

## Inline weight determination of tablets by means of microwave sensor

Krämer AG is one of the leading manufacturers in the pharma industry. Among other things, they manufacture dedusters for tablets. Currently, there is not an Inline test for those tablets that are dedusted. For this reason, Krämer AG's wish and at the same time the goal of this project is to develop a system able to realize a weight measurement of those tablets inline. In order to achieve this, the tablets have to pass one by one through a microwave sensor and then discarded if they do not meet the goal weight.

The first step of this project was to conduct a functional analysis and find ideas to create variants. These were evaluated based on different criteria and a CAD concept was created based on the most suitable one.

The result of this project is a concept for a centrifugal feeder suitable for industrial use for quality assurance of the tablets. The tablets come out of the deduster in a bulk which can be fed into a surge hopper device that leads them to a rotary disk which isolates them and sends them through the sensor. Finally, the tablets that do not meet the pre-defined requirements are discarded from production with compressed air.



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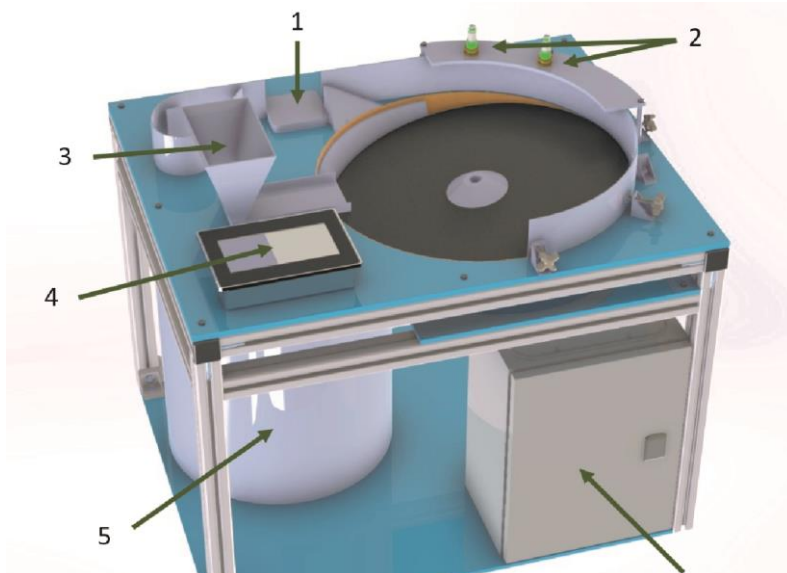


Figure 1: Concept for the centrifugal feeder.  
Legend: 1. Microwavesensor - 2. Light barriers - 3. Inlet - 4. HMI - 5. Container - 6. Electrical cabinet