

# Emerson's pneumatic solution provides real-time tooling system at aircraft manufacturing plant

## RESULTS

- Provided drop-in cylinder replacement
- Cut lead times from 12 weeks to 8 weeks
- Developed solution enabling real-time tooling system feedback
- Allowed more timely maintenance and production scheduling



## APPLICATION

Assembly line for passenger aircraft

## CHALLENGE

A global aircraft manufacturer used a large circular tooling system to hold the fuselage of a passenger plane and rotate it for assembly of internal components. The tooling was actuated by an air logic system and held in place with 130 NFPA pneumatic cylinders with rod locks. The manufacturer was unhappy with its cylinder supplier for its 12-week lead times and missed shipping dates. The company wanted a new vendor that could meet its delivery dates so maintenance could be scheduled.

## SOLUTION

The aircraft manufacturer invited Emerson's technical team to visit its plant to review the application. The team recommended the ASCO™ Series A tie rod cylinder with integral rod lock option as a drop-in replacement. The cylinder had an 8-week lead time plus the customer was familiar with the quality of its design.

During the visit, the manufacturer's tool engineering group told Emerson's technical specialists their tooling's air logic system had no feedback capability. The company wanted a solution that could monitor the system's inputs and outputs and set its parameters. The Emerson team suggested a package consisting of an ASCO G3 electronic manifold with Series 502 directional control valves and Series 652 air preparation equipment. The solution enabled communication with the tooling system through a PLC, allowing immediate data feedback for more timely maintenance and production. The Emerson solution was installed on six tooling packages and the customer is evaluating applications for it in other areas of the plant.

*Because of short lead times and familiarity with the products, the customer chose Emerson as their new vendor. The solution provided allowed for real-time tooling feedback through a PLC, which results in more timely maintenance and production.*

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