



Model MR48



Model MR510

# MINTECH CNC ROUTER MR SERIES



# Product Overview

The MR Series Entry-Level CNC Router delivers professional CNC capabilities in an accessible, user-friendly package. Designed for CNC Router for Woodworking and CNC Router for Signmaking, it is ideal for small businesses, educational institutions, and hobbyists stepping into professional-grade CNC routing. Available in California and throughout the United States, the MR Series provides high-quality performance at a competitive CNC Router Price, combining precision, reliability, and affordability.

## Key Features:

- User-Friendly Handheld Controller
  - Intuitive handheld operation box allows beginners to get started quickly with minimal learning time.
- Cost-Effective Manual Tool Change
  - Simple manual tool change design reduces maintenance costs and simplifies operation.
- Space-Saving Compact Design
  - Small footprint ideal for workshops with limited space.
- High Efficiency and Precision
  - Delivers precise engraving and cutting, making it a High Precision Affordable CNC Router suitable for entry-level users.

## Applications:

- Signage and Advertising: Cutting and engraving of signboards, lightboxes, and display racks.
- Handicrafts: Custom processing of wooden and acrylic crafts.
- Furniture Decoration: Precision machining of furniture components and decorative panels.

## Performance Advantages:

- Professional results at an accessible price point
- Easy learning curve with comprehensive support resources
- Reliable operation suitable for daily production use
- Quality construction ensures long-term durability and accuracy
- Expandable capabilities as skills and requirements grow

The MR Series represents the perfect entry point into professional CNC routing, offering genuine industrial capabilities with ease of use. As a CNC Router for Woodworking and CNC Router for Signmaking, it is an affordable, high-precision solution available in California and across the United States.

# Applicable Materials

## Metal Materials

- Light metals like copper and aluminum for engraving and cutting.

## Plastics and Polymers

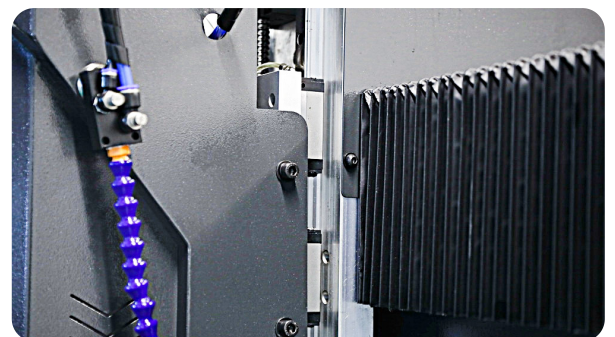
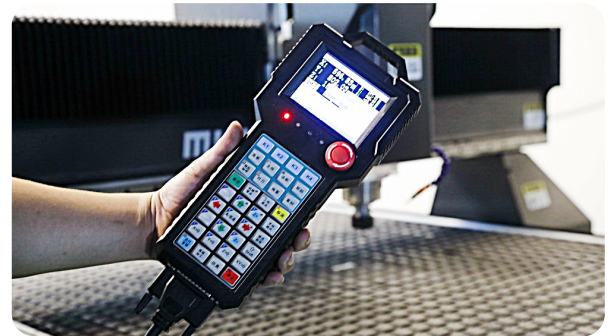
- Compatible with materials such as PMMA, PC, PVC, PS, PP, PA, PE, PET, and POM.

## Composite Materials

- Suitable for MDF, carbon fiber composites, aluminum-plastic panels, and honeycomb panels.

## Wood and Hard Materials

- Works with solid wood, plywood, acrylic, and fiberglass (FRP).



# Technical Specifications

| Model                          | MR48                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | MR510                                      |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Working area                   | 4' x 8' ( 1250 x 2500 mm )                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5' x 10' ( 1530 x 3060 mm )                |
| Dimensions                     | 122" x 87" x 69" ( 3100 x 2200 x 1750 mm )                                                                                                                                                                                                                                                                                                                                                                                                                                      | 150" x 97" x 69" ( 3800 x 2450 x 1750 mm ) |
| Weight                         | 3400 lbs                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3900 lbs                                   |
| Work Area and Capacity         | <ul style="list-style-type: none"><li>• Z-Axis Travel: 7 inches (180 mm).</li><li>• Material Thickness: Up to 5 inches (130 mm).</li><li>• Cutting Thickness: Up to 4 inches (100 mm) with appropriate tooling.</li><li>• Worktable Surface: Phenolic composite grid vacuum table with aluminum T-slots.</li></ul>                                                                                                                                                              |                                            |
| Control System                 | <ul style="list-style-type: none"><li>• File Format Support: DXF, AI, CDR, NC, and G-code for both 2D and 3D machining.</li><li>• Interface: Handheld controller.</li><li>• CAM Software Compatibility: Compatible with industry-standard software such as VCarve, Aspire, Alphacam, Engview, MasterCAM, Enroute, Type 3 and others</li></ul>                                                                                                                                   |                                            |
| Motion and Drive               | <ul style="list-style-type: none"><li>• Movement Type: Gantry movement.</li><li>• Drive System: Servo-driven motors.</li><li>• Transmission:<ul style="list-style-type: none"><li>◦ XY-Axis: Helical rack-and-pinion with linear guides.</li><li>◦ Z-Axis: Ball screw with linear guides.</li></ul></li><li>• Speed: Max travel speed of 82 ft/min ( 25 m/min ).</li><li>• Precision: ±0.004 inches ( ±0.1 mm ).</li><li>• Repeatability: ±0.002 inches ( ±0.05 mm ).</li></ul> |                                            |
| Spindle                        | <ul style="list-style-type: none"><li>• Power: 5.3 HP ( 4 kW ).</li><li>• Speed: Up to 30,000 RPM ( water-cooled ).</li><li>• Tool Holder: ER20 collet system.</li><li>• Tool Change: Manual.</li></ul>                                                                                                                                                                                                                                                                         |                                            |
| Cooling method                 | Water Cooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                            |
| Power and Utility Requirements | <ul style="list-style-type: none"><li>• Main Power: 208-240V, single-phase, 30A.</li><li>• Compressed Air: 0.6-0.8 MPa (87-116 psi), ≥3-5 CFM (85-140 L/min).</li><li>• Vacuum Requirements: 117.7-176.6 CFM (200-300 m³/h), vacuum pressure ≥85 mbar (8500 Pa).</li></ul>                                                                                                                                                                                                      |                                            |
| Misting / Lubricating System   | Includes flexible loc-line nozzles for adjustable coolant or mist delivery to the cutting area, ensuring efficient lubrication and extended tool life.                                                                                                                                                                                                                                                                                                                          |                                            |
| Environmental Requirements     | <ul style="list-style-type: none"><li>• Temperature: 10-40°C.</li><li>• Humidity: 40-60%.</li></ul>                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Available Configurations       | Optional high-resolution CCD camera for precise positioning and material alignment.                                                                                                                                                                                                                                                                                                                                                                                             |                                            |
| Advantages                     | <ol style="list-style-type: none"><li>1. Beginner-Friendly: Designed for ease of operation with minimal learning curve.</li><li>2. Cost-Effective: Low maintenance costs with manual tool changes.</li><li>3. High Flexibility: Supports various power options and materials.</li><li>4. Precision and Efficiency: Delivers accurate, reliable performance for a wide range of applications.</li></ol>                                                                          |                                            |

# CNC ROUTER BIT EXPLOSION

## PRECISION & COATING



- END MILLS,
- V-BITS,
- BALL NOSE

SHOP NEW ARRIVALS