BIG RED™ 600

SIMPLE AND RUGGED. STICK, TIG AND ARC GOUGING.

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 »

c
3.6 kW

Input »

dc

Product Number »
K2811-1

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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.
  • 10 mm (3/8 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).
• Widely-Used Deutz® Industrial Diesel Engine
  • Deutz® F3L912, 44 HP, 1800 RPM.
  • 3-cylinder, air-cooled.
  • Engine protection for low oil pressure and high temperature.
  • Low maintenance and long life.

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

PERFORMANCE

• 600 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.
• 5 taps and fine control for selecting a wide range of output from 65 to 600 amps.
• Built-in “hot” start (in the stick/arc gouging mode) for easier starts and restrikes to minimize the electrode “sticking” to the work.
• Arc gouging with up to a 10 mm (3/8 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™ 600 constant current DC welding output by adding the Multi-Weld® 350 system. Available power is 16,500 watts at 60V DC. See the Multi-Weld® 350 bulletin E5.302.

<table>
<thead>
<tr>
<th>Weld Amps</th>
<th>1Phase [120V] Watts</th>
<th>1Phase [240V] Watts</th>
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<tbody>
<tr>
<td>0</td>
<td>2400</td>
<td>3600</td>
</tr>
<tr>
<td>100</td>
<td>2400</td>
<td>3600</td>
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<tr>
<td>200</td>
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<tr>
<td>300</td>
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<td>400</td>
<td>1200</td>
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<td>500</td>
<td>0</td>
<td>1200</td>
</tr>
<tr>
<td>600</td>
<td>0</td>
<td>0</td>
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OR

<table>
<thead>
<tr>
<th>Weld Amps</th>
<th>1Phase [120V] Watts</th>
<th>1Phase [240V] Watts</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>100</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>200</td>
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<tr>
<td>300</td>
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<td>400</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>500</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>600</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

SIMULTANEOUS WELDING AND POWER LOADS

- Welding in one phase while using power in another phase.
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® nameplate.

QUALITY AND RELIABILITY

- Designed especially for welding in remote locations, Lincoln Electric’s Big Red™ 600 offers reliable DC arc welding performance.
- The Big Red™ 600 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® air-cooled industrial diesel engine offers low maintenance and long life. No radiator and radiator hoses to maintain.
- 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.)
MACHINE SPECIFICATIONS

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<tr>
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<tbody>
<tr>
<td>Big Red™ 600</td>
<td>I2811-1</td>
<td>600 Amp DC Arc Welder with 3,600 Watts of AC Power</td>
<td>DC Constant Current at 40º C</td>
<td>Up to 3,600 Watts</td>
<td>36.9 x 28.3 x 65.1</td>
<td>1,657</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>600A/30V/40%</td>
<td>60 Hz</td>
<td>(937 x 718 x 1654)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>550A/34V/60%</td>
<td>120V Duplex NEMA Receptacle w/ Sealed GFCI Module</td>
<td>15A</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>500A/40V/100%</td>
<td>20A</td>
<td>240V 1-Phase European Receptacle 15A</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>65-600A</td>
<td>120V European Receptacle w/ Sealed GFCI Module Shared with NEMA Duplex Receptacle 15A</td>
<td>15A</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Stick/Gouging 90V DC Max OCV @ 1,890 RPM</td>
<td></td>
<td>To top of exhaust tube: 45.2 in. [1148 mm]</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>TIG 75V DC Max OCV @ 1,890 RPM</td>
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</tr>
</tbody>
</table>

[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

<table>
<thead>
<tr>
<th>Engine Model</th>
<th>Description</th>
<th>Horsepower &amp; Displacement</th>
<th>Capacities</th>
<th>Operating Speeds</th>
<th>Fuel Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deutz® Diesel(^{(3)}) F3L912</td>
<td>3 Cylinder, 4 Cycle Air-Cooled Diesel Engine with Dry Cartridge Air Filter</td>
<td>44 HP @ 1800 RPM 173 cu in (2.8 liters)</td>
<td>Fuel: 20.0 gals (76 liters) Oil: 9.5 qts (9.0 liters)</td>
<td>Full Load: 1,800 600A / 30V / 40% 500A / 40V / 100% High Idle: 1,860 RPM</td>
<td>12.0 gals/hr - 4.4 liters/hr 2.0 gals/hr - 7.5 liters/hr 0.7 gals/hr - 2.6 liters/hr</td>
</tr>
</tbody>
</table>

\(^{(3)}\) Deutz® warranty is 2 years/3,000 hours for all components, 3 years/4,500 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 rectangular steel tube frame construction is phosphate etched and powder coated 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 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 K2865-1

**Spark Arrestor Kit**
Mounts to muffler exhaust tube. Virtually eliminates spark emissions.
Order K2866-1

**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

**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

**STICK OPTIONS**

**Accessory Kit**
For stick welding. Includes 15 ft. (4.6 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 K2868-1

**Shown with optional K2639-1 Fender & Light Kit**
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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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.


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

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Number</th>
<th>Rated Output Current/Voltage/Duty Cycle</th>
<th>Output Range</th>
<th>Engine Model</th>
<th>Number of Cylinders</th>
<th>HP@ Speed (BPM)</th>
<th>H x W x D inches (mm)</th>
<th>Net Weight lbs. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Red™ 600</td>
<td>K2811-1</td>
<td>At 40º C 600A/30V/40% 550A/34V/60% 500A/40V/100%</td>
<td>600A/30V/40% 3600 watts</td>
<td>Deutz® F6L912 Diesel</td>
<td>3</td>
<td>44 @ 1800</td>
<td>36.9 x 28.3 x 65.1 (937 x 718 x 1654)</td>
<td>1,657 (752)</td>
</tr>
</tbody>
</table>

To top of exhaust tube: 45.2 in. (1148 mm)