



AUTOMATIC BURGER MACHINE



PROJECT TEAM



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PROJECT OVERVIEW

Oppertunity

Why we started
this project?

First Machine

As Engineers,
How we made our
first machine?

Future work

How are we going
to start our
buisness?

Market Gap



Time-consuming
manual machine



Pricey imported
Automatic Machines



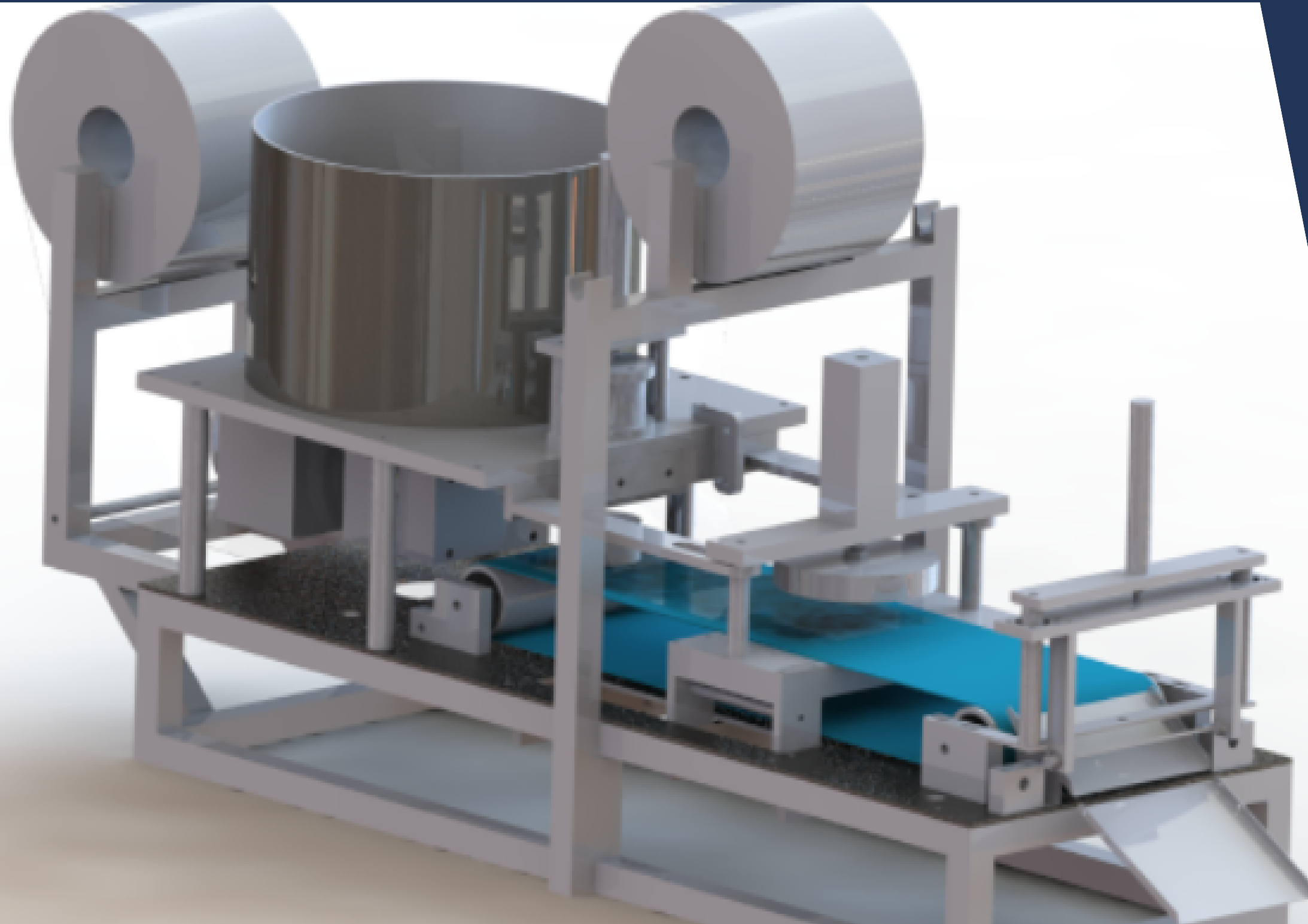
OPPORTUNITY



Customers needs

Restaurants and Butchershops
are willing to pay for a
relatively low cost, high quality
Automatic Burger Machine

Automatic Burger Machine Design



Limitations :

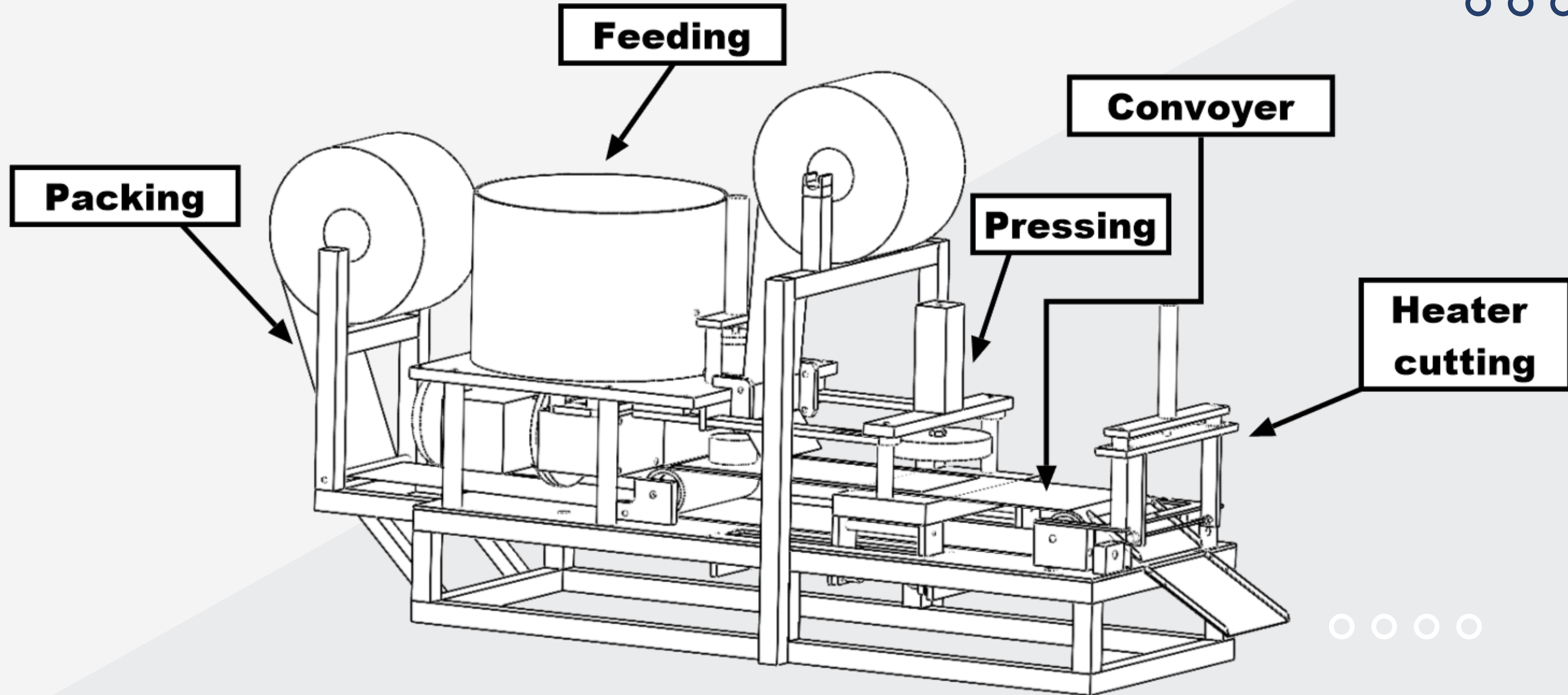
1. Cost

2. Quality

3. Size

4. Noise

Work Principle

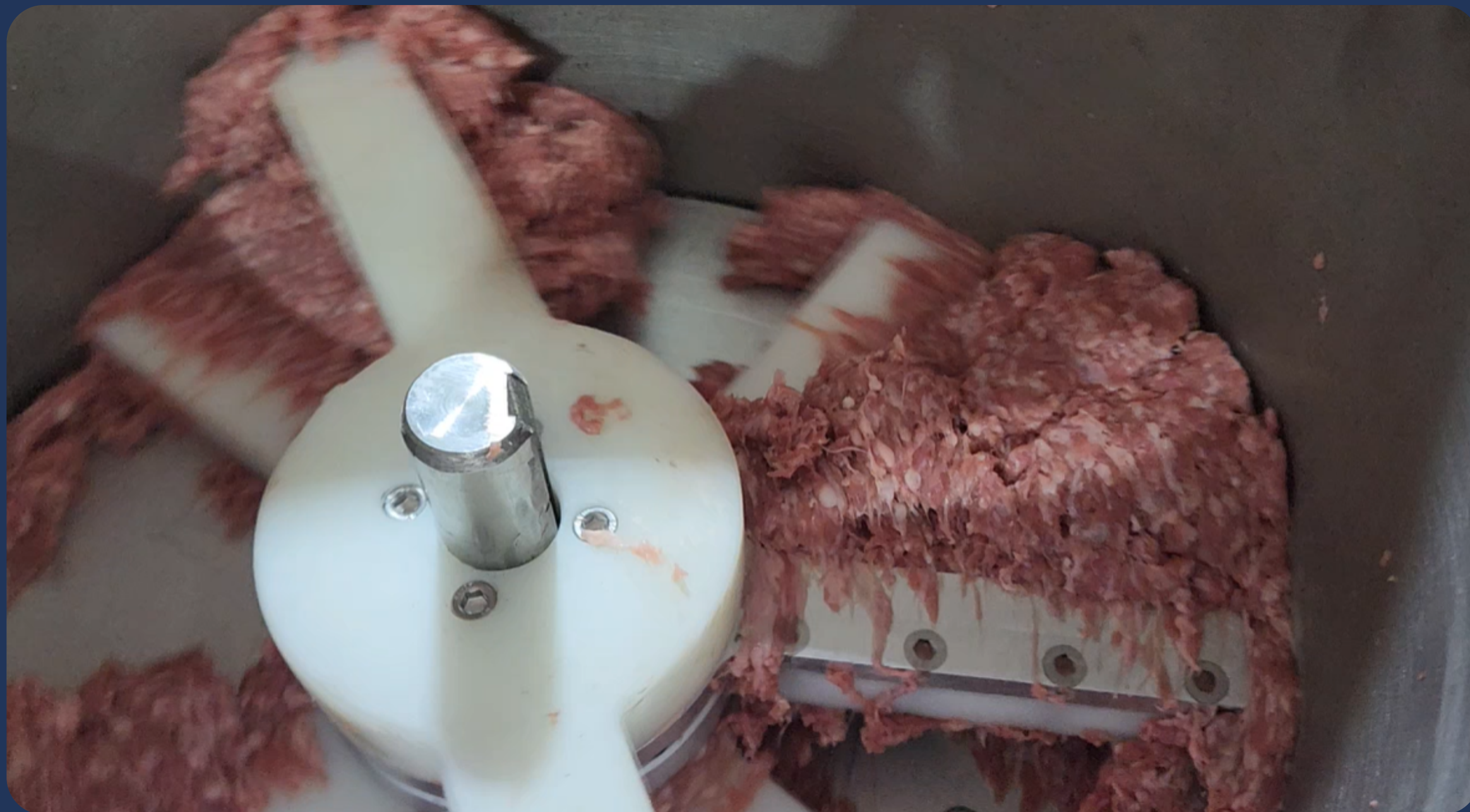


The Machine Parts Are Done !!



Control System

Processes: Feeding



Control System

Processes: Pressing & Conveyor Movement



Control System

Processes: Portion release and Discharging



Control System



Programmable Logic Controller

PLC is a Computer for Industrial operation



Fast



Reliable



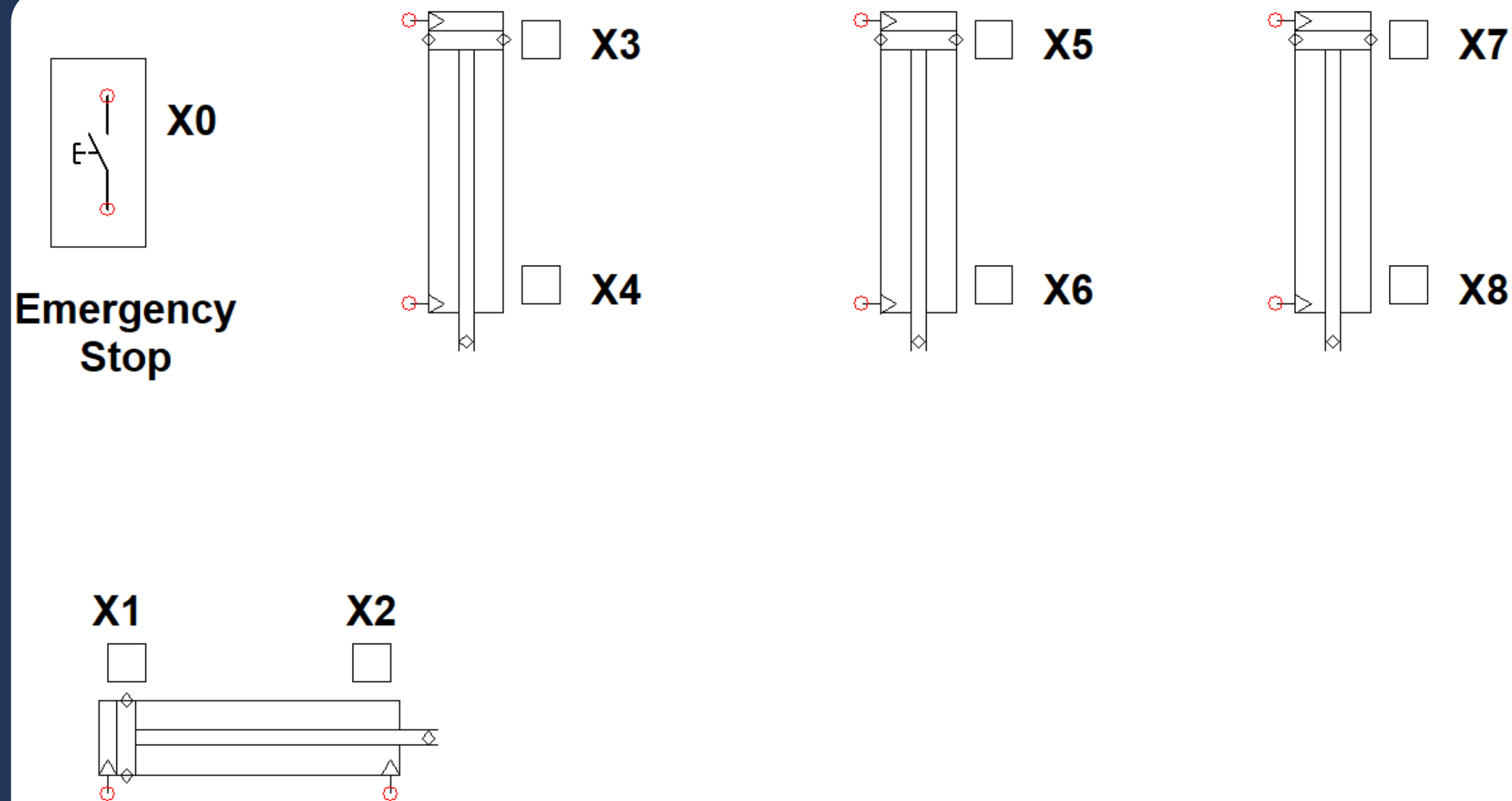
Easy to operate



Easy to program

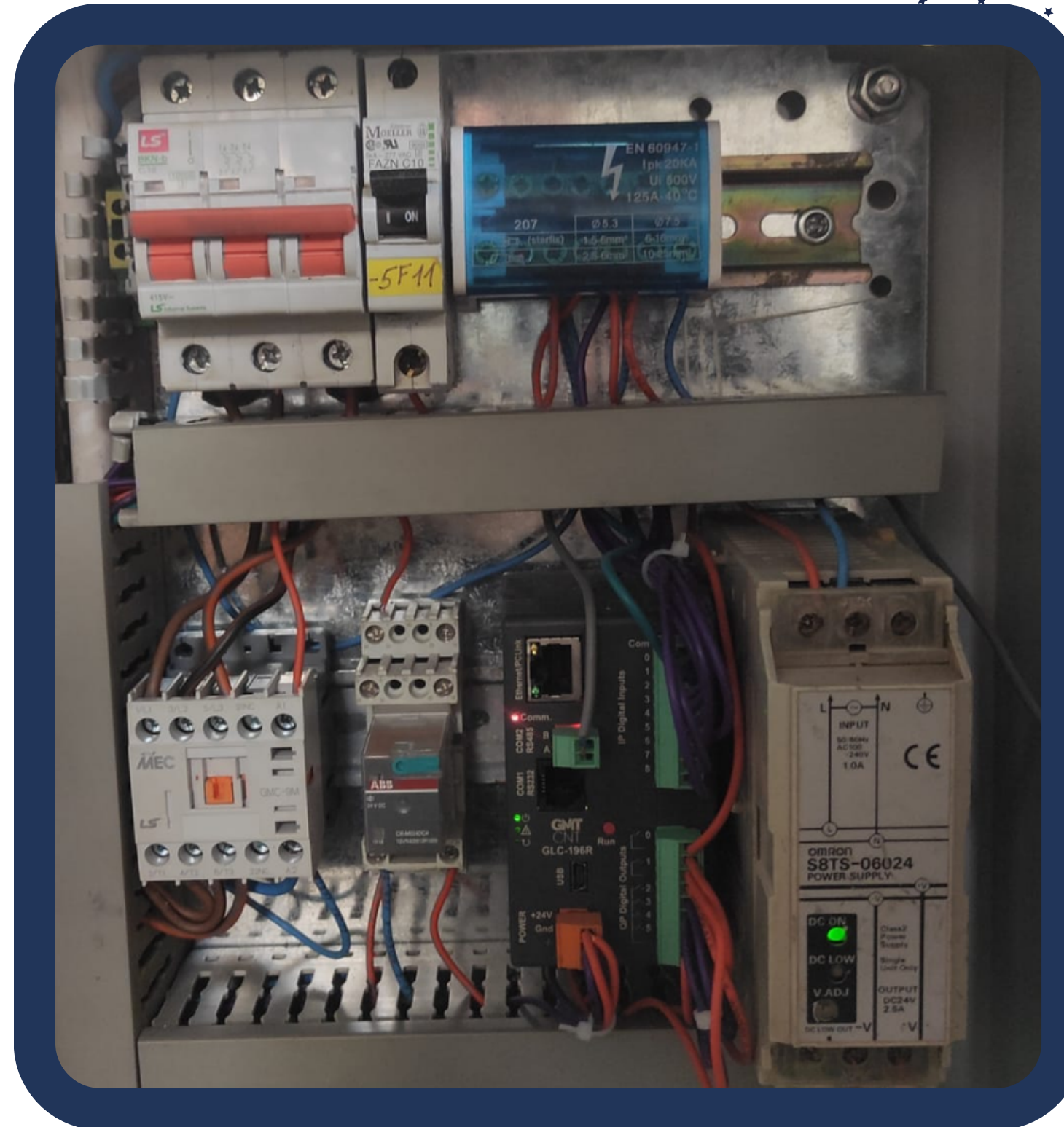
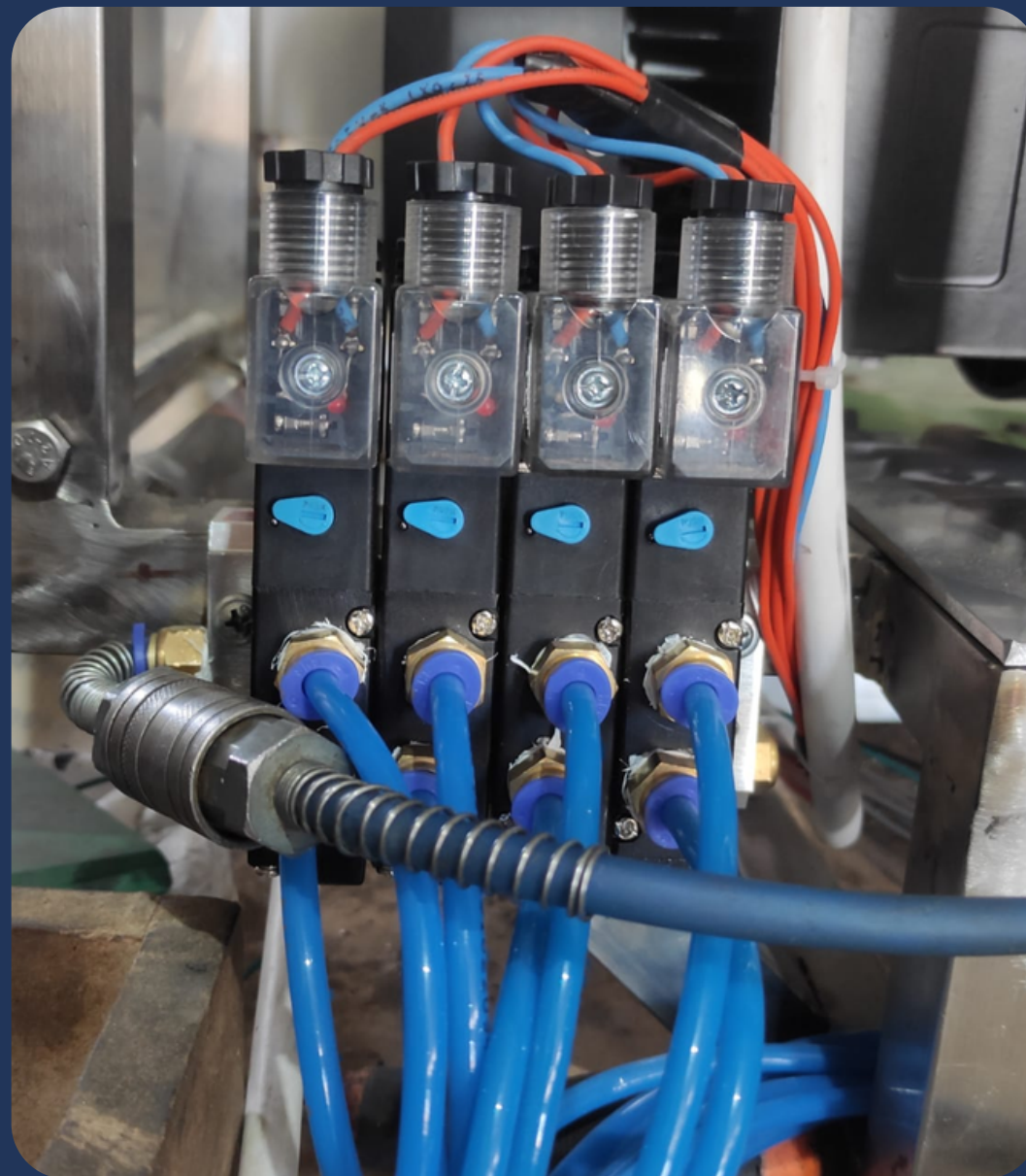
Control System

Inputs: Magnet proximity sensors



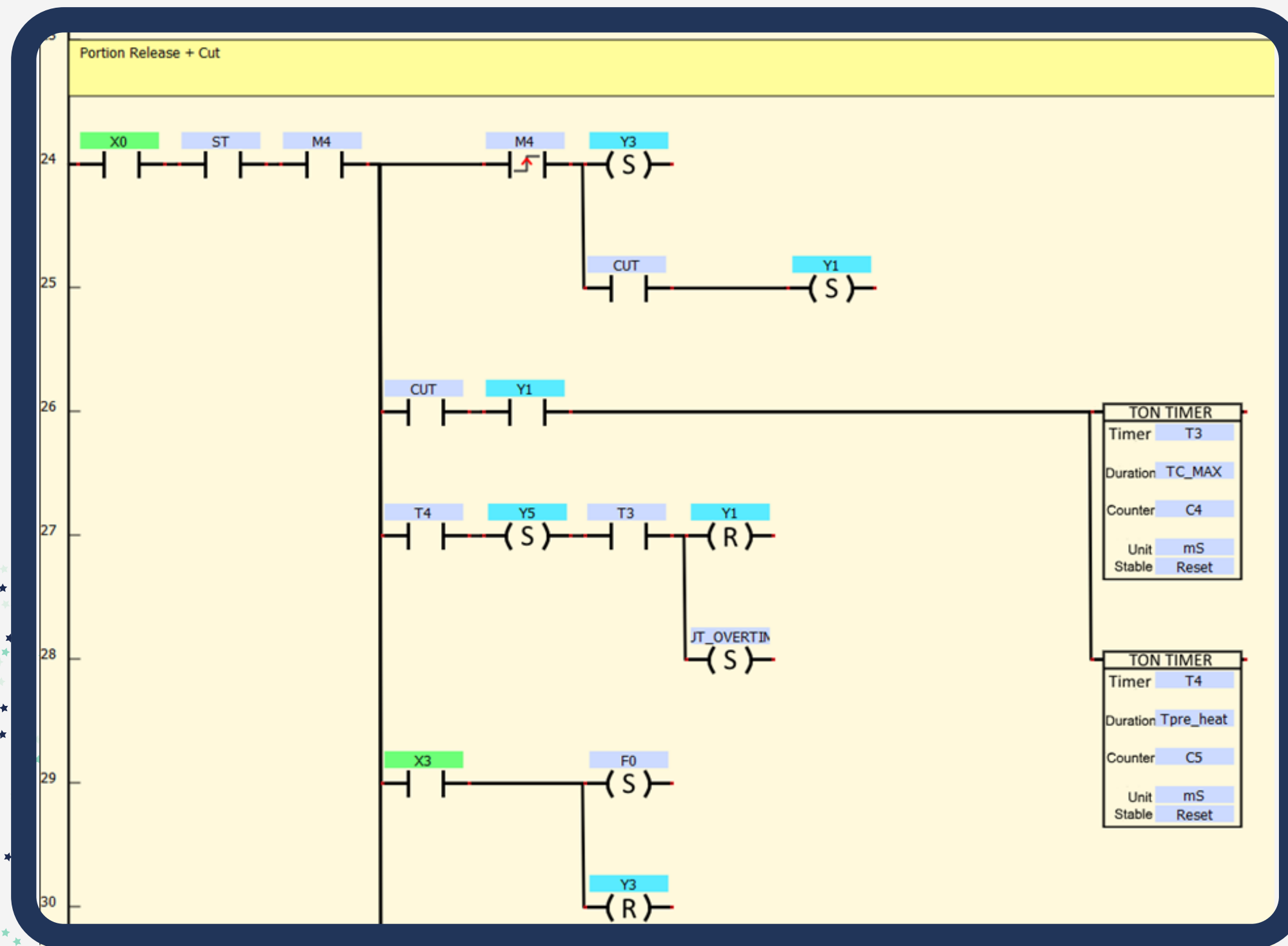
Control System

Outputs:



Control System

Code:



Proirtized



Labeled



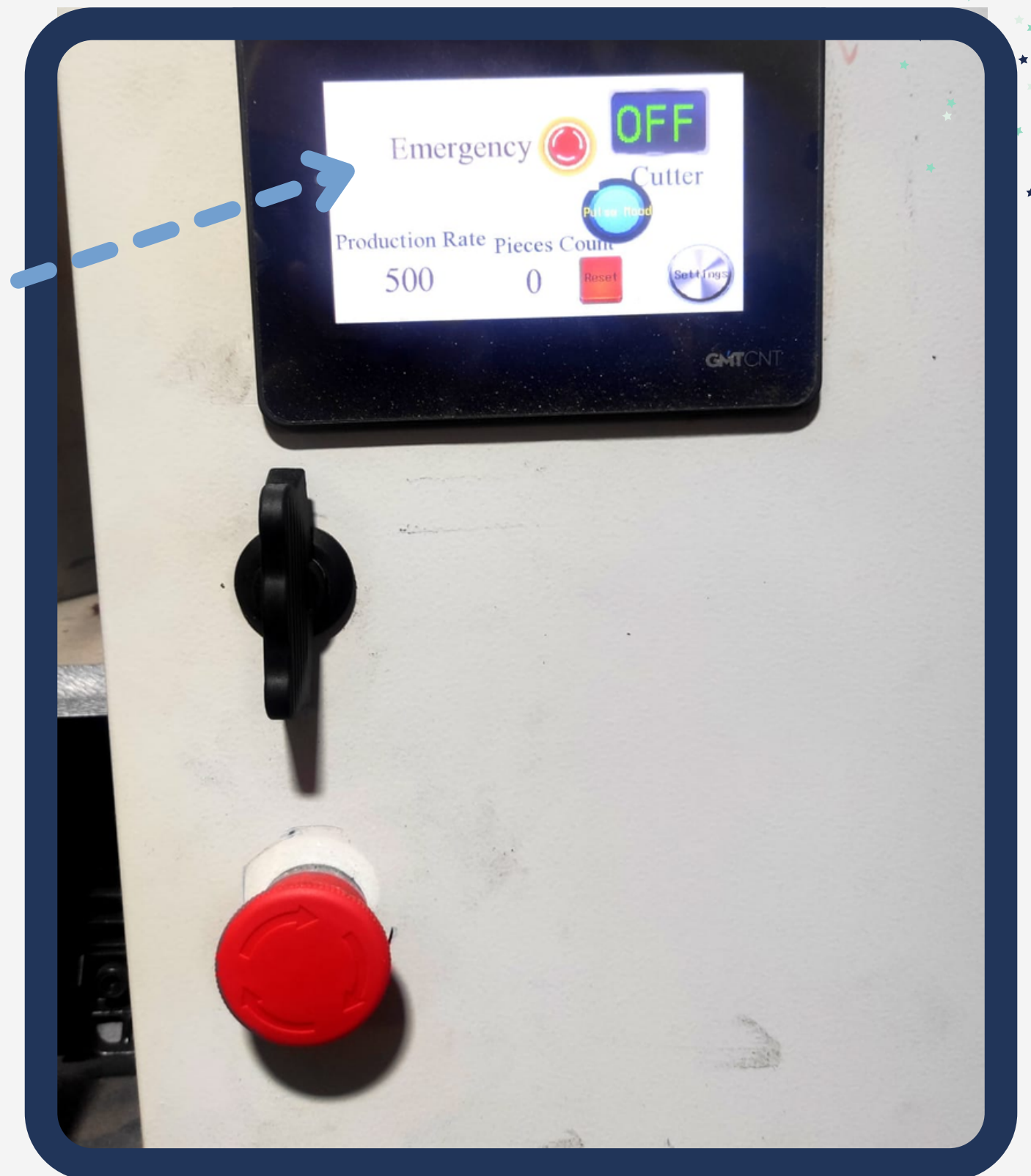
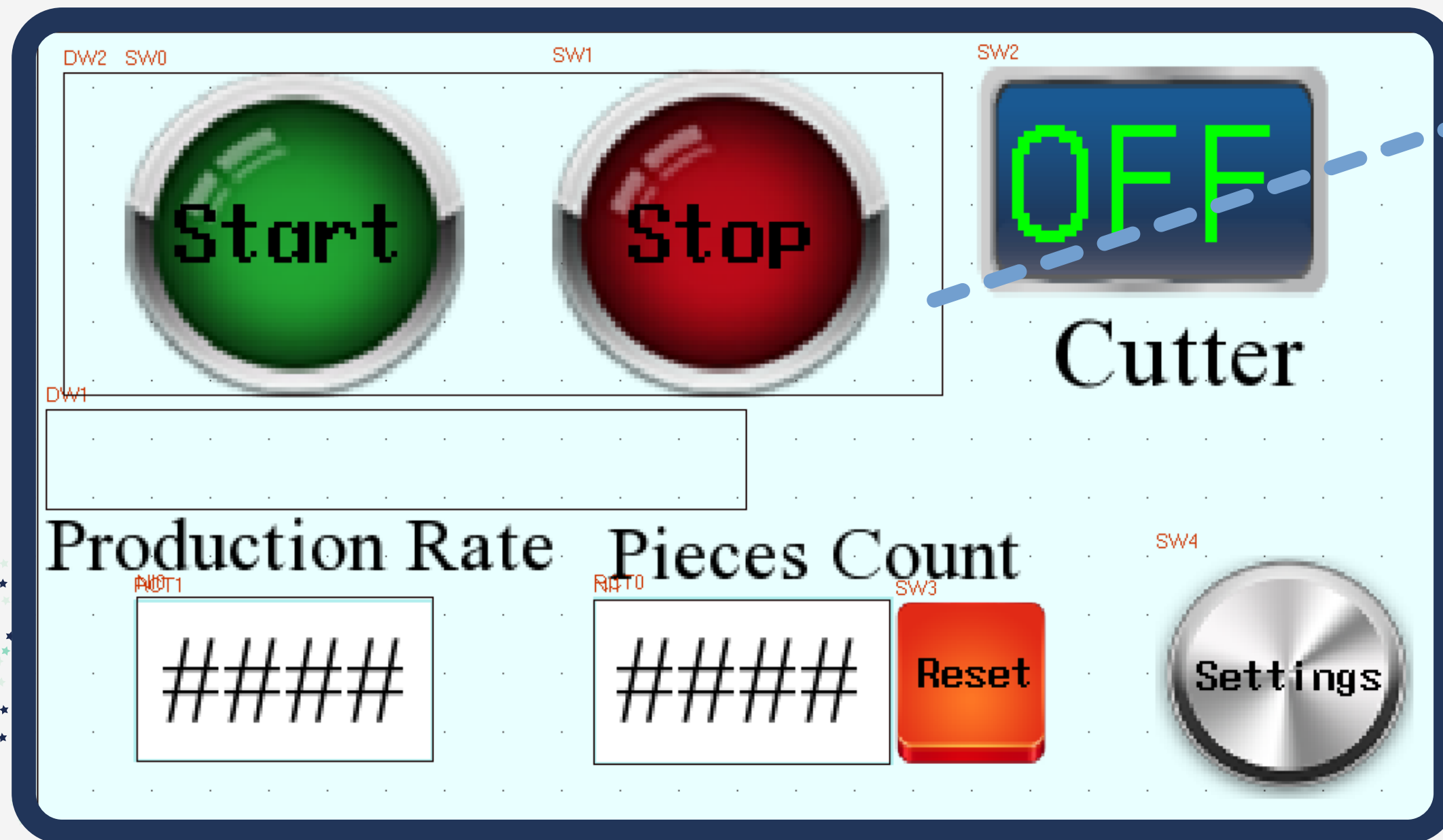
***Multiple control
moods***



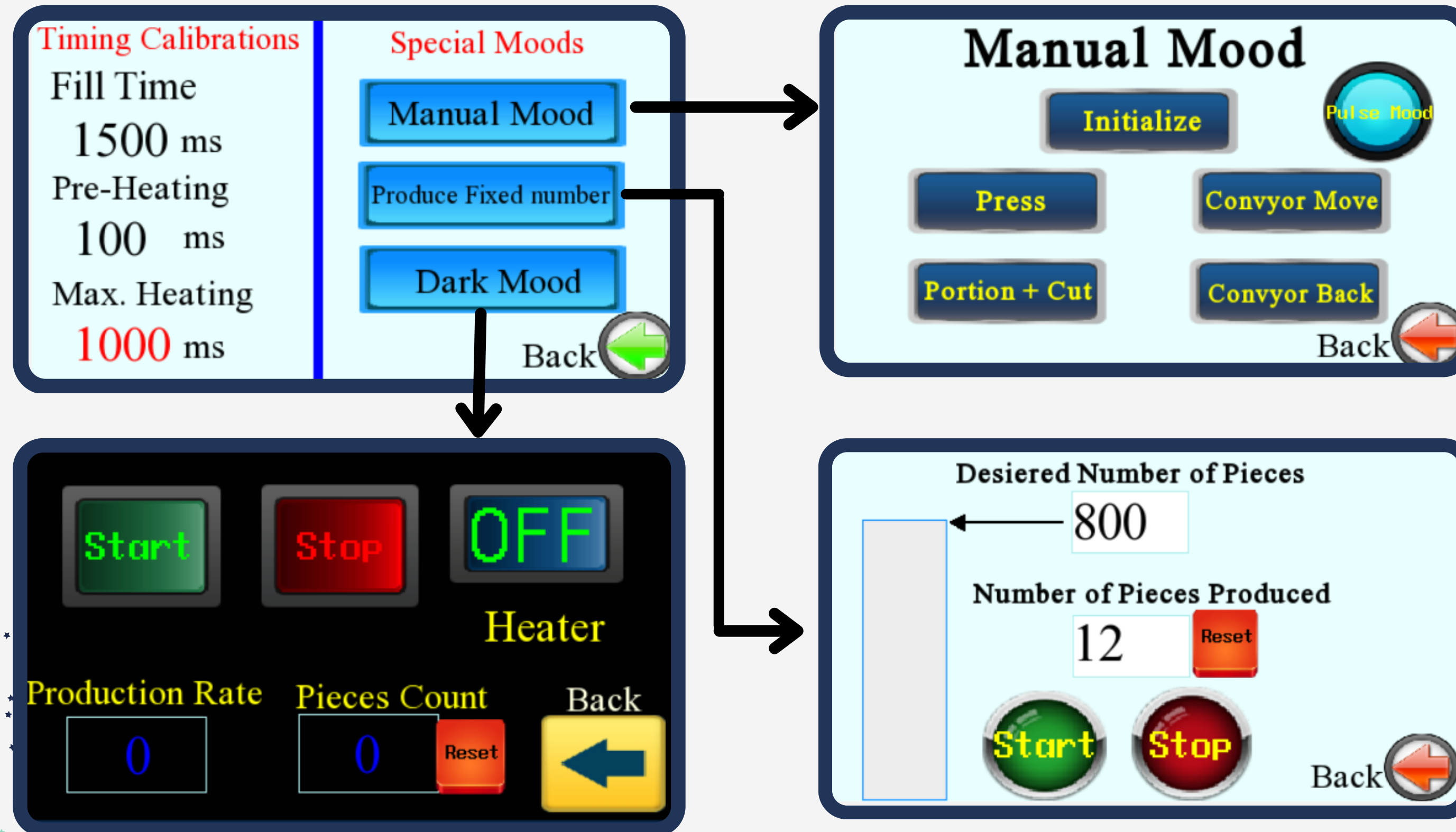
***Controlable
variables***

Control System

HMI Design:



Control System



Machine Specifications

- ▶ **Made in Palestine with relatively low cost**
- ▶ **Interactive, and adjustable variables.**
- ▶ **Manually adjustable Production Rate**
- ▶ **Variable weights and shapes are possible**
- ▶ **Compact, desktop-mounted machine**

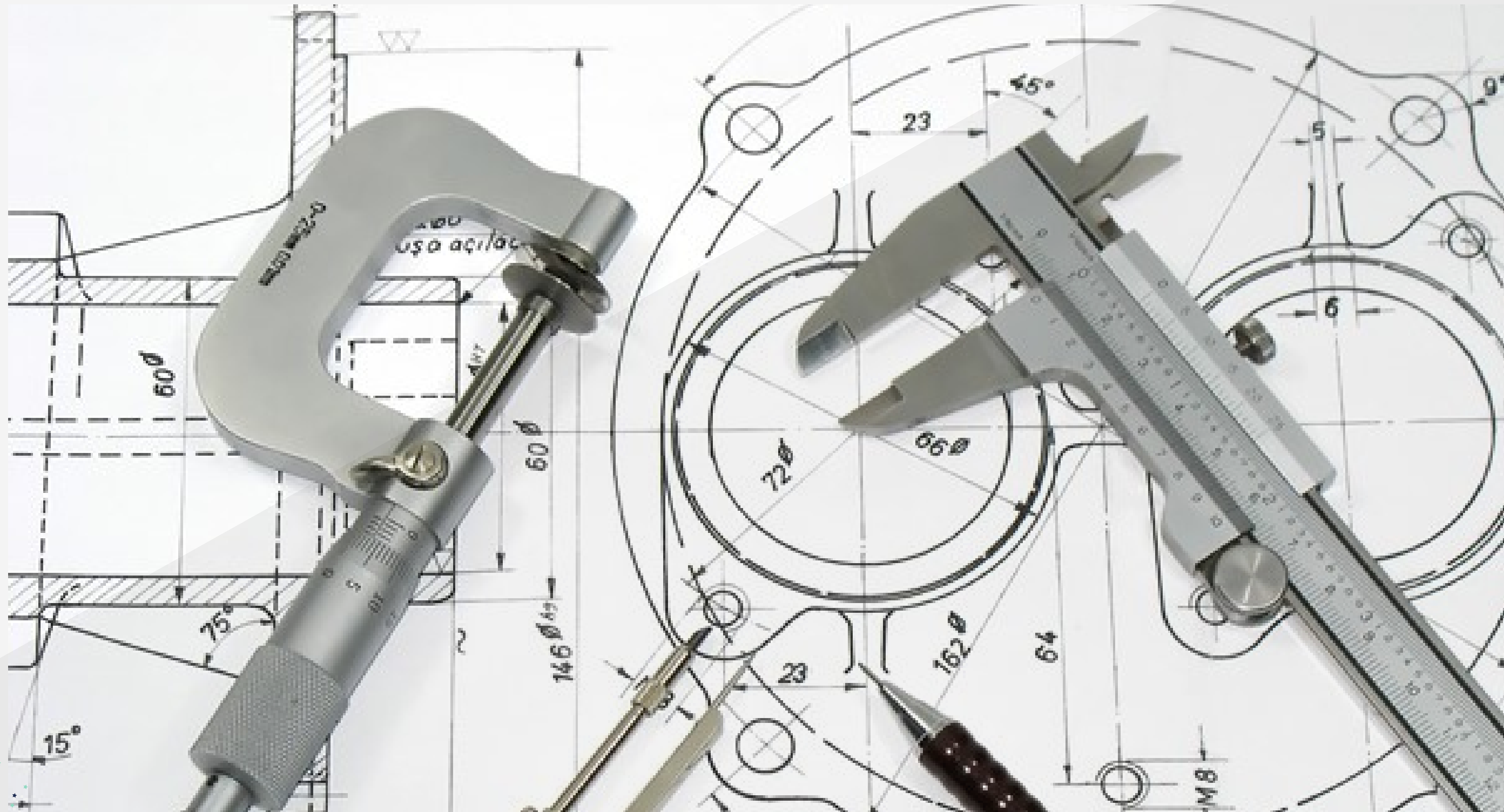
Project's Output

● **working with 2 leading companies in our field.**



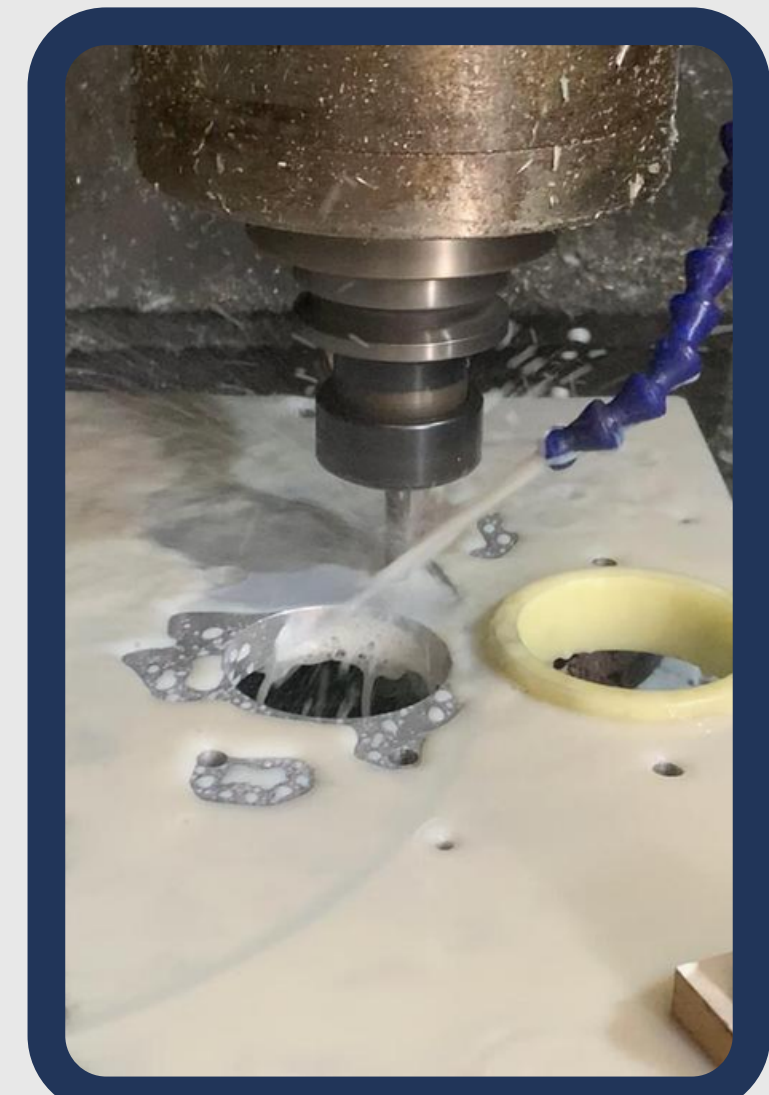
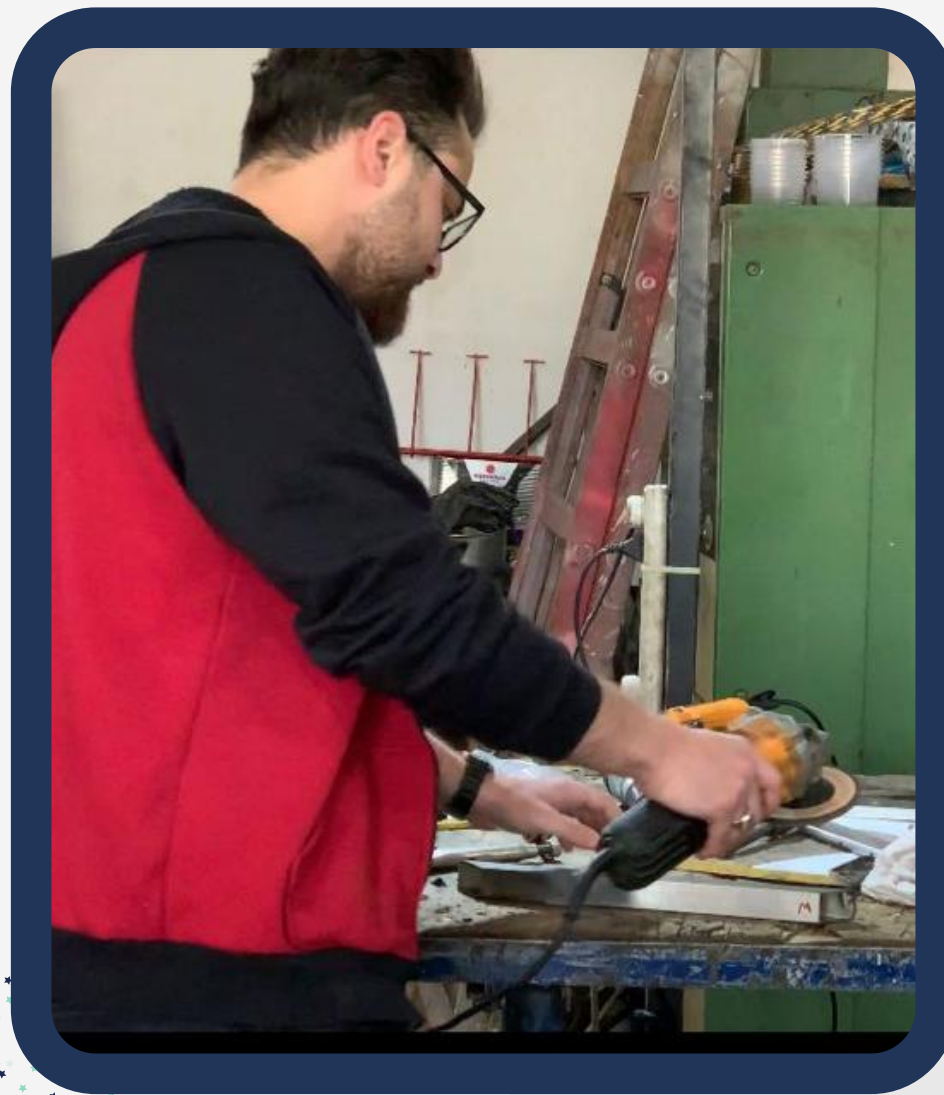
Project's Output

➡ **Introduce us to reverse engineering.**



Project's Output

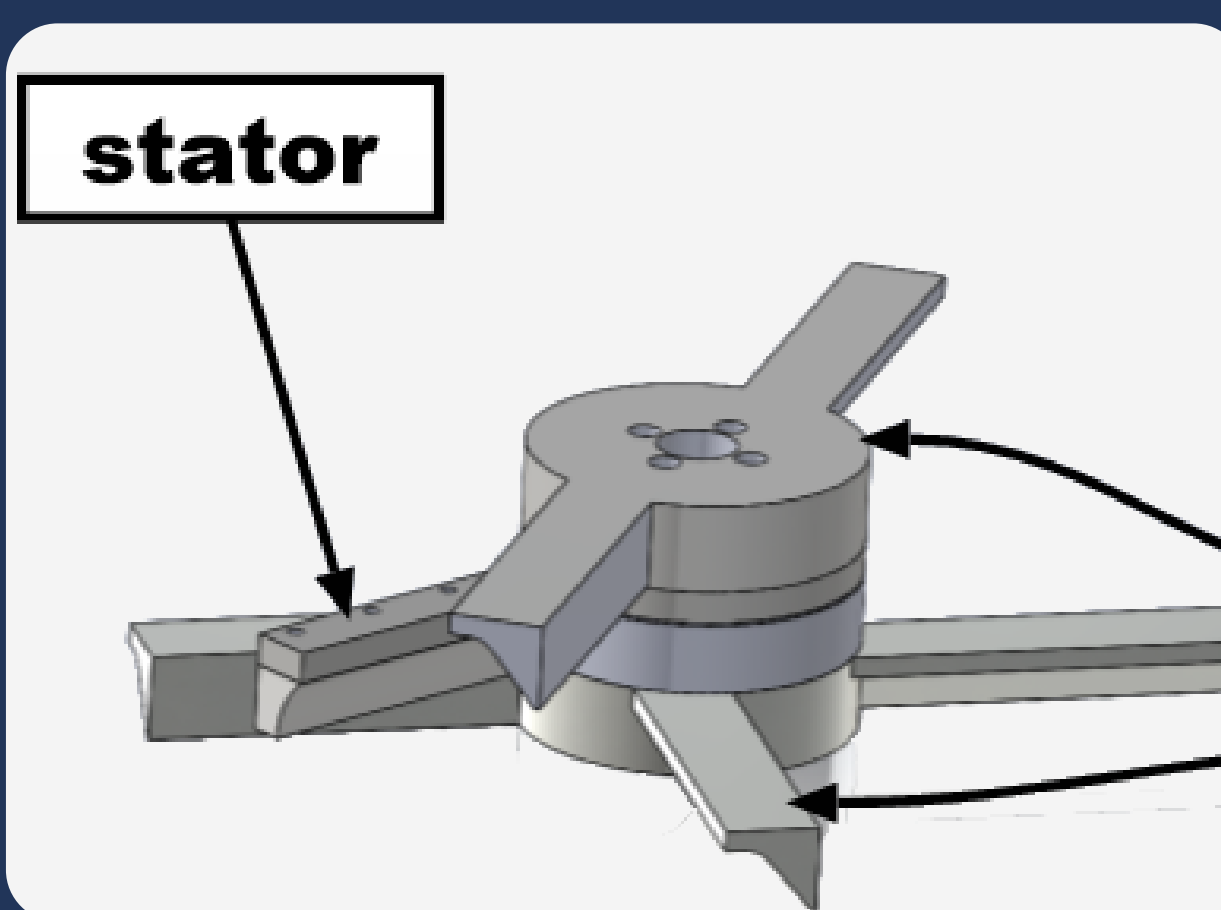
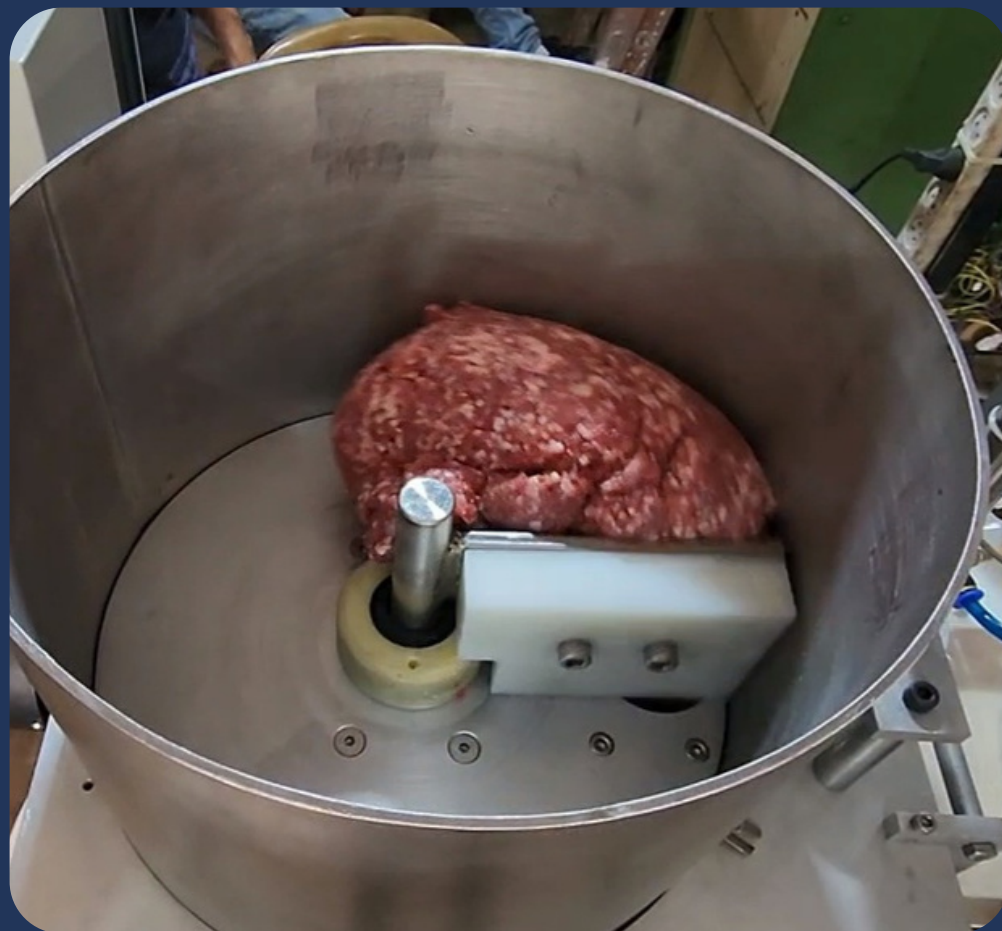
► **Knowledge and experience in manufacturing**



Project's Output

► **Problem Solving Skills : Design Problems**

Blade:



Project's Output

► **Problem Solving Skills : Design Problems**

Cutting piston Placement:



Project's Output

► **Problem Solving Skills : Run Problems**

In-consistanc center of pressing:



Project's Output

► **Problem Solving Skills : Run manufacturing
wrapping Plastic behavior**



Conclusions

✦ **The project team found it a very useful experience to them to implement a practical project in cooperation with the local market**

✦ **Sometimes the design has to be modified to coop with what is available in the local market stock.**

✦ **Improve our Problem-Solving skills, and encourage us to put more effort into the thinking and designing stage in the future**

✦ ***Real-life manufacturing will always face new problems that were not considered and have to be overcome***



THANK YOU

