UM-USB-0247-V1

omtech

High/Low Pressure Air Module

User Manual

Read Carefully Before Use
Keep for Future Reference

Disclaimer

Read this disclaimer completely and carefully before proceeding with the rest of the manual content.

1. **Product Modifications**

   Any modifications or alterations to OMTech products void any warranties and may result in damage or injury. OMTech shall not be liable for any damages resulting from such modifications or alterations.

2. **Compliance with Laws**

   Customers shall be liable for ensuring that the use of OMTech products complies with all applicable laws and regulations in their respective jurisdictions. OMTech shall not be responsible for any violations of laws or regulations resulting from the use of OMTech products.

3. **Correct Use**

   Always use OMTech products only as directed in the accompanying manuals. Failure to follow instructions may result in injury or damage.

   Always ensure the assembly, installation, operation, maintenance, or repair of OMTech products is carried out by a competent person.

   Regular maintenance should be performed throughout the lifecycle of OMTech products. You are responsible for ensuring the products operate as intended.

   Always wear appropriate protective gear.

4. **Third-Party Products**

   OMTech shall not be liable for any damages or losses resulting from the use of third-party products in conjunction with OMTech products. Customers shall refer to the third-party's guidelines and/or warranties (if any) for any third-party products used.

5. **Limitation of Liability**

   OMTech shall not be liable for any direct, indirect, punitive, incidental, special, or consequential damages to property or life, whatsoever arising out of or connected with the use or misuse of OMTech products. In no event shall OMTech's liability exceed the value of the products sold.

6. **Warranty**

   Refer to the sales page for warranty information.

This disclaimer states the entire obligation of OMTech with respect to OMTech products. If any part of this disclaimer is determined to be void, invalid, unenforceable, or illegal, including but not limited to the warranty disclaimers, liability disclaimers, and liability limitations set forth above, the invalid or unenforceable provision will be deemed superseded by a valid and enforceable provision that most closely matches the intent of the original provision and the remainder of the agreement shall remain in full force and effect.

Welcome to the OMTech Community!

For helpful hints and instructional videos, visit our **Help Center** or join our official laser group! If you encounter any issues with your engraver, please feel free to contact us. Our support team will respond **ASAP** to resolve your concerns.

Help Center

help.omtechlaser.com/hc/en-us

First Time Setup | Safety | Maintenance | Troubleshooting | FAQ | Hot Tips

Explore on your smart device

@omtechlaser

Website: omtechlaser.com

Technical Support Email: support@omtechlaser.com

Technical Support Number: +1 (949) 438-4949, Monday – Friday from 9:00 am – 5:00 pm (PT)

Address: Rygel Advanced Machines, 1940 E Deere Ave, Ste 100, Santa Ana, CA 92705, USA

Safety Information

General Safety

Danger

- Read and follow all instructions carefully before use. Store this manual for future reference.
- Provide this manual to all users if the device is transferred to a third party.
- Ensure **ALL** personnel involved in installation, operation, or maintenance receive proper training.
- **DO NOT** allow minors, untrained personnel, or personnel with physical or mental impairments to operate the device.
- **DO NOT** modify the device's electrical components, wiring, or safety circuits. Unauthorized alterations may cause fire, electric shock, or permanent damage.
- **NEVER** operate the device if the power cord, hoses, or pneumatic components show signs of damage, wear, or cracks.
- Keep your work site clean and well-lit. Cluttered and dark work areas invite accidents.
- **DO NOT** expose the device to rain or other humid environments to avoid the risk of electric shock. **ONLY** store and use indoors.
- **DO NOT** use or store the device in high temperatures, near flammable or combustible materials, or in areas with strong electromagnetic fields.
- **ALWAYS** disconnect the device from the power supply before performing any maintenance, adjustments, or repairs.
- **ALWAYS** wear ANSI/OSHA-approved protective equipment tailored to your task and environment.
- **DO NOT** adjust the knobs to increase the output pressure beyond the marked maximum.

Warning

- Follow **ALL** local electrical and safety codes when installing and operating the device.
- **ALWAYS** ensure proper ventilation when operating the device to prevent overheating.
- **ONLY** qualified personnel should perform repairs or maintenance on this equipment.
- Ensure the device is grounded correctly using a certified 3-prong outlet.

Caution

- Allow the device to cool down before performing any maintenance or adjustments.
- Store the device in a clean, dry environment when not in use.
- If abnormal operation, unusual noises, smoke, or sparks are observed, immediately power off the device and contact qualified service personnel.

Grounding Safety

Danger

- This device must be grounded.
- In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current.
- This device is equipped with a cord having a grounding wire and an appropriate grounding plug.
- The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- Improper installation of the grounding plug can result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, **DO NOT** connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the device is properly grounded.
- **DO NOT** modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- This device is designed for use on a nominal 120-V circuit and has a grounding plug similar to the one shown in Figure A.
- A temporary adapter, as shown in Figures B and C, can be used to connect the plug to a 2-pin receptacle (Figure B) if no grounded outlet is available.
- The temporary adapter shall be used only until a properly grounded outlet (Figure A) is installed by a qualified electrician.
- The green colored rigid ear, lug, or similar part extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover.
- Whenever the adapter is used, it must be held in place by a metal screw.

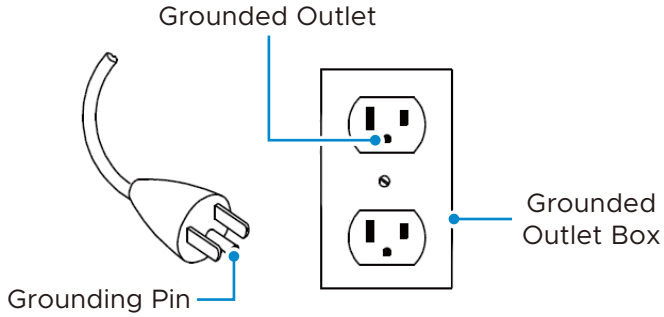


Figure A

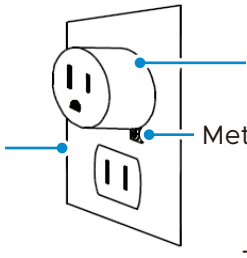


Figure B

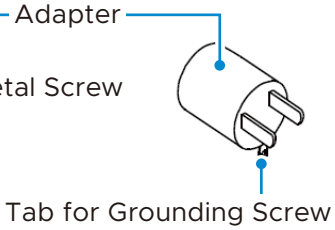
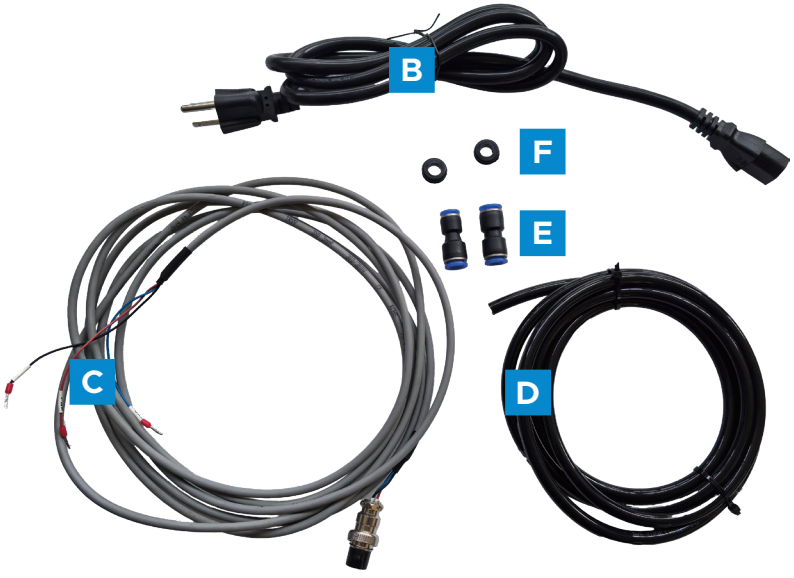


Figure C

Specifications

Power Input	100–240 V, 50/60 Hz	
Electrical Output	24 V/4.2 A	
Compatible Machines	CO2 Laser Engraver (Excluding OMTech K40+)	
Dimensions	13.78 × 6.69 × 9.84 in.	35 × 17 × 25 cm
Net Weight	11.02 lb.	5 kg

Package List



No.	Name	Qty.
A	Air Module	1
B	Power Cord (1.5 m)	1
C	3-Pin Signal Cable (3 m)	1
D	Air Hose (2 m)	1
E	Air Hose Fittings	2
F	Washers	2

Not Included but Helpful:

- Air Compressor with Air Hose
- Power Drill
- Work Gloves
- Ø8 mm Drain Hose
- Wastewater Collection Tank

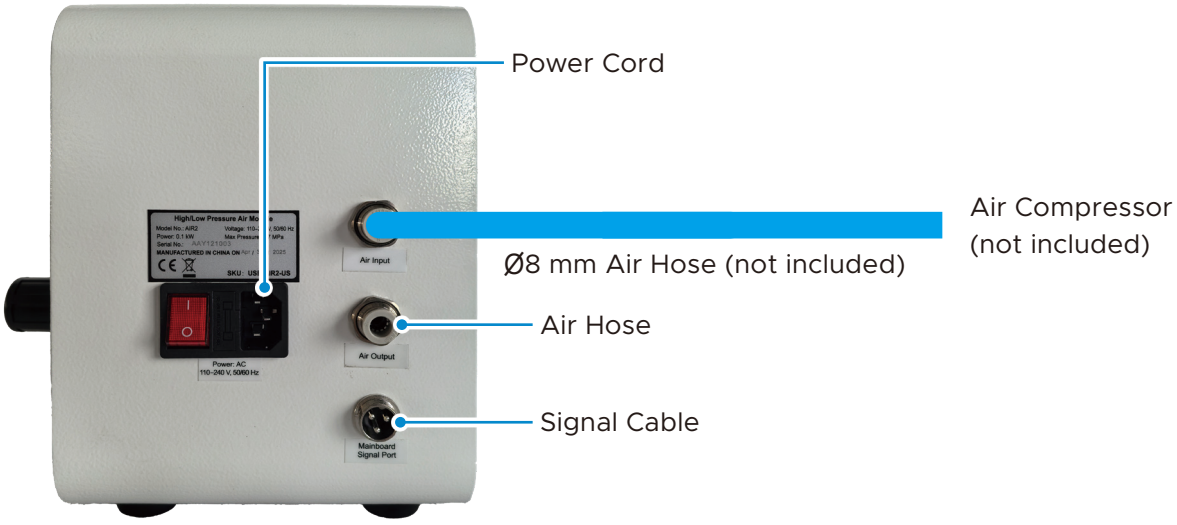
Installation

Danger

Ensure that the air compressor is powered off before starting installation.

Air Module

1. Connect the device's power cord, air hose, and signal cable.
2. Connect the device to an air compressor (not included) using an Ø8 mm air hose (not included).



3. Connect the device to a wastewater collection tank (not included) using an Ø8 mm drain hose (not included).

Installation

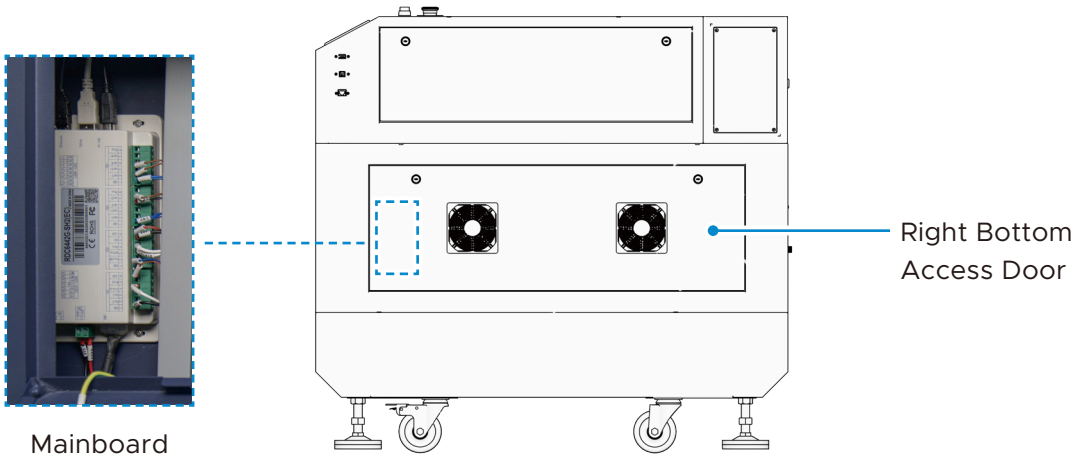
CO_2 Laser Engraver

Danger

ALWAYS ensure that the engraver is powered off before starting installation.

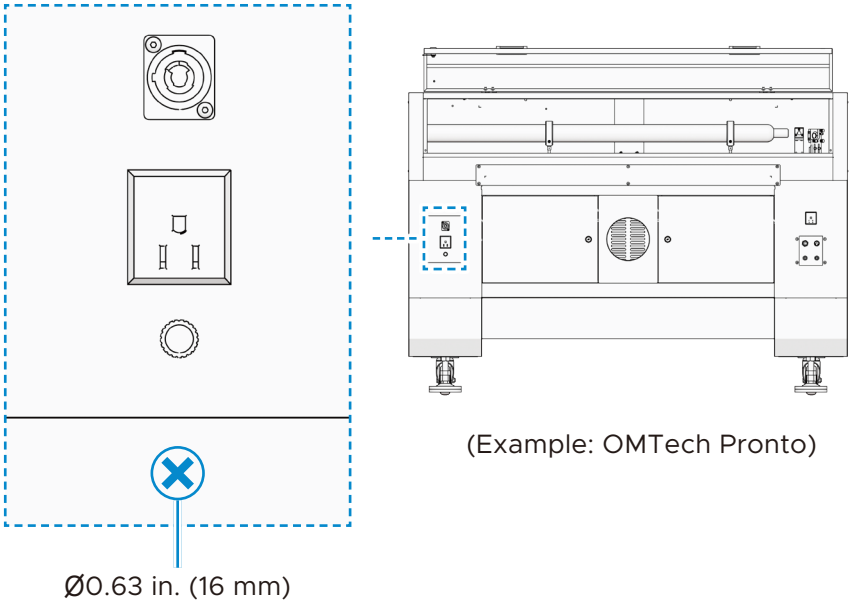
1. Connect the signal cable.

   a. Open the right bottom access door to expose the mainboard.

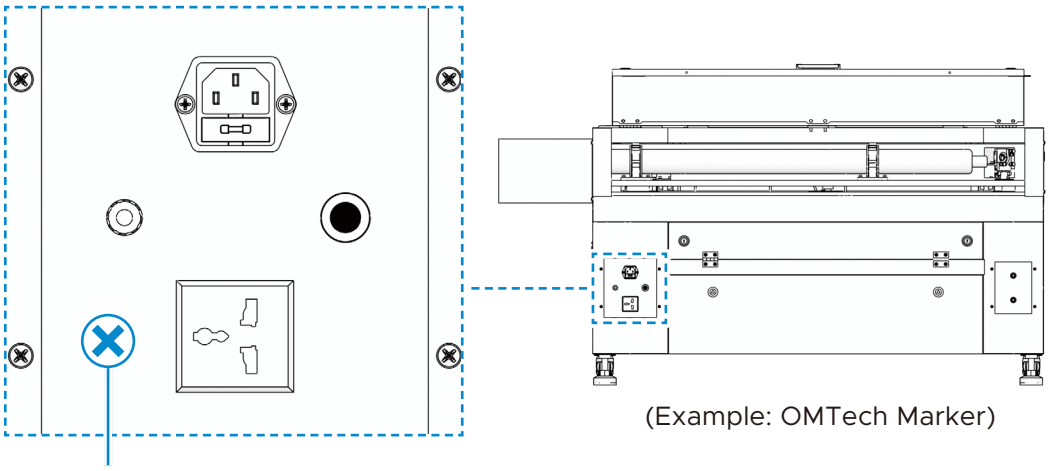


(Example: OMTech Pronto)

   b. Use a power drill (not included) to drill a Ø0.63-inch (16-mm) hole on one side of the engraver's rear panel, near the mainboard.



(Example: OMTech Pronto)



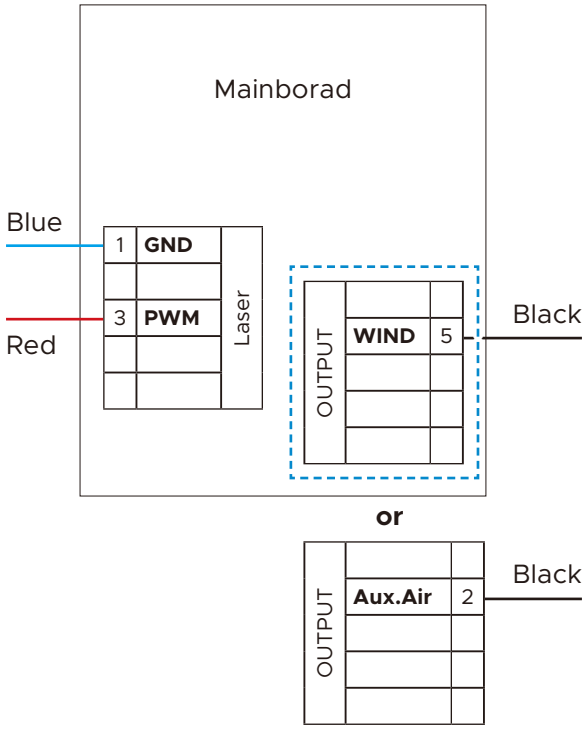
Ø0.63 in. (16 mm)

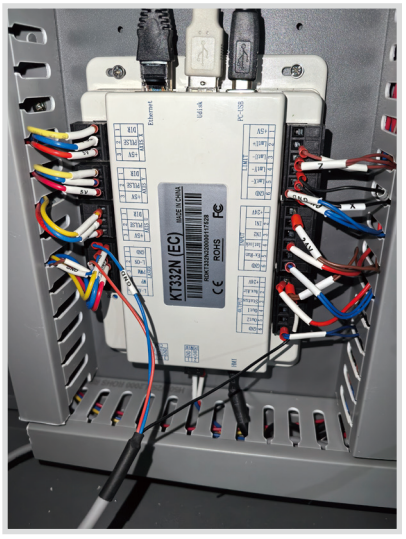
(Example: OMTech Marker)

c. Pass the provided washer through the three wires of the signal cable. Insert the three signal wires into the drilled hole and secure the washer in the hole.

d. Connect the three wires to the correct positions on the mainboard based on their wire labels.

- Blue wire → **GND**
- Red wire → **PWM**
- Black wire → **WIND/Aux.Air**





(Example: OMTech Pronto)

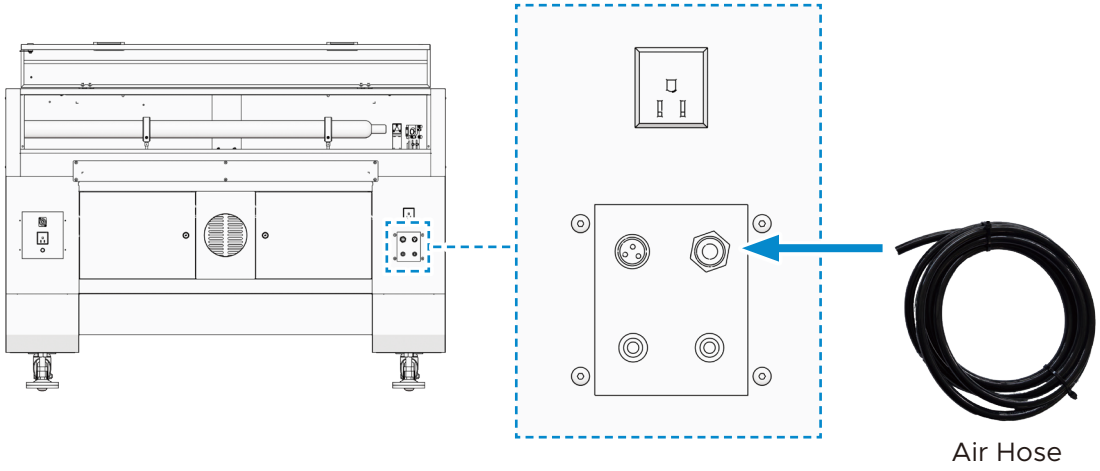
e. Place the signal cable neatly into the wire holder.

Installation

2. Connect the air hose.

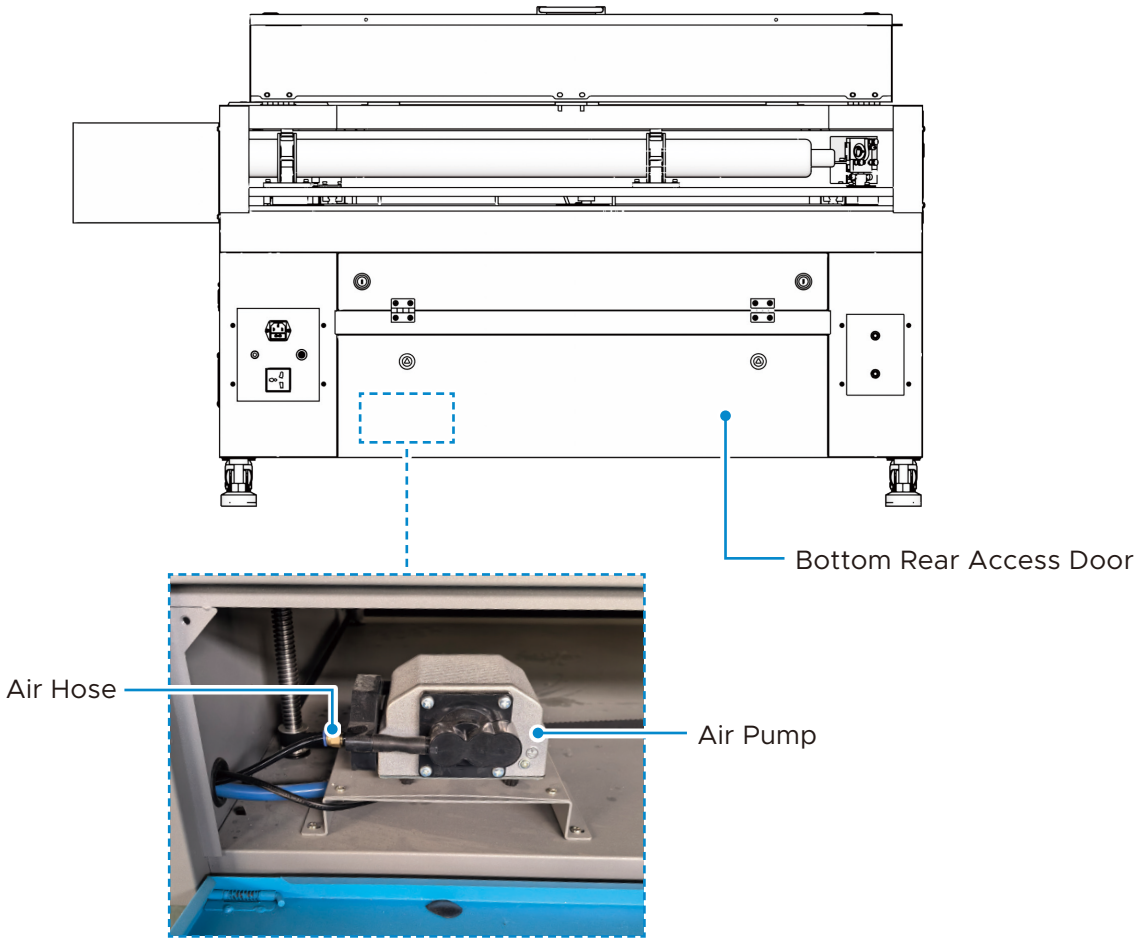
   - Engraver **WITH** Air Assist Intake (Example: OMTech Pronto)

     Insert the air hose into the air assist intake.

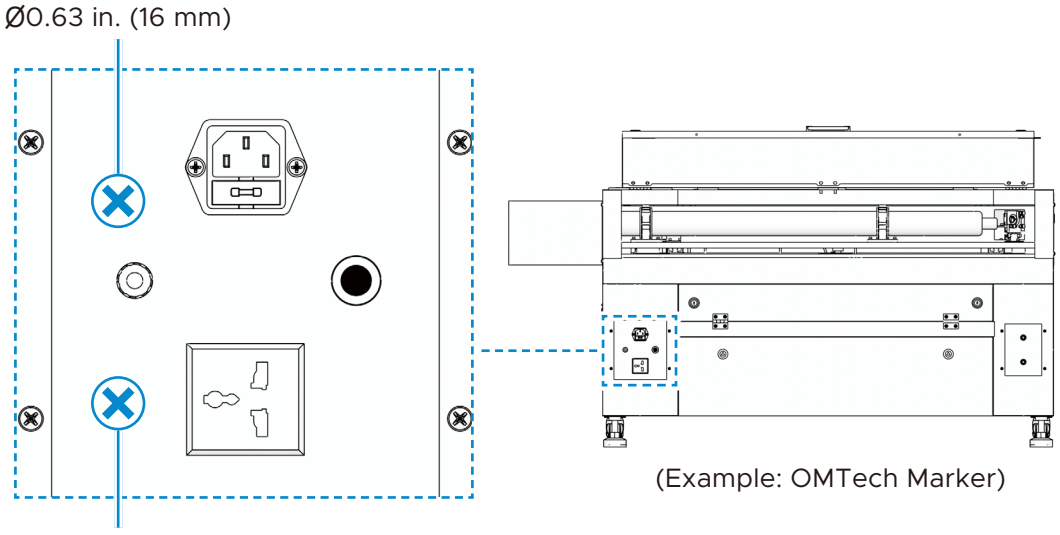


   - Engraver **WITHOUT** Air Assist Intake (Example: OMTech Marker)

     a. Open the bottom rear access door. Disconnect the inner air hose from the pump.



b. Drill a Ø0.63-inch (16-mm) hole in the back of the engraver.



(Example: OMTech Marker)

c. Pull the inner air hose out of the drilled hole. Pass the provided washer through the hose to secure the hose in the hole.

d. Select the air hose fitting that matches your inner air hose. Use the fitting to connect the inner air hose to the air hose from the air module.

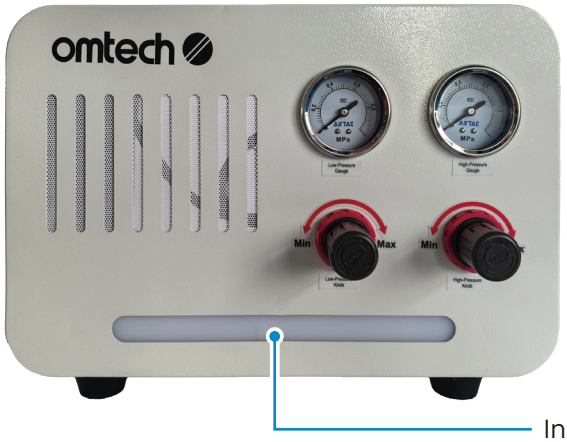
(Example: OMTech Pronto)

e. Close all access doors on the engraver.

Operation

1. Power on the engraver.
2. Connect the air module's power cord to a stable power supply. Activate the air module by flipping the power switch to **I**.
3. Before engraving or cutting, adjust the high or low pressure using the corresponding knob based on your task.
   - For engraving, use the low-pressure knob to adjust the pressure to around 0.1 MPa.
   - For cutting, use the high-pressure knob to set the pressure to around 0.25 MPa.
   - For thin or lightweight materials, such as paper, use low pressure to prevent the material from lifting or deforming due to airflow.
4. Turn on the connected air compressor.
5. Start engraving or cutting on your engraver. The air module activates, and the indicator displays the operating mode.

   The air module automatically switches between high and low pressure based on the PWM value detected from the mainboard. When the software-configured power setting is above 40%, high pressure is activated by default. At 40% or below, low pressure is used.
6. When finishing, the air module stops and drains the wastewater through the drain port.
7. Turn off the air compressor, flip the power switch to **O**, and disconnect the power supply.



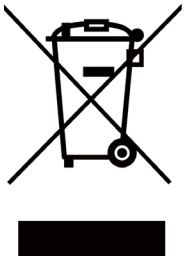
Indicator Status:

- White: Standby Mode
- Green: Low-Pressure Air Active
- Orange: High-Pressure Air Active

Maintenance

- Wipe the device regularly with a soft, dry or slightly damp cloth to remove dust, debris, or residue. Do not use abrasive cleaners or solvents.
- Dump wastewater in the wastewater collection tank in accordance with local laws and regulations for the disposal of waste liquids.
- Before each use, inspect the device and all components for signs of wear, damage, or misalignment.
- Store the device in a clean, dry environment, away from dust, moisture, and direct sunlight.

Disposal



Electrical products should not be disposed of with household products. In the EU and UK, according to the European Directive 2012/19/EU for the disposal of electrical and electronic equipment and its implementation in national laws, used electrical products must be collected separately and disposed of at the collection points provided for this purpose. Locations in Australia, Canada, and the United States may have similar regulations. Contact your local authorities or dealer for disposal and recycling advice.

omtech

User Manual

High/Low Pressure Air Module

User Manual

Rev. 11 Jun. 2025