

A large, high-resolution image of the Earth as seen from space, showing the continents of Europe, Africa, and Asia. The Earth is set against a dark blue background with scattered white stars.

Experience the benefits of laser machines

Trimming and personalisation of products can take up a good deal of time, especially when using old cutting and engraving techniques. BRM laser machines take work off your hands and provide a new class of accuracy compared to these manual methods.

Powerful lasers enable you to create unique designs with varying textures. Breathe life into your two-dimensional design with ease. Countless professionals benefit from these machines: whether you work within the technical or creative sector.

INTRODUCTION

Traditional cutting and engraving techniques operate with the manual cutting and puncture of materials using precision blades and similar equipment for slower, more labour-intensive and less optimal results.

Throughout the past years, the use of laser machines has skyrocketed due to the wide application and growing popularity of the advanced equipment. Laser beams with high energy and power density can vaporise materials quickly, efficiently and continuously. Laser cutting machines are also equipped with digital automation technology to facilitate the engraving, cutting and hollowing out of products. A laser machine can be utilised in various sectors and is able to process a wide range of materials, including paper, acrylics, glass, stainless steel, multiplex and many others.

Cutting with a laser offers more precision, efficiency and quality than traditional cutting and engraving techniques. We will highlight the exact benefits of our laser machines later in this document. We will also share several of our client case studies with you.

OPERATION

Laser beams with a high energy and power density can vaporise materials rapidly, efficiently and continuously.

The cutting machine's laser beam is concentrated on a small area so that the focal point gains a high power density, rapidly converting photon energy into heat until the material vaporises and creates a perforation. As the beam travels over the material, the perforation continues to create a cut seam. This seam remains almost completely uninfluenced by residual heat and is therefore unaffected by distortion factors.

Seams are consistent and precise, and the incision is customisable. With the help of computer vector pattern design, high efficiency can be obtained at low cost. Combining laser and computer technology allows designers to achieve perfect laser cutting or engraving results.



ADVANTAGES

A laser machine offers many advantages and is the perfect tool for cutting a wide array of materials. When compared with a 3D printer or manual cutting, many benefits can be gained.

Several general advantages apply to working with a laser cutter. Rapid production times are a main advantage for large-scale processing. Moreover, lasers provide the highest level of accuracy in results. The machine is computer operable with use of the advanced CNC technology.

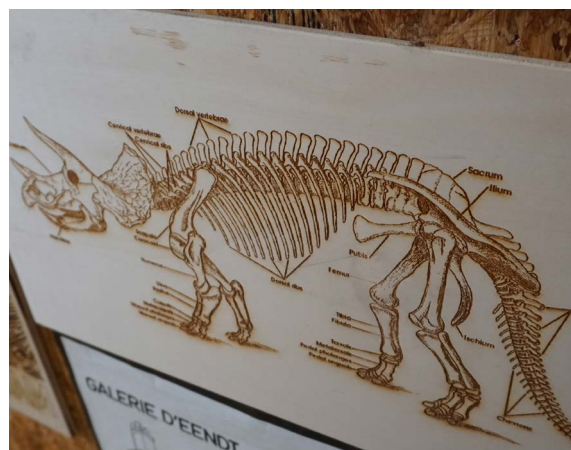
The user-friendliness factor is high. Another plus point is the lack of finishing required following laser processing. Gone are the days of sanding, filing and polishing, and the accompanying shavings and residue.



ADVANTAGES

3D Printer vs Laser Cutting Machine.

A laser machine and a 3D printer have some similarities but are primarily characterised by their differences. One similarity, for example, is that both machines are computer operated. One difference, however, is that 3D printing requires the software to produce a mould. This forms the foundation for the 3D printing production. During laser engraving and laser cutting, the software itself forms the foundation for precision cutting and engraving. A significant disadvantage of a 3D printer machine is the equipment's slow operation. When cutting or engraving with a laser machine, the speed and efficiency form a major advantage. Moreover, the cost of purchasing a 3D printer for professional applications is significantly higher.



ADVANTAGES

The advantages compared to manual cutting, etching or engraving.

It goes without saying that laser equipment is much faster than manual processing applications. Manual etching and engraving are highly time-consuming processes. With use of a laser, the production level is many times higher. Moreover, a laser offers more in the way of precision and accuracy. With manual processing, accuracy can never be guaranteed. As a result, batch productions will always contain a certain level of inconsistency.



For which sector is the laser machine suitable?

The possibilities for the use of a laser cutter are virtually endless. This includes, for example, applications in the fashion industry, marketing sector and shipbuilding industry or in the field of carpentry, quarries and metalworks. The creative sector also plays host to an extensive array of applications for artistic expression and creation.

Examples of sectors:

- Marketing sector
- Fashion industry
- Shipbuilding industry
- Carpentry sector
- Metalworking industry
- Creative sector
- Quarry and mining sector
- Schools
- Architecture



The varied opportunities offer the option of using the machinery for the manufacture of machine components, for example. Or the creation of original souvenirs and unique promotional items. The possibilities also extend to unique decorative items, and the design and creation of beautiful leather products such as leather belts or leather clothing labels. One of the advantages of a laser machine is the high level of detail in specific patterns. The creation of contours or high-precision etching is another plus point.

BRM Lasers are compatible with a wide range of materials. The versatile cutting equipment is suitable for cutting and engraving applications with various materials.

Wood materials alone offer endless opportunities for carpentry products. Moreover, a wide array of wood types is suitable for laser carving, such as MDF, multiplex, particle board, hardwood, veneers and cork. Various wood products can be transformed into art, souvenirs and decorative furniture processing. Materials such as glass, plexiglass and mirrors are also ideal for adding a unique look. This also applies to the use of metals and natural stone, as well as leather, paper, foam, stainless steel, rubber and textiles.

With the availability of cutting and engraving using a laser machine, the options for creating a unique product are endless. Some exceptions do apply to the suitability of products. Due to the toxins found in PVC, for example, it is not compatible with a laser machine. This also applies to all materials containing PVC.

Examples of compatible materials:

- Wood types, cork, MDF, particle board, multiplex and veneers
- Glass, plexiglass, crystal and mirrors
- Aluminium and iron
- Foam
- Textiles
- Paper
- Rubber
- Natural stone
- Stainless steel

Odisee University College

Odisee is a Belgian University College with multiple locations throughout the country. At Odisee's technological campus in Ghent, a BRM laser machine is used on a daily basis. The machine is frequently used for the "Design and production technology" programme where students are instructed in mechanical designs and production technology. At Odisee, we've met with instructor Jurgen Symynck.

"We use the laser machine to show the students that a design needs to be feasible and that they therefore need to consider each detail of the design so that the final result is a single mountable entity."

Students create a wide range of products with the laser machine. One great example was a catapult that could launch a tennis ball into a goal.

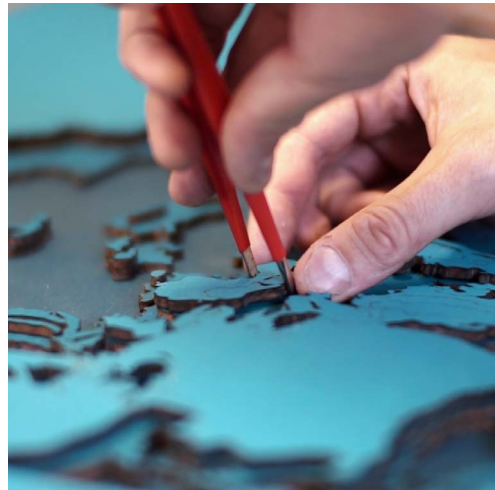
"We are very happy with the laser machine and its added value. Although the machine was affordable, it isn't lacking in durability. The software is highly accessible, whereby students are able to use the machine independently following 30 minutes of instruction."

Jurgen would certainly recommend the machine to other schools, primarily due to the good price-quality ratio!

De nieuwe kaartenmakers

De Nieuwe Kaartenmakers are two young dutch entrepreneurs with a range of highly creative maps which serve as stunning wall art. With the use of varying layers of wood and colour palette, the maps are absolutely stunning. “We aim to lay the focus on the depths and heights found throughout the world. Many people haven’t the faintest idea of how beautiful the underwater world is.” The maps are exclusive as only a few samples are produced from each design. These can be purchased via the De Nieuwe Kaartenmakers website.

Each map is drawn by hand on the computer and each wooden panel is hand-painted. “The final step is to cut out the design. Precision is key and simply cannot be achieved with simple saw. Each layer must be cut using laser technology.” After cutting, the wooden layers are glued to the map by hand.



“ **Without the laser,
we wouldn’t have a
company.**

For De Nieuwe Kaartenmakers, the laser machine is essential to the construction of the maps. The machine’s high precision ensures that the maps come out of the machine as exact productions of the computer designs. The process is also highly efficient. “Without the laser, we wouldn’t have a company. With a jigsaw we would need a full day per layer. This only takes about an hour with the laser cutter.” De Nieuwe Kaartenmakers haven’t regretted the purchase of their BRM Laser Machine for a single minute. “It doesn’t get any better than this. I am confident that the laser is the best equipment for the job.”

Team V Architect

Team V is an architectural firm in Amsterdam (Netherlands) specialised in large utility projects, such as train stations, high-rise buildings and other complex structures. The firm has worked on such prominent projects as Rotterdam Central station, Amsterdam South station and the HAUT project. Patrick Bil, an architect that produces scale models for the firm, described the cutting and trimming method originally used as strenuous with limited potential to achieve the desired result.

With the objective of creating models for the firm with more efficiency and accuracy, Bil set out to find the right cutting and engraving technique for MDF, acrylic and other materials. He looked into a wide range of manufacturers and laser machine products through demonstrations and the request for detailed specifications.

After more than a year with the BRM laser cutting machine, Bil's conclusion is that BRM Lasers is the best firm in terms of price, product quality, professionalism and image.



Bil indicates that the most important feature of the laser machine for Team V is its efficiency. This is due to the fact that the firm must first produce a large quantity of high-quality models before producing the final model. He also notes that the BRM laser machine was installed and operates according to the highest standards while the guidance and training required to operate the machine effectively were provided.

BRM Lasers offers a wide spectrum of efficient, highly accurate laser machines. The equipment is available in an open and closed table version depending on the needs of the user.

Studio BEE

Studio BEE is a laser studio based in the city of Vught in the Netherlands. This is where the young entrepreneur Laszlo Meulman designs a range of brilliant creations with his BRM Laser Machine. During his product design degree, Laszlo became interested in laser cutting and engraving techniques. “I delved into the world of lasers and discovered the wealth of creative options.”

He has many unique clients who come to him for his expertise with the laser machine. His portfolio includes a range of outdoor signage for businesses. You'll find a collection of his designs cut with the BRM Laser Machine decorating the facades of many a business throughout the region. He also engraves and produces the most unique promotional gifts – everything from leather emblems on canvas shoppers to specialised wine cases. With the diversity in available materials, Laszlo always thinks up the perfect solutions for his clients.

“ **BRM witnessed the earliest stages of the success of my business.**

The laser machine is essential for Studio Bee. “Without my laser machine, Studio Bee wouldn't exist.” Laszlo adds that a laser machine provides unparalleled precision and doesn't produce the rounded corners associated with a CNC milling cutter. He is also highly enthusiastic about his choice to work with BRM. “BRM is a safe bet and also offers sharp pricing. This is ideal for new companies.” For Studio Bee, the laser machine has become indispensable.

CONTACT

Feel free to contact us for additional information or questions!

We are happy to help you review the possibilities for a machine at your company. You are also welcome to a demo on one of our machines at various locations throughout the world. Demos serve to highlight the range of possibilities offered by the machines so that you can get a good idea of the added value of laser equipment.

