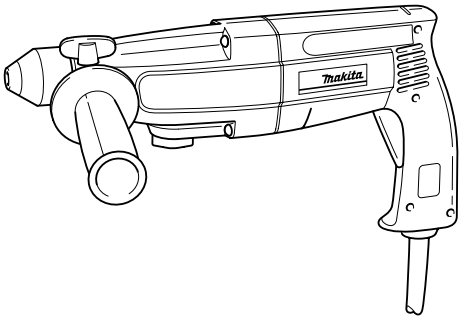
ENGLISH

Rotary Hammer

MODEL HR2400



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DOUBLE INSULATION

I N S T R U C T I O N M A N U A L

⚠ **WARNING:**
For your personal safety, READ and UNDERSTAND before using.
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

SPECIFICATIONS

Model		HR2400
Capacities	Concrete	24 mm
	Steel	13 mm
	Wood	38 mm
No load speed (min^{-1})		0 - 1,200
Blows per minute		0 - 4,200
Overall length		333 mm
Net weight		2.3 kg
Safety class		⧈ /II

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

SYMBOLS END201-2

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.

 .....Read instruction manual.

 .....DOUBLE INSULATION

 .....Only for EU countries

Do not dispose of electric equipment together with household waste material!

In observance of European Directive 2002/96/EC on waste electric and electronic equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Intended use

The tool is intended for hammer drilling and drilling in brick, concrete and stone as well as for chiselling work.

It is also suitable for drilling without impact in wood, metal, ceramic and plastic.

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

For European countries only

Noise and Vibration

The typical A-weighted noise levels are
sound pressure level: 89 dB (A)
sound power level: 100 dB (A)

Uncertainty: 3 dB

– Wear ear protection. –

The typical weighted root mean square acceleration value is 11 m/s^2.

These values have been obtained according to EN60745.

EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in compliance with the following standards of standardized documents, EN60745, EN55014, EN61000 in accordance with Council Directives, 89/336/EEC, 98/37/EC.

Yasuhiko Kanzaki **CE 2005**

Director

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Responsible manufacturer:

Makita Corporation Anjo Aichi Japan

GENERAL SAFETY RULES

GEA001-3

⚠ **WARNING:**

Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. 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.

SAVE THESE INSTRUCTIONS

Work area safety

1. **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
2. **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.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **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.
5. **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.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **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.
8. **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.

Personal safety

9. **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.
10. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
11. **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
12. **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.
13. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
14. **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.
15. **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.

Power tool use and care

16. **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.
17. **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.
18. **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.
19. **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.

20. **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.
21. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
22. **Use the power tool, accessories and tool bits etc. in accordance with these instructions and in the manner intended for the particular type of power tool, 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

23. **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.
24. **Follow instruction for lubricating and changing accessories.**
25. **Keep handles dry, clean and free from oil and grease.**

SPECIFIC SAFETY RULES

GEB007-2

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to rotary hammer safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.

1. **Wear ear protectors.** Exposure to noise can cause hearing loss.
2. **Use auxiliary handles supplied with the tool.** Loss of control can cause personal injury.
3. **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.
4. **Wear a hard hat (safety helmet), safety glasses and/or face shield. Ordinary eye or sun glasses are NOT safety glasses. It is also highly recommended that you wear a dust mask and thickly padded gloves.**
5. **Be sure the bit is secured in place before operation.**
6. **Under normal operation, the tool is designed to produce vibration. The screws can come loose easily, causing a breakdown or accident. Check tightness of screws carefully before operation.**
7. **In cold weather or when the tool has not been used for a long time, let the tool warm up for a while by operating it under no load. This will loosen up the lubrication. Without proper warm-up, hammering operation is difficult.**
8. **Always be sure you have a firm footing.**
   Be sure no one is below when using the tool in high locations.
9. **Hold the tool firmly with both hands.**
10. **Keep hands away from moving parts.**
11. **Do not leave the tool running. Operate the tool only when hand-held.**
12. **Do not point the tool at any one in the area when operating. The bit could fly out and injure someone seriously.**
13. **Do not touch the bit or parts close to the bit immediately after operation; they may be extremely hot and could burn your skin.**
14. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**

SAVE THESE INSTRUCTIONS

⚠ WARNING:
MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

FUNCTIONAL DESCRIPTION

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

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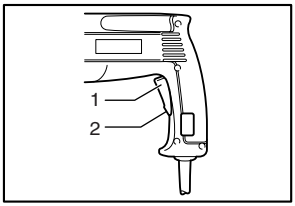

1. Switch trigger
2. Lock lever

Switch action

⚠ **CAUTION:**

- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the “OFF” position when released.

To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.
For continuous operation, pull the switch trigger and then slide the lock lever upward.
To stop the tool from the locked position, pull the switch trigger fully, then release it.

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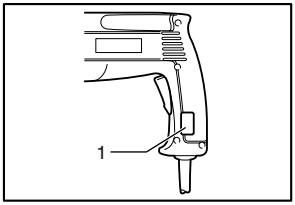

1. Reversing switch

Reversing switch action

This tool has a reversing switch to change the direction of rotation. Press the upper side (FWD side) of the reversing switch for clockwise rotation or the lower side (REV side) of the reversing switch for counterclockwise rotation.

⚠ **CAUTION:**

- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.

Selecting the action mode

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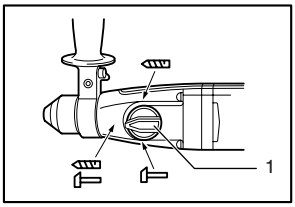

1. Action mode changing knob

This tool employs an action mode changing knob. Select one of the three modes suitable for your work needs by using this knob.

For rotation only, turn the knob so that the arrow on the knob points toward the symbol on the tool body.
For hammering only, turn the knob so that the arrow on the knob points toward the symbol on the tool body.
For rotation with hammering, turn the knob so that the arrow on the knob points toward the symbol on the tool body.

NOTE:

- When it is hard to turn the knob, pull the switch trigger halfway for running at low speed and turn the knob.

Torque limiter

The torque limiter will actuate when a certain torque level is reached. The motor will disengage from the output shaft. When this happens, the bit will stop turning.

⚠ **CAUTION:**

- As soon as the torque limiter actuates, switch off the tool immediately. This will help prevent premature wear of the tool.
- Hole saws, core bits, diamond core bits, etc. cannot be used with this tool. They tend to pinch or catch easily in the hole. This will cause the torque limiter to actuate too frequently.

ASSEMBLY

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

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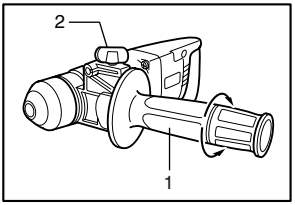

1. Side grip
2. Clamp screw

Side grip (auxiliary handle)

The side grip swings around to either side, allowing easy handling of the tool in any position. Loosen the clamp screw on the side grip and swing the side grip to the desired position. Then tighten the clamp screw to secure the side grip.

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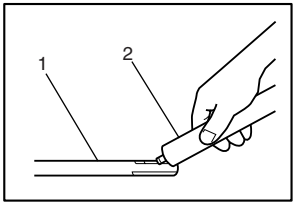

1. Bit shank
2. Bit grease

Installing or removing the bit

Clean the bit shank and apply bit grease before installing the bit.

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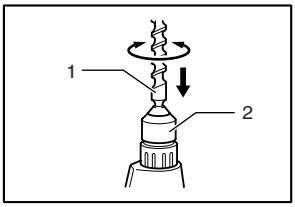

1. Bit
2. Chuck cover

Insert the bit into the tool. Turn the bit and push it in until it engages.

If the bit cannot be pushed in, remove the bit. Pull the chuck cover down a couple of times. Then insert the bit again. Turn the bit and push it in until it engages.

After installing, always make sure that the bit is securely held in place by trying to pull it out.

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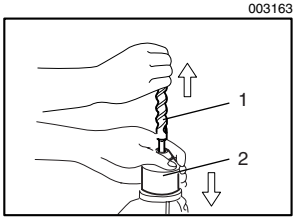

1. Bit
2. Chuck cover

To remove the bit, pull the chuck cover down all the way and pull the bit out.

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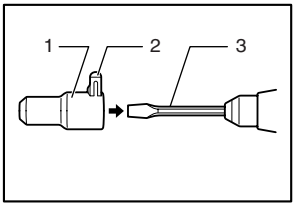

1. Chisel adapter
2. Clamp screw
3. Chisel

Using cold chisel or bull point

When using optional cold chisel or bull point, proceed as follows.

1. Disconnect plug.
2. Remove the side grip from the tool.
3. Turn the knob to hammer drilling symbol .
4. Install the cold chisel or bull point and then the chisel adapter (optional accessory) on the tool.
5. Rotate the cold chisel toward the direction suitable for your work. Then secure the cold chisel and chisel adapter by using the clamp screw on the chisel adapter.
6. Turn the knob to hammering only symbol . Now you can use the cold chisel or bull point.

⚠ **CAUTION:**

- Always set "'hammering only" action when using the cold chisel or bull point. If you use "rotation with hammering" or "rotation only" action, the hammering mechanism may be damaged on the tool.

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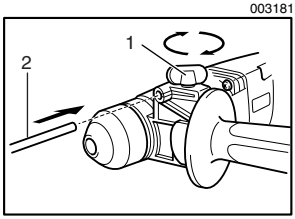

1. Clamp screw
2. Depth gauge

Depth gauge

The depth gauge is convenient for drilling holes of uniform depth. Loosen the clamp screw and adjust the depth gauge to the desired depth. After adjusting, tighten the clamp screw firmly.

NOTE:

- The depth gauge cannot be used at the position where the depth gauge strikes against the gear housing.

OPERATION

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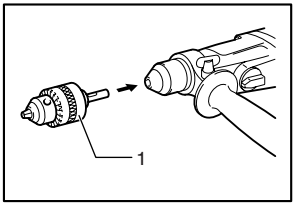

1. Drill chuck assembly

Drilling in wood or metal

Use the optional drill chuck assembly (consisting of drill chuck and chuck adapter assembly). When installing it, refer to "Installing or removing drill bit" described on the previous page.

Set the action mode changing knob to "rotation only".

You can drill up to 13 mm diameter in metal and up to 38 mm diameter in wood. (Note: When using a flat boring bit.)

⚠ **CAUTION:**

- Never use "rotation with hammering" when the drill chuck assembly is installed on the tool. The drill chuck assembly may be damaged.
  Also, the drill chuck will come off when reversing the tool.

MAINTENANCE

⚠ **CAUTION:**

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

To maintain product SAFETY and RELIABILITY, repairs, carbon brush inspection and replacement, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

ACCESSORIES

⚠ **CAUTION:**

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita service center.

- SDS-Plus Carbide-tipped bits
- Drill chuck S13
- Chuck adapter
- Chuck key S13
- Bit grease
- Side grip
- Depth gauge
- Blow-out bulb
- Dust cup
- Dust extractor attachment
- Safety goggles
- Plastic carrying case

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