VEVOR T0000000001V0

VEVOR MT2 Universal Dividing Head Instruction Manual

Model: T0000000001V0 | Brand: VEVOR

1. Introduction

This manual provides essential instructions for the safe and effective operation, setup, and maintenance of your VEVOR MT2 Universal Dividing Head. This precision tool is designed for use with milling machines, drills, and grinders to accurately divide workpieces for various machining operations such as drilling, cutting, boring, and spot flattening. Please read this manual thoroughly before initial use to ensure proper function and to prevent injury or damage to the equipment.

Figure 1.1: VEVOR MT2 Universal Dividing Head demonstrating various machining applications.

2. Safety Instructions

Operating machinery can be hazardous. Adhere to all safety precautions to prevent personal injury or equipment damage.

- **Read the Manual:** Familiarize yourself with all instructions and warnings before operating the dividing head.
- **Personal Protective Equipment (PPE):** Always wear safety glasses, hearing protection, and appropriate work attire. Avoid loose clothing or jewelry that could get caught in moving parts.
- **Work Area:** Ensure your workspace is clean, well-lit, and free from obstructions.
- **Secure Mounting:** Always ensure the dividing head and workpiece are securely mounted to the machine table before operation.
- **Power Disconnection:** Disconnect power to the milling machine before making any adjustments, maintenance, or when the machine is unattended.
- **Stable Workpiece Support:** Use the tailstock for additional support when machining longer workpieces to prevent vibration and ensure stability.
- **No Unauthorized Modifications:** Do not modify the dividing head or its components. Use only genuine VEVOR

replacement parts.

3. Product Overview and Components

The VEVOR MT2 Universal Dividing Head is constructed from solid HT200 cast iron, ensuring high stability, wear resistance, and a long operational life. Its design minimizes friction for smooth running and precise operations.

Figure 3.1: Solid cast iron construction of the dividing head.

Key Components:

- **Main Headstock:** Houses the indexing mechanism and chuck.
- **3-Jaw Chuck:** For securely holding workpieces.
- **Indexing Plates:** Used for precise angular division of the workpiece. Includes a direct indexing plate and interchangeable plates with varying hole counts.
- **Tailstock:** Provides additional support for longer workpieces, enhancing stability during machining.
- **Angle Adjustment Mechanism:** Allows the headstock to be tilted from 10° below horizontal to 90° vertical.

- **Reduction Ratio:** The internal gearing provides a 1:40 reduction ratio for fine adjustments.

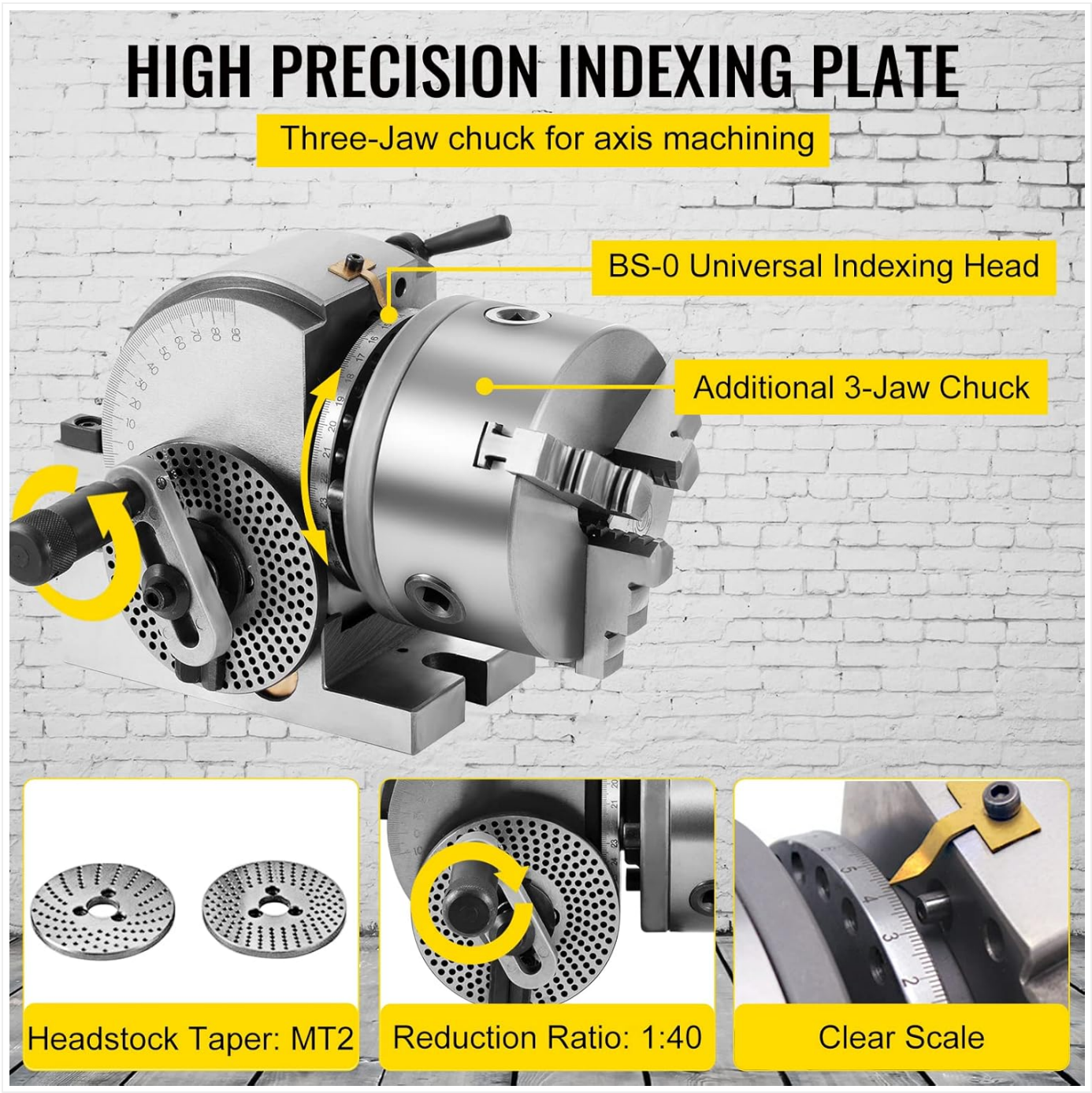

Figure 3.2: High precision indexing plate and 3-jaw chuck details.

4. Setup

Proper setup is crucial for accurate and safe operation.

1. **Unpacking and Inspection:** Carefully unpack all components. Inspect for any shipping damage. Report any damage to your supplier immediately.
2. **Cleaning:** Clean all protective coatings and any debris from the unit using a suitable solvent and a soft cloth.
3. **Mounting the Dividing Head:** Securely mount the main headstock to the milling machine table using appropriate T-nuts and bolts. Ensure it is aligned correctly with the machine's axis.
4. **Attaching the Tailstock:** Position the tailstock on the machine table opposite the headstock. Ensure its center height matches that of the headstock. Secure it firmly in place.
5. **Initial Lubrication:** Apply a thin layer of machine oil to all moving parts and precision surfaces as indicated in the

maintenance section.

Figure 4.1: Dividing head mounted on a milling machine.

5. Operating Instructions

Follow these steps for precise machining operations.

5.1. Workpiece Mounting

- Open the jaws of the 3-jaw chuck.
- Insert the workpiece and tighten the chuck jaws evenly to secure it.
- For longer workpieces, extend the tailstock center to support the free end of the workpiece. Ensure the tailstock is locked securely.

Figure 5.1: Workpiece support with tailstock.

5.2. Adjusting the Head Angle

The headstock can be tilted to machine workpieces at various angles.

1. Loosen the locking bolts on the side of the headstock.
2. Carefully tilt the headstock to the desired angle, which can range from 10° below horizontal to 90° vertical. Use the clear scale for accurate angle setting.
3. Once the desired angle is set, securely tighten the locking bolts.

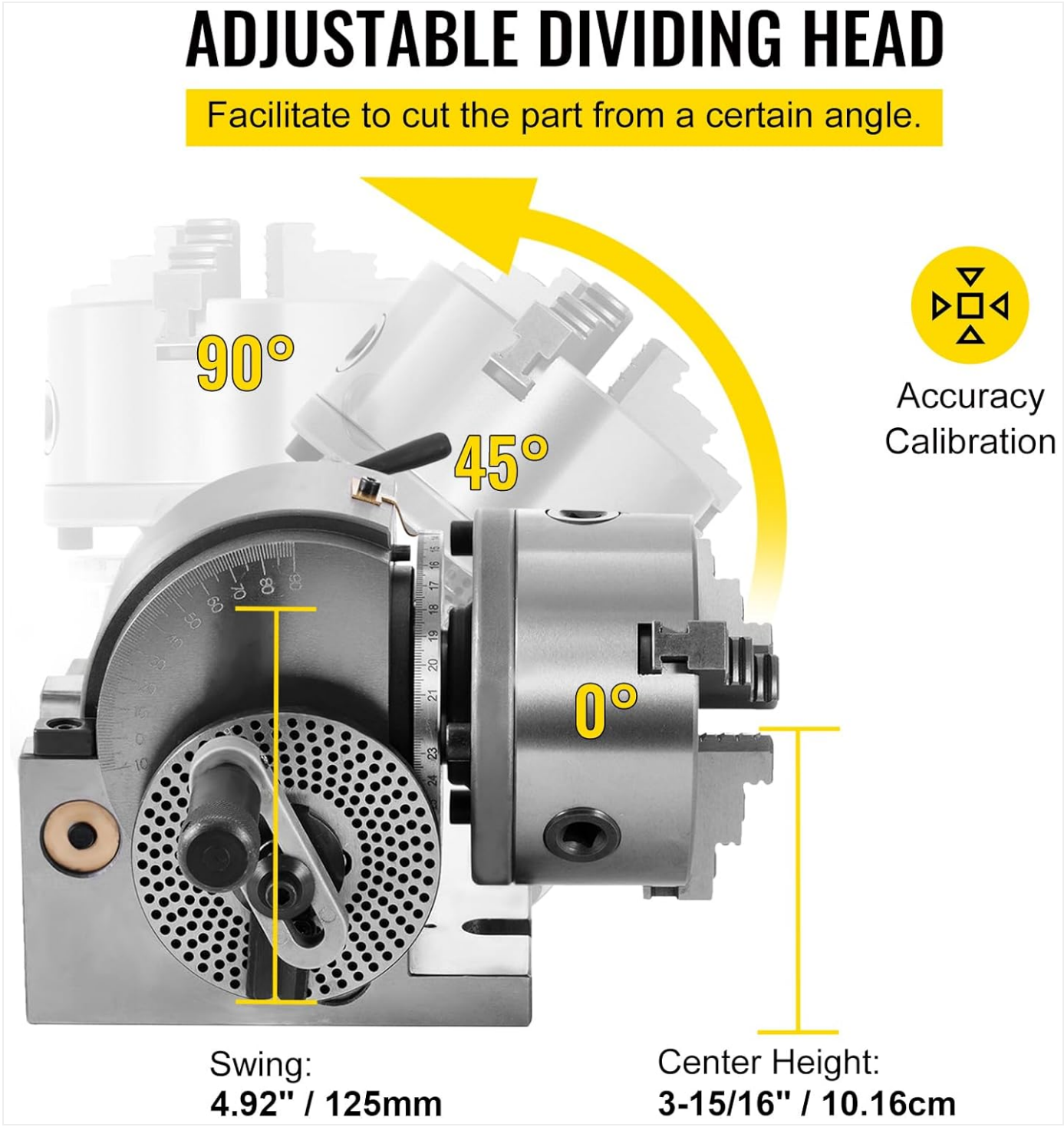

Figure 5.2: Adjustable head angle mechanism.

5.3. Indexing Operations

The dividing head allows for precise angular division using the indexing plates and the 1:40 reduction ratio.

1. **Select Indexing Plate:** Choose the appropriate indexing plate based on the number of divisions required. The kit includes interchangeable plates with different hole counts.
2. **Calculate Divisions:** Determine the number of turns of the crank handle and the specific hole circle required for your desired division. The formula for simple indexing is: Turns = 40 / Number of Divisions.
3. **Set Indexing Pin:** Engage the indexing pin into the calculated hole on the chosen indexing plate.
4. **Perform Division:** Rotate the crank handle the calculated number of turns and holes. Lock the indexing pin in the new position.
5. **Direct Indexing:** For quick, coarse divisions, the direct indexing plate can be used by disengaging the worm gear and using

the direct indexing pin.

6. Maintenance

Regular maintenance ensures the longevity and accuracy of your dividing head.

- **Cleaning:** After each use, clean the dividing head thoroughly to remove chips, dust, and coolant residue. Use a brush and compressed air, followed by a clean cloth.
- **Lubrication:** Regularly apply a thin film of high-quality machine oil to all sliding surfaces, gears, and the chuck jaws to prevent rust and ensure smooth operation. Pay particular attention to the worm gear and indexing mechanism.
- **Inspection:** Periodically inspect all bolts, screws, and moving parts for tightness and wear. Replace any worn or damaged components immediately.
- **Storage:** When not in use, store the dividing head in a clean, dry environment. Apply a rust preventative to all exposed metal surfaces if storing for extended periods.

7. Troubleshooting

Refer to this section for common issues and their solutions.

Problem	Possible Cause	Solution
Inaccurate divisions	Incorrect indexing calculation; Loose indexing pin; Worn worm gear; Play in chuck jaws.	Recheck calculations; Ensure pin is fully engaged; Inspect and replace worn parts; Tighten chuck jaws.
Workpiece vibration/instability	Workpiece not securely clamped; Tailstock not used or improperly secured; Loose mounting bolts.	Ensure chuck jaws are tight; Use and properly secure tailstock; Tighten all mounting bolts.
Stiff operation/difficulty rotating	Lack of lubrication; Accumulation of debris; Rust.	Clean and lubricate all moving parts; Remove any rust.
Angle adjustment difficult	Locking bolts too tight; Debris in pivot mechanism.	Loosen locking bolts sufficiently; Clean pivot area.

8. Specifications

Technical specifications for the VEVOR MT2 Universal Dividing Head.

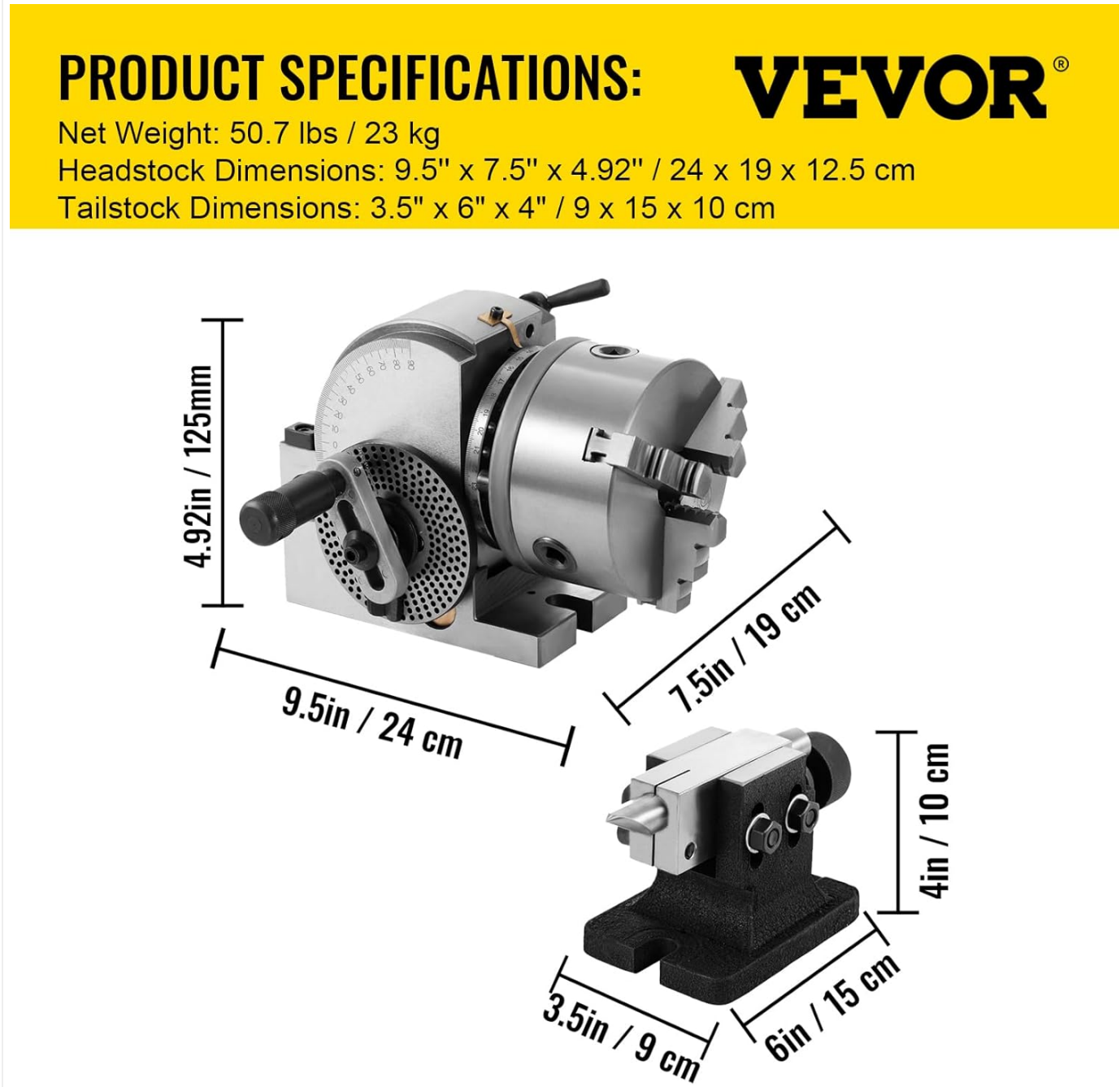

Figure 8.1: Product dimensions and weight.

Feature	Specification
Model Number	T0000000001V0
Brand	VEVOR
Dimensions (L x W x H)	41.91 x 24.89 x 24.13 cm (16.5 x 9.8 x 9.5 inches)
Net Weight	19.81 kg (43.67 lbs)
Headstock Taper	MT2
Swing	125 mm (4.92 inches)
Center Height	10.16 cm (3-15/16 inches)
Reduction Ratio	1:40

Feature	Specification
Adjustable Angle	10° below horizontal to 90° vertical
Material	HT200 Cast Iron
UPC	840349973470

9. Warranty and Support

For warranty information or technical support, please contact VEVOR customer service through their official website or the retailer from whom the product was purchased. Ensure you have your model number (T0000000001V0) and purchase details available when contacting support.