



JR AUTOMATION TECHNOLOGIES, LLC

AUTOMATED HOSE ASSEMBLY CELL CASE STUDY

INTELLIGENT DESIGNS

FAST FACTS:

- In business since 1980
- 120,000 sq. foot facility
- 210 employees
- North of Holland, MI

JR Automation Technologies, LLC staffs ingenious, qualified professionals who design and build solutions for efficiency and speed, customized for your specific needs. Whether that means machines or process development, the JR team has a smart, lean solution to your challenging project.



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CHALLENGE:

To build an operator free assembly solution to assemble a multiple component steel and rubber tube assembly with complete hose installation, inspection and packout capabilities.

SOLUTION:

- Dual robot assembly machine
 - Steel & rubber hose assembly robot
 - Hose installation, inspection and pack out robot
- Vision guided flex feeding for complex steel and rubber hoses
- Camera inspection for rubber hose presence, clamp presence, and clamp location
- Bowl feeder system for simple hose clamps
- Interchangeable assembly nests for future product additions
- Dual part chutes, one can be filling a bag while the other is replaced by an operator, eliminating downtime

OUTCOMES & BENEFITS:

- Fully automated assembly machine
- 18 second cycle time
- The only operator role is to load feeders and change packout bags
- Considerably reduced labor content
- Reduced floor space
- Machine is easily relocated as one moveable unit
- Minimizes future expense for adding new products