

Success Story

Multilane Thermoformer Actuator Results in Significant Cost Savings.

Durable, cleanable motion control components are crucial for food production machinery. Concept Solutions rises to the hygienic challenge with the AKMH™ Servomotor and AquaTRUE™ gearhead.

Challenge

Concept Solutions Inc. has been providing high-performance motion solutions to the food industry for over 25 years. They recognized the need to provide an accurate, easy-to-use actuator that could allow a single printing head to print on multiple lanes of material entering a thermoforming packaging machine. The application requires simple integration into the packaging line, easy setup, durability in a wash-down environment, and the ability to be cleaned.

Solution

Working in conjunction with a major inkjet printer manufacturer, Control Solutions designed a system that allows for full inclusion of a wash-down actuator with a printer system that provides easy integration into new or existing thermoformer machines.

The system manages the "Print Go" and "Mirror" signals and provides direct feedback to the printer. An intuitive graphical HMI is used for set up. Simply load the start position, web width, desired speed, press go and it is ready to run. All units are scaled automatically, eliminating the guess work from the setup, so typical commissioning time is 15 minutes or less and product changeover is accomplished in a matter of seconds.

The entire system is built for duty in harsh wash-down environments and is comprised of an actuator manufactured from 300 series stainless steel, an AquaTRUE gearbox and a Kollmorgen AKMH Servomotor, both built to be cleaned with 2-12ph solutions and exposed to 1450 psi spray without restriction.

A standard system includes a stainless steel IP69K control cabinet, actuator with 3-meter food grade servo cable, brackets for one or two print heads and all interface cables required for communication to the printer. The actuator system is powered by 110vac and uses less than 5 amps.

Options such as adding additional integrated actuators to the system allow for machines with very high output requirements.

"The cost savings to the user is significant, said Brad Bower, President, Control Systems Inc. "For example, A 4 lane thermoformer machine without the actuator would require 2 printers with an average cost of \$30,000 each. The Control Systems actuator allow for the use of one \$30,000 printer and a complete actuator system costing \$20,000 so the savings in this example would be \$70,000."

The development of the wash-down hygienic AKMH servomotor, AQT gearbox and motion components, that can be applied without covers and cleaned just like the rest of the machine, enabled this product innovation.



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FAST FACTS

Challenge:

Design an actuator for a single print head to print on multiple lanes of material entering a thermoformer machine that withstands harsh wash-down environments.

Solution:

Develop an actuator system using 300 series stainless steel and other components designed for wash-down environments and use a Kollmorgen AKMH™ IP69K hygienic stainless steel servomotor with AquaTRUE™ IP69K gearbox to provide precise motion.

Benefits:

- **A single print head can be used for multiple lanes saving thousands of dollars.**
- **Easy integration into new or existing machines and product change over.**
- **Actuator, servomotor, gearbox and cable can be exposed to existing cleaning regimens reducing the risk of food recall and 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 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.

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