



Lasercutting

Only for students starting from the 2nd year

BEFORE LASERING : Make an appointment (via inge.elewaut@ugent.be), try to determine which material and how much you want to laser (max. 1h per student). Prepare your lasercut well. If you laser small forms, please use the smaller size card board, for example 35/90cm. (cheaper) Always sent in AUTOCAD 2022 dwg or dxf. or older. When your file is ready : Mail it to laserugent@gmail.com! No usb to avoid viruses.

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. During the lasering, you can't put a usb stick into the computer. Also best to not open another program on the laser computer, because it can give errors and the lasering will stop. Always 1 person stays with the laser to check if nothing happens.

AFTER LASERING : **Remove material directly from the laseroffice and surface** and bring it to the workplace outside. Put your left over material in the BIN. Pay your bill.

Preparation lasercutfile

1. Download the lasercutter.dwt file (acad-template) and lasercutter.stb (plotstyle) at <http://www.architectuur.ugent.be/organisatie/faciliteiten/laser-cutter/> Read the laser cutter preparations file here or on our website.
The file is made for the biggest possible size 60/90, so beware if you use wood board of 60/80, to make your drawing at the correct size!
2. Start autocad and create a new drawing starting from the lasercutter.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 ' (Acad 2008) - via Express tools (Acad 2010)
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 lasercutter.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.. 30minutes!

BRING YOURSELF, Goin time to the store (lucas creativ/schleiper)
Grey cardboard is not allowed, it pollutes the machine too much

Good materials

white cardboard 1.5mm 60/90 cm

plexiglas translucent 3mm (45/60cm : 15euro pp) of blue 3mm (37.5/40cm : 9.5euro pp) or

buy at info@atelierswauters.be (because only a few left)

Wood board 60/80 upto 3mm

coloured paper 65/50 cm: 1.5 euro (different colours : gray, black, chocolate, beige, brick red...)

(You can bring other colours 200 gr paper, available at Schleiper of Lucas C, ..)

white paper 200gr (A1) : 0.5 euro Ideal for folding structures

* Lasertime costs 1 euro per bloc of 5 minutes/per plate

