



USER MANUAL

使用說明書

CORDLESS LOW SPEED TIRE BUFFER

鋰電無碳刷輪胎修磨機

BEX®
Be Xcellent

Located on the toolhousing are the model and serial numbers of your tool, please record these.


請您紀錄位於包裝盒上的工具型號與序號。


Model Number: _____
型號

Serial Number: _____
序號

WWW.BEXTOOL.COM

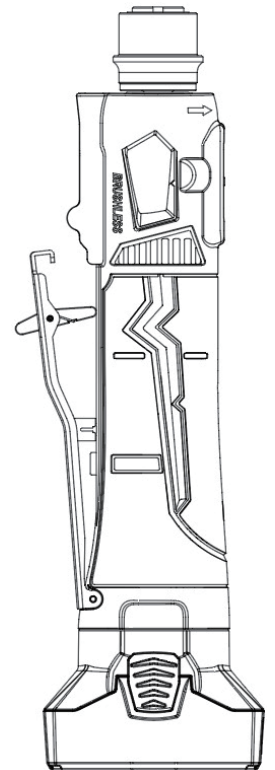
Made in Taiwan

 IMPROPER AND UNSAFE USE OF THIS TOOL WILL RESULT IN DEATH OR SERIOUS INJURY. IT IS VERY IMPORTANT THAT THE INTENDED OPERATOR OF THIS TOOL READS AND UNDERSTANDS THIS MANUAL BEFORE OPERATING THIS TOOL. KEEP THIS MANUAL AVAILABLE FOR OTHERS BEFORE THEY USE THE TOOL.

 不當或不安全使用本工具可能導致死亡或嚴重傷害。
操作本工具的使用者務必在操作前仔細閱讀並理解本手冊內容。請將本手冊保留，供其他使用者在使用工具前參閱。





▲ **WARNING:** Please read the instructions and warnings for this tool carefully before use. Failure to do so could lead to serious injury.

▲ **重要事項:** 使用本工具前，請仔細閱讀操作說明與警告內容。
未遵守可能導致嚴重傷害。



GS120B

Explanation of Symbols

Wear Eye Protectors	Warning	Read Instruction before Use	Wear Hearing Protectors
			
Direct Current	Revolutions per Minute (RPM)	Volts	
D.C.	n XXXX min ⁻¹	V	

Noise – GS120B

The typical A-weighted noise level determined according to EN62841-2-1:

Sound pressure level (LpA): 66.4 dB(A)

Sound power level (LWA): 77.4 dB(A)

Uncertainty (K): 3 dB(A)

NOTE: The declared noise emission value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another.

NOTE: The declared noise emission value(s) may also be used in a preliminary assessment of exposure.

▲ **WARNING:** Wear ear protection.

▲ **WARNING:** The noise emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.

▲ **WARNING:** Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

Vibration – GS120B

The vibration total value determined according to EN62841-2-1:

Vibration emission (ah): 3.24 m/s²

Uncertainty (K): 1.5 m/s²

NOTE: The declared vibration total value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another.

NOTE: The declared vibration total value(s) may also be used in a preliminary assessment of exposure.

▲ **WARNING:** The vibration emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.

▲ **WARNING:** Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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General Power Tool Safety Rules

▲ WARNING: Read all safety rules, instructions, illustrations, and specifications. Failure to follow these instructions may result in electric shock, fire, and/or serious injury. Keep this manual and all instructions for future reference.

- The term "power tool" in these rules refers to both mains-operated (corded) and battery-operated (cordless) power tools.
- Always hold the power tool by insulated gripping surfaces only when performing an operation where the cutting tool may contact hidden wiring. Contact with a "live" wire may also make exposed metal parts of the power tool "live" and could cause electric shock to the operator.

Work Area Safety Rules

- a) Keep the work area clean and well lit. Cluttered or dark areas can lead to accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools can create sparks that may ignite the dust or fumes.
- c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control of the tool.

Electrical Safety Rules

- 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 reduce the 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 increases the risk of electric shock.
- d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep the 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. Using a cord rated 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 (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.

Personal Safety Rules

- 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 a power tool may result in serious personal injury.
- b) 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.
- c) Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on can lead to 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 jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry 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.
- i) Always wear protective goggles to protect your eyes from injury when using power tools. The goggles must comply with ANSI Z87.1 in the USA, EN 166 in Europe, or AS/NZS 1336 in Australia/New Zealand.



In Australia/New Zealand, it is legally required to wear a face shield to protect your face, too.

Power Tool Operation 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 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.
- 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.

Battery Tool Operation 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 the battery pack is not in use, keep it away from other metal objects such as 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, seek medical help immediately. 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 behavior, 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 an 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.

Service

- a) Have your power tool serviced by a qualified repair person using only the 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 an authorized service provider.

Specific Safety Rules for Tire Buffer

- a) Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool does not assure safe operation.
- b) The rated speed of the grinding accessories must be at least equal to the maximum speed marked on the power tool. Grinding accessories running faster than their rated speed can break and fly apart.
- c) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately controlled.
- d) The arbor size of wheels, sanding drum or any other accessory must properly fit the spindle or collet of the power tool. Accessories that do not match the mounting hardware of the power tool may run out of balance, vibrate excessively, and may cause loss of control.
- e) Mandrel mounted wheels, sanding drums, cutters or other accessories must be fully inserted into the collet or chuck. If the mandrel is insufficiently held and/or the overhang of the wheel is too long, the mounted wheel may become loose and be ejected at high velocity.
- f) Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, sanding drum for cracks, tear or excess wear. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.

- g) Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. Eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- h) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- i) Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory 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.
- j) Always hold the tool firmly in your hand(s) during the start-up. The reaction torque of the motor, as it accelerates to full speed, can cause the tool to twist.
- k) Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use. Clamping a small workpiece allows you to use your hand(s) to control the tool. Round material such as dowel rods, pipes or tubing have a tendency to roll while being cut, and may cause the bit to bind or jump toward you.
- l) Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
- m) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- n) Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.

Kickback and Related Warnings

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory’s rotation at the point of the binding.

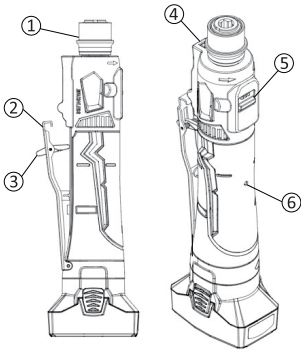
For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel’s movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

- **Maintain a firm grip with both hands on the power tool** and position your body and arms to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
- **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- **Do not position your body in the area where power tool will move if kickback occurs.** Kickback will propel the tool in direction opposite to the wheel’s movement at the point of snagging.
- Use special care when working corners, sharp edges, etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- Do not attach a toothed saw blade Such blades create frequent kickback and loss of control.

Specifications		
Model No	GS120B	
No-load Speed	Drilling Mode	0 – 1,200 RPM
	Buffing Mode	0 – 2,500 RPM
Collet	7/16" Hex	
Volts	14.4 V D.C.	
Dimension (with battery)	306 / 54 / 85 mm	
Weight (with battery)	1.16 kg	
Battery Model	EB14020-A1	
Charger Model	EC1412-A1	

Functional Description



1	Collet
2	Paddle Switch
3	Switch Lock Lever
4	LED Light
5	Mode Selector
6	Indicator Light

Assembly and Instruction

▲ **WARNING:** To reduce the risk of serious personal injury, turn unit off and remove the battery pack before making any adjustments or removing / installing attachments or accessories. An accidental start-up can cause injury.

▲ **WARNING:** Recharge only with the charger specified for the battery. For specific charging instructions, read the operator’s manual supplied with your charger and battery.

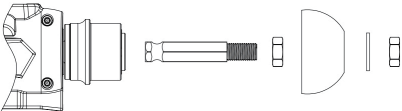
▲ **WARNING:** Only use accessories specifically recommended for this tool. Others may be hazardous.

▲ **WARNING:** To reduce the risk of injury, always securely tighten the accessory to the tire buffer and clean mandrels before inserting them into the collet. Otherwise the high-speed rotation of the tool could force the accessory to fly out of the collet.

Inserting and Removing the Battery

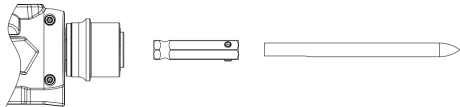
- To insert the battery:
Insert the battery into the tool. Make sure it is fully seated and securely latched into place.
- To remove the battery:
Press the release buttons and remove the battery from the tool.

Installing the Buffing Wheel



- Remove the battery pack.
- Assemble the buffing wheel, coupler, nuts, and washer.
- Pull out the locking ring.
- Insert the buffing wheel assembly into the collet.
- Release the locking ring to secure the wheel.
- Reverse the procedure when removing the accessory.

Installing the Drilling Bit



- Remove the battery pack.
- Assemble the drilling bit and 7/16" hex adapter.
- Pull out the locking ring.
- Insert the drilling bit assembly into the collet.
- Release the locking ring to secure the bit.
- Reverse the procedure when removing the accessory.

OPERATION

▲ **WARNING:** To reduce the risk of serious personal injury, turn unit off and remove the battery pack before making any adjustments or removing / installing attachments or accessories. An accidental start-up can cause injury.

▲ **WARNING:** Always wear proper eye and hearing protection when operating tool.

Mode Selector

The mode selector switch is used to adjust the rotation speed (RPM) for the application. To select the mode:

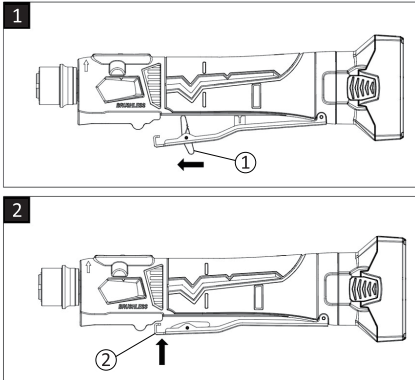
Mode	Drilling Mode	Buffing Mode
No-load Speed (RPM)	0 -1200	0 -2500
Icon		
Description	<p>Push the switch downward to select <i>Drilling Mode</i>.</p> <p>This mode is used for drilling operations on both the inner and outer sides of the tire.</p>	<p>Push the switch forward to select <i>Buffing Mode</i>.</p> <p>This mode is used for operations on the inner liner of the tire.</p>

General Operation

- Before use, run the tool at no-load for about 1 minute after installing an accessory.

▲ WARNING: Do not use dropped or damaged accessories. They may break and cause injury.

- Secure the workpiece with a clamp or vise. Do not hold small parts by hand.



1. Switch Lock Lever 2. Paddle Switch

- To start the tool, push the switch lock lever forward, then press the paddle switch.
 - NOTE : The LED light will automatically turn on when the switch is pressed.
 - Allow the accessory to reach full speed before beginning work.
 - To adjust speed, vary the pressure applied to the paddle switch. The deeper the switch is pressed, the faster the rotation speed, up to the maximum speed set by the mode selector.
 - Control the contact pressure and the surface area between the accessory and the workpiece. Avoid applying excessive force.
- ▲ WARNING: Do not strike or bang the accessory against the workpiece. Excessive pressure may damage the accessory or reduce operating speed.**
- To stop the tool, release the paddle switch and allow the accessory to come to a complete stop before setting the tool down.

If the tire buffer begins to vibrate abnormally, immediately turn off the tool and inspect the accessory. Dull or damaged accessories can cause excessive vibration and may be ejected from the tool.

Replace or resharpen accessories as needed.

Each accessory is designed for a specific application. Use only drilling or buffing accessories intended for this tool, and always follow the manufacturer's operating instructions.

Battery Specification & Safety Rules

Battery Specification

Battery Model	EB14020-A1
Rated Voltage	14.4 V
Rated Capacity	2 Ah
Cell Type	Li-ion
Dimension	89 / 59 / 105 mm

Safety Rules for Battery

- Do not throw the battery into fire, nor heat the battery.
- Do not disassemble nor modify the battery pack.
- Do not leave the battery in a place of high temperature. (60 °C or more)
- To prevent the battery from water or moisture.
- Do not add strong shock, nor drop the battery.
- Do not solder lead directly to the battery body.
- Do not heat nor solder the terminals of the battery.
- Do not short “+” and “-” terminal of the battery with a kind of metal.
- Do not charge beyond the condition which described on the delivery specification.
- Do not reverse-charge or reverse-connect the battery.
- When recharging, please use a special charger (EC1412-A1).
- Please regularly check the battery capacity. When the voltage of the battery is lower than the terminal voltage, its capacity may drop and cannot be recovered.
- m) If the battery is stored over 3 months, it should be checked again about the remaining capacity and charge the battery.

Remarks: Please refer to the technical data sheet for the battery specifications.

Charger Specification & Safety Rules


Charger Specification

Charger	EC1412-A1
Battery Model	EB14020-A1
Output Voltage	16.6 V
Protection Class	Electrical protection class II
AC Supply Voltage	100 VAC - 240 VAC
Mains Frequency	50 Hz - 60 Hz
Operating Temperature	0 °C - 40 °C
Storage Temperature	-20 °C - 70 °C

Status of Charge Indicator

State	Red LED	Green LED
Standby Mode	OFF	Flashes
Battery Install / Charging	ON	OFF
80% Charged	OFF	Fast Flashes
Fully Charged	OFF	ON
Temperature Protection	Flashes	OFF
Abnormal Protection	Red and Green LEDs ON	

Safety Rules for Charger

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- Do not operate the appliance in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Chargers can cause sparks which may ignite dust or fumes.
- Keep children and other persons away from the area while the charger is in use.
- The supply cord plug must match the outlet. Modification of the plug in any way is not permissible. Unmodified plugs and corresponding power outlets reduce the risk of electric shock.
- 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.
- Do not abuse the supply cord. Never use the supply cord to carry, pull or unplug the appliance. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- Only use the battery charger in areas which are dry. Water entering an electric appliance increases the risk of electric shock.
- Use the charger only to charge the batteries approved for use with this charger.
- Do not use a charger if its casing or electric supply cord is defective.
- Store chargers out of reach of children when not in use. Do not allow persons unfamiliar with the appliance or these instructions to operate it. Chargers are dangerous in the hands of untrained users.
- Maintain the appliance carefully. Check to ensure that no parts are broken or damaged in such a way that the appliance can no longer function correctly. If damaged, have the appliance repaired before use.
- Use chargers and the corresponding batteries in accordance with these instructions and as is specified for this particular model. Use of chargers for applications different from those intended could result in hazardous situations.
- 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.
- When not in use, keep the battery and the charger away from paper clips, coins, keys, nails, screws or other small metal objects that could cause a short circuit at the battery terminals or the charging contacts. A short circuit at the battery terminals or charging contacts could result in personal injury (burns) or fire.
- Take care to ensure that the charger is standing in a steady, secure position. A falling battery or charger may present a risk of injury to yourself or others.
- Avoid touching the contacts.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Take care to ensure that the batteries suffer no mechanical damage.
- Do not charge or continue to use damaged batteries (e.g. batteries with cracks, broken parts, bent or pushed-in and/or pulled-out contacts).
- Do not touch the supply cord or extension cord if they are damaged while working. Disconnect the supply cord plug from the power outlet. Damaged supply cords or extension cords present a risk of electric shock. 
- Never operate the appliance when it is dirty or wet. Under unfavorable conditions, dampness or dust adhering to the surface of the appliance, especially dust from conductive materials, may present a risk of electric shock. Dirty or dusty appliances should thus be checked at a service center at regular intervals, especially if used frequently for working on conductive materials.

Maintenance

▲ **WARNING:** To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger or tool before performing any maintenance.

- Never disassemble the tool, battery pack or charger.
- Contact a service facility for ALL repairs.

Maintaining Tool

▲ **WARNING:** To reduce the risk of personal injury and damage, never immerse your tool, battery pack or charger in liquid or allow a liquid to flow inside them.

- Keep your tool, battery pack and charger in good repair by adopting a regular maintenance program.
- Inspect your tool for issues such as undue noise, misalignment or binding of moving parts, breakage of parts, or any other condition that may affect operation. If any issues are found, Return the tool, battery pack, and charger to an authorized service center.
- If the tool does not start or operate at full power with a fully charged battery pack, clean the contacts on the battery pack. If the tool still does not work properly return the tool, charger and battery pack, to a service facility for repairs.

Cleaning

- Clean dust and debris from vents.
- Use only mild soap and a damp cloth to clean, since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia.
- Never use flammable or combustible solvents around tools.

Repairs

- For repairs, return the tool, battery pack and charger to the nearest service center.

Troubleshooting





When protection activated , the indicator light will flash red.
Details are shown in the table below.

State of Abnormality	Probable Cause (malfunction)	Troubleshooting
Flash once	- Battery voltage protection.	- Move the workpiece aside, reinstall the battery, and pull the trigger. - Replace with a fully charged battery, and pull the trigger.
Flash 2 times	- Tool battery temperature protection. - Tool motor temperature protection. - Tool control board temperature protection.	- Move the workpiece aside, reinstall the battery, and pull the trigger. - Remove the battery, wait for the temperature to return to normal, then reinstall the battery.
Flash 3 times	- Over current protection.	- Move the workpiece aside, reinstall the battery, and pull the trigger.
Tool does not work and indicator light does not flash	- Tool motor abnormal.	- Move the workpiece aside, reinstall the battery, and pull the trigger.
Contact service if the problem persists. For failure other than above situation, please stop using the tool and contact authorized service center.		

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Address:No. 24, 36th Road, Taichung Industrial Park Taichung, Taiwan

符號說明

佩戴護目鏡	警告	使用前詳讀說明書	佩戴聽力保護裝置
			
直流電	每分鐘空載轉速 (RPM)	伏特	
D.C	n XXXX min ⁻¹	V	

噪音 – GS120B

根據 EN62841-2-1 標準測定的典型 A 加權噪音級:

聲壓值(LpA): 66.4 dB(A)

聲能值(LWA): 77.4 dB(A)

不確定度(K): 3 dB(A)

註: 所聲明的噪音排放值是依據標準測試方法測得的，可用於比較不同工具之間的噪音程度。

註: 所聲明的噪音排放值亦可用於初步評估暴露情況。

- ▲ 警告: 請佩戴聽力保護裝置。
- ▲ 警告: 實際使用工具時的噪音值，可能因使用方法及加工的工件不同，而與聲明值有異。
- ▲ 警告: 確保根據實際使用條件 (包括工具關閉時、空轉時以及觸發時的所有操作循環部分) 估算暴露情況，制定保護操作員的安全措施。

振動 – GS120B

根據 EN62841-2-1 標準測定的總振動值:

振動宣告值 (ah): 3.24 m/s²，或更低

不確定度 (K): 1.5 m/s²

註: 所聲明的總振動值是依據標準測試方法測得的，可用於比較不同工具之間的振動程度。

註: 所聲明的總振動值亦可用於初步評估暴露情況。

- ▲ 警告: 實際使用工具時的振動值，可能因使用方法及加工的工件不同，而與聲明值有異。
- ▲ 警告: 確保根據實際使用條件 (包括工具關閉時、空轉時以及觸發時的所有操作循環部分) 估算暴露情況，制定保護操作員的安全措施。

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一般電動工具安全警告

▲警告: 請務必閱讀並遵循所有安全警告、使用說明、圖片與規格內容。若未遵守下列指引, 可能導致觸電、火災, 或造成嚴重人身傷害。請妥善保存本使用說明, 以備日後參考。

- 在本使用說明中, 「電動工具」是指插電式電動工具或電池式電動工具。
- 當進行的作業可能接觸到隱藏電線或自身電線時, 請務必握持電動工具的絕緣握把表面。若緊固件誤觸帶電的電線, 可能使電動工具的裸露金屬部分導電, 並導致操作人員觸電。

工作場地安全規則

- a) 保持工作區域整潔並具備充足照明, 雜亂或昏暗的環境容易引發意外。
- b) 請勿在有爆炸危險的環境中操作電動工具, 例如: 存在易燃液體、氣體或粉塵的場所。電動工具可能產生火花, 引燃粉塵或氣體。
- c) 操作工具時, 請讓兒童及旁觀者遠離工作區域。分心會導致操作者失去對工具的控制。

用電安全規則

- a) 電動工具必須使用與插座相符的原廠插頭, 切勿改裝或使用轉接插頭, 以降低觸電風險。
- b) 作業時避免身體接觸接地金屬的表面, 例如: 金屬管線、散熱器、鍋爐或冰箱。若身體接觸接地的表面, 會提高觸電的風險。
- c) 請勿將電動工具暴露於雨天或潮溼環境中, 工具進水將增加觸電的風險。
- d) 請勿以不當方式使用電源線, 例如: 用電線搬運、拉動或拔除工具。請確保電線遠離熱源、油脂、銳利邊緣或活動零件等危險物品。受損或纏繞的電線將增加觸電的風險。
- e) 戶外作業時, 請使用適合戶外環境的延長線。使用適合戶外環境的延長線, 能降低觸電風險。
- f) 如無法避免在潮濕環境下操作電動工具, 請務必使用具漏電保護裝置 (GFCI) 的電源, 以有效降低觸電風險。

人身安全規則

- a) 使用電動工具時應保持專注與警覺, 並運用常識。切勿在疲勞或受藥物、酒精或毒品影響下操作, 即使短暫的疏忽也可能導致嚴重的人身傷害。
- b) 請使用個人防護裝備並始終佩戴護目鏡。在適當情況下, 請搭配使用防塵口罩、防滑安全鞋、安全帽及聽力保護裝置等防護設備, 以降低人身傷害的風險。
- c) 避免工具意外啟動。在連接電源或電池、提起或搬運工具之前, 請確保開關處於關閉狀態。若搬運工具時手指誤觸開關, 或工具處於開啟狀態, 可能會導致事故。
- d) 啟動電動工具前, 請務必移除所有定位鍵或扳手。若扳手或定位鍵遺留在旋轉零件上, 可能導致人身傷害。
- e) 操作工具時, 請避免過度伸手。請保持穩固的立足點及良好的身體平衡, 以確保在突發狀況下仍能有效控制工具。
- f) 請穿著合適的服裝, 避免穿著寬鬆衣物或佩戴飾品。確保頭髮、衣服和手套遠離活動零件, 以防止捲入造成危險。
- g) 若工具配備除塵或集塵裝置, 請確保其妥善連接並正確使用。使用除塵或集塵裝置能減少因粉塵引起的危害。
- h) 請勿因頻繁使用而自認熟練導致疏忽安全原則, 即使是短暫的疏忽也可能造成嚴重傷害。請保持警覺並嚴格遵守安全規範。
- i) 使用電動工具時, 務必佩戴護目鏡, 以避免眼睛受到傷害。護目鏡需符合ANSI Z87.1 (美國)、EN 166 (歐洲) 或AS/NZS 1336 (澳洲/紐西蘭) 標準。於澳洲 / 紐西蘭地區, 法定需佩戴面罩以保護臉部。



電池工具使用和注意事項

- a) 僅使用原廠指定的充電器為電池充電。混用未指定或不相容充電器會增加引發火災的風險。
- b) 僅使用原廠指定的電池組，混用未指定或不相容的電池會增加人身傷害及引發火災的風險。
- c) 未使用的電池組應存放在遠離金屬物體的地方，例如：迴紋針、硬幣、鑰匙、釘子、螺絲等。金屬物體可能意外連通電池端子而造成短路，進而導致火災或燒傷。
- d) 錯誤使用可能導致電池滲液。若接觸到皮膚，請立即以水沖洗；若濺入眼睛，應立即就醫。電池中滲出的液體可能會引起皮膚刺激或燒傷。
- e) 請勿使用已損壞或改裝的電池組或工具，否則可能引發火災、爆炸或人身傷害。
- f) 請勿將電池組或工具暴露於火源或高溫環境，以防電池損壞或爆炸。
- g) 請依規定的溫度範圍充電，並遵循所有充電說明。不當的溫度或充電方式可能導致電池損壞並增加火災風險。

維修

- a) 請尋求合格的維修機構進行檢修，並僅使用與原廠相同的替換零件。以確保電動工具的維護安全。
- b) 切勿自行檢修損壞的電池組。電池組的維修僅能由原廠或授權售服中心進行。

電動輪胎修磨機專用安全規則

- a) 請勿使用非原廠設計或未經推薦之配件。能安裝並不代表可安全使用。
- b) 操作前請確認配件額定轉速。砂輪等配件之額定轉速不得低於本機標示的最高轉速，否則可能因超速運轉導致破裂飛散。
- c) 配件之外徑與厚度必需與本工具主軸或筒夾相符，否則可能造成失衡、過度震動或失控。
- d) 帶心軸的砂輪、砂鼓或切削刀等配件，須完全插入夾筒中。若夾持不牢或外露過長，配件可能鬆脫並高速飛出。
- e) 嚴禁使用損壞的配件。使用前請檢查：研磨輪是否有缺角或裂痕；砂鼓是否有裂縫、破損或過度磨耗。工具或配件若曾跌落，務必重新檢查或更換良品。
- f) 配件安裝後，應讓人員遠離旋轉平面，先以最高轉速空轉 1 分鐘；若配件有損壞，通常會在此測試中破裂。
- g) 請佩戴個人防護裝備。依作業情況佩戴面罩、護目鏡，必要時使用防塵口罩、聽力防護耳罩、手套及防飛屑工作圍裙。護目鏡須能有效阻擋飛散物；防塵口罩或呼吸器須能過濾作業產生的粉塵；長時間暴露於高噪音環境可能造成聽力損失。
- h) 非作業人員請遠離工作區。進入作業區者亦須佩戴個人防護具。工件或破裂配件的碎片可能飛散至區域外，造成傷害。
- i) 在進行可能接觸隱藏電線之作業時，僅握持具絕緣包覆之握把。若切削配件接觸帶電導線，工具外露金屬部件可能帶電並導致觸電危險。
- j) 啟動時請牢握工具。馬達加速至全速時，其反扭力可能使工具扭動。
- k) 建議使用夾具固定工件。切勿一手持工件、一手操作工具。使用夾具可讓雙手控制工具，並防止圓棒或管材滾動造成夾片或反彈。
- l) 配件完全停止後再放下工具。旋轉中的配件可能勾附表面，使工具失去控制。
- m) 請勿於工具運轉狀態置於身側攜帶。旋轉部件若碰觸到衣物，可能捲入並造成危險。
- n) 請定期清潔工具進風口/散熱孔。馬達風扇會將粉塵吸入機身，金屬粉塵累積過多可能引發電氣危害。

反彈與相關警告

反彈是旋轉中之砂輪、底盤、鐵刷或任何其他配件卡住或斷裂時瞬間產生的反作用力。旋轉中的配件發生卡住或斷裂時會突然停止轉動，這將從連接位置造成電動工具失控並以配件旋轉相反的方向運轉。

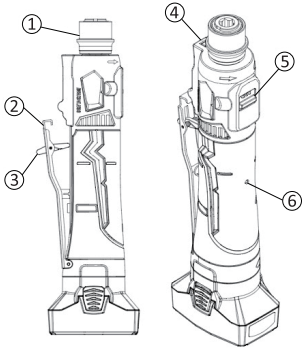
舉例來說，工件如果造成研磨砂輪片斷裂或卡住，已推入卡住的砂輪邊緣可能會鑽進材料表面裡，而使砂輪脫出或反彈。依據砂輪卡住時的移動方向，它有可能彈向或彈離操作人員。在上述情況下，研磨砂輪片亦可能斷裂。反彈是不當使用電動工具及 / 或操作程序 (條件) 不正確所造成的結果。

採取以下適當預防措施，則可避免此一情況：

- 雙手緊握電動工具，穩住雙臂和身體以抵抗反彈力道。務必使用輔助握把 (若有配備)，以求有效掌控啟動時的反彈或扭力。操作人員只要採取適當防護措施，即可控制扭矩的反作用力以及反彈力道。
- 雙手請勿靠近旋轉中的配件。配件可能會反彈並擊中您的手。
- 請勿將身體任何部位放置在發生反彈時電動工具位移的範圍之內。斷裂時，反彈力道會將本工具推往砂輪移動的相反方向。
- 處理尖角、銳利邊緣等物時，請配戴特殊的防護裝備，防範配件彈跳和斷裂。尖角、銳利邊緣或彈跳力道往往會扯斷旋轉中的配件，並造成工具失控或反彈。
- 請勿加裝木工鋸片、周邊間隙大於 10 mm 的分段式鑽石鋸片或鋸齒刀片。此類刀片會產生規律性反彈，進而導致本工具失控。

規格		
工具型號	GS120B	
空載轉速RPM	鑽孔模式	0 – 1,200
	研磨模式	0 – 2,500
筒夾	7/16" 六角	
電壓	14.4 V D.C.	
工具尺寸(含電池)	306 / 54 / 85 mm	
工具重量(含電池)	1.16 kg	
電池型號	EB14020-A1	
充電器型號	EC1412-A1	

功能描述




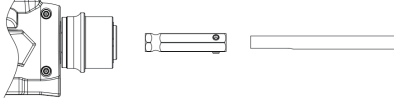
1	快拆筒夾
2	槳式開關
3	開關鎖定桿
4	LED燈
5	模式切換鈕
6	指示燈

- 組裝及說明**
- ▲ 警告: 僅使用指定的充電器進行充電。具體充電指示，請閱讀充電器和電池的使用手冊。
 - ▲ 警告: 如要更換或移除配件，請務必先移除電池組。
 - ▲ 警告: 請只使用專用配件。其他不相容之配件可能會破碎或斷裂，造成人員受傷。
 - ▲ 警告: 為降低受傷風險，將配件裝到輪胎修磨機上時務必確實鎖緊，並在將配件軸柄插入筒夾前先清潔乾淨。否則工具高速旋轉時，配件可能被甩出筒夾。

- 電池移除/安裝**
- 移除電池: 請按下釋放鈕，再將電池由工具上移除。
 - 安裝電池: 請將電池插入工具。並確保電池已安裝至定位並確實扣上。

- 電池移除/安裝**
- 移除電池: 請按下釋放鈕，再將電池由工具上移除。
 - 安裝電池: 請將電池插入工具。並確保電池已安裝至定位並確實扣上。

- 配件安裝/拆卸 – 打磨輪**
- 
- 取下電池組。
 - 將打磨輪與接桿、螺帽、墊圈等零件組裝穩妥。
 - 安裝配件時，請提拉環圈，將組裝好的打磨輪插入筒夾。
 - 釋放環圈使其鎖定，完成安裝。
 - 拆卸配件時，請提拉環圈後取下；隨後釋放環圈，完成拆卸。

- 配件安裝/拆卸 – 鑽頭**
- 
- 取下電池組。
 - 使用鑽頭時需搭配 7/16 吋六角轉接頭，將鑽頭與轉接頭組裝穩妥。
 - 安裝配件時，請提拉環圈，將組裝好的鑽頭插入筒夾。
 - 釋放環圈使其鎖定，完成安裝。
 - 拆卸配件時，請提拉環圈後取下；隨後釋放環圈，完成拆卸。

操作

- ▲警告: 為降低嚴重人員受傷風險，請始終佩戴符合 ANSI Z87.1 標準的適當護目裝備。
- ▲警告: 在多塵環境中作業時，請佩戴適當的呼吸防護裝置或使用符合 OSHA 規範的除塵解決方案。
- ▲警告: 請在進行任何調整或拆卸/安裝配件之前，先將設備關閉並移除電池組。意外啟動可能會導致人身傷害。

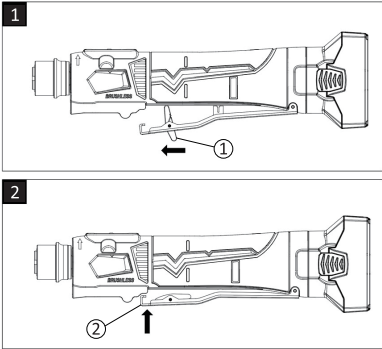
模式切換

依作業需求切換模式，調整轉速。

模式	鑽孔模式	研磨模式
空載轉速 (RPM)	0 -1200	0 -2500
操作圖示		
模式說明	將模式切換鈕往後推，切換為鑽孔模式。 用於輪胎內部與外部的鑽孔作業。	將模式切換鈕往前推，切換為研磨模式。 用於輪胎內部的研磨作業。

啟動、停止及控制速度

- 剛安裝配件或開始作業前，請先空轉1分鐘再接觸工件。
- 請使用夾具、虎鉗或其他適當方式固定工件。
- ▲警告: 請勿使用會摔落的配件。受損的配件可能使工件或工具損壞，亦可能破裂造成人身危險。



1. 開關鎖定桿 2. 槳式開關

- 啟動工具: 先將開關鎖定桿往前推，再壓下槳式開關即可。
- 按壓扳機時，LED燈會自動亮起。
- 開始作業前，先讓配件以全速空轉。
- 改變運轉速度: 請增加或減少按壓開關的壓力。開關按壓越深，速度便越快。最高速由模式切換鈕設定。
- 控制配件與工作的接觸壓力與面積，避免施力過度。
- ▲警告: 勿以敲擊方式讓配件貼合工件。過大壓力會導致配件損壞或轉速下降。
- 停止工具: 放開扳機即可。

若工具出現異常震動，請立即停機檢查。鈍化或損壞的配件可能導致震動使工具被甩出，請更換或重新修磨。

所有配件均為特定用途設計，僅限用於其指定之鑽孔或研磨作業，並請依原廠說明操作。

電池規格與安全使用事項

電池組規格

電池型號	EB14020-A1
額定電壓	14.4 V
額定容量	2 Ah
電池類型	鋰離子電池
電池尺寸	89 / 59 / 105 mm

電池安全使用事項

- a) 請勿將電池燒掉，也不要將電池拿去加熱。
- b) 請勿拆卸或重組電池組。
- c) 請勿將電池放在高溫的地方 (60°C或以上)。
- d) 請勿讓電池受潮或碰水。
- e) 請勿讓電池受到大力撞擊，也不要讓電池落地。
- f) 請勿直接將鉛焊接到電池本體。
- g) 請勿加熱或焊接電池的端子。
- h) 請勿使電池正、負端子短路。
- i) 請遵守運送規則上所述的條件。
- j) 請勿反向充電或逆向連接電池。
- k) 充電時，請用 EC1412-A1 專用充電器。
- l) 請定期檢查電池容量。當電池的電壓低於開路電壓時，電池容量可能會下降且無法恢復。
- m) 如果電池放置時間超過3個月，應再次檢查剩餘容量並為電池充電。

※ 備註: 請參考電池規格技術數據表

充電器規格與安全使用事項

充電器規格

充電器型號	EC14121-A1
適配電池	EB14020-A1
輸出電壓	16.6 V
保護等級	電氣保護等級II
交流電供電電壓	100VAC - 240VAC
電源頻率	50Hz - 60Hz
作業溫度	0°C - 40°C
存放溫度	-20°C - 70°C

充電器指示燈顯示

指示燈	紅燈	綠燈
待機狀態	-	閃爍
充電中	恆亮	-
充電大於80%	-	快速閃爍
充電完成	-	恆亮
溫度保護	閃爍	-
異常保護	紅燈及綠燈同時恆亮	

充電器安全使用事項

- 保持工作區域整潔及光線充足。雜亂或黑暗的区域易導致事故發生。
- 請勿在有爆炸可能性的環境中運作充電器，例如於有易燃液體、氣體或粉塵的環境中操作。充電器會產生火花，可能會引燃粉塵或氣體。
- 電源線的插頭必須與插座相配。以任何方式改裝插頭皆不被允許。未經改裝的插頭與相配的插座能減少觸電的風險。
- 操作時避免身體接觸接地金屬的表面，如鐵管、散熱器、鍋爐、冰箱。若使用人員的身體接地，則觸電的風險會增加。
- 請勿以不正確的方式使用電源線。不要使用電線來移動、拉動充電器，或拔掉充電器的插頭。請確保電線遠離熱源、油、尖銳的邊緣或移動的零件。損壞或糾結的電線會增加觸電的風險。
- 請務必在乾燥處使用電池充電器。若電氣設備進水，會增加觸電的風險。
- 充電器僅能為經批准與本充電器一起使用的專用電池充電。
- 若充電器的外殼或電源線有缺陷，請不要使用該充電器。
- 請將閒置的充電器放置在兒童無法觸及的地方。不要讓不熟悉充電器或本說明的人操作充電器。充電器在未經過訓練的使用人員手中是相當危險的。
- 請小心保養充電器。請檢查以確保沒有任何部分破裂或損壞，導致充電器無法正常運作的狀況。若有損壞，請於使用前維修完成。
- 請遵照本說明及本特定型號的規定使用相應的充電器和電池。如果將充電器用於與其目的不同的應用中，可能會導致危險情況。
- 請只使用製造商指定的充電器進行充電。若將適用於一種電池組的充電器與另一種電池組一起使用，可能有產生火災的風險。
- 請務必注意在不使用時，將電池和充電器置於遠離迴紋針、硬幣、鑰匙、釘子、螺絲或其他小型金屬物體的安全位置，以避免這些物體意外觸及電池端子或充電器接觸點而導致短路。
- 請避免電池終端或充電接觸點發生短路，因為這可能導致人身傷害（例如燒傷）或火災。
- 請確保電池與充電器置放於穩固、安全的位置。如果電池或充電器不慎掉落，可能會對自己或他人造成人身傷害的風險。
- 避免觸摸充電接觸點。
- 本充電器不適合給生理、感官或精神能力下降、缺乏經驗、知識不足的人（包括兒童）使用，除非有負責其安全的人進行監督或指導如何使用本設備。

- 注意確保電池未受機械損傷。
- 請勿將損壞的電池繼續使用或進行充電，例如有裂縫、斷裂、彎曲或接觸點被推入或拉出的電池。
- 若電源線或延長線在運作時被損壞，請不要觸摸它們。將電源線插頭從電源插座上拔下來。損壞的電源線或延長線有觸電的危險。
- 當充電器骯髒或潮溼時，切勿操作之。在不利的條件下，充電器表面附著之溼氣或灰塵，尤其是來自導電材料的灰塵，可能會帶來觸電的風險。因此，骯髒或累積許多灰塵的充電器，應定期送至服務中心進行檢查，特別是其經常用於處理導電材料的情況。



維護保養

▲警告: 爲了降低傷害風險，在進行任何維護保養工作前，請務必拔掉充電器插頭並將充電器或工具的電池組移除。

- 請勿拆解工具、電池組或充電器。
- 請聯絡售服中心進行所有維修。

保養工具

- 定期維護設備，確認工具、電池組和充電器處於良好狀態。
- 檢查工具是否有異常噪音、零件錯位、活動零件卡住、零件損壞或任何其他可能影響工具運作的情況。如出現上述問題，請送回售服中心檢測維修。
- 如果工具無法啟動或在使用完全充電的電池組時無法達到全功率，請清潔電池組上的接觸點。如果工具仍然無法正常運作，請送回售服中心檢測維修。

▲警告: 爲了降低傷害和損壞率，請勿讓工具、電池組或充電器泡水或受潮。

清潔

- 清潔通風孔上的灰塵和碎屑。
- 保持手柄乾淨、乾燥，並且無油、無脂。
- 僅使用溫和的肥皂和濕布進行清潔，因爲某些清潔劑和溶劑對塑料和其他絕緣部件有害。例如: 汽油、松節油、香蕉水、油漆稀釋劑、含氯清潔劑、氨及含氨的家用清潔劑。
- 切勿在工具周圍使用易燃或可燃的溶劑。

維修

- 如需維修，請將工具、電池組和充電器送至最近的售服中心。

故障排除

當保護功能啟動時，工具的指示燈會以閃爍方式提示，詳細說明如下表所示：

燈號顯示	描述	排除方式
閃爍一次	■ 電池電壓保護	■ 移開工件，重新安裝電池然後扣動扳機。 ■ 更換充滿電的電池。
閃爍兩次	■ 工具馬達溫度保護 ■ 工具電池溫度保護 ■ 工具控制板溫度保護	■ 移開工件，重新安裝電池然後扣動扳機。 ■ 卸下電池，等待溫度降低後重新安裝電池。
閃爍三次	■ 工具過電流保護	■ 移開工件，重新安裝電池然後扣動扳機。
工具無反應，且無燈號	■ 工具馬達異常	■ 移開工件，重新安裝電池然後扣動扳機。
如果問題仍然存在，請聯繫售服中心。 若發生上述情況以外之故障情形，請停止使用本工具，並聯絡當地售服中心進行檢測維修。		

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