



CASE STUDY

How To Properly Seal Housings With RTV Silicone

Problem:

A manufacturer of hybrid power electronics needed to assemble and seal control module housings with high efficiency and 100% confidence.

Solution:

Flexible Automation, Inc. (FAI) manufactures robotic systems that assemble and test automotive, consumer, and medical devices. 30 years of experience led to a system that dispenses RTV silicone and secures the housing halves using robots, vision, and an automated screwdriver.



At station #1 of the rotary dial chassis, the operator scans-in the housing halves with a Cognex barcode scanner and loads them onto the fixtures. Station #2 uses a Plasmatrete system mounted on an Epson robot to prep the plastic for bonding. Station #3 utilizes a Sealant Equipment brand dispense system mounted on a second Epson robot to lay down the bead of RTV silicone. A Cognex vision system is used inspect the quality of the sealant bead. Station #4 uses a pick-n-place to precisely assemble the housing halves together. When the housing returns to station #1, the operator uses an automated Atlas-Copco screwdriver to secure the halves before unloading. All of the assembly and inspection data is collected and stored for traceability.

Benefits:

The automotive supplier provides their customer with product guaranteed to have 100% quality. Further, the supplier now has a flexible automated system that can easily be reprogrammed to process future product models.

About Flexible Automation Inc.:

We are a group of automation, engineering & design specialists that creatively solve assembly problems. Based in Michigan, we have strong mid-west work ethics with a tenacity to do everything it takes to find a solution. We feel this, along with our staff of over 50 automation experts is what allows us to be successful. We'd love to find a solution to your assembly challenges.