



CASE STUDY

FAI Develops State-Of-The-Art Assembly & Laser Marking Machine For Automate 2017

Problem:

Flexible Automation, Inc. (FAI) needed to create a machine for a robotic exhibit that demonstrated their advanced solutions in robotic assembly.

Solution:

FAI manufactured a cutting edge machine that engraves a screwdriver with a user's initials and aligns a driver bit into the hex socket on a screwdriver.

The process begins once a user enters their initials into the machine. The screwdriver transfers from a pallet by a Yamaha Cartesian robot and placed on a MagneMotion MagneMover LITE linear synchronous motor based conveyor. From there, a newly released Epson N series robot positions the screwdriver in a Keyence laser marking unit which engraves the screwdriver. Next, the Epson positions the screwdriver over a camera to identify the position of the hex socket. Downstream, a Fanuc M-1 delta robot uses vision guidance to obtain driver bits from a Flexomation flex feeder. The robots then collaborate to align the driver bit into the hex socket on the screwdriver, which is then returned to the user.

Benefits:

With this machine, FAI was able to demonstrate their ability to offer top solutions in automation at one of the most advanced automation events in North America.

About Flexible Automation Inc.:

FAI a group of automation, engineering & design specialists that creatively solve assembly problems. Based in Michigan, FAI has strong mid-west ethics with a tenacity to do everything it takes to find a solution. They feel this, along with their staff of over 60 automation experts is what allows them to be successful.

