

LATERAL DISPATCHING OF FINISHED BOTTLING PRODUCTS INTO CUSTOMIZED CARTONS FOR PACKING PURPOSES

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ABSTRACT

We are required to construct a partial automation process where finished bottles (presumably heavy e.g. wine bottles, 4 to 6 bottles) are picked from a production line and transferred and released into empty-cartons for packing this is considered as one cycle.

Purpose and expected outcomes:

- Mechanism with rectangular frame with perforated holes of precise dimensions.
- Clamping mechanism designed to pick-up from working station.
- Once the bottles are grasped by clamping mechanism the mechanism is to move laterally to the release point.
- Working station able to raise, move laterally, lower down and release
- No bottles should be dropped during process

We are required to build automation process this is our main problem reason being due to the lack of an electric and electronic major in our group. We found out that if we divided the overall process into parts progress can be continued without any setbacks. We divided our overall mechanism into 3 partial mechanisms:

- Rigid frame (frame where mechanism is ran)
- Movement Mechanism
- Clamping Mechanism

This made it easier for us to improve our overall mechanism by concentrating on these parts separately and approach difficulties separately. The report is going to proceed with more detailed description of how these mechanisms work separately and how they will be connected to form the overall mechanism and how it works.