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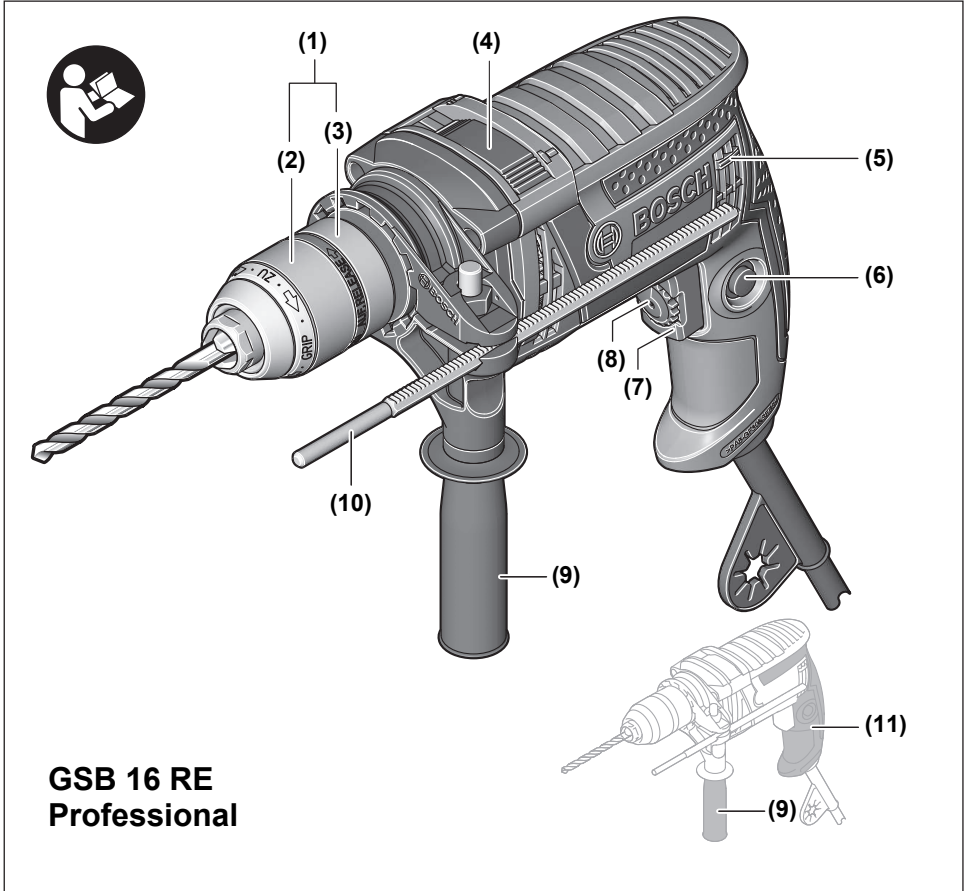
# GSB Professional

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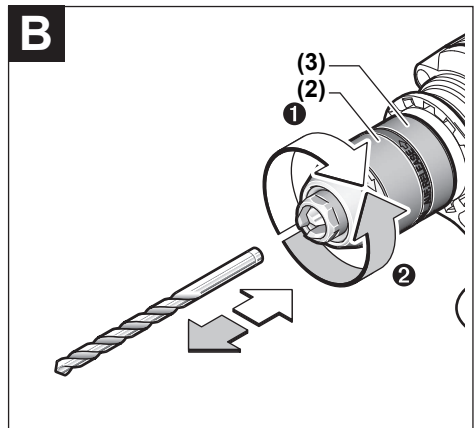
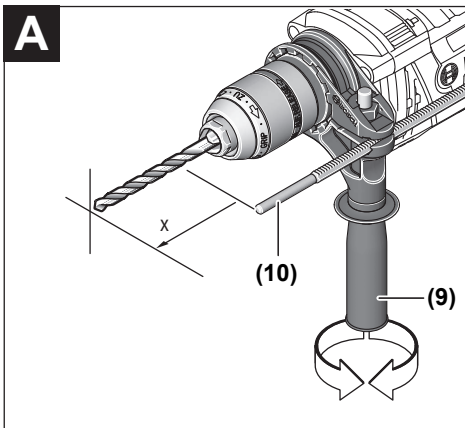


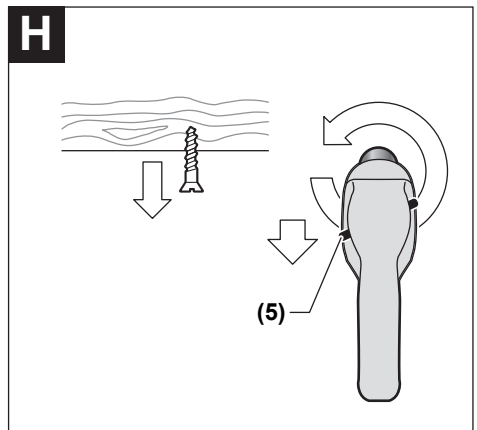
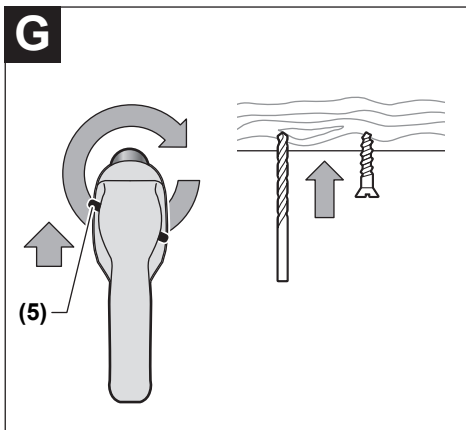
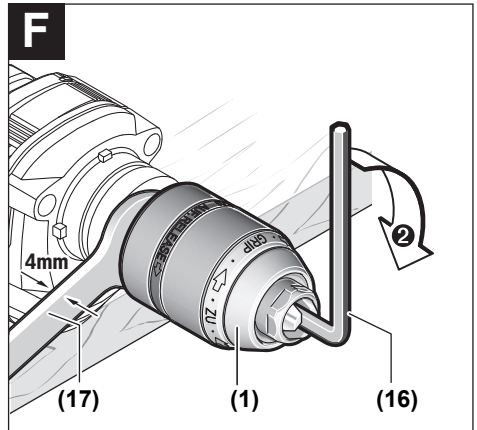
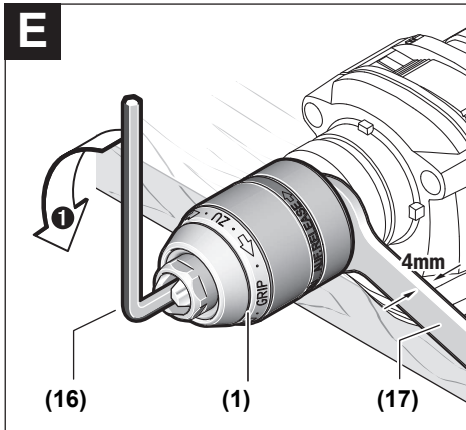
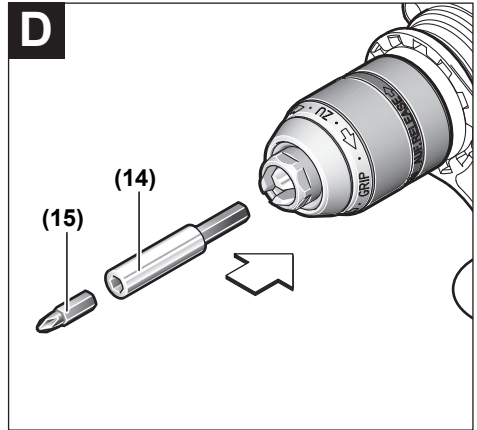
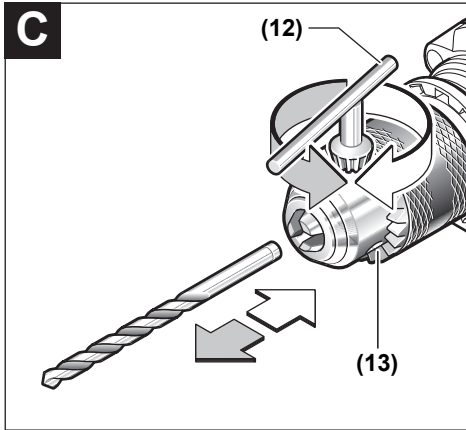
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中文 .....	页	5
English .....	page	9



## GSB 16 RE Professional





# 中文

## 安全规章

### 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。

#### 工作场地的安全

- ▶ 保持工作场地清洁和明亮。杂乱和黑暗的场地会引发事故。
- ▶ 不要在易爆环境，如有易燃液体、气体或粉尘的环境下操作电动工具。电动工具产生的火花会点燃粉尘或气体。
- ▶ 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。

#### 电气安全

- ▶ 电动工具插头必须与插座相配。绝不能以任何方式改装插头。需接地的电动工具不能使用任何转换插头。未经改装的插头和相配的插座将降低电击风险。
- ▶ 避免人体接触接地表面，如管道、散热片和冰箱。如果你身体接触接地表面会增加电击风险。
- ▶ 不得将电动工具暴露在雨中或潮湿环境中。水进入电动工具将增加电击风险。
- ▶ 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。
- ▶ 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风险。
- ▶ 如果无法避免在潮湿的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。

#### 人身安全

- ▶ 保持警觉，当操作电动工具时关注所从事的操作并保持清醒。当你感到疲倦，或在有药物、酒精或治疗反应时，不要操作电动工具。在操作电动工具时瞬间的疏忽会导致严重人身伤害。
- ▶ 使用个人防护装置。始终佩戴护目镜。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。
- ▶ 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。

- ▶ 在电动工具接通之前，拿掉所有调节钥匙或扳手。遗留在电动工具旋转零件上的扳手或钥匙会导致人身伤害。
- ▶ 手不要过分伸展。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。
- ▶ 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、配饰或长发可能会卷入运动部件。
- ▶ 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。
- ▶ 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。

#### 电动工具使用和注意事项

- ▶ 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。
- ▶ 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。
- ▶ 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。
- ▶ 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。
- ▶ 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。
- ▶ 保持切削刀具锋利和清洁。维护良好地有锋利切削刃的刀具不易卡住而且容易控制。
- ▶ 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。
- ▶ 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。

#### 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

##### 适用于全部操作的安全说明

- ▶ 带耳罩进行冲击作业。暴露于噪声环境会导致失聪。
- ▶ 使用辅助手柄。失控会导致人身伤害。
- ▶ 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从而使 操作者受到电击。

### 当使用长钻头时的安全说明

- ▶ **操作时切勿超出钻头的最大额定转速。**在较高转速下，如果让钻头在不接触工件的情况下随意旋转，很可能导致其弯折，从而引发人身伤害。
- ▶ **务必以低转速开始钻孔，并让钻头尖端与工件接触。**在较高转速下，如果让钻头在不接触工件的情况下随意旋转，很可能导致其弯折，从而引发人身伤害。
- ▶ **施压时务必与钻头成一直线，且不得施加过大力。**若钻头弯折会导致其损坏或失控，从而引发人身伤害。

### 其它安全规章

- ▶ **当工具刀头被夹住时，请立即关闭电动工具。**以防反作用力矩导致反弹。当电动工具过载或向待加工工件倾斜时，工具刀头就会卡住。
- ▶ **请紧握电动工具。**拧紧和拧松螺丝时可能短时出现高反应扭矩。
- ▶ **固定好工件。**使用固定装置或老虎钳固定工件，会比用手紧握工件更牢固。
- ▶ **使用合适的侦测装置侦察隐藏的电线，或者向当地的相关单位寻求支援。**接触电线可能引起火灾并让操作者触电。损坏了瓦斯管会引起爆炸。凿穿水管不仅会造成严重的财物损失，也可能导致触电。
- ▶ **等待电动工具完全静止后才能够放下机器。**机器上的工具可能在工作中被夹住，而令您无法控制电动工具。

## 产品和性能说明



请阅读所有安全规章和指示。不遵照以下警告和说明可能导致电击、着火和/或严重伤害。

请注意本使用说明书开头部分的图示。

### 按照规定使用

GBM、TBM代表电钻，GSB、TSB代表冲击电钻。

本机器适合在砖块、混凝土和石材上进行冲击钻。另外也可以在木材、金属、陶瓷和塑料上钻孔。设备配备了电子调节和正/逆转功能，也适用于螺纹拧紧和攻丝。

### 插图上的机件

机件的编号和电动工具详解图上的编号一致。

- (1) 快速夹头<sup>A)</sup>
- (2) 前套筒
- (3) 后套筒
- (4) “钻孔/冲击钻”转换开关
- (5) 正逆转开关 (GSB 13 RE/GSB 16 RE/GSB 600 RE)
- (6) 起停开关的锁紧键
- (7) 起停开关
- (8) 转速预选调节轮 (GSB 16 RE)
- (9) 辅助手柄 (绝缘握柄)<sup>A)</sup>
- (10) 限深器<sup>A)</sup>
- (11) 手柄 (绝缘握柄)
- (12) 夹头扳手<sup>A)</sup>
- (13) 齿环夹头<sup>A)</sup>
- (14) 通用批嘴架<sup>A)B)</sup>
- (15) 螺丝批嘴<sup>A)B)</sup>
- (16) 内六角扳手<sup>A)B)</sup>
- (17) 开口扳手<sup>A)B)</sup>

A) 图表或说明上提到的附件，并不包含在基本的供货范围之内。本公司的附件清单中有完整的附件供应项目。

B) 市售 (不包含在供货范围之内)

### 技术数据

冲击钻	GSB ...	13	13 RE	16	16 RE	600 RE
物品代码	3 601 ...	B27 0..	B27 1..	B28 0..	B28 1..	B27 1..
额定输入功率	瓦	650	650	750	750	650
输出功率	瓦	353	353	456	456	353
无负载转速	转/分钟	3 150	3 150	3 250	3 250	3 150
冲击次数	转/分钟	47 000	47 000	48 500	48 500	47 000
额定扭力	牛米	1.8	1.8	2.1	2.1	1.8
设定转速		-	-	-	●	-
正/逆转功能		-	●	-	●	●
主轴颈直径	毫米	43	43	43	43	43
最大钻孔直径						
- 混凝土	毫米	13	13	16	16	13
- 钢	毫米	10	10	12	12	10
- 木材	毫米	20	20	25	25	20

冲击钻	GSB ...	13	13 RE	16	16 RE	600 RE
夹头的夹紧范围	毫米	1.5-13	1.5-13	1.5-13	1.5-13	1.5-13
重量符合EPTA-Procedure 01:2014	千克	1.6	1.6	1.8	1.8	1.6
保护等级		□/	□/	□/	□/	□/

所有参数适用于230伏的额定电压[U]，对于其他不同的电压和国际规格，数据有可能不同。

## 安装

- ▶ 在电动工具上进行所有操作之前都必须从插座上拔出电源插头。

### 辅助手柄 (见图片A)

- ▶ 操作电动工具时务必使用辅助手柄(9)。

可以任意翻动辅助手柄(9)，以便在工作时毫无疲劳地牢牢抓紧。

逆时针转动辅助手柄(9)的下半部并装入限深器(10)。

尽可能地拉出限深器，使钻尖与限深器尖端之间的距离等于所需的钻孔深度X。

然后顺时针重新拧紧辅助手柄(9)的下半部。

限深器(10)的槽纹必须朝上。

### 更换工具

#### 快速夹头 (见图片B)

握住快速夹头(1)的后套筒(3)，沿①方向旋转前套筒(2)，直至可以安装工具为止。安装好工具。

握住快速夹头(1)的后套筒(3)，用手朝着②方向用力旋紧前套筒(2)，直至不再听到过于卡紧的声音为止。由此钻夹头会被自动锁止。

反向转动前套筒(2)来移除工具时，锁止件再次自动松开。

#### 齿环夹头 (见图片C)

- ▶ 更换刀具时，请佩戴保护手套。长时间工作之后夹头会变得十分炽热。

旋转打开齿环夹头(13)，直至可以装入工具。安装好工具。

将夹头扳手(12)插入齿环夹头(13)相应的孔中，然后均匀拧紧工具。

#### 起子机的工具 (见图片D)

使用螺丝批嘴(15)时，应当使用通用批嘴架(14)。必须使用与螺丝头大小相符的螺丝批嘴。

旋螺丝时，应将“钻孔/冲击钻”(4)转换按钮调到“钻孔”图标上。

### 更换钻夹头

- ▶ 在电动工具上进行所有操作之前都必须从插座上拔出电源插头。

#### 拆卸钻夹头 (见图片E)

为了拆卸快速夹头(1)，将内六角扳手(16)夹到快速夹头(1)中并将开口扳手(17) (SW 14) 放在驱动轴的扳手着力面上。

将电动工具放到一个稳固的底板上，例如工作台。

固定开口扳手(17)，朝①方向转动六内角扳手(16)松开快速夹头(1)。通过轻轻敲击内六角扳手(16)的长柄来松开卡住的快速夹头。

将内六角扳手从快速夹头中拆下，然后完全拧下快速夹头。

请按照与拆卸快速夹头相同的方式拆卸齿环夹头(13)。

#### 安装钻夹头 (见图片F)

以相反的顺序安装快速夹头/带卡环的快速夹头/齿环夹头。



必须以33-39牛米的拧紧力矩拧紧钻夹头。

### 抽吸粉尘/切屑

含铅的颜料以及某些木材、矿物和金属的加工废尘有害健康。机器操作者或者工地附近的人如果接触、吸入这些废尘，可能会有过敏反应或者感染呼吸道疾病。

某些尘埃（例如加工橡木或山毛榉的废尘）可能致癌，特别是和处理木材的添加剂（例如木材的防腐剂等）结合之后。只有经过专业训练的人才能够加工含石棉的物料。

- 工作场所要保持空气流通。

- 最好佩戴P2滤网等级的口罩。

请留心并遵守贵国和加工物料有关的法规。

- ▶ 避免让工作场所堆积过多的尘垢。尘埃容易被点燃。

## 运行

### 投入使用

- ▶ 注意电源电压！电源的电压必须和电动工具铭牌上标示的电压一致。标记为230伏电动工具用220伏的电压可以驱动。

#### 调整旋转方向 (见图片G-H) (GSB 13 RE/ GSB 16 RE/GSB 600 RE)

- ▶ 只能在电动工具静止时操纵正逆转开关(5)。

通过正逆转开关(5)可以更改电动工具的旋转方向。按下起停开关(7)后无法更改。

**正转：**钻孔和拧入螺丝时，将正逆转开关(5)在左侧向上推，同时在右侧向下推。

**逆转：**松开并拧出螺丝时，将正逆转开关(5)在左侧向下推，同时在右侧向上推。



## 设定操作模式



### 钻孔和拧螺丝

将转换按钮(4)调到“钻孔”图标上。



### 冲击钻

将转换按钮(4)调到“冲击钻”图标上。

可感到转换按钮(4)卡止，在

电机运行时也可操纵。

## 接通/关闭

将电动工具投入使用时按压起停开关(7)并按住。

如需**锁定**被按住的起停开关(7)，请按压锁定键(6)。

如需**关闭**电动工具，请松开起停开关(7)，如果其已被锁定键(6)锁住，请短促按压起停开关(7)，然后再松开。

## 调整转速/冲击次数 (GSB 13 RE/GSB 16 RE/GSB 600 RE)

根据按压起停开关(7)的程度，可以无级调节已接通的电动工具的转速。

轻按起停开关(7)，转速低。逐渐在开关上加压，转速也会跟着提高。

## 预选转速/冲击次数 (GSB 16 RE)

利用转速预选调节轮(8)也可以在运行过程中预选所需的转速/冲击次数。

正确的转速/冲击次数必须视加工物料和工作状况而定，唯有实际操作才能够得到最合适的结果。

## 工作提示

▶ 在电动工具上进行所有操作之前都必须从插座上拔出电源插头。

▶ 先关闭电动工具，然后再放置在螺母/螺栓上。旋转的工具刀头可能会滑开。

使用低转速长时间操作之后，应该让电动工具以最大转速空转约3分钟来帮助机器冷却。

为瓷砖钻孔时，将转换按钮(4)调到“钻孔”图标上。瓷砖钻穿后，将转换按钮调到“冲击钻”图标上，进行冲击钻作业。

在混凝土、石材和砖墙上钻孔时，必须使用硬金属钻头。

在金属上钻孔时，仅可使用锋利的HSS钻头（HSS=高速钢）。在博世的附件产品系列中，有符合这个品质等级的产品。

可通过钻头刃磨机（附件）毫不费力地磨利直径在2.5-10毫米的麻花钻。

## GSB 16 RE

进行精密的钻孔工作时，最好使用钻台（附件）。机器台钳作为附件购买，能够牢牢地夹住工件。它可以避免工件扭转，从而防止事故发生。

## 维修和服务

### 维护和清洁

- ▶ 在电动工具上进行所有操作之前都必须从插座上拔出电源插头。
- ▶ 电动工具和通气孔必须随时保持清洁，以确保工作效率和工作安全。

如果必须更换连接线，务必把这项工作交给博世或者经授权的博世电动工具顾客服务执行，以避免危害机器的安全性能。

### 客户服务和应用咨询

本公司顾客服务处负责回答有关本公司产品的修理、维护和备件的问题。备件的分解图和信息也可查看：[www.bosch-pt.com](http://www.bosch-pt.com)  
博世应用咨询团队乐于就我们的产品及其附件问题提供帮助。

[www.powertool-portal.de](http://www.powertool-portal.de)，适合工匠和DIY者的互联网门户网站。

如需查询和订购备件，请务必提供产品型号铭牌上的10位数货号。

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### 处理废弃物

必须以符合环保要求的方式回收再利用电动工具、附件和包装材料。





请勿将电动工具扔到生活垃圾中!

## English

### Safety instructions

#### General Power Tool Safety Warnings

**⚠ WARNING** Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.**

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### Work area safety

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

#### Electrical safety

- ▶ **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- ▶ **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- ▶ **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- ▶ **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- ▶ **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- ▶ **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protec-**

**ted supply.** Use of an RCD reduces the risk of electric shock.

#### Personal safety

- ▶ **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- ▶ **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- ▶ **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or engaging power tools that have the switch on invites accidents.
- ▶ **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- ▶ **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- ▶ **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- ▶ **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- ▶ **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

#### Power tool use and care

- ▶ **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- ▶ **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- ▶ **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- ▶ **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or**

these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

- ▶ **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **Use the power tool, accessories and tool bits etc. in accordance with these instructions, 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.
- ▶ **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

#### Service

- ▶ **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.

## Safety Warnings for Drills

### Safety instructions for all operations

- ▶ **Wear ear protectors when impact drilling.** Exposure to noise can cause hearing loss.
- ▶ **Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.
- ▶ **Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory or fasteners may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

### Safety instructions when using long drill bits

- ▶ **Never operate at higher speed than the maximum speed rating of the drill bit.** At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- ▶ **Always start drilling at low speed and with the bit tip in contact with the workpiece.** At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- ▶ **Apply pressure only in direct line with the bit and do not apply excessive pressure.** Bits can bend causing breakage or loss of control, resulting in personal injury.

### Additional safety warnings

- ▶ **Switch the power tool off immediately if the application tool becomes blocked. Be prepared for high torque reactions which cause kickback.** The application tool becomes blocked when it becomes jammed in

the workpiece or when the power tool becomes overloaded.

- ▶ **Hold the power tool securely.** When tightening and loosening screws be prepared for temporarily high torque reactions.
- ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
- ▶ **Use suitable detectors to determine if utility lines are hidden in the work area or call the local utility company for assistance.** Contact with electric lines can lead to fire and electric shock. Damaging a gas line can lead to explosion. Penetrating a water line causes property damage or may cause an electric shock.
- ▶ **Always wait until the power tool has come to a complete stop before placing it down.** The application tool can jam and cause you to lose control of the power tool.

### Products sold in GB only:

Your product is fitted with an BS 1363/A approved electric plug with internal fuse (ASTA approved to BS 1362).

If the plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place by an authorised customer service agent. The replacement plug should have the same fuse rating as the original plug.

The severed plug must be disposed of to avoid a possible shock hazard and should never be inserted into a mains socket elsewhere.

## Product Description and Specifications



### Read all the safety and general instructions.

Failure to observe the safety and general instructions may result in electric shock, fire and/or serious injury.

Please observe the illustrations at the beginning of this operating manual.

### Intended Use

The power tool is intended for impact drilling in brick, concrete and stone, as well as for drilling in wood, metal, ceramic and plastic. Tools with electronic control and right/left rotation are also suitable for screwdriving and thread cutting.

### Product Features

The numbering of the product features refers to the diagram of the power tool on the graphics page.

- (1) Keyless chuck <sup>A)</sup>
- (2) Front sleeve
- (3) Rear sleeve
- (4) "Drilling/impact drilling" selector switch
- (5) Rotational direction switch (GSB 13 RE/GSB 16 RE/GSB 600 RE)
- (6) Lock-on button for on/off switch

- (7) On/off switch
- (8) Speed preselection thumbwheel (GSB 16 RE)
- (9) Auxiliary handle (insulated gripping surface) <sup>A)</sup>
- (10) Depth stop <sup>A)</sup>
- (11) Handle (insulated gripping surface)
- (12) Chuck key <sup>A)</sup>
- (13) Keyed chuck <sup>A)</sup>

- (14) Universal bit holder <sup>A)</sup>
- (15) Screwdriver bit <sup>A/B)</sup>
- (16) Hex key <sup>A/B)</sup>
- (17) Open-ended spanner <sup>A/B)</sup>

A) Accessories shown or described are not included with the product as standard. You can find the complete selection of accessories in our accessories range.

B) Commercially available (not included in the scope of delivery)

## Technical Data

Impact drill	GSB ...	13	13 RE	16	16 RE	600 RE
Article number	3 601 ...	B27 0..	B27 1..	B28 0..	B28 1..	B27 1..
Rated power input	W	650	650	750	750	650
Power output	W	353	353	456	456	353
No-load speed	rpm	3 150	3 150	3 250	3 250	3 150
Impact rate	rpm	47 000	47 000	48 500	48 500	47 000
Rated torque	Nm	1.8	1.8	2.1	2.1	1.8
Speed preselection		–	–	–	●	–
Right/left rotation		–	●	–	●	●
Spindle collar diameter	mm	43	43	43	43	43
Max. drilling diameter						
– Concrete	mm	13	13	16	16	13
– Steel	mm	10	10	12	12	10
– Wood	mm	20	20	25	25	20
Chuck capacity	mm	1.5–13	1.5–13	1.5–13	1.5–13	1.5–13
Weight according to EPTA-Procedure 01:2014	kg	1.6	1.6	1.8	1.8	1.6
Protection class		□/II	□/II	□/II	□/II	□/II

The specifications apply to a rated voltage [U] of 230 V. These specifications may vary at different voltages and in country-specific models.

## Assembly

- ▶ Pull the plug out of the socket before carrying out any work on the power tool.

### Auxiliary Handle (see figure A)

- ▶ Do not operate your power tool without the auxiliary handle (9).

You can swivel the auxiliary handle (9) to any angle for a safe work posture that minimises fatigue.

Turn the lower gripping end of the auxiliary handle (9) anti-clockwise and set the depth stop (10).

Pull the depth stop far enough out that the distance between the drill bit tip and the edge of the depth stop corresponds to the required drilling depth X.

Then, turn the lower gripping end of the auxiliary handle (9) clockwise to retighten it.

The fluting on the depth stop (10) must face upwards.

## Changing the Tool

### Keyless Chuck (see figure B)

Hold the rear sleeve (3) of the keyless chuck (1) firmly and turn the front sleeve (2) in the rotational direction ① until the tool can be inserted. Insert the tool.

Hold the rear sleeve (3) of the keyless chuck (1) and firmly tighten the front sleeve (2) by hand in the rotational direction ② until it stops clicking. This will automatically lock the drill chuck.

The lock will disengage again if you turn the front sleeve (2) in the opposite direction to remove the tool.

### Keyed chuck (see figure C)

- ▶ Wear protective gloves when changing tools. The drill chuck may heat up significantly when it is used for long periods.

Open the keyed chuck (13) by turning it until the tool can be inserted. Insert the tool.

Insert the drill chuck key (12) into the corresponding holes of the keyed chuck (13) and clamp the tool evenly.

## Screwdriving Tools (see figure D)

You should always use a universal bit holder (14) when using screwdriver bits (15). Only use screwdriver bits that fit the screw head.

For screwdriving, make sure the "drilling/impact drilling" selector switch (4) is always set to the "drilling" symbol.

## Changing the Drill Chuck

- **Pull the plug out of the socket before carrying out any work on the power tool.**

### Removing the Drill Chuck (see figure E)

To remove the keyless chuck (1), clamp a hex key (16) in the keyless chuck (1) and position an open-ended spanner (17) (width across flats: 14) against the spanner flat of the drive spindle.

Place the power tool on a firm surface, e.g. a work bench. Hold the open-ended spanner (17) in place and loosen the keyless chuck (1) by turning the hex key (16) in the rotational direction ⚙️. A tightly seated keyless chuck can be loosened with a light blow on the long shaft of the hex key (16).

Remove the hex key from the keyless chuck and completely unscrew the keyless chuck from the power tool.

The keyed chuck (13) can be removed in the same way as described for the keyless chuck.

### Fitting the Drill Chuck (see figure F)

The keyless chuck/keyless chuck with securing ring/keyed chuck is mounted in reverse order.



**The drill chuck must be tightened using a tightening torque of approx. 33–39 Nm.**

## Dust/Chip Extraction

Dust from materials such as lead-containing coatings, some wood types, minerals and metal can be harmful to one's health. Touching or breathing-in the dust can cause allergic reactions and/or lead to respiratory infections of the user or bystanders.

Certain dust, such as oak or beech dust, is considered carcinogenic, especially in connection with wood-treatment additives (chromate, wood preservative). Materials containing asbestos may only be worked by specialists.

- Provide for good ventilation of the working place.
- It is recommended to wear a P2 filter-class respirator.

Observe the relevant regulations in your country for the materials to be worked.

- **Avoid dust accumulation at the workplace.** Dust can easily ignite.

## Operation

### Starting Operation

- **Pay attention to the mains voltage. The voltage of the power source must match the voltage specified on the**

**rating plate of the power tool. Power tools marked with 230 V can also be operated with 220 V.**

- **Products that are only sold in AUS and NZ:** Use a residual current device (RCD) with a nominal residual current of 30 mA or less.

### Setting the rotational direction (see figures G–H) (GSB 13 RE/GSB 16 RE/GSB 600 RE)

- **Only operate the rotational direction switch (5) when the power tool is not in use.**

The rotational direction switch (5) is used to change the rotational direction of the power tool. However, this is not possible while the on/off switch (7) is being pressed.

**Clockwise rotation:** To drill and drive in screws, slide the rotational direction switch (5) upwards on the left-hand side and downwards on the right-hand side at the same time.

**Anti-clockwise rotation:** To loosen and unscrew screws and nuts, slide the rotational direction switch (5) downwards on the left-hand side and upwards on the right-hand side at the same time.

### Setting the Operating Mode



#### Drilling and screwdriving

Set the selector switch (4) to the "drilling" symbol.



#### Impact drilling

Set the selector switch (4) to the "impact drilling" symbol.

The selector switch (4) clicks into place and can also be actuated when the motor is running.

### Switching on/off

To **start** the power tool, press and hold the on/off switch (7).

Press the lock-on button (6) to **lock** the on/off switch (7) in this position.

To **switch off** the power tool, release the on/off switch (7); or, if the switch is locked with the lock-on button (6), briefly press the on/off switch (7) and then release it.

### Setting the speed/impact rate (GSB 13 RE/GSB 16 RE/GSB 600 RE)

You can adjust the speed of the power tool when it is on by pressing in the on/off switch (7) to varying extents.

A light pressure on the on/off switch (7) results in a low rotational speed. Increased pressure on the switch causes an increase in speed.

### Preselecting the Speed/Impact Rate (GSB 16 RE)

You can preselect the required speed/impact rate using the speed preselection thumbwheel (8), even during operation. The required speed/impact rate is dependent on the material and the work conditions and can be determined by practical trials.

### Practical Advice

- **Pull the plug out of the socket before carrying out any work on the power tool.**

► **Only apply the power tool to the screw/nut when the tool is switched off.** Rotating tool inserts can slip off.

After working at a low speed for an extended period, you should operate the power tool at the maximum speed for approximately three minutes without load to cool it down.

To drill into tiles, set the selector switch **(4)** to the "drilling" symbol. After drilling through the tile, set the selector switch to the "impact drilling" symbol and drill with impact.

Use carbide drill bits when working with concrete, stone and masonry.

When drilling into metal, only use sharpened HSS drills (HSS = high-speed steel) which are in perfect condition. The Bosch accessory range guarantees appropriate quality.

Using the drill bit sharpener (accessory), you can effortlessly sharpen twist drill bits with a diameter of 2.5–10 mm.

### GSB 16 RE

Use a drill stand (accessory) for jobs that require particular precision.

The machine vice, which is available as an accessory, enables the workpiece to be securely clamped. This prevents the workpiece from turning and any accidents this could cause.

## Maintenance and Servicing

### Maintenance and Cleaning

- **Pull the plug out of the socket before carrying out any work on the power tool.**
- **To ensure safe and efficient operation, always keep the power tool and the ventilation slots clean.**

In order to avoid safety hazards, if the power supply cord needs to be replaced, this must be done by Bosch or by a customer service centre that is authorised to repair Bosch power tools.

### After-sales Service and Advice on Using Products

Our after-sales service can answer questions concerning product maintenance and repair, as well as spare parts. You can find exploded drawings and information on spare parts at: [www.bosch-pt.com](http://www.bosch-pt.com)

The Bosch product use advice team will be happy to help you with any questions about our products and their accessories.

[www.powertool-portal.de](http://www.powertool-portal.de), the internet portal for tradespeople and DIY enthusiasts.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the type plate of the product.

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**Disposal**

The power tool, accessories and packaging should be recycled in an environmentally friendly manner.



Do not dispose of power tools along with household waste.



