

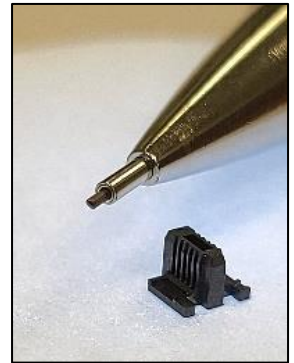


The Project:

Our customer was faced with a significant increase in demand for a new flagship, 0.4 mm centerline LCP electrical connector. Due to the extremely tight centerline circuit spacing and micro features, doubling cavitation in a traditional mold layout would introduce more variation, waste and risk. Our solution had to provide part quality verification, increased production volume and decreased cost.

The Challenge:

Our team knew we needed to take advantage of our specialized, Plustech/Sodick micro injection molding presses in our Small Parts Molding (SPM) room. They have unmatched exact dosing and fast response time capabilities—which would be key ingredients to the project's success. We needed to create a closed-loop manufacturing solution that could mold the parts, visually inspect and sort by cavity in a matter of a few seconds. Increasing cavitation on such a tight tolerance, inspection intensive product presented many obstacles. Matrix viewed this project as an opportunity to demonstrate our true full-service capabilities to solve our customer's micro molding electrical connector challenge.



0.4 mm LCP
Electrical Connector

The Solution:



Yushin High-Speed Side Entry Robot

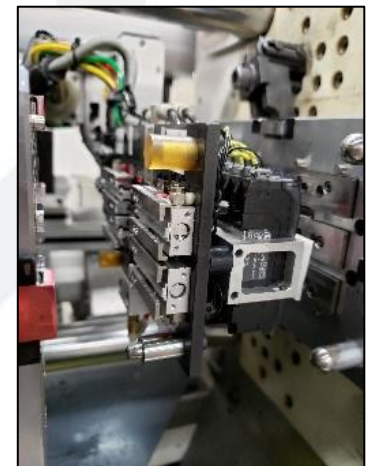
Matrix Tool's engineers and designers partnered with three key suppliers to develop a state-of-the-art, high speed automation cell. We created a custom manufacturing solution consisting of Sodick's exact dosing, 20-ton Injection Molding Machine, Yushin America's High Speed Side Entry Robot, and a high-resolution vision inspection system from Japan. All three work in tandem to mold, remove the parts, inspect, and finally sort/separate the connectors by cavity ID. All of this occurs in a matter of seconds!

"Extremely capable, solutions-based leader in the industry. We cannot compliment them enough regarding capability, quality and service."

--Mark B., Global Sourcing Manager

The Benefits:

Matrix Tool was able to use state-of-the-art automation technology to improve part quality and provide increased production capacity on this multi-cavity, tight tolerance electrical connector. In addition, cycle time and processing costs were driven down to levels that are not typically achievable on traditional horizontal injection molding machines. Our customer was able to meet increased product market demand while simultaneously reducing the overall manufacturing cost of their connector assemblies.



Custom End of Arm Tooling

Have a difficult project? Connect with US!

For a quotation or additional information, contact Matrix Tool Inc.