

**APPLICATION SOLUTION: Educational Exhibit**



**Product Family:** Electric

**Product Used:** ERD Electric Cylinder

**Product Type:** Standard

**Application Description:**

Backhoe simulator for Children's Museum

**Challenge:**

A museum exhibit design allowed children to operate a simulated backhoe. The automated motion required electric cylinders to simulate the lift, reach and tilt of the backhoe's arm and bucket. A 100% duty cycle requirement was necessary during hours the museum would be open.

**Tolomatic Solution:**

Three ERD15 electric cylinders were selected to control each of the simulated motions, two with a 12-inch stroke and one with a 6-inch stroke. A JVL drive was used because of the simple set up and easy programming to control the motion profiles.

**Customer Benefit:**

- Realistic operation with non-stop operation during business hours
- Simplified installation with electric components rather than a pneumatic system
- A more realistic sound experience with stepper motor rather than pneumatic air valves
- Exhibit is so popular with the children that the museum added another backhoe simulator to accommodate the increased attendance