



Bottlers Reduce Production Costs by 7%

Challenge:

A bottling equipment manufacturer needed a means to increase cycle time on their filling machinery. This required development of a dynamic nozzle that could follow a filling profile, starting out with a rapid fill and slowing as the bottle reached capacity to eliminate spillage. This profile was critical to maximizing speed while at the same time keeping the process under control.

Previous solutions from competitors couldn't provide the accuracy or the reliability the customer was looking for. Having orders in hand and failed components on the floor, production was at a standstill and orders were postponed. Threatened with cancellations, they turned to Bimba.

Solution:

Working closely with the customer, Bimba engineers began designing a special position feedback cylinder with a magnetostrictive sensor shrouded in a hollow piston rod. Every sensor is individually calibrated by Bimba for exactly 0-10V feedback signal output. This was required because up to 40 units are installed per machine, and individual calibration is not possible in production. In addition, the sensor is immune to wear from rapid cycling, moisture, and air line contamination, which is critical in a filling environment.

For closed loop operation, the cylinder was mated to a Bimba PCS control. The valve and manifold assembly are mounted beside the cylinder and the control. The cylinder and manifold are housed in a sealed chamber to protect them from contamination.

This provided the customer with the responsiveness, accuracy, and durability that their process required. The custom solutions required rapid response, and prototypes were delivered in two weeks. Production followed shortly afterwards. The successful implementation allowed orders to be filled and new sales to be captured. The customer realized throughput gains of 15% and reduced production costs by 7%.

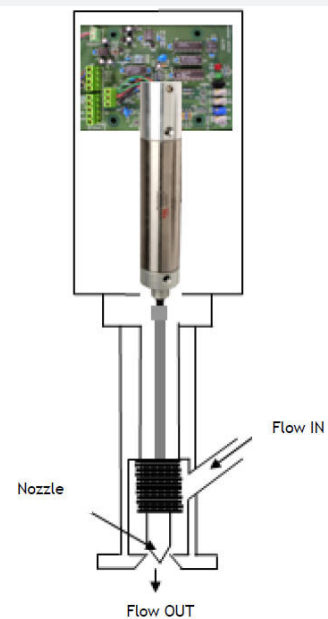


Benefits:

- Reduces production costs by 7%.
- Throughput gains of 15%.
- Increases responsiveness and accuracy.

Other Applications:

- Filling
- Fluid Dispensing
- Bottling



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