Purchasing Laser Engraving Equipment

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For many users, especially those new to the technology, buying laser equipment can be intimidating. To many, the word, “laser” still conjures up images of danger, high technology, and steep learning curves. However, with today’s user friendly laser engraving equipment, nothing could be further from the truth.

Think Computer

Many people think that they have to be “laser” literate, to run a laser engraving system. Actually, a laser engraving system is nothing more than a sophisticated printer and being “computer” literate is much more important than being “laser” literate. If you know how to run a graphic arts program on your pc, you will be able to run one of these systems very quickly. If you do not know how to run one, it is recommended that you learn. Most users like CorelDRAW products, but there are others as well. If you already are familiar with a graphics program, check with the manufacturer of the equipment you are buying to see if it will work. This will make getting up and running even shorter. If you do not understand computer basics, now is the time to learn. You will want to learn basic computer commands, windows, and using a mouse. There are a variety of classes available through community ed classes, computer and software stores, and local vo tech institutions. Additionally, there are books and online aids available as well.

Before you Buy

Prior to any purchase of equipment, it is good to have a sense of what you will be using your machine for. Also, consider future needs as well. It is oftentimes better to buy something you can grow into, rather than have a piece of equipment that is soon obsolete.

Next, contact the manufacturers of new equipment. You can find them in industry directories, trade journals, trade shows, and online searches. Talk to them about your needs and ask to see a demonstration. Whenever possible, have them demo the system on your parts or what you anticipate will be your most common job(s). Ask questions and make sure you understand what you will be getting for you money. Talk to current users when possible. Find out how they feel about not only the equipment, but the company they bought it from. Some owners we know initially used a job shop to give them a sense of the process and the marketplace.

Choices

Once you decide that the technology is right for you, you will need to make some choices. Machine differences include the manufacturer, wattage of the laser, table size, options available (some may be added at a later date), and price. Additionally, make sure you understand warranty, service, training, and support issues as well. Everyone is generally treated well prior to a purchase. Getting a sense of how you will be treated after the purchase is equally important.

Additionally

In addition to the laser engraving system, you will need the following to ensure that your laser engraver will run safely and efficiently. These include:

- Ambient operating temperatures of 60° – 80°. Lasers may behave erratically in temperatures that are too cold or too hot.

- An area that is relatively free of high humidity. Humidity no higher than 70% is recommended. Water from high humidity may cause electrical problems in the laser system and/or computer.

- An area that is relatively dust free and easy to ventilate. Excessive dust and/or other airborne particles may interfere with the laser.

- High quality surge protector. This will protect the electronics in your laser engraving system and the computer.

- Adequate space for system, computer, and storage.

- Working exhaust system. Because a laser vaporizes material, it is essential to have a good working exhaust system to remove vaporized materials, smoke, and fumes. Systems manufacturers recommend a minimum of 200 CFM (cubic feet per minute) at 6 inches of static pressure (inches of water). For best results, choose a location that provides the shortest

and most direct path to exhaust ductwork. If you are going to be laser processing rubber stamp material, acrylic, or other aromatic materials, you may need to invest in a more elaborate exhaust system.

- Compatible computer. Manufacturers recommend the following
minimum computer requirements: However, keep in mind that more memory and power will result in faster processing speeds.

- Pentium2 (recommended) with at least 64mb RAM
- a 2 GB hard drive
- one floppy disk drive,
- CD- ROM drive
- a color VGA monitor,
- mouse
- Windows (check with manufacturer for version)
- Windows compatible graphics software
- An optical resolution scanner with a minimum of 600 dpi is also recommended for the generation of artwork.
- A parallel printer cable (10 ' or less) to connect the computer to the laser system.

Options:

These include rotary fixtures for the engraving or curved surfaces), vector cutting tables (to elevate materials during cutting), special lenses for special applications, and air assist (to keep the point of laser contact clean and free of debris). These are orations that may be beneficial depending on the specific application. Some may be added later and/or purchase form an after market supplier.

Conclusion

Soon, you will get a sense of the equipment, the company, and how you have been treated during the process. As with any purchase of any kind, feeling comfortable about what you are getting for your money will be the determining factor in any purchase.