

POWER WAVE® S500

ADVANCED PROCESS WELDER



Shown: K2904-1
Power Wave S500

POWERFUL MULTI-PROCESS CAPABILITY.

The multi-process Power Wave® S500 is packed with Lincoln Electric performance technology and innovation. Built to be the best in class advanced process welding machine, the Power Wave® S500 features advanced welding waveforms optimized to provide the highest quality arc for nearly any application.

Processes »

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

Applications »

Construction, Aerospace, Fabrication, Automotive, Production

Output »



Input »



Product Numbers »

K2904-1 Power Wave S500
K3187-2 Power Wave S500 Ready-Pak
K3186-2 Power Wave S500 One-Pak
See back for complete specs

INDUSTRY LEADING
5-YEAR
STANDARD
WARRANTY



KEY FEATURES

- **PowerConnect® Technology** – Automatically adjusts input power from 200-600V, 50 or 60 Hz, three phase. Welding output remains constant through the entire input voltage range.
- **Checkpoint® Welding Production Monitoring** – 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 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).
- **Built to Last** – Constructed for maximum durability with an IP23 rating for harsh environments and backed by an industry leading 5 year warranty.
- **Standard Ethernet** – Allows for enhanced connectivity and control as well as software upgrades through PowerWaveSoftware.com

KEY CONTROLS - POWER SOURCE

FRONT

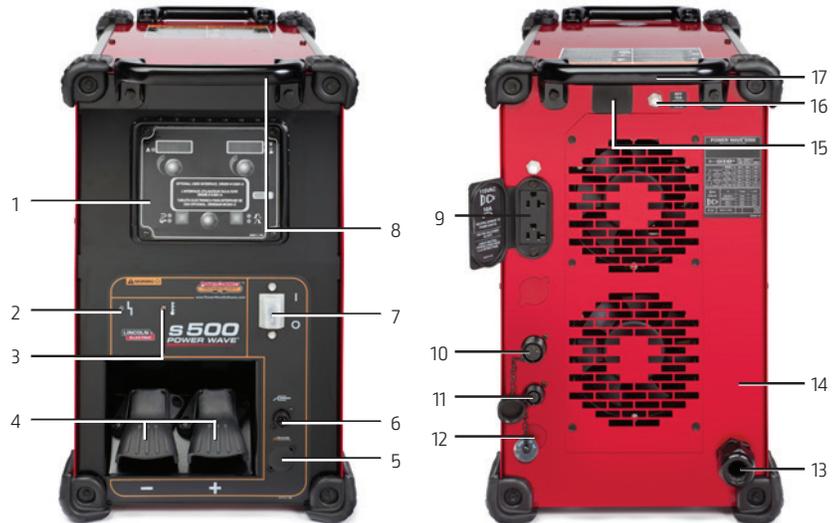
1. Optional S-Series User Interface Kit (K3001-2) for Stick, TIG and CV MIG with voltage sensing feeder
2. Status Light
3. Thermal Fault Indicator Light
4. Output Studs
5. Output Control Receptacle Knockout Plate – 12-pin
- (for optional output control receptacle included with
- K3001-2 S-Series User Interface Kit)
6. Work Sense Lead Receptacle
7. Main Power Switch
8. Reversible Handles

BACK

9. Standard 115V (10 Amp) AC Duplex Auxiliary Power
- Receptacle and Circuit Breaker
10. ArcLink® Welding System Component
- Communication Cable Receptacle
11. Sync Tandem/STT® Receptacle
12. Optional DeviceNet™ Kit (K2827-2)
13. Input Power Cable Connection
14. TIG Solenoid Kit Knockout Plate
- (for optional TIG solenoid included with
K3001-2
- S-Series User Interface Kit)
15. Ethernet Cable Receptacle
16. Circuit Breaker (ArcLink®)
17. Reversible Handles



Reversible handles shown



OPTIONAL USER INTERFACE AND CONNECTIVITY KITS

This optional interface provides full control of welding parameters from the front panel of the power source for Stick and TIG processes. Kit also includes 12-pin Receptacle and TIG Gas Solenoid.

Order K3001-2



The Power Wave® Wireless Connectivity Module delivers a simple and secure solution for machine connectivity – allowing users to make use of powerful process monitoring and control capabilities such as Checkpoint® and MQTT without the hassle of costly network infrastructure.”

Order K4352-1



WHAT'S INCLUDED

Ready-Pak® Packages are assembled and shipped on one pallet. **One-Pak® Packages** are not assembled. All packages can be ordered using a single Product Number (K#). Welding wire and shielding gas must be ordered separately.

Power Wave® S500/Power Feed® 84 Bench Feeder Ready-Pak®, includes:

- Power Wave® S500 (K2904-1)
- Power Feed® 84 Bench Model (K3328-13)
 - Wire Reel Stand
- ArcLink®/Linc-Net™ Control Cable with Weld Power Cable - 8 ft. (2.4 m)
- Magnum® PRO Curve™ 400 Gun and Cable Package (K2952-2-10-45)
- .040-.045 (1.0-1.1 mm) Drive Roll Kit (KP1505-045S)
- Work Lead Package (K2149-1)
- Harris® Flowmeter Regulator and Hose (3100211)
- Inverter and Wire Feeder Cart (K3059-4)

Order K3187-2

Power Wave® S500/Power Feed® 84 Bench Feeder One-Pak®, includes:

- Power Wave® S500 (K2904-1)
- Power Feed® 84 Bench Model (K3328-13)
 - Wire Reel Stand
- ArcLink®/Linc-Net™ Control Cable with Weld Power Cable - 8 ft. (2.4 m)
- Magnum® PRO Curve™ 400 Gun and Cable Package (K2952-2-10-45)
- .040-.045 (1.0-1.1 mm) Drive Roll Kit (KP1505-045S)
- Work Lead Package (K2149-1)
- Harris® Flowmeter Regulator and Hose (3100211)

Order K3186-2



Shown: K3187-1

TECHNOLOGIES



PowerConnect® Technology

Features PowerConnect™ technology, Planar Transformer™ Technology and 120kHz output to provide exceptional welding performance while still maintaining a high power factor and efficiency.



Rugged Reliability

- Tested under severe conditions:
- Extreme Temperature Ranges
 - Extreme Humidity
 - Rain
 - Dirt and Dust
 - IP23 Rated Performance



CheckPoint® Welding Production Monitoring

CheckPoint, cloud server-based and mobile delivery solutions, is the welding industry's most advanced weld data collection and monitoring tool, allowing fabricators to analyze their welding operations and processes. These tools can provide necessary data for customer ISO, Six Sigma, statistical process control (SPC), quality cost delivery (QCD), overall equipment effectiveness (OEE) and lean manufacturing efforts. CheckPoint is offered at no charge with every Power Wave purchase.

Waveform Control Technology®

Advanced software-driven hardware architecture allows for Lincoln Electric exclusive welding processes such as STT®, Rapid X®, HyperFill® and Low Fume Pulse®. For a full list of available welding processes and waveforms as well as requirements and software update details for Power Wave® advanced process welding systems, please visit: www.PowerWaveSoftware.com

RECOMMENDED ACCESSORIES

GENERAL OPTIONS



S-Series User Interface Kit

This optional interface provides full control of welding parameters from the front panel of the power source for Stick and TIG processes. Includes TIG gas solenoid and 12-pin remote connector.

Order K3001-2



DeviceNet™ Kit

The kit allows DeviceNet™ connectivity to control the power source. Includes internal harness and 5-pin DeviceNet™ receptacle for mounting on power source back panel.

Order K2827-2



Inverter and Wire Feeder Cart

Rear-wheeled cart with front casters and gas bottle platform. Convenient handles allow for easy cable storage. Small footprint fits through 30 in. (762 mm) door. Not intended for use with double head wire feeders.

Order K3059-4



Dual Cylinder Inverter & Wire Feeder Cart

Rear-wheeled cart with front casters and dual cylinder platform. Convenient handles allow for easy cable storage. Small footprint fits through 30 inch (762 mm) door.

Order K3059-5



Work Lead Package

15 ft. (4.5 m) 4/0 cable with 1/2 in. stud lug and work clamp.

Order K2149-1



Work Voltage Sense Lead Kit

Required to accurately monitor voltage at the arc.

Order K940-25 for 25 ft. (7.6 m)

Order K1811-50 for 50 ft. (15.2 m)

Order K1811-100 (shown) for 100 ft. (30.5 m)

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 Amptrol™ 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 Amptrol™ 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 K3685-1



Magnum® PRO AL Fixed Conduit Push-Pull Guns
The new, improved Magnum PRO AL Fixed Conduit Push-Pull Guns feature a new rigid liner which provides a smooth, premium aluminum welding solution. Uses Magnum PRO MIG Gun expendables. Available in 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

PRODUCT SPECIFICATIONS

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

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 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. 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.

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