
COOPER COBOT
CLICK CLICK WELD
Understanding Drives Solutions
LINCOLN ELECTRIC
AUTOMATION

INDUSTRY **CHALLENGES**

The welding industry is facing several challenges that are hindering its growth and profitability. One of the major challenges is the shortage of professional welders, with the American Welding Society estimating a shortage of over 300,000 welders by 2028.

Automation can not only address the skilled labor shortage pain point, but also delivers increased productivity and consistency. However, automating with robotic welding can pose challenges of its own – successful deployment requires skillsets on robotic programming and welding expertise on weld development.

Installation of a robotic cell can take up a lot of floor space, require a lot of upfront cost, and is typically designed for limited types of parts. Without the proper tooling setup, weld development and robot programming expertise, it can be difficult to ensure repeatability, productivity and efficiency gains.



LABOUR SHORTAGES

TIME/COST INTENSIVE

QUALITY CONTROL

COMPLEX ROBOT PROGRAMMING

LINCOLN ELECTRIC



THE COOPER COBOT **SOLUTION**

Here at Lincoln Electric Automation, we combined more than a century of innovative welding know-how with your real-world automation needs to create our Cooper® welding cobots. Cooper welding cobots are available as a compact cart system or as a non-cart package. The carts are designed to move anywhere you need to weld; packages give you the freedom to customize how you mount or integrate the cobot into your operation. It's the affordable, game-changing solution you need to level up your welding and your business!

For over 130 years, Lincoln Electric has been the world leader in the design, development and manufacturing of arc welding products. We deliver a complete "single source" robotic welding solution by manufacturing all the welding components needed to create high-quality welds. This unparalleled level of control enables us to develop robotic welding solutions that meet the unique needs of each of our customers.

We paired our high-performance Power Wave® R450 robotic welding machine with the innovative Cooper App to provide a robotic welding experience! Whether the Cooper welding cobot is your entry into automation or a new addition to your automation process, the supporting Cooper App will help you quickly program and produce quality welds.

EASY ROBOTIC PROGRAMMING

ONE-PERSON JOB

ELIMINATE ERRORS

REDUCE LABOR COSTS

100%

Meet quality expectations on **every** weld and operate in the most efficent way possible.

COLLABORTIVE WELDING

We designed the Cooper welding cobots to complement the skills of human welders. Cooper welding cobots help improve welding productivity, weld quality, and repeatability in a collaborative way.
We developed the Cooper App for easy-to-use programming. The Power Wave R450 robotic welding platform runs the systems with industry-leading performance. Cooper welding cobots make integrating automation easy for any business.

CONTROL
WELD QUALITY

SIMPLIFIED
PROGRAMMING

MATERIAL
OPTIMIZATION

OPERATOR
RESOURCE CENTRE

REDUCE ERRORS

INTUITIVE OPERATION

ECONOMIC
INVESTMENT

ONLY ONE
OPERATOR NEEDED

INCREASED PRODUCTION
CAPABILITIES

AUTOMATED
WELDING

USER FRIENDLY
CART DESIGN

UPGRADEABLE
SOFTWARE



CAN I DEMO THE COOPER COBOT LIVE IN ACTION? **YES**

Get in touch with our sales team to schedule a live demo near you.

COOPER COBOT **KEY FEATURES**

INTRODUCING COOPER COBOT GEN II
COLLABORATIVE WELDING SOLUTION

NEW WIRE BRAKE TORCHES
Improved experience & performance: Consistent wire stick out, accurate touch sensing, and Thru-ARC™ Tracking for accurate weld placement.

NEW BUILT-IN TOOLING TABLE
A welding table is an essential tool for any welding operation. The Cooper Welding Cobot Cart includes an integrated tooling table providing a stable surface for your parts and accommodations for required clamps.

NEW BACK ACCESS DOORS
New sliding door allows easy access to the back of the equipment.





NEW CABLE MANAGEMENT
Uniformed clamps and brackets keep the torch bundle controlled and tidy. This new standard will help reduce payload errors and keep the welding torch stable.

THE COOPER APP
The innovative Cooper App provides an easy and intuitive interface that gets operators of all skill levels to program parts quickly while delivering accurate and consistent quality welds.

COLLABORATIVE ROBOT ARM
The Cooper Cobot systems are offered with the FANUC® CRX™ or ABB® GoFa® robotic arm, both established leaders in industrial robotics.

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SELECT YOUR APPLICATION TYPE
WATER-COOLED SYSTEMS

Ideal for heavy duty, large-diameter wire applications



SYSTEM INCLUDES

- FANUC CRX or ABB GoFa robotic arm
- Teach pendant
- Power Wave R450 robotic welding power source
- AutoDrive® 4R220 wire feeder
- MAGNUM® PRO water-cooled wire-break welding torch
- Cool Wave® 20S water cooler
- The Cooper App
- Fault reset palmstation
- Tooling table top
- Heavy-duty casters
- Stabilizing kickstand

SELECT YOUR APPLICATION TYPE
AIR-COOLED SYSTEMS

Ideal for lower amperage applications



SYSTEM INCLUDES

- FANUC CRX or ABB GoFa robotic arm
- Teach pendant
- Power Wave R450 robotic welding power source
- AutoDrive 4R100 wire feeder
- MAGNUM PRO air-cooled wire-break welding torch
- The Cooper App
- Fault reset palmstation
- Fixed welding table
- Heavy-duty casters
- Stabilizing kickstand

INDUSTRIES

- High-Mix Job Industries
- Part Resurfacing & Reconditioning
- Steel Fabricating & Metal Service
- Mechanical Contracting & Piping
- Training & Educational Programs
- Agricultural Equipment
- Roof & Bridge Trusses
- Manufacturing
- Repair & Remanufacturing

SELECT YOUR APPLICATION TYPE
ALUMINUM SYSTEMS

Ideal for leveraging improved wire-feeding management



SYSTEM INCLUDES

- FANUC CRX robotic arm
- Tablet-based teach pendant
- Power Wave R450 robotic welding power source
- AutoDrive SA Push/Pull Wire Feeder
- Cool Arc 55S Water-Cooler
- The Cooper App
- Water-cooled MAGNUM PRO water-cooled torch
- Tooling table top
- Heavy-duty casters
- Stabilizing kickstand



SELECT YOUR CONFIGURATION

REACH & PAYLOAD FOR YOUR APPLICATION

Systems designed for easy integration into any operation.



Cooper CRX-10iA/L Water-Cooled
Wire-Brake Welding Cobot Cart



Cooper GoFa-10 Air-Cooled
Wire-Brake Welding Cobot Cart



Cooper CRX-30iA Water-Cooled
Wire-Brake Welding Cobot Cart

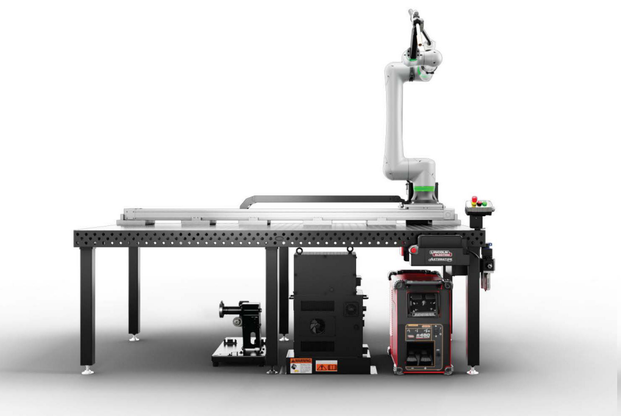
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WORK ENVELOPES
REACH & PAYLOAD

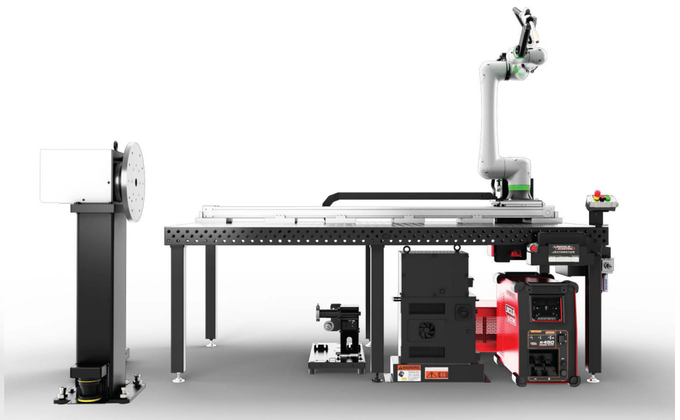
Application Type	Model Name	Reach in (mm)	Payload lb (kg)
Water-Cooled	Cooper CRX 10iA/L	55.8 (1,418)	22 (10)
	Cooper CRX 30iA	74.4 (1,889)	66 (30)
	Cooper GoFa 10	64 (1,620)	22 (10)
Air-Cooled	Cooper CRX 10iA/L	55.8 (1,418)	22 (10)
	Cooper CRX 30iA/L	74.4 (1,889)	66 (30)
	Cooper GoFa 10	64 (1,620)	22 (10)
Aluminum	Cooper CRX 10iA/L	55.8 (1,418)	22 (10)
	Cooper CRX 30iA	74.4 (1,889)	66 (30)

Looking for a custom solution? Contact our team to learn about our cobot engineered systems.

SELECT YOUR CONFIGURATION
COOPER ADAPT SYSTEMS



Cooper Adapt Air-Cooled Welding Cobot System



Cooper Adapt Water-Cooled Welding Cobot System
with optional headstock positioner

THE VALUE OF
COOPER COBOT ADAPT

INCREASED WORKSPACE

Operators can breakdown the 4‘ x 8‘ Siegmund table into working zones, and/or support larger or longer parts to weld. The configuration increases fabrication capacity, while utilizing an operator to prep a zone, while the cobot is welding in another zone simultaneously.

TRACK POSITIONER

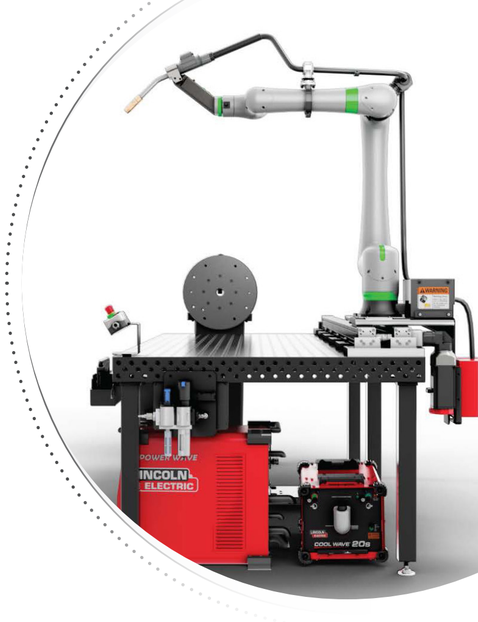
Typical work envelope of a cobot is 360 degrees from the base of the cobot arm. Mounting the base of the CRX-10iA/L Cobot arm onto a track expands the system‘s reach along the entire length of the track and table.

HEADSTOCK POSITIONER

Adding a headstock or a part positioner to the Cooper Adapt Cobot system provides the ability to rotate a part while the cobot welds. This expands the reachability, increases efficiency, and improves repeatability.

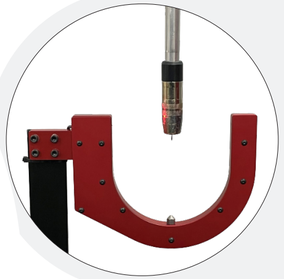
COORDINATED MOTION SUPPORT

With the Cooper App, programming coordinated motion is made easy, ensuring your cobot and external axes are working together to delivery high quality results.



COOPER ACCESSORIES
ENHANCE YOUR SYSTEM





PERFECT POINT

Perfect Point solution is a tool to automatically define and update the Tool Center Point (TCP) for whichever type of torch used on the robot.



POWER REAM® PLUS

Maintain high quality and productivity in your Cooper Welding Cobot with Power Reamer Plus. This collaborative friendly torch maintenance center removes and reduces spatter accumulation for welding performance.

INTRODUCING **ArcAdjust™**

Real-time control box enables precise adjustment of weld position, parameters, and weave settings - empowering operators to optimize weld quality with confidence.

Dedicated Control

Allows users to make real-time adjustments to positions, weld parameters, and weave parameters.

Easy-to-Use

Simplifies programming and adjustments without needing to look at a screen, making it user-friendly even with a welding helmet on.

Wide Range of Applications

Suitable for shipbuilding, heavy equipment manufacturing, and structural welding, handling complex geometries and out-of-position welding.



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COOPER APP
WELD PROGRAMMING

REMOVING BARRIERS TO AUTOMATED WELDING

The Cooper App is exclusive to Cooper welding cobots from Lincoln Electric Automation, designed to make welding as simple as Click Click Weld™! The innovative Cooper App provides an easy and intuitive interface that gets operators performing welds quickly and allows simple adoption of personal preference and customization of specific welds.

NOT A WELDING EXPERT?

The Cooper App leverages Lincoln Electric's welding expertise by providing users with pre-made weld sets with Weld by Numbers.



1

WELD BY NUMBERS

You don't need to be a robotics or welding expert to obtain quality welds. The Cooper App includes easy-to-use, pre-programmed weld parameters designed to get you started, allowing customization for advanced users to improve individual results.

2

AUTO AIR MOTION RECORDING

This solution removes the burden from operators to program air movements and transitions between weld sequences, accelerating the time between programming and welding.

3

TORCH ANGLE QUICK SET

User can set their desired work and travel angles on weld points. These angles can be automatically applied to subsequent weld points to ensure consistency throughout welds.

ADVANCED FEATURES

Whether your fabrication requires a standard single-pass linear weld or structural steel multi-pass welds, the Cooper App helps provide the solution. On-screen steps guide users through the weld programming process.



MULTI-PASS WELDING

By simply teaching the arc start and arc end location, you will define the offsets and direction of each pass. These passes can be saved to templates to be reused for other similar root welds.

THRU-ARC TRACKING

The Thru-Arc Tracking & Touch Sense features automatically adjust the robot's toolpath to provide accurate weld bead placement in situations where there are imperfect part geometries, misaligned parts, warped parts, or high variance part fixtures.

WELD PATTERNING

The weld patterning feature helps you program the first segment of the part and then replicate the program to all the following identical segments. This saves significant programming time when working on parts with repetitive geometry.

LINCOLN ELECTRIC
ADVANCED TECHNOLOGY





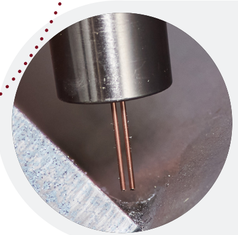
POWER WAVE R450 ROBOTIC WELDING MACHINE

The Power Wave R450 platform provides fast travel speeds and low spatter generation. This efficient power source draws less than 50W in Hibernate Mode, reducing operation costs for robot-dependent manufacturers.



AUTODRIVE WIRE FEEDER

Engineered with the patented MAXTRAC® Wire Drive System, both the AutoDrive 4R100 and 4R220 wire feeders help deliver the wire feeding results you need for maximizing automated welding productivity and quality.



HYPERFILL TWIN-WIRE MIG WELDING PROCESS

The HyperFill® technology allows operations to improve weld deposition without the burden of a complex system setup. Maximize productivity and lower your costs.

**Upgrade available for water-cooled systems.*

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ON-TORCH, SOURCE CAPTURE
FUME EXTRACTION

X-Tractor 2 Fume Gun Fume Extraction

INCREASE THE SAFETY OF YOUR WELDING PROCESSES

The Lincoln Electric X-Tractor® 2 Fume Gun fume extraction system is a source capture extraction system designed for the removal and filtration of welding fume when connected to a welding nozzle, fume gun, or robotic on-torch application.

Benefits

- Connects to fume on-torch kit
- Captures 90% of fumes at source
- Does not interfere with cobot functionality

Key Features

- Automatic cleaning filter
- Large filter media (160 sq. ft.)
- Infinite flow control to not disturb the shielding gas

An X-Tractor 2 Fume Gun system includes everything you need to install the system on your Cooper welding cobot. Simply choose a model based on your input voltage and a fume extraction torch based on your air-cooled or water-cooled application.



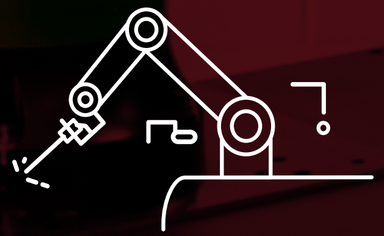
X-Tractor 2 Fume Gun on-torch fume extractor on Cooper welding cobot cart system

COOPER COBOT
ONLINE RESOURCE CENTER

Access the Cooper welding cobot resources you need to advance your collaborative automation including welding tutorials, manuals, software downloads, and more.

COOPER **SERVICE & SUPPORT**

Our team will be there every step of the way from on-site installation, and training your operators, to technical support. We're here to ensure your business' successful integration of the Cooper Cobot welding system.



COOPER COBOT
RESOURCE CENTER

Video Resources: Get started, program welds, and troubleshoot with your Cooper cobot with the online resource center. In-depth video resources and training guided by our team of experts.

MAXIMIZE UPTIME
TECH SUPPORT TO KEEP YOUR BUSINESS RUNNING SMOOTHLY.

- **Software Updates**
- Fully trained field service engineers
- Fast spare parts fulfillment
- On-site visits



Warranty
Our standard 5-year warranty protects your investment with comprehensive coverage

Shipping & Delivery
Get your standard Cooper Cobot System within less than a week!

Installation
Effortless Installation: Our expert team arranges and supervises the process, typically completed in just one day!

LINCOLN ELECTRIC

TRUSTED AROUND THE GLOBE

1000+ COOPER COBOT SYSTEMS IN OPERATION

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Weld Fume Control Products

Weld fume control products manufactured by The Lincoln Electric Company are designed to be utilized as an engineering safety control to aide in achieving adequate ventilation while conducting welding or it's allied processes. When the equipment is used as designed - and when properly installed, operated and maintained - it can be a valuable and effective tool to help employers maintain adequate ventilation in the workplace. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable exposure limits.

About Lincoln Electric

Lincoln Electric is the world leader in the engineering, design, and manufacturing of advanced arc welding solutions, automated joining, assembly and cutting systems, plasma and oxy-fuel cutting equipment, and has a leading global position in brazing and soldering alloys. Lincoln is recognized as the Welding Expert™ for its leading materials science, software development, automation engineering, and application expertise, which advance customers' fabrication capabilities to help them build a better world. Headquartered in Cleveland, Ohio, Lincoln operates 71 manufacturing and automation system integration locations across 21 countries and maintains a worldwide network of distributors and sales offices serving customers in over 160 countries. For more information about Lincoln Electric and its products and services, visit the Company's website at https://www.lincolnelectric.com.

Customer Assistance Policy

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications 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, or to provide engineering advice in relation to a specific situation or application. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. 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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https://www.lincolnelectric.com/automation

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