



Media Contact:

Cathy Powell
Marketing Communications
FANUC Robotics
Phone: (248) 377-7570
cathy.powell@fanucrobotics.com

**FANUC Robotics Showcases
New M-3*i*A Intelligent, Flexible, and
High-Speed Robot at IMTS 2010**

For Immediate Release

ROCHESTER HILLS, Mich., Sept. 13, 2010 – FANUC Robotics America will demonstrate its new M-3*i*A intelligent, parallel-link robot designed to maximize speed and flexibility for assembly, small part handling and picking applications at IMTS 2010, held Sept. 13-18, at McCormick Place, Chicago, booth S-8919.

The M-3*i*A robot is a larger version of the company's M-1*i*A robot introduced last year. Available in a four- or six-axis model, the M-3*i*A offers the same unique parallel-link structure, and accommodates payloads up to 6kg. In addition, it has the largest work envelope of any robot in its class (1350mm x 500mm).

At the show, the new M-3*i*A/6A six-axis robot, equipped with *i*RVision 2D, a two-jaw mechanical gripper and a sealing gun will assemble a concentrated photovoltaic solar panel. The robot scans and locates nine randomly-oriented heat sinks and concentrated photovoltaic assemblies (CPAs) using *i*RVision's Snap-in-Motion software. The M-3*i*A/6A's flexible three-axis wrist allows it to pick, reorient and insert each heat sink at a 15 degree angle into the solar panel. Next, the robot simulates the application of sealer to the heat sink and picks and mounts a CPA to the heat sink. The process repeats until all nine heat sinks and CPAs are assembled into the solar panel. When the panel is complete, the robot disassembles it, places the parts randomly on the work stand, and the cycle repeats.

"Typical vision systems have stationary cameras that require the robot to stop to take a picture, which increases cycle time," said David Bruce, product manager, FANUC Robotics America. "The Snap-in-Motion feature of *i*RVision allows the robot to move the camera over a work area, snap and locate parts without stopping, helping to significantly reduce cycle times."

FANUC Robotics will also feature a four-axis M-3*i*A/6S robot equipped with *i*RVision visual line tracking to pick randomly-located plastic parts from an infeed conveyor at 155 parts per minute, and place them uniformly on an outfeed conveyor.

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FANUC M-3iA Robot - Page 2

The M-3iA six-axis model has a three-axis, patent-pending wrist for complex [assembly](#) tasks. The extreme flexibility offered by the three-axis wrist enables the robot to pick up and insert parts at simple or compound angles, and twist parts into place, similar to the flexibility offered by a manual operator.

“The M-3iA’s unique design makes it possible to automate the assembly of a variety of applications that could not be done with traditional SCARA-type robots,” added Bruce. “We refer to our series of parallel-link robots as fists because they provide the accuracy and flexibility of a human hand.”

A four-axis M-3iA has a single-axis wrist for simple assembly and high-speed picking operations, offering speeds up to 4000 degrees per second. In addition, a hollow wrist allows hoses and cables to be routed internally, which minimizes wear and tear on the tooling cables.

“The M-3iA is ideal for both simple and complex assembly of electronics, medical devices, pharmaceuticals, cosmetics, office supplies, consumer products, and solar panels,” said Bruce. “A completely enclosed structure also makes it safe for food environments.”

The M-3iA, like all FANUC robots, operates with the company’s latest R-30iA controller with integrated intelligent functions such as *iR*Vision[®], Force Sensing, Robot Link, and Collision Guard.

The M-3iA robot offers a wide range of benefits, including:

- Patent-pending three-axis, parallel-link wrist maximizes flexibility.
- Portable and compact size allows operation in small spaces.
- Six-axis design (three-axis wrist) enables part feeding from the sides of a work zone, increasing the useable workspace.
- Four-axis design (single-axis wrist) moves parts at extremely high speeds; a hollow wrist allows tooling cables to be routed internally, minimizing wear and tear.
- [Food option](#) with food-grade grease features a special coating to handle acid and alkaline disinfectants, and low-pressure rinsing.
- Ability to work with primary (unpackaged) or secondary (packaged) food products.
- IP67 rating for the entire robot means the robot is waterproof and can withstand harsh environments, including dust and oil mist.
- Collision Guard detects robot collisions with external objects, minimizing damage to the part and robot.
- Robot Link controls and coordinates up to ten robots through a network exchange of robot positional data.
- FANUC [Force Sensor](#) is available for intricate assembly applications.

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FANUC M-3*i*A Robot - Page 3

FANUC *i*RVision

FANUC's *i*RVision is a truly integrated, plug-and-go vision system that runs on the standard CPU of every FANUC R-30*i*A controller without any additional hardware. A single source solution developed and supported by FANUC, *i*RVision offers easy setup and operation for factory environments requiring 2D and 3D guidance, error proofing, visual tracking, and quality control – all with FANUC's world-renowned reliability.

FANUC Robotics America designs, engineers and manufactures industrial robots and robotic systems for a wide range of applications including arc and spot welding, material handling (machine tending, picking, packing, palletizing), material removal, assembly, paint finishing and dispensing. The company also provides application-specific software, controls, vision products, and complete support services. After 28 years of success, FANUC Robotics maintains its position as the leading robotics company in the Americas. A subsidiary of FANUC LTD in Japan, the company is headquartered in Detroit, and has facilities in Chicago; Los Angeles; Charlotte; Cincinnati; Toronto; Aguascalientes, Mexico; and Sao Paulo, Brazil. Over 220,000 FANUC robots are installed worldwide. Contact FANUC Robotics at www.fanucrobotics.com or by calling 1-800-iQ-ROBOT, option 5.

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