

## Learning area 3 – CNC Milling

### Modul A: Handheld CNC Milling

#### Content Overview:

In this workshop you will get a comprehensive introduction to CNC milling and learn the basics of the theory around this topic. We will look at the Shaper Origin, a hand-held CNC milling machine, clarify which file format you will prepare and mill our first workpiece. The following topics will be covered during the course.

- How the Shaper Origin handheld CNC milling machine works.
- What file format you need and how you can create it.
- Positioning the design on the workpiece and setting the milling parameters on the machine.
- How you choose the right feeds and speeds for your material to get the best results.
- We practise data preparation and the milling process together.
- We look at samples together and discuss various possible applications.

#### Modules:

1. Introduction to the Shaper Origin
2. Excursus to the vector graphics software Inkscape
3. Independent milling with the Shaper

#### Objectives:

- Participants will be able to use the Shaper safely. After the introduction, we support them with their first project before they can use the machine independently.
- Furthermore, they understand how to create files for cutting pockets and holes.
- Participants learn which materials are suitable and which shapes can be machined.
- They also get an overview of suitable milling tools and their possible uses.
- They learn the basics of the vector graphics software Inkscape to create editable files for CNC milling.

**Duration:** 2 hours

**Minimum age:** 18 years

**Number of participants:** 3

**Language:** Course languages are German or English (depending on demand).

**Costs:** Free of charge within active membership, otherwise you need a day pass.