

## Topyond Z20002

# Topyond Mini Motorized Lathe Machine Z20002 User Manual

Model: Z20002

## 1. INTRODUCTION

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Thank you for choosing the Topyond Mini Motorized Lathe Machine Z20002. This compact and versatile power tool is designed for precision processing of various materials, including soft metals (such as aluminum and copper), wood, and engineering plastics. It is ideal for DIY enthusiasts and small-scale projects requiring the creation of round or tapered shapes.

This manual provides essential information for the safe and efficient operation, setup, and maintenance of your new lathe machine. Please read it thoroughly before use and retain it for future reference.



**Note:** Due to product updates, you may receive either the new or old type of the machine. Both types offer the same core functionality and performance.

## 2. SAFETY INSTRUCTIONS

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Your safety is paramount. Always follow these safety guidelines to prevent injury and damage to the machine.

- **Eye Protection:** Always wear safety glasses or a face shield to protect against flying debris.
- **Work Area:** Ensure your work area is clean, well-lit, and free from clutter. Keep children and bystanders away.
- **Secure Workpiece:** Always ensure the workpiece is securely clamped in the chuck before starting

the machine. A loose workpiece can be ejected with force.

- **Appropriate Clothing:** Avoid loose clothing, gloves, ties, or jewelry that can get caught in moving parts. Tie back long hair.
- **Tool Condition:** Use only sharp, undamaged turning tools. Dull or damaged tools can cause kickback or poor results.
- **Power Disconnection:** Disconnect the machine from the power source before making adjustments, changing tools, or performing maintenance.
- **Overload Protection:** The transformer includes over current, over voltage, and overheat protection. Do not attempt to bypass these safety features.
- **Ventilation:** Ensure adequate ventilation, especially when working with materials that produce dust or fumes.
- **Read Manual:** Familiarize yourself with all controls and operating procedures before using the machine.

### 3. PACKAGE CONTENTS

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Carefully unpack the box and ensure all items are present and undamaged. If any parts are missing or damaged, contact Topyond customer support.

- 1 x Mini Motorized Lathe Machine
- 1 x Working Board
- 1 x Power Adapter
- 1 x US Plug
- 1 x Accessories Package (includes various components for assembly/operation)
- 1 x Sponge Block

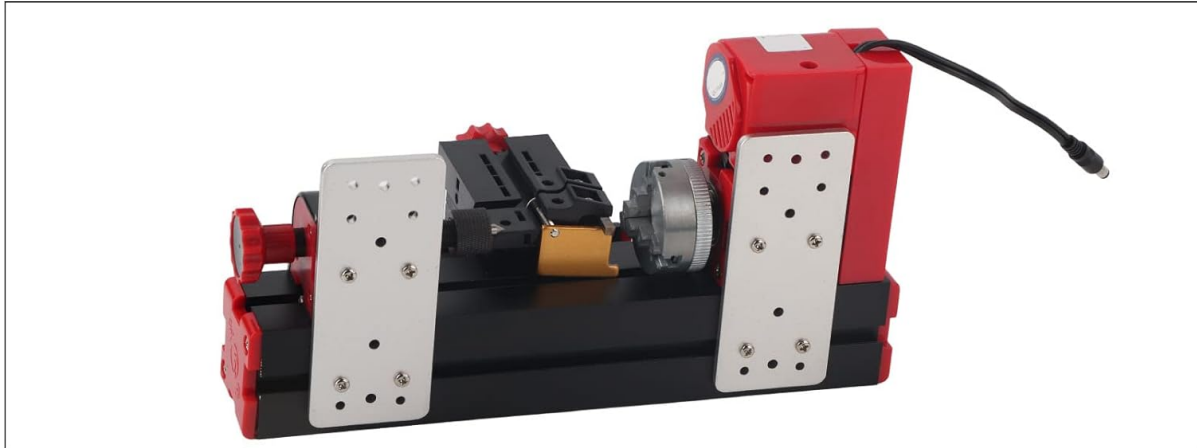
### 4. SETUP

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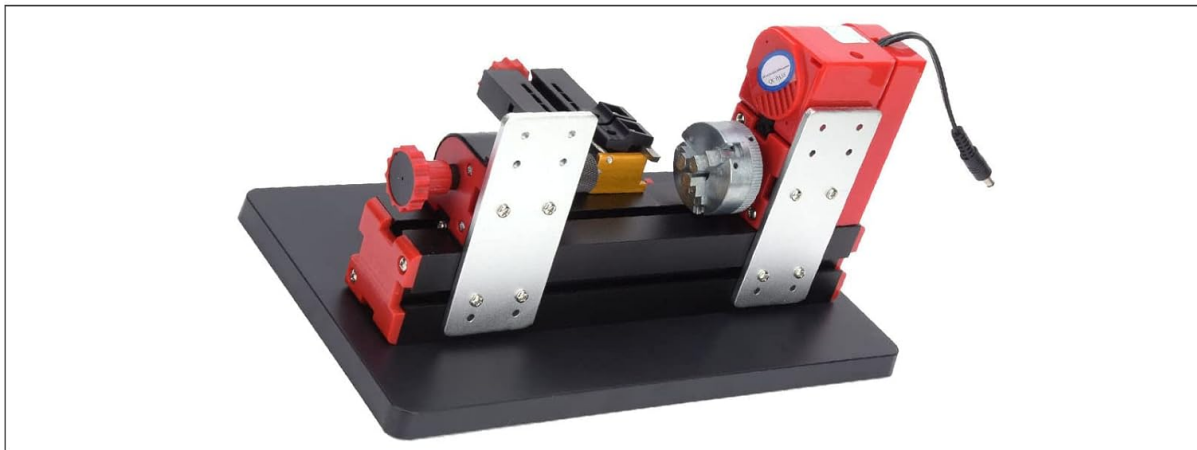
Follow these steps to set up your Mini Motorized Lathe Machine:

1. **Unpacking:** Remove all components from the packaging. Keep packaging materials for potential future transport or returns.
2. **Placement:** Place the working board on a stable, level, and sturdy workbench. Ensure there is sufficient space around the machine for safe operation and material handling.
3. **Machine Assembly:** Secure the main lathe unit onto the working board using the provided fasteners. Refer to the accessories package for specific assembly instructions if needed.
4. **Power Connection:** Connect the power adapter to the machine's power input port. Then, plug the US plug into the power adapter and connect it to a standard 100-240V AC outlet. Ensure the power switch on the machine is in the 'OFF' position before connecting to power.
5. **Initial Inspection:** Before first use, visually inspect all components to ensure they are properly assembled and free from damage. Manually rotate the chuck to ensure smooth movement.

## NEW AND OLD MODELS ARE SHIPPED RANDOMLY



New Type



Old Type

Figure 4.1: Assembled Mini Motorized Lathe Machine.

## 5. OPERATING INSTRUCTIONS

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This section details the general procedure for operating your mini lathe machine.

- 1. Material Selection:** The machine is suitable for processing soft metals (aluminum, copper), wood, and engineering plastics. Ensure your material does not exceed the maximum diameter of 20mm and a length of 135mm.
- 2. Workpiece Mounting:** Securely mount your workpiece into the chuck. Ensure it is centered and clamped tightly to prevent vibration or ejection during operation.
- 3. Tool Installation:** Install the high-speed steel turning tool into the tool post. Adjust its height and angle to match the desired cut. Ensure the tool is sharp and free from defects.
- 4. Adjusting Settings:** While this model has a fixed motor speed of 20000rpm, you will need to adjust the tool's position relative to the workpiece for desired depth of cut and feed rate.
- 5. Power On:** Once the workpiece and tool are secure, and all safety precautions are observed, switch the machine to the 'ON' position. The motor will start, and the chuck will rotate.
- 6. Performing the Cut:** Slowly and steadily advance the turning tool into the rotating workpiece. Apply consistent pressure to achieve a smooth cut. For best results, take multiple shallow passes rather than one deep cut. The primary purpose is to process parts into round or tapered shapes.

7. **Monitoring:** Continuously monitor the cutting process for any unusual noises, vibrations, or excessive heat. If any issues arise, immediately turn off the machine.
8. **Power Off:** Once the desired shape is achieved, retract the tool from the workpiece and switch the machine to the 'OFF' position. Allow the chuck to come to a complete stop before handling the workpiece.
9. **Workpiece Removal:** Carefully unclamp and remove the finished workpiece.



Figure 5.1: Lathe machine processing a workpiece.

## 6. MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your lathe machine.

- **Cleaning:** After each use, disconnect the power and thoroughly clean the machine. Remove all chips, dust, and debris from the chuck, tool post, and bed. Use a brush or compressed air.
- **Lubrication:** Periodically apply a light machine oil to moving parts, such as the lead screw and slide ways, to ensure smooth operation and prevent rust.
- **Tool Care:** Keep your turning tools sharp. A dull tool can lead to poor finishes and increased strain on the motor. Sharpen or replace tools as needed.
- **Inspection:** Regularly inspect all fasteners, belts (if any), and electrical connections for tightness and wear. Tighten any loose screws and replace worn components.

- **Storage:** When not in use, store the machine in a clean, dry environment, away from direct sunlight and extreme temperatures.

## 7. TROUBLESHOOTING

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This section addresses common issues you might encounter with your lathe machine.

Problem	Possible Cause	Solution
Machine does not power on	No power supply; Loose connection; Faulty adapter/plug	Check power outlet; Ensure all connections are secure; Test with another outlet; Contact support if adapter/plug is faulty.
Motor runs but chuck does not rotate	Internal mechanical issue	Immediately power off the machine. Do not attempt to repair. Contact Topyond customer support.
Poor cutting quality / Excessive vibration	Dull tool; Loose workpiece; Incorrect tool setup; Unstable workbench	Sharpen or replace tool; Re-secure workpiece; Adjust tool height/angle; Ensure workbench is stable.
Machine overheats	Continuous heavy load; Blocked ventilation	Allow machine to cool down; Reduce depth of cut; Ensure ventilation openings are clear. The built-in overheat protection should activate.

For issues not listed here or if the suggested solutions do not resolve the problem, please contact Topyond customer support for assistance.

## 8. SPECIFICATIONS

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Detailed technical specifications for the Topyond Mini Motorized Lathe Machine Z20002:

- **Model:** Z20002
- **Motor Speed:** 20000rpm
- **Input Voltage / Current / Power:** 12VDC / 2A / 24W
- **Maximum Diameter of Processed Material:** 20mm
- **Processing Material Length:** 135mm
- **Processing Materials:** Wood, engineering plastics, soft metals (aluminum, copper, etc.)
- **Turning Tool Material:** High-speed steel
- **Protection Features:** Transformer with over current, over voltage, over heat protection
- **Item Weight:** Approximately 5.54 pounds (2.51 kg)

## 9. WARRANTY AND SUPPORT

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Topyond products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please refer to the warranty card included with your product or contact Topyond customer service directly through the retailer where the product was purchased.

Please have your model number (Z20002) and purchase date ready when contacting support.

