

Enhanced performance of Baxley sawmills thanks to Emerson's aluminum cylinders with ideal cushioning technology

RESULTS

- Reliable operation in harsh environment
- Maximized throughput and minimized downtime
- "Ideal Cushioning" technology improves efficiency while reducing noise



APPLICATION

AVENTICS™ aluminum cylinders paired with AVENTICS directional valves by Emerson actuate high-speed sawmill trimmers and sorter systems.

CUSTOMER

Baxley Equipment Company, USA

Baxley Equipment Company, a division of Timber Automation, LLC of Hot Springs, AR (USA) is a leading supplier of sawmill technology to the North American lumber industry, providing a broad range of products and complete systems such trimmers, sorters, stackers, feeders and edgers.

CHALLENGE

As a leading lumber industry supplier, Baxley Equipment Company knows the demands of its customers well. Mill operators seek the highest throughput rates possible, with machine downtimes kept to a minimum. This requires heavy-duty equipment with components engineered for durable, repeatable performance, while also guaranteeing steadfast and long-lasting operation even in very difficult and dirty environments, such as sawmills.

"We're using cylinders and valves that can operate faster than other brands we've tried, which allows us to design faster systems. If we didn't have the technology and components to run at that speed, it would be more challenging to build systems that fully satisfy our customers' requirements."

Tommy Green
Chief Engineer,
Baxley Equipment Company

SOLUTION

To get the best possible performance in the challenging sawmill environment, Baxley uses Emerson's pneumatic cylinders (AVENTICS TRB ISO 15552) with ideal cushioning technology, paired with directional valves (AVENTICS series 581 ISO directional valve with integral flow control) to actuate high-speed sawmills and sorter systems. Emerson's ideal cushioning technology avoids end of stroke bounce and thereby eradicates a major source of cylinder wear, speed reduction and noise. Emerson's AVENTICS pneumatic components enable Baxley's sawmill trimmers to operate with very tight cycle times of 120 milliseconds or less. In combination with AVENTICS directional control valves, the cylinders run speeds that other cylinder designs are unable to maintain.

For the sorter systems, Emerson pneumatics offer similar operational advantages: reliability and speed. These high-speed, large-scale systems automatically sort thousands of finished boards into stacks. The demands of the sorter systems are even greater as they need cycle times of 90 milliseconds. To cope with this requirement, AVENTICS series 740 directional valves are installed close to the AVENTICS TRB cylinder rather than on it, eliminating the need to add flow control and keeping weight to a minimum.



The AVENTICS 581 valve is one of Emerson's fastest valves, with Teflon™-encapsulated O-rings that allow it to resist friction and keep up with the trimmer's throughput rates.