

CASE STUDY

PRODUCT CATEGORY:

Electric Actuators

INDUSTRY:

Food Processing

APPLICATION:

Apply electric actuator to open and close a lid on a double ribbon blender used for mixing grains.

PROBLEM STATEMENT (PAIN):

This OEM designs and builds a wide range of paddle and ribbon type blenders for use within the grain and viscous fluid processing industry. The top of the mixing chambers use a stainless steel cover which can weigh as much as 1,000 lbs. These covers were lifted by an overhead hoist during product changeovers. This proved to be time consuming and dangerous as the cover would swing as it moved away from the equipment. Customer needed to automate the cover removal in order to improve safety and reduce change over times.

FLOW PRODUCTS SOLUTION:

- The Flow Products team met with the customer's engineering team to review the equipment design and application requirements. The problem required a new look at the design of the cover for the mixing equipment.
- The customer established 3 objectives for the project:
 - > Improve the safety of the cover removal
 - > Automate cover lifting process
 - > Keep design compact
- The Flow Products engineering solution required a minor design change to the cover and a Tolomatic ERD25 stainless steel electric actuator with IP65 rating and holding brake to raise and lower the cover via a rear pivot cantilevered design.
- The electric actuator is powered by a servo motor with an integrated programmable drive to provide flexibility for cycle times.
- The electric actuator uses a reverse parallel motor mount to reduce space requirements.



Flow Products
Engineered Solution

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RESULTS:

1. The new cover design coupled with the Tolomatic electric actuator allowed for the elimination of the overhead hoist system resulting in a safe changeover process.
2. The programmable drive afforded the end user the ability to customize their cycles by increasing/decreasing cover lifting speeds.
3. The compact design of the Tolomatic actuator fit within the existing mixing equipment envelope dimensions.

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