

#### **Robert Bosch GmbH**

Power Tools Division 70745 Leinfelden-Echterdingen Germany

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**1619 92A 06J** (2013.12) PS / 193 EURO



## **GBH** Professional

2-24 D | 2-24 DF



# **BOSCH**

- 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
- **kk** Пайдалану нұсқаулығының түпнұсқасы
- ro Instrucțiuni originale
- **bg** Оригинална инструкция

- **mk** Оригинално упатство за работа
- sr Originalno uputstvo za rad
- sl Izvirna navodila
- hr Originalne upute za rad
- et Algupärane kasutusjuhend
- Iv Instrukcijas oriģinālvalodā
- It Originali instrukcija
- ar تعليمات التشغيل الأصلية
- دفتزچه راهنمای اصلی **fa**













English | 9





### **General Power Tool Safety Warnings**

**⚠** WARNING

ous injury.

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or seri-

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

The term "power tool" in the warnings refers to your mainsoperated (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
- ► 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
- ▶ 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 acci-
- ► 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 iewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, iewellery 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
- ▶ 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.

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## **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 the tool by the insulated gripping surfaces when performing operations where the application tool or the screw could contact hidden wiring or its own power cord. Contact with a "live" wire will also make exposed metal parts of the power tool "live" and shock the operator.

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 In**structions

- ▶ Observe the mains voltage! The voltage of the power source must correspond with the data on the type plate of the machine.
- ▶ Use appropriate detectors to determine if utility lines are hidden in the work area or call the local utility compa**ny 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.
- ► To save energy, only switch the power tool on when using it.
- ► 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 reauired.
- ▶ 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 iam 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 2-24 D GBH 2-24 DF: Rotary Hammer
The state of the s	Grey-marked area: Handle (insulated gripping surface)
BOSCH S X XXXX XXXX	Article number
	Read all safety warnings and all instructions
	Before any work on the machine itself, pull the mains plug from the socket out-



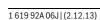
let



Wear protective gloves



Always wear ear protection.







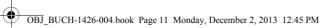


















Symbol	Meaning
	Wear safety glasses/goggles
	Key type drill chuck
	Keyless drill chuck
1	Movement direction
$\bigcirc$	Reaction direction
$\overline{\Box}$	Next step of action
*	Right/left rotation
	Drilling without impact
	Hammer Drilling
<u>T</u>	Chiselling
	Screwdriving
<del></del>	Vario-Lock
I	Switching On
0	Switching Off
	On/Off switch lock-on
	Releasing the On/Off switch
ETO .	Low speed/impact rate
and a	High speed/impact rate
10	Extraction
$\Box$	Tool holder

Symbol	Meaning
	Apply a light coat of grease to the shank end of the application tool
P <sub>1</sub>	Rated power input
E	Impact energy per stroke according to EPTA-Procedure 05/2009
$n_0$	No-load speed
Ø	Drilling diameter, max.
	Concrete
K	Steel
	Wood
A	Brickwork
Intel T	Core bit
<u> </u>	Weight according to
	EPTA-Procedure 01/2003
	Protection class
L <sub>wA</sub>	Sound power level
L <sub>pA</sub>	Sound pressure level
a <sub>h</sub>	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

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.

## **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 2011/65/EU, 2004/108/EC, 2006/42/EC.

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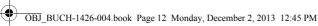


















Technical file (2006/42/EC) at: Robert Bosch GmbH, PT/ETM9 D-70745 Leinfelden-Echterdingen

Henk Becker **Executive Vice President** Engineering

Helmut Heinzelmann Head of Product Certification PT/ETM9

Robert Bosch GmbH, Power Tools Division D-70745 Leinfelden-Echterdingen Leinfelden, 08.05.2013

## **Noise/Vibration Information**

The measured values of the machine are listed in the table on page 183.

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

The vibration 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 insertion tools or is poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the total working

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 pat-

## **Mounting and Operation**

The following table indicates the action objectives for mounting and operation of the power tool. The instructions for each action objective are shown aside. Depending on the type of application, various instruction combinations are required. Observe the safety instructions.

Action		Figure	Please observe	Page
Selecting a drill chuck (GBH 2-24 DF)		1		184
Removing the Quick Change Chuck (GBH 2-24 DF)		2		185
Inserting the Quick Change Chuck (GBH 2-24 DF)	•	3		185
Inserting SDS-plus Drilling Tools		4	SDS-plus	185
Removing SDS-plus Drilling Tools	(m)	5	SDS-plus	186
Inserting the Key Type Drill Chuck (GBH 2-24 DF)		6	<b>9</b> -2	186

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Action		Figure	Please observe	Page
Inserting the Keyless Chuck (GBH 2-24 DF)	•	7	Ø-5	186
Inserting round shank applications tools (GBH 2-24 DF)	+ 1	8		187
Selecting the operating mode and rotation direction	Ĭ+ĬT+T →	9		188
Changing the chisel position (Vario-Lock)	<del></del>	10	BE SDS-plus	189
Changing the position of the auxiliary handle		11		189
Adjusting the drilling depth <b>X</b>	X	12		190
Mounting the extraction system (Saugfix)		13		190
Switching on and off and setting the speed	I/O A/A	14		191
Locking-on the On/Off switch	A	15		191

## **Maintenance and Cleaning**

Releasing the On/Off switch

Selecting Accessories

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

If the replacement of the supply cord is necessary, this has to be done by Bosch or an authorized Bosch service agent in order to avoid a safety hazard.





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		GBH 2-24 D	GBH 2-24 DF
BOSCH (B) X XXX XXX XXX			
		3 611 BA0 0	3 611 BAO 1
P <sub>1</sub> E	W	790	790
E	J	2,7	2,7
$n_0$	min <sup>-1</sup>	1300	1300
Ø max.			
	mm	24	24
	mm	13	13
	mm	30	30
	mm	68	68
İ	kg	2,8	2,9
		II	II
L <sub>wA</sub>	dB(A)	102	102
L <sub>pA</sub>	dB(A)	91	91
K	dB	3	3
a <sub>h</sub> iT	m/s <sup>2</sup>	17	17
a <sub>h</sub> i	m/s <sup>2</sup>	< 2,5	< 2,5
a <sub>h</sub> <b>T</b>	m/s <sup>2</sup>	13	13
a <sub>h</sub> ₹	m/s <sup>2</sup>	< 2,5	< 2,5
K	m/s <sup>2</sup>	1,5	1,5











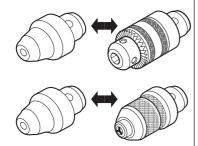


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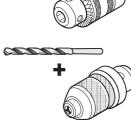






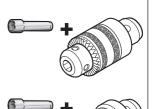














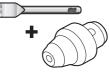














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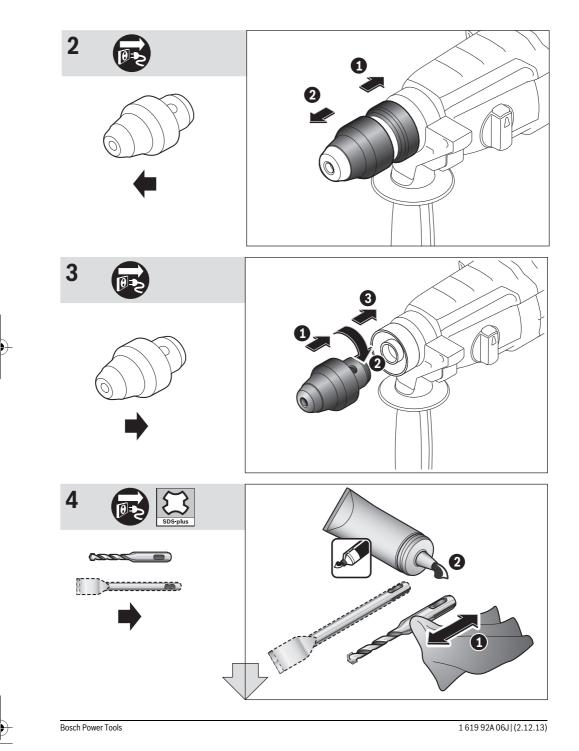




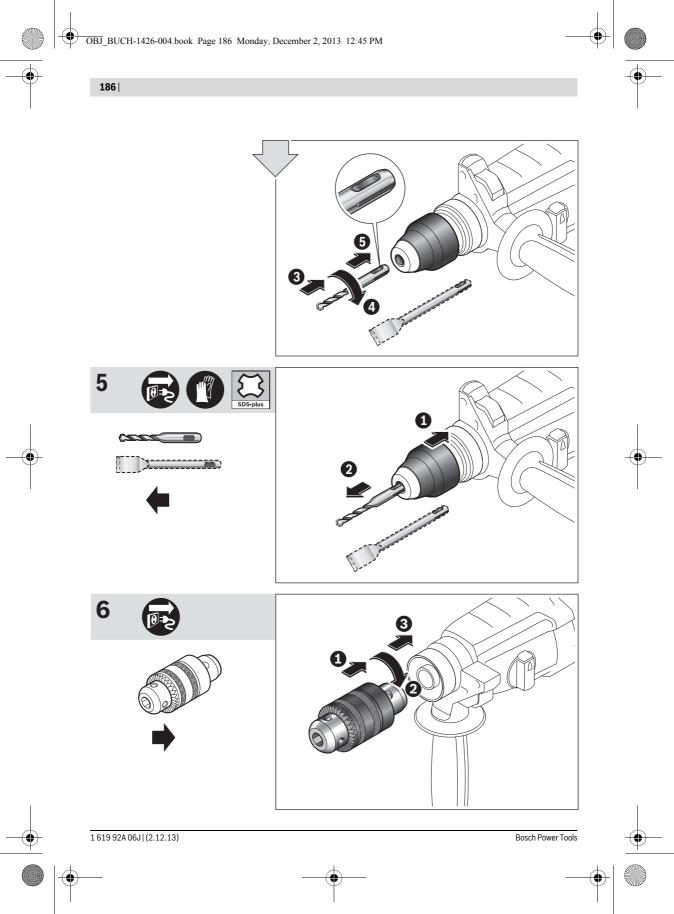






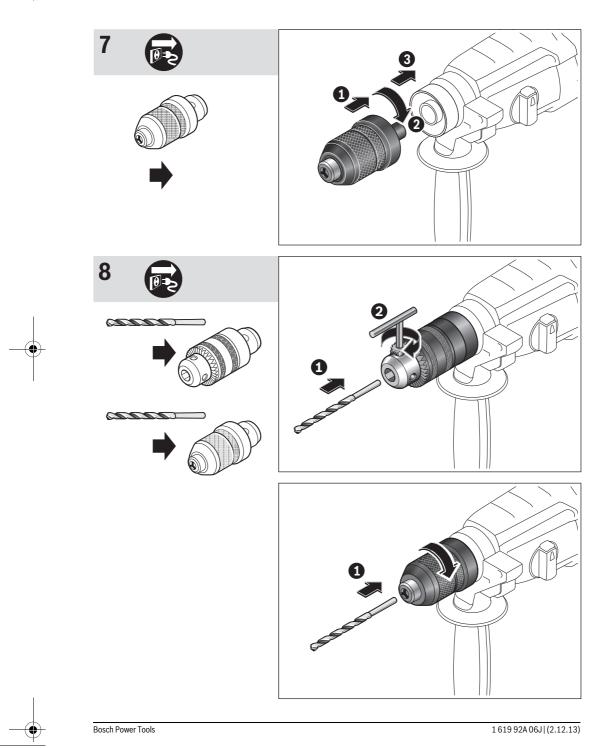










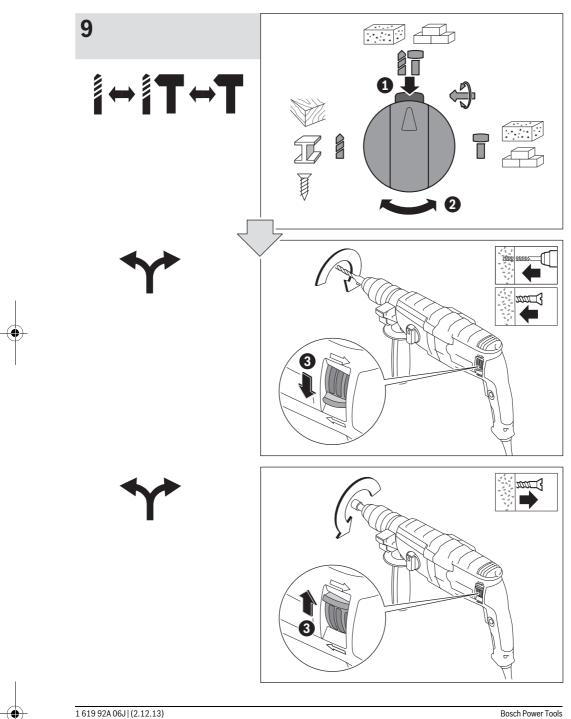


























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