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> Makita HB350 1-3/8" Magnetic Drill User Manual

Makita HB350

Makita HB350 1-3/8" Magnetic Drill User Manual

Model: HB350 | Brand: Makita

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your Makita HB350 1-3/8" Magnetic Drill. Please read this manual thoroughly before using the tool to ensure proper handling and to prevent injury or damage.

The Makita HB350 is a powerful magnetic drill designed for cutting holes in steel. Its robust construction and features ensure precision and stability during drilling operations.

2. SAFETY INFORMATION

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

- **Read all instructions:** Familiarize yourself with the tool's functions and operating procedures.
- **Wear appropriate personal protective equipment (PPE):** Always wear safety glasses, hearing protection, and gloves when operating the drill.
- **Secure the workpiece:** Ensure the magnetic base is firmly attached to a clean, flat, ferromagnetic surface before starting the drill.
- **Maintain a clean work area:** Cluttered areas and benches invite injuries.
- **Avoid unintentional starting:** Ensure the switch is in the off position before plugging in the tool.
- **Do not overreach:** Keep proper footing and balance at all times.
- **Disconnect power:** Always disconnect the drill from the power source before making adjustments, changing accessories, or storing the tool.

3. COMPONENTS AND PACKAGE CONTENTS

The Makita HB350 Magnetic Drill package typically includes the following items:

- Makita HB350 Magnetic Drill Unit
- 500mL coolant bottle and connection hose

- Polyester safety strap
- Cutting guard
- Hex wrenches (various sizes)
- Tool case





Figure 3.1: Makita HB350 Magnetic Drill with included accessories, including the coolant bottle, safety strap, and hex wrenches.

4. SETUP

4.1 Attaching the Cutting Guard

The removable cutting guard is essential for isolating the cutting mechanism during operation. Attach it securely to the drill unit as shown in the diagram.



Figure 4.1: Side view of the Makita HB350, showing the attachment points for the cutting guard.

4.2 Coolant System Setup

The spindle coolant system improves cutting performance and extends cutter life. Fill the 500mL coolant bottle with appropriate cutting fluid and connect it to the drill's coolant inlet hose.



Figure 4.2: The coolant bottle connected to the drill, ready for use.

4.3 Installing the Cutter

The industrial chuck accepts 3/4" Weldon Shank Cutters. Insert the cutter firmly into the chuck and secure it using the provided hex wrenches.



Figure 4.3: Detail of the drill chuck, showing where the cutter is inserted.

5. OPERATION

5.1 Securing the Magnetic Base

Place the magnetic drill on a clean, flat, and stable ferromagnetic surface. Ensure the surface is free of debris, rust, or paint that could interfere with the magnetic clamping force. Activate the magnetic base by switching the "MAGNET" switch to the "ON" position. Verify that the drill is securely clamped before proceeding.



Figure 5.1: The magnetic drill firmly attached to a metal beam, demonstrating proper securing.

5.2 Drilling Procedure

1. Ensure the workpiece is stable and the magnetic base is fully engaged.
2. Position the drill over the desired drilling location.
3. Switch the "MOTOR" to the "ON" position. The motor will start, and the cutter will begin to rotate.
4. Slowly feed the cutter into the material using the feed handles. Apply steady, even pressure. Do not force the drill.
5. Ensure the coolant system is active and providing lubrication to the cutting area.
6. Once the hole is complete, retract the cutter fully from the workpiece.
7. Switch the "MOTOR" to the "OFF" position.
8. Switch the "MAGNET" to the "OFF" position to release the drill from the workpiece.







Figure 5.2: An operator demonstrating the drilling process, showing the feed handles and control panel.

5.3 Adjusting Motor Height

The motor height can be adjusted to accommodate various cutting thicknesses. Use the adjustment mechanism to raise or lower the motor as needed for optimal cutting depth.



Figure 5.3: Detail of the motor height adjustment rack and pinion system.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Makita HB350 Magnetic Drill.

- **Cleaning:** After each use, clean the drill, especially the magnetic base and chuck area, to remove metal chips and debris.

Use a dry cloth or soft brush.

- **Coolant System:** Regularly check and refill the coolant reservoir. Clean the coolant lines and nozzle to prevent blockages.
- **Lubrication:** Periodically lubricate moving parts, such as the dovetail slide mechanism, with appropriate machine oil to ensure smooth operation.
- **Cutter Inspection:** Inspect cutters before each use for wear or damage. Replace dull or damaged cutters immediately to maintain cutting efficiency and safety.
- **Power Cord:** Check the power cord for any signs of damage, cuts, or fraying. If damaged, have it repaired by a qualified service technician.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Drill does not start	No power supply; Power switch off; Overload protection activated.	Check power connection; Ensure switches are ON; Reset overload protection if applicable.
Magnetic base not holding	Surface is not ferromagnetic; Surface is dirty/uneven; Magnet switch is OFF.	Ensure surface is steel/iron; Clean and flatten surface; Turn magnet switch ON.
Poor cutting performance	Dull cutter; Insufficient coolant; Incorrect feed rate.	Replace cutter; Check coolant level and flow; Adjust feed rate.
Excessive vibration/noise	Loose components; Damaged cutter; Unstable workpiece.	Check all fasteners; Replace cutter; Secure workpiece properly.

8. SPECIFICATIONS

Feature	Specification
Model	HB350
Brand	Makita
Power Source	Corded Electric
Voltage	120 Volts
Amperage	10 Amps
Wattage	1050 Watts
Maximum Rotational Speed	850 RPM
Drilling Capacity (Steel)	Up to 1-3/8" diameter and 2" thick (35 mm)
Chuck Type	3/4" Weldon Shank
Item Weight	37.04 Pounds (approx. 16.8 kg)
Product Dimensions	15.75 x 21.65 x 7.48 inches
Special Feature	Lightweight, Spindle Coolant System, Removable Guard
UPC	088381732789

9. WARRANTY AND SUPPORT

Warranty Information: The manufacturer states "No Warranty" for this product. Please refer to your point of purchase for any specific return or repair policies.

Customer Support: For technical assistance, parts, or service inquiries, please contact Makita customer support or visit the official Makita website. You can also refer to the [User Guide \(PDF\)](#) for additional details.

Online Resources:

- Makita Official Website: www.makitatools.com
- Makita Store on Amazon: [Visit the Makita Store](#)