

SF121-A



en

Operating instructions

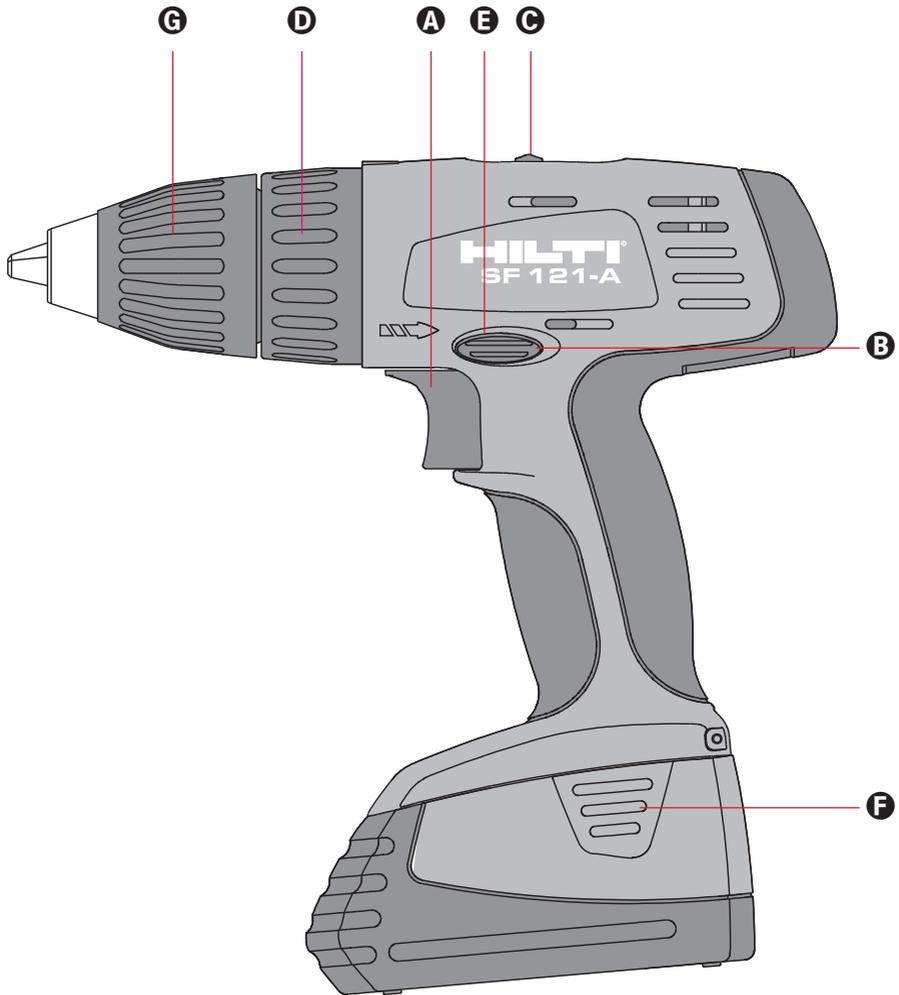
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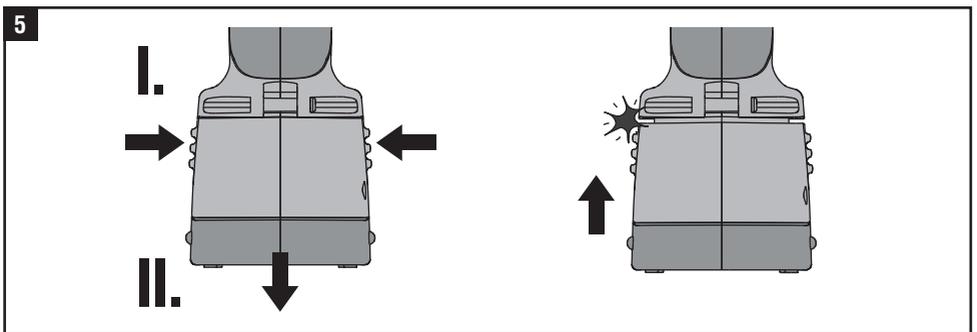
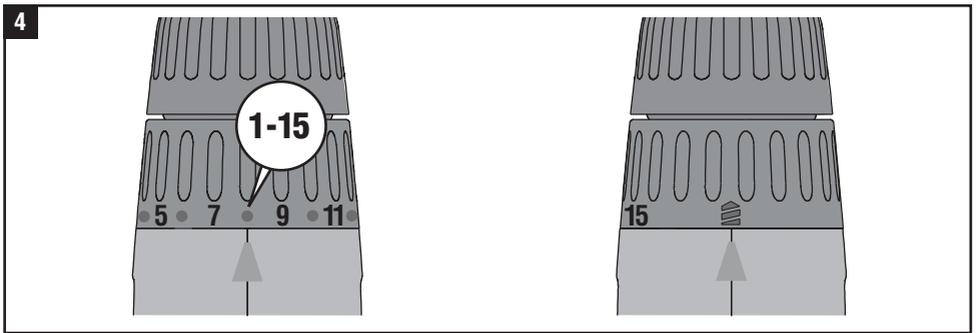
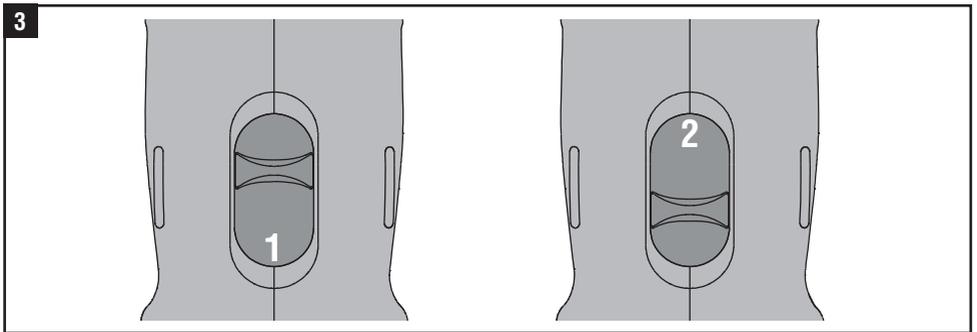
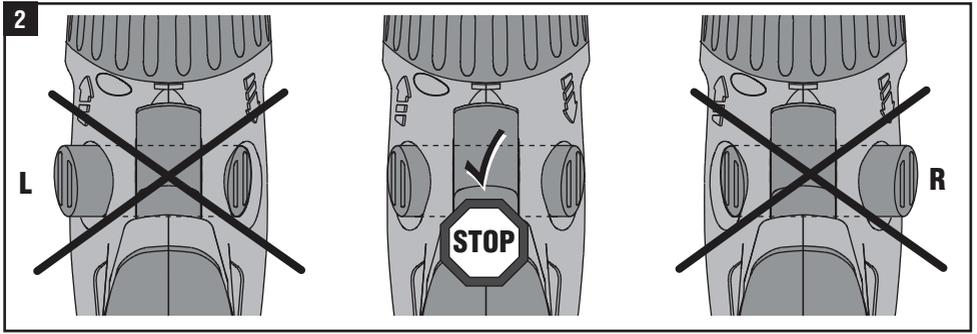
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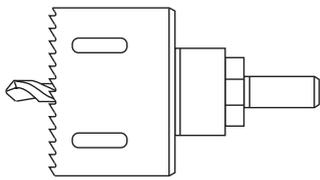
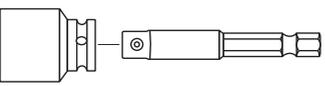
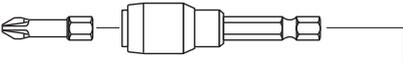
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ETL listed to US and Canadian safety standards
Homologué ETL (conforme aux normes de sécurité américaines et canadiennes)
Producto homologado según normas de seguridad americanas y canadienses
Produto homologado de acordo com as normas de segurança americanas e canadianas







SF 121-A battery drill driver

It is important that the operating instructions are read before the tool is operated.

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.

Electrical Warning

This symbol warns of hazards as a result of the electrical current when using the tool. It marks a dangerous situation. The illustrated behavior following this symbol must always be observed in order to help avoid serious injury or damages to property.

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
Drill driver weight incl. battery and chuck:	1.95 kg (4.32 lbs)
Dimensions (l×h×w):	220×231×72 mm (8.7×9.1×2.8")
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 (1/16–1/2")
Torque:	max. 21 Nm (15 ft. lbs) (set at drilling symbol)
Torque adjustment:	1.5–10 Nm (1–7.4 ft. lbs) (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)	

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 (1.6 lbs)	0.77 kg (1.7 lbs)
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

3. General safety rules

3.1 Warning!

Read and understand all instructions.

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

SAVE THESE INSTRUCTIONS.

3.2 Work Area

Keep your work area clean and well lit.

Cluttered benches 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 bystanders, children, and visitors away while operating a power tool.

Distractions can cause you to lose control.

3.3 Electrical safety

Do not abuse the cord. Never use the cord to carry the tool. Keep cord away from heat, oil, sharp edges, or moving parts. Replace damaged cords immediately. Damaged cords may create a fire.

A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery.

A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.

Use battery operated tool only with specifically designated battery pack.

Use of any other batteries may create a risk of fire.

3.4 Personal safety

Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.

A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.

Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure switch is in the locked or off position before inserting battery pack.

Carrying tools with your finger on the switch or inserting the battery pack into a tool with the switch on invites accidents.

Remove adjusting keys or wrenches before turning the tool on.

A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times.

Proper footing and balance enable better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection.

Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.



Always wear safety glasses

3.5 Tool Use and Care

Secure work – use clamps or other practical way to secure and support the workpiece to a stable platform.

Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application.

The correct tool will do the job better and safer at the rate for which it is designed.

Do not use tool if switch does not turn it on or off.

A tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool.

Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of reach of children and untrained persons.

Tools are dangerous in the hands of untrained users.

When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small objects that can make a connection from one terminal to another.

Shorting the battery terminals together may cause sparks, burns, or a fire.

Maintain tools with care. Keep cutting tools sharp and clean.

Properly maintained insert tools with sharp cutting edge are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.

Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for your model.

Accessories that may be suitable for one tool may create a risk of injury when used on another tool.

3.6 Service

Tool service must be performed only by qualified repair personnel.

Service or maintenance performed by unqualified personnel may result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.

Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of shock or injury.

4. Specific Safety Rules and Symbols

Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring.

Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.

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 leadbased 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.

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

Children must be instructed not to play with the tool.

Don't use the tool in water.

Water can damage the tool and battery pack and creates risk of shocking the operator.

Ensure that the insert tools (drill bits, etc.) are equipped with the appropriate connection end for the chuck system in use and that they are locked in position correctly in the chuck.

A loose insert tool presents a risk of injury.

Take care to avoid concealed cables and pipes. Check the area in which you are working beforehand, e. g. using a metal detector.

Concealed electric cables or gas and water pipes present a serious hazard if damaged while you are working.

Check of proper battery seating in the tool.

If the battery is not properly inserted, it can drop out when working and cause an injury.

Symbols used on the tool:

V volts
n₀ no load speed
.../min revolutions or reciprocation per minute
==== direct current

5. Functional description (typical)

Type of screw / application	Size	Speed
Driving chipboard screws	6x60 mm dia. (1/4" x 2 3/8")	1st (low) speed
Driving wood screws into plastic anchors	—	1st (low) speed
Installing DX stud EM8	—	1st (low) speed
Driving self-drilling screws	S-MD 01 4.8x19 mm (3/16" x 3/4")	2nd (high) speed
Drilling into softwood / particle board	15 mm dia. (19/32")	2nd (high) speed
Drilling into with a hole saw	68 mm dia. (2 11/16")	2nd (high) speed
Drilling into with a HSS twist-drill	10 mm dia. (3/8")	2nd (high) speed

6. Assembly



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



The SF 121-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.

7. 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 12 H 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 12 H 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 **3**

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 **4**

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 **2**

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 **A** 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.

8. 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 bat-

tery 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.

9. 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 12 H 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 12 H 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.

10. 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.

11. Disposal

Batteries

The Hilti SFB 121 battery has 10 nickel-cadmium cells.

The Hilti SFB 126 battery has 10 nickel-metal hydrid cells.

Both you and Hilti bear the responsibility for recycling of the worn-out batteries in keeping with environmental protection requirements.

Important: Do not throw worn-out batteries into household waste, a fire or water. Dispose of the batteries in accordance with national regulations or return them to Hilti.



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