

A18 / ASB18

de	Akku-Bohr- und Akku-Schlagbohrschrauber	Originalbetriebsanleitung	6
en	Cordless drill driver and cordless impact drill driver	Translation of the original operating instructions	16
fr	Perceuse et perceuse-visseuse à percussion, sans fil	Traduction de la notice d'emploi originale	26
it	Trapano avvitatore a batteria e trapano a percussione a batteria	Traduzione delle istruzioni d'uso originali	36
nl	Accu-boor- en accu-slagboorschroevendraaier	Vertaling van de originele gebruiksaanwijzing	46
es	Taladro y taladradora de impacto de batería	Traducción del manual de instrucciones original	56
fi	Akkupora- ja akkuiskuporaruuviväänin	Käännös alkuperäiskäyttöohjeesta	66
sv	Batteridrivnen borrarvridare- och batteridrivnen slagborrskrudare	Översättning av originalbruksanvisningen	75
da	Akku-bore- og akku-slagboreskruemaskine	Oversættelse af den originale betjeningsvejledning	84
ru	Акумуляторная дрель-шуруповёрт и аккумуляторная ударная дрель-шуруповёрт	Перевод оригинальной инструкции по эксплуатации	93
pl	Akumulatorowa wiertarka-wkrętarka udarowa	Tłumaczenie oryginalnej instrukcji obsługi	103
cs	Akumulační vrtačka a příklepová vrtačka	Překlad původního provozního návodu	113
sl	Akumulatorski vrtni vijačniki in akumulatorski udarni vrtni vijačniki	Prevod izvirnih navodil za uporabo	123
sk	Akumulátorová vrtačka a akumulátorová príklepová vrtačka	Originálny návod na používanie	133

mafiell
creating excellence



MAF02080/b

Table of Contents

1	Signs and symbols	17
2	Product information	17
2.1	Manufacturer's data	17
2.2	Machine identification	17
2.3	Technical data	18
2.4	Emissions	18
2.5	Scope of supply	19
2.6	Use according to intended purpose	19
3	Safety information	19
3.1	Safety instructions for all types of work	19
3.2	Safety instructions for the use of long drill bits	19
3.3	Additional safety instructions	20
4	Layout	20
4.1	Depicted components	20
4.2	Symbols	20
5	Operation	20
5.1	Rechargeable battery, capacity and signal display	20
5.2	Removing and inserting the rechargeable battery	21
5.3	Sense of rotation, transport lock	21
5.4	Selecting the gear speed	21
5.5	Setting drilling or impact drilling mode	21
5.6	Setting the torque, impulse function	21
5.7	Switching on/off, setting the speed	21
5.8	Tool change	21
5.9	Switching the LED light on/off	22
5.10	Belt clip	22
5.11	Bit adapter	22
5.12	Optical alignment (spirit level)	22
6	Service and maintenance	22
6.1	Storage	23
6.2	Transport	23
6.3	Disposal of rechargeable batteries/batteries	23
7	Troubleshooting	24
8	Optional accessories	25
9	Exploded drawing and spare parts list	25

1 Signs and symbols



This symbol is found in all places where you will find information for your safety.

Non-compliance with these instructions may result in very serious injuries.



This symbol indicates a potentially hazardous situation.

If this situation is not avoided, the product or objects in its vicinity may get damaged.



This symbol indicates tips for the user and other useful information.

2 Product information

for machines with product no. 91C801, 91C821, 91C901, 91C921

2.1 Manufacturer's data

MAFELL AG, Beffendorfer Straße 4, D-78727 Oberndorf / Neckar, Phone +49 (0)7423/812-0, Fax +49 (0)7423/812-218, e-mail: mafell@mafell.de

2.2 Machine identification

All details required for machine identification are available on the attached rating plate.



CE symbol to document compliance with the basic safety and health requirements according to Appendix I of the Machinery Directive.



For EU countries only

Do not dispose of electrical tools together with domestic waste!

In accordance with the European directive 2002/96/EC on waste electrical and electronic equipment and transposition into national law, obsolete electrical tools must be collected separately and recycled in an environmentally-compatible manner.



Read the operating instructions. This reduces the risk of injury.



Protect the rechargeable battery from heat, excessive solar radiation, fire, frost, water and humidity.

Protect rechargeable battery packs from humidity!



Protect rechargeable battery packs from fire!

There is danger of explosion!



Cordless Alliance System (=CAS) is a cross-manufacturer battery pack system. Further information is available at www.cordless-alliance-system.com

2.3 Technical data

Model:		A18	ASB18
Voltage	V	18	18
Speed level 1	rpm	0-560	0-560
Speed level 2	rpm	0-1960	0-1960
Torque (soft)	Nm	65	65
Torque (impulse)	Nm	65	65
Torque (hard)	Nm	130	130
D max chuck	Ø mm	13	13
D min chuck	Ø mm	1.5	1.5
Max. drill diameter:			
Steel	Ø mm	13	13
Wood	Ø mm	68	68
Concrete	Ø mm	-	16
Max. impact rate	/min	-	38000
Weight (with rechargeable battery 4.0 Ah / 5.5 Ah)	kg	1.8 / 2.2	1.9 / 2.3

2.4 Emissions

The values stated are emission levels. Although there is a correlation between emission and imission level, it cannot be reliably derived from this whether additional precautions are necessary. Factors influencing the current imission level existing at the workplace comprise the duration of exposure, the room characteristic, other source of noise, etc. such as e.g. the number of machines and other adjacent machining operations. In addition, the permissible imission level may differ from country to country. This information is nevertheless suitable for providing the machine user with an improved assessment of the hazard and risk.

2.4.1 Noise emission specifications

Noise emission values determined according to EN 62841-1 and EN 62841-2-1:

	Sound pressure level (L_{pA})	Sound power level (L_{WA})
A18	72 dB (A)	88 dB (A)
ASB18	92 dB (A)	103 dB (A)
Uncertainty (K_{WA})	3 dB (A)	3 dB (A)

2.4.2 Vibration value specification

	Drilling in metal	Impact drilling in concrete
A18	< 2.5 m/s ²	-
ASB18	< 2.5 m/s ²	< 15.5 m/s ²
Measuring inaccuracy	1.5 m/s ²	2.5 m/s ²

2.5 Scope of supply

Cordless drill driver and cordless impact drill driver A18 and ASB18 complete with:

- 1 cordless screwdriver
- 1 quick-release chuck
- 1 rechargeable battery 4.0 Ah for product no. 91C801, 91C821, 91C901, 91C921
- 1 rechargeable battery 5.5 Ah for product no. 91C801, 91C821, 91C901, 91C921
- 1 additional handle
- 1 quick-release bit holder
- 1 rechargeable battery for product no. 91C801, 91C821, 91C901, 91C921
- 1 belt clip
- 1 operating manual
- 1 folder "Safety instructions"

2.6 Use according to intended purpose

The drill drivers and impact drill drivers (A18 and ASB18) are suitable for drilling without impact in metal, wood, plastic and similar materials as well as for screwing and tapping.

The impact drill driver (ASB18) is in addition suitable for impact drilling in concrete, masonry, brickwork and stone.

Any other use than described above is not permissible. The manufacturer cannot be held liable for any damage arising from such other use.

In order to use the appliance as intended, you must comply with the operating, maintenance and repair instructions specified by MAFELL.

Corrective maintenance work must be carried out by MAFELL authorised dealers or MAFELL customer service stations.

The safety instructions applicable in the respective country of use as well as other generally recognised rules pertaining to safety and occupational health must be observed.

Unauthorized changes to the appliance shall rule out any manufacturer liability for damages resulting thereof.

Only use original Mafell / CAS rechargeable batteries and accessories.

3 Safety information



Danger

Electrical appliances may be dangerous if used incorrectly. Therefore, always observe the safety instructions summarised in this chapter and the safety regulations applicable in the respective country of use!

3.1 Safety instructions for all types of work

- **Wear ear protectors during the use of impact drill drivers (machines with the designation ASB).** Exposure to noise can cause loss of hearing.
- **Make use of the additional handle supplied with the appliance.** Loss of control can lead to injuries.
- **Always hold the appliance by the insulated gripping surfaces when carrying out work during which the bit may hit concealed power lines.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

3.2 Safety instructions for the use of long drill bits

- **Always start drilling at low speed and with the drill bit in contact with the workpiece.**
- **On no account may you work at a speed that exceeds the maximum speed permitted for the drill bit.** At higher speeds, the drill bit can easily

bend if allowed to turn freely (without contact with the workpiece); this can lead to injuries.

- **Do not apply excessive pressure and only apply pressure in the longitudinal direction to the drill bit.** Drill bits can bend and thus break or lead to a loss of control and injuries.

3.3 Additional safety instructions

- Ensure that the machine is switched off when you push in the rechargeable battery.
- Remove the rechargeable batteries from the machine before carrying out any setting, retooling, maintenance or cleaning tasks.
- Dust originating from materials such as leaded paint, some types of wood, minerals and metal can be harmful to health. Touching or inhaling these dusts can cause allergic reactions and/or respiratory disorders in the user or persons staying in the vicinity.
- As far as possible, make use of a dust extraction system.
- Provide for good ventilation of the workplace.
- It is recommended to wear a respirator mask with filter class P2.
- Observe the regulations valid in your country for the materials to be machined.
- Secure the workpiece against shifting, e. g. by means of fastening devices.
- LED light (Fig. 1, 7): Do not directly look at the LED radiation with optical instruments.

4 Layout

4.1 Depicted components

(see Fig. 1-6)

- (1) Exchangeable attachment (chuck)
- (2) Gear change slide (drilling, impact screw driving only ASB ...)
- (3) Gear change slide - first or second gear
- (4) Sense of rotation selector switch, double sided
- (5) Bit adapter, double sided
- (6) Belt clip, can be used on both sides
- (7) LED light
- (8) Button - capacity display
- (9) Rechargeable battery
- (10) Capacity and signal display

(11) Setting wheel – torque pre-selection, impulse function

(12) Switch trigger

(13) Additional handle

(14) Bubble level

(15) Circular level

(16) Unlocking mechanism rechargeable battery

(17) Locking ring

(18) Clamping arm

(19) Adjusting screw

4.2 Symbols



Movement direction



First gear



Second gear



Screwing



Drilling



Without torque control



Impulse function



Impact drilling

Nm

Torque

5 Operation

5.1 Rechargeable battery, capacity and signal display

(see Fig. 1)

- Charge the rechargeable battery prior to use.
- Recharge the rechargeable battery in case of loss of power.
- Press the button (8) to query the charge condition of the rechargeable battery. The capacity can be read off the LED lights (10).
- If a LED light (10) flashes, the rechargeable battery is almost empty. Recharge the rechargeable battery.
- The optimum storage temperature is between 10 °C and 30 °C.

5.2 Removing and inserting the rechargeable battery

(see Fig. 3)

Removing: Press the unlocking mechanism (16) and pull the rechargeable battery (9) out to the front.

Inserting: Push on the rechargeable battery until it clicks into place.

5.3 Sense of rotation, transport lock

(see Fig. 1)

R = Clockwise rotation

L = Anti-clockwise rotation

0 = Centre position: Transport lock

(Switch-on lock)

5.4 Selecting the gear speed

(see Fig. 1)



Actuate the switch slider (3) only when the motor is standing still!

1

First gear: low speed, high torque; preferably for screwing

2

Second gear: high speed; preferably for drilling

5.5 Setting drilling or impact drilling mode

(see Fig. 1)

- Set the desired operating method at the switch slider (2).

5.6 Setting the torque, impulse function



Caution!

Do not work with activated impulse function for a longer period of time! (The motor can overheat). It is best to only work with the additional handle when using the impulse function.

(Fig. 1)

Set the torque by turning the adjusting ring (11).

1...10 = Torque limitation (setting range first gear: 3 – 20 Nm, second gear: 1 – 10 Nm)



= Adjusting the drill setting (max. torque, without torque control). Do not block the spindle to avoid overloading the motor.



= Adjusting the impulse function (max. torque pulsing).

5.7 Switching on/off, setting the speed

(see Fig. 1)

Switching on: Press the switch trigger (12) and keep it depressed. The speed at the switch trigger can be changed by the depth to which it is depressed.

Switching off: Release the switch trigger (12).



The noise that can be heard when the machine is switched off is due to the design (quick stop) and has no influence on function and life time of the machine.

5.8 Tool change



Only use high-grade tools, which are suitable for the forces and torques occurring! Broken tools will lead to a machine defect. If repairs are necessary, contact the customer service stations for MAFELL electrical tools.


The spindle enables a quick change between the accessory attachments and a direct 1/4" hexagonal adapter.


Demounting the attachment: (see Fig. 5) Pull the locking ring (17) forward and pull off the attachment to the front.

Mounting the attachment: Pull the locking ring (17) forward and push the attachment onto the spindle up to the limit stop. (If necessary, turn the chuck slightly to and fro.)

5.8.1 Quick-release chuck

(see Fig. 1)

Opening the chuck: Turn the chuck (1) in direction of rotation .



Tensioning the tool: Turn the sleeve in direction  until the perceptible mechanical resistance has been overcome. **Caution! The tool is not yet tensioned!** Continue turning forcefully (a "clicking" sound must be

heard while doing so) until it is not possible to turn any further - only now the tool is reliably tensioned.

In case of a soft tool shaft, it may be necessary to retension after a short drilling time.

Notes on ASB18 M and A18

- The ratchet sound that may be heard after opening the chuck (functional) is switched off by counter-rotating the sleeve.

Cleaning: Hold the machine occasionally with the quick-release chuck pointing vertically down and turn the sleeve completely in direction  and then turn it completely in direction . The collected dust drops out of the quick-release chuck.

5.8.2 Quick-release bit holder

Inserting a bit: Slide the bit into the bit holder until it audibly engages.

Removing a bit: Pull the sleeve at the bit adapter forward until it engages and remove the bit.



The quick-change bit holder can be used for screwing applications with up to 8 mm countersunk screws in wood or up to a torque of max. 60 Nm.

In the event of higher requirements, insert the bit directly into the spindle or use the chuck.

5.8.3 Angle attachment

The angle attachment can be used to work at right angles to the screwdriver axle.

Slide the angle attachment completely onto the machine until the components' profiles engage.

Adjust the clamping force at the adjusting screw (19) (Fig. 6).

Forcefully push the clamping arm (18) down to the limit stop, in this manner fastening the angle attachment on the machine (Fig. 6).



If the angle attachment is not slid onto the clamping collar, the lever may not be pushed forcefully down. Failure to do so can destroy the tight fit.

5.9 Switching the LED light on/off

- Press the switch trigger (12) to switch on the LED light (7).
- After releasing the switch trigger (12), the LED light (7) still glows for approx. 5 sec. and then switches off.

5.10 Belt clip



For an easier handling of the belt clip, remove the rechargeable battery (see chapter 5.2)

(see Fig. 4)

Detaching:

- Press the belt clip (6) together at the rear.
- Swivel it out of the rear opening.
- Slacken the belt clip and remove it from the front opening.

Attaching:

- Press the belt clip (6) together and insert it into the openings provided.
- The belt clip (6) can be attached on both sides.

5.11 Bit adapter

(see Fig. 1)

A screw bit can be fitted in the bit adapter (5) on both sides.

5.12 Optical alignment (spirit level)

The bubble level (14) and circular level (15) can be used to align the screwdriver in horizontal and vertical direction.

6 Service and maintenance



Danger

Unplug the rechargeable battery for all service work.

MAFELL machines are designed to be low in maintenance.

Always keep the appliance clean.

Should the appliance fail despite thorough manufacturing and testing procedures, the repair must

be carried out by an authorised customer service station for MAFELL electrical tools.

Store the appliance in a dry and frost-proof place.

Only use MAFELL accessories and spare parts. Have components, the replacement of which has not been described, replaced at a MAFELL customer service station.

6.1 Storage

Clean the machine thoroughly if the machine is not used for a longer period of time. Spray blank metal parts with a rust-proofing agent.

6.2 Transport

The included Li-ion rechargeable batteries are subject to the requirements of dangerous goods legislation. The rechargeable batteries can be transported by the user on the road without any further requirements.

For the dispatch by third parties (e.g.: air transport or forwarding agent), special requirements for packaging and labelling must be observed. In this case, a dangerous goods expert must be consulted when preparing the package.

Only dispatch rechargeable batteries if their housing is undamaged. Tape open contacts and pack the rechargeable battery so that it does not move in the packaging.

Please also observe any further national regulations.

6.3 Disposal of rechargeable batteries/batteries



Electrical tools, rechargeable batteries, accessories and packaging should be recycled in an environmentally friendly manner.

Do not dispose of electrical tools together with domestic waste!

For EU countries only:



According to the European Directive 2002/96/EC, power tools that are no longer serviceable, and according to the European Directive 2006/66/EC, defective or used rechargeable batteries/batteries must be collected separately and recycled in an environmentally sound manner.

Return unusable rechargeable batteries/batteries directly to:

Germany

Stiftung
GRS Batterien
Heidenkampsweg 44
20097 Hamburg
Germany

Rechargeable batteries/batteries:



Li-ion:

Please comply with the information in Section "Transport", page 23.

Subject to changes.

7 Troubleshooting



Danger

Determining the causes for existing defects and eliminating these always requires increased attention and caution.

To activate the electronic functions: Press the switch trigger (12).

If the machine switches off automatically, the electronic system has activated self-protection mode. Despite this protective function, overload and as a consequence damage to the machine may occur during certain applications.

Some of the most frequent defects and their causes are listed in the following chart. In case of other defects, please contact your dealer or the MAFELL customer service directly.

Defect	Cause	Remedy
Machine switches off and an LED on the capacity display (10) flashes.	Rechargeable battery is almost empty. The electronic system protects the rechargeable battery from deep discharge.	Charge the rechargeable battery.
The machine switches off and cannot be switched on again. A warning signal sounds and the LED light (7) flashes.	Overload A sustained load has overheated the machine or the rechargeable battery.	Signal goes out after releasing the switch trigger (12). Allow the machine and the rechargeable battery to cool down. Note: The machine cools down faster when it is allowed to idle after it is switched on again.
Machine switches off. A warning signal sounds and the LED light (7) flashes. Machine restarts when it is switched on again.	Excessive current rating. This leads to the machine being switched off, e.g. in the event of prolonged blockage.	Switch off the machine by releasing the switch trigger (12). Afterwards, you can switch the machine back on again and resume work. Try to avoid further blockages.

8 Optional accessories

- Rechargeable battery PowerTank 18 M 72 LiHD	Order No. 094500
- Rechargeable battery PowerTank 18 M 99 LiHD	Order No. 094503
- Rechargeable battery PowerTank 18 M 144 LiHD	Order No. 094498
- APS M charger - GB	Order No. 094493
- APS M charger	Order No. 094492
- APS M + quick-charger	Order No. 094509
- APS M + quick-charger - GB	Order No. 094511
- Angle attachment A-WV 18	Order No. 094459
- Chuck A-SBF 13	Order No. 206772
- Quick bit holder A-SBH	Order No. 206766
- Torque attachment A-DMVx3 3:1 transmission ratio	Order No. 094450
- Drilling station	Order No. 961210
- Drilling station S	Order No. 961215

9 Exploded drawing and spare parts list

The corresponding information in respect of spare parts can be found on our homepage: www.mafell.com