

ADVANCED SYSTEMS GROUP

C A P A B I L I T I E S

Motoman Robotics' Advanced Systems Group (ASG) designs solutions to meet customer-specific robotic application needs. As one of the Western Hemisphere's largest custom solution providers, we have the resources and experience to address the most demanding manufacturing challenges.



SIMULTANEOUS ENGINEERING

Motoman Robotics' highly experienced application and project engineers assist our customers in designing products and processes that are automation-friendly.

CUSTOM TOOLING

To ensure project success, Motoman Robotics manages all aspects of custom tooling, including tooling design, design reviews, quality inspection, run-off and start-up.

PROJECT MANAGEMENT

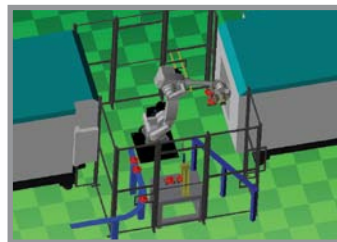
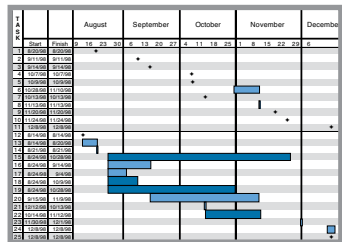
Motoman Robotics' Project Management Team coordinates all details of a project. This ensures that all needs and resources are balanced to meet delivery and budget requirements.

SIMULATION

Motoman Robotics utilizes state-of-the-art simulation tools to aid in the concept and design of robotic automation solutions. To reduce risk, simulation software is used to verify system form, fit, function, throughput and ergonomics prior to project execution.

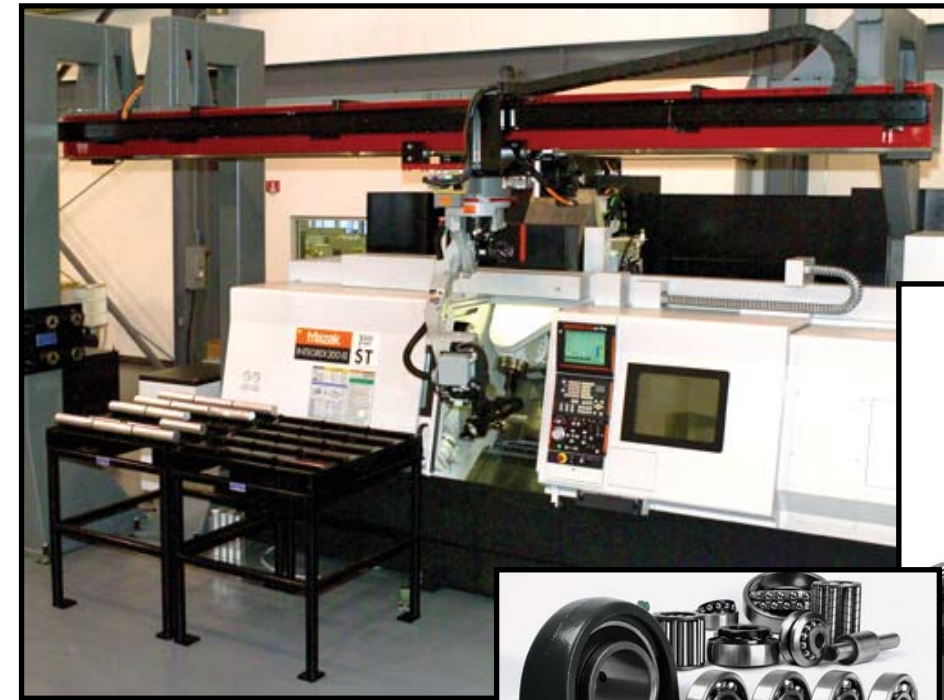
APPLICATION EXPERIENCE

Motoman Robotics' Advanced Systems Group is an experienced provider of machine tending solutions across many industries. We incorporate our comprehensive line of standard material handling robots, robot transporters, multi-part grippers, part infeed and outfeed products, part regrip and blow-off stations, and vision offerings into the best custom solution for your manufacturing needs.



MACHINE TENDING

S O L U T I O N S



CUSTOM ROBOTIC SOLUTIONS

Visit our web site to see how your industry is taking advantage of Motoman Robotics' expertise and to request a visit from your local salesman.

www.motoman.com/mt

MACHINE TENDING SOLUTIONS

S O L U T I O N S

Motoman Robotics offers a wide array of machine tending solutions for automotive, agriculture, transportation, medical, injection molding and other industries. Our expertise enables us to deliver an efficient and cost-effective solution with a focus on providing the customer with the highest quality, throughput and ROI.



— Automotive —



— Transportation —

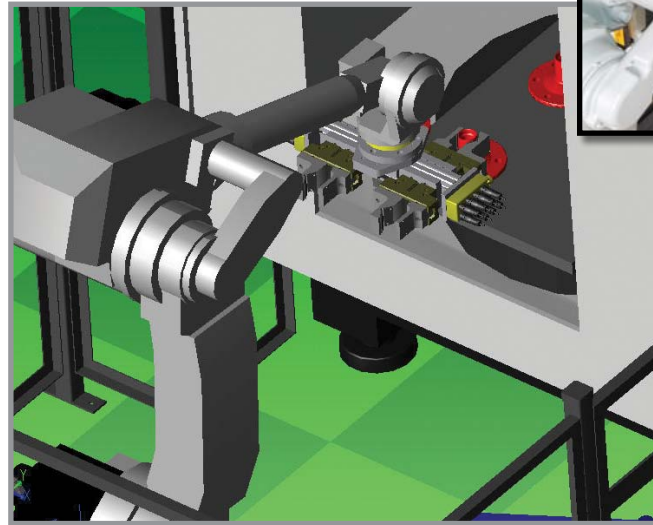


— Medical —



— Construction —

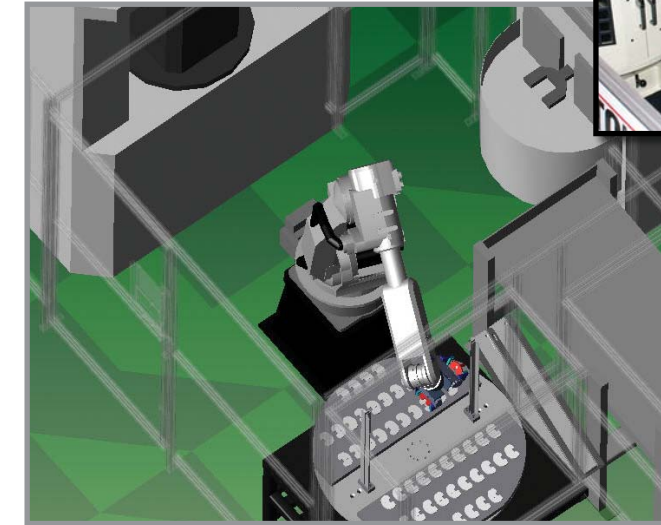
WORLD-LEADING ROBOTIC SOLUTIONS BY MOTOMAN ROBOTICS



— AUTOMOTIVE: Wheel Hub —



- Four-part gripper allows quick load and unload of two parts simultaneously
- Robot tends two machining centers and a gauge
- Gravity infeed conveyor includes dual part escapement and locator
- Gravity outfeed conveyor quarantines parts that fail inspection
- PLC and HMI control system provides machine interface and system monitoring



— MEDICAL: Replacement Joint —



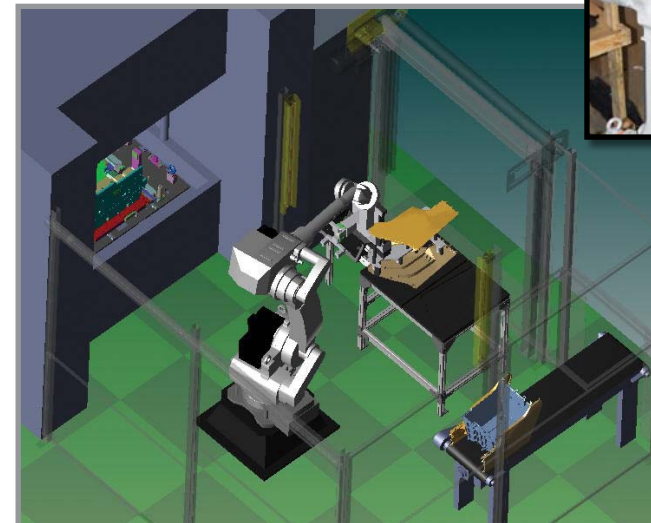
- Robot tends horizontal machine center and media blasting machine
- Dual gripper provides maximum throughput
- Turntable with fixtures holds and maintains orientation of raw parts
- Flip-over stand re-oriens parts between machining and blasting operations
- Tray conveyor delivers empty containers to robot for loading
- Finished part trays are conveyed to next operation



— TRANSPORTATION: Locomotive Bearing —



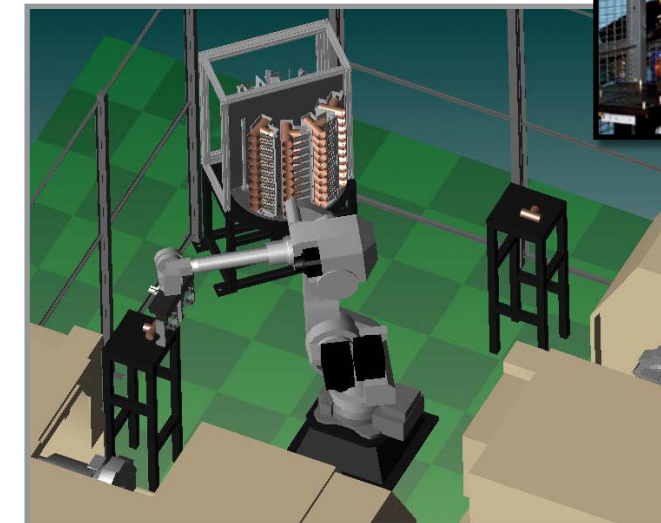
- Robot tends three vertical machining centers, performing sequential operations
- Large dual gripper provides maximum spindle utilization
- Sensors on gripper ensure parts are properly seated in machine fixture
- Parts can be flipped between operations, as required
- Quality control stand provides access for in-process inspection



— AUTOMOTIVE: Center Console —



- Custom gripper holds one vibration welded part and three different components
- Robot loads and unloads plastic automotive components into vibration welder
- Robot eliminates repetitive stress injuries from loading welder
- Custom-designed fixtures provide ergonomic operator loading
- Belt conveyor transports vibration welded parts



— CONSTRUCTION: Pipe Fittings —



- Robot tends two lathes, performing turning operations
- Flexible system allows processing parts in serial or parallel
- Rotary table provides 30 minutes of unattended run time
- System handles a wide range of parts
- Triple gripper provides quick part exchange by holding part in multiple orientations