COOPER™ Welding Cobot Series

Collaborative Robot Partner



LINCOLN® ELECTRIC AUTOMATION™

GLOBAL INDUSTRY CHALLENGES



Skills Shortage

- Across many industries, finding skilled welders is a challenge.

Quality

- Quality components require more and more control.
- Welded parts require welders qualified for the job.





Health and Safety

- Repetitive tasks increasing musculoskeletal disorders.
- Keep qualified personal comfortable.
- Fume level exposure, remove the welder away from the torch.

Cost

- High-mix, low-volume shops struggle to justify automation investments.
- Wrong impression of Automation cost.
- Very large parts require too much investment, floor space.



COOPER™ WELDING COBOT SERIES THE RANGE SOLUTIONS

- Alternative to the welder shortage
- Weld quality under control
- Reduction of painful and repetitive tasks
- Reduction of exposure to welding fumes
- Robotisation with ease
- Simplified programming

Mobile and adaptable

Easily deployed and programmed to weld in minutes. You can quickly automate tasks for improved productivity and throughput. Choose your version - cart, base magnet cart or platform - to perfectly fit to your job.







Ideal for:

- High-Mix Job Shops
- Repair & Re-manufacturing
- Mechanical Contractors & Pipe Shops
- Steel Fabricators & Metal Service Centres
- Structural & Agricultural
- Training & Educational Programs

COOPER™ WELDING COBOT SERIES / ROBOTIZE WITH EASE

Innovative Cooper App, quick programming and quality welds

Simplified Programming
The Cooper App's user-friendly interface helps remove the barriers to robotic welding common with traditional teach pendant interfaces.

Auto Air Motion Recording
The Cooper App sets the approach and departure paths automatically as you navigate the cobot arm around the part. Path-smoothing technology reduces unwanted motion.

Smart Circle Welds
Smart Circles greatly reduce programming time and help improve weld consistency of cylindrical parts by calculating 4 weld points.

Weld by Numbers
Precise weld parameters significantly impact weld quality. With the Cooper App's predefined weld schedules, it's as simple as selecting 1 through 8. You can easily modify the parameters for a more customized experience.

Touch Sensing
Re localise your part to ensure the correct wire placement.

Accelerated Onboarding
The Cooper App does not require robot expertise, achieving positive results quickly without extended training time.

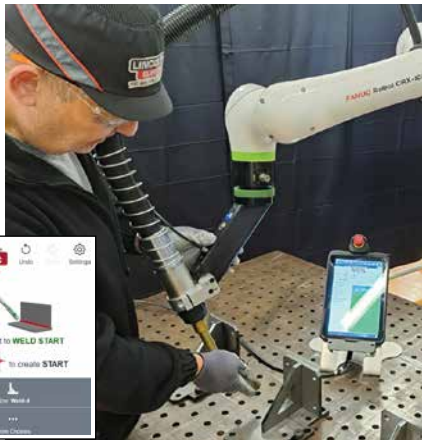
Multi-Pass Welding
The multi-pass feature inputs offset passes based on a predetermined root fillet weld. By simply teaching the location of the arc start and arc end, you will define the direction of each pass.

Torch Angle Quick Set
User-taught torch angles on the first weld start point are automatically mirrored to all subsequent weld points in the toolpath.

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

Thru-Arc™ Tracking
The Thru-Arc Tracking feature automatically adjusts the robot's vertical and lateral trajectory to help provide accurate bead placement on warped parts, misaligned parts, and non-linear weld paths.

Click, Click, Weld™ with Smart Torch
Smart Torch design provides an ergonomic grip for users to easily move the collaborative robotic arm.
The integrated buttons allow users to program from the torch.



Safe and reliable cobot



Highest Safety
Truly Collaborative environment thanks to the Cobot the design and its intelligent contact-sensing technology allowing the Cooper Welding Cobot to safely work side-by-side with welding operator.



Maintenance free
Reliability is everything. The Cobot is designed for eight years ZERO maintenance on motors, reducers, sensors, cables, and grease – delivering peace of mind, you can trust.

COOPER™ WELDING COBOT CART / COMPACT SOLUTION

COOPER™ Cart CRX 10iA/L

- Fanuc CRX 10iA/L with programming tablet
- Torch with integrated push buttons
- Power Wave® R450 robotic welding power source
- AutoDrive® 4R100 wire feeder (or 4R220 for HYPERFILL™)
- Robotic torch with wire retention system (except FX500W)
- Cool Arc® 50 (for water-cooled version)
- Single Plug & Play power cable
- Software package including relocation, multi-pass welding, and seam tracking
- Fixed welding table (1000x1500 mm DN16)
- Stabilizing Kickstand
- Arc visual protection



Cart Gen II



Cart Magnet Base

MAGNETIC BASE OPTION

- Cobot mounted on a magnetic base
- Liftable cobot/wire feeder assembly (135 kg)
- Wire spool on a liftable support
- 15 m protected harness

To order	AIR LE550A	WATER LE550W	WATER B500W	WATER FX500W	HYPERFILL LE550W
CART CRX10iA/L	AS-RM-91506414	AS-RM-91506474	AS-RM-91506434	AS-RM-91506454	AS-RM-91506484
CART CRX10iA/L Magnet	AS-RM-91506418	AS-RM-91506481	AS-RM-91506438	AS-RM-91506458	AS-RM-91506482

	Air Cooled	Water Cooled			
	LE550A	LE550W	B500W	FX500W	HYPERFILL LE550W
Steel / Stainless	✓	✓	✓	✓	✓
Aluminium	X	X	✓	X	X
Hyperfill™ Process	X	X	X	X	✓
Fume extraction	X	X	X	✓	X
Application	Conventional - 300A@100%	Intensive - 450A@100%			
Cart weight	640 KG	670 Kg			720 Kg
Cart Magnet weight	840 KG	870 Kg			920 Kg
Cart dimension	(LxI) 1900 x 1000 mm - table height 1015 mm				
Table dimension	1500 x 1500 x 50 mm - DN16 - Plasma Nitrided Treatment				
Max. load	500 daN				

Optional system

- MOBIFILTER Fume Extractor for conventional gun*
- Linc-Extractor for fume extraction gun*





**Fume Extraction performance will depend on final application and working environment. For operators'safety but also for the protection of the environment, user has to collect and filter welding fumes. Consult us to see the possible options.*

COOPER™ WELDING COBOT PLATFORM
CUSTOMIZE YOUR TOOL

COOPER™ PLATFORM CRX 10iA/L or 30iA

- Fanuc CRX 10iA/L with programming tablet
- Torch with integrated push buttons
- Power Wave® R450 robotic welding power source
- AutoDrive® 4R100 wire feeder (or 4R220 for HYPERFILL™)
- Robotic torch with wire retention system (except FX500W)
- Cool Arc® 50 (for water-cooled version)
- Single Plug & Play power cable
- Utility Drawer & Tablet Tray
- Software package including relocation, multi-pass welding, and seam tracking



Mobile



Hand Pallet trucks



Crane



Forklift

Open working zone for more flexibility

Plug and Play platform with air or water cooled torch, conventional or fume extraction.
Free zone in front of Cooper Welding Cobot to customize your welding zone.

Get +471mm Cobot Reach with CRX30iA

CRX-10iA/L : Max reach 1418mm
CRX-30iA : Max reach 1889mm

Adaptation to your job



Using your table or Tooling.



Directly with a large part.

Optional system

- Advance Module
- Software pack
  Touch sensing + Multi-pass + Seam tracking
- MOBIFILTER Fume Extractor for conventional gun*
- Linc-Extractor for fume extraction gun*



	Air Cooled	Water Cooled			
	LE550A	LE550W	B500W	FX500W	HYPERFILL™
Steel / Stainless	✓	✓			
Aluminium	X	X	✓	X	X
Fume extraction	X	X	X	✓	X
Application	Conventional - 300A@100%	Intensive - 450A@100%			
Weight Platform CRX 10iA/L	640 Kg	670 Kg			720 Kg
Weight Platform CRX 30iA	710 Kg	740 Kg			790 Kg
Dimension	1480 x 1000 mm				

To order	AIR LE550A	WATER LE550W	WATER B500W	WATER FX500W	HYPERFILL LE550W
Platform CRX 10iA/L + Software Pack	AS-RM-91506511	AS-RM-91506876	AS-RM-91506836	AS-RM-91506551	AS-RM-91506896
Platform CRX 10iA/L + Advance Module + Software Pack	AS-RM-91506513	AS-RM-91506877	AS-RM-91506837	AS-RM-91506553	AS-RM-91506897
Platform CRX 30iA + Software Pack	AS-RM-91506811	AS-RM-91506874	AS-RM-91506834	AS-RM-91506851	AS-RM-91506894
Platform CRX 30iA + Advance Module + Software Pack	AS-RM-91506813	AS-RM-91506875	AS-RM-91506835	AS-RM-91506853	AS-RM-91506895

***Fume Extraction performance will depends on final application and working environment.*
For operators 'safety but also for the protection of the environment, user has to collect and filter welding fumes.
Consult us to see the possible options

HIGH PERFORMANCE WELDING SYSTEM
PROVEN PERFORMANCES

Welding system

- 450A at 100% duty cycle
- Output range: 5-500A



INDUSTRY LEADING
5-YEAR STANDARD WARRANTY

Proven performance in the industry, the Power Wave® range is offering the industry leading 5 Year Standard Warranty.

Gun range

Semi-Automatic MIG welding gun, designed to tackle high-heat applications.

LE550A	LE550W	B500W	FX500W
			
Conventional			Fume extraction
300A@100%	500A@100%		
Air Cooled	Water cooled		
Steel / Stainless		Steel / Stainless Aluminium	Steel / Stainless
0.8 - 1.2 mm	HYPERFILL™	0.8 - 1.6 mm	

Fully interfaced



Power Wave® R450 is interfaced with the Cooper™ App. Precise weld parameters significantly impact weld quality. With the Cooper App's predefined weld schedules, it's as simple as selecting 1 through 8. You can easily modify the parameters for a more customized experience.





Robotic feeder

4R100 For Single wire
4R220 For HYPERFILL™

- Powerful wire feeders
- MAXTRAC® 4-roll drive system
- Precise speed control

Power Wave® Advance module

Available on Cooper Welding Cobot Platform, giving opportunity to expand welding capabilities.

- Ideal for: Adding AC polarity, STT®



Water cooler

COOL ARC® 50 : Efficient cooler optimized for Power Wave® systems



Wire Retention System



Maintaining a consistent wire stick-out is essential to ensure accurate and repeatable path programming. The wire retention system fitted to the LE550 and B500W torches automatically locks wire movement during teaching, providing a stable reference point and ensuring perfectly repeatable welding paths.

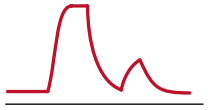
OPTIMIZE YOUR ARC PERFORMANCE
THE RIGHT PROCESS FOR ANY APPLICATION

Beyond conventional CV or Pulsed modes, Power Wave® R450 integrates unique process.

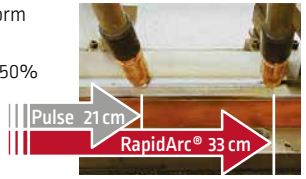
Power Wave® R450

STEEL & STAINLESS STEEL

RapidArc®
Maximizing weld travel speeds

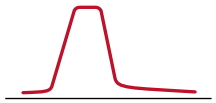


- Industry's premier waveform for high-speed welding
- Increase travel speeds by 50%
- Reduce spatter by 15%



ALUMINIUM

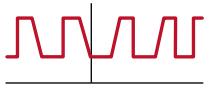
Precision Pulse™
Pulse performance for jobs demanding flexibility



- Improved out of positon welds over standard pulse
- Enhanced puddle control for improved operator confidence
- Controlled heat input
- Improves welds in tight joints



Pulse-on-Pulse®
TIG appearance. MIG productivity



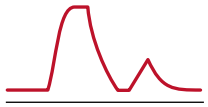
- Excellent heat input control especially on thin materials *(less than 7 mm thick)*
- Eliminates in-line weaving
- Improve operator appeal for any skill level
- Use when appearance and productivity matter using aluminium



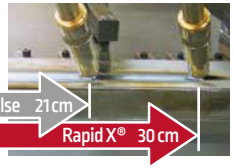
With Advance module

STEEL

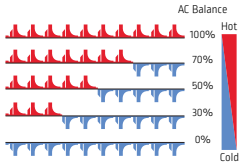
Rapid X®
High speed, low spatter, low heat input, no trade-offs



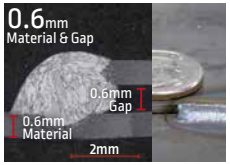
- Revolutionises the productivity of welding
- Increase travel speeds by 40%
- Reduce spatter by 30%



AC-STT™
Industry's superior thin gauge solution

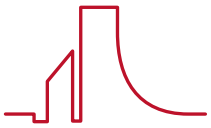


- Proven STT® waveform with controlled AC balance
- Excellent heat-input control
- No burn through, no spatter

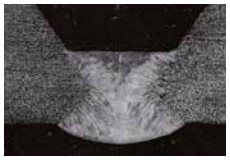


STEEL, STAINLESS & NICKEL

STT®
Industry proven root pass solution



- Simplify open root welding for any operator skill level
- Eliminates common burn-through & lack of fusion issues.
- Larger bead, flat face, perfect back bead, excellent fusion

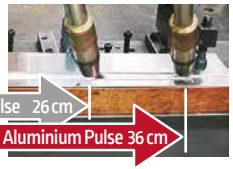


ALUMINIUM

AC Aluminium Pulse
Improved Aluminium productivity and quality

UltimArc® Control

- Increase travel speeds by 40%
- Increase deposition by 75%
- Improves gap bridging capabilities
- Decrease burn-through

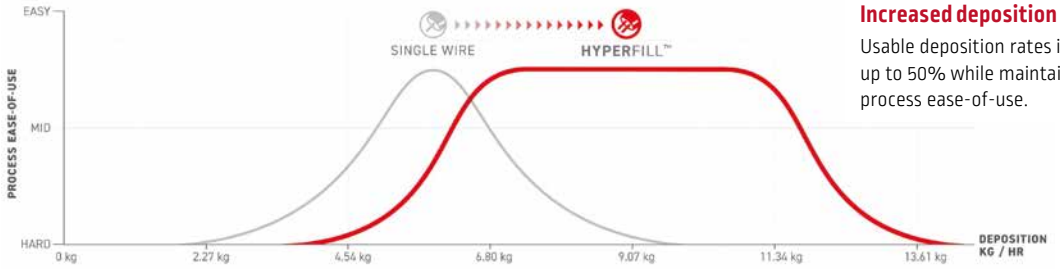


STEEL & STAINLESS STEEL

HYPERFILL™
Bigger welds
Faster, easier

HYPERFILL™ redefines high deposition welding, making larger welds, faster and more easily.

The HYPERFILL™ twin-wire MIG solution revolutionizethe heavy fabrication productivity, pushing the limits of the single wire without changing.



Increased deposition rates

Usable deposition rates increase up to 50% while maintaining process ease-of-use.





ARC FACILITIES
Application Resource Centers

Application Resource Centers, also known as ARC facilities, house Lincoln Electric's latest technologies and professionals, who help develop and deliver productivity solutions that create new opportunities for our current and future customers.

ARC facilities include dedicated spaces and equipment to demonstrate and test welding, cutting, virtual welding, and automation solutions.

In addition, each ARC includes classroom areas for instruction on the processes, machines and consumables solutions available to them.

REQUEST A DEMO

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