



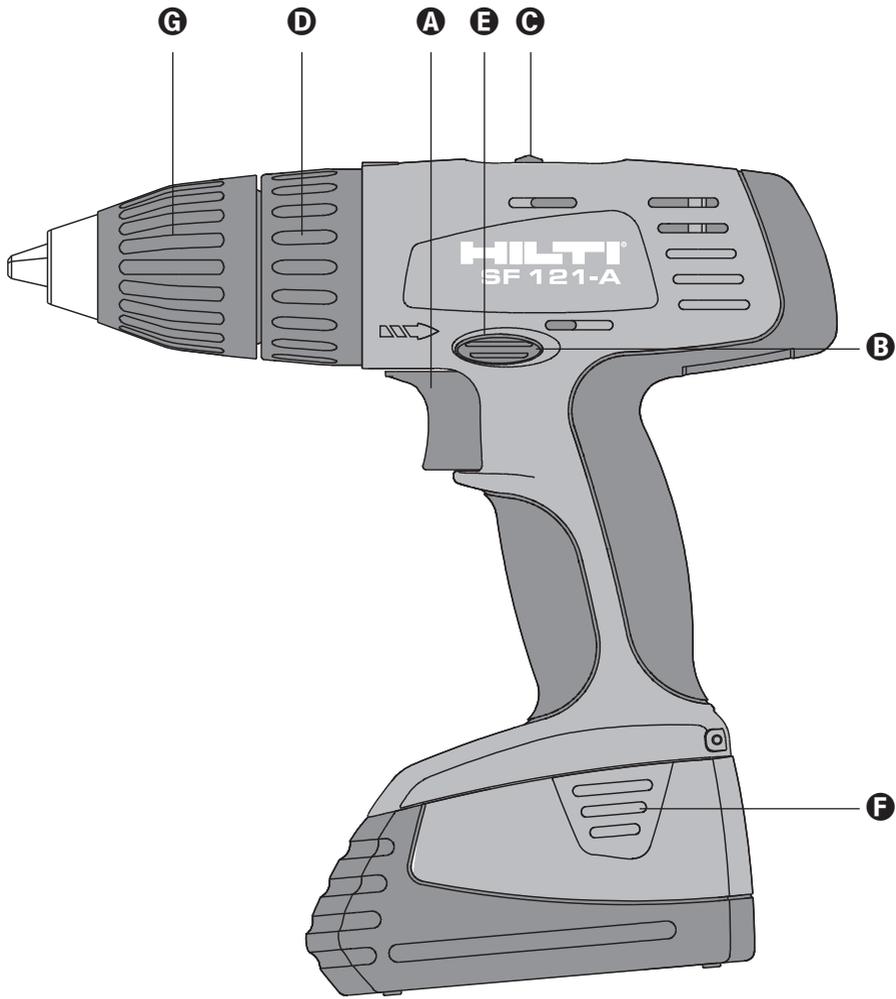
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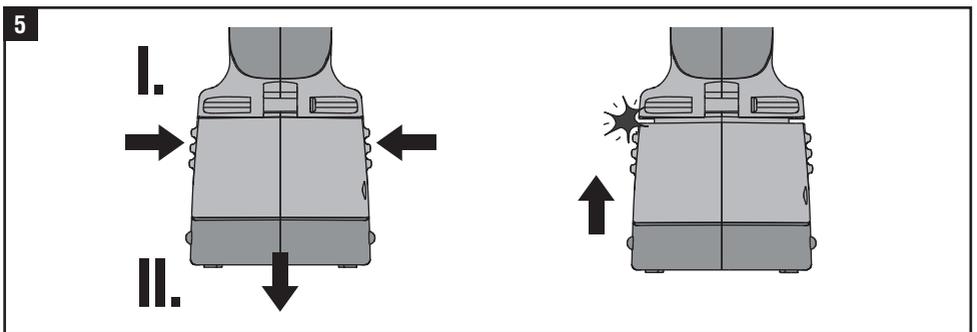
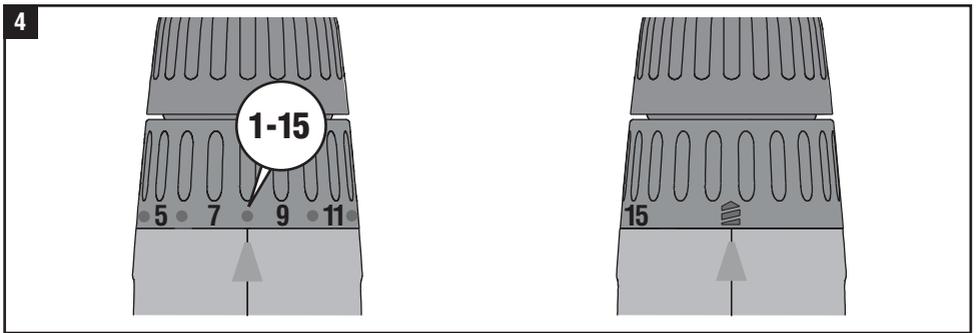
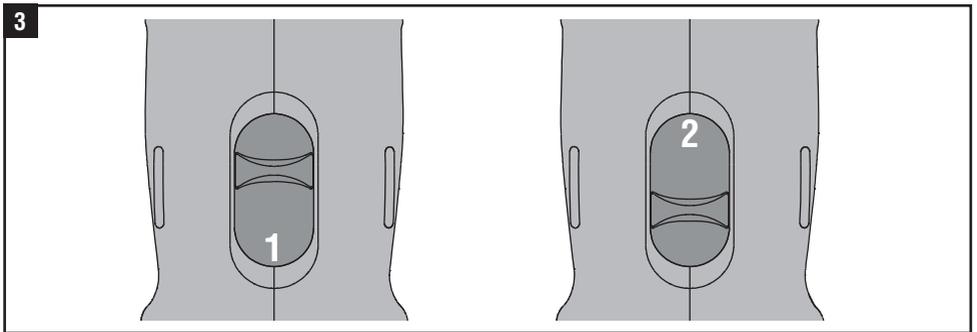
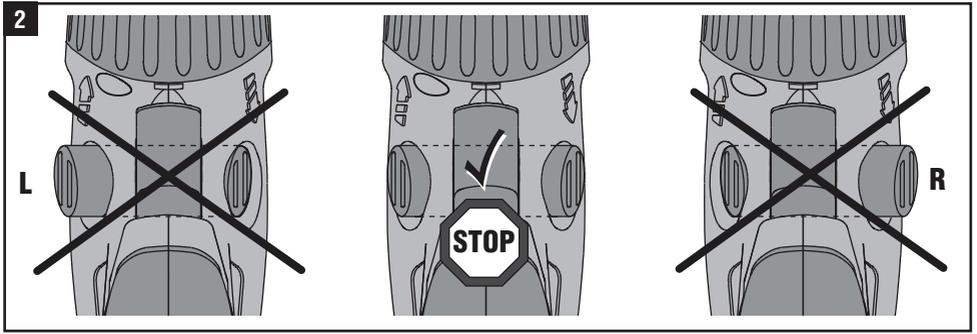
Operating instructions

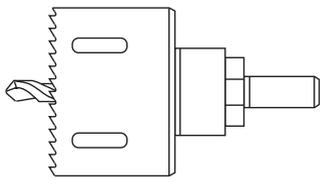
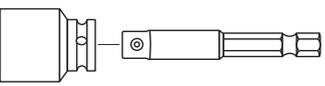
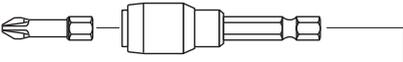
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HILTI

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ORIGINAL OPERATING INSTRUCTIONS

SF 121-A battery drill driver

It is important 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 component parts **1**

- A** Switch with electronic speed control
- B** Reversing switch
- C** Two-speed switch
- D** Torque clutch setting ring
- E** Motor brake
- F** Battery release button (two)
- G** Quick-release chuck

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1. General information

 In these operating instructions, this symbol indicates points of particular importance to safety. The instructions at these points must always be observed in order to avoid the risk of serious injury.

 Caution: high voltage

Symbols



Read the operating instructions before use.



Return waste material for recycling.

1 The numbers refer to the illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while you read the operating instructions.

In these operating instructions, the word "tool" always refers to the SF 121-A with battery.

 **The following conditions must always be observed when the tool is in use:**

- The tool is for hand-held use only.
- Do not use the tool in places where the surrounding conditions may present a risk of explosion.

2. Technical data

SF 121-A battery drill driver

Voltage:	12 Volt
Weight as per EPTA-Procedure 01/2003:	2.2 kg
Dimensions (l×h×w):	220×231×72 mm
Speed (no load):	1st speed: 0–400 r.p.m. 2nd speed: 0–1300 r.p.m.
Chuck / Quick-release chuck capacity:	1.5–13 mm
Torque:	max. 21 Nm (set at drilling symbol)
Torque adjustment:	1.5–10 Nm (at 15 settings)
Speed control:	electronic via on-off switch
Reversing switch:	electronic with switching lock when running
Spindle lock:	when the drill driver is switched off
Motor brake:	activated by the control switch
Dust-tight enclosure and permanent lubrication (maintenance free)	

-NOTE-

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure. The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period. An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period. Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Noise and vibration information (according to EN 60745):

Typical A-weighted noise pressure level: < 70 dB (A)

For the given sound power level as per EN 60745, the tolerance is 3 dB.

Wear ear protection!

Triaxial vibration value (vibration vector sum) measured in accordance with EN 60745-2-1 Drilling in metal, (a _h , v)	< 2.5 m/s ²
measured in accordance with EN 60745-2-2 Screwdriving without impact, (a _h):	< 2.5 m/s ²
Uncertainty (K) for triaxial vibration value:	1.5 m/s ²

Battery	SFB 121	SFB 126
Voltage:	12 Volt	12 Volt
Capacity:	12 Volt×2.0 Ah = 24 Wh	12 Volt×3.0 Ah = 36 Wh
Weight:	0.72 kg	0.77 kg
Temperature monitoring:	yes	yes
Type of cell:	nickel-cadmium Sub C design	nickel-metal hydrid Sub C design
No. of cells:	10	10

Right of technical modifications reserved

2.1 Applications

Type of screw / application	Size	Speed
Driving chipboard screws	6×60 mm dia.	1st (low) speed
Driving wood screws into plastic anchors	–	1st (low) speed
Installing DX stud EM8	–	1st (low) speed
Driving self-drilling screws	S-MD01 4.8×19 mm	2nd (high) speed
Drilling into softwood / particle board	15 mm dia.	2nd (high) speed
Drilling into with a hole saw	68 mm dia.	2nd (high) speed
Drilling into with a HSS twist-drill	10 mm dia.	2nd (high) speed

2.2 Correct use

- Driving and removing screws
- Drilling in steel and wood

The working environment may be on a construction site or in a workshop and may consist of renovation, conversion or new building work.

3. Safety rules

3.1 General safety rules

-WARNING- Read all instructions! *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.*

SAVE THESE INSTRUCTIONS

3.1.1 Work area

- Keep the work area clean and well lit.** *Cluttered and dark areas invite accidents.*
- 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.*

3.1.2 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 car-**

rying, 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 approved for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

3.1.3 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 safety equipment. Always wear eye protection.** *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- Avoid accidental starting. Ensure the switch is in the off position before plugging in.** *Carrying power tools with your finger on the switch or plugging in 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.*
- 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 these devices can reduce dust related hazards.

3.1.4 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 and in the manner intended for the particular type of power tool, 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.*

3.1.5 Battery tool use and care

- a) **Ensure the switch is in the off position before inserting battery pack.** *Inserting the battery pack into power tools that have the switch on invites accidents.*
- b) **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.*
- c) **Use power tools only with specifically designated battery packs.** *Use of any other battery packs may create a risk of injury and fire.*
- d) **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.*

- e) **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.*

3.1.6 Service

- a) **Have your power tool serviced by a qualified repair person using only genuine replacement parts.** *This will ensure that the safety of the power tool is maintained.*

3.2 Additional safety precautions

3.2.1 Personal safety

- a) **Breathing protection must be worn when the tool is used without a dust removal system for work that creates dust.**
- b) **The tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
- c) **Children must be instructed not to play with the tool.**
- d) **Dust from material such as paint containing lead, some wood species, minerals and metal may be harmful. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory diseases to the operator 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). Material containing asbestos must only be treated by specialists. Where the use of a dust extraction device is possible it shall be used. To achieve a high level of dust collection, use a suitable vacuum cleaner of the type recommended by Hilti for wood dust and/or mineral dust together with this tool. Ensure that the workplace is well ventilated. The use of a dust mask of filter class P2 is recommended. Follow national requirements for the materials you want to work with.**

3.2.2 Power tool use and care

- a) **Secure the workpiece. Use clamps or a vice to hold the workpiece in place.** *The workpiece is thus held more securely than by hand and both hands remain free to operate the tool.*
- b) **Ensure that the insert tools used are equipped with the appropriate connection end system and that they are properly fitted and secured in the chuck.**
- c) **Hold tool 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.*

3.2.3 Electrical safety

- a) **Before beginning work, check the working area (e.g. with a metal detector) to ensure that no concealed**

electric cables or gas and water pipes are present.
External metal parts of the tool may become live if, for example, an electric cable is damaged inadvertently. This presents a serious risk of electric shock.

3.2.4 Work area

- a) **Ensure that the workplace is well lit.**
- b) **Ensure that the workplace is well ventilated.** *Poorly ventilated workplaces may be injurious to the health due to exposure to dust.*

3.2.5 Personal protective equipment

The user and any other persons in the vicinity must wear suitable eye protection and protective gloves when the tool is in use. Breathing protection must be worn if no dust removal system is used.



Wear eye protection



Wear protective gloves



Wear breathing protection

4. Before use

  It is essential that the safety precautions printed in these operating instructions are read and observed before the tool is used.

 The SF121-A may be used only with the SFB 121 or SFB 126 battery.

 Before it is used for the first time, it is essential that a new battery is charged for 24 hours in normal charging mode or up to 12 hours using the conditioning charging mode, thus permitting “forming” of the battery cells to take place.

At low temperatures: Battery performance drops at low temperatures. Store the battery at room temperature when not in use.

At high temperatures: Do not store a battery where it may be subjected to high temperatures (e.g. exposed to the sun, at a window, behind a car windscreen or on a radiator).

Do not completely run down the battery. The cells can be damaged if the battery is completely discharged.

5. Operation

Insert tool insertion and removal

 Use the safety catch **2** as protection against unintentional switching on during transport or when inserting or removing an insert tool.

Quick-release chuck

An insert tool can be clamped or released without a chuck key. When the drill driver is switched off by the on-off control switch, the spindle is locked. This is a help when opening / tightening the quick-release chuck.

Battery removal

Battery release button **5**

If the battery has to be changed, press in the two release buttons using two fingers and pull the battery out of the drill driver.

Battery insertion

Push in the battery as far as it will go. There must be an audible click.

Only the Hilti SFB 121 or SFB 126 batteries may be used.

Battery charging

Only the Hilti C 7/24, C 7/36-ACS, SFC 7/18, TCU 7/36 or SBC 12H battery charger may be used. Please refer to the charger operating instructions for the charging process.

If the SFB 126 battery is charged in the old SBC 12H charger, a loss of capacity must be expected with this kind of charging. Full capacity of the battery will be obtained with the C 7/24, C 7/36-ACS, SFC 7/18 and TCU 7/36 chargers.

Speed selection

Two-speed switch

The speed can be selected using the mechanical two-speed switch, i.e. 1st speed: 0–400 r.p.m. or 2nd speed: 0–1300 r.p.m. Only change speed when the drill driver is not running.

Torque selection

Torque clutch setting ring

The release torque (1–10 Nm) is obtained by turning the setting ring to the desired torque level (setting 1–15). At the drilling symbol () , the torque clutch is blocked and the drill driver gives its max. torque of about 21 Nm (stalling torque) at this setting.

Reversing switch

The reversing switch is used to reverse the direction of rotation of the chuck. A locking device prevents operation of the switch while the motor is running. The control switch  is deactivated when the reversing switch is in the central position.

Speed control

Switch with electronic speed control

The speed can be controlled infinitely from zero to maximum by slowly depressing the switch.

6. Care and maintenance



Before cleaning, remove the battery from the tool in order to prevent inadvertent starting.

Care of the 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 tool is made from impact-resistant plastic. Sections of the grip are made from a synthetic rubber 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 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 tool.

Take care of your insert tools. Clean off dirt and dust deposits. Always keep the connection end clean and lightly greased.

SFB 121 and SFB 126 batteries

Keep the contact surfaces free of dust and lubricants. Clean them if necessary using a clean cloth. If the battery capacity drops below an acceptable level after a short period of use, we recommend that it be diagnosed by Hilti.

Maintenance

Check all external parts of the tool for damage and check that all controls operate faultlessly. Do not operate the tool if parts are damaged or if the controls do not function faultlessly. If necessary, your electric tool should be repaired at a Hilti service centre.

7. Accessories

Battery removal

Battery release button

If the battery has to be changed, press in the two release buttons using two fingers and pull the battery out of the drill driver.

Battery insertion

Push in the battery as far as it will go. There must be an audible click.

Only the Hilti SFB 121 or SFB 126 batteries may be used.

Battery charging

Only the Hilti C 7/24, C 7/36-ACS, SFC 7/18, TCU 7/36 or SBC 12H battery charger may be used. Please refer to the charger operating instructions for the charging process.

If the SFB 126 battery is charged in the old SBC 12H charger, a loss of capacity must be expected with this kind of charging. Full capacity of the battery will be obtained with the C 7/24, C 7/36-ACS, SFC 7/18 and TCU 7/36 chargers.

SFB 121 or SFB 126 battery

Use only the SFB 121 or SFB 126 batteries.

Special insert tools program

Should you require insert tools not included in the standard program, please contact the Hilti customer service department or your Hilti representative. Hilti offers a comprehensive range of special insert tools in professional quality.

8. Manufacturers 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 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.

9. Disposal



Most of the materials from which Hilti power 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 sales representative for further information.

Dispose of the battery in accordance with national regulations or return used batteries to Hilti for recycling.



Only for EU countries

Disposal of electric tools together with household waste is not permissible!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its imple-

mentation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

10. EC declaration of conformity

Description:	Battery screwdriver
Designation:	SF121-A
Year of desing:	2001

We declare, on our sole responsibility, that this product complies with the following directives and standards: until 28.12.2009 98/37/EC, as of 29.12.2009 2006/42/EC, 2004/108/EC, 2006/66/EC, EN 55 014-1, EN 55 014-2, EN 60 745-1, EN 60 745-2-1, EN 60 745-2-2

Hilti Corporation

Handwritten signature of Dietmar Sartor.

Dietmar Sartor
Head of BA Quality Process
Management
Business Area Electric Tools &
Accessories
12/2009

Handwritten signature of Roman Haenggi.

Roman Haenggi
Senior Vice President
Business Unit Cordless and
Cutting

12/2009

Hilti Corporation

LI-9494 Schaan

Tel.: +423 / 234 21 11

Fax: +423 / 234 29 65

www.hilti.com



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