



# End-Effector eNews

From ATI Industrial Automation

WINTER/SPRING 2015

## ATI F/T SENSORS UTILIZED IN NEXT GENERATION STONE CUTTING SYSTEM



ATI Industrial Automation recently collaborated with CORE, a consortium that has developed the LeanMachine, a state-of-the-art manufacturing solution for the stone industry. The system consists of a large environmentally-protected ATI Force/Torque Sensor and a Six-Axis Industrial Robot equipped with a cutting tool that machines the stone. The tool force is a critical issue because it improves the quality of the manufactured products, mainly during polishing operations, and it reduces the tool wear. The LeanMachine solution uses an ATI Omega191 Six-Axis Force/Torque Sensor to measure and control the tool force, allowing any stone factory to optimize all product-finishing stages increasing throughputs when compared with human dependent processes. [Read More >](#)

## NEW PRODUCTS AND SOLUTIONS AT THE AUTOMATE 2015 SHOW

ATI Industrial Automation will be exhibiting at the upcoming Automate 2015 Show March 23-26, 2015 in Chicago, IL at McCormick Place, North Hall, Booth #640. Automate is North America's broadest automation event, offering the largest solutions-based showcase of automation technologies in North America. ATI will display a variety of live robotic demonstrations and new products. [Read More >](#)



## ATI TOOL CHANGERS AND COMAU'S SMARTCELL MAKE FLEXIBLE ASSEMBLY A REALITY

The SmartCell from Comau LLC is a large gantry-style robot with a central pallet-positioning system and two mobile vertical axes, rather than one. Instead of a single, dedicated end-effector that only changes when a new model is being made, each robot arm is equipped with a Robotic Tool Changer from ATI so end-effectors can be exchanged continuously during the assembly sequence. By implementing SmartCells, manufacturers can dramatically reduce costs. Compared with a traditional assembly line, fixed and variable costs can be reduced by 40 percent, floor space reduced by 60 percent, and the number of automation components reduced by 75 percent. [Read More >](#)

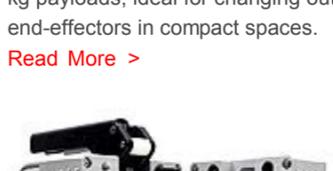


## Featured Products



### QC-18 Electric Tool Changer

ATI has developed an electrically-actuated Tool Changer that utilizes a 24V DC electric servo motor to drive the locking mechanism. The low voltage, low-current inputs allow for easy integration into research, educational, aerospace, and mobile robotic applications. Designed for applications where air supply is either not available or not desired, the QC-18 is sized for 18 kg payloads, ideal for changing out end-effectors in compact spaces. [Read More >](#)



### GH1 Manual Utility Coupler

ATI has developed a series of Utility Couplers that can be manually coupled/uncoupled quickly and are designed for applications where there is a need to quickly connect utilities such as air, fluid, power, and electrical signals in docking and fixturing applications. The GH1, features a patented locking steel latch that draws in the utility connections. It has four 3/8 NPT axially-checked, pneumatic ports, and hardened stainless steel alignment pins. The GH1 can connect multiple utilities at one time and can be supplied with several different mounting bracket options, including grab handles. [Read More >](#)



### EtherCAT Force/Torque Sensor

The EtherCAT Force/Torque (F/T) Sensor seamlessly streams data to devices that use EtherCAT fieldbus. Integrated signal conditioning, data acquisition, and a 1-port EtherCAT interface are all contained in the sensor. The EtherCAT F/T also supports Power-over-Ethernet and only requires one 4-pin, M12 connector for EtherCAT and power. No additional interface box is needed. EtherCAT is a native fieldbus on many robots and often comes at no extra cost. [Read More >](#)

## ATI DEBURRING TOOLS INCREASE SAFETY AND REMOVE WASTE

Compass Automation recently developed a Robotic Deflashing System utilizing ATI's Radially-Compliant Deburring Tools to remove excess plastic from workpieces. The operator presses a touch button and a linear actuator moves the part toward one of two FANUC LR Mate 200iC robots equipped with ATI RC-340 Robotic Deburring Tools. The robot then proceeds to deflash the part, alleviating the operator of the ergonomic and quality difficulties associated with deflashing by hand. The compliance that is built into the Deburring Tool enables it to adjust accordingly to give the parts a consistent finish. This feature allows for uniform material removal and reduces production waste, saving time and money. [Read More >](#)



## Featured Videos

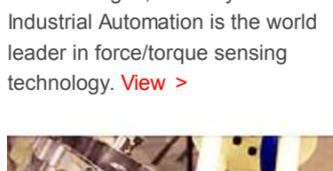


### Why ATI Force/Torque Sensors?

This video explains what a Multi-Axis Force/Torque Sensor is, its advantages, and why ATI Industrial Automation is the world leader in force/torque sensing technology. [View >](#)

## BOOSTING PRODUCTION POTENTIAL WITH ATI FORCE/TORQUE SENSORS

Force control technology, also referred to as tactile feedback, gives robots fine-tuned information about the force being applied to a part so the robot can react appropriately. ATI Industrial Automation's Six-Axis Force/Torque Sensors enable robots to do just that. Robot adaptability resulting from force control is a necessity when removing parting lines on metal castings due to the varying size of the parting line. Large sections of molding flash sometimes need to be removed by grinding. A robot equipped with ATI F/T Sensors can give it an almost "human-like" ability to sense when it has encountered an unworkable area of a part and make the decision to take a different approach. When a robot's behavior is able to adapt to a process in real time, the result is improved production, quality, and tool life. [Read More >](#)



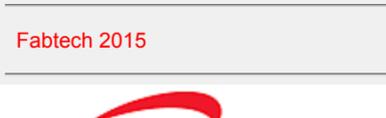
### Robotic Deburring of Cast Metal Housings

An ATI Flexdebur RC-660 Robotic Deburring Tool is utilized to remove excess aluminum from transmission housings. ATI offers a variety of compliant deburring tools that make automated deburring and finishing a safe, consistent, and economical process. [View >](#)

## UPCOMING EVENTS

ATI exhibits at a variety of industry shows and conferences. Our schedule is listed below. Contact Valerie Van Deusen at [Valerie.VanDeusen@ati-ia.com](mailto:Valerie.VanDeusen@ati-ia.com) if you would like a FREE ticket (subject to availability) to any upcoming shows.

<a href="#">Manufacturing in America Symposium</a>	March 11-12, 2015	Ford Field, Detroit, MI
<a href="#">Automate 2015</a>	March 23-26, 2015	McCormick Place, Chicago, IL ( <b>Booth #640</b> )
<a href="#">Orthopaedic Research Society Annual Meeting</a>	March 28-31, 2015	MGM Grand Hotel, Las Vegas, NV ( <b>Booth #339</b> )
<a href="#">Fabtech Mexico 2015</a>	May 5-7, 2015	Cintermex, Monterrey, Mexico ( <b>Booth #601</b> )
<a href="#">Electronics New England</a>	May 6-7, 2015	Boston Convention Center, Boston, MA ( <b>Booth #1013</b> )
<a href="#">FEIMAFE 2015</a>	May 18-23, 2015	Anhembi Exhibition Pavilion, São Paulo, Brazil
<a href="#">ICRA 2015</a>	May 26-30, 2015	Washington State Convention Center, Seattle, WA ( <b>Booth #221</b> )
<a href="#">ATX Canada 2015</a>	June 16-18, 2015	Toronto Congress Center, Toronto, Ontario ( <b>Booth #1047</b> )
<a href="#">Pack Expo Mexico 2015</a>	June 16-19, 2015	Centro Banamex, Mexico City, Mexico ( <b>Booth #4201</b> )
<a href="#">American Society of Biomechanics Annual Meeting</a>	August 5-8, 2015	Hyatt Regency, Columbus, OH
<a href="#">ATI's 2015 Technology Fair</a>	August 13, 2015	ATI Michigan Office, Orion Township, MI
<a href="#">Pack Expo 2015</a>	September 28-30, 2015	Las Vegas Convention Center, Las Vegas, NV ( <b>Booth #C5614</b> )
<a href="#">The Assembly Show 2015</a>	October 27-29, 2015	Donald E. Stephens Convention Center, Rosemont, IL
<a href="#">Fabtech 2015</a>	November 9-12, 2015	McCormick Place, Chicago, IL



Engineered Products for Robotic Productivity

Visit [www.ati-ia.com](http://www.ati-ia.com) for the most current product specifications, 2-D drawings, and 3-D CAD models.

