

APPLICATION SOLUTION: 3D Printing For Home Construction



Product Family: Electric
Product Used: RSA Rod-Style Linear Actuator
Product Type: Modified Standard

Application Requirements

Stroke (varies): Max. 11 in (279.4 mm)

Speed: 20 in/sec (508 mm/sec)

Thrust: 900 lbf (4 kN)

Application Description

Articulate the concrete slurry dispensing head forming exterior/interior walls used in residential construction.

Challenge

A machine designer developing a method to automate the building of residential homes needed to articulate a dispensing head for the 3D printing portion of the construction process.

Tolomatic Solution

Tolomatic was able to meet all the speed, stroke and thrust requirements within a tight deadline using a modified RSA32 electric linear rod-style actuator. Featuring a planetary roller screw, this actuator perfectly met the durability needs required for the long service hours and rigorous production demands on this robot. With an IP67 rating, requirements were also met for exposure to outdoor elements.

Customer Benefit

- Long service life with high duty-cycle actuator design
- IP67 environmental protection
- Fast delivery with a modified standard design, built-to-order for customer specifications
- Readily adaptable to customer's preferred motor with Tolomatic's Your Motor Here® program
- Rugged, repeatable performance with Endurance Technology™ design features