





* The picture above may differ slightly to actual unit.

BPHR272 HAMMER

Technical data

Hammer	BPHR272	
Power input	W	850
No-load speed	/min	700
Impact rate	BPM	3400
Impact energy (EPTA) J		4.1
Modes		2
Max capacity	mm	
- Concrete		26
- Steel		-
-Wood		-
Weight	kg	5.1

Intended use

Your Black & Decker hammer has been designed for drilling in concrete and masonry as well as for light chiselling applications.

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

- Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- 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.

- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2. Electrical safety

- 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.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- 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.
- 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.
- 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

- 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.
- 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.
- 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.

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 the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power 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.

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.

Hammer safety warnings

- ◆ **Wear ear protectors.** Exposure to noise can cause hearing loss.
- ◆ **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.
- ◆ **Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- ◆ Never use a chisel accessory in rotary mode. The accessory will bind in the material and rotate the drill.
- ◆ 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.
- ◆ Before drilling into walls, floors or ceilings, check for the location of wiring and pipes.
- ◆ Avoid touching the tip of a drill bit just after drilling, as it may be hot.
- ◆ 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

- ◆ This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- ◆ Children should be supervised to ensure that they do not play with the appliance.

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.)

Label on the tool

The following symbols are shown on the tool:



Warning! In order to reduce the risk of injury, the user must read the manual.

Date code position (Fig. D)

The date code (12) is printed on the housing of the tool, which also contains the year of manufacture.

For example: 2013 XX JN

Year of manufacture

Electrical safety



Double insulation measures are taken in this power tool, so no grounding is needed. Please check whether the voltage of power supplied is consistent with the voltage on the nameplate or not.

- ◆ If the wire is damaged, it should be replaced by the manufacturer or a service center authorized by Black & Decker, to avoid danger.

Part name

The power tool includes some or all of the following parts:

1. Switch
2. Oil-injection inlet cap
3. Modes selector
4. Tool chuck (tool holder)
5. sleeve
6. Side handle
7. Depth stop
8. Bottom cover

Assembly

Warning! Before assembly, please ensure that the power tool is powered off and the power plug of the tool is unplugged from the power source.

Install the side handle

Warning! When holes are drilled in the concrete, bricks and other surfaces, please grip the side handle to ensure safe operation.

- ◆ The side handle (6) can be rotated to any side, which can facilitate the use of the power tool in any position.
- ◆ Rotate the side handle (6) counterclockwise, to unlock and release the power tool, rotate it to the desired position.
- ◆ Rotate the side handle clockwise to tighten it adequately.

Fitting an accessory (Fig. A)

- ◆ Please clean the drill shank and lubricate the drill bit before installing it.
- ◆ Pull back and hold the slide-sleeve(5), and then screw the drill bit into the chuck, press it internally until it is fastened, the drilling bit can be automatically locked in situ. Pull the drill bit outwards to test whether it has been adequately locked in the correct position or not.
- ◆ Pull back and hold the drill sleeve(5) clamp, you can remove the drill bit.

Use

Warning! Please use the power tool under normal load; no overloading is permitted.

Warning! Before drilling holes in the wall, floor or ceiling, please check the positions of the wire and

steel tube.

Chipping/Chiseling (Fig. B)

- ◆ When the cutting / stripping / removing operation is conducted, please put the operation modes selector (3) to position **T**, the drilling bit, cold chisel and scaling chisel etc. should be properly used.

Warning! Do not rotate the knob when the power tool is rotating under the load, otherwise it will be damaged.

Hammer drilling (Fig. B)

- ◆ When using the hammer drill to drill holes on the masonry and concrete surfaces, the operation mode selector (3) should be set to position **T**.
- ◆ The drilling bit should be aligned to the drilling position, and then press the switch button to achieve the best effect. Keep the power tool be positioned correctly, prevent it from deviating the hole.
- ◆ When the fragments plug the borehole or powders, please do not apply further pressure, and make the tool rotate in an idling state, then gradually take out the drilling bit from the hole. Repeat the said steps for several times, the plugged hole can be clean, and then resume the normal drilling.

Warning! When the drilling bit begins to break down the reinforced concrete or hit the steel bar inside the concrete, the power tool may have dangerous reaction force. Please always keep balance, stable posture and tightly grip the tool, to prevent from generating the dangerous reaction force. When the concrete is chiseled, the distance between the two points of one chiseling shall not be too much away from the edge, which shall be about 8cm or so, define the distance through finding the cracking strength of the concrete.

Overload coupling device

If the drilling bit is clamped or hooked up, the driving force transmitted to the drill shaft will be cut off. A huge force will occur, so two hands must tightly grip the power tool when it is in operation, and ensure that the operator is standing in a stable and fixed position.

Select the depth of holes to be drilled (Fig. C)

A depth gauge is an easy to use ruler to ensure that the drilling depth is consistent. Unlock the side handle, adjust the depth gauge according to the required depth, and then tighten the side handle.

- ◆ Unfasten the side handle (6) by turning counter-clockwise the grip.
- ◆ Set the depth stop (7) to the desired position. The maximum depth of the drilled hole shall equal to the distance between the tip of drilling bit and the front end of the depth stop.
- ◆ Tighten the side handle by turning the grip clockwise.

Switch on and off

Warning! Before inserting the plug, please confirm whether the switch can trigger freely or not, whether it can return to the original position after releasing.

- ◆ Press the switch button (1), the power tool can be started immediately.
- ◆ Release the button (1), the tool stops rotating.

Accessories

The performance of an electric tool depends on its accessories. Black & Decker accessories are designed according to high quality standards, to enhance the performance of electric tool. The use of these accessories can help you conveniently operate the tool.

Maintenance

The Black & Decker cord / cordless appliance / tools are of sophisticated design, can be used for a long time, and only little maintenance is needed. To obtain consistent satisfactory use, proper maintenance and regular cleaning of the tools are necessary.

Warning! Before performing any maintenance work on the cord / cordless electric tools, the following points must be implemented:

- ◆ Switch off the power of the equipment / tools and pull off the plug;
- ◆ If the equipment / tools are equipped with independent battery pack, please turn off the power and remove the battery pack from the equipment / tools.
- ◆ If the equipment / tools are equipped with an integrated battery, please run out the battery, before turning off its power.
- ◆ Before the cleaning, unplug the charger plug

from the power source. In addition, except the regular cleaning on your charger, no other maintenance is needed.

- ◆ Regularly use the soft brush or dry cloth to clean the ventilation slot of the equipment / tools / charger.
- ◆ Regularly use a damp cloth to clean the motor housing. Please do not use any abrasive cleaning agents or solvent-based cleansing agents.
- ◆ Regularly open the clamping chuck and tap it gently to remove any internal dust (after installation).

Replace the carbon brushes (Fig. E)



Lubrication

- ◆ Regularly replace and check the carbon brushes. Replace it in time when it is worn to the abrasive boundary line. Keep the carbon brush clean and make it freely slide in the brushing range. Two brushes shall be replaced at the same time.
- ◆ Use the cross screwdriver to counterclockwise unscrew the screws, open the bottom cover(8) with a flat screwdriver to counterclockwise open the brush cover(9), you can remove the brush(10) as shown in the figure E, and put the new brush, and then clockwise fasten the brush cover(9), finally put the bottom cover(8), and then use the cross screwdriver to tighten it properly.
- ◆ Open the cap of the lube oil-injection inlet(2), check the lube oil in the gearbox, if the lube oil is dirty or insufficient, replace or add the adequate amount of lube oil provided by the company.



Cleaning



Warning! Once the visible dust build-up is found at and/or around the ventilating ports, immediately flush the dust and powder within the host shell with clean dry air. To perform this procedure, wear the approved safety equipment and dust mask.



Warning! It is strictly forbidden to clean the non-metallic parts of the tool with the

solvents or other irritant chemicals. These chemicals may weaken the materials of these components. Use a cloth moistened with a mild soapy water to clean it. Do not let any substance permeate into the tool and do not immerse any part of the tool into a liquid.

Protect the environment



Separate collection. This product may not be disposed together with the ordinary household waste.

If you find that your Black & Decker products are needed to be replaced or you will no longer need to use these products, please do not put them together with the household waste. Please place them separately to recycle.



Separate collection of the used products and packaging materials allow the materials to be recycled and reused.

Reuse of the recycled materials helps to prevent the pollution of the environment, and reduces the demand for raw materials. Local regulations may provide separate collection of the electrical products from the household, at the municipal waste sites or by the retailer when you purchase a new product.

BPHR272 电锤

技术数据

电锤		BPHR272
输入功率	W	850
空载转速	/min	700
冲击率	BPM	3400
冲击能量 (EPTA)	J	4.1
模式		2
最大钻孔能力	mm	
- 混凝土		26
- 钢材		-
- 木材		-
重量	kg	5.1

设计用途

您的百得电锤设计用于在混凝土和砖石上钻孔，以及轻度凿切应用。

安全说明

电动工具通用安全警告



警告！ 阅读所有警告和所有说明。不遵照以下警告和说明会导致电击、着火和/或严重伤害。

保存所有警告和说明书以备查阅。在所有下列的警告中术语“电动工具”指市电驱动（有线）电动工具或电池驱动（无线）电动工具。

1. 工作场地的安全

- 保持工作场地清洁和明亮。混乱和黑暗的场地会引发事故。
- 不要在易爆环境，如有易燃液体、气体或粉尘的环境下操作电动工具。电动工具产生的火花会点燃粉尘或气体。
- 让儿童和旁观者离开后操作电动工具。注意力不集中会使你失去对工具的控制。

2. 电气安全

- 电动工具插头必须与插座相配。绝不能以任何方式改装插头。需接地的电动工具不能使用任何转换插头。未经改装的插头和相配的插座将减少电击危险。

- 避免人体接触接地表面，如管道、散热片和冰箱。如果你身体接地会增加电击危险。
- 不得将电动工具暴露在雨中或潮湿环境中。水进入电动工具将增加电击危险。
- 不得滥用电线。绝不能用电线搬运、拉动电动工具或拔出其插头。使电线远离热源、油、锐边或运动部件。受损或缠绕的软线会增加电击危险。
- 当在户外使用电动工具时，使用适合户外使用的外接软线。适合户外使用的软线将减少电击危险。
- 如果在潮湿环境下操作电动工具是不可能的，应使用剩余电流动作保护器（RCD）。使用RCD可减小电击危险。

3. 人身安全

- 保持警觉，当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦，或在有药物、酒精或治疗反应时，不要操作电动工具。在操作电动工具时瞬间的疏忽会导致严重人身伤害。
- 使用个人防护装置。始终佩戴护目镜。安全装置，诸如适当条件下使用防尘面具、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。
- 防止意外起动。确保开关在连接电源和/或电池盒、拿起或搬运工具时处于关断位置。手指放在已接通电源的开关上或开关处于接通时插入插头可能会导致危险。
- 在电动工具接通之前，拿掉所有调节钥匙或扳手。遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。
- 手不要伸展得太长。时刻注意立足点和身体平衡。这样在意外情况下能很好地控制电动工具。
- 着装适当。不要穿宽松衣服或佩戴饰品。让你的衣服、手套和头发远离运动部件。宽松衣服、配饰或长发可能会卷入运动部件中。
- 如果提供了与排屑、集尘设备连接用的装置，要确保他们连接完好且使用得当。使用这些装置可减少尘屑引起的危险。

4. 电动工具使用和注意事项

- 不要滥用电动工具，根据用途使用适当的电动工具。选用适当设计的电动工具会使你工作更有效、更安全。
- 如果开关不能接通或关断工具电源，则不能使用该电动工具。不能用开关来控制的电动工具是危险的且必须进行修理。
- 在进行任何调节、更换附件或贮存电动工具之前，必须从电源上拔掉插头和/或使电池盒与工具脱开。这种防护性措施将减少工具意外起动的危险。
- 将闲置不用的电动工具贮存在儿童所及范围之外，并且不要让不熟悉电动工具或对这些说明不

了解的人操作电动工具。电动工具在未经培训的用户手中是危险的。

- e. 保养电动工具。检查运动件是否调整到位或卡住，检查零件破损情况和影响电动工具运行的其他状况。如有损坏，电动工具应在使用前修理好。许多事故由维护不良的电动工具引发。
- f. 保持切削刀具锋利和清洁。保养良好的有锋利切削刃的刀具不易卡住而且容易控制。
- g. 按照使用说明书，结合作业环境和工况使用电动工具，附件和钻头。“将电动工具用于那些与其用途不符的操作可能会导致危险。

5. 维修

- a. 将你的电动工具送交专业维修人员，使用同样的备件进行修理。这样将确保所维修的电动工具的安全性。

锤类工具的安全警告

- ◆ 戴好耳罩。暴露在噪声中会引起听力损伤。
- ◆ 使用随工具提供的辅助手柄。操作失手会引起人身伤害。
- ◆ 在切削附件可能触及暗线或其自身软线之处进行操作时，要通过绝缘握持面来握持工具。切削附件碰到带电导线会使工具外露的金属零件带电从而使操作者受到电击。
- ◆ 请勿在旋转模式下使用凿子附件。附件将卡在材料中并旋转电钻。
- ◆ 请使用夹具或采取其它可行的方法，把工件可靠地固定在稳定的平台上。手持或用身体顶住工件都是不稳定的，会导致操作失控。
- ◆ 在墙上、地板或天花板上钻孔之前，请先检查电线和钢管位置。
- ◆ 避免在钻孔后立刻触碰钻头顶端，以免烫伤。
- ◆ 本使用手册描述了工具的设计用途。使用非本使用手册所建议的任何其他附件或配件，或者使用本工具执行非手册建议的任何其他操作，都可能存在人身伤害和/或财产损失的危险。

他人安全

- ◆ 本设备不适合体力、感官或智力不足以及缺乏经验、知识的人员（包括儿童），除非负责他们安全的人员已经为他们提供关于使用此设备的监督或指示。
- ◆ 应看管好儿童，以确保他们不将此设备当做玩具来玩。

其他风险

使用工具时，可能出现本安全警示之外的其他剩余风险。这些风险可能来自使用不当，使用时间过长等。尽管遵守了相关的安全法规并采用了安全装备，某些风险仍然是无法避免的。这些风险包括：

- ◆ 接触旋转/运动部件时所导致的伤害风险。
- ◆ 更换部件、锯片或附件时所导致的伤害风险。
- ◆ 长期使用工具所导致的伤害风险。长期使用任何工具时，均应定期休息。
- ◆ 听力损伤。
- ◆ 吸入工具使用过程中产生的粉尘导致的健康危害（例如，锯切木材，特别是橡木、山毛榉和中密度纤维板时）。

工具上的标签

工具上显示了下列符号：



警告！为降低伤害风险，用户必须阅读使用手册。

日期码位置（图 D）

日期码(12)印在工具外壳上，其中还包含制造年份。

例如： 2013 XX JN
制造年份

电气安全



本工具采用双重绝缘，因此无需接地线。请务必检查电源电压是否与铭牌上的电压一致。

- ◆ 如果电源线损坏，必须由制造商或百得授权服务中心更换，以避免发生危险。

部件名称（图 D）

本工具包含如下部分或全部部件：

1. 开关
2. 加油盖
3. 模式选择器
4. 工具夹头
5. 滑套
6. 侧手柄
7. 深度尺
8. 底盖

组装

警告！组装前，请确保关闭工具电源并拔下工具插头。

安装侧手柄

警告！在混凝土、砖石等表面钻孔时请务必使用侧手柄以确保操作安全。

- ◆ 侧手柄 (6) 可以旋转到任意一侧，在任何位置都能方便地操作工具。
- ◆ 逆时针旋转侧手柄 (6) 可使其松开，将其转至所需位置。
- ◆ 通过顺时针旋转拧紧侧手柄。

安装附件 (图 A)

- ◆ 安装钻头前请清洁钻头柄并涂抹润滑油。
- ◆ 把滑套(5)向后拉并且按住，把钻头旋入钻夹，跟着把它向内压，直至扣紧，钻头会自动锁紧在原位。把钻头向外拉以作测试，确保已锁定在正确位置。
- ◆ 把钻夹的滑套(5)向后拉并且按住，即可取出钻头。

使用

警告！请使工具在正常负荷下工作，切勿过载。

警告！在墙上、地板或天花板上钻孔之前，请先检查电线和钢管位置。

铲凿 (图 B)

- ◆ 在凿/剥/拆的操作时，请将操作模式选择器(3)设置到 **T** 位置，此时需使用尖钻头、冷凿、铲锈凿等。

警告！工具有载运转时请勿转动调钮，否则工具会受损。

冲击钻孔 (图 B)

- ◆ 使用冲击钻在砖石和混凝土中钻孔时，请将操作模式选择器 (3) 设置到 **T2** 位置。
- ◆ 钻头对准需钻孔的位置，然后扣动开关按钮效果最佳。保持工具定位正确，防止工具偏离孔位。
- ◆ 钻孔被碎片或粉屑堵塞时，请勿进一步施压，而使工具空转，然后从孔眼中退出部分钻头。如此重复数次便可将孔眼清理干净，重新开始正常钻孔。

警告！钻头开始击穿混凝土或冲击混凝土中的钢筋时，工具可能产生危险的反作用力。请始终保持平衡、稳定的姿势并双手握牢工具，从而防止产生危险的反作用力。凿混凝土时凿一次不能离边缘太多，约8cm左右，找到每块混凝土的开裂强度来定距离。

超负荷联结装置

如果钻头被夹住或钩住，传向钻轴的驱动力便会被切断。此刻会发生巨力，因此操作时必须以双手握紧机器，并确保立足稳固。

选择钻孔深度 (图 C)

深度尺是一种使用方便，确保钻孔深度统一的工具。旋松侧手柄，按所需深度调整深度规，然后旋紧侧手柄。

- ◆ 通过逆时针转动手柄转松侧手柄 (6)。
- ◆ 将深度尺 (7) 设置到所需位置。最大钻孔深度相等与钻头尖端与深度尺前末端之间的距离。
- ◆ 通过顺时针转动手柄转紧侧手柄。

启动与关闭

警告！在插入电源插头之前，请务必确认开关是否能扣动自如，释放后能够退回原位。

- ◆ 按下开关按钮 (1)，工具即可启动。
- ◆ 放开开关按钮 (1)，工具即停止转动。

附件

电动工具的性能取决于所使用的附件。百得附件按照高质量标准设计，旨在增强电动工具的性能。使用这些附件会令您的工具如虎添翼。

维护

本百得有有线/无线设备/工具设计精良，可以长期使用，而且只需极少的维护。要持续获得令人满意的工作效果，需要对工具进行适当的维护和定期清洁。

警告！对有线/无线电动工具进行任何维护工作之前，必须：

- ◆ 闭电源并拔下设备/工具插头。
- ◆ 如果设备/工具配有独立电池组，请关闭电源并从设备/工具上取下电池。
- ◆ 如果设备/工具配有一体式电池，请将电池电量耗尽后，然后再关闭电源。
- ◆ 清洁之前，先拔下充电器插头。您的充电器除了需要定期清洁外，不需要执行任何保养操作。
- ◆ 定期使用软刷或干布清洁设备/工具/充电器内的通风槽。
- ◆ 定期使用湿布清洁电动机外壳。请不要使用任何研磨性或基于溶剂的清洁剂。
- ◆ 定期打开夹头并轻敲以去除内部的任何粉尘（安装后）。

替换碳刷



润滑

- ◆ 定期替换和检查碳刷。当其磨损到界限磨损线时，就需要替换。要保持碳刷清洁并使其在副刷内能自由滑动。两只碳刷应同时替换。
- ◆ 用十字螺丝起子逆时针旋松螺钉(11)，打开底盖

(8), 用一字螺丝起子逆时针旋开刷盖(9), 然后取出碳刷(10), 放进新碳刷, 顺时针旋紧刷盖(9), 最后装好底盖(8), 用十字螺丝起子拧紧即可。

- ◆ 打开油盖(2), 检查齿轮箱内的润滑油, 如齿轮箱内的润滑油变脏或缺少, 就更换或添加本公司提供的润滑油。



清洁



警告！一旦通风口和周围积聚了可见的粉尘请立即用干燥的空气吹走主机外壳内的粉尘和灰尘。执行此过程时, 需戴上经认可的护目装备和防尘面具。



警告！切勿使用溶剂或其他刺激性化学制品来清洁工具的非金属部件。这些化学物质可能会削弱这些部件使用的材料。请用布蘸温和的肥皂水擦拭。切勿让任何液体渗入工具, 切勿让工具的任何部分浸在液体中。

保护环境



分类回收。本产品不得与普通家庭垃圾一起处理。

如果您发现您的百得产品需要更换或您已经不再需要使用这些产品, 请不要将它们与家庭垃圾一起处理。请将它们单独分类回收。



分类回收使用过的产品和包装能够让材料得以再循环和再利用。再生材料的再利用有助于防止环境污染, 并降低对原材料的需求。

当地法规可能要求由市政废物处理点或向您出售新产品的零售商提供从家庭中分类回收电气产品的服务。

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