

Monport GM20+D70

Monport 20W Fiber Laser Engraver User Manual

Model: GM20+D70

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective operation of your Monport 20W Fiber Laser Engraver. This integrated mini fiber laser marking machine is designed for high-precision engraving and marking on various metal and some non-metal materials. It features a compact design, high engraving speed, and compatibility with LightBurn software.

2. SAFETY INFORMATION

WARNING: This is a Class 4 laser product. Improper use can result in serious injury, including eye damage, skin burns, and fire. Always follow safety guidelines.

- Always wear appropriate laser safety glasses that block the specific wavelength of the fiber laser during operation.
- Never look directly into the laser beam or at reflections.
- Ensure the work area is well-ventilated to dissipate fumes and particles generated during engraving.
- Keep flammable materials away from the laser's path.
- Do not operate the machine unattended.
- Familiarize yourself with emergency stop procedures.
- Ensure proper grounding of the equipment.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- Monport 20W Fiber Laser Engraver Unit
- D70 Rotary Axis
- Power Cable
- USB Drive (containing software and backup parameters)
- User Manual (this document)
- Laser Safety Glasses

- Focusing Ruler/Gauge
- Necessary Cables and Connectors



Image: The Monport 20W Fiber Laser Engraver unit with the D70 Rotary Axis accessory shown alongside.

4. SETUP

4.1 Physical Setup

1. **Unpacking:** Carefully remove all components from the packaging.
2. **Placement:** Place the laser engraver on a stable, level surface in a well-ventilated area. Ensure sufficient space around the machine for operation and heat dissipation.
3. **Power Connection:** Connect the power cable to the engraver and then to a grounded electrical outlet.
4. **Rotary Axis Connection (Optional):** If using the D70 Rotary Axis, connect it to the designated port on the engraver according to the instructions provided with the rotary axis.

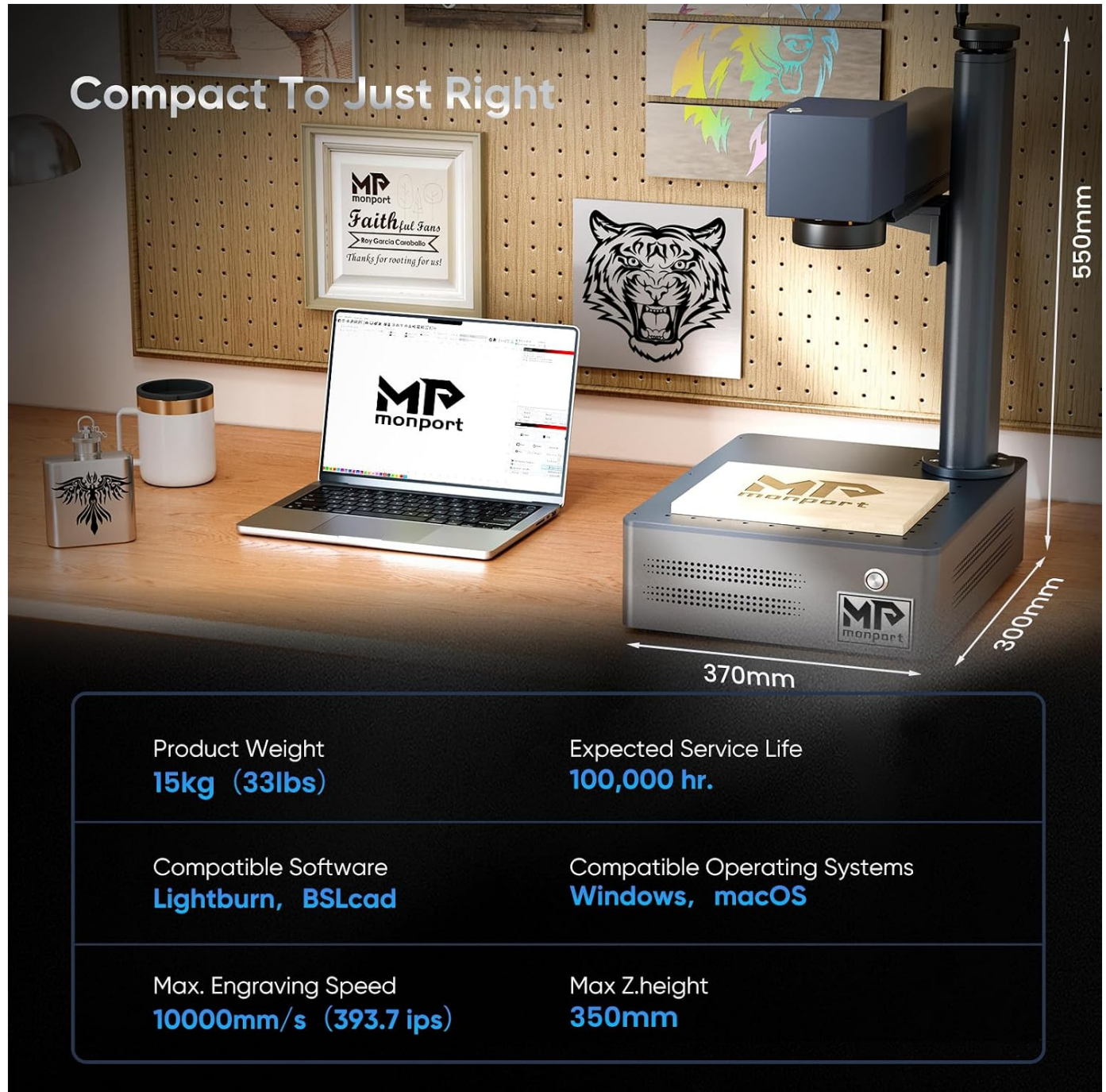


Image: A visual representation of the Monport 20W Fiber Laser Engraver's compact size (370mm x 300mm x 550mm) and its compatibility with Windows and macOS operating systems, along with LightBurn and BSLCad software.

4.2 Software Installation

The Monport 20W Fiber Laser Engraver is compatible with LightBurn software. Free and easy-to-use software (BSLCad) and backup parameters are also provided on the included USB drive.

1. **Insert USB Drive:** Insert the provided USB drive into your computer.
2. **Install Software:** Follow the instructions on the USB drive to install either LightBurn (if purchased separately) or the provided free software.
3. **Driver Installation:** Ensure all necessary drivers are installed as prompted by the software or included on the USB drive.
4. **Connect to Computer:** Connect the laser engraver to your computer using the provided USB cable.

5. OPERATING INSTRUCTIONS

5.1 Basic Operation Workflow

1. **Power On:** Turn on the laser engraver using the main power switch.
2. **Software Launch:** Launch your chosen laser software (LightBurn or BSLCad) on your computer.
3. **Connect Device:** Ensure the software recognizes and connects to the laser engraver.
4. **Design/Import:** Create your design or import an existing file into the software.
5. **Material Placement:** Place the material to be engraved on the workbed. Ensure it is stable and flat.
6. **Focusing:** Adjust the laser head height to achieve optimal focus on the material surface. Use the red dot pointer for precise positioning. *Remember to remove the lens cap before operation.*
7. **Parameter Settings:** Adjust laser parameters (power, speed, frequency, passes) based on the material type and desired engraving effect. Refer to the software's material library or conduct test engravings.
8. **Framing/Preview:** Use the framing function in the software to preview the engraving area on your material.
9. **Start Engraving:** Initiate the engraving process from the software. Monitor the process closely.
10. **Power Off:** Once engraving is complete, power off the machine.

5.2 Key Features and Capabilities

- **High Speed:** Max marking speed of 10000mm/s for efficient operation.
- **High Accuracy:** Achieves a carving accuracy of 0.01mm due to customized galvanometer system and F-theta field mirror.
- **Optimal Working Area:** The 110x110mm workbed is optimized for 20W fiber lasers, ensuring consistent engraving quality across the entire area.
- **Material Compatibility:** Capable of engraving all metals (gold, silver, copper, stainless steel, brass, titanium, etc.) and certain plastics.
- **Deep Engraving & Cutting:** Supports 2.5D metal engraving, deep metal engraving, and some metal sheet cutting. Higher power models (50W+) are recommended for stronger and faster results in these applications.

10000mm/s

Max, Marking Speed



professional Software

BsIAppSimple/Lightburn



Smaller, But still Powerful

20W

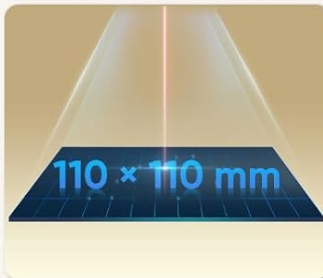
Fiber Laser

Peak power up to 8 kW



High Scalability

Rotary Axis, Protection
Enclosure, Fume Extractor, etc



**Sub-micron And
Error-free Accuracy**



Wide Marking Materials

Stainless Steel, Aluminum, Gold, Silver, Alloy, Ceramic,
Marble, Leather, Plastics, Colored Acrylic, etc



**Metal 3D
Engraving & Cutting**

Image: An infographic highlighting key features of the Monport 20W Fiber Laser, including its 10000mm/s max marking speed, compatibility with LightBurn, 110x110mm workbed, sub-micron accuracy, and wide range of compatible materials like stainless steel, aluminum, brass, silver, plastic, platinum, titanium, and gold.

AS FAST AS EVER



UP TO
10000
mm/s



10000
mm/s

Monport



5000
mm/s

Others

Image: A visual comparison illustrating the Monport laser's engraving speed of up to 10000 mm/s, significantly faster than typical 5000 mm/s speeds of other machines.

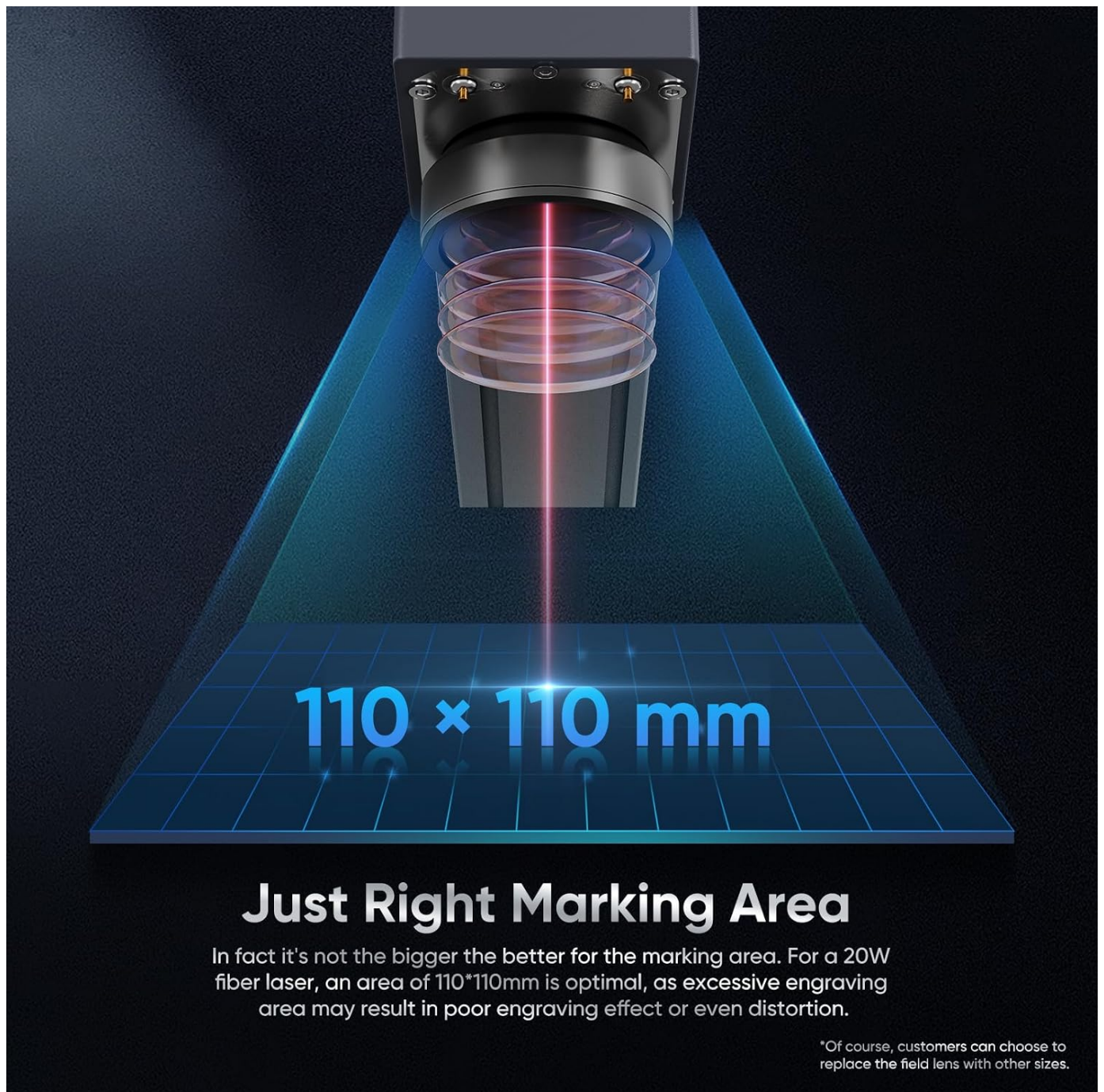


Image: A diagram showing the 110x110mm optimal marking area for the 20W fiber laser, emphasizing that this size prevents distortion and ensures consistent engraving quality.

Such Exquisite Precision

0.01MM

ultra-fine spot
Clearly display every detail

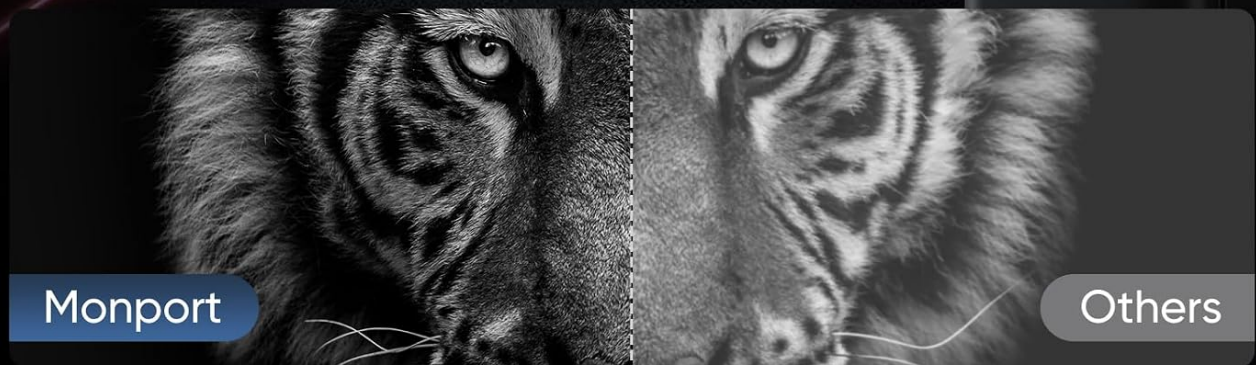
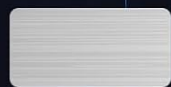


Image: A close-up illustration demonstrating the ultra-fine 0.01mm spot size of the Monport laser, highlighting its capability to clearly display intricate details in engravings.

Smaller, But still Powerful 20W Fiber Laser

Peak power up to 8 kW

For all-metals and plastic,etc.



Stainless Steel



Aluminum



Brass



Silver



Plastic



Platinum



Titanium



Gold



Image: An illustration showing various materials compatible with the Monport 20W Fiber Laser, including stainless steel, aluminum, brass, silver, plastic, platinum, titanium, and gold.

5.3 Official Product Video

Your browser does not support the video tag.

Video: An official product video from Monport demonstrating the fiber laser engraver in action, showcasing its capabilities for engraving on various materials like rings and tumblers, and highlighting the precision and speed of the engraving process.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your laser engraver.

- **Lens Cleaning:** Periodically inspect and clean the laser lens using a lint-free cloth and lens cleaning solution. Avoid touching the lens with bare hands.
- **Workbed Cleaning:** Keep the workbed clean from debris and residue to ensure proper material placement and prevent interference with the laser path.
- **Ventilation:** Ensure the ventilation openings on the machine are clear of obstructions to prevent overheating.

- **Cable Inspection:** Regularly check all cables for signs of wear or damage.

7. TROUBLESHOOTING

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
Laser not firing	Power off; Emergency stop engaged; Software not connected; Lens cap on	Check power connection; Release emergency stop; Verify software connection; Remove lens cap
Poor engraving quality	Incorrect focus; Incorrect parameters (speed/power); Dirty lens; Material not flat	Re-focus the laser; Adjust parameters; Clean the lens; Ensure material is flat on workbed
Software not detecting device	USB cable disconnected/faulty; Driver issues; Machine not powered on	Check USB connection; Reinstall drivers; Power on the engraver
Engraving is distorted or off-center	Material shifted; Incorrect origin/home setting; Galvanometer issue	Secure material; Reset origin in software; Contact support if issue persists

8. SPECIFICATIONS

- **Brand:** Monport
- **Model:** GM20+D70
- **Laser Class:** Class 4
- **Output Power:** 20W (20000 mW)
- **Max Marking Speed:** 10000mm/s
- **Carving Accuracy:** 0.01mm
- **Working Area:** 110mm x 110mm (4.3" x 4.3")
- **Material:** Aluminum (machine body)
- **Color:** Grey
- **Operation Mode:** Manual
- **Expected Service Life:** Up to 100,000 hours
- **Compatible Software:** LightBurn, BSLCad
- **Compatible Operating Systems:** Windows, macOS
- **Product Weight:** 15kg (33lbs)
- **Max Z-height:** 350mm

9. WARRANTY AND SUPPORT

Monport provides customer support for their products. For warranty information, technical assistance, or service inquiries, please refer to the contact information provided on the Monport website or the documentation included with your purchase. Keep your purchase receipt for warranty claims.

You can visit the official Monport store for more information and support: [Monport Store on Amazon](#).

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question