

The German perfect industrial design, beauty and quality of experience

The new Cayken marks a new beginning in industrial grade drill machine aesthetic design and manufacturing process. It follows the consistent style of the leaders, with a forward-looking design ideas and the perfect ergonomic design, opened up a new era of drilling industry.

Germany Cayken authorized manufacturer: shanghai chengxiang mechanical and electric equipment co.,ltd

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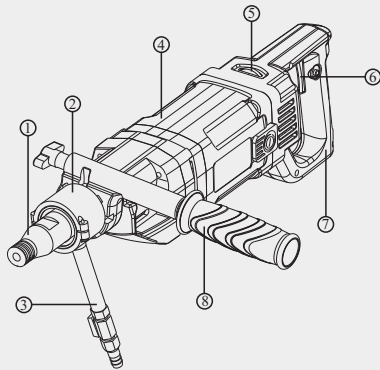
OPERATING INSTRUCTION
<http://www.cayken.com.cn>

用户守则

警告！

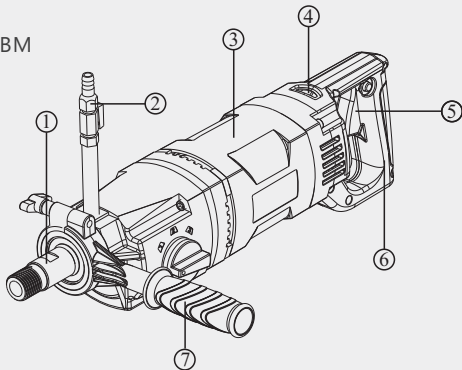
请阅读并理解所有指示说明。如未如实遵守以下指示说明,则可能导致电击、火灾,或导致其他严重的人身伤害。在所有警告指示中使用的“电动工具”都是指必须连接电源的电动工具。

SCY-18/2EBM



- 1,电机主轴
- 2,水圈总成
- 3,进水阀门
- 4,电机总成
- 5,调速开关
- 6,电源开关
- 7,主要手柄
- 8,辅助手柄

SCY-26/3EBM



- 1,电机主轴
- 2,进水阀门
- 3,电机总成
- 4,调速开关
- 5,电源开关
- 6,主要手柄
- 7,辅助手柄

本手册描述的机型如下:

产品型号	钻孔范围	额定电压	输入功率	空载转速
SCY-18/2EBM	Φ15-132mm	220V	1900W	700-1200rpm 1050-1750rpm
SCY-26/3EBM	Φ15-165mm	220V	2300W	400-850rpm 750-1650rpm 1200-2650rpm

工作场所的安全规章:

- a) 工作场所必须保持干净并且照明要充足. 杂乱或昏暗的工作场所容易导致意外。
- b) 不可在有爆炸危险的环境下操作本电动工具. 有爆炸危险的环境是指充斥了易燃液体、瓦斯或尘埃的工作场所. 操作机器时会产生火花, 火花容易引燃尘埃或易燃蒸汽。
- c) 操作机器时不可让儿童或旁观者靠近工作场所. 工作时如果因为第三者的干扰而分散注意力可能导致操作失控。

使用电器用品的安全指示:

- a) 双重绝缘的工具配有极化插头 (其中一个叶片较宽). 该插头只能单向插在极化插座上. 如果插头未能完全插入插座, 就将插头反过来. 如果仍不能插上, 请联系专业电工安装一个极化插座. 切勿擅自更改插头. 双重绝缘不需要三线电源。
- b) 避免让身体碰触接地的物体, 例如水管、散热器、电炉和冰箱等. 如果您的身体接地了, 非常容易遭受电击。
- c) 机器必须远离雨水或湿气. 如果让水渗入电动工具中, 会使操作者遭受电击的危险。
- d) 正确地处理电线. 不可以使用电线提携电动工具、悬挂电动工具或者以抽拉电线的方式拔出插头. 电线必须远离高温、油垢、锋利的边缘或转动中的机件. 电线如果受损或缠绕在一起, 会使操作者遭受电击的危险。
- e) 户外使用电动工具时, 只能使用标注“W-A”或“W”的户外专用延长线. 这种线是户外专用, 能减少电击风险。

针对操作者的安全指示:

- a) 工作时务必要全神贯注, 不但要保持头脑清醒更要理性的操作电动工具. 疲惫、喝酒或服用毒品、兴奋剂、药物之后, 切勿操作电动工具. 使用电动工具时只要稍微分心便可能发生严重的意外。
- b) 穿好您个人的防护装备并戴上护目镜. 根据所使用的电动工具穿戴合适的防护装备, 例如防尘面罩、止滑工作鞋、安全帽或耳罩, 可降低工作伤害的发生机率。
- c) 避免意外启动机器. 插上插头前, 务必确保电动工具处于关闭状态. 如果您在提携电动工具时, 手指碰触了开关, 或者在连接电源时, 起停开关仍然设定在开动位置, 都可能造成极严重的意外。
- d) 开动电动工具之前必须拆除仍然插在机器上的调整工具或螺丝扳手. 如果机器已经开始转动, 而机器上仍然插着调整工具, 很容易伤害使用者。
- e) 避免错误的持机姿势. 操作机器时要确保立足稳固, 並要随时保持平衡. 正确的操作姿势能够帮助您在突发状况下及时控制住电动工具。
- f) 穿著合适的工作服. 工作时不可以穿太宽松的衣服, 也不可以戴首饰. 不可以让头发、衣服和手套接触机器上的转动机件. 宽松的衣物、长发或首饰容易被卷入转动的机件中。
- g) 使用夹子或其他可行的方法将工作件固定在工作台上, 将工作件拿在手里或是靠在身上都是不合适的, 可能导致失控。
- h) 勿让机器承载过重的负荷. 根据工作性质选择适合的电动工具. 正确地选用电动工具可以在规定的功率范围中, 更有效率更安全的操作机器。
- i) 勿使用有开关故障的电动工具. 如果无法正常操控起停开关, 极易在操作机器时产生意外. 尽快将故障的机器送修。
- j) 在调整机器设定、更换零件或不使用机器时, 都必须先从插座上拔出插头并且这个预防措施可以避免不小心开动电动工具。
- k) 不使用电动工具时, 必须把机器存放在儿童无法取得之处. 勿让不熟悉机器操作方法及未阅读本说明书的人使用本机器. 让经验不足的人操作电动工具容易发生意外。
- l) 细心地保养、维护电动工具. 检查机器上的转动零件是否运作正常, 并确定是否有零件断裂或损坏. 故障的机件会影响电动工具的运作功能. 使用机器之前务必先更换或修理故障的机件. 若未彻底执行机器的维护工作容易导致工作意外。



- m) 切割工具必须保持锋利、清洁。经过细心保养而且刀刃锋利的切割工具不易被夹住,而且较容易操作。
- n) 遵照这些指示使用电动工具、配件及安装在机器上的工具。另外也必须注意有关机器操作方式及机器适用范围的解说。如果使用电动工具执行不符合该机器性能的工作,极容易发生意外。

工作场所的安全规章:

要把工具交给合格的专业人员检修。检修时只能换装原厂零、配件。唯有如此才能确保机器的安全性能。

针对机器的安全指示:

- ◆ 使用机器时要戴好耳罩。
 - ◆ 使用随工具提供的辅助手柄。
 - ◆ 工作时必须握持辅助手柄和主手柄。
1. 如果工作时可能割断隐藏着的电线或机器本身的电源线,那么一定要握著绝缘手柄操作机器。电动工具如果接触了带电的线路,机器上的金属部件会导电,并可能造成操作者触电。为减少伤害风险,请务必在钻孔之前检查隐藏着的电线。
 2. 使用电动工具时请佩戴耳罩。噪音会损坏您的听力。
 3. 请使用电动工具附带的辅助手柄。如果无法控制好电动工具容易造成伤害。
 4. 小心维护工具。手柄保持干燥,清洁,远离油脂。刃口保持锋利,清洁。按照指示说明来润滑和更换配件。定期检查工具电线和延长线是否有破损,请使用合格的维修工具修理或更换破损部分。
 5. 妥善保存标签及铭牌。这些标签及铭牌上有重要信息。一旦模糊不清或者遗失,请更换。警告! 锯,磨,钻及其他建筑施工造成的灰尘可能含有导致癌症,生育缺陷或是或其他生育伤害的化学物质。这些化学物质有:铅基油漆中的铅砖块/水泥及其他砖石产品中的结晶二氧化硅化学处理过的木材中的砷和铬遭受化学品接触的风险,跟做这种工作的时间有关。为减少接触化学品,尽量在通风区工作,使用认可的安全设备,如专门过滤微粒的防尘面具。
 6. 在楼板上取芯请为工作人员提供适当的保护。
 7. 使用铭牌上的最大尺寸以内的取芯钻头和钻头。超尺寸的钻头会损坏电机,过多的扭矩可能会导致机器不受控制。
 8. 只使用推荐的钻头,即符合机器最大额定转速或在适合的耦合线下高于额定转速。
 9. 紧握钻孔机,确保身体和手臂不受扭矩反作用。该机器上装有安全离合器保护机器但是还是要时刻警惕。
 10. 过载保护器起效时,按一下开关,将钻头移出,等待几分钟,直至工具冷却。
 11. 请勿使用迟钝或是损坏的钻头。迟钝的钻头会导致电机过多的摩擦和负载,导致损坏。
 12. 工作件变更角度前,确保机器完全停止。
 13. 紧要:切割完后,等到钻头完全停止后再放下。
 14. 切勿在周边有易燃固体,液体,气体的地方,使用工具。换向器/碳刷上的火花可能会引起火灾和爆炸。
 15. 对于工具的某些应用是已经设计好的,制造商强烈建议该工具不被修改或是用于其他本身没有的应用。对于工具的应用,如果您有任何疑问,在得到制造商的解答之前,请勿使用。

电源接入:

电力网电压必须符合工具铭牌上标示的电压。供电电缆破损时,绝不要使用工具。请立即请经授权的客服中心更换的损坏的电缆。使用破损的供电电缆可能导致触电。

按照规定使用机器:

该钻孔机适用于干湿岩石,混凝土和其他类似材料。工具上装有两档速度齿轮箱,这使工具在钻打孔或者小孔时,有两种速度范围选择。此外电机装有反馈电子速度的稳定器,确保工具在无论负载多少的情况下,保持转速不变。该工具可通过指轮调节速度。工具上装有软启动,过载保护器和机械滑动离合器以确保安全性。

警告

请勿擅自改造或修改工具,如:添加其他本机指示说明未提及的应用。否则用户应承担由不当使用造成的损坏和意外事故。

加长线缆:

如需加长电缆,必须有足够的截面以防止电压过低及温度过高。电压过低会导致输出电流减少,引发电机故障。下列表格列出了机器加长电缆适用的直径。请使用UL和CSA认证的加长电缆。请勿混合使用两条加长电缆。(如下表所示)

加长电缆线总长(英尺)	线尺寸(AWG)
25	16
50	12
100	10
150	8
200	6

手册中的符号:

V.....伏特
A.....安培
Hz.....赫兹
~...交流电
rpm...空载转速
回...双重绝缘

拆箱:

将工具及配件从箱中小心取出。在检查及满意操作机器前,请保留所有包装材料。
注意:操作前,请装上合适的钻头。未阅读和理解所有指示说明前,切勿操作此工具。

包装清单:

名 称	数 量
金刚石钻孔机	1台
开口扳手	1把
可调节侧手柄	1个

连接与移除钻头:

1. 清理主轴上的灰尘。
2. 拧上钻头(不含),用2把适合的扳手(含一把)拧紧。
3. 移除钻头时,方向跟安装时相反。用两把扳手松钻头。

警告

连接与移除钻头时必须关闭电源!

可选夹头:

可选择免工具快卸夹头,可装配SDS中心钻,起轴心辅助作用。打孔时,中心钻迅速移除。主钻头也可能松离工具。只需在钻头逆时针转动时用手顺时针转动锁圈,钻头就会松开。

安装快卸夹头,只需在将夹头装在主轴上,然后用2个开口扳手拧紧即可。如要拆掉,反方向即可。

可调节辅助手柄

注意:可调节辅助手柄与主手柄成直角时,手柄得到最好利用。

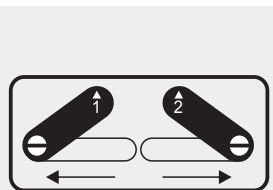
可调节辅助手柄

1. 逆时针转动,松开手柄
2. 旋转手柄到理想角度
3. 重新拧紧手柄

齿轮调速范围设置：

18/2可以两档齿轮机械调速，以钻不同尺寸的孔，一般情况下，低速适用大钻头，高速适用小钻头。调速：

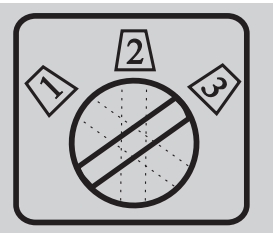
1. 确保机器完全停止，及未接电源
2. 按下齿轮变速按钮，滑动变速杆至低速或高速来调节齿轮。请轻微调节齿轮，调完后，请将按钮按回止动装置。设完低速档后，按钮会向两点钟方向向右倾斜，“1”键在直角位置。设完高速档后，按钮会向十点钟方向向左倾斜，“2”键在直角位置。



图一

26/3可以三档齿轮机械调速，以钻不同尺寸的孔，一般情况下，低速适用大钻头，种速适用中号钻头,高速适用小钻头。

1. 调速时要确保机器完全停止，及未接电源。
2. 拨动变速旋钮时，旋钮指到相应的数字。根据钻头的需要调节至相应的速度。



图二

设置转速：

除机械调速外,还可以通过调速指轮进行电子调速。调速时，向右（顺时针）加速，向左（逆时针）减速。速度稳定控制器能使机器维持选定好的速度，不论负载变化。

启动机器与停止机器：

请确保电压与铭牌上的电压一致，在连接电源前，请确认开关是关闭状态。

启动机器：启动和使用机器时，必须一手握住主手把，一手握住辅助手柄，以保持平稳。启动机器时，按下触发开关，然后按下锁销。机器上有调速指轮，向右转动时，速度增加。

关闭机器：按下触发开关，解锁，关闭机器。机器关闭后，柄轴仍会转动一会。小心，身体切勿接触钻头，机器未停止之前，请勿放下。

正确的操作机器：

如何使用工具：为最大限度及安全控制钻孔机，请两手操作。请勿连续使用工具超过30分钟。请佩戴安全眼镜或护目镜，以免伤害眼睛。钻孔前，机器需全速运行。

- 1>如果未用到中心辅助，开始打孔时，要用钻头边缘接触工件。
- 2>由于是钻头边缘接触工件，请慢慢操作。
- 3>深度钻孔时，请稳当操作，不要用力过度，请尽量保持钻头与工件垂直。注意：如果钻孔时，钻头内部有损坏，在继续钻孔前，请停止并更换。
- 4>完成钻孔前，保持电机运转，以便轻松取下钻头。如果在未完全移出钻头前，停止电机，可能堵塞在孔里面。请在钻头移出后，关闭电机。
- 5>如果钻头堵塞在工作件里，滑动安全滑动离合器。滑动几次后，需打开齿轮箱，然后重置离合器。请委托合格的服务中心。

过载保护器

如果机器负载接近过载水平，过载保护器就会起效，然后关闭机器。如果这种情况出现，按下触发开关，减少负载重启机器。

钻孔遇到钢筋时：

如果碰到钢筋结构，减少压力，让钻头以自己的速度转动。自行锐化，金刚石钻头需要用研磨材料进行研磨。研磨材料可以去除金属碎屑。

警告：

楼板上打孔时，为减少伤害，请为工作人员提供适当的安全保护。

工具的维护与保养：

定期用干燥压缩空气清理通风槽。所有塑料部分请用柔软的湿布清洁。切勿使用溶剂清洗塑料部分，可能会造成分解或损坏。

维护碳刷

碳刷是易损部分，到达其磨损极限时，请更换。

注意：碳刷按付更换

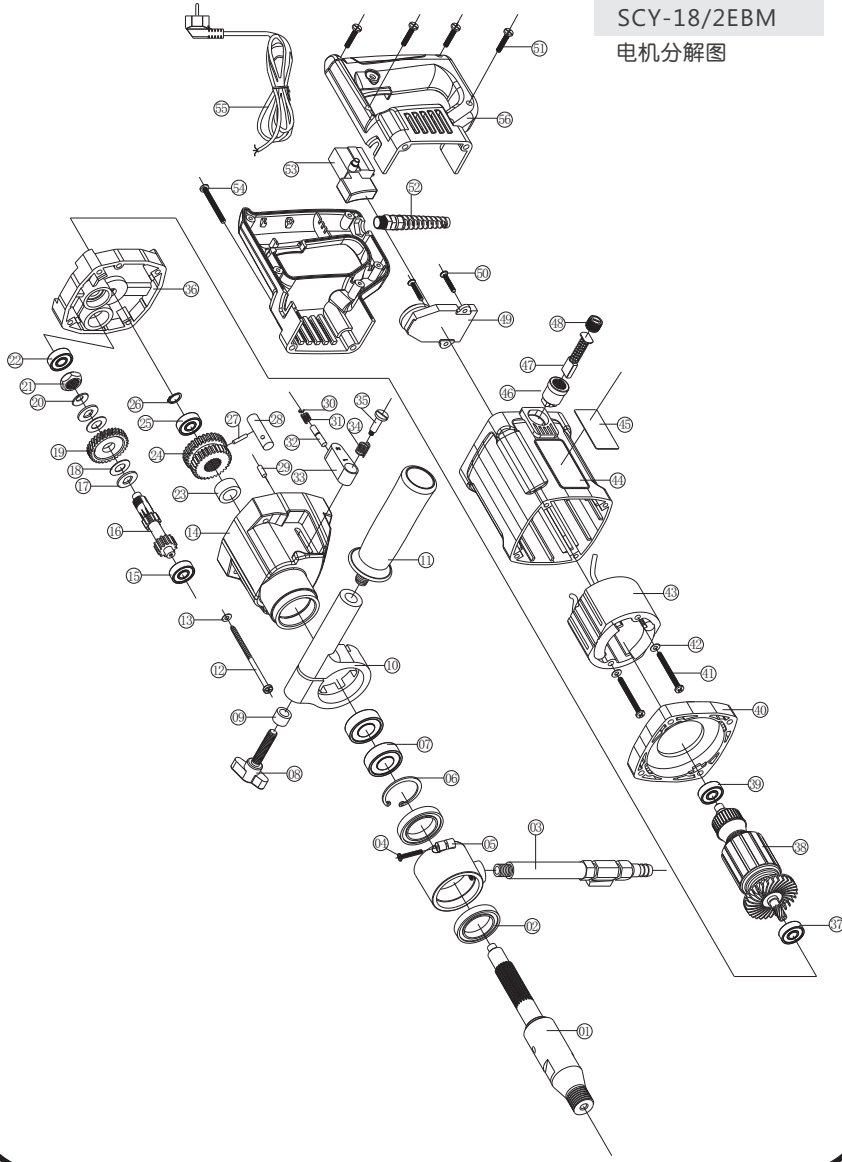
更换：轻轻拧掉碳刷盖，取下碳刷，换上新的碳刷（按付更换），确保其正确对其，并能滑动自如，然后更换碳刷盖。

提示：由于固定不牢而导致的后果，本公司不负任何责任。

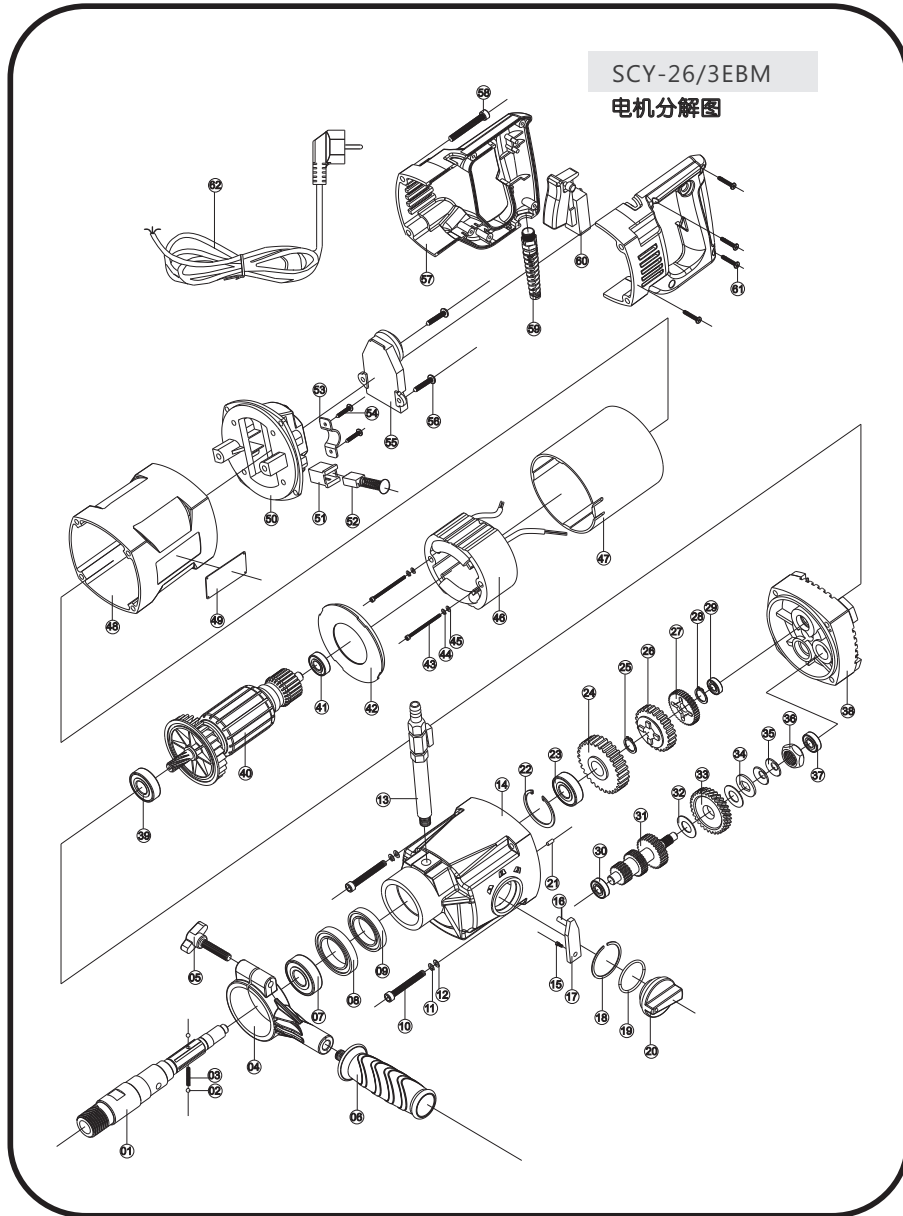
如需更换电源线，请让制造商或是其代理商更换，以免安全隐患。

为了产品的改进，本公司保留对技术数据更改而无需事先通知的权力。

SCY-18/2EBM
电机分解图



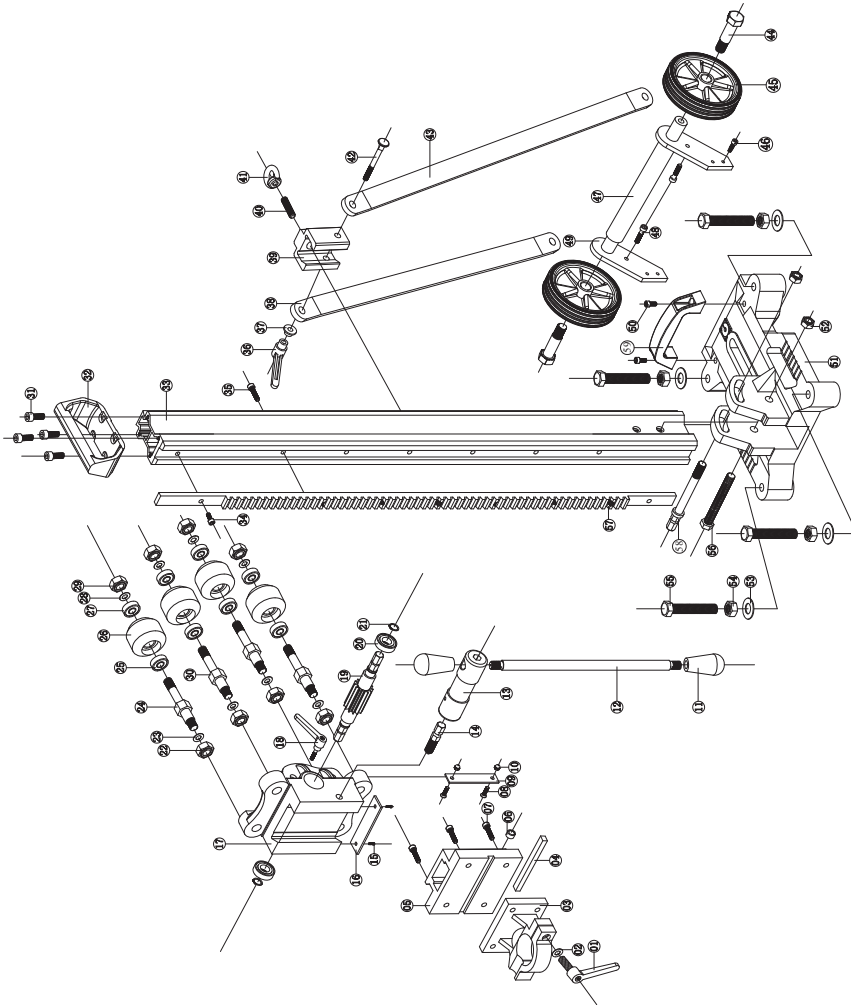
序号 No.	名称 Parts Name	数量 QTY
01	主轴 output spindle	1根
02	油封 oil seal	2个
03	进水阀门 flush water valve	1个
04	紧固螺丝 fastening screw	2个
05	水圈 water ring	1个
06	卡簧 snap spring	1个
07	6003#轴承 6003#ball bearing	2个
08	调紧螺丝 tightening screw	1个
09	小铁套 small iron set	1个
10	手把夹箍 hand clamp	1个
11	辅助手柄 sild handle	1个
12	齿轮箱螺丝 screw	4个
13	弹垫 spring	4个
14	齿轮箱 gear box	1个
15	608#轴承 608#ball bearing	1个
16	离合器轴 clutch shaft	1个
17	离合器铁片 clutch plate	2个
18	离合铜片 clutch of copper	2个
19	离合器平板 surface plate	1个
20	离合器弹垫 clutch disc	1个
21	离合器螺帽 clutch nut	1个
22	698#轴承 698#ball bearing	1个
23	主轴铁套 iron cover	1个
24	平板齿轮 flat gear	1个
25	608#轴承 608#ball bearing	1个
26	主轴卡簧 bearing circlip	1个
27	拨档销子 shift pin	1个
28	拨档销子轴 shift pin shaft	1个
29	齿轮箱销子 gear pin	1个
30	E字卡 Ecirclip	1个
31	弹簧 sping	1个
32	带槽销子 grooved pin	1个
33	塑料拨钮 plastic dialing button	1个
34	弹簧 spring	1个
35	一字调档螺丝 a smatrix screw	1个
36	中间盖 intermediate flange	1个
37	6001#轴承 6001#ball bearing	1个
38	转子 armature	1个
39	608#轴承 608#ball bearing	1个
40	塑料圈 plastic ring	1个
41	定子螺丝 stator screw	2个
42	定子螺丝垫片 stator screw gasket	2个
43	定子 stator	1个
44	定子壳 stator case	1个
45	铝牌 aluminum plate	2个
46	刷窝 brush house	2个
47	电刷 brushes	2个
48	刷盖 brush cover	2个
49	调速器 speed regulator	1个
50	固定螺丝 set screw	2个
51	手把固定螺丝 handle fixing screw	4个
52	老鼠尾巴 rat tail	1个
53	开关 switch	1个
54	定子壳固定螺丝 stator shell fixing screw	4个
55	电源线 power wire	1根
56	主手把 main handle	1付



序号 No.	名称	Parts Name	数量 QTY
01	主轴	spindle	1根
02	钢珠	steel ball	2个
03	弹簧	spring	1个
04	夹箍	clip	1个
05	调紧螺丝	tighten screw	1个
06	辅助手柄	side handle	1个
07	60/28#轴承	60/28#bearing	1个
08	油封	oil seal	1个
09	油封	oil seal	1个
10	齿轮箱固定螺丝	set screw	4个
11	平垫	flat gasket	4个
12	弹垫	spring washer	4个
13	进水阀门	inlet valve	1个
14	齿轮箱	gearbox	1个
15	拨档块固定螺丝	set screw	1个
16	拨档销子	shift pin	1个
17	拨档块	paddle shift	1个
18	卡簧	snap spring	1个
19	O型圈	o-ring	1个
20	拨档旋钮	shift knob	1个
21	定位销	locating pin	1个
22	内卡簧	internal circlip	1个
23	6005#轴承	6005#bearing	1个
24	慢速平板	low speed flat gear	1个
25	卡簧	snap spring	1个
26	中速平板	middle speed flat gear	1个
27	快速平板	high speed flat gear	1个
28	卡簧	snap spring	1个
29	698#轴承	698#bearing	1个
30	6001#轴承	6001#bearing	1个
31	宝塔齿轮	pagoda gear	1个
32	铜片	copper sheet	2片
33	宝塔齿平板	flat pagoda gear	1个
34	铁片	iron sheet	1片
35	弹垫	spring washer	2片
36	螺帽	nut	1个
37	608#轴承	608#bearing	1个
38	中间盖	center cover	1个
39	6201#轴承	6201#bearing	1个
40	转子	rotor	1个
41	6000#轴承	6000#bearing	1个
42	挡风圈	break wind ring	1个
43	定子螺丝	stator screw	2个
44	弹垫	spring washer	2个
45	平垫	flat gasket	2个
46	定子	stator	1个
47	内衬	liner	1个
48	定子壳	stator shell	1个
49	铭牌	nameplate	2个
50	电刷支架	carbon brush bracket	1个
51	刷窝	brush holder	2个
52	电刷	carbon brush	1付
53	线卡	line card	2个
54	线卡固定螺丝	line card screw	4个
55	调速器	speed governor	1个
56	调速器固定螺丝	speed governor screw	2个
57	主手柄	main handle	1付
58	手柄固定螺丝	handle screw	4个
59	老鼠尾巴	mouse tail	1个
60	电机开关	motor switch	1个
61	手柄固定螺丝	handle screw	4个
62	电源线	power line	1个

decompose diagram

机架分解图



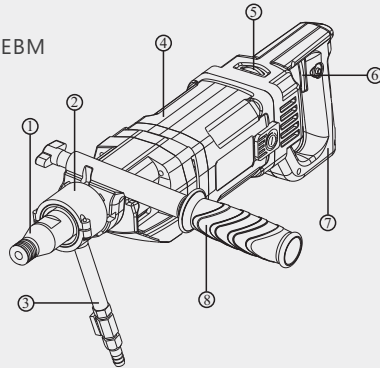
序号 No.	名称	Parts Name	数量 QTY
01	可调节把手	adjustable handle	1个
02	垫片	shim	1个
03	夹箍	clip	1个
04	方销	square cotter	1个
05	燕尾槽铝板	dovetail groove plate	1个
06	圆销子套	round pin set	1个
07	夹箍固定螺丝	clip to fix screw	4个
08	小滑片固定螺丝	small vane to fix screw	2个
09	小滑片	small vane	1个
10	盖型螺帽	cap nut	2个
11	胶木球	runbber ball	2个
12	摇杆	rocker	1个
13	内六角接头	six corner joint	1个
14	外六角紧固螺丝	the six angle fastening screws	1个
15	固定螺丝	fix screw	2个
16	限位铁片	the limit of sheet iron	1个
17	升降器	riser	1个
18	紧固扳手	spanner	1个
19	升降轴	lifting shaft	1根
20	轴承	bearing	2个
21	卡簧	jump ring	2个
22	螺帽	nut	4个
23	垫片	shim	4个
24	轮子轴	the wheel shaft	2根
25	轴承	bearing	4个
26	轮子	shim	4个
27	轴承	bearing	4个
28	垫片	shim	4个
29	防松螺帽	block nut	4个
30	偏心轮子轴	the eccentric wheel shaft	2根
31	手把固定螺丝	hand screw	4个
32	手把	hand grip	1个
33	铝合金方杆	aluminum alloy rod	1根
34	齿条固定螺丝	rack to fix screw	2个
35	齿条固定螺丝	rack to fix screw	4个
36	紧固扳手	spanner	1把
37	带台阶垫片	step pad	1个
38	大圆孔支撑杆	great circle hole supporting rod	1根
39	小滑块	small block	1块
40	螺丝杆	the screw rod	1根
41	不锈钢拉手	stainless steel handle	1个
42	马车螺丝	carriage screw	1个
43	方孔支撑杆	square hole of support pole	1个
44	轮子固定螺丝	wheel to fix screw	2个
45	轮子	wheel	2个
46	铁片固定螺丝	sheet iron to fix screw	4个
47	圆支撑杆	round support pole	1根
48	支撑杆固定螺丝	support pole to fix screw	2个
49	不规则铁片	irregular shtte iron	2片
50	固定螺丝	fix screw	2个
51	底座	pedestal	1个
52	防松螺帽	block nut	2个
53	垫片	shim	4个
54	螺帽	nut	4个
55	底座螺丝	pedestal screw	4个
56	方杆固定螺丝	square bar to fix screw	1个
57	齿条	gear	1根
58	外六角螺丝	the six angle screw	1个
59	胶木提手把	bakelite handle	1个

Operating instructions

Warning

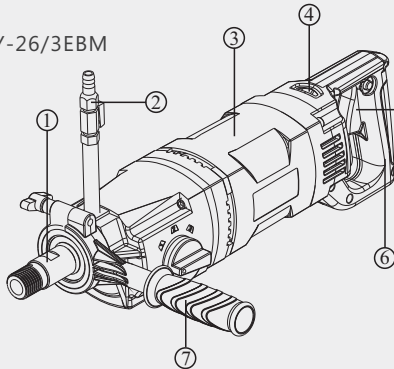
Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and / or serious personal injury. The term "power tool" in all of the warnings listed below refers to your mains-operated (corded) power tool.

SCY-18/2EBM



1. Motor Spindle
2. Water Ring Assembly
3. Flush Water Valve
4. Motor assembly
5. Speed Control Switch
6. Power Switch
7. Main Handle
8. Sild Handle

SCY-26/3EBM



1. Motor Spindle
2. Flush Water Valve
3. Motor Assembly
4. Speed Control Switch
5. Power Switch
6. Main Handle
7. Sild Handle

About this manual

machine type	drill range	voltage	power input	speed
SCY-18/2EBM	Φ15-132mm	220V	1900W	700-1200rpm 1050-1750rpm
SCY-26/3EBM	Φ15-165mm	220V	2300W	400-850rpm 750-1650rpm 1200-2650rpm



Work area safety:

- a) Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquid, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- c) Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical Safety:

- a) Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for a three wire grounded power supply system.
- b) Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
- c) Don't expose power tools to rain or wet conditions. Water entering power tool will increase the risk of electric shock.
- d) Don't abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
- e) When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock.

Personal Safety:

- a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while 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. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- d) Remove adjusting keys or switches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- e) Do not overreach. Keep a proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- f) Dress properly. Do not wear loose clothing or Jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- g) Use clamps or other practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
- h) Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- i) Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- j) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- k) Store idle tools out of reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Tools are dangerous in the hands of untrained users.

- l) Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
- m) Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- n) Use the power tool, accessories and blades 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 tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES:

- ◆ **Put on the earmuff while using this machine.**
 - ◆ **Use the auxiliary handles provided by random.**
 - ◆ **Hold the auxiliary handles with main handles.**
1. Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator. To reduce the risk of injury, always check the work area for hidden wires before coring.
 2. Wear ear protectors with impact drills. Exposure to noise can cause hearing loss.
 3. Use auxiliary handles supplied with the tool. Loss of control can cause personal injury.
 4. Maintain tools carefully. Keep handles dry, clean and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Periodically inspect tool cords and extension cords for damage. Have damaged parts repaired or replaced by a qualified service facility.
 5. Maintain labels and nameplates. These carry important information. If unreadable or — missing, obtain a replacement. **WARNING!** Same 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 paint, crystalline silica from bricks and cement and other masonry products, and arsenic and chromium from chemically-treated 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, such as those dust masks that are specifically designed to filter out microscopic particles.
 6. Provide proper protection for people and property below the coring area when coring through floors.
 7. Always use core bits and drill bits within the maximum allowed size on the nameplate. Oversized bits will cause damage to the motor and excessive torque leading to loss of control.
 8. Use only recommended bits, rated at the machine's maximum rated RPM or higher with correct coupling thread.
 9. Maintain a firm grip on the drill and position your body and arm in a way that allows you to resist torque reaction forces. This machine is equipped with a safety clutch to protect the machine and operator but caution should always be used.
 10. When the electronic overload protection kicks in, release the switch and remove the bit from the workpiece. Wait for a few minutes for the tool to cool down.
 11. Do not use a dull or damaged bit. Dull bits cause excessive friction and binding and excessive load on the motor, leading to damage.
 12. Allow the machine to come to a complete stop before changing workpiece angle.
 13. Important: After completing the cut, wait for coasting bit to stop rotating completely before putting the machine down.
 14. Never operate the tool in an area with flammable solids, liquids, or gases. Spark from the commutator/carbon brushes could cause a fire or explosion.
 15. There are certain applications for which was designed. The manufacturer strongly recommends that this tool not be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application Do not use the tool until you have written the manufacturer and have been advised.

Electrical connection:

The network voltage must conform to the voltage indicated on the tool name plate. Under no circumstances should the tool be used when the power supply cable is damaged. A damaged cable must be replaced immediately by an authorized Customer Service Center. Do not try to repair the damaged cable yourself. The use of damaged power cables can lead to an electric shock.

Intended use:

This drilling machine is designed for either wet or dry core drilling in masonry, concrete and similar types of materials. It is equipped with a 2 speed gearbox which allows mechanical selection of 2 speed ranges for ideal drilling with either small or large diameter core bits. In addition, the motor is equipped with feedback electronic speed stabilization which works to keep the rotation speed the same, regardless of load. There is a variable speed function which is controlled by a thumbwheel. There is soft start and electronic overload protection and also a mechanical slip clutch for safety. There is provision for both impact drilling and standard drilling functions. Selection between impact and standard drilling is made with a selector tab on the top of the gearbox.

Extension cable:

If an extension cable is required, it must have a sufficient cross section so as to prevent an excessive drop in voltage or overheating. An excessive drop in voltage reduces the output and can lead to failure of the motor. The following table shows you the correct cable diameter as a function of the cable length for this machine. Use only U.L and CSA listed extension cables. Never use two extension cables together. Instead, use one long one.

Total extension cord length (feet)	Cord size
25	16
50	12
100	10
150	8
200	6

Symbols used in this manual
V.....volts
A.....amperes
Hz.....hertz
W.....watt
~.....alternating current
rpm.....speed
Ⓜ.....class II tool

CARTON CONTENTS:

1. Diamond Core Drill Machine
2. M24 / 27 wrench
3. Side handle

UNPACKING:

Carefully remove the tool and all loose items from the shipping container. Retain all packing materials until after you have inspected and satisfactorily operated the machine.

NOTE: An appropriate core bit must be mounted to the machine before operating. Refer to the section of this manual: "INSTALLING THE BIT"

Note: the handle offers the best leverage when it is at a right angle to the main handle.

To adjust the side handle:

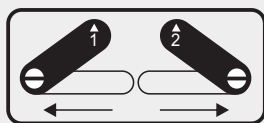
1. Loosen the grip by turning anticlockwise.
2. Rotate the handle to the desired angle and engage the slots with the corresponding tab in the gearbox.
3. Retighten the grip firmly.

SETTING THE GEAR SPEED RANGE:

18/2 machine has a two speed range mechanical gearbox for best drilling with different sizes of core bits. Generally, the lower speed is for larger diameter bits and the higher speed range is for smaller diameter bits. To set the speed:

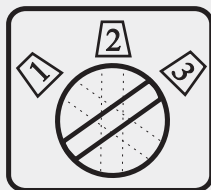
1. Ensure that the machine is fully stopped and unplugged.
2. Pop the Gear Selector Tab out of the detent then slide the selector back for low or forward for high to change the gear. It may be necessary to turn the spindle slightly in order for the gear to be engaged. Once engaged, pop the tab into its detent. When the low speed range is properly selected, the tab will be slanted to the right at a two o'clock position and the number "1" will be in the straight-up position. When the high speed range is properly selected, the tab will be slanted to the left at a ten o'clock position and the number "2" will be in the straight-up position.

image—



26/3 machine can third gear speed, to drilling of different sizes, In general, low speed is suitable for big drill bit, medium speed for medium drill bit, high speed for small drill bit.

1. Speed regulation to ensure the machine stopped completely, and no power supply.
2. Dial speed buttons, knobs refers to a corresponding digital. According to the bit needs to adjust to the corresponding speed.



image二

SETTING THE ROTATION SPEED:

In addition to the mechanical speed ranges, the speed is also adjusted electronically by turning the Variable Speed Thumbwheel. To adjust, simply turn the wheel to the right (clockwise) to increase speed and to the left (counterclockwise) to decrease the speed. The feedback electronic speed stabilization control will maintain the selected speed regardless of load.

STARTING AND STOPPING TOOL:

Make sure that the power circuit voltage is the same as that shown on the specification plate of the machine and that switch is "OFF" before connecting the tool to the power circuit. Switching the machine on and off

To switch on: Keep the machine steady during switching and during must use by holding the main handle with one hand and the side handle with the other. Press the trigger switch to start. **To lock the switch on,** press the lock pin. There is a progressive variable speed thumb wheel. By turning the variable speed thumbwheel to the right, the speed will gradually increase. **To switch off:** Squeeze and release the trigger switch to unlock the switch and switch off. **After the machine has been switched off, the arbor will still rotate for a time. Take care that parts of your body do not come into contact with the bit or set the machine down while it is still rotating.**

HOW TO USE THE TOOL:

Effective control of this powerful drill requires two-handed operation for maximum control and safety. Do not use this tool continuously over 30 minutes. Protect your eyes from injury with safety glasses or goggles. The machine must reach full speed before drilling begins.

1. If a centering aid is not used, it is often helpful to begin drilling with the core held at an angle to the work so that just the edge of the bit contacts the workpiece. Once a small groove is made, which will guide the bit and keep it from drifting, then the angle may be corrected to straight.
2. Begin slowly as the core bit begins to engage the material.
3. Once fully in the cut, it is important to apply steady, but not excessive feed pressure and to keep the drill as straight as possible in the cut.

Note: If the material core breaks off inside the core bit while drilling, stop and remove it before continuing.

4. When the cut is complete, keep the motor running to ease pulling the bit out of the cut. The bit may become stuck in the hole if you turn the motor off before the bit is completely removed. Once the bit is removed from the work surface, turn the motor OFF.
5. If the bit gets stuck in the work, then the safety slip clutch will slip. After the clutch slips a few times, the gearbox will need to be opened and the clutch will need to be reset. Entrust this to a qualified service center.

ELECTRONIC OVERLOAD PROTECTION:

If while cutting the machine reaches a load approaching overload level, the electronic overload protection will kick in and shut the machine off. When this happens, release the trigger and restart again giving the machine less load.

ENCOUNTERING STEEL:

If the core bit encounters embedded steel, lessen the feed pressure and let the bit drill at its own pace. Don't force the bit. To self-sharpen, diamond-impregnated core bits require interaction with an abrasive material. This abrasive material wears away the metal composition in the segment's matrix. As this is done, sharp diamonds are exposed and the grinding action created by the diamonds continues.

WARNING: When coring through floors, cores generally drop from the bit. To reduce the risk of injury, provide proper protection for people and property below the coring area.

MAINTENANCE:

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. Never use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

THE CARBON BRUSHES:

The carbon brushes are a normal wearing part and must be replaced when they reach their wear limit. Caution: Always replace the brushes as a pair

To replace: simply remove the brush caps and withdraw the old brushes. Replace with new brushes (always replace as a pair) ensuring that they align properly and slide freely. Then replace the brush caps.

Warning: 1. The company is not liable for the consequence resulting from Unfastenedness. 2. In case of any damage, changing the cable on the help of the factory or dealer if the cable of machine need to be changed. 3. In order to keep improving our products, the company reserves the rights of making changes to technical data without advance notice.

