

Will lasers replace conventional engraving machines?

Bob Butler from Gravograph UK tells us what he thinks....

As a product specialist with Gravograph UK this is a question I am repeatedly being asked in one form or another. Sometimes the person asking the question wants to save money when investing in a laser, by trading in their existing engraving machine. In other cases this is the first step into computerised engraving and the purchaser wants to make the most effective use of their investment. In both cases the answer is not that straightforward.

My usual response is to answer the question with another question - or more than likely several questions: What is your main line of business? What products or materials do you want to mark / engrave? How big are they? What sort of quantities do you work in - primarily one offs - a large number of identical plates - etc, etc? Do you want to mark the surface or deep engrave into the material?

The answers to these and in fact many more similar questions help to point the confused potential purchaser in the right direction.

Which type of laser?



LS100

When first considering a laser many potential buyers do not appreciate that they come in different types - each one offering different features and varying results with different materials.

Lasers generally fall into two main areas, although within these areas there are sometimes several similar, yet different, formats. For the purpose of this exercise I will class them as YAG and CO2 and ignore the variations inside each range.



GT100 YAG Laser

The YAG laser is generally selected for its ability to mark directly onto metal products, although it is very good for creating a contrasting mark on many plastic materials. When looking at deep engraving, or even cutting out metal parts, a much more powerful model is required, this is often cost prohibitive to the non-industrial user.

The CO2 laser will mark coated metals by removing the coating as with anodised aluminium or by bonding an applied coating to a bare metal surface. Its most popular media though is amongst the varied range of 'organic' type materials such as wood, plastics, glass, leather and paper or card. Most of these latter materials can be both marked and cut by the CO2 laser.

Due to their design features, the YAG laser generally offers a very fast mark in a limited working area, whereas the CO2 covers a larger area but at a comparatively slower rate. There are a range of power levels available, which not only gives a choice of speeds at which they will work, but also influence the quality of the end result.

... and the traditional engraver?

For in excess of 50 years the Pantograph, (or manual engraver), and more recently its computerised offspring, (with more than 20 years of history), have been the machine of choice when it comes to identifying or personalising a product or creating a small sign or label.



IS400 Volume

Capable of creating a surface mark or a deeper cut into most of the previously mentioned materials, it is possible to produce a width of results that would only be achievable with a combination of the two laser families. Add to this the unique finish of a traditionally engraved mark which is cherished by many, and a discerning end user, and one could argue that the laser has a lot of shortcomings.

... the ultimate answer?

The answer is that there is no real definitive answer.

If you are working with one of the materials which are well suited to the laser approach, then the laser's speed and ease of use, (no clamping and no tools to sharpen), will definitely make it an ideal choice.

Yet if you want that more time-honoured appearance provided by the traditional engraver, then the laser will not provide you with a replacement for your existing machine. But there is one certainty. In the majority of cases there is a place for both the laser and the traditional engraver. Each one complements the other and the correct combination can ensure that the finish required to satisfy the customers demands will be available, and that the means will also be there to provide a quality result, yet also meet a tight deadline.

How do I decide?

The above statements have only just scratched the surface of this complex subject, but my years of experience with Gravograph UK have given me an insight into ways of selecting the best solution for your specific business.

* Always have a comprehensive demonstration and wherever possible use the products / materials which you intend to offer to your customer. Can your proposed supplier offer on site as well as showroom demonstrations at a time to meet your own convenience?

* Check out all three options - YAG, CO2 and traditional.

* Are you buying direct from the manufacturer or from a distributor?

* Look into the supply of materials you require for your new machine. A low cost / poor quality material will only increase your production costs and not save money.

* Check out the after-sales service available with the machine you are considering. Modern equipment does not break down as often as some of its ancestors, but you can be sure that if it does break down it will be in the middle of a big order or at the busiest time of the year.

* Ensure that the training on offer covers your needs and that this does not end after the day of installation. As you progress with your new machine then your demands upon it may require more detailed support. Is the training on-site or will your staff have to waste valuable time travelling to your supplier?

* Be certain that the software provided in the package enables you to design your required layout quickly and comprehensively. Many software packages on offer today were not designed with the engraver in mind.

* A good starting point is to contact Gravograph UK who offer a comprehensive range of both YAG and CO2 lasers, an extensive choice of traditional engraving machines and probably the widest collection of engraving materials available from one supplier. Add this choice to over 50 years of engraving experience, purpose designed software, customer driven support and you arrive at the best range of options all in one place.

For more information, contact Gravograph direct.