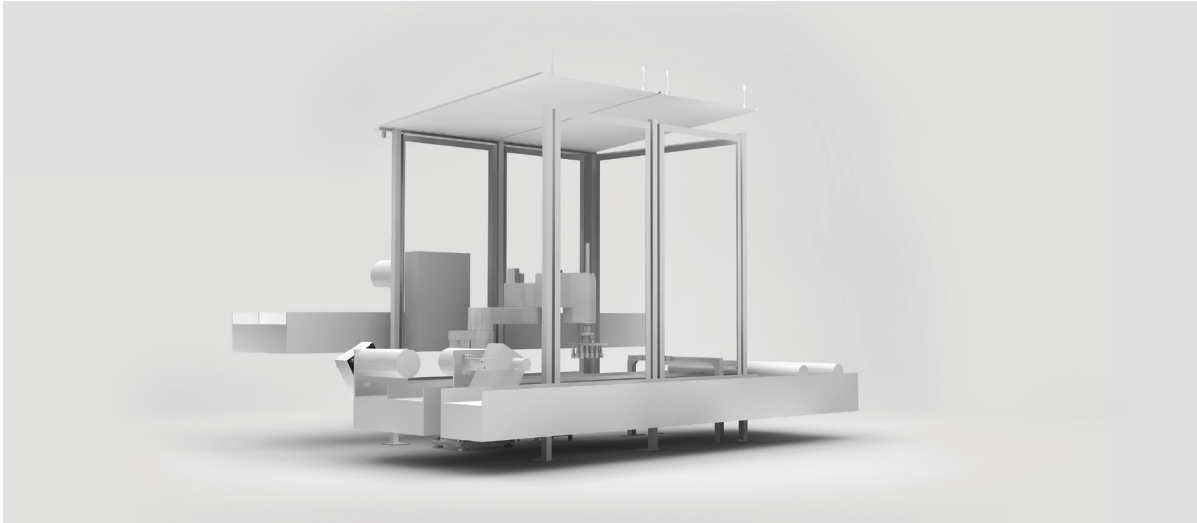


Tubular bags handling



Task

Packaged tubular bags are transported to the packaging unit without order on two existing conveyor belts running parallel. The upstream filling station has a faster cycle time than the packaging unit. For this reason a unit must be built which takes care of the distribution of the tubular bags from the conveyor belt packaging unit 1 to conveyor belt packaging unit 2. A Stäubli Scara robot was provided by the customer for the handling process. The belt velocity can be up to 18 m/min. Cycle times of 50-80 tubular bags per minute must be processed.

Solution

A food compatible cell with integration of an existing Stäubli Scara robot meets the requirements. Five laser sensors are employed for detecting the position of the tubular bags. The conveyor belt is equipped with a rotary encoder in order to generate belt velocity related tracking of the tubular bags with the robot controller. With the help of vacuum valves per suction cup and bellows suction cup, the different format sizes are safely picked up and placed.

Result

The Inox-cell with Plexiglas casing and monitored access door allows the operating personnel an all-round view and generous access to the unit. The suspended roof construction with its gutter protects the components from cleaning agents from the second floor. An ample electrical vacuum pump with a filter and a vacuum valve at the robot head guarantees fast and high-volume evacuation times for tubular bag handling and thereby significantly reduces the cycle time.

Bottom line: position and format size detection is also possible without an expensive vision system!

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