

WINDY CITY WIRE CASE STUDY

About Windy City Wire

Windy City Wire® has been leading the way in low-voltage wire innovations since 1994. Windy City Wire is dedicated to developing solutions that generate significant results for customers. It's goal to not simply sell cable but provide comprehensive cable management solutions that save integrators time on their projects from concept to completion.

Windy City Wire Products

All products are created with a commitment to excellence and are designed with customers' needs in mind. From Smartwire® cables to patented RackPack® Field Systems Solution, Windy City Wire is offering real solutions to real issues faced by integrators in the field every day.

Windy City Wire is proud to say that all of SmartWire cables are Made in the USA! The company runs manufacturing operations out of Bolingbrook headquarters, allowing it 100% quality control over all products. This gives the ability to quickly and easily create custom cables for customers based on their specific projects.

Robot Project Description

Palletizing Robot designed to sense and respond to multiple size targets on multiple lanes. Safely and efficiently placing material at the appropriate target locations. Designed to coordinate with other systems to accomplish tasks with no required direction from a user.

Why Windy City Wire decided to Automate ?

- ✓ Increase in production and throughput
- ✓ Execute repetitive work
- ✓ Reduced Direct labor costs
- ✓ Increased Safety
- ✓ Production Slowdown



Interview with Mark Winkel (President) & Mike Martin (Plant Manager)

What advantages did you seek with robotic solution?

Mike: Without the robot, we would have had to add another employee and another piece of equipment to meet demand. We're anticipating at least a 25% increase amongst the 4 associates that work in that area. This definitely is a step in the right direction to help us minimize the risk of ever having a back injury from internal handling.

Why choose RSI?

Mike: There are a couple of reasons. One, we were wanting to find a local company. We know from past experience, there's also some support that's needed, and it's good to be able to find a local source for that. So they could respond quickly when needed. Second, we actually had 3 different companies come in and look at the - what we are trying to accomplish, and all 3 came in and gave us their solutions. We thought RSI was the best prepared and had the best presentation of the 3 companies.

Tell us about your Experience working RSI.

Mike: Overall, it has been a good experience. There is always a learning curve any time you try to implement a system such as this. From the upfront initial visits to the presentation to the final delivery, installation, and implementation into manufacturing, it has been a positive experience. I think we've all learned something from it.

How did RSI make a difference for you?

Mike: Our employees like working with the robot a lot. We have seen the increase in our productivity, especially as we head into our heavier working months right now. So overall, I think it's been a very, very positive experience from the ordering to the implementation to the programming and making the tweaks that are obviously necessary every time you have a project like this.

Where do you see the future of robotics?

Mark: There is no doubt that industrial robotics will continue to expand. RSI's work has gotten quite a few people out of the plant interested in looking at the mechanical side of the robot, as opposed to just utilizing the function of it. And we hope there's a migration of employees that maybe are replaced on the manual labor side, when they get into the technological side. And we're pretty excited about that because there are a couple of guys out there that have talked about that. So that's a very positive sign for the future.

How RSI Approached the Robot Project



Discuss Areas for Automation

We will sit down with you to discuss needs and opportunities for improvement at your facility. With your experience and our expertise, we will determine the key areas to increase efficiency, improve safety, and improve reliability of your processes. We will deliver video simulations and layouts in order to ensure that our solution matches your vision.



Attention to Detail

We will work with you to collect all relevant application specifications. Our goal is to offer multiple solutions to help you decide which is best suited for your application. Price, accuracy, throughput, environment, and machine footprint are all factors that will be examined to determine the ideal solution. One of our primary goals is to ensure a return on the investment that makes financial sense.



Simulations and Layout Drawings

We will generate 2D and 3D layout drawings to verify that equipment footprint is within all defined constraints. We will generate detailed simulations to analyze the complete machine process. We will verify that targets are within range of motion, have a well defined collision free zone, and predict machine cycle time.



Design Engineering

We design custom end of arm tooling, grippers, fingers, and other mechanics to manipulate your payload. When "off the shelf" robot solutions are unable to meet your needs, we can design custom handling equipment to fit application requirements. We will design your electrical panel and layout the entire system.



Fabrication and Assembly

We will manage the fabrication and assembly of sub components required for your project. Robot work cells, custom framing structures, electrical panels, housings, and end of arm tooling are common tasks for us. Environmental and Industry specific requirements can be accommodated.



Software Engineering

We will develop a user interface (HMI) that is sharp, intuitive, and machine specific. Using Test Driven Development, we ensure that the software is robust throughout development. Our User Experience Design experts will collaborate with you to develop a User Interface that fits your your process. Leveraging Machine Vision, we can incorporate inspection, quality control or add precision to positioning for difficult applications. Intelligent and remote diagnostics, real time monitoring, and automatic reports to plant managers showing machine health and metrics are part of our standard package.



Project Management

Project timelines and on-site needs are mission critical elements in successfully deploying an RSI Solution. With experience working on hundreds of projects, RSI is capable of managing your project from concept stage to production. We will ensure that delivery stays on schedule, that project goals are reached, and expectations are exceeded.



Installation, Training, Maintenance & New Features

RSI's engineering team performs and manages all installation and commissioning processes with total commitment to customer satisfaction and successful production operation. We will come onsite to install and calibrate the equipment. We will perform any final software tweaks and standby to make sure equipment is operating properly.

Contact RSI

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