

CREWORKS 9" x 24"

CREWORKS Mini Metal Lathe 9" x 24" Instruction Manual

Model: 9" x 24" | Brand: CREWORKS

1. INTRODUCTION

Thank you for choosing the CREWORKS 9" x 24" Mini Metal Lathe. This manual provides essential information for the safe operation, maintenance, and troubleshooting of your new machine. Please read this manual thoroughly before operating the lathe to ensure proper use and to prevent injury or damage.



Figure 1.1: CREWORKS 9" x 24" Mini Metal Lathe with included accessories.

2. SAFETY INSTRUCTIONS

Always prioritize safety when operating machinery. Failure to follow these instructions may result in serious injury or death.

- **Read the Manual:** Understand all instructions and warnings before operation.
- **Personal Protective Equipment (PPE):** Always wear safety glasses or a face shield. Use hearing protection. Do not wear loose clothing, gloves, ties, or jewelry that can get caught in moving parts. Tie back long hair.
- **Work Area:** Keep the work area clean, well-lit, and free from clutter. Ensure adequate space around the machine.
- **Machine Condition:** Inspect the lathe for damage or loose parts before each use. Do not operate if damaged.
- **Power Connection:** Ensure the machine is properly grounded. Disconnect power before making adjustments, changing tools, or performing maintenance.
- **Workpiece Security:** Always ensure the workpiece is securely clamped in the chuck or collet.
- **Chip Removal:** Never remove chips by hand while the machine is running. Use a brush or hook.
- **Emergency Stop:** Familiarize yourself with the location and operation of the emergency stop button.
- **Supervision:** Never leave the machine unattended while it is running.

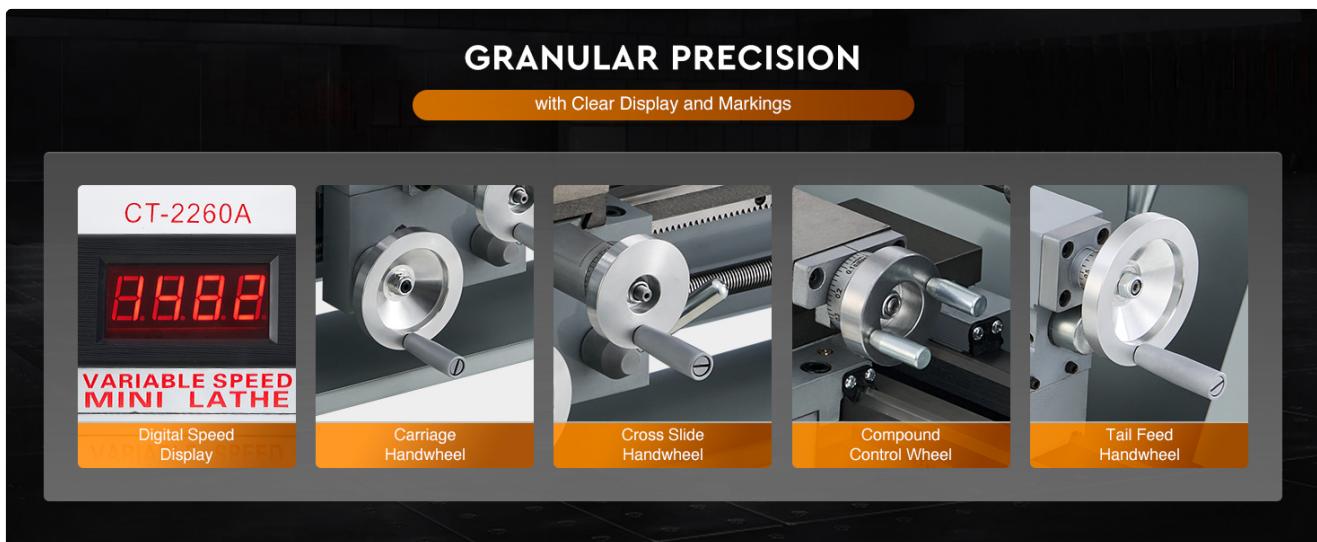


Figure 2.1: Overview of the lathe components, including the emergency stop button.

3. COMPONENTS AND CONTROLS

Understanding the various parts of your lathe is crucial for effective and safe operation.

3.1 Main Components

- **Headstock:** Houses the main spindle, motor, and gear train.
- **Chuck:** Holds the workpiece securely. The CREWORKS lathe features a 3-jaw chuck.
- **Carriage:** Moves along the bed, carrying the cross slide and tool post.
- **Cross Slide:** Moves perpendicular to the bed, allowing for facing operations.
- **Compound Rest:** Rotates and slides to allow for angled cuts and fine adjustments.
- **Tool Post:** Holds the cutting tools.

- **Tailstock:** Supports the end of long workpieces or holds drilling/reaming tools.
- **Bed:** The main frame of the lathe, providing precision guide rails for the carriage and tailstock.
- **Lead Screw:** Used for automatic feeding and threading operations.

3.2 Controls

- **Power and Emergency Stop:** Main power switch and immediate shutdown button.
- **Forward/Reverse Switch:** Controls spindle rotation direction.
- **Speed Adjustment Knob:** Varies the spindle speed.
- **Digital Speed Display:** Shows the current spindle RPM.
- **Carriage Handwheel:** Manual movement of the carriage along the bed.
- **Cross Slide Handwheel:** Manual movement of the cross slide.
- **Compound Control Wheel:** Manual movement of the compound rest.
- **Tail Feed Handwheel:** Advances the tailstock quill.
- **Half Nut Lever:** Engages the lead screw for threading.



Figure 3.1: Detailed diagram showing the main components and controls of the lathe.

DIGITAL DISPLAY SPEED ADJUSTMENT

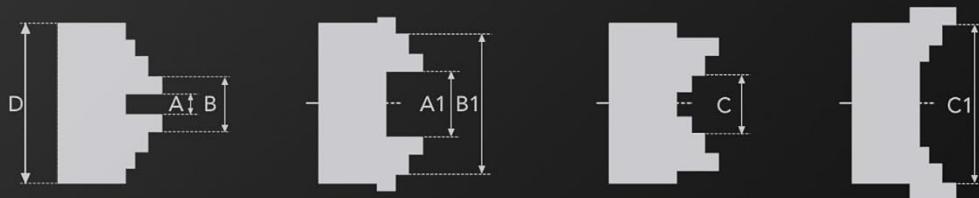
Smooth & Precise Stepless Adjustment up to 3000 rpm



Figure 3.2: The digital display provides real-time spindle speed readings.



ADAPTABLE 3-JAW CHUCK



5 in. (125 mm) 3-Jaw Chuck Clamping Range

Internal Jaws		External Jaws
A-A1	B-B1	C-C1
0.1–1.6 in. (2.5–40 mm)	1.5–5 in. (38–125 mm)	1.5–4.3 in. (38–110 mm)

Figure 3.3: The 5-inch 3-jaw chuck is adaptable for various workpiece sizes.

4. SETUP

4.1 Unpacking and Placement

1. Carefully remove the lathe and all accessories from the packaging. Retain packaging for future transport or storage.
2. Clean off any protective grease or oil from the machine surfaces using a suitable degreaser.
3. Place the lathe on a sturdy, level workbench capable of supporting its weight (approximately 159 lbs / 72 kg). Ensure the workbench is stable and does not wobble.
4. Secure the lathe to the workbench using appropriate fasteners through the mounting holes in the base.

4.2 Initial Checks

- Verify all moving parts move freely without excessive play or binding.
- Check that all fasteners are tight.
- Ensure the chuck guard is properly installed and functions correctly.
- Connect the power cord to a grounded electrical outlet.

5. OPERATION

5.1 Basic Operation

1. **Power On:** Turn on the main power switch. The digital display should illuminate.
2. **Workpiece Mounting:** Open the chuck jaws using the chuck key. Insert the workpiece, ensuring it is securely centered and clamped. Remove the chuck key before starting the machine.
3. **Tool Installation:** Loosen the tool post locking screw. Insert the cutting tool, ensuring it is at the correct height relative to the workpiece center. Tighten the locking screw.
4. **Speed Adjustment:** Use the speed adjustment knob to set the desired spindle RPM. The digital display will show the current speed. The lathe supports speeds from 0 to 3000 rpm.
5. **Spindle Direction:** Select forward or reverse rotation using the direction switch.
6. **Engage Feed:** For manual operation, use the carriage, cross slide, and compound handwheels. For automatic feed or threading, engage the half-nut lever (refer to threading charts for gear setup).
7. **Cutting:** Slowly advance the cutting tool into the workpiece. Monitor the cut and adjust feed rate as needed.
8. **Power Off:** After completing the operation, turn off the spindle, then the main power switch.

5.2 Applications

This mini metal lathe is versatile and can perform various operations on materials such as wood, plastics, brass, and aluminum.

- **Turning:** Reducing the diameter of a workpiece.
- **Facing:** Creating a flat surface on the end of a workpiece.
- **Drilling:** Creating holes along the center axis using the tailstock.
- **Threading:** Cutting external or internal threads.
- **Cutting:** Parting off sections of material.

9" x 24" MINI METAL LATHE

Ideal for Turning, Threading, & Drilling

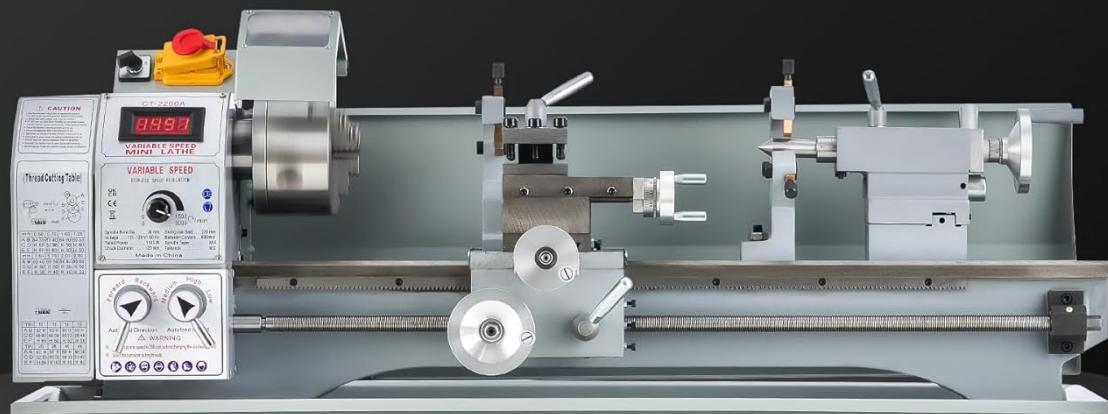


Figure 5.1: The lathe is suitable for a wide range of metalworking and other material applications.

6. MAINTENANCE

Regular maintenance ensures the longevity and precision of your CREWORKS Mini Metal Lathe.

6.1 Cleaning

- After each use, clean all chips and debris from the machine, especially from the bedways, lead screw, and chuck. Use a brush or shop vacuum.
- Wipe down all surfaces with a clean cloth.

6.2 Lubrication

- Regularly apply a thin coat of machine oil to the bedways, lead screw, and other sliding surfaces to prevent rust and ensure smooth operation.

- Consult the lubrication points diagram (if available in a more detailed manual) for specific oiling requirements.

6.3 Adjustments and Inspections

- Periodically check the tension of the drive belts.
- Inspect the chuck jaws for wear or damage.
- Ensure the tailstock is aligned correctly.
- Check the condition of the metal gear set for any signs of wear or damage.

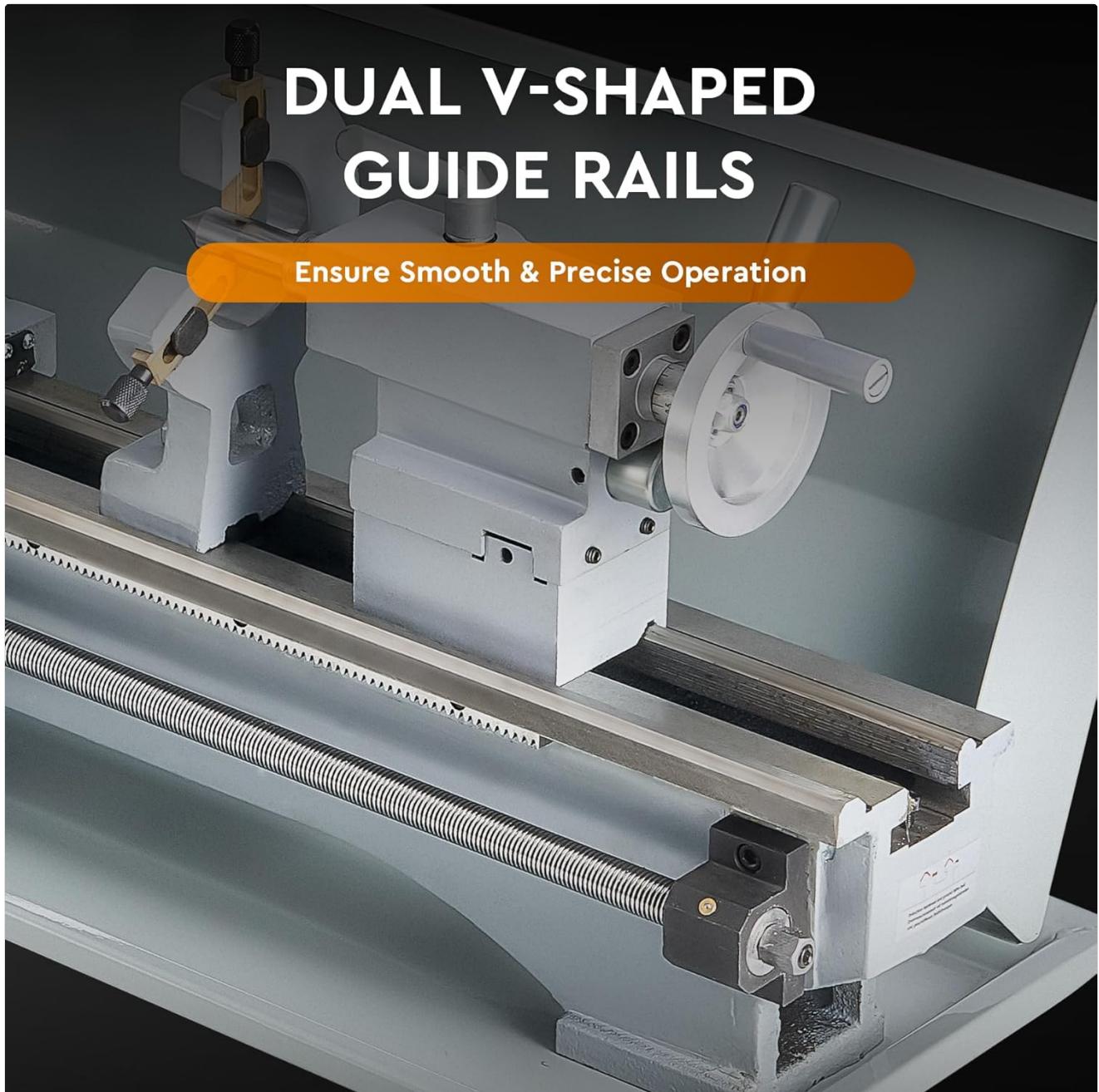


Figure 6.1: The dual V-shaped guide rails require regular cleaning and lubrication for smooth and precise operation.

DURABLE METAL GEAR SET

Wear Resistant Construction
for Strong and Efficient Power Transmission



Figure 6.2: The metal gear set ensures strong and efficient power transmission and should be inspected periodically.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Lathe does not power on.	No power supply; Emergency stop engaged; Loose wiring.	Check power cord and outlet; Disengage emergency stop; Inspect wiring (if qualified).
Spindle does not rotate.	Speed knob set to zero; Direction switch not engaged; Motor fault.	Increase speed; Select forward/reverse; Contact support if motor fault suspected.

Problem	Possible Cause	Solution
Excessive vibration or noise.	Unbalanced workpiece; Loose components; Worn bearings; Insufficient lubrication.	Ensure workpiece is balanced and secure; Tighten all fasteners; Lubricate moving parts; Contact support for bearing issues.
Poor surface finish on workpiece.	Dull cutting tool; Incorrect speed/feed rate; Workpiece not rigid; Lathe not level.	Sharpen/replace tool; Adjust speed/feed; Ensure workpiece is secure; Level the lathe.

8. SPECIFICATIONS

Technical specifications for the CREWORKS 9" x 24" Mini Metal Lathe.

Feature	Specification
Model	9" x 24"
Rated Power	1.5 HP (1100W)
Swing Over Bed	8.7 in. (220 mm)
Distance Between Centers	23.6 in. (600 mm)
Spindle Bore	1.5 in. (38 mm)
Chuck Diameter	5 in. (125 mm)
Max. Spindle Speed	3000 rpm
Tailstock Taper	MT#2
Spindle Taper	MT#5
Metric Thread Range	0.3–3 mm
Inch Thread Range	8–44 tpi
Product Dimensions (L x W x H)	39.57 x 13.78 x 16.93 inches
Net Weight	158.7 lbs (72 kg)
Material	Cast Iron, Stainless Steel, ABS



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Rated Power: 1.5 HP (1100W)

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Spindle Bore: 1.5 in. (38 mm)

Tailstock Taper: MT#2

Spindle Taper: MT#5

Metric Thread Range: 0.3–3 mm

Inch Thread Range: 8–44 tpi

Center Distance: 23.6 in. (600 mm)

Chuck Diameter: 5 in. (125 mm)

Max. Spindle Speed: 3000 rpm

Net Weight: 158.7 lb. (72 kg)

Figure 8.1: Visual representation of key specifications and dimensions.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided at the point of purchase or visit the official CREWORKS website.

- **Customer Support:** For assistance with product issues, setup, or operation, please contact CREWORKS customer service.
- **Returns:** This product typically includes a 30-day easy return policy. Please check your purchase details for specific terms.

Note: Any unauthorized modifications or repairs to the machine may void the warranty.

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