LINEAR ACTUATOR APPLICATIONS

Tilt / Pivot

Duff-Norton linear actuators can be used to tilt objects, fixed at one end, up to 180° from their starting positions. The extension and retraction of the actuator causes the object to pivot about its stationary end.

Lift / Lower

Duff-Norton linear actuators can handle any lifting and lowering application up to 2000 lb (910 kg). As the translating tube of the actuator extends and retracts, the object that the actuator is attached to is raised and lowered at a consistent speed.

Position

When an application requires periodic adjustment to the position of an object or objects, Duff-Norton linear actuators provide the solution. The motion of the actuator allows the operator to position an object by simply pushing a button.

Portable Lighting

PROBLEM: Movie and construction crews need portable lighting for work at night. Lighting that is compact for travel and easily erected on location was difficult to find.

SOLUTION: Duff-Norton linear actuators mounted to the skeleton of the lighting system, allows the lights to be drawn flush against the vehicle, then fully extended on location at the flip of a switch. Additional actuators adjust the angle of the lighting fixtures

Drill Press Table

PROBLEM: When work pieces of different sizes require manual machining, it is necessary to adjust the height of the drill press table. Adjusting the height of the table manually is both time consuming and fatiguing.

SOLUTION: A Duff-Norton linear actuator mounted under the table allows the operator to change the height of the table as often as needed using either hand or foot controls.

Engine Assembly Fixture

PROBLEM: Fixture must be highly adjustable to specific positions for different procedures. The movement of the fixture must be smooth and reliable.

SOLUTION: Duff-Norton linear actuators are used to raise and lower the assembly fixture. This saves assembly time, reduces employee fatigue and work related injuries.

Roll / Slide

When it is necessary to roll or slide an object or a mechanical assembly into position, a

Duff-Norton linear actuator is the answer. The movement of the actuator causes the clamping, rolling or sliding of the desired object.

Open / Close

A Duff-Norton linear actuator mounted on a door, gate, or valve allows opening and closing operations on either a timed, or on-demand basis. As the actuator retracts, the gate is opened at a steady rate; the extension of the actuator returns the gate to a closed position.

Tension

Duff-Norton linear actuators offer a perfect solution for applications in which tension on a conveyor or web must be maintained and adjusted. An actuator mounted on a frame or roller extends and retracts to control the tension in the system.

Drum / Barrel Lifter

PROBLEM: Hazardous material sealed in drums must be handled and processed for disposal. It is desirable to minimize human involvement in the process.

SOLUTION: Two Duff-Norton linear actuators are used in each assembly. One operates a set of ratchet clamps that securely grasp the drum. The other actuator lifts the drum for pouring.

Industrial Oven

PROBLEM: Industrial oven doors can be very large and must often be opened and closed on a timed basis to allow for steady flow of material in and out.

SOLUTION: A Duff-Norton linear actuator is connected to the oven door and operated by an electronic control system. The actuator opens and closes the door to allow materials to enter and exit when prompted by the control system.

Conveyor System

PROBLEM: The tension in conveyor belts must frequently be adjusted to allow for crates of different sizes and to take up slack in the system that develops with use.

SOLUTION: A Duff-Norton linear actuator is mounted to a roller at one end of the conveyor system. At the push of a button, the actuator adjusts the position of the roller, controlling the tension in the entire system. Actuators can also be used to reposition conveyor systems.