

Transfer system with handling



Task

The purpose of the unit is a 100 percent examination of electronic actuators. The unit must include five test cells and a laser marking cell. The actuators must be transported to the test cells and afterwards applied to the test station, where the DMC is read and testing is initiated. After successful testing, the actuators are set back onto the transport system and subsequently marked with a laser. At the withdrawal station, the actuators are removed from the transport system and packaged. All main movements for the actuator have to be carried out electronically. The complete system must have a cycle time of two seconds.

Solution

The actuators are placed from the assembly line onto the workpiece carrier. A circulating carrier belt system supplies every test cell with actuators. A pick and place with linear motors and double grippers takes care of the handling between actuators and the individual test stations. Good actuators are placed back onto the workpiece carrier and bad ones ejected via a slide into a box. After successful testing, the actuators are transported to the laser marking station, marked and transported on to the packaging station.

Result

With optimised intake at the testing stations, linear motor movements and a circulating transport system, the required complete cycle time can be met. Despite rapid movements, the actuators are treated gently, since the acceleration and brake ramps of the linear motors can be optimally adjusted to the respective stations. The large folding doors guarantee easy servicing at every station. Furthermore, the safety casing is designed in a way that ensures that the adjacent stations can continue functioning during a manual intervention.