ERECTING BOXES WITHIN SECONDS

BRANCH OF INDUSTRY
packaging

ITEM
collapsible plastic boxes

JOB
erecting collapsed boxes within seconds

SPECIAL TECHNICAL FEATURES

- employment of robots instead of linear handling mechanisms yields improved uptimes
- dual cells run in parallel increase throughput

TASK

For a food-processing company, ASA Automatisierungs- und Fördersysteme built a dual-cell station for erecting collapsible plastic boxes. Due to the necessarily short erection times per box, smooth, uninterrupted, around-the-clock operation was the key criterion in the task description.

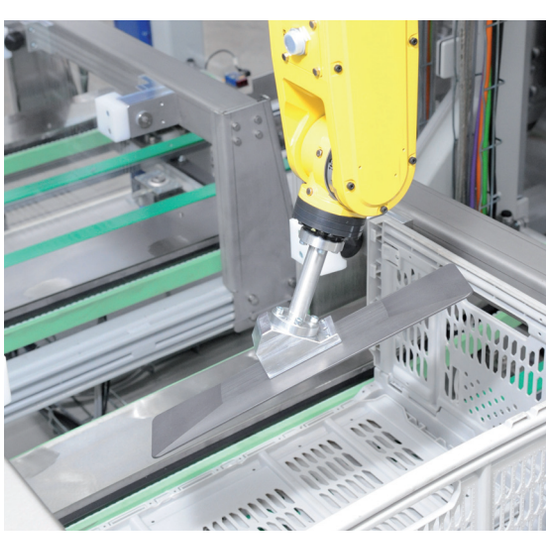
IMPLEMENTATION

The dual-cell box-erector station that resulted erects a pair of boxes every three seconds, a rate that cannot be maintained manually for more than short periods. Prior to filling, stacks of empty, collapsed boxes are first washed and then conveyed to the station. Sensors arranged on either side of the station determine the order in which the sides of boxes have been collapsed.

The pair of robots erects their sides, one after the other, and then checks that all sides have been correctly latched in place. Poorly latched and defective boxes are ejected before they come onto the conveyor belt transporting boxes onward to the filling station. In order to simplify cleaning, critical parts of the cells have been fabricated from stainless steel, even though they never come into direct contact with food products. As is customary at ASA, this dual-cell station is supplied complete and ready for use. The station is operated from a touch-screen terminal that, in the event of a failure or malfunction, highlights the associated system-status data onscreen in a contrasting color.

BENEFITS

The dual-cell station's design and complement of equipment provide for extremely reliable operation. The supply of erected boxes is guaranteed at all times, even while just one of the cells is operating. Thanks to the employment of articulated-arm robots, station uptime is better than that of conventional systems employing linear handling mechanisms. In the ideal case, such stations may be set up and placed in operation within a few hours, where the exact time involved depends upon their complement of equipment.



www.asa-automation.com | office.de@asa-automation.com | +49 (0) 6182 89 52 0