

INNOVATION

SPOTLIGHT from the brands of Altra Industrial Motion Corp.



NEW WARNER LINEAR ACTUATORS PROVIDE MORE POWER IN LESS SPACE FOR CHALLENGING INDUSTRIAL, AGRICULTURAL AND MOBILE APPLICATIONS

The engineering team at Warner Linear has developed a new new electric actuator with self-contained hydraulic actuation to meet the growing demand for power dense actuators used in a variety of industrial applications including ag sprayer booms, snow plow blades, mower deck lifts, and ATV dump boxes.

The innovative H-Track actuator provides the performance of hydraulics without the space requirements and expense of a full-size hydraulic system.

H-Track units have the smallest mounting envelope compared to other Warner Linear actuators. A unique, patented valve and reservoir design also provides significant space savings compared to competitive models.

DESIGNED TO WITHSTAND HIGH LOADS AND JARRING BOUNCES IN THE FIELD

Larger ag sprayers, with ever-increasing boom lengths reaching 130 ft. in the U.S. (177 ft. in Europe), are becoming more and more popular.

These larger capacity sprayers allow growers to complete their field applications more efficiently while saving time and fuel.

Actuators are used to fold the long sprayer booms into a stowed position for transport. Folding and unfolding of the booms, from the extended spraying position to the stowed position, applies very high loads on the actuators.

Also, the moment force acting on the actuators is dramatically increased due to the bouncing of the booms during vehicle movement.

These combined loads create tremendous impacts which can quickly destroy most other electric actuators. However, the H-Track is designed to handle this type of extreme loading with ease.



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MORE POWER IN LESS SPACE

The H-Track is a robust actuator solution with a force rating of 4800 lbs. (21 kN) and travel speeds near 4 in. (100 mm) per second.

The unit's power pack features a configurable gear pump. Two gear size options in combination with multiple gear housing thicknesses allow for variable pressures and volumes.

An exclusive valve and reservoir arrangement minimizes parts and solves volume/pressure differential problems. Improved efficiencies are achieved by using a split tank shuttle valve with back pressure relief (patented).



Three-piece design allows for multiple system arrangements beyond a single actuator (i.e.: add-on accumulators, external cylinders, stand-alone tanks, etc.).

Other features include:

- Bore and rod combinations allow for multiple configurations.
- Stroke lengths up to 16". Solid rods allow for increased resistance to buckling.
- Actuator mounting length is a shorter package than any electromechanical actuator on the market.
- Hydraulic actuator is immune to vibrational drifting and hydraulically self-locks.
- Meter out circuits can be installed in one or both sides of the actuator to ensure load run-away situations will not occur.
- Cover tube is reservoir for pump providing improved cooling of the fluid. Extrusion design allows for feedback (limit switches, potentiometer, etc.).
- Fluid reservoir is only used to store or replace actuator rod volume. Reservoir is vented and isolated from atmosphere with a biased lid which allows actuator and pump operation in any orientation without entraining air or cavitation.



H-TRACK MODELS ARE IDEAL FOR USE IN DEMANDING OUTDOOR APPLICATIONS

Weather-tight, submersible, and washdown-capable, H-Track actuators are IP67 static, IP69K dynamic and 500 hour salt spray rated. Units are completely sealed with a wide operating temperature range of -40°F to 180°F (-40°C to 82°C). Seven models are available with stroke lengths up to 16 in.

Snow plows are another harsh application where loading, such as when a moving plow blade strikes a stationary concrete obstacle, can quickly destroy most linear actuators. The H-Track has the ability to cushion these types of blows and continue operating as required.

Mower deck lifts are typically where electric actuators shine. However, with increasing deck sizes and ground speeds being developed for faster mowing, the limits of traditional electric actuators can quickly be exceeded.

The H-Track, with its reliable load-holding capabilities, enhanced durability for higher transport speeds, and ability to withstand high-pressure washdowns, makes it a perfect choice for the next generation of larger, faster mowers.

* Source: farm-equipment.com

