

# SF 14-A SFH 14-A

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English

# SF 14-A SFH 14-A

**Original operating instructions** 



# 1 Information about the documentation

# 1.1 About this documentation

- Read this documentation before initial operation or use. This is a prerequisite for safe, trouble-free handling and use of the product.
- Observe the safety instructions and warnings in this documentation and on the product.
- Always keep the operating instructions with the product and make sure that the operating instructions are with the product when it is given to other persons.

# 1.2 Explanation of symbols used

# 1.2.1 Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used:

# **DANGER**

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

# A WARNING

# WARNING !

 Draws attention to a potential threat of danger that can lead to serious injury or fatality.

#### △ CAUTION CAUTION !

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

# 1.2.2 Symbols in the documentation

The following symbols are used in this document:

<b>③</b>	Read the operating instructions before use.
i	Instructions for use and other useful information
8	Dealing with recyclable materials
$\overline{X}$	Do not dispose of electric equipment and batteries as household waste

# 1.2.3 Symbols in the illustrations

The following symbols are used in illustrations:

#### International Control of Control

2	These numbers refer to the corresponding illustrations found at the beginning of these operating instructions
3	The numbering reflects the sequence of operations shown in the illustrations and may deviate from the steps described in the text
Ð	Item reference numbers are used in the <b>overview illustrations</b> and refer to the numbers used in the <b>product overview section</b>
0	This symbol is intended to draw special attention to certain points when handling the product.

# 1.3 Product-dependent symbols

# 1.3.1 Symbols on the product

The following symbols are used on the product:

n <sub>0</sub>	Rated speed under no load
/min	Revolutions per minute
V	Volts
===	Direct current (DC)
۶T	Hammer drilling
1	Drilling without hammer action
	Forward / reverse
đ	Wireless data transfer

# 1.4 Product information

products are designed for professional users and only trained, authorized personnel are permitted to operate, service and maintain the products. This personnel must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

The type designation and serial number are printed on the rating plate.

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 Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

Product information



Drill/driver	SF 14-A   SFH 14-A
Generation:	01
Serial no.:	

# 1.5 Declaration of conformity

We declare, on our sole responsibility, that the product described here complies with the applicable directives and standards. A copy of the declaration issued by the certification department can be found at the end of this documentation.

The technical documentation is filed here:

Hilti Entwicklungsgesellschaft mbH | Tool Certification | Hiltistrasse 6 | 86916 Kaufering, Germany

# 2 Safety

# 2.1 General power tool safety warnings

▲ WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below 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.

# Work area safety

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

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- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

# Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

# Personal safety

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

# Power tool use and care

- 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.
- 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.
- Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- 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.
- Maintain power tools and accessories. 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.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- 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.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

#### Battery tool use and care

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.

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- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- 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.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130° C (265 °F) may cause explosion.
- Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

# Service

- 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.
- Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

# 2.2 Drill safety warnings

# Safety instructions when using long drill bits

- Never operate at higher speed than the maximum speed rating of the drill bit. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- Always start drilling at low speed and with the bit tip in contact with the workpiece. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- Apply pressure only in direct line with the bit and do not apply excessive pressure. Bits can bend causing breakage or loss of control, resulting in personal injury.

# 2.3 Additional safety precautions for screwdrivers

# Personal safety

- Use the product only when it is in perfect working order.
- Never tamper with or modify the tool in any way.
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- Use the auxiliary grips supplied with the power tool. Loss of control can cause personal injury.
- Always hold the tool firmly with both hands on the grips provided. Keep the grips clean and dry.
- Do not touch rotating parts risk of injury!
- Wear suitable protective glasses, a hard hat, ear protection, protective gloves and light respiratory protection while using the power tool.
- ▶ Wear protective gloves also when changing the tool. Touching the accessory tool can result in cuts and burns.
- ► Wear eye protection. Flying fragments can injure the body and eyes.
- Before starting work, check the hazard class of the dust that will be produced when working. Use an industrial vacuum cleaner with an officially approved protection class in compliance with the locally applicable dust protection regulations. Dust from materials such as lead-based paint, certain types of wood and concrete/masonry/stone containing quartz, minerals or metal can be harmful to health.
- Make sure that the workplace is well ventilated and, where necessary, wear a respirator appropriate for the type of dust generated. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory or other diseases among operators or bystanders. Certain kinds of dust are classified as carcinogenic such as oak and beech dust, especially in conjunction with additives for wood conditioning (chromate, wood preservative). Only specialists are permitted to handle material containing asbestos.
- Take breaks and do physical exercises to improve the blood circulation in your fingers. Exposure to vibration during long periods of work can lead to disorders of the blood vessels and nervous system in the fingers, hands and wrists.

# Electrical safety

 Before beginning work, check the working area for concealed electric cables or gas and water pipes. External metal parts of the power tool may give you an electric shock if you damage an electric cable accidentally.

# Power tool use and care

- Immediately switch off the power tool if the accessory tool jams. The power tool might twist off-line.
- Wait until the power tool stops completely before you lay it down.

# 2.4 Battery use and care

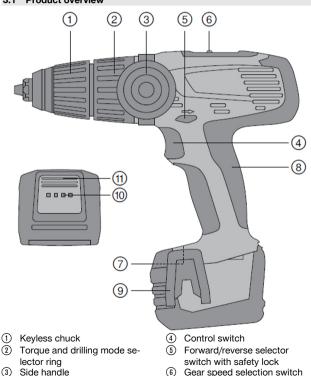
- Observe the special regulations and instructions applicable to the transport, storage and use of Li-ion batteries.
- ► Do not expose batteries to high temperatures, direct sunlight or fire.
- Do not disassemble, crush or incinerate batteries and do not subject them to temperatures over 80 °C.

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- Do not use or charge batteries that have suffered mechanical impact. have been dropped from a height or show signs of damage. In this case, always contact your Hilti Service.
- If the battery is too hot to touch it may be defective. In this case, place the product in a non-flammable location, well away from flammable materials, where it can be kept under observation and allowed to cool down. In this case, always contact your Hilti Service.

#### Description 3

#### 31 Product overview



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- 8 Grip
- 9 Belt hook (optional)

- Battery state of charge indicator
- Release button with additional function (charge state display activation)

# 3.2 Intended use

# SF 14-A

The SF 14-A is a hand-held cordless drill / driver. It is designed for driving and removing screws and for drilling in steel, wood and plastic.

# SFH 14-A

The SFH 14-A is a hand-held cordless drill / driver. It is designed for drilling in steel, wood and plastic, for hammer drilling in cellular concrete and masonry, and for driving and removing screws.

- ► Use only Hilti Li-ion batteries of the B18 / B22 series with this product.
- ▶ Use only the Hilti battery chargers of the C4/36 series for these batteries.

# 3.3 Overload and overheating protection

The power tool is equipped with an electronic system to protect against overloading and overheating. The power tool switches itself off automatically in the event of overloading or overheating. After releasing the control switch, the power tool may not restart immediately when the switch is pressed again (while the power tool is cooling down).

Overloading or overheating are not indicated by the charge status display.

# 3.4 Li-ion battery display

The charge status of the Li-ion battery and malfunctions of the power tool are indicated by the display on the Li-ion battery. The charge status of the Li-ion battery is displayed after pressing one of the two battery release buttons.

Status	Meaning
4 LEDs light up.	Charge status: 75 % to 100 %
3 LEDs light up.	Charge status: 50 % to 75 %
2 LEDs light up.	Charge status: 25 % to 50 %
1 LED lights up.	Charge status: 10 % to 25 %
1 LED flashes, the power tool is in working order.	Charge status: < 10 %
1 LED flashes, the power tool is not in working order.	The battery has overheated or is completely discharged.



Status	Meaning
4 LEDs flash, the power tool is not	The power tool is overloaded or has
in working order.	overheated.

Battery charge status cannot be displayed while the control switch is pressed and for up to 5 seconds after releasing the control switch. If the battery display LEDs blink, please observe the instructions given in the Troubleshooting section.

# 3.5 Items supplied

Drill / driver, side handle, operating instructions.

Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local **Hilti** Center or online at: **www.hilti.group** 

# 4 Technical data

#### 4.1 Technical data

	SF 14-A	SFH 14-A
Rated voltage	14.4 V	14.4 V
Weight	2.3 kg	2.4 kg
	(5.1 lb)	(5.3 lb)
Speed in 1st gear	0 /min	0 /min
	400 /min	400 /min
Speed in 2nd gear	0 /min	0 /min
	1,300 /min	1,300 /min
Speed in 2nd gear	0 /min	0 /min
	2,250 /min	2,250 /min
Torque	2 Nm	2 Nm
	12 Nm	12 Nm
Hammering speed when drilling in 3rd	•/•	40,500 /min
gear		
Hammer drilling in masonry (max. length	•/•	4 mm
100 mm)		12 mm

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	SF 14-A	SFH 14-A
Ambient temperature for operation	−17 °C	−17 °C
	60 °C	60 °C
	(1 °F	(1 °F
	140 °F)	140 °F)
Storage temperature	−20 °C	−20 °C
	70 °C	70 °C
	(−4 °F	(−4 °F
	158 °F)	158 °F)

# 4.2 Battery

Battery operating voltage	14.4 V
Ambient temperature for operation	−17 °C 60 °C (1 °F 140 °F)
	(1 °F 140 °F)
Storage temperature	−20 °C 40 °C (−4 °F 104 °F)
	(−4 °F 104 °F)
Battery charging starting temperature	−10 °C 45 °C (14 °F 113 °F)
	(14 °F 113 °F)

# 5 Preparations at the workplace

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# Risk of injury by inadvertent starting!

- ▶ Before inserting the battery, make sure that the product is switched off.
- Remove the battery before making any adjustments to the power tool or before changing accessories.

Observe the safety instructions and warnings in this documentation and on the product.

# 5.1 Charging the battery

- 1. Before charging the battery, read the operating instructions for the charger.
- 2. Make sure that the contacts on the battery and the contacts on the charger are clean and dry.
- 3. Use an approved charger to charge the battery.

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# 5.2 Inserting the battery

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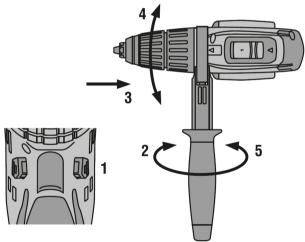
# Risk of injury by short circuit or falling battery!

- Before inserting the battery, make sure that the contacts on the battery and the contacts on the product are free of foreign matter.
- Make sure that the battery always engages correctly.
- 1. Charge the battery fully before using it for the first time.
- Push the battery into the battery holder until it engages with an audible click.
- 3. Check that the battery is seated securely.

# 5.3 Removing the battery

- 1. Press the release buttons on the battery.
- 2. Pull the battery out of its holder in the device.

# 5.4 Adjusting the side handle



Adjust the side handle to the desired position.

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# 5.5 Fitting the belt hook (optional)

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#### Risk of injury by falling power tools!

Check that the belt hook is fitted securely before beginning work.

The belt hook enables you to attach suitable power tools to your belt, where they are close to your body. It can be fitted to allow attachment on the left or right side of the body.



- 1. Remove the battery from the power tool.
- 2. Secure the belt hook with 2 screws to the base of the power tool.
- 3. Check that belt hook and power tool are secure.

# 5.6 Fitting the accessory tool

- 1. Set the forward/reverse switch to the middle position or remove the battery from the power tool.
- Check that the connection end of the accessory tool is clean. Clean the connection end if necessary.
- 3. Open the keyless chuck.
- 4. Insert the accessory tool into the keyless chuck and then turn the chuck firmly by hand until tight and several clicks are heard.
- 5. Check that the accessory tool is held securely.

# 6 Operation

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# Risk of injury by short circuit or falling battery!

- Before inserting the battery, make sure that the contacts on the battery and the contacts on the product are free of foreign matter.
- Make sure that the battery always engages correctly.

Observe the safety instructions and warnings in this documentation and on the product.



# 6.1 Selecting the gear



► Select the desired gear by adjusting the two gear selector switches.

# 6.2 Setting forward or reverse rotation

An interlock prevents switching while the motor is running. The control switch is locked when the forward/reverse switch is in the middle position (safety lock).



Set the forward/reverse switch to the desired direction of rotation.

# 6.3 Switching on

Press the control switch.

Speed can be controlled steplessly right up to maximum by varying how far the control switch is pressed in.

# 6.4 Screwdriving

- 1. Set the torque and operating mode selector ring to the required torque.
- 2. Set the forward/reverse switch to the desired direction of rotation.

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# 6.5 Drilling

- 1. Set the torque and operating mode selector ring to the 💈 symbol.
- 2. Set the forward/reverse switch to the "forward" position.
- 3. Switch the drill / driver on. → page 14

# 6.6 Hammer drilling

SFH 14-A

- 1. Set the selector ring to the "Hammer drilling" position **[T**.
- 2. Switch the drill / driver on. → page 14

# 6.7 Switching off

Release the control switch.

# 6.8 Removing the accessory tool

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

# 7 Care and maintenance

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#### Risk of injury with battery inserted !

 Always remove the battery before carrying out care and maintenance tasks!

# Care and maintenance of the tool

- Carefully remove stubborn dirt.
- · Clean the air vents carefully with a dry brush.
- Use only a slightly damp cloth to clean the casing. Do not use cleaning agents containing silicone as these can attack the plastic parts.

# Care of the Li-ion batteries

- · Keep the battery free from oil and grease.
- Use only a slightly damp cloth to clean the casing. Do not use cleaning agents containing silicone as these may attack the plastic parts.
- · Avoid ingress of moisture.

# Maintenance

- Check all visible parts and controls for signs of damage at regular intervals and make sure that they all function correctly.
- Do not operate the product if signs of damage are found or if parts malfunction. Have it repaired immediately by Hilti Service.

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- After cleaning and maintenance, fit all guards or protective devices and check that they function correctly.
- To help ensure safe and reliable operation, use only genuine Hilti spare parts and consumables. Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local **Hilti Store** or online at: **www.hilti.group**.

# 8 Transport and storage of cordless tools

# Transport

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# Accidental starting during transport !

- Always transport your products with the batteries removed!
- Remove the battery.
- Never transport batteries in bulk form (loose, unprotected).
- Check the tool and batteries for damage before use after long periods of transport.

#### Storage

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# Accidental damage caused by defective or leaking batteries !

- Always store your products with the batteries removed!
- ▶ Store the tool and batteries in a place that is as cool and dry as possible.
- Never store batteries in direct sunlight, on heating units or behind a window pane.
- Store the tool and batteries in a place where they cannot be accessed by children or unauthorized persons.
- Check the tool and batteries for damage before use after long periods of storage.

# 9 Troubleshooting

If the trouble you are experiencing is not listed in this table or you are unable to remedy the problem by yourself, please contact **Hilti** Service.

#### 9.1 Troubleshooting

Trouble or fault	Possible cause	Action to be taken
The power tool does not work.	The battery is not fully inserted.	<ul> <li>Push the battery in until it engages with an audible double click.</li> </ul>

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Trouble or fault	Possible cause	Action to be taken
The power tool does not work.	Low battery.	<ul> <li>Change the battery and charge the empty battery.</li> </ul>
The power tool doesn't work and all four LEDs blink.	The power tool has been overloaded briefly.	<ul> <li>Release the control switch and then press it again.</li> </ul>
	The overheating cut-out has been activated.	<ul> <li>Allow the power tool to cool down. Clean the air vents.</li> </ul>
The power tool does not work and one LED flashes.	Low battery.	<ul> <li>Change the battery and charge the empty battery.</li> </ul>
	The battery is too hot or too cold.	<ul> <li>Bring the battery to the recommended op- erating temperature.</li> </ul>
The on/off button cannot be pressed, i.e. the button is locked.	The forward/reverse selector switch is in the middle position.	<ul> <li>Push the forward/reverse switch to the left or right.</li> </ul>
The battery runs down more quickly than usual.	Very low ambient tem- perature.	<ul> <li>Allow the battery to warm up slowly to room temperature.</li> </ul>
The battery does not engage with an audible double click.	The retaining lugs on the battery are dirty.	<ul> <li>Clean the retaining lugs and push the battery in until it engages. Contact</li> <li>Hilti Service if the problem persists.</li> </ul>
The tool or battery gets very hot.	The tool is overloaded (application limits ex- ceeded).	<ul> <li>Pay attention to the power and perfor- mance rating of the product before using it, i.e check its suitabil- ity for the job on hand. See the "Technical data" section.</li> </ul>
No hammering ac- tion.	The operating mode is not set correctly at the selector ring.	<ul> <li>Set the selector ring to the "Hammer drilling" position 21.</li> </ul>



# 9.2 Disposal

Most of the materials from which **Hilti** tools and appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can be returned to **Hilti** for recycling. Ask **Hilti** Service or your Hilti representative for further information.

# Battery disposal

Improper disposal of batteries can result in health hazards from leaking gases or fluids.

- DO NOT send batteries through the mail!
- Cover the terminals with a non-conductive material (such as electrical tape) to prevent short circuiting.
- Dispose of your battery out of the reach of children.
- Dispose of the battery at your Hilti Store, or consult your local governmental garbage disposal or public health and safety resources for disposal instructions.



 Do not dispose of power tools, electronic equipment or batteries as household waste!

# 10 Manufacturer's warranty

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

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