

High-Speed Connector Assembly



Challenge

A consumer electronics manufacturer needed an automated system designed to assemble, swage, and inspect small components into electrical connectors.

Solution

Bulk parts are manually loaded into vibratory bowls to be oriented and singulated before entering the machine enclosure. Inside the enclosure, turret mounted pick-and-place tools load components into pneumatic collets carried in nests on a 10-station rotary index table. As the table rotates, components are automatically swaged, vision inspected, and tested before being unloaded to the packaging line. Failed components are automatically removed to a reject bin.



Result

The high-speed connector assembly system orients, assembles, swages, and inspects electrical connectors at a rate of **1.25 seconds per assembly**. The entire process is recipe driven from a custom touchscreen interface. Part changeover can be completed in under 10 minutes, and requires little more than replacing part adapter components at the nests and selecting a new recipe from the user interface.

About DWFritz Automation

Established in 1973, DWFritz Automation provides world-class build-to-print manufacturing capabilities to clients, in addition to designing, building, and supporting engineered-to-order automation systems and high-speed, non-contact metrology products.

