

BLACK & DECKER®

Hammer Drills KR45RE/KR50RE/KR55RE/KR603/KR703/KR71RE

Technical Data

Hammer Drill		KR45RE	KR50RE	KR55RE	KR603	KR703	KR71RE
Chuck Capacity	mm	1-10	1-10	1.5-13	2-13	2-13	1.5-13
Power input	W	450	500	550	650	710	710
No load speed	RPM	0-2,800	0-2,800	0-2,800	0-3,100	0-3,100	0-2,800
Impact rate	BPM	0-44,800	0-44,800	0-44,800	0-52,700	0-52,700	0-44,800
Reverse		Yes	Yes	Yes	Yes	Yes	Yes
Max. drilling capacity							
- steel	mm	10	10	13	13	13	13
- wood	mm	20	20	20	25	32	20
- concrete	mm	10	10	13	13	16	13
Cable length	m	3	3	3	3	3	3
Weight	kg	1.9	1.9	1.9	1.95	2.11	1.9

Intended Use

Your Black & Decker hammer drill has been designed for drilling in wood, metal, plastics and masonry as well as for screwdriving purposes.

Safety Instructions

When using power tools, always observe the safety regulations applicable in your country to reduce the risk of fire, electric shock, personal injury and material damage. Read the following safety instructions before attempting to operate this product. Keep these instructions in a safe place!

The following symbols are used throughout this manual:

- ⚠ Denotes risk of personal injury, loss of life or damage to the tool in case of non-observance of the instructions in this manual.
- ⚡ Denotes risk of electric shock.
- 🔥 Fire hazard.

- Work Area**
 - Keep work area clean and bright.** Cluttered areas and benches can cause accidents. Keep work area well lit (250-300 Lux).
 - Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks that may ignite the dust or fumes.
 - Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.
- 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.

- Personal Safety**
 - Stay alert. Watch what you are doing. Use common sense. Do not operate the tool when 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 safety equipment. Always wear eye protection.** Everyday eyeglasses only have impact resistant lenses, they are not safety glasses. Contain long hair. Safety equipment such as dust mask, non-skid safety shoes, hardhat, heat-resistant apron or hearing protection used for appropriate conditions will reduce personal injuries.
 - 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.
 - 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.
 - Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
 - Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jeweler or long hair can be caught in moving parts.
 - 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.**

- Secure workpiece.** Use clamps or a vice to hold the workpiece. It is safer and it frees both hands to operate the tool.
- Power tool use and care**
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
 - 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 those intended could result in a hazardous situation.
- Service**
 - Have your power tool serviced by a qualified repairperson using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Additional Safety Instructions for Hammer Drills

- Wear ear protectors with impact drills.** Exposure to noise can cause hearing loss.
- Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.
- Keep your drill bits sharp for best and safest performance.
- When fitting and changing accessories, always use the instructions supplied with the accessory.
- Should your hammer drill develop a fault, do not try to fix it yourself, but take it to one of our authorized repair agents.
- Make sure that the switch is in the "off" position before you plugging in or putting down the tool.
- Do not force your hammer drill** – it will do a better and safer job at the speed for which it was designed.
- ⚠ **Warning:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints,
 - Crystalline silica from bricks and cement and other masonry products, and
 - Arsenic and chromium from chemically treated lumber (CCA).Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water. Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.

Labels on your tool

They may include the following symbols.

V	.....	volts
A	.....	Amperes
Hz	.....	Hertz
W	.....	Watts
Min.	.....	Minutes
~	.....	Alternating current
—	.....	Direct current
No	.....	No load speed
Ⓜ	.....	Class II Construction
Ⓧ	.....	Earthing terminal
⚠	.....	Safety alert symbol
.../min	.....	Revolutions or reciprocation per minute
.../bpm	.....	Beats per minute

Double Insulation

Ⓜ The tool is double insulated. Double insulation means that all the external metal parts are electrically insulated from the mains power supply. This is done by placing insulated barriers between the electrical and mechanical components so as to making unnecessary for the tool to be earthed. **NOTE:** Double insulation does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

Electrical safety

The electric motor has been designed for one voltage only. Always check that the power supply corresponds to the voltage on the rating plate.

- ⚠ **Warning:** Never connect the live (L) or neutral (N) wires to the earth pin marked E or Ⓧ.

Using an Extension Cable

An extension cable should not be used unless absolutely necessary. Use of an improper extension cable could result in a risk of fire and electric shock. If an extension cable must be used, use only those that are approved by the country's Electrical Authority. Make sure that extension cord is in good condition before using. Always use the cord that is suitable for the power input of your charger (see technical data on name plate).

When using a cable reel, always unwind the cable completely.

Features (fig. A)

- Variable speed on/off switch
- Variable speed control dial (KR703 only*)
- Lock-on button
- Forward/reverse slider
- Drilling mode selector
- Keyless chuck (KR703 & KR603 only)
- Keyed chuck (KR55RE/KR50RE/KR45RE/KR71RE only)
- Adjustable depth stop (exclude KR71RE-KR)
- Side handle
- Chuck key (KR55RE/KR50RE/KR45RE/KR71RE only)

Your Drill May Includes These Features

- The on/off switch is used to operate your drill in all modes of operation.
- The variable speed control dial provides optimal control of your drill for a wide range of tasks.
- The lock-on button provides continuous operation of your drill.
- The side handle gives a secondary gripping position for your drill.
- The depth stop for setting the depth of hole to be drilled.
- Your drill can operate as a hammer drill or as a rotary drill depending on the setting of the hammer/ drill switch.
- The forward/ reverse switch controls the direction of rotation when your drill is used as a screwdriver, or when cleaning a jammed drill bit.

Assembly and Adjustment

- ⚠ Prior to assembly and adjustment always unplug the tool.
- N.B.** Accessories mentioned in this manual may not necessarily be included in your pack.

Fitting the Side Handle & Depth Stop (Fig. B)

The side handle (9) can be fitted to suit both right-handed and left-handed users.

- Turn the grip counterclockwise until you can slide the side handle (9) onto the front of the tool as shown.
- Rotate the side handle into the desired position.
- Insert the depth stop (8) into the mounting hole as shown. (exclude KR71RE-KR)
- Set the drilling depth as described below.
- Tighten the side handle by turning the grip clockwise.

Fitting and Removing a Drill Bit or Screwdriver Bit

- ⚠ Disconnect the plug from the electricity supply.

Keyless Chuck (KR703/ KR603 only) (Fig. C)

- Open the chuck by turning the sleeve (6) counterclockwise.
- Insert the bit shank (11) into the chuck.
- Tighten the chuck by turning the sleeve clockwise.

Keyed Chuck (KR55RE/KR50RE/KR45RE/KR71RE only) (Fig. D)

- Open the chuck by turning the sleeve (7) counterclockwise
- Insert the bit shank (11) into the chuck.
- Insert the chuck key (10) into each hole (12) in the side of the chuck and turn clockwise until tight.

Removing and Fitting a Chuck (Fig. E)

- Open the chuck jaws as far as possible.
- Remove the chuck retaining screw, located in the chuck, by turning it clockwise using a screwdriver.
- Tighten an Allen key (not supplied) into the chuck and strike it with a hammer as shown.
- Remove the Allen key.
- Remove the chuck by turning it counterclockwise.
- To refit the chuck, screw it onto the spindle and secure it with the chuck retaining screw.

Instruction for Use

- ⚠ Always observe the safety instructions and applicable regulations.
- ⚠ Let the tool work at its own pace. Do not overload.
- Be aware of the location of pipework and wiring.
- Apply only a gentle pressure to the tool (approx. 2-3 kg). Excessive force does not speed up drilling but decreases tool performance and may shorten tool life.

Selecting the Direction of Rotation (Fig. A)

- For drilling and for tightening screws, use forward (clockwise) rotation. For loosening screws or removing a jammed drill bit, use reverse (counterclockwise) rotation.
- To select forward rotation, push the forward/reverse slider (4) to the left.

- To select reverse rotation, push the forward/reverse slider to the right.
- ⚠ Always wait until the motor has come to a complete standstill before changing the direction of rotation.

Selecting the Speed (KR703 only*) (Fig. A)

- Set the speed of your drill by setting the variable speed control dial (2) to the desired position.
- Turn the dial counterclockwise for low speed and clockwise for high speed.
- As a general rule, for large size drill bits use low speeds and for smaller drill bits use high speeds.

Selecting the Drilling Mode (Fig. A)

- For drilling in masonry, set the drilling mode selector (5) to the **T** position.
- For drilling in other materials and for screwdriving, set the drilling mode selector (5) to the **1** position.

Setting the Drilling Depth (Fig. E)

- Insert the required drill bit.
- Slacken the side handle (9).
- Fit the depth adjustment stop (8) through the hole in the side handle clamp. (exclude KR71RE-KR)
- Slide the depth stop until the distance between the end of the depth stop and the end of the drill bit is equal to the length of the screw you will fit.
- Tighten the side handle.

Switching On and Off (Fig. A)

- To switch the tool on, press the on/off trigger switch (1). The more the trigger is depressed the faster the speed will be.
- As a general rule, use low speeds for large diameter drill bits and high speeds for smaller diameter drill bits.
- For continuous operation, press the lock-on button (3) and release the on/off switch. This option is available only at full speed or at any speed preset with the variable speed control knob (2). This option does not work in reverse rotation.
- To switch the tool off, release the on/off switch. To switch the tool off when in continuous operation, press the on/off switch once more and release it.

Handy Hints

Drilling

- ⚠ **WARNING:** Drill may stall (if overloaded or improperly used) causing a twist. Always expect the stall. Grip the drill firmly to control the twisting action (see Fig. F) and prevent loss of control that could cause personal injury. If a stall does occur, release the trigger immediately and determine the reason for the stall before re-starting. Do not click the trigger of a stalled drill off and on in an attempt to start it. Damage to the drill can result.
- Always apply a light pressure in a straight line with the drill bit. Run the drill very slowly, using light pressure, until the hole is started enough to keep the drill bit from slipping out of it.
- Use a block of wood to back up work pieces that may splinter.
- Use spade bits when drilling large diameter holes in wood.
- Use HSS drill bits when drilling in metal.
- Use masonry bits when drilling in soft masonry.
- Use a lubricant when drilling metals other than cast iron and brass.
- Make an indentation using a center punch at the center of the hole to be drilled in order to improve accuracy.
- Keep the motor running while pulling the bit out of a drilled hole. This will help reduce jamming.
- When using twist drill bits to drill holes in wood, it will be necessary to pull the bits out frequently to clear chips from the flutes.

Screwdriving

- Always use the correct type and size of screwdriver bit.
- If screws are difficult to tighten, try applying a small amount of washing liquid or soap as a lubricant.
- Always hold the tool and screwdriver bit in a straight line with the screw.

Maintenance

Your Black & Decker power tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.

The hammer drill is not user-serviceable. Take the tool to an authorized Black & Decker repair agent.

Lubrication

Your drill has been adequately lubricated before leaving the factory.

Tool Cleaning

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

Important

To ensure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (other than those listed in this manual) should be performed by authorized service centers or other qualified organizations, always using identical replacement parts. Unit contains no user serviceable parts inside.

Accessories

The performance of any power tool is dependent upon the accessory used. Black & Decker accessories are engineered to high quality standards and are designed to enhance the performance of your power tool. By using Black & Decker accessories you will get the very best from your tool.

Black & Decker offers a large selection of accessories available at our local dealer or authorized service center at extra cost.

- ⚠ **CAUTION:** The use of any non-recommended accessories may be hazardous.

Protecting The Environment

♻ Separate collection. This product must not be disposed of with normal household waste. Should you find one day that your Black & Decker product needs replacement, or if it is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.

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

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

If necessary, contact your local municipality for proper disposal instructions in your city/town.

Service Information

Black & Decker offers a full network of company-owned and authorized service locations throughout Asia. All Black & Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service.

Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black & Decker location nearest to you.

Notes

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

* except Taiwan

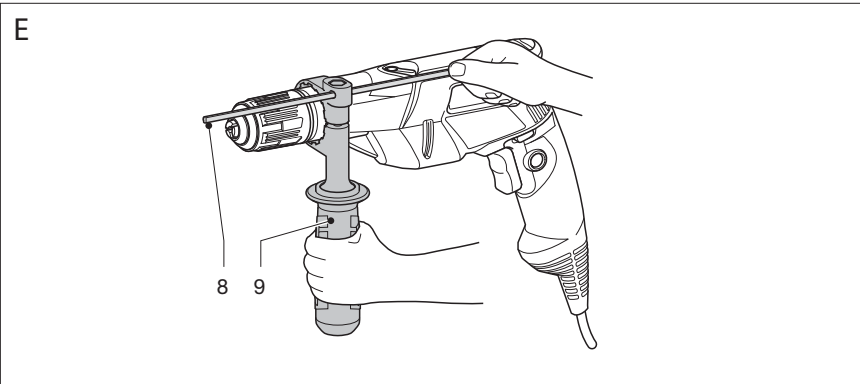
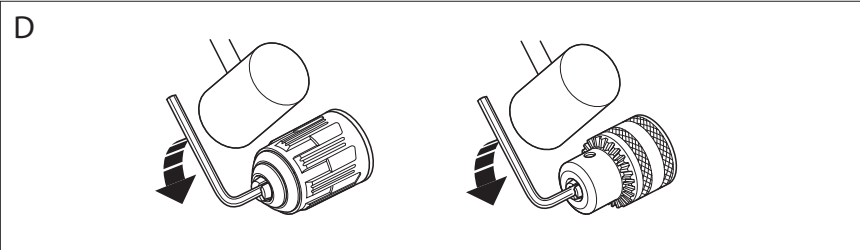
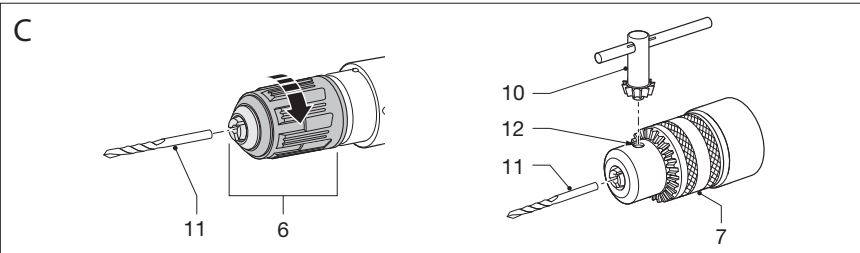
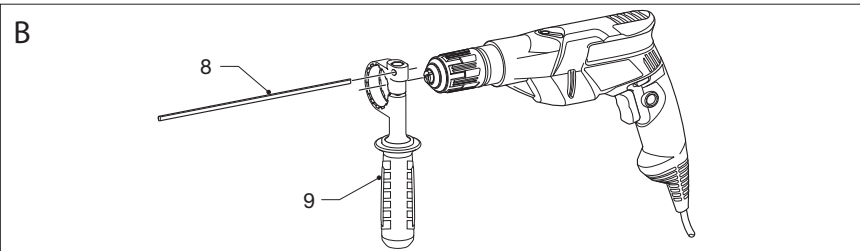
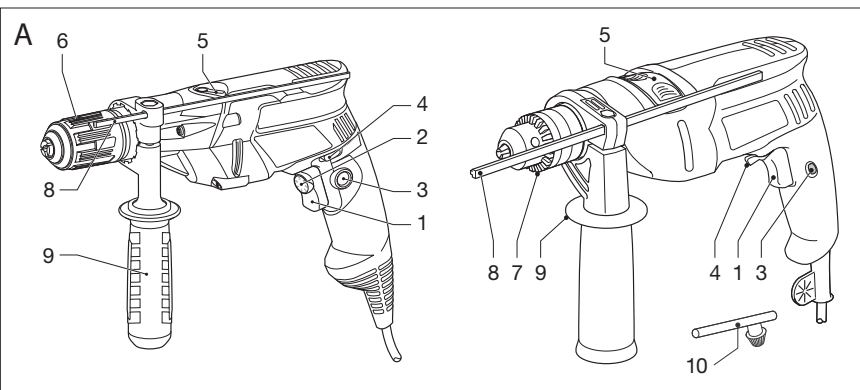
KR703
KR603
KR55RE
KR50RE
KR45RE
KR71RE

www.BlackandDecker.com

This manual is applicable for -KR, -A9 & -XD only

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冲击钻

KR45RE/KR50RE/KR55RE/KR603/KR703/KR71RE

技术参数

冲击钻	KR45RE	KR50RE	KR55RE	KR603	KR703	KR71RE	
夹头直径	毫米	1-10	1-10	1.5-13	2-13	2-13	1.5-13
输入功率	瓦	450	500	550	650	710	710
空载转速	每分钟转数	0-2,800	0-2,800	0-2,800	0-3,100	0-3,100	0-2,800
冲击力	每分钟冲击次数	0-44,800	0-44,800	0-44,800	0-52,700	0-52,700	0-44,800
逆转功能	有	有	有	有	有	有	
最大钻孔能力	毫米	10	10	13	25	13	13
 - 钻砖石	毫米	20	20	20	32	20	
 - 钻灰	毫米	10	10	13	13	16	13
 - 钻钢	毫米	10	10	13	13	16	13
电线长度	米	3	3	3	3	3	3
净重	千克	1.9	1.9	1.9	1.95	2.11	1.9

设计用途

本百得冲击钻是设计来钻木材、金属、塑料及砖石及螺丝线的。它是一款非工业用途电动机具。

安全指引

当使用电动工具时，必须遵循当地安全规则以减少导致火灾、触电和人身伤害的危险。请在操作本产品前阅读并理解本操作手册；并把本手册妥善保管！

下列标志会在本说明书内使用：

△ 表示如不依本说明书指示操作，会有人身伤亡、工具损坏的危险。

△ 表示会有电击的危险。

△ 表示会有火灾危险。

警告： 阅读说明。没有按照以下列举的说明或使用或操作会导致触电、着火和 / 或严重伤害。在所有以下列举的警告中术语“电动工具”指使电驱动（有线）电动工具或电池驱动（无线）电动工具。

保存这些说明。

a) 工作场地

- 保持工作场地清洁和明亮。混乱和黑暗的场所会引发事故。
- 不要在易燃环境。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操纵电动工具。分心会使您放松控制。

b) 电气安全

- 电动工具插头必须与插座相配。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触电危险。
- 避免人体接触接地表面，如管道、散热器和冰箱。如果您身体接地会增加触电危险。
- 不得将电动工具暴露雨中或潮湿环境中。水进入电动工具将增加触电危险。
- 3)不得用通用电线。绝不要用电线搬运、拉动电动工具或拔出其插头。让电动工具远离热、油、锐边或运动部件。受损或缠绕的电线会增加触电危险。
- 当在户外使用电动工具时，使用适合户外使用的外接电线。适合户外使用的电线将减少触电危险。

c) 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。切勿在有疲倦、药物、酒精或治疗反应下操作电动工具。在操作电动工具期间精力分散会导致严重人身伤害。
- 使用安全装置。始终配戴护目镜。安全装置，诸如适当条件下的防尘面具、防弹安全鞋、安全帽、听力防护等装置能减少人身伤害。
- 避免突然启动。确保开关在插入插头时处于关闭位置。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。
- 5)手不要伸得太长。时刻注意脚下和身体平衡。这样在意外情况下能很好地控制电动工具。
- 6)着装适当。不要穿宽松衣服或佩带饰品。让你的头发、衣服和袖子远离运动部件。宽松衣服、佩饰或长发可能会卷入运动部件。
- 7)如果提供了与排屑装置、集尘设备连接用的装置，则确保他们连接完好且使用得当。使用这些装置可减少碎屑引起的危险。
- d) 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。选用适当的设计额值的电动工具会使你工作有效、更安全。
 - 如果开关不能接通或关闭工具电源，则不能使用该电动工具。不能用开关来控制电动工具是危险的且必须进行修理。
 - 3)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 / 或将电池盒断开电源。这种防护措施能将减少电动工具突然启动的危险。
 - 4)将闲置电动工具贮存儿童所及范围之外，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。电动工具本身未经培训的用戶手中是危险的。
 - 5)保养电动工具。检查运动部件的安装是否正确、零件破损情况和影响电动工具运行的其他条件。如有损坏，电动工具必须在使用前修理好。许多事故由维护不良的电动工具引发。
 - 6)保持切割机锋利和清洁。保持良好的有锋利切削刃的刀具不易卡住而且容易控制。
 - 7)按照使用说明书以及打算使用的电动工具的特殊类型要求的方式，考虑作业条件和进行的作业来使用电动工具、附件和工具的刀具等。电动工具用作那些与要求不符的操作可能会导致危险情况。
- e) 维修
 - 1)将你的电动工具送交专业维修人员，必须使用同样的备件进行更换。这样确保所维修的电动工具的安全性。

冲击钻的附加安全守则

- 配**防护耳罩**，以免损害听力。
- 使用**辅助把手**，以免失控并构成危险。
- 保持钻头锋利已达最佳及最安全的效能。
- 当更换或装上配件时，必要依从配件的说明书上所述而行。
- 如本冲击钻有问题，切勿试图自行修理，请把它送到当地的百得指定维修中心检查。
- 接上电源前要确定开关是在“关”的位置；放下工具前必先把它关掉。
- 切勿随意丢弃** - 本冲击钻以其自身转速运行会有更佳及更安全的表现。

- △ **警告：** 某些因砂光、割锯、磨光、钻孔及其它建造业活动所产生的尘屑所含化学物质可能引起癌症、先天缺陷、或会危害生育的。其中一些化学物质的例子为：
 - 含铅的油漆；
 - 墙转及水泥中的透明二氧化硅及其它砖石产品；及
 - 经化学处理木材中的砷及铬(CCA)
- 这些物质对你的危害视乎您做这类工作的频率程度。要减低接触此类化学品，请在空气流通的地方工作，并使用证明安全的器具(如特别为过滤极细尘设计的防尘面罩)。
- 切勿长期在**因砂光、割锯、磨光、钻孔及其它建造业活动而产生尘屑的环境下工作，请使用保护衣物及用肥皂及水清洗衣物遮掩的部位**。若任由这些尘屑进入您的口、眼或皮肤上，您会吸入有害的化学品而危害健康。

工具上的标签

工具上的标签可能会有下列符号：

V	……………	伏特
A	……………	安培
Hz	……………	赫兹
W	……………	瓦
Min.	……………	分钟
~	……………	交流电
—	……………	直流电
ng	……………	空载转速
□	……………	II类工具
⊔	……………	接地终端
⚠	……………	安全警告符号
…/min	……………	每分钟转速或往复次数
…/bpm	……………	每分钟冲击次数

双重绝缘

⊔ 本工具是双重绝缘的；有关电动及机械部份均以额外的绝缘体隔开，因此，所有外部的金属部份都是与电分隔的。双重绝缘能使电器更加安全，而且无需接地线。 **注意：** 双重绝缘不能代替使用本工具的正常安全措施，它是对工具的可能电力绝缘失效而多加的一重保护而已。

电气安全

本工具的电动机达仅适用于某一特定的电压。使用前，先要检查并确保电源电压与铭牌上的电压相符。

△ 切勿切火线(L)或地线(N)与标有E或⊕符号的引线相接。

使用延长线

如非必要，请勿使用延长线。使用不正确的延长线会引致火灾或电击的危险。如果非要使用不可，请用当地电力机构认可的延长线。使用前先确定延长线的性能良好，并且符合工具的电源输入(见铭牌上的技术数据)。

如果使用卷盘电线，必须把卷盘电线全部松开。

部件(图A)

- 调速扳机开关
- 调速旋钮(只限KR703*)
- 锁定钮
- 正 / 逆转选择杆
- 钻孔模式选择器
- 免匙夹头(只限KR703及KR603)
- 钥匙夹头(只限KR45RE/KR50RE/KR55RE/KR71RE)
- 可调深度尺(除KR71RE-KR外)
- 辅助把手
- 夹头钥匙(只限KR45RE/KR50RE/KR55RE/KR71RE)

本工具可能有下列功能：

- 开关可以操控工具的所有操作模式。
- 调速旋钮使工具更易操控以作广泛用途。
- 锁定使工具可连续操作；
- 利用辅助把手可使工具在操作时更稳定；

- 可调深度尺可设定钻孔深度；
- 利用钻孔模式选择器可设定垂直钻击或旋转钻孔模式。
- 正 / 逆转选择杆设定工具的转动方向，使工具可作作为起子使用；或可拉出卡塞的钻头。

组装和调整

△ 组装和调整前，先要切断电源。

△ **注意：** 这工具未必包含本说明书所提及的配件。

安装辅助把手及深度尺 (图B)

辅助把手 (9)可安装在冲击钻的左或右面。

- 如图逆时针方向转动辅助把手的握把部分直至可把辅助把手 (9)套入工具的前面。
- 旋转辅助把手至所需位置。
- 把深度尺 (8)插入辅助把手的孔内。(除KR71RE-KR外)
- 如图设定深度尺。
- 顺时针方向转紧握把。

装卸钻头或起子头

△ 请先切断电源。

免匙夹头(只限KR603/KR703) (图C)

- 逆时针方向旋开夹头套筒(6)。
- 把钻头柄(11)插入夹头。
- 顺时针方向旋紧夹头套筒。

钥匙夹头(只限KR55RE/KR50RE/KR45RE/KR71RE) (图D)

- 逆时针方向旋开夹头套筒(7)。
- 把钻头柄(11)插入夹头。
- 把夹头钥匙(10)插入夹头的孔(12)内，然后顺时针旋紧。

装卸夹头(图E)

- 把夹头爪开至最大。
- 以螺丝刀顺时针方向转动夹头内的螺丝，把它卸下。
- 如图把六角匙（另购）插入夹头，并用锤子敲击六角匙。
- 卸下六角匙。
- 逆时针方向旋转夹头把它卸下。
- 要把夹头重新装上，把夹头放入旋轴，再用螺丝旋紧。

使用指南

△ 请遵守安全指示及相关条例。

△ 让工具依其自身速度运行，切勿过载。

- 小心管道及电线的危险。
- 以温和的力度(大约2-3千克)压向工具，过大的压力虽然可以加快钻孔的速度，但却会降低工具的性能并缩短工具的寿命。

设定转动方向 (图A)

- 请使用正转（顺时针方向）来钻孔或旋紧螺丝；使用逆转（逆时针方向）来卸下螺丝或卡塞的钻头。
- 使用正转，把正 / 逆转选择杆(4)推向右边。
- 使用逆转，把正 / 逆转选择杆推向左边。

△ 推动正逆转转动杆前先确定工具马达已完全停止。

设定速度(只限KR703*)(图A)

- 把调速旋钮(2)转至所需位置。
- 逆时针方向旋转调速旋钮以设定低速；顺时针方向旋转调速旋钮以设定高速。
- 通常来说，用低速来转粗的钻头，幼钻头可用高速来转。

选择使用模式(图A)

△ 要钻砖石，把钻孔模式选择器(4)推至 **T** 位置。

△ 要钻其它物料或转螺丝，把钻孔模式选择器(4)推至 **2** 位置。

设定钻孔深度 (图E)

△ 安装适当的钻头；

△ 转松辅助把手(9)；

- 把深度尺(8)插入辅助把手夹的孔内；(除KR71RE-KR外)
- 滑动深度尺，直至它的尾端和钻头的距离与螺丝的长度相等。
- 转紧辅助把手。

调速开关(图A)

- 要启动工具，按压调速扳机开关(1)，按压扳机愈深，则工具的速度愈快。
- 通常使用低速钻直径大的孔。使用高钻直径小的孔。
- 按压扳机愈深，工具的速度愈快。
- 要持续钻孔，按下开关后，再按锁定钮(3)，然后松开开关。这功能只能在工具达全速或在使用调速旋钮预设了的速度时才可使用；逆转时不能使用这功能。
- 要止动工具，释放扳机开关。

便利提示

钻孔

- △ **警告：** 工具有时会失速(若过慢或使用不当)而造成扰动的机会。紧握工具以控制工具的扭动以避免失控而造成人身伤害。假若工具失速，应立即释放扳机开关，即下钻头并找出失速的原因。切勿将扳机开关忽略忽略地连续去启动和启动工具，这会损坏电机。
- 去湿和冷却的工具，这会脱电钻钻。
- 在木材上钻孔时应使用铲形钻头。
- 使用高速锋钢(麻花)钻头钻金属。
- 使用砖头钻头以钻软砖。
- 当钻金属时，亦应使用切削润滑油；铸铁及黄铜则例外，它们应干钻。最佳的切削润滑油为含硫切削油或猪油；烟肉油有同样功效。
- 在要钻孔的位置上下压下記号才钻会比较准确。
- 当要把钻头从钻孔中拉出时，应保持马达转动，以防止钻头卡塞。
- 使用麻花钻头来钻木时，要经常把钻头从钻孔中拉出以清除钻头槽的木屑以免过热。

转螺丝

- 使用正确种类及尺寸螺丝。
- 如螺丝很难旋紧，可尝试用一点清洁剂或肥皂来作润滑剂。
- 工具、起子头及螺丝应成一直线。

维护

本百得工具的设计使其可长时间使用而只需最少的维护，要使工具有满意的性能，需要长久正确的对工具维护及清洁。请勿尝试自行维修本冲击钻，请把它送到百得的指定维修中心去。

润滑

本工具无需加额外的润滑油。

清洁工具

△ **警告：** 清洁工具前先要切断电源。

- 以软刷子或干布定期清洁排气孔。工具外壳可用湿布及温和清洁剂清洁。
- 定期用湿布清洁工具外壳，但切勿使用溶剂。
- 定期开启夹头，然后旋转夹头以清理夹头内的碎屑。

重要说明

为了确保本工具安全可靠，只能由授权的维修中心或其它专业维修组织进行维修、保养及调整；同时亦必须使用相同的更换部件。本工具内并无用户可自行更换的零件。

配件

任何电动工具的性能是依赖使用得当的配件的，百得的配件都是经精心设计，并以最佳物料制造。再经无数次严谨的测试合格才推出市场的；故其质量一等一，务求与电动工具相辅相成。使用百得配件会令您的电动工具如虎添翼。百得推荐的配件，在当地的销售商或授权的维修中心有售。

△ **警告：** 本电动工具使用任何未经推荐的配件，均可能导致危险。

环境保护

♻ 本工具必须与家庭垃圾分开处理。

若某天您想更新工具或工具对您已无用处，切勿把它丢在家庭垃圾中。

- 分开处理的废物可令废物循环再造的原料。
- 将物料循环再造可避免环境污染及减少对环境的需求。

需要时，与当地的政府联络，索取有关处置废物的资料。

维修服务

百得在欧洲各地均设有直属或授权的维修中心网络。所有百得维修中心的专业人员均训练有素，可以给予顾客提供高效、可靠的维修服务。

无论您需要技术建议、维修还是更换原厂配件，请与就近的百得维修中心联系。

注意事项

- 由于百得对产品不断作出改良，因此我们保留更改产品规格的权利，而无须作出任何事前通知。
- 标准设备和备用零件在各国可能有所不同。
- 产品规格在各国可能有所不同。
- 百得不一定对所有的国家都供应整套系列的产品。关于供货范围情况请与当地经销商洽谈。

* 台湾除外

制造厂： 百得（苏州）科技有限公司

制造厂地址： 苏州工业园区苏虹路200号出口加工区

产地： 江苏苏州

海报 드릴

KR45RE/KR50RE/KR55RE/KR603/KR703/KR71RE

기술 자료

해머 드릴	KR45RE	KR50RE	KR55RE	KR603	KR703	KR71RE	
척 크기	mm	1-10	1-10	1.5-13	1-13	2-13	1.5-13
전원	W	450	500	550	650	710	710
무부하 회전수	RPM	0-2,800	0-2,800	0-2,800	0-3,100	0-3,100	0-2,800
충격률	BPM	0-44-800	0-44-800	0-44,800	0-52,700	0-52,700	0-44,800
역회전	예	예	예	예	예	예	
최대 드릴 구멍 크기							
- 철재/목재/콘크리트	mm	10/20/10	10/20/10	13/20/13	13/25/13	13/32/16	13/20/13
케이블 길이	m	3	3	3	3	3	3
중량	kg	1.9	1.9	1.9	1.95	2.11	1.9

용도

Black & Decker 해머 드릴은 목재, 철재, 플라스틱 및 연성 석재를 대상으로 하는 드릴 작업과 스크루드라이버 작업용으로 설계되었습니다.

안전 지침

전동 공구를 사용할 때 파쇄, 갇힘, 신체 상해 및 제품 손상을 줄이기 위해 각 국가에 적용되는 안전 규정을 항상 준수하십시오. 본 제품을 작동하기 전에 다음의 안전 지침을 읽으십시오. 또한 본 지침서를 안전한 장소에 보관하십시오.

다음은 본 설명서에서 사용되는 기호입니다.

△ 본 설명서의 지침을 준수하지 않을 경우로 나타낼 수 있는 신체 상해, 생명 단축, 또는 공구 손상의 위험을 나타냅니다.

△ 갇힘의 위험을 나타냅니다.

△ 화재 위험을 나타냅니다.

작업 공간

- 작업 공간**
 - 작업 공간을 절정하게 유지하고 항상 조명을 사용하십시오.** 작업공간이 안전한 곳에서 작업은 사고가 발생할 위험이 있습니다. 또한 작업 공간의 조명은 250 ~ 300 럭스 정도로 유지하십시오.
 - 전동 공구를 인화성 액체, 가스, 연기 등 폭발 위험이 있는 장소에서 사용하지 마십시오.** 전동 공구를 사용하면 먼지나 연기에 불이 붙을 수 있는 상황이 발생합니다.
 - 전동 공구를 사용하는 동안에는 어린이 등 작업지 외의 다른 사람이 주변에 오지 않도록 하십시오.** 주위가 신변해진 전동 공구를 올바르게 사용할 수 없습니다.

전기 안전

- 전동 공구의 플러그는 반드시 해당 콘센트에 끼워야 합니다.** 잘못된 플러그를 개조해서는 안됩니다. **어댑터 플러그를 접지된 전동 공구와 함께 사용하지 마십시오.** 플러그를 잘못된 콘센트에 끼워서 사용하면 갇힘 위험이 줄어듭니다.
 - 절대 콘센트(파워) 플러그이며, 콘센트에 넣으려 하면 선을 절단하지 마십시오.** 선제가 절지되면 갇힘 위험이 발생합니다.
 - 전동 공구를 비가 내리는 곳이나 습기가 많은 곳에 노출하지 마십시오.** 전동 공구를 물에 들어가면 갇힘 위험이 커집니다.
 - 코드와 합선로 다루지 마십시오.** 코드를 잡고 전동 공구를 옮기거나 장마터기나 플러그를 뽑지 마십시오. 코드를 열, 기름, 뜨거운 물이나 뜨거운 작을 부분에서 멀리하십시오. 코드가 손상되었거나 꼬여 있으면 갇힘 위험이 커집니다.
 - 공구로 이리에서 사용할 때는 이리용으로 적합한 연장 코드를 사용하십시오.** 이리용으로 적합한 코드를 사용하면 갇힘 위험이 줄어듭니다.

신체 관련

- 항상 주의하십시오.** 작업이 집중하십시오. 올바른 방법으로 사용하십시오. 피로하거나 마약, 음주 또는 약을 복용 중에는 절대로 공구를 사용하지 마십시오. 전동 공구 사용 중에 주의하지 않으면 심각한 신체 상해를 입을 수 있습니다.
- 안전 장비를 사용하십시오.** 항상 보안경을 착용하십시오. 알려진 단점 충격을 방지할 뿐 안전 유리가 아닙니다. 머리가 긴 경우에는 푸간 등을 착용하여 머리를 안쪽으로 넣어주십시오. 방진 마스크, 마모용 방진 안전화, 안전모, 방열 앞치마, 방열 장갑 등과 같은 안전 장비를 착용하면 신체 상해의 위험을 줄일 수 있습니다.
- 갑작스런 작동을 삼가십시오.** 플러그를 켜기 전에 스위치가 off 위치에 있는지 확인하십시오. 전동 공구를 옮기거나 전동 공구의 플러그를 뽑을 때는 손가락이 스위치 부분에 있으면 갑작스 스위치가 켜질 수 있습니다.
- 전동 공구를 사용하기 전에 조정용 키와 렌치를 안전히 제거하십시오.** 렌치나 키가 전동 공구의 회전부에 부착되어 있으면 신체 상해를 입을 수 있습니다.
- 몸을 관리해 줌서 작업하지 마십시오.** 바로 서서 항상 평형을 유지하십시오. 이렇게 하면 갑작스런 상황에서 전동 공구를 작동할 수 있습니다.
- 작업에 일정한 휴식을 착용하십시오.** 일정한 휴이나 장시간을 착용하지 마십시오. 무릎, 옷 및 장갑을 착용 부분에서 멀리하십시오. 옷, 장갑 또는 긴 머리가 착용 부분에 걸릴 수 있으므로 주의하십시오.
- 장기가 분리 되기 및 수기 기능을 제공하는 경우 언더 상태를 확인하고 올바르게 사용하지 하지 확인하십시오.** 이와 같은 장비를 사용하면 분리를 관련된 위험을 최소화할 수 있습니다.
- 작업 공구를 안전하게 확인하십시오.** 플러그나 바이스를 사용하지 작업할 고정시키십시오. 암을 사용하여 공구를 작동하는 것이 더 안전하고 편리합니다.

- 전동 공구 사용 및 관리**
 - 전동 공구에 무리한 힘을 가하지 마십시오.** 사용 분야에 맞는 전동 공구를 사용하십시오. 일정한 전동 공구는 충격과 일정한 환경에서 더욱 안전하고 향상된 작업을 수행합니다.
 - 스위치가 켜지거나 꺼지지 않는 경우 전동 공구를 사용하지 마십시오.** 스위치가 작동하지 않는 전동 공구는 위험하므로 반드시 수리 분야이 합니다.
 - 조정용 키나 부품을 교체하거나 전동 공구를 보정하기 전에는 콘센트 등에서 전원 플러그를 뽑으십시오.** 이와 같은 예외 안전 조치는 전동 공구가 갑작스런 작동하는 위험을 줄여줍니다.
 - 사용하지 않는 전동 공구는 어린이의 손이 닿지 않는 곳에 보관하고 전동 공구나 해당 지점에 익숙하지 않은 사람이 전동 공구를 사용하지 않도록 하십시오.** 본 제품은 전동 공구 사용에 익숙하지 않은 사용자에게는 위험한 제품입니다.
 - 전동 공구를 유지 관리하십시오.** 작동 부분의 이물질이나 얼음, 부록 피손 등 전동 공구 작동에 영향을 미치는 상태를 확인하십시오. 손상된 경우, 사용용 지침서 지침을 공을 수리하십시오. 전동 공구를 제대로 관리하지 않아서 발생할 수 사고가 있습니다.
 - 절차 공구를 올바르게 점검하고 유지 관리하십시오.** 절삭 공구를 올바르게 유지 관리하여 절삭면이 날카로우면 잘 깎이기 쉽고 쉽게 작업할 수 있습니다.
 - 전동 공구, 부록 및 공구 비트 등을 해당 지침 및 전동 공구별 사용 방법에 따라, 작업 조건 및 작업을 고려하여 사용하십시오.** 전동 공구를 설계 용도와 다르게 사용하면 위험해질 수 있습니다.
- 서비스**
 - 전동 공구는 반드시 승인 수리 기사가 승정 부품을 사용하여 수리해야 합니다.** 이렇게 하면 전동 공구를 안전하게 유지 관리할 수 있습니다.

해머 드릴 사용자 안전규

- 일렉트 드릴 사용자 방향장구를 착용하십시오.** 소음이 노출되면 청각이 손상될 수 있습니다.
- 공구와 함께 제공된 보호 헬멧을 사용하십시오.** 전동 공구 사용 중에 머리나 얼굴을 올바르게 제어하지 못하면 신체 상해 입을 수 있습니다.
- 최고의 안전성을 확보하기 위해 안전 장비를 사용하십시오.** 알려진 단점 충격을 방지할 뿐 안전 유리가 아닙니다. 머리가 긴 경우에는 푸간 등을 착용하여 머리를 안쪽으로 넣어주십시오. 방진 마스크, 마모용 방진 안전화, 안전모, 방열 앞치마, 방열 장갑 등과 같은 안전 장비를 착용하면 신체 상해의 위험을 줄일 수 있습니다.
- 해머 드릴에 문제가 생기면 사용자가 직접 수리하지 말고 공인 수리 기사에 연락하십시오.**
- 공구 전원 플러그를 꺼주거나 공구를 내려 놓기 전에 스위치가 "off" (꺼짐) 위치에 있는지 확인하십시오.**
- 해머 드릴에 무리한 힘을 가하지 마십시오.** - 권장 속도로 작업하는 것이 더 안전하고 확실합니다.
- 경고: 안전 락, 홈질, 연막, 드릴이나 기타 전동 작업 중에는 콘센트에서 플러그를 뽑으십시오.** 콘센트를 플러그