ENGINEERING INFORMATION—ACTUATORS FAQ

Linear Actuators

Q. What are the benefits of a Linear Actuator?
A. Joyce/Dayton Linear Actuators offer a complete package solution including actuator, motor, limit switches, and position feedback (potentiometer).

Q. What are the duty cycle limitations?
A. Joyce/Dayton actuators have been designed and thoroughly tested to meet the duty cycles indicated in the catalog pages under the full load rating of the actuator. No special capacitors or other components are required to meet rated duty cycle.

Q. What happens if I lose power?
A. The actuator will come to a stop and stay in position until power is re-applied. An integral coil spring brake automatically engages when the motor is not running.

Q. What is the clutch and how is it used?
A. A screw clutch device is available on units without limit switches. This device allows the screw to turn if the actuator is run against a hard stop. The clutch is an emergency protection device and should not be repeatedly used as an end of travel limit.

Q. Are the linear actuators user-serviceable?
A. A comprehensive O&M manual is supplied with each actuator and some components can be replaced in the field. However, it is often more convenient and cost effective to replace the entire actuator.

Q. Are the limit switches pre-set?
A. Models with limit switches must be installed prior to setting the limit switch. This allows the flexibility to tailor the stop positions to the individual application.

Q. What is the restraining torque on linear actuators?
A. The restraining torque is the torque required to resist screw rotation. About 60 inch pounds for the 500 pound actuator. About 190 inch pounds for the 1500 pound actuator.

Integrated Actuators

Q. What are the benefits of an integrated actuator?
A. Integrated actuators offer maximum design flexibility with a choice of gear ratios, cast NEMA 56C motor mounting, and a choice of precision ACME screw or high speed ball screw drives.

Q. Are integrated actuators self-locking?
A. The IA51 and IA201 integrated actuators are inherently self-locking. All other models require a motor brake or other external locking device.

Q. What motor options are available?
A. Joyce/Dayton Integrated Actuators come standard with a NEMA 56C motor mounting so any motor with a 56C mounting can be adapted. Integrated Actuators can be purchased with AC or DC electric motors as well as with air motors.