

## R400 safety and pre-installation acknowledgment

### How to prepare for the arrival of your new laser

Congratulations on the purchase of your new R400 laser system! Please read carefully through the following information necessary to prepare for the arrival of your new laser system.



### Important unloading and unpacking information

- Please be advised; a forklift truck is recommended to unload the system from the delivery truck if you do not have a loading dock.
- Delivery with a liftgate equipped truck is available in some areas and may be added to your shipping for an additional cost.

### Important safety information

All personnel involved in installation, set-up, operation, maintenance, and repair of the machine must read and understand the installation guide and operation manual, paying close attention to the “safety” sections and information.

All personnel involved in installation, set-up, operation, maintenance, and repair must be trained and informed about all the functions and potential dangers of the machine.

-  Danger: high voltage inside can cause death or serious injuries. Laser source installation and replacement should be performed by trained, qualified personnel only! General electronic safety regulations must be followed. Disconnect all power and wait a minimum of 30 minutes before opening the laser tube. See installation guide for additional instructions
-  Warning: fire hazard from gas and processing of flammable materials.
- Unsupervised operation of the system is not permitted.
- A CO2 fire extinguisher must be on hand at all times as the laser beam can ignite flammable materials.
- Do not store any flammable materials inside the machine or in the immediate vicinity of the machine.
- Some materials are not safe for laser processing. The processing of such material can cause serious risk to health and safety as well as causing damage to the machine. Such damages are not covered under warranty.
- Processing of materials or materials containing the following is not permitted: carbon, polyvinyl chloride (pvc), polyvinyl butyral (pvb) polytetrafluorethylene (ptfe, teflon®), carbon fiber, beryllium oxide and materials containing halogens (fluorine, chlorine, bromine, iodine and astatine), epoxy-based or phenolic resins.

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- Use caution when processing materials or materials containing the following: manganese, chromium, nickel, cobalt, copper, and lead. Any material with the naming addition “flame-retarding” as it may contain bromine.

Engravers Network, LLC is not liable for the processing of any dangerous or harmful materials. It is recommended that you always consult with your material supplier and obtain a material safety data sheet to determine if the material is safe for laser processing. See system operation manual for additional safety information.

### Installation environment requirements

- Room temperature is between 59° – 77° f. Avoid higher ambient temperatures and direct sun exposure. Operating outside of these temperatures will reduce the lifetime of the system components.
- Do not install system in a high dust area. Excessive dust will reduce the lifetime of the system components.
- The humidity must not exceed 70% and the temperature must not be close to the dew point.
- Do not install in areas with poor air circulation.
- Do not install in areas that expose the system to mechanical shocks.
- Max distance from the system to the pc is 8 ft. To minimize communication interference.
- System should be installed with at least 2 ft of clearance from the wall to allow for proper cooling.

Failure and/or damage resulting from environment are not covered under warranty.

### Electrical requirements

- Laser system is to be installed on a dedicated circuit. Do not install extraction system on the same circuit as the laser.
- Noisy or unstable electricity as well as voltage spikes can cause interference and possible damage to the laser system.
- If electrical power fluctuations, brown outs or frequent power outages are a problem in your area or facility, an electrical line stabilizer, ups (uninterruptable power supply) or backup generator may be required. If installing any of these devices, be sure they meet the electrical specifications of your laser system. We recommend consulting with a local industrial electrician.
- Fuse protection: do not connect other devices via the laser fuse as the laser system requires the full amperage.

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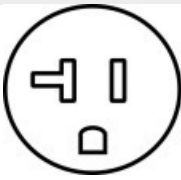

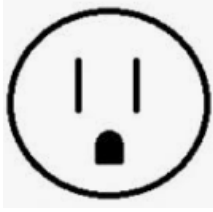
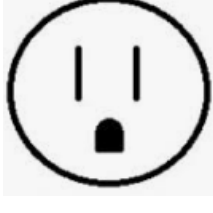
Damages/failures from faulty power source is not covered under warranty. See below for the electrical specification for your laser system.

### Exhaust requirements

- Do not operate the laser system without an adequate exhaust system.
- Inadequate exhaust increases the risk of fire.
- Fumes and dust created during cutting or engraving must be exhausted properly. Some materials when cut or engraved can produce fumes that are hazardous in concentrated amounts. Always consult with your material supplier prior to laser processing.
- The lifetime of optics, mechanical and other system critical components will be reduced by fumes and dust accumulating in the machine. This can be avoided by a capable exhaust system.
- The cutting quality will be reduced by fumes and dust accumulating in the machine. This will be avoided by a capable exhaust system.
- The laser power interacting with the workpiece will be reduced by fumes and dust accumulating in the machine. This can be avoided by a capable exhaust system.
- Damage to the system caused by improper extraction will not be covered under warranty. See Specification Chart for the exhaust specifications for your laser system.

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### Specification Chart

Model:	R400				
Wattage:	100 watt				
Dimensions:	Width:	61.02"	Depth:	42.52"	Height: 42.52"
Weight:	(approx.) 662 lbs.				
Machine Electrical Requirements:	Required Voltage:	110-120V		 <p>Picture to left shows proper electrical receptacle</p>	
	Required Amperage:	20A			
	Plug type:	NEMA 5-20P			
Chiller Electrical Requirements:	Required Voltage:	110-120V			
	Required Amperage:	15A			
	Plug type:	NEMA 5-15P			
External Air Pump	Required Voltage:	110-120V			
	Required Amperage:	15A			
	Plug type:	NEMA 5-15P			
R500 Vent Set (Optional) Includes 1 Blower, 1 hose (laser to Vent) Customer responsible for venting to the outside	Required Voltage:	110-120V			
	Required Amperage:	15A			
	Plug type:	NEMA 5-15P			
Exhaust Requirements:	<ul style="list-style-type: none"> <li>• Cabinet Exhaust and Table Exhaust</li> <li>• Ports: 2x 4.92" OD Ports</li> <li>• 1 x Blower with 740 CFM @ 11 in. wc</li> </ul>				

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### PC Requirements:

- Windows 10 32/64
- Microsoft .NET framework 3.5
- Adobe® Reader 9.0 or later
- Local administrative privileges (for required software installations)
- 8 GB of RAM 80GB of hard disk space
- 2 GHz processor or faster
- 1024 x 768 or better monitor resolution
- 24-bit color depth graphics card
- 2 free USB interface or better
- Mouse, Keyboard, Monitor
- Vector Based Graphics Software such as Corel Draw/Adobe Illustrator/Engrave Lab or similar (Review minimum PC specs for your graphics software. Graphics programs may have additional requirements)