

User Manual

△ FERREX®

18V LI-ION HAMMER DRILL AND IMPACT DRIVER KIT



Original instructions

Contents

List of contents and features	4
General information	6
Reading and storing the user manual	6
Explanation of symbols	6
Safety	7
Scope of use	7
Residual risks	8
General power tool safety warnings	9
Impact Drill Safety Warnings	12
Impact Driver Safety Warnings	13
Safety instructions for battery chargers	13
Before using the kit	14
Checking the kit and pack contents	14
Fitting and removing the battery	14
Checking the battery status	14
Charging the battery	15
Fitting the belt clip	16
Fitting tools to the hammer drill	17
Fitting tools to the impact driver	18
Using the hammer drill	18
Changing speed	18
Forward / Reverse	19
Switching ON / OFF	19
LED worklight	20
Driving screws	20
Drilling and hammer drilling	21
Drill bit selection	21
Working with the drill	22
Using the impact driver	23
Forward / Reverse	23
Switching ON / OFF	24
LED worklight	24

Maintenance, cleaning, storage and transport	25
Maintenance	
Cleaning	26
Storage	26
Transport	26
Troubleshooting	
Technical specifications	28
Noise and vibrations levels	30
Noise emissions	
Vibration details	30
Recycling	32
Disposal of the packaging	32
Disposing of old appliances	32
Recycling batteries	32
Declaration of Conformity	33

List of contents and features

- Drill / screwdriver / hammer mode selection ring
- 2. Indicator mark for torque and drilling mode
- 3. Speed range selection switch
- 4. Handle
- 5. Belt clip (pre-mounted)
- 6. Battery
- 7. Battery release button
- 8. LED worklight
- 9. Trigger and electronic speed control

- 10. Forward / reverse switch
- 11. Keyless chuck
- 12. Torque control ring
- 13. Quick release chuck
- 14. Sleeve
- 15. Charge level indicator
- 16. Charge level indicator button
- 17. Charging indicator lamp
- 18. Charger





General information

Reading and storing the user manual

These operating instructions form an integral part of this 18 V Li-Ion hammer drill and impact driver kit (referred to as hammer drill and impact driver in the remainder of this manual). They contain important instructions on safety, use and disposal of the hammer drill and impact driver. Please familiarise yourself with all operating and safety instructions before using the hammer drill and impact driver. Only use the sander as described and for the stated purpose. If the hammer drill and/or the impact driver are passed on to a third party, please provide all documents to the third party together with the the hammer drill and/or the impact driver. Keep the operating instructions safe for future reference.

Explanation of symbols

The following symbols and signal words are used in this user manual, on the hammer drill and/or the impact driver or on the packaging.

Indicator a hazardous cituation that if not avoided could

A WARNING!	result in death or serious injury.
△ CAUTION!	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
⚠ NOTICE!	Warns of possible damage to property.
i	This symbol provides you with useful additional information regarding assembly or operation.
CE	Declaration of Conformity (see chapter "EC Declaration of Conformity"): Products labelled with this symbol meet all applicable provisions of the European Economic Area.
	Read the user manual.
	Declares the quick charger as protection category II.
\triangle	Only use the charger indoors.
	Direct current.
T2.0A	Time-current characteristics of the fuse.

max. 40°C	Never expose the rechargeable battery to temperatures exceeding 40 °C.
**	Do not throw the rechargeable battery in fire. There is a risk of explosion.
%	Dispose of the battery in an environmentally friendly manner.

The following designation of the tool is achieved by a code that is a combination of letters and numbers:

<u>WWS</u> Manufacturer Manufacturer = WALTER Werkzeuge Salzburg G	ASS Product (GER) imbH (WWS); Prod	<u>18</u> Power luct (GER) =	LO1 Version Cordless impact driver (ASS);	Power = 18 V
<u>WWS</u> Manufacturer	ABS Product (GER)	18 Power	LO1 Version	

Manufacturer = WALTER Werkzeuge Salzburg GmbH (WWS); Product (GER) = Cordless hammer drill (ABS); Power = 18 V

Safety

Scope of use

Both the hammer drill and the impact driver are exclusively designed for private use and for hobby and DIY projects for the following purposes:

- Drilling holes in wood, plastic and metal,
- Driving screws,
- Tightening and loosening screw connections.

Both the hammer drill and the impact driver must be used in accordance with the instructions and safety warnings contained in this manual and may not be used for any other purpose. It is designed for DIY use only and is not suitable for commercial or heavy-duty use, such use may damage your hammer drill and/or impact driver and invalidate your warranty. Neither the manufacturer nor the retailer can accept any responsibility for injury, loss or damage caused by misuse of this hammer drill and/or impact driver of any kind. Examples of misuse are given in the following no exhaustive list:

- Use of the hammer drill and/or impact driver for any other than its intended purpose;
- Non-observance of the safety warnings and instructions as well as the assembly, operating, cleaning and maintenance instructions contained in this manual;
- Non-observance of any applicable health, safety and accident prevention regulations concerning the use of this hammer drill and/or impact driver;

- Use of accessories or spare parts that are not suitable for the hammer drill and/or impact driver:
- Use of the sander in modified form:
- Commercial or otherwise excessive use.

Anyone who operates or services the hammer drill and/or impact driver must be familiar with these instructions and must be aware of possible dangers. This hammer drill and/or impact driver may only be used by a competent person – in case of doubt seek training or advice from an expert.

Non-observance of the safety, assembly and operating instructions while operating the hammer drill and/or impact driver counts as misuse. Any applicable health and safety regulations must be followed. Any other applicable local and national legislation must also be followed. The hammer drill and/or impact driver may not be modified as modifications may cause damage or injury.

Residual risks

A residual risk of injury remains even if the hammer drill and/or impact driver is used for its intended purpose in accordance with the safety, assembly and operating instructions.

Due to the nature of the hammer drill and/or impact driver, the following dangers may arise:

- Injury by projectiles from failure of the workpiece or accessories.
- Injury by contact with rotating parts.
- Risk of crushing or injury due to improper use.
- Breakage of the insert tool or the workpiece.

General power tool safety warnings

A WARNING!

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) Work area safety

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) 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.
- c) Keep children and bystanders away while operating a power tool.

 Distractions can cause you to lose control.

2) Electrical safety

- a) 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.
- b) 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.
- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d)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.
- e) 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.
- f) 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.

3) Personal safety

- a) 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 a 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 offposition 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 and clothing 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.*
- h)Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

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 remove the battery pack, if detachable, from the power tool before making any

- **adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
- 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 and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **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.
- h) Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- 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.
 - e) Do not use a battery pack or tool that is damaged or modified.

 Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.

- f) Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion.
- g) Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

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

Impact Drill Safety Warnings

- 1) Safety instructions for all operations
 - **a) Wear ear protectors when impact drilling.** *Exposure to noise can cause hearing loss.*
 - b) Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory or fasteners 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.
- 2) Safety instructions when using long drill bits
 - a) Never operate at higher speed than the maximum speed rating of the drill bit. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
 - b) Always start drilling at low speed and with the bit tip in contact with the workpiece. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
 - c) Apply pressure only in direct line with the bit and do not apply excessive pressure. Bits can bend causing breakage or loss of control, resulting in personal injury.

Impact Driver Safety Warnings

1) Hold the 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.

Safety instructions for battery chargers

- 1) Never connect a battery pack that is damaged in any way to the charger. There is a danger of electric shock.
- 2) Do not misuse the charger! The charger is only intended for charging the battery pack Mod. LY770-Li-18V-F, 2000 mAh. Misuse may result in fire or a fatal electric shock
- 3) WARNING! Do not charge non-rechargeable batteries with the charger. *Not following this instruction results in hazards.*
- 4) Damaged mains plug or connecting cables have to be replaced by the manufacturer of the power tool or his customer service department to prevent hazards.
- 5) The charger, but not the cordless drill, can be operated by children from 8 years of age and above, as well as by people with reduced physical, sensory or mental capacities or who lack knowledge or experience, if they have been supervised or instructed regarding safe use of the device, and understand the resultant dangers. Children must not play with the tool. Cleaning and user maintenance shall not be performed by children without supervision.
- **6) Do not expose the cordless drill and the charger to rain or moisture.** *Water ingression can result in an electrical shock and damage the device.*

Before using the kit

Checking the kit and pack contents

- Take the kit out of the packaging.
- Check that the delivery is complete (see section: "List of contents and features")
- Check whether the kit or any of its individual parts are damaged.
- If this is the case, do not use the kit. Contact the manufacturer at the service address specified on the warranty card.
- The ambient temperature for using the tools and the battery is between 10°C and 40°C

Fitting and removing the battery

- Slide the battery 6 into the handle 4 until it engages.
- To remove the battery, hold down the battery release button 7 and pull the battery out of the handle.



The impact driver must only be used together with the following types of battery pack:

Battery model	Rated voltage	Capacity
LY770-Li-18V-F	18 V	2.0 Ah

Checking the battery status



The battery is equipped with a charge level indicator, which displays an indication of the battery charge level.

Use the battery charge status indicator to plan your work and/or to avoid deep discharge.

- To check the charge level, press the battery charge level indicator button 16.
- The charge level is represented by three green LEDs working as charge level indicator 15.
- When the battery is fully charged all three LEDs light up green.



• The battery has a deep discharge protection system. At a charge level under 35% it will cease to operate the drill. The battery status light will flash before cut out. Do not try to override this protection function, instead charge the battery immediately.

LED battery status indicator	Capacity
3x green LEDs	>70%
2x green LEDs	<70%
1x green LED	<50% Charge battery!

Charging the battery



The battery is only lightly charged when it leaves the factory. The battery must be charged before the machine is used for the first time.

The battery can become warm if the machine is subject to heavy use. Always allow the battery to cool down before re-charging.



The charger is equipped with a charging indicator lamp. During charging, the indicator light will light up red. After completion of charging, the light turns green.

The battery charge status indicator on the battery indicates the charge level of the battery whilst on charge.

0-34%	3 blinking LEDs
35-69%	2 blinking LEDs
70-99%	1 blinking LED
100%	3 LEDs illuminate for approximately 10 minutes

- Slide the battery onto the charger 18.
- Connect the charger to a suitable mains socket. The red charging light comes on.
- The charger may become warm and buzz slightly during charging. This is normal and does not indicate a fault



Only the following charger types may be used to charge the battery pack:

Battery charger model	Rated Input	Rated Output:
LY77-2200-2300B	230 - 240 V~ / 50/60 Hz / 63 W	22 V == / 2.3 A

Ambient temperature for charging: 0 - 40 °

- After about an hour the charging indicator light turns green to indicate that charging is completed.
- Remove the battery from the charger.
- Disconnect the charger from the mains after charging.



Fitting the belt clip



The belt clip is factory fitted. For your convenience it can be fitted to either side of the machine.

- Unscrew the Phillips screw.
- Fit the belt clip 5 to the other side of the machine.
- Secure by fastening the Phillips screw.



Fitting tools to the hammer drill

A WARNING!

Only use bits designed for use with the machine.



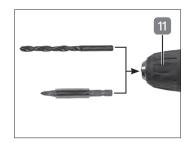
Keyless chuck 111

Both drill bits and screwdriver bits can be fitted to the chuck.

- Turn the chuck 11 counterclockwise to open it and insert a drill bit or bit holder
- Choose
 - a suitable drill bit and insert it into the chuck
 - a bit holder and insert it using the hexagonal side into the chuck.
- Tighten the chuck clockwise.
- If you have mounted a bit holder, then insert a suitable bit.
- To remove proceed in the reverse order.



Allow the drill or the bit used to rotate for a few times freely and check visually if the tool is rotating properly.



Fitting tools to the impact driver

A WARNING!

Only use bits designed for use with the machine.

⚠ CAUTION!

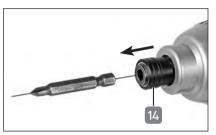
Due to the high levels or torque produced when using the driver use only impact-ready bits. The use of standard screwdriver bits is not recommended.



Ouick release chuck 13

The chuck is suitable for bits with a ¼" quick-release hexagonal shaft (6.35mm).

- To insert a bit pull the sleeve 14 away from the tool and push the bit into the chuck until it engages and the sleeve retracts into its original position.
- To fit socket bits the use of a socket bit adapter is required.
- To remove the bit retract the sleeve and pull out the bit.



Using the hammer drill Changing speed



Change speeds only when the drill spindle has come to a complete stop. (To prevent the risk of damage to the gears.)



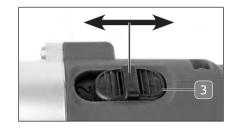
Always ensure that the speed selection switch properly locks into position 1 or 2.

Speed adjustment switch in position 1:

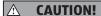
• Speed 1: 0 - 350 rpm

Speed adjustment switch in position 2:

• Speed 2: 0 – 1,250 rpm



Forward / Reverse



Ensure the drill has come to a complete stop before changing direction.

- Select the direction of rotation by pressing the forward/reverse switch 10 . The forward / reverse switch has a lock function and cannot be used when the trigger is depressed.
- Switch in direction == :

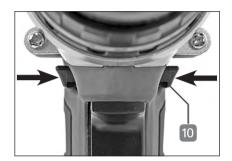
Forward

- **Switch in direction** :

Reverse

- Switch in the centre position:

On/Off switch locked



Switching ON / OFF

Switching on:

Press the On / Off switch 9.

Switching off:

Release the On / Off switch.

The speed can be infinitely adjusted by varying the pressure exerted on the trigger.



LED worklight



The drill is equipped with an LED worklight that facilitates working in inaccessible, dark places.

• The LED worklight 8 illuminates immediately after pulling the trigger and turns off once you release the trigger.

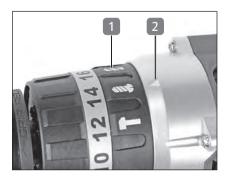


Driving screws



To tighten screws, the drilling icon on the torque setting ring should not be selected (risk of overload).

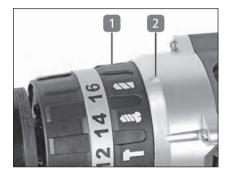
- To select screwdriving mode, rotate the drill / screwdriver / hammer mode selection ring 10 so that the screw symbol we lines up with the indicator mark 2
- The torque setting can be adjusted using the torque control ring so that the slip clutch engages when the head of the screw is flush with the workpiece surface. Do not use the drill setting when driving screws. (Danger of overload).



Drilling and hammer drilling

• To select drilling mode, rotate the drill / screwdriver / hammer mode selection ring

1 so that the drill symbol lines up with the indicator mark



 To select hammer drilling mode, rotate the drill / screwdriver / hammer mode selection ring so that the hammer symbol
 lines up with the indicator mark.

Hammer drilling mode should only be used for drilling in masonry.



Drill bit selection

Drilling concrete and stone	TCT drill bit for stone
For metal	HSS drill bit for metal
For wood	Spiral bit for wood

Working with the drill

↑ CAUTION!

Always secure your workpiece in a vice or in any other clamping device. Secure particularly large workpieces against sliding or support them properly.

⚠ NOTICE!

Drilling speed is not increased by applying excess pressure on the drill. Excess pressure can damage the drill or the drill bit and can lead to injury. The larger the hole, the greater the forces exerted on your arm. Grip the machine with two hands and maintain a stable posture.

Drilling in wood

- Make an indentation at the desired hole location using a centre punch or nail.
- Place a piece of waste wood under the workpiece or drill the hole from both sides to avoid damaging the workpiece at hole breakthrough.
- The maximum hole diameter can only be achieved using Forstner bits.

Driving wood screws

- Where possible use crosshead wood screws.
- Ensure that you use the correctly sized screwdriver bit.
- Drill an appropriately sized pilot hole before driving in the screw. Driving without pilot drilling increases the risk that the wood may split or that the screw may break.

Drilling in metal

- Make an indentation at the desired hole location using a centre punch.
- Always secure the workpiece using an appropriate clamping device. Lay a piece of wood under thin sheets of metal to prevent deformation.
- Use only well sharpened HSS drill bits when drilling metal. If a large hole diameter is required, drill a pilot hole using a smaller bit first.
- When drilling metal, consult the following table to determine the appropriate lubricant.

Impact drilling

- For applications which produce a considerable amount of dust, such as impact and diamond core drilling, make sure a dust collection system is applied.
- For applications which produce a considerable amount of dust, such as impact and Make sure that the dust collection system does not touch the moving drill
- For applications which produce a considerable amount of dust, such as impact and When using a two-hand operated dust collection system, a second person is needed.

Material	Lubricant
Steel	Oil
Aluminium	Turpentine or paraffin
Brass, copper, cast iron	No lubricant (remove the drill from the hole regularly to aid cooling)

Drilling masonry

- Use the hammer drilling mode when drilling masonry.
- Always use a TCT masonry drill bit.
- When drilling deep holes, occasionally remove the bit from the hole to aid cooling and waste ejection.
- When drilling tiled surfaces, start in conventional drilling mode and switch to hammer drilling mode only once the tiled surface is pierced.

Using the impact driver

A WARNING!

Do not operate the impact driver for excessive periods of time to avoid damage to the tool, the bit and/or the workpiece.

Forward / Reverse

⚠ CAUTION!

Ensure the driver has come to a complete stop before changing direction.

- Select the direction of rotation by pressing the forward/reverse switch 10.
- **Switch in position** : Running forward
- Switch in position :
 Running reverse
- Switch in middle position:
 Trigger is locked.



Switching ON / OFF

To switch ON:

• Pull the trigger 9.

To switch OFF:

• Release the trigger.

The speed can be adjusted by varying the pressure exerted on the trigger.



LED worklight



The driver is equipped with an LED worklight that facilitates working in inaccessible, dark places.

• The LED worklight 8 illuminates immediately after pulling the trigger and turns off once you release the trigger.



Maintenance, cleaning, storage and transport

WARNING!

Disconnect the mains plug of the charger and remove the battery of the impact driver / hammer drill before carrying out any adjustment, maintenance, repair or cleaning. To do this, remove the tool being used.

Maintenance

The hammer drill and the impact driver ares practically maintenance-free.

Only use spare parts / accessories from the manufacturer or authorised and qualified workshops.

Repairs should only be carried out by qualified technicians or by an authorised service centre. Qualified technicians must have relevant training and experience, be familiar with the design and construction requirements of the product and understand and follow the safety regulations.

Always keep your tool bits sharp. Always sharpen them using a suitable tool as recommended by the tool bit manufacturer.

Replacing the chuck

- Open the chuck completely. Hold the chuck firmly. Remove the chuck screw on the inside of the chuck (left handed thread).
- Insert a hex key (not supplied) into the chuck and tighten the chuck around the hex key.
- Lightly tap the hex key with a rubber mallet in the direction of the arrow as illustrated and unscrew the chuck.





It is easier to remove the chuck when speed range 1 is selected.

Carry out the above procedure in reverse order to fit the new chuck.

Cleaning

△ CAUTION!

Never immerse the impact driver in water or other liquids.

⚠ NOTICE!

Do not use aggressive cleaning agents, brushes with metal or nylon bristles, or sharp or metallic cleaning items such as knives, hard spatulas, and the like. These can damage the surface.

Do not use running water or other liquids for cleaning and protect the water from getting inside the hammer drill and/or impact driver.

Do not use electrical cleaning devices.

- Wipe all surfaces and components with a slightly damp cloth.
- Use a mild soapy solution to moisten the cloth.
- Allow all parts to dry completely.

Storage

- Clean both the hammer drill and the impact driver before storage.
- When not in use, store the hammer drill and the impact driver in a safe, cool, dry, well-ventilated place out of the reach of children.
- The tool and its battery may only be stored at an ambient temperature between 0°c and 40°C.

Transport

• Transport the hammer drill and/or impact driver protected from shocks and vibrations in the original packaging.

Troubleshooting

Problem	Possible cause	Remedy
The motor does not start.	Battery empty	Charge the battery
	No connection between the battery and the drill's battery contacts	Slide the battery in as far as it will go
	Forward / reverse switch in central position	Slide the switch to the left or the right
The motor runs but the drill bit does not rotate	Drill bit not secured properly	Check whether you can remove the drill bit by hand. Fit the drill bit correctly.
Battery does not charge	Battery not fitted properly	Slide the battery in as far as it will go.
	Charger defective	Replace the battery charger
Poor drilling performance in masonry	Drill bit blunt	Sharpen the drill bit or use a new drill bit
	Switch in wrong position	Put the drill / hammer mode selection ring in the hammer drilling position
Charge control lamp on battery charger does not light up	No mains power	Check the houshold fuse box
	Cable defective	Have the cable changed by
		customer service
	Battery charger defective	Have the battery charger checked by customer service
Battery performance poor	Battery defective	Replace the battery

Technical specifications

CORDLESS HAMMER DRILL

Model	WWS-ABS18-L01
Battery voltage	18 V ===
Chuck capacity	2 – 13 mm
No load speed	Speed range 1: 0 – 350 rpm Speed range 2: 0 – 1250 rpm
Impact rate	Speed range 1: 0 – 5250 bpm Speed range 2: 0 – 18750 bpm
Torque settings	16 plus drill setting plus hammer drill
Torque	max. 35 Nm
Max drilling capacity	Steel 13 mm Wood 25 mm Masonry 8 mm
Protection category	III

CORDLESS IMPACT DRIVER

Model	WWS-ASS18-L01	
Battery voltage	18 V ===	
Chuck size	1⁄4" hexagonal (6.35mm)	
Torque	max. 180 Nm	
No load speed	0 – 2200 rpm	
Impact rate	0 – 3000 bpm	
Protection category	III	

Battery charger

Model	LY77-2200-2300B
Article	629121
Rated voltage	230 – 240 V~, 50/60 Hz , 63 W
Output voltage	22 V
Output current	2300 mA
Protection category	II

Battery

Model	LY770-Li-18V-F
Article	629120
Battery voltage	18 V
Capacity	2000 mAh
Туре	Lithium-Ion (Li-Ion)

Noise and vibrations levels

Noise emissions

Measured according to EN 62841. The noise level at the workplace may exceed 85 dB (A); safety precautions are required for the operator in this case (wear suitable ear protection).

	Hammer Drill	Impact Driver
Sound pressure level: L_{pA}	84 dB(A)	95.1 dB(A)
Sound power level: L _{WA}	95 dB(A)	106.1 dB(A)
Uncertainty: K	3 dB(A)	3 dB(A)

Vibration details

	Hammer Drill	Impact Driver
Vibration level: <i>A</i> h,D	7.528 m/s ²	15.87 m/s ²
(Impact drilling)		
Vibration level: Ah,D	1.078 m/s ²	1.5 m/s ²
(Drilling)		
Uncertainty: K	1.5 m/s ²	1.5 m/s ²

The overall vibration value and the noise emission value specified have been measured according to a standardized test method and can be used to compare one power tool with another.

The overall vibration value and the noise emission value specified can also be used for a preliminary assessment of exposure.

A WARNING!

The vibration and noise emissions during the actual use of the power tool may differ from the specified values, depending on the manner in which the power tool is used, especially, the type of workpiece being machined.

- Is the cordless drill well-maintained and in good condition.
- How, and for what material, the cordless drill is used.
- The use of proper accessories, and whether these are in good condition.

- Is the cordless drill held tightly by the user.
- Is the cordless drill operated properly as described in this manual.
- If the cordless drill is used improperly or excessively it can cause vibrationrelated illness.

A WARNING!

Safety measures have to be defined to protect the operator based on an estimation of exposure during actual usage conditions (in this case all the parts of the operating cycle have to be considered, such as times when the power tool is turned off, and those where, the tool is turned on, but is running without load).

Depending on the way the tool is used and the operating conditions, the following safety precautions have to be taken for the safety of the operator:

- Try to avoid exposure to vibration as much as possible.
- Only use proper accessories.
- Wear anti-vibration gloves when using the cordless drill.
- Follow the instructions on cordless drill maintenance and care contained in this manual.
- Avoid using the cordless drill at a temperature below 10°C and over 40°C.
- Plan your work in such a way so that you do not have to use vibrating tools over several days.

Recyclina

Disposal of the packaging



Recycled



Locally

Sort the packaging materials according to type and dispose of each separately. Dispose of cardboard as waste paper and shrink wrap via the recyclable material collection service.

Disposing of old appliances



This symbol indicates that this product may not be disposed of together with domestic waste in compliance with the (2012/19/EU) Regulation pertaining to waste electrical and electronic devices (WEEE). This product must be handed in at a collection point intended for the purpose. This can occur, for example, by handing it in at an authorised collecting point for the recycling of waste electrical and electronic equipment. Owing to potentially hazardous substances that are frequently contained in waste electronic equipment. incorrect handling of waste equipment may have a negative impact on the environment and on the health of human beings. By disposing of this product correctly, you are also contributing towards an efficient use of natural resources. Information on collecting points for waste equipment can be obtained from your municipal authorities, the public law disposal authorities, an authorised institution for the disposal of waste electrical and electronic equipment or the waste collection services.

Recycling batteries



Do not dispose of used batteries in the household waste.

Consult your local authority or dealership for details of recycling or disposal facilities.

Declaration of Conformity





EU/EC DECLARATION OF CONFORMITY

We (4) expressly declare, under our sole responsibility, that the object (1) of this declaration is in conformity with all relevant provisions of the following Union narmonisation legislation (2). References to the harmonized standards used (3). The technical file is available from (4).

m	(2)	(3)
18V Li-ton hammer drill - 30-00521 - 2019-09 Mod.: WWS-ASS18-L02	2006/42/EC 2014/30/EU 2011/65/EU	EN 62841-1:2015; EN 62841-2-1:2018; EN 55014-1:2006+A1:2009+A2:2011; EN 55014-2:2015; EN 50581:2012

(4)

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head St. Product Management Salzburg 128.06.2019

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EU/EC DECLARATION OF CONFORMITY

We (4) expressly declare, under our sole responsibility, that the object (1) of this declaration is in conformity with all relevant provisions of the following Union harmonisation legislation (2), References to the harmonized standards used (3).

The technical file is available from (4).

(1)	(2)	(3)
18V Li-lon impact driver kit -30-00521 -2019-09 Mod.: WWS-ASS18-L01	2006/42/EC 2014/30/EU 2011/65/EU	EN 62841-2:2015; EN 62841-2-12018; EN 62841-2-2; EN 55014-12006+A12009+A22011; EN 55014-120015; EN 55014-12015
	(4)	
	erkzeuge Salzburg Gmb irkstr. 9, A-5081, Anif, Au	

pha Ben Shields Head of Product Management Salzburg, 28.06.2019



Great care has gone into the manufacture of this product and it should therefore provide you with years of good service when used properly. In the event of product failure within it's intended use over the course of the first 3 years after date of purchase, we will remedy the problem as quickly as possible once it has been brought to our attention. In the unlikely event of such an occurrence, or if you require any information about the product, please contact us via our helpline support services, details of which are to be found both in this manual and on the product itself.





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