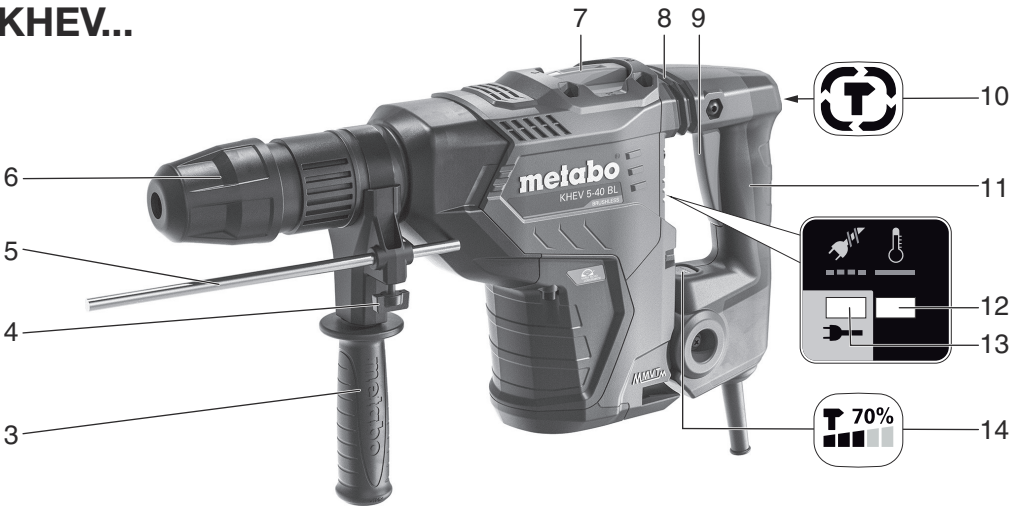


**KHEV 5-40 BL**  
**KHEV 8-45 BL**  
**KHEV 11-52 BL**  
**MHEV 5 BL**  
**MHE 96-2**

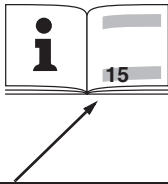


# KHEV...



# MHEV...



		<b>KHEV 5-40 BL</b> *1) Serial Number: 00765..	<b>KHEV 8-45 BL</b> *1) Serial Number: 00766..	<b>KHEV 11-52 BL</b> *1) Serial Number: 00767..	<b>MHEV 5 BL</b> *1) Serial Number: 00769..	<b>MHE 96-2</b> *1) Serial Number: 00772..
		SDS-max	SDS-max	SDS-max	SDS-max	SDS-max
<b>P<sub>1</sub></b>	<b>W</b>	1150	1500	1500	1500	1500
<b>P<sub>2</sub></b>	<b>W</b>	730	750	810	730	810
<b>n<sub>0</sub></b>	<b>/min</b>	0 - 350 0 - 500	0 - 210 0 - 300	110 - 280	-	-
<b>D<sub>1</sub></b>	<b>mm (in)</b>	40 (1 <sup>9</sup> / <sub>16</sub> )	45 (1 <sup>25</sup> / <sub>32</sub> )	52 (2 <sup>1</sup> / <sub>16</sub> )	-	-
<b>D<sub>2</sub></b>	<b>mm (in)</b>	105 (4 <sup>1</sup> / <sub>8</sub> )	125 (4 <sup>15</sup> / <sub>16</sub> )	160 (6 <sup>5</sup> / <sub>16</sub> )	-	-
<b>s<sub>max</sub></b>	<b>/min bpm</b>	2900	2900	2400	2900	2100
<b>W (EPTA 05/2009)</b>	<b>J</b>	8,7	12,2	18,8	8,7	18,0
<b>C</b>	<b>-</b>	12	12	12	12	12
<b>m</b>	<b>kg (lbs)</b>	8,3 (18)	9,8 (22)	12,4 (27)	8,3 (18)	12,4 (27)
<b>a<sub>h,HD</sub>/K<sub>h,HD</sub></b>	<b>m/s<sup>2</sup></b>	8,0 (1,5)	8,6 (1,5)	9,5 (1,5)	-	-
<b>a<sub>h,Cheq</sub>/K<sub>h,Cheq</sub></b>	<b>m/s<sup>2</sup></b>	7,3 (1,5)	9,2 (1,5)	9,7 (1,5)	7,3 (1,5)	10,3 (1,5)
<b>L<sub>pA</sub>/K<sub>pA</sub></b>	<b>dB (A)</b>	93 / 3	94 / 3	98 / 3		83 / 3
<b>L<sub>WA</sub>/K<sub>WA</sub></b>	<b>dB (A)</b>	104 / 3	105 / 3	110 / 3		94 / 3
<b>L<sub>pA(M)</sub></b>	<b>dB (A)</b>					
<b>L<sub>WA(M)</sub></b>	<b>dB (A)</b>	-	-	-		98,4
<b>L<sub>WA(G)</sub></b>	<b>dB (A)</b>	-	-	-		101,0



\*2) 2014/30/EU, 2006/42/EC, 2011/65/EU

\*3) EN 60745-1:2009+A11:2010, EN 60745-2-6:2010, EN 50581:2012

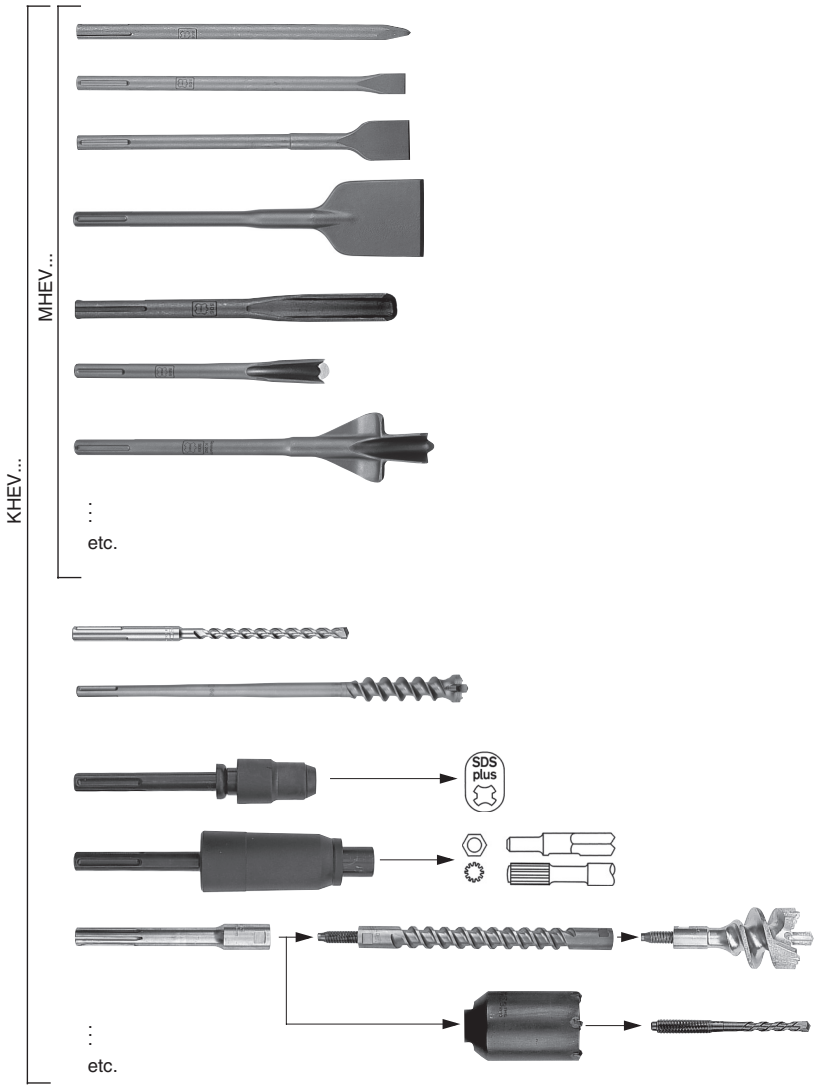
2018-09-10, Bernd Fleischmann

Direktor Produktentstehung & Qualität (Vice President Product Engineering & Quality)

\*4) Metabowerke GmbH - Metabo-Allee 1 - 72622 Nuertingen, Germany

ppa. B.F.

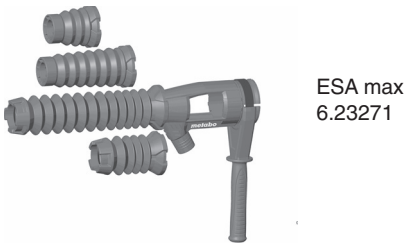
(A)



(B)



(C)



# 使用说明

## 1. 符合标准声明

为了履行我方责任，我们特此声明，本公司的电钻和凿锤按类型和序列号 \*1) 标识，符合指令 \*2) 和标准 \*3) 的全部相关要求。\*4) 的相关技术文档 - 详见第 3 页。

MHEV...: 2000/14/EC: 符合附录 VI 的一致性评估程序 (m < 15 kg)。(检测机构: 斯洛文尼亚质量与计量研究院, Trzaskacesta2, SI-1000 Ljubljana, Slovenia (公告机构编号: 1304))。

## 2. 特定使用条件

组合锤 (KHEV...) 与适当的配件搭配使用时，适用于对混凝土、砖、石材及类似材料进行锤钻和凿削。

凿锤 (MHEV...) 与适当的配件搭配使用时，适用于对混凝土、砖、石材及类似材料进行凿削。

用户自行承担因使用不当造成的任何损坏的责任。必须遵守通用事故预防规章和随附的安全资料。

## 3. 一般安全说明



为了您自身的安全及保护您的电动工具，请特别注意标有此符号的所有文本！



**警告** - 仔细阅读使用说明可降低受伤风险。



**警告** - 请仔细阅读所有安全警告和说明。如果未遵守这些安全警告和说明，可能导致电击、火灾和/或人员重伤。

保存好所有警告和说明以备查阅。

转交电动工具时，请一并转交这些文件。

## 4. 特殊安全说明

**锤类工具的安全警告:**

——戴好耳罩。暴露在噪声中会引起听力损伤。

——使用随工具提供的辅助手柄。操作失手会引起人身伤害。

——在切削附件可能触及暗线或其自身软线之处进行操作时，要通过绝缘握持面来握持工具。切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。

在调整、改换、维护或清洁工具前，请将主电源拔下。

在作业过程中，附加手柄必须正确安装。

始终双手握住工具的规定手柄处，保持安全站姿，专心工作。

穿戴个人防护装备并始终佩戴安全眼镜。在适当条件下使用防护装备（例如防尘口罩、防滑安全鞋、防护手套、安全帽或听力保护装置）可减少人身伤害。

确保您要使用本工具的地方没有铺设**电源电缆、煤气管道或水管**（例如，使用金属探测器检测）。

仅使用正确安装的工具进行作业。拉动工具，检查其是否准确固定到位。（必须能够将工具沿轴向移动几厘米。）

在地面上方作业时，请确保您下方的区域无障碍物。

作业结束后，切勿直接触碰工具或靠近工具的零件，因为它们的温度会很高，可能导致皮肤灼伤。

始终将电源电缆放置在远离工具背面的位置。

必须更换损坏或破裂的附加手柄。切勿使用存在问题的附加手柄操纵工具。

固定工件，防止滑动或旋转（例如，可使用螺丝夹钳固定）。

**降低粉尘暴露程度:**



**警告** - 使用此电动工具进行砂光、切割、研磨、钻孔及其他施工作业时产生的部分粉尘可能包含已知可导致癌症、先天缺陷或其他生殖危害的化学物质。此类化学物质的一些示例包括:

- 含铅油漆中的铅，
- 砖块、水泥及其他石材产品的结晶二氧化硅，
- 以及
- 经化学处理的木材中的砷和铬。

暴露于此类物质所带来的风险取决于操作人员进行此类工作的频率。为降低对这些化学物质的暴露程度：在通风良好的区域作业，并穿戴经过认证的防护装备，例如专门用于过滤微小颗粒的防尘面罩等。

这同样适用于由其他材料引起的粉尘，如木材（橡木或榉木粉尘）、金属、石棉等。已知可导致的其他疾病包括过敏反应、呼吸系统疾病等。切勿吸入这些粉尘。

遵守物料、员工、应用和应用地点的相关准则和国家规定（例如，职业卫生与安全法规、废物处理规范等）。

## PRC 简体中文

从源头收集产生的颗粒，避免在周围环境中沉积。

对于特殊作业，使用适当的配件。从而降低肆意侵入环境的微粒数量。

使用适当的除尘装置。

通过以下措施降低粉尘暴露程度：

- 请勿将逃逸的颗粒和排出的废气流朝向自己或附近人员，也不要将其朝向沉积的粉尘。
- 使用除尘装置和/或空气净化器。
- 确保工作区域通风良好，使用真空吸尘器保证工作区域的清洁。吹扫会使粉尘飞散。
- 使用真空吸尘器或水洗防护服。请勿吹、打或刷防护装备。


### 5. 概述


请参见第 2 页。

- 1 夹紧旋钮 \*
- 2 弓形手柄（附加手柄）\*
- 3 附加手柄 \*
- 4 蝶形螺丝（用于调整限深器）\*
- 5 限深器 \*
- 6 工具锁
- 7 旋钮
- 8 麦太保 VibraTech (MVT)：集成减震系统
- 9 触发开关
- 10 用于连续工作的按钮（仅在凿锤工作模式下）
- 11 手柄
- 12 电信号指示灯
- 13 操作指示灯（连接电源后会发出灯信号）
- 14 用于减小冲击力的按钮（适合软材料作业）

\* 取决于型号和设备


### 6. 首次运行

 调试前，请查看额定电源电压及频率（标在铭牌上）是否与现有的电源相同。

 务必在上游安装一个最大脱扣电流为 30 mA 的通用电流敏感接地故障断路器（B 型 RCD）。

仅使用最小横截面积为 1.5 mm<sup>2</sup> 的延长电缆。延长电缆必须符合工具的功耗（参见技术规格）。如果使用电缆导轮，请始终将电缆完全卷起。

#### 6.1 装配弓形手柄或附加手柄

 为安全起见，务必使用随附的弓形手柄 (2) 或附加手柄 (3)。

#### MHEV...:

通过逆时针转动夹紧旋钮 (1) 松开夹紧环。将弓形手柄 (2) 调整至所需位置和角度。牢牢拧紧夹紧旋钮。

#### KHEV...:

通过逆时针转动附加手柄 (3) 打开夹紧环。将附加手柄固定到所需角度。拧紧附加手柄。


## 7. 使用

### 7.1 限深器设定

（仅适用于 KHEV 5-40 BL）


松开蝶形螺丝 (4)。将限深器 (5) 设定为所需钻孔深度。重新拧紧蝶形螺丝 (4)。

### 7.2 定位、拆除工具

 在插入之前，清洁钻杆并涂抹提供的专用润滑脂（配件：订单号 6.31800）！仅使用 SDS-max 工具。

**定位工具：**

转动工具并将其插入，直至其卡合到位。工具将自动锁定。


 拉动工具，检查其是否准确固定到位。（必须能够将工具沿轴向移动几厘米。）

**卸下工具：**


按箭头 (a) 所示方向向后拉工具锁 (6)，卸下工具 (b)。

### 7.3 设置操作模式和凿锤位置

 安装凿锤后，避免用工具进行撬抬。

 在电机完全停止前，请勿激活开关按钮 (7)。

转动开关按钮 (7) 选择所需的操作模式。



 冲击钻（仅适用于 KHEV...）

 凿钻

 使凿锤旋转至所需位置的设置。

**设置凿锤的位置：**凿锤可以锁定在不同的位置。

- 插入凿锤。
- 将旋钮 (7) 转到过渡位置 **N**。
- 将凿锤转到所需位置。
- 将开关按钮 (7) 转到位置 **T**。
- 转动凿锤，直至其卡合到位。

 安装凿锤后，仅可在“凿钻”操作模式下操作工具 。

#### 7.4 设置冲击力

按下按钮 (14) 改变冲击力（和速度）（但不要在电机运转时操作）。

按钮 (14) **亮起**：减小冲击力、降低速度（约 70%）

按钮 (14) **未亮起**：最大冲击力、高速（100%）

通过反复试验找到正确的设置。例如：如果正在对软、脆性材料进行作业或者希望降低破损率，请在“减小冲击力”设置下进行作业。

“最大冲击力”设置可用于处理较硬材料。


#### 7.5 接通和断开

##### 扭矩设置：


按下触发开关 (9) 即可接通工具。

要断开工具，请松开触发开关 (9)。

##### 连续工作（仅限于凿钻模式 ）：

按下 (10) 按钮后可将工具切换至连续工作模式（仅限于凿钻模式 ）。（(10) 按钮亮起。）

要断开工具，再次按下 (10) 按钮。（(10) 按钮未亮起。）

 连续工作期间，如果电动工具意外脱手，它将继续运转。因此，双手必须始终握住工具的手柄，站稳，专心工作。

#### 7.6 麦太保 VibraTech (MVT)

用于减轻振动，并降低手部压力。


推压工具时，务必在手柄上适度用力，不要用力过度。中心位置 (8) 减振效果最明显。

## 8. 清洁与维护


应使用真空吸尘器或通过吹送干燥空气的方式，经常性的定期彻底清洁电动工具的所有通风口。进行该操作之前，请切断电动工具的电源并佩戴防护眼镜和防尘面罩。

## 9. 故障排除

电信号指示灯 (12)

 **闪烁 - 重启保护**

---- 在停电后恢复供电时，尽管电钻仍处于开启状态，但为确保安全，并不会使其启动。请将电钻再次关闭后开启。

 **持续亮起 - 过载**

—— 如果工具长时间过载，则会限制功率输入以避免电机进一步过热。

使工具空转直至冷却。

## 10. 配件

只能使用麦太保原厂配件。

仅可使用符合使用说明中所列要求及规格的配件。

请参见第 4 页。

A 钻头和凿锤种类繁多，应用范围广泛

B 专用润滑脂（用于润滑钻杆）

C 除尘系统

有关完整配件列表，请访问 [www.metabo.com](http://www.metabo.com) 或查看产品目录。

## 11. 维修

只能由合格的电工修理电动工具！

连接电缆只能由麦太保或授权的客户服务中心进行更换。


如果需要维修麦太保电动工具，请联系您当地的麦太保代表。有关具体地址，请参见

[www.metabo.com](http://www.metabo.com)。

您可以从 [www.metabo.com](http://www.metabo.com) 下载配件列表。

## 12. 环境保护

有关废弃的工具、包装和配件的环保性处置及回收，请遵循国家相关规定。

 仅适用于欧盟国家/地区：不得将电动工具与生活垃圾一同处置！根据有关废旧电子和电气设备的欧盟指令 2002/96/EC 及其在国家法律系统中的实施方案，废旧的电动工具必须单独收集 and 上交，从而以环保的方式回收。

## 13. 技术规格

对规格的解释性说明请见第 3 页。保留因技术发展而进行变更的权利。

$P_1$  = 额定输入功率

$P_2$  = 输出功率

$n_0$  = 空载转速

$D_1$  = 使用冲击石材钻头钻入混凝土的最大钻孔直径

$D_2$  = 使用冲击岩心切割机钻入混凝土的最大钻孔直径

## PRC 简体中文

$s_{\max}$  = 最大冲击率

$W$  = 单次冲击力

$C$  = 凿钻位置的数量

$m$  = 不含电源电缆的重量

测量值依照 EN 60745 确定。

工具的防护等级为 II 级

~ 交流电

引用的技术资料皆含有公差值在内（依照相关有效标准）。

### 排放值

这些值可用于评估电动工具的排放量，以及比较不同的电动工具。根据操作条件、使用的电动工具及配件的情况，实际载荷可能会更高或更低。当载荷较低，无法进行评估时，请让工具休息一下。根据调整后的估计值，为使用者安排保护措施，例如组织措施。

振动总值（三个方向的矢量和）依据 EN 60745 确定：

$a_{h, HD}$  = 振动排放值（使用锤钻对混凝土进行钻孔）

$a_{h, Cheq}$  = 振动排放值（凿钻）

$K_{h, HD/Cheq}$  = 不确定（振动）

### 典型 A 荷重声音等级：

$L_{pa}$  = 声压等级

$L_{WA}$  = 声功率等级

$K_{pA}, K_{WA}$  = 不确定（噪声等级）

$L_{pA(M)}$  = 根据 2000/14/EG 在用户耳处测量的噪声等级

$L_{WA(M)}$  = 根据 2000/14/EG 测量的声功率等级

$L_{WA(G)}$  = 保证声功率等级符合 2000/14/EC



操作过程中，噪音等级可能超过 80 dB(A)。

### 佩戴护耳器！



# Original instructions

## 1. Declaration of Conformity

On our own responsibility, we hereby declare that this drilling and chisel hammer, identified by type and serial number \*1), meets all relevant requirements of directives \*2) and standards \*3). Technical documents for \*4) - see page 3.

MHEV...:2000/14/EC: Conformity assessment procedures in accordance with Annex VI (m < 15 kg). (Testing agency: Slovenian Institute of Quality and Metrology, Trzaska cesta 2, SI-1000 Ljubljana, Slovenia (Notified Body No.: 1304)).

## 2. Specified Conditions of Use

The combination hammer (KHEV...) is designed for hammer drilling and chiselling in concrete, bricks, stone and similar materials when used in combination with appropriate accessories.

The chisel hammer (MHEV...) is designed for chiselling in concrete, bricks, stone and similar materials when used in combination with appropriate accessories.

The user bears sole responsibility for any damage caused by inappropriate use.

Generally accepted accident prevention regulations and the enclosed safety information must be observed.

## 3. General Safety Information



For your own protection and for the protection of your power tool, pay attention to all parts of the text that are marked with this symbol!



**WARNING** – Read the operating instructions to reduce the risk of injury.



**WARNING Read all safety warnings and instructions.** Failure to follow all safety warnings and instructions may result in electric shock, fire and/or serious injury.

**Keep all safety instructions and information for future reference.**

Always include these documents when passing on your power tool.

## 4. Special Safety Instructions

**Wear ear protectors.** Exposure to noise can cause hearing loss.

**Use auxiliary handle(s), if supplied with the tool.** Loss of control can cause personal injury.

**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.

Pull the plug out of the socket before making any adjustments, changing tools, carrying out maintenance or cleaning.

Always work with the additional handle correctly installed.

Always hold the machine with both hands on the intended handles, take a secure stance and concentrate on the work.

Wear personal protective equipment and always wear safety glasses. Protective equipment such as dust mask, non-skid safety shoes, protective gloves, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

Ensure that the place where you wish to work is free of **power cables, gas lines or water pipes** (e.g. check using a metal detector).

Work only with a correctly fitted tool. Pull on the tool to check that it is correctly seated. (It must be possible to move the tool a few centimetres in an axial direction.)

When working above ground level, ensure that the area below you is clear.

Never touch the tool or parts near the tool directly after work because they may be extremely hot and can cause burns to the skin,

Always position the power cable so that it leads away from the back of the machine.

A damaged or cracked additional handle must be replaced. Never operate a machine with a defective additional handle.

Secure the workpiece to prevent slipping or rotation (e.g. by securing with screw clamps).

### Reducing dust exposure:

**WARNING** - Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

This also applies to dust from other materials such as some timber types (like oak or beech dust), metals, asbestos. Other known diseases are e.g. allergic reactions, respiratory diseases. Do not let dust enter the body.

Observe the relevant guidelines and national regulations for your material, staff, application and place of application (e.g. occupational health and safety regulations, disposal).

Collect the particles generated at the source, avoid deposits in the surrounding area.

Use suitable accessories for special work. In this way, fewer particles enter the environment in an uncontrolled manner.

Use a suitable extraction unit.

Reduce dust exposure with the following measures:

- do not direct the escaping particles and the exhaust air stream towards yourself or nearby persons or towards dust deposits,
- use an extraction unit and/or air purifiers,
- ensure good ventilation of the workplace and keep it clean using a vacuum cleaner. Sweeping or blowing stirs up dust.
- Vacuum or wash protective clothing. Do not blow, beat or brush protective gear.


## 5. Overview


See page 2.

- 1 Clamping knob \*
- 2 Bow handle (additional handle) \*
- 3 Additional handle \*
- 4 Wing screw (for adjusting the depth stop) \*
- 5 Depth stop \*
- 6 Tool lock
- 7 Knob
- 8 Metabo VibraTech (MVT): integrated damping system
- 9 Trigger
- 10 Button for continuous operation (only in chisel operating mode)
- 11 Handle
- 12 Electronic signal indicator
- 13 Operating indicator (light signal if mains power is connected)
- 14 Button for reduced impact force (for working in soft material)

\* model-dependent, equipment-dependent


## 6. Initial Operation

 Before commissioning, check that the rated mains voltage and mains frequency stated on the type plate match your power supply.

 Always install a universal current sensitive ground fault circuit interrupter (type B RCD) with a maximum trip current of 30 mA upstream.

Use only extension cables with a minimum cross-section of 1.5 mm<sup>2</sup>. Extension cables must correspond to the power consumption of the machine (cf Technical Specifications). If a cable roller is used, always roll up the cable completely.

### 6.1 Assembly of the bow handle or additional handle

 For safety reasons, always use the bow handle (2) or additional handle (3) supplied.

#### MHEV...:

Release the clamping ring by turning the clamping knob (1) anticlockwise. Adjust the bow handle (2) to the required position and angle. Tighten the clamping knob firmly.

#### KHEV...:

Open the clamping ring by turning the additional handle (3) anticlockwise. Secure the additional handle at the required angle. Tighten the additional handle.


## 7. Use

### 7.1 Depth Stop Setting

(Only for KHEV 5-40 BL)


Release the wing (4) screw. Set the depth stop (5) to the required drilling depth. Retighten the wing screw (4).

### 7.2 Positioning, removing tool

 Before inserting, clean tool shank and apply supplied special grease (accessories: Order no. 6.31800)! Use only SDS-max tools.

#### Positioning tool:


Turn tool and insert until it engages. The tool is automatically locked.


 Pull on the tool to check that it is correctly seated. (It must be possible to move the tool a few centimetres in an axial direction.)

#### Remove the tool:


Pull the tool lock (6) backwards in direction indicated by arrow (a) and remove tool (b).

### 7.3 Setting operating mode and chisel position

 Avoid levering with the machine when a chisel is fitted.

 Do not activate the switch button (7) until the motor has completely stopped.



Turn the switch button (7) to select the desired operating mode.

 Impact drilling (only for KHEV...)

 Chiselling

 Setting which enables the chisel to be rotated to the desired position.

Setting the position of the chisel: The chisel can be locked in different positions.

- Insert the chisel.
- Turn the knob (7) to the interim position  **N**.
- Turn the chisel to the required position.
- Turn the switch button (7) to position  **T**.
- Turn the chisel until it engages.

 When a chisel is fitted, only operate the machine in the chiselling operating mode  **T**.

### 7.4 Setting impact force

Press the button (14) to change the impact force (and the speed) (but not while the motor is running).

Button (14) **illuminated**: reduced impact force, reduced speed (**approx. 70%**)

Button (14) **not illuminated**: maximum impact force, high speed (**100%**)

The correct setting is found by trial and error.  
Example: if work is being completed on soft, brittle material or if you want to keep breakage to a low level, work at "reduced impact force".

Use the "maximum impact force" setting for working with harder materials.

## 7.5 Switching on and off

### Torque setting:


Press the trigger switch (9) to switch on the machine.

To switch off release the trigger switch (9).

### Continuous operation (only in chiselling mode **T**):

The machine can be switched to continuous operation (only in chiselling mode **T**) by pressing the (10) button. ( (10) button illuminated.)

To switch off, press the (10) button once again. ( (10) button not illuminated.)

 In continuous operation, the machine continues running if it is forced out of your hands. Therefore, always hold the machine with both hands using the handles provided, stand securely and concentrate.

## 7.6 Metabo VibraTech (MVT)

For reduced vibrations and less stress on the hands.

Always apply a moderate amount of pressure to the handle when pushing down the machine and do not force. Vibrations are reduced most effectively at the central position (8).


## 8. Cleaning, Maintenance

The power tool should be cleaned regularly, often and thoroughly through all air vents using a vacuum cleaner or by blowing in dry air. Prior to this operation, separate the power tool from the power source and wear protective glasses and dust mask.


## 9. Troubleshooting

### Elektronic signal indicator (12)

#### Flashing - restart protection

When power is restored after a power failure,  the machine - which is still switched on - will not start for safety reasons. Switch machine on and off again.

#### Continuously illuminated - overload

If the machine is overloaded for a long period  of time, the power intake is limited to avoid further excessive heating of the motor.

Allow the machine to run at idle speed until it has cooled off and the electronic signal indicator goes out.

## 10. Accessories

Use only genuine Metabo accessories.

Use only accessories that fulfil the requirements and specifications listed in these operating instructions.

See page 4.

- A Extensive drill bit and chisel assortment for a wide range of applications.
- B Special grease (for lubricating the tool shanks)
- C Dust extraction system

For a complete range of accessories, see [www.metabo.com](http://www.metabo.com) or the catalogue.

## 11. Repairs

Repairs to electrical tools must ONLY be carried out by qualified electricians!


The connection cable must only be replaced by Metabo or an authorised customer service workshop.

Contact your local Metabo representative if you have Metabo power tools requiring repairs. See [www.metabo.com](http://www.metabo.com) for addresses.

You can download a list of spare parts from [www.metabo.com](http://www.metabo.com).

## 12. Environmental Protection

Observe national regulations on environmentally compatible disposal and on the recycling of disused machines, packaging and accessories.

 Only for EU countries: never dispose of power tools in your household waste! Used power tools must be collected separately and handed in for environmentally compatible recycling in accordance with European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in national legal systems.

## 13. Technical Specifications

Explanatory notes on the specifications on page 3. Changes due to technological progress reserved.


$P_1$	= Rated input power
$P_2$	= Power output
$n_0$	= No-load speed
$D_1$	= Max. drilling diameter in concrete with impact masonry bits
$D_2$	= Max. drilling diameter in concrete with impact core cutters
$S_{max}$	= Maximum impact rate
$W$	= Single impact force
$C$	= Number of chisel positions
$m$	= Weight without mains cable

Measured values determined in conformity with EN 60745.

 Machine in protection class II

~ AC power

The technical specifications quoted are subject to tolerances (in compliance with relevant valid standards).

 **Emission values**

## en ENGLISH

These values make it possible to assess the emissions from the power tool and to compare different power tools. The actual load may be higher or lower depending on operating conditions, the condition of the power tool or the accessories used. Please allow for breaks and periods when the load is lower for assessment purposes. Arrange protective measures for the user, such as organisational measures based on the adjusted estimates.

Total vibration value (vector sum of three directions) determined in accordance with EN 60745:

$a_{h, HD}$  = Vibration emission value (hammer drilling into concrete)

$a_{h, Cheq}$  = Vibration emission value (chiselling)

$K_{h, HD/Cheq}$  = Uncertainty (vibration)

Typical A-effective perceived sound levels:

$L_{pa}$  = Sound-pressure level

$L_{WA}$  = Acoustic power level

$K_{pA}, K_{WA}$  = Uncertainty (noise level)


$L_{pA(M)}$  = measured noise level according to 2000/14/EG at the user's ear

$L_{WA(M)}$  = Measured acoustic power level as per 2000/14/EG

$L_{WA(G)}$  = Guaranteed acoustic power level as per 2000/14/EC



During operation the noise level can exceed 80 dB(A).

 **Wear ear protectors!**







C997353 23  
170 27 6220 – 0123

Metabowerke GmbH  
Metabo-Allee 1  
72622 Nuertingen  
Germany  
[www.metabo.com](http://www.metabo.com)

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