Monport YXF30

Monport 30W Fiber Laser Engraver Instruction Manual

Model: YXF30

1. Important Safety Information

Before operating the Monport 30W Fiber Laser Engraver, read and understand all safety instructions. Failure to follow these instructions may result in serious injury or property damage.

- **Eye Protection:** Always wear appropriate laser safety glasses (OD 6+ at 1064nm) when the laser is in operation. Direct exposure to the laser beam can cause permanent eye damage.
- **Ventilation:** Operate the machine in a well-ventilated area to dissipate fumes and particles generated during engraving. Some materials may produce hazardous fumes.
- **Material Compatibility:** This machine is designed for marking metals such as stainless steel, gold, silver, brass, and certain plastics. Do not engrave unknown materials or materials that may produce toxic fumes or catch fire, such as PVC.
- **Fire Safety:** Keep a fire extinguisher nearby. Do not leave the machine unattended during operation.
- **Electrical Safety:** Ensure the machine is properly grounded. Do not operate with damaged cables or if the machine shows signs of malfunction.
- **Emergency Stop:** Familiarize yourself with the location and function of the emergency stop button. In case of any emergency, press this button immediately to cut power to the laser.
- **Laser Class:** This device is a Class 1 laser product when fully enclosed and operated as intended. However, the internal laser source is Class 4. Exercise extreme caution during maintenance or when covers are removed.

2. Product Overview

The Monport 30W Fiber Laser Engraver is a precision marking and etching machine designed for various metal and select non-metal materials. It features a Raycus fiber laser source, offering a long operational lifetime and high marking speed.

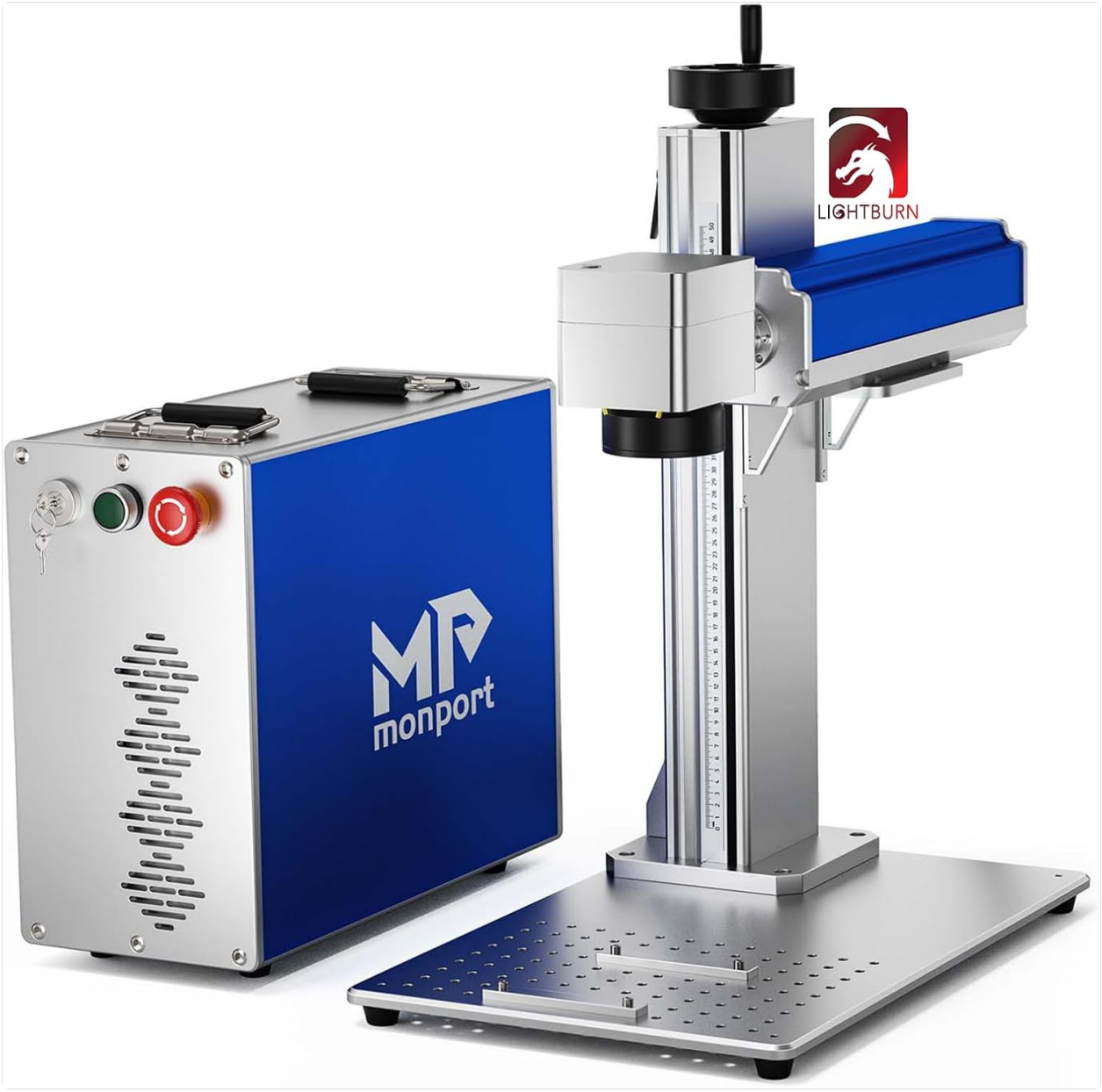

Figure 2.1: Monport 30W Fiber Laser Engraver with its control unit.

Key Features:

- **30W Raycus Fiber Laser Source:** Provides stable and reliable laser output with an estimated lifetime of up to 100,000 hours. Suitable for marking most metals.
- **Integrated Design:** Features two cooling fans for improved heat dissipation and an integrated power supply for enhanced stability.
- **Simplified Controls:** Combines three original power buttons into one, along with an added panic button for immediate shutdown.
- **Advanced Workspace:** Equipped with a built-in workspace grid and removable positioning bars for precise material placement. Supports an optional rotary axis (not included) for cylindrical objects.
- **Red Dot Locator:** An external red dot locator assists in quick and accurate laser focus setup.
- **Manual Focus:** A focus-height wheel allows for precise manual adjustment of the laser focus, aided by a vertical supporting tower with a ruler for convenient height measurements.

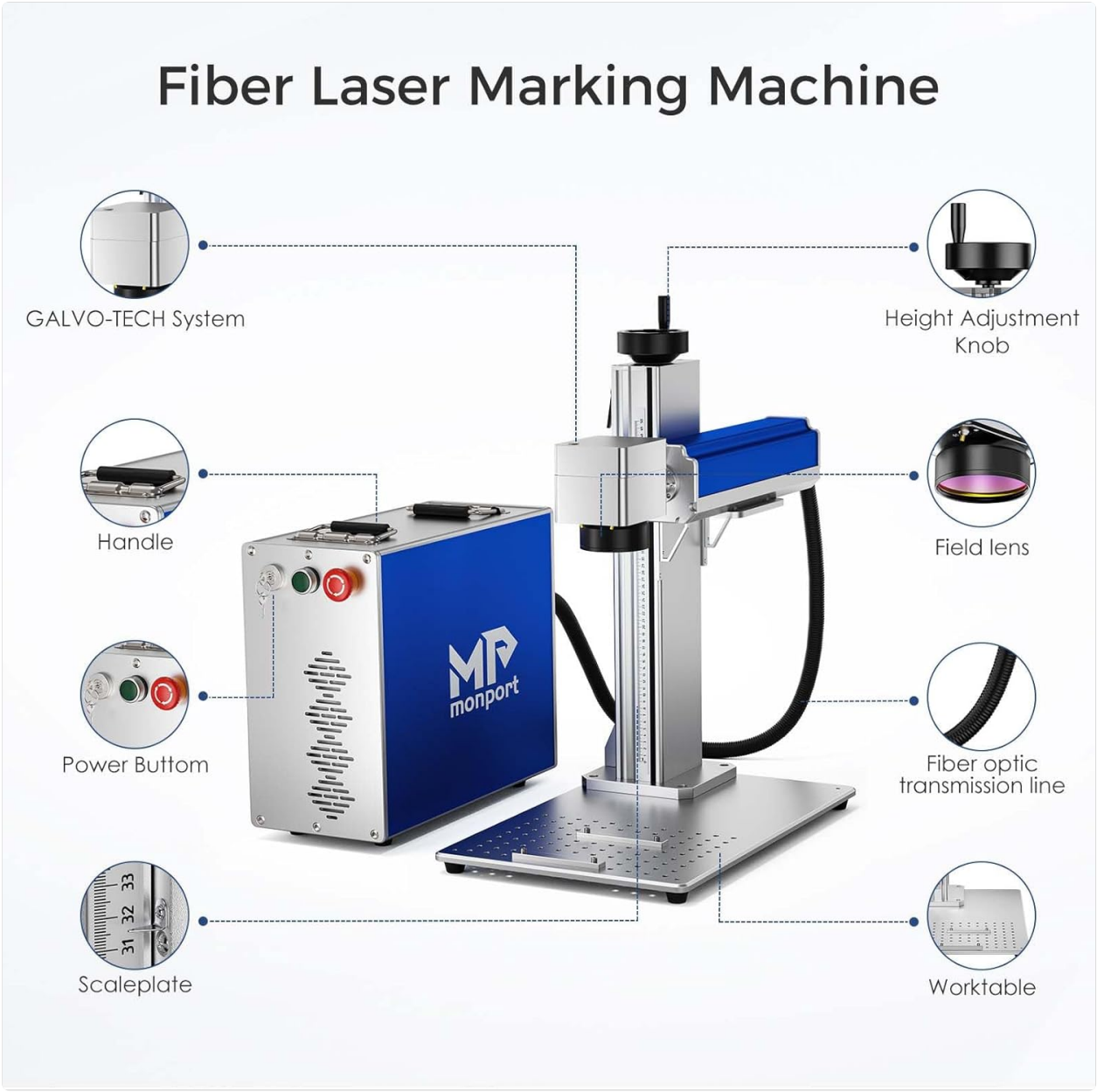

Figure 2.2: Labeled components of the Monport Fiber Laser Marking Machine, including the GALVO-TECH System, Height Adjustment Knob, Handle, Field lens, Power Button, Fiber optic transmission line, Scaleplate, and Worktable.

3. Setup Instructions

Follow these steps to set up your Monport 30W Fiber Laser Engraver.

3.1 Unboxing and Inspection

1. Carefully remove all components from the packaging.
2. Inspect the machine for any signs of damage during transit. Contact customer support immediately if any damage is found.
3. Verify that all accessories listed in the packing list are present.

3.2 Machine Placement

- Place the laser engraver on a stable, level surface capable of supporting its weight (approximately 33.5 kg).
- Ensure adequate space around the machine for ventilation and safe operation.

3.3 Electrical Connection

- Connect the power cable to the machine and then to a grounded electrical outlet. Ensure the voltage matches the machine's requirements (typically 110V or 220V, check machine label).
- The machine features an upgraded button design for ease of use and safety.

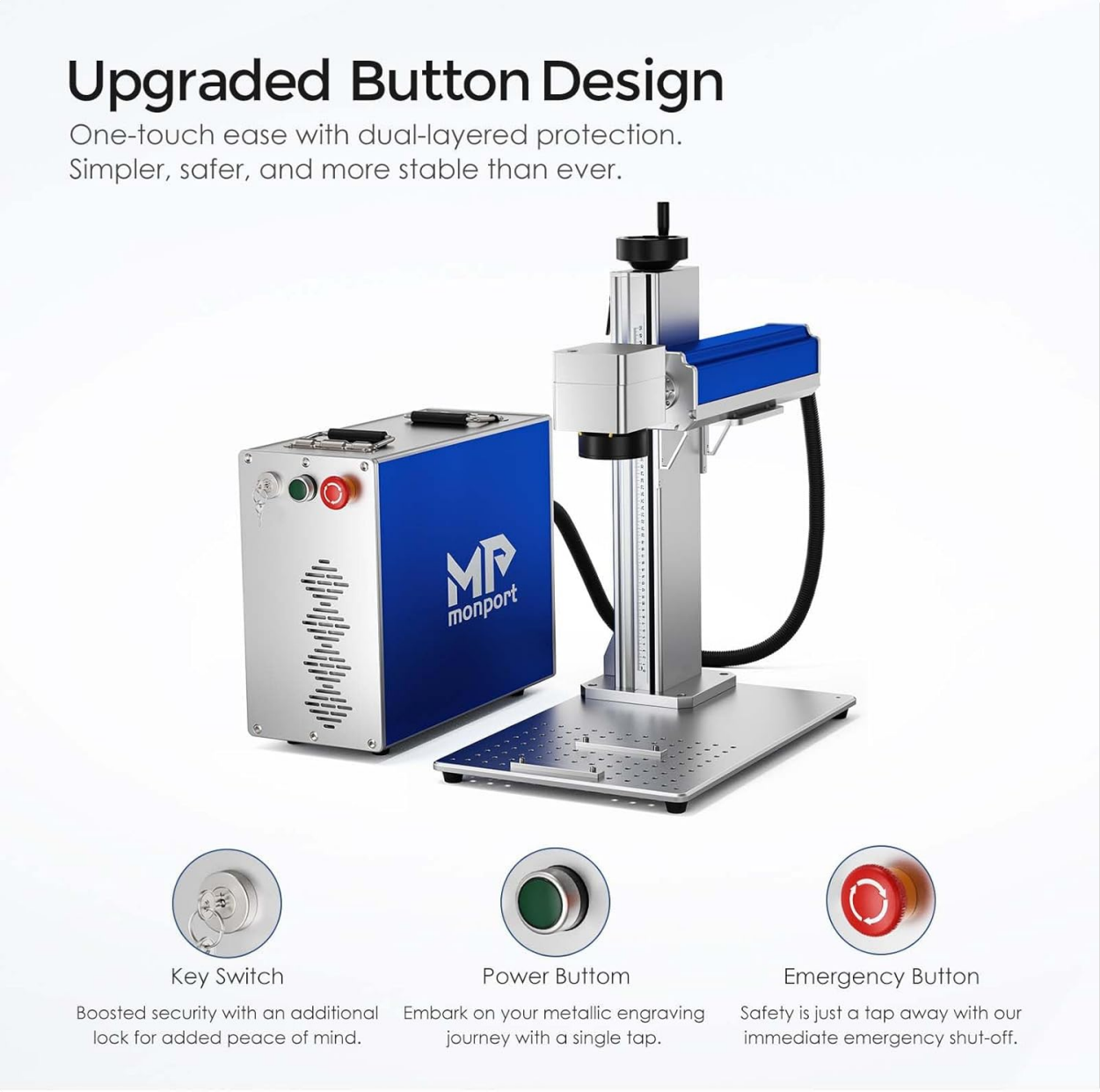

Figure 3.1: The upgraded button design includes a Key Switch for security, a Power Button for operation, and an Emergency Button for immediate shutdown.

3.4 Software Installation (Lightburn)

- Install the Lightburn software on your computer. Refer to the Lightburn documentation for detailed installation instructions.
- Connect the laser engraver to your computer via the provided USB cable.
- Ensure your operating system (Windows 7/8/10/11 or MacOS) is compatible.

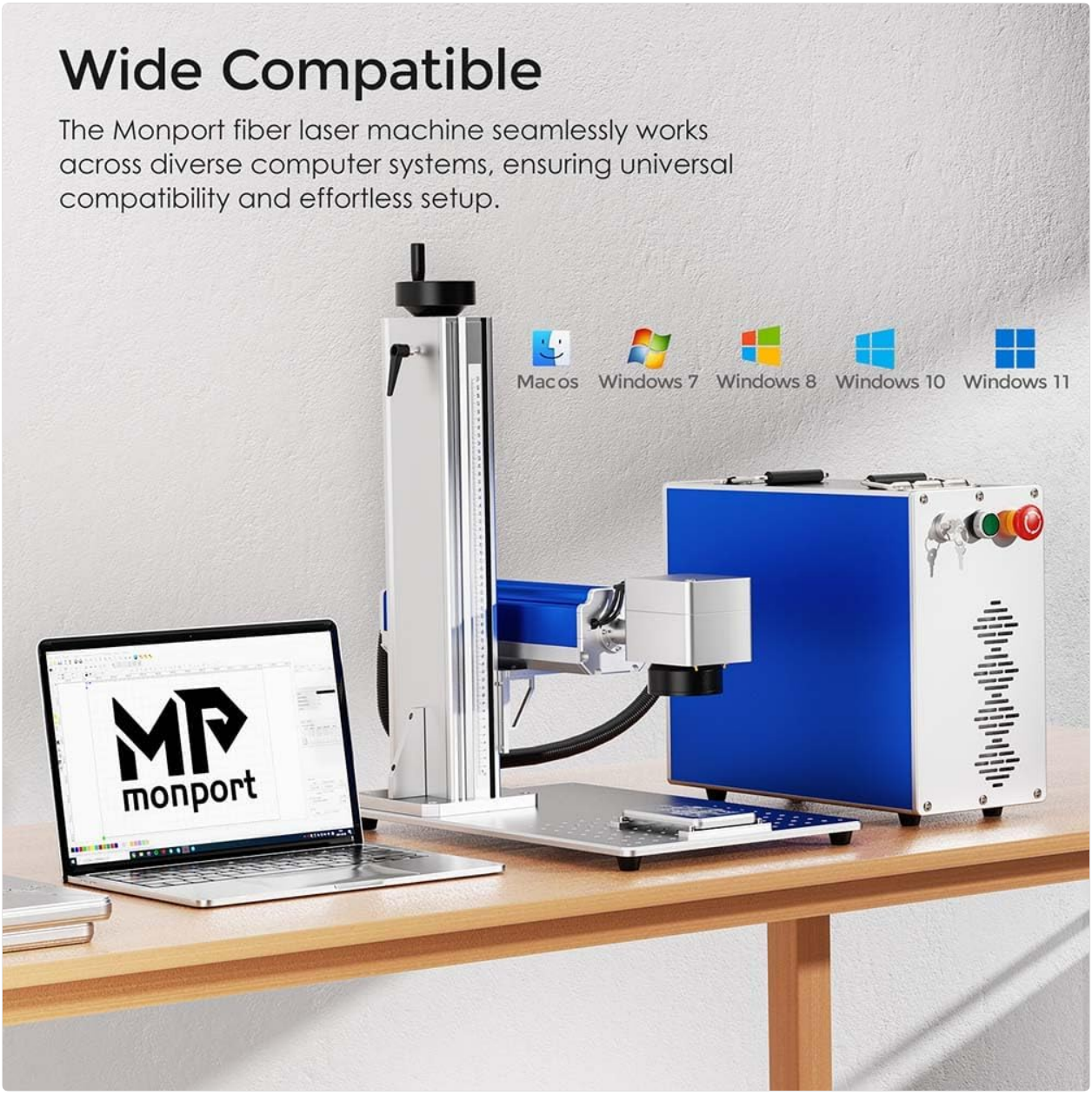

Figure 3.2: The Monport fiber laser machine is compatible with MacOS, Windows 7, Windows 8, Windows 10, and Windows 11.

4. Operating Instructions

This section outlines the basic steps for operating your Monport 30W Fiber Laser Engraver.

4.1 Powering On

1. Insert the key into the key switch and turn it to the ON position.
2. Press the green power button. The machine will power on, and the cooling fans will start.

4.2 Material Placement

- Place your material on the worktable. Use the built-in grid and removable positioning bars for accurate alignment.
- For cylindrical objects, attach the optional rotary axis (if applicable) and secure the object.

4.3 Focusing the Laser

Accurate focusing is crucial for optimal engraving results.

1. Activate the red dot locator in your software or via the machine controls. Two red dots will appear on your material.
2. Rotate the manual focus-height wheel to adjust the height of the laser head.
3. Adjust until the two red dots converge into a single, sharp point on the surface of your material. Use the ruler on the vertical supporting tower for reference.

4.4 Preparing and Starting an Engraving Job

1. Open Lightburn software and import or create your design.
2. Configure laser parameters (power, speed, frequency, passes) according to your material and desired effect. Refer to Lightburn documentation and material test guides for recommended settings.
3. Use the 'Frame' function in Lightburn to preview the engraving area with the red dot locator, ensuring correct placement.
4. Ensure all safety precautions are in place (eye protection, ventilation).
5. Click 'Start' in Lightburn to begin the engraving process.

4.5 Powering Off

1. Once the engraving job is complete, wait for the machine to cool down.
2. Press the power button to turn off the machine.
3. Turn the key switch to the OFF position and remove the key for security.

5. Maintenance

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

5.1 Cleaning the Lens

- The field lens is a critical component. Keep it clean and free of dust and debris.
- Use a specialized lens cleaning solution and lint-free wipes designed for optical components.
- Never touch the lens surface with bare hands.

5.2 General Cleaning

- Regularly clean the work area and the exterior of the machine to prevent dust and debris accumulation.
- Ensure the cooling fan vents are clear and unobstructed to maintain proper airflow.

5.3 Software Updates

- Periodically check for updates to the Lightburn software to benefit from new features and bug fixes.

6. Troubleshooting

This section addresses common issues you might encounter and provides basic solutions.

6.1 Laser Not Firing

- **Check Power:** Ensure the machine is powered on, the key switch is in the ON position, and the power button is pressed.
- **Emergency Stop:** Verify that the emergency stop button is not engaged. Twist it clockwise to release if it is.
- **Software Connection:** Confirm that Lightburn is connected to the machine and the job is properly sent.
- **Laser Parameters:** Check if the laser power setting in Lightburn is set above 0%.

6.2 Poor Engraving Quality

- **Focus:** Re-check the laser focus. An out-of-focus laser will produce blurry or weak engravings.
- **Material Settings:** Adjust laser power, speed, and frequency settings in Lightburn. Different materials and desired effects require specific parameters. Perform test engravings on scrap material.
- **Lens Cleanliness:** A dirty lens can scatter the laser beam, leading to poor quality. Clean the lens as described in the Maintenance section.
- **Material Stability:** Ensure the material is securely placed and does not move during engraving.

6.3 Machine Not Responding to Software

- **USB Connection:** Ensure the USB cable is securely connected to both the machine and the computer. Try a different USB port or cable.
- **Driver Installation:** Verify that the necessary drivers for the laser engraver are correctly installed on your computer.
- **Software Restart:** Close and restart Lightburn.
- **Computer Restart:** Restart your computer.

7. Specifications

Detailed technical specifications for the Monport 30W Fiber Laser Engraver (Model YXF30).

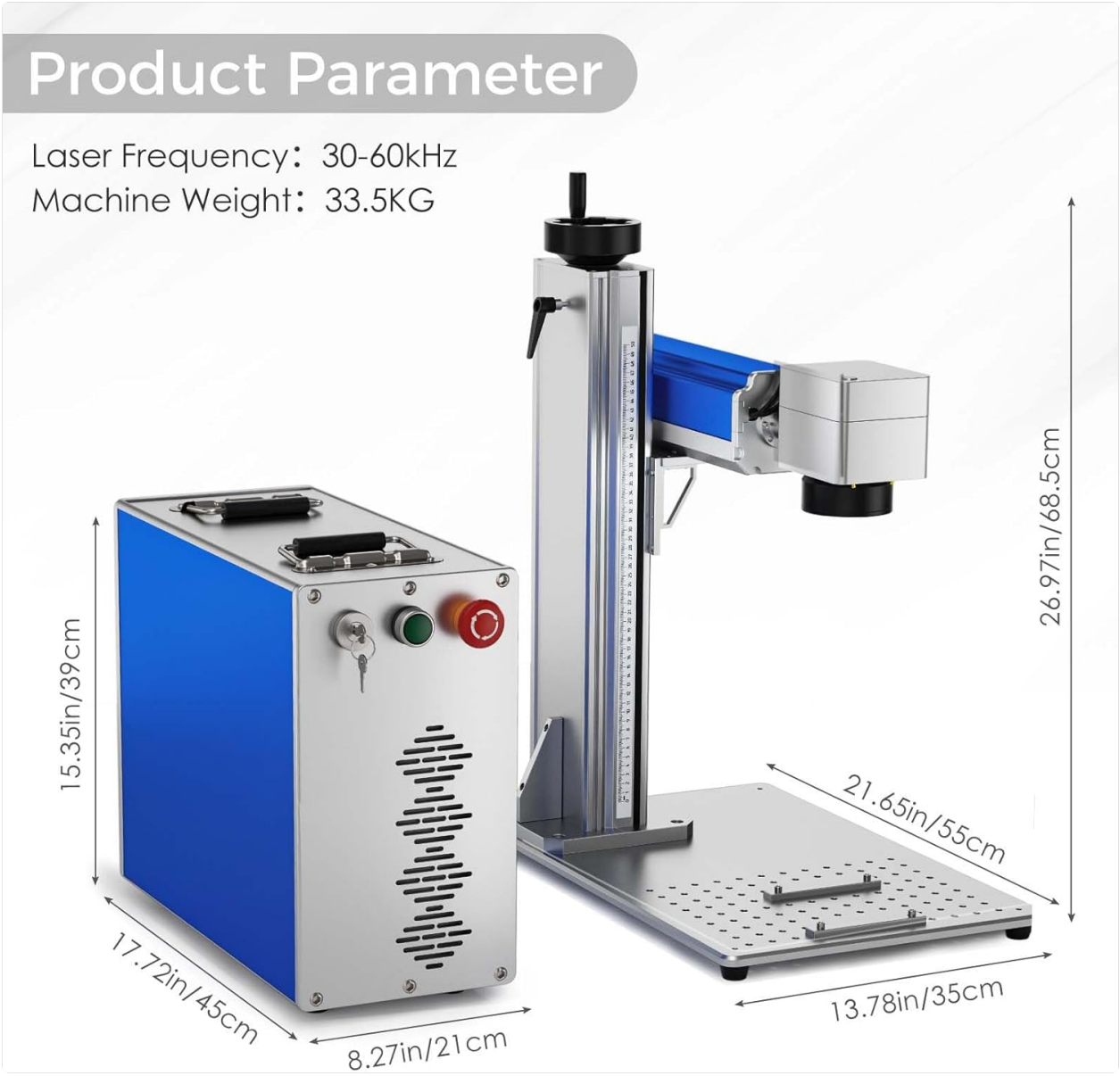

Figure 7.1: Product dimensions and weight for the Monport Fiber Laser Engraver.

Feature	Specification
Model Number	YXF30
Laser Power	30W
Laser Source	Raycus Fiber Laser
Laser Source Lifetime	Up to 100,000 hours
Laser Class	Class 1 (enclosed system), Class 4 (internal source)
Laser Output Power	5mW (Red Dot Locator)
Laser Frequency	30-60KHz
Wavelength	Up to 1064nm
Work Area	5.9" x 5.9" (150mm x 150mm)
Max Marking Speed	7000 mm/s

Feature	Specification
Minimum Accuracy	0.01mm
Machine Weight	33.5 KG
Manufacturer	Monport
Compatible Software	Lightburn
Operating System Compatibility	MacOS, Windows 7/8/10/11

8. Warranty and Support

For warranty information and technical support, please refer to the official Monport website or contact Monport customer service directly. Keep your purchase receipt and product serial number handy when contacting support.
You can visit the Monport store for more information:Monport Store on Amazon