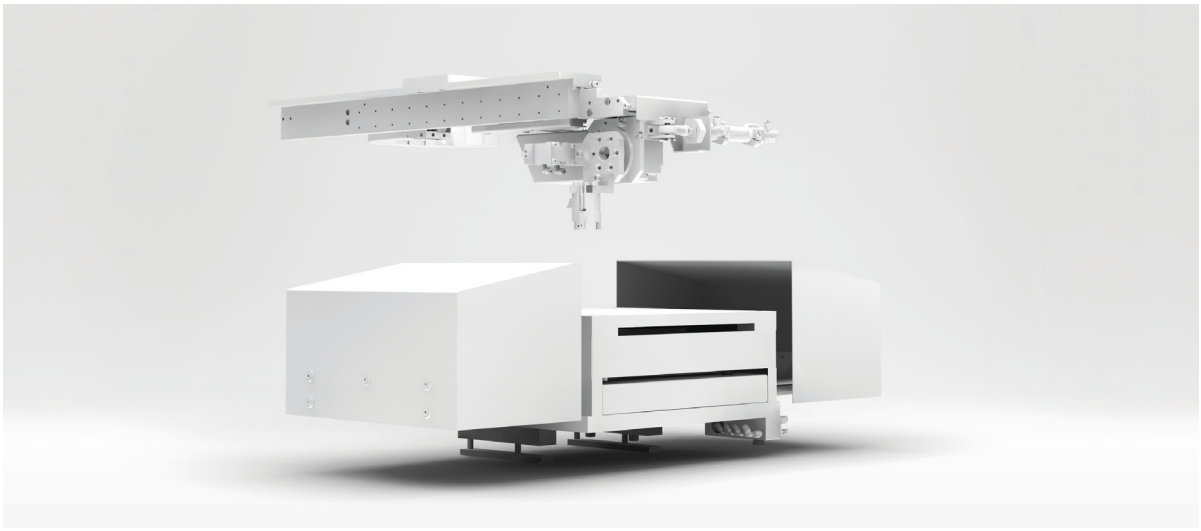
asytec
Sondermaschinenbau

Industry: metal processing industry, job order production

Inline storage box



Task

A simple automation solution for small milling machines must be developed. A Brother TC-S2A milling machine serves as a basis for this project. The parts storage and the handling must be realised interiorly and with the existing axles of the machine. The manufacturing parts can be stockpiled on a pallet which can be replaced manually and optionally automatically. The system must be designed for maximum raw parts dimensions of 60x60x80 mm or for 2 kg parts weight with positive locking grippers.

Solution

The parts depot is mounted onto the machine table. Inside, a pallet with workpieces is stored which has to be exchanged manually. Moving the parts box to the different positions is realised with the axles of the milling table. The loading and discharging handling device for raw and finished parts is located at the Z-axis of the milling machine and moved to the milling spindle in XY-direction. A 180° rotary module takes care of the changeover between the raw and finished parts gripper. Either parallel or three-point gripper can be chosen as the gripper.

Result

This automation solution is suitable for small to medium-sized quantities. The pallet size is 300x346 mm. The maximum storage depends on the part size and is laid out individually for the customer. It can vary between a few tens to several hundreds of parts. The autonomy is dependent on the processing time and the parts storage. The handling time varies between 8 and 10 seconds.

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