



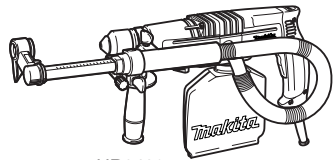
Rotary Hammer With Dust Extraction

25 mm (1")

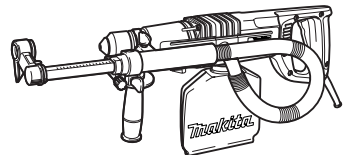
MODEL HR2430

25 mm (1")

MODEL HR2431



HR2430



HR2431

003096



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.

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SPECIFICATIONS

Model		HR2430	HR2431
Capacities	Concrete	25 mm (1")	
	Steel	13 mm (1/2")	
	Wood	32 mm (1-1/4")	
Dust extraction capacities	Drilling depth	0 - 100 mm (4")	
	Max. bit diameter	25 mm (1")	
	Max. bit length	270 mm (10-5/8")	
	Dust bag capacity	0.4 L	
No load speed (RPM)		0 - 1,050/min.	
Blows per minute		0 - 4,900	
Overall length		416 mm (16-3/8")	477 mm (18-3/4")
Net weight		2.6 kg (5.7 lbs)	2.8 kg (6.2 lbs)

- Manufacturer reserves the right to change specifications without notice.
- Specifications may differ from country to country.

GENERAL SAFETY RULES

USA002-2

(For All Tools)

WARNING:

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

SAVE THESE INSTRUCTIONS

Work Area

1. **Keep your work area clean and well lit.** Cluttered benches 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 bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

4. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is 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 to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
8. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce 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 tool while 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. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

11. **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
12. **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
13. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
14. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions. Ordinary eye or sun glasses are NOT eye protection.

Tool Use and Care

15. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
16. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
17. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
18. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
20. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.

21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

23. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
24. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

USE PROPER EXTENSION CORD: Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Table 1: Minimum gage for cord

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
More Than	Not More Than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

SPECIFIC SAFETY RULES

USB010-2

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. **Hold 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.
2. **Wear ear protectors when using the tool for extended periods. Prolonged exposure to high intensity noise can cause hearing loss.**

3. 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.
4. Be sure the bit is secured in place before operation.
5. 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.
6. 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.
7. Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.
8. Hold the tool firmly with both hands.
9. Keep hands away from moving parts.
10. Do not leave the tool running. Operate the tool only when hand-held.
11. Do not point the tool at any one in the area when operating. The bit could fly out and injure someone seriously.
12. Do not touch the bit or parts close to the bit immediately after operation; they may be extremely hot and could burn your skin.
13. 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.

SYMBOLS

USD202-2

The followings show the symbols used for tool.

- | | | | |
|--|---------------------|---|---|
| V | volts | n_0 | no load speed |
| A | amperes |  | Class II Construction |
| Hz | hertz | .../min..... | revolutions or reciprocation per minute |
|  | alternating current |  | number of blow |

FUNCTIONAL DESCRIPTION

⚠ CAUTION:

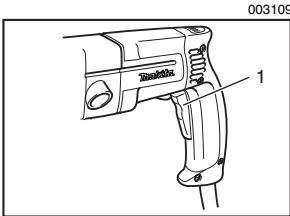
- Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

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.



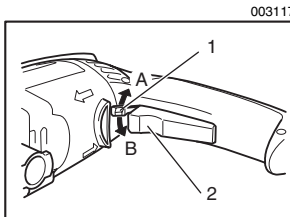
1. Switch trigger

Reversing switch action

This tool has a reversing switch to change the direction of rotation. Move the reversing switch lever to the ← position (A side) for clockwise rotation or the → position (B side) 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.



1. Reversing switch lever

2. Switch trigger

Selecting the action mode

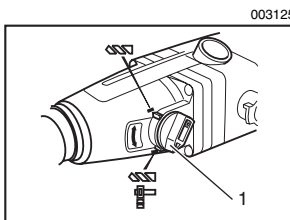
This tool employs an action mode changing knob. Select one of the two modes suitable for your work needs by using this knob.

For rotation only, turn the knob so that the arrow on the knob points toward the ⚙ mark on the tool body.

For rotation with hammering, turn the knob so that the arrow on the knob points toward the ⚙T mark on the tool body.

⚠ CAUTION:

- Always set the knob fully to your desired mode mark. If you operate the tool with the knob positioned halfway between the mode marks, the tool may be damaged.



1. Action mode changing 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.

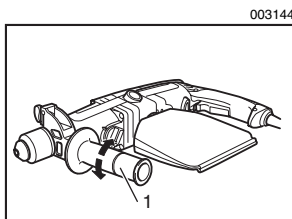
⚠ CAUTION:

- 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.



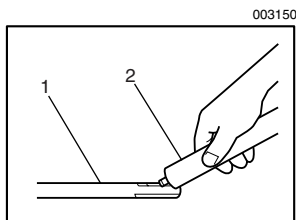
1. Side grip

Side grip (auxiliary handle)

The side grip swings around to either side, allowing easy handling of the tool in any position. Loosen the side grip by turning it counterclockwise, swing it to the desired position and then tighten it by turning clockwise.

Bit grease (optional accessory)

Coat the bit shank head beforehand with a small amount of bit grease (about 0.5 -1 g; 0.02 - 0.04 oz.). This chuck lubrication assures smooth action and longer service life.

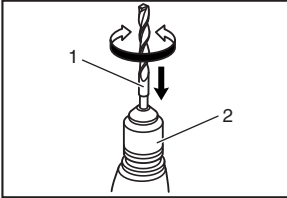


1. Bit shank
2. Bit grease

Installing or removing the bit

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

003159



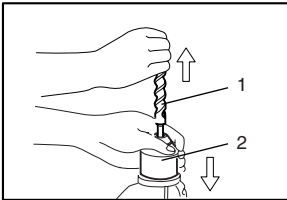
1. Bit
2. Chuck cover

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.

003163



1. Bit
2. Chuck cover

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

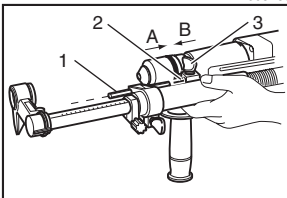
Dust extractor attachment and dust bag (In concrete drilling operation)

With the dust extractor attachment and the dust bag installed on this tool, you can do your work very cleanly without dust scattered around in the work site.

⚠ CAUTION:

- These two accessories can be used only for drilling holes in concrete. Accordingly, do not use them in metal or wood drilling operation.

003188



1. Coupling rod
2. Coupling hole
3. Clamp screw

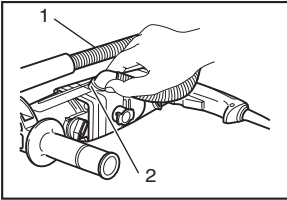
Installing dust extractor attachment

Loosen the clamp screw of the side grip by turning it counter-clockwise. Insert the coupling rod of the dust extractor attachment through the coupling hole of the side grip until the rod cannot be pushed in any further. And then tighten the clamp screw clockwise to secure the dust extractor attachment. The coupling rod can be inserted from either side A or B.

NOTE:

- At some angles of the side grip with the tool, the dust extractor attachment cannot be installed on the tool because of the interference between the attachment and the tool.

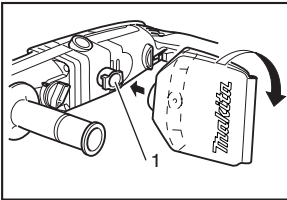
003189



1. Hose
2. Hose port

Insert firmly the hose of the dust extractor attachment into the hose port of the tool until the hose hits against the bottom of the port to be fixed firmly to the tool.

003190

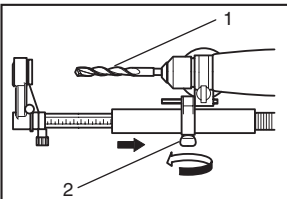


1. Dust exhaust port

Installing dust bag

Keeping the angle of the dust bag with the tool at 90°, insert the dust bag into the dust exhaust port of the tool. Secure the dust bag by turning it clockwise.

003191

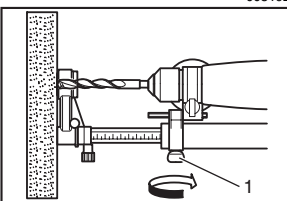


1. Bit
2. Clamp screw

Adjusting the position of dust extractor attachment

Loosen the clamp screw of the dust extractor attachment by turning it counterclockwise.

003192

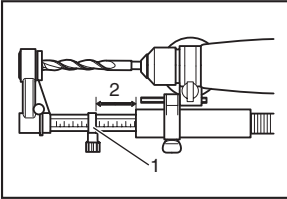


1. Clamp screw

And then align the tip of the bit with the top of the dust extractor attachment.

Tighten the clamp screw by turning it clockwise to secure the dust extractor attachment.

003193



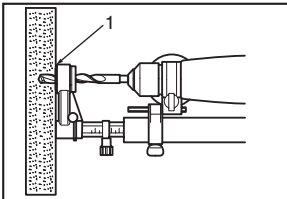
1. Stopper
2. Drilling depth

Depth adjustment

Loosen the screw of the stopper by turning it counterclockwise so that the stopper could slide on the depth gauge of the dust extractor attachment. Slide the stopper to the desired drilling depth of the gauge, and then tighten the screw by turning it clockwise.

OPERATION

003194



1. Contact with the surface completely

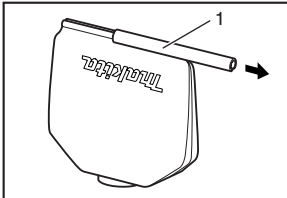
Drilling with dust extractor attachment

In drilling operation, hold the tool so that the top end of the dust extractor attachment is always kept in complete contact with the surface of concrete.

NOTE:

- Any space between them would result in a considerable loss of dust extracting power.

003195



1. Fastener

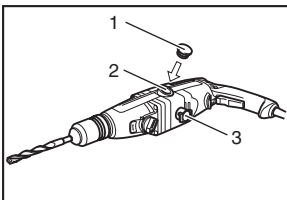
Cleaning out dust bag

Remove the dust bag from the tool. Pull the fastener out of the dust bag, and then remove dust or particles to clean out the dust bag.

NOTE:

- Too much dust in the dust bag would result in a considerable loss of dust extracting power. Accordingly, clean out the dust bag from time to time.

003196




1. Cap
2. Hose port
3. Dust exhaust port

Drilling without dust extractor attachment

This tool can be also used as a standard rotary hammer without the dust extractor attachment and the dust bag.

Before drilling operation without the dust extractor attachment and the dust bag, plug the hose port with the cap provided. The cap reduces the exhaust air from the dust exhaust port for your comfortable operation.

Hammer drilling operation

Set the action mode changing knob to the  symbol.

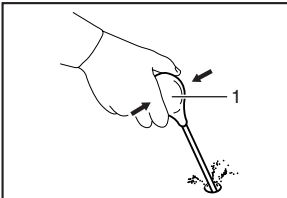
Position the bit at the desired location for the hole, then pull the switch trigger. Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole.

Do not apply more pressure when the hole becomes clogged with chips or particles. Instead, run the tool at an idle, then remove the bit partially from the hole. By repeating this several times, the hole will be cleaned out and normal drilling may be resumed.

CAUTION:

- There is a tremendous and sudden twisting force exerted on the tool/bit at the time of hole break-through, when the hole becomes clogged with chips and particles, or when striking reinforcing rods embedded in the concrete. Always use the side grip (auxiliary handle) and firmly hold the tool by both side grip and switch handle during operations. Failure to do so may result in the loss of control of the tool and potentially severe injury.

002449

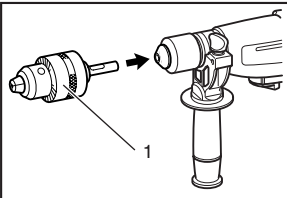


1. Blow-out bulb

Blow-out bulb (optional accessory)

After drilling the hole, use the blow-out bulb to clean the dust out of the hole.

003220



1. Drill chuck assembly

Drilling in wood or metal

Use the optional drill chuck assembly. When installing it, refer to “Installing or removing the bit” described on the previous page.

Set the action mode changing knob to “rotation only”.

You can drill up to 13 mm (1/2”) diameter in metal and up to 32 mm (1 - 1/4”) diameter in wood.

⚠ 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.
- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.
- There is a tremendous twisting force exerted on the tool/bit at the time of hole breakthrough. Hold the tool firmly and exert care when the bit begins to break through the workpiece.
- A stuck bit can be removed simply by setting the reversing switch to reverse rotation in order to back out. However, the tool may back out abruptly if you do not hold it firmly.
- Always secure small workpieces in a vise or similar hold-down device.

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 or Factory 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 assembly
- Drill chuck S13
- Chuck adapter
- Chuck key S13
- Bit grease
- Blow-out bulb
- Safety goggles
- Plastic carrying case

Cut



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CUSTOMER'S RECORD

<p>When you need service: Send complete tool (prepaid) to one of the Makita Factory Service Centers listed, or to an Authorized Makita Service Center. Be sure to attach a letter to the outside of the carton detailing the problem with your tool.</p>	Date Purchased
	Dealer's Name & Address
	Model No.
	Serial No.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to 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.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others:
- repairs are required because of normal wear and tear:
- the tool has been abused, misused or improperly maintained:
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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