



**MANDERS
AUTOMATION**

member of mandersgroup

Infeed Cobot for vials

MANDERS AUTOMATION

Twan Bakker

RAYA 2023 Finalist Event



Manders Automation

- Established in 1984, privately owned
- 60 employees
- Custom made equipment for assembly, joining and handling
- Operating worldwide, mainly in Germany and the Netherlands
- Part of the Manders Group: 7 independent, international companies in 1 cooperating group



member of mandersgroup

Introduction of the infeed cobots

Current customer situation

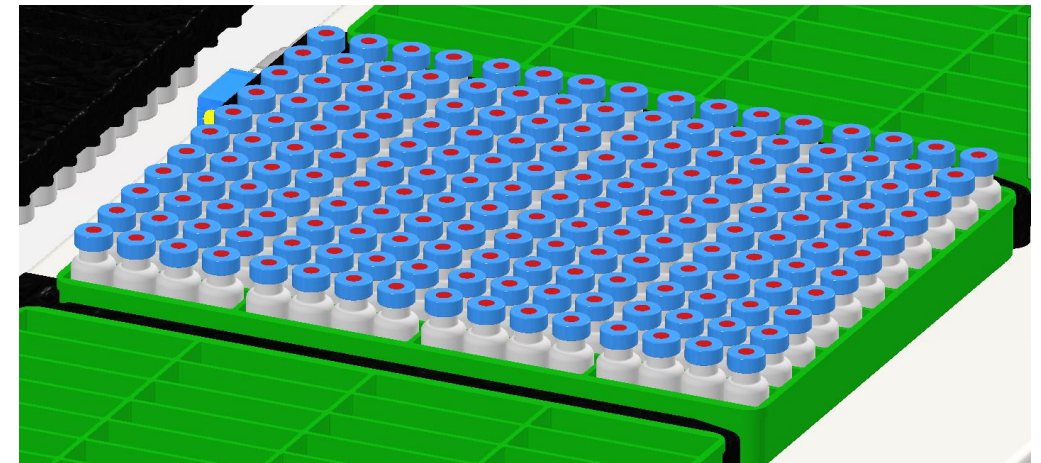
Operators place vials by hand on a conveyor belt, which leads to a labeling and packaging line



After introducing the infeed cobots

Two infeed and labeller tables consisting of a conveyor with a rotary buffer table feed the packaging line

- The products are supplied in plastic racks (176 vials)
- Feeding vials of varying lengths is possible, as requested by the customer
- Total capacity of up to 1200 vials per minute



Key characteristics of the solution

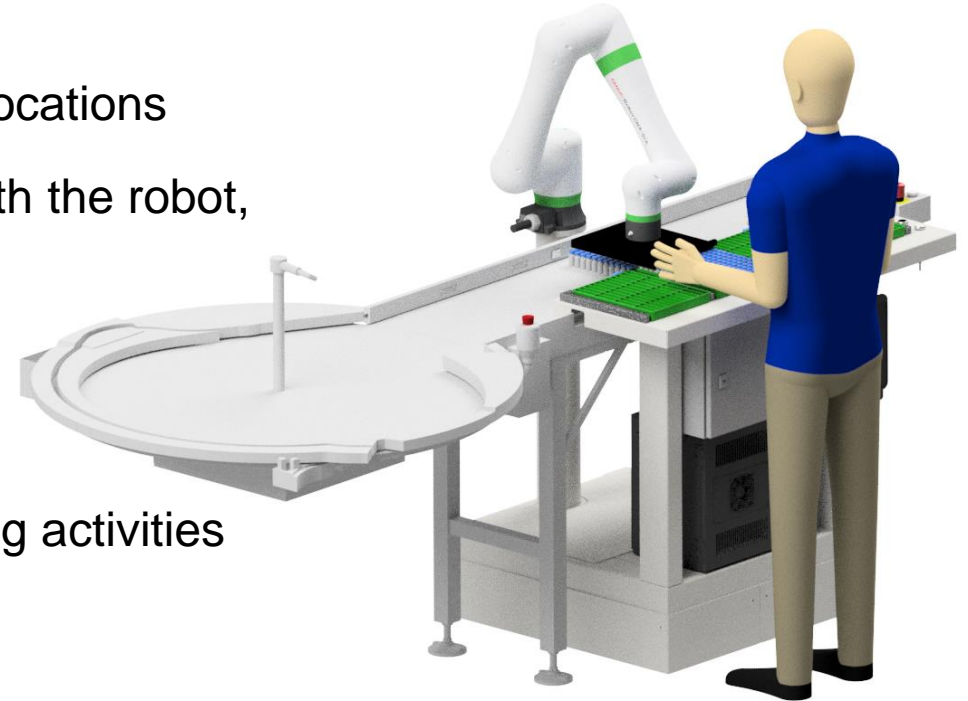


- Two separate systems, on each conveyor one installation
- On each system the operator can place 4 plastic trays
- The trays are detected automatically, and the cobot will take all the vials and place them on the conveyor belt
- The operator can change the racks during robot movement. Human and robot work together, making this a real cobot solution
- This installation is very accessible due to the omission of the safety fencing
- This also results in a cleaner working environment and a smaller footprint



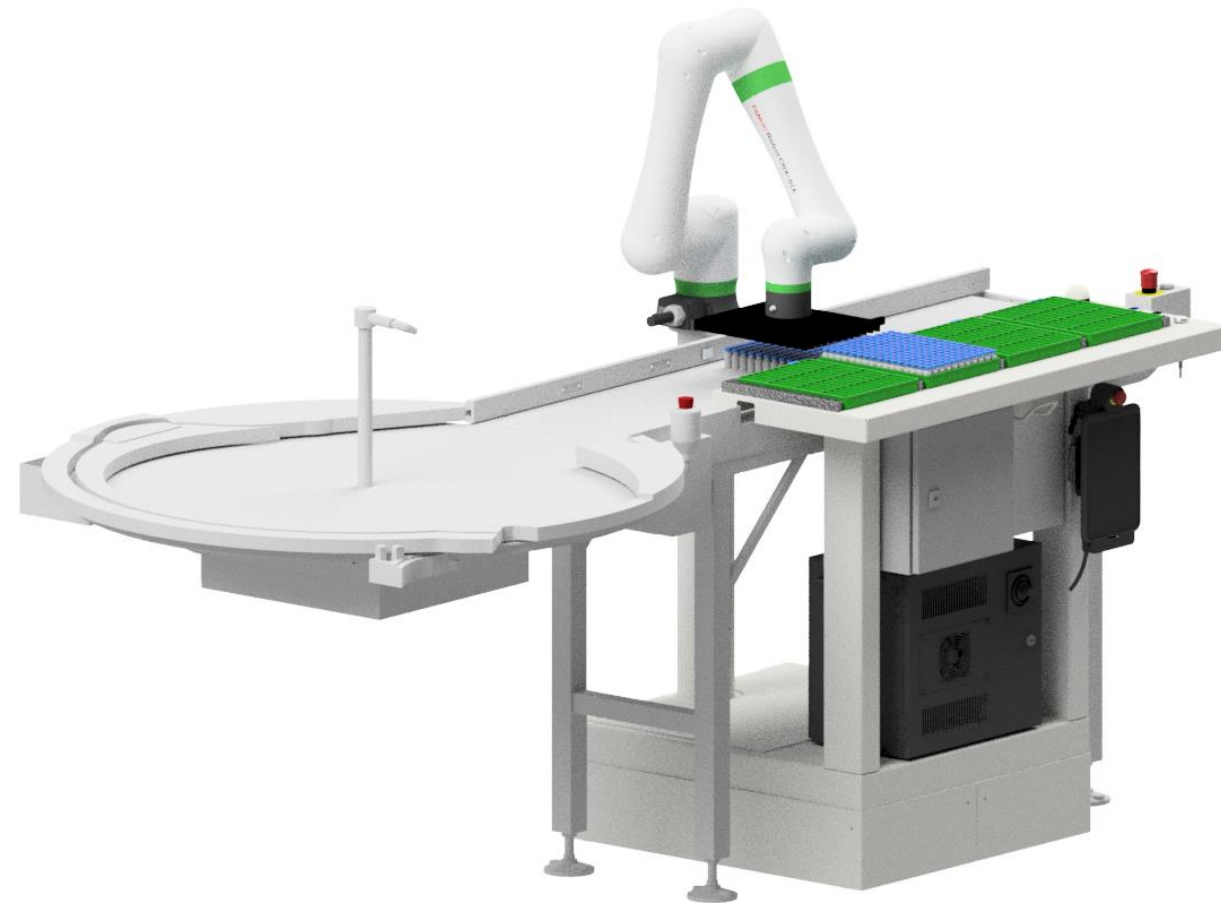
Automation drivers – points of improvement

- Less handling by operators, only one operator needed at two locations
- Fewer mind-numbing activities because of the collaboration with the robot, resulting in more happiness at work
- Huge ergonomic improvements
- Fewer errors due to falling vials
- Less training time for operators as there are no difficult handling activities
- The equipment works autonomously for a longer period
- Open visibility for proper line clearance
- Closed design to prevent product entrapment



More characteristics

- The solution is based on a collaborative robot, in this case a Fanuc
- Changeable robot gripper for different products
- Rack detection
- RI&E analysis conform NEN-EN-ISO 12100, Sistema validation and operator manual
- No safety devices necessary, proven by real crash measurements
- Easy to use by the clearest possible operator controls: start, stop, reset buttons and status light



Summary of application advantages



- Plug and play and stand-alone solution
- Easy to integrate in existing processes
- Flexible for different vial designs
- Flexible layout
- Small footprint
- No specialized employees necessary
- No mind-numbing activities for operators anymore
- Robot brand independent
- Clean design

