Integrated Robotic Solutions



Part load/unload

Robot arms are frequently used in manufacturing in order to free skilled operators to work on other critical tasks. Well known for handling large scale components, robots are now optimized for handling microscopic parts as well.

AMADA WELD TECH integrates robotic arms inside or outside the work chamber to perform a number of operations, most often loading and unloading of parts or trays of parts.

Robotic integration also opens the opportunity for lights-out production.

ROI for Automated Process Handling

- High output and productivity
- Consistent quality
- Efficient resource utilization
- Enhanced safety
- Effective hedge for skilled workforce shortages

TYPICAL APPLICATIONS

- Pick and place parts
- Load/unload trays of parts
- Use with resistance welding, laser welding, laser marking, laser cutting, laser micromachining, hermetic sealing or hot bar bonding technology
- Robots can be programmed to lift out of the work area to facilitate easy access for operator intervention, service or maintenance.

FEATURES

- Integrate with any AMADA WELD TECH Delta, SIGMA® or AX system.
- Typical robot features:
  - 6 axes of motion
  - 717 mm of reach
  - 7 kg payload capacity
- Programmed motion paths for desired operation
- High precision placement - 10 microns (0.0004”) giving the ability to load parts with high repeatability
- Robot controller provides additional I/O for advanced automation platforms
- Grippers designed specifically for optimal handling requirements
- Pair with bowl feeders, step feeders, bins or vibratory feed systems
- Optional robot-integrated vision system
- Network compatible for high speed monitoring and data acquisition
- Dual check safety software to avoid collisions
- Combine with area scanners and interlock devices for safe operation



Pick and place trays of parts



AMADA WELD TECH's Design Philosophy: Define - Design - Deliver

Developing a unique solution geared for advanced manufacturing is complicated. Our approach? Define-Design-Deliver. This methodology helps us design the ideal system to meet your manufacturing needs and budget while maximizing your equipment investment ROI and meeting your production goals.



Process Assessment
- Determine part usage and success
- Optimize part designs
- Select material

Sample Qualification
- Process sample parts
- Determine optimal production settings





Equipment Specification
- Meets production, quality, and budget criteria
- Product flow
- Customer requirements

Product Assembly
- Engineer oversees project
- Work with customer & technicians





Test and Verification
- Rigorous testing
- System acceptance
- Customer directed

Installation and Support
- Install system and verify functionality
- Train engineers and operators
- Provide continual, ongoing support



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