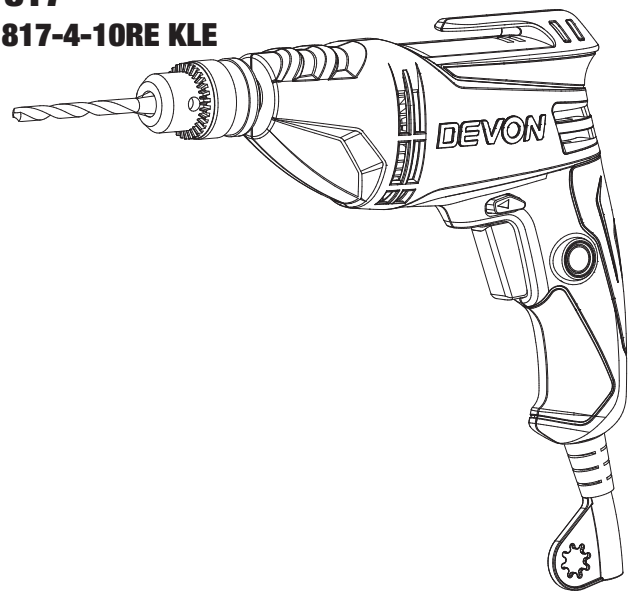
DEVON® 大有

型号：**1812**
1812-2
1816
1817
1817-4-10RE KLE



各产品外观之间存在差异，请以实物为准。

中国 电钻

GB **Electric Drill**

专业电动工具

PROFESSIONAL TOOLS

大有工具 "劲"在掌握

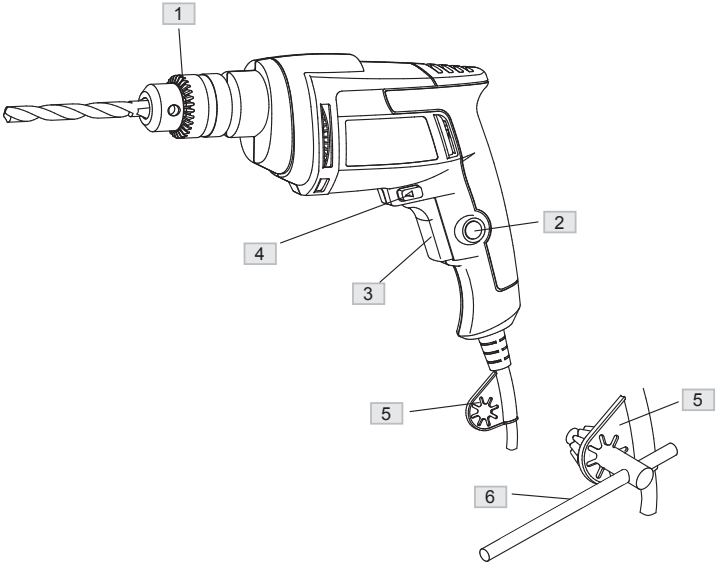
电钻简介

本电动工具主要用于有色金属、铸铁、木材和塑料的钻孔，及普通钢材的钻削。

请您在使用前务必仔细阅读说明书，并严格按照说明指示使用该电钻。

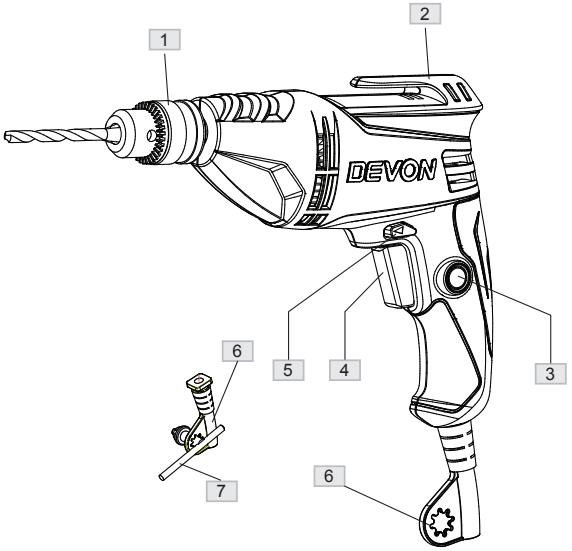
1. 操作控制

1812/1816系列



1. 钻夹头
2. 锁定按钮
3. 开关
4. 换向拨杆
5. 钥匙袋
6. 夹盘钥匙

1817系列



1. 钻夹头
2. 腰带夹
3. 锁定按钮
4. 开关
5. 换向拨杆
6. 钥匙袋
7. 夹盘钥匙

2、工具规格

型号	1812	1812-2	1816	1817	1817-4-10RE KLE
额定输入功率(W)	450	550	550	400	400
空载转速(/min)	0-2700	0-2600	0-2600	0-1650	0-1650
负载转速(/min)	0-1700	0-1650	0-1700	0-1200	0-1200
夹头夹紧范围(mm)	1.5-10	1.5-10	1.5-13	1.5-10	1.5-10
钻孔直径-钢铁(mm)	10	10	13	10	10
钻孔直径-木材(mm)	20	25	25	20	20
重量(kg)	1.45	1.50	1.60	1.20	1.20
换向功能	√	√	√	√	√
调速功能	√	√	√	√	√
自紧夹头	X	X	X	X	√
保护等级	⧈/II	⧈/II	⧈/II	⧈/II	⧈/II
绝缘等级	E	E	E	E	E

注：为求改进，本说明书所载规格可能不预先通告而给予更改。

电动工具通用安全警告

⚠ **警告！阅读随电动工具提供的所有安全警告、说明、图示和规定。**不遵照以下所列说明会导致电击、着火和/或严重伤害。

保存所有警告和说明书以备查阅。

警告中的术语“电动工具”是指市电驱动（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

1）**保持工作场地清洁和明亮。**杂乱和黑暗的场地会引发事故。

2）**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。

3）**操作电动工具时，远离儿童和旁观者。**注意力不集中会使你失去对工具的控制。

2．电气安全

1）**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降低电击风险。

2）**避免人体接触接地表面，如管道、散热片和冰箱。**如果你身体接触接地表面会增加电击风险。

3）**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风险。

4）**不得滥用软线。绝不能用软线搬运、拉动电动工具或拔出其插头。使软线远离热源、油、锐边或运动部件。**受损或缠绕的软线会增加电击风险。

5）**当在户外使用电动工具时，使用适合户外使用的延长线。**适合户外使用的电线将降低电击危险。

6）**如果无法避免在潮湿环境中操作电动工具，应使用带有剩余电流装置（RCD）保护的电源。RCD的使用可降低电击风险。**

3．人身安全

1）**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。

2）**使用个人防护装置。始终佩戴护目镜。**防护装置，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。

3）**防止意外起动。在连接电源和/或电池包、拿起或搬运工具前确保开关处于关断位置。**手指放在开关上搬运工具或开关处于接通时通电会导致危险。

4）**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）**手不要过分伸展。时刻注意立足点和身体平衡。**这样能在意外情况下能更好地控制住电动工具。

6）**着装适当。不要穿宽松衣服或佩戴饰品。让你的头发和衣服远离运动部件。**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、集尘设备连接用的装置，要确保其连接完好且使用得当。**使用集尘装置可降低尘屑引起的危险。

8）**不要因为频繁使用工具而产生的熟悉感而掉以轻心，忽视工具的安全准则。**某个粗心的动作可能在瞬间导致严重的伤害。

4. **电动工具使用和注意事项**

1）**不要勉强使用电动工具，根据用途使用合适的电动工具。**选用合适的按照额定值设计的电动工具会使你工作更有效、更安全。

2）**如果开关不能接通或关断电源，则不能使用该电动工具。**不能通过开关来控制的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/或卸下电池包（如可拆卸）。**这种防护性的安全措施降低了电动工具意外起动的风险。

4）**将闲置不用的电动工具贮存在儿童所及范围之外，并且不允许不熟悉电动工具和不了解这些说明的人操作电动工具。**电动工具在未经培训的使用者手中是危险的。

5）**维护电动工具及其附件。检查运动部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，应在使用前修理好电动工具。**许多事故是由维护不良的电动工具引发的。

6）**保持切削刀具锋利和清洁。**维护良好地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，并考虑作业条件和要进行的作业来选择电动工具、附件和工具的刀头等。**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情况。

8）**保持手柄和握持表面干燥、清洁，不得沾有油脂。**在意外的情况下，湿滑的手柄不能保证握持的安全和对工具的控制。

5．**维修**

由专业维修人员使用相同的备件维修电动工具。这将保证所维修的电动工具的安全。

电钻安全警告

—当在钻削附件可能触及暗线或其自身导线的场合进行操作时，要通过绝缘握持面握持工具。钻削附件碰到带电导线会使工具外露的金属零件带电而使操作者受到电击。

符号	含义
	阅读说明书
	警告标记
	请佩戴防护用具
	Ⅱ类工具
	不要丢入垃圾桶

电钻工作时产生的粉尘可能含有致癌或对人体有害的化学物质。例如：

- 油漆中含的铅。
- 砷和铬与木材起反应后也会产生有毒物质。

为了减少这些有毒的化妆物质对人体的伤害，要尽量保证在通风的环境下工作，并且工作时配戴合格的安全保护装置。

配备

- 夹头钥匙 1个

（在某些国家或某些特殊的机型，其所提供的配备，可能与以上所给的资料稍有出入。

操作说明

1．**检查供电电压** 须与铭牌数据相符！

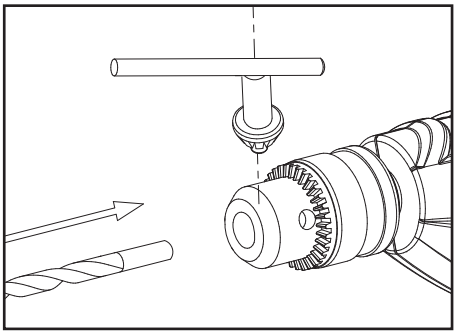
2．**安装钻头**

1）插入:紧握机身，同时转动齿轮夹盘（逆时针），直至夹头打开至足够容纳钻头插入。

2）夹紧：把齿轮夹环以相反方向转动，直至夹盘变紧。

3）紧固：把夹盘钥匙先后插入夹盘上的三个匙孔，以同等力度收紧。

4）以上述相反动作即可卸下钻头。

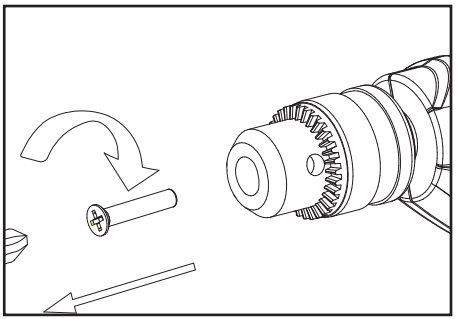


⚠ 为了您的安全，夹头钥匙使用完后，应立即取下，放回电缆套管的匙袋内！

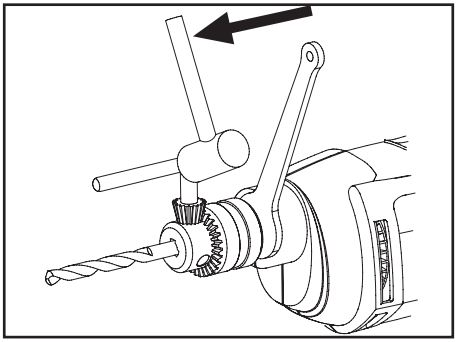
3．更换钻夹头

更换钻夹头时，建议同时更换钻夹头内的左旋螺钉！

1）打开钻夹头，并用螺丝起子扭出（顺时针旋转）左旋螺钉。



2）用开口扳手夹紧输出轴，将夹盘钥匙插入钻夹头的侧面孔内，用橡胶锤轻敲夹盘钥匙，使钻夹头逆时针转动。图示如下：



4．开关操作

⚠ 检查工具的开关操作是否自如，确保插电前开关处于关停状态！

1）间歇性作业：

启动 ：按下开关

关停 ：放开开关

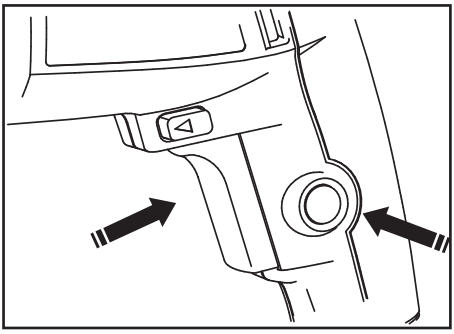
2）连续性作业：

启动 ：按下开关及锁定按钮

关停 ：放开开关即可

3）调速操作

在开关上施力越大，转速越高。可无段式增加至所需转速。



5．换向操作

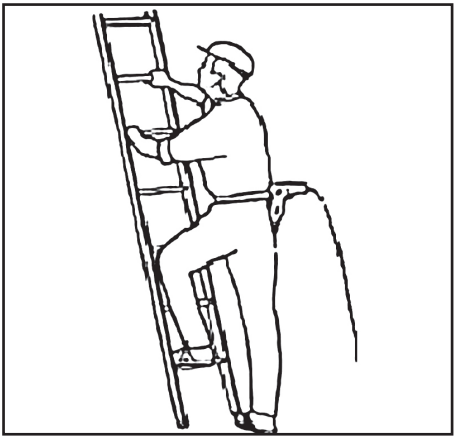
1）正转：换向拨杆推向左手侧

2）反转：换向拨杆推向右手侧

⚠ 换向操作前，必须关停开关，否则会烧坏马达。

6．腰带夹的应用（仅在1817系列上配置）

如工作需要，关机后可利用腰带夹将电钻悬挂于腰间，以利于攀爬。



实际应用

⚠ 为减少爆炸、电击等危险和伤害，作业前必须检查钻孔位置有无隐蔽的电线、气体、供水管道！

1．注意事项

1）作业前，先确认工件是否被夹具或台钳卡紧

2）在工件（如薄铁板、木材）之下垫木块以防变形或碎裂；

3）在钻孔处作记号，先钻出一个中心孔，以防止钻头尖端滑脱。

4）紧握手柄，但不需加强力。过大的压力并不能加快钻孔速度，反而易损坏钻头边缘，降低效率和钻头寿命。

5）不时将钻头由钻孔中抽出，以便冷却。

工具在操作间隙，钻头尚未完全静止和冷却，严禁用手接触钻头清除铁屑、木屑！

2．钻钢材等金属

1）使用高速钢螺旋钻（特别是钻白生铁，须用硬金属钻头）

2）以下材料的工件，润滑剂使用建议：

钢：油

铝：松节油、石蜡

黄铜、铜、生铁：不必使用润滑剂

3．钻木材

1）选用麻花钻时，注意将钻头慢慢由钻孔中抽出，清除凹槽内木屑。

2）为防钻穿时木材碎裂，可在钻头刚穿透木材，露出钻头尖端时翻转工件，从反面完成钻孔。

4．旋紧螺丝

1）使用大小合适的螺丝起子。 建议用于″十″ 字头螺丝，因为螺丝起子的刀头容易从″一″字头螺丝的头上滑出来。

2）软木不须事先钻孔，便可锁入螺丝。硬木或锁较粗的螺丝时，则须先钻孔。

3）锁螺栓头螺钉，须先钻螺头大小的孔。

4）锁木材螺丝，须先钻孔约半个螺丝深。

工具维护保养

注意：对电钻进行维修检查之前，必须把插头拔离电源插座！

1．**检查安装螺钉。**经常检查安装螺钉是否紧固稳妥。螺钉松开极易引起严重事故。

2．**定期检查线缆。**如发现损伤应立即委托**DEVON**®授权的维修中心处理。

3．**保持通风槽清洁顺畅。**经常清除尘埃、油污，严防杂物入内。

4．**更换碳刷。**经**DEVON**®授权的维修中心检查和更换碳刷，以保证工具长期安全使用。

5．**必须由DEVON®授权的维修中心进行维修。**只能使用**DEVON**®的配件、零件。

6. **清洁。**避免使用造成塑料龟裂损坏的溶剂擦拭塑料零件。建议使用稍微沾湿了肥皂水的柔布擦拭外塑料机壳。

7、避免工具受到震荡、撞击或油脂影响

⚠ **请勿让马达淋到水，禁止将整个机身投入水中，以免引起马达故障及触电事故！**

环境保护

1. **DEVON**®的包装可以百分之百进行回收再生处理。

2. 报废的电动工具和附件中含有大量有价值的原材料及合成材料，同样可以进行再生回收。

3. 磨屑或切割时所产生的粉尘中会包含有害物质，因而不应作为普通垃圾倾倒，而应交给特殊垃圾回收站处理。

服务

1. 工具需要保修时,请自行送至当地特约维修中心，并提供有效保修卡及购机发票原件，遗失保修卡恕不补发。

2. 由于正常磨耗、过载或不当使用而导致的损坏，不在保修范围内。

附：一般故障及排除方法

故障	原因	排除方法
1. 接电后电机不运转	1. 电源断了	1. 修复电源
	2. 接头松落	2. 检查所有接头
	3. 开关接触不良或不动作	3. 修理或更换开关
	4. 电刷与换向器表面不接触	4. 更换碳刷
2. 接电后有异声且不旋转或转得很慢	1. 开关触点烧坏	1. 修理或更换开关
	2. 机械部分卡住	2. 检查机械部分
3. 换向器上产生环火或较大火花	1. 电枢短路	1. 修复电枢
	2. 电刷和换向器接触不良	2. 更换碳刷
	3. 换向器表面不光洁	3. 清除杂物，使换向器表面光洁
4. 旋转慢且有异声	1. 钻尾长短不符合设计尺寸	1. 更换标准钻尾的钻头
	2. 钻头碰到钢筋	2. 重新选择钻孔点
	3. 润滑脂太多	3. 选择适量的润滑脂

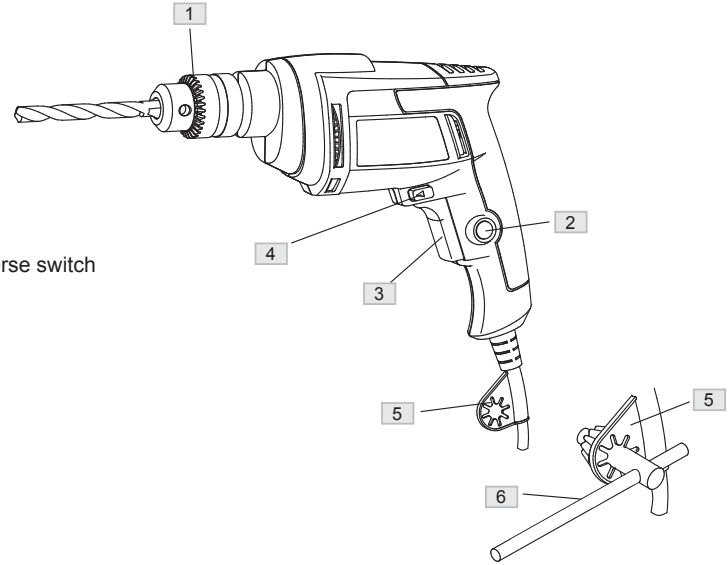
DESCRIPTION OF THE TOOL

The power tool is intended for drilling in nonferrous material, cast iron, wood, plastic, plain carbon steel.

Read, understand and follow all safety rules and instructions before using this tool.

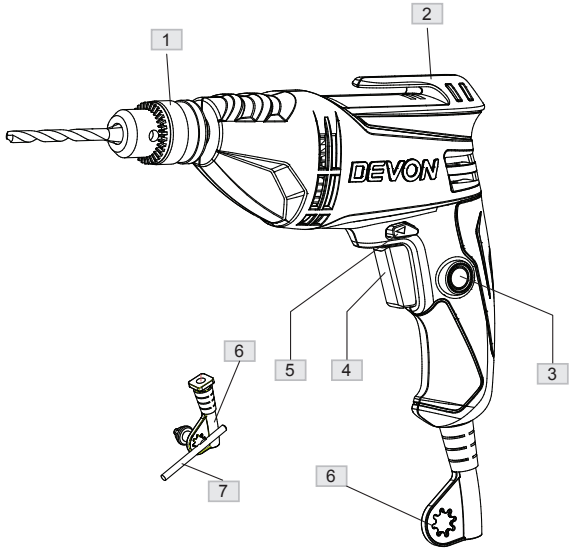
1. MAIN PARTS

1812 / 1816 Series types



1. Chuck
2. Lock button
3. Trigger
4. Forward/Reverse switch
5. Key bag
6. Chuck Key

1817 Series types



1. Chuck
2. Hook
3. Lock button
4. Trigger
5. Forward/Reverse switch
6. Key bag
7. Chuck Key

2、TOOL SPECIFICATIONS

Model	1812	1812-2	1816	1817	1817-4-10RE KLE
Input power (W)	450	550	550	400	400
No load (/min)	0-2700	0-2600	0-2600	0-1650	0-1650
Loaded (/min)	0-1700	0-1650	0-1700	0-1200	0-1200
Chuck clamping range(mm)	1.5-10	1.5-10	1.5-13	1.5-10	1.5-10
Capacity : Steel(mm)	10	10	13	10	10
Capacity : Wood (mm)	20	25	25	20	20
Weight (Kg)	1.45	1.50	1.60	1.20	1.20
Reward/Reverse function	√	√	√	√	√
Vary Speed function	√	√	√	√	√
Keyless chuck	X	X	X	X	√
Protect grade	□/II	□/II	□/II	□/II	□/II
Insulated grade	E	E	E	E	E

NOTE: Due to **DEVON**'s continuing program of development, the specifications herein are subject of change without prior notice.

GENERAL SAFETY RULES

⚠ **WARNING:** Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal 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

■ WORK AREA

1. Keep workplace clean and well lit. Cluttered and dark workplaces invite accidents.
2. 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.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

■ Electrical safety

1. 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.
2. Avoid body contact with earthed or grounded surfaces such as conduits, radiators, and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
3. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
4. 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.
5. 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.
6. 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.

■ Personal safety

1. 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.
2. 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 person- al injuries.
3. Avoid suddenly starting. Ensure the switch is

in the off position before plugging in. When your finger on the switch or plugging in power tools that have the switch on invites accidents.

4. 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.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. 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.
7. f 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.
8. Use clamps or another practical way to support and secure 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.
9. Do not use on a ladder or unstable support. Stable footing on a solid surface enables better control of the power tool in unexpected situations.
10. Keep handles dry, clean, and free from oil and grease. Slippery hands cannot safely control the power tool.
11. Always wear safety glasses with side shields. Everyday glasses may have impact resistant lenses, but they are not safety glasses. Following this rule will reduce the risk of eye injury.
12. Protect your lungs. Wear a face or dust mask if the operation is dusty. Following this rule will reduce the risk of serious personal injury.
13. Protect your hearing. Wear hearing protection during extended periods of operation. Following this rule will reduce the risk of serious person injury.

■ **Power tool use and care**

1. 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.
2. 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.
3. Disconnect the plug from the power source be- fore making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. 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.
5. Maintain power tools. Check for misalign- ment 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.
6. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. 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 per- formed. Use of the power tool for operations different from those intended could result in a hazardous situation.

8. Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you lend this tool to some- one else, also lend them these instructions.

■ **Service**

1). Have your power tool serviced by a qualified repair person.

2). When servicing a power tool, use only iden- tical replacement parts.

3). Follow instructions in the Maintenance section of this manual. Use of unauthor- ized parts or failure to follow Maintenance

instructions may create a risk of shock or injury.

ADDITIONAL SAFETY RULES FOR ELECTRIC DRILL

1. Place the cord at the back of the tool and keep the cord away from the bit.
2. Secure the workpieces with clamp or bench vice.
3. Check for the hidden electrical wire, gas or water pipeline by a metal detector.
4. Do not clear up the dust or chips when in operation.
5. Do not dill in any position of the tool house, it will cause electric shock.

WARNING: Some dust created by power Cutting contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints
- arsenics and chromium from chemically reacted lumber.

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.

STANDARD ACCESSORIES

Chuck key 1 Pc

Be sure to check the accessories as it is subject to change by areas and models.

OPERATION

1. POWER SUPPLY

The power tool supply must match the nameplate date.

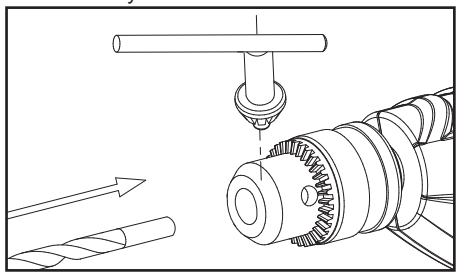
2. INSTALLING BITS

(1) To open the chuck jaws, place the chuck key in one of the three holes located on the chuck. Turn the key counter clockwise.

(2) Insert the bit into the chuck. Center the bit in the chuck jaws Tighten the chuck jaws by hand to align the bit.

(3) To close the chuck jaws, place the chuck key in each of the three holes in the chuck. Turn the chuck key clockwise. Tighten securely.

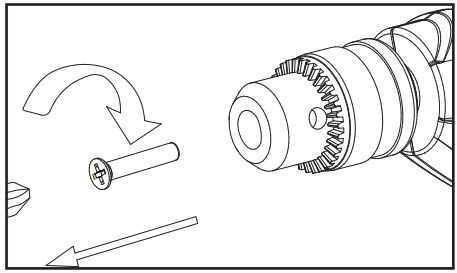
(4) To remove the bit, insert the chuck key into one of the holes in the chuck. Turn the chuck key counterclockwise.



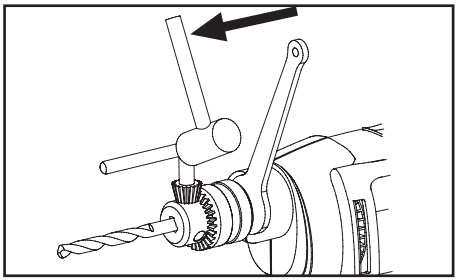
⚠ **WARNING:** To reduce the risk of injury, always remove the chuck key from the chuck after each use.

3. REMOVING BITS

(1) A left-handed thread screw is located inside the chuck to prevent the chuck from loosening when the tool is operated in reverse direction. Remove the screw by turning it clockwise.



(2) To remove the chuck, hold the tool so that only the side of the chuck rests firmly and squarely on a solid workbench.protrude 2mm out for the material. Insert a hex wrench or a chuck remover bar in the chuck jaw, turn the chuck so the wrench is at about a 30^{o} angle to the bench top and strike the key sharply with a hammer so the chuck turns in a counterclockwise direction (looking from the front of the tool). This should loosen the chuck from the spindle.



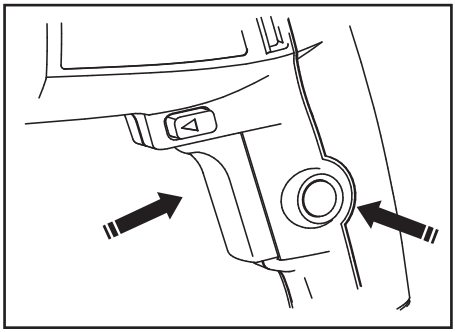
4. TRIGGER CONTROLS

⚠ **WARNING:** To reduce the risk of injury, to make sure you can control the switch freely and keep it off before plugging drill.

(1) To lock the trigger hold the lock button in while pulling the trigger. Release the trigger.

(2) To unlock the trigger, pull the trigger and release. The lock button will pop out.

(3) To vary the drilling speed, simply increase or decrease pressure on the trigger. The further the trigger is pulled, the greater the drilling speed.



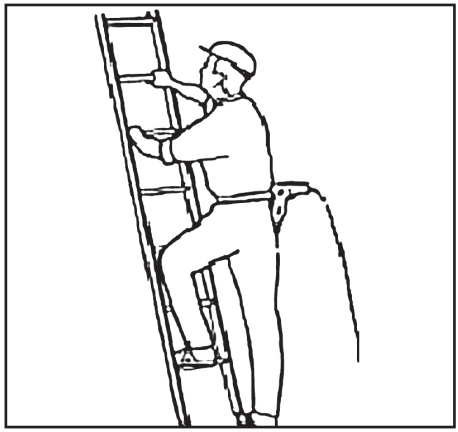
5. FORWARD /REVERSE SWITCH

(1) For forward (clockwise) rotation, push the forward / reverse switch to the left position as shown.

(2) For reverse (counterclockwise) rotation, push the forward / reverse switch to the right position as shown. Although an interlock prevents reversing the tool while the motor is running, allow it to come to a full stop before reversing.

⚠ **WARNING:** Before moving Forward / Reverse switch the tool must be switch off.

6. PRACTICAL BELT CLIP (1817 SERIES TYPES)



For hanging the drill for trouble-free transport on the scaffolds and ladders.

APPLICATIONS

⚠ **WARNING:**To reduce the risk of injury, never touch the bit to clean the debris until it has already stopped and cooled down.

1. SELECT DRILL BITS

When selecting a bit, use the right type for your job. For best performance, always use sharp bits.

(1) Before drilling, be sure the work piece is clamped securely.

(2) Use backing material to prevent damage to the work piece during breakthrough.

(3) When staring a hole, make a mark on the work surface, then drill a small hole.

(4) Always apply pressure in line with the bit. Use enough pressure to keep the drill biting, but do not push hard enough to stall the motor.

(5) Pull the bit out of the hole to prevent jamming, as well as to cool it during running.

2. DRILL IN WOOD AND PLASTIC

(1) Start the drill slowly, gradually increasing speed as you drill. When using twist drill bits, pull the bit out of the hole frequently to clear chips from the bit flutes. Use low

speeds for plastic with a low melting point.

3. DRILL IN METAL

1) Lubricate drill bits with cutting oil when drilling in iron or steel. Do not use a coolant when drilling in nonferrous metals such as copper, brass or aluminum.

4. DRIVE SCREW

(1) Use the proper screwdriver bit, "+" screw is best choice.

(2) It's recommended to start a small hole when screw on hard wood but not for cork.

(3) Screw on wood, firstly start a hole as depth as half length of the screw.

TOOL MAINTENANCE

WARNING: Before any work on the machine itself, pull the power plug**.**

(1) Inspect the diamond cutting discs. The diamond cutting disc damaged or worn our will cause motor malfunction and affect the cutting efficiency, so suggest to replace the diamond cutting disc periodically.

(2) Inspect tool cords periodically. The cord is special prepared, if damaged, have repaired at your nearest Authorized **DEVON**® Service Center. This tool was used with the power cord as a particular structure, don't replace the power cord without authorization, such as replacement, please go to the Authorized **DEVON**® Service Center.

(3) Keep the vents clean. Clean all parts of the tool, clean dust periodically. To prevent debris from entry.

(4) Replace the carbon brush when the carbon brush is worn out in certain length and motor stops running. All maintenance should be carried Out by Authorized **DEVON**® Service Center.

(5) All service MUST only be performed by Authorized **DEVON**® Service Center. ALWAYS use only **DEVON**® accessories that are recommended for this tool.

(6) Cleaning. Avoid the use of plastic cracks caused by damage to the solvent. Use clean cloths and mild soap to remove dirt, dust, etc.

(7) Avoid the tool vibration or impact, and keep it from oil and grease.

⚠ **WARNING:** Do not allow the water enter the motor and the tool full immersed in the ware, which will result in motor malfunction and electric shock.

ENVIRONMENT PROTECTION

1. Tool, accessories and packaging should be sorted for environment-friendly recycling.
2. Power tools and accessories at the end of their service life still contain large amounts of valuable raw materials and plastics which can likewise be fed back into a recycling process.
3. Some dust created by working contains harmful chemicals must be collected by special garbage re- cycle site.

SERVICE

1. In case of guarantee, repair or purchase of replacement parts, always contact the qualified service center. And supplied with the efficient service card and invoice.
2. It is without the scope of guarantee when the tool was normal wear, overload or improper use of damage.

TROUBLE SHOOTING

Problems	Reasons	Ways to Solve The Problems
1. The motor stops running	1. Unconnected to power source	1. Connect to power source
	2. Plugs not fully connect	2. Check all plugs
	3. Switch out of work	3. Replace or repair the switch
	4. Brushes not touch the commutator	4. Replace the brushes with two new ones
2. Running slowly (Not running) with the noise at the beginning of power turn-on	1. Switch out of work	1. Replace or repair the switch
	2. Mechanical trouble	2. Check mechanical parts
3. Commutator sparkle	1. Armature short circuit	1. Repair the armature
	2. Poor connection between the brush and the commutator	2. Replace it with a new one
	3. Commutator surface not smooth	3. Clean the commutator surface
4. Running slowly with the noise in process of working	1. Wrong drill bit size or type	1. Change dill bite size or type
	2. The dill bit contacts hidden steel	2. Choose other drill area to avoid contact hidden steel
	3. Too much lubrication	3. Reduce the amount of lubrication

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制造商：南京德朔实业有限公司
地址：江苏南京江宁经济技术开发区将军大道159号
销售商：泉峰（中国）工具销售有限公司

检验员 QA 01 PASS

全国统一售后服务电话
400-828-9076

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保修服务说明:

- 工具需要维修时，请送至当地大有授权维修中心或寄至泉峰售后服务部，产品保修期以购机发票/收据原件上的日期起算。
- 仅对存在质量缺陷的产品给与免费维修或免费换新,其前提是经大有授权维修中心证明其故障是由于材料或制造缺陷所造成的,并处于保修期内。
- 保修期及保修条款根据工具的类别而定：
  1. 交流工具：
     1.1. 整机保修6个月或者转子换向器直径磨损量在0.2毫米以内，以先到为准。
  2. 直流工具：
     2.1. 12V产品：机身保修12个月，电池、充电器为12个月内包换。
     2.2. 14V以上产品：机身保修6个月，电池、充电器为6个月内包换。
  3. 光电工具：
     3.1. 激光测距仪：保修24个月。
     3.2. 其他光电产品：保修12个月。
- 保修不包括：
  1. 任何自然磨损以及正常使用时所发生损耗，如气缸、齿轮、O形圈、转子换向器直径磨损量超过0.2毫米、碳刷、轴承、开关、电子线路板、电源线等。
  2. 由于不遵守操作说明、不正确使用、异常的环境条件、不适当的操作条件、过载或缺乏足够的维护和保养所导致的工具故障。
  3. 自行或非大有授权维修点拆修的所导致的工具故障。
  4. 由于使用非原装大有配件而引起的缺陷。
  5. 经过改装或增加部件的工具。
  6. 随机附送的配件或者附件。
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- 具体保修明细可查询大有官网：www.devon.com.cn

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025-84994858
售 后 服 务 地 址： 江苏省南京市江宁区将军大道529号，
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售后件寄回收件人： 客服1号

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