

Meridian Products

Years ago Meridian Products started out manufacturing camper trailer doors but over time, and various owners, Meridian evolved into producing high-end kitchen cabinet components with about 80% of those being doors.

Located in New Holland, Pennsylvania with a 52,000 sq. ft. facility and 240 employees Meridian sells to the smaller cabinet shops east of the Mississippi. "Everything we make is custom," explained Dean Youndt, engineering manager. "The parts are configured at order entry and by selecting specific features and options, all projects are produced on a per kitchen basis."

Manufacturing Problem/Solution

In 1995 Meridian Products underwent an ownership change. The owner came from a high-end custom kitchen manufacturer and he took Meridian to a higher level. "We needed to improve quality and put more emphasis on serving our customers and meeting their needs," stated Youndt. "Up to this point we were telling customers, 'this is what we have to offer,' and nothing more."

Meridian began to focus on improving the quality of the machined components. They improved the material quality and became more particular about defecting the wood. They added new machinery and began using the Accurate Technology ProScale linear measurement units on the single and multiple spindle shapers. ProScales were also being used on the Dodds dovetail drawer box machines.

"We improved our machining accuracy tremendously, but since we were machining the edge of the product after final assembly the product was slightly out of our tolerance range and customers were beginning to complain," explained Youndt. "We needed to get a better handle on the product going out the door."

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Operator checks squareness and X & Y measurements



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Meridian designed a hydraulic squaring table system in the inspection department to check all components. The table resembles an easel and the lower left corner has two steel fences set at a 90° angle. The table is backlit with fluorescent light so that when doors are placed on the table and positioned against the fences, the inspector can easily see any gaps from the components not being square. At the same time, ProScales are mounted onto the table and while the inspector is looking at squareness he steps on a foot pedal and cylinders drive small blocks, attached to the ProScales, on the X and Y axis against the door and stop. The inspector reads the width and length of the door for dimension tolerance. This process runs at 7000 cycles per week and ProScale has serviced Meridian well.

Results

Youndt explains, "We can catch any squareness or dimension problems within a short time after the component has been made. If there is a problem, we are able to go to the source of the problem, focus in on the operation and make the correction."

Meridian has actually closed the loop in the quality process by using ProScales throughout the shop on various machines to achieve faster and more accurate set-ups. Once the finished products go through inspection for quality assurance, that inspection information is then fed back to the production process for quality approval or any necessary adjustments.

"Our main objective is to make set-ups quicker, more accurate and gain in productivity," said Youndt. "Being custom, we make a lot of set-ups. If we can save time in set-ups, we increase throughput. Every operation where we have ProScale we have increased output and quality."



Squaring table is backlit with fluorescent lighting



Andrew Hagy
Product Inspector



"We've changed from a tape measure and pointer to ProScale linear measurement. ProScales will speed production, reduce set-up time and check process accuracy."

Dean Youndt

Engineering Manager

"Quality has become a way of life for Meridian that gives us the growth that we desire. ProScale has played a major role in that growth."

Steve Groff

Vice President Operations