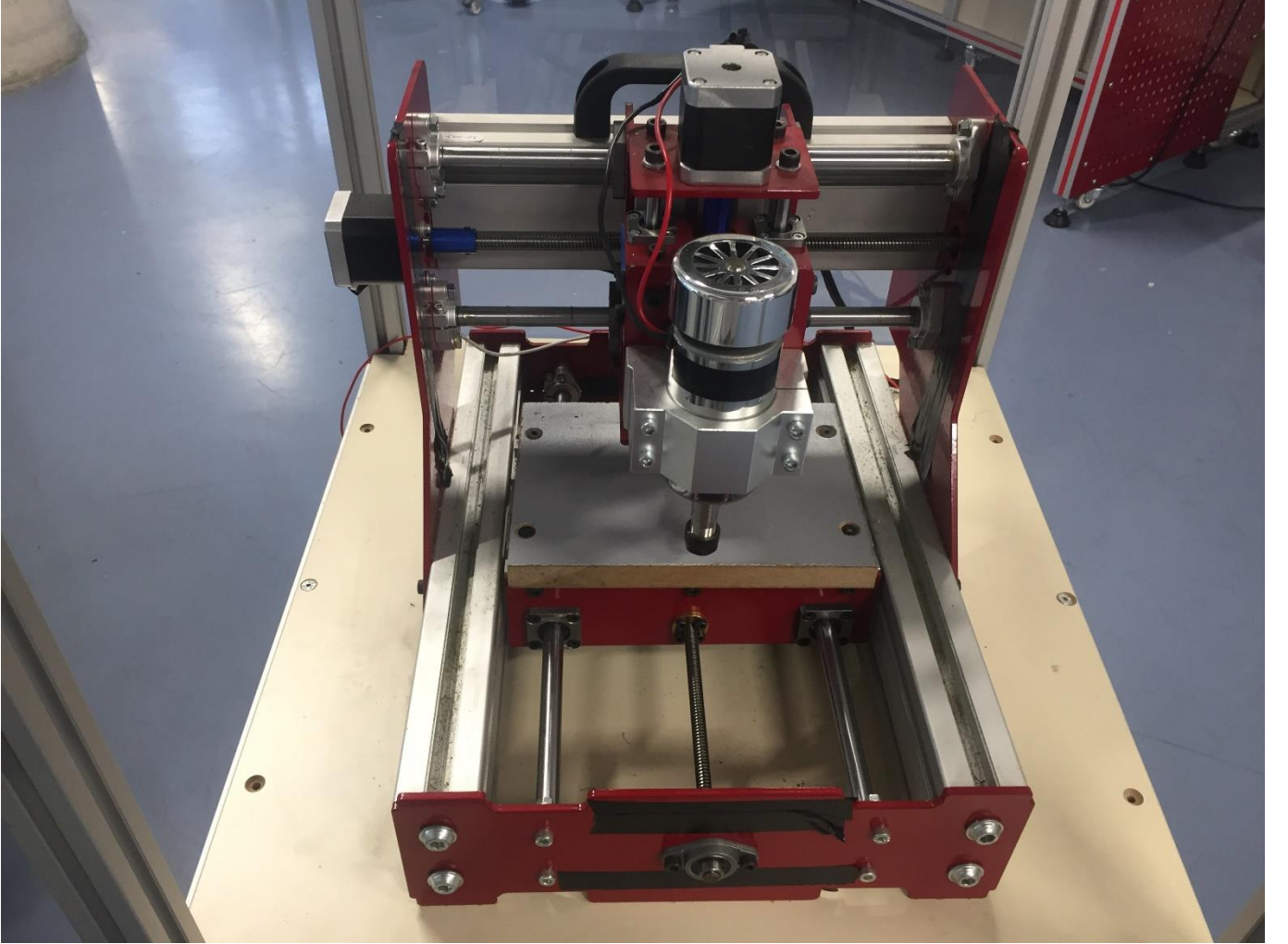


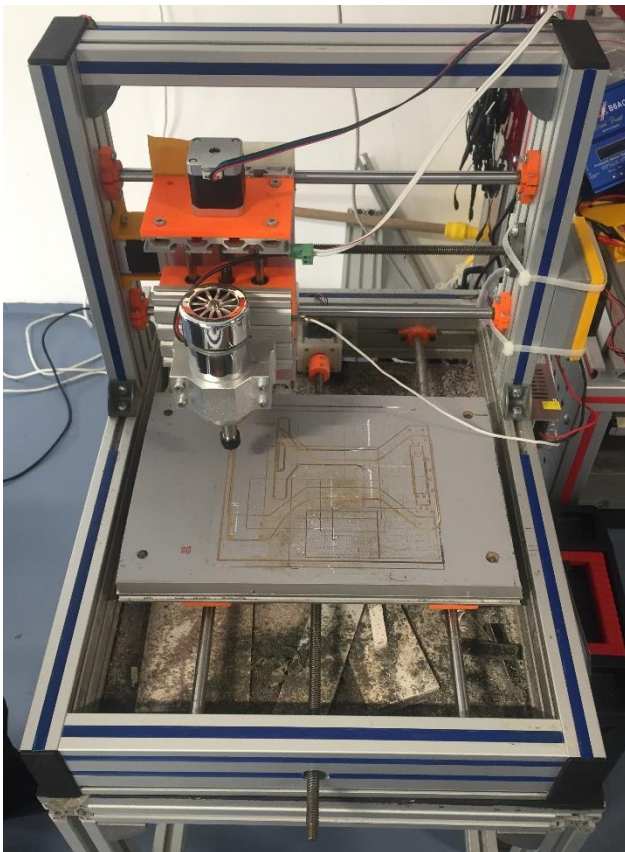
PCB ENGRAVER



EGE SEÇGİN

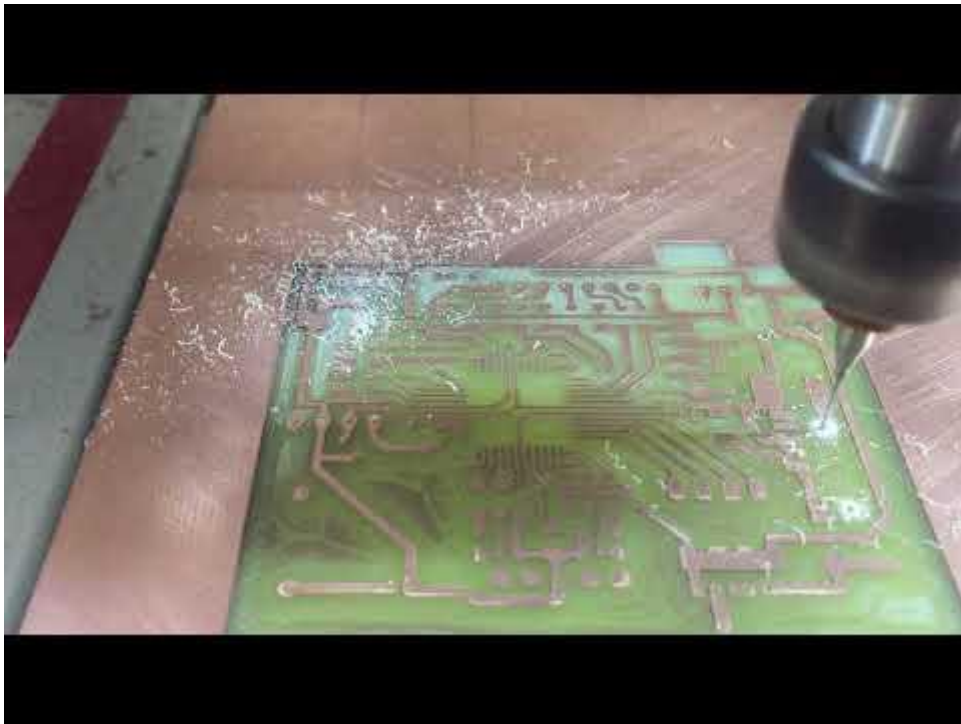
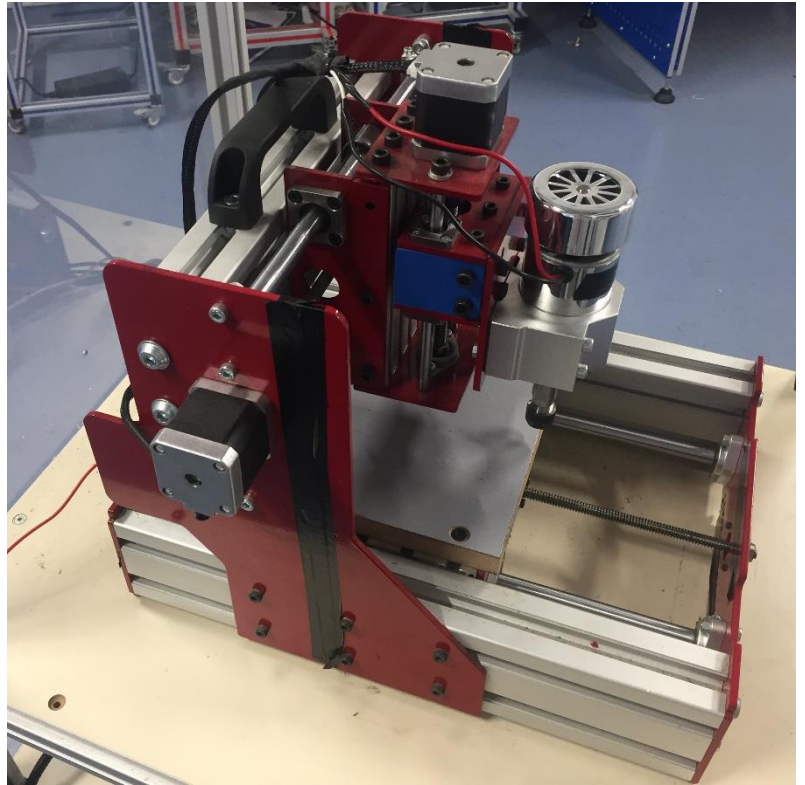
PCB Engraver Producing

Since I had mechatronics education in a technical high school and I was very interested in electronic circuits, producing PCB boards with chemical methods was both dangerous, poor quality, harmful to the environment and time-consuming. I said to my automation systems teacher that I want to design a PCB engraver and he supported me. I talked about what was on my mind. As a result of long efforts and after a failed prototype, we have produced more than 10 successful PCB engravers for our school at very affordable prices, and it's still being produced since I graduated



The photo on the left is the first design we made after we decided to do PCB engraver. We couldn't produce an ideal PCB with this machine, because there were plastic parts causing it to stretch, which caused problems such as not engraving some parts of the PCBs. Also, we chose the motor drivers small and the drivers were burned several times.

This is the 2nd and final prototype we made. We ran into a lot of problems with this, but they weren't impossible to fix like the previous prototype. We preferred larger drives and thick metal sheets, resulting in increased strength and durability.



You can see how it is working by watching this video

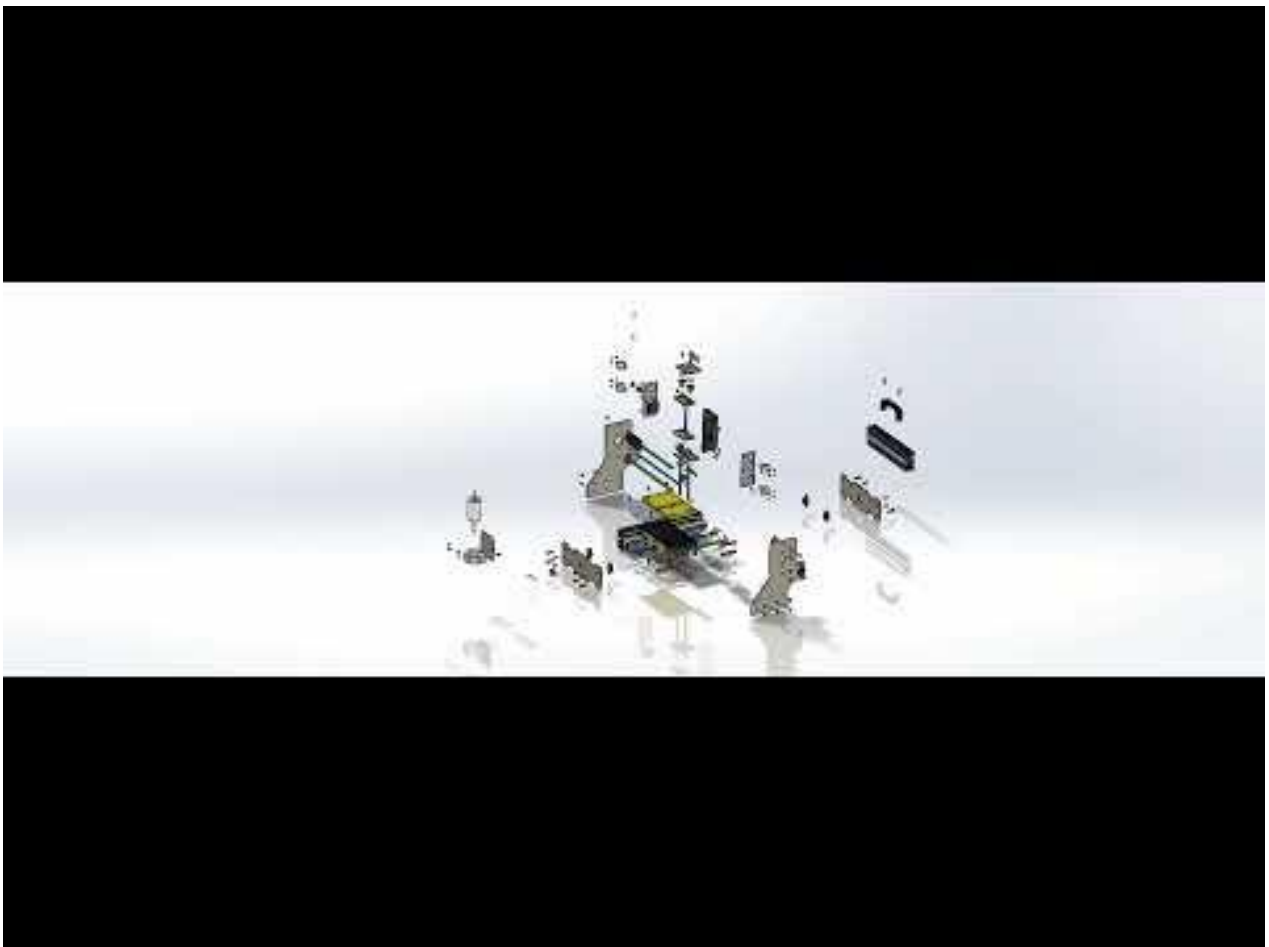
My Thoughts

I can say that it was the most useful but the most difficult project I have ever done. It was the kind of project that I wouldn't have been able to accomplish if I hadn't worked with my teacher.

It really makes me feel good to leave an easier opportunity for the next generations and to prevent possible accidents that can be caused by chemical producing.

The best thing was that we didn't bother with coding, because with the help of GRBL open source code, we started using it very comfortably quickly.

(3D modeling of the 2nd prototype)



Scheme

