

Success Story

North Star Looks to Kollmorgen for Hygienic Wash-Down Motor Solution.

Durability and cleanability are essential for food production machinery. The AKMH™ servomotor was built for performance in harsh wash-down environments.

Challenge

North Star Engineered Products, Inc., a supplier of highly functional and durable food processing machinery since 1934, sought to make design enhancements to their Wedge Maestro apple coring machine to reduce product waste and increase shelf life. In addition, North Star sought to eliminate a pneumatic cylinder, a frequent replacement part that operates in a refrigerated wash-down area on the machine.

Solution

A servo driven linear actuator was used to replace the pneumatic cylinder. And a standard servomotor was used to index the loading table. "The ability to fully control the motion of both axes allowed for a more precise cut, increasing the shelf life of the apples, and less product waste due to a reduction of broken tips while maintaining the machines high production rate of 100 apples per minute." said John Clement, Division Manager, North Star Engineered Products.

The move to servo motion improved the function of the machine as desired. But, a standard servomotor motor with a stainless steel cover was used for the indexing table. The location of this motor was below the indexing table and was subject to thorough wash-down with water and caustic cleaning agents. Even with a cover, the motor was failing in less than two months creating durability and support issues. A more durable, cleaner solution was needed for the indexer motor.

Applying the Kollmorgen AKMH Stainless Steel IP69K servomotor to the indexing axis was the solution to the motor failure problem. The AKMH motor was purposefully designed to be washed down without restriction. Both the motor and cable can be coated with 2 to 12 pH cleaning solutions and sustain 1450 psi spray. As a result, the motor was applied without a cover eliminating a potential growth niche area and allowing it to be cleaned and inspected just like the rest of the machine. No more failures have occurred and the machine can be cleaned faster and more thoroughly.

The AKMH motor in conjunction with the 64:1 right angle gearbox has helped make the Maestro SD project a success, which is good news if you enjoy fully prepared ready-to-eat apples slices.



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FAST FACTS

Challenge:

Find a reliable hygienic servomotor to withstand direct wash-down cycles without allowing water ingress to replace standard servomotors that were failing in as little as two months.

Solution:

Use the AKMH™ IP69K hygienic stainless steel servomotor.

Benefits:

- **Motor covers are not required, eliminating possible pathogen growth niches and reducing the risk of food recall**
- **Motor and cable can be exposed to existing cleaning regimen, reducing cleaning time**
- **AKMH motors have a two year warranty against water ingress**

Have Similar Challenges and Want to See Real Results?

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About Kollmorgen

Kollmorgen is a leading provider of motion systems and components for machine builders around the globe, with over 70 years of motion control design and application expertise. Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For more information, visit kollmorgen.com, email support@kollmorgen.com, or call 540-633-3545.