

# HILTI

# TE 905-AVR

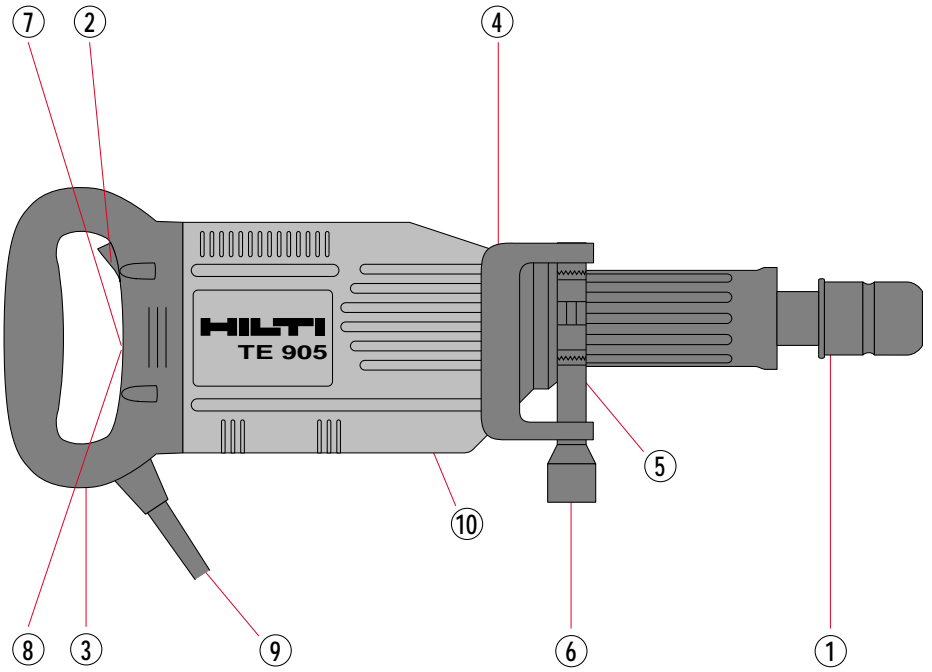
Bedienungsanleitung  
Operating instructions

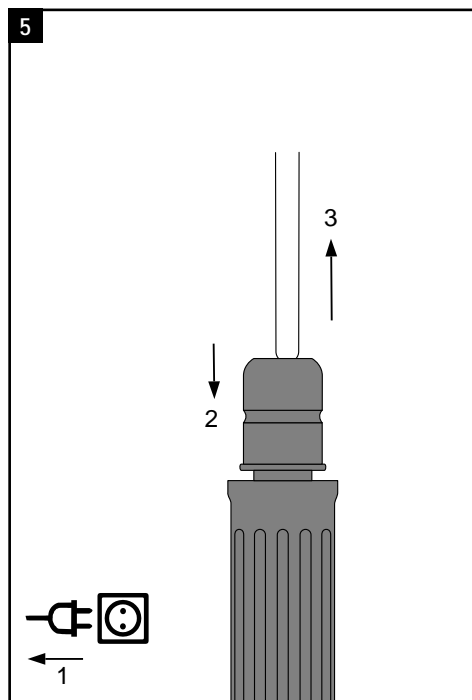
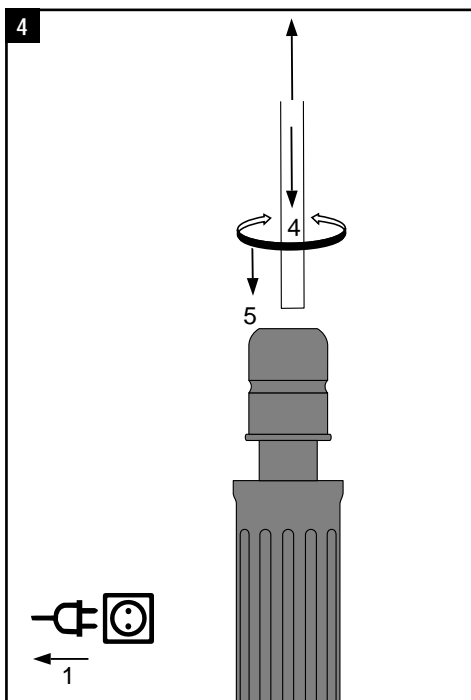
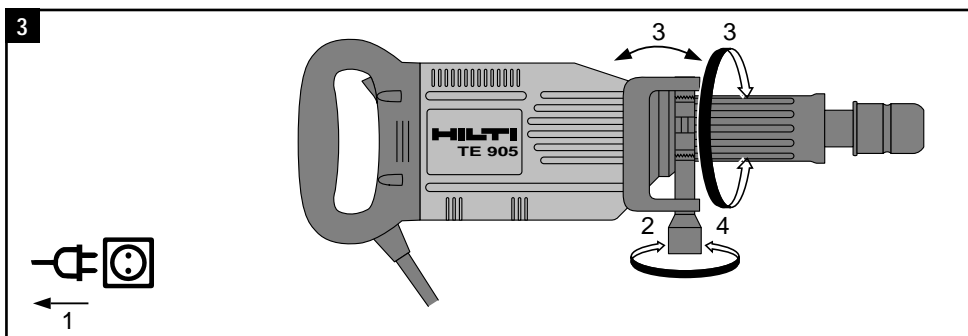
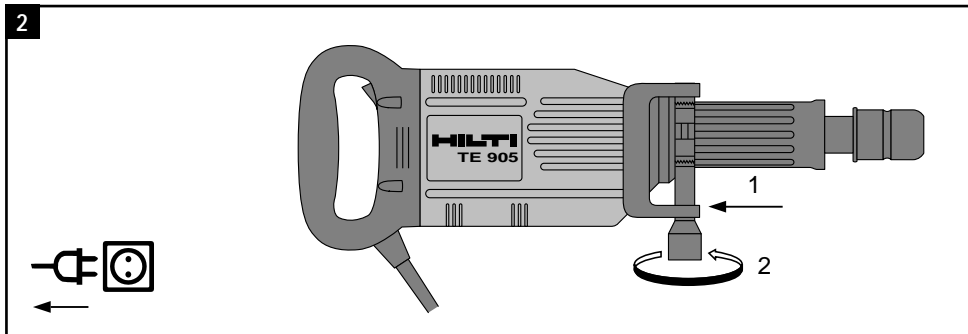
de  
en



376550

CE





# TE 905-AVR breaker

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

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

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

## Operating controls and components 1

- ① Chuck
- ② On/off switch
- ③ Grip
- ④ Side handle
- ⑤ Side handle clamp
- ⑥ Screw
- ⑦ Service indicator
- ⑧ Activation indicator (theft protection system) (available as option)
- ⑨ Supply cord
- ⑩ Ventilation slots

Contents	Page
1. General information	11
2. Description	12
3. Tools and accessories	12
4. Technical data	13
5. Safety precautions	13
6. Before use	15
7. Operation	15
8. Care and maintenance	17
9. Troubleshooting	17
10. Disposal	18
11. Warranty	18
12. EC declaration of conformity	19

## 1. General information

### 1.1 Signal words and their meaning

#### -CAUTION-

Used to draw attention to a potentially dangerous situation which could lead to minor personal injury or damage to the equipment or other property.

#### -NOTE-

Used to draw attention to an instruction or other useful information.

### 1.2 Pictograms

#### Warning signs



General warning



Warning: electricity



Warning: hot surface

#### Obligation signs



Wear a safety helmet



Wear eye protection



Wear breathing protection



Wear ear protection



Wear protective gloves

#### Symbols



Read the operating instructions before use.



Equipped with theft protection system

**1** These numbers refer to the corresponding illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while studying the operating instructions.

In these operating instructions, the TE 905-AVR breaker is referred to as "the tool".

#### Location of identification data on the tool

The type designation and serial number can be found on the rating plate on the tool. 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: TE 905-AVR

Serial no.:

en

## 2. Description

### Correct use

The TE 905-AVR is a hand-held electric tool for chiseling. The tool is suitable for chiseling and demolition work on concrete, masonry, stone or asphalt. The working environment may be on a construction site of any kind.

The tool may be operated only when supplied with a voltage in compliance with the information given on its rating plate.

The TE 905-AVR is a heavy-duty breaker. It is equipped with a TE-S chuck. The tool features an active vibration reduction system that reduces vibration by about 50%.

The tool can be equipped with an optional theft protection function. This function operates on a radio / transponder principle. When equipped with this function, the tool can be activated and operated only by authorized users.

### Chucks:

- TE-S chucks

### Switches:

- On/off switch

### Grips:

- Adjustable vibration-absorbing side handle.
- Vibration-absorbing grip.

### Lubrication:

- Permanent lubrication.

### Indicator lamps:

- Service indicator (red).
- Theft protection system indicator (available as option) (blinks yellow).

### The following items are supplied as standard:

- Tool
- Grease dispenser (50 ml)
- Operating instructions
- Toolbox
- Cleaning cloth

## 3. Tools and accessories

### TE 905-AVR

TE-S chuck ●

Pointed chisel

Flat chisel

Wide flat chisel

Asphalt chisel

Flexible chisel

Bushing tool

Tamping tool


Earth rod rammer

HSS hanging support system ●

TPS = theft protection system with

TPS-K activation key ●

## 4. Technical data

Tool	TE 905-AVR					
Rated power input	1550 W	1600 W	1550 W	1600 W	1600 W	1600 W
Rated voltage	100 V	110 V	120 V	220 V	230 V	240 V
Rated current input	15 A	16 A	13 A	8.2 A	8.3 A	8.3 A
Mains frequency	50–60 Hz					
Weight of tool	11.3 kg					
Dimensions (l×w×h)	680×110×240 mm					
Chuck	TE-S					
Hammering speed under load	2200 blows/min					
Single impact energy	20 joules					
Chiseling performance in medium-hard concrete	1300 cm <sup>3</sup> /min					
Automatic cut-out carbon brushes						
Adjustable side handle						
Foam rubber padded grip and side handle						
Electronic speed (r.p.m.) limitation						
On/off switch						
Vibration reduction with built in AVR-system						
Service indicator						
<b>User information as per EN 61000-3-11</b>						
Switching operations cause short voltage drops. If the mains electric supply conditions are unfavourable, other tools / machines can be impaired. If the main electric supply impedance is less than 0.39 Ohms, no disruptions / disturbances need be expected.						
Double insulated (in accordance with EN 50144)	Protection class II 					
Interference immunity	In accordance with EN 55014-2					
Radio and television interference suppression	In accordance with EN 55014-1					
<b>Noise and vibration information (measured in accordance with EN 50144):</b>						
Typical A-weighted sound power level (L <sub>WA</sub> ):	≤ 105 dB (A)					
Typical A-weighted sound pressure level (L <sub>pA</sub> ):	≤ 92 dB (A)					
<b>Wear ear protection!</b>						
Typical weighted vibration at the grips:	≤ 8 m/s <sup>2</sup>					
Right of technical changes reserved						

## 5. Safety precautions

### 5.1 Basic information concerning safety

In addition to the information relevant to safety given in each of the sections of these operating instructions, the following points must be strictly observed at all times.



- Do not expose the tool to rain or snow, do not use it in damp or wet areas or in the vicinity of inflammable liquids or gasses.

- Changes or modifications to the tool are not permissible.
- To avoid the risk of injury, use only original Hilti accessories and additional equipment.
- Observe the information printed in the operating instructions concerning operation, care and maintenance.
- The tool and its ancillary equipment may present hazards when used incorrectly by untrained personnel or when used not as directed.

## 5.2 Take the necessary precautions to make the workplace safe



- Ensure that the workplace is well lit.
- Ensure that the workplace is well ventilated.
- Keep the working area tidy. Objects which could cause injury should be removed from the working area.
- When working, keep other persons, particularly children, outside the range of the tool.
- Avoid unfavorable body positions.
- Wear eye protection. Wear breathing protection when the work creates dust.
- Wear non-slip shoes and always work from a secure stance.
- Wear protective gloves.
- Do not wear loose clothing, loose long hair or jewelry as these can become caught up in moving parts.
- To avoid tripping and falling when working, always lead the supply cord, extension cord and extraction hose away to the rear.
- Concealed electric cables or gas and water pipes present a serious hazard if damaged while you are working. Accordingly, check the area in which you are working beforehand (e.g. using a metal detector). Avoid contact between your body and earthed / grounded objects, such as pipes or radiators. External metal parts of the tool may become live, for example, when an electric cable is drilled into inadvertently.
- Use a vice or clamp to secure loose workpieces.

## 5.3 General safety precautions



- Operate the tool only as directed and only when it is in faultless condition.
- Take the surrounding conditions into account. Do not expose the tool to rain or snow and do not use it in damp or wet areas. Do not use the tool where there is a risk of fire or explosion.
- Never leave the tool unsupervised.
- The side handle must always be fitted when the tool is in use.
- The tool is for hand-held use only.
- Hold the side-handle securely at the end furthest from the tool.
- Keep the tool, especially its grip surfaces, clean and free from oil and grease.
- When not in use, the tool must be stored in a dry place, locked up or out of reach of children.
- Disconnect the supply cord plug from the socket when the tool is not in use (e.g. during breaks, before maintenance and before changing insert tools).
- Take care of your insert tools. You will be able to work more efficiently and more safely if the insert tools are

kept sharp and clean. Observe instructions on care and maintenance and on changing insert tools.

- Do not overload the tool. It will work more efficiently and more safely within its intended performance range.

### 5.3.1 Mechanical



- Observe the instructions concerning care and maintenance and replacement of insert tools in good time.
- Ensure that the insert tools used are equipped with the correct connection end system and that they are properly fitted and secured in the chuck.

### 5.3.2 Electrical



- Check the condition of the tool including the supply cord and extension cord as well as the plug connections. Do not operate the tool if damage is found, if the tool is not complete or if its controls cannot be operated faultlessly.
- Do not touch the supply cord in the event of it suffering damage while working. Disconnect the supply cord plug from the socket.
- Damaged switches must be replaced at a Hilti service center. Do not use the tool if it cannot be switched on and off correctly.
- The tool should be repaired by a trained electrical specialist (Hilti service center).
- Never carry the tool by the supply cord.
- Grip the plug and not the supply cord when pulling it out of the socket.
- Do not expose the supply cord to heat, oil or sharp edges.
- When working outdoors, use only extension cords approved and correspondingly marked as suitable for outdoor use.
- To avoid a risk of accident, use only original Hilti spare parts.
- Never operate the tool when it is dirty or wet. Dust or dampness on the surface of the tool make it difficult to hold and, under unfavorable conditions, may lead to electric shocks.

### 5.3.3 Thermal



- The insert tool may become hot during use. You should therefore wear protective gloves when changing insert tools.

#### 5.4 Requirements to be met by users

- The tool is intended for professional use.
- The tool may be operated, serviced and repaired only by authorized, trained personnel. This personnel must be informed of any special hazards that may be encountered.
- Always concentrate on the job you are doing. Proceed carefully and do not use the tool if your full attention is not on the job.

#### 5.5 Personal protective equipment

The user and any other persons in the vicinity must wear suitable eye protection, a safety helmet, ear protection, protective gloves and breathing protection.



Wear a safety helmet



Wear eye protection



Wear breathing protection



Wear ear protection



Wear protective gloves

en

## 6. Before use



Ensure that the tool is disconnected from the mains supply.

#### 6.1 Use of extension cords

Use only extension cords of a type approved for the application and with conductors of adequate cross section. Recommended minimum conductor cross section and max. cable lengths:

Mains voltage	Conductor cross section				AWG	
	1.5 mm <sup>2</sup>	2.0 mm <sup>2</sup>	2.5 mm <sup>2</sup>	3.5 mm <sup>2</sup>	14	12
100 V	–	20 m	–	30 m	–	–
110–120 V	20 m	25 m	30 m	–	75 ft	125 ft
220–240 V	50 m	–	100 m	–	–	–

Do not use extension cords with 1.25 mm<sup>2</sup> or 16 AWG conductor cross sections.

#### 6.2 Use of a generator or transformer

This tool may be powered by a generator or transformer which fulfils the following conditions:

- AC voltage output, power output at least 2600 W
  - The operating voltage must be within +5% and –15% of the rated voltage at all times.
  - Frequency range 50–60 Hz, never above 65 Hz
  - Automatic voltage regulation with starting boost
- Never operate other tools or appliances from the generator or transformer at the same time. Switching other tools or appliances on and off may cause undervoltage and / or overvoltage peaks, resulting in damage to the tool.

#### 6.3 Fitting the side handle 2

1. Fit the side handle and side handle clamp onto the tool.
2. Secure the side handle by tightening the screw knob.

## 7. Operation



Never use the tool without the side handle.  
Use a vice or clamp to secure loose workpieces.

-CAUTION-	
	<ul style="list-style-type: none"> <li>• The insert tool may become hot during use.</li> </ul>
	<ul style="list-style-type: none"> <li>• There is a risk of burning the hands.</li> <li>• Wear protective gloves when changing insert tools.</li> </ul>

#### 7.1 Adjusting the side handle 3

1. Unplug the supply cord from the mains socket.
2. Slacken the screw knob on the side handle.
3. Bring the side handle into the desired position.
4. Tighten the screw knob to secure the side handle in the desired position.

#### 7.2 Fitting the insert tool 4

-NOTE-

The chisel can be locked in the chuck in 6 different positions (in 60° increments).

Flat and shaped chisels can thus always be brought into the optimum position for the job on hand.

1. Unplug the supply cord from the mains socket.



2. Check that the insert tool connection end is clean and lightly greased. Clean and grease the connection end if necessary.
3. Check that the sealing lip on the dust cap is clean and in good condition. Clean the dust cap if necessary or replace it if the sealing lip is damaged.
4. Push the insert tool into the chuck and rotate it while applying light pressure until it engages in the guide grooves.
5. Push the insert tool into the chuck until it is heard to engage.
6. Check that the insert tool is held securely by attempting to pull it out of the chuck.


**7.3 Removing the insert tool 5**


1. Unplug the supply cord from the mains socket.
2. Open the chuck by pulling back the locking sleeve.
3. Pull the insert tool out of the chuck.

**7.4 Chiseling**

**-NOTE-**

When working at low temperatures: The hammering mechanism works only when the tool has reached a minimum operating temperature. Bring the drill bit into contact with the base material and allow the tool to run under no load until the minimum operating temperature is reached. If necessary, repeat this procedure until the hammering mechanism begins to operate.

	<p><b>-CAUTION-</b></p> <ul style="list-style-type: none"> <li>● Drilling may cause splintering of the material.</li> <li>● Splinters may cause injury to parts of the body and eyes.</li> <li>● Wear eye protection, protective gloves and breathing protection if no dust removal system is used.</li> </ul>
---	--

	<p><b>-CAUTION-</b></p> <ul style="list-style-type: none"> <li>● The tool and the drilling operation emit noise.</li> <li>● Excessive noise may damage the hearing.</li> <li>● Wear ear protection.</li> </ul>
--	--

**7.4.1 Switching on**

1. Plug the supply cord into the electric socket.
2. Press the on/off switch.

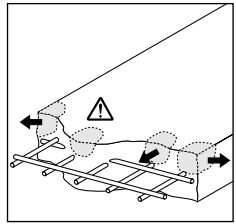
**7.4.2 Switching off**

Press the on/off switch.

**7.4.3 Chiseling tips**

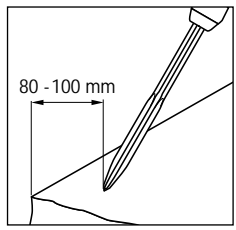
**Reinforcing bars**

Always guide the chisel toward the edge of the material and not toward the reinforcing bar.



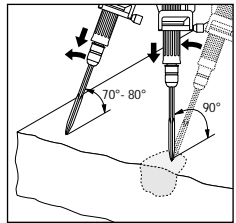
**Starting chiseling**

Position the point of the chisel approx. 80–100 mm from the edge of the material.



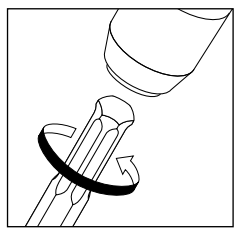
**Chiseling direction**

Begin chiseling at an angle of 70°–80° to the concrete surface, with the tip of the chisel pointing toward the edge. Increase the angle to 90° as the chisel penetrates, thus breaking away material.



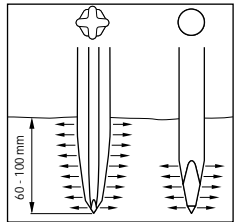
**Self-sharpening process**

Rotate the chisel in the chuck at regular intervals (ensures even wear and assists the self-sharpening process).



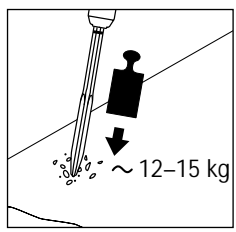
**Depth of penetration**

Polygon chisels break up and crush the material even at considerable depth.



**Contact pressure**

Contact pressure too low: Chisel jumps about.  
 Contact pressure too high: Lower chiseling performance.



## 8. Care and maintenance

Unplug the supply cord from the mains socket.

### 8.1 Care of insert tools

Clean off dirt and dust deposits and protect your insert tools from corrosion by wiping them from time to time with an oil-soaked rag.

#### 8.1.1 Regrinding insert tools

Pointed, flat and wide-flat chisels can be reground when slightly worn at the tip or cutting edge.

#### -NOTE-

Avoid overheating the surface of the chisel during grinding (no discoloration).

### 8.2 Care of the electric tool

The outer casing of the tool is made from impact-resistant plastic. Sections of the grip are made from an elastomer material.

Never operate the 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 tool. Clean the outside of the tool at regular intervals using 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 tool. Always keep the grip surfaces of the tool free from oil and grease. Do not use cleaning agents which contain silicone.

### 8.3 Service indicator

The tool is equipped with a service indicator.

#### 8.3.1 The service indicator lights

The carbon brushes have reached the end of their life. The tool can be operated for a further approx. ten hours after the service indicator lights, after which the automatic cut-out will be activated. Please return the tool to a Hilti service center in good time so that it is ready for use when required.

#### 8.3.2 The service indicator blinks

An electrical fault has occurred.

The tool has been rendered inoperable and should be returned to a Hilti repair center for servicing.

### 8.4 Maintenance

Check all external parts of the tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the tool if parts are damaged or when the controls do not function faultlessly. If necessary, your electric tool should be repaired at a Hilti repair center. Repairs to the electrical section of the tool may be carried out only by trained electrical specialists.

### 8.5 Checks after care and maintenance

After carrying out care and maintenance on the tool, check that all protective equipment has been refitted and that all items function faultlessly.

## 9. Troubleshooting

Fault	Possible cause	Remedy
The tool doesn't start	Fault in mains supply	Plug in another electric appliance and check whether it works
	Supply cord or plug defective	The cord should be checked and, if necessary, replaced by an electrical specialist
	On/off switch defective	The cord should be checked and, if necessary, replaced by an electrical specialist
No hammering action	The tool is too cold	Allow the tool to warm up to the minimum operating temperature (see 7.4 "Chiseling")
The tool does not achieve full power	Extension cord with inadequate cross section used	Use an extension cord with adequate cross section (see 6.1 "Use of extension cords")

## 10. Disposal

Most of the materials from which Hilti electric tools 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 electric tools for recycling. Please ask your Hilti customer service department or Hilti representative for further information.

Should you wish to return the electric tool yourself to a disposal facility for recycling, proceed as follows:

Dismantle the electric tool as far as possible without the need for special tools. Use absorbent paper to wipe oily parts clean and to collect any grease that runs out (total quantity approx. 50 ml). This paper should also be disposed of correctly. **On no account should oil or grease be allowed to enter the waste water system or to find its way into the ground.**

The individual parts should be separated as follows:

Part / assembly	Main material	Recycling
Toolbox	Plastic	Plastics recycling
Gear housing	Plastic with magnesium alloy / brass parts	Scrap metal
Bearing plate	Magnesium alloy / brass	Scrap metal
Grip, side handle	Plastic	Plastics recycling
Motor housing	Plastic	Plastics recycling
Fan	Plastic	Plastics recycling
Motor (rotor and stator)	Steel and copper	Scrap metal
Supply cord	Copper, elastomer	Scrap metal
Hammering mechanism parts	Steel	Scrap metal
Screws, small parts	Steel	Scrap metal

## 11. Warranty

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid as long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti operating instructions, all warranty claims are made within 12 months (unless other mandatory national regulations prescribe a longer minimum period) from the date of sale (invoice date) and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

**Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular,**

**Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.**

Send the tool and/or related parts immediately upon discovery of a defect to the local Hilti marketing organisation for repair or replacement.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

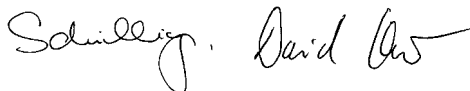
## 12. EC declaration of conformity

Designation:	Breaker
Type:	TE 905-AVR
Year of design:	2003

We declare, on our sole responsibility, that this product complies with the following directives and standards: 73/23/EEC, 89/336/EEC, 98/37/EC, 2000/14/EC, EN 50144-1, EN 50144-2-6, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-11.

Measured sound power level	
LWA:	105 dB/1pW
Guaranteed sound power level	
LWAd:	107 dB/1pW
Conformity assessment procedure:	2000/14/EC Annex VI
European Notified Body:	TÜV NORD CERT, Am TÜV 1, 30519 Hannover, Germany
European file number:	CE-0032-139 955-06

### Hilti Corporation



Daniel Schilling  
Senior Vice President  
Drilling and Demolition  
Business Unit  
December 2002

David Hruza  
Development  
Drilling and Demolition  
Business Unit  
December 2002

en



Hilti Corporation

FL-9494 Schaan

Tel.: +423 / 234 21 11

Fax: +423 / 234 29 65

[www.hilti.com](http://www.hilti.com)