



**WOLF<sup>®</sup> ROBOTICS**

A Lincoln Electric Company



**AUTOMATION SOLUTIONS THAT MEET THE MOST DEMANDING  
REQUIREMENTS — YOURS.**

**LINCOLN  
ELECTRIC**



# CAR-W

## GREATLY SIMPLIFYING AUTOMATED WELDING

### Our Challenge.

Constant programming for high mix/ low volume part production made it difficult to integrate standard robotic welding.

So, we developed a solution.

### Meet CAR-W™.

### ABOUT CAR-W

Computer Aided Robotic Welding (CAR-W) is automated robotic path planning software. Using CAD models, CAR-W generates a collision-free path for welds. Very little, if any programming needed.

### HOW CAR-W WORKS

1. Export CAD model and weld information to CAR-W.
2. CAR-W will automatically select the best path for the weld process and generate a collision free path program for all the welds.
3. Download path program to robot and begin welding.

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*“CAR-W is taking automated robotic path planning to the next level. It's eliminating almost all programming, vastly reducing training requirements, and bringing automation to the unique one-off assemblies.”*



## CAR-W BENEFITS

### SIGNIFICANT TIME SAVINGS

Now, you can forget about hours of time consuming programming. With CAR-W, weld programs are automatically generated allowing you to download and start welding.

### TRULY FLEXIBLE, COLLISION FREE AUTOMATION

New design or product configuration? No problem. Other robotic welding solutions for shipbuilding can only handle a set of manually pre-defined part configurations. This limits the product categories that can be welded and drives costly programming and "software updates."

CAR-W knows your part geometry, your weld call-outs, and your weld procedures. As long as the part allows access, CAR-W automatically plans the robot motion for each weld while navigating obstacles, pushing into tight corners, avoiding cable wrap-up, and maintaining proper weld gun angles. [SEE PAGE 3 FOR EXAMPLES]

### QUALIFIED WELD PROCEDURES

CAR-W puts you in control. A weld procedure database secures your process information and makes qualified procedures available for use in automatic CAR-W program generation. Simple, intuitive tools allow you to easily upgrade your manual welding procedures to an all-digital, robot-class format, capturing the process knowledge from your workforce and preserving it for the future.

### AMERICAN INGENUITY & U.S. BASED SUPPORT

Your investment is 100% designed, manufactured and backed by a team of experts with over a century of welding and automation experience, based right here in the U.S.A.

### FULLY INTEGATES WITH EXISTING PRODUCTION

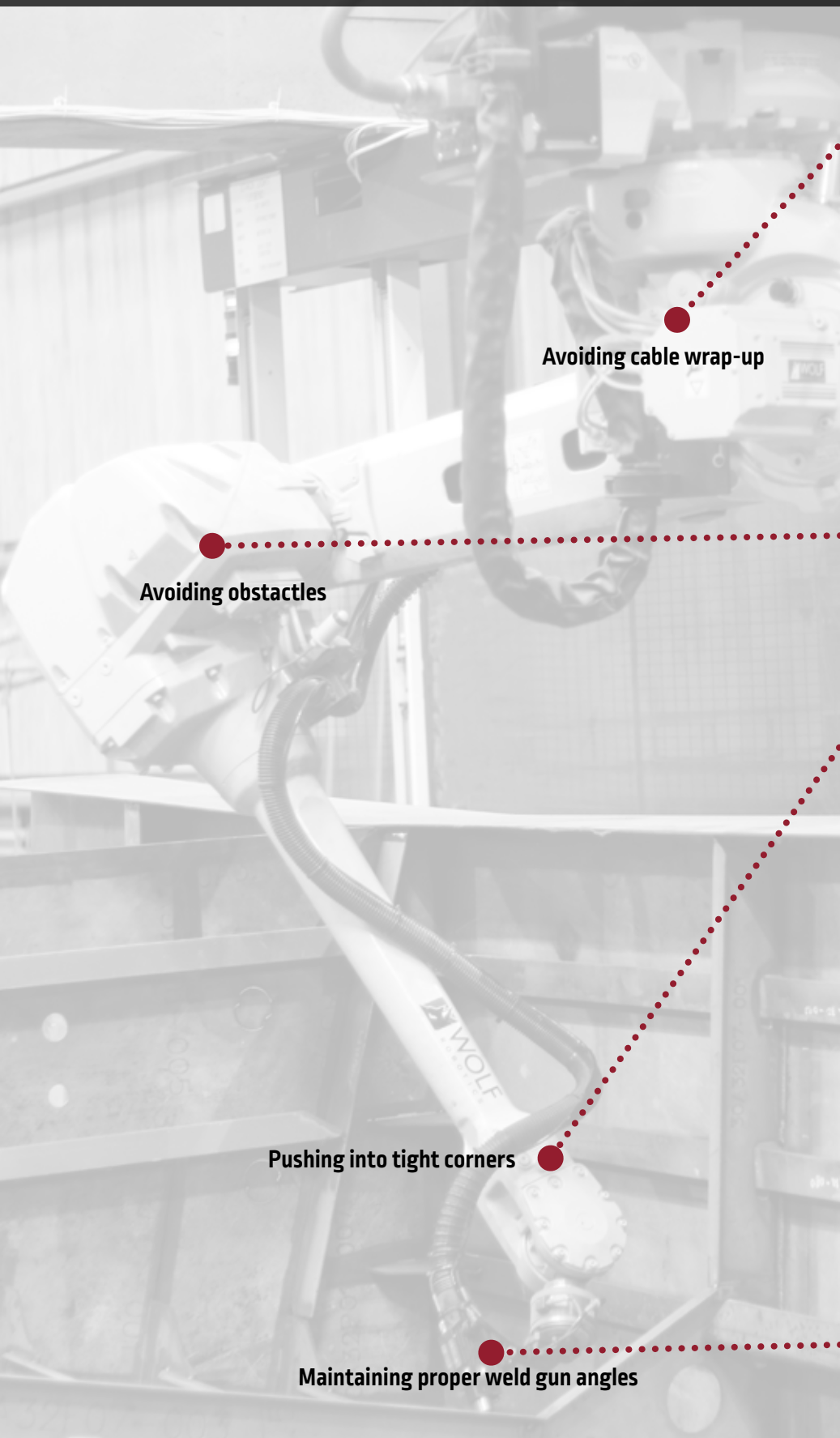
CAR-W enables welding automation for applications previously thought to be too complex. Adding a CAR-W enabled system can automate challenging welding tasks including mid-to-late stages of panel production, and intricate sub-assemblies.

*"The workforce is shifting, many are losing their welders to retirement. When they leave, so does their knowledge.*

*With CAR-W, you can save your welding program templates and create a library. CAR-W saves qualified procedures to be accessible for automatic programming on any part and any CAR-W enabled robot system."*

# CAR-W ENABLED WELDING

AUTOMATIC—FLEXIBLE—COLLISION-FREE



## CUSTOMER ASSISTANCE POLICY

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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# ABOUT WOLF ROBOTICS

The Wolf Robotics team of welding automation experts leverages nearly 40 years of advanced design, process, and programming knowledge to meet modern welding and automation challenges. Wolf Robotics is unmatched in delivering robotic systems to customers engaged in high-mix, low-volume product manufacturing. Industry-leading capabilities like automatic programming, collision avoidance, robotic vision, and adaptive welding provide the necessary tools to enable cost-effective automation of complex applications.

In 2015, Wolf Robotics was acquired by Lincoln Electric, a world-leader in the design, development and manufacture of arc welding products, robotic arc welding systems, plasma and oxyfuel cutting equipment and has a leading global position in the brazing and soldering alloys market.

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