



Model MC43



Model MC48



Model MC510

Mintech CO₂ Laser Cutters
MC SERIES



Product Overview

MC Series CO₂ Laser Cutter. Large-Format Industrial CO₂ Laser Cutting System for Production, Sign Making, Furniture Manufacturing, and Packaging Applications. The MC Series CO₂ Laser Cutter is a high-performance, large-format laser cutting solution designed for manufacturers that require consistent accuracy, industrial reliability, and exceptional value. Offering 4'x3', 4'x8', 5'x10', and 6'x10' cutting areas, the MC Series is ideal for full-sheet processing, high-volume production, and large-format materials such as acrylic, wood, plastic sheets, foam board, corrugated packaging, and signage substrates. Engineered with a heavy-duty steel frame, precision ball screw drive system, and high-accuracy servo motors, the MC Series delivers stable, repeatable cutting performance across a wide range of non-metal materials.

Key Features:

- Large-Format Working Areas (4'x3' / 4'x8' / 5'x10'):
 - Designed for full-sheet processing, the MC Series supports oversized materials commonly used in sign making, cabinet manufacturing, furniture production, display fabrication, and more.
- Precision Ball Screw Drive System:
 - Industrial-grade ball screw transmission ensures high positioning accuracy, minimal mechanical backlash, and smooth motion-critical for detailed cutting and long-format accuracy. A major precision advantage over belt-driven systems.
- High-Performance CO₂ Laser System:
 - Available with high-quality glass tubes or upgraded Synrad / Iradion / Luxinar RF CO₂ laser sources for superior beam quality, power consistency, and extended operating life.
- Servo Motion Control:
 - High-accuracy servo motors deliver smooth, precise, and reliable performance, ideal for continuous production environments.
- Heavy-Duty Welded Steel Frame:
 - Rigid construction minimizes vibration during high-speed cutting, ensuring consistent edge quality across large work areas.
- Intelligent CNC Control System:
 - User-friendly interface with advanced parameter management, supporting complex job workflows and efficient production processes.

The MC Series represents an ideal balance of performance, reliability, and value, making it the preferred choice for businesses requiring dependable CO₂ laser cutting capabilities for production.

Applicable Materials

1. Plastic Materials

- Acrylic (PMMA)/Polycarbonate (PC)/Polyethylene (PE)/Polyester (PET/PETG)

2. Wood and Wood Products

- Wood/Plywood/Medium-density fiberboard (MDF)

3. Textiles and soft materials

- Fabrics/Leather/EVA/Rubber

4. Paper Materials

- Cardboard/Corrugated Cardboard/Paper

5. Stone and Non-metal Composite Materials

- Marble/Granite/Slate/Glass/Ceramic/Composite Materials

6. Other Specialty Materials

- Sponge/Resin/Acrylic Composite



Technical Specifications

Model	MC43	MC48	MC510
Working size	48" × 36" (1220 × 910 mm)	48" × 96" (1220 × 2440 mm)	60" × 120" (1525 × 3050 mm)
Countertop weight	≤ 220lbs (≤ 100KG)	≤ 440lbs (≤ 200KG)	≤ 660lbs (≤ 300KG)
Machine size	83" × 64.5" × 48" (2100 × 1640 × 1210 mm)	72" × 143" × 48" (1815 × 3615 × 1210 mm)	83" × 166.5" × 48" (2100 × 4230 × 1210 mm)
Machine weight	1200 lbs	1800 lbs	2500 lbs
Power Supply	220V, 60Hz, Single Phase, 2.2KW, 30A	220V, 60Hz, Single Phase, 4.4KW, 30A	220V, 60Hz, Single Phase, 4.4KW, 30A
Communication	USB, RJ45, u-disk		
Work Environment	Humidity: 40% - 60%, Temperature: 10°C - 30°C (50°F - 86°F)		
Laser Class	CLASS IV		
Air demand	Compressed air 0.6 - 1.0 MPa (6 - 10 bar or 87 - 145 psi), 60 - 150 L/min (2 - 5 CFM)		
Transmission mode	Linear Motor & Square Guide Rail		
Drive mode	Servo drive system		
Focusing method	Electric		
Optical system	Closed constant optical path flying optical path		
Compatible software	Lightburn, Excluding CCD Camera		
CCD Camera	Optional High-resolution CCD camera for precise positioning and material alignment		
Counterpoint	Assembly Redpoint Instructions		
Maximum speed	250mm/S		
Cutting accuracy	±0.05mm / 300mm		
Laser power options	60-100W, 100-150W, 150-200W, 250-300W		
Laser life	More than one year		
Cooling method	Water Cooling		
Cutting capacity	Solid wood: 18mm, MDF: 12mm, Acrylic: 40mm (Different cutting capabilities for different materials)		

CO₂ Laser Sources

All CO₂ laser models are available with the following RF-excited CO₂ laser sources



60-100W Synrad ti Series



100-150W IRADION Infinity Series



150-250W LUXIAR SR Series