Minimizing environmental damage in both the automotive industry and the food and beverage industry is extremely important. Operations like adhesive bonding, battery filling, or sealing demand repeatability, precision, and flexibility to effectively control delivery of potentially caustic material such as epoxies or silicones.

In the past, pneumatics were chosen for their cost and small profile. However, because of poor reliability and lack of control, electromechanical actuators are replacing pneumatic actuators in many dispensing applications. They provide the programmability and accuracy needed to meet production requirements and minimize waste.

Customer
Recognized as a leader in automated liquid dispensing and coating systems, the company designs and manufactures a full line of equipment globally. They provide equipment to the automotive industry as well as the medical, process, and packaging industries. They are able to deliver precision, consistency, and flexibility to their customers in small, lightweight dispensing systems.

Application
In this application, electromechanical ball screw actuators were being used to control the stroke of a pump and force liquid through a nozzle. They needed to displace the same amount of fluids each time. Consistency during the process regardless of changes became critical to the effectiveness of the device and the current ball screw actuators weren’t able to provide that.

Customer Challenge
The customer was struggling with performance problems on their internally designed positive displacement device. The product had a long history in the market but wasn’t producing a constant flow rate. Without consistent and controlled dispensing the end products failed quality control tests.

Solution
They were using Exlar roller screw actuators on other dispensing products they offered. When they factored in the quality issues to the cost of their existing system, and the improvements they would gain, they realized using Exlar’s GSX actuators to fix the problem was the right solution. The GSX/GTX offered a smaller profile with less weight and lower maintenance than that of the current ball screw actuator solution. A minor change (saving costs in other areas) allowed them to use a more robust and better performing actuator.

Results
They were able to save substantially on weight and space by converting to an Exlar actuator, making their product more appealing to their customers. They also improved the quality and life of that product. A previous positive experience with Exlar products made the choice to upgrade compelling, which is why more machine builders are switching.