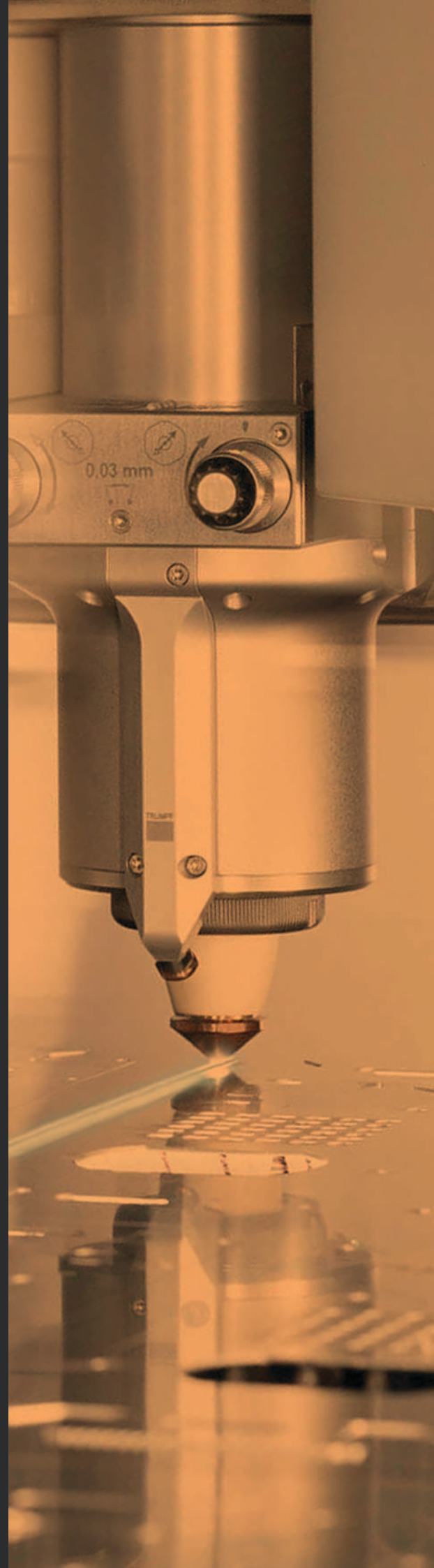


# Ultimate guide to 2D laser cutting

Get your 2D laser cutting  
files ready for our online  
platform in an easy way.

**LASERBOOST™**



*LaserBoost is meant to be easy and fast. Understanding some basic rules about our service is the key concept to make the production flow properly.*

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## - Supported Formats

We support a large number of vector formats, for these, our software is able to detect all the necessary parameters to show you a price on the fly.

Supported formats:



For .svg files, it is important to check the measurements detected by our tool, these can be edited in the configurator itself. The scale of the format may be altered depending on the version of the file or program with which it is created.

If you have a file with a different format (indicated on the web as *.other*), you must manually enter the height and width measurements of your parts.

Our technical team will review your order before manufacturing it.

If you have any questions regarding the creation of your document, please contact us at [info@laserboost.com](mailto:info@laserboost.com).



## - Recommended Software

All existing CAD software can save or export files in the formats we support in our configurator. Here is a list of the programs we recommend:

Software	Formats supported by LaserBoost
Adobe iLlustrator™	.dxf   .dwg   .ai   .svg   .pdf   .eps
Autodesk Autocad™	.dxf   .dwg
SolidWorks™	.dxf   .dwg
Inkscape™ (free)	.dxf   .svg   .pdf   .eps
QCad™ (free)	.dxf   .dwg   .svg
Autodesk Fusion360™ (free)	.dxf   .dwg

Adobe Illustrator™ and Inkscape™ are the most versatile, designed for both technical and artistic design, with a wide range of export formats options and easy to use.

Autodesk Autocad™ and QCad™ are the industry standard for 2D CAD drawing.

Solidworks™ and Autodesk Fusion360™ are 3D drawing software intended for engineering and mechanical design. Both can also export to 2D compatible formats.

Remember that it is necessary to upload the parts free of dimensions, boxes, drawing templates and in real scale 1:1 in millimeters.

If you have any questions regarding the creation of your document, please contact us at [info@laserboost.com](mailto:info@laserboost.com).



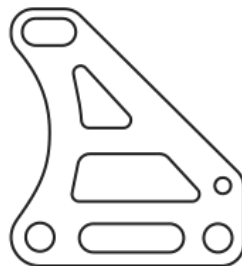
## - Getting you parts ready

Here are the 4 basic points to keep in mind so that your parts are ready for our configurator.

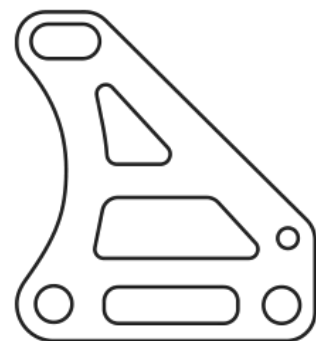
### > Scale

Your part must be the exact size you want it to be cut, in 1:1 scale. If you want the part in a different size than the original you must indicate it in the configurator. The units in which you must upload your file are millimeters (mm) or inches (in).

 Order #456  
Hello, I would like my part at 300 x 330 mm.



150 x 165 mm

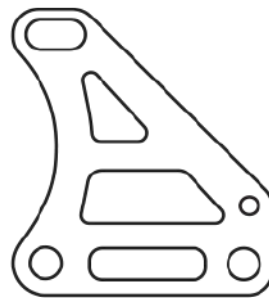
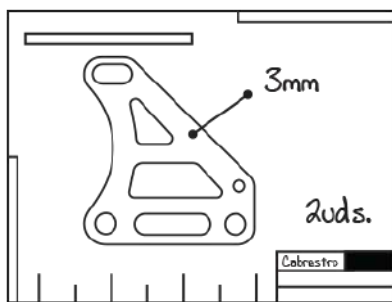


300 x 330 mm



## > Content

Your file should contain only the lines to be cut. To avoid problems and delays, your design should be free of dimensions, notes, borders and objects that should not be fabricated.



## ➤ Lines and Shapes

Your designs must be free of open points and intersections. Our process handles all lines in your design as a cutting lines, so an open area will be left without a full cut and an intersecting lines will generate an extra cut.

Make sure your designs do not contain any of these elements if they are not really necessary.





## > Texts

There are some fantastic typographies, but we don't have all the existing fonts on our devices. To avoid getting the wrong view of your text we need you to convert the texts to outlines.



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In most CAD programs, the functionality of converting text into shapes is called "explode" or "explode text".

In Adobe iLlustrator™ this can be done by selecting the text and clicking on the Text Menu>Create Outlines.



## - Laser cutting process

Our precision and maximum measurements at a glance:



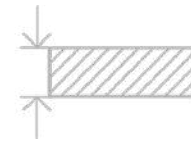
**$\pm 0.15$  mm**

Cutting Tolerance



**1000 x 2000 mm**

Our metal sheet sizes



**0.3 mm ~ 8 mm**

Cutting thickness range

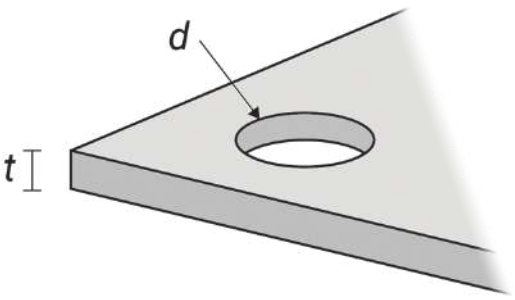
The dimensions of our sheet metal formats coincide with the maximum dimensions we can produce per part (1000 x 2000mm). If you need more space for your creations, please contact us at [info@laserboost.com](mailto:info@laserboost.com)

At LaserBoost we are open to special requests within our limitations. If you need a material that is not in our online stock please contact us, we will look for the raw material in our authorized suppliers.

## > Limitations on shapes and holes

Our process has geometric limitations depending on the thickness of the material to be cut. We show below the minimum hole diameter values according on the thickness to guarantee a clean cut and finish.

Thickness (t)	Minimum diameter (d)*
0.5 mm	∅ 0.5 mm
1.0 mm	∅ 0.5 mm
1.2 mm	∅ 0.5 mm
1.5 mm	∅ 1.0 mm
2.0 mm	∅ 1.0 mm
3.0 mm	∅ 2.0 mm
4.0 mm	∅ 3.0 mm
5.0 mm	∅ 4.0 mm
6.0 mm	∅ 5.0 mm
8.0 mm	∅ 6.0 mm

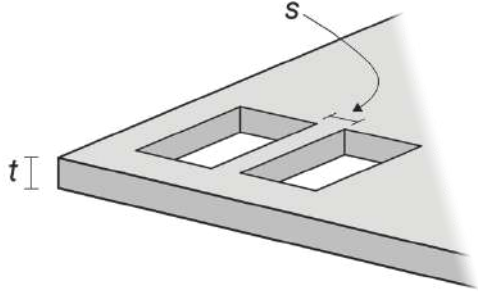


\*In aluminum, the minimum diameter is equal to the thickness value.

## > Minimum measurement between shapes

There is a minimum distance between closed shapes to be cut in the same piece, also depending on the thickness.

Thickness (t)	Minimum distance (s)**
0.5 mm	∅ 1.0 mm
1.0 mm	∅ 1.0 mm
1.2 mm	∅ 1.0 mm
1.5 mm	∅ 1.0 mm
2.0 mm	∅ 1.0 mm
3.0 mm	∅ 1.0 mm
4.0 mm	∅ 2.0 mm
5.0 mm	∅ 2.0 mm
6.0 mm	∅ 2.0 mm
8.0 mm	∅ 2.0 mm

A 3D perspective diagram of a rectangular plate with two rectangular holes. The thickness of the plate is labeled 't'. The minimum distance between the inner corners of the two holes is labeled 's'. The diagram illustrates the relationship between the plate's thickness and the required distance between shapes for successful laser cutting.

\*\*In aluminum, the minimum distance is equal to half the thickness value.

It is possible to properly manufacture parts that do not comply with the Minimum Hole Sizes and/or Minimum measurement between shapes tables, however, the correct cutting result is not guaranteed by LaserBoost if the specifications of these tables are not met.

In addition to the non-correlation between the design and these tables, the quality of the cut may be affected by factors such as the existence of areas on the part with a high concentration of cut, among others.

You can find more information about these cases in our Terms and Conditions of Service on our website.

[www.laserboost.com](http://www.laserboost.com)

- 72h shipping
- Online Configurator
- Instant price
- No minimum quantity
- Multiple materials and finishes

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