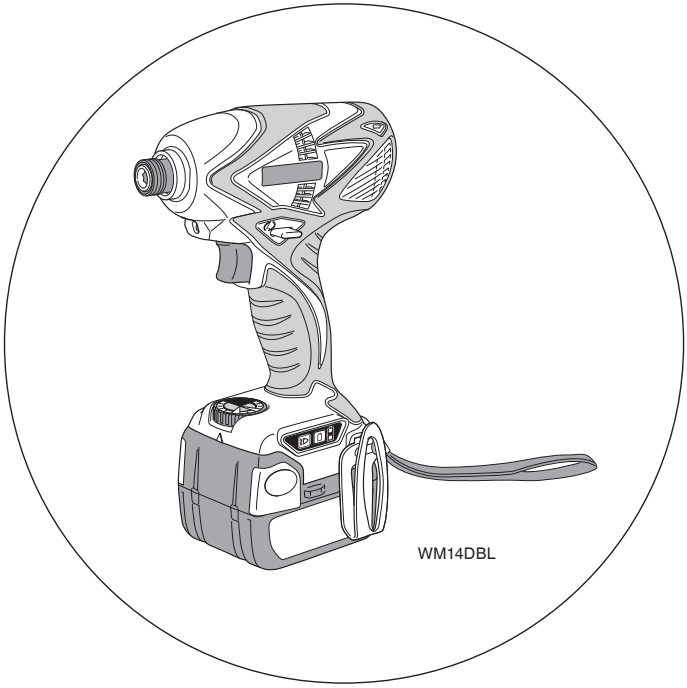
HiKOKI

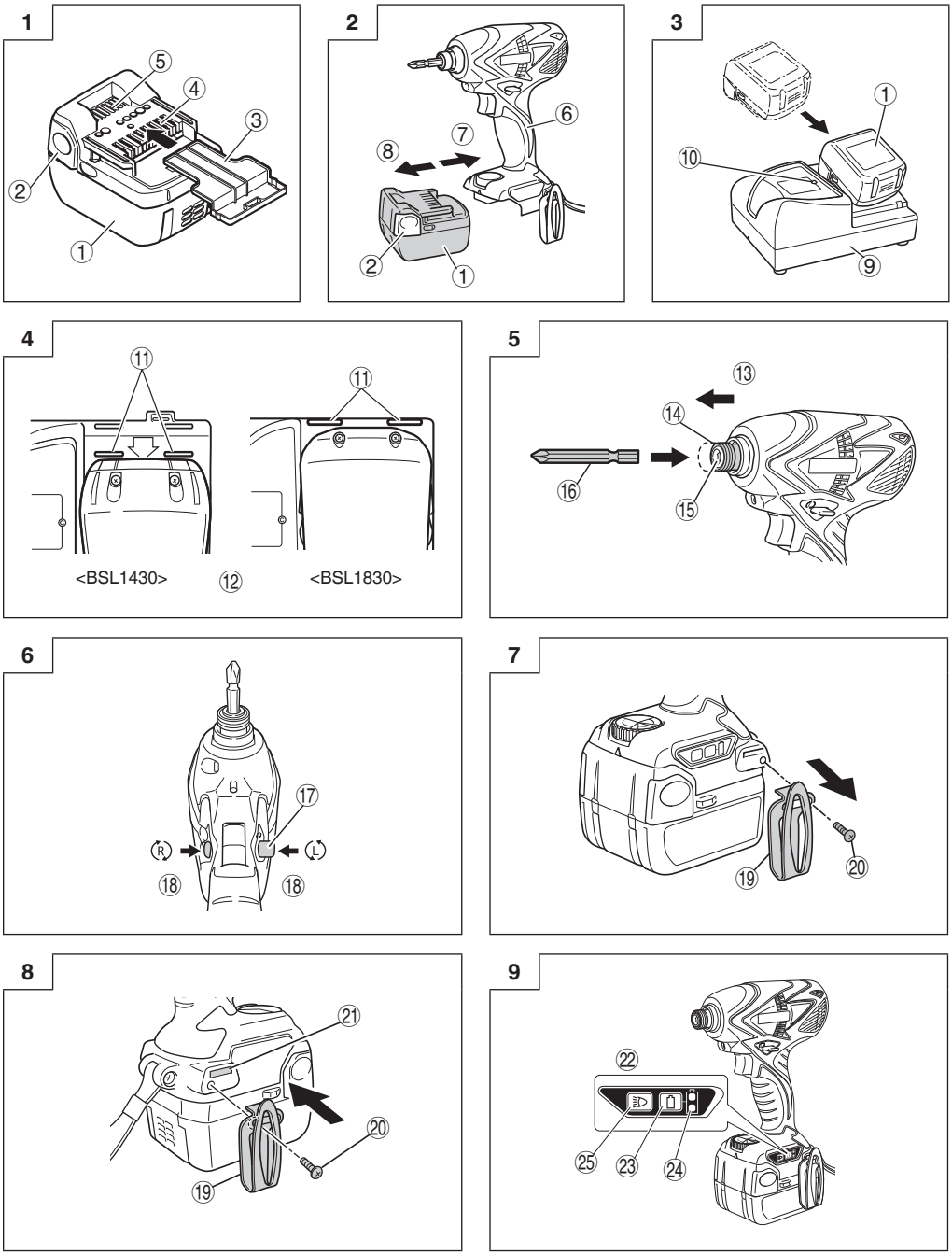
电子脉冲起子机
Electronic Pulse Driver

WM 14DBL · WM 18DBL

使用说明书
Handling instructions



使用前务请详加阅读
Read through carefully and understand these instructions before use.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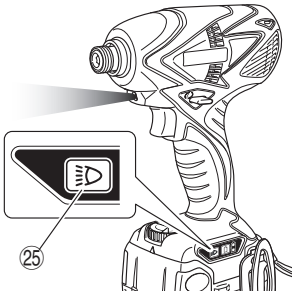

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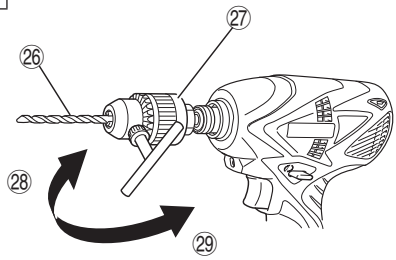

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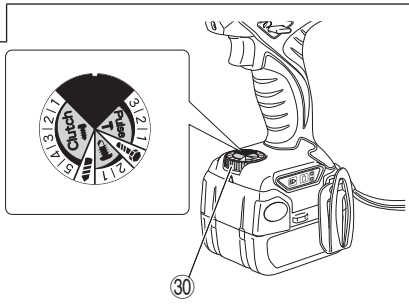


①	充电式电池	Rechargeable battery
②	插销	Latch
③	电池盖	Battery cover
④	端子	Terminals
⑤	通风孔	Ventilation holes
⑥	把手	Handle
⑦	插入	Insert
⑧	拉出	Pull out
⑨	充电器	Charger
⑩	充电时间指示灯	Charging time indicator lamp
⑪	线	Line
⑫	插入后	After insert
⑬	移动	Movement
⑭	导套	Guide sleeve
⑮	铁砧中的六角孔	Hexagonal hole in the anvil
⑯	起子钻头	Driver bit
⑰	按钮	Push button
⑱	按	Push
⑲	挂钩	Hook
⑳	螺丝	Screw
㉑	凹槽	Groove
㉒	开关面板	Switch panel
㉓	电池余量指示开关	Remaining battery indicator switch
㉔	电池余量指示灯	Remaining battery indicator lamp
㉕	灯开关	Light switch
㉖	钻头	Drill bit
㉗	钻头夹盘转换器	Drill chuck adapter
㉘	旋紧	Tighten
㉙	旋松	Loosen
㉚	模式选择转盘	Mode selection dial

一般安全规则

警告！
阅读说明
没有按照以下列举的说明而使用或操作将导致触电、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”指市电驱动（有线）电动工具或电池驱动（无线）电动工具。

保存这些说明

1）工作场地
a）保持工作场地清洁和明亮。
混乱和黑暗的场地会引发事故。
b）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。
c）让儿童和旁观者离开后操纵电动工具。
分心会使你放松控制。

2）电气安全
a）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触电危险。
b）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触电危险。
c）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触电危险。
d）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。
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。
e）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。

3）人身安全
a）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。
b）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、防滑安全鞋、安全帽、听力防护等装置能减少人身伤害。
c）避免突然起动。
确保开关在插入插头时处于关断位置。
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。
d）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。
e）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。
f）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。
g）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。

4）电动工具使用和注意事项
a）不要滥用电动工具，根据用途使用适当的电动工具。
选用适当的设计额定值的电动工具会使你工作更有效、更安全。
b）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。
c）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 / 或将电池盒脱开电源。
这种防护性措施将减少电动工具突然起动的危险。
d）将闲置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。
电动工具在未经训练的用户手中是危险的。
e）保养电动工具。检查运动件的安装偏差或卡住、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。
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、附件和工具的刀头等。
将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。

5）电池式工具使用和注意事项
a）确保开关在插入电池盒前处于断开状态。
将电池盒插入到开关状态为接通的电动工具上会引发事故。
b）只用制造商规定的充电器充电。
将适用于某种电池盒的充电器用到其他电池盒时会发生着火危险。

c) **只使用配有特制电池盒的电动工具。**
使用其他电池盒会发生损坏和着火危险。

d) **当电池盒不用时，将它远离其他金属物体，例如回形针、硬币、钥匙、钉子、螺钉或其他小金属物体，以防一端与另一端连接。**
电池端部短路会引起然烧或火灾。

e) **在滥用条件下，液体会从电池中溅出；避免接触。如果无意间碰到了，用水冲洗。如果液体碰到了眼睛，还要寻求医疗帮助。**
从电池中溅出的液体会发生腐蚀或燃烧。

6) 维修

a) **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。**
这样将确保所维修的电动工具的安全性。

注意事项

不可让儿童和体弱人士靠近工作场所。

应将不使用的工具存放在儿童和体弱人士接触不到的地方。

电子脉冲起子机使用上的注意事项

1. 本工具为手提式钻孔工具，用于旋紧和旋松螺丝。
2. 如长时间进行作业，请使用耳塞。
3. 单手操作非常危险。操作时请用双手握紧电动工具。
4. 安装好起子机的钻头以后，请轻轻地将钻头往外拉确认钻头是否松驰。如钻头安装得不妥当，在使用时钻头可能会松驰而引起危险。
5. 请使用与螺丝相配的钻头。
6. 用本工具旋紧螺丝时，如工具与螺丝之间的位置不成直线，则会损坏工具头，同时工具的旋转力也不能有效地传给螺丝。所以，旋紧螺丝时，请使工具与螺丝成一直线。
7. 务请在 0℃～ 40℃的温度下进行充电。温度低于 0℃将会导致充电过度，极其危险。
   电池不能在高于 40℃的温度下充电。
   最适合于充电的温度是 20 ～ 25℃。
8. 不要连续使用充电器。
   一次充电完毕后，在 15 分钟内不要再次使用该充电器对电池充电。
9. 勿让杂质进入充电式电池连结口内。
10. 切勿拆卸充电式电池与充电器。
11. 切勿使充电式电池短路。使电池短路将会造成很大的电流和过热，从而烧坏电池。
12. 请勿将电池丢入火中。
    电池受热将会爆炸。
13. 请勿将异物插入充电器的通风口。
    若将金属异物或易燃物插入通风口的话，将会引起触电事故或使充电器受损。
14. 充电后电池寿命太短不够使用时，请尽快将电池送往经销店。请勿将用过的电池乱丢。
15. 请勿使用耗竭了的电池，否则会损坏充电器。
16. 在墙壁、地板或天花板上钻孔时，应检查是否有埋设的电源线等。

锂离子电池使用注意事项

为延长使用期限，锂离子电池备配停止输出的保护功能。

若是在使用本产品时发生下列 1 至 3 的情况，即使按下开关，马达也可能停止。这并非故障，而是启动保护功能的结果。

1. 在残留的电池电力即将耗尽时，马达会停止。
   在这种情况下，请立即予以充电。
2. 若工具超过负荷，马达亦可能停止。在这种情况下，请松开工具的开关，试着消除超过负荷的原因。之后您就可以再度使用。
3. 若电池在过载工作情况下过热，电池电力可能会中止。
   在这种情况下，请停止使用电池，让电池冷却。之后您就可以再度使用。

此外，请留心下列的警告及注意事项。

警告

为防止发生电池漏电、发热、冒烟、爆炸及提前点燃，请确保留意下列事项。

1. 确保电池上没有堆积削屑及灰尘。
○ 在工作时确定削屑及灰尘没有掉落在电池上。
○ 确定所有工作时掉落在电动工具上的削屑和灰尘没有堆积在电池上。
○ 请勿将未使用的电池存放在曝露于削屑和灰尘的位置。
○ 在存放电池之前，请清除任何可能附着在上面的削屑和灰尘，并请切勿将它与金属零件（螺丝、钉子等）存放在一起。
2. 请勿以钉子等利器刺穿电池、以铁锤敲打、踩踏、丢掷电池，或将其剧烈撞击。
3. 切勿使用明显损坏或变形的电池。
4. 使用电池时请勿颠倒电极。
5. 请勿直接连接电源插座或汽车点烟器孔座。
6. 请依规定方式使用电池，切勿移作他用。
7. 如果已过了再充电时间，电池仍无法完成充电，请立即停止继续再充电。
8. 请勿将电池放置于高温或高压处，例如微波炉、烘干机或高压容器内。
9. 在发觉有渗漏或异味时，请勿接近远离火源。
10. 请勿在会产生强烈静电的地方使用。
11. 如有　电池渗漏、异味、发热、褪色或变形，或在使用、充电或存放时出现任何异常，请立即将它从装备或电池充电器拆下，并停止使用。

注意

1. 若电池渗漏出的液体进入您的眼睛，请勿搓揉眼睛，并以自来水等干净清水充分冲洗，立刻送医。
   若不加以处理，液体可能会导致眼睛不适。
2. 若液体渗漏至您的皮肤或衣物，请立即以自来水等清水冲洗。
   上述情况可能会使皮肤受到刺激。
3. 若初次使用电池时发现生锈、异味、过热、褪色、变形及 / 或其它异常情况时，请勿使用并将该电池退还给供货商或厂商。

警告

如果导电异物进入锂离子电池端子之间，可能发生短路，并造成火灾危险。存放电池时，请遵循下列事项。

- ○ **请勿在存储盒中放入导电的切屑、铁钉、钢丝、铜线或其他导线。**
- ○ **或者将电池装在电动工具中，或者在牢固按入电池盖并挡住通风孔后再存放，以防止短路（参照图 1）。**

规　格

电动工具

型式			WM14DBL	WM18DBL
容量	电子脉冲模式	木螺丝	ϕ 4.2 × 75	
	螺栓模式	普通螺栓	M4 － M10	
		高强度螺栓	M4 － M6	
	自钻孔螺丝模式	自钻孔螺丝	ϕ 6	
	钻孔模式	木工钻孔	ϕ 21	
		钢钻孔	ϕ 10	
		泥灰钻孔	ϕ 6	
	电子离合模式	小螺丝	M6	
旋紧转矩 [在 20℃时完全充电]	螺栓模式 [旋紧时间：3 秒]		最大 30 N·m {306 kgf·cm}	最大 33 N·m {337 kgf·cm}
			旋紧时使用 M10 高强度螺栓（强度等级 12.9）六角插座	
	钻孔模式		11 N·m {112 kgf·cm}	
	电子离合模式		5- 点离合 2.3 － 5.3 N·m {23 － 54 kgf·cm}	
边缘形状			对边宽度 6.35，钻头插入形状	
电机类型			直流电机	
无负载速度 [在 20℃时完全充电]	电子脉冲模式		0 － 1100 转 / 分	
	螺栓模式		0 － 640 转 / 分	
	自钻孔螺丝模式		0 － 1100 转 / 分	
	钻孔模式		0 － 1100 转 / 分	
	电子离合模式		0 － 450 转 / 分	
推动次数 [在 20℃时完全充电]	电子脉冲模式		0 － 1090 转 / 分	
	螺栓模式		0 － 1090 转 / 分	
	自钻孔螺丝模式		0 － 1090 转 / 分	
充电电池			BSL1430: 锂离子 14.4 V (3.0 Ah, 8 节)	BSL1830: 锂离子 18 V (3.0 Ah, 10 节)
工具外形尺寸 整体长度 × 高度 × 中间高度			162 mm × 250 mm × 31 mm (安装 BSL1430)	162 mm × 252 mm × 31 mm (安装 BSL1830)
重量			1.5 kg (安装 BSL1430)	1.7 kg (安装 BSL1830)
LED 灯			白色 LED	
电池余量指示灯			红色 LED	

充电器

型式	UC18YRSL
充电电压	14.4 V　18 V
重量	0.6 kg

标 准 附 件

除了主机 (1) 外，产品包中还包括下表所列的附件。

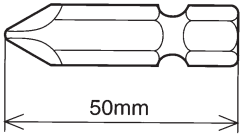
WM14DBL (2LSRK)	① 充电器 (UC18YRSL).....1 ② 电池 (BSL1430).....2 ③ 塑料盒.....1 ④ 电池盖.....1
WM14DBL (NN)	不带充电器、电池、塑料盒及电池盖。
WM18DBL (2LSRK)	① 充电器 (UC18YRSL).....1 ② 电池 (BSL1830).....2 ③ 塑料盒.....1 ④ 电池盖.....1
WM18DBL (NN)	不带充电器、电池、塑料盒及电池盖。

标准附件可能不预先通告而已予更改。

选购附件（分开销售）

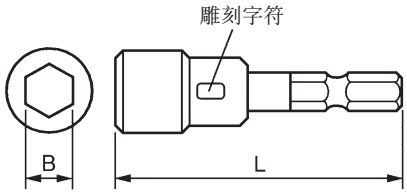
1. 加上起子头

头编号	代码编号
No. 2	992671
No. 3	992672

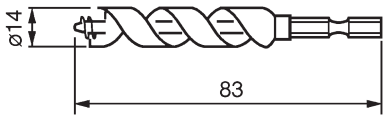


2. 六角套筒

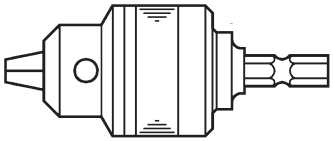
部件名称	雕刻字符	L	B	代码编号
5 mm 六角套筒	8	65	8	996177
6 mm 六角套筒	10	65	10	985329
5/16" 六角套筒	12	65	12	996178
8 mm 六角套筒	13	65	13	996179
10 mm 六角套筒 (小型)	14	65	14	996180
10 mm 六角套筒	16	65	16	996181
10 mm 六角套筒	17	65	17	996182
1/2" 六角长套筒	21	166	21	996197



3. 木工钻：代号 959183



4. 钻头夹盘转换器套装：代码编号 321823
使用当地市场有售的钻头。



选购附件可能不预先通告而已予更改。

用　途

- ○ 取出小螺丝、小螺栓、机器螺丝、木螺丝、自攻螺丝等。
- ○ 在各种木材上钻孔。
- ○ 在各种金属上钻孔。

电池的拆卸 / 安装法

1. 电池的拆卸法
请先紧抓住把手、然后再推压电池插销以拆下电池（参照图 1 和 图 2）。

> 注意
> 切勿使电池短路。

2. 电池的安装法
插入电池时请注意极性（参照图 2）

充　电

使用电子脉冲起子机之前，按下述方法将电池进行充电。

1. 将充电器的电源线连接到插座。
将充电器插头连接到插座时，指示灯会闪烁呈红色（间隔为 1 秒）。
2. 将电池插入充电器。
如图 3、4 所示，将电池紧紧地插入充电器直至可见线条。

3. **充电**

将电池插入充电器后，将开始充电，指示灯会持续点亮呈红色。

电池完全充电后，指示灯将闪烁呈红色（以 1 秒的间隔）（参照**表** 1）。

(1) 指示灯显示

根据充电器或充电式电池的情况，指示灯的显示如**表** 1 所示。

表 1

指示灯的显示				
指示灯点亮或闪烁呈红色。	充电前	闪烁	点亮 0.5 秒钟，不点亮 0.5 秒钟（熄灭 0.5 秒钟）	
	充电时	点亮	连续点亮	
	充电完成	闪烁	点亮 0.5 秒钟，不点亮 0.5 秒钟（熄灭 0.5 秒钟）	
	无法充电	闪动	点亮 0.1 秒钟，不点亮 0.1 秒钟（熄灭 0.1 秒钟）	电池或充电器有问题。
指示灯点亮或闪烁呈绿色。	过热而等待	点亮	连续点亮	电池过热。无法充（电池冷却后开始进行充电）。

(2) 关于充电式电池的温度

充电式电池的温度如**表** 2 所示，在充电前应使已发热的电池冷却片刻。

表 2 电池充电范围

充电电池	可以对电池进行充电的温度
BSL1430, BSL1830	0℃ － 50℃

(3) 关于充电时间

由充电器和电池共同决定，充电时间变化如**表** 3 所示。

表 3 充电时间（20℃下）

充电器 / 电池	UC18YRSL
BSL1430, BSL1830	约 45 分钟。

注：

充电时间可能根据环境温度和电压而有变化。

4. **从插座或点烟器孔座上拔下充电器的电源线。**
5. **握紧充电器并取出电池。**

注：

充电完成后，请先从充电器内取出电池，然后加以妥善保存。

较长时间保持电池性能的方法

(1) 在电池电力完全耗尽之前进行充电。

感到电动工具的能力变弱时，请停止使用并给电池充电。若您继续使用电动工具并耗尽电力，电池可能会损坏或其使用寿命缩短。

(2) 避免在高温环境中充电。

使用后充电式电池的温度将迅速升高。若使用后立即对这种电池进行充电，其内部化学物质会劣化，电池使用寿命将缩短。请稍等片刻，待电池冷却后再进行充电。

注意

○ 连续使用电池充电器时，电池充电器将会升温，进而生成导致故障的因素。一旦充电完成，请闲置 15 分钟后再进行下次充电。

○ 电池在阳光直接照射后或者使用之后会变热。如果此时对电池充电，充电器上的指示灯会显示绿色。

电池将不充电。在此情况下，先让电池冷却下来，然后再充电。

○ 指示灯闪烁呈红色（间隔为 0.2 秒）时，请检查充电器的电池连接器内有无异物，若有请取出。如果没有异物，则可能是电池或充电器的故障。请将其拿到经授权的维修中心。

作 业 之 前

1. 准备和检查工作环境
   确保工作地点满足预防措施中列出的所有条件。
2. 检查电池
   确保电池安装牢固。如果其完全松动，可能脱落并造成意外。
3. 安装钻头

○ 起子钻头
请务必按照下列步骤安装击入式钻头（图 5）。
(1) 向后拉导套
(2) 将钻头插入铁砧的六角孔。
(3) 松开导套，导套随后返回到原始位置。

注意
如果导套没有返回到原始位置，则说明没有正确安装钻头。

○ 钻头
- 带有六角柄的钻子可以直接装到工具上。
- 如要安装没有六角柄的钻子，您需要另外购买钻头夹盘转换器套装。

(1) 将钻头插入夹盘。
(2) 使用夹盘钥匙按顺序从三个孔旋紧夹盘，从而固定钻头。（图 11）

- 使用铁钻子为木螺丝钻一个导向孔或者一个 10 mm 或更小的孔。

(1) 将钻头插入夹盘。
(2) 使用夹盘钥匙按顺序从三个孔旋紧夹盘，从而固定钻头。（图 11）

使 用 方 法

1. 模式选择功能

警告
请将模式选择转盘设在正确位置（应发出咔嗒的响声并锁固在该位置）后使用本工具。
若无视此警告，本工具可能会发生意外情况，并导致材料 / 螺丝损坏或受伤。

注意
请勿向模式选择转盘施加强力。

能通过旋转本工具上的模式选择转盘并将其对准三角标记来改变操作模式。
能从下表所示的 5 种不同模式中选择操作模式。

注：
○ 由各模式获得的拧紧扭矩因螺丝和拧入的材料而异。
请先试着拧紧一些螺丝，调节模式选择转盘。
○ 请使用螺栓模式来拧紧螺栓。
○ 在本工具打开的状态下旋转模式选择转盘时，不能改变模式。在改变操作模式前请关闭本工具。

模式选择之例

运行模式	标记		最大转矩	应用		注
电子脉冲模式	T	3	———	木螺钉旋紧	对角拧紧 75 毫米螺丝	○ 请使用适合于螺丝直径的钻头和套筒。 ○ 使用钻头模式时务必不要停下马达旋转。
		2			拧紧 50 － 75 毫米螺丝	
		1			拧紧短于 50 毫米的螺丝	
螺栓模式			30 N·m 33 N·m	*1 螺栓旋紧		
自钻孔螺丝模式		2	———	自钻孔螺丝旋紧（ϕ 5 或 ϕ 6）		
		1		自钻孔螺丝旋紧（ϕ 3.5 或 ϕ 4）*2		
钻孔模式			11 N·m	钻孔		
电子离合模式 *4		5	5.3 N·m	*3 拧紧机器螺丝 (M6) 或自攻螺丝、固定石膏板		
		4				
		3				
		2				
		1	2.3 N·m			

*1: WM14DBL: 30 N·m, WM18DBL: 33 N·m.
*2: 在用自钻孔螺丝固定薄板前，确保板厚度适合螺丝直径。
*3: 在电子离合模式 4 或 5 情况下，当负载增加时，工具可能短暂反向转动，以降低螺丝头损坏的风险。
*4: 工具以低转速启动，并轻轻旋紧。
扭矩达到转盘上设置的数值时，马达将自动停止旋转，以免过度拧紧。
不会产生机械类型等的离合声音。

2. **电子脉冲起子机的特点**

与传统冲击起子机不同，电子脉冲起子机通过反复地正向和反向旋转电机来产生击打力。

此机制有助于减小操作时的声音。

以下特点是传统冲击起子机所不具备的，但它们并非故障。

○ 工具在连续旋紧螺丝时容易变热。

为保护电机及用于控制电机运行的电子部件，此工具配有温度保护电路。

根据螺丝及应用螺丝的材料，击打操作可能提前启动。

由于击打操作可能导致电机和电子部件温度升高，因此温度保护电路可能提前启用。关于在温度保护电路造成运行停止后如何恢复的信息，请参见第 12 页的“1. 连续运行”。

此外，电子脉冲起子机还会一直控制电机旋转，以便在各种模式下都能达到最佳运行状态。

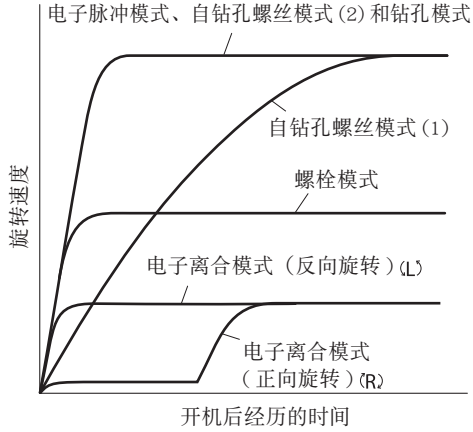
因此，在运行过程中可能出现下列情况。

○ 运行开始时的行为因模式不同而异。

自钻孔螺丝模式（1）逐渐提高速度。

电子离合模式（正向旋转）在启动后的特定时间内以极低的速度旋转电机，之后才提高速度。

与此相反，电子离合模式（反向旋转）在启动后立即达到预设旋转速度。



○ 工具不从击打操作返回初始状态。

如果在开关处于拉开状态时从螺丝或螺栓上移开起子头或套筒，工具可能继续击打操作。

为返回初始状态，应关闭开关，然后启动下一个操作。

○ 即使电池剩余电量低时，电机旋转速度也不减慢。

此工具采用恒速控制，即使电池剩余电量低，旋转速度也几乎不会改变。这样，在电池电量耗尽之前，用户可以高效使用工具。但是，很难从旋转速度上判断电池剩余电量，因此在工作过程中工具可能突然停止。

不时通过按下电池剩余电量指示开关来检查电池剩余电量。

○ 当电子离合动作时，工具自动停止。

螺丝可以安静地旋紧，机械装置不会产生离合声音。

当离合动作时，工具自动停止。如要继续使用工具，应关闭开关，然后重新开启。如果工具在没有负载的情况下也不运行，则可能是电池剩余电量低。在此情况下，应立即对电池充电。

3. **检查旋转方向**

按下按钮 R 侧时，起子头顺时针旋转（从后面看）。按下按钮 L 侧时，起子头逆时针转动。（参见图 6，机身上有 (L) 和 (R) 标记）

注意

工具正在转动时，不能切换按钮。如要切换按钮，应停止工具，然后按下按钮。

4. **开关操作**

○ 压下扳机开关，则本机旋转；松开扳机，则本机停止。

○ 转速可通过改变扳机开关的扣动幅度来控制：幅度小则速度低，幅度大则速度高。

5. **使用挂钩**

挂钩用于在工作时将电动工具挂到腰带上。

注意

○ 使用挂钩时，牢固挂好挂钩，以防意外掉落。如果电动工具掉落，可能造成意外伤害。

○ 将电动工具挂在腰带上行动时，切勿在电动工具头上安装任何钻头。如果在将电动工具挂在腰带上行动时安装了尖利的钻头，可能造成伤害。

○ 将挂钩安装牢固。如果安装不牢固，在使用时可能造成伤害。

(1) 卸下挂钩。

用菲利普斯螺丝刀取下固定钩子的螺丝。（图 7）

(2) 重新装上挂钩并拧紧螺丝。

将挂钩牢固安装到电动工具的凹槽中，拧紧螺丝固定挂钩。（图 8）

6. **有关电池余量指示**

按下电池余量指示开关后，电池余量指示灯会点亮，能检查电池剩余电量。（图 9）

将手指从电池余量指示开关上放开后，电池余量指示灯会熄灭。电池余量指示灯的状态和电池剩余电量如**表 4** 所示。

表 4

指示灯状态	电池剩余电量
	电池剩余电量充足
	电池剩余一半电量。
	电池已快无剩余电量。请尽快给电池再充电。

因为电池余量指示因环境温度和电池特性而略有不同，上表仅供参考。

注：
○ 请勿对开关面板施加强烈冲击或将其损坏，否则可能会导致故障。
○ 为了节约电池用电，按住电池余量指示开关时电池余量指示灯才点亮。

7. LED 灯使用方法
每当按下开关面板上的灯开关，LED 灯会点亮或熄灭。（图 10）
为了防止电池耗电，请时常注意关闭 LED 灯。

注意
请不要看着灯，让眼睛直接受灯光照射。如果眼睛持续受灯光照射，会伤害眼睛。

注：
为了防止因忘记关闭 LED 灯而使电池耗电，约在 15 分钟后灯会自动关闭。

8. 拧紧和拧松螺丝
安装适合螺丝的转头，使转头对准螺丝头的凹槽，然后拧紧螺丝。
推动工具，使转头恰好与螺丝头吻合。

注意
○ 长时间将工具应用于螺丝会造成螺丝拧得过紧，且容易使螺丝折断。
用工具拧紧螺丝时，如果工具与螺丝有一定角度，则可能损坏螺丝头，正确的作用力无法传送到螺丝。
拧紧时，使工具正好对准螺丝。
○ 使用适合螺丝头上十字槽的起子头。务必使用合适的起子头，尤其是在旋紧自钻孔螺丝时，使用不合适的起子头会造成螺丝倾斜。

9. 一次充电后可能的工作量
下表介绍了一次充电后工具可完成的大致工作量。
（旋紧螺丝的数量和镗孔操作的次数会由于木材或金属的硬度、环境温度、充电器属性等不同而略有差异。）

运行模式	操作		型式	WM14DBL	WM18DBL
电子脉冲模式	木螺钉旋紧	ϕ 4.2 × 75	柳安木	约 240	约 290
螺栓模式	螺栓旋紧	M10 × 30	S10C	约 750	约 900
自钻孔螺丝模式	自钻孔螺丝旋紧	ϕ 5 × 19	C 通道 t2.3 + SPCC t1.6	约 160	约 190
钻孔模式	木工钻孔	ϕ 15	美洲松木 t18	约 450	约 540
	钢钻孔	ϕ 6.5	SPCC t1.6	约 120	约 145
	水泥钻孔	ϕ 6 × 30	马达	约 80	约 95
电子离合模式	机器螺丝旋紧	M6 × 12	S10C	约 1000	约 1200

操作上的注意事项

1. 连续运行
连续执行击打操作时，温度保护电路可能提前启动。（参见第 11 页的“2. 电子脉冲起子机的特点”。）
当温度保护电路启动后停止工具时，LED 灯闪烁以指明工具处于高温状态。约 30 秒后，LED 灯自动熄灭。
当执行连续操作时，在更换充电电池后，让工具休息约 15 分钟。

注：
○ 当工具因温度保护电路启动而停止时，让工具充分冷却。待工具冷却后，再继续使用工具。
○ 若工具未充分冷却，开启开关时工具不会启动。当开关处于开启状态时，LED 灯闪烁。请等待工具完全冷却。
○ 在连续运行期间，请勿触摸工具的前端部位。其温度较高。

2. 关于速度控制开关的使用注意事项
此开关内置一个电路，可平滑地改变旋转速度。因此，在连续驱动螺丝时，如果略微扳动开关扳机（低速旋转）且电机停止，电路部件的元件可能过热和损坏。

3. 手持工具并施加压制力
   务必用双手稳稳握住工具，并使工具直接对准螺丝或螺栓。不需要过分用力将工具压在材料上。切勿向工具过分施加压制 / 挤压力。否则，可能造成工具损坏。

维 护 和 检 查

1. 检查工具
   由于使用已经钝化的工具会降低效率并可能引起马达故障，因此一旦注意到磨损情况，就应及早磨快或更换工具。
2. 检查安装螺钉
   要经常检查安装螺钉是否紧固妥善。若发现螺钉松了，应立即重新扭紧，否则会导致严重的事故。
3. 电动机的维护
   电动机绕线是电动工具的“心脏部”应仔细检查有无损伤，是否被油液或水沾湿。
4. 清理外部
   工具沾污时，用干软布或沾肥皂水的布擦拭。切勿使用氯溶液、汽油或稀释剂，以免塑胶部分溶化。
5. 收藏
   工具应收藏于温度低于 40℃和小孩拿不到的地方。

注：
在电池长期存放（3 个月或更长）后务必给电池完全充电。如果长期存放后使用，容量小的电池可能无法充电。

6. 维修零部件一览表

注意
HiKOKI牌电动工具的维修、改造和检查须由经HiKOKI公司授权的维修中心进行。
当要求维修或其他保养服务时，若将此零部件一览表与电动工具一起呈交给经HiKOKI公司授权的维修中心，将有助于维修或保养工作。
在操作和维修电动工具时，必须遵守贵国制定的安全的有关规则和标准。

改造
HiKOKI牌电动工具经常加以改善和改造以采用最新的先进技术。
因此，某些零部件可能变更，恕不另行通知。

关于HiKOKI牌无线电动工具的重要通知：
请确保始终使用我们指定的正版电池。如果使用我们指定以外的电池，或对电池进行拆卸和改动（例如拆卸和更换电池组件或其他内部部件），那么我们无法保证我们无线电动工具的安全性和使用性能。

注：
为求改进，本手册所载规格可能不预先通告而径予更改。

GENERAL SAFETY RULES

WARNING!
Read all instructions
Failure to follow all instructions listed below may result in electric shock, fire and/or serious 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

1) **Work area**
   a) **Keep work area clean and well lit.**
   Cluttered and dark areas invite accidents.
   b) **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 of fumes.
   c) **Keep children and bystanders away while operating a power tool.**
   Distractions can cause you to lose control.

2) **Electrical safety**
   a) **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.
   b) **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.
   c) **Do not expose power tools to rain or wet conditions.**
   Water entering a power tool will increase the risk of electric shock.
   d) **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.
   e) **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.

3) **Personal safety**
   a) **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.
   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. 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.
   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 these devices 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 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 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 intended could result in a hazardous situation.

5) **Battery tool use and care**
   a) **Ensure the switch is in the off position before inserting battery pack.**
   Inserting the battery pack into power tools that have the switch on invites accidents.
   b) **Recharge only with the charger specified by the manufacturer.**
   A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
   c) **Use power tools only with specifically designated battery packs.**
   Use of any other battery packs may create a risk of injury and fire.

d) When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another.
Shorting the battery terminals together may cause burns or a fire.

e) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.
Liquid ejected from the battery may cause irritation or burns.

6) 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.

PRECAUTION
Keep children and infirm persons away.
When not in use, tools should be stored out of reach of children and infirm persons.

PRECAUTIONS FOR ELECTRONIC PULSE DRIVER

1. This is portable tool for drilling, tightening and loosenig screws. Use it only for these operation.
2. Use the earplugs if using for a long time.
3. One-hand operation is extremely dangerous; hold the unit firmly with both hands when operating.
4. After installing the driver bit, pull lightly out the bit to make sure that it does not come loose. If the bit is not installed properly, it can come loose during use, which can be dangerous.
5. Use the bit that matches the screw.
6. Tightening a screw with the tool at an angle to that tool can damage the head of the screw and the proper force will not be transmitted to the screw. Tighten with this tool lined up straight with the screw.
7. Always charge the battery at a temperature of 0 – 40°C. A temperature of less than 0°C will result in over charging which is dangerous. The battery cannot be charged at a temperature greater than 40°C.
   The most suitable temperature for charging is that of 20 – 25°C.
8. Do not use the charger continuously.
   When one charging is completed, leave the charger for about 15 minutes before the next charging of battery.
9. Do not allow foreign matter to enter the hole for connecting the rechargeable battery.
10. Never disassemble the rechargeable battery and charger.
11. Never short-circuit the rechargeable battery.
    Short-circuiting the battery will cause a great electric current and overheat. It results in burn or damage to the battery.
12. Do not dispose of the battery in fire.
    If the battery is burnt, it may explode.
13. Do not insert object into the air ventilation slots of the charger.
    Inserting metal objects or inflammables into the charger air ventilation slots will result in electrical shock hazard or damaged charge.
14. Bring the battery to the shop from which it was purchased as soon as the post-charging battery life becomes too short for practical use. Do not dispose of the exhausted battery.
15. Using an exhausted battery will damage the charger.
16. When drilling in wall, floor or ceiling, check for buried electric power cord, etc.

CAUTION ON LITHIUM-ION BATTERY

To extend the lifetime, the lithium-ion battery equips with the protection function to stop the output.
In the cases of 1 to 3 described below, when using this product, even if you are pulling the switch, the motor may stop. This is not the trouble but the result of protection function.

1. When the battery power remaining runs out, the motor stops.
   In such case, charge it up immediately.
2. If the tool is overloaded, the motor may stop. In this case, release the switch of tool and eliminate causes of overloading. After that, you can use it again.
3. If the battery is overheated under overload work, the battery power may stop.
   In this case, stop using the battery and let the battery cool. After that, you can use it again.

Furthermore, please heed the following warning and caution.

WARNING

In order to prevent any battery leakage, heat generation, smoke emission, explosion and ignition beforehand, please be sure to heed the following precautions.

1. Make sure that swarf and dust do not collect on the battery.
   ○ During work make sure that swarf and dust do not fall on the battery.
   ○ Make sure that any swarf and dust falling on the power tool during work do not collect on the battery.
   ○ Do not store an unused battery in a location exposed to swarf and dust.
   ○ Before storing a battery, remove any swarf and dust that may adhere to it and do not store it together with metal parts (screws, nails, etc.).
2. Do not pierce battery with a sharp object such as a nail, strike with a hammer, step on, throw or subject the battery to severe physical shock.
3. Do not use an apparently damaged or deformed battery.
4. Do not use the battery in reverse polarity.
5. Do not connect directly to an electrical outlets or car cigarette lighter sockets.
6. Do not use the battery for a purpose other than those specified.
7. If the battery charging fails to complete even when a specified recharging time has elapsed, immediately stop further recharging.
8. Do not put or subject the battery to high temperatures or high pressure such as into a microwave oven, dryer, or high pressure container.
9. Keep away from fire immediately when leakage or foul odor are detected.
10. Do not use in a location where strong static electricity generates.
11. If there is battery leakage, foul odor, heat generated, discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the equipment or battery charger, and stop use.

CAUTION

1. If liquid leaking from the battery gets into your eyes, do not rub your eyes and wash them well with fresh clean water such as tap water and contact a doctor immediately.
   If left untreated, the liquid may cause eye-problems.
2. If liquid leaks onto your skin or clothes, wash well with clean water such as tap water immediately.
   There is a possibility that this can cause skin irritation.

3. If you find rust, foul odor, overheating, discolor, deformation, and/or other irregularities when using the battery for the first time, do not use and return it to your supplier or vendor.

WARNING

If an electrically conductive foreign object enters the terminals of the lithium ion battery, a short-circuit may occur resulting in the risk of fire. Please observe the following matters when storing the battery.

- ○ **Do not place electrically conductive cuttings, nails, steel wire, copper wire or other wire in the storage case.**
- ○ **Either install the battery in the power tool or store by securely pressing into the battery cover until the ventilation holes are concealed to prevent short-circuits (See Fig. 1).**

SPECIFICATIONS

POWER TOOL

Model			WM14DBL	WM18DBL
Capacity	Electronic pulse mode	Wood screw	ø 4.2 × 75	
	Bolt mode	Ordinary bolt	M4 – M10	
		High tension bolt	M4 – M6	
	Self drilling screw mode	Self drilling screw	ø 6	
	Drill mode	Woodwork drilling	ø 21	
		Steel drilling	ø 10	
		Mortar drilling	ø 6	
	Electronic clutch mode	Small screw	M6	
Tightening torque [when fully charged at 20°C temp]	Bolt mode [Tightening time: 3 sec.]		Maximum 30 N·m {306 kgf·cm}	Maximum 33 N·m {337 kgf·cm}
			Tightening is M10 high tension bolt (strength grade 12.9) Hexagon socket used	
	Drill mode		11 N·m {112 kgf·cm}	
	Electronic clutch mode		5-point clutch 2.3 – 5.3 N·m {23 – 54 kgf·cm}	
Edge shape			Width across flat 6.35, bit insertion shape	
Motor			DC motor	
No-load speed [when fully charged at 20°C temp]	Electronic pulse mode		0 – 1100 /min	
	Bolt mode		0 – 640 /min	
	Self drilling screw mode		0 – 1100 /min	
	Drill mode		0 – 1100 /min	
	Electronic clutch mode		0 – 450 /min	
Number of blows [when fully charged at 20°C temp]	Electronic pulse mode		0 – 1090 /min	
	Bolt mode		0 – 1090 /min	
	Self drilling screw mode		0 – 1090 /min	
Rechargeable battery			BSL1430: Li-ion 14.4 V (3.0 Ah, 8 cells)	BSL1830: Li-ion 18 V (3.0 Ah, 10 cells)
Dimensions of the tool Entire length × height × center height			162 mm × 250 mm × 31 mm (BSL1430 attached)	162 mm × 252 mm × 31 mm (BSL1830 attached)
Weight			1.5 kg (BSL1430 attached)	1.7 kg (BSL1830 attached)
LED light			White LED	
Remaining battery indicator lamp			Red LED	

CHARGER

Model	UC18YRSL
Charging voltage	14.4 V 18 V
Weight	0.6 kg

STANDARD ACCESSORIES

In addition to the main unit (1), the package contains the accessories listed in the table below.

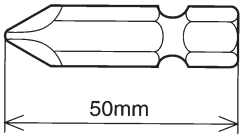
WM14DBL (2LSRK)	① Charger (UC18YRSL) ..... 1 ② Battery (BSL1430) ..... 2 ③ Plastic case..... 1 ④ Battery cover..... 1
WM14DBL (NN)	Without charger, battery, plastic case and battery cover.
WM18DBL (2LSRK)	① Charger (UC18YRSL) ..... 1 ② Battery (BSL1830) ..... 2 ③ Plastic case..... 1 ④ Battery cover..... 1
WM18DBL (NN)	Without charger, battery, plastic case and battery cover.

Standard accessories are subject to change without notice.

OPTIONAL ACCESSORIES (sold separately)

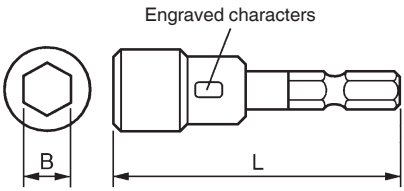
1. Plus driver bit

Bit No.	Code No.
No. 2	992671
No. 3	992672

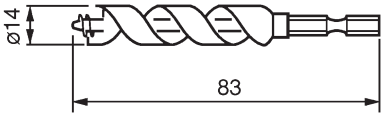


2. Hexagonal socket

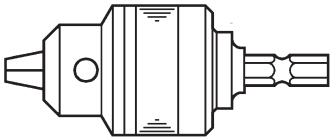
Part Name	Engraved characters	L	B	Code No.
5 mm Hexagonal socket	8	65	8	996177
6 mm Hexagonal socket	10	65	10	985329
5/16" Hexagonal socket	12	65	12	996178
8 mm Hexagonal socket	13	65	13	996179
10 mm Hexagonal socket (small type)	14	65	14	996180
10 mm Hexagonal socket	16	65	16	996181
10 mm Hexagonal socket	17	65	17	996182
1/2" Hexagonal long socket	21	166	21	996197



3. Wood working drill: Code No. 959183



4. Drill chuck adapter set: Code No. 321823
Use drill bits available on the local market.



Optional accessories are subject to change without notice.

APPLICATIONS

- ○ Driving and removing of small screws, small bolts, machine screws, wood screws, tapping screws, etc.
- ○ Drilling of various woods.
- ○ Drilling of various metals.

BATTERY REMOVAL/INSTALLATION

1. Battery removal
Hold the handle tightly and push the battery latch to remove the battery (see **Figs. 1** and **2**).

CAUTION
Never short-circuit the battery.

2. Battery installation
Insert the battery while observing its polarities (see **Fig. 2**).

CHARGING

Before using the Electronic Pulse Driver, charge the battery as follows.

1. Connect the charger's power cord to the receptacle.
When the power cord is connected, the charger's pilot lamp will blink in red (At 1-second intervals).

2. Insert the battery into the charger
Firmly insert the battery into the charger until the lines are visible, as shown in **Figs. 3**, and **4**.

3. Charging
When inserting a battery in the charger, charging will commence and the pilot lamp will light up continuously in red.
When the battery becomes fully recharged, the pilot lamp will blink in red (At 1-second intervals). (See **Table 1**)

(1) Pilot lamp indication
The indications of the pilot lamp will be as shown in **Table 1**, according to the condition of the charger or the rechargeable battery.

Table 1

Indications of the pilot lamp				
The pilot lamp lights or blinks in red.	Before charging	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds)	
	While charging	Lights	Lights continuously	
	Charging complete	Blinks	Lights for 0.5 seconds. Does not light for 0.5 seconds. (off for 0.5 seconds)	
	Charging impossible	Flickers	Lights for 0.1 second. Does not light for 0.1 seconds. (off for 0.1 seconds)	Malfunction in the battery or the charger.
The pilot lamp lights in green.	Overheat standby	Lights	Lights continuously	Battery overheated. Unable to charge (Charging will commence when battery cools).

(2) Regarding the temperatures of the rechargeable battery
The temperatures for rechargeable batteries are as shown in the **Table 2**, and batteries that have become hot should be cooled for a while before being recharged.

Table 2 Recharging ranges of batteries

Rechargeable batteries	Temperatures at which the battery can be recharged
BSL1430, BSL1830	0°C – 50°C

(3) Regarding recharging time
Depending on the combination of the charger and batteries, the charging time will become as shown in **Table 3.**

Table 3 Charging time (At 20°C)

Charger / Battery	UC18YRSL
BSL1430, BSL1830	Approx. 45 min.

NOTE:
The charging time may vary according to temperature and power source voltage.

4. Disconnect the charger's power cord from the receptacle.

5. Hold the charger firmly and pull out the battery.

NOTE:
After operation, pull out batteries from the charger first, and then keep the batteries properly.

How to make the batteries perform longer

(1) Recharge the batteries before they become completely exhausted.
When you feel that the power of the tool becomes weaker, stop using the tool and recharge its battery. If you continue to use the tool and exhaust the electric current, the battery may be damaged and its life will become shorter.

(2) Avoid recharging at high temperatures.
A rechargeable battery will be hot immediately after use. If such a battery is recharged immediately after use, its internal chemical substance will deteriorate, and the battery life will be shortened. Leave the battery and recharge it after it has cooled for a while.

CAUTION

○ When the battery charger has been continuously used, the battery charger is heated, thus constituting the cause of the failures. Once the charging has been completed, give 15 minutes rest until the next charging.

○ If the battery is recharged when it is warm due to battery use or exposure to sunlight, the pilot lamp map light in green.
The battery will not be recharged. In such a case, let the battery cool before charging.

○ When the pilot lamp flickers in red (at 0.2-second intervals), check for and take out any foreign objects in the charger's battery installation hole. If there are no foreign objects, it is probable that the battery or charger is malfunctioning. Take it to HiKOKI authorized Service Center.

PRIOR TO OPERATION

1. Preparing and checking the work environment
Make sure that the work site meets all the conditions laid forth in the precautions.

2. Checking the battery
Make sure that the battery is installed firmly. If it is at all loose it could come off and cause an accident.

3. Installing the bit

○ Driver bit
Always follow the following procedure to install driver bit. (**Fig. 5**)

(1) Pull the guide sleeve back.
(2) Insert the bit into the hexagonal hole in the anvil.
(3) Release the guide sleeve and it returns to its original position.

CAUTION
If the guide sleeve does not return to its original position, then the bit is not installed properly.

○ Drill bit

- A drill with hexagonal shank can be attached directly to the tool.
- To attach a drill without hexagonal shank, you need to have the drill chuck adapter set sold separately.

(1) Insert the drill bit into the chuck.
(2) Use the chuck key to secure the drill bit, tightening the chuck by each of the three holes in turn. (**Fig. 11**)

- Use an iron drill to make a pilot hole for a wood screw or a 10 mm or smaller hole.

(1) Insert the drill bit into the chuck.
(2) Use the chuck key to secure the drill bit, tightening the chuck by each of the three holes in turn. (**Fig. 11**)

HOW TO USE

1. Mode selection function

WARNING

Use this tool with the mode selection dial set to the correct position (it should be clicked and locked in place).

Ignoring this may cause an unexpected behavior of the tool and result in breaking materials/screws or injury.

CAUTION

Do not apply strong impact to the mode selection dial.

The operation mode can be changed by turning the mode selection dial on the tool and aligning it with the triangular mark.

The operation mode can be selected from five different modes described in the below table.

NOTE:

- ○ The tightening torque obtained by each mode varies according to the screw and material being screwed. Adjust the mode selection dial after test-tightening a few screws.
- ○ Use the bolt mode to tighten bolts.
- ○ Turning the mode selection dial with the tool switched on does not change the mode. Switch off the tool before changing the operation mode.

Example of mode selection

Operation mode	Marking		Maximum torque	Application		Notes
Electronic pulse mode	T	3	———	Wood screw tightening	Diagonal tightening of 75 mm screw	○ Use the bit and socket which are suitable for the screw diameter. ○ When using the drill mode, be sure not to stop the motor rotation.
		2			Tightening of 50 – 75 mm screw	
		1			Tightening screw shorter than 50 mm	
Bolt mode			30 N·m 33 N·m	*1 Bolt tightening		
Self drilling screw mode		2	———	Self drilling screw tightening (ø 5 or ø 6)		
		1		Self drilling screw tightening (ø 3.5 or ø 4) *2		
Drill mode			11 N·m	Drilling		
Electronic clutch mode *4		5	5.3 N·m	*3		
		4				
		3		Machine screw (M6) or tapping screw tightening, Gypsum board fixing		
		2				
		1	2.3 N·m			

*1: WM14DBL: 30 N·m, WM18DBL: 33 N·m.

*2: Before fixing a thin plate with a self drilling screw, make sure that the thickness of the plate is suitable for the screw diameter.

*3: With the electronic clutch mode 4 or 5 the tool may execute reverse rotation briefly when the load increases in order to reduce a risk of screw-head damage.

*4: The tool starts up in low rotation speed and tightens softly.
The motor automatically stops rotating when the torque reaches to the number set on the dial in order to reduce over tightening.
The clutch sound such as of the mechanical type will not be generated.

2. Characteristics of Electronic Pulse Driver

Unlike a conventional impact driver, the electronic pulse driver generates the striking force by rotating the motor in regular and reverse directions repeatedly.

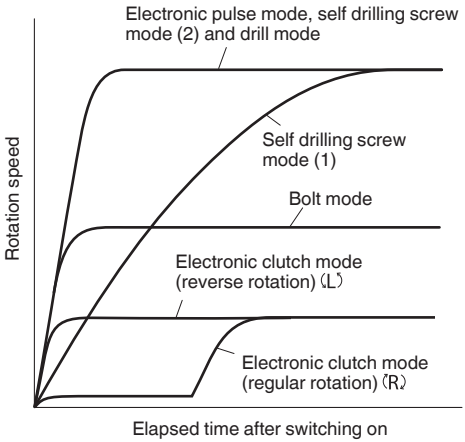
This mechanism has helped to provide quieter operation. The following characteristics are uncommon to a conventional impact driver, however these are not signs of malfunction.

- ○ The tool tends to be heated by continuous screw tightening.
To protect the motor and electronic parts that control the motor operation, this tool is equipped with a temperature protection circuit.
Depending on the screw and material being screwed, the striking operation may start early.
Since the striking operation causes temperature increase of the motor and electronic parts, the temperature protection circuit may be activated early.
Refer to "1. Continuous operation" on page 21 for recovering from the operation stop caused by the temperature protection circuit.

Also, the electronic pulse driver controls the motor rotation consistently to provide the optimum operation for each mode.

Because of this, the following cases can occur during operation.

- ○ The behavior at operation start differs by the mode.
The self drilling screw mode (1) gradually increases the speed.
The electronic clutch mode (regular rotation) rotates the motor at a very slow speed for a certain period after the start and then increases the speed.
On the other hand, the electronic clutch mode (reverse rotation) meets the preset rotation speed immediately after the start.



○ The tool may not return to the initial status from the striking operation.
When the bit or socket is removed from the screw or bolt while the switch is being pulled, the tool may continue the striking operation.
To return to the initial status, turn off the switch and then start the next operation.

○ Motor rotation speed does not decrease even when the remaining battery power becomes low.
Since this tool adopts the constant-speed control, the rotation speed is almost unchanged even when the remaining amount of the battery becomes low. This allows users to operate the tool efficiently until the battery runs down. However, it is difficult to know the remaining battery power from the rotation speed and the tool may stop suddenly during work.
Check the remaining battery power by pressing the remaining battery indicator switch at times.

○ The tool stops automatically when the electronic clutch is actuated.
Quiet screw tightening can be performed without clutch sound generated by the mechanical type.
The tool stops automatically when the clutch is actuated. If you continue to use the tool, turn off the switch once and turn it on again. When the tool does not operate even without load, the remaining amount of the battery is low. In this case, recharge the battery immediately.

3. Check the rotational direction
The bit rotates clockwise (viewed from the rear side) by pushing the R-side of the push button.
The L-side of the push button is pushed to turn the bit counterclockwise. (See **Fig. 6**) (The (L) and (R) marks are provided on the body.)

CAUTION
The push button can not be switched while the tool is turning. To switch the push button, stop the tool, then set the push button.

4. Switch operation

○ When the trigger switch is depressed, the tool rotates. When the trigger is released, the tool stops.

○ The rotational speed can be controlled by varying the amount that the trigger switch is pulled. Speed is low when the trigger switch is pulled slightly and increases as the trigger switch is pulled more.

5. Using the hook
The hook is used to hang up the power tool to your waist belt while working.

CAUTION

○ When using the hook, hang up the power tool firmly not to drop accidentally.
If the power tool is dropped, it may lead to an accident.

○ When carrying the power tool hooked to your waist belt, do not fit any bit to the tip of power tool. If the sharp bit such as drill is fitted to the power tool when carrying it hooked to your waist belt, you will be injured.

○ Install securely the hook. Unless the hook is securely installed, it may cause an injury while being used.

(1) Removing the hook.
Remove the screws fixing the hook with Philips screw driver.(**Fig. 7**)

(2) Replacing the hook and tightening the screws.
Install securely the hook in the groove of power tool and tighten the screws to fix the hook firmly. (**Fig. 8**)

6. About Remaining Battery Indicator
When pressing the remaining battery indicator switch, the remaining battery indicator lamp lights and the battery remaining power can be checked. (**Fig. 9**)
When releasing your finger from the remaining battery indicator switch, the remaining battery indicator lamp goes off. The **Table 4** shows the state of remaining battery indicator lamp and the battery remaining power.

Table 4

State of lamp	Battery Remaining Power
	The battery remaining power is enough.
	The battery remaining power is a half.
	The battery remaining power is nearly empty. Re-charge the battery soonest possible.

As the remaining battery indicator shows somewhat differently depending on ambient temperature and battery characteristics, read it as a reference.

NOTE:

○ Do not give a strong shock to the switch panel or break it. It may lead to a trouble.

○ To save the battery power consumption, the remaining battery indicator lamp lights while pressing the remaining battery indicator switch.

7. How to use the LED light
Every time you press the light switch on the switch panel, the LED light lights or goes off. (**Fig. 10**)
To prevent the battery power consumption, turn off the LED light frequently.

CAUTION
Do not expose directly your eyes to the light by looking into the light.
If your eyes are continuously exposed to the light, your eyes will be hurt.

NOTE:
To prevent the battery power consumption caused by forgetting to turn off the LED light, the light goes off automatically in about 15 minutes.

8. Tightening and loosening screws
Install the bit that matches the screw, line up the bit in the grooves of the head of the screw, then tighten it.
Push the tool just enough to keep the bit fitting the head of the screw.

CAUTION

○ Applying the tool for too long tightens the screw too much and can break it.
Tightening a screw with the tool at an angle to that screw can damage the head of the screw and the proper force will not be transmitted to the screw.
Tighten with this tool lined up straight with the screw.

○ Use the bit that fits the cross recess on the screw head.
Make sure to use an appropriate bit especially when tightening self drilling screws since using an inappropriate bit can topple the screws.

9. Work amount possible with one charging

The following table shows the approximate amount of work to be carried out by the tool with one charging.
(The number of screws tightened and that of boring operations differ slightly according to the hardness of wood or metal, the ambient temperature, the charger properties, etc.)

Operation mode	Operation		Model	WM14DBL	WM18DBL
Electronic pulse mode	Wood screw tightening	ø 4.2 × 75	Lauan	Approx. 240	Approx. 290
Bolt mode	Bolt tightening	M10 × 30	S10C	Approx. 750	Approx. 900
Self drilling screw mode	Self drilling screw tightening	ø 5 × 19	C-channel t2.3 + SPCC t1.6	Approx. 160	Approx. 190
Drill mode	Woodwork drilling	ø 15	American pine t18	Approx. 450	Approx. 540
	Steel drilling	ø 6.5	SPCC t1.6	Approx. 120	Approx. 145
	Mortar drilling	ø 6 × 30	Mortar	Approx. 80	Approx. 95
Electronic clutch mode	Machine screw tightening	M6 × 12	S10C	Approx. 1000	Approx. 1200

OPERATIONAL CAUTIONS

1. Continuous operation

When you perform the striking operation continuously, the temperature protection circuit may be activated early. (Refer to "2. Characteristics of Electronic Pulse Driver" on page 19.)
When the activated temperature protection circuit stops the tool, the LED light flashes to indicate that the tool is heated to high temperature. The LED light goes off automatically after approx. 30 seconds.
When you perform continuous operation, allow the tool to rest for around 15 minutes at a replacement of rechargeable battery.

NOTE:

○ When the tool is stopped by the activated temperature protection circuit, allow the tool to cool sufficiently.
You can use the tool again when it cools down.

○ While the tool is not cooled sufficiently, it cannot start up by turning the switch to on. The LED light flashes while the switch is turned on. Please wait until the tool cools down sufficiently.

○ Do not touch the nose part of the tool during continuous operation. It is heated to high temperature.

2. Cautions on use of the speed control switch

This switch has a built-in, electronic circuit which steplessly varies the rotation speed. Consequently, when the switch trigger is pulled only slightly (low speed rotation) and the motor is stopped while continuously driving in screws, the components of the electronic circuit parts may overheat and be damaged.

3. Holding the tool and applying the pressing force

Make sure to hold the tool securely with your both hands, and keep the tool straight to a screw or bolt. There is no need to press the tool excessively against materials.
Be careful not to apply excessive pressing/prying force to the tool. It may damage the tool.

MAINTENANCE AND INSPECTION

1. Inspecting the tool

Since use of a dull tool will degrade efficiency and cause possible motor malfunction, sharpen or replace the tool as soon as abrasion is noted.

2. Inspecting the mounting screws

Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be loose, retighten them immediately. Failure to do so could result in serious hazard.

3. Maintenance of the motor

The motor unit winding is the very "heart" of the power tool.
Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

4. Cleaning of the outside

When the tool is stained, wipe with a soft dry cloth or a cloth moistened with soapy water. Do not use chloric solvents, gasoline or paint thinner, for they melt plastics.

5. Storage

Store the tool in a place in which the temperature is less than 40°C and out of reach of children.

NOTE:

Make sure that the battery is fully charged when stored for a long period (3 months or more). The battery with smaller capacity may not be able to becharged when used, if stored for a long period.

6. Service parts list

CAUTION

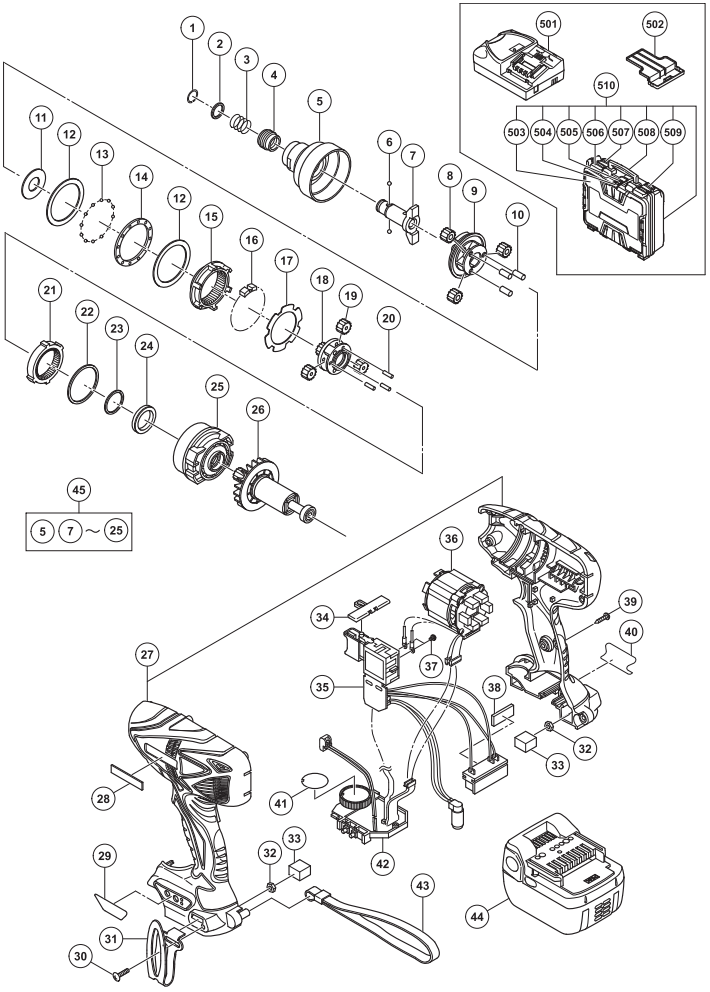
Repair, modification and inspection of HiKOKI Power Tools must be carried out by a HiKOKI Authorized Service Center.
This Parts List will be helpful if presented with the tool to the HiKOKI Authorized Service Center when requesting repair or other maintenance.
In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

MODIFICATIONS

HiKOKI Power Tools are constantly being improved and modified to incorporate the latest technological advancements.
Accordingly, some parts may be changed without prior notice.

Important notice on the batteries for the HiKOKI cordless power tools
Please always use one of our designated genuine batteries. We cannot guarantee the safety and performance of our cordless power tool when used with batteries other than these designated by us, or when the battery is disassembled and modified (such as disassembly and replacement of cells or other internal parts).

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



ITEM NO.	PART NAME	Q'TY
1	RETAINING RING	1
2	WASHER (D)	1
3	GUIDE SPRING (D)	1
4	GUIDE SLEEVE (D)	1
5	HAMMER CASE	1
6	STEEL BALL D3.5	2
7	ANVIL	1
8	IDLE GEAR (B)	3
9	HAMMER	1
10	NEEDLE ROLLER	3
11	WASHER (D)	1
12	WASHER (E)	2
13	STEEL BALL D2.5	12
14	WASHER (F)	1
15	RING GEAR (B)	1
16	DAMPER	6
17	WASHER (C)	1
18	PINION (B)	1
19	IDLE GEAR (A)	3
20	NEEDLE ROLLER	3
21	RING GEAR (A)	1
22	WASHER (B)	1
23	WASHER (A)	1
24	METAL	1
25	INNER COVER	1
26	ROTOR	1
27	HOUSING (A) (B) SET	1
28	BRAND PLATE	1
29	PANEL SHEET (B)	1
30	TRUSS HD. SCREW M4	1
31	HOOK	1
32	LOCK NUT M4	2
33	PACKING	2
34	PUSHING BUTTON (A)	1
35	DC-SPEED CONTROL SWITCH	1
36	STATOR FET PCB	1
37	MACHINE SCREW (W/SP. WASHER) M3 × 5	2
38	CUSHION	1
39	TAPPING SCREW (W/FLANGE) D4 × 20	10
40	NAME PLATE	1

ITEM NO.	PART NAME	Q'TY
41	SEAL	1
42	CONTROLLER ASS'Y	1
43	STRAP	1
44	BATTERY	2
45	GEAR BOX ASS'Y	1
501	CHARGER (UC18YRSL)	1
502	BATTERY COVER	1
503	COVER	1
504	SUB LATCH	1
505	KNOB (C)	1
506	LATCH	2
507	KNOB (L)	1
508	HANDLE	1
509	KNOB (R)	1
510	CASE ASS'Y	1

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