Makita DHR171Z

Makita DHR171Z 18V LXT Brushless SDS+ Rotary Hammer Instruction Manual

Model: DHR171Z

1. Safety Instructions

Always observe basic safety precautions when using electric tools to reduce the risk of fire, electric shock, and personal injury.

1.1 General Power Tool Safety Warnings

- **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.
- **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.
- **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.
- **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. Disconnect the plug from the power source and/or remove the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.

2. Product Overview

The Makita DHR171Z is an 18V LXT Brushless SDS+ Rotary Hammer designed for efficient drilling and hammering. It features a compact and ergonomic design, a brushless motor for extended runtime, and a vibration-absorbing handle for user comfort.



Figure 2.1: Overall view of the Makita DHR171Z rotary hammer with an 18V LXT battery attached. This image highlights the compact design and the included battery.



Figure 2.2: Side profile of the DHR171Z, showcasing the ergonomic grip and the brushless motor designation on the tool body.



Figure 2.3: Front view of the tool, illustrating the SDS+ chuck and the adjustable side handle for improved control.



Figure 2.4: Rear view of the rotary hammer, showing the battery compartment and overall tool balance.

Key Features:

- **Brushless Motor:** Delivers 0-680 RPM, 0-4,800 IPM, and 1.2 Joules of impact energy for faster drilling.
- **Compact Design:** Only 273mm overall length for easy maneuverability.
- **Vibration Absorbing Handle:** Enhances operator comfort during prolonged use.
- **2-Mode Operation:** "Rotation only" for drilling and "hammering with rotation" for concrete applications.
- **Variable Speed Trigger:** Allows matching speed to the application.
- **Built-in L.E.D. Light:** Illuminates the work area.
- **One-Touch Sliding Chuck:** For quick and easy bit changes.

3. Setup

3.1 Battery Installation

1. Ensure the tool is switched off.
2. Align the battery pack (e.g., BL1830) with the battery port on the tool.
3. Slide the battery into the port until it clicks securely into place. Do not force it.
4. To remove, press the release button on the battery and slide it out.



Figure 3.1: The 18V LXT battery securely attached to the base of the rotary hammer, ready for operation.

3.2 Side Handle Attachment

1. Loosen the side handle by rotating it counter-clockwise.
2. Slide the handle onto the barrel of the rotary hammer.
3. Adjust the handle to a comfortable and secure position.
4. Tighten the handle by rotating it clockwise until it is firmly secured.



Figure 3.2: The adjustable side handle positioned on the tool, providing additional stability and control during use.

3.3 Bit Installation (SDS+ Chuck)

1. Clean the shank of the SDS+ bit.
2. Pull back the chuck sleeve.
3. Insert the bit into the chuck until it locks into place.
4. Release the chuck sleeve. The bit should have a slight amount of play (axial movement) which is normal for SDS+ systems.
5. To remove, pull back the chuck sleeve and pull the bit out.



Figure 3.3: A detailed view of the SDS+ chuck mechanism, designed for quick and secure bit changes.

4. Operating Instructions

4.1 Mode Selection

The DHR171Z offers two operating modes:

- **Rotation Only (Drill Mode):** For drilling into wood, metal, or plastic. Set the mode selector to the drill icon.
- **Hammering with Rotation (Hammer Drill Mode):** For drilling into concrete, masonry, or stone. Set the mode selector to the hammer drill icon.



Figure 4.1: Close-up of the mode selector switch, allowing users to easily switch between rotation-only and hammer drilling modes.

4.2 Variable Speed Trigger

The tool is equipped with a variable speed trigger. The speed and impact rate can be adjusted by varying the pressure on the trigger switch. Pressing the trigger further increases the speed.



Figure 4.2: The main handle and variable speed trigger, designed for comfortable operation and precise control over drilling speed.

4.3 Drilling Techniques

- **Starting a Hole:** Begin drilling at a low speed to prevent the bit from wandering. Once the hole is started, increase speed as needed.
- **Applying Pressure:** Apply steady, firm pressure in line with the drill bit. Do not lean into the tool or apply excessive force, especially in hammer drill mode; let the tool do the work.
- **Clearing Debris:** Periodically withdraw the bit from the hole to clear debris, especially when drilling deep holes.
- **Overheating:** If the tool becomes hot, reduce pressure and allow it to run freely for a short period to cool down.

5. Maintenance

5.1 Cleaning

- Regularly clean the ventilation openings on the tool to prevent overheating.
- Wipe down the tool with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- Clean the SDS+ chuck regularly to ensure smooth bit insertion and removal.

5.2 Storage

- Store the tool in a cool, dry place, away from direct sunlight and moisture.
- Remove the battery pack from the tool before storage, especially for long periods.
- Keep the tool and accessories out of reach of children.

6. Troubleshooting

Problem	Possible Cause	Solution
Tool does not start	Battery not charged or improperly inserted.	Charge battery fully. Re-insert battery securely until it clicks.
Reduced performance / Lack of power	Battery charge low; Tool overheating; Worn carbon brushes (though this model is brushless, general advice).	Recharge battery. Allow tool to cool down. (N/A for brushless motor).
Bit not rotating or hammering	Incorrect mode selected; Bit improperly inserted.	Check mode selector. Re-insert bit into chuck correctly.
Excessive vibration	Bit bent or damaged; Side handle loose.	Replace bit. Tighten side handle.

7. Specifications

Attribute	Value
Brand	Makita
Model Number	DHR171Z
Power Source	Battery Powered
Voltage	18 Volts
Amperage	3 Amps
Impact Energy	1.2 J
Impacts Per Minute (IPM)	0 - 4,800 ipm
No Load Speed (RPM)	0 - 680 rpm
Chuck Type	SDS+ Plus
Motor Type	Brushless
Item Weight	10.12 pounds
Package Dimensions	15.43 x 11.61 x 11.06 inches

8. Warranty and Support

Makita power tools are typically covered by a limited warranty. Please refer to the warranty card included with your product or visit the official Makita website for detailed warranty information specific to your region and model.

For technical support, service, or to find an authorized service center, please visit the Makita official website or contact their customer service department. Keep your purchase receipt as proof of purchase for warranty claims.

Makita Official Website: www.makitatools.com

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