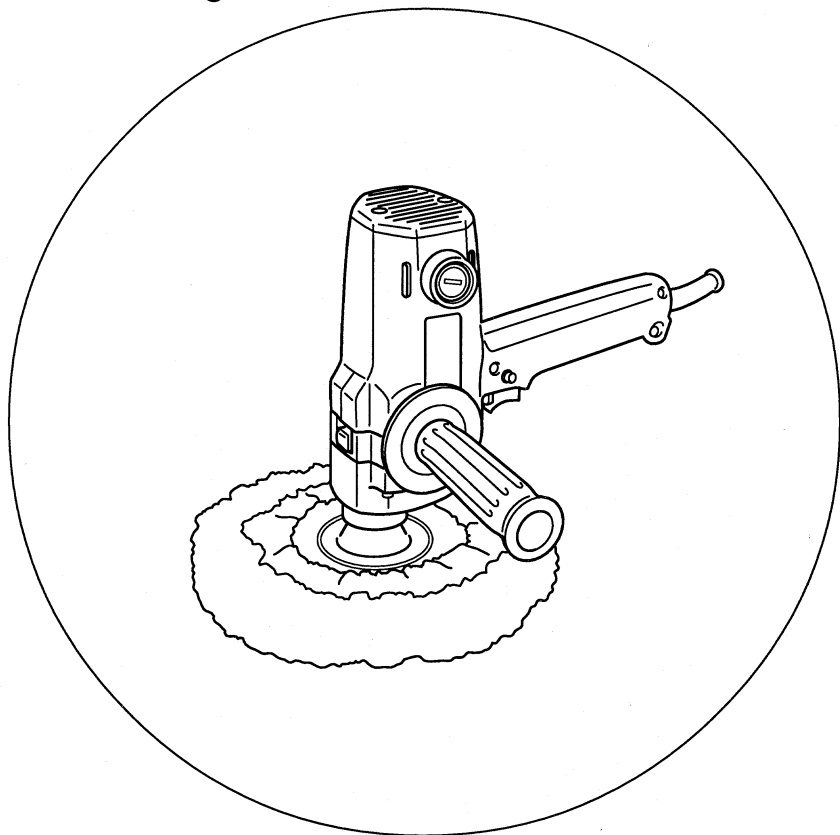


HITACHI

日立牌抛光机 POLISHER

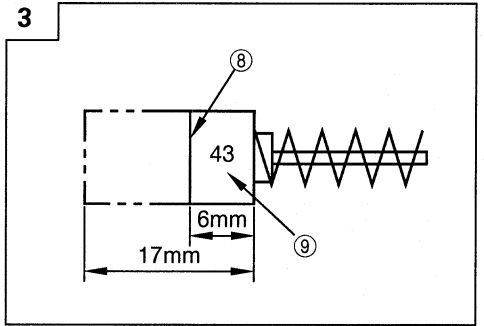
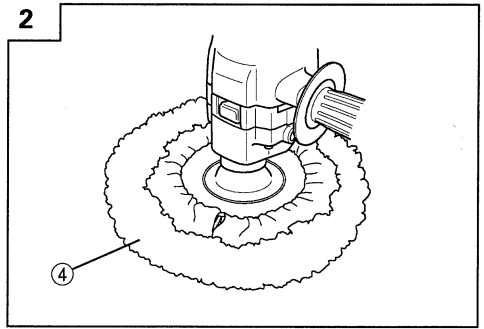
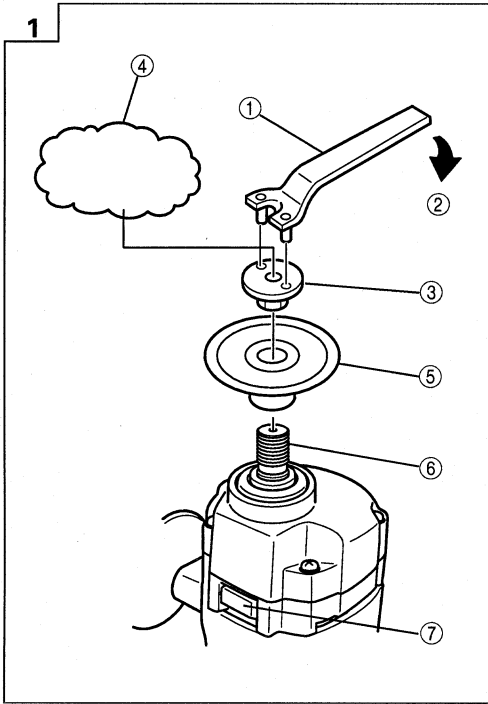
SP 18SA

使用说明书
Handling instructions



使用前务请详加阅读

Read through carefully and understand these instructions before use.



①	扳手	Wrench
②	紧	Tighten
③	垫片螺帽	Washer nut
④	羊毛罩	Wool bonnet
⑤	橡胶垫圈	Rubber pad
⑥	主轴	Spindle
⑦	锁定杆	Lock lever
⑧	磨损极限	Wear limit
⑨	碳刷号	No. of carbon brush

作业上的一般注意事项

警告！当使用电动工具时，为了减少造成火灾、电击和人身伤害，必须时刻遵守基本注意事项，以及下述操作注意事项。

在操作本机之前，请通读本说明书，并予以妥善保管。

安全操作注意事项：

1. 工作场所应打扫干净，清理妥当，杂乱无章将导致事故。
2. 确保妥适的作业环境。电动工具不可任其风吹雨打。不得在潮湿的地方作业。工作场所需保持充分的亮度。请勿在有可能造成火灾或爆炸的地方使用电动工具。
3. 谨防触电事故。应避免身体同大地或接地表面不可让访客触摸电动工具或延伸线缆接触（例如：管道、散热器、炉灶、冰箱等）
4. 不可让孩童靠近工作场所。与作业无关的访客也必须保持安全距离。
5. 不使用的电动工具应存放于干燥而孩童伸手不及的高处，并加锁保管。
6. 不得使劲用力推压。电动工具需按设计条件才能有效而安全地工作，绝不可勉强。
7. 妥选使用工具。不可用小型工具或附件去干重活。不可用于规定外的作业。举例说，用圆锯进行伐木打枝或原木锯切作业。
8. 工作时衣服穿戴要合适。不要让松散的衣角和宝石类卷入转动部份。屋外作业时，最好手戴橡胶手套，脚穿防滑胶鞋。同时要戴上能够罩笼长发的工作帽。
9. 绝大多数的电动工具作业时，均需戴安全眼镜。进行粉尘飞扬的切削作业时，需戴防尘面罩。
10. 连接除尘设备
如果提供连击除尘和集尘的设备，请确认是否已经连接好并且使用正常。
11. 不要拿电线提起电动工具，也不得拉扯电线从电源插座拆除插头。电线需从热源和油液隔开，并避免与锐利的边缘接触。
12. 作业以安全第一为原则。工件要用夹具或台钳卡紧。这样做，比用手按压更为可靠，也能够让双手专心操作。
13. 作业时脚步要站稳，身体姿势要保持平衡。

14. 工具应维护妥善，经常保持锋利、清洁才能充分发挥性能，落实作业安全的要求。应按规定加注润滑油脂、更换附件。线缆应定期检查，如发现损伤应立即委托专业性的服务单位加以修复。延伸线缆如有损伤应予更换。手柄要保持干燥，并防止沾附油脂类。
15. 不使用时，维修前以及更换附件（如：刀具、钻头、锯具等）之前，都必须拆卸电源插头才行。
16. 开动前务必把调整用键和扳手类拆除下来。这一点与安全有关。应养成习惯，严格遵守。
17. 谨防误开动。插头一插上电源插座，指头就不可随便接触电源开关。插接电源之前，应先确认：开关是否切断。
18. 屋外延伸线缆的使用。屋外作业时，必须使用专用的延伸线缆。
19. 保持高度警觉，充分掌握情况，以正常的判断力从事作业。疲惫时切不可开动电动工具。
20. 检查损坏部件。在继续使用电动工具之前，应详细检查各部零件以及防护装置有无损坏，以便判断具能否正常工作，能否发挥正常效能。检查转动部份的对准、空转、各零件有无异常，安装是否妥善以及其它足以给工作带来不良影响的情况。
如防护以及其它零件损伤了。除非本说明书中已有记载否则应立即委托服务中心进行妥善修理或更换。开关一发现缺陷，应立即委托服务中心加以更换。如开关不能正常地接通或切断，绝不可使用该电动工具。
21. 警告
使用非本说明书中的推荐的附件可能有发生人身损害的危险。
22. 本工具必须委托有资格的维修人员进行维修。本电动工具满足相关的安全要求。维修必须由专业人员使用纯正配件来进行。否则有可能会给用户造成人身损害。

使用抛光机时的注意事项

1. 请勿将正在旋转的抛光机放在无人看管的地板上。
2. 使用抛光机时，应牢牢握住机体操作柄和侧柄。否则所产生的反作用力会将孔钻歪。甚至会造成危险。

规格

电压（按地区）*	(110V, 115V, 120V, 127V, 220V, 230V, 240V) ~
输入功率*	650W
无负荷速度	2000 转/分
重量（不含线缆）	2.9 kg

*当须改变地区时应检查产品上的铭牌。

标准附件

- (1) 180mm 羊毛罩 1
- (2) 橡胶垫圈 1
- (3) 扳手 1
- (4) 侧柄 1

但因地区不同标准附件也不相同。

标准附件可能不预先通告而径予更改。

用途

- 汽车、火车、电梯、冰箱、缝纫机、洗衣机及其它金属装置等的涂漆金属表面的抛光和磨亮-
- 木制家具等的清漆表面的抛光-
- 合成树脂、硬橡胶的磨亮-

作业之前

1. 电源
确认所使用的电源与工具铭牌上标示的规格是否相符。
2. 电源开关
确认电源开关是否切断。若电源开关接通，则插头插入电源插座时电动工具将出其不意地立刻转动，从而招致严重事故。

3. 延伸线缆

若作业场所移到离开电源的地点，应使用容量足够、铠装合适的延伸线缆，并且要尽可能地短些。

注意：损坏和导线一定要更换或修理。

4. 固定侧柄

把侧柄旋进罩中。

5. 检查锁定杆

在打开电源开关之前按两三下锁定杆，检查它是否已被释放（参照图 1）。

羊毛罩的拆卸（图 1）

注意：确认开关已断开并且从电源插座中拔去电源插头以避免严重事故。

1. 安装

- (1) 将底座螺母装在橡胶垫圈上。
- (2) 用一只手按锁定杆，同时用另一只手慢慢转动橡胶垫片螺帽锁住主轴。
用附带的扳手旋紧轮状垫片。
- (3) 将羊毛罩罩在海绵垫上。
拉出羊毛罩的线并将其同海绵垫连接后将线扎紧。
将扎紧线后所剩下的线放入羊毛罩内侧收纳。
(图 2)

注意：

- 羊毛罩安装得不妥当的话，可能会引起振动。
- 确认锁定杆被解除锁定；可在打开抛光机之前通过掀两三次锁定杆进行检查。

2. 拆卸

请按与上述相反的顺序来拆卸羊毛罩。

实用抛光机的应用

1. 可进行弯曲表面和平面的抛光。请不要将抛光机压在物体表面上，而尽量利用抛光机本身的重量。用力将抛光机压在物体表面上的话，不仅抛光效果不理想，而且会给马达带来不必要的负载。
2. 请根据所需的抛光状态来选择使用抛光用的化合物和蜡。为了达到最佳的抛光效果，用砂纸机使用粒度细的砂纸抛光后，使用羊毛罩并涂上抛光所用化合物，最后进行打蜡。
将少量的化合物和蜡涂在要抛光的表面，然后再用羊毛罩抛光。
3. 在操作期间，请勿使电线碰到羊毛罩，因为羊毛罩会钩住电线并将之卷进。
4. 接通抛光机的电源
扣动开关板机并推入停止销，这样开关便被保持在开的状态，便于连续操作。要想关掉开关时，请再次扣动板机开关，这样停止销也会被断开。
5. 使用须知
使用本工具之后，在砂盘没有完全停止之前，请勿将其立即放在有许多细层、脏物和灰尘的地方。

注意：抛光机不用时，应将电源关掉。

3. 检查碳刷（图3）

马达使用碳刷，它是消耗部品，因为使用过久的碳刷将会导致马达故障，用具有相同碳刷号的新碳刷去更换旧的，碳刷编号用数字表示碳刷何时用旧或接近于磨损极限，此外，要经常保持碳刷清洁以及保证它在刷握里能自由滑动。

○ **更换碳刷**

用无头螺丝刀卸下碳刷盖，然后可以很容易地取下碳刷。

注：为求改进，本手册所载规格可能不预先通告而径予更改。

维护和检查

1. 检查安装螺钉

要经常检查安装螺钉是否紧固妥善。若发现螺钉松了，应立即重新扭紧，否则会导致严重事故。

2. 电动机的维护

电动机绕组是电动工具的“心脏”。应仔细检查有无损伤，是否被油液或水沾湿。

GENERAL OPERATIONAL PRECAUTIONS

WARNING! When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following.

Read all these instructions before operating this product and save these instructions.

For safe operations:

1. Keep work area clean. Cluttered areas and benches invite injuries.
2. Consider work area environment. Do not expose power tools to rain. Do not use power tools in damp or wet locations. Keep work area well lit. Do not use power tools where there is risk to cause fire or explosion.
3. Guard against electric shock. Avoid body contact with earthed or grounded surfaces. (e.g. pipes, radiators, ranges, refrigerators).
4. Keep children away. Do not let visitors touch the tool or extension cord. All visitors should be kept away from work area.
5. Store idle tools. When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.
6. Do not force the tool. It will do the job better and safer at the rate for which it was intended.
7. Use the right tool. Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saw to cut tree limbs or logs.
8. Dress properly. Do not wear loose clothing or jewellery, they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protecting hair covering to contain long hair.
9. Use eye protection. Also use face or dust mask if the cutting operation is dusty.
10. Connect dust extraction equipment.
If devices are provided for the connection of dust extraction and collection facilities ensure these are connected and properly used.
11. Do not abuse the cord. Never carry the tool by the cord or yank it to disconnect it from the receptacle. Keep the cord away from heat, oil and sharp edges.
12. Secure work. Use clamps or a vise to hold the work. It is safer than using your hand and it frees both hands to operate tool.
13. Do not overreach. Keep proper footing and balance at all times.
14. Maintain tools with care. Keep cutting tools sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Inspect tool cords periodically and if damaged, have it repaired by authorized service center. Inspect extension cords periodically and replace, if damaged. Keep handles dry, clean, and free from oil and grease.
15. Disconnect tools. When not in use, before servicing, and when changing accessories such as blades, bits and cutters.

16. Remove adjusting keys and wrenches. Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
17. Avoid unintentional starting. Do not carry a plugged-in tool with a finger on the switch. Ensure switch is off when plugging in.
18. Use outdoor extension leads. When tool is used outdoors, use only extension cords intended for outdoor use.
19. Stay alert. Watch what you are doing. Use common sense. Do not operate tool when you are tired.
20. Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated in this handling instructions. Have defective switches replaced by an authorized service center. Do not use the tool if the switch does not turn it on and off.
21. Warning
The use of any accessory or attachment, other than those recommended in this handling instructions, may present a risk of personal injury.
22. Have your tool repaired by a qualified person.
This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts. Otherwise this may result in considerable danger to the user.

PRECAUTIONS ON USING POLISHER

1. Do not leave the revolving polisher unattended on the floor.
2. Always hold the body handle and side handle of the polisher firmly.
Otherwise the counterforce produced may result in inaccurate and even dangerous operation.

SPECIFICATIONS

Voltage (by areas)*	(110V, 115V, 120V, 127V, 220V, 230V, 240V)∩
Power Input*	650W
No-Load Speed	2 000/min.
Weight (without cord)	2.9 kg

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

STANDARD ACCESSORIES

- (1) 180mm Wool Bonnet 1
- (2) Rubber Pad 1
- (3) Wrench 1
- (4) Side Handle 1

Please note, however, that the standard accessories differ in some areas.

Standard accessories are subject to change without notice.

APPLICATIONS

- Polishing or shining painted metal surfaces, such as those of automobiles, trains, elevators, refrigerators, sewing machines, washing machines, metal appliances, etc.
- Polishing varnished surfaces of wooden furniture, etc.
- Shining synthetic resin or ebonite products.

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, inviting 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.

CAUTION:

Damaged cord must be replaced or repaired.

4. Fixing the side handle

Screw the side handle into the housing.

5. Confirm the lock lever

Confirm that the lock lever is disengaged by pushing lock lever two or three times before switching the power tool on (See Fig. 1)

MOUNTING AND DISMOUNTING THE WOOL BONNET (Fig. 1)

CAUTION: Be sure to switch power OFF and disconnect the plug from the receptacle to avoid serious trouble.

1. Mounting

- (1) Attach the washer nut on the rubber pad.
- (2) While pushing the lock lever with one hand, lock the spindle by turning the rubber pad slowly with the other hand.
Tighten the washer nut by using the supplied wrench.
- (3) Cover the rubber pad with the wool bonnet.
Pull the string of the wool bonnet, let it contact the rubber pad, and tie the string up. Then, tuck the knot and the remainder of the string into the wool bonnet. (See Fig. 2)

CAUTION

- Improper fitting of the wool bonnet may cause vibration.
 - Confirm that the lock lever is disengaged by pushing lock lever two or three times before switching the polisher on.
- ### 2. Dismounting
- To remove the wool bonnet, follow the above procedures in reverse.

PRACTICAL POLISHER APPLICATIONS

1. Curved surface as well as plain one is treated for finishing. It is recommended to hold the polisher without pushing on the material, and make the best of the weight of the machine alone. As the excessive pressure on the polishing surface will not only bring unsatisfactory result but also apply overload on the motor.
2. Depending on the finishing degree of the surface, use the polishing compound or wax. In order to attain the maximum polishing effect, first polish the surface with the fine sand paper using the sander, than polish it with the polishing compound using the wool bonnet, and than finish with wax. Apply a small quantity of the compound and wax to the surface, and polish with the wool bonnet.
3. Don't let the cord touch the wool bonnet during its operation, for the rotating wool bonnet may catch the cord and get caught it in.
4. Switching on the polisher
Pulling the trigger of switch and push the stopper, it keeps the switched-on condition and it is convenient for the continuous operation. When switched off, the stopper can be disengaged by means of pulling the trigger again.
5. Precaution after use
Do not lay the polisher down immediately after using on a place where there are many shavings, much dirt and dust until it has completely stopped revolving.

CAUTION

When the polisher is not in use, the power source should be disconnected.

MAINTENANCE AND INSPECTION

1. 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.

2. 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.

3. Inspecting the carbon brushes (Fig. 3)

The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush could result in motor trouble, replace the carbon brushes with new ones which have the same carbon brush No. shown in the figure when they become worn to or near the “wear limit”. In addition, always keep carbon brushes clean and ensure that they slide freely within the brush holders.

○ Replacing carbon brushes

Disassemble the brush caps with a slotted-head screwdriver. The carbon brushes can then be easily removed.

Note

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

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