

# Quality

M A G A Z I N E

## Case Study: Contributing to Quality

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A Blount technician uses the ShapeGrabber Ai810 3-D scanner. *Source: Blount International*

In the competitive mower blade industry, price and quality are keys to a successful manufacturing business. The increasingly specific requirements of lawnmower OEMs trickle down to blade manufacturers such as Blount International (Portland, OR), which produces nearly 2,000 different OEM and aftermarket blades, including its own Oregon brand line.

To continuously optimize quality while controlling costs, Blount uses a ShapeGrabber Ai810 3-D laser scanner as part of its forming process. Implementing the scanner has led to quality improvements and decreased lead times of about 30% in the first year of use.

### Improving Efficiencies in Quality Inspection

Blount has always used traditional methods of measurement such as calipers and height gages to verify the conformance of its mower blades to specifications. During the forming process, blade airlifts and offsets are tailored to specifications. When nonconformance issues are identified, adjustments to the machines are made, and another part is formed and measured again.

Seeking a more efficient means of measuring key product attributes, Blount chose the ShapeGrabber Ai810 with Geomagic software. The solution met six key criteria. They include:

- **Ease of use.** Only a handful of personnel at Blount were able to perform the manual measurements, creating bottlenecks. Now, the Ai810 scanner is used by 50 operations personnel. The average training time required on the scanner is one hour per person.
- **Flexibility.** Using no fixtures, the ShapeGrabber scanner is able to measure all of the key product characteristics of interest to Blount, across 1,800-2,000 unique blade designs, which range from 12 to 36 inches in length.
- **Versatility.** Blount also uses the scanner in design and development of tools, and for more efficient capability studies on tools and die.
- **Speed and accuracy.** The ShapeGrabber scanner met Blount's existing measurement accuracy (up to 0.003 of an inch) while improving inspection speed by 30%. It requires just eight minutes to scan a complete blade compared to 15 minutes doing so manually.
- **Training and support.** Blount received product training from ShapeGrabber and internal training is now handled by a Blount staff member. ShapeGrabber provides ongoing support and annual system calibration services, which assist Blount in maintaining its ISO 9001 registration.

## **Quantifiable Benefits and a Culture of Quality**

In addition to reducing the time involved in quality inspection and eliminating quality control bottlenecks at Blount, the ShapeGrabber scanner also has contributed to other improvements. Blount verifies certain characteristics of its blades using the criteria, in control and capable. In the first year of using the scanner, Blount saw a 30% increase in conformance in those areas.

Lead time on mower blade production also has dropped by nearly 30%, from six days to produce a blade down to just over four days. Engineering Manager Brian Brunk attributes this to improved product quality.

Brunk also says that the scanner has had an unexpected side effect in terms of supporting a culture of quality. "The scanner has engaged the people who use it more than they were engaged before," he says. "Now, we see employees taking more of an ownership of the products and their quality throughout the manufacturing organization."

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[www.blount.com](http://www.blount.com)

## Benefits

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