

**CURTISS -
WRIGHT**

Tire & Rubber

Automation Applications
Increase Productivity and Profit

EXLAR®

TIRES - EFFICIENT, RELIABLE, AND FAST

Tire production involves many steps from the selection of proper compounds to assembling components into a tire and finally curing the tire so that it will last for years. Strict quality requirements and rising production demands have forced many manufacturing facilities to look for alternatives to conventional hydraulic solutions. Hydraulic cylinders often leak or need continuous maintenance that requires stopping production completely. The downtime and safety hazards have made electromechanical actuators increasingly important to the tire and rubber industry.

Exlar[®] electromechanical actuators from Curtiss-Wright offer the force of hydraulics with all the advantages of electric.

With our experience in providing improved solutions for customers, we can offer you gains in productivity, quality, and reliability. Utilizing electromechanical actuators can minimize the overall footprint of your facility, saving you thousands in property, equipment, and overhead.



Benefits

Programmability and Precision - The ability to control position, acceleration, deceleration, and velocity gives manufacturers flexibility and offers efficiency greater than 90%.

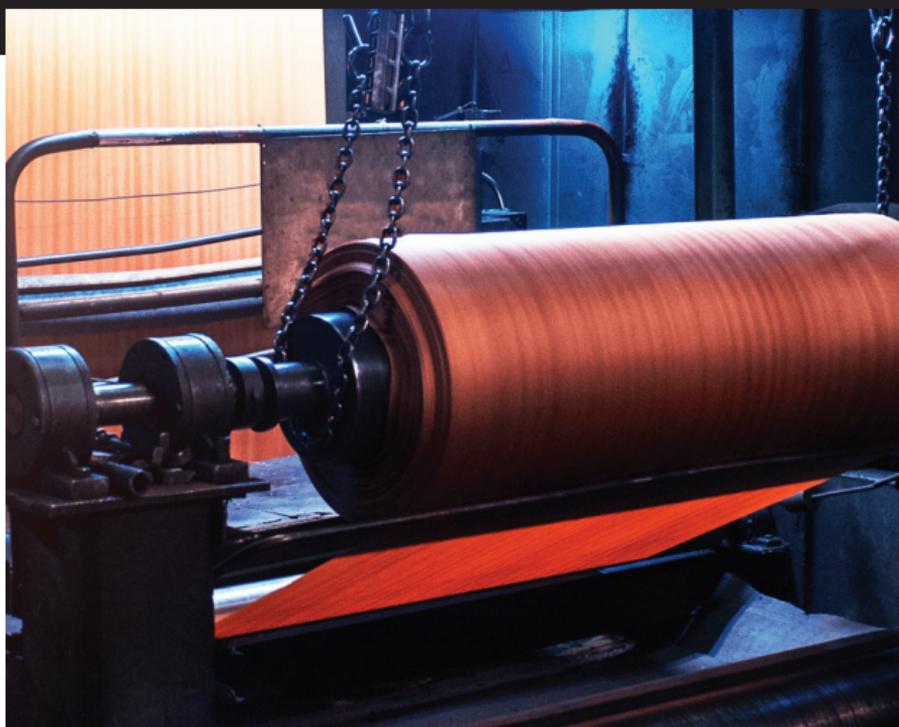
Exlar actuators combine roller screw and servo motor technology in a completely sealed package and can be used in place of most hydraulic cylinders.

Power Density - We offer force density comparable to hydraulics, up to 356 kN. Exlar actuators provide accurate positioning at high speed with high force in a very compact design.

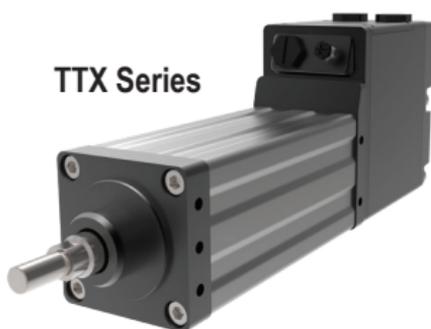
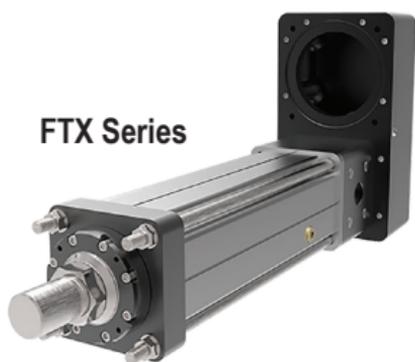
Longer Life - Exlar actuators are manufactured to last. An Exlar roller screw actuator lasts, on average, up to 15X longer than competitive electric ball screw actuators of similar frame size.

Rugged and Durable - Our actuators are built to withstand harsh environments. Designed with hydraulic replacement in mind, we offer IP65 protection and can meet or exceed most hydraulic criteria.

Our unique roller screw technology delivers high force in a small package giving you more flexibility, higher efficiency, and better reliability than hydraulic cylinders



Speed - Exlar actuators allow for smooth, efficient motion at speeds up to 1500 mm/sec. We can provide better control, higher speeds, and faster response than hydraulics.



Applications

Tire manufacturing involves dozens of processes all relying on each other. Each of the processes can benefit from electromechanical actuation.

Calendering

Loading the calendering wheels with fabric, rubber, and steel cords using Exlar actuators will give you the control you need for precise and repeatable positioning.

Tire Building

Automating the tedious and labor-intensive process of constructing layer after layer of individual plies onto the tire-building drum can maximize productivity and save you time and money.

Vulcanization

Holding the molds tightly closed during the vulcanization processes with electric actuators can give you more flexibility and reduce the downtime associated with hydraulics.

Quality Control

Automating quality control processes such as load and puncture tests using Exlar actuators speeds your time to market and allows you to cope with varying tire designs and thicknesses.

Migrating from hydraulics to electric actuation can improve energy efficiency, increase speed, and reduce downtime – increasing throughput by as much as 85%.

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