This Product is Certified
Ce produit est certifié
Este producto esta certificado
Este produto está certificado
ORIGINAL OPERATING INSTRUCTIONS

SF 144-A / SFH 144-A cordless drill / driver

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.

Contents

1 General information
2 Description
3 Insert tools, accessories
4 Technical data
5 Safety instructions
6 Before use
7 Operation
8 Care and maintenance
9 Troubleshooting
10 Disposal
11 Manufacturer’s warranty - tools

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: caustic substances
## Obligation signs

- Wear eye protection
- Wear a hard hat
- Wear ear protection
- Wear protective gloves
- Wear breathing protection

## Symbols

- Read the operating instructions before use
- Return waste material for recycling.
- Volts
- Direct current

## 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:**

**Serial no.:**

## 2 Description

### 2.1 Use of the product as directed

The SF 144-A is a hand-held, cordless drill/driver for driving and removing screws and for drilling in steel, wood and masonry.

The SFH 144-A is a hand-held, cordless hammer drill/driver for driving and removing screws, for drilling in steel, wood and masonry and for hammer drilling in lightweight concrete and masonry.

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

Do not use the battery as a power source for other unspecified appliances.

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

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

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

Nationally applicable industrial safety regulations must be observed.

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

### 2.2 Chuck
Quick-release chuck

### 2.3 Switches
Speed-control switch
Two or three-gear selector switch
Forward / reverse switch

### 2.4 Grips
Pivotal side handle
Vibration-absorbing grip

### 2.5 Lubrication
Grease lubrication

### 2.6 The items supplied include (toolbox versions):
1. Power tool
2. Side handle
3. Operating instructions
4. Hilti toolbox

### 2.7 The items supplied include (cardboard box versions):
1. Power tool
2. Side handle
3. Operating instructions

### 2.8 Li-ion battery charge status

<table>
<thead>
<tr>
<th>LEDs light constantly</th>
<th>LEDs blink</th>
<th>Charge status C</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED 1,2,3,4</td>
<td>-</td>
<td>C ≥ 15 %</td>
</tr>
<tr>
<td>LED 1,2,3</td>
<td>-</td>
<td>50 % ≤ C &lt; 75 %</td>
</tr>
<tr>
<td>LED 1,2</td>
<td>-</td>
<td>25 % ≤ C &lt; 50 %</td>
</tr>
<tr>
<td>LED 1</td>
<td>-</td>
<td>10 % ≤ C &lt; 25 %</td>
</tr>
<tr>
<td>-</td>
<td>LED 1</td>
<td>C &lt; 10 %</td>
</tr>
</tbody>
</table>

### 3 Insert tools, accessories

<table>
<thead>
<tr>
<th>Designation</th>
<th>Short designation</th>
<th>Item number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit holder</td>
<td>S-BH 50</td>
<td>257257</td>
</tr>
<tr>
<td>Charger for Li-ion batteries</td>
<td>C 4/36</td>
<td></td>
</tr>
<tr>
<td>Charger for Li-ion batteries</td>
<td>C 4/36-ACS</td>
<td></td>
</tr>
<tr>
<td>Charger for Li-ion batteries</td>
<td>C 4/36-ACS TPS</td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td>B 144/2,6 Li-Ion</td>
<td>273114</td>
</tr>
</tbody>
</table>
### Designation
- **SF 144-A chuck**
- **SFH 144-A chuck**

### Item number, description
- SF 144-A chuck: 202477, Quick-release chuck
- SFH 144-A chuck: 202489, Quick-release chuck

### Technical data

#### Right of technical changes reserved.

<table>
<thead>
<tr>
<th><strong>Power tool</strong></th>
<th><strong>SF 144-A</strong></th>
<th><strong>SFH 144-A</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated voltage (DC voltage)</td>
<td>14.4 V</td>
<td>14.4 V</td>
</tr>
<tr>
<td>Weight</td>
<td>2.2 kg (4.85 lb)</td>
<td>2.4 kg (5.29 lb)</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>237 mm (9.33&quot;) x 85 mm (3.35&quot;) x 237 mm (9.33&quot;)</td>
<td>238 mm (9.37&quot;)</td>
</tr>
<tr>
<td>Speed in 1st gear</td>
<td>0...380/min</td>
<td>0...350/min</td>
</tr>
<tr>
<td>Speed in 2nd gear</td>
<td>0...1,440/min</td>
<td>0...1,360/min</td>
</tr>
<tr>
<td>Speed in 3rd gear</td>
<td>0...1,900/min</td>
<td></td>
</tr>
<tr>
<td>Torque with tool set to drilling symbol (soft/flexible joint)</td>
<td>Max. 33 Nm (Max. 24 lb/ft)</td>
<td>Max. 33 Nm (Max. 24 lb/ft)</td>
</tr>
<tr>
<td>Torque range (15 settings)</td>
<td>2...12 Nm (1...9 lb/ft)</td>
<td>2...12 Nm (1...9 lb/ft)</td>
</tr>
<tr>
<td>Hammering speed</td>
<td>34,200/min</td>
<td></td>
</tr>
<tr>
<td>Hammer drilling in masonry (max. length 80 mm)</td>
<td>#3...6 mm (0.12...0.24&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

#### Battery
- **B 144/2.6 Li-Ion**
  - Rated voltage: 14.4 V
  - Capacity: 2.6 Ah
  - Energy content: 37.44 Wh
  - Weight: 0.55 kg (1.21 lb)
  - Temperature monitoring: Yes
  - Type of cell: Li-Ion
  - No. of cells: 4

### 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, require to 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

**WARNING**

*Read all safety warnings and 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

a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.

b) 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.

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

5.1.2 Electrical safety

a) 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.

b) 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.

c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

d) 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.

e) Disconnect the plug from the power source 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.

d) 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.

e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

f) 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.

g) 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 Battery tool use and care

a) Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.

6.0を使うために

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

a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.

b) 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.

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

5.1.2 Electrical safety

a) 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.

b) 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.

c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

d) 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.

e) Disconnect the plug from the power source 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.

d) 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.

e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

f) 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.

g) 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 Battery tool use and care

a) Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
c) When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

d) Under abusive conditions, liquid may be ejected from the battery, avoid contact. If contact accidently occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

5.1.6 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 Drill safety warnings
a) Wear ear protectors when impact drilling. Exposure to noise can cause hearing loss.

b) Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.

c) Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring. Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.

5.3 Additional safety instructions

5.3.1 Personal safety
a) Hold power tool by insulated gripping surfaces when performing an operation where the fastener may contact hidden wiring. Fasteners contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.

b) Keep the grips dry, clean and free from oil and grease.

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) Activate the safety lock (forward / reverse switch in the middle position) before storing or transporting the power tool.

f) Children must be instructed not to play with the power tool.

g) The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.

h) WARNING: Some dust created by grinding, sanding, cutting and drilling contains chemicals known to cause cancer, birth defects, infertility or other reproductive harm; or serious and permanent respiratory or other injury. Some examples of these chemicals are: lead from lead-based paints, crystalline silica from bricks, concrete and other masonry products and natural stone, arsenic and chromium from chemically-treated lumber. Your risk from these exposures varies, depending on how often you do this type of work. To reduce exposure to these chemicals, the operator and bystanders should work in a well-ventilated area, work with approved safety equipment, such as respiratory protection appropriate for the type of dust generated, and designed to filter out microscopic particles and direct dust away from the face and body. Avoid prolonged contact with dust. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes, or to remain on your skin may promote absorption of harmful chemicals.

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.

c) Do not use batteries other than those approved for use with the applicable power tool or appliance. Use of other batteries or use of the battery for purposes for which it is not intended presents a risk of fire and explosion.

d) Observe the special instructions applicable to the transport, storage and use of Li-ion batteries.

f) Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).

5.3.4 Electrical safety

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...

Posted: 19.04.2017 | Doc-Nr: PUB/5128952/000/01
live, for example, when an electric cable is damaged accidentally. This presents a serious risk of electric shock.

5.3.5 Work area
a) Ensure that the workplace is well lit.
b) Ensure that the workplace is well ventilated. Exposure to dust at a poorly ventilated workplace may result in damage to the health.

5.3.6 Personal protective equipment
The user and any other persons in the vicinity must wear ANSI Z87.1-approved eye protection, a hard hat, ear protection, protective gloves and breathing protection while the machine is in use.

6 Before use

6.1 Battery use and care
NOTE
Battery performance drops at low temperatures. Never use the battery until the cells become fully discharged. Change to the second battery as soon as a drop in performance is noticed. Recharge the battery immediately so that it is ready for reuse.

Store the battery in a cool, dry place. Never store the battery where it is exposed to direct sunlight or sources of heat, e.g. on heaters / radiators or behind a motor vehicle windscreen. Batteries that have reached the end of their life must be disposed of safely and correctly to avoid environmental pollution.

6.2 Charging the battery
DANGER
Use only the Hilti batteries and Hilti chargers listed under “Accessories”.

6.2.1 Charging a new battery for the first time
A new battery must be charged correctly for the first time before use. This will ensure that the cells form correctly. Incorrect initial charging may have a permanent, negative effect on battery capacity. Please refer to the applicable battery charger’s operating instructions for information about initial charging.

6.2.2 Charging a previously used battery
Ensure that the outer surfaces of the battery are clean and dry before inserting it in the corresponding charger. Read the operating instructions for the charger for further information about the charging procedure. Li-ion batteries are ready for use at any time, even when only partly charged. Charging progress is indicated by the LED display (see charger operating instructions).

6.3 Fitting the battery
CAUTION
Before fitting the battery, check that the power tool is switched off and that the safety lock is engaged (forward/reverse switch in the middle position). Use only the Hilti batteries approved for use with this power tool.

CAUTION
Check that the terminals on the battery and in the power tool are free from foreign objects before inserting the battery in the power tool.

1. Push the battery into the power tool from below as far as it will go and until it is heard to engage with a click.
2. CAUTION A falling battery may present a risk of injury to yourself or others. Check that the battery is seated securely in the power tool.

6.4 Removing the battery
1. Press both battery release buttons.
2. Pull the battery downwards out of the power tool.
7 Operation

**CAUTION**
The tool may get hot during use. Wear protective gloves.

**CAUTION**
The power tool may suddenly swing to the side (rotate about its own axis) when drilling, hammer drilling or screwdriving. Always use the power tool with the side handle fitted and hold it securely with both hands.

**CAUTION**
To avoid injuries caused by the insert tool, wear protective gloves when changing insert tools.

### 7.1 Setting forward or reverse rotation

**NOTE**
The forward / reverse switch is used to select the direction of rotation of the drive spindle. An interlock prevents switching while the motor is running. The control switch is locked when the forward / reverse switch is in the middle position. Push the forward / reverse switch to the right (power tool held in working direction) to select forward rotation. Push the forward / reverse switch to the left (power tool held in working direction) to select reverse rotation.

### 7.2 Adjusting the side handle

1. Release the side handle clamping band by turning the handle counterclockwise.
2. Pivot the side handle into the desired position.
3. Tighten the side handle by turning the grip clockwise.
4. Check that it holds securely.

### 7.3 Speed selection

#### 7.3.1 Speed selection using the 2-speed gear switch (SF 144-A)

**NOTE**
The mechanical 2-speed gear switch can be used to select the speed range required. Speed with fully-charged battery: 1st gear: 0-380 r.p.m. or 2nd gear: 0-1440 r.p.m.

#### 7.3.2 Speed selection using the 3-speed gear switch (SFH 144-A)

**NOTE**
The mechanical 3-speed gear switch can be used to select the speed range required. Speed with fully-charged battery: 1st gear: 0-350 r.p.m., 2nd gear: 0-1360 r.p.m. or 3rd gear: 0-1900 r.p.m.

### 7.4 Switching on / off

**CAUTION**
To avoid damage to the power tool, the switch must be released (switched off) if the motor is stalled for more than 2-3 seconds. After stalling, the power tool must be allowed to run for 2 minutes under no load.

The speed of the power tool can be controlled smoothly (increased from zero to maximum) by pressing the control switch gradually.

### 7.5 Drilling

**CAUTION**
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.

#### 7.5.1 Fitting the drill bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Check that the connection end of the drill bit is clean. Clean the connection end if necessary.
3. Insert the drill bit in the chuck and then turn the chuck sleeve until tight.
4. Check that the drill bit is held securely (check by pulling).

#### 7.5.2 Drilling

1. Move the forward / reverse switch to the “Forward” position.
2. Turn the torque and operating mode setting ring to the drilling symbol.

#### 7.5.3 Removing the drill bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Open the quick-release chuck.
3. Pull the insert tool out of the chuck.

### 7.6 Hammer drilling (SFH 144-A)

#### 7.6.1 Fitting the drill bit

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Check that the connection end of the drill bit is clean. Clean the connection end if necessary.
3. Insert the drill bit in the chuck and then turn the chuck sleeve until tight.
4. Check that the drill bit is held securely (check by pulling).
### 7.6.2 Hammer drilling
1. Move the forward / reverse switch to the “Forward” position.
2. Turn the torque and operating mode setting ring to the hammer drilling symbol.

### 7.6.3 Removing the drill bit
1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Open the quick-release chuck.
3. Pull the insert tool out of the chuck.

### 7.7 Screwdriving
#### 7.7.1 Fitting the bit / bit holder
1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Insert the bit adapter in the chuck and then turn the chuck sleeve until tight.
3. Check that the bit adapter is held securely (check by pulling).
4. Fit the bit in the bit holder.

#### 7.7.2 Screwdriving
1. Set the forward / reverse switch to the desired direction of rotation.
2. Turn the torque and operating mode setting ring to the desired torque value.

#### 7.7.3 Removing the bit / bit holder
1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Remove the bit from the bit holder.
3. Open the quick-release chuck.
4. Remove the bit holder from the chuck.

### 7.8 Reading the charge status LED display on Li-ion batteries
**NOTE**
The charge status cannot be indicated while the power tool is in operation. Indication is given (LED 1 blinks) only when the battery is fully discharged or when it is too hot (temperature above 80°C).

The Li-ion battery features a charge status LED display. The charge status is indicated by the LEDs on the battery during charging (please refer to the operating instructions for the charger). When the battery is at rest (not in use), its charge status is indicated by the four LEDs on the battery for a time of three seconds after pressing one of the battery release buttons.

### 8 Care and maintenance

#### 8.1 Care of the insert tools
Clean off dirt and dust deposits adhering to the insert tools and protect them from corrosion by wiping the insert tools from time to time with an oil-soaked rag.

#### 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.

The outer casing of the power tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber material. 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.

#### 8.3 Care of the Li-ion battery
**Avoid entrance of moisture.**
Charge the battery fully before using it for the first time. In order to achieve maximum battery life, stop discharging the battery as soon as a significant drop in performance is noticed.

**NOTE**
If use of the power tool continues, further battery discharge will be stopped automatically before the battery cells suffer damage.

Charge the battery with the Hilti charger approved for use with Li-ion batteries.

**NOTE**
- A conditioning charge (as is required with NiCd or NiMH batteries) is not necessary.
- Interruption of the charging procedure has no negative effect on battery life.
- Charging can be started at any time with no negative effect on battery life. There is no memory effect (as with NiCd or NiMH batteries).
- For best results, batteries should be stored fully charged in a cool dry place. Avoid charging the battery in places subject to high ambient temperatures (e.g. at a window) as this has an adverse effect on battery life and increases the rate of self-discharge.
- If the battery no longer reaches full charge, it may have lost capacity due to aging or overstressing. It is possible to continue working with a battery in this condition but it should be replaced in good time.

8.4 Maintenance

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

9 Troubleshooting

<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The power tool doesn’t run.</td>
<td>The battery is discharged or fitted incorrectly.</td>
<td>The battery must be heard to engage with a click or, respectively, needs to be charged.</td>
</tr>
<tr>
<td>No hammering action.</td>
<td>The torque and operating mode setting ring are not set to the hammer drilling symbol.</td>
<td>Turn the torque and operating mode setting ring to the hammer drilling symbol.</td>
</tr>
<tr>
<td>The on / off switch can’t be pressed, i.e. the switch is locked.</td>
<td>The forward / reverse switch is in the middle position (transport lock engaged).</td>
<td>Push the forward / reverse switch to the left or right.</td>
</tr>
<tr>
<td>The battery runs down more quickly than usual.</td>
<td>Battery condition is not optimal.</td>
<td>Have battery condition diagnosed by Hilti Service or replace with a new battery.</td>
</tr>
<tr>
<td>The battery doesn’t engage with an audible click.</td>
<td>The retaining lugs on the battery are dirty.</td>
<td>Clean the retaining lugs and check that the battery engages securely. Contact Hilti Service if the problem persists.</td>
</tr>
<tr>
<td>The power tool or the battery gets very warm.</td>
<td>Electrical fault.</td>
<td>Switch the power tool off immediately, remove the battery and contact Hilti Service.</td>
</tr>
</tbody>
</table>

10 Disposal

CAUTION
Improper disposal of the equipment may have serious consequences: the burning of plastic components generates toxic fumes which may present a health hazard. Batteries may explode if damaged or exposed to very high temperatures, causing poisoning, burns, acid burns or environmental pollution. Careless disposal may permit unauthorized and improper use of the equipment. This may result in serious personal injury, injury to third parties and pollution of the environment.

CAUTION
Dispose of defective batteries without delay. Keep them out of reach of children. Do not attempt to open or dismantle batteries and do not dispose of them by incineration.
CAUTION
Dispose of the batteries in accordance with national regulations or return them to Hilti.

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.

11 Manufacturer’s warranty - tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating instructions, 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 over the entire lifespan of the tool. 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.

For repair or replacement, send the tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

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