Intelligent Robot Solutions

FANUC Robotics

Application: Machine Tending

Industry: Machine Tools
Company Name: Automotive Component Supplier
Products Used: (4) FANUC LR Mate 100

Robots process parts automatically and consistently.

Challenges:

An automotive component supplier recently faced special challenges for a new high-production machining process. Cycle times were not unreasonable for manual load/unload; however, to process parts consistently, 24 hours a day, the company determined that automation was the best solution.

Solution:

Four LR Mate 100s provided by FANUC Robotics now process parts automatically and consistently, day in and day out. The system uses four dual spindle lathes with one robot mounted atop each machine to save valuable floor space. A vibratory bowl feeder connected to each lathe feeds parts to the robot. The robot, equipped with a single part gripper, loads parts into the spindle which reverses work pieces in the chuck for complete machining. A built-in sensor verifies that parts are fully seated into the chuck to ensure accuracy. Finished parts are automatically released to an outgoing conveyor.

The new "lights out" system works continuously, processing 320 parts per hour consistently — without requiring operator intervention.

Process Advantages

- Easily meets customer throughput requirements
- Provides 24-hour, unattended, consistent processing
- Direct mounting reduces floor space requirements
- Lower factory overhead by eliminating the need for manual machine load/unload labor

System Specifications

- Uses single-part gripper equipped with built-in placement verification sensor
- Vibratory bowl feeders supply parts continuously
- Easy-to-use software package with user-friendly interface
- Small footprint for tight installation on machine tools