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All Axis Robotics Manufactures Custom Robot Arm End-Effectors with MakerBot METHOD

Turnkey robotics provider reduces lead times and costs while increasing production efficiency with in-house 3D printing solutions

BROOKLYN, N.Y.--(BUSINESS WIRE)-- [MakerBot](#), a global leader in 3D printing, revealed that [All Axis Robotics](#) is implementing the MakerBot METHOD manufacturing workstation into its automation processes to produce custom tooling parts for its legacy machines as well as customers.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20190925005272/en/>



Photo: Business Wire

All Axis Robotics is a Dallas, Texas-based machine shop and a leader in turnkey custom robot solutions for other machine shops and manufacturing facilities in need of automated machine tending. Customers enlist the expertise of All Axis Robotics' mechanical and manufacturing engineers to streamline their

manufacturing operations with robotic arms and custom end-effectors, including those for CNC machine tending, automated part sanding, and brake press machine tending, among others.

"One of the challenges we faced when adapting our collaborative robots and automation in the machine shop was the need to develop custom parts during the process. We would have to develop custom brackets, fixtures, or fingers for the grippers, and not all of this would be possible to produce on CNC machines," said Gary Kuzmin, CEO, All Axis. "When we purchased the MakerBot METHOD, we automatically obtained all that capability for customizing all these different parts. Within days, we were able to print custom parts for our machines. The relevance of having this machine within our process is that we have a quick

turnaround capability to produce custom parts that we can integrate into our systems immediately.”

The engineering team at All Axis uses 3D printing to produce custom tooling parts—reducing lead times from months to hours for their bespoke robot end-effector designs. This ability to create custom solutions for customers—combined with rapid turnaround times—has helped All Axis gain a competitive advantage against competitors as more manufacturing facilities upgrade new and legacy equipment to meet the increasing demands of industry 4.0 and the modern global marketplace.

“Not only was it extremely valuable for us to make on-demand custom parts for what we needed to keep our operations going, but we were able to implement 3D printing for our customers and their needs,” added Kuzmin. “As our engineers realized the capabilities of 3D printing, we were able to create a product line of 3D printed parts for existing customers who had similar challenges.”

For example, All Axis engineers designed and manufactured a custom part sander using MakerBot’s strong and durable real ABS material with the METHOD X. The robot sander automates the time-consuming manual aluminum sanding operation; helping a machine shop to run more efficiently by freeing up personnel for other tasks. It features two sides with different grid sand pads as well as a connection for a vacuum to remove debris.

By producing the part with an in-house METHOD printer, the team was able to eliminate undesirable factors typical of traditional manufacturing processes, including expensive machinist time and material costs. And by approaching the part design through the lens of freeform additive manufacturing, the engineers were able to 3D model the part quickly without having to account for complex assembly considerations typical of traditional manufacturing processes.

The ability to print with Stratasys® SR-30 soluble support material allowed the engineers to design the sander as one complex part, which would’ve been impossible to machine using traditional manufacturing methods. METHOD’s dimensional accuracy ensured that the part mated perfectly with the robot arm on the first try. The use of production-grade ABS printed in the 100°C heated chamber produced a very strong and durable tool capable of withstanding the harsh machine shop environment.

“All Axis Robotics is a prime example of a customer who has embraced the possibilities of additive manufacturing to remain competitive in today’s environment,” added Nadav Goshen, CEO, MakerBot. “By investing in in-house 3D printing solutions, companies like All Axis can change how they approach manufacturing. By combining automation with the quick part turnaround time METHOD has to offer, companies can now improve their production capabilities and grow business opportunities.”

“One of the interesting things about our shop is that right next to our million-dollar machines on the production floor is a MakerBot METHOD, which is about \$6,500. And it’s that \$6,500 machine that is able to keep our million-dollar machines running automation,” concluded Kuzmin.

To learn more about All Axis Robotics, visit www.allaxisrobotics.com/.

Learn more about MakerBot METHOD at www.makerbot.com/method.

About MakerBot

[MakerBot](http://www.makerbot.com), a subsidiary of Stratasys Ltd. (Nasdaq: SSYS), is a global leader in the 3D printing industry. The company helps create the innovators of today and the businesses and learning institutions of the future. Founded in 2009 in Brooklyn, NY, MakerBot strives to redefine the standards for 3D printing for reliability, accessibility, precision, and ease-of-use. Through this dedication, MakerBot has one of the largest install bases in the industry and also runs Thingiverse, the largest 3D printing community in the world.

We believe there's an innovator in everyone, so we make the 3D printing tools that make your ideas matter. Discover innovation with MakerBot 3D printing.

To learn more about MakerBot, visit makerbot.com.

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