

ADVANTAGE

► Multi process

Unlimited set of Standard, Pulse and advanced Arc processes, with optional the addition of STT® and Rapid X, more than 100 weld modes inside.

► Ethernet as standard

Free software, like Power Wave Manager and Check Point or Production Monitoring for a single machine or multiple in a network

► Free product updates

Free software updates, to upgrade each Power Wave® with the latest arc programs at any time. NO difference between the upgraded machine and a new one.

► Robustness

Built according to the Lincoln Electric Industrial standard for in and outside use and difficult environmental conditions. Overrated components and potted PC boards. Three Year Warranty

FEATURES

► Procedure Selection (JOB), all your specific weld settings stored in different memory locations.

► Easy recall, visible Procedure Selection content on the display and easy to recall on the feeder or on the gun joy stick or the gun trigger.

► Ultim Arc allows you fine tune the Arc Cone to suit your application.

► Run In, Hot and Soft Start, Pre and Post Flow Crater and many more features in addition as standard.

► Remote Options, all machines and feeders are prepared for remote control on the gun, separated remotes and Push Pull guns also with remote.



Outstanding Operation Modular Configuration

The Power Wave® C300, S350 and S500 are part of a modular concept offering many different configurations allowing you to adjust the machine to your welding application. The new platforms all communicate with Arclink allowing you to work with all our digital feeders from the LF45 to PF10M.

All Power Waves® come complete with an Ethernet connection. You can get access to the machine by using this connection and our free available software. Software updates are free, our Web site powerwavesoftware.com contains the latest version of software including weldmodes. By updating the machine you can be sure that your machine is "up to date" and has a welding performance equal to a new one with the last improvements and additions included.

On one side advanced technology but on the other side robustness, the Power Wave has it all. The machines are built according to our Industrial standard and prepared to work day in day out as well as shift operations. The components inside the machine are all protected and all PC boards are encapsulated. The Three Year warranty is standard and confirms the quality of the product.

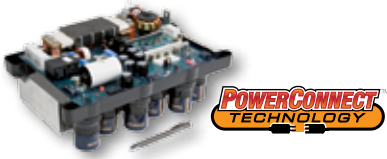
MODULAR BUILD



FEATURES / BENEFITS

Feature	Function	Customer benefit
Run-In		Adjustable Wire Feed Speed prior to the start supporting smooth starting.
Hot/Soft Start		High or Low weld procedures at the start, a high setting may "pre-heat" the material at the beginning of the weld. (ALU)
Inductance		Adjustable inductance with Short Arc for a more "soft" or "harsh" Arc.
Ultim Arc™		Adjust the Arc characteristics in advanced mode and change the Arc cone to meet individual preferences.
Crater		Ramping the output down for a defined time to prevent crater cracks.
Job/Memory		Store up to 8 customised weld procedures for multiple operators processes and settings.
Memory lock		The procedures stored in the memory can be secured with a password
Limits		Will limit the changes you can make on a procedure stored in the memory
Dual procedure		Switch from one procedure to another while welding
True Energy™		Shows the precise amount of power delivered to the weld in kJ. Customers can use this value to calculate the Heat Input.

Tribrid™ Power Module



Includes Lincoln's **PowerConnect™** technology, **Planar Transformer™** technology providing Exceptional welding performance allowing high input variations at Industry leading (max output):

- 0.95 Power factor
- 85% efficiency



Our **iARC™** High Speed Digital Controls are Lincolns next generation of digital welding controls. It is 90 times faster than previous generations. Ethernet on board as standard.

All PC board's are "potted" for maximum protection and a long life time.

POWER WAVE® SOFTWARE SOLUTIONS

Each Power Wave has a full duplex 100Mhz Ethernet on board allowing you to connect the machine with a PC and run our free available software.

The Lincoln Electric website powerwavesoftware.com will allow you to download a software package to upgrade your machine. Our ready to go software bundle contains an upgrade kit of the complete machine including weld modes. Welding is the purpose of the machine therefore we constantly improve our weld set with more files or Arc improvements of existing modes. After running the package upgrades your machine is brand new!

Power Wave manager is for servicing and adjustments on the standard machine. You may change network settings, customize the feeder, or use one of the diagnostic tools.

Power Waves can run in a network with a unique IP address to identify each machine. After installing Production Monitoring™ 2.2, you will be able to see each machine in the network and extract data about the production with each machine in particular. Not only welding data is recorder also details about the consumables telling you how much wire is left.

With Check Point™ Production Monitoring, all welding process data are available anywhere, anytime at any Device thanks to iClouds technology.

- POWER WAVE® SOFTWARE FREE UPDATE**
- POWER WAVE® MANAGER**
- PRODUCTION MONITORING™ 2.2**
- CHECKPOINT™**
- WeldScore™**

Free available at www.powerwavesoftware.com

POWER WAVE® PROCESSES

Standard processes

CV MIG

Pulse MIG Stainless

Pulse MIG Aluminium

Pulse MIG Steel

Stick Soft / Crisp

TIG (Pulse)

Special processes

Power Mode®

Rapid Arc®

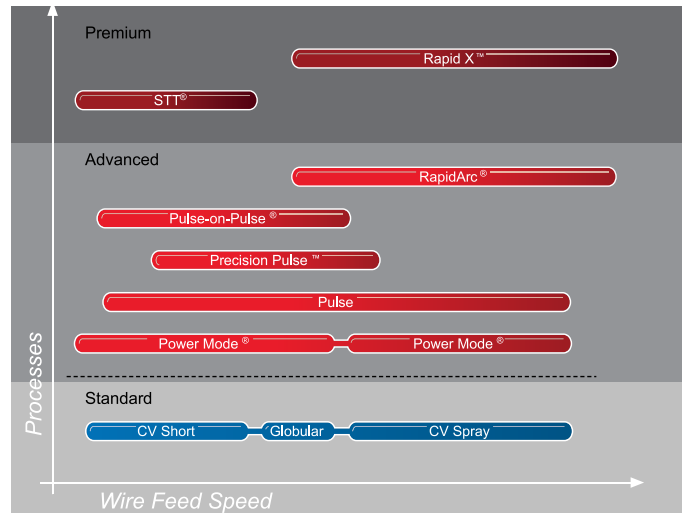
Pulse on Pulse® (ALU)

Precision Pulse

STT® *

Rapid X™ *

* available with STT module



POWER MODE®

What is Power Mode®?

A new GMAW process that combines the benefits of the Wave Form Control Technology with the output characteristics of traditional constant current equipment.

The benefit of this type of control is best demonstrated in applications where energy and penetration must be closely monitored and consistent. The controlled response of the Power Mode® enables the power source to maintain a stable arc despite stick-out fluctuation, even at very low current levels.

APPLICATIONS

- Thin material Steel and Stainless (even below 1.0 mm)
- Root Pass welding
- ALU Spray Arc
- Metal case corner welds

KEY FEATURES

- Excellent starting characteristics
- A stable Arc despite stick-out fluctuations even at very low current levels
- Consistency of weld penetration in axial spray transfer
- Low spatter

RAPID ARC®

What is Rapid Arc®?

A pulsed GMAW process solution designed to increase productivity by reducing cycle time. Rapid Arc® improves low voltage welding at high speeds, as it stabilizes the process for shorter arc length. With traditional Waveforms, the arc length is longer to avoid spatter, limiting the travel speed. With Rapid Arc®, the arc length is kept short and tight, and spatter is avoided with precise control of the short circuit cycle. Rapid Arc® stabilizes the shortened arc length with controlled short circuit cycles.

APPLICATIONS

- Fillet, lap and but welds
- Narrow joints
- Different weld positions
- Wheels, Tanks

KEY FEATURES

- High Travel Speed compared to CV spray and Pulse
- High penetration
- Low heat input, less distortion
- Position welding possible

PULSE ON PULSE®

What is Pulse on Pulse®?

Pulse-on-Pulse® is a patented solution from Lincoln Electric that uses a sequence of pulse wave shapes to tightly control the arc length and the heat input while welding aluminum. The pulse sequences also result in a GTAW-like bead appearance. The high energy pulses provide a hotter arc (longer arc duration), which improves cleaning action at the base material. The low energy pulses allow the weld puddle to cool, which controls the heat input for good penetration.

APPLICATIONS

- Thin Aluminium applications
- Alu applications where a nice bead appearance is needed.
- Boats, semitrailers, caravans, ladders

KEY FEATURES

- Easy control of the Arc at low Amperage levels
- Nice bead appearance (ripple effect)
- Possible replacement of TIG on certain applications
- Increased cleaning action

STT®

What is STT®?

STT® is a controlled short-circuit transfer GMAW process which produces a low hydrogen weld deposit and makes it easier to achieve a high quality root weld in all positions.

The STT® process eliminates the lack of penetration and poor sidewall fusion problems encountered when using the traditional short-arc GMAW process.

APPLICATIONS

- Mild & Stainless Steel
- Open root welding

KEY FEATURES

- Premium alternative to GMAW Short Arc
- Extremely very low spatter levels
- Superior Arc behaviour
- Vertical down without cold lap

RAPID X™

What is Rapid X™?

Like with Rapid Arc® the Arc length is very short, however with Rapid X™ the spatter level is reduced significantly and the Arc length shorter another time.

As a result Rapid X™ provides fast travel speeds, deep penetration and delivers increased productivity

APPLICATIONS

- Mild Steel
- PA Lap, PB Lap, PG Lap

KEY FEATURES

- Increases Travel Speed
- Reduces Spatter
- Increases Penetration
- Reduces Heat Input
- Reduces Distortion



Power Wave® C300, S350 & S500

TECHNICAL SPECIFICATIONS POWER SOURCES

Product	Item number	Voltage / Power Factor	Input Power @ Rated Output	Fuse size (slow)	Weight (kg)	Dimensions HxWxD (mm)	Protection Class	Conformance
Power Wave® C300 CE (compact)	K2865-1	230/400V3Ph 50/60Hz (208-575V)*0,95	11.1 kVA@40%	40/25A	50.4	478 x 356 x 610	IP23	EN 60974-1 EN 60974-10 ROHS CE
Power Wave® S350 CE (source)	K2823-2		14 kVA@40%		46.6	518 x 356 x 630		
Power Wave® S500 CE (source)	K3168-1		22,5 kVA@60%	90/60A	68	570 x 356 x 630		

TECHNICAL SPECIFICATIONS WIRE FEEDERS

Product	Item number	Drive rolls	Cooling	Input power	Wire size (mm)	WFS (m/min)	Weight (kg)	Dimensions HxWxD (mm)
Power Wave® C300 MAXTRAC™ DRIVE	built-in	MAXTRAC 2 rolls Ø 44,5 mm	A/W	40 V DC	0.8-1.6	1.0-20.0	-	-
LF45S	K14083-1	4 rolls Ø 37 mm					12	370 x 195 x 535
LF45	K14072-1						17	440 x 270 x 636

WELDING OUTPUT

Product	Process	Output range (A)	Max. O.C.V.	Rated Output (40°C)
Power Wave® C300	GMAW, GMAW-Pulse, FCAW	5-300	70V	300A/29V@40% 250A/26,5V@100%
	SMAW			280A/31,2V@40% 225A/29V@100%
	GTAW-DC			300A/22V@40% 250A/22V@100%
Power Wave® S350	GMAW, GMAW-Pulse, FCAW	5-350	70V	350A/31,5V@40% 300A/29V@100%
	SMAW		60V	325A/33V@40% 250A/31V@100%
	GTAW-DC		24V	350A/24V@40% 300A/22V@100%
Power Wave® S500	GMAW, GMAW-Pulse, FCAW	40-550A	60V	500A/39V@60% 450A/36,5V@100%
	SMAW	15-550A	60V	500A/40V@60% 450A/40V@100%
	GTAW-DC	5-550A	24V	500A/30V@60% 450A/28V@100%

ACCESSORIES

Item number	Description	PW C300	PW S350/S500
K14087-1	CART PW C CE	✓	-
K14085-1	CART PW S CE	-	✓
K14050-1	Coolarc-50	✓	✓
K14072-1	LF-45	-	✓
K14083-1	LF-45S	-	✓
K2461-2	PF 10M Dual	-	✓
K2921-1	STT module CE	-	✓
K10349-PGW-XM	Cable IC Water Cooled 3,5,10,15m	-	✓
K10349-PG-3M	Cable IC Air Cooled 3,5,10,15m	-	✓
K10420-1	Coolant Acorox (2X5L)	✓	✓
K14091-1	Remote control -7M	✓	✓
K10095-1-15M	Remote control 6-pins, 15m	✓	✓
K870	Foot Amptril	✓	✓
K2909-1	Adapter 6/12-Pins for Remote Applications - 0,5m	✓	✓
KP10519-8	Adapter TIG Euro	-	✓
K10413-360GC-4M	LG360GC with cross switch, 4m	✓	✓
K10413-420GC-3M	LG420GC with cross switch, 3m	✓	✓
K10413-420GC-4M	LG420GC with cross switch, 4m	✓	✓
K10413-420GC-6M	LG420GC with cross switch, 6m	✓	✓
K10413-505WC-4M	LG505WC with cross switch, 4m	✓	✓
K3004-1	Autodrive 19	-	✓
K3171-1	Autodrive 19 Tandem	-	✓
K2827-2	DeviceNet KIT	-	✓



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LINCOLN®
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