

metabo®

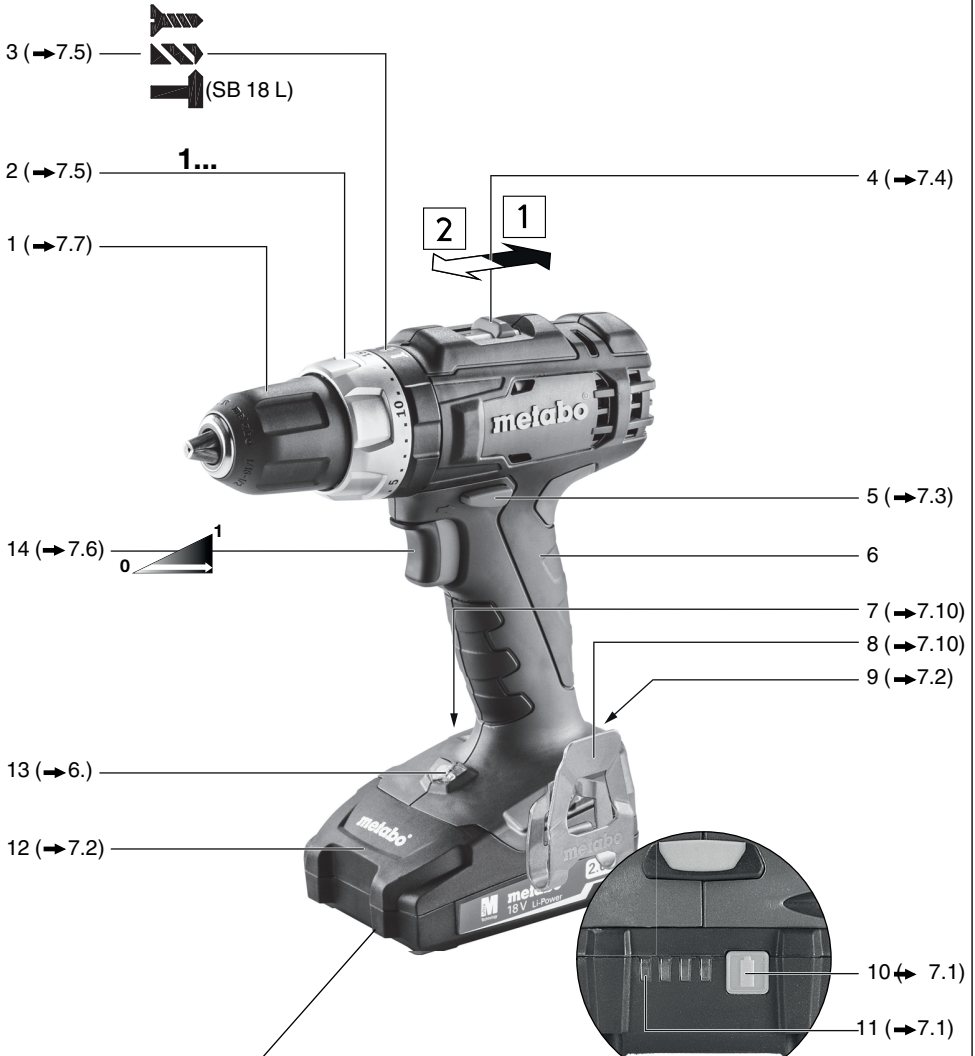
PROFESSIONAL POWER TOOL SOLUTIONS

BS 18 L
BS 18 L Quick
BS 1800 L Plus
SB 18 L

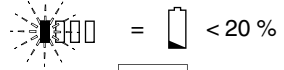
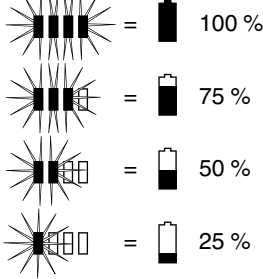


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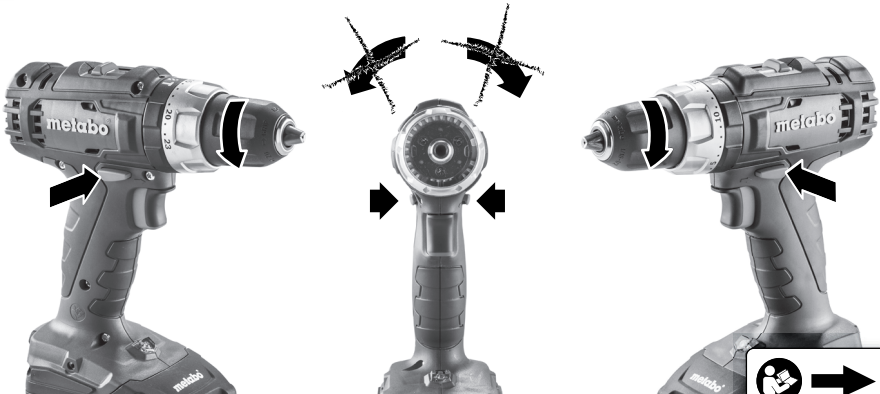
A



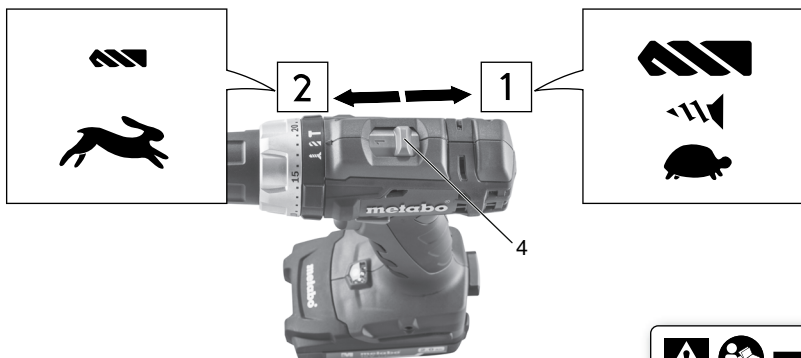
18 V	Li-Power	2,0 Ah	6.25596
18 V	LiHD	3,5 Ah	6.25346
18 V	Li-Power	4,0 Ah	6.25591
18 V	Li-Power	5,2 Ah	6.25592
18 V	LiHD	5,5 Ah	6.25342
18 V	LiHD	7,0 Ah	6.25345
			etc.

B

ASC 30-36
ASC ultra
SC 60 Plus
ASC 30 etc.

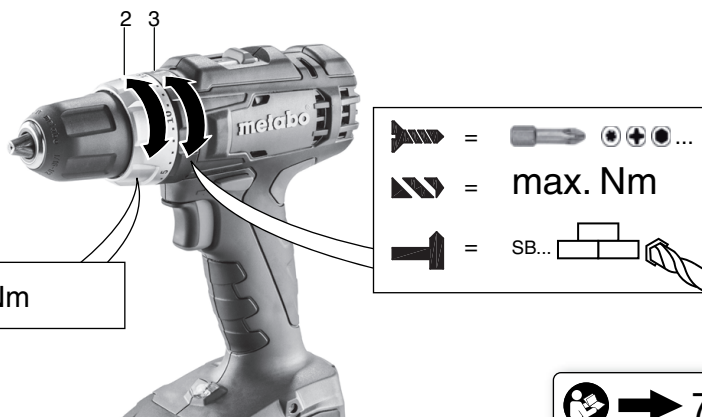
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



7.4

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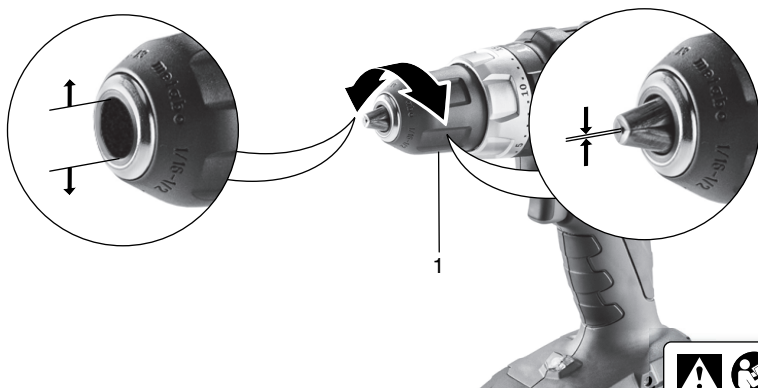
1... = Nm ... Nm

-  =  +  +  ...
-  = max. Nm
-  = SB...  

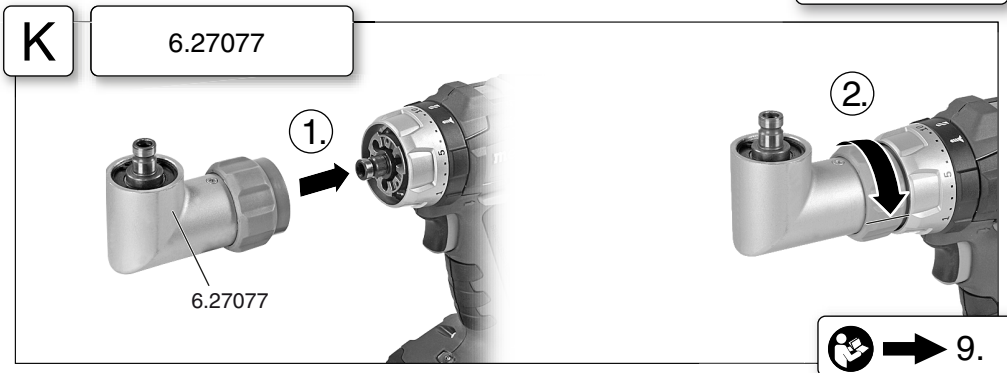
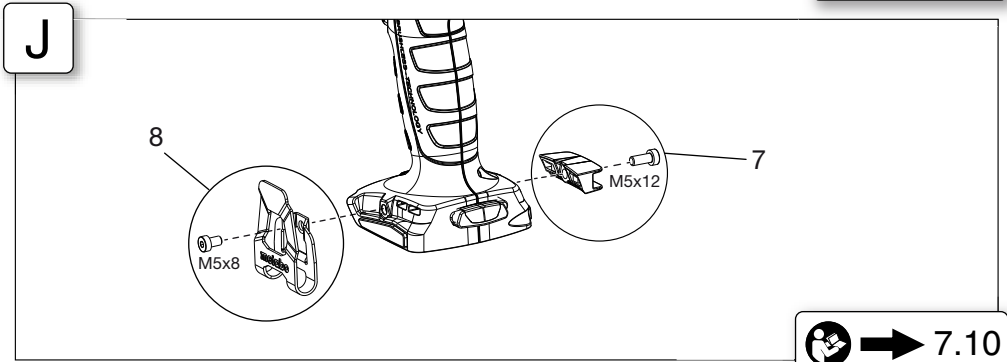
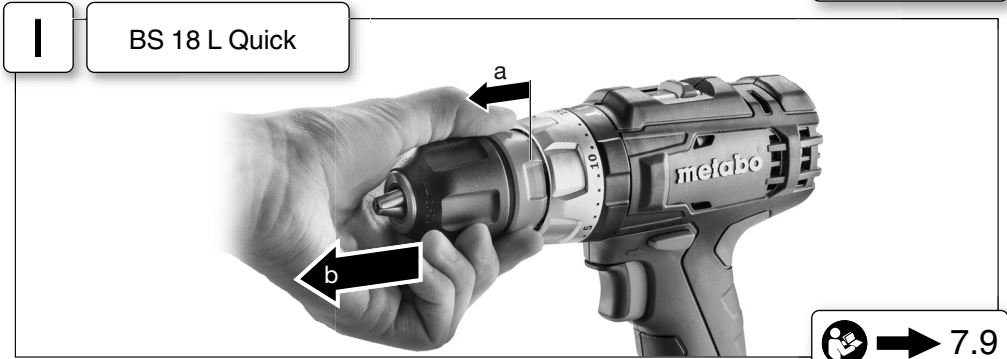
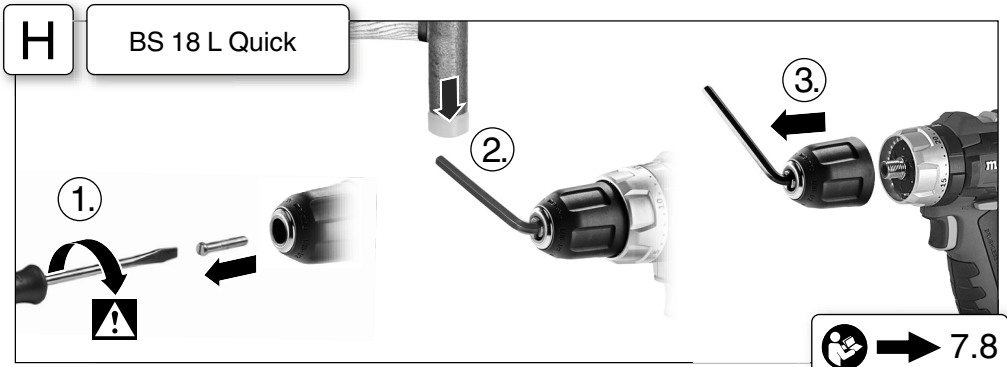


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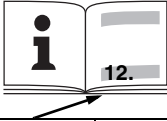



G



7.7



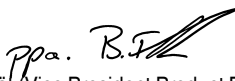
L

		BS 18 L BS 1800 L Plus	BS 18 L Quick	SB 18 L
	*1) Serial Number	02321..	02320..	02317..
U	V	18	18	18
n₀	/min, rpm	1	0 - 450	0 - 450
		2	0 - 1800	0 - 1800
M₁	Nm (in-lbs)	25 (221)	25 (221)	25 (221)
M₃	Nm (in-lbs)	50 (442)	50 (442)	50 (442)
M₄	Nm (in-lbs)	1	1,5 - 6 (13,3 - 53,1)	1,5 - 6 (13,3 - 53,1)
D₁ max 	mm (in)	10 (³ / ₈)	10 (³ / ₈)	10 (³ / ₈)
D₂ max 	mm (in)	20 (²⁵ / ₃₂)	20 (²⁵ / ₃₂)	20 (²⁵ / ₃₂)
D₃ max 	mm (in)	2	-	10 (³ / ₈)
s	/min, bpm	-	-	27000
m	kg (lbs)	1,6 (3.5)	1,6 (3.5)	1,6 (3.5)
G	UNF(in)	1/2" - 20 UNF	-	1/2" - 20 UNF
D_{max}	mm (in)	13 (¹ / ₂)	13 (¹ / ₂)	13 (¹ / ₂)
a_{h, ID}/K_{h, ID}	m/s²	-	-	21,5/ 1,5
a_{h, D}/K_{h, D}	m/s²	2,8 / 1,5	2,8 / 1,5	2,8 / 1,5
a_{h, S}/K_{h, S}	m/s²	< 2,5 / 1,5	< 2,5 / 1,5	< 2,5 / 1,5
L_{pA}/K_{pA}	dB(A)	77 / 3	77 / 3	89 / 3
L_{WA}/K_{WA}	dB(A)	88 / 3	88 / 3	100 / 3

 → 12.

M

 *2) 2014/30/EU, 2006/42/EC, 2011/65/EU
 *3) EN 60745-1:2009+A11:2010, EN 60745-2-1:2010, EN 60745-2-2:2010, EN 50581:2012

2020-07-06, Bernd Fleischmann 
 Direktor Produktentstehung & Qualität (Vice President Product Engineering & Quality)
 *4) Metabowerke GmbH - Metabo-Allee 1 - 72622 Nuertingen, Germany

 → 1.

Original Instructions

1. Declaration of Conformity

We declare and accept sole responsibility for ensuring; these cordless drills/screwdrivers and cordless hammer drills identified by their type and serial number *1) conform to all relevant provisions of the directives *2) and standards *3). Technical documents at *4) - ➔ Fig. M.

2. Specified Use

The cordless drills/screwdrivers and cordless hammer drills are suitable for drilling without impact in metal, wood, plastic and similar materials as well as for screwdriving and thread tapping.

The cordless screwdrivers are also suitable for impact drilling in masonry, brickwork and stone.

The user bears sole responsibility for any damage caused by inappropriate use.

Generally accepted accident prevention regulations and the enclosed safety information must be observed.

3. General Safety Instructions



For your own protection and for the protection of your electrical tool, pay attention to all parts of the text that are marked with this symbol!



WARNING – Reading the operating instructions will reduce the risk of injury.



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. Pass on your electrical tool only together with these documents.

4. Special Safety Instructions

Wear ear protectors when impact drilling (machines with the designation SB). Exposure to noise can cause hearing loss.

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.

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 and loss of control, resulting in personal injury.

Ensure that the spot where you wish to work is free of **power cables, gas lines or water pipes** (e.g. using a metal detector).



Protect battery packs from water and moisture!



Do not expose battery packs to fire!



Do not use faulty or deformed battery packs!

Do not open battery packs!

Do not touch or short circuit battery pack contacts!



A slightly acidic, flammable fluid may leak from defective Li-ion battery packs!



If battery fluid leaks out and comes into contact with your skin, rinse immediately with plenty of water. If battery fluid leaks out and comes into contact with your eyes, wash them with clean water and seek medical attention immediately!

If the machine is defective, remove the battery pack from the machine.

Remove the battery pack from the machine before making any adjustments, changing tools, maintaining or cleaning.

Before fitting the battery pack, make sure that the machine is switched off.

Keep hands away from the rotating tool!

Remove chips and similar material only with the machine at a standstill.

Secure the workpiece to prevent slipping or rotation (e.g. by securing with screw clamps).

LED light (13): do not observe the LED radiation directly with optical instruments.



CAUTION Do not stare at operating lamp.

Reducing dust exposure:



WARNING - Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce

your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

This also applies to dust from other materials such as some timber types (like oak or beech dust), metals, asbestos. Other known diseases are e.g. allergic reactions, respiratory diseases. Do not let dust enter the body.

Observe the relevant guidelines and national regulations for your material, staff, application and place of application (e.g. occupational health and safety regulations, disposal).

Collect the particles generated at the source, avoid deposits in the surrounding area.

Use suitable accessories for special work. In this way, fewer particles enter the environment in an uncontrolled manner.

Use a suitable extraction unit.

Reduce dust exposure with the following measures:

- do not direct the escaping particles and the exhaust air stream at yourself or nearby persons or on dust deposits,
- use an extraction unit and/or air purifiers,
- ensure good ventilation of the workplace and keep clean using a vacuum cleaner. Sweeping or blowing stirs up dust.
- Vacuum or wash the protective clothing. Do not blow, beat or brush.

Transport of li-ion battery packs:











The shipping of li-ion battery pack is subject to laws related to the carriage of hazardous goods (UN 3480 and UN 3481). Inform yourself of the currently valid specifications when shipping li-ion battery packs. If necessary, consult your freight forwarder. Certified packaging is available from Metabo.

Only send the battery pack if the housing is intact and no fluid is leaking. Remove the battery pack from the machine for sending. Prevent the contacts from short-circuiting (e.g. by protecting them with adhesive tape).

5. Figures

Illustrations are provided at the beginning of the operating instructions.

Symbol explanation:

-  Movement direction
-  Drill bit
-  Slow
-  Fast
-  First gear
-  Second gear
-  Screwdriving / torque limitation
-  Drilling / max. torque
-  Impact drilling
-  Nm Torque

6. Overview

➔ Fig. A

- 1 Keyless chuck
- 2 Adjusting sleeve (Torque limitation)
- 3 Adjusting sleeve
 - Screwdriving / torque limitation
 - Drilling / max. torque
 - Impact drilling
- 4 Switch (1st / 2nd gear)
- 5 Rotation selector switch (rotation setting, transport lock) - both sides of the machine
- 6 Handle (gripping surface)
- 7 Bit depot *
- 8 Belt hook *
- 9 Battery pack release button
- 10 Capacity indicator button
- 11 Capacity and signal indicator
- 12 Battery pack
- 13 LED light
- 14 Trigger switch

*equipment-specific

7. Use

7.1 Battery pack, capacity and signal indicator ➔ Fig. B

Charge the battery pack before use.


Recharge the battery pack if performance diminishes.

Instructions on charging the battery pack can be found in the operating instructions of the Metabo charger.



7.2 Removing and inserting the battery pack ➔ Fig. C

7.3 Setting the direction of rotation, engaging the transporting safety device (switch-on lock) ➔ Fig. D


7.4 Selecting the gear ➔ Fig. E

 Do not set the switch (4) unless the motor has stopped completely!

7.5 Setting the torque limitation, screwdriving, drilling and impact drilling ➔ Fig. F

-  = Set **screwdriving** by turning the sleeve (3) AND set the **torque** (with torque limitation) by turning the sleeve (2) - intermediate settings are also possible.
-  = Set **drilling** by turning the sleeve (3) (max. torque, without torque limitation) To avoid overloading the motor, do not jam the spindle.

Machines with the designation SB...:

 = Set **impact drilling** by turning the sleeve (3) (max. torque, without torque limitation) To avoid overloading the motor, do not jam the spindle.

7.6 Switching On/Off, setting the speed

➔ Fig. A

Switching on, speed: press the trigger switch (14). Press in the trigger switch to increase the rotational speed.

Switching off: release the trigger switch (14). **Note:** the noise that the machine makes when it switches off is due to the design (quick stop) and has no influence on the function or the service life of the machine.

7.7 Keyless chuck ➔ Fig. G

Opening the drill chuck:

Turn the drill chuck sleeve (1) clockwise.

Clamping the tool:

Open the drill chuck and insert the tool as far as possible. Turn the drill chuck sleeve (1) in clockwise direction until the tool is clamped securely. With a soft tool shank, retightening may be required after a short drilling period.

Cleaning: from time to time, hold the machine vertically with the chuck facing downwards and turn the sleeve fully in the direction "GRIP, ZU" and then turn fully in the direction "AUF, RELEASE". The dust collected falls from the keyless chuck.

7.8 Unscrewing the chuck ➔ Fig. H

Employ the same procedure when attaching the chuck, except in reverse order.

7.9 Chuck with quick change system (with BS 18 L Quick) ➔ Fig. I

To remove: push the interlock ring forward (a), advance and pull off the chuck forwards (b).

To fit: push the interlock ring forward and move the chuck as far as the limit stop on the drill spindle.

7.10 Fitting the belt hook (equipment-specific) / bit depot (equipment-specific)


➔ Fig. J


Fit the belt hook (8) as shown.

Fit the bit depot (7) as shown.

8. Troubleshooting

8.1 The machine's multifunctional monitoring system

 If the machine switches off automatically, the machine electronics have activated automatic protection mode. A warning signal sounds (continuous beeping). The beeping stops after a maximum of 30 seconds or when the trigger switch (14) is released.

 In spite of this protective function, overloading is still possible with certain applications and can result in damage to the machine.

Causes and remedies:

- Battery pack almost empty** ➔ Fig. A, B (The electronics protect the battery pack against damage through total discharge).
If one LED (11) is flashing, the battery pack is almost flat. If necessary, press the button (10) and check the LEDs (11) to see the charge level. If the battery pack is almost flat, it must be recharged.
- Long continuous overloading of the machine will activate the **temperature cut-out**.
Leave the machine or battery pack to cool.
Note: if the battery pack feels very warm, the pack will cool more quickly in an "AIR COOLED" charger.
Note: the machine will cool more quickly if you operate it at idling speed.
- Metabo **safety shutdown**: the machine has SHUT DOWN by itself. If the speed suddenly drops (for example, if the machine suddenly seizes or kickback occurs), the machine switches off. Switch off the machine at the trigger switch (14). Switch it on again and continue to work as normal. Try to prevent the machine from seizing.

9. Accessories

Use only original Metabo or CAS (Cordless Alliance System) battery packs and accessories.

Use only accessories that fulfil the requirements and specifications listed in these operating instructions.

Fitting the angle drilling attachment ➔ Fig. K.

For a complete range of accessories, see www.metabo.com or the catalogue.

10. Repairs

 Repairs to electrical tools must ONLY be carried out by qualified electricians!

Contact your local Metabo representative if you have Metabo power tools requiring repairs. See www.metabo.com for addresses.


You can download a list of spare parts from www.metabo.com.

11. Environmental Protection

Observe national regulations on environmentally compatible disposal and on the recycling of disused machines, packaging and accessories.

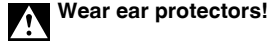
Battery packs may not be disposed of with regular waste. Return faulty or used battery packs to your Metabo dealer!

Do not allow battery packs to come into contact with water!

 Protect the environment, and do not dispose of power tools and battery packs with household waste. Observe national regulations on

separated collection and recycling of disused machines, packaging and accessories.

Before disposal, discharge the battery pack in the power tool. Prevent the contacts from short-circuiting (e. g. by protecting them with adhesive tape).



Wear ear protectors!

12. Technical Data

➔ *Fig. L.* We reserve the right to make technical improvements.

U = Voltage of battery pack
 n_0 = No-load speed

Tightening torque for screwing:

M₁ = Soft screwing application (wood)
 M₃ = Hard screwing applications (metal)
 M₄ = Adjustable torque

Max. drill diameter:

D_{1 max} = in steel
 D_{2 max} = in softwood
 D_{3 max} = in masonry

s = Max. impact rate
 m = Weight (with the smallest battery pack)
 G = Spindle thread
 D_{max} = Chuck clamping range

Measured values determined in conformity with EN 62841.

Permitted ambient temperature during operation:
 -20 °C (-4°F) to 50 °C (120°F) (limited performance with temperatures below 0 °C (32°F)). Permitted ambient temperature for storage: 0 °C (32°F) to 30 °C (86°F).

--- Direct current

The technical specifications quoted are subject to tolerances (in compliance with the relevant valid standards).

Emission values

These values make it possible to assess the emissions from the power tool and to compare different power tools. The actual load may be higher or lower depending on the operating conditions, the condition of the power tool or the accessories. Please allow for breaks and periods when the load is lower for assessment purposes. Arrange protective measures for the user, such as organisational measures based on the adjusted estimates.

Vibration total value (vector sum of three directions) determined in accordance with EN 62841:

a_{h, ID} = Vibration emission value (impact drilling in concrete)
 a_{h, D} = Vibration emission value (Drilling in metal)
 a_{h, S} = Vibration emission value (screwing without impact)
 K_{h, ...} = Uncertainty (vibration)

Typical A-effective perceived sound levels:

L_{pA} = Sound-pressure level
 L_{WA} = Acoustic power level
 K_{pA}, K_{WA} = Uncertainty (noise level)

During operation the noise level can exceed 80 dB(A).