GRAVOTECH
by BRADY

EBOOK

Choosing the best laser table for your needs

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Choose the best laser table for your needs

Are you interested in laser engraving and would like to **choose a CO2 laser table** for your projects? Whether you've already used other types of machines or technologies, or you'd like to integrate laser engraving and/or cutting into your production, we're here to help you make the right choice.
Our aim is to guide you so that you can **make a profitable investment.**

The Gravotech expert

Product Manager at Gravotech, Arthur first worked on the mechanical range before specializing in the laser table range.

His role is to act as a link between the sales and R&D teams. To do this, he gathers and synthesizes customer needs to define future products. He also lends his expertise on current products to sales teams, helping them to respond effectively to customer issues.

***Arthur NAULIN**, gantry laser product manager*

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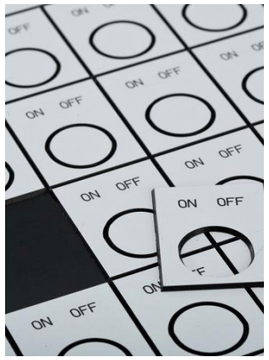


How to choose your CO2 laser table?

Step 1: determine your needs

For the **personalization of objects** such as pens, mugs, key rings, medals or trophy labels**,** you'll need engraving in series or by the unit.

For **informational signage** (door signs and cut-out letters) or **industrial** signage (warning and prevention signs, identification labels and industrial tokens), you'll need engraving and cutting.

For **creative projects,** such as decorations and models, you'll need mainly die-cutting, but also some engraving features.

Step 2: Evaluate the size and number of parts to be produced

For engraving individual small parts, a **small A3 laser table** will suffice. On the other hand, for series engraving and large parts, you'll need a larger laser table. It all depends on the **size of the part to be engraved** and the **number of engravings** per day.

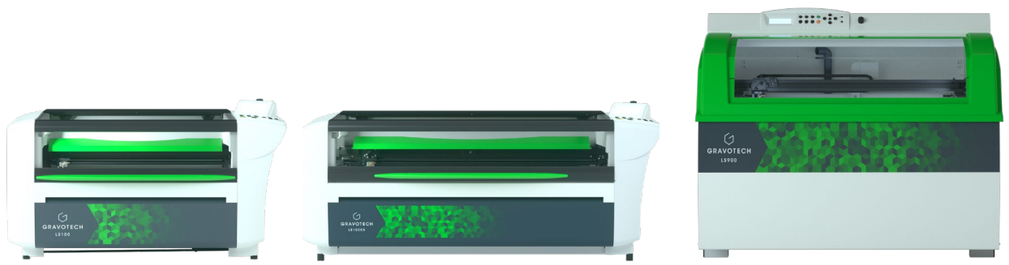
Case study: choosing the right machine format for your business

For a **multiservice engraver** who produces around 50 plates of 3.94 x 0.98" (letterbox label size) per day, or who works on engraving on demand, a **small machine** will be sufficient. For **engravers specializing in signage**, who produce more than 100 plates of 3.94 x 0.98" per day, and who need to engrave and cut large plates in a single operation, a larger machine with higher productivity will be required.

For **professionals in object personalization,** each engraving is unique and cutting is anecdotal, so a small laser machine will be more than sufficient.

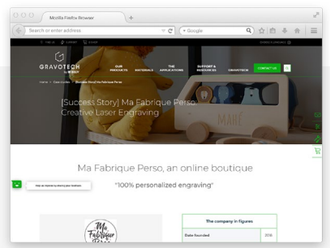
For companies **companies specializing in object creation** cutting or creating large engravings (over 3.15 to 3.94" wide), you'll need an intermediate-sized **laser table.**

For engraving and/or cutting series



A small and a large machine will perform a similar task in roughly the same time. If the size of the part to be cut is not limiting, a large machine will enable **more parts to be produced at once**, optimizing operator time.

If your need is simply to make a small engraving on an existing object, and the object is not too large, a **laser station** (such as the WeLase™ or LW2) is more than sufficient. As is the case with "Ma Fabrique Perso", one of Gravotech's French customers.



Discover the "Ma Fabrique Perso" success story

Laser engraving for creativity

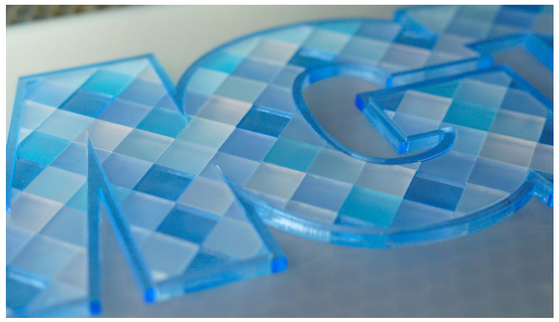
Step 3: choose the right laser table power for your needs

Now that you have a clearer idea of the laser table you need, depending on the application and the number of parts to be engraved and/or cut, it's time to consider a decisive element: **the thickness of the material to be processed.**

Please note if you need to engrave or cut organic materials, it's important to know that having a more powerful source has no impact on engraving, as it won't be done any faster.

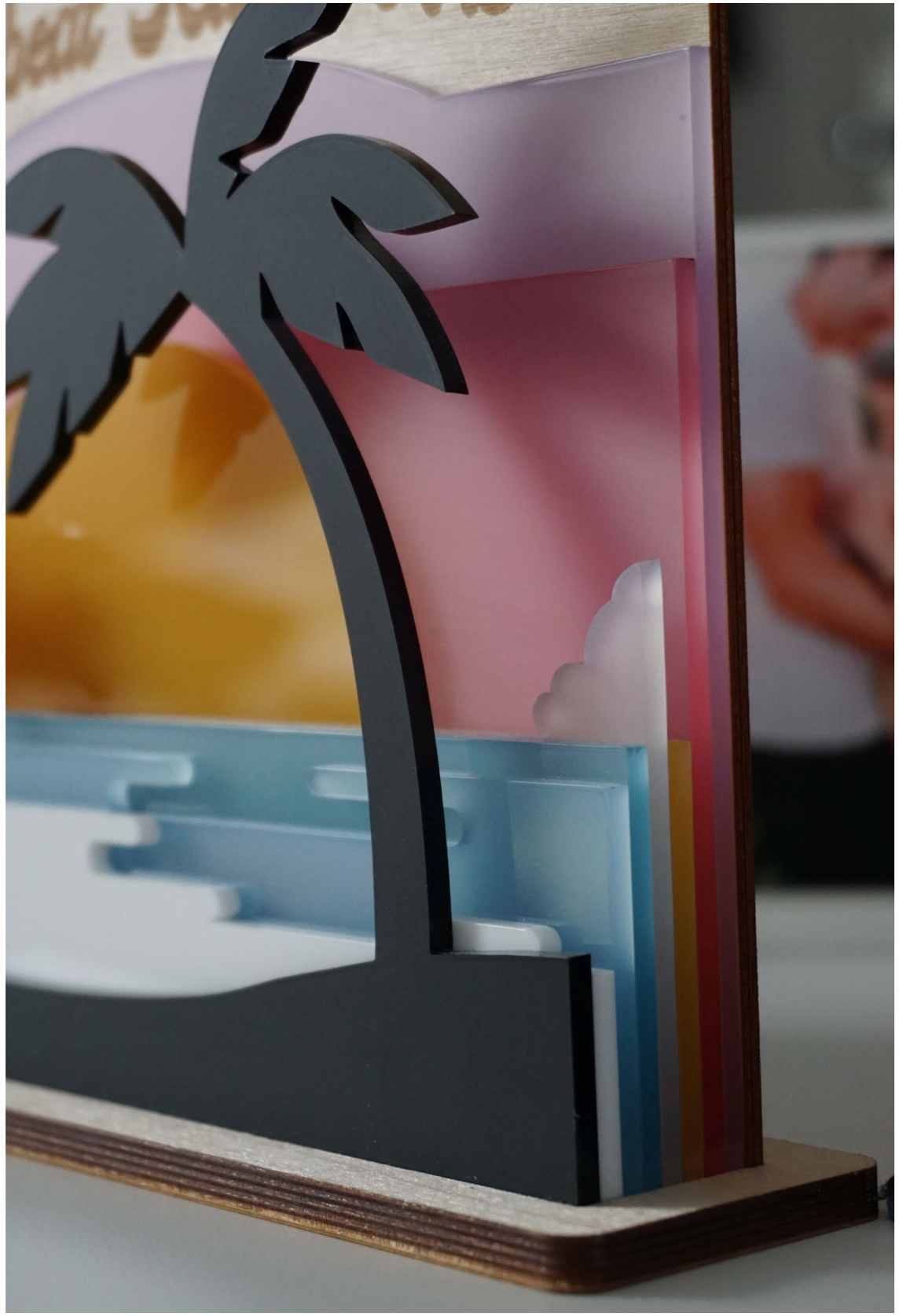
If you need to cut **thick organic materials or plastics (> 6 mm),** you'll need a fairly powerful (CO2) laser table. For example, for acrylic:

- a 30W laser table will be limited to cutting a thickness of 0.40";
- an 80W laser table will cut up to 0.79" deep, and will cut 0.40 mm twice as fast.



Laser tables should be considered as engravers. Cutting organic or plastic materials (except glass) is perfectly feasible, but metal or materials composed partly of metal (e.g. dibond) cannot be cut with a laser table.

So it's important to **assess your needs** in terms of power to choose the laser table best suited to your projects.



How much should you invest in a laser table? 3 criteria to consider

Machine purchase cost

"Top-of-the-range" laser tables are equipped with a **high-quality,** air-cooled **metal laser source**, with a lifespan of up to 10 years. They are **productive, safe** (class 1 or 2) and can be controlled via dedicated software. Prices range from $10,000 to $40,000, depending on table size.

"Low-cost" laser tables are open (without protective housing) and class 4. They are **not very productive,** can be **dangerous** (not always to European or American standards) and may not be equipped with graphic composition software. Generally speaking, prices are under $6,000.

Keep in mind **hidden costs** (for low-cost imported models) such as delivery charges, customs and import fees, quality or lifespan of components, and the cost of after-sales service and maintenance.

Machine operating costs

A laser table generally has very low **operating and maintenance costs**. There are electricity costs, as well as the purchase of protective eyewear for low-cost laser tables.

Regular cleaning of the machine interior and optical elements (such as lenses and mirrors) with a suitable cleaner is also necessary. And to ensure the long life of your machine, we recommend that you take out an annual maintenance contract.

Getting to grips with a laser table involves not only learning how to use the machine, but also the software. On the whole, **half a day's training** is needed to be autonomous on the main application. But this will take less time than with a low-cost machine, where the operator has to train independently.

In fact, this type of laser is often not suitable for training purposes.

Machine reliability and service life

The lifespan of a laser table often depends on the quality of its components and manufacture, but also on its maintenance.

- "Low-cost" tables require a source change every 2 years, at a cost of between $300 and $1,000. They may also be subject to **regular malfunctions**, sometimes requiring **the intervention of a technician**, which can be time-consuming. Note that these interventions can cause **the machine** to be nonfunctioning for several months.

- "Top-of-the-range" laser table sources have a lifespan of up to 10 years, which means **low maintenance costs.** However, it is necessary to take into account the cost of filter and lens changes, as well as any machine adjustments.

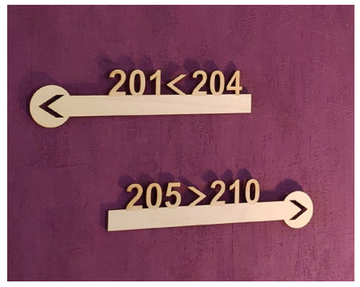
	"Low-cost" table		"High-end" table	
Machine size	Small laser table *(> 50 cm wide)*	Large laser table *(up to < 1 m wide)*	Small laser table *(> 50 cm wide)*	Large laser table *(up to < 1 m wide)*
Average purchase cost	$1,000	$10,000	$10,000 $20,000	$20,000 $40,000
Laser source lifespan	Up to 2 years *(i.e. $300 to $1,000 additional costs every 2 years)*		Up to 10 years	
Laser safety class	**Class 4** hazardous laser, can cause severe eye and skin damage, PPE mandatory		**Class 2** no PPE (personal protective equipment) required for use	
Availability of spare parts	Reduced availability: machine must be returned No guarantee of parts availability after product shutdown		Machines designed to be repairable, all spare parts are available through our after-sales service Guaranteed parts availability for 6 years after model discontinuation	
Hotline and after-sales service	Reduced local presence, which implies long exchanges, generally by e-mail (time differences) and no dedicated contact person		Local presence in more than one country, phone line available and teams of mobile technicians	
Manufacturer and sales network	Reseller distributors with no guarantee of continued activity		Internationally certified partner establishments	

How to make the most of your laser table?

Diversify and expand your business

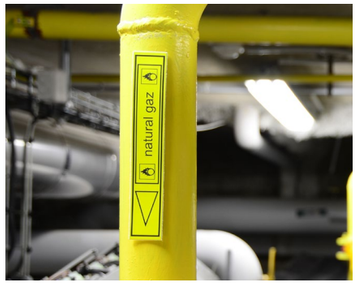
Because it's not tied to a specific application, the laser table is a great way to diversify your business. In fact, the possibilities for diversification with this machine are extremely varied.

Name signage



Door plaques, trophy plaques, letterbox plaques, house and room numbers, cutting of large letters and signs... The laser table can be used to **produce different types of engraving or cutting** for both indoor and outdoor signage.
The same applies to more technical and industrial projects:

fireproof equipment identification plates



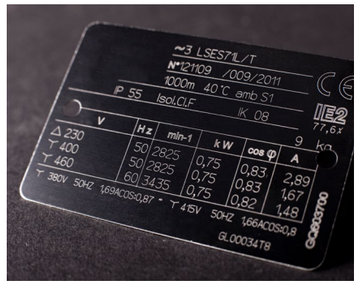
identification plates for piping or electrical circuits

weather-resistant labels and plates (UV-resistant)

Note that with a CO2 laser table, this application is only possible on plastic or anodized aluminum plates.

Industrial identification with a CO2 laser

More industrial applications are possible, such as:



industrial identification plates

CE plates

serial number plates

Customization

To satisfy both private and professional customers, we can **personalize a wide range of objects** with a laser table:

key rings

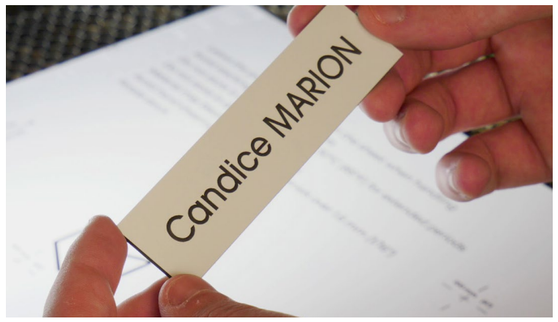
pens

ink pads

Product design

Creating product ranges in wood, acrylic or paper (mainly small series of objects) is also a good way to **make your laser table profitable.** So give your creativity free rein!

How to make the most of your laser table: a few examples to calculate your margin



A **nameplate** for a letterbox costs around $1.80 (i.e. $0.40 material cost and $1.50 running cost). Once produced, it sells for between $8 and $15.

A **dog tag** (in anodized aluminum) costs around $1 to buy, and $0.70 for less than a minute's use of the machine. It sells for between $8 and $15.

In general, **the potential margin** is multiplied by 10 on the purchase cost of personalization, and by five on the purchase cost of small signs.

However, these percentages are given as a rough guide, and it's advisable to analyze prices in your market before taking the plunge.

What you need to know about Gravotech laser tables

Gravotech offers its own **control software**: **Gravostyle™**. It includes some features specific to laser technology, but is not mandatory to operate the machine.

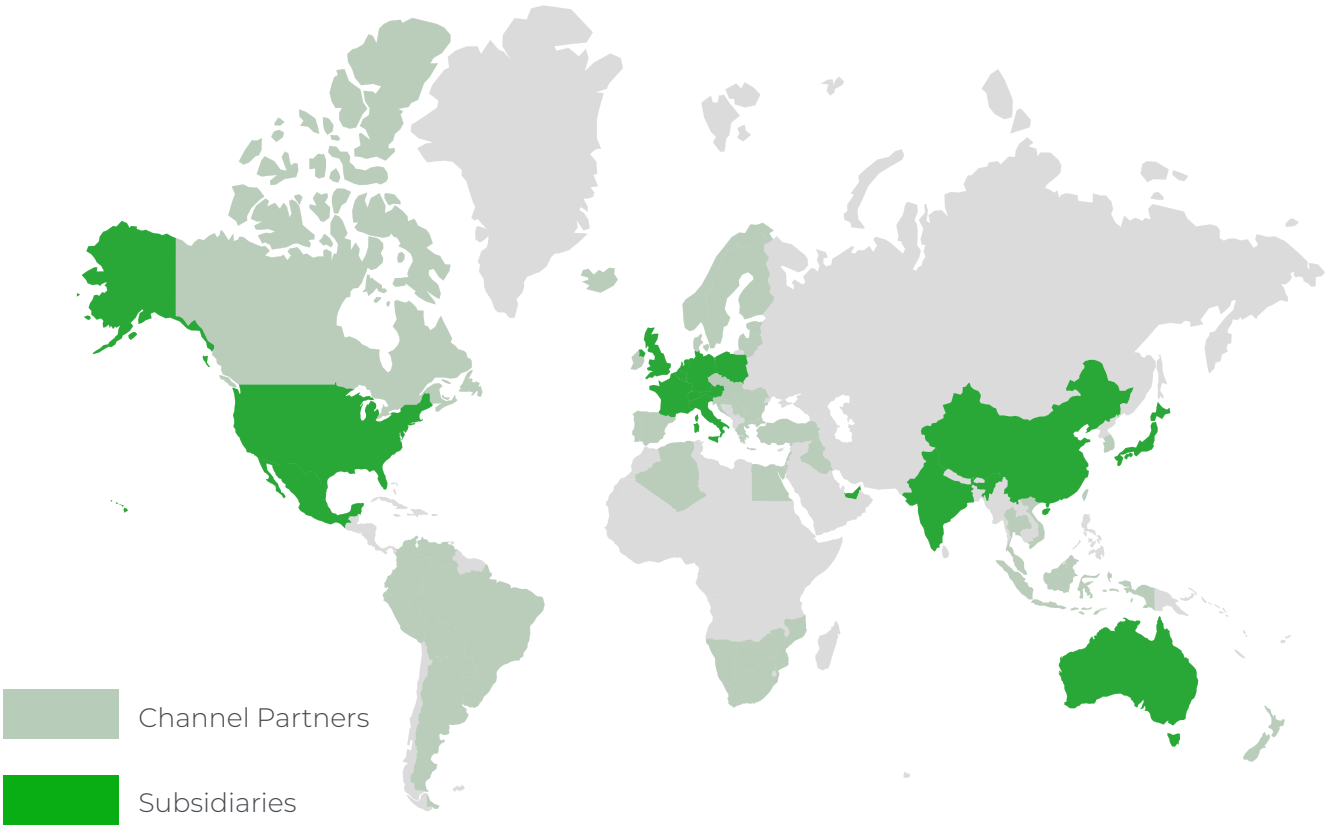
A laser table can be driven by other graphics software such as Adobe Illustrator or Corel Draw.

You now have everything you need to assess your potential profitability with a CO2 laser table.

Our advice: opt for top-of-the-range lasers for greater productivity and peace of mind. Gravotech experts are here to help you identify the machine that's right for you: from identifying your needs to choosing the right machine, right through to deploying the laser table on your premises.

Contact a Gravotech expert

Gravotech, leader in permanent marking solutions



+85
years of expertise

+60 000
customers

+85 %
sales export

77
countries

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