metabo

Designed for operating in USA & Canada only. When this product is used in areas other than the USA & Canada, we cannot guarantee the product quality and performance.

Model Modèle Modelo

DN 18DSL

Cordless Angle Drill Perceuse d'angle à batterie Taladro angular a batería



SAFETY INSTRUCTIONS AND INSTRUCTION MANUAL

IMPROPER OR UNSAFE use of this power tool can result in death or serious bodily injury! This manual contains important information about product safety. Please read and understand this manual BEFORE operating the power tool. Please keep this manual available for other users and owners before they use the power tool. This manual should be stored in safe place.

INSTRUCTIONS DE SECURITE ET MODE D'EMPLOI

↑ AVERTISSEMENT

Une utilisation **INCORRECTE OU DANGEREUSE** de cet outil motorisé peut entraîner la mort ou de sérieuses blessures corporelles!

Ce mode d'emploi contient d'importantes informations à propos de la sécurité de ce produit. Prière de lire et de comprendre ce mode d'emploi AVANT d'utiliser l'outil motorisé. Garder ce mode d'emploi à la disponibilité des autres utilisateurs et propriétaires avant qu'ils utilisent l'outil motorisé. Ce mode d'emploi doit être conservé dans un endroit sûr.

INSTRUCCIONES DE SEGURIDAD Y MANUAL DE INSTRUCCIONES

ADVERTENCIA

¡La utilización INAPROPIADA O PELIGROSA de esta herramienta eléctrica puede resultar en lesiones de gravedad o la muerte!

Este manual contiene información importante sobre la seguridad del producto. Lea y comprenda este manual ANTES de utilizar la herramienta eléctrica. Guarde este manual para que puedan leerlo otras personas antes de utilizar la herramienta eléctrica. Este manual debe ser quardado en un lugar seguro.

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IMPORTANT SAFETY INFORMATION

Read and understand all of the safety precautions, warnings and operating instructions in the Instruction Manual before operating or maintaining this power tool.

Most accidents that result from power tool operation and maintenance are caused by the failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing a potentially hazardous situation before it occurs, and by observing appropriate safety procedures.

Basic safety precautions are outlined in the "SAFETY" section of this Instruction Manual and in the sections which contain the operation and maintenance instructions.

Hazards that must be avoided to prevent bodily injury or machine damage are identified by WARNINGS on the power tool and in this Instruction Manual.

NEVER use this power tool in a manner that has not been specifically recommended by metabo HPT.

MEANINGS OF SIGNAL WORDS

WARNING indicates a potentially hazardous situations which, if ignored, could result in death or serious injury.

CAUTION indicates a potentially hazardous situations which, if not avoided, may result in minor or moderate injury, or PEMEHN may cause machine damage.

NOTE emphasizes essential information.

SAFETY

GENERAL POWER TOOL SAFETY WARNINGS

WARNING

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

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

- 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
- 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.

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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.

 Use personal protective equipment. Always wear eye protection.

Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

 Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.

Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

 d) Remove any adjusting key or wrench before turning the power tool on.

A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times.

This enables better control of the power tool in

This enables better control of the power tool is unexpected situations.

 f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.

Loose clothes, jewellery or long hair can be caught in moving parts.

g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.

Use of dust collection can reduce dust-related hazards.

1) 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

 b) Do not use the power tool if the switch does not turn it on and off.

Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.

Such preventive safety measures reduce the risk of starting the power tool accidentally.

 d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.

Power tools are dangerous in the hands of untrained users.

 e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation.

If damaged, have the power tool repaired before use.

Many accidents are caused by poorly maintained power tools.

f) Keep cutting tools sharp and clean.

Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.

Use of the power tool for operations different from those intended could result in a hazardous situation.

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

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.

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

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-WARNING-

To reduce the risk of injury, user must read instruction manual.

SPECIFIC SAFETY RULES AND SYMBOLS

- Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.
- Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory or fastener may contact hidden wiring.

Cutting accessory and fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

 Always wear ear protectors when using the tool for extended periods.



Prolonged exposure to high intensity noise can cause hearing loss.

- Never place hands or other body parts near the drill bit or chuck during operation. Hold the drill by its handle only.
- Because the cordless angle drill operates by battery power, be aware of the fact that it can begin to operate at any time.

 When the process of all the statements of the process of all the proce
- When working at elevated locations, clear the area of all other people and be aware of conditions below you.
- Never touch moving parts.

Never place your hands, fingers or other body parts near the tool's moving parts.

8. Never operate without all guards in place.

Never operate this tool without all guards or safety features in place and in proper working order. If maintenance or servicing requires the removal of a guard or safety feature, be sure to replace the guard or safety feature before resuming operation of the tool.

9. Use right tool.

Don't force small tool or attachment to do the job of a heavy-duty tool.

Don't use tool for purpose not intended —for example— don't use circular saw for cutting tree limbs or logs.

 Never use a power tool for applications other than those specified.

Never use a power tool for applications other than those specified in the instruction manual.

11. Handle tool correctly.

Operate the tool according to the instructions provided herein. Do not drop or throw the tool. Never allow the tool to be operated by children, individuals unfamiliar with its operation or unauthorized personnel.

Keep all screws, bolts and covers tightly in place.
 Keep all screws, bolts, and plates tightly mounted.
 Check their condition periodically.

 Do not use power tools if the plastic housing or handle is cracked.

Cracks in the tool's housing or handle can lead to electric shock. Such tools should not be used until repaired.

 Blades and accessories must be securely mounted to the tool.

Prevent potential injuries to yourself or others. Blades, cutting implements and accessories which have been mounted to the tool should be secure and tight.

 Never use a tool which is defective or operating abnormally.

If the tool appears to be operating unusually, making strange noises, or otherwise appears defective, stop using it immediately and arrange for repairs by a metabo HPT authorized service center.

16. Carefully handle power tools.

Should a power tool be dropped or struck against hard materials inadvertently, it may be deformed, cracked, or damaged.

17. Do not wipe plastic parts with solvent.

Solvents such as gasoline, thinner benzine, carbon tetrachloride, and alcohol may damage and crack plastic parts. Do not wipe them with such solvents. Wipe plastic parts with a soft cloth lightly dampened

with soapy water and dry thoroughly.

18. Always wear eye protection that meets the requirement of the latest revision of ANSI Standard Z87.1.



 Do not use the keyless chuck in place of hand tools or for tightening purposes. Doing so may result in damage to the product.

 This product contains a strong permanent magnet in the motor.

Observe the following precautions regarding adhering of chips to the tool and the effect of the permanent magnet on electronic devices.

▲ CAUTION

① Do not place the tool on a workbench or work area where metal chips are present.

The chips may adhere to the tool, resulting in injury or malfunction.

② If chips have adhered to the tool, do not touch it. Remove the chips with a brush. Failure to do so may result in injury.

- If you use a pacemaker or other electronic medical device, do not operate or approach the tool. Operation of the electronic device may be affected.
 Do not use the tool in the vicinity of precision devices
- such as cell phones, magnetic cards or electronic memory media.

 Doing so may lead to misoperation, malfunction or

Doing so may lead to misoperation, malfunction or loss of data.

21. Definitions for symbols used on this tool

V volts

== direct current

no.....no load speed

---/min.... revolutions or reciprocation per minute

IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CHARGER

⚠ WARNING

Death or serious bodily injury could result from improper or unsafe use of battery chargers. To avoid these risks, follow these basic safety instructions:

READ ALL INSTRUCTIONS

 This manual contains important safety and operating instructions for battery charger Model UC18YKSL.

- Before using battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- To reduce risk of injury, charge metabo HPT rechargeable battery type BSL14 and BSL18 series. Other type of batteries may burst causing personal injury and damage.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- To reduce risk of damage to electric plug and cord, pull by plug when disconnecting battery charger.
- Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress
- An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used make sure:
 - a. That blades of extension cord are the same number, size, and shape as those of plug on battery charger:
 - b. That extension cord is properly wired and in good electrical condition; and
 - c. That wire size is large enough for AC ampere rating of battery charger as specified in Table 1

Table 1 RECOMMENDED MINIMUM AWG SIZE FOR EXTENSION CORDS FOR BATTERY CHARGERS

AC Input Ratio	AC Input Rating Amperes*		AWG Size of Cord		
Equal to or	Equal to or but less		Length of Cord, Feet (Meter)		
greater than	than	25 (7.5)	50 (15)	100 (30)	150 (45)
0	2	18	18	18	16
2	3	18	18	16	14
3	4	18	18	16	14

If the input rating of a battery charger is given in watts rather than in amperes, the corresponding ampere rating is to be determined by dividing the wattage rating by the voltage rating-for example:

 $\frac{1,250 \text{ watts}}{125 \text{ volts}} = 10 \text{ amperes}$

- Do not operate battery charger with damaged cord or plug-replace them immediately.
- plug-replace them immediately.
 9. Do not operate battery charger if it has received a sharp blow, been dropped, or otherwise damaged in any way, take it to a qualified serviceman.
- Do not disassemble battery charger; take it to a qualified serviceman when service or repair is

required. Incorrect reassembly may result in a risk of electric shock or fire.

 To reduce risk of electric shock, unplug charger from receptacle before attempting any maintenance or cleaning. Removing the battery will not reduce this risk.

IMPORTANT SAFETY INSTRUCTIONS FOR USE OF THE BATTERY AND BATTERY CHARGER

You must charge the battery before you can use the power tool. Before using the model UC18YKSL battery charger, be sure to read all instructions and cautionary statements on it, the battery and in this manual.

REMEMBER: USE ONLY metabo HPT BATTERY TYPES BSL14 AND BSL18 SERIES. OTHER TYPES OF BATTERIES MAY BURST AND CAUSE INJURY!

Follow these instructions to avoid the risk of injury:

▲ WARNING: Improper use of the battery or battery charger can lead to serious injury. To avoid these injuries:

- NEVER disassemble the battery.
- NEVER incinerate the battery, even if it is damaged or is completely worn out. The battery can explode in a fire
- NEVER short-circuit the battery.
- NEVER insert any objects into the battery charger's air vents. Electric shock or damage to the battery charger may result.
 NEVER charge outdoors. Keep the battery away
- from direct sunlight and use only where there is low humidity and good ventilation.
- NEVER charge when the temperature is below 32°F (0°C) or above 104°F (40°C).
- NEVER connect two battery chargers together.
- NEVER insert foreign objects into the hole for the battery or the battery charger.
- NEVER use a booster transformer when charging.
 NEVER use an engine generator or DC power to
- charge.

 11. **NEVER** store the battery or battery charger in places
- where the temperature may reach or exceed 104°F (40°C) such as inside metal box or car.
- NEVER expose the battery or battery charger to rain or wet conditions.
- ALWAYS operate charger on standard household electrical power (120 volts). Using the charger on any other voltage may overheat and damage the charger.
- ALWAYS wait at least 15 minutes between charges to avoid overheating the charger.
- ALWAYS disconnect the power cord from its receptacle when the charger is not in use.

CAUTION ON LITHIUM-ION BATTERY

To extend the lifetime, the lithium-ion battery equips with the protection function to stop the output.

In the cases of 1 to 3 described below, when using this product, even if you are pulling the switch, the motor may stop. This is not the trouble but the result of protection function.

- When the battery power remaining runs out, the motor stops.
- In such case, charge it up immediately.
- If the tool is overloaded, the motor may stop. In this case, release the switch of tool and eliminate causes of overloading. After that, you can use it again.

If the battery is overheated under overload work, the battery power may stop.

In this case, stop using the battery and let the battery cool. After that, you can use it again.

Furthermore, please heed the following warning and caution.

△ WARNING

In order to prevent any battery leakage, heat generation, smoke emission, explosion and ignition beforehand, please be sure to heed the following precautions.

- Make sure that swarf and dust do not collect on the battery.
- During work make sure that swarf and dust do not fall on the battery.
- Make sure that any swarf and dust falling on the power tool during work do not collect on the battery.
- Do not store an unused battery in a location exposed to swarf and dust.
- Before storing a battery, remove any swarf and dust that may adhere to it and do not store it together with metal parts (screws, nails, etc.).
- Do not pierce battery with a sharp object such as a nail, strike with a hammer, step on, throw or subject the battery to severe physical shock.
- Do not use an apparently damaged or deformed battery.
- 4. Do not use the battery in reverse polarity.
- Do not connect directly to an electrical outlets or car cigarette lighter sockets.
- Do not use the battery for a purpose other than those specified.
- If the battery charging fails to complete even when a specified recharging time has elapsed, immediately stop further recharging.
- Do not put or subject the battery to high temperatures or high pressure such as into a microwave oven, dryer, or high pressure container.
- Keep away from fire immediately when leakage or foul odor are detected.
- 10. Do not use in a location where strong static electricity
- generates.

 11. If there is battery leakage, foul odor, heat generated, discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the equipment or battery charger, and stop use.
- 12. Do not immerse the battery or allow any fluids to flow inside. Conductive liquid ingress, such as water, can cause damage resulting in fire or explosion. Store your battery in a cool, dry place, away from combustible and flammable items. Corrosive gas atmospheres must be avoided.

⚠ CAUTION

- If liquid leaking from the battery gets into your eyes, do not rub your eyes and wash them well with fresh clean water such as tap water and contact a doctor immediately.
- If left untreated, the liquid may cause eye-problems.
- If liquid leaks onto your skin or clothes, wash well with clean water such as tap water immediately. There is a possibility that this can cause skin irritation.
- If you find rust, foul odor, overheating, discolor, deformation, and/or other irregularities when using the battery for the first time, do not use and return it to your supplier or vendor.

△ WARNING

If an electrically conductive foreign object enters the terminals of the lithium ion battery, a short-circuit may occur resulting in the risk of fire. Please observe the following matters when storing the battery.

 Do not place electrically conductive cuttings, nails, steel wire, copper wire or other wire in the storage case.

SAVE THESE INSTRUCTIONS AND MAKE THEM AVAILABLE TO OTHER USERS AND OWNERS OF THIS TOOL!

FUNCTIONAL DESCRIPTION

NOTE

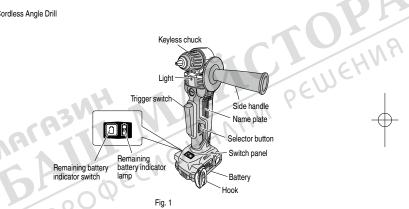
The information contained in this Instruction Manual is designed to assist you in the safe operation and maintenance of the power tool.

NEVER operate, or attempt any maintenance on the tool unless you have first read and understood all safety instructions contained in this manual.

Some illustrations in this Instruction Manual may show details or attachments that differ from those on your own power tool.

NAME OF PARTS

1. Cordless Angle Drill



2. Battery

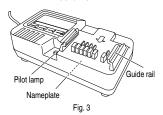
Ventilation holes Terminals Latch

Fig. 2

<BSL1815X>

3. Battery Charger

<UC18YKSL>



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SPECIFICATIONS

1. Cordless Angle Drill

Model	lodel		DN18DSL	
Motor	Motor		DC motor	
No-load speed			0 – 1800 /min	
Capacity	Deillin	Wood (Thickness 11/16 in. (18 mm))	1 – 3/32 in. (28 mm) (Soft Wood)	
	Drilling	Metal (Thickness 1/16 in. (1.6 mm))	3/8 in. (10 mm) (Mild Steel)	
	Screw Driver	Wood screw	#11 × 1-1/2 in. (5.1 mm × 38 mm)	
Drill chuck capacity			Maximum gripping diameter 3/8 in. (10 mm)	
Model			BSL1815X	
Battery	Type		Li-ion battery	
	Voltage		DC 18 V	
Weight (without battery)			3.7 lbs. (1.7 kg)	

2. Battery Charger

z. Battory Griargo.	
Model	UC18YKSL
Input power source	Single phase: AC 120 V 60 Hz
Charging time (At a temperature of 68°F (20°C))	BSL1815X: Approx. 40 min
Charging voltage	DC 14.4 V – 18 V
Charging current	DC 2.0 A
Weight	0.8 lbs. (0.35 kg)

NOTE: The charging time may vary according to temperature and power source voltage.

ASSEMBLY AND OPERATION

APPLICATIONS

- O Use as a drill
- Drilling of soft steel and wood.
- Use as a screwdriver
 Tightening and loosening of wood screws.

REMOVAL AND INSTALLATION METHOD OF BATTERY

O How to install the battery.

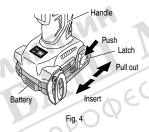
Align the battery with the groove in tool handle and slip it into place.

Always insert it all the way until it locks in place with a little click, If not, it may accidentally fall out of the tool, causing injury to you or someone around you (Fig. 4).

O How to remove the battery.

Withdraw battery from the tool handle wh

Withdraw battery from the tool handle while pressing the latch (2 pcs) of the battery (Fig. 4).



CHARGING METHOD

NOTE

Before plugging into the receptacle, make sure the following points.

- O The power source voltage is stated on the nameplate.
- O The cord is not damaged.

△ WARNING

Do not charge at voltage higher than indicated on the nameplate.

If charged at voltage higher than indicated on the nameplate, the charger will burn out.

 Insert the plug of battery charger into the receptacle. When the plug of battery charger has been inserted into the receptacle, pilot lamp will blink in red. (At 1-second intervals)



△ WARNING

Do not use the electrical cord if damaged. Have it repaired immediately.

Insert the battery to the battery charger. Insert the battery into the battery charger as shown in Fig. 5. Make sure it contacts the bottom of the battery charger.

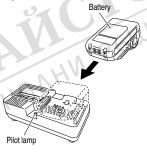


Fig. 5

3. Charging

 When the battery is connected to the battery charger, charging will commence and the pilot lamp will light in red. (See Table 2)

NOTE

If the pilot lamp does not light or blink in red, pull out the plug from the receptacle and check if the battery is properly mounted.

 When the battery is fully charged, the pilot lamp will blink in red slowly. (At 1-second intervals) (See Table 2)

Table 2

Table 2					
Indications of the pilot lamp					
Pilot lamp (red)	Before charging	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds)		
	While charging	Lights	Lights continuously		
	Charging complete	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds)		
	Overheat standby	Blinks	Lights for 1 second. Does not light for 0.5 seconds. (off for 0.5 seconds)	Battery overheated. Unable to charge. (Charging will commence when battery cools)	
	Charging impossible	Flickers	Lights for 0.1 seconds. Does not light for 0.1 seconds. (off for 0.1 seconds)	Malfunction in the battery or the charger	

 Regarding the temperature of the rechargeable battery.

The temperatures for rechargeable batteries are as shown in Table 3, and batteries that have become hot should be cooled for a while before being recharged.

Table 3

Rechargeable batteries	Temperatures at which the battery can be recharged		
BSL1815X	32°F — 122°F (0°C — 50°C)		

4. Disconnect battery charger from the receptacle.

A CAUTION

Do not pull the plug out of the receptacle by pulling on the cord.

Make sure to grasp the plug when removing from receptacle to avoid damaging cord.

 Remove the battery from the battery charger. Supporting the battery charger with hand, pull out the battery from the battery charger.

Regarding electric discharge in case of new batteries, etc.

As the internal chemical substance of new batteries and batteries that have not been used for an extended period is not activated, the electric discharge might be low when using them the first and second time. This is a temporary phenomenon, and normal time required for recharging will be restored by recharging the batteries 2 – 3 times.

How to make the batteries perform longer.

- O Recharge the batteries before they become completely exhausted.
 - When you feel that the power of the tool becomes weaker, stop using the tool and recharge its battery. If you continue to use the tool and exhaust the electric current, the battery may be damaged and its life will become shorter.
- O Avoid recharging at high temperatures.
 - A rechargeable battery will be not immediately after use. If such a battery is recharged immediately after use, its internal chemical substance will deteriorate, and the battery life will be shortened. Leave the battery and recharge it after it has cooled for a while.

△ CAUTION

- When the battery charger has been continuously used, the battery charger will be heated, thus constituting the cause of the failures. Once the charging has been completed, give 15 minutes rest until the next charging.
- If the battery is charged while it is heated because it has been left for a long time in a location subject to direct sunlight or because the battery has just been used, the pilot lamp of the charger lights for 1 second, does not light for 0.5 seconds (off for 0.5 seconds).

The battery will not be recharged. In such a case, let the battery cool before charging.

 When the pilot lamp flickers (at 0.2-second intervals), check for and take out any foreign objects in the charger's battery connector. If there are no foreign objects, it is probable that the battery or charger is malfunctioning. Take it to your authorized Service Center.

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NOTE

- Charging times may be longer depending on the surrounding temperature and battery conditions.
- Remove the battery from the charger when not in use.

BEFORE USE

Check the work area to make sure that it is clear of debris and clutter

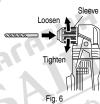
Clear the area of unnecessary personnel. Ensure that lighting and ventilation is adequate.

OPERATION

- Mounting and dismounting of the bit.
- (1) Mounting the bit.

At first, remove the the battery from the tool.

Loosen the sleeve by turning it toward the left (in the counterclockwise direction as viewed from the front) to open the clip on the keyless chuck. After inserting a driver bit, etc., into the keyless drill chuck, and tighten the sleeve by turning it toward the right (in the clockwise direction as viewed from the front). (See Fig. 6).



NOTE

If the sleeve becomes loose during operation, tighten

The tightening force becomes stronger when the sleeve is tightened.

(2) Dismounting the bit

At first, remove the the battery from the tool. Loosen the sleeve by turning it toward the left (in the counterclockwise direction as viewed from the front), and then take out the bit etc. (See Fig. 6)

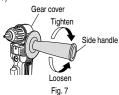
When mounting a bit into the keyless chuck, tighten firmly. If the sleeve is not tight, the bit may slip or fall out, causing injury.

NOTE

When it is no longer possible to loosen the sleeve, use a vise or similar instrument to secure the bit. Turn the sleeve to the loose side (left side) for a moment. It should be easy now to loosen the sleeve.

- Confirm that the battery is mounted correctly.
- Installing the side handle.

Screw the side handle into the gear cover tightly. (Fig. 7)



4. Check the rotational direction.

The bit rotates clockwise (viewed from the rear side) by pushing the R-side of the selector button.

The L-side of the selector button is pushed to turn the bit counterclockwise (See Fig. 8). (The (L) and (R) marks are provided on the body.)



Fig. 8

- When the trigger switch is depressed, the tool rotates. When the trigger switch is released, the tool stops.
- The rotational speed of the drill can be controlled by varying the amount that the trigger switch is pulled. Speed is low when the trigger switch is pulled slightly and increases as the trigger switch is pulled more.
- When releasing the trigger switch, the brake will be applied for immediate stopping.

- The motor rotation may be locked to cease while the unit is used as drill. While operating the angle drill, take care not to lock the motor.
- If the motor is locked, immediately turn the power off. If the motor is locked for a while, the motor or battery may be burnt.
- A buzzing noise is produced when the motor is about to rotate; This is only a noise, not a machine failure.

About Remaining Battery Indicator

When pressing the remaining battery indicator switch, the remaining battery indicator lamp lights and the battery remaining power can be checked. When releasing your finger from the remaining battery indicator switch, the remaining battery indicator lamp goes off. The Table 4 shows the state of remaining battery indicator lamp and the battery remaining power. (see Fig. 1)

Table 4

State of lamp	Battery Remaining Power
<u>(0:0</u>	The battery remaining power is enough.
	The battery remaining power is a half.
Öo	The battery remaining power is nearly empty. Re-charge the battery soonest possible.

As the remaining battery indicator shows somewhat differently depending on ambient temperature and battery characteristics, read it as a reference.

- Do not give a strong shock to the switch panel or break it. It may lead to a trouble.
- O To save the battery power consumption, the remaining battery indicator lamp lights while pressing the remaining battery indicator switch.
- Using the hook

The hook is used to hang up the power tool to your waist belt while working.

CAUTION

- When using the hook, hang up the power tool firmly not to drop accidentally. If the power tool is dropped, it may lead to an
 - accident. When carrying the power tool with hooked to your waist belt, do not fit any bit to the tip of
- power tool. If the sharp bit such as drill is fitted to the power tool when carrying it with hooked to your waist belt, you will be injured.
- Install securely the hook. Unless the hook is securely installed, it may cause an injury while using.
- (1) Installing the hook and tightening the screws. Install securely the hook in the groove of power tool and tighten the screws to fix the hook firmly. (Fig. 9)

Hook can be installing either side of the body.

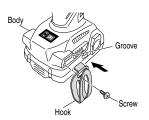


Fig. 9

7. Using the light

Pull the trigger switch to light up the light. The light keeps on lighting while the trigger switch is being pulled. The light goes out after releasing the trigger switch. (Fig. 10).

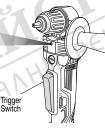


Fig. 10

△ CAUTION

Do not look directly into the light. Such actions could result in eye injury.

OPERATIONAL CAUTIONS

- Resting the unit after continuous work
- The power tool is equipped with a temperature protection circuit to protect the motor.
 - Continuous drilling or tightening wood screw work may cause the temperature of the unit to rise, activating the temperature protection circuit and automatically stopping operation.
 - If this happens, allow the power tool to cool before resuming use.
- After use for continuous tightening wood screw works, rest the unit for 15 minutes or so when replacing the battery. The temperature of the motor, switch, etc., will rise if the work is started again immediately after battery replacement, eventually resulting in burnout.

MAINTENANCE AND INSPECTION

⚠ CAUTION: Pull out battery before doing any inspection or maintenance.

1. Checking the condition of the bit

The bits should be checked regularly. If worn or broken bits can slip or decrease the efficiency of the motor and burn it out.

Replace worn bits with new ones.

⚠ CAUTION

If you use a driver bit of which point is worn or broken, it will be dangerous since it slips. So replace it with a new one.

2. Check the Screws

Loose screws are dangerous. Regularly inspect them and make sure they are tight.

⚠ CAUTION

Using this power tool with loosened, screws is extremely dangerous.

3. Check for Dust

Dust may be removed with a soft cloth or a cloth dampened with soapy water. Do not use bleach, chlorine, gasoline or thinner, for they may damage the plastics.

4. Disposal of the exhausted battery

△ WARNING

Do not dispose of the exhausted battery. The battery must explode if it is incinerated. The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of it's useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

5. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool.

Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

Inspecting the carbon brushes (Fig. 11)

The motor employs carbon brushes which are consumable parts. Since and excessively worn carbon brush can result in motor trouble, replace the carbon brush with new ones when it becomes worn to or near the "wear limit". In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

NOTE

When replacing the carbon brush with a new one, be sure to use the metabo HPT Carbon Brush Code No. 999054

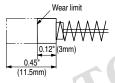


Fig. 11

Nail of carbon brush

Protrusion of carbon brush



7. Replacing carbon brushes

Take out the carbon brush by first removing the brush cap and then hooking the protrusion of the carbon brush with a flat head screw driver, etc., as shown in Fig. 13.

When installing the carbon brush, choose the direction so that the nail of the carbon brush agrees with the contact portion outside the brush tube. Then push it in with a finger as illustrated in Fig. 14. Lastly, install the brush cap.

△ CAUTION

- Be absolutely sure to insert the nail of the carbon brush into the contact portion outside the brush tube. (You can insert whichever one of the two nails provided.)
- Caution must be exercised since any error in this operation can result in the deformed nail of the carbon brush and may cause motor trouble at an early stage.



Fig. 13

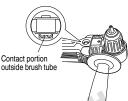


Fig. 14

Storage

Storing in a place below 104°F (40°C) and out of the reach of children.

NOTE

Storing lithium-ion batteries

Make sure the lithium-ion batteries have been fully charged before storing them.

Prolonged storage (3 months or more) of batteries with a low charge may result in performance deterioration, significantly reducing battery usage time or rendering the batteries incapable of holding a charge.

However, significantly reduced battery usage time may be recovered by repeatedly charging and using the batteries two to five times.

If the battery usage time is extremely short despite repeated charging and use, consider the batteries dead and purchase new batteries.

9. Service and repairs

All quality power tools will eventually require servicing or replacement of parts because of wear from normal use. To assure that only authorized replacement parts will be used, all service and repairs must be performed by a metabo HPT AUTHORIZED SERVICE CENTER, ONLY.

△ CAUTION

In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

Important notice on the batteries for the metabo HPT cordless power tools

Please always use one of our designated genuine batteries. We cannot guarantee the safety and performance of our cordless power tool when used with batteries other than these designated by us, or when the battery is disassembled and modified (such as disassembly and replacement of cells or other internal parts).

OHANHIN PEWEHIN

TROUBLESHOOTING GUIDE

△ WARNING

- To avoid injury from an accidental start, turn the switch OFF and remove the plug from the power source or remove the battery from the main body before making any adjustments.
- All electrical or mechanical repairs should be done only by qualified service technicians. Contact metabo HPT Authorized Service Center.

Problem	Possible Cause	Possible Solution	
Tool will not start.	Battery not installed properly.	Check the battery installation.	
	Battery not charged.	Charge battery using appropriate charger.	
	Battery overheated.	Remove battery from tool and let battery cool for while.	
Battery will not charged.	Battery pack not installed into Charger properly.	Insert battery into charger until charge status lamp (red) appears.	
	Charger not plugged in.	Plug charger into a working receptacle.	
	Battery temperature too hot	Remove battery from charger, cool battery. For more detail, refer to "Charging Method".	
ALL BAS	Battery temperature too cold	Remove battery from charger, move battery and charger to a surrounding air temperature of above 32°F (0°C) For more detail, refer to "Changing Method".	
BA	ODECNOW		



ACCESSORIES

⚠ WARNING

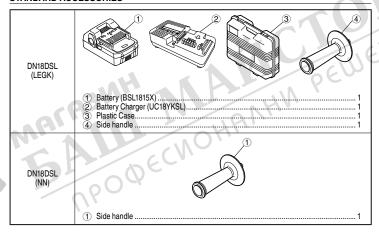
ALWAYS use Only authorized metabo HPT replacement parts and accessories. NEVER use replacement parts or accessories which are not intended for use with this tool. Contact metabo HPT if you are not sure whether it is safe to use a particular replacement part or accessory with your tool.
The use of any other attachment or accessory can be dangerous and could cause injury or mechanical

damage.

NOTE

Accessories are subject to change without any obligation on the part of the metabo HPT.

STANDARD ACCESSORIES



OPTIONAL ACCESSORIES.....sold separately

O Battery (BSL1815X)

NOTE

Specifications are subject to change without any obligation on the part of the metabo HPT.