



## **GB** Operating instructions

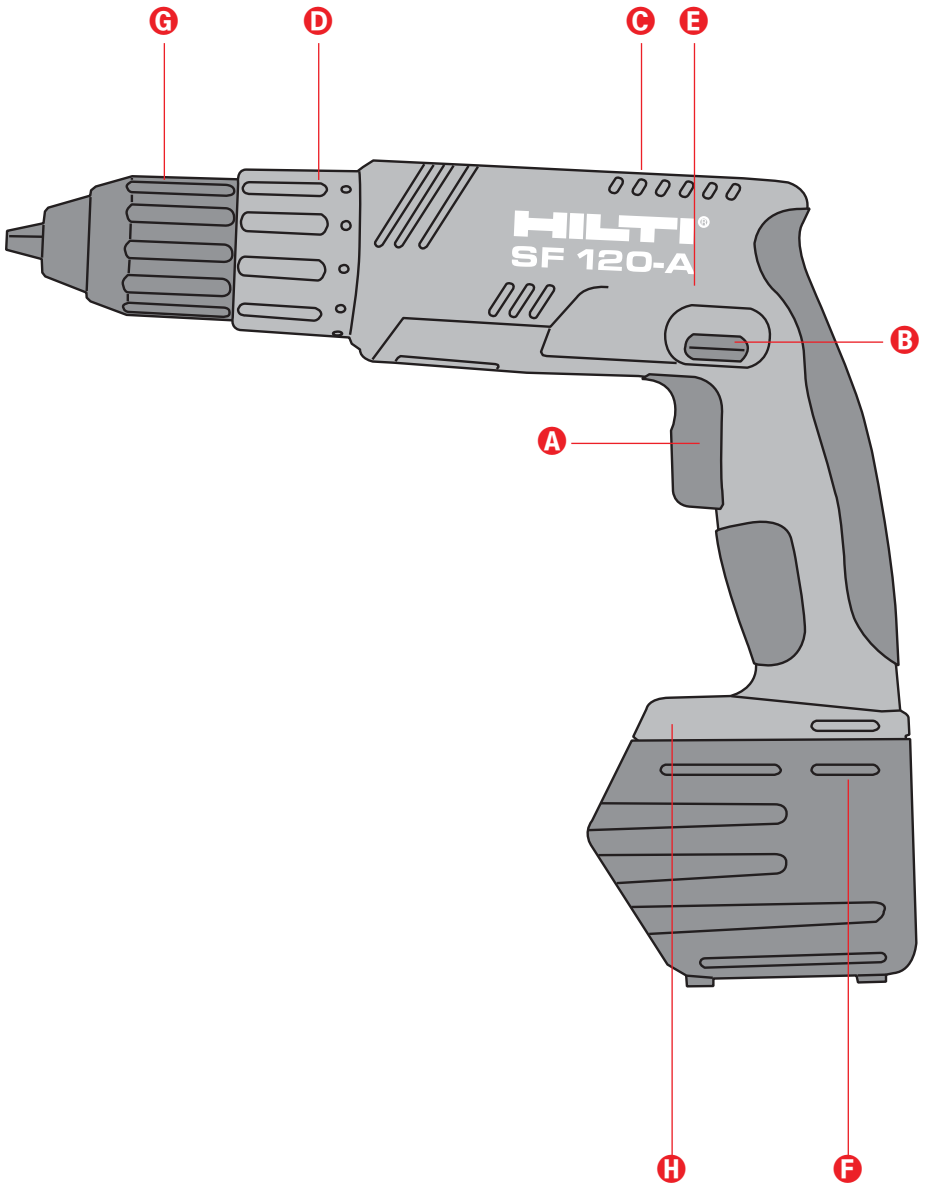
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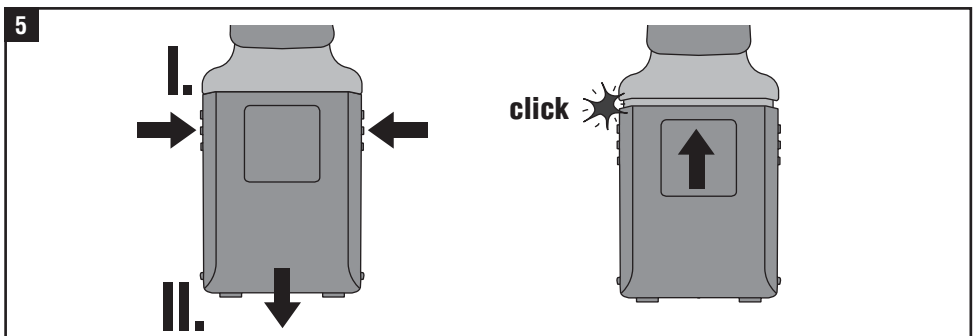
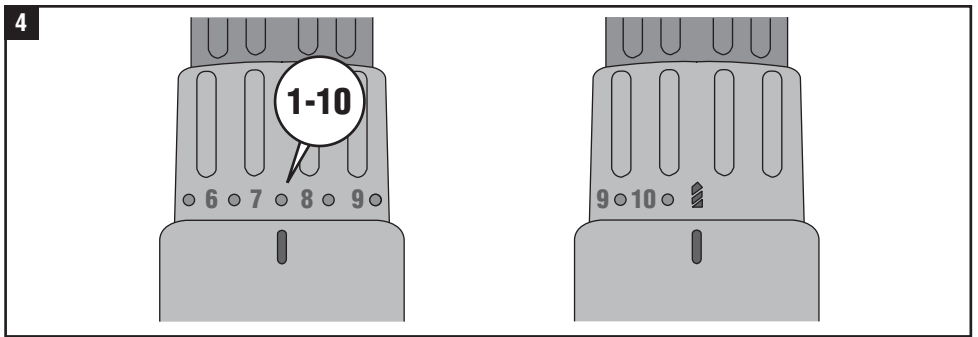
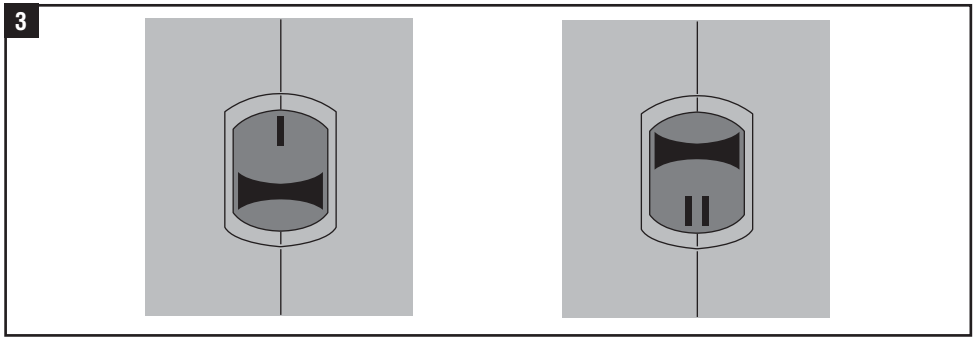
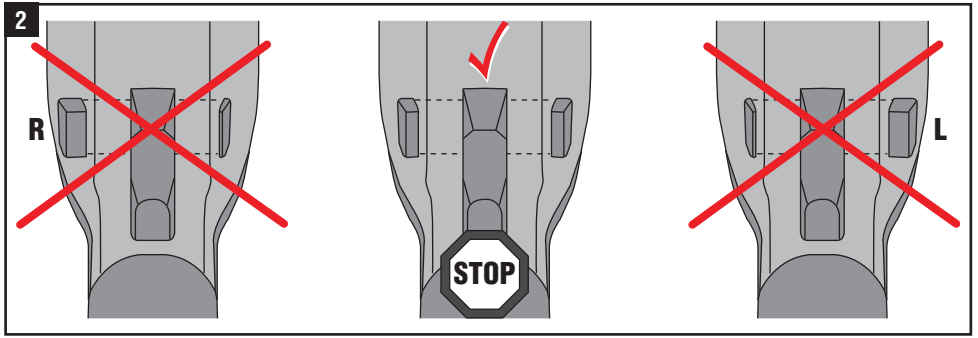


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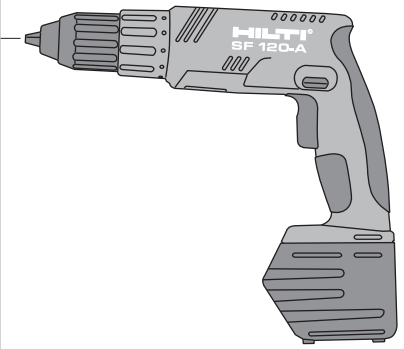
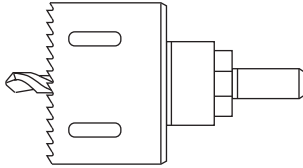
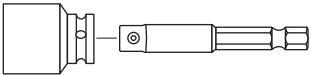
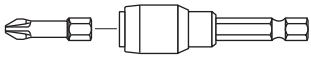
# HILTI

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# SF 120-A battery screwdriver

**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.**

## 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

**I** 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 120-A with battery.

## Operating controls and component parts **I**

- 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
- H** Dual-purpose bit (PH2 / PZD2)

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 **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.

## Technical data

### SF 120-A battery screwdriver

Voltage:	12 Volt
Screwdriver weight incl. battery and chuck:	2 kg
Dimensions (l×h×w):	261×172×61 mm
Speed (no load):	1st speed: 0–320 r.p.m. 2nd speed: 0–1150 r.p.m.
Chuck / Quick-release chuck capacity:	1.5–13 mm
Torque:	max. 21 Nm (set at drilling symbol)
Torque adjustment:	1–10 Nm (at 20 settings)
Vibration:	less than 2.5 m/sec <sup>2</sup>
Noise level (power):	less than 70 dB(A)
Speed control:	electronic via on-off switch
Reversing switch:	electronic with switching lock when running
Spindle lock:	when the screwdriver is switched off
Motor brake:	activated by the control switch
Dust-tight enclosure and permanent lubrication (maintenance free)	

Battery	SBP 12	SFB 125
Voltage:	12 Volt	12 Volt
Capacity:	12 Volt×2,0 Ah = 24 Wh	12 Volt×3,0 Ah = 36 Wh
Weight:	0.69 kg	0.73 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

## Applications

Type of screw / application	Size	Speed
Wood screw / chipboard screw in spruce / chipboard	up to 5 mm dia. 5–8 mm dia.	2nd 1st
Machine screw	up to M8	1st/2nd
Screw in plastic anchor		
Screw	10 mm dia.	1st
Plastic anchor	12 mm dia.	
Type of drill / application	Size	Speed
Wood bit in softwood / chipboard	30 mm dia.	2nd
Wood bit in hardwood	20 mm dia.	2nd
Auger bit in softwood / chipboard	30 mm dia.	2nd
Auger bit in hardwood	20 mm dia.	2nd
Paddle bit in softwood / chipboard	25 mm dia.	2nd
Paddle bit in hardwood	12 mm dia.	2nd
Hole saw in softwood / chipboard	up to 68 mm dia.	1st
HSS twist drill in steel	up to 6 mm dia.	2nd
predrill using 6 mm dia. drill bit	from 6 up to 10 mm dia.	1st
Masonry drill bit in brick	up to 6 mm dia.	1st
Special insert tools / applications	Size	Speed
Thread tapping in metal	up to M8	1st
Deburrer, deburring bored holes in metal, wire brush, grinding point, emery cloth / sand paper		1st



## Safety precautions

When using electric tools, the following fundamental safety precautions must always be observed in order to avoid the risk of injury, electric shock and fire hazards. Please read and observe the instructions below before using the tool.

### 1. Use protective equipment.



Wear protective glasses



Wear respiratory protection if the work causes dust.

### 2. Wear suitable working clothing.

Do not wear loose clothing, loose long hair or jewellery as it can become caught up in moving parts of the machine. Wear non-slip shoes.

### 3. Make the working area safe.

Objects which could cause injury should be removed from the working area. Ensure that the area is well lit. When working, keep other persons outside the range of the tool you are using.

### 4. Take the influences of the surrounding area into account.

Do not operate the tool in the vicinity of flammable liquids or gasses. Do not use the tool under water.

### 5. Check the tool each time before use.

Check the condition of the tool. Do not use it if it is damaged, incomplete or if the controls cannot be operated correctly.

### 6. Use the correct insert tool.

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. Use only the recommended original Hilti accessories and auxiliary equipment.

### 7. Use the tool only for the purposes for which it is intended (see page 8).

Do not overload the tool.


### 8. Apply a safe working method.

Avoid unfavourable body positions. Always ensure that you have a safe stance. Always remain attentive. The drill bit may become stuck unexpectedly. Switch the tool off if you are distracted from your work.

### 9. Take care to avoid concealed cables and pipes. Concealed electric cables or gas and water pipes pre-

sent a serious hazard if damaged while you are working. Accordingly, check the area in which you are working beforehand, e.g. using a metal detector. Avoid contact between your body and earthed / grounded objects such as pipes or radiators. External metal parts of the tool may become live, for example, when an electric cable is drilled into inadvertently.

### 10. Avoid unintentional starting.

The forwards / reverse / transport lock switch should be brought into the transport lock position (middle position ) when the tool is not in use, e.g. during pauses between work, before maintenance, when changing insert tools and during transport.

### 11. Keep the electric tool and insert tools in good condition.

Follow the care and maintenance instructions and replace insert tools in good time. Never operate the tool when it is dirty or wet. Dust or dampness on the surface of the tool makes it slippery and difficult to hold. Repairs to the tool may be carried out only by an authorised electrical specialist using original Hilti spare parts. Failure to observe this point may result in damage to the tool or present a risk of accident. Accordingly, if necessary, have the tool repaired at a Hilti service centre or authorised Hilti repair workshop.

### 12. Avoid short circuiting the terminals of the battery (accessory).

Short circuiting the battery terminals presents a risk of fire.

### 13. Check of proper battery seating in tool.

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

### 14. Keep the tool out of the reach of children.

Knowledge of the operating instructions is a must if the tool is to be used without injury or damage to persons and / or product respectively.

## Before use



The SF 120-A may be used only with the SBP 12 or SFB 125 battery.



Before it is used for the first time, it is important 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.

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

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 work with the battery until it is run down. The cells can be damaged if the battery is completely discharged.

## Operation

### Insert tool insertion and removal



Use the safety catch **2** as protection against unintentional switching on during transport.

### Quick-release chuck

An insert tool can be clamped or released without a chuck key. When the screwdriver 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 screwdriver.

### Battery insertion

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

Only the Hilti SBP 12 or SFB 125 batteries may be used.

### Battery charging

Only the Hilti 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 125 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 charger will be obtained with the 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. 1<sup>st</sup> speed: 0–320 r.p.m. or 2<sup>nd</sup> speed: 0–1150 r.p.m. Only change speed when the screwdriver 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 1–20). At the drilling symbol () , the torque clutch is blocked and the screwdriver gives its max. torque of about 21 Nm (stalling torque) at this setting.

## **2** 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 **2** 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.

## Care and maintenance

### Care of the tool

The outer casing of the tool is made of impact-resistant plastic. Sections of the grip are made of an elastomer material.



Clean the outside of the tool at regular intervals using 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. Always keep the grip surfaces of the tool free from oil and grease. Do not use cleaning agents which contain silicone.



Never operate the tool when the ventilation slots are blocked. Clean the ventilation slots carefully using a dry brush. Do not permit foreign matter to enter the interior of the tool.

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

### SBP 12 and SFB 125 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 long 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 the controls do not function faultlessly. If necessary, your electric tool should be repaired at a Hilti service centre.

## Warranty

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid as long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, all warranty claims are made within 12 months from the date of the sale (invoice date), 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. 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 and/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.

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## Disposal

Most of the materials used to manufacture Hilti electric tools are can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for your old electric tools to be taken back and batteries for recycling. Please ask the local Hilti customer service or Hilti representative for further information.

Should you wish to return the electric tool yourself to a disposal facility for recycling, proceed as follows: Dismantle the electric tool as far as possible without the need for special tools. Use absorbent paper to wipe greasy parts clean and to collect the grease that runs out. This paper should also be disposed of correctly. On no account should grease be allowed to enter the waste water system or to find its way into the ground.

### The individual parts should be separated as follows:

Part / assembly	Main material	Recycling
Toolbox	Plastic	Plastic
Housing	Plastic	Plastic
Motor	Steel, copper	Scrap metal
Gearing parts	Steel	Scrap metal
Chuck	Plastic Steel	Plastic Scrap metal
Screws, small parts	Steel	Scrap metal

## Batteries

The Hilti SBP 12 battery has 10 nickel-cadmium cells.

The Hilti SFB 125 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.

## CE – Declaración de conformidad

Denominación:	Atornilladora con batería
Tipo:	SF120-A
Año de construcción:	1999

Declaramos bajo nuestra única responsabilidad que este producto cumple con las siguientes reglas y normativas: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55 014-1, EN 55 014-2

## EG-Konformitetserklæring

Betegnelse:	Batteridreven skruemaskine
Typebetegnelse:	SF120-A
Konstruktionsår:	1999

Hermed erklærer vi på eget ansvar, at dette produkt er i overensstemmelse med følgende direktiver og standarder: 98/37/EF 89/336/EØF, 91/157/EØF, 93/86/EØF, EN 55 014-1, EN 55 014-2

## Vaatumuksenmukaisuusvakuutus

Nimike	Akkuporakone/-ruuvain
Tyypimerkintä	SF120-A
Suunnitteluvuosi	1999

Todistamme täten ja vastaamme yksin siitä, että tämä tuote on seuraavien suositusten ja normien mukainen: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55014-1, EN 55014-2.

## Samsvarserklæring

Betegnelse:	Akku skruemaskin
Modell/type:	SF120-A
Produksjonsår:	1999

Vi erklærer herved at dette produktet er i overensstemmelse med følgende normer eller standarder: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55 014-1, EN 55 014-2

## EG-Försäkran om överensstämmelse

Benämning:	batteriskruvdragare
Typbeteckning:	SF120-A
Konstruktionsår:	1999

Vi intygar på eget ansvar att denna produkt överensstämmer med följande direktiv och standarder: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55 014-1, EN 55 014-2

## Δήλωση συμμόρφωσης ΕΕ

Περιγραφή:	Κατσαβίδι μπαταρίας
Μοντέλο/Τύπος:	SF 120-A
Έτος σχεδίασης:	1999

Δηλώνουμε υπεύθυνα ότι το συγκεκριμένο προϊόν συμμορφώνεται με τα ακόλουθα κριτήρια ή έγγραφα προδιαγραφών: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55014-1, EN 55014-2

## Hilti Corporation

Keith Paige  
Head Business Unit  
Direct Fastening  
September 1999

Dr. Felix Ferlemann  
Head Development  
Screw Fastening  
September 1999

## Konformitätserklärung

Bezeichnung:	Akku-Montageschrauber
Typenbezeichnung:	SF120-A
Konstruktionsjahr:	1999

Wir erklären in alleiniger Verantwortung, dass dieses Produkt mit den folgenden Richtlinien und Normen übereinstimmt: 98/37/EG, 89/336/EWG, 91/157/EWG, 93/86/EWG, EN 55 014-1, EN 55 014-2

## EC declaration of conformity

Description:	Battery screwdriver
Designation:	SF120-A
Year of desing:	1999

We declare, under our sole responsibility, that this product complies with the following standards or standardization documents: 98/37/EC, 89/336/EEC, 91/157/EEC, 93/86/EEC, EN 55 014-1, EN 55 014-2

## Déclaration de conformité

Désignation:	Visseuse-perceuse sans fil
Modèle/type:	SF120-A
Année de conception:	1999

Nous déclarons sous notre seule et unique responsabilité que ce produit est conforme aux directives et normes suivantes: 98/37/CE, 89/336/CEE, 91/157/CEE, 93/86/CEE, EN 55 014-1, EN 55 014-2

## Dichiarazione di conformità EC

Descrizione:	Avvitatore
Designazione del tipo:	SF120-A
Anno di progettazione:	1999

Assumendone la piena responsabilità, dichiariamo che questo prodotto è conforme alle seguenti norme ed ai relativi documenti: 98/37/CE, 89/336/CEE, 91/157/ECEE, 93/86/CEE, EN 55 014-1, EN 55 014-2

## EG-overeenkomstigheidsverklaring

Benaming:	Accu schroefmachine
Type:	SF120-A
Bouwjaar:	1999

Wij verklaren in eigen verantwoordelijkheid dat dit product beantwoordt aan de volgende richtlijnen en normen: 98/37/EG, 89/336/EEG, 91/157/EEG, 93/86/EEG, EN 55 014-1, EN 55 014-2

## Declaração de conformidade EC

Descrição	Aparafusadora a bateria
Designação	SF120-A
Ano de design	1999

Declaramos, sob nossa responsabilidade, que este produto está de acordo com as seguintes normas e documentos: 98/37/EG, 89/336/EEG, 91/157/EEG, 93/86/EEG, EN 55 014-1, EN 55 014-2

## Hilti Corporation Headquarters

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