Automated Dispense System for Filter End Cap Bonding Applications

Nordson Sealant Equipment works in partnership with SPX Filtran Corp., South Carolina, to provide robotic dispensing systems for unique manufacturing applications.

In one automated system, a new, dual-element filter was needed to bond metal end caps with fabric filter elements in a two-step process. The automated assembly process required 3 to 40 grams of mixed urethane to be dispensed into an end cap within 4 seconds. Next, the mixture manually cured in the inserted filter in 3.5 minutes.

This automated dispensing system has one robot and one operator performing the tasks that would normally be performed by two automation cells and two operators. After the first application of adhesive, a 15-minute delay is required before the second application of adhesive. The parts travel on a U-shaped dual-track conveyor to cure the adhesive after two applications. After fully curing, the parts are packaged for shipment.

The robotic dispensing system integrated by Nordson Sealant Equipment includes our Servo-Flo 704 Gear Meter-Mix Dispense System, a Fantuc M-10iA 6-axis robot with R-30iA controller for articulating the adhesive onto the filter end caps, two manual fixture slides for positioning the end caps in the dispense cell, a dual-track conveyor for curing adhesives and full-perimeter, see-through safety guards.