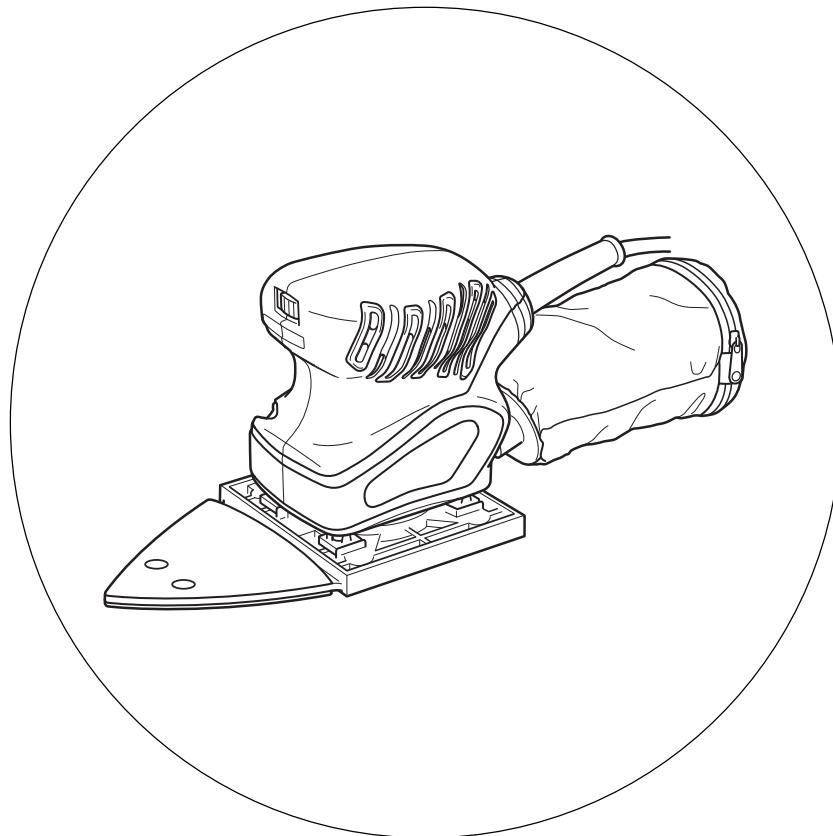


HiKOKI

Orbital Sander
三角形砂紙磨光機

SV 12SH

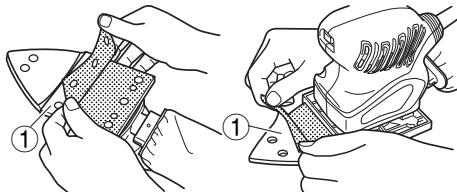
Handling instructions
使用說明書



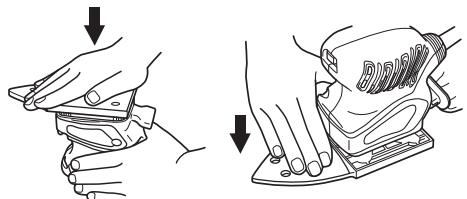
Read through carefully and understand these instructions before use.
使用前務請詳加閱讀



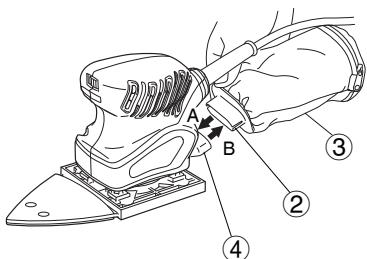
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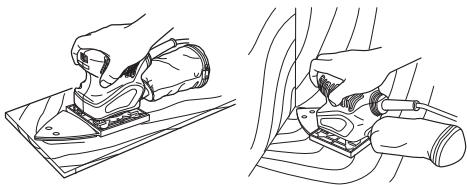
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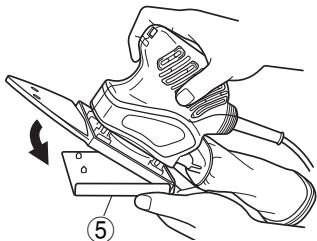
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4



5



	English	中國語
①	Sanding paper	砂紙
②	Dust gate	集塵門
③	Dust bag	粉塵袋
④	Dust outlet	粉塵出口
⑤	Punch plate	鑽孔板

GENERAL SAFETY RULES

WARNING!

Read all instructions

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

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.

SAVE THESE INSTRUCTIONS

1) Work area

a) Keep work area clean and well lit.

Cluttered and 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 of 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.

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 safety equipment. Always wear eye protection.

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

c) Avoid accidental starting. Ensure the switch is in the off position before plugging in.

Carrying power tools with your finger on the switch or plugging in 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 these devices can reduce dust-related hazards.

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 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 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 and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.

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

5) 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.

PRECAUTION

Keep children and infirm persons away.

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

SPECIFICATIONS

Voltage (by areas)*	(110 V, 120 V, 220 V, 230 V, 240 V) ~
Power Input	200 W*
Rated power output	70 W
No-load speed	14000 /min
Sanding pad size	110 mm × 190 mm
Sanding paper size	110 mm × 100 mm (Square), 96 mm × 96 mm × 96 mm (Triangle)
Weight (without cord)	1.0 kg

* Be sure to check the nameplate on product as it is subject to change by areas.

STANDARD ACCESSORIES

- 110 × 100 mm Velcro type sanding paper (Square) 1
- 96 × 96 × 96 mm Velcro type sanding paper (Triangle) 2
- Dust bag 1

Standard accessories are subject to change without notice.

OPTIONAL ACCESSORIES (sold separately)

1. **Sanding paper**
- 110 × 100 mm Velcro type sanding paper (Square)
Grain: AA60, AA100, AA150
- 96 × 96 × 96 mm Velcro type sanding paper (Triangle)
Grain: AA60, AA100, AA150

2. Punch plate

Optional accessories are subject to change without notice.

APPLICATIONS

Mainly used for the following purposes at corners or gaps.

- Finish polishing of woodwork surfaces
- Sanding surfaces of woodwork or sheet metal prior to painting, etc.

PRIOR TO OPERATION**1. Power source**

Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.

2. Power switch

Ensure that the power switch is in the OFF position. If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.

3. Extension cord

When the work area is removed from the power source, use an extension cord of sufficient thickness and rated capacity. The extension cord should be kept as short as practicable.

4. Installing the sanding paper

(1) Align the sanding paper's holes with the pad's holes (Fig. 1).

(2) Strongly push the sanding paper with the palm of your hand to fasten it securely in place (Fig. 2).

5. RCD

The use of a residual current device with a rated residual current of 30 mA or less at all times is recommended.

6. Attaching and Removing the Dust Bag**(1) Attaching the Dust Bag**

As shown in Fig. 3, hold the dust gate and push it in the direction of Arrow A to attach it to the dust outlet.

(2) Removing the Dust Bag

As shown in Fig. 3, hold the dust gate and pull it in the direction of Arrow B to remove it from the dust outlet.

CAUTION

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.

PRACTICAL OPERATING PROCEDURES**CAUTION**

Never apply water or grinding fluid when sanding. This could result in electrical shock.

1. Switching the sander ON and OFF

The power can be turned on by setting the lever to ON (I) and turned off by setting the lever to OFF (0).

CAUTION

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.

2. How to hold the orbital sander

While gripping the housing, lightly press the sander against the surface to be sanded so that the sanding paper uniformly contacts the surface, as shown in Fig. 4. 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.

CAUTION

Do not press on the corner of the pad with excessive force. It may cause damage to the pad itself.

3. How to move the orbital sander

For optimum operating efficiency, alternately move the sander forward and backward at a constant speed and balance.

4. After installing new sanding paper

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.

MOUNTING THE OPTIONAL ACCESSORIES

○ Making a Hole in the Sanding Paper with the Punch Plate (Fig. 5)

When using sanding paper without holes in it, punch holes in it with the punch plate to improve dust collecting capacity.

MAINTENANCE AND INSPECTION

1. Emptying and cleaning the Dust Bag

If the dust bag contains too much saw dust, dust collection will be affected. Empty the dust bag when it gets full. Remove the dust bag, open the fastener, and dispose of the contents.

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. Replacing supply cord

If the supply cord of Tool is damaged, the Tool must be returned to HIKOKI Authorized Service Center for the cord to be replaced.

6. Servicing

Consult an authorized Service Agent in the event of power tool failure.

7. Service parts list

A: Item No.

B: Code No.

C: No. Used

D: Remarks

CAUTION

Repair, modification and inspection of HIKOKI Power Tools must be carried out by a HIKOKI Authorized Service Center.

This Parts List will be helpful if presented with the tool to the HIKOKI Authorized Service Center when requesting repair or other maintenance.

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

MODIFICATIONS

HiKOKI Power Tools are constantly being improved and modified to incorporate the latest technological advancements.

Accordingly, some parts (i.e. code numbers and/or design) may be changed without prior notice.

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！

閱讀所有說明

未遵守下列之說明可能導致電擊、火災及/或嚴重傷害。

「電動工具」一詞在下列警告中，關係到電源操作（有線）之電動工具或電池操作（無線）之電動工具。

記住這些說明

1) 工作場所

a) 保持工作場所清潔及明亮。

雜亂及昏暗區域易發生意外。

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，保持兒童及過往人員遠離。

分神會讓你失去控制。

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) 避免身體接觸到接地面諸如管子、散熱器、爐灶及冰箱。

如果你的身體接地或搭地，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繫的危險。

d) 勿濫用電源線。絕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繫之危險。

e) 電動工具在室外操作時要使用一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。

3) 人員安全

a) 保持機警，注意你正在做什麼，並運用普通常識操作電動工具。

當你感到疲勞或受藥品、酒精或醫療影響時，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) 使用安全裝備，常時佩戴安全眼鏡。

安全裝備有防塵口罩、防滑安全鞋、硬帽，或在適當情況下使用聽覺防護，可減少人員傷害。

c) 避免意外地啟動。在插電前確認開關是在“off”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) 在將電動工具啟動前，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。

使用此類裝置能減少與粉塵有關之危害。

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你所需。

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及關的位置，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) 在做任何調整、更換配件或收存電動工具時，要將插頭與電源分開，且/或將電池從電動工具中取出。

此種預防安全措施可減少意外開啟電動機之危險。

d) 收存停用之電動工具，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書的人操作電動工具。

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，檢核是否有可動零件錯誤的結合或卡住、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，保持銳利之切割鋒口，可減少卡住並容易控制。

g) 按照說明書使用電動工具、配件及刀具等，使用特殊型式之電動工具時要考量工作條件及所執行之工作。

使用電動工具未如預期用途之操作時，會導致危害。

5) 維修

a) 讓你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。

注意事項

不可讓孩童和體弱人士靠近工作場所。
應將不使用的工具存放在孩童和體弱人士伸手不及的地方。

規 格

電壓 (按地區)*	(110 V, 120 V, 220 V, 230 V, 240 V) ~
輸入功率	200 W*
額定輸出功率	70 W
無負荷速度	14000轉／分
砂紙墊板尺寸	110 mm × 190 mm
砂紙尺寸	110 mm × 100 mm (方形), 96 mm × 96 mm × 96 mm (三角形)
重量 (不含線纜)	1.0 kg

*當須改變地區時應檢查產品上的銘牌。

標 準 附 件

- 110 × 100 毫米Velcro 式砂紙 (方形) 1
- 96 × 96 × 96 毫米Velcro 式砂紙 (三角形) 2
- 粉塵袋 1

標準附件可能不預先通告而徑予更改。

選購附件 (分開銷售)

1. 砂紙

- 110 × 100 毫米Velcro 式砂紙 (方形)
顆粒度：AA60、AA100、AA150
- 96 × 96 × 96 毫米Velcro 式砂紙 (三角形)
顆粒度：AA60、AA100、AA150

2. 鑽孔板

選購附件可能不預先通告而徑予更改。

用 途

主要用於角落或縫隙之以下目的。

- 木工作表面的最後拋光
- 木工作或金屬薄板在油漆前的表面拋光等

作 業 之 前

1. 電源

確認所使用的電源與工具銘牌上標示的規格是否相符。

2. 電源開關

確認電源開關是否切斷。若電源開關接通，則插頭插入電源插座時電動工具將出其不意地立刻轉動，從而招致嚴重事故。

3. 延伸線纜

若作業場所移到離開電源的地點，應使用容量足夠、鑄裝合適的延伸線纜，並且要盡可能地短些。

4. 安裝砂紙

- (1) 將砂紙的孔與墊板的孔對準 (圖1)。
- (2) 用手掌用力將砂紙牢固地推到位 (圖2)。

5. RCD

使用殘餘電流裝置時，建議採 30 mA 以下的額定殘餘電流。

6. 安裝和拆卸粉塵袋

- (1) 安裝粉塵袋
如圖3所示，抓住集塵門並將其沿箭頭A的方向推，將其裝到粉塵出口。
- (2) 拆卸粉塵袋
如圖3所示，抓住集塵門並將其沿箭頭B的方向拉，將其從粉塵出口拆下。

注意

在打磨操作之前要先確定打磨的表面材料。如果要進行打磨操作的表面會產生有害或有毒的塵土，例如由鉛著色的表面，就要確保裝塵土的袋子或適當的塵土抽取系統要和塵土排放口緊密地連接在一起。

如果有必要，另外還要帶上防塵面具。

不要吸入或接觸在打磨過程中產生的有害或有毒的塵土，這類塵土會危及到操作者自身及旁觀者的身體健康。

使 用 方 法

注意

打磨時切勿噴水或磨削液。否則會招致觸電。

1. 啟動和關閉磨光機

將手柄設定在ON (1) 位置可接通電源，而將其設定在OFF (0) 位置則可關閉電源。

注意

切勿在磨光機接觸打磨面時打開電源開關。這可保護材料免受損壞。關閉電源時同樣如此。

2. 如何握持軌道磨光機

如圖4所示，在抓住機殼的同時，將磨光機輕輕抵住要打磨的表面，使砂紙均勻接觸打磨面。打磨時切勿對磨光機用力過猛。否則會導致電動機過載，砂紙使用壽命降低，以及打磨或拋光效率低下。

注意

請勿過度按壓墊板的角落。否則可能會造成墊板損壞。

3. 如何移動軌道磨光機

為獲得最佳的工作效率，應將磨光機勻速、穩定地前後移動。

4. 安裝新的砂紙之後

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。這可通過在打磨或拋光時略微向前或向後傾斜磨光機予以避免。磨光機的移動在砂紙適當研磨之後將變得穩定。

安裝選購附件

○ 使用鑽孔板為砂紙穿孔（圖5）

使用無孔的砂紙時，使用鑽孔板為其穿孔，以提高集塵容量。

維 護 和 檢 查

1. 倒空和清掃粉塵袋

粉塵袋裡的粉塵過多時，磨光機的集塵效果將會降低。所以，當粉塵袋裡的粉塵滿了時，請將粉塵袋倒空。

請先卸下粉塵袋，然後拉開拉鏈，倒掉粉塵。

2. 檢查砂紙

如繼續使用磨損了的砂紙，會降低工作效率，並可能磨損砂紙墊板，所以砂紙一旦出現磨損就請及時更換。

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. 電動機的維護

電動機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. 更換電源線

如果工具的電源線破損，必須將工具送回HiKOKI授權的服務中心來更換電源線。

6. 維修

電動工具起故障時，請洽經授權的維修代理店。

7. 維修部件目錄

A: 項目號碼

B: 代碼號碼

C: 所使用號碼

D: 備注

注意

HiKOKI電動工具的修理、維護和檢查必須由HiKOKI所認可的維修中心進行。

當尋求修理或其他維護時，將本部件目錄與工具一起提交給HiKOKI所認可的維修中心會對您有所幫助。

在操作和維護電動工具中，必須遵守各國的安全規則和標準規定。

改進

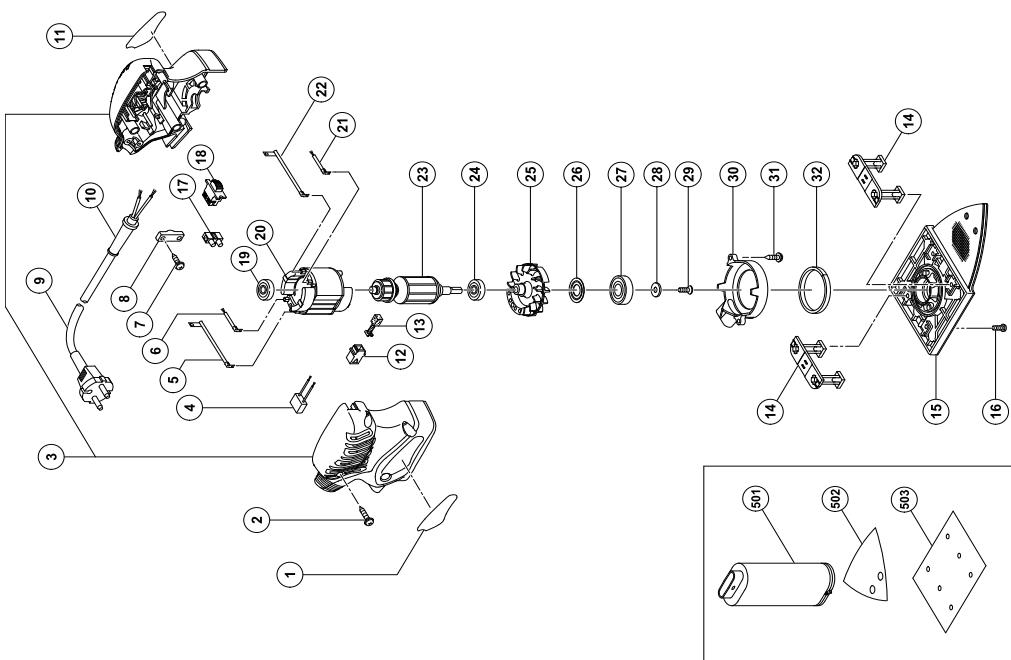
HiKOKI電動工具隨時都在進行改進以適應最新的技術進步。

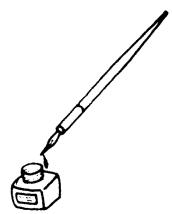
因此，有些部件（如，代碼號碼和／或設計）可能未預先通知而進行改進。

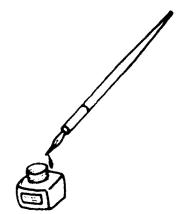
註

為求改進，本手冊所載規格可能不預先通告而徑予更改。

	A	B	C	D
1	1	1	1	1
2	2	301-653	4	D4x20
3	3	322-766	1	
4	4	930-039	1	
5	5	322-764	1	
6	6	322-761	1	
7	7	984-750	2	D4x16
8	8	937-631	1	
9	9		1	
10	10	953-327	1	D8.8
11	11		1	
12	12	930-483	2	
13	13	999-041	2	
14	14	322-756	2	
15	15	324-081	1	
16	16	324-082	4	M4x10
17	17	938-307	1	
18	18	311-948	1	
19	19	626-V/M	1	626VVC2PS2L
20-1	20-1	340-578C	1	110V
20-2	20-2	340-578D	1	120V
20-3	20-3	340-578E	1	220V-230V
20-4	20-4	340-578F	1	240V
21	21	322-762	1	
22	22	322-763	1	
23-1	23-1	360-637C	1	110V
23-2	23-2	360-637U	1	120V "19, 24"
23-3	23-3	360-637E	1	220V-230V
23-4	23-4	360-637F	1	240V
24	24	629-V/M	1	629VVC2PS2L
25	25	322-757	1	
26	26	993-052	1	
27	27	600-1DD	1	6001DDCMPS2L
28	28	987-169	1	
29	29	993-244	1	M4x12
30	30	322-758	1	
31	31	984-750	2	D4x16
32	32	311-946	1	
501	501	310-339	1	
502	502	323-969	2	
503	503	310-345	1	







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