

**APPLICATION SOLUTION: Crucible Lift Assembly**



**Product Family:** Electric

**Product Used:** MXE Rodless Screw Drive Actuator

**Product Type:** Modified Standard

**Application Requirements:**

**Stroke:** 40 in (1016 mm)

**Application Description:**

A crucible lift assembly for the manufacture of semiconductor chips for use in electrical components

**Challenge:**

Both the equipment used and the product produced are expensive and exacting so a reliable, robust solution was critical. In the production of the semiconductor chips, an actuator was required to move the crucible to position into the furnace and hold position throughout the lengthy process of growing the semiconductor material. As a precaution, and as an added safety factor, the actuator could not lose position if a power outage occurred.

**Tolomatic Solution:**

Using an MXE50P electric actuator improved the system, allowing modulating the air flow to the crucible. The BNM05 leadscrew/gearbox combination ensures no backdrive would happen if a power-out situation occurs. Tolomatic accommodated the customer request for special mounting and end cap. The customer now successfully operates over 500 units.

**Customer Benefit:**

- Robust actuator solution with high moment capability
- Safety and ease of servicing
- Improved accuracy, control and repeatability
- Incorporated the customers need to use Allen Bradley motors and controls
- Excellent engineering collaboration with Tolomatic and distributor
- Accommodated customization requests with no disruption to production schedule