

Manual for creation of milling file

File format / Units

To generate a milling file we use RhinoCAM which is plug-in for Rhinoceros and generates the tool paths that are transferred to the CNC-milling-machine. The following file formats can be imported and edited:

- .3dm (Rhinoceros)
- .dwg (Autocad)
- .skp (Sketchup)
- .stl (Stereolithography)
- .iges
- .dxf
- .3ds

The units need to be set in millimetres (1 unit = 1mm). It is advised to insert a scale into the drawings, for example:

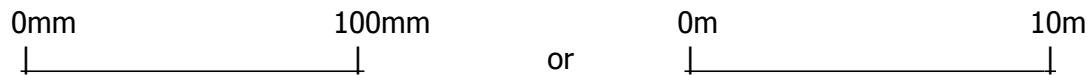


Table measurements / Constructed space

The maximum constructed space in **x,y-direction** is **1000x750mm**. The maximum height of the construction parts in **z-direction** is **50mm**.

In special cases, like engraving, taller construction parts are possible. That has to be decided from case to case.

Configuration of a file

Two-dimensional files are suitable for cutting contour lines, for example facades. The lines should be applied as poly-lines (connected, closed lines). All of the lines should have the same z-coordinates (**z=0**).

Three-dimensional objects should be closed volumes without open surfaces. We can't produce undercuts because it is only a three-axe milling machine.

The file should only contain the information of the volume to be cut. Think about the position of the components to use the material effectively (saves time, material and costs).

Created layers help us to process the information. Please use the following names for your milling files:

- Außenkontur/outer contours (to cut the outer geometries [2D])
- Innenkontur/ inner contours (to cut the inner geometries [2D])
- Gravur/ engrave (to engrave [2D and 3D])
- Tasche/ pocket (to mark a recess, for example relief façades [2D and 3D])
- Geometry (for volumes [3D])

Costs

To compensate mechanical wear we have to charge a user fee:

15 Cent/Min | 9 Euro/Std

The given costs depend on the milling time which depend on the size and complexity of your model and the choice of material.

Materials and material thickness

the following materials can be used:

- solid wood
- medium density fibreboard (MDF)
- chipboard
- plywood
- block-board
- polyurethane (known as PU or PUR)
- styrodur

The material thickness depend on the diameter of the miller. In general the thinner the miller the smaller the cutting depth.

miller	miller depth
• 1,0mm	4mm
• 1,5mm	8mm
• 2,0mm	10mm
• 3,0mm	15mm
• 6,0mm	30mm