

Power Wave® S500

Processes

Stick, DC TIG, Pulsed DC TIG, MIG,
Pulsed MIG, Flux-Cored

Product Number

K2904-1 Power Wave S500
K3187-2 Power Wave S500 Ready-PaK
K3186-2 Power Wave S500 One-PaK

See back for complete specs

Input Voltage

200/208/220/230/380/400/415/460/575/
3/50/60

Input Current @ Rated Output

3 Ph / 40% Duty Cycle: 80/73/41/37/29A
3 Ph / 100% Duty Cycle: 60/54/30/27/21 A

Output Range

5-550 Amps

Rated Output

GMAW: 550A/41.5V/40%
GMAW: 450A/36.5V/100%

Weight/Dimensions (H x W x D)

150 lbs. (68 Kg)
22.5 x 14 x 24.8 in.
(571 x 355 x 630 mm)

Powerful Multi-Process Capability.

The multi-process Power Wave® S500 is packed with Lincoln Electric performance technology for welding on thicker materials. It provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs.

FEATURES

- ▶ **PowerConnect™ Technology (Patent-Pending)** – Automatically adjusts to input power from 200-600V, 50 or 60 Hz, three phase. Welding output remains constant through the entire input voltage range.
- ▶ **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- ▶ **CheckPoint™** – A cloud-based system to view or analyze your welding data. Track equipment usage, store weld data, configure fault limits and more.
- ▶ **Standard 115V (10A) AC Duplex Auxiliary Power Receptacle** – Features patent-pending Surge Blocker™ Technology to ensure simultaneous welding performance is not compromised by high starting current devices such as grinders (typically requiring 60A or more peak surge current).
- ▶ **Durable Case** – IP23 rated to withstand harsh environments.
- ▶ **Standard Ethernet** – Allows for effortless software upgrades through powerwavesoftware.com

APPLICATIONS

- ▶ Construction
- ▶ Aerospace
- ▶ Fabrication
- ▶ Automotive
- ▶ Production



Shown: K2904-1
Power Wave S500

RECOMMENDED WIRE FEEDERS

- ▶ Power Feed® 84 Bench and Boom models
- ▶ Power Feed® 25M

WAVEFORM CONTROL TECHNOLOGY® PROCESS CAPABILITIES

- ▶ Pulse
- ▶ Pulse-on-Pulse®
- ▶ Power Mode®
- ▶ RapidArc®
- ▶ Rapid X™ (With STT® Module)
- ▶ Upgradable for additional processes to be developed in the future.

INPUT



OUTPUT



Two Year Extended
Warranty Available in
the U.S.A. and Canada.



RECOMMENDED ACCESSORIES

GENERAL OPTIONS, CON'T



Deluxe Adjustable Gas Regulator & Hose Kit
Accommodates CO₂, Argon, or Argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose.
Order K586-1



Weld Fume Control Solutions
Lincoln Electric offers a wide variety of weld fume control solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.
Request Publication MC08-70

STICK OPTIONS



Accessory Kit
Complete kit for stick welding. Includes 30 ft. (9.1 m) electrode cable, 25 ft. (7.6 m) work cable, headshield, work clamp and electrode holder. 150 amps.
Order K704



Shown: Cool Arc 55 S

Cool Arc® 55 Water Cooler
Designed to integrate with Power Wave® S350 and S500 power sources to cool water-cooled welding guns or torches rated up to 500 amps. Recommended for robotic and hand-held MIG, TIG and Plasma cutting operations. 115V/1/60. The 55 S model includes an ArcLink® communication flow sensor that detects water flow to prohibit welding when no flow is present.
Order K3086-1 for Cool Arc 55
Order K3086-2 for Cool Arc 55 S



Remote Output Control with 12-pin Universal Connector
Permits remote adjustment of output. Requires K3001-2 S-Series User Interface Kit.
Order K857-2 for 25 ft. (7.6 m)



12-pin to 6-pin Adapter
Allows older 6-pin remote controls (K870, K963-3, K857) to be used with 12-pin Universal Connection.
Order K2909-1

12-pin to 7-pin Adapter
Allows 7-pin push-pull guns to be used with 12-pin Universal Connection.
Order K2910-1

TIG OPTIONS



PTA-17 150 Amp Air-Cooled TIG Torch
Order K1782-1 for 12.5 ft. (3.8 m) length, 1-cable
Order K1782-3 for 25 ft. (7.6 m) length, 1-cable



PTA-26 200 Amp Air-Cooled TIG Torch
Order K1783-1 for 12.5 ft. (3.8 m) length, 1-cable
Order K1783-3 for 25 ft. (7.6 m) length, 1-cable



Parts Kits
Magnum® Parts Kits provide all the torch accessories you need to start welding. Parts kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.
Order KP508 for PTA-17
Order KP509 for PTA-26



Foot Ampctrl™ with 12-pin Universal Connector
Provides 25 ft. (7.6 m) of remote current control for TIG welding. Requires K3001-2 S-Series User Interface Kit.
Order K870-2



Hand Ampctrl™ with 12-pin Universal Connector
Provides 25 ft. (7.6 m) of remote current control for TIG welding. Requires K3001-2 S-Series User Interface Kit.
Order K963-4



WIRE FEEDER OPTIONS

STT® Module
This module allows easy connection and fast digital communication with compatible Power Wave® S-Series power sources, Power Feed® wire feeders, and compatible water coolers. Add STT® capability without having to purchase a second power source.
Order K2902-1 US/Int'l (shown)
Order K2921-1 CE



Power Wave® Advanced Module
Provides multi-process reverse polarity (DC+), straight polarity (DC-), AC, high frequency TIG and STT® functionality. Compatible with Power Wave® S350 and S500.
Order K2912-1



Magnum® PRO AL Air-Cooled & Water-Cooled Push-Pull Guns
The Magnum PRO AL gooseneck style guns are designed to optimize a push-pull welding operation for aluminum. Uses Magnum PRO MIG Gun expendables. Available in 7-pin and 12-pin connections.
Request Publication E12.14



AutoDrive® 19 Controller
Relays wire feed commands from Power Wave® S Series power source to any AutoDrive® Series robotic wire drive for automated welding operation. Not compatible with Power Wave® R-Series power sources.
Order K3004-1



AutoDrive® 19 Tandem Controller
Relays wire feed commands from Power Wave® S-Series power source to any AutoDrive® Series robotic wire drive for automated tandem welding operations.
Order K3171-1

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Voltage	Input Current @ Rated Output	Rated Output Current/Voltage/Duty Cycle	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® S500	K2904-1	200/208/220/230/380/400/415/460/575/3/50/60	3 Ph / 40% Duty Cycle: 80/73/41/37/29 3 Ph / 100% Duty Cycle: 60/54/30/27/21	GMAW: 550A/41.5V/40% GMAW: 450A/36.5V/100% SMAW: 550A/42V/40% SMAW: 450A/38V/100% GTAW-DC: 550A/32V/40% GTAW-DC: 450A/28V/100%	5-550A	22.5 x 14 x 24.8 (571 x 355 x 630)	150 (68)
Power Wave® S500/ Power Feed® 84 Ready-Pak®	K3187-2						
Power Wave® S500/ Power Feed® 84 One-Pak®	K3186-2						

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

CUSTOMER ASSISTANCE POLICY

The business of 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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ELECTRIC**
THE WELDING EXPERTS®