

MACHINE DESIGN- HIGH SPEED PICK-AND-PLACE



STERLING
ENGINEERING

SITUATION:

The corporate Plant Engineer and the Corporate Engineering Manager requested our assistance in providing an engineering solution to increase throughput of blow-molded bottle production equipment.

- The client had projections that customer demand would exceed production capabilities with existing equipment and configuration.
- The current process was constrained by the speed of the existing method of removing the bottles from the molding machines.
- The machines were experiencing excessive downtime as a result of operators attempting to run equipment at increased speeds.

STERLING SOLUTION:

The customer believed existing equipment could meet projected demand by improving post-molding material handling equipment. They also believed that a more sophisticated engineered solution would reduce the downtime of their machinery. Sterling assessed the kinematics of their current system and developed a design for a high speed pick-and-place device.

- Sterling supervised the fabrication, assembly, validation, and installation of the new device at the customer's site.

RESULTS:

Sterling's solution enabled the customer to realize results that exceeded the original expectations. They were able to easily meet demand without the capital expenses of additional molding equipment and operator payroll. Because the solution was so efficient, Sterling a follow-up project to adapt the solution to additional machinery. The end result was an increase in yield from 90 bottles per minute to 180 bottles per minute.

PROJECT SNAPSHOT

- ❖ *Blow-molded bottle company projected upcoming demand that surpassed their current production capabilities.*
- ❖ *Sterling developed a design for a new pick-and-place device and supervised its fabrication, assembly, validation and installation.*
- ❖ *The new device exceeded production expectations and the customer was able to meet the new demand without additional equipment or personnel costs.*

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