

# COOPER™ Welding Cobot Series

Collaborative Robot Partner



**LINCOLN**®  
**ELECTRIC**

# 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 Cart or Platform version 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.



### Accelerated Onboarding

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



### 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.



### 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.



### Smart Circle Welds

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



### 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 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.



### 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.



### Touch Sensing\*

Re-localise your part to ensure the correct wire placement.

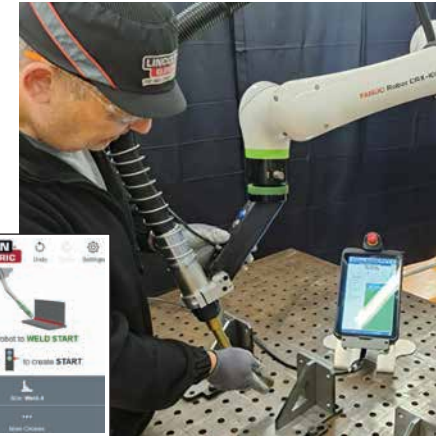


### Thru-Arc™ Tracking\*

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.

\*Thick Plate Weld required (soft package)

# COOPER™ WELDING COBOT CART / COMPACT SOLUTION

## COOPER™ CART

- Fanuc CRX 10iA/L with Tablet-Based TP
- Integrated Push-button Torch Control
- Power Wave® R450 Robotic Power Source
- AutoDrive® 4R100 Wire Feeder
- Robotic torch
- Coolarc 26  
*(for cooling package)*
- Plug & Play single power input
- Fixed Welding Table
- Heavy Duty Casters
- Stabilizing Kickstand
- Utility Drawer & Tablet Tray
- Arc visual protection



	Water Cooled			Air Cooled LE550A
	LE550W	B500W	FX500W	
Steel / Stainless		✓		✓
Aluminium	X	✓	X	X
Fume extraction	X	X	✓	X
Application	Intensive - 450A@100%			Conventional - 300A@100%
Cart weight	500 Kg			470 Kg
Cart dimension	1672 x 800 mm			
Cart payload	226 Kg			
Optional table dimension	800 x 800 mm			
Optional table weight	120 Kg			

## Optional system

- Software pack Touch sensing + Multi-pass + Seam tracking
- Tooling H28 Table 800 x 800 x 25 mm
- MOBIFILTER Fume Extractor for conventional gun\*
- Linc-Extractor for fume extraction gun\*

To order	AIR LE550A	WATER LE550W	WATER B500W	WATER FX500W
Cart alone	AS-RM-91506410	AS-RM-91506470	AS-RM-91506430	AS-RM-91506450
Cart + Software Pack	AS-RM-91506411	AS-RM-91506471	AS-RM-91506431	AS-RM-91506451
Cart + Table	AS-RM-91506412	AS-RM-91506472	AS-RM-91506432	AS-RM-91506452
Cart + Table + Software Pack	AS-RM-91506413	AS-RM-91506473	AS-RM-91506433	AS-RM-91506453



*\*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

- Fancu CRX 10iA/L with Tablet-Based TP
- Integrated Push-button Torch Control
- Power Wave® R450 Robotic Power Source
- Wire Feeder AutoDrive® 4R100 (4R220 for HYPERFILL™)
- Robotic torch
- Coolarc 50 (for cooling package)
- Ethernet Hub
- Plug & Play single power input
- Utility Drawer & Tablet Tray
- Arc visual protection



### Adaptation to your job



Using your table or Tooling.



Directly with a large part.

	Water Cooled				Air Cooled
	LE550W	B500W	FX500W	HYPERFILL™	LE550A
Steel / Stainless			✓		✓
Aluminium	X	✓	X	X	X
Fume extraction	X	X	✓	X	X
Application	Intensive - 450A@100%				Conventionnal 300A@100%
Weight	670 Kg		710 Kg		640 Kg
Dimension	1480 x 1000 mm				

### 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.

### Optional system

- Advance Module
- Software pack
- MOBIFILTER Fume Extractor for conventional gun\*
- Linc-Extractor for fume extraction gun\*



To order	AIR LE550A	WATER LE550W	WATER B500W	WATER FX500W	HYPERFILL LE550W
Platform	AS-RM-91506510	AS-RM-91506570	AS-RM-91506530	AS-RM-91506550	AS-RM-91506590
Platform + Software Pack	AS-RM-91506511	AS-RM-91506571	AS-RM-91506531	AS-RM-91506551	AS-RM-91506591
Platform + Advance Module	AS-RM-91506512	AS-RM-91506572	AS-RM-91506532	AS-RM-91506552	AS-RM-91506592
Platform + Advance Module + Software Pack	AS-RM-91506513	AS-RM-91506573	AS-RM-91506533	AS-RM-91506553	AS-RM-91506593

\*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.

# 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.



### Power Wave® Advance module

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

- Ideal for: Adding AC polarity, STT®



### Robotic feeder

4R100 For Single wire  
4R220 For HYPERFILL™

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



### Cooling system

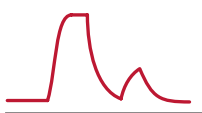

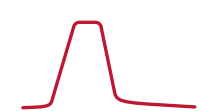

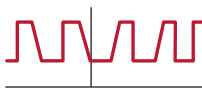

Efficient cooling system.  
COOLARC 26 for Cart version  
COOLARC 50 for Platform version



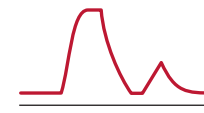
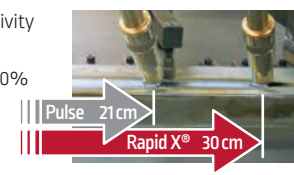
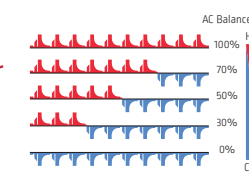
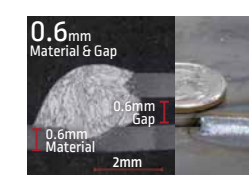

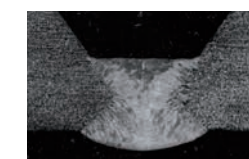
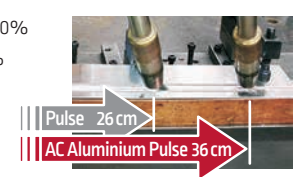
# OPTIMIZE YOUR ARC PERFORMANCE THE RIGHT PROCESS FOR ANY APPLICATION

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

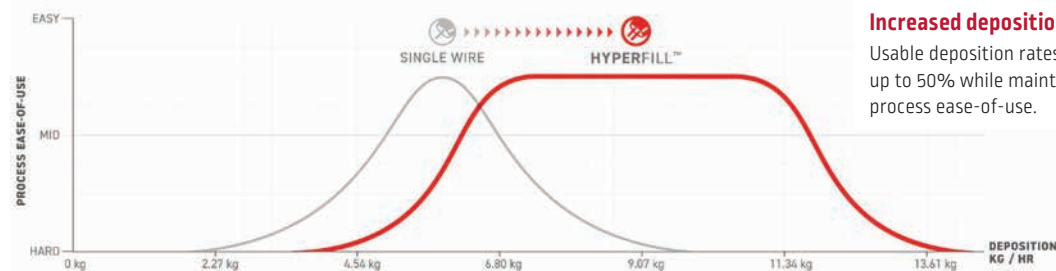
## Power Wave® R450

ALUMINIUM STEEL & STAINLESS STEEL	<p><b>RapidArc®</b> Maximizing weld travel speeds</p>  <ul style="list-style-type: none"> <li>Industry's premier waveform for high-speed welding</li> <li>Increase travel speeds by 50%</li> <li>Reduce spatter by 15%</li> </ul> 
	<p><b>Precision Pulse™</b> Pulse performance for jobs demanding flexibility</p>  <ul style="list-style-type: none"> <li>Improved out of position welds over standard pulse</li> <li>Enhanced puddle control for improved operator confidence</li> <li>Controlled heat input</li> <li>Improves welds in tight joints</li> </ul> 
	<p><b>Pulse-on-Pulse®</b> TIG appearance. MIG productivity</p>  <ul style="list-style-type: none"> <li>Excellent heat input control especially on thin materials (<i>less than 7 mm thick</i>)</li> <li>Eliminates in-line weaving</li> <li>Improve operator appeal for any skill level</li> <li>Use when appearance and productivity matter using aluminium</li> </ul> 

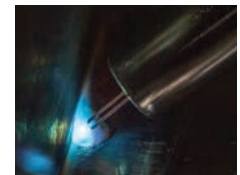
## With Advance module

STEEL	<p><b>Rapid X®</b> High speed, low spatter, low heat input, no trade-offs</p>  <ul style="list-style-type: none"> <li>Revolutionises the productivity of welding</li> <li>Increase travel speeds by 40%</li> <li>Reduce spatter by 30%</li> </ul> 
	<p><b>AC-STT™</b> Industry's superior thin gauge solution</p>  <ul style="list-style-type: none"> <li>Proven STT® waveform with controlled AC balance</li> <li>Excellent heat-input control</li> <li>No burn through, no spatter</li> </ul> 
STEEL, STAINLESS & NICKEL	<p><b>STT®</b> Industry proven root pass solution</p>  <ul style="list-style-type: none"> <li>Simplify open root welding for any operator skill level</li> <li>Eliminates common burn-through &amp; lack of fusion issues.</li> <li>Larger bead, flat face, perfect back bead, excellent fusion</li> </ul> 
ALUMINIUM	<p><b>AC Aluminium Pulse</b> Improved Aluminium productivity and quality</p> <p><b>UltimArc® Control</b></p> <ul style="list-style-type: none"> <li>Increase travel speeds by 40%</li> <li>Increase deposition by 75%</li> <li>Improves gap bridging capabilities</li> <li>Decrease burn-through</li> </ul> 

STEEL & STAINLESS STEEL	<p><b>HYPERFILL™</b> Bigger welds Faster, easier</p> <p>HYPERFILL™ redefines high deposition welding, making larger welds, faster and more easily. The HYPERFILL™ twin-wire MIG solution revolutionizes the heavy fabrication productivity, pushing the limits of the single wire without changing.</p>
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**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**