SLASHING LEAD TIMES BY INNOVATIVE AUTOMATION









ORIGINAL MANUAL PROCESS



Crescent molded each component, the nozzle, and the cap separately and bulked shipped to the client.

The client would then manually assemble the components and conduct a visual inspection before packaging and shipping.

To offer a value-added solution to our client, we assumed responsibility for the assembly process, manually at first by Crescent operators while the automation solution was being built.

INNOVATIVE AUTOMATION SOLUTION

Each part is injection molded – using end-of-arm tooling to separate and discard the runner.

The parts are loaded into vibratory bowl feeder systems for part orientation to get ready for assembly.

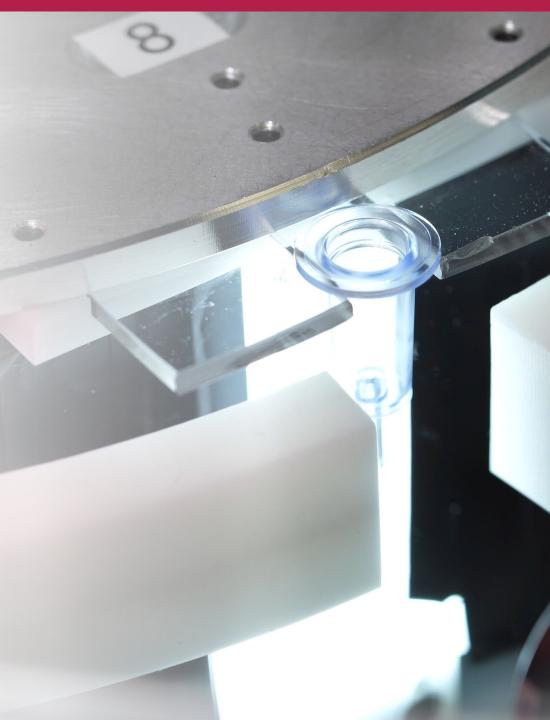
A highly specialized Keyence Vision System inspects the parts.

- Two high-resolution cameras inspect the Nozzles.
- The Caps are inspected by a third camera using a 360° lens to view the entire part.

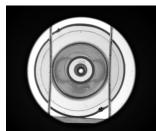
If the inspection rejects the part, it is immediately removed, and all good parts continue down the line for assembly.

The Nozzle is pressed into the Cap to make one component.

The assembled component is inspected and sorted into groups of 100 for final packaging and shipping.

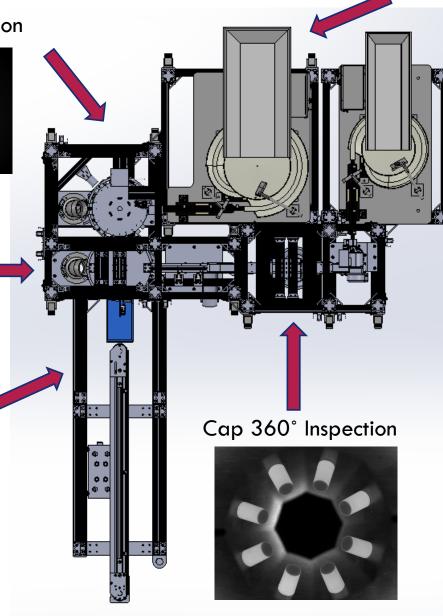


Nozzle Inspection



Nozzle & Cap Assembly and Assembled Part Inspection

Assembled Parts Sorted into Groups of 100

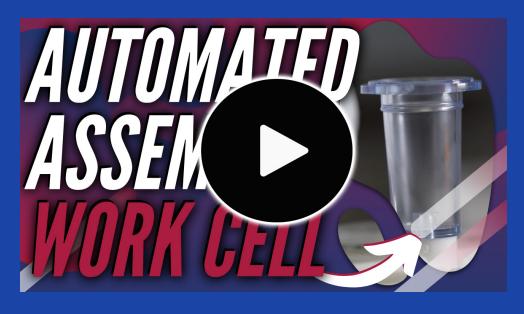


Vibratory Bowl Feeder Systems for Nozzle & Caps



NOZZLE/CAP AUTOMATION SOLUTION

Watch this Video



AUTOMATED SOLUTION SLASHED LEAD TIMES, COSTS, & LABOR

Lead Time Reduction



Reduced lead time by 2 weeks

Minimized operational costs



With in-line camera inspection, we reduced rejects/scrap by 1.62%, resulting in a \$10,000 annual savings.

Reduce the need for labor



No manual assembly is necessary, reducing labor by 2 full-time operators resulting in an \$81,000 annual savings.

IMPROVED QUALITY, EFFICIENCY, & EMPLOYEE SAFETY

Improved Product Quality



The product is now 100% inspected by automated vision systems.

Improved Efficiency & Productivity



Ability to keep up with the demand by decreasing the overall cycle per part by 6 seconds, meeting the client's takt time.

Improved Employee Safety



The automation vs. manual assembly process eliminated potential repetitive motion injuries.

