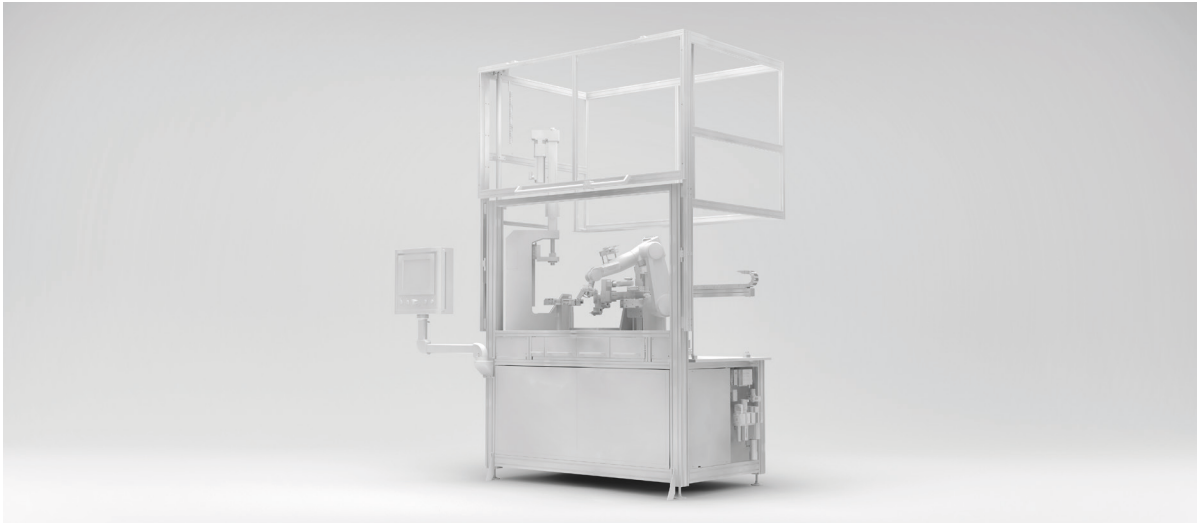


Parts handling for processing machines (loading robots)



Task

Parts from a container must be automatically fed to various processing machines. The automat must include two upstream containers for processing. The parts must be supplied to the units with a mounting accuracy of $< \pm 0.05$ mm. Due to the large variety of parts, the customer wants to be able to configure and program the unit himself. The products intended for processing must be request-able via the controls and dispensed through the output tray to the personnel for inspection. Additionally, the unit must be equipped with preparation stations (measuring, screwing, pressing, polishing, etc.). Accessibility must be assured from all sides.

Solution

In order to achieve high flexibility and accuracy, a robot cell was developed with Stäubli robot. Chain conveyors are employed for feeding and discharge of the containers. By using a database and an SQL4Automation solution, the new parts can be configured and programmed by the operating personnel with a configurator. The parts discharge solution is a lockable drawer. The different preparation stations can be positioned on the machine table as required. The complete accident protection can be hoisted up by means of vertical guiding.

Result

Different units for part weights from a few grams to several kilograms were covered by the wide product portfolio of Stäubli robots. New parts are configured by the operating personnel via the input mask. This reduces the program development costs to a minimum, while at the same time increasing autonomy and productivity.

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