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1 619 929 877 (2011.04) PS / 143 **UNI**



1 619 929 877

GBH Professional

2-28 D | 2-28 DV | 2-28 DFV



de Originalbetriebsanleitung
en Original instructions
fr Notice originale
es Manual original
pt Manual original
it Istruzioni originali
nl Oorspronkelijke
gebruiksaanwijzing
da Original brugsanvisning
sv Bruksanvisning i original
no Original driftsinstruks
fi Alkuperäiset ohjeet

el Πρωτότυπο οδηγιών χρήσης
tr Orijinal işletme talimatı
pl Instrukcja oryginalna
cs Původní návod k používání
sk Pôvodný návod na použitie
hu Eredeti használati utasítás
ru Оригинальное руководство по
эксплуатации
uk Оригінальна інструкція з
експлуатації
ro Instrucțiuni originale
bg Оригинална инструкция

sr Originalno uputstvo za rad
sl Izvirna navodila
hr Originalne upute za rad
et Algupärane kasutusjuhend
lv Instrukcijas oriģinālvalodā
lt Originali instrukcija
ar تعليمات التشغيل الأصلية
fa راهنمای طرز کار اصلی



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Wartung und Reinigung

- **Halten Sie das Elektrowerkzeug und die Lüftungsschlitze sauber, um gut und sicher zu arbeiten.**

Kundendienst und Kundenberatung

Der Kundendienst beantwortet Ihre Fragen zu Reparatur und Wartung Ihres Produkts sowie zu Ersatzteilen. Explosionszeichnungen und Informationen zu Ersatzteilen finden Sie auch unter:

www.bosch-pt.com

Das Bosch-Kundenberater-Team hilft Ihnen gerne bei Fragen zu Kauf, Anwendung und Einstellung von Produkten und Zubehör.

www.powertool-portal.de, das Internetportal für Handwerker und Heimwerker.

www.ewbc.de, der Informations-Pool für Handwerk und Ausbildung.

Geben Sie bei allen Rückfragen und Ersatzteilbestellungen bitte unbedingt die 10-stellige Sachnummer laut Typenschild des Elektrowerkzeuges an.

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Entsorgung

Elektrowerkzeuge, Zubehör und Verpackungen sollen einer umweltgerechten Wiederverwertung zugeführt werden.

Werfen Sie Elektrowerkzeuge nicht in den Hausmüll!

Nur für EU-Länder:



Gemäß der Europäischen Richtlinie 2002/96/EG über Elektro- und Elektronik-Altgeräte und ihrer Umsetzung in nationales Recht müssen nicht mehr gebrauchsfähige Elektrowerkzeuge getrennt gesammelt und einer umweltgerechten Wiederverwertung

zugeführt werden.

Änderungen vorbehalten.

English

General Power Tool Safety Warnings



Read all safety warnings and all instructions. Failure to follow the warnings

and instructions 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.**

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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 and 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) protected 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 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 energising 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, clothing and gloves 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.

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 the battery pack 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. 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.

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.

Hammer Safety Warnings

- ▶ **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 tool by insulated gripping surfaces, when performing an operation where the cutting accessory or fastener may contact hidden wiring.** Cutting accessory and fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

Products sold in GB only: Your product is fitted with a 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.

Products sold in AUS and NZ only: Use a residual current device (RCD) with a rated residual current of 30 mA or less.

Additional Safety and Working Instructions

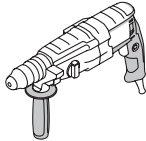









- ▶ **Observe correct mains voltage! The voltage of the power source must agree with the voltage specified on the**

nameplate of the machine. Power tools marked with 230 V can also be operated with 220 V.



















- ▶ **Use appropriate 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.
 - ▶ **Firmly tighten the auxiliary handle, hold the machine firmly with both hands while working and keep proper footing and balance at all times.** The machine is securely guided with both hands.
 - ▶ **Secure the workpiece.** A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
 - ▶ For drilling without impact in wood, metal, ceramic and plastic as well as for screwdriving, tools without SDS-plus are used (e.g., drills with cylindrical shank). For these tools, a keyless chuck or a key type drill chuck are required.
 - ▶ **GBH 2-28 DFV:** Only use quick change chucks with **3 identification grooves** (standard delivery scope) or **2 identification grooves** (accessory/spare part) – see figure 1, page 134.
 - The quick change chuck is automatically locked. Check the locking effect by pulling the quick change chuck.
 - ▶ **Inserting SDS-plus Drilling Tools:** Check the latching by pulling the tool.
 - ▶ **Replace a damaged dust protection cap immediately.** The dust protection cap largely prevents the penetration of drilling dust into the tool holder during operation. When inserting the tool, pay attention that the dust protection cap is not damaged.
 - ▶ **Dusts from materials such as lead-containing coatings, some wood types, minerals and metal can be harmful to one's health and cause allergic reactions, lead to respiratory infections and/or cancer.** Materials containing asbestos may only be worked by specialists.
 - As far as possible, use a dust extraction system suitable for the material.
 - 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.
- ▶ **Prevent dust accumulation at the workplace.** Dusts can easily ignite.
 - ▶ **If the application tool should become blocked, switch the machine off. Loosen the application tool.**
 - ▶ **Before switching on the power tool, make sure that the application tool moves freely.** When switching on with a blocked drilling tool, high torque reaction can occur.
 - ▶ **Always wait until the machine has come to a complete stop before placing it down.** The tool insert can jam and lead to loss of control over the power tool.



Symbols

The following symbols are important for reading and understanding the operating instructions. Please take note of the symbols and their meaning. The correct interpretation of the symbols will help you to use the machine in a better and safer manner.

Symbol	Meaning
	GBH 2-28 D/ GBH 2-28 DV/ GBH 2-28 DFV: Rotary Hammer Grey-marked area: Handle (insulated gripping surface)
	Article number
	Read all safety warnings and all instructions
	Before any work on the machine itself, pull the mains plug from the socket outlet
	Wear protective gloves
	Wear ear protection.
	Wear safety glasses/goggles
	Movement direction
	Reaction direction
	Prohibited action
	Permitted action
	Next step of action
	Right/left rotation

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Symbol	Meaning
	Drilling without impact
	Hammer Drilling
	Chiselling
	Screwdriving
	Vario-Lock
	Switching On
	Switching Off
	On/Off switch lock-on
	Releasing the On/Off switch
	Low speed/impact rate
	High speed/impact rate
	Extraction
	Tool holder
P ₁	Rated power input
E	Impact energy per stroke according to EPTA-Procedure 05/2009
n ₀	No-load speed
Ø	Drilling diameter, max.
	Concrete
	Steel
	Wood
	Brickwork
	Core bit

Symbol	Meaning
	Weight according to EPTA-Procedure 01/2003
	Protection class
L _{WA}	Sound power level
L _{pA}	Sound pressure level
a _h	Vibration total value
K	Uncertainty

Delivery Scope

Rotary hammer, auxiliary handle and depth stop.
Application tools and other accessories shown or described are not part of the standard delivery scope.

A complete overview of accessories can be found in our accessories program.

Intended Use

The machine is intended for hammer drilling in concrete, bricks and masonry, as well as for light chiselling work. It is also suitable for drilling without impact in wood, metal, ceramics and plastic, as well as for screwdriving.

Technical Data

The technical data of the machine are listed in the Table on page 133.

The values given are valid for a nominal voltage [U] of 230 V. For different voltages and models for specific countries, these values can vary.

Please observe the article number on the type plate of your machine. The trade names of the individual machines may vary.


Declaration of Conformity

We declare under our sole responsibility that the product described under "Technical Data" is in conformity with the following standards or standardization documents: EN 60745 according to the provisions of the directives 2004/108/EC, 2006/42/EC.

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Leinfelden, 21.09.2010

Noise/Vibration Information

The measured values of the machine are listed in the table on page 133.

Noise and vibrational values (vector sum of three directions) determined according to EN 60745.

The vibration emission level given in this information sheet has been measured in accordance with a standardised test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.

The declared vibration emission level represents the main applications of the tool. However if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working period.

An estimation of the level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibration such as: maintain the tool and the accessories, keep the hands warm, organisation of work patterns.

Mounting and Operation

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Removing the Quick Change Chuck (GBH 2-28 DFV)	2	135
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Inserting SDS-plus Drilling Tools	4	136
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Inserting round shank applications tools (GBH 2-28 DFV)	6	137
Selecting the operating mode and rotation direction	7	137 – 138
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Changing the position of the auxiliary handle	9	139
Adjusting the drilling depth X	10	139
Mounting the extraction system (Saugfix)	11	140
Switching on and off and setting the speed	12	140
Locking-on the On/Off switch	13	141
Releasing the On/Off switch	14	141
Selecting accessories	–	142

Maintenance and Cleaning

► **For safe and proper working, always keep the machine and ventilation slots clean.**

After-sales Service and Customer Assistance

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. Exploded views and information on spare parts can also be found under:

www.bosch-pt.com

Our customer service representatives can answer your questions concerning possible applications and adjustment of products and accessories.

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

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