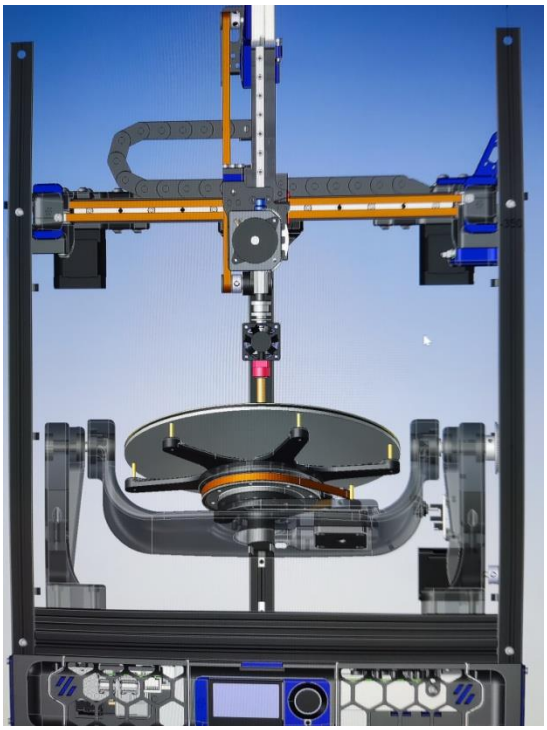
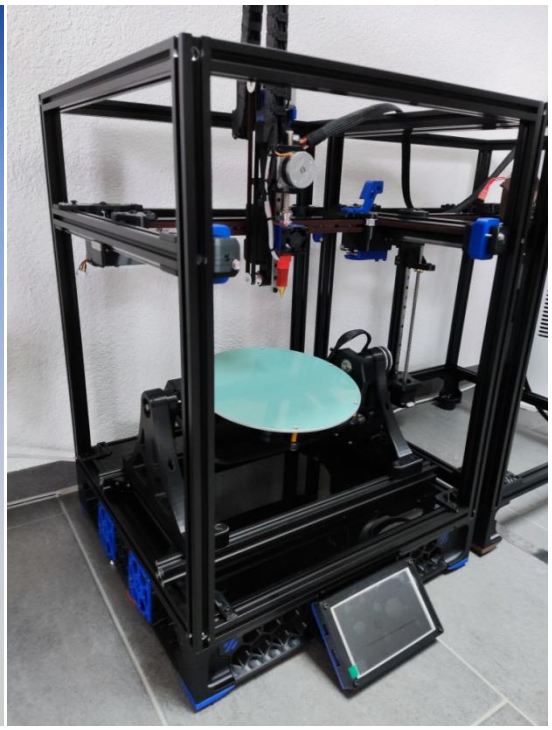
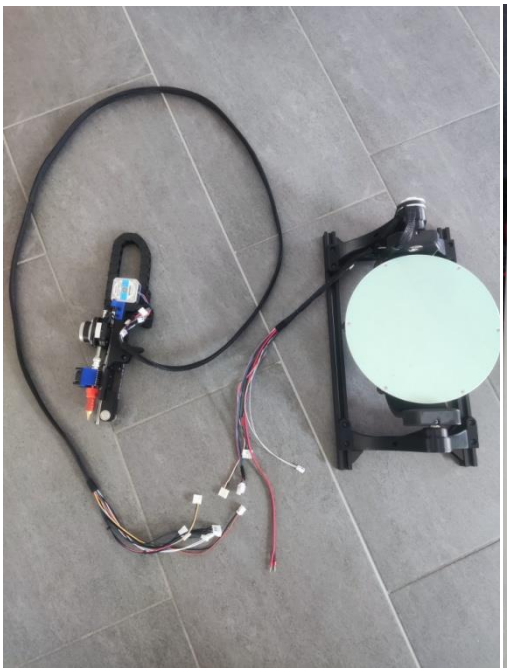
Project 5 axis 3D printer Voron Trident

For the project I chosed an 3D printer Voron Trident 250mm from open source, because of the excellent core XY gantry. The rotary bed and the Z axis extruder and hotend are designed as extention modules and can be adapted to any kind of core XY 3D printer. All parts are printed from ABS filament and in the future i would like to make the 3D printer fully enclosed.

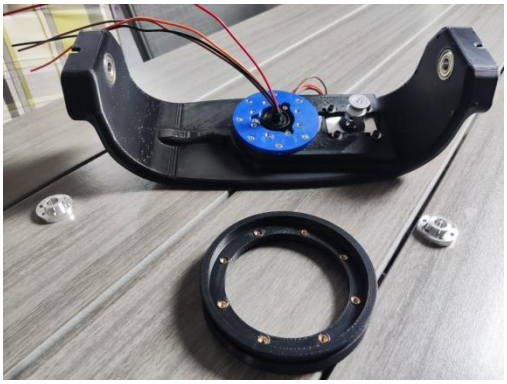
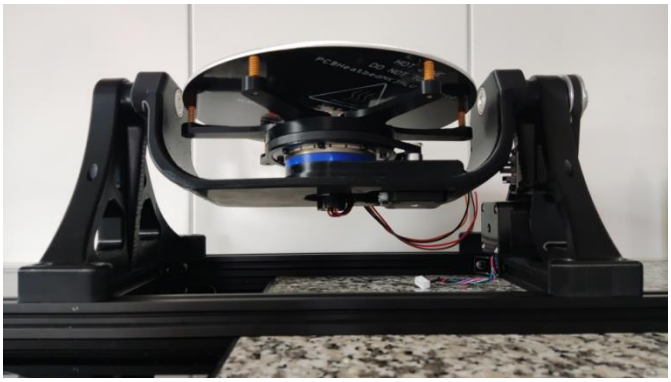
Everything was its build, was considered for people on budget and with no access to CNC machines and whole build can be finished with a bit of knowledge of mechanics



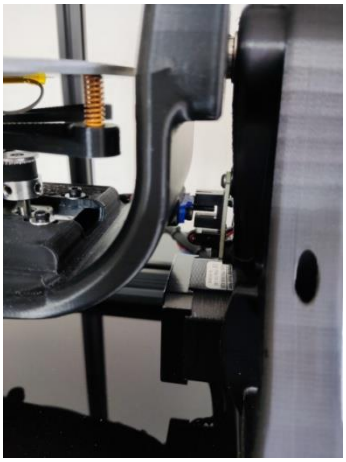
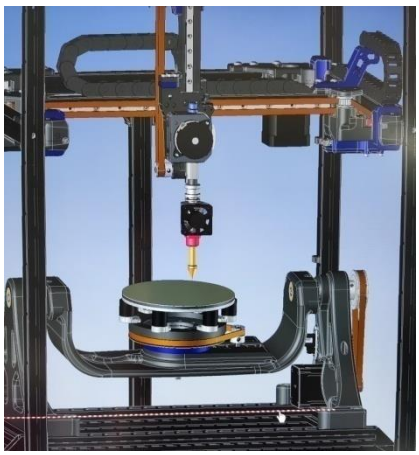
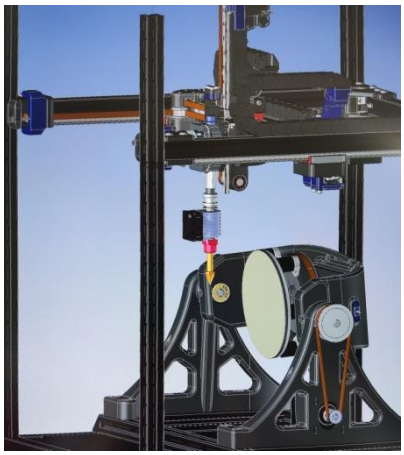




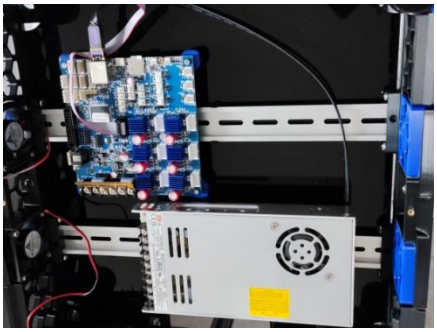
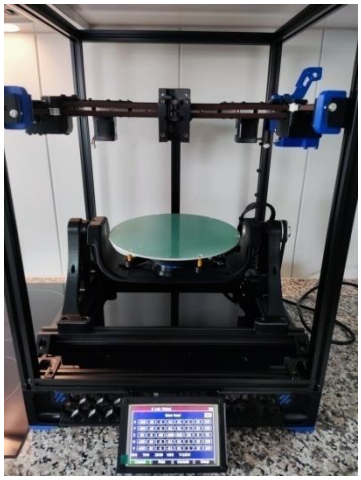
The rotary bed can be heated like any other heated bed for 3D printers with thermostat for reading temperatures, throught the slip ring. The size of current heated bed is 220mm diameter.

But the whole system is made for universal swapping of another devices, for example smaller bed or any kind of component what can be used as a base for executing 3D printing.

The 3D printer electronics is based on DUET 6HC with homing axis X, Y, Z, A, C. The rotary bed can swivel in both directions.


The 3D printer is already build and tested only with standard slicers such as Prusa slicer or Super slicer. I have made indicator clock device to adjust the printer to the tight tolerances. The whole motivation behind this project is to bring and educate communties of hobbyists or people interested in additive manufacturing, new way of processing FDM methods to create and produce parts what can eliminate weak characteristics of layer adhesion by combining layer deposition from different angles of produced components.