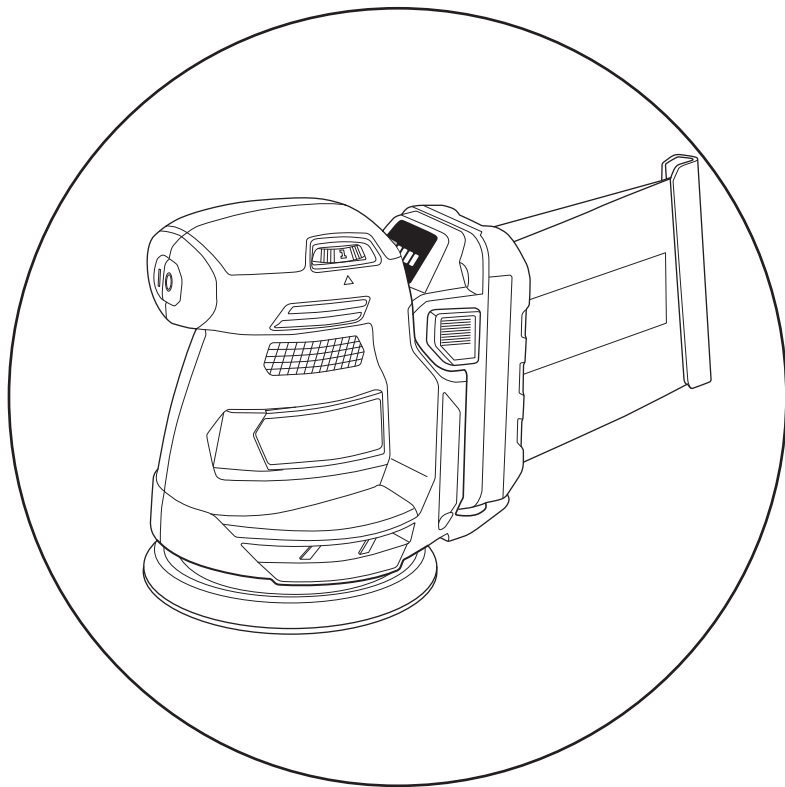


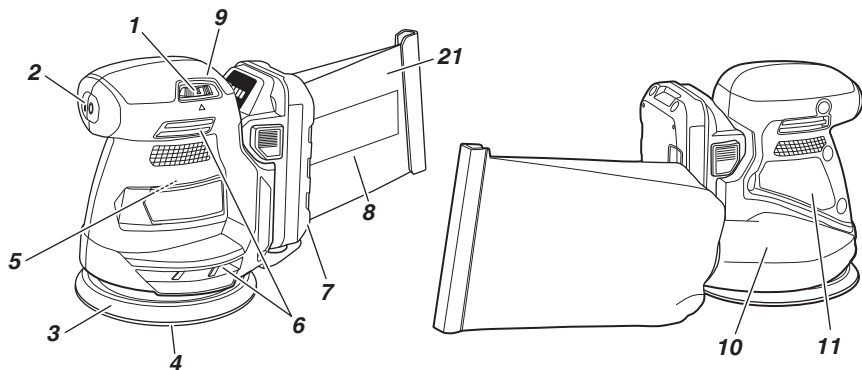
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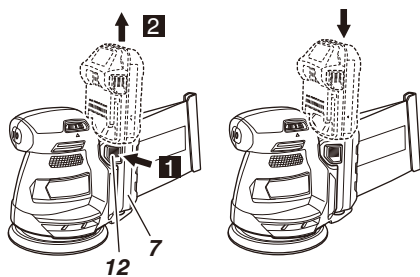
(en) Handling instructions

(zh) 使用說明書

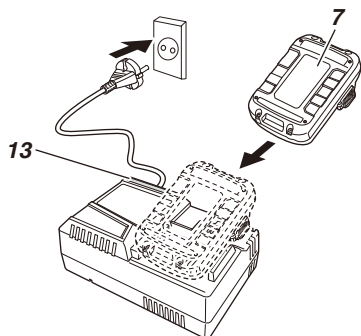
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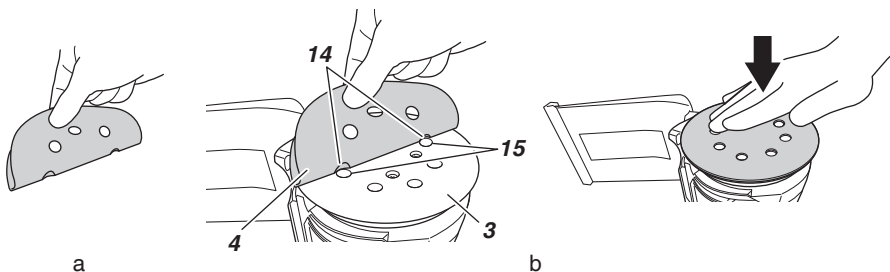
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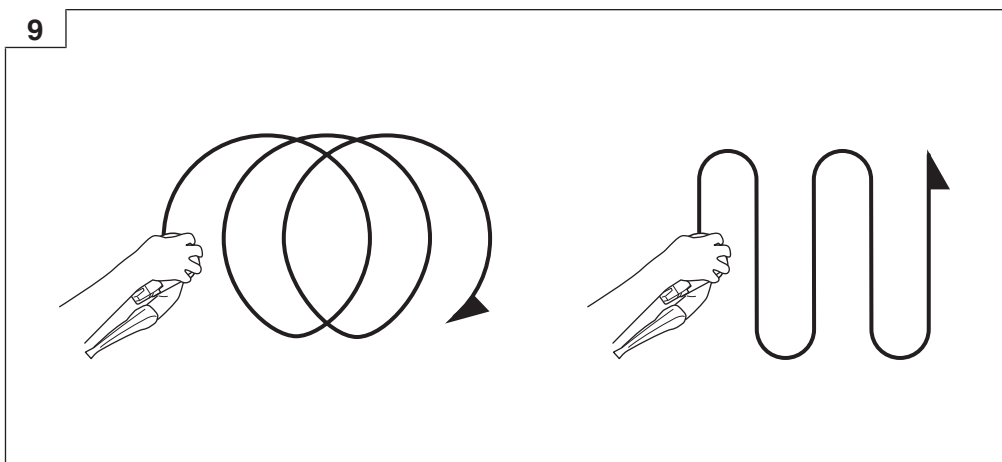
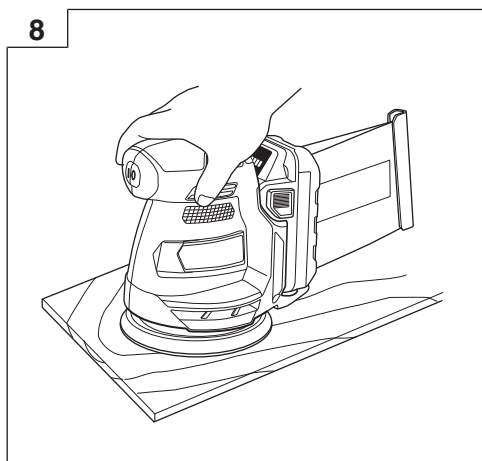
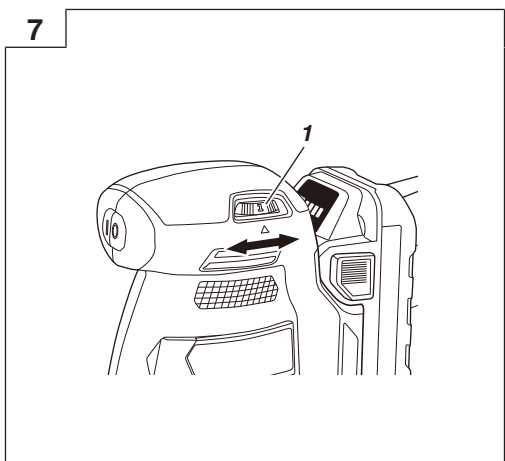
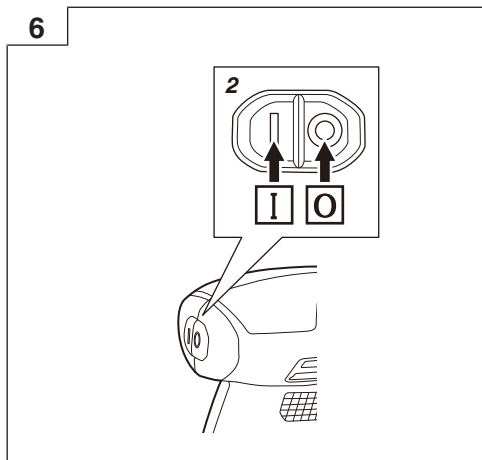
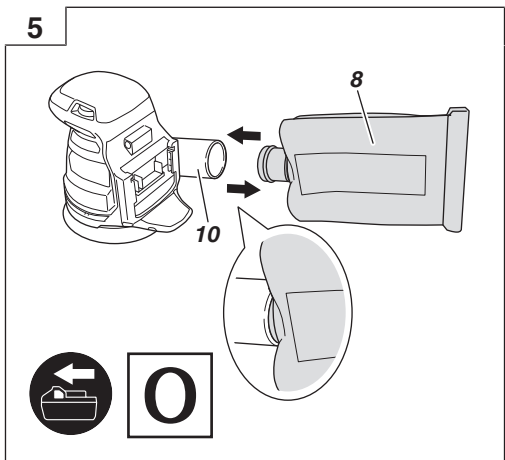
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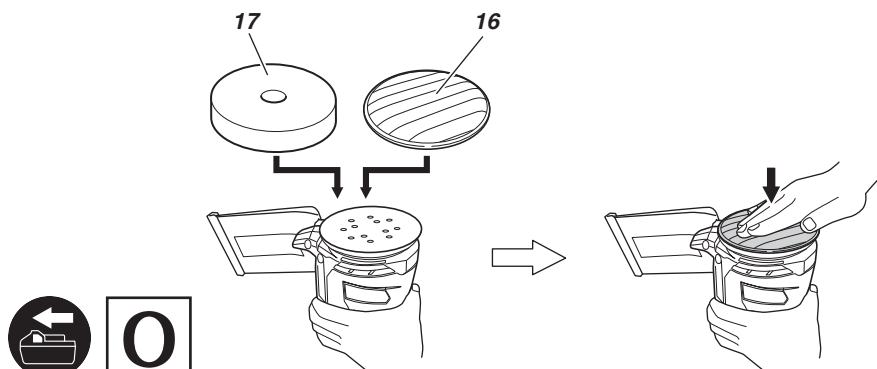
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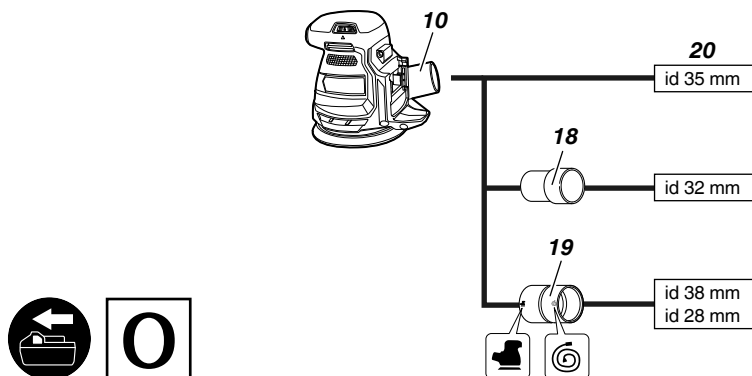




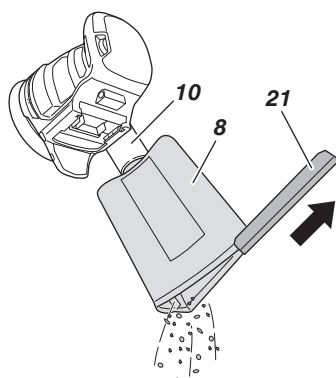
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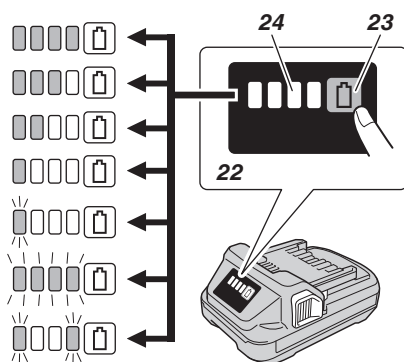
11



12



13



GENERAL POWER TOOL SAFETY WARNINGS

⚠ WARNING

Read all safety warnings, instructions, illustrations and specifications provided with this power tool.

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings 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 power tool. 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 a 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 and clothing 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, if detachable, 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 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.**

English

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.

PRECAUTION

Keep children and infirm persons away.

When not in use, tools should be stored out of reach of children and infirm persons.

ADDITIONAL SAFETY WARNINGS

1. Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the workpiece by hand or against your body leaves it unstable and may lead to loss of control.
2. Attaching and removing the dust bag
Prior to the sanding operation, make sure the material of surface you are going to sand.
If the surface under sanding operation is expected to generate harmful / toxic dusts such as lead painted surface, make sure the dust bag or appropriate dust extraction system is connected with dust outlet tightly. Wear the dust mask additionally, if available.
Do not inhale or touch the harmful / toxic dusts generated in sanding operation, the dust can endanger the health of yourself and bystanders.
3. Never apply water or grinding fluid when sanding. This could result in electrical shock.
4. Never turn the power switch ON when the sander is contacting the surface to be sanded. This is necessary to preclude damage to the material. The same applies when switching the power OFF.
5. DO NOT apply excessive pressure to the sander while sanding. Excessive-pressure may cause overload of the motor, reduced service life of the sanding paper, and lowered sanding or polishing efficiency.
6. Never touch moving parts.
Never place your hands, fingers or other body parts near the tool's moving parts.
7. NEVER leave tool running unattended. Turn power off. Don't leave tool until it comes to a complete stop.
8. When operating the tool, do not wear work gloves as such cloth wear can get caught in the tool.
9. Do not leave the tool running. Operate the tool only when hand-held.
10. Make sure that there are no cracks, scratches, or other abnormalities on the pad before use.
11. Accessories must be securely mounted to the tool. Prevent potential injuries to yourself or others. Accessories which have been mounted to the tool should be secure and tight.
12. Use the sanding paper and accessories specified by HiKOKI.
13. When sanding metal, sparks are generated. Do not use the dust bag, and keep other persons and flammable substances away from the work area.
14. If you notice that the unit is generating unusually high temperatures, operating poorly, or making abnormal noises, immediately stop using and shut off the power switch. Request an inspection and repair from the dealer where you purchased the unit or a HiKOKI Authorized Service Center.
Continuing to use while operating abnormally might cause injuries.
15. If the unit is mistakenly dropped or strikes another object, make a thorough check of the unit for cracks, breakage or deformation, etc.
Injuries might occur if the unit has cracks, breakage or deformation.
16. When working at elevated locations, clear the area of other people and aware of conditions below you.
17. Always charge the battery at a temperature of 0°C–40°C. A temperature of less than 0°C will result in over charging which is dangerous. The battery cannot be charged at a temperature higher than 40°C. The most suitable temperature for charging is that of 20°C–25°C.
18. Do not use the charger continuously.
When one charging is completed, leave the charger for about 15 minutes before the next charging of battery.
19. Do not allow foreign matter to enter the hole for connecting the rechargeable battery.

CORDLESS RANDOM ORBIT SANDER SAFETY WARNINGS

Hold tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

20. Never disassemble the rechargeable battery and charger.
21. Never short-circuit the rechargeable battery. Short-circuiting the battery will cause a great electric current and overheat. It results in burn or damage to the battery.
22. Do not dispose of the battery in fire. If the battery is burnt, it may explode.
23. Bring the battery to the shop from which it was purchased as soon as the post-charging battery life becomes too short for practical use. Do not dispose of the exhausted battery.
24. Do not insert objects into the air ventilation slots of the charger.
Inserting metal objects or inflammables into the charger air ventilation slots will result in electrical shock hazard or a damaged charger.
25. When using this unit continuously, the unit may overheat, leading to damage in the motor and switch. Therefore, whenever the housing becomes hot, give the tool a break for a while.
26. Make sure that the battery is installed firmly. If it is at all loose it could come off and cause an accident.
27. Do not use the product if the tool or the battery terminals (battery mount) are deformed.
Installing the battery could cause a short circuit that could result in smoke emission or ignition.
28. Keep the tool's terminals (battery mount) free of swarf and dust.
 - Prior to use, make sure that swarf and dust have not collected in the area of the terminals.
 - During use, try to avoid swarf or dust on the tool from falling on the battery.
 - When suspending operation or after use, do not leave the tool in an area where it may be exposed to falling swarf or dust.
Doing so could cause a short circuit that could result in smoke emission or ignition.
29. Always use the tool and battery at temperatures between -5°C and 40°C.

- 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.).
2. 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.
 3. Do not use an apparently damaged or deformed battery.
 4. Do not use the battery in reverse polarity.
 5. Do not connect directly to an electrical outlets or car cigarette lighter sockets.
 6. Do not use the battery for a purpose other than those specified.
 7. If the battery charging fails to complete even when a specified recharging time has elapsed, immediately stop further recharging.
 8. Do not put or subject the battery to high temperatures or high pressure such as into a microwave oven, dryer, or high pressure container.
 9. 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

1. 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.
2. 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.
3. 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 a conductive foreign matter enters in the terminal of lithium ion battery, the battery may be shorted, causing fire. When storing the lithium ion battery, obey surely the rules of following contents.

- Do not place conductive debris, nail and wires such as iron wire and copper wire in the storage case.
- To prevent shorting from occurring, load the battery in the tool or insert securely the battery cover for storing until the ventilator is not seen.

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.

1. When the battery power remaining runs out, the motor stops.
In such a case, charge it up immediately.
2. 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.
3. 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.

1. 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.

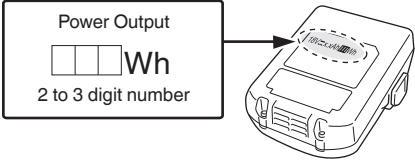
REGARDING LITHIUM-ION BATTERY TRANSPORTATION

When transporting a lithium-ion battery, please observe the following precautions.

WARNING

Notify the transportation company that a package contains a lithium-ion battery, inform the company of its power output and follow the instructions of the transportation company when arranging transport.

- Lithium-ion batteries that exceed a power output of 100 Wh are considered to be in the freight classification of Dangerous Goods and will require special application procedures.
- For transportation abroad, you must comply with international law and the rules and regulations of the destination country.



NAMES OF PARTS

The numbers in the list below correspond to Fig. 1–Fig. 13.

1	Dial
2	Switch
3	Pad
4	Sanding paper
5	Motor
6	Ventilation holes
7	Battery (sold separately)
8	Dust bag
9	Housing
10	Duct
11	Name plate
12	Latch
13	Charge indicator lamp
14	Sanding paper holes
15	Pad holes
16	Polyester buff
17	Polishing Sponge
18	Vacuum adapter (A)
19	Vacuum adapter (B)
20	Hose
21	Closure band
22	Display panel

23	Remaining battery indicator switch
24	Remaining battery indicator lamp

SYMBOLS

WARNING

The following show symbols used for the machine. Be sure that you understand their meaning before use.

	SV1813DA: Cordless Random Orbit Sander
	To reduce the risk of injury, user must read instruction manual.
	Direct current
	Rated voltage
	No-load speed
	Revolution or reciprocations per minute
	Disconnect the battery
	Switching ON
	Switching OFF
	Warning
	Hose inner diameter
	Attaching on the tool side (Fig. 11)
	Attaching on the dust collector hose side (Fig. 11)

STANDARD ACCESSORIES

In addition to the main unit (1 unit), the package contains the accessories listed on page 20.

Standard accessories are subject to change without notice.

APPLICATIONS

- Roughing or finishing of woodwork and metal surfaces.
- Preliminary sanding of woodwork and metal surfaces before painting.
- Paint removal.
- Rust removal.

SPECIFICATIONS

1. Power tool

Model	SV1813DA
Voltage	18 V
No-load speed	7000–11000 /min
Diameter of orbit	3 mm
Sanding pad size (Outer diameter)	125 mm
Sanding paper size (Outer diameter)	125 mm
Weight	1.6 kg (BSL1820M)

NOTE

Due to HiKOKI's continuing program of research and development, the specifications herein are subject to change without prior notice.

Electronic control

- Brake function
Brake is activated when the switch is turned off, stopping the motor's rotation.

2. Battery

Model	Voltage	Battery capacity
BSL1820M	18 V	2.0 Ah

CHARGING

Before using the power tool, charge the battery as follows.

<UC18YSL3>

1. Connect the charger's power cord to the receptacle.

When connecting the plug of the charger to a receptacle, the charge indicator lamp will blink in red. (See **Table 1**)

2. Insert the battery into the charger.

Firmly insert the battery into the charger as shown in **Fig. 3** (on page 2).

3. Charging



When inserting a battery in the charger, charging will commence and the charge indicator lamp will blink in blue.






When the battery becomes fully recharged, the charge indicator lamp will light up in green. (See **Table 1**)

(1) Charge indicator lamp indication

The indications of the charge indicator lamp will be as shown in **Table 1**, according to the condition of the charger or the rechargeable battery.

Table 1: Indications of the charge indicator lamp

ON/OFF at 0.5 sec. intervals (RED) 	Before charging *1
Lights for 0.5 sec. at intervals of 1 sec. (BLUE) 	Charged at less than 50%

Lights for 1 sec. at intervals of 0.5 sec. (BLUE) 	Charged at less than 80%
Lights continuously (BLUE) 	Charged at more than 80%
Lights continuously (Continuous buzzer sound: about 6 sec.) (GREEN) 	Charging complete
ON/OFF at 0.3 sec. intervals (RED) 	Overheat standby *2
ON/OFF at 0.1 sec. intervals (Intermittent buzzer sound: about 2 sec.) (PURPLE) 	Charging impossible *3

NOTE

- *1 If the red lamp continues to blink even after the charger has been attached, check to confirm that the battery has been fully inserted.
- *2 Battery overheated. Unable to charge.
Although charging will start once the battery has cooled down even when left in situ, the best practice is to remove the battery and allow it to cool down in a shaded, well-ventilated location before charging.
- *3 Malfunction in the battery or the charger
 - Fully insert the battery.
 - Check to confirm that no foreign matter is stuck to the battery mount or terminals. If there are no foreign objects, it is probable that the battery or charger is malfunctioning. Take it to your authorized Service Center.

- 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 5 minutes rest until the next charging.

- (2) Regarding the temperatures and charging time of the battery (See **Table 2**)

Table 2

Model	UC18YSL3	
Type of battery	Li-ion	
Charging voltage	14.4–18 V	
Temperatures at which the battery can be recharged	0°C–50°C	
Charging time for battery capacity, approx. (At 20°C)	1.5 Ah	15 min
	2.0 Ah	20 min
	2.5 Ah	25 min
	3.0 Ah	20 min (BSL1430C, BSL1830C: 30 min)
	4.0 Ah	26 min (BSL1840M: 40 min)
	5.0 Ah	32 min
	6.0 Ah	38 min

English

Charging time for multi volt battery capacity, approx. (At 20°C)	1.5 Ah (x 2 unit)	20 min
	2.5 Ah (x 2 unit)	32 min
	4.0 Ah (x 2 unit)	52 min
Number of battery cells		4–10
Weight		0.6 kg

NOTE

- The recharging time may vary according to the ambient temperature and power source voltage.
- If charging takes a long time
 - Charging will take longer at extremely low ambient temperatures. Charge the battery in a warm location (such as indoors).
 - Do not block the air vent. Otherwise the interior will overheat, reducing the charger's performance.
 - If the cooling fan is not operating, contact a HiKOKI Authorized Service Center for repairs.

4. Disconnect the charger's power cord from the receptacle.

5. Hold the charger firmly and pull out the battery.

NOTE

Be sure to pull out the battery from the charger after use, and then keep it.

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.

- (1) 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.
- (2) Avoid recharging at high temperatures. A rechargeable battery will be hot 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.

MOUNTING AND OPERATION

Action	Figure	Page
Removing and inserting the battery*1	2	2
Charging	3	2
Installing the sanding paper*2	4	2
Attaching the dust bag*3	5	3
Switch operation	6	3
Adjustment of speed*4	7	3

Action	Figure	Page
How to hold the random orbit sander	8	3
How to move the random orbit sander*5	9	3
Installing the selecting accessories	10	4
Attaching the dust collector	11	4
Selecting accessories	—	21

*1 Removing and inserting the battery

CAUTION

Before installing or removing the battery, turn the switch to the OFF position.

If the battery is inserted with the switch in the ON position, the motor will operate unexpectedly.

*2 Installing the sanding paper

Since the attachment is a hook-and-loop type, the sanding paper can be installed easily by just pressing it onto the pad. Gently pinch and hold together two places on the edges of the sanding paper so that two holes are visible on the bottom. (Fig. 4-a)

Overlap the two holes of the sanding paper with two holes of the pad, and attach the whole surface of the sanding paper to the pad so that the remaining holes are also aligned. (Fig. 4-b)

*3 Attaching the dust bag

If too much dust accumulates in the dust bag, the dust collection power will be reduced.

Dispose of dust as soon as possible.

*4 Adjustment of speed

The sander is equipped with an electric control circuit that enables speed control. To adjust the speed, turn the dial shown in Fig. 7. When the dial is set to "1", the sander operates at the minimum speed (7000 /min). When the dial set to "6", the sander operates at the maximum speed (11000 /min). Adjust the speed according to the material to be cut and working efficiency.

Material	Grain		Dial scale
	Rough grinding	Fine grinding	
Paintwork: Sanding Repairs (scratches, rust spots) Stripping	180 120 40	400 240 80	3–6 2–4 2–4
Wood: Softwood Hardwood Veneers	60–80 60 240	240 180 320	3–6 3–5 2–4
Metals: Aluminium Steel Stainless steel	80 60 120	240 240 240	2–4 3–6 3–6

Note: Please use this table as a standard.

*5 How to move the random orbit sander

CAUTION

- Immediately after use, always ensure that the switch is in the OFF position and pull out the battery.
- Since the sander may suck in dust and debris, be careful not to place it where there is much dust and debris when it is still spinning right after use.

- Looking from above, the sanding pad rotates clockwise during the loaded operation, but it may rotate counterclockwise during the no-load operation.
- Never run the tool without the sanding paper. You may seriously damage the pad.
- Using the tool with the pad edge contacting the workpiece may damage the pad.

NOTE

Movement of the sander may tend to become unsteady after new sanding paper has been installed, because of the new, coarse grain of the paper. This can be avoided by slightly tilting the sander forward or backward during sanding or polishing. Sander movement will become steady as the sanding paper surface becomes properly abraded.

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.

CAUTION

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

SELECTING ACCESSORIES

The accessories of this machine are listed on page 21.

MAINTENANCE AND INSPECTION**WARNING**

Be sure to turn off the switch and remove the battery before maintenance and inspection.

1. Emptying and cleaning the Dust Bag

If the dust bag contains too much dust, dust collection will be affected. Empty the dust bag when it gets full. Remove the dust bag, open the closure band, and dispose of the contents. (Fig. 12)

2. Inspecting the sanding paper

Since use of worn-out sanding paper will degrade efficiency and cause possible damage to the pad, replace the sanding paper as soon as excessive abrasion is noted.

3. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.

4. 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.

5. Inspection of terminals (tool and battery)

Check to make sure that swarf and dust have not collected on the terminals.

On occasion check prior, during and after operation.

CAUTION

Remove any swarf or dust which may have collected on the terminals.

Failure to do so may result in malfunction.

6. Cleaning on the outside**WARNING**

Wear protective glasses and a dust mask when cleaning the filter with an air gun. Failure to do so may result in inhalation or exposure of the eyes to debris or dust.

Use an air gun or other similar tool to remove materials, chips, etc. which have adhered to the body, and wipe with a soft dry cloth or a cloth moistened with soapy water. Do not use chloric solvents, gasoline or paint thinner, for they melt plastics.

7. Storage

Store the power tool and battery in a place in which the temperature is less than 40°C and out of 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.

Important notice on the batteries for the HiKOKI 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).

NOTE

Due to HiKOKI's continuing program of research and development, the specifications herein are subject to change without prior notice.

一般安全規則

⚠ 警告

閱讀所有安全警告說明

未遵守警告與說明可能導致電擊、火災或其他嚴重傷害。

請妥善保存本使用說明書，以供未來參考之用。

「電動工具」一詞在警告中，係指電源操作（有線）之電動工具或電池操作（無線）之電動工具。

1) 工作場所安全

- a) 保持工作場所清潔及明亮。
雜亂或昏暗的區域容易發生意外。
- b) 勿在易產生爆炸之環境中操作，譬如有易燃液體、瓦斯或粉塵存在之處。
電動工具產生火花會引燃粉塵或煙氣。
- c) 當操作電動工具時，確保兒童及過往人員遠離。
分神會讓您失去控制。

2) 電氣安全

- a) 電動工具插頭必須與插座配合，絕不可以任何方法修改插頭，且不得使用任何轉接插頭於有接地之電動工具。
不修改插頭及所結合之插座，可減少電擊。
- b) 避免身體接觸到地面，諸如管子、散熱器、爐灶及冰箱。
如果您的身體接地或觸地，會增加電擊的危險。
- c) 勿讓電動工具淋雨或曝露在潮濕的環境下。
電動工具進水會增加電擊的危險。
- d) 勿濫用電源線。請勿使用電源線去纏繞、拖拉電動工具或拔插頭，保持電源線遠離熱氣、油氣、尖角或可動零件。
損壞或纏繞的電源線會增加電擊之危險。
- e) 電動工具在室外操作時，請務必使用適合室外用的延長線。
使用合適之室外用延長線會減少電擊的危險。
- f) 若無法避免在潮濕地區操作電動工具，請使用以漏電斷路器 (RCD) 來保護電源。
使用 RCD，可降低觸電危險。

3) 人員安全

- a) 保持機警，注意您正在做什麼，並運用正確常識操作電動工具。當您感到疲勞或受藥品、酒精或醫療影響時，請勿操作電動工具。
操作中瞬間的不注意，可能造成人員嚴重的傷害。
- b) 使用個人防護裝備，經常配戴安全眼鏡。

配戴防塵口罩、防滑安全鞋、硬帽等防護裝備，或在適當情況下使用聽覺防護，可減少人員傷害。

- c) 防止意外發生。在連接電源或電池組、拿起或攜帶工具前，請確認開關是在「off」（關閉）的位置。
以手指放在開關握持電動工具，或在電動工具的開關於「on」的狀況下插上插頭，都會導致意外發生。
- d) 在電動工具啟動前，先卸下任何調整用鑰匙或扳手。
扳手或鑰匙遺留在電動工具的轉動部位時，可能導致人員傷害。
- e) 身體勿過度伸張，任何時間要保持站穩及平衡。
以便在不預期的狀態下，能對電動工具有較好的控制。
- f) 衣著要合宜，別穿太鬆的衣服或戴首飾。保持你的頭髮、衣服及手套遠離轉動部位。
寬鬆的衣服、手飾及長髮會被捲入轉動部位。
- g) 如果裝置要用於粉塵抽取及集塵設施，要確保其連接及正當使用。
使用集塵裝置可減少與灰塵相關的危險。
- h) 請勿因頻繁使用本工具，熟悉操作而忽略本工具的安全原則。
粗心的行動有可能瞬間即造成嚴重傷害。

4) 電動工具之使用及注意事項

- a) 勿強力使用電動工具，使用正確之電動工具為您所需。
正確使用電動工具，會依其設計條件，使工作做得更好更安全。
- b) 如果開關不能轉至開或關的位置，勿使用電動工具。
任何電動工具不能被開關所控制是危險的，必須要修理。
- c) 進行任何調整、更換配件或收存電動工具時，必須將插頭與電源分開，且需將電池組從電動工具中取出。
此種預防安全措施，可減少意外開啟電動工具之危險。
- d) 收存停用之電動工具，需遠離兒童，且不容許不熟悉電動工具或未瞭解操作電動工具說明的人操作電動工具。
在未受過訓練的人手裡，電動工具極為危險。
- e) 保養電動工具，檢查是否可動零件有錯誤的結合或卡住、零件破裂及可能影響電動工具操作的任何其他情形。電動工具如果損壞，在使用前要修好。
許多意外皆肇因於不良的保養。
- f) 保持切割工具銳利清潔。

適當的保養切割工具，保持銳利之切削鋒口，可減少卡住並容易控制。

- g) 按照說明書使用電動工具、配件及刀具時，必須考量工作條件及所執行之工作。

若未依照這些使用說明操作電動工具時，可能造成相關之危害情況。

- h) 保持把手和握持面乾燥、清潔，且未沾到油脂和潤滑油。
滑溜的把手和握持面在操作時會有安全上的問題，且可能造成成本工具意外失去控制。

5) 電池式電動工具的使用及注意事項

- a) 需再充電時，僅能使用製造商指定的充電器。因充電器僅適合同一型式的電池組，若使用任何其它電池組時，將導致起火的危險。

- b) 使用電動工具時，僅能使用按照其特性設計的電池組。
因使用其它任何電池組時，將導致人員傷害及起火的危險。

- c) 當電池組不再使用時，需保存好並遠離其它的金屬物件，例如：迴紋針、錢幣、鑰匙、圖釘、螺釘，或類似可能造成端子與端子間連接的其它較小金屬物件。
因電池組端子間短路時，將導致燃燒或起火的危險。

- d) 在誤用情況下，電解液可能自電池中噴出；請避免接觸。當發生意外接觸時，請用清水沖洗。若電解液觸及眼睛時，請儘速尋求醫療協助。
因自電池中噴出的電解液，將導致灼傷或刺激皮膚。

- e) 請勿使用損壞或改造的電池組或電動工具。
損壞或改造的電池可能會發生不可預知的行為，進而導致火災、爆炸或受傷的風險。

- f) 請勿使電池組或電動工具接觸到火源或處於溫度過高的地方。

接觸火源或溫度超過130°C可能會引起爆炸。

- g) 請遵循所有充電指示，並且不要在說明書指定的溫度範圍之外為電池組或電動工具充電。
充電不當或溫度超出指定範圍可能會損壞電池並增加火災的風險。

6) 維修

- a) 讓您的電動工具由合格修理人員僅使用相同的維修零件更換。

如此可確保電動工具的安全得以維持。

- b) 切勿對損壞的電池組進行維修。
電池組的維修只能由製造商或授權服務維修店進行。

注意事項

不可讓孩童和體弱人士靠近工作場所。

應將不使用的電動工具存放在孩童和體弱人士伸手不及的地方。

圓形砂紙磨光機安全警告

在鋸切工具可能接觸到隱藏線路之情況下進行操作時，握住工具的絕緣握持面。接觸到「通電」的電線將使工具露出的金屬部件「通電」，而造成操作者觸電。

附加安全警告

1. 使用夾具或其他可實施的方式將工件固定並支撐在穩定的平台上。
用手握住工件或用身體抵住工件會使其不穩定，並可能導致失去控制。
2. 安裝和拆卸集塵袋
進行打磨操作之前，請確認要進行打磨的材料表面是否適當。
如果要打磨的表面（如塗鉛表面）預期會產生有害／有毒粉塵，請確保集塵袋或適當的除塵系統與粉塵排出口緊密連接。
必要時請戴上防塵面罩。
請勿吸入或接觸打磨操作中產生的有害／有毒粉塵，這些粉塵會危害您和旁觀者的健康。
3. 打磨時切勿用水或研磨液。這可能會導致觸電。
4. 切勿在磨光機接觸要打磨的表面時打開電源開關。這可保護材料免受損壞。關閉電源時同樣如此。
5. 打磨時絕對不可對磨光機過度施力。過度施力可能會導致馬達過載，縮短砂紙的使用壽命，並降低打磨或拋光效率。
6. 切勿觸摸移動中的部件。
切勿將手、手指或其他身體部位靠近工具的移動中的部件。
7. 切勿讓工具處於無人看守的狀態。關閉電源。
在完全停止之前不要離開工具。
8. 操作本工具時，請勿佩戴工作手套，因為穿戴此類織物可能會卡在工具中。
9. 工具運行時請勿使其處於無人看管的狀態。僅在手持時操作工具。
10. 使用前請確保墊板上沒有裂縫、刮痕或其他異常情況。
11. 配件必須牢固地安裝到工具上。
防止對自己或他人造成潛在傷害。
已安裝到工具上的配件應牢固且不鬆動。
12. 使用HiKOKI指定的砂紙和配件。
13. 打磨金屬時會產生火花。請勿使用集塵袋，並使其他人員和易燃物品遠離工作區域。

14. 如果您發現本機產生異常高溫、運作不良或發出異常噪音，請立即停止使用並關閉電源開關。請要求您所購買本機的經銷商或HiKOKI授權服務中心進行檢查和維修。
在異常運作時繼續使用可能會導致受傷。
15. 如果本機不慎掉落或撞擊到其他物品，請仔細檢查本機是否有裂痕、破損或變形等。
如果本機有裂痕、破損或變形，可能會導致受傷。
16. 在高處工作時，請清空該區域的其他人員並注意您下方的情況。
17. 務請在 0–40°C 的溫度下進行充電。溫度低於 0°C 將會導致充電過度，極其危險。電池不能在高於 40°C 的溫度下充電。最適合於充電的溫度是 20–25°C。
18. 請勿連續使用充電器。
完成一次充電後，請將充電器擱置大約15分鐘，然後再進行下一次充電。
19. 請勿讓異物進入充電電池連接口內。
20. 切勿拆卸充電電池與充電器。
21. 切勿使充電電池短路。電池短路會造成極大電流和過熱。從而燒壞電池。
22. 請勿將電池丟入火中。燃燒電池會引起爆炸。
23. 充電後電池壽命若太短不夠使用，請盡快將電池送往經銷店。不可將用過的電池丟棄。
24. 請勿將異物插入充電器的通風口。
若將金屬異物或易燃物插入通風口的話，將會引起觸電事故或使充電器受損。
25. 連續使用本機時，本機可能出現過熱而導致馬達和開關損壞。因此，每當機殼變熱時，讓工具休息一會兒。
26. 確保電池安裝牢固。如果電池鬆動，可能會脫落而造成事故。
27. 如果工具或電池端子（電池座）變形，請勿使用本產品。
安裝電池可能會造成短路，從而導致冒煙或起火。
28. 保持工具的端子（電池座）沒有削屑和灰塵。
 - 使用前請確認端子區域沒有堆積削屑和灰塵。
 - 使用過程中盡量避免工具上的削屑或灰塵掉落在電池上。
 - 暫停操作或使用後，請勿將工具留在可能暴露於有掉落削屑或灰塵的區域。
否則可能會造成短路，從而導致冒煙或起火。
29. 務必在-5°C至40°C的溫度下使用本工具和電池。

若是在使用本產品時發生下列 1 至 3 的情況，即使按下開關，馬達也可能停止。這並非故障，而是啟動保護功能的結果。

1. 在殘留的電池電力即將耗盡時，馬達會停止。
在這種情況下，請立即予以充電。
2. 若工具超過負荷，馬達亦可能停止。在這種情況下，請鬆開工具的開關，試著消除超過負載的原因。之後您就可以再度使用。
3. 若電池在過載工作情況下過熱，電池電力可能會中止。
在這種情況下，請停止使用電池，讓電池冷卻。之後您就可以再度使用。

此外，請留心下列的警告及注意事項。

警告

為事先防止電池發生滲漏、發熱、冒煙、爆炸及起火等事故，請確保留意下列事項。

1. 確保電池上沒有堆積削屑及灰塵。
 - 在工作時確定削屑及灰塵沒有掉落在電池上。
 - 確定所有工作時掉落在電動工具上的削屑和灰塵沒有堆積在電池上。
 - 請勿將未使用的電池存放在曝露於削屑和灰塵的位置。
 - 在存放電池之前，請清除任何可能附著在上面的削屑和灰塵，並請切勿將它與金屬零件（螺絲、釘子等）存放在一起。
2. 請勿以釘子等利器刺穿電池、以鐵錘敲打、蹂躪、丟擲電池，或將其劇烈撞擊。
3. 切勿使用明顯損壞或變形的電池。
4. 使用電池時請勿顛倒電極。
5. 請勿直接連接電源插座或汽車點煙器孔座。
6. 請依規定方式使用電池，切勿移作他用。
7. 如果已過了再充電時間，電池仍無法完成充電，請立即停止繼續充電。
8. 請勿將電池放置於高溫或高壓處，例如微波爐、烘乾機或高壓容器內。
9. 發現有滲漏或異味時，請立即將電池遠離火源處。
10. 請勿在會產生強烈靜電的地方使用。
11. 如電池出現滲漏、異味、發熱、褪色或變形，或在使用、充電或存放時出現任何異常，請立即將它從裝備或電池充電器拆下，並停止使用。
12. 請勿將電池浸入任何液體，或讓任何液體流入電池內。若水等具有導性的液體滲入，可能會造成損壞，進而導致火災或爆炸。將電池存放在陰涼、乾燥的地方，遠離可燃及易燃物品。必須避免腐蝕性氣體環境。

注意

1. 若電池滲漏出的液體進入您的眼睛，請勿揉搓眼睛，並以自來水等乾淨清水充分沖洗，立刻送醫。
若不加以處理，液體可能會導致眼睛不適。

鋰離子電池使用注意事項

為延長使用期限，鋰離子電池配備停止輸出的保護功能。

2. 若液體滲漏至您的皮膚或衣物，請立即以自來水等清水沖洗。
上述情況可能會使皮膚受到刺激。
3. 若初次使用電池時發現生鏽、異味、過熱、褪色、變形或其他異常情況時，請勿使用並將該電池退還給供應商或廠商。

警告

若具有導電性的異物進入鋰離子電池的端子，可能會造成短路，進而引發火災。請在存放電池時遵循以下事項。

- 請勿將導電物品，如鐵釘、鐵絲等金屬絲，銅線和電線放入儲存箱內。
- 為了防止發生短路，將電池裝入工具內或確實壓下電池蓋儲存電池，直至遮住通風孔為止。

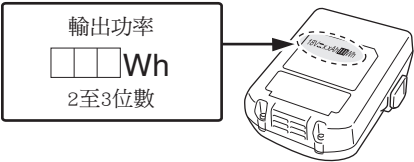
關於鋰離子電池的運輸

運輸鋰離子電池時，請遵守以下注意事項。

警告

安排運輸時，請通知運輸公司包裹中含有鋰離子電池，告知該電池之輸出功率，並按照運輸公司的指示。

- 輸出功率超過100 Wh 的鋰離子電池被視為貨物分類中的危險物品，將需要特殊的申請程序。
- 對於國外的運輸，必須遵守國際法規則和目的國法規。



各部位名稱

以下列表中的數字與圖 1—圖 13 相對應。

1	轉盤
2	開關
3	墊板
4	砂紙
5	馬達
6	通氣孔
7	電池（另售）
8	集塵袋

9	機殼
10	導管
11	銘牌
12	卡榫
13	充電指示燈
14	砂紙孔
15	墊板孔
16	聚酯革
17	拋光海綿
18	真空適配器（A）
19	真空適配器（B）
20	軟管
21	封口帶
22	顯示屏
23	電池剩餘量指示燈開關
24	電池剩餘量指示燈






符號

警告

以下為使用於本機器的符號。請確保您在使用前明白其意義。

	SV1813DA: 圓形砂紙磨光機
	使用前請詳讀使用說明書
	直流電流
	額定電壓
	無負荷速度
	/min 每分鐘轉數或往復數
	取出電池

中國語

	開關ON
	開關OFF
	警告
id	軟管內徑
	安裝在工具側（圖 11）
	安裝在集塵器軟管側（圖 11）

標準附件

除了主機身(1台)以外，包裝盒內包含第20頁所列之附件。

標準附件可能不預先通告而徑予更改。

用途

- 木工件和金屬表面的粗加工或精加工。
- 木工件和金屬表面塗裝前的初步打磨。
- 除漆。
- 除鏽。

規格

1. 電動工具

機型	SV1813DA
電壓	18 V
無負載速度	7000－11000 /min
軌道直徑	3 mm
砂墊尺寸（外徑）	125 mm
砂紙尺寸（外徑）	125 mm
重量	1.6 kg（BSL1820M）

註

HiKOKI不斷研究和開發新產品，若規格發生變更，恕不另行通知。

電子控制

- 制動功能
當開關關閉時，制動器被啟動而停止馬達的旋轉。

2. 電池

機型	電壓	電池容量
BSL1820M	18 V	2.0 Ah

充電







使用電動工具之前，按下述方法將電池進行充電。

<UC18YSL3>

- 將充電器的電源線連接到插座。
當充電器的插頭連接到插座時，充電信號燈會閃爍紅燈。（見表 1）
- 將電池裝入充電器。
將電池牢固地裝入充電器，如圖 3所示（第2頁）。
- 充電
將電池插入充電器後，就會開始充電，且充電指示燈會閃爍藍燈。
當電池已完全充電時，充電信號燈會亮起綠燈。（見表 1）

- (1) 充電信號燈指示
依據充電器或充電電池的狀態，充電信號燈會有不同的指示，如表 1所示。

表 1: 充電信號燈的指示

每隔 0.5 秒 ON/OFF（紅） 	充電前 *1
每隔 1 秒亮燈 0.5 秒（藍） 	充電低於 50%
每隔 0.5 秒亮燈 1 秒（藍） 	充電低於 80%
持續亮燈（藍） 	充電高於 80%
持續亮燈（連續的蜂鳴聲：約 6 秒）（綠） 	充電完成
每隔 0.3 秒 ON/OFF（紅） 	過熱待機 *2

動作	圖表	頁數
如何移動圓形砂紙磨光機*5	9	3
安裝選擇的配件	10	4
安裝集塵器	11	4
選擇附件	—	21

*1 拆卸和安裝電池
注意

在安裝或移除 電池之前，請將開關轉到OFF位置。
如果在開關處於ON位置的情況下插入電池，馬達將意外運作。

*2 安裝砂紙

由於該附件為鉤環型，只要將砂紙按壓到墊板上即可輕易安裝。將砂紙邊緣的兩處輕輕地捏在一起，使兩個孔在底部可看見。(圖 4-a)
將砂紙的兩個孔與墊板的兩個孔重疊，並將砂紙的整個表面安裝在墊板上，使剩餘的孔也對齊。(圖 4-b)

*3 安裝集塵袋

如果集塵袋中積聚的粉塵過多，將降低集塵能力。
盡快丟棄粉塵。

*4 速度調整

本磨光機配備可控制速度的電氣控制電路。要調整速度，請轉動圖 7中所示的轉盤。當轉盤設在“1”時，磨光機以最小速度（7000 /min）運行。當轉盤設在“6”時，磨光機以最大速度（11000 /min）運行。請根據要切削的材料和工作效率調整速度。

材料	顆粒度		轉盤刻度
	粗磨	精磨	
油漆件： 打磨 修復 （刮痕、鏽斑） 去除漆層	180 120 40	400 240 80	3－6 2－4 2－4
木材： 軟木 硬木 膠合板	60－80 60 240	240 180 320	3－6 3－5 2－4
金屬： 鋁 鋼 不銹鋼	80 60 120	240 240 240	2－4 3－6 3－6

註：請使用此表為標準。

*5 如何移動圓形砂紙磨光機
注意

- 在使用後務必立即確保開關處於OFF位置並取出電池。
- 由於磨光機可能會吸入粉塵和碎屑，因此在使用後其仍處於旋轉狀態時，請注意不要將其放置在粉塵和碎屑較多的地方。
- 從上面看，打磨墊在負載運作時順時針旋轉，但在空載運作時可能會逆時針旋轉。
- 切勿在沒有砂紙的情況下運行本工具。您可能會嚴重損壞墊板。
- 在墊板邊緣接觸工件的情況下使用本工具可能會損壞墊板。

註

安裝新砂紙之後，由於其顆粒新且粗糙，因此磨光機的移動可能會變得不穩定。這可透過在打磨或拋光過程中略微向前或向後傾斜磨光機予以避免。隨著砂紙表面變得適當磨損，磨光機的移動將變得穩定。

維護和檢查

警告

進行維修和檢查之前，務必要關閉開關，並取出電池。

1. 清空和清潔集塵袋

如果集塵袋中的粉塵過多，將影響集塵。當集塵袋裡的粉塵滿了時，請將其清空。
請先卸下集塵袋，打開封口帶，然後丟棄內容物。(圖 12)

2. 檢查砂紙

使用磨損的砂紙將降低效率並可能損壞墊板，因此一旦發現砂紙過度磨損就請及時更換。

3. 檢查安裝螺釘

要經常檢查安裝螺釘是否緊固妥善。若發現螺釘鬆了，應立即重新扭緊。否則會導致嚴重的事故。

4. 馬達的維護

馬達繞線是電動工具的心臟部。應仔細檢查有無損傷，是否被油液或水沾濕。

5. 端子的檢查（工具和電池）

檢查以確保端子上沒有堆積屑屑和灰塵。
有時於操作前、操作期間和操作後檢查。

注意

去除任何可能已堆積在端子上的屑屑或灰塵。
否則可能會導致故障。

6. 清理外部

警告

用吹氣槍清潔過濾器時，請佩戴防護眼鏡和防塵口罩。否則可能會導致碎屑或灰塵進入眼睛，或眼睛暴露於碎屑或灰塵中。

使用空氣槍或其他類似工具去除粘附在機身的材料、碎屑等，並用柔軟的乾布或沾有肥皂水的布擦拭。切勿使用氯溶液、汽油或稀釋劑，以免塑膠部分溶化。

7. 收藏

電動工具和電池應收藏於溫度低於 40°C 且為小孩拿不到的地方。

註

存放鋰離子電池

存放鋰離子電池前，確保其已完全充電。

電池在低電力的狀態下長期存放（3個月以上），可能會導致性能劣化，電池的使用時間顯著降低或無法再進行充電。

然而，反覆將電池充電和暫停充電二至五次，可能會改善電池使用時間的顯著降低情況。

反覆充電後，若電池的使用時間仍呈現極短現象，表示電池壽命已盡，請購買新的電池。

注意

在操作和維修電動工具中，必須遵守各國的安全規則和標準規定。

選擇配件

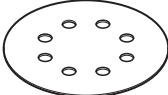

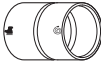

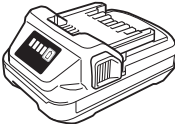
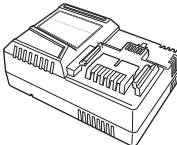
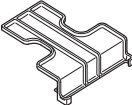
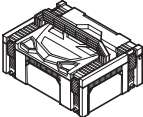
本機器的附件列在第21頁。

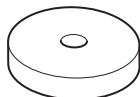
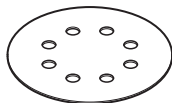
HiKOKI 充電式工具電池重要注意事項

請務必使用本公司所指定的原廠電池。若未使用本公司所指定的電池，或使用經拆解及改裝的電池（例如，拆解後更換電池芯或其他內部零件），則本公司無法保證充電式工具的性能及操作安全。

註

為求改進，本手冊所載規格可能不預先通告而徑予更改。

	SV1813DA
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	1
	1
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 UC18YSL3	1
	2
	1



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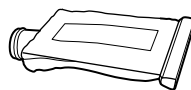
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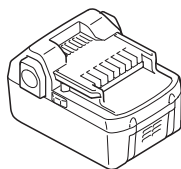
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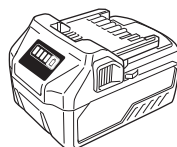
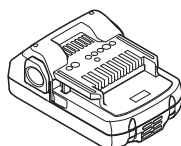
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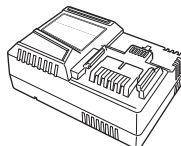
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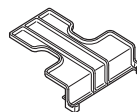
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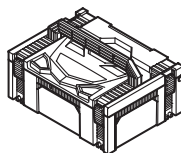
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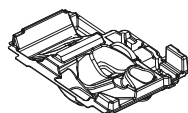
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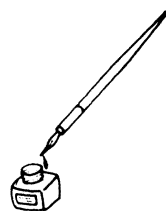
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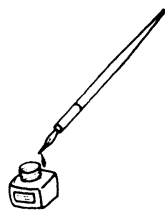


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