LECTRA

THE CHALLENGE
Guangzan needed to improve its productivity and cost structure in order to achieve greater profitability.

LECTRA'S RESPONSE
Implementation of Lectra's Vector® iX6 fabric-cutting solution enabled Guangzan to achieve significant material savings while also streamlining the cutting process and resolving quality issues.

RESULTS
Guangzan has succeeded in increasing productivity by more than 50% by lowering the waste ratio and drastically improving the quality of cut parts for the automotive trim covers it supplies to major carmakers.

LECTRA SOLUTIONS
Vector®

Guangzan fuels rapid growth with leaner operations and increased productivity

Seeking to improve profitability, the China-based automotive trim cover and headrest supplier turned to Lectra to digitalize fabric-cutting processes in the face of evolving market challenges.

A FAST-GROWING AUTOMOTIVE SUPPLIER

Based in Shanghai, China, Guangzan is a supplier of automotive headrests and interior trim. Initially an automotive injection molding manufacturer, the company expanded into automotive seating trim covers, from the cutting of fabric parts all the way to sewing and assembly. With the vision to grow its business, Guangzan upgraded its product line, making the company more attractive to customers.

New revenue opportunities also brought challenges to productivity and cost control, a drag on the company's overall growth. Guangzan found that it was difficult to satisfy demand with inflexible production capabilities based mainly on manual die press operations. Increasingly sophisticated seating designs involving smaller, more intricate parts added a further degree of manufacturing complexity.

Guangzan's business underwent a major transformation once a contract was signed with an OEM, resulting in a company-wide initiative to streamline production. Guangzan then sought a digital cutting solution that could provide a higher production capacity while ensuring premium quality.

A FOUNDATION FOR LONG-TERM GROWTH

At the end of 2015, Guangzan acquired two automotive fabric cutters from a rival CAD/CAM system manufacturer. It was only after implementation that the company determined the equipment was not suited to cutting the multi-fabric material used in headrests. The technical limitations of the cutters restricted the number of plies that could be cut due to the risk of material fusion. Additionally, the buffer required to achieve small, detailed shapes contributed to low cutter productivity and material waste.

Guangzan needed to both acquire more efficient equipment and benefit from cutting room expertise to streamline existing operations. Determined to build a foundation for long-term growth, Guangzan began researching alternative fabric-cutting solutions on the market. With the support of Lectra's Professional Services, Guangzan reevaluated its technological needs and re-outfitted its cutting line with DesignConcept 2D prototyping software, Diamino marker-making solution and VectorAuto iX6 precision fabric cutting equipment.

A 50% INCREASE IN OVERALL PRODUCTIVITY

To manufacture its headrests, Guangzan uses a pour-in-place (PIP) process requiring an especially high level of accuracy for the production of cut pieces. Any deviation beyond the tolerance of less than ± 1 mm can compromise sewing quality, resulting in foam leakage. Lectra's Vector iX6 features a 2x7 mm blade that exerts less pressure on synthetic materials than the rival CAD/CAM cutting solution it replaced, minimizing friction and the risk of fusion. Combined with Vector iX6's more sensitive stress sensor, the precision blade enables a reduction of buffer between pieces, significantly lowering the waste ratio.

Together with Lectra's automatic nesting solution, Vector iX6 furthermore enables the best possible placement of pieces, saving time and maximizing fabric efficiency. Lectra's integrated solution comprising advanced software, cutting equipment and value-added professional services has enabled Guangzan to significantly optimize production. Overall productivity per machine has improved, and the lower waste ratio and superior cut quality of the Vector digital cutting solution have increased productivity by more than 50%.

"Lectra is an ideal partner. Its Vector solution allows us to achieve operational excellence, and provides us with various benefits owing to its advanced technology. Vector's predictive maintenance ensures high machine availability. Working seamlessly with Lectra, we anticipate a sharper competitive edge in the automotive supply chain, and a profitable future."

Guo XiaoBing
General Manager,
Guangzan

About Guangzan Industry & Trade

Founded in 1994, Guangzan is a manufacturer of automotive headrests and interior trim. With a production plant located in Shanghai, the private company employs a workforce of over 200.

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