

# How To Choose the Right Laser-Engraver that best fits your Classroom or School

## Where Do I Start??

**S**o, you're considering the purchase of a Laser Cutter / Engraver, and, like everyone, you've got a lot of questions. The first might very well be: **"What, exactly, is a laser-cutter/engraver?"**

**Also, you probably want to know:**

**(1)** what the right price-range is; **(2)** what the material-costs will be; **(3)** what kind of materials can it cut/engrave on; **(4)** what sort of maintenance can you expect will be needed, if any; **(5)** how "user-friendly" is it; and, **(6)** which kind of company should you buy from that will give you the follow-up support and help you'd like.

All of these are great questions, and there are likely more specific ones that you have in-mind once you have answers to these basics.

Right here, we'll do our best to answer those questions and give you some context on how to move forward in a smart and educated way to buying a Laser Cutter/Engraver.

## "What Is a Laser Cutter / Engraver, Anyway?"

Okay, first of all, Laser Cutting is a technology that uses a laser to cut materials, and is typically used for industrial manufacturing applications – technical experience that is of increasing importance to students engaged in pre-engineering programs.

Laser cutting works by directing the output of a high-power laser, by computer, at the material to be cut, leaving an edge with a high-quality, high-precision surface finish; engraving just decreases the power of the laser to engrave rather than cut, and, there are virtually no limits to how complex a design can be. **A copy of the U.S. Constitution or all the Disney characters can be engraved onto a single Pringle potato chip without breaking the chip.** That's how detailed and sensitive the laser can be.

Laser cutting and etching machines are relatively new in Schools and Colleges, although nationwide one of the most popular laser cutter/engraver product-lines – due to safety, speed, long-term reliability, and affordability – is the LaserPro line produced by a company called GCC. While there are several types of lasers used in industrial manufacturing, the one used by GCC – and most all Education-appropriate laser-products – is a CO2 laser.

**“What kind of Materials does it use? And are they Inexpensive?”**

A laser-machine appropriate to Education-usage has a laser that’s not as strong as certain other industrial-lasers, but, it will be able to actually cut/sever materials such as plastics, acrylics, wood, cardboard, and other paper-products. With regards to engraving, one of the great things about the laser-machine is that you can use an exceptionally wide range of materials – such as **Glass, Marble, Woods, Plastics, Ceramics, and even Stainless Steel**. Oh, and food-products like that Pringle potato chip, too. **As for costs, that entirely depends on what materials you want to use. Wood and plastic are quite cheap; marble is more expensive, unless you can find someone giving extra pieces away.**

**“Is the Laser ‘User-Friendly’? Is it Safe and Easy to Use?”**

Laser-machines – like all products – vary quite a bit in how easy they are to use, and in how they address important issues like Safety and Construction-Quality. Simply, some laser-machines are a bit safer and easier to use than others.

We’ve done consumer-research consistently over the past 20-plus years and have found a handful of very-good quality laser-machine manufacturers that we’d happily recommend, but only one who offers the a wide variety of safety features, and that, again, is GCC’s line of LaserPro models:

The LaserPro laser-machines are very safe. They offer an abrasion-free, contact-free process not requiring any adjusting or clamping of the material to be engraved. Unlike traditional cutting machines, **laser engravers don’t expose users to open, moving parts – making them as safe to use as a CD player or microwave oven.**

In fact, the LaserPro machines offer unique safety-features like Internal-Workspace-Lighting, an Emergency-Stop-button, Auto-Shut-off with aural warnings, and other helpful items.

**They're clean.** Clean edges and fine detail aren't the only things that are "clean" about laser engraving; it's also better for the environment, especially when combined with one of GCC's advanced laser exhaust systems.

**They're fast.** LaserPro offers the highest speeds on the market for engraving, delivering better productivity & output over conventional systems such as saws, routers, etc.

**They're simple.** All the LaserPro laser engraving machines can be operated with the ease-of-use of a laser printer; using standard graphic layout programs and quick, one-touch commands – and deliver high-quality output whether the user is a novice or a laser engraving expert.

Again, there are many fine laser-machines on the market, but it comes down to those which fit your Classroom needs, those that are also very safe, and buying from a fully supportive company that can really make the difference when you're still using the machine five-years from now. *Make sure you do your homework in investigating features, and knowing the answers to these questions will help a lot.*

### **"How much does a Laser Cutter / Engraver typically cost?"**

For Schools and College needs, the cost of a laser-machine will be dependent on how much physical space you have, and how often and how many students will be using the machine; since speed and the size of product-output will be a factor from machine to machine.

The good news is that laser-machines have come down in price the past few years, with most starting at \$10,000 for a 20-watt system. **However, one of the best smaller laser-cutters/engravers from LaserPro starts at just under \$8,000 (perfect for middle-schools and some high schools) and goes up to around \$25,000 for the largest, fastest, and most productive machines (perfect for universities).**

If you are comparing laser-machines, be sure they are of the same power and size. You cannot compare the engraving speed or results of a 50-watt machine, for instance, with those of a 20-watt model. **The amount of power directly affects speed and performance.**

Consider the cost and what you can afford, but don't forget about the payback. If you spend \$7,500 and the machine can't do the job, you've wasted \$7,500. Conversely, if you spend \$14,000 and it can do the job, plus, do more than you ever expected – like, as many schools have done, make money via the school's extracurricular groups, like booster club products and such – the machine pays for itself in short order. **Just consider what you and your Students will be doing with the machine.**

Also, another thing to consider is *what space do you have in order to operate the machine?* The reason the sub-\$8,000 LaserPro C180 is great for many schools is that it is small, and takes up very little space (aside from also being very budget-friendly). But, when thinking about physical space, it's also good to keep in-mind that ideally – if you'll be doing a lot of work – you'll also maybe want an exhaust-system to remove dust. The company you buy from can recommend a blower suitable for you, if wished.

### **"Finally, does it matter what Company I buy from?"**

Who you ultimately decide to buy from *can be* almost as important as what size of laser-cutter/engraver you purchase. *Again, it's like any other purchase you make:* If you're buying a car, you want to buy the best quality vehicle for the best possible price, and, you might want to know that the company you bought it from will support you for as long as you own the vehicle. It's the same for a laser-machine.

**Ideally, look for:** (1) Continuous support; ensuring your machine works great, and if there's a hiccup, that they'll fix it. (2) You want a secure, established Company with the strongest Manufacturer partnerships that will be there for you ten-years from now. (3) And, in a perfect world, you want a Company that knows Educators and that focuses on them exclusively to ensure both your needs are understood and met, and a Company that will actually help you in instructing and educating your Students.

**That's it! Hope our Guide has answered your questions. Contact us for more help.**