



## Challenge

A leader in gas turbine technology was in need of a heat resistant tool changer, capable of operating in harsh environments with extreme temperatures, and enable interchanging of workpieces that undergo the process of depositing on turbine blades.

In addition to exchanging the workpiece, the user was looking to improve their overall production efficiency by automatically exchanging spray guns.



## Solution

Applied Robotics' team of engineers created a high temperature tool changer, constructed with a high performance stainless alloy for maximum strength and stability, and Applied Robotics' self-centering, ensuring 3-cam latching mechanism. A active cooling system was also integrated into the tool changer to supply constant heat removal.

The tool changer was built and tested at the Applied Robotics Headquarters in NY and can withstand temperatures up to 1600 °F.

To improve productivity, tool changers and tool stands were implemented to allow robots to automatically change the thermal spray guns being used.



## Benefits

Our custom built Epsilon Tool Changer has now been successfully and safely operating in the harsh environments for over 7 years, with little to no maintenance.

With the addition of tool changers and tool stands, efficiency in tool/gun change over has lead to an increase output, higher quality consistency, as well as decreased their downtime.



"Through cooperation and collaboration the project had a successful implementation and allowed for a long term manual operation to be fully automated. Applied Robotics tailors their approach and provides unique solutions, much like this, to all of their customers."

**-Anonymous  
Regional Sales Manager**

