

HOVERLAY II

preliminary assembly instructions

Created by Moritz Walter, 2014. Hoverlay II and referring documentation is licensed under GPL V3. This manual is still under heavy development. However, it should be enough to get you started. If you're new to the whole world of wiring things up, find help in your local makerspace. I take no responsibility for damage or pain you might experience in this project.

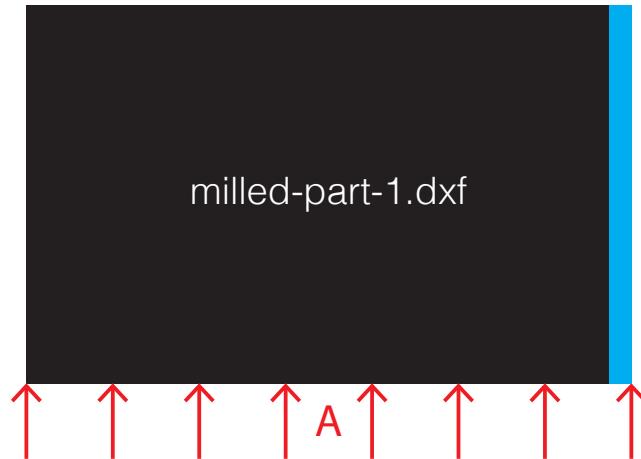
How to read this manual

Parts are shown as black polygons with the name of their corresponding *.dxf file, bottom side elements are shown as dashed lines.

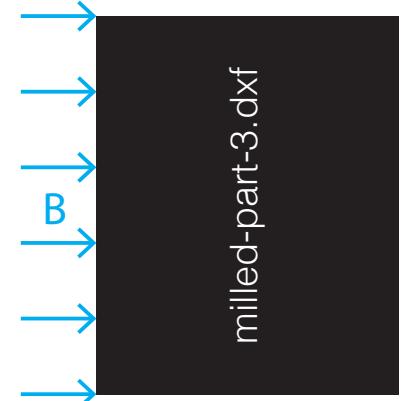
Colored areas mark where glue is applied to the surface of a part.



A



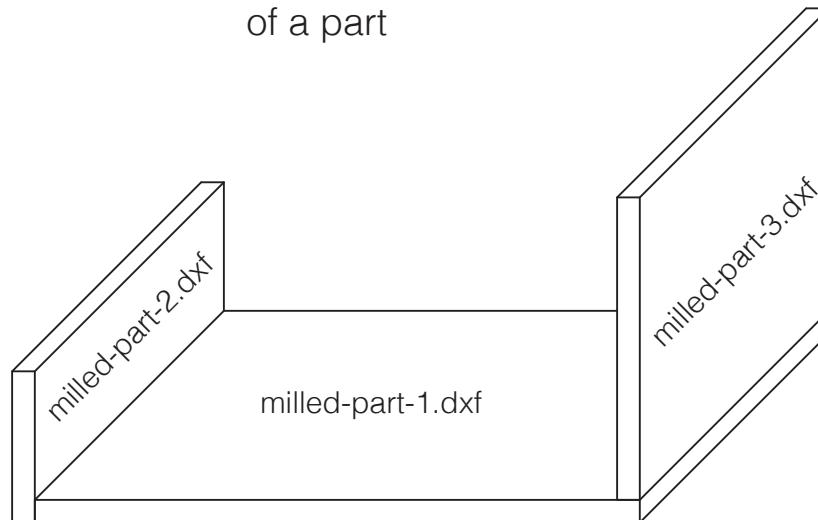
milled-part-1.dxf



B

Letters and colors tell you, how and in what order the parts belong together.

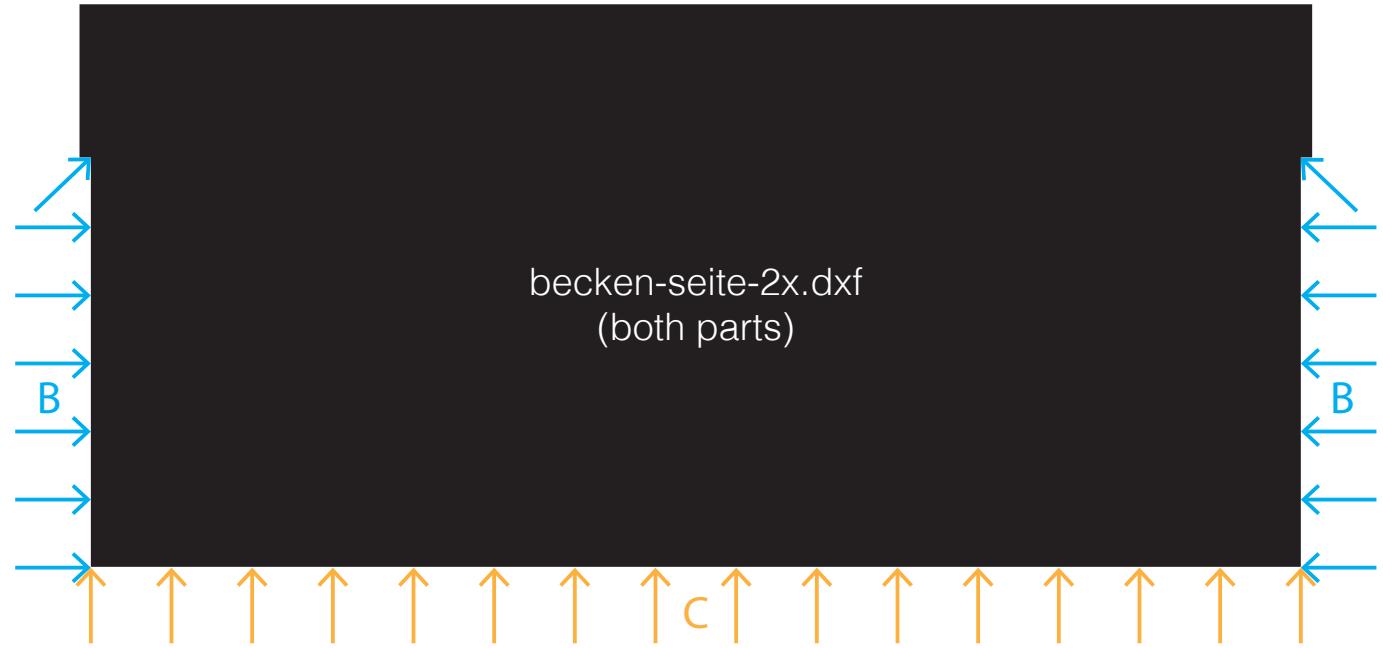
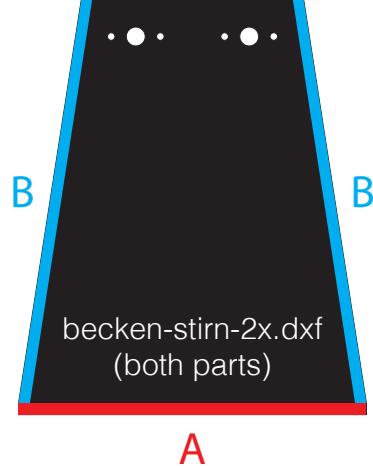
Colored arrows mark where glue is applied to the edge of a part



The above assembles like this:

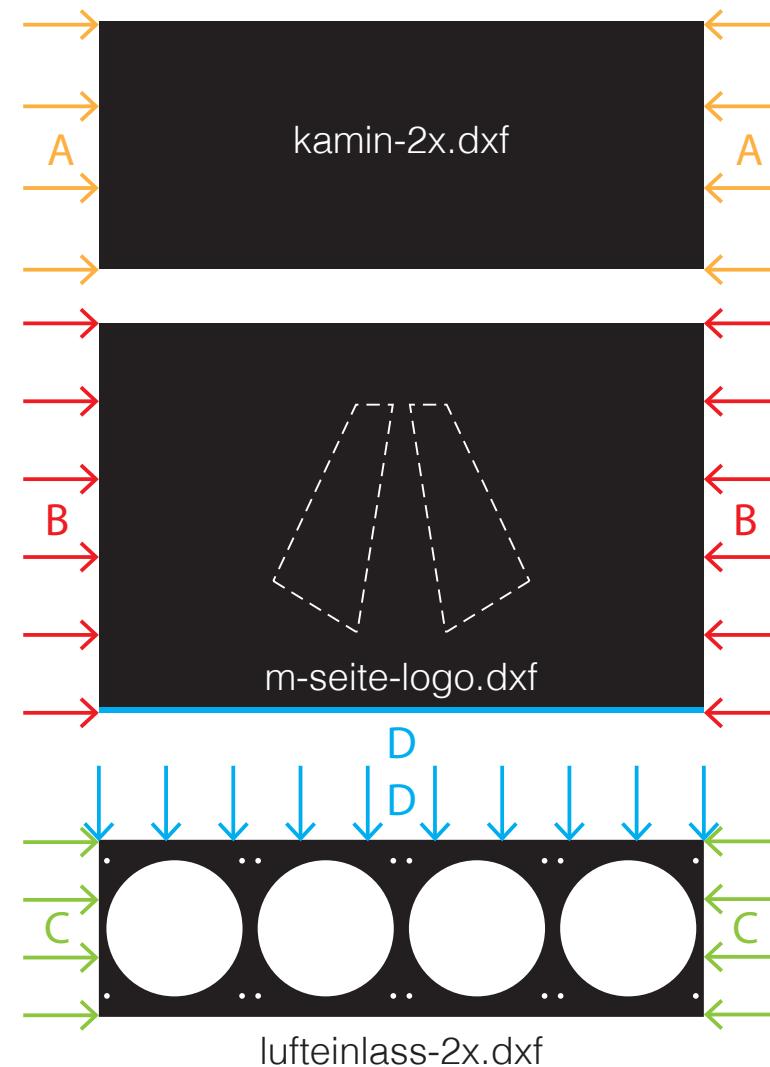
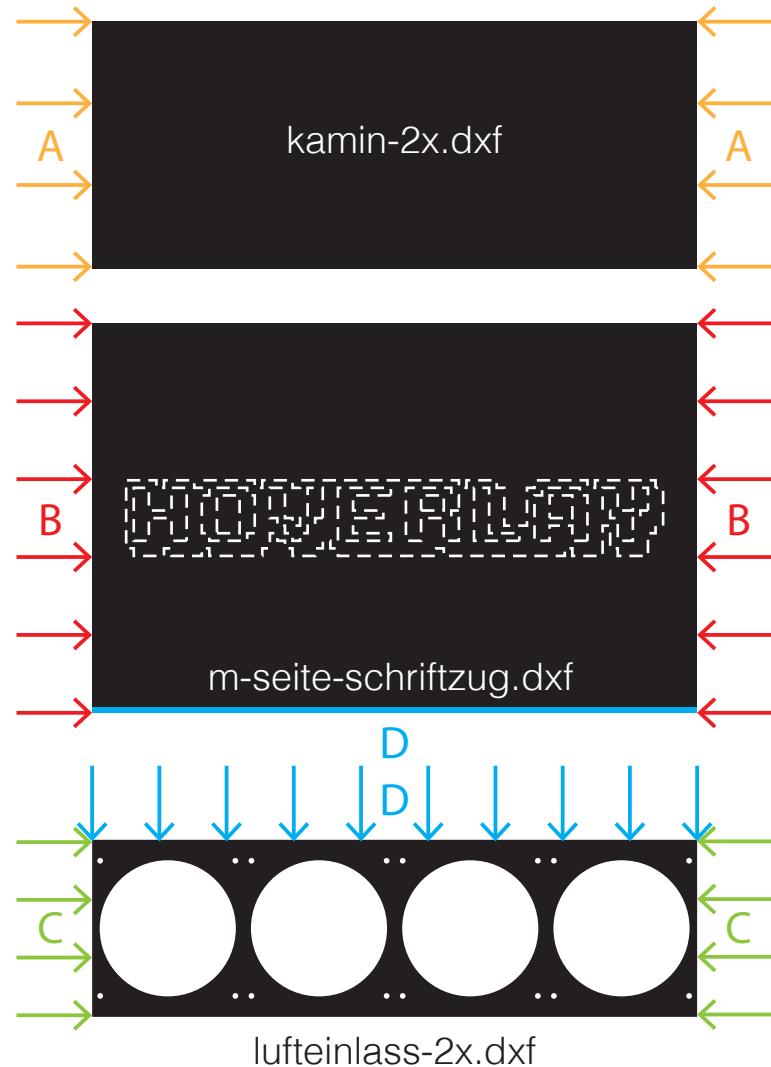
Vat

After assembling, seal the vat watertight with silicone or acrylic.

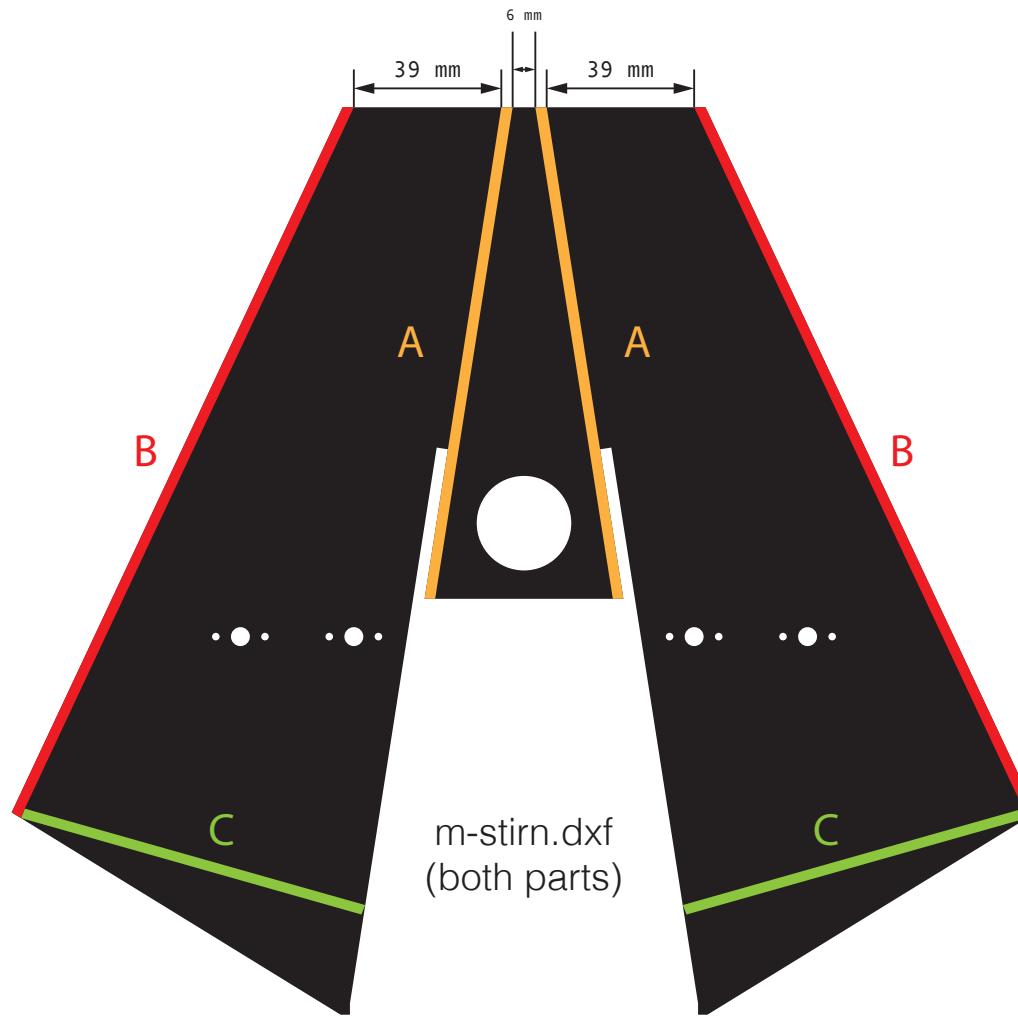


Housing (1)

Make sure to not apply any glue to the visible surfaces with the engravings of m-seite-logo.dxf and m-seite-schriftzug.dxf. The glue goes on the other side!



Housing (2)



Preparing power connectors and mounts

Before putting the connectors into the mount, solder the cable shoes into them. Then just slide them into the 3D printed mounting clip. Add cables with cable shoes on them and secure with a M3 screw.

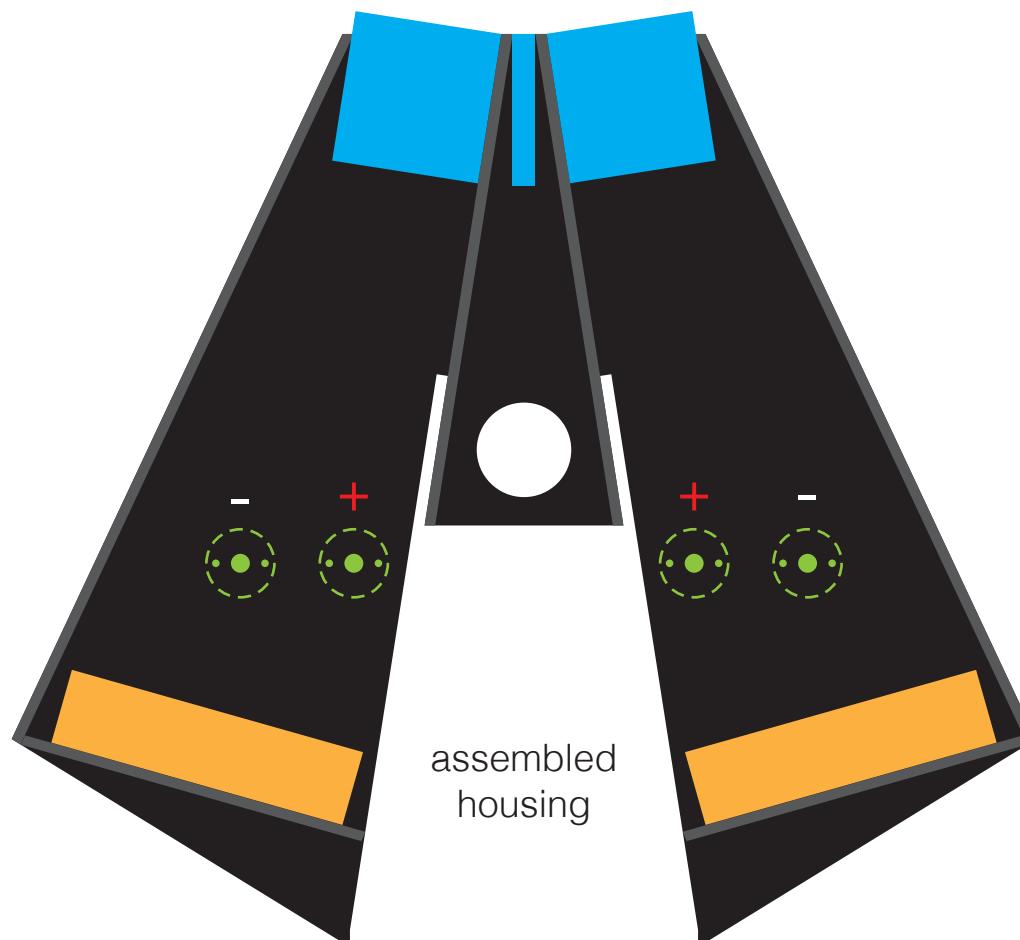


Installing flow formers, fans and power connectors

The 3D printed flow formers (shown in blue) slide into the air channels from the top and are secured with double-sided tape or plastic glue.

The fans (shown in green) are attached with M3 countersunk screws and nuts.

The prepared power connectors (shown in green) are attached with small M2 countersunk screws and nuts. Make sure you got the polarity right when wiring the fans to the power inputs and when passing on the input to the output on the other end of the Hoverlay II module. Power inputs are male, power outputs are female.



Wire the atomizers

The atomizers run from alternating current, so polarity is not an issue here.

All overlay modules connect in series, so you have to wire the atomizers and fans accordingly.

Power inputs are always male connectors, power outputs are always female connectors.

Here in the picture the power input is on the right, where all the atomizers are attached in parallel, while (also in parallel) two double-wire-connections pass on the current to the output (left). It is recommended to use sufficient wire diameters here. Once the atomizers are wired like shown below, you can install them into the vat.



Good Luck!



HACK DAY