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HILTI

ST1800

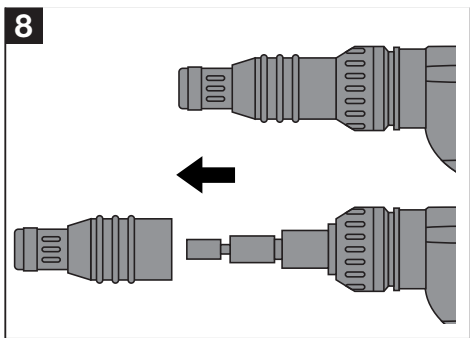
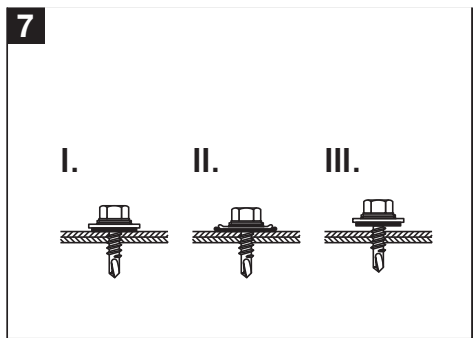
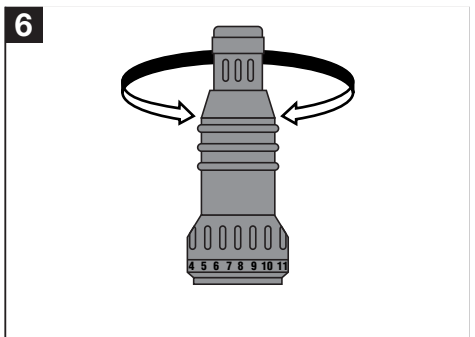
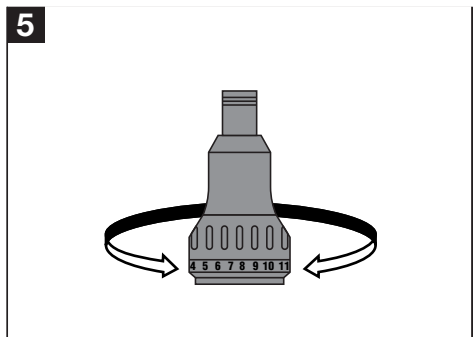
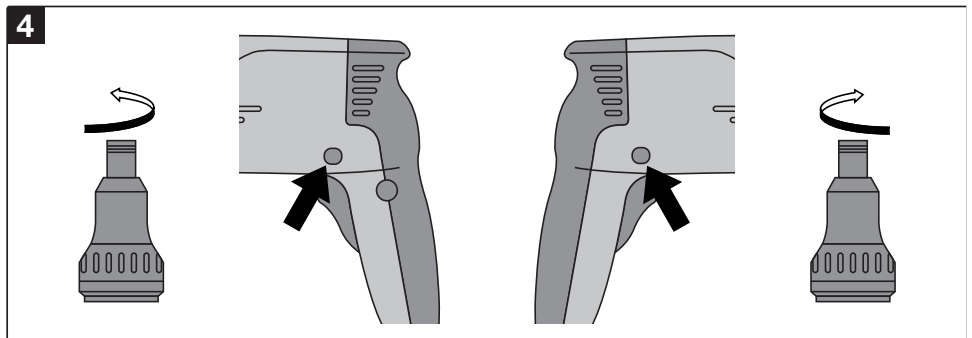
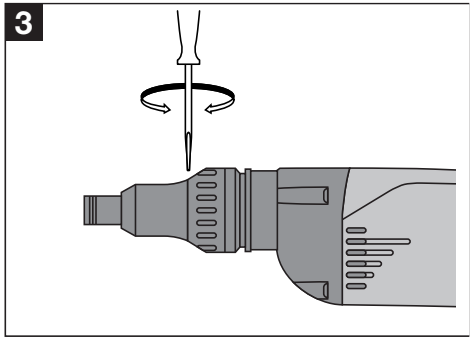
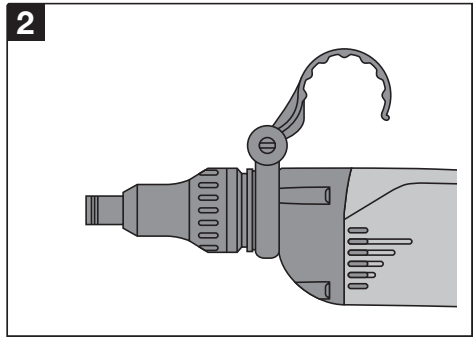
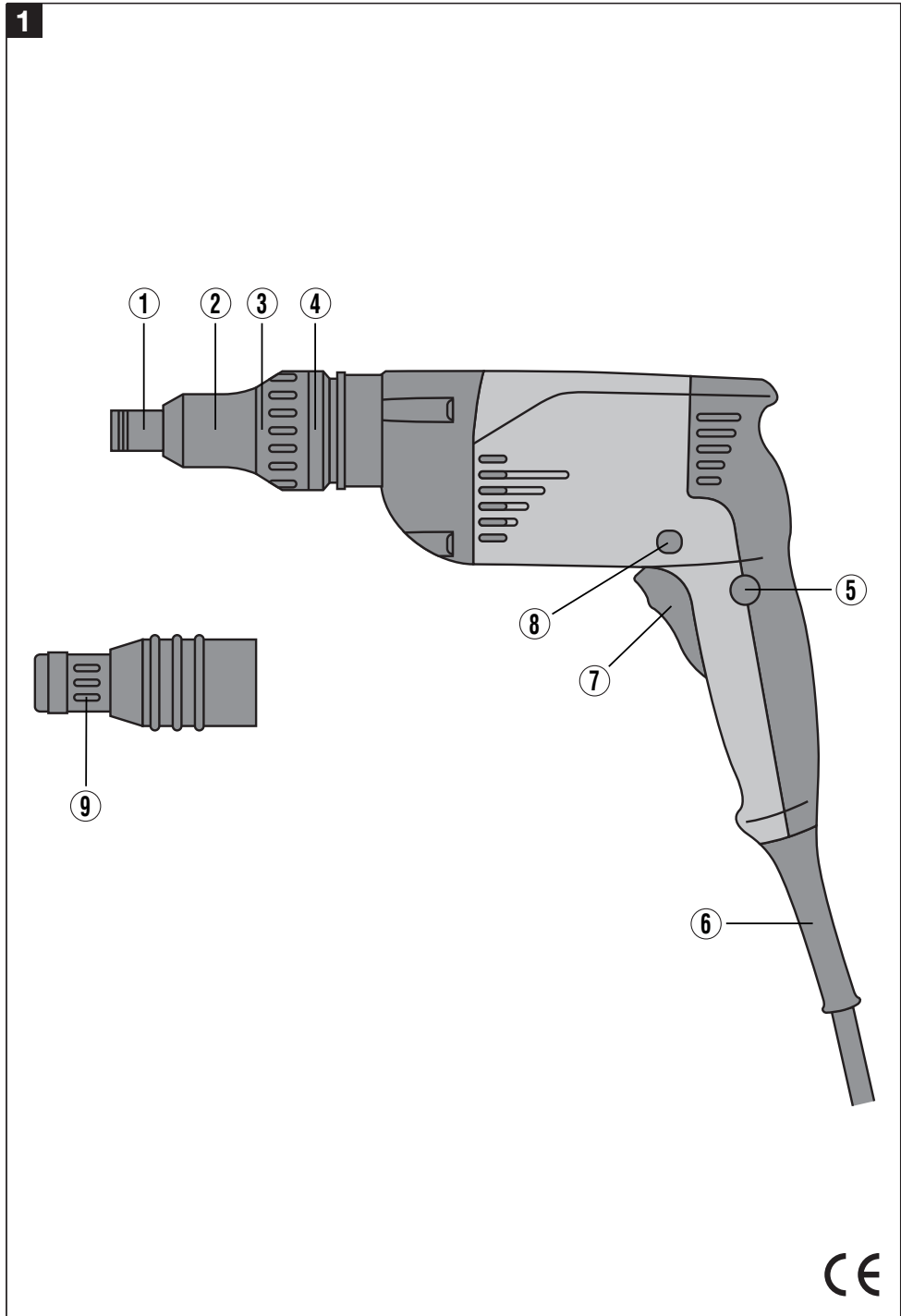


Bedienungsanleitung
Operating instructions
Mode d'emploi
Istruzioni d'uso
Gebruiksaanwijzing
Manual de instruções
Manual de instrucciones
Brugsanvisning
Käyttöohje
Bruksanvisning
Bruksanvisning
Οδηγίες χρήσεως
Kasutusjuhend
Lietošanas pamācība
Instrukcija

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378502/C





ST 1800 electric screwdriver

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 parts **1**

- ① Chuck
- ② Protective sleeve
- ③ Push-fit connection between depth gauge and electric screwdriver
- ④ Torque adjusting ring
- ⑤ Control switch lockbutton
- ⑥ Supply cord
- ⑦ Control switch
- ⑧ Forward/reverse pushbutton
- ⑨ Depth gauge adjusting ring

Contents	Page
1. General information	9
2. Description	10
3. Tools and accessories	10
4. Technical data	11
5. Safety precautions	11
6. Before use	13
7. Operation	13
8. Care and maintenance	14
9. Disposal	15
10. Warranty	15
11. EC declaration of conformity	16

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

Obligation signs



Wear eye protection



Wear ear protection

Symbols



Read the operating instructions before use.

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 ST 1800 electric screwdriver is referred to as "the tool".

Location of identification data on the tool

The type designation can be found on the rating 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: ST 1800

Serial no.:

en

2. Description

2.1 Use of the tool as directed

The ST 1800 is a hand-held, electric mains-powered tool for driving screws used to fasten sheet metal in metal construction applications.

It is used to drive or remove the recommended metal construction screws in the applicable materials.

The working environment may be a construction site of any kind where metal construction work is taking place. Use of a screw magazine is possible and provision has been made for this (SDT 25).

Only the specified screwdriving bits, magazine and accessories may be used with the tool. The general safety precautions listed in the operating instructions must be observed.

2.2 Main applications / torque settings

Application	Screw type / diameter in mm	Torque setting
Sheet metal on sheet metal	S-MD / 4.2	1–2
	S-MD / 4.8	1–8
Sheet metal on steel profile	S-MD 51 + S-MD 21 / 5.5	8–13
	S-MD 53 + S-MD 23 / 5.5	6–11
	S-MP 52 / 6.3	4–12
Sheet metal on steel beam	S-MD 55 + S-MD 25 / 5.5	2–7
	S-MP 53 / 6.5	8–14
Sheet metal on wood	S-MP 53 / 6.5	14 – max.
Fiber-cement board on steel profile	S-FD 03 / 6.3	6–12
Fiber-cement board on steel beam	S-FD 05 / 6.3	12–15
Fiber-cement board on wood	S-FD 01 / 6.5	12 – max.
Sandwich panel on steel profile	S-CD 63 / 5.5	2–7
Sandwich panel on steel beam	S-CD 65 / 5.5	2–9
Sandwich panel on wood	S-CDW 61 / 6.5	5–8

The above settings are intended as an approximate guideline. They result from evaluation of the characteristic curves for the torque clutches of tools tested in quality assurance tests and from torque values obtained from the corresponding screw tests.

Chuck: 1/4" hexagon socket

Operating controls

Control switch with lockbutton

Forward / reverse pushbutton

Torque adjusting ring

Depth gauge adjusting ring


Items supplied as standard equipment

- ST 1800 electric screwdriver
- S-GT17 depth gauge (for screws with sealing washers of up to 17 mm diameter)
- Operating instructions
- Toolbox or cardboard box (depending on version)

3. Accessories and insert tools

Scaffold hook	
Belt hook	
Depth gauge	S-GT 23 for screws with sealing washers of up to 23 mm in diameter
Depth gauge	S-GU13 for bit holder and bit (PH, PZ, TX etc.)
Hex. sockets	Sockets for hex. screws (7, 8, 10, 12, 1/4", 5/16", 3/8")
Decking tool	SDT25 for serial fastening applications
Bits and bit holders	TX, PH and TX bits; S-BH bit holder

4. Technical data

Tool	ST1800
Rated power	600 W (WH version (120 V) 670 W)
Rated voltage	100 V, 110–120 V, 220–240 V
Rated current	2.8 A at 230 V (6.1 A at 120 V)
Mains frequency	50 / 60 Hz
Weight of tool	1.8 kg
Dimensions (L×W×H)	308×72×265 mm
Chuck	1/4" hexagon socket
Speed under no load	0–1900 r.p.m.
Max. torque	22 Nm
Speed control	Electronic, by way of control switch
Torque adjustment	In 18 increments / 1.5–22 Nm
Forward / reverse	Pushbutton
Double insulation (as per EN 50144)	Protection class II 
Mechanical clutch	
Vibration-absorbing grip	
Interference immunity	As per EN 55014-2
Radio and television interference suppression	As per EN 55014-1

Noise and vibration information (measured in accordance with EN 50144):

Typical A-weighted sound power level (L_{WA}):	97 dB (A)
Typical A-weighted sound pressure level (L_{pA}):	84 dB (A)

It is recommended that ear protection is worn.

Typical weighted vibration at the grips:	< 2.5 m/s ²
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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.

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 workplace tidy. Objects which could cause injury should be removed from the working area. Untidiness at the workplace can lead to accidents.
- 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 tool.
- Wear goggles and wear breathing protection during jobs that create dust.

- Do not wear loose clothing, loose long hair or jewelry as these can become caught up in moving parts. Wear suitable headgear if you have long hair.
- Wear non-slip shoes or boots and always ensure that you have a secure stance.
- When working, keep other persons, particularly children, outside the range of the tool. Do not permit other persons to touch the tool. Keep other persons away from the area in which you are working.
- Avoid unfavorable body positions when working. Work from a secure stance and always stay in balance.
- 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.

5.3 General safety precautions



- Use the right electric tool for the job. Do not use the tool for purposes for which it was not intended. Use the tool only as directed and when it is in faultless condition.
- Avoid contact with rotating parts.
- Use only the original accessories or ancillary equipment listed in the operating instructions. Use of other insert tools or accessories may present a risk of personal injury.
- Take the influences of the surrounding area into account. Do not expose the tool to rain or snow and do not use it in damp or wet conditions. Do not use the tool where there is a risk of fire or explosion.
- Keep the grips dry, clean and free from oil and grease.
- Always hold the tool with both hands on the grips provided.
- Operate the tool only as directed and only when it is in faultless condition.
- When not in use, the tool must be stored in a dry place, locked up or out of reach of children.
- Avoid unintentional starting. Do not carry the tool with your finger on the on/off switch. Ensure that the on/off switch is in the "off" position before plugging the supply cord into the electric socket.
- 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).
- Switch the tool off before transporting it.
- 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.
- Check that moving parts function faultlessly and that they are not sticking or damaged. All parts must be correctly fitted and fulfil all requirements in order to ensure that the tool operates faultlessly.
- Check the electric tool for possible damage. Protective devices and any parts that may have suffered slight damage should be checked for correct operation and functionality before further use of the electric tool. Damaged safety devices or other damaged parts should be replaced or repaired properly by an authorized repair workshop unless otherwise indicated in the operating instructions.

5.3.1 Mechanical hazards



- Follow the instructions concerning care and maintenance.
- Check that the scaffold hook and belt hook are securely attached.

- Check that the insert tools used are compatible with the chuck system and that they are secured in the chuck or gear housing correctly.

5.3.2 Electrical hazards



- Protect yourself against electric shock. Avoid body contact with earthed / grounded objects, e.g. pipes, radiators, cookers and fridges.
- Check the condition of the supply cord at regular intervals and, if found to be damaged, have it replaced by a trained electrical specialist. Check the condition of extension cords at regular intervals and replace them if found to be damaged.
- Check the condition of the tool. Do not operate the tool if it is found to be damaged, if it 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 off and on properly.
- The tool may be repaired by trained electrical specialists only (Hilti service) using original Hilti spare parts. Failure to observe this point may present considerable risk to the user.
- Do not use the supply cord for purposes for which it is not intended. Never carry the tool by the supply cord. Do not pull the plug out of the socket by pulling the supply cord.
- 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.
- In the event of a power cut: Switch off and unplug the tool.
- Avoid using extension cords with multiple sockets for simultaneous use of several electric tools or appliances.
- 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.

5.4 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 operator and other persons in the immediate vicinity must always wear eye protection and ear protection while the tool is in use.



Wear eye protection



Wear ear protection

en

6. Before use



-NOTE-

The electric supply voltage must comply with the information given on the rating plate.

6.1 Fitting the scaffold hook 2

1. Unplug the supply cord from the electric socket.
2. Slide the scaffold hook over the tool from the front.
3. Rotate the scaffold hook into the desired position.
4. Secure the scaffold hook by tightening the knurled screw.

-CAUTION-

Check that the scaffold hook is attached securely to the tool.

6.2 Removing the protective sleeve 3

1. Unplug the supply cord from the electric socket.
2. Insert the tip of a screwdriver in the gap between the tool and the protective sleeve. Pry the protective sleeve away from the tool by turning the screwdriver.

3. Pull the protective sleeve off toward the front end of the tool.

6.3 Use of a generator or transformer

This tool can be powered by a generator or by way of a transformer connected to the construction site electric supply when the following conditions and specifications are fulfilled:

- Alternating current, power output at least 2600 W.
- The operating voltage must remain within +5% and –15% of the rated voltage at all times.
- Permissible frequency: 50–60 Hz; never above 65 Hz.
- The equipment must be fitted with an automatic voltage regulator with starting compensation.

Never operate other tools or appliances from the generator or transformer at the same time. Switching other tools or appliances off and on can result in sudden overvoltage or undervoltage which may cause damage to the tool.

7. Operation



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 tool.

-CAUTION-



- The screwdriving procedure may cause the material to splinter.
- Splintering material may injure the eyes.
- Wear eye protection.

7.1 Setting forward / reverse rotation 4

The forward / reverse selector pushbutton can be used to select the desired direction of rotation. An interlock prevents operation of the pushbutton while the motor is running.

- Pushbutton moved to the right (as seen with tool in working position) = forwards rotation.
- Pushbutton moved to the left (as seen with tool in working position) = reverse rotation.

7.2 Torque adjustment 5

1. Turn the torque adjusting ring to the desired torque setting (positions 1–18, see section 2.2 for information on applications and screw types).

7.3 Switching on / off

1. Plug the supply cord into the electric socket.

- Press the control switch slowly. The speed of the tool can thus be varied between 0 and maximum speed.

7.4 Lockbutton for sustained operation

Use of the lockbutton permits sustained operation (motor running constantly) without need to maintain pressure on the control switch.

7.4.1 Switching on in sustained operating mode

- Press the control switch as far as it will go.
- Press the lockbutton while maintaining pressure on the control switch and then release the control switch.

7.4.2 Switching off when running in sustained mode

- Press the control switch. The lockbutton returns to its original position.

7.5 Fitting the depth gauge 3

- Unplug the supply cord from the electric socket.
- Insert the tip of a screwdriver in the gap between the tool and the protective sleeve. Pry the protective sleeve away from the tool by turning the screwdriver.
- Pull the protective sleeve off toward the front end of the tool.
- Push the depth gauge onto the tool from the front.

7.6 Depth gauge adjustment 6

The depth gauge is used when driving screws with sealing washers.

Use a depth gauge suitable for the applicable sealing washer diameter (accessory).

The depth gauge can be adjusted to ensure correct compression of the sealing washer under the head of the screw.

7.6.1 Adjusting the depth gauge 7

To decrease compression of sealing washer

- Turn the depth gauge to the right (II).

To increase compression of sealing washer

- Turn the depth gauge to the left. Compression of the screw seal is increased (± 0.25 mm per click stop) (III).

7.7 Removing the depth gauge 8

- Pull the depth gauge off the tool toward the front.

7.8 Changing bits

The chuck is equipped with a $\frac{1}{4}$ " hexagon socket. This size is standardized (DIN 3126/ ISO 1173).

- Pull the depth gauge off the tool toward the front.
- Pull the sleeve to the rear and hold it in this position.
- The bit can then be pulled out or a different bit inserted.
- Release the sleeve and allow it to return to its original position.
- Refit the depth gauge to the tool.

7.9 Removing a previously driven screw

- Pull the depth gauge off the tool toward the front.
- Bring the forward / reverse pushbutton into the "reverse" position.
- The tool can now be used to remove the screw.

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.

8.2 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 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

8.4 Checks after care and maintenance

Check that the tool functions correctly (drive and remove a screw) after carrying out care and maintenance.

9. 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	Plastics recycling
Bearing plate	Plastic	Plastics recycling
Motor housing	Plastic	Plastics recycling
Grip cover	Plastic	Plastics recycling
Fan	Plastic	Plastics recycling
Motor (rotor and stator)	Steel and copper	Scrap metal
Supply cord	Copper, elastomer	Scrap metal
Gearing parts	Steel / Aluminium	Scrap metal
Screws, small parts	Steel	Scrap metal

10. 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 the 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 mandatory 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 dis-

covery 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.

11. EC declaration of conformity

Designation:	Electric screwdriver
Type:	ST 1800
Year of design:	2003

en We declare, on our sole responsibility, that this product complies with the following directives and standards: 73/23/EWG, 98/37/EG, 89/336/EWG, EN 50144-1, EN 50144-2-2, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.

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