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Makita TB131

Makita TB131 Bench Drill User Manual

MODEL: TB131

1. Introduction

Thank you for choosing the Makita TB131 Bench Drill. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your new bench drill. Please read this manual thoroughly before operating the tool to ensure proper use and to prevent injury or damage.

The Makita TB131 is a robust 250 Watt bench drill designed for precision drilling in various materials, offering 5 distinct speed settings for optimal performance across different applications.

2. Important Safety Instructions

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

- **Work Area Safety:** Keep your 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.
- **Electrical Safety:** Power tool plugs must match the outlet. Never modify the plug in any way. Do not expose power tools to rain or wet conditions.
- **Personal Safety:** Always wear eye protection. Use safety glasses, goggles, or a face shield. Wear hearing protection when operating for extended periods. Dress properly; avoid loose clothing, jewelry, or long hair that can be caught in moving parts.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Maintenance:** Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.

3. Components Overview

Familiarize yourself with the main components of your Makita TB131 Bench Drill:



Figure 3.1: Front view of the Makita TB131 Bench Drill, showing the main body, motor, chuck, and work table.

- **Motor Housing:** Contains the 250 Watt motor.
- **Chuck:** Holds the drill bits, with a maximum capacity of 13 mm (1/2 inch).
- **Depth Stop:** Allows for precise control over drilling depth.
- **Work Table:** Adjustable table for supporting workpieces, can be tilted up to 45 degrees left or right.
- **Feed Handles:** Used to lower the chuck for drilling.
- **Base:** Provides stability for the drill press.



Figure 3.2: Side view of the Makita TB131 Bench Drill, highlighting the motor and column.

4. Setup and Assembly

Follow these steps to assemble and set up your bench drill:

1. **Unpacking:** Carefully remove all components from the packaging. Check for any damage or missing parts.
2. **Base and Column Assembly:** Securely attach the column to the base using the provided fasteners. Ensure it is firmly seated and tightened.
3. **Head Assembly:** Mount the drill head assembly onto the top of the column. Tighten the locking screws to secure it in place.
4. **Work Table Installation:** Slide the work table assembly onto the column and secure it at a comfortable working height using the table locking handle.
5. **Chuck Installation:** Clean the tapered spindle and the inside of the chuck. Place the chuck onto the spindle and tap it firmly with a rubber mallet to seat it.
6. **Mounting:** For stability and safety, it is highly recommended to bolt the bench drill to a sturdy workbench using the mounting holes in the base.

5. Operation

5.1 Power On/Off

Locate the ON/OFF switch, typically a large, clearly marked button on the front of the drill head. Press 'ON' to start the motor and 'OFF' to stop it.

5.2 Speed Adjustment

The Makita TB131 features 5 speed modes. To change the speed:

1. **Disconnect Power:** Always unplug the drill from the power source before adjusting speed.
2. **Open Belt Cover:** Open the belt cover on top of the drill head.
3. **Adjust Belt Position:** Loosen the motor tensioning bolt. Move the drive belt to the desired pulley combination to achieve the required speed. Refer to the speed chart inside the belt cover for appropriate settings.
4. **Tension Belt:** Re-tension the belt by adjusting the motor position and tightening the tensioning bolt. The belt should have slight deflection.
5. **Close Cover:** Close the belt cover securely.

Available speeds (approximate): 570, 890, 1300, 1900, 2670 RPM (50Hz) and 690, 1070, 1560, 2280 RPM (60Hz).

5.3 Drilling Procedure

1. **Select Bit:** Choose the appropriate drill bit for your material and desired hole size. Insert it firmly into the chuck and tighten with the chuck key.
2. **Adjust Table:** Position the work table to the correct height and angle.
3. **Secure Workpiece:** Always clamp your workpiece securely to the work table. Never hold it by hand.
4. **Set Depth Stop:** Adjust the depth stop for the desired drilling depth.
5. **Start Drill:** Turn on the drill. Allow it to reach full speed before contacting the workpiece.
6. **Drill:** Slowly lower the drill bit into the workpiece using the feed handles. Apply steady, even pressure.
7. **Retract:** Once the desired depth is reached, retract the drill bit from the workpiece.
8. **Turn Off:** Turn off the drill and wait for the chuck to stop rotating before removing the workpiece.

6. Maintenance

Regular maintenance ensures the longevity and safe operation of your drill press.

- **Cleaning:** Keep the drill press clean, especially the column, table, and chuck. Remove dust and debris after each

use.

- **Lubrication:** Periodically apply a light coat of machine oil to moving parts, such as the column and quill.
- **Belt Inspection:** Check the drive belt for wear, cracks, or fraying. Replace if necessary. Ensure proper belt tension.
- **Chuck Maintenance:** Keep the chuck jaws clean and free of debris. If the chuck becomes stiff, clean and lubricate it.
- **Cord Inspection:** Regularly inspect the power cord for any damage. Do not use the tool if the cord is damaged.

7. Troubleshooting

Refer to the table below for common issues and their solutions:

Problem	Possible Cause	Solution
Drill does not start	No power supply; Faulty switch; Motor overload.	Check power connection; Test switch; Allow motor to cool.
Excessive vibration	Loose mounting; Unbalanced drill bit; Worn bearings.	Securely mount drill; Replace or sharpen bit; Contact service.
Drill bit wobbles	Chuck not tightened; Bent drill bit; Damaged chuck.	Re-tighten chuck; Replace bent bit; Replace chuck if damaged.
Motor overheats	Overloading; Insufficient ventilation.	Reduce load; Ensure proper airflow around motor.

8. Technical Specifications

Specification	Value
Model Number	TB131
Continuous Rating Input	250 W
Drilling Capacity (Steel)	13 mm (1/2 inch)
Drilling Capacity (Wood)	24 mm (15/16 inch)
No Load Speed (50Hz)	570, 890, 1300, 1900, 2670 RPM
No Load Speed (60Hz)	690, 1070, 1560, 2280 RPM
Number of Speeds	5
Chuck Size	13 mm
Table Tilt	45 degrees (left or right)
Net Weight	20 kg (44.1 lbs)
Power Source	Corded Electric
Voltage	240 Volts (DC)
Amperage	6 Amps

Specification	Value
Product Dimensions	20L x 20W x 5H Centimeters
Material	Metal

9. Warranty and Support

Makita products are manufactured under strict quality control standards. For warranty information, please refer to the warranty card included with your purchase or visit the official Makita website for details specific to your region.

For technical assistance, spare parts, or service, please contact your authorized Makita service center or the dealer from whom you purchased the product. Ensure you have your model number (TB131) and purchase details available when seeking support.

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