



Lasercutting

For students from the 2nd year and for DOT 1

BEFORE LASERING : Make an appointment (via inge.elewaut@ugent.be) or for appointments on tuesdays: Christof.deprest@ugent.be, try to determine which material and how much you want to laser (max. 1h per student, 0.5h in jurytime). Prepare your lasercut well. Always sent in AUTOCAD dwg or dxf. When your file is ready : Mail it to laserugent@gmail.com! When we have the file we can also check your lasertime.

DURING LASERING : Keep monitoring the laser ! Make sure that the laser does not bump into the material. Press pause if necessary, you can use tape to keep the material in place, press pause again to continue the laser. The cardboard needs to be taped on the sides or bottom, when it is not flat and could bump against the laser. It is best to keep your drawing 0.8cm away from the edge.

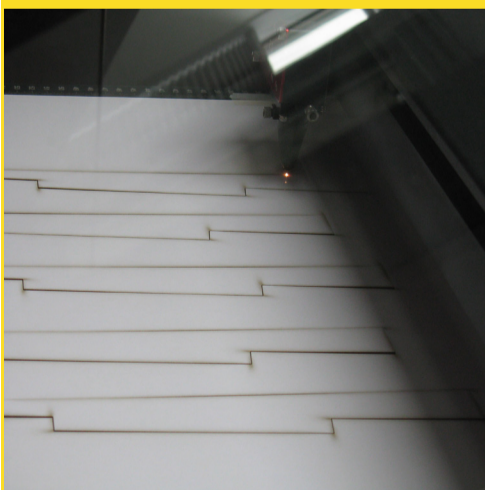
AFTER LASERING : **Remove material directly from the plot & laseroffice** and bring it to the workplace outside in a ventilated area. Put your left over material in the BIN. Then pay cash or with a payment link (while lasering or directly after)

Preparation lasercutfile

1. Download the `laser cutter.dwt` file (acad-template) and `laser cutter.stb` (plotstyle) at <http://www.architectuur.ugent.be/organisatie/faciliteiten/laser-cutter/> Read the laser cutter preparations file here or on our website.
2. Start autocad and create a new drawing starting from the `laser cutter.dwt` file. Here you will find a layout " laser cutter" where you can position your drawings.
3. In the new file, you will find a number of layers (0, cutting, engraving , viewport), for the layers "0" and" viewport" the plot function has to be disabled (already in the prepared file). Objects that you want to cut or engrave, put them in the respective layer .
4. Important: Make sure there are no lines are superposed and avoid the production of individual points (for example, you would get this if you would execute a "divide" command, the "nodes" are in fact individual points). Double lines will dramatically increase the execution time and ensure that in those places the cutting line will be thicker. It is also bad for the laser cutter. To remove duplicate lines from the file: Command ' Overkill '
5. After the previous steps your document is almost ready to print, though you will be missing a " plot style " in the plotmenu. Indeed, the laser cutter plotstyle hasn't been added yet to the existing plot styles and you will notice the message " missing" . In the main menu you go to "file " .. to " plot style manager" .. and simply drag the `laser cutter.stb` file in there. From now on, the various plot styles (cutting and engraving) are attached to the respective layers. You will get an error message stating that " ... this plotter configuration can not be used ... " , ignore this message.
6. If you only use one side of the material, you can make the drawing mirrored, so this side will be engraved to avoid having laser stains on actual side

NOTES:

- Avoid using hatches or text (except the font "txt " , the laser cutter recognizes this as normal lines), which are rasterized by the laser cutter and this will go very slow. Use no other regions , but use " boundary" to trace the contours of objects. " Region " also creates a series of points that are cut . Of course, this results in long operating times
- Simplify your AutoCAD drawing as much as possible . On scale, the laser cutter can engrave lines up to about 0.5 mm. For cutting in cardboard you keep a distance of min. 2mm. Depending on the type of material aim for maximum 1000-1500 lines per full board for an acceptable execution time..



Approved materials

Bring Yourself. Grey cardboard is not allowed, it pollutes the machine too much

White cardboard 1 or 1.5mm: 60/90 cm is the maximum width of the laser (all smaller sizes are possible).

Wooden cardboard (most commonly used) is usually 60/80 cm (note the size of your drawing):

HK 0.6mm, 1.2mm, 1.8mm, 2.4mm, and 3mm are also available from Schleiper/Lucas Creativ.

Colored or white paper (various colors of paper are available from Schleiper or Lucas Creativ; please bring your own).

Other sizes are also acceptable. Please ensure your paper is as flat as possible and not rolled up, otherwise it will bump against the laser cone.

Blue plexiglass 3mm (37.5/40cm: €9.50 per sheet): a few sheets are still in stock; other colors of plexiglass can be purchased by yourself. Only CAST plexiglass, otherwise not laserable: <https://www.atelierswauters.be/nl/>

Laser time costs €1 per 5-minute block/per sheet. This is added to your material cost.