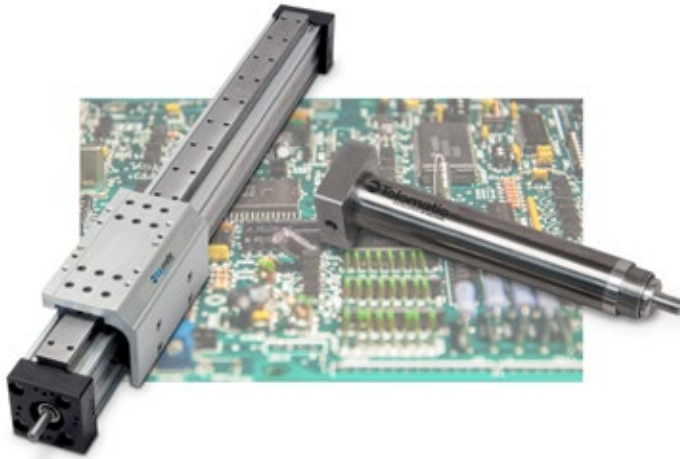


APPLICATION SOLUTION: Semiconductor Manufacturing



Product Family: Electric
Products Used: ERD15 & MXE40P
Product Type: Standard & Modified Standard

Application Requirements (ERD)

Stroke: 12 in
Speed: 12 in / sec
Thrust: 25 lbf
Motion Profile: Trapezoidal

Application Requirements (MXE)

Stroke: 20 in
Speed: 5 in / sec
Thrust: 785 lbf
Motion Profile: Trapezoidal

Application Description:

Machining parts in vertical orientation.

Challenge:

A part machining application required a two-step process. First, a rod-style actuator was specified to push a part vertically into position. Second, a rodless actuator was specified to precisely move a cutting unit to engage the positioned part. The precision of the rodless actuator was important, however both actuators needed to be cost-effective at the same time.

Tolomatic Solution:

To perform the first portion of the two-step process, a standard ERD15 electric rod cylinder was selected for its cost effectiveness. To achieve the positional accuracy of the second move, a MXE40P rodless profiled rail electric actuator was selected. An auxiliary carrier was added to the actuator and both carriers were precisely measured and shimmed to provide the straightness and flatness required to engage the part. In addition, a low-backlash motor coupler was used in conjunction with the motor encoder to improve the positional accuracy.

Customer Benefit:

- Tolomatic's ability to easily modify a standard product kept the project on schedule
- Accurate repeatable positioning of parts and cutter unit maintained output efficiencies
- Tolomatic's solution accomplished both cost and equipment performance expectations