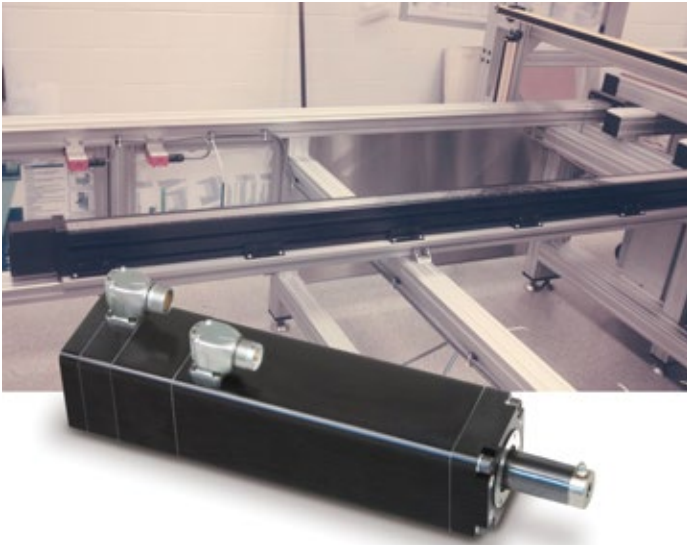


APPLICATION SOLUTION: Ultrasonic Welding Gantry System



Product Family: Electric

Product Used: B3W Linear Belt Drive and IMA Linear Servo Actuator

Product Type: Standard

Application Requirements:

Stroke: 12 foot in/out-feed tables; 4 x 6 foot working envelope; 8-inch z-axis ultrasonic tooling plate

Load: Heavy Ultrasonic Tooling

Application Description:

Applying ultrasonic welds to large medical waste bags

Challenge:

The ultrasonic welding process in this application was utilizing pneumatic motion control, which required manual adjustment in setup. Lack of positioning control resulted in welding and dimensional inaccuracies, delays that slowed production time and high scrap rates. Customer demands prompted an immediate change to an efficient electric motion control solution that would provide consistent performance carrying the heavy ultrasonic tooling heads, in and out over long distances, on the feed tables.

Tolomatic Solution:

A B3W linear belt-drive actuator was selected for the X- and Y-axis for its long stroke lengths and high load carrying capabilities for both the in-feed and out-feed table. Since accuracy and repeatability were customer concerns, servo motors with absolute encoders were selected for all 5 axes. An IMA33 linear servo actuator was selected for the z-axis for its integrated servo motor design providing force feedback functionality from the motor/drive system to ensure speed and positioning consistency throughout the welding process.

Customer Benefit:

- Quick, accurate, repeatable, ultrasonic welds
- Eliminated manual adjustment inaccuracies
- Eliminated costs related to compressed air
- Reduced product scrap
- Increased machine cycle time and product throughput