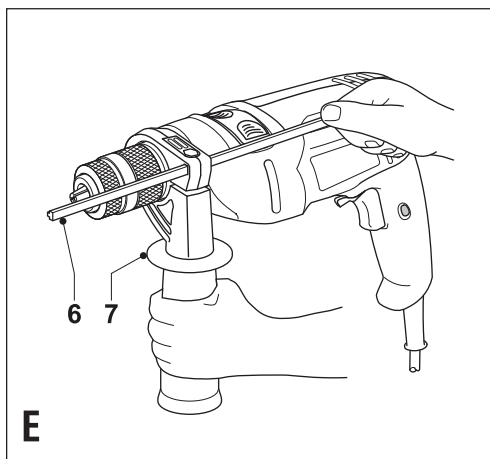
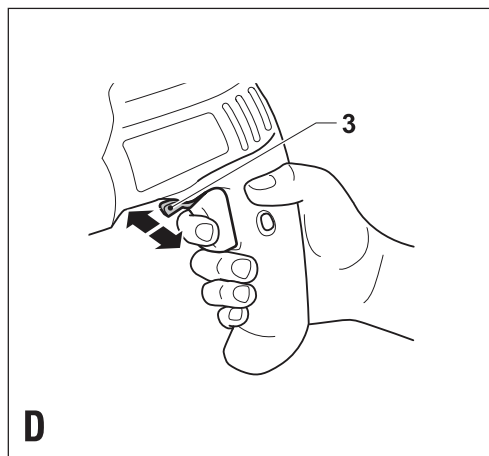
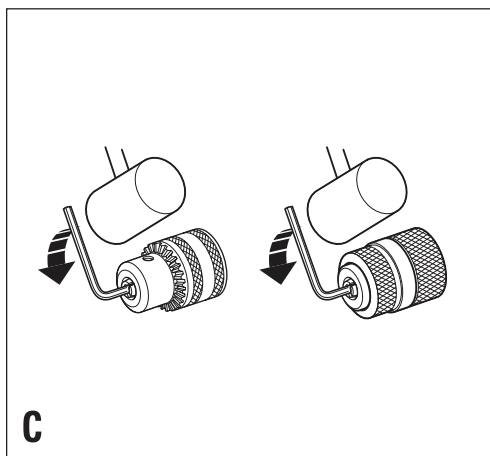
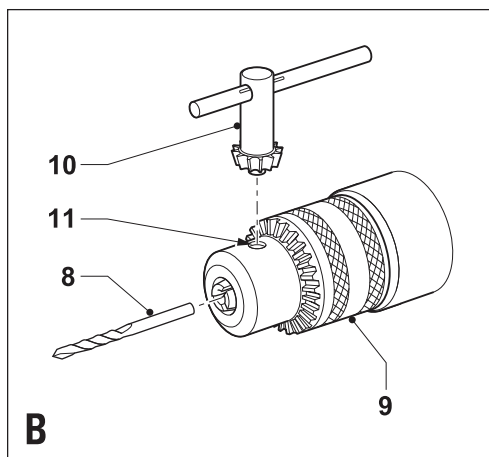
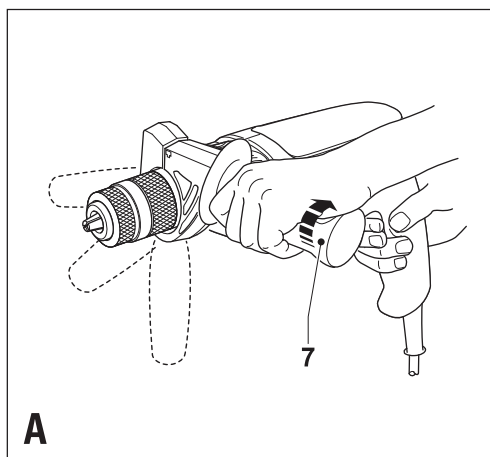




HD400
HD450
HD500

English (original instructions)

3



The illustrations are for representative purposes only, they can differ from actual product.

HAMMER DRILL

HD400/ HD450/ HD500

Technical Data

Specifications:		HD400	HD450	HD500
Voltage	V _{ac}	220-240V~	220-240V~	220-240V~
	Hz	50/60Hz	50/60Hz	50/60Hz
Power input	W	500	500	550
No-load speed	min ⁻¹	3000	0-3000	0-3000
Max drill capacity				
Steel/Concrete	mm	10	10	13
Wood	mm	20	20	20

DO NOT RETURN THIS PRODUCT TO THE STORE, first contact your local Black & Decker office or nearest authorized service center.

INTENDED USE

Your Black & Decker hammer drill has been designed for drilling in wood, metal, plastics, and masonry as well as for screwdriving purposes.

SAVE THESE INSTRUCTIONS

General power tool safety warnings

Warning! Read all safety warnings and all instructions.

Failure to follow the warnings and 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 all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

1. Work Area Safety

- Keep work area clean and well lit.** Cluttered and 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.

2. 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) protected supply.** Use of an RCD reduces the risk of electric shock. **Note:** The term "Residual Current Device (RCD)" can be replaced by "Ground Fault Circuit Interrupter (GFCI)" or by "Earth Leakage Circuit Breaker (ELCB)".

3. 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 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 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.
- 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, 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

5. 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.

6. Electrical safety



This tool is double insulated; therefore no earth wire is required. Always check that the power supply corresponds to the voltage on the rating plate.

- ◆ This appliance is not intended for use by young or infirm persons without supervision. Children must be supervised to ensure they do not play with the appliance.
- ◆ If the supply cord is damaged, it must be replaced by the manufacturer, an authorized Black & Decker Service Centre or an equally qualified person in order to avoid a hazard. If the supply cord is replaced by an equally qualified person, but not authorized by Black & Decker, the warranty will lose effect.

7. Labels on tool

The label on your tool may include the following symbols:



Read Instructions Manual



Use Eye Protection



Use Ear Protection

V Volts

A Amperes

Hz Hertz

W Watts

min minutes

~ Alternating Current

== Direct Current

n_0 No-Load Speed

..... Class II Construction

..... Earthing Terminal

..... Safety Alert Symbol

.../min.... Revolutions or Reciprocation per minute

ADDITIONAL SAFETY INSTRUCTIONS FOR HAMMER DRILL

Drill safety warnings

- ◆ **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 power tool by insulated gripping surfaces, when performing an operation where the cutting accessory 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.
- ◆ **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- ◆ Before drilling into walls, floors or ceilings check for the location of wiring and pipes.
- ◆ Avoid touching the tip of a drill bit just after drilling, as it may be hot.

Features

This tool includes some or all of the following features:

1. Variable speed switch (Only for HD450-HD500)
2. Lock-on button
3. Forward/reverse slider (Only for HD450-HD500)
4. Drilling mode selector
5. Chuck
6. Depth stop (Only for HD450-HD500)
7. Side handle (Only for HD450-HD500)

Assembly

Warning! Before assembly, make sure that the tool is switched off and unplugged.

Fitting the side handle and depth stop (fig. A) (Only for HD450-HD500)

- ◆ Turn the grip counterclockwise until you can slide the side handle (7) onto the front of the tool as shown.
- ◆ Rotate the side handle into the desired position.
- ◆ Insert the depth stop (6) into the mounting hole as shown.
- ◆ Set the drilling depth as described below.
- ◆ Tighten the side handle by turning the grip clockwise.

Fitting a drill bit or screwdriver bit

Keyed chuck (fig. B)

- ◆ Open the chuck by turning the sleeve (9) counterclockwise.
- ◆ Insert the bit shaft (8) into the chuck.
- ◆ Insert the chuck key (10) into each hole (11) in the side of the chuck and turn clockwise until tight.

Removing and refitting the chuck (fig. C)

- ◆ Open the chuck as far as possible.
- ◆ Remove the chuck retaining screw, located in the chuck, by turning it clockwise using a screwdriver.
- ◆ Tighten an Allen key into the chuck and strike it with a hammer as shown.
- ◆ Remove the Allen key.
- ◆ Remove the chuck by turning it counterclockwise.
- ◆ To refit the chuck, screw it onto the spindle and secure it with the chuck retaining screw.

Use

Warning! Let the tool work at its own pace. Do not overload.

Warning! Before drilling into walls, floors or ceilings, check for the location of wiring and pipes.

Selecting the direction of rotation (fig. D)

For drilling and for tightening screws, use forward (clockwise) rotation. For loosening screws or removing a jammed drill bit, use reverse (counterclockwise) rotation.

- ◆ To select forward rotation, push the forward/reverse slider (3) to the centre position.
- ◆ To select reverse rotation, push the forward/reverse slider to the left.

Warning! Never change the direction of rotation while the motor is running.

Selecting the drilling mode

- ◆ For drilling in masonry, set the drilling mode selector (4) to the **T** position.
- ◆ For drilling in other materials and for screwdriving, set the drilling mode selector to the **2** position.

Setting the drilling depth (fig. E) (Only for HD450-HD500)

- ◆ Slacken the side handle (7) by turning the grip counterclockwise.
- ◆ Set the depth stop (6) to the desired position. The maximum drilling depth is equal to the distance between the tip of the drill bit and the front end of the depth stop.
- ◆ Tighten the side handle by turning the grip clockwise.

Switching on and off

- ◆ To switch the tool on, press the speed switch (1). For tools with variable speed switch, the tool speed depends on how far you press the switch. As a general rule, use low speeds for large diameter drill bits and high speeds for smaller diameter drill bits. (HD450-HD500)
- ◆ For continuous operation, press the lock-on button (2) and release the speed switch. This option is available only at full speed. This option does not work in reverse rotation. Reverse rotation available only for HD450-HD500.
- ◆ To switch the tool off, release the speed switch. To switch the tool off when in continuous operation, press the speed switch once more and release it.

Accessories

The performance of your tool depends on the accessory used. Black & Decker accessories are engineered to high quality standards and designed to enhance the performance of your tool. By using these accessories you will get the very best from your tool.

Maintenance

Your tool has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper tool care and regular cleaning.

Warning! Before performing any maintenance, switch off and unplug the tool.

- ◆ Regularly clean the ventilation slots in your tool using a soft brush or dry cloth.
- ◆ Regularly clean the motor housing using a damp cloth. Do not use any abrasive or solvent-based cleaner.

Service

Black & Decker offers a full network of company-owned and authorized service locations. All Black & Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black & Decker location nearest you, or visit us at www.BlackandDecker.com

