

SIMPLE AND RUGGED. STICK, TIG AND ARC GOUGING.

Big Red™ 500



Shown K2810-1

KEY FEATURES

Built for operation in remote locations, the Big Red™ 500 is a simple, rugged diesel engine-driven welder for stick welding, TIG and arc gouging. The design features no PC boards, proven reactor technology and the popular Deutz® D2011L3i oil/air-cooled industrial diesel engine for high reliability in jungles, deserts and other extreme environments.

- Simple, Rugged Design
- High-Output Welding and Arc Gouging
- Desert Duty™ Rated
- Versatile Receptacle Connections for AC Generator Power
- Popular Deutz® Industrial Diesel Engine

Processes »
Stick, TIG, Gouging

Output »



Input »



Product Number »
K2810-1

FEATURES

- **Simple, Rugged Design**
 - Proven reactor technology.
 - No PC boards.
 - Heavy gauge steel base, frame, case sides and roof.
- **High-Output Welding and Arc Gouging**
 - 600 Amps DC stick and DC TIG welding.
 - 8 mm (5/16 in.) carbon arc gouging.
- **Desert Duty™ Rated**
 - Tested for extreme temperature operation up to 55°C.
- **Versatile Receptacle Connections for 60 Hz AC Generator Power**
 - Operate common construction tools:
 - 2,400 watts, 120V NEMA receptacles.
 - 1,800 watts, 120V EURO receptacle.
 - 120V receptacles are GFCI protected.
 - 3,600 watts, 240V EURO receptacle, with a port for easily adding an RCD (Residual Current Device).
- **Popular Deutz® Industrial Diesel Engine**
 - Deutz® D2011L3i, 32 HP, 1800 RPM.
 - 3-cylinder, oil/air-cooled.
 - EPA Tier 4i
 - Engine protection for low oil pressure and high temperature.
 - Low maintenance and long life.

PERFORMANCE

- 500 amp rated output DC arc constant current welding power source for construction and maintenance stick welding.
- Weld mode selector switch to select either stick/arc gouging mode or TIG mode.
- 4 taps and fine control for selecting a wide range of output from 65 to 500 amps.
- Built-in “hot” start for easier starts and restrikes minimizing the electrode “sticking” to the work.
- Arc gouging with up to a 8 mm (5/16 in.) carbon.
- Scratch start DC TIG welding.
- Delivers up to 2,400 watts of 120V generator AC power for a grinder, or lights and 3,600 watts of 240V AC generator power for other power tools.
- Nominal 120V and 240V AC generator voltage is independent of any weld dial setting.
- Get multiple arcs from the Big Red™ 500 constant current DC welding output by adding the Multi-Weld® 350 system. Available power is 8,100 watts at 60V DC (10,200 watts at 58V DC). See the Multi-Weld® 350 bulletin E5.302.

SIMULTANEOUS WELDING AND POWER LOADS

Weld Amps	1Phase (120V)		OR	1Phase (240V)	
	Watts	Amps		Watts	Amps
0	2400	20		3600	15
100	2400	20		3600	15
200	2400	20		3600	15
300	1200	10		1200	5
400	0	0		0	0
500	0	0		0	0

EXPORT ONLY – NOT FOR SALE IN THE U.S.A. AND CANADA

FEATURES

- Simple Controls - Keeps training time to a minimum.
- Powered by a heavy duty, industrial Deutz® diesel engine.
- Pressure lubrication system with replaceable filter assures lubrication to all critical areas of the engine.
- Engine gauges indicate oil pressure, temperature and fuel level.
- All day welding with 76 liter [20 gallon] plastic fuel tank. Pre-filter water separator and a filter in the fuel line help keep the fuel clean.
- Single-side engine access with lockable sliding door.
- NEMA and European style receptacles with RCD-ready port.



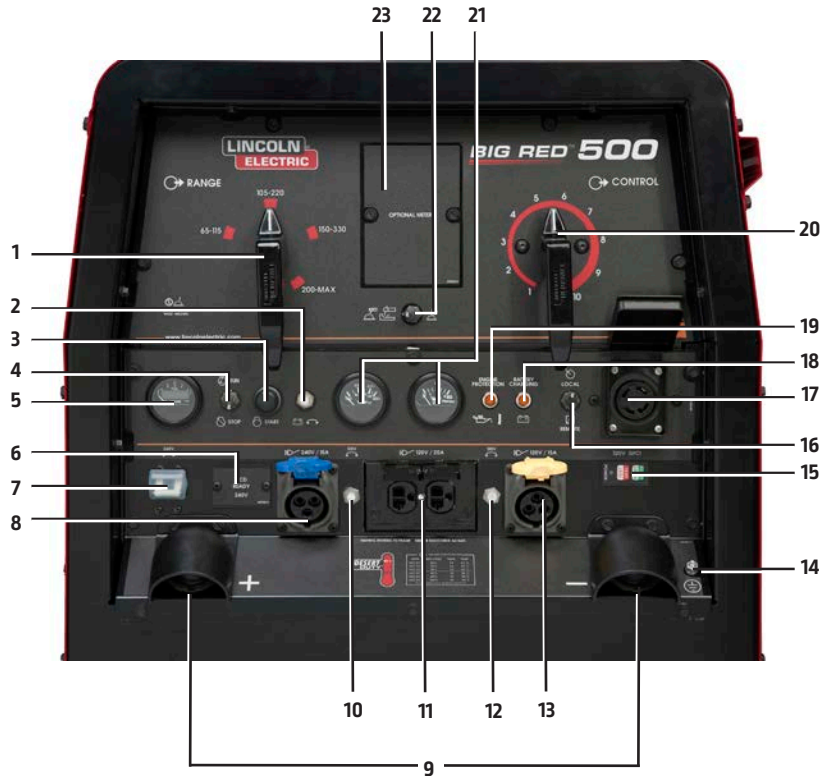
- Oil drain system includes ball valve and hose to direct oil beyond the base of the machine.
- Engine hour meter for scheduling maintenance.
- Scratch-resistant Lexan® namplate.

QUALITY AND RELIABILITY

- Designed especially for welding in remote locations, Lincoln Electric's Big Red™ 500 offers reliable DC arc welding performance.
- The Big Red™ 500 is built in a heavy gauge steel case and is designed for durability on the job site. Rugged construction withstands rough field handling while protecting internal parts.
- Deutz® oil/air-cooled industrial diesel engine offers low maintenance and long life. No radiator and radiator hoses to maintain. EPA Tier 4i.
- Engine Protection System includes automatic shutdown for low oil pressure or high engine temperature.
- Indicator light turns on for low oil pressure or high engine temperature. A second indicator light turns on if the engine battery charging system malfunctions.
- Circuit breaker on the 12V battery circuit provides added component protection.
- Dependability and long life aided by all-copper windings in rotors, stators and reactor with high quality insulation.
- Standard environmental protection includes coatings on stators, rotors, reactor, rectifier stack and exposed electrical connections.
- The following components are T-Plus™ coated for additional environmental protection, especially for tropical climates: machined ID (inside diameter) of stators, inside of stator tie bars, and machined OD (outside diameter) of rotors.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.
- IP23 enclosure protection.
- Three-year Lincoln Electric warranty (engine is warranted separately by the manufacturer).

KEY CONTROLS

1. Current Range Selector
2. Breaker for 12V Battery Circuit
3. Start Push Button
4. Run/Stop Switch
5. Fuel Gauge/Hour Meter
6. RCD-Ready Port Cover
7. 240V AC Circuit Breaker for European Receptacle
8. 240V AC European Receptacle
9. Covered Weld Output Terminals + and -
10. 120V AC Circuit Breaker for NEMA Receptacles
11. 120V AC NEMA Receptacles
12. 120V AC Circuit Breaker for European Receptacle
13. 120V AC European Receptacle
14. Ground Stud
15. Sealed GFCI Module
16. Local/Remote Control Switch
17. Remote Control Connector
18. Engine Battery Charging Light
19. Engine Protection Light
20. Fine Output Control
21. Engine Temperature and Oil Pressure Gauges
22. Weld Mode Selector Switch
23. Access for Optional Analog Weld Meters



MACHINE SPECIFICATIONS

Product Name	Ordering Information	Description	CC Rated Output ⁽¹⁾ Current/Voltage/Duty Cycle	Generator AC Power ⁽²⁾	Dimensions H x W x L inches (mm)	Weight lbs. (kg)
Big Red™ 500	K2810-1	500 Amp DC Arc Welder with 3,600 Watts of AC Power	DC Constant Current at 40% C 500A/30V/40% 450A/34V/60% 400A/36V/100% 65-500A 90V DC Max OCV @ 1,890 RPM	Up to 3,600 Watts 60 Hz 120V Duplex NEMA Receptacle w/ <u>Sealed GFCI Module</u> 20A 120V European Receptacle w/ Sealed GFCI Module Shared with NEMA Duplex Receptacle 15A 240V 1-Phase <u>European Receptacle</u> 15A	36.9 x 28.3 x 65.1 (937 x 718 x 1654) To top of exhaust tube: 46.5 in. (1181 mm)	1538 (697)

⁽¹⁾ Based on a 10 minute period. High Altitude: For maximum rating, derate the output 5% for every 300 m (984 ft.) above 1,500 m (4,920 ft.).

⁽²⁾ 120V will operate either 60 Hz or 50/60 Hz power tools, lights, etc.

ENGINE SPECIFICATIONS

Engine Model	Description	Horsepower & Displacement	Capacities	Operating Speeds	Fuel Consumption
Deutz® Diesel [ⓑ] D2011L3i EPA Tier 4i	3 Cylinder, 4 Cycle Oil/Air-Cooled Diesel Engine with Dry Cartridge Air Filter MSHA Approved	32 HP @ 1800 RPM 173 cu in (2.8 ltrs)	Fuel: 20.0 gals (76 ltrs) Oil: 6.3 qts (6.0 ltrs)	Full Load: 1,800 500A/30V/40% 400A/36V/100% High Idle: 1,890 RPM	1.0 gals/hr - 3.6 ltrs/hr 1.5 gals/hr - 5.6 ltrs/hr 0.6 gals/hr - 2.1 ltrs/hr

[ⓑ] Deutz® is 2 years/2,000 hours for all components, 3 years/3,000 hours for major components.

RECOMMENDED ACCESSORIES

GENERAL OPTIONS

Medium Welder Trailer

For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 13 in. (330 mm) wheels. Stiff .120 in. (3.0 mm) welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Includes a Duo-Hitch® – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 60 in. (1524 mm). Overall length 124 in. (3150 mm).

Order:
K2636-1 Trailer
K2639-1 Fender & Light Kit
K2640-1 Cable Rack

Four-Wheeled Steerable Yard Trailer

For off-road, plant and yard use. Includes an automatically engaging drawbar lock when the drawbar is raised to the vertical position. 13 in. (330 mm) wheels. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Stiff 3/16 in. (4.8 mm) welded rectangular steel frame construction is phosphate etched and powder-coat painted for superior rust and corrosion resistance. Also includes a Duo-Hitch® – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 55 in. (1397 mm). Overall length 124.5 in. (3162 mm).

Order K2641-2



Analog Weld Meters Kit

Easy to read analog meters for volts and amps. Easy to install.

Order K2863-1



Spark Arrestor Kit

Mounts to muffler exhaust tube. Virtually eliminates spark emissions.

Order K2864-1



Multi-Weld® 350

For multiple arcs from the DC output of a welding power source. See bulletin E5.302 for Multi-Weld® 350 and distribution system.

Order K1735-1

STICK OPTIONS

Accessory Kit

For stick welding. Includes 35 ft. (10.7 m) 2/0 electrode cable with lug, 30 ft. (9.1 m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder. 400 amp capacity.

Order K704



Remote Control

Remote control rheostat permits machine output changes up to 100 ft. (30.5 m) from the machine. Plugs into receptacle on control panel.

Order K2861-1



TIG OPTIONS

Pro-Torch™ PTA-26V TIG Torch

Air-cooled 200 amp torch equipped with valve for gas flow control. 25 ft. (7.6 m) length.

Order K1783-9



Magnum® Parts Kit

for PTA-26V TIG Torch
Magnum® Parts Kit provides all the torch accessories you need to start welding. Parts kit provides collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable sack.

Order KP509

PRODUCT SPECIFICATIONS

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine Model	Number of Cylinders	HP@ Speed (RPM)	H x W x D inches (mm)	Net Weight lbs. (kg)
Big Red™ 500	K2810-1	At 40° C 500A/30V/40% 450A/34V/60% 400A/36V/100%	Welding: 65-500A DC AC Power: 3600 watts	Deutz® D2011L3i Diesel EPA Tier 4i	3	32 @ 1800	36.9 x 28.3 x 65.1 (937 x 718 x 1654) To top of exhaust tube: 46.5 in. (1181 mm)	1538 (697)

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

Manufactured at a facility with certified ISO Quality and Environmental Management Systems.

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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The Lincoln Electric Company
22801 St. Clair Avenue · Cleveland, OH · 44117-1199 · U.S.A.

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