

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

> [Sihao](#) /

> [Sihao Mini Metal Lathe User Manual](#)

Sihao 8.7"x 29.5"-Brush Motor

Sihao Mini Metal Lathe User Manual

Model: 8.7"x 29.5"-Brush Motor

1. INTRODUCTION

This user manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your Sihao High-Precision Mini Metal Lathe. This benchtop lathe is designed for precision machining tasks such as turning, drilling, boring, and threading various materials including wood, plastic, brass, and aluminum.

Please read this manual thoroughly before operating the machine to ensure proper usage and to prevent injury or damage.

2. SAFETY INSTRUCTIONS

Operating any machinery, especially a metal lathe, requires strict adherence to safety protocols. Failure to follow these instructions may result in serious injury or damage to the equipment.

- Always wear appropriate personal protective equipment (PPE), including safety glasses or a face shield, hearing protection, and sturdy work gloves.
- Ensure the work area is clean, well-lit, and free from obstructions.
- Never wear loose clothing, jewelry, or long hair that could become entangled in moving parts.
- Before making any adjustments or performing maintenance, always disconnect the lathe from the power source.
- Do not operate the lathe under the influence of drugs, alcohol, or medication that may impair judgment.
- Keep hands and fingers clear of the chuck, cutting tools, and other moving components during operation.
- Use the emergency stop button in case of an immediate hazard.
- Securely clamp all workpieces in the chuck or collet before starting the machine.
- Ensure all guards and safety devices are in place and functioning correctly.
- Do not overload the machine; respect its maximum working capacity.

3. COMPONENTS AND FEATURES

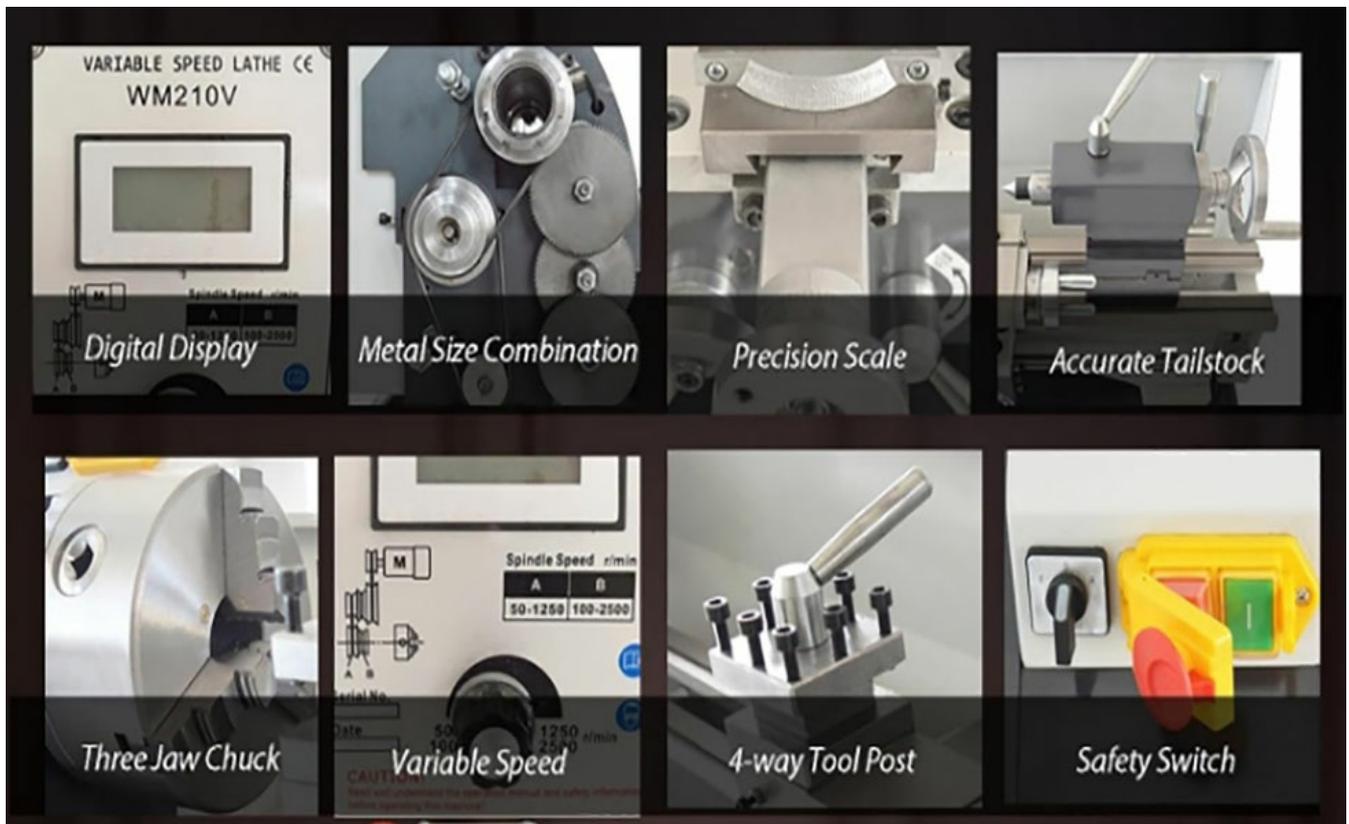
The Sihao Mini Metal Lathe is equipped with several key components designed for precision and ease of use. Below are descriptions and illustrations of the main parts and their functions.

Overall Lathe View with Accessories



This image displays the complete Sihao Mini Metal Lathe unit along with its standard accessories, including various tools, chuck jaws, and a storage box. It provides a comprehensive view of the product as it arrives.

Detailed Component Diagram



An annotated diagram highlighting key components of the lathe, such as the chuck, tool post, tailstock, speed adjustment, and emergency stop. This helps in identifying each part for setup and operation.

Variable Speed Control and Digital Display

VARIABLE SPEEDS



**VARIABLE SPEED
MINILATHE**

Digital Display



Max swing diameter: 220mm

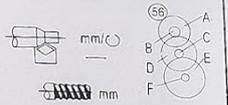
**Variable Speed:
50-2250±10%**



CAUTION

- Read owner's manual before using this machine
- Keep all guards in place
- Always wear safety glasses when using this machine
- Do not wear loose clothing, gloves, neckties or jewelry
- Ensure that the machine is properly grounded
- Remove adjusting keys and wrenches
- Ensure that work is clamped securely in place
- Ensure that proper speed is selected for work to be done
- Do not leave running machine unattended
- Disconnect tool from power source before servicing
- Do not operate if using drugs, alcohol or medication

(Thread cutting table)



	0.50	0.75	1.00	1.25
A	B 84	30	84	40
C	D H 60	H 60	H 50	H 60
E	F H 80	H 72	H 80	H 50
	1.50	1.75	2.00	2.50
A	B 60	40	80	50
C	D H 80	H 72	H 50	H 60
E	F H 50	H 40	H 40	H 33

(When machining metric thread, it can be changed according to actual demand.)

	n/1" TPI			
	10	11	14	19
A	B 60	H 72	H 52	H 84
C	D 40	50	60	50
E	F H 52	H 52	H 80	H 40
	22	28	38	40
A	B 66	H 72	H 72	H 86
C	D 52	60	30	H 52

MX-750 [®]

**VARIABLE SPEED
MINILATHE**

**VARIABLE SPEED
STEPLESS SPEED REGULATION** ^{CE}

1500 3000 ω /min

Max swing diameter: 220mm
Spindle taper: MT5
Spindle hole: 38mm

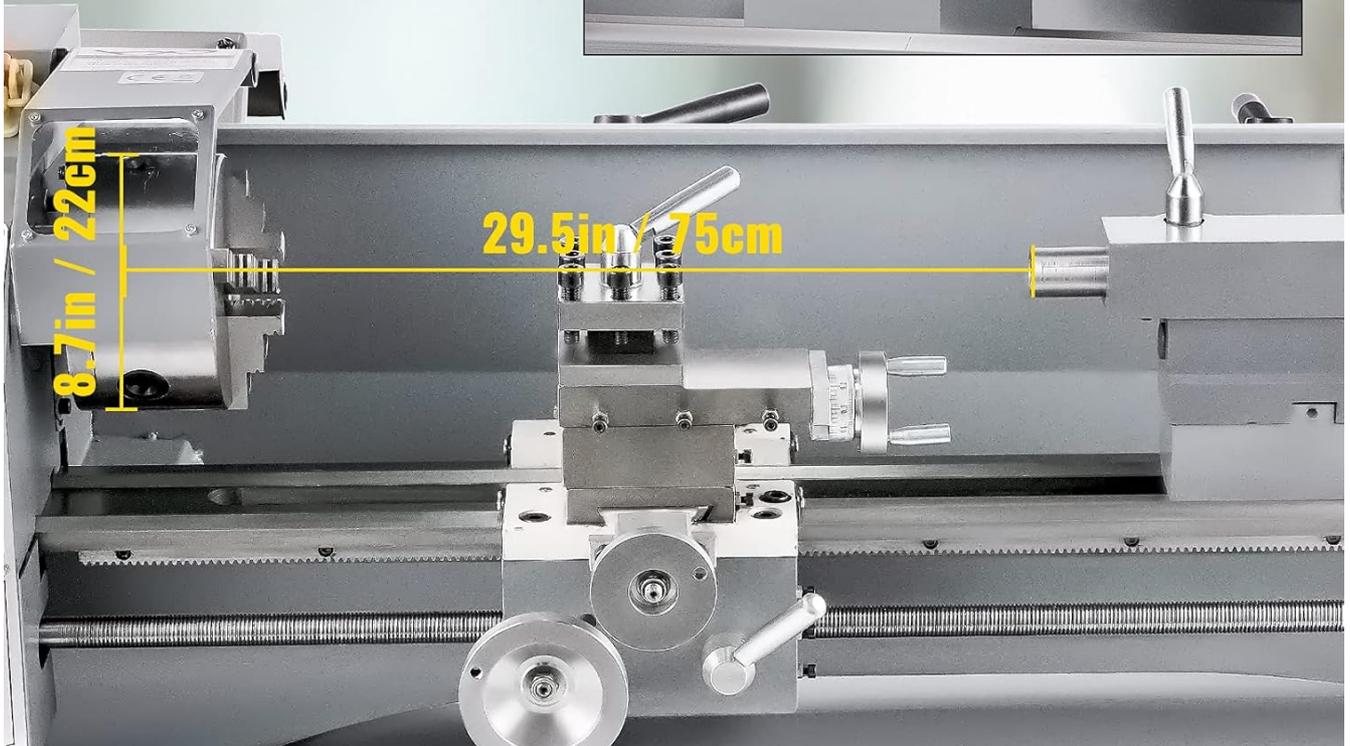
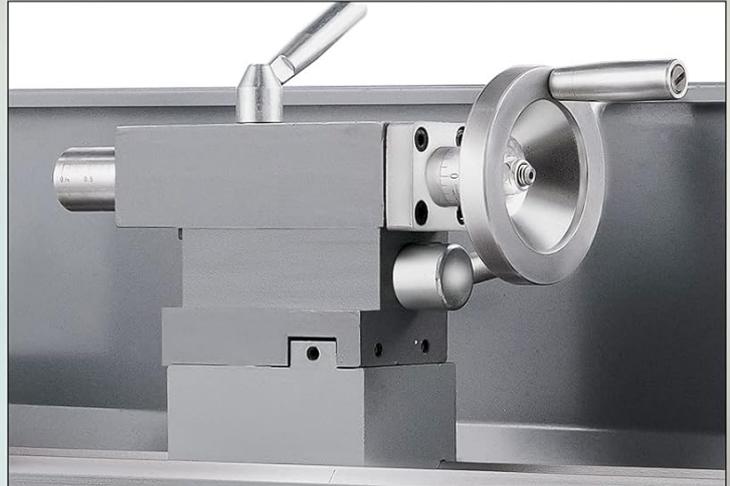
CAUTION

- Read owner's manual before using this machine
- Keep all guards in place
- Always wear safety glasses when using this machine
- Do not wear loose clothing, gloves, neckties or jewelry
- Ensure that the machine is properly grounded
- Remove adjusting keys and wrenches
- Ensure that work is clamped securely in place
- Ensure that proper speed is selected for work to be done
- Do not leave running machine unattended
- Disconnect tool from power source before servicing
- Do not operate if using drugs, alcohol or medication

The lathe features a digital display for precise RPM readings and a stepless speed regulation knob. It offers two-speed options: a high gear of 0-1500 RPM and a reverse direction capability, allowing for accurate speed adjustments for various materials and operations.

Accurate Tailstock and Working Capacity

Accurate Tailstock MT 2 Taper



Equipped with an MT 2 Taper accurate tailstock, this lathe provides stable support for longer workpieces. It boasts a large working capacity with an 8.7-inch swing over bed and a 29.5-inch distance between centers, accommodating a wide range of workpiece sizes.

Tool Post and 3-Jaw Chuck



**4-way tool post
allows you to easily
change your cutting
tools and angles**

**3-jaw chuck able to handle
both square and round
objects with ease**

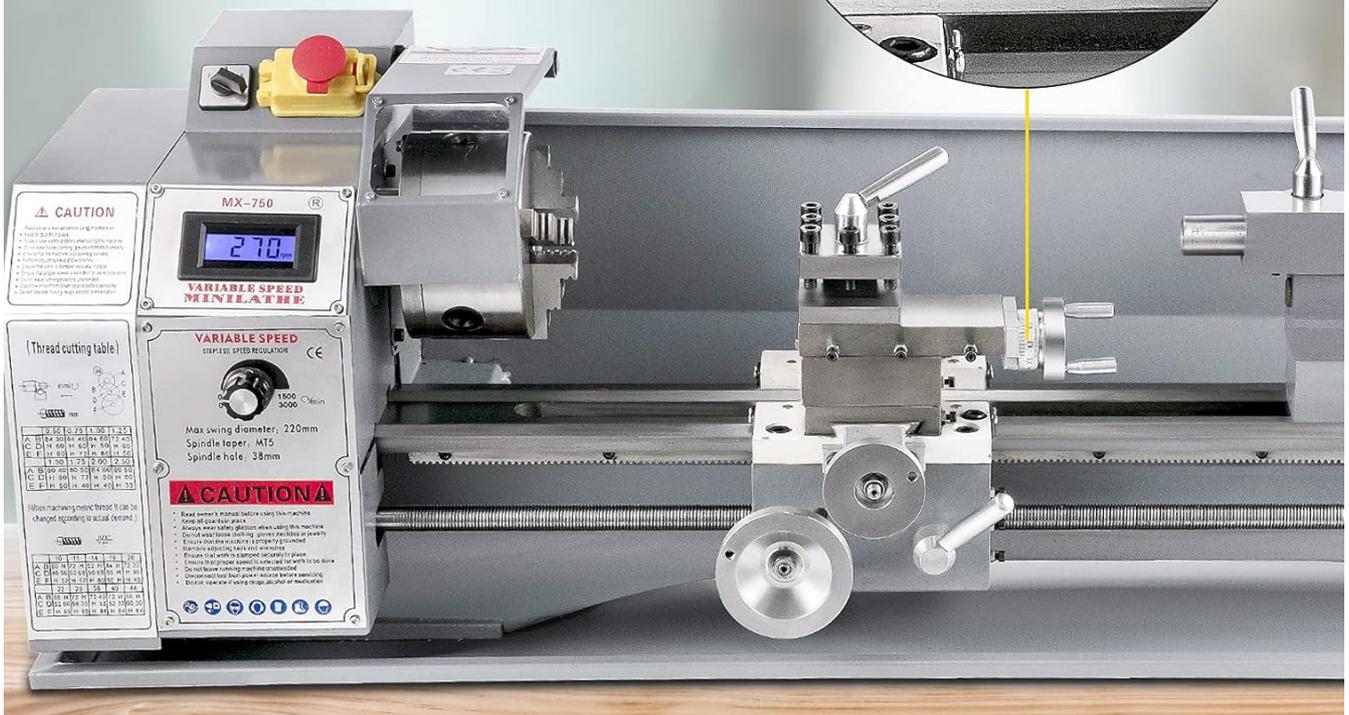
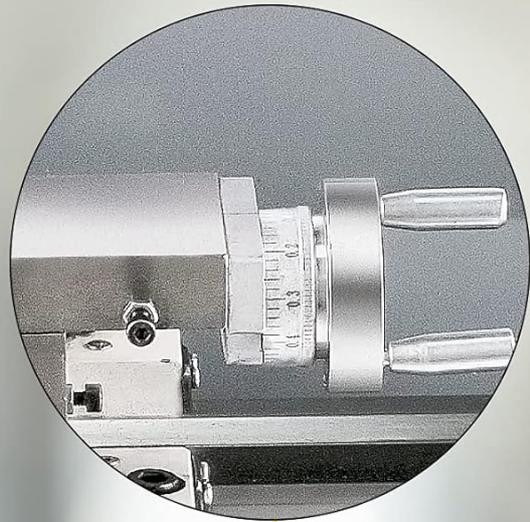


The professional composite tool holder features a 4-way tool post, enabling quick and easy changes of cutting tools and angles for internal, face, and bevel cutting. The 4-inch 3-jaw self-centering chuck ensures smooth and secure clamping of both square and round materials, with a precision of less than 0.01mm.

Professional Cross Slide

PROFESSIONAL CROSS SLIDE

- Handwheel with Scale
- Providing Accurate Processing



The cross slide is designed for professional use, featuring a handwheel with a clear scale. This allows for precise adjustments and accurate processing during various machining operations, contributing to the high precision capabilities of the lathe.

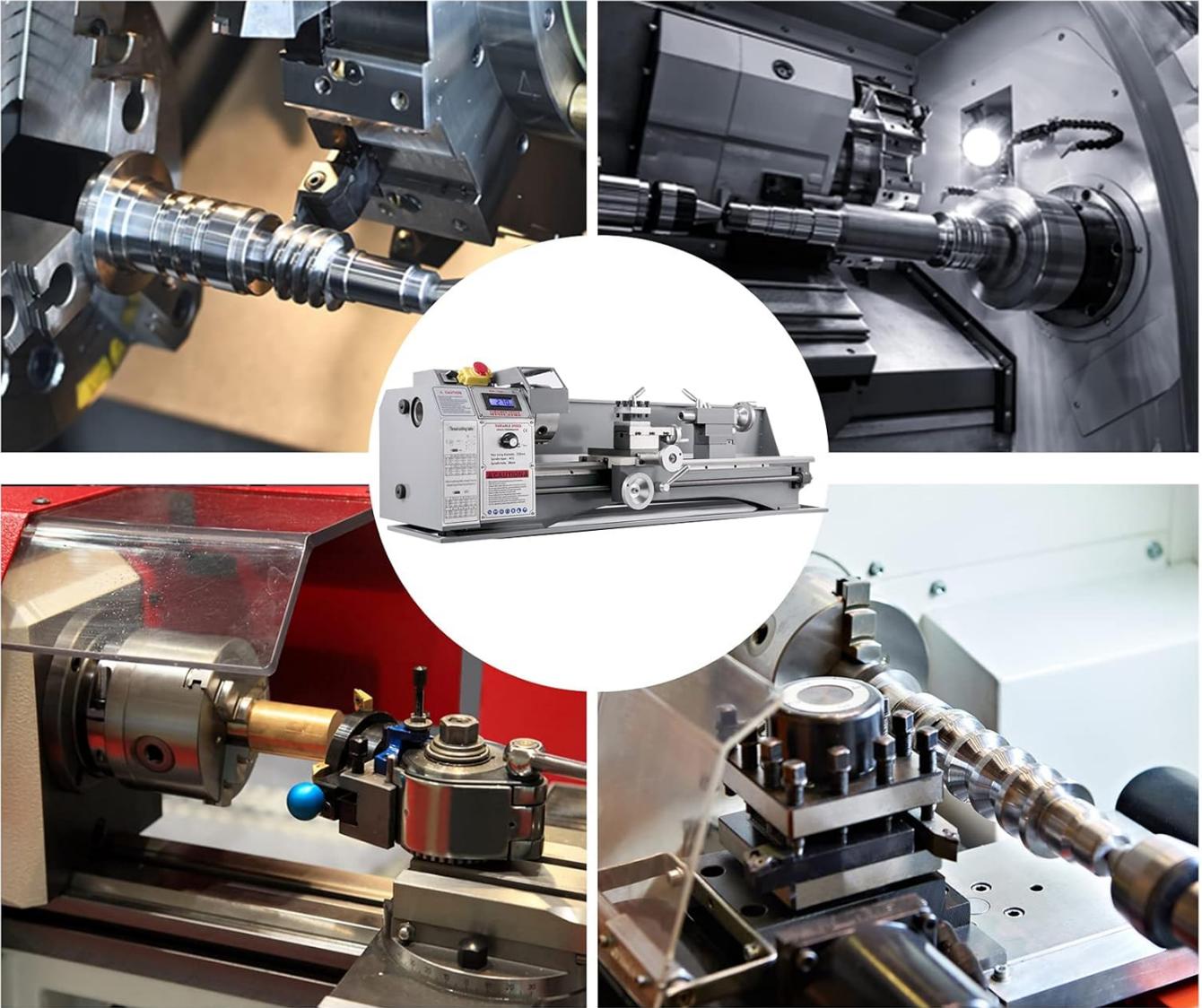
Included Accessories



The lathe comes with a comprehensive set of accessories, including various wrenches, hex keys, spare gears, and other essential tools, providing everything needed for immediate setup and operation.

Wide Application

WIDE APPLICATION



This mini metal lathe is versatile and capable of handling a wide range of applications, including turning, drilling, threading, and cutting. It is suitable for working with various materials such as wood, plastic, brass, and aluminum, making it ideal for both hobbyists and professionals.

4. SETUP

Proper setup is crucial for the safe and effective operation of your lathe. Follow these steps carefully:

1. **Unpacking and Inspection:** Carefully remove all components from the packaging. Inspect for any shipping damage. Report any damage to the supplier immediately.
2. **Mounting:** Securely mount the lathe to a sturdy workbench or stand using appropriate fasteners. Ensure the mounting surface is level and capable of supporting the lathe's weight and operational forces.
3. **Cleaning:** Before first use, thoroughly clean all protective coatings (e.g., cosmoline) from the machine's surfaces, especially the ways, chuck, and tool post, using a suitable degreaser.
4. **Lubrication:** Apply a thin coat of machine oil to all unpainted metal surfaces, especially the ways and lead screws, to prevent corrosion and ensure smooth operation.
5. **Electrical Connection:** Connect the lathe to a grounded power outlet with the correct voltage (110V AC as per product specifications). Ensure the power switch is in the "OFF" position before plugging in.
6. **Initial Checks:** Manually rotate the chuck and move the carriage and tailstock to ensure all parts move freely.

without binding. Check that the emergency stop button functions correctly.

5. OPERATING INSTRUCTIONS

This section outlines the basic steps for operating your Sihao Mini Metal Lathe for common machining tasks.

5.1. Powering On and Speed Adjustment

- Ensure the lathe is securely mounted and the workpiece is clamped.
- Turn the main power switch to the "ON" position.
- Use the variable speed knob to adjust the spindle RPM. The digital display will show the current speed. Start with lower speeds for larger diameters or harder materials, and increase as needed.
- Select forward or reverse rotation as required for your operation.

5.2. Workpiece Clamping

- Open the 3-jaw self-centering chuck jaws sufficiently to insert the workpiece.
- Insert the workpiece and tighten the chuck jaws firmly using the chuck key. Ensure the workpiece is centered and held securely to prevent slippage during operation.
- Remove the chuck key immediately after tightening.

5.3. Tool Installation and Adjustment

- Loosen the tool post locking handle.
- Insert the desired cutting tool into one of the 4-way tool post slots.
- Adjust the tool height so that the cutting edge is precisely on the center line of the workpiece.
- Tighten the tool post locking handle securely.

5.4. Basic Machining Operations

- **Turning:** Advance the cutting tool into the rotating workpiece using the cross slide and carriage handwheels. Control the depth of cut and feed rate carefully.
- **Drilling:** Mount a drill bit in the tailstock chuck. Advance the tailstock quill into the rotating workpiece.
- **Threading:** Refer to the thread cutting table on the machine for appropriate gear settings. Engage the half-nut lever for automatic feed.
- **Cutting/Parting:** Use a parting tool to cut off a section of the workpiece. Ensure adequate support and slow, steady feed.

Always use cutting fluid when machining metals to reduce friction, dissipate heat, and improve surface finish and tool life.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Sihao Mini Metal Lathe.

- **Cleaning:** After each use, clean chips and debris from the lathe bed, carriage, and other surfaces. Use a brush or shop vacuum; never use compressed air as it can embed chips into moving parts.
- **Lubrication:** Regularly lubricate all moving parts, including the lead screws, ways, and gears, with appropriate machine oil. Refer to the lubrication points indicated in the machine diagram.
- **Inspection:** Periodically inspect all fasteners for tightness. Check for any signs of wear or damage on belts, gears, and electrical cords. Replace worn parts immediately.

- **Chuck Maintenance:** Keep the chuck jaws clean and lubricated. Periodically remove the chuck and clean its mounting surface.
- **Motor Care:** Ensure the motor ventilation slots are clear of dust and debris to prevent overheating.
- **Storage:** When not in use for extended periods, cover the lathe to protect it from dust and moisture. Apply a light coat of oil to exposed metal surfaces.

7. TROUBLESHOOTING

This section addresses common issues you might encounter and provides potential solutions.

Problem	Possible Cause	Solution
Lathe does not power on.	No power supply; Emergency stop engaged; Faulty switch.	Check power cord and outlet; Disengage emergency stop; Inspect and replace switch if necessary.
Spindle not rotating.	Motor issue; Belt slipped or broken; Speed control set to zero.	Check motor connection; Inspect and adjust/replace belt; Increase speed using the control knob.
Excessive vibration or noise.	Unbalanced workpiece; Loose mounting; Worn bearings; Insufficient lubrication.	Ensure workpiece is balanced and securely clamped; Tighten mounting bolts; Inspect and replace bearings; Lubricate all moving parts.
Poor surface finish on workpiece.	Dull cutting tool; Incorrect speed/feed rate; Lack of cutting fluid; Machine vibration.	Sharpen or replace tool; Adjust speed and feed; Apply cutting fluid; Address vibration issues.
Carriage or tailstock difficult to move.	Lack of lubrication; Chips on ways; Overtightened gibs.	Clean and lubricate ways; Remove chips; Adjust gibs for smooth movement.

If you encounter problems not listed here, or if the suggested solutions do not resolve the issue, please contact customer support.

8. SPECIFICATIONS

Attribute	Detail
Brand	Sihao
Model Number	8.7"x 29.5"-Brush Motor
Swing Over Bed	8.7 inches (220mm)
Distance Between Centers	29.5 inches (750mm)
Spindle Speed	0-1500 RPM (High Gear)
Spindle Precision	Less than 0.01mm
Chuck Type	4-inch 3-Jaw Self-Centering Chuck
Tailstock Taper	MT 2
Power Source	AC

Attribute	Detail
Included Components	Lathe with accessories
ASIN	B0F1FDGTBW
Date First Available	March 14, 2025

9. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact the manufacturer, Sihao, or your authorized dealer. Keep your purchase receipt and product model number handy when contacting support.

While specific warranty details are not provided in this manual, general protection plans may be available through your retailer. Please refer to your purchase documentation for details on any extended protection plans.

You can visit the Sihao Store for more information:[Sihao Official Store](#)