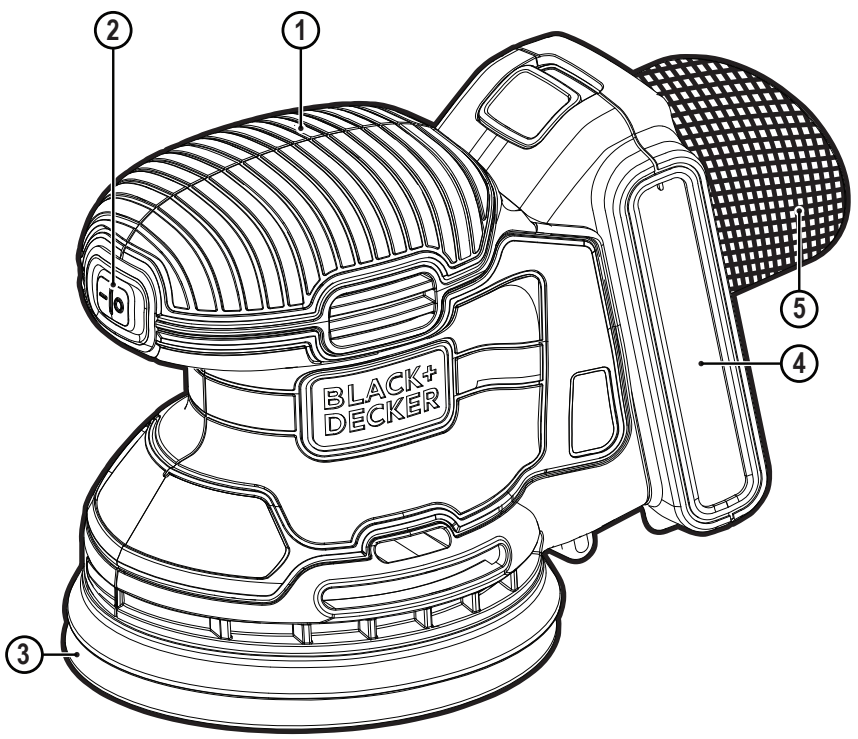




20V Max Random Orbit Sander

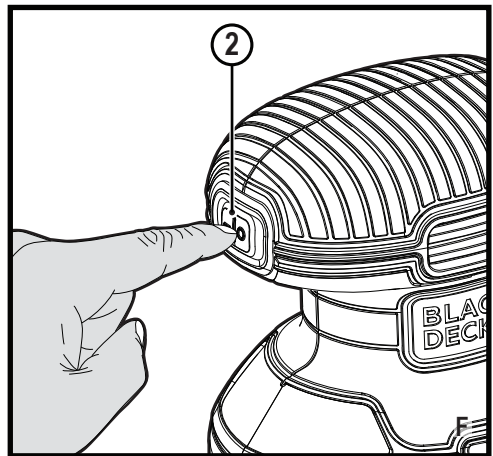
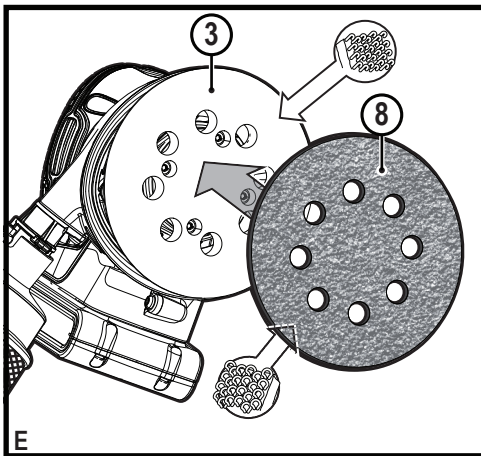
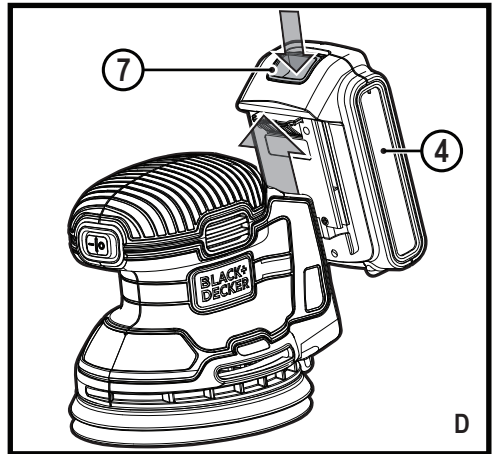
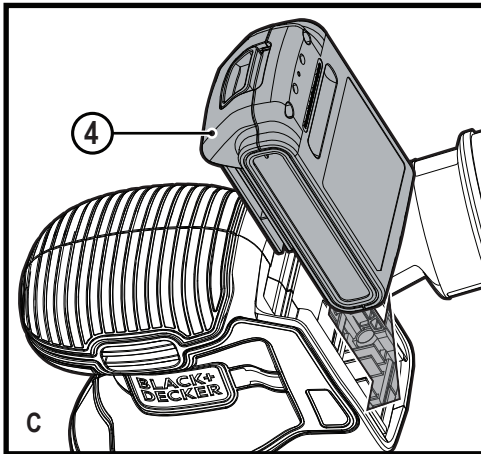
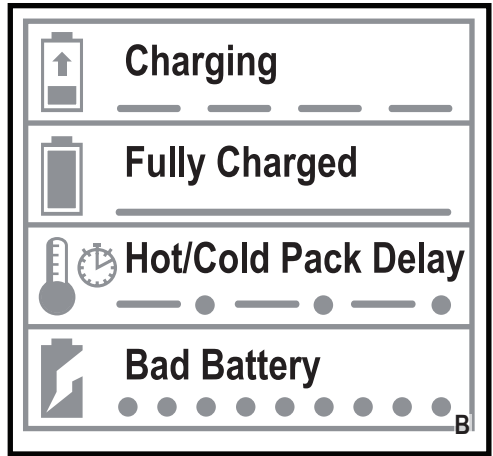
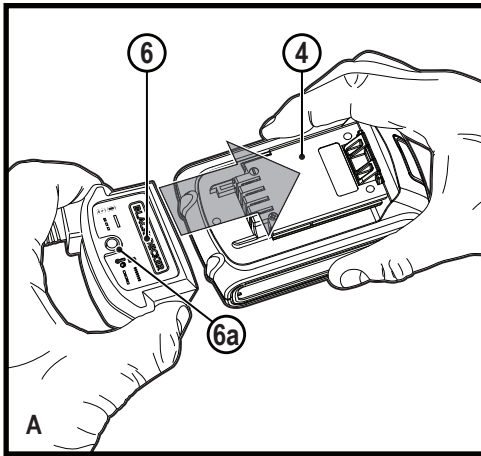
20V Max 鋰電偏心砂磨機

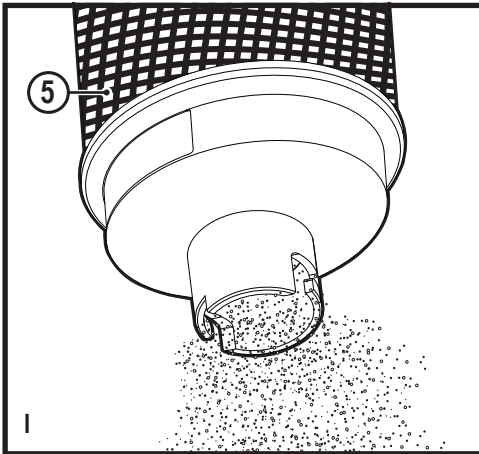
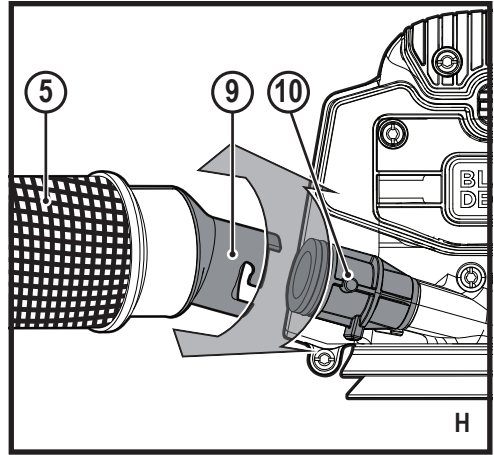
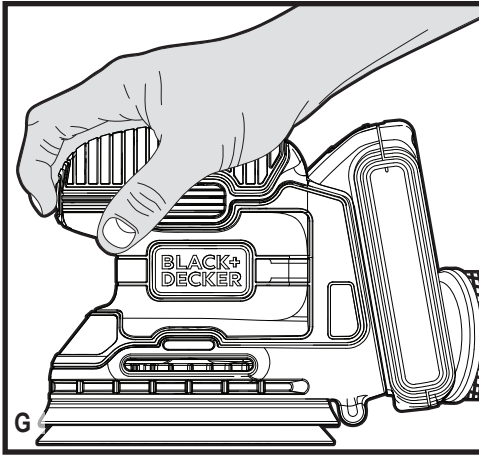
www.blackanddecker.com



BDCROS18

English 3
繁體中文 9





BDCROS18 ROS SANDER

Technical data

BDCROS18		
Input voltage	V_{DC}	18V (20V Max)
Orbits (no load)	min^{-1}	12000
Sanding base surface	mm	125
Weight	kg	0.9

Charger		
LCS1620		
Input voltage	V_{AC}	110
Output voltage	V_{DC}	8 - 20
Current	mA	400

Battery		
LBXR2020		
Voltage	V_{DC}	18V (20V Max)
Capacity	Ah	2.0
Type		Li-Ion

Intended use

Your BLACK+DECKER BDCROS18 random orbital sander has been designed for sanding wood, metal, plastics and painted surfaces. This tool is intended for consumer use only.

Safety instructions

General power tool safety warnings



Warning! Read all safety warnings and all instructions. Failure to follow the warnings and instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

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

1. Work area safety

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

2. Electrical safety

- a. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- c. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the charger. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3. Personal safety

- a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.**

A moment of inattention while operating power tools may result in serious personal injury.

- b. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as 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 power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

- d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

- e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

- f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, 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.

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

4. Power tool use and care

- a. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c. **Disconnect the plug from the power source and/or remove the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e. **Maintain power tools and accessories.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- h. **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- 5. Battery tool use and care**
- a. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- b. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- c. **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- d. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- e. **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- f. **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
- g. **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.
- 6. Service**
- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- b. **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

Additional power tool safety warnings



Warning! Additional safety warnings for sanders

- ◆ **Hold power tool by insulated gripping surfaces when performing an operation where the sanding accessory may contact hidden wiring.** Sanding accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock
- ◆ **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.



Warning! Contact with or inhalation of dusts arising from sanding applications may endanger the health of the operator and possible bystanders. Wear a dust mask specifically designed for protection against dust and fumes and ensure that persons within or entering the work area are also protected.

- ◆ Thoroughly remove all dust after sanding.
- ◆ Take special care when sanding paint which is possibly lead based or when sanding some woods and metal which may produce toxic dust:
 - ◆ Do not let children or pregnant women enter the work area.
 - ◆ Do not eat, drink or smoke in the work area.
 - ◆ Dispose of dust particles and any other debris safely.
- ◆ The intended use is described in this instruction manual. The use of any accessory or attachment or performance of any operation with this tool other than those recommended in this instruction manual may present a risk of personal injury and/or damage to property.

Safety of others

Never allow children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or people unfamiliar with these instructions to use the machine, local regulations may restrict the age of the operator.

Residual risks

Additional residual risks may arise when using the tool which may not be included in the enclosed safety warnings. These risks can arise from misuse, prolonged use etc.

Even with the application of the relevant safety regulations and the implementation of safety devices, certain residual risks can not be avoided. These include:

- ◆ Injuries caused by touching any rotating/moving parts.
- ◆ Injuries caused when changing any parts, blades or accessories.
- ◆ Injuries caused by prolonged use of a tool. When using any tool for prolonged periods ensure you take regular breaks.
- ◆ Impairment of hearing.
- ◆ Health hazards caused by breathing dust developed when using your tool (example:- working with wood, especially oak, beech and MDF.)

Labels on tool

The following pictograms are shown on the tool along with the date code:



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

Additional safety instructions for batteries and chargers

Batteries

- ◆ Never attempt to open for any reason.
- ◆ Do not expose the battery to water.
- ◆ Do not store in locations where the temperature may exceed 40 °C.
- ◆ Charge only at ambient temperatures between 10 °C and 40 °C.
- ◆ Charge only using the charger provided with the tool.
- ◆ When disposing of batteries, follow the instructions given in the section "Protecting the environment".

Chargers

- ◆ Use your BLACK+DECKER charger only to charge the battery in the tool with which it was supplied. Other batteries could burst, causing personal injury and damage.
- ◆ Never attempt to charge non-rechargeable batteries.
- ◆ Have defective cords replaced immediately.

- ◆ Do not expose the charger to water.
- ◆ Do not open the charger.
- ◆ Do not probe the charger.



The charger is intended for indoor use only.



Read the instruction manual before use.

Electrical safety



Your charger is double insulated; therefore no earth wire is required. Always check that the mains voltage corresponds to the voltage on the rating plate. Never attempt to replace the charger unit with a regular mains plug.

- ◆ If the supply cord is damaged, it must be replaced by the manufacturer or an authorised BLACK+DECKER Centre in order to avoid a hazard.

Features

This tool includes some or all of the following features.

1. Handle
2. On/off button
3. Sanding pad
4. Battery
5. Dust canister
6. Charger

Charging procedure (Fig. A)

BLACK+DECKER chargers are designed to charge BLACK+DECKER battery packs.

- ◆ Plug the charger (6) into an appropriate outlet before inserting the battery pack (4).
- ◆ Insert the battery pack (4) into the charger (6) as shown in figure A.
- ◆ The green LED (6a) will flash indicating that the battery is being charged.
- ◆ The completion of charge is indicated by the green LED (6a) remaining on continuously. The pack is fully charged and may be used at this time or left on the charger.

Note: Recharge discharged batteries as soon as possible after use or battery life may be greatly diminished. For longest battery life, do not discharge batteries fully.

It is recommended that the batteries be recharged after each use.

Leaving the battery in the charger

The charger (6) and battery pack (4) can be left connected with the LED glowing indefinitely. The charger will keep the battery pack fresh and fully charged.

Important charging notes

- ◆ Longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 65°F and 75°F (18°- 24°C). DO NOT charge the battery pack in an air temperature below +40°F (+4.5°C), or above +105°F (+40.5°C). This is important and will prevent serious damage to the battery pack.
- ◆ The charger and battery pack may become warm to touch while charging. This is a normal condition, and does not indicate a problem. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as in a metal shed, or an uninsulated trailer.
- ◆ If the battery pack does not charge properly:
 - ◆ Check current at receptacle by plugging in a lamp or other appliance.
 - ◆ Check to see if receptacle is connected to a light switch which turns power off when you turn out the lights.
 - ◆ Move charger and battery pack to a location where the surrounding air temperature is approximately 65°F - 75°F (18°- 24°C).
 - ◆ If charging problems persist, take the tool, battery pack and charger to your local service center.
- ◆ The battery pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. DO NOT CONTINUE to use under these conditions. Follow the charging procedure. You may also charge a partially used pack whenever you desire with no adverse affect on the battery pack.
- ◆ Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminium foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.
- ◆ Do not freeze or immerse charger in water or any other liquid.

Warning! Do not allow any liquid to get inside charger. Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return to a service center for recycling.

Charger Diagnostics (Fig.B)

Refer to the indicators in figure B for the charge status of the battery pack.

Bad Battery

If you see a bad battery blink pattern, do not continue to charge this battery. Return it to a service center or a collection site for recycling.

Hot/Cold Pack Delay

When the charger detects a battery pack that is too hot or too cold, it automatically starts a Hot/Cold Pack Delay, suspending charging until the battery pack has reached an appropriate temperature. The charger then automatically switches to the pack charging mode. This feature ensures maximum battery pack life. A cold battery pack will charge at a slower rate than a warm battery pack. The pack will charge at that slower rate throughout the entire charging cycle and will not return to maximum charge rate even if the pack warms.

Installing and removing the battery pack from the tool

To install battery pack Fig. C)

- ◆ Insert battery (4) into tool until an audible click is heard (Figure. C)
- ◆ Ensure battery pack is fully seated and fully latched into position.

To remove battery pack (Fig.D)

- ◆ Depress the battery release button (7) as shown in figure D and pull battery pack (4) out of the tool.

Attaching hook and loop sanding discs (fig.E)

For best results, use BLACK+DECKER accessories.

- ◆ Your sander is designed for use with either mesh carbide sandpaper or with standard sand paper with the 8 hole dust extraction pattern.
- ◆ To attach the sanding disc (8), carefully center it over the sanding pad (3) ensuring the holes in the disc align with the holes in the pad and press the disc firmly in place.
- ◆ The hook and loop fastening system sanding disc can be easily removed by simply pulling it off. It can be reused as desired.

Use

Warning! Let the tool work at its own pace. Do not overload.

Switching on and off

- ◆ To switch the tool on, depress the on/off switch (2) at the "I" position.
- ◆ To switch the tool off, depress the on/off switch (2) at the "O" position.

Operation

Grasp the sander as shown in figure G and turn it ON. Move it in long, sweeping strokes along the surface, letting it do the work.

Pushing down on the tool while sanding actually slows the removal rate and produces an inferior quality finish.

Check your work often. Sander is capable of removing material rapidly especially with coarse paper.

Dust Collection (Fig. H, I)

Warning! Collected sanding dust from sanding surface coatings (polyurethane, linseed oil, etc.) can selfignite in sander dust bag or elsewhere and cause fire. To reduce risk, empty bag frequently and strictly follow sander manual and coating manufacturer's instructions.

- ◆ To attach the canister to the sander, line up the grooves in the canister (9) with the nubs (10) on the dust port.
- ◆ Slide the canister onto the dust port and turn the canister clockwise to lock it in place as shown in Figure H.
- ◆ To remove, turn the canister counterclockwise and slide the canister off.
- ◆ To empty the canister, remove it from the dust port and dump the sanding debris into an appropriate trash receptacle Figure I.

Maintenance

Your BLACK+DECKER tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.

Your charger does not require any maintenance apart from regular cleaning.

Warning! Before performing any maintenance on the tool, remove the battery from the tool. Unplug the charger before cleaning it.

- ◆ Regularly clean the ventilation slots in your tool and charger using a soft brush or dry cloth.
- ◆ Regularly clean the motor housing using a damp cloth. Do not use any abrasive or solvent-based cleaner.
- ◆ Regularly open the chuck and tap it to remove any dust from the interior.

Protecting the environment



Separate collection. This product must not be disposed of with normal household waste.

Should you find one day that your BLACK+DECKER product needs replacement, or if it is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.



Separate collection of used products and packaging allows materials to be recycled and used again.

Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

BLACK+DECKER provides a facility for the collection and recycling of BLACK+DECKER products once they have reached the end of their working life. To take advantage of this service please return your product to any authorised repair agent who will collect them on our behalf.

You can check the location of your nearest authorised repair agent by contacting your local BLACK+DECKER office at the address indicated in this manual. Alternatively, a list of authorised BLACK+DECKER repair agents and full details of our after-sales service and contacts are available on the Internet at: www.2helpU.com

Batteries



There are no user serviceable parts inside.

- ◆ At the end of your products life return the whole unit to your service agent or to a local recycling station to have the battery recycled. Do not throw the unit out with household waste.

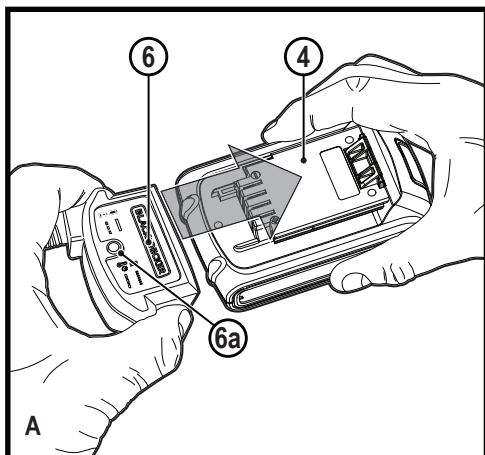
Service Information

BLACK+DECKER offers a full network of company-owned and authorized service locations throughout Asia. All BLACK+DECKER Service Centers are staffed with trained personnel to provide customers with efficient and reliable product service.

Whether you need technical advice, repair, or genuine factory replacement parts, contact the BLACK+DECKER location nearest to you.

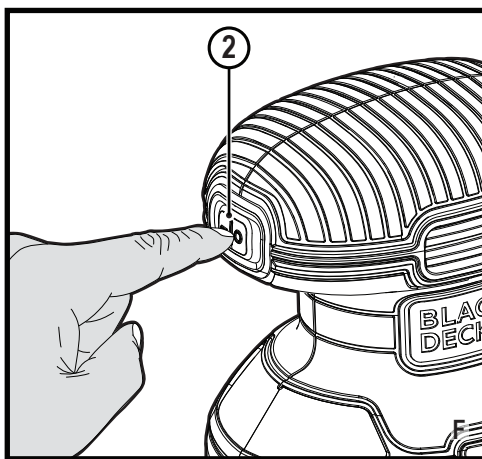
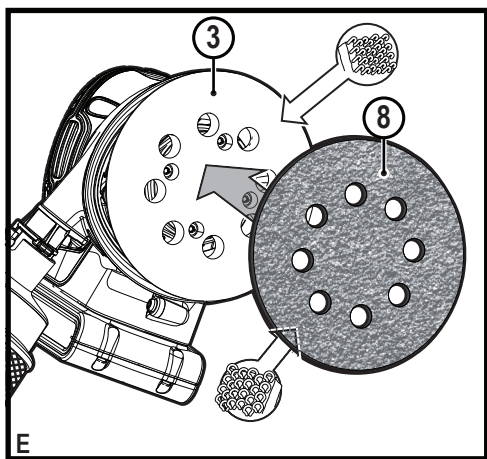
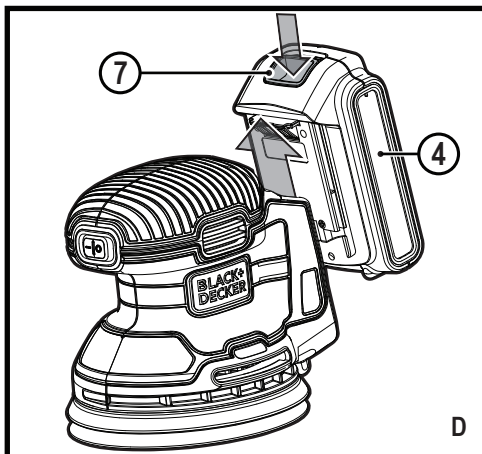
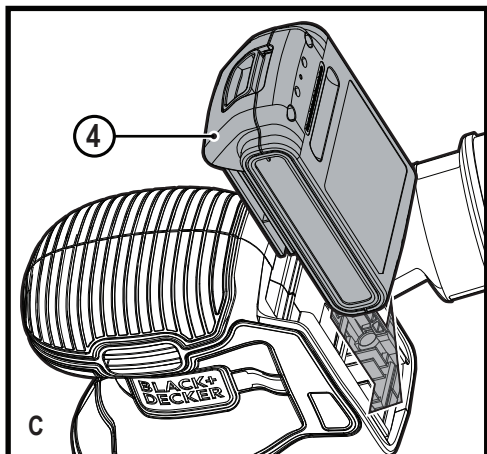
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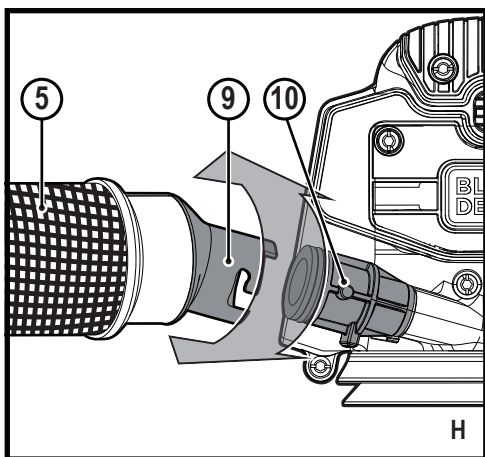
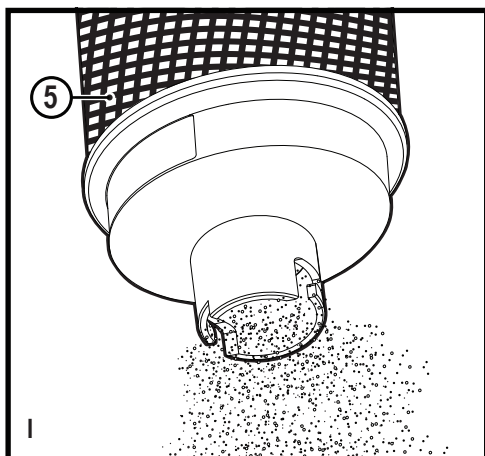
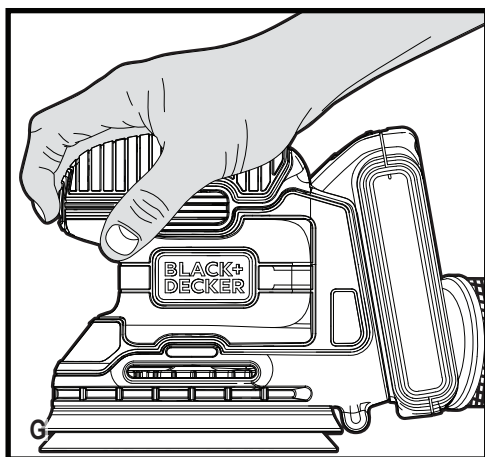
- ◆ BLACK+DECKER's policy is one of continuous improvement to our products and, as such, we reserve the right to change product specifications without prior notice.
- ◆ Standard equipment and accessories may vary by country.
- ◆ Product specifications may differ by country.
- ◆ Complete product range may not be available in all countries. Contact your local BLACK+DECKER dealers for range availability.



	LED 閃爍: 充電中
	LED 持續亮起: 充電完成
	電池溫度異常
	電池不良

B





BDCROS18 偏心砂磨機

技術資料

BDCROS18		
電壓	V_{ac}	18V (20V Max)
空載迴轉	OPM	12000
砂磨底盤直徑	mm	125
重量	kg	0.9

充電器		LCS1620
輸入電壓	V_{ac}	110
輸出電壓	V_{dc}	8 - 20
電流	mA	400

電池		LBXR2020
輸出電壓	V_{dc}	18V (20V Max)
容量	Ah	2.0
類型		鋰電池

20V Max 為最大初始電池電壓 (無負載電壓)，標稱電壓為18V。

請注意！各地區上市產品/配件不盡相同，請依台灣繁體中文說明書的內容為主。

Warning! Attachments and accessories are not the same in each region, please only refer to Taiwan Traditional Chinese description in this manual.

設計用途

BLACK+DECKER BDCROS18 偏心型砂磨機設計用於砂磨木材、金屬、塑膠和塗漆表面。本工具只供一般 DIY 消費者使用，營業使用者不適用百得一年保修條款。

安全指示

電動工具一般安全警告



警告！請閱讀所有安全警告及指示。
若不遵循以下所示警告及指示，可能會導致觸電、火災及/或嚴重傷害。

請妥善保存說明書以備將來查閱。以下所示所有警告中的術語「電動工具」係指由電源供電(插電式)或由電池供電(充電式)的電動工具。

1. 工作場地安全

- 請保持工作場地清潔明亮。混亂或黑暗的場地會引發事故。
- 請勿在易爆環境(例如存在易燃液體、氣體或粉塵的環境)中操作電動工具。電動工具產生的火花可能會引燃粉塵或煙霧。
- 操作電動工具時，請遠離兒童與旁觀者。分心會導致您疏於控制。

2. 電氣安全

- 電動工具插頭必須與插座相符。切勿以任何方式改裝插頭。請勿將接地的電動工具與任何配接器插頭搭配使用。使用未經改裝的插頭與相符的插座可降低觸電風險。
- 請避免人體接觸接地表面(例如管道、散熱片、爐灶及冰箱)。若您的身體接地，會增加觸電風險。
- 請勿將電動工具暴露在雨中或潮濕環境中。水進入電動工具會增加觸電風險。
- 請勿濫用電線。切勿使用電線來搬運、拉動充電器或拔出充電器插頭。請讓電線遠離熱、油、銳邊或活動部件。受損或纏繞的電線會增加觸電風險。
- 在室外操作電動工具時，請使用適合室外使用的延長電線。採用適當的延長線可降低觸電危險及工具燒毀。
- 若必須在潮濕環境中操作電動工具，請使用受漏電保護器(RCD)保護的電源。使用RCD可降低觸電風險。

3. 人身安全

- 操作電動工具時，請保持警覺、留意所執行的操作並運用常識。請勿在疲倦或在受到藥物、酒精或藥品的影響時使用電動工具。
操作電動工具時，一時的注意力分散可能會導致嚴重人身傷害。
- 請使用人身防護設備。始終佩戴護目裝置。防護設備(例如在適當條件下使用的防塵面具、防滑安全鞋、安全帽或聽力保護裝置)可減少人身傷害。

- 避免意外啟動。在連接至電源及/或電池組、抬起或搬運工具之前，請確保開關處於關閉位置。若搬運電動工具時將手指放在開關上，或者在電動工具開關開啟時將插頭插入電源插座，這兩種行為都會引發事故。
- 開啟電動工具之前，請卸下所有調整鑰匙或扳手。電動工具旋轉部件上遺留的扳手或鑰匙可能會導致人身傷害。
- 請勿過度伸長雙手。時刻注意腳下與身體的平衡。如此可在意外情況下更好地控制電動工具。
- 穿著適當。請勿穿著寬鬆衣服或佩戴飾品。讓頭髮、衣服及手套遠離活動部件。寬鬆衣服、佩飾或長髮可能會捲入活動部件中。
- 若為連接除塵與集塵設備而提供裝置，請確保妥善連接及正確使用。使用集塵設備可減少與粉塵有關的危險。
- 請勿因頻繁使用工具，對其十分熟悉，而讓您變得自滿，忽略工具的安全原則。粗心大意就會在瞬間造成嚴重傷害。

4. 電動工具的使用與維護

- 請勿超負荷使用電動工具。請根據您的應用，使用正確的電動工具。正確的電動工具能以設計的額定值，更有效、更安全地執行工作。
- 若開關無法開啟或關閉電動工具，則請勿使用。若開關無法控制電動工具，則電動工具存在危險，必須予以維修。
- 在執行任何調整、更換配件或存放電動工具之前，請從電源上拔掉插頭及/或卸下電動工具中的電池組。這類安全防護措施可降低電動工具意外啟動的風險。
- 請將閒置的電動工具存放在兒童無法觸及的地方，請勿讓不熟悉電動工具或這些指示的人員操作電動工具。未經訓練的使用者操作電動工具會發生危險。
- 維護電動工具
請檢查是否存在活動部件未對準或卡住、部件破損以及可能影響電動工具運作的所有其他任何狀況。若電動工具有損傷，請先維修後再使用。許多事故都因電動工具維護不善所導致。
- 請保持刀具鋒利清潔。妥善維護、刀刃鋒利的刀具卡住的可能性更低，更易於控制及提高作業效率，亦能維護工具使用壽命。
- 請根據這些指示並考慮工作條件和所要執行的工作，以使用電動工具、配件和工具鑽頭等。若將電動工具用於執行不同於設計用途(砂磨木材、金屬、塑膠和塗漆表面)的操作，可能導致危險情況。

5. 電池的使用與養護

- 僅能使用製造商指定的充電器進行再充電。適用於一類電池組的充電器與另一種電池組搭配使用時可能導致火災的危險。

- b. 使用電動工具時，僅能搭配專門指定的電池組。使用任何其他電池組可能會導致受傷和火災的危險。
- c. 當不使用電池組時，請將電池組遠離其他金屬物體，如迴紋針、硬幣、鑰匙、釘子、螺絲，或其他小型金屬物體。電池短路而導致燒傷或火災。
- d. 在惡劣條件下，液體可能從電池中噴出；請避免接觸。若不慎接觸，請使用清水沖洗。若液體接觸到眼睛，請盡速尋求醫療協助。電池噴出的液體可能會導致刺激或燒傷。
- e. 請勿使用已經損壞或改動的電池組或工具。損壞或改動的電池可能表現出不可預計的行為，導致火災、爆炸或傷害風險。
- f. 請勿讓電池組或工具暴露於高溫度的環境中。暴露高溫的環境中可能導致爆炸。
- g. 請遵循所有充電說明，請勿在說明中規定的溫度範圍以外的環境對電池組或工具充電。不當充電或在指定範圍以外的溫度下充電，可能導致電池損壞並增加火災風險。
- h. 在電池用完電量後，建議馬上充電，鋰電池請勿過度放電，電力過度耗竭會導致鋰電池損壞。
- i. 請將電池從機身卸下分開存放，若長時間未使用電池（1年以上），請每 6 個月為電池充電一次，以確保電池壽命。
- j. 當主機突然停止動作，或無法輕鬆完成以往的作業量時，請馬上充電。

6. 維修

- a. 電動工具之修理，僅可由認證的技術人員執行。請勿交由非百得認證服務中心的技術人員進行修理、維護、調整。若產品經由非百得認證的維修工程師拆解、組裝、調整，恕無法適用百得一年家用保修條款。為充份發揮其功能，修理、維護、調整請務必使用原廠零件。百得認證服務中心擁有保修條款解釋權。
- b. 不得維修已損毀的電池。電池組的維修應僅由製造商或授權服務提供商進行。

電動工具其他安全警告



警告！其他砂磨機安全警告

- ◆ 若在執行操作時，砂磨配件可能會接觸隱藏的電線，則只能透過絕緣握把表面握住電動工具。若砂磨配件時接觸到「帶電」導線，可能會導致電動工具裸露的金屬部件「帶電」，並導致操作人員觸電。

- ◆ 使用夾子或是其他實用方式，將工件固定並支撐於穩固的工作檯上。不論是手持工件或是靠在身上，都會令工件極不穩定，還有可能導致失控。



警告！接觸或吸入砂磨所產生的粉塵可能會危及操作人員及旁觀者的健康。配戴特別為防範粉塵和煙霧所設計的防護面具，確保工作區域內或是進入工作區域的人員都受到保護。

- ◆ 砂磨後請徹底清除所有粉塵。
- ◆ 在砂磨可能含有鉛的塗料或是可能產生有毒粉塵的木材或金屬時，請特別注意：
 - ◆ 勿讓兒童或孕婦進入工作區域。
 - ◆ 勿在工作區域飲食或吸煙。
 - ◆ 以安全方式處置粉塵顆粒以及任何其他碎屑。
- ◆ 工具的設計用途已在本使用手冊中載明。若使用並非本使用手冊中所建議的配件或附件，或者使用本工具執行並非本使用手冊中所建議的操作，可能會有人身傷害和/或財產損失的風險。

他人的安全

切勿讓兒童、身體、感官或心理機能不健全或缺乏經驗及知識，或是不熟悉這些指示的人員使用機器，當地法規可能會限制操作人員的年齡。

操作風險

使用工具時可能會出現未包括在隨附的安全警告中的其他風險。誤用、長時間使用工具等因素會導致這些風險。即使遵循相關安全規定並採用安全裝置，仍然無法避免某些殘餘風險。此類風險包括：

- ◆ 接觸任何旋轉/活動部件所引起的傷害。
- ◆ 更換任何部件、刀片或配件所引起的傷害。
- ◆ 過長時間使用工具會引起的損壞，請確保可以定期休息，以維護工具壽命。
- ◆ 聽力受損
- ◆ 使用工具時產生的呼吸粉塵導致的健康危害(例如：使用木材，尤其是橡木、櫟木、中密度纖維板。)

工具上的標籤

本工具上具有以下象形圖與日期代碼：



警告！為減少受傷風險，使用者必須閱讀使用手冊。

製造年份及號碼(範圍)

2016	23	BM
西元年份	週數	號碼

電池與充電器的其他安全指示

電池

- ◆ 切勿因任何原因嘗試打開電池。
- ◆ 請勿將電池暴露在水中。
- ◆ 請勿於高溫夏季時，長時間存放於車內。
- ◆ 勿於電池過熱時繼續充電。
- ◆ 只能使用本工具隨附的充電器為電池充電。
- ◆ 處置電池時，請遵循「保護環境」一節所提供的指示。

充電器

- ◆ 只能使用 BLACK+DECKER 充電器為本工具隨附的電池充電。其他非原廠電池可能會爆裂，導致人身傷害和損害。
- ◆ 切勿嘗試為不可充電的電池充電。
- ◆ 立即更換有缺陷的電池。
- ◆ 請勿將充電器暴露在雨水中。
- ◆ 請勿嘗試打開充電器內部。
- ◆ 請勿刺破充電器。



充電器僅供室內使用



使用前請閱讀使用手冊。

電氣安全



充電器採用雙重絕緣，因此無需接地線。請務必檢查電源電壓是否與銘牌上的電壓一致。切勿嘗試使用一般的電源插頭替換充電器裝置。

- ◆ 若電源線損壞，則必須送往製造廠商或獲授權的 BLACK+DECKER 維修中心進行更換，以避免發生危險。

功能部件

本工具包括以下部分或全部功能部件。

1. 握把
2. 開關按鈕
3. 砂磨底盤 (125mm)
4. 電池
5. 集塵罐
6. 充電器

充電程序 (圖A)

BLACK+DECKER 充電器設計用於為 BLACK+DECKER 電池組充電。

- ◆ 在插入電池組 (4) 之前，請先將充電器 (6) 插入相應的插座。
- ◆ 將電池組 (4) 插入充電器 (6) (如圖 A 所示)。

- ◆ 綠色 LED 燈 (6a) 將會閃爍，表示電池正在充電中。
- ◆ 綠色 LED 燈 (6a) 持續穩定亮起，表示充電已完成。此時充滿電的電池組可供使用，亦可留在充電器中。

附註：1. 在電池用完電量後，建議冷卻後充電，鋰電池請勿過度放電，電力過度耗竭會導致鋰電池損壞。

2. 請將電池從機身卸下分開存放，若長時間未使用電池(1年以上)，請每6個月為電池充電一次，以確保電池壽命。

將電池留在充電器中

可將充電器 (6) 與電池組 (4) 保持連接，LED 燈會持續閃爍。充電器可讓電池組維持充滿電力的狀態。

重要的充電提示

- ◆ 若在 65°F 至 75°F (18°–24°C) 的氣溫條件下為電池組充電，可以最大限度地延長電池組的使用壽命，並達到最佳效能。請勿在低於 +40°F (+4.5°C) 或高於 +105°F (+40.5°C) 的氣溫條件下為電池組充電。這很重要，且會防止嚴重損壞電池組。
- ◆ 充電器和電池組在充電期間可能有溫熱觸感。此為正常情況，並非指示發生問題。為加快電池組使用後的冷卻速度，請勿將充電器或電池組置於溫熱環境，如金屬棚或無隔熱的活動房屋。
- ◆ 若電池組無法正常充電：
 - ◆ 請插入燈具或其他器具，檢查插座是否有電。
 - ◆ 檢查插座是否已連接至燈具開關，且當您關燈時，燈具開關也會斷電；
 - ◆ 將充電器和電池組移動至周圍氣溫約為 65°F–75°F (18°–24°C) 的環境。
 - ◆ 若充電問題依然存在，請將工具、電池組和充電器送至當地的維修中心。
- ◆ 當電池組無法產生工作所需的足夠功率(之前可輕鬆達到)時，則必須對其進行充電。切勿在此條件下繼續使用。遵循充電程序。只要願意，您也可以為僅使用部分電量的電池組充電，不會有任何不利影響。
- ◆ 應將具有導電性質的外部材料(例如但不限於，鋼絲絨、鋁箔或任何金屬顆粒的積聚物)遠離充電器插槽。當插槽中沒有電池組時，請務必從電源上拔下充電器。嘗試清潔之前，請拔下充電器插頭。
- ◆ 請勿冰凍充電器或將其浸入水中或任何其他液體中。

警告！請勿讓任何液體進入充電器。切勿因任何原因嘗試拆卸電池組。若電池組的塑膠外殼破損或破裂，請送至維修中心回收。

充電器診斷 (圖 B)

有關電池組的充電狀態，請參閱圖 B 中的指標。

電池不良

如果出現電池不良閃爍模式，請勿繼續充電此電池。請送交維修中心或是回收站進行資源回收。

電池溫度異常

當充電器偵測到電池組過熱或過冷時，將會自動啟動熱/冷電池組延遲功能，並且暫停充電，直到電池達到適當的溫度為止。然後充電器會自動切換到電池組充電模式。此功能可確保電池組擁有最長的使用壽命。低溫電池組的充電速度將稍慢於常溫電池組。電池組將在整個充電週期以較慢的速率充電，即使電池組溫度過高，也不會回到正常充電速度。

安裝電池組以及從工具中取出電池組

若要安裝電池組(圖 C)

- ◆ 將電池(4)插入工具，直到聽見喀嗒聲為止(圖C)
- ◆ 確保電池組已確實安裝並且完全卡入定位。

若要移除電池組(圖 D)

- ◆ 按下如圖 D 所示的電池釋放按鈕 (7)，然後將電池組 (4) 從工具中抽出。

連接掛鉤以及環形砂磨盤 (圖 E)

為獲得最佳效果，請使用 BLACK+DECKER 配件。

- ◆ 砂磨機，可與市售一般砂紙或是設 8 孔除塵模式的標準砂紙搭配使用。砂紙孔位不影響工作效能。
- ◆ 若要連接砂紙 (8)，請小心將其置於砂磨底盤 (3) 中央，確保砂紙的洞孔與底盤的洞孔對準，然後將砂紙確實壓至定位。
- ◆ 掛鉤以及環形緊固系統砂磨盤可以透過拉出的方式輕易取下。使用者可以依照需要重複使用。

使用

警告！讓工具按照自己的速度運作。請勿過度施壓於工具。

開啟和關閉

- ◆ 若要開啟工具，請按下「I」位置的電源開關 (2)。
- ◆ 若要關閉工具，請按下「O」位置的電源開關 (2)。

操作

握住砂磨機 (如圖 G 所示)，然後打開機器。沿著表面將砂磨機進行一次長距離的連續移動，然後讓砂磨機自行運作。

當砂磨實際上減緩移除速率並且產生低品質表面處理結果時，向下按壓工具。經常查看砂磨情況。砂磨機能夠快速研磨表面，與砂紙粗細搭配時尤其重要。

集塵 (圖 H、I)

警告！自砂磨表面塗層收集的砂磨粉塵 (聚氨酯、亞麻籽油等) 可能會在砂磨機集塵袋或是其他位置產生自然現象，進而造成火災。為減低風險，請經常清空集塵袋並且嚴格遵守砂磨機手冊以及塗層製造商的說明。

- ◆ 若要將集塵罐與砂磨機連接，請將集塵罐 (9) 中的溝槽與集塵口的凸起 (10) 排成一列。
- ◆ 將集塵罐滑至集塵口，然後將集塵罐以順時鐘方向旋轉，將其鎖至定位 (如圖 H 所示)。
- ◆ 若要取下集塵罐，將集塵罐以逆時鐘方向旋轉，然後將其滑出。
- ◆ 若要將集塵罐清空，請將其從集塵口取下，然後將砂磨碎屑丟棄至適當的垃圾桶 (圖 I)。

維護

BLACK+DECKER 電動工具採用獨特設計，能夠長時間使用，並且只需最少的維護。若要持續獲得令人滿意的操作效果，需進行正確的工具維護與定期清潔。

本充電器除了定期清潔之外，不需要執行任何維護操作。

警告！在對工具執行任何保養之前，請先將工具的電池取下。清潔之前，請拔下充電器的插頭。

- ◆ 定期使用軟刷或乾布清潔工具與充電器內的通風槽口。
- ◆ 請定期使用濕布清潔電動機外殼。請勿使用任何研磨性或溶劑型的清潔劑。
- ◆ 定期清潔底盤及砂紙，去除內部的任何粉塵。

保護環境



分類回收。本產品必須與一般家庭廢物分開處置。

若您發現需要更換 BLACK+DECKER 產品，或該產品對您再無用處，請勿將其與家庭廢物一併處置。請確保本產品可供分類回收。



透過分開收集用過的產品與包裝，可以實現材料的循環再生利用。重複使用回收的材料有助於防止環境污染，並降低對原材料的需求。

當地法規可能要求由市政廢物回收點，或由向您出售新產品的經銷商來提供將電子產品與家庭廢物分類回收的服務。

針對已達到其使用壽命的 BLACK+DECKER 產品，BLACK+DECKER 提供相關的收集和回收設施。若要利用此服務，請將您的產品退回至任何代表我們回收產品的授權維修代理商。

您可以使用本手冊中指定的地址來聯絡當地的 BLACK+DECKER 辦事處，以查詢最近授權維修代理商的位置。或者，您也可以造訪下列網站，取得授權 BLACK+DECKER 維修代理商清單，以及我們售後服務和聯絡方式的完整詳細資料：www.2helpU.com

電池



電池內部沒有使用者可維修的部件。

- ◆ 在產品壽命結束時，請將整個裝置送還至維修代理商或是當地資源回收站以回收電池。請勿以家庭廢棄物方式丟棄裝置。

服務資訊

BLACK+DECKER 在亞洲地區提供覆蓋範圍廣泛的公司隸屬和授權服務地點。所有 BLACK+DECKER 維修中心都具有訓練有素的人員，能為客戶提供高效、可靠的產品服務。

若您需要技術建議、維修或原廠替換部件，請聯絡最靠近您的 BLACK+DECKER 地點。

附註

- ◆ BLACK+DECKER 秉持不斷改善產品的原則，因此，我們保留隨時變更產品規格而不預先通知的權利。
- ◆ 標準設備及配件可能視國家/地區而有所不同。
- ◆ 產品規格可能視國家/地區而有所不同。
- ◆ 並非在所有國家/地區都提供完整的產品系列。請聯絡您當地的 BLACK+DECKER 經銷商以瞭解所提供的產品系列。

經銷商: 特力股份有限公司

地址: 台北市內湖區新湖三路 23 號 1.2.5 樓

電話: 0800-008-007

進口/委製廠商: 新加坡商百得電動工具(股)公司台灣分公司

地址: 台北市士林區德行西路 33 號 2 樓

電話: 02-2834-1741

