling power (ATC).  
**NOTE** After connecting the supply cord to the electric supply, the power tool is always set to full chiseling power.  
**NOTE** To set the power tool to reduced (50%) chiseling power, press the reduced-power button. The chiseling power LED then lights. To reselect full chiseling power, press the reduced-power button again.
  7. Position the tip of the chisel at the point where chiseling is to begin.
  8. Press the control switch fully.

### 7.2.5 Drilling without hammering

Drilling without hammering is possible when drill bits with a special connection end are used. Drill bits of this kind are available from Hilti. For example, when the keyless quick-release chuck is fitted, smooth-shank drill bits for wood or steel can be used to drill without hammering. The function selector switch must be set to the "Hammer drilling" position when the power tool is used in this way.

### 7.2.6 Control switch lock

When chiseling, the control switch can be locked in the "on" position.

1. Push the control switch lock above the grip forward.
2. Press the control switch fully.  
The power tool then operates in sustained mode.
3. To cancel sustained operating mode, slide the control switch lock to the rear.  
The power tool then switches off.

### 7.2.7 Mixing

1. Turn the function selector switch until it engages in the "Hammer drilling" position.
2. Insert the quick-release chuck in the power tool's chuck.
3. Insert the mixing paddle.
4. Check that the insert tool has engaged correctly by pulling it.
5. Bring the side handle into the desired position and check that it is fitted correctly and secured.
6. Plug the supply cord into the power outlet.
7. Position the mixing paddle in the container holding the substance to be mixed.
8. To begin mixing, press the control switch slowly.
9. Press the control switch fully to continue working at full power.
10. Guide the mixing paddle carefully in order to avoid splashing and spillage.

## 8 Care and maintenance

### CAUTION

Disconnect the mains plug from the power outlet.

#### 8.1 Care of core bits and metal parts

Remove any dirt adhering to the surface of the core bits, the chuck and drive spindle and protect their surfaces from corrosion by rubbing them with an oily cloth from time to time.

#### 8.2 Care of the power tool

### CAUTION

Keep the power tool, especially its grip surfaces, clean and free from oil and grease. Do not use cleaning agents which contain silicone.

Never operate the power tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign objects to enter the interior of the power tool. Clean the outside of the power tool at regular intervals with a slightly damp cloth. Do not use a spray, steam pressure cleaning equipment or running water for cleaning. This may negatively affect the electrical safety of the power tool.

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#### 8.3 Service indicator

### NOTE

The power tool is equipped with a service indicator.

Indicator	Constant red light	End of service interval - servicing is due. After the lamp lights for the first time, the power tool may continue to be used for several hours before the automatic cut-out is activated. To ensure that the power tool is always ready for use, it should be returned to Hilti for servicing in good time.
	Blinking red light	See section "Troubleshooting".

#### 8.4 Maintenance

### WARNING

Repairs to the electrical section of the power tool may be carried out only by trained electrical specialists.

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are

damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

#### 8.5 Checking the power tool after care and maintenance

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

## 9 Troubleshooting

Fault	Possible cause	Remedy
The power tool doesn't start.	Interruption in the electric supply.	Plug in another electric appliance and check whether it works.
	The supply cord or plug is defective.	Have it checked by a trained electrical specialist and replaced if necessary.
	Generator with sleep mode.	Apply a load to the generator by connecting another appliance (e.g. a lamp). Subsequently switch the power tool off and on again.
	Other electrical fault.	Have it 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 on again.

Fault	Possible cause	Remedy
The power tool doesn't start.	The control switch is defective.	Have it checked by a trained electrical specialist and replaced if necessary.
No hammering action.	The power tool is too cold.	Allow the power tool to warm up to the minimum operating temperature. See section: 7.2.2 Hammer drilling <b>6</b>
The power tool doesn't start and the LED blinks red.	A fault has occurred in the power tool.	If necessary, the power tool should be repaired by Hilti Service.
The power tool doesn't start and the LED lights red.	The carbon brushes are worn.	Have it checked by a trained electrical specialist and replaced if necessary.
The power tool doesn't start and the indicator lamp blinks yellow.	The power tool has not been unlocked (applies to tools with the theft protection system (ATC)).	Use the TPS key to unlock the power tool.
The power tool doesn't achieve full power.	The extension cord is too long or its gauge is inadequate.	Use an extension cord of an approved length and / or of adequate gauge.
	The control switch is not pressed fully.	Press the control switch as far as it will go.
	The "Reduced power" button is active (ATC).	Press the "Reduced power" button.
	The voltage provided by the electric supply is too low.	Connect the power tool to a different power source.
The drill bit doesn't rotate.	The function selector switch is not engaged or is in the "Chiseling" or "Chisel adjustment" position.	Move the function selector switch to the "Hammer drilling" position when the motor has stopped.
The drill bit / chisel can't 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 insert tool.
	The side handle is not fitted correctly.	Release the side handle and refit it correctly so that the clamping band and side handle engage in the groove.

## 10 Disposal



Most of the materials from which Hilti power tools or appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old power tools or appliances for recycling. Please ask your Hilti customer service department or Hilti representative for further information.



For EC countries only

Disposal of electric tools together with household waste is not permissible.

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

## 11 Manufacturer's warranty - tools

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

## 12 EC declaration of conformity (original)

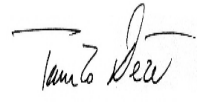
Designation:	Combiammer
Type:	TE 60 / TE 60-ATC-AVR
Generation:	03
Year of design:	2010

We declare, on our sole responsibility, that this product complies with the following directives and standards: until 19th April 2016: 2004/108/EC, from 20th April 2016: 2014/30/EU, 2006/42/EC, 2011/65/EU, EN 60745-1, EN 60745-2-6, EN ISO 12100.

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