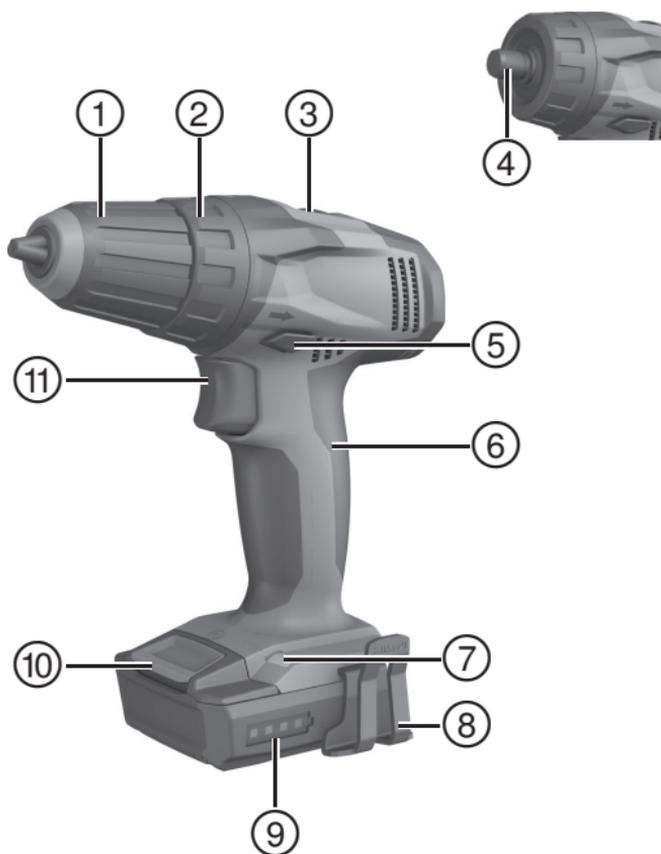


# HILTI

## SF 2-A / SFD 2-A

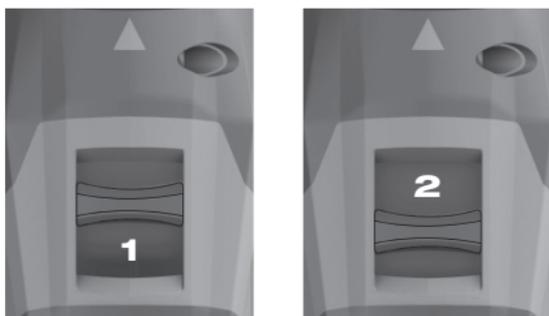
Bedienungsanleitung	de
Operating instructions	en
Mode d'emploi	fr
Istruzioni d'uso	it
Manual de instrucciones	es
Manual de instruções	pt
Gebruiksaanwijzing	nl
Οδηγίες χρήσεως	el
Használati utasítás	hu
Instrukcja obsługi	pl
Инструкция по эксплуатации	ru
Návod k obsluze	cs
Návod na obsluhu	sk
Upute za uporabu	hr
Navodila za uporabo	sl
Ръководство за обслужване	bg
Instrucțiuni de utilizare	ro



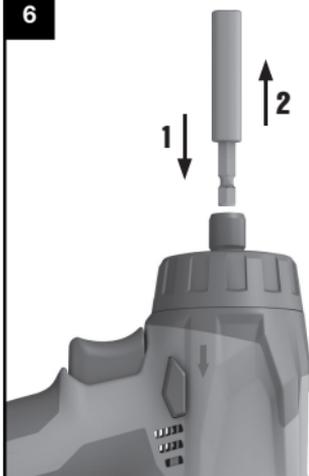


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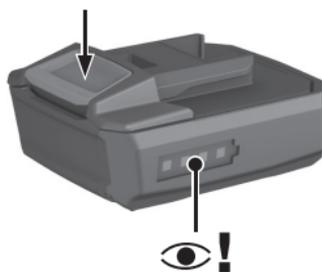
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# ORIGINAL OPERATING INSTRUCTIONS

## SF 2-A/SFD 2-A cordless drill / driver

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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	25
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**1** These numbers refer to the illustrations. You can find the illustrations at the beginning of the operating instructions.

In these operating instructions, the designation "power tool" always refers to the SF 2-A or SFD 2-A cordless drill / driver, with battery fitted.

### Parts, operating controls and indicators **1**

- ① Keyless chuck (SF 2-A)
- ② Torque and drilling mode setting ring
- ③ Gear selector switch
- ④ Hex. socket with locking sleeve (SFD 2-A)
- ⑤ Forward / reverse switch

- ⑥ Grip
- ⑦ Lamp
- ⑧ Belt hook (optional)
- ⑨ Charging status indicator
- ⑩ Release button
- ⑪ Control switch (with electronic speed control)

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## 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

en



Wear breathing protection



Read the operating instructions before use.

## Symbols



Volts



Direct current



Rated speed under no load



Revolutions per minute



Drilling without hammering



Return materials for recycling

## Location of identification data on the power tool

The type designation can be found on the type identification plate at the base of the power tool and the serial number on the side of the casing. 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:

---

Generation: 01

---

Serial no.:

---

## 2 Description

### 2.1 Use of the product as directed

The SF 2-A and SFD 2-A are hand-held cordless drill / drivers for driving and removing screws and drilling in steel, wood and plastic.

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.

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.

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### 2.2 Chuck

The SF 2-A has a keyless chuck and the SFD 2-A features a hex. socket drive.

### 2.3 Switches

Control switch with electronic speed control

Gear selector switch

Forward / reverse selector switch with transport lock

Torque and drilling mode setting ring

### 2.4 Grips

Vibration-absorbing grip

### 2.5 The items supplied include (toolbox versions):

1 Power tool

1 Operating instructions

1 Hilti toolbox

## 2.6 The items supplied include (cardboard box versions):

- 1 Power tool
- 1 Operating instructions

## 2.7 Additional items required for operating the tool:

en B 12/2.6 Li-Ion battery and C4/12-50 charger.

## 2.8 Li-ion battery charge status display

LEDs light constantly	LEDs blink	Charge status C
LED 1, 2, 3, 4	-	$C \geq 75 \%$
LED 1, 2, 3	-	$50 \% \leq C < 75 \%$
LED 1, 2	-	$25 \% \leq C < 50 \%$
LED 1	-	$10 \% \leq C < 25 \%$
-	LED 1	$C < 10 \%$

## 2.9 Overload and overheating protection

The power tool is equipped with an electronic protection system to prevent overloading and overheating. The power tool switches itself off automatically in the event of overloading and 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).

### NOTE

Overloading or overheating are not indicated by the LEDs on the battery.

## 3 Insert tools, accessories

Designation	Short designation
Charger for Li-ion batteries	C 4/12-50
Battery	B 12/2.6 Li-Ion
Belt hook (optional)	

Designation	Description
Keyless chuck clamping range	$\varnothing 0.8 \dots 10 \text{ mm}$
Drilling diameter range in wood (soft)	$\varnothing 0.8 \dots 14 \text{ mm}$

Designation	Description
Drilling diameter range in wood (hard)	∅ 0.8...10 mm
Drilling diameter range in metal	∅ 0.8...6 mm
Wood screws (max. length 80 mm)	∅ 3...6 mm

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#### 4 Technical data

Right of technical changes reserved.

Power tool	SF 2-A	SFD 2-A
Rated voltage (DC voltage)	10.8 V	10.8 V
Weight in accordance with EPTA procedure 01/2003	1.1 kg	1.0 kg
Speed in 1st gear (with B 12/2.6)	0...400/min	0...400/min
Speed in 2nd gear (with B 12/2.6)	0...1,500/min	0...1,500/min
Torque with tool set to drilling symbol (soft/flexible joint)	Max. 12 Nm	Max. 12 Nm
Torque range (15 settings)	0.5...3.5 Nm	0.5...3.5 Nm

#### NOTE

The vibration emission level given in this information sheet has been measured in accordance with a standardized 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, organization of work patterns.

## Noise and vibration information (measured in accordance with EN 60745):

Typical A-weighted sound power level for the SF 2-A/SFD 2-A	75 dB (A)
Typical A-weighted emission sound pressure level for the SF 2-A/SFD 2-A	64 dB (A)
Uncertainty for the given sound level	3 dB (A)

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Triaxial vibration values (vibration vector sum)	Measured in accordance with EN 60745-2-2
For the SF 2-A/SFD 2-A: Screwdriving without impact action, $a_h$	0.5 m/s <sup>2</sup>
Uncertainty (K)	1.5 m/s <sup>2</sup>

Triaxial vibration values (vibration vector sum)	Measured in accordance with EN 60745-2-1
For the SF 2-A/SFD 2-A: Drilling in metal, $a_{h,D}$	1.9 m/s <sup>2</sup>
Uncertainty (K) for triaxial vibration measurements	1.5 m/s <sup>2</sup>

Battery	B 12/2.6 Li-Ion
Rated voltage	10.8 V
Capacity	2.6 Ah
Energy capacity	28.08 Wh
Weight	0.24 kg
Temperature monitoring	Yes
Type of cell	Li-Ion
No. of cells	3

## 5 Safety instructions

### NOTE

The safety rules in section 5.1 contain all general safety rules for electric tools which, in accordance with the applicable standards, must 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

a)  **WARNING**

**Read all safety warnings and all 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.

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### 5.1.1 Work area safety

- Keep work area clean and well lit.** Cluttered or 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.

### 5.1.2 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 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.

### 5.1.3 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.

- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **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.
- 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.

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### 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 accidentally 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 tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

## 5.3 Additional safety instructions

### 5.3.1 Personal safety

- en
- 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) **Always hold the power tool securely with both hands on the grips provided. 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) **The power tool is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
  - g) **Children must be instructed not to play with the power tool.**
  - h) 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.**

### 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) **Large and heavy insert tools must only be operated in first gear.** There is otherwise a risk that the tool will be damaged when it is switched off or, under unfavorable conditions, the chuck might be detached.

### 5.3.3 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) **Do not expose batteries to high temperatures and keep them away from fire.** This presents a risk of explosion.
- c) **Do not disassemble, squash or incinerate batteries and do not subject them to temperatures over 80°C.** This presents a risk of fire, explosion or injury through contact with caustic substances.
- d) **Avoid ingress of moisture.** Ingress of moisture may cause a short circuit, resulting in burning injuries or fire.
- e) **Use only batteries of the type approved for use with the applicable power tool.** Use of unapproved batteries or use of the batteries in areas of application for which they are not approved presents a risk of fire and explosion.
- f) **Observe the special guidelines applicable to the transport, storage and use of Li-ion batteries.**
- g) **Remove the battery before storing or transporting the tool.**
- h) **Avoid short circuiting the battery terminals. Before inserting the battery in the tool, make sure that the battery terminals and the terminals in the tool are free from foreign objects.** Short circuiting the battery terminals presents a risk of fire, explosion and chemical burns.
- i) **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).**
- j) If the battery is too hot to touch it may be defective. **Place the tool in a location where it can be kept under observation, well away from flammable materials, and allow it to cool down. Contact Hilti Service after the battery has cooled down.**

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### 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 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



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The user and any other persons in the vicinity must wear suitable eye protection, a hard hat, ear protection, protective gloves and breathing protection while the tool is in use.

## 6 Before use



### 6.1 Battery use and care

#### NOTE

Battery performance drops at low temperatures. Use the tool only after fully charging the battery. This ensures that maximum battery capacity is available. Change to the second battery in good time. 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 the heat of the sun, on a radiator or behind glass, e.g. at a window. 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

Charge the battery fully before using it for the first time.

### 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.

Information about charging can be found in the operating instructions for the charger.

Lithium-ion batteries are ready for use even when only partially charged.

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## 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

**Before inserting the battery in the power tool, check to ensure that the battery terminals and the contacts in the power tool are free from foreign objects.**

1. Push the battery into the power tool from the front, 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 and others.**

Check that the battery is seated securely in the power tool.

## 6.4 Removing the battery

1. Press the release button.
2. Pull the battery out of the tool towards the front.

## 6.5 Transport and storage of battery packs

Remove the battery from the tool before transport or storage. Make sure that the battery contacts are not short-circuited. Remove loose metal items such as screws, nails, clamps, loose screwdriving bits, wires or metal cuttings and chips from the toolbox or transport container, or prevent these items from coming into contact with the battery.

Observe national and international transport regulations when shipping battery packs (transportation by road, rail, sea or air).

## 6.6 Belt hook 3

### CAUTION

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

The belt hook allows the power tool to be attached to a belt worn by the operator. The belt hook can also be fitted to the other side of the power tool for use by left-handed persons.

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1. Remove the battery from the tool.
2. Fit the mounting plate into the guides provided.
3. Secure the belt hook with the two screws.

## 7 Operation



### CAUTION

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

### CAUTION

**When drilling and screwdriving, the grip of the tool may be deflected laterally (the tool tends to pivot about its own axis).**

### CAUTION

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

## 7.1 Setting forward or reverse rotation 4

### 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 left (when the power tool is held in the working direction) to select forward rotation. Push the forward / reverse switch to the right (when the power tool is held in the working direction) to select reverse rotation.

## 7.2 Selecting the speed range 5

### WARNING

**Large and heavy insert tools must only be operated in first gear.** There is otherwise a risk that the tool will be damaged when it is switched off or, under unfavorable conditions, the chuck might be detached.

### NOTE

The gear selector switch can be used to select the speed range. Speed range for the SF 2-A/SFD 2-A with a fully charged battery: 1st gear: 0-400/min, 2nd gear: 0-1500/min.

### NOTE

The gear selector switch can be operated only when the motor is at a standstill.

## 7.3 Switching on / off

Speed of rotation can be increased smoothly up to maximum speed by pressing the control switch slowly.

## 7.4 Changing sockets

### CAUTION

**Wear protective gloves when changing insert tools as the insert tools get hot during use.**

Check that the connection end of the insert tool is clean. Clean the connection end if necessary.

### 7.4.1 Changing bits with the SF 2-A

#### NOTE

The power tool is equipped with a keyless chuck that accepts various accessories such as drill bits, screwdriving bits and bit holders.

#### 7.4.1.1 Fitting the insert tool

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Open the keyless chuck.
3. Insert the drill bit in the chuck and then turn the keyless chuck sleeve until tight.
4. Check that the drill bit is held securely.

#### 7.4.1.2 Removing the tool

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.

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2. Open the keyless chuck.
3. Pull the insert tool out of the chuck.

#### 7.4.2 Changing bits with the SFD 2-A

##### NOTE

The power tool is equipped with a 1/4" hex. socket with locking sleeve that accepts various accessories such as drill bits, screwdriving bits and bit holders.

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##### 7.4.2.1 Fitting the insert tool

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Push the locking sleeve on the hex. socket forward and hold it securely in this position.
3. Push the bit into the hex. socket as far as it will go and then release the locking sleeve.
4. Check that the drill bit is held securely.

##### 7.4.2.2 Removing the tool

1. Set the forward / reverse switch to the middle position or remove the battery from the power tool.
2. Push the locking sleeve on the hex. socket forward and hold it securely in this position.
3. Pull the bit out of the hex. socket and then release the locking sleeve.

#### 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.**

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

#### 7.6 Screwdriving

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

#### 7.7 Reading the charge status LED display on Li-ion batteries

##### NOTE

The charge status cannot be indicated while the tool is in operation.

**NOTE**

The charge status display LEDs may light briefly while the battery is being fitted to the tool.

The Li-ion battery features a charge status LED display. When the tool is not in operation, the charge status is displayed by four LEDs when the lockbutton on the battery is pressed.

**8 Care and maintenance****CAUTION**

**Before beginning cleaning, remove the battery in order to prevent the electric tool starting unintentionally.**

**8.1 Care of 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.**

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 ingress of moisture.

Charge the battery fully before using it for the first time.

In order to achieve maximum battery life, stop drawing power from the battery as soon as a significant drop in battery performance is noticed.

**NOTE**

If use continues, further battery discharge will be stopped automatically before the battery cells suffer damage.

Charge the batteries with the Hilti chargers 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. Storing the battery in places subject to high ambient temperatures (e.g. at a window) 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 overstraining. It is still possible to work with this battery. You should, however, soon replace the battery with a new one.

**8.4 Maintenance****WARNING**

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

Check all external parts of the power tool for damage at regular intervals and check that all controls operate faultlessly. Do not operate the power tool if parts are damaged or when the controls do not function faultlessly. If necessary, the power tool should be repaired by Hilti Service.

**8.5 Checking the power tool after care and maintenance**

After carrying out care and maintenance work on the power tool, check that all protective and safety devices are fitted and that they function faultlessly.

**9 Troubleshooting**

<b>Fault</b>	<b>Possible cause</b>	<b>Remedy</b>
The power tool doesn't run.	The battery is discharged or is not pushed all the way in.	The battery must be heard to engage with a click or, respectively, needs to be charged.
	Electrical fault.	Remove the battery from the tool and contact Hilti Service.

<b>Fault</b>	<b>Possible cause</b>	<b>Remedy</b>
The on / off switch can't be pressed, i.e. the switch is locked.	The forward / reverse switch is in the middle position (transport lock engaged).	Push the forward / reverse switch to the left or right.
The battery runs down more quickly than usual.	Very low ambient temperature.	Allow the battery to warm up slowly to room temperature.
The battery doesn't engage with an audible click.	The retaining lugs on the battery are dirty.	Clean the retaining lugs and push the battery in until it engages. Contact Hilti Service if the problem persists.
The power tool or the battery becomes very warm.	Electrical fault.	Switch the power tool off immediately, remove the battery from the tool and allow it to cool down while keeping an eye on it, contact Hilti Service.
	The power tool has been overloaded (application limits exceeded).	Use the right power tool for the job (don't use a low-powered tool for heavy work).

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## 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 right away. Keep them out of reach of children. Do not disassemble or incinerate the batteries.

### CAUTION

Batteries that have reached the end of their life must be disposed of in accordance with national regulations or returned to Hilti.



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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.



For EC countries only

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

In observance of the European Directive on waste electrical and electronic equipment and its implementation in accordance with national law, electrical appliances that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

## 11 Manufacturer's warranty - tools

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

## 12 EC declaration of conformity (original)

Designation:	Cordless drill / driver
Type:	SF 2-A/SFD 2-A
Generation:	01
Year of design:	2013

We declare, on our sole responsibility, that this product complies with the following directives and standards: 2006/42/EC, until 19th April 2016: 2004/108/EC, from 20th April 2016: 2014/30/EU, 2011/65/EU, 2006/66/EC, EN 60745-1, EN 60745-2-1, EN 60745-2-2, EN ISO 12100.



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