



224013

**TE 104**

# Operating instructions

**HILTI**

# General safety rules

## 1. WARNING!

### Read and understand all instructions.

Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

## SAVE THESE INSTRUCTIONS

### 2. Work Area

2.1 **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.


2.2 **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.

2.3 **Keep bystanders, children and visitors away while operating a power tool.** Distractions can cause you to lose control.

### 3. Electrical Safety

3.1 **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

Applicable only to Class I (grounded) tools.

3.2 **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation  eliminates the need for the three-wire grounded power cord and grounded power supply system.

Applicable only to Class II tools.

3.3 **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

3.4 **Don't expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

3.5 **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.

3.6 **When operating a power tool outside, use an outdoor extension cord marked «W-A» or «W».** These cords are rated for outdoor use and reduce the risk of electric shock.

### 4. Personal Safety

4.1 **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

4.2 **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

4.3 **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

4.4 **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

4.5 **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.

4.6 **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat or hearing protection must be used for appropriate conditions.

### 5. Tool Use and Care

5.1 **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

5.2 **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

5.3 **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

5.4 **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

5.5 **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

5.6 **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.

5.7 **Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

5.8 **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

### 6. Service

6.1 **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

6.2 **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

### Additional Specific Safety Rules:

101 **Hold tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a «live» wire will make exposed metal parts of the tool «live» and shock the operator.

102 **Wear ear protectors when using the tool for extended periods.** Prolonged exposure to high intensity noise can cause hearing loss.

# Hilti TE 104 Scaler



## Kit supplied with the machine:

Plastic case, cleaning cloth, Hilti connection end grease, operating instructions

## Technical data

Input power:	550 W
Voltage:	115 V
Input current:	4.8 A,
Frequency:	50–60 Hz
Machine weight:	3.5 kg (7.7 lbs)
Dimensions:	365 × 190 × 85 (14.4" × 7.5" × 3.3")
Hammering under load:	0–3800 blows/min.
Single impact energy:	2.2 Joules
Front section designed to be held	
Permanent lubrication	
Variable speed control switch	
Automatic cut-out brushes	
Quick-release chuck for set of scaling needles	
Quick-release chuck:	for TE-C chisels
Chisel blade adjustment to 8 positions	
Chisels with extended TE-C connection end:	Pointed, narrow, flat, wide flat/scrapper, flexible, channel, mortar and joint chisels
Needle protector with round and oval opening for the sets of needles	
Double insulation construction, class II	
Right of technical modifications reserved	

## Please note before starting to work

Read the enclosed General Safety rules.

When working with the machine, it must be held with two hands. Always make sure that you have a safe stance/foothold.

1. The electric supply must be the same as given on the TE 104 nameplate.
2. The TE 104 is double insulated and must **not be grounded**.

**Wear protective gloves, safety glasses and ear protectors.**

This Product is  
UL listed and CSA certified



Always wear ear protectors.



Always wear protective gloves.



Always wear safety glasses.

**Do not use this product in any way other than as directed by these operating instructions.**

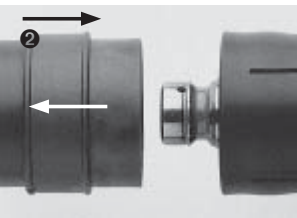
**The respective regulations of your trade association and the enclosed General safety rules must be observed.**

**The operating instructions should always be kept with the machine!**



**Fig. 1: Cleaning of connection ends**

The chuck is not incorporated in the lubricating system of the TE104. The connection ends of chisels, etc. must, therefore, be cleaned regularly and lubricated sparingly with Hilti grease.

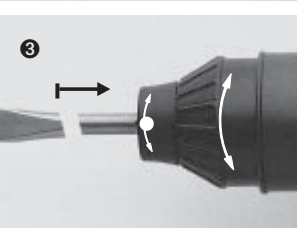


**Holding the front section:**

The cylinder section has been insulated against heat and designed for a good hold. Operators, however, should wear suitable gloves.

**Start-up in cold surroundings**

The TE 104 will start up quicker if its jolted once briefly against the work surface just after switching on.



## Operating when chiselling

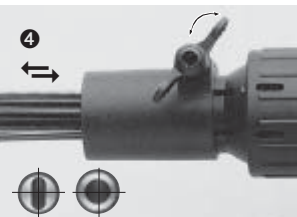
**Fig. 2: Attach the chisel chuck (change the needle chuck.)**

Pull forward locking ring against spring pressure and mount chuck on spindle. Release locking ring and turn slightly until locking balls engage.

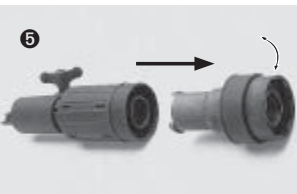
**Note: The chisel chuck can only be attached when the chuck is open.**

**Fig. 3: Insert/change a chisel.**

Turn chuck counter-clockwise (symbol  $\curvearrowright$ ). Insert chisel as far as it will go. Turn chuck in opposite direction and lock chisel (symbol  $\curvearrowleft$ ).



**Position the chisel blade.** Press forward locking sleeve, turn chuck with inserted chisel more or less to desired position, release locking ring, and continue turning until locking ring engages.



**Select the hammering power.** Regulate hammering power from 0 to 100%, as required, using electronic switch. The TE104 runs continuously without maintaining pressure on the switch. Press switch again to switch off.

## Operation when needle scaling

### Attach the needle chuck (change the chisel chuck.)

Proceed as for chisel chuck, fig. 3.

**Fig. 4: Select/adjust needle protector.** Select a round or oval needle protector depending on the scaling job i.e. a flat, corner or edge surface. Adjust needle protrusion and secure (open) protector using wing nut.

**Fig. 5: Change the needle set.** Press needle holder towards locking ring and then turn. Spring tension separates needle holder from locking sleeve. Needles can be replaced separately or as a set. Apply only moderate pressure when working.

**Caution! Insufficient pressure will shorten the life. (Make sure the tool is always in contact with the base material.)**

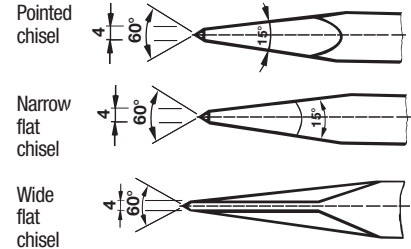
### Pointed and narrow flat chisels:

Forge chisels at about 900°C to 1000°C (bright red to bright yellow red). Afterwards, quench in oil. On forging and quenching the chisel in this way, it will be given optimal treatment. No further hardening and tempering is necessary.

### Wide-flat chisel:

As the cross-section of a worn wide-flat chisel is not large enough for forging, this chisel should not be reformed but only resharpened. The blade as long enough to be resharpened several times.

### Resharpenering:



## Servicing

Electric tools must comply with the respective safety regulations. Servicing must, therefore, be carried out only by qualified electricians/electrical specialists. The use of original Hilti parts ensures an optimum of safety.

## Chisel reforging and resharpening

When resharpening wide-flat, narrow-flat and pointed chisels which are not badly worn, take care to avoid overheating (no discoloration). Resharpenering limit: to a remaining length of 130 mm from connection end.