

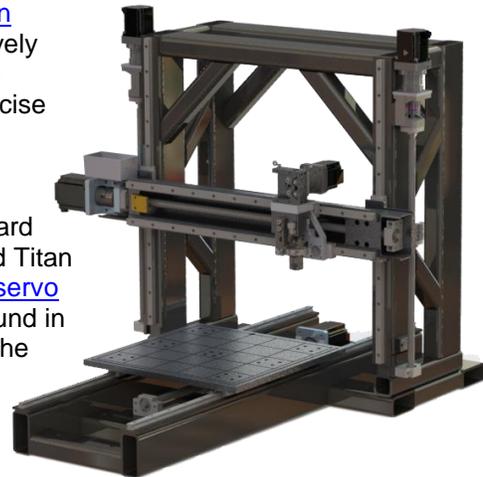
## New printer sparks an industrial revolution in additive performance

*Titan printer with Yaskawa components sets new pace for 3D speed*

**Fort Worth, TX.** One of the big attractions at April's RAPID+TCT 3D printing expo was a printer that raises the bar in processing speed. The machine's advances are achieved through technology that is new to the field of additive manufacturing, and was drawn from the world of automated industrial machinery.

The new printer, developed in a cooperative effort between [Titan Robotics](#) and Yaskawa America, is able to achieve an impressively fast printing speed of 350 millimeters per second. When moving between print events, the print head can travel between two precise points at a remarkable one meter per second.

The step forward in speed comes from two sources. Titan contributed a welded steel frame that sets a new industry standard for machining precision and structural strength. Yaskawa helped Titan replace a set of standard motion control devices with Yaskawa [servo systems](#) and [machine controllers](#), which are more commonly found in the world of high end automated factory equipment. Check out the [video!](#)



"We're really focused on having an accurate, robust machine that can do big parts really quickly and reliably, over and over again," said Clay Guillory, Titan founder and CEO, adding, "Our customers want something they can trust...they can't afford to waste two weeks of print time on a really large, mission critical part." The new Titan/Yaskawa machine delivers on this desired outcome by using three industrial technologies:

- **Steppers to servos-** the low-cost stepper motors that are typically used on 3D printers are replaced in the Titan machine by five axes of servo control. The result is a dramatic increase in motion speed and precision, along with new freedom from movement ripples, machine vibration and other mechanical artifacts.
- **Industrial strength machine control-** Titan's new printer replaces the traditional open source control board with a Yaskawa MP3300iec machine controller, which is able to process existing G-code with a far higher level of long-term reliability. The switch to industrial control also offers the option of improving the machine's user interface, which places better system control in the hands of entry level users.
- **A stronger framework-** an exceptionally robust framework of precision machined components gives the Titan/Yaskawa machine a stability, accuracy and repeatability of movement that has seldom been seen in the additive manufacturing industry.

The result is a great step forward for both print quality and cost effectiveness. "I think this is a sign that we're seeing the industry rise to the next stage in its development," said Kevin Barker, Director of Sales for Yaskawa's Motion division. "We're seeing companies like Titan enter the top tier of the business. More of the producers who started at the hobbyist end of the industry are stepping up to create products that outperform the high-cost competitors who once set the standard in this technology," he said. "I'm glad that we could play a part in moving the industry forward, because it creates an easier path to innovation for everyone...both printer builders and the end users who are using 3D technology to create their own innovations."

**Contact: Tom Kutcher**  
Manager, Marketing Communications  
Phone: 847-887-7318  
E-mail: [tom\\_kutcher@yaskawa.com](mailto:tom_kutcher@yaskawa.com)

**Yaskawa America, Inc.**  
Drives & Motion Division  
2121 Norman Drive South  
Waukegan, IL 60085  
Phone: 800-YASKAWA (927-5292)  
Fax: 847-887-7310

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## **About Yaskawa**

The Drives & Motion Division of Yaskawa America, Inc. manufactures industrial automation equipment. Its products include industrial AC drives; commercial HVAC drives; spindle drives and motors; servo amplifier systems and motion controllers; and low-voltage industrial control switches. The company's products are used in automotive, building automation, chemical and petrochemical, food and beverage, machine tool, material handling, metal forming, packaging, pharmaceutical, solar, plastics and rubber, and textile applications. Yaskawa America's Motoman Robotics Division makes industrial robots that can weld, assemble, cut and handle goods for manufacturers.

Yaskawa America, Inc. employs more than 1,000 people at its headquarters in Waukegan, IL, its manufacturing facilities in Buffalo Grove, IL and Oak Creek, WI, and in offices across the United States. For more information about motion control by Yaskawa, please visit our website at [www.yaskawa.com](http://www.yaskawa.com).