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› LUNYEE 3018 Pro Ultra CNC Machine Instruction Manual

LUNYEE 3018 Pro Ultra

LUNYEE 3018 Pro Ultra CNC Machine Instruction Manual

Model: 3018 Pro Ultra

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation, setup, and maintenance of your LUNYEE 3018 Pro Ultra CNC Machine. Please read this manual thoroughly before operating the machine to ensure proper usage and to prevent damage or injury.

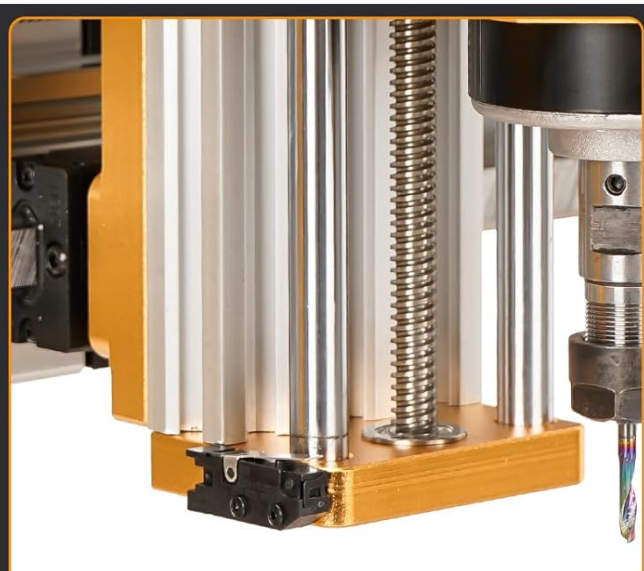
2. PRODUCT OVERVIEW AND FEATURES

The LUNYEE 3018 Pro Ultra is an advanced CNC router designed for precision engraving and milling. It features an all-metal construction and several upgrades for enhanced performance and stability.

2.1 Key Components



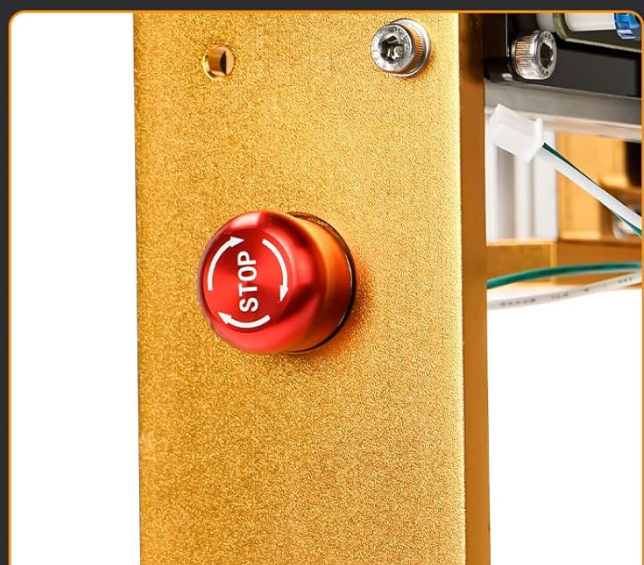
500W Spindle & ER11 Collect



X Y Z Limit Switches



Hand Knob



Emergency Stop Switches

This image displays key components of the CNC machine, including the 500W Spindle with ER11 Collet, XYZ Limit Switches for axis control, a Hand Knob for manual adjustments, and an Emergency Stop Button for safety.

2.2 Enhanced Spindle and Linear Guides

The machine is equipped with a 500W spindle, providing strong performance for various materials. The X-axis features HGH15 Linear Guides, contributing to improved stability and precision, especially for metal engraving.

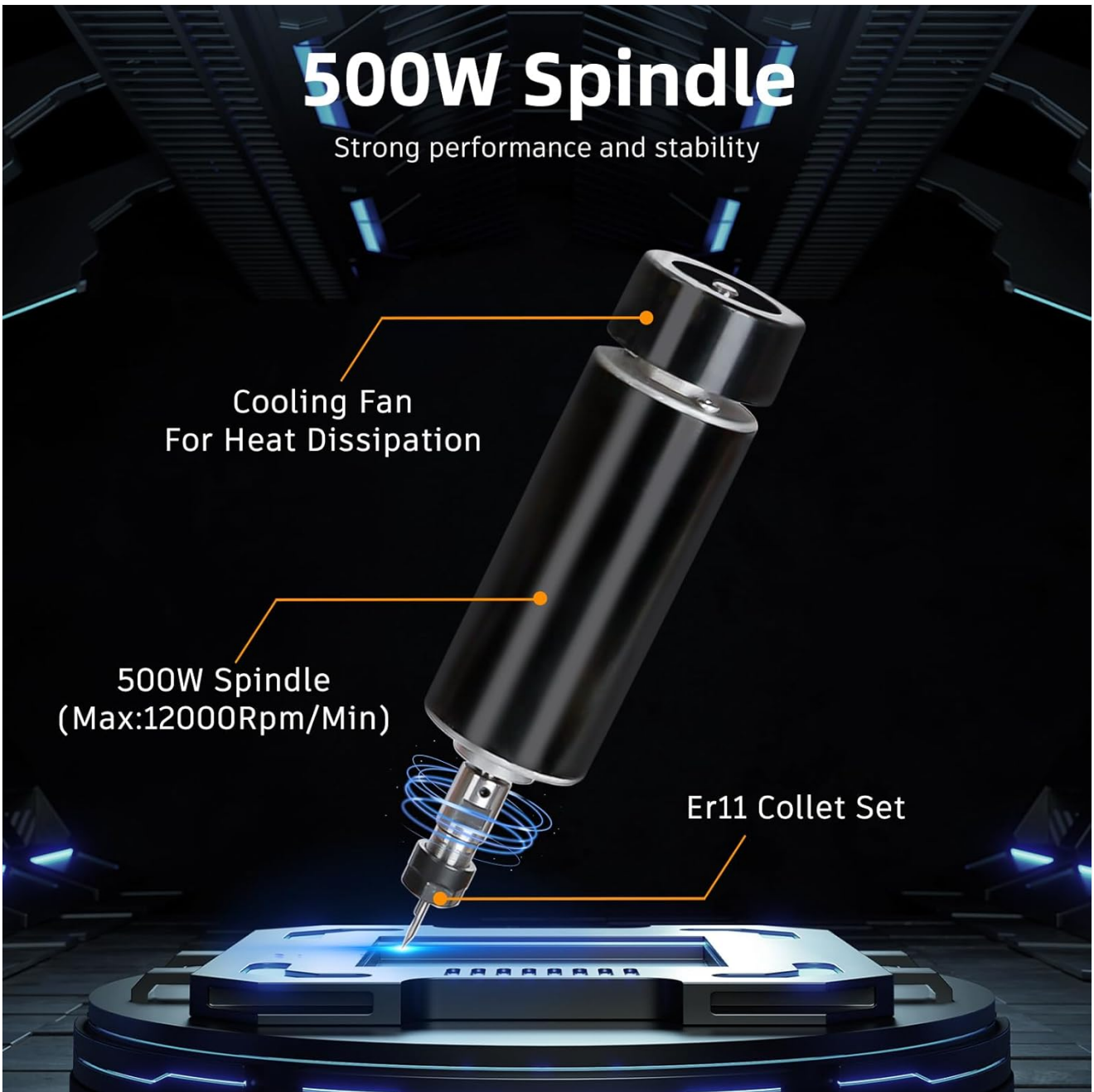
500W Spindle

Strong performance and stability

Cooling Fan
For Heat Dissipation

500W Spindle
(Max:12000Rpm/Min)

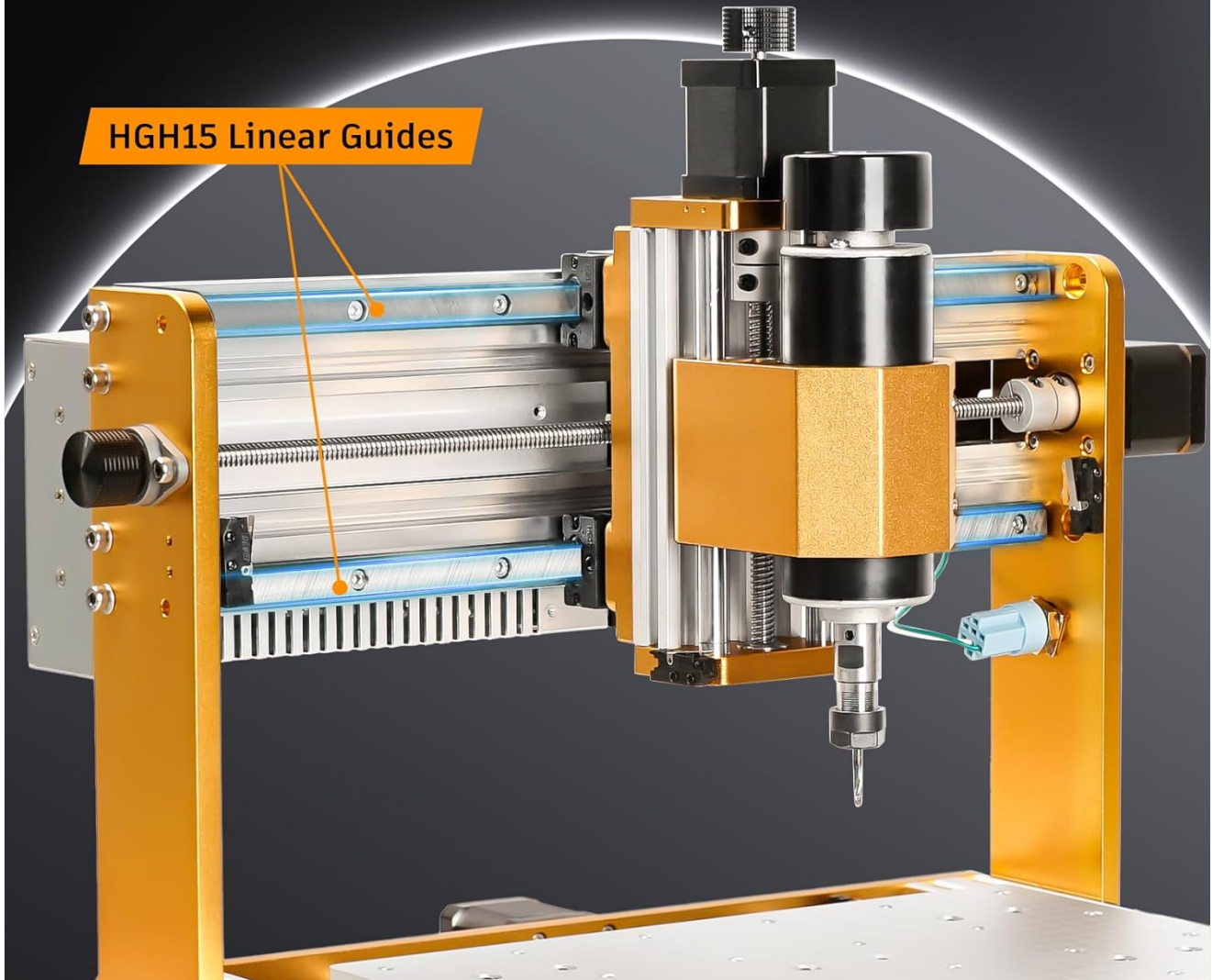
Er11 Collet Set



This image highlights the 500W Spindle, showing its cooling fan for heat dissipation and the ER11 Collet Set for tool holding.

All Metal Body

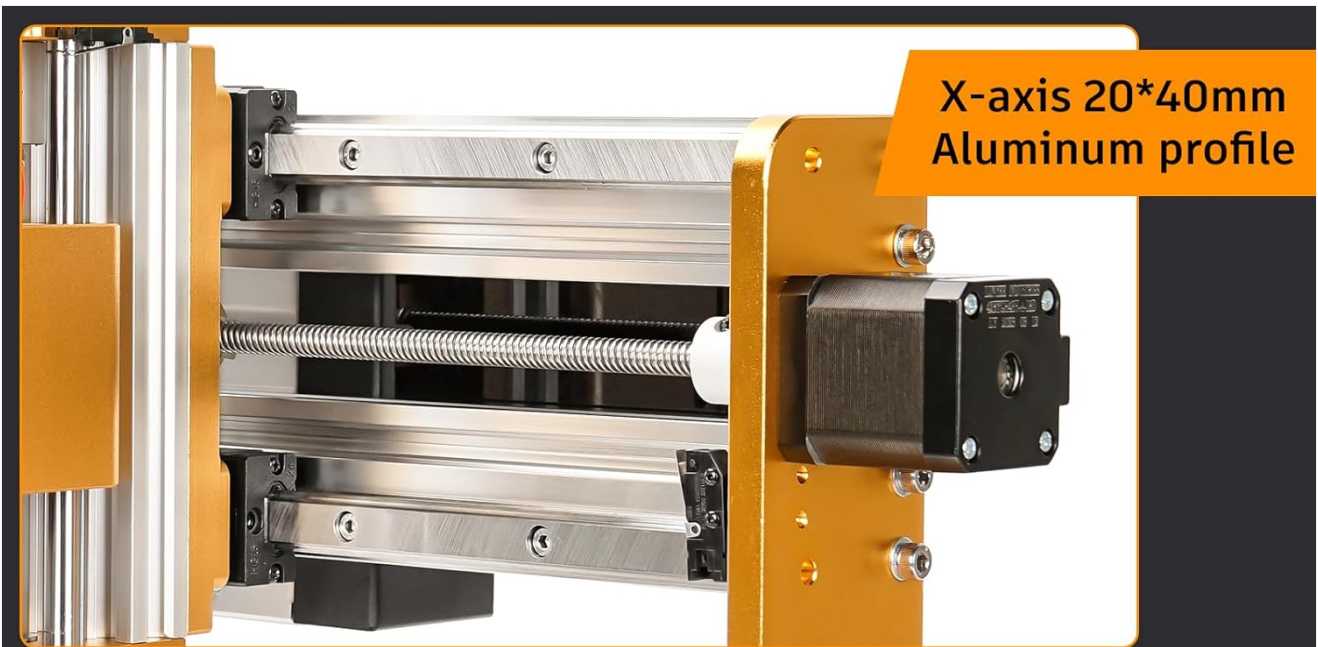
All metal frame, stronger, safer and more durable



This image illustrates the all-metal construction of the machine, emphasizing the HGH15 Linear Guides on the X-axis for enhanced rigidity and accuracy.

2.3 Robust Frame and Work Platform

The upgraded linear guide structure includes 2040 X-axis profiles and 4040 Y-axis profiles, significantly enhancing engraving accuracy and processing strength. The one-piece machined and molded aluminum work platform ensures flatness and strength, featuring an integrated measurement scale for material positioning.



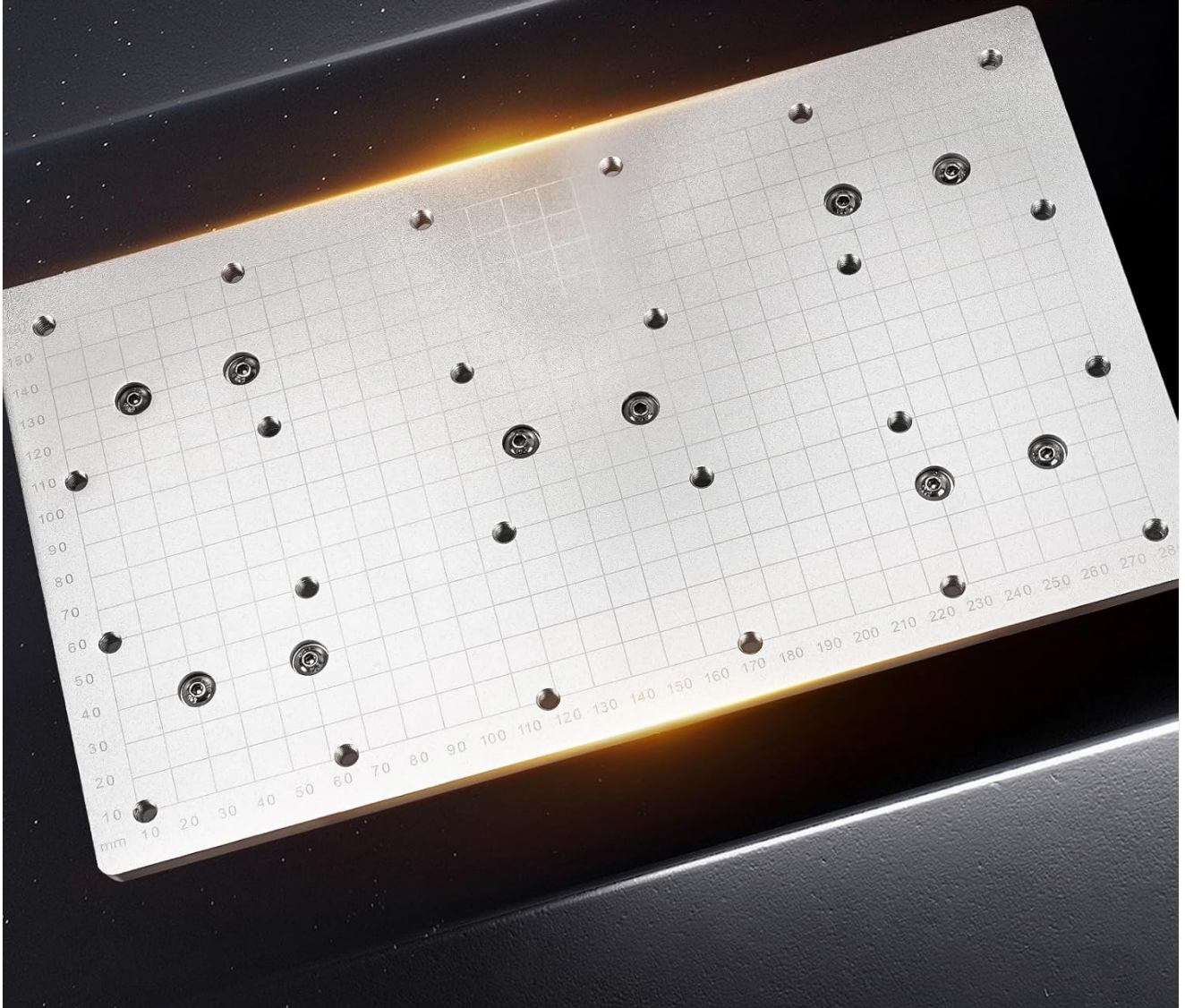
**X-axis 20*40mm
Aluminum profile**



**Y-axis 40*40mm
Aluminum profile**

This image details the robust aluminum profiles used for the X-axis (20x40mm) and Y-axis (40x40mm), which contribute to the machine's structural integrity.

One-piece All-Metal Anodized Work Surface



This image shows the one-piece all-metal anodized work surface, featuring a precise scale grid for accurate material placement.

2.4 52mm Diameter Dust Shoe

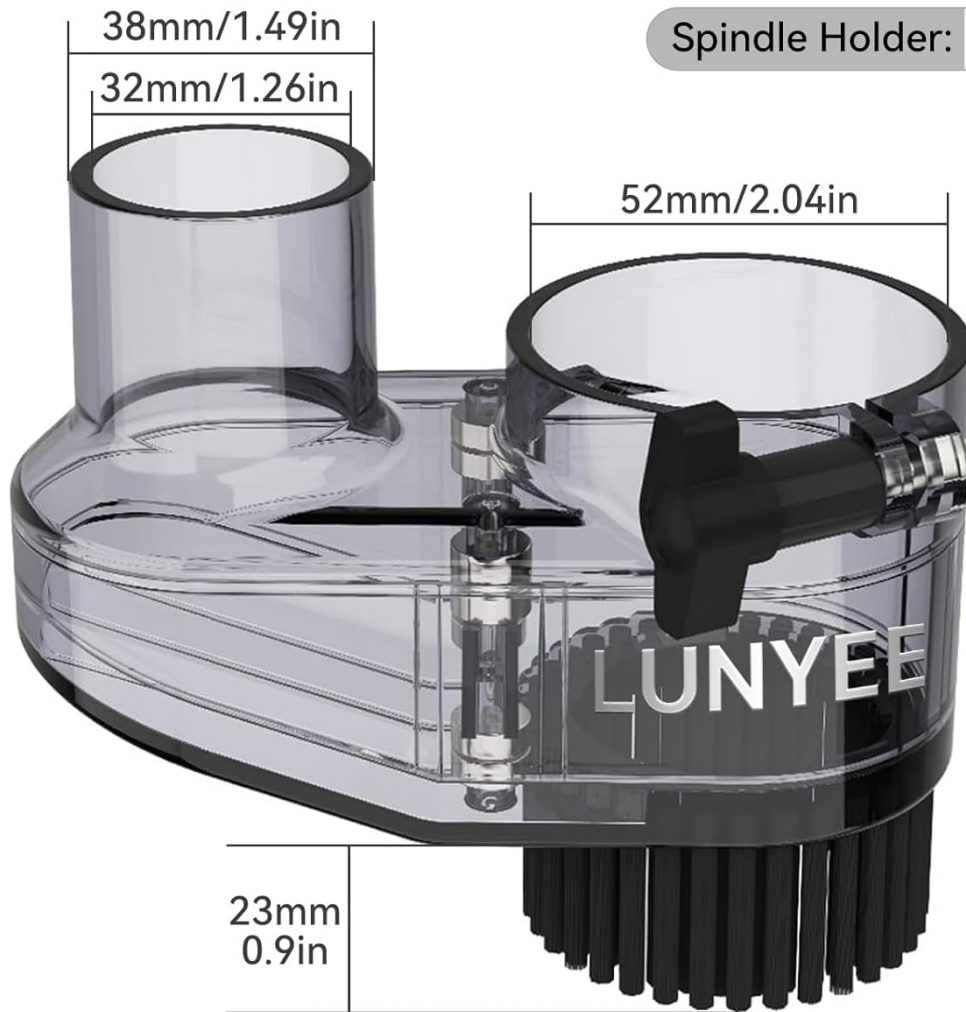
The included dust shoe is designed for efficient dust removal, keeping the work area clean. It is made of transparent ABS for visibility and features a 23mm nylon brush and magnetic attachment for easy disassembly.

Diameter 52mm

CNC Dust Shoe

Vacuum Port: 38mm

Spindle Holder: 52mm



This diagram provides key dimensions of the 52mm CNC Dust Shoe, including the 38mm vacuum port and 52mm spindle holder diameter.

52MM CNC Dust Shoe



Easy to
Disassemble



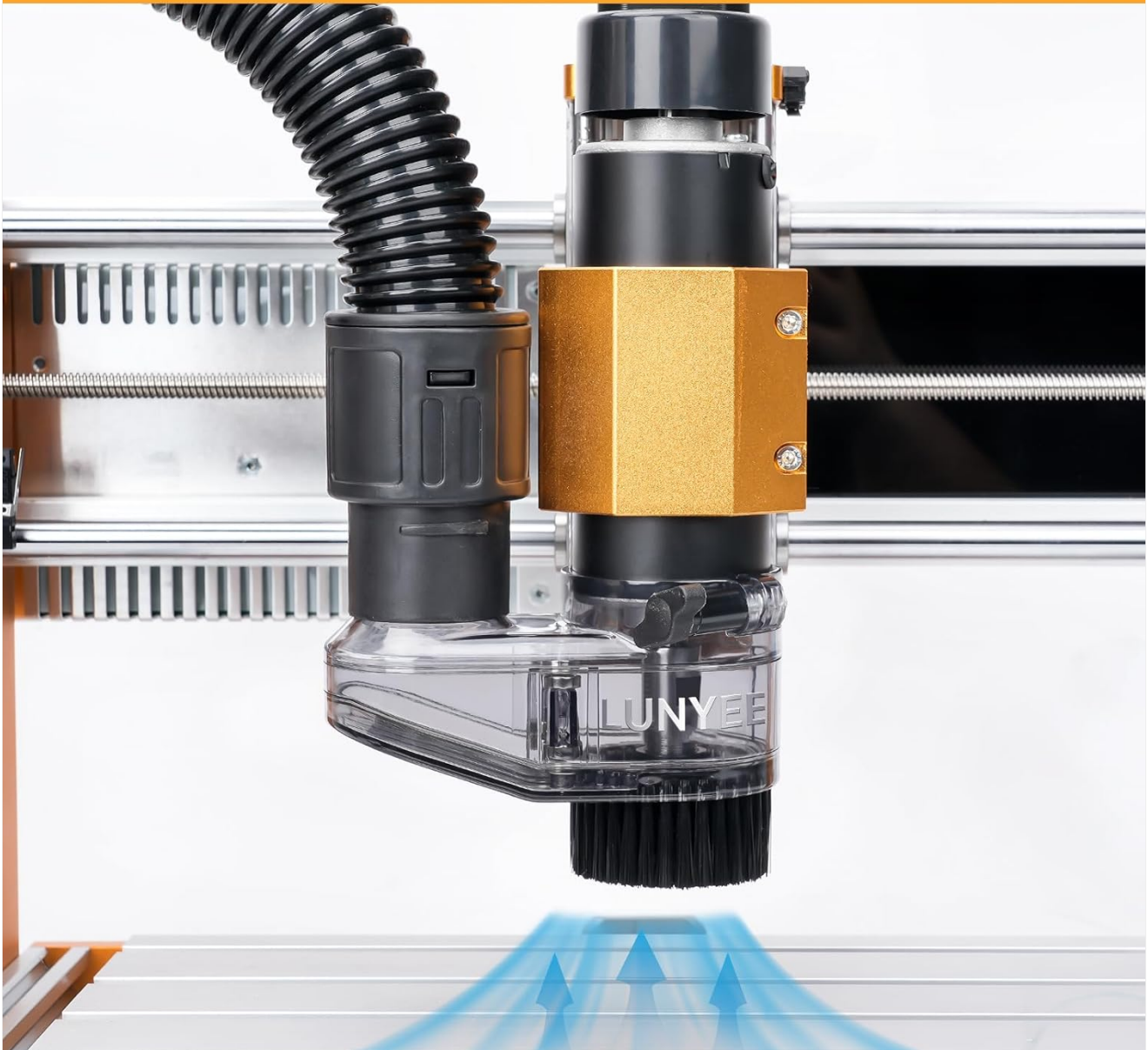
Composed of
8 Magnets



Strong
Adsorption

This image illustrates the magnetic design of the 52mm CNC Dust Shoe, highlighting its easy disassembly and strong adsorption capabilities.

Excellent Sealing Properties



This image shows the 52mm CNC Dust Shoe installed on the machine, demonstrating its effective sealing properties for dust collection during operation.

3. SETUP INSTRUCTIONS

Careful assembly and setup are crucial for the optimal performance of your CNC machine. Follow these steps to prepare your machine for operation.

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all parts listed in the packing list are present and undamaged.
2. **Frame Assembly:** Assemble the all-metal frame components, ensuring all screws are securely tightened. Refer to the included assembly diagrams for specific connections of the X-axis and Y-axis profiles.
3. **Spindle Installation:** Mount the 500W spindle onto the Z-axis carriage. Ensure it is firmly secured.
4. **Work Platform Attachment:** Secure the one-piece anodized aluminum work surface to the base of the machine.
5. **Dust Shoe Attachment:** If using, attach the 52mm diameter dust shoe to the spindle. Ensure it is correctly aligned and secured.

6. **Electrical Connections:** Connect the power supply and control cables according to the provided wiring diagram. Ensure all connections are secure before powering on.
7. **Software Installation:** Install the necessary CNC control software on your computer. Follow the software's installation guide.
8. **Calibration:** Perform initial calibration of the X, Y, and Z axes as per the software instructions to ensure accurate movement and homing.

4. OPERATING INSTRUCTIONS

This section outlines the general procedure for operating your LUNYEE 3018 Pro Ultra CNC Machine. Always prioritize safety during operation.

1. **Safety First:** Wear appropriate personal protective equipment (PPE), including safety glasses. Ensure the work area is clear and well-ventilated.
2. **Power On:** Connect the machine to a suitable power source and turn on the main power switch.
3. **Software Connection:** Launch your CNC control software and establish a connection with the machine.
4. **Homing:** Perform the homing sequence to set the machine's reference point.
5. **Material Preparation:** Securely clamp your workpiece onto the work platform using the provided T-Track clamps or other suitable methods.
6. **Tool Installation:** Select the appropriate engraving or milling bit and insert it into the ER11 collet. Tighten the collet nut securely.
7. **Zeroing:** Manually or automatically set the X, Y, and Z zero points for your workpiece within the software.
8. **Load G-Code:** Load your prepared G-code file into the CNC control software.
9. **Start Job:** Initiate the machining process from the software. Monitor the machine closely during operation.
10. **Emergency Stop:** In case of any malfunction or emergency, immediately press the red Emergency Stop button.
11. **Power Off:** Once the job is complete, power off the spindle, then the machine, and disconnect from the power source.

5. MAINTENANCE

Regular maintenance ensures the longevity and consistent performance of your CNC machine.

- **Cleaning:** After each use, clean the work platform, linear guides, and lead screws to remove dust, chips, and debris. The dust shoe helps significantly in this regard.
- **Lubrication:** Periodically apply a thin layer of appropriate lubricant to the linear guides and lead screws to ensure smooth movement.
- **Spindle Care:** Keep the spindle clean and free from obstructions. Ensure the cooling fan operates effectively.
- **Electrical Connections:** Regularly check all electrical connections for tightness and signs of wear.
- **Tool Inspection:** Inspect engraving bits and milling cutters for sharpness and damage before each use. Replace dull or damaged tools.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Machine not responding	Loose electrical connection, software not connected, emergency stop engaged.	Check all cables, ensure software is connected, release emergency stop button.
Inaccurate engraving/milling	Loose tool, unsecured workpiece, incorrect zeroing, worn tool, loose belts/screws.	Tighten tool, secure workpiece, re-zero, replace tool, check and tighten mechanical components.
Spindle not rotating	Power issue, spindle cable disconnected, software command error.	Verify power supply, check spindle cable, ensure G-code includes spindle start command.
Excessive dust/debris	Dust shoe not properly attached, vacuum not connected/functional, worn dust shoe brush.	Ensure dust shoe is correctly installed, check vacuum connection and power, replace brush if necessary.

7. SPECIFICATIONS

Technical specifications for the LUNYEE 3018 Pro Ultra CNC Machine.

- **Model:** 3018 Pro Ultra
- **Brand:** LUNYEE
- **Spindle Power:** 500W (Max 12000 RPM/Min)
- **X-Axis Guide:** HGH15 Linear Guide
- **X-Axis Profile:** 20x40mm Aluminum
- **Y-Axis Profile:** 40x40mm Aluminum
- **Z-Axis Height:** 80mm
- **Work Surface:** One-piece All-Metal Anodized Aluminum with Scale Grid
- **Dust Shoe Diameter:** 52mm
- **Dust Shoe Brush:** 23mm Nylon
- **Material:** Acrylonitrile Butadiene Styrene (ABS), Aluminum
- **Power Source:** Corded Electric
- **Horsepower:** 0.67 Horsepower
- **Base Type:** Fixed
- **Compatibility:** Most 3018 series CNC machines (e.g., 3018-PRO, 3018-PROVer, 3018-PROVer Mach3, 3018-MX3) with 52mm spindle diameter.

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact LUNYEE customer service. Refer to your purchase documentation for specific warranty terms and contact details.

- **Return Policy:** This product is subject to a 30-day return/replacement policy.
- **Manufacturer:** LUNYEE
- **Contact:** Please refer to the contact information provided with your purchase or visit the official LUNYEE store page for support options.

