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FANUC Introduces New Collaborative Robots in Human/Robot Interactive Demonstrations at IMTS 2016

For Immediate Release

ROCHESTER HILLS, MI – (Sept. 12, 2016) FANUC America Corporation will introduce the new CR-4*i*A and CR-7*i*A table-top size collaborative robots, and demonstrate its CR-35iA heavy-payload collaborative robot at IMTS 2016, booth #S-8919.

The CR-7*i*A, CR-7*i*A/L, and CR-4*i*A collaborative robots follow the launch of the larger CR-35*i*A collaborative robot. "Our collaborative robots are equipped with highly-sensitive contact detection allowing them to share workstations with people," said Greg Buell, product manager, FANUC America. "This is a major safety and cost benefit as it allows the robot to perform more strenuous tasks or repetitive operations without the need for expensive industrial safety barriers."

IMTS Collaborative Robot Demonstrations

Gearbox Assembly – A new FANUC CR-7*i*A/L collaborative robot mounted to an AGV will perform two operations. First, the robot will use *i*RVision to pick planet gears from a rack and use the FANUC FS-15*i*A force control sensor to insert the gears into a gearbox to build three assemblies. The robot will then disassemble the gearbox. Next, the robot moves to a second station and picks a relay, presents it to an error proofing camera to verify that the part is acceptable, then inserts the relay into a circuit board. The robot then disassembles the circuit board and the cycle repeats. The cell features the new robot's capabilities to safely interact with an operator, handle different part types, and work on a mobile platform.

Interactive Cell – A new FANUC CR-4*i*A collaborative robot mounted to a pedestal and equipped with a Rockwell Safety Area Scanner will demonstrate the robot's high-speed mode and contact-stop mode. Visitors will be able to experience the high sensitivity of the robot's contact stop and push-to-escape features. In addition, the cell will showcase the CR-4*i*A's tap-to-resume feature.

Motor Assembly – A FANUC CR-35*i*A collaborative robot equipped with *i*Rvision picks an unfinished motor from a pallet and places it at a work station where an operator attaches several parts on the motor's shaft as the robot retrieves a second motor. The robot places the second motor on the work station, then picks and rotates the completed motor, allowing the operator to attach an inspection tag. The robot then transfers the completed motor to a finished motor pallet. After three assemblies are

complete, the operation is done in reverse. This cell features very close human/robot collaboration in an interactive application.

"The FANUC CR-35*i*A collaborative robot allows shared workspace between an operator and the interactive robot," added Buell. "The highly-sensitive robot gently stops if it comes in contact with the operator, allowing the robot and human to work side by side."

CR-7*i*A, CR-7*i*A/L, and CR-4*i*A Features and Benefits

The CR-7*i*A offers a 717mm reach and 7kg payload; the CR-7*i*A/L offers the same payload with a longer 911mm reach; and the CR-4*i*A has a 550mm reach and 4kg payload. FANUC based its design for the new compact collaborative robot series on the widely popular LR Mate-series of mini material handling robots. The new robots are ideal for small part sorting and assembly, inspection, machine tending and part delivery. All of FANUC's collaborative robots are green to distinguish them from the standard yellow FANUC robots.

The new CR-7*i*A, CR-7*i*A/L, and CR-4*i*A collaborative robots provides a wide range of features and benefits, including:

- Three compact variants offering 550-911mm reach and 4-7kg payload capabilities.
- Floor, wall and ceiling mounting options.
- Safety rated contact detection and familiar green exterior color.
- Designed with the same high reliability as FANUC's conventional robots.
- Works in cooperation with a human operator in a variety of manufacturing applications.
- Supports FANUC's latest intelligent functions such as *i*RVision and Force Sensing.
- Designed to meet the safety requirements of ISO 10218-1:2011 and RIA/ANSI R15.06-2012.
- Operates with the small R-30*i*B Mate controller, capable of running on 120v.

CR-35*i*A's Features and Benefits

The CR-35*i*A collaborative robot features six-axis articulation. A soft green cover protects workers who are in direct contact with the robot.

The CR-35*i*A robot was developed to help manufacturers solve ergonomic challenges by handling applications that are physically demanding for humans, such as heavy lifting. In the automotive industry, for example, workers are required to lift spare tires into vehicles on the assembly line. "The CR-35*i*A can work alongside the employees assigned to this task to help reduce injuries associated with repetitive or heavy lifting," said Buell.

Certified to meet the requirements of ISO 10218-1:2011 and RIA/ANSI R15.06-2012, FANUC's CR-35*i*A collaborative robot can work in a variety of applications alongside human workers including: machine tending, handling heavy payloads that require lift assist devices or custom equipment, higher payload mechanical assembly, palletizing or packing, and tote or carton handling.

The CR-35*i*A robot offers a wide range of collaborative and safety features and benefits, including:

- Industry's first 35 kg payload collaborative robot that can work with humans in a shared workspace without safety fences.
- Works in cooperation with a human operator in a variety of applications including assembly and heavy-duty part transfer.
- Stops safely when it touches a human operator.
- Soft green cover minimizes impact force and prevents human operators from being pinched.
- Certified to meet the requirements of international standards ISO 10218-1.
- Supports FANUC's latest intelligent functions such as *i*RVision.
- Designed with the same high reliability as FANUC's conventional robots.

About FANUC America Corporation

FANUC America Corporation is a subsidiary of FANUC CORPORATION in Japan, and provides industry-leading robotics, CNC systems, and factory automation. FANUC's innovative technologies and proven expertise help manufacturers in the Americas maximize efficiency, reliability and profitability.

FANUC America is headquartered at 3900 W. Hamlin Road, Rochester Hills, MI 48309, and has facilities in: Atlanta; Boston; Charlotte; Chicago; Cincinnati; Cleveland; Houston; Los Angeles; Minneapolis; Montreal; Pine Brook, NJ; Pontiac, MI; San Francisco; Seattle; Toronto; Buenos Aires, Argentina; Sao Paulo, and Manaus, Brazil; and Aguascalientes, Mexico City, and Monterrey, Mexico. For more information, please call: 888-FANUC-US (888-326-8287) or visit our website: www.fanucamerica.com. Also, connect with us on YouTube, Twitter, Facebook, Google+ and LinkedIn.

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