

SAE-500[®]

Processes

Stick, TIG, Flux-Cored⁽¹⁾, Gouging
(1) With CV Adapter.

Product Number

K1278-11 Kubota

Output Range

80-575A DC Welding
3000 Watts AC Generator

Rated Output Current/Voltage/Duty Cycle

500A DC/40V/60%
400A DC/40V/100%

Number of Cylinders

4

HP @ Speed (RPM)

57.8 HP @ 1800 RPM

Weight/Dimensions (H x W x D)

2048 lbs. (928 kg)

45.8 x 28 x 83 in.
(1164 x 711 x 2109 mm)

To Top of Exhaust Tube
54.3 in. (1379 mm)

The Diesel Workhorse™

For demanding jobs that call for high amperage capabilities, the SAE-500[®] offers 500 amps for DC stick welding and 3,000 watts of AC power. Designed especially for pipeliner welding operations and field construction welders, the SAE-500[®] is powered by a heavy duty Kubota[®] industrial diesel engine, which offers low maintenance and long life for hassle-free operation. Add CV wire welding with the optional CV Adapter.

FEATURES

- ▶ **Rugged Construction** - Heavy gauge steel case withstands rough field handling.
- ▶ **Dual Continuous Output Control** - Continuous adjustment of voltage and current. Select either a soft “buttery” arc or snappy “digging” arc for fast, high-quality welding.
- ▶ **High Duty Cycle Welding Output** - 100% duty cycle at 400 amps and 60% duty cycle at 500 amps for demanding applications.
- ▶ **Arc Gouging** - Arc gouging with up to 3/8 in. (10 mm) carbons.
- ▶ **Heavy Duty Industrial Diesel Engine** - Kubota[®] 4-cylinder, water-cooled industrial turbo-charged diesel engine offers low maintenance and long life.
- ▶ **Multiple Arcs** - Large-capacity DC weld output makes the SAE-500[®] the #1 choice for multiple arcs with the Multi-Weld™ 350 system. (See recommended options section.)

APPLICATIONS

- ▶ Pipeliner
- ▶ Construction
- ▶ Maintenance



INPUT



OUTPUT



Kubota[®]



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



THE LINCOLN ELECTRIC COMPANY

22801 St. Clair Avenue • Cleveland, OH • 44117-1199 • U.S.A.
PH: +1.216-481-8100 • www.lincolnelectric.com

PERFORMANCE

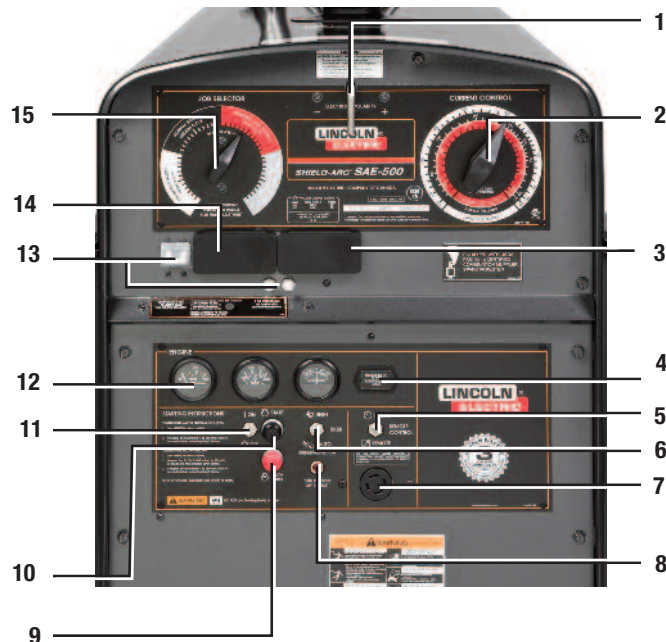
- 500 amp rated output DC arc welding power source with outstanding characteristics for pipe, construction and maintenance stick welding. 575 amp maximum output.
- Polarity switch for selecting DC+, DC- welding output.
- Scratch start DC TIG welding. (See TIG module in recommended options section for high frequency starting.)
- Delivers 3,000 watts of 115V/230V AC power for a grinder, lights or other power tools.
- Add CV wire welding capability with optional CV Adapter. Use with across-the-arc LN-25 Ironworker™ and LN-15 wire feeders.
- Large capacity DC welding output make the SAE-500® the #1 choice for multiple arcs with the Multi-Weld® 350 system. Available power is 22,500 watts at 60V DC. See the Multi-Weld™ 350 Bulletin E5.302.

FEATURES

- Pressure lubrication system with replaceable filter assures lubrication to all critical areas of the engine.
- Engine gauges indicate oil pressure, temperature and battery charging amps.
- All day welding with 29 gallon plastic fuel tank with combination fuel cap/fuel gauge. Pre-filter water separator and a filter in the fuel line help keep the fuel clean.
- Kubota® engine uses glow plugs for starting the engine at low ambient temperatures, down to -5° F (-21° C).
- Combination muffler/spark arrestor is standard on the machine.
- Single-side engine access for routine maintenance.
- Oil drain system includes ball valve, hose and clamp to direct oil beyond the base of the machine.
- Engine hour meter for scheduling maintenance.
- Optional K924-4 remote control kit with 100 ft. (30 m) cord.

KEY CONTROLS

1. Polarity Switch
2. Current Control
3. 115V Receptacles with Covers
4. Engine Hour Meter
5. Local/Remote Control Switch
6. Engine Idler
7. Remote Control Receptacle
8. Engine Protection Light
9. Glow Plug Button
10. Pushbutton Start
11. On/Off Switch
12. Oil Pressure, Temperature, and Battery Charging Amps Gauges
13. Circuit Breakers
14. 230V Receptacles with Covers
15. Job Selector



QUALITY AND RELIABILITY

- Welding and AC generator outputs rated at 40°C (104°F).
- Automatic shutdown protection for low oil pressure or high coolant temperature.
- Printed circuit board for idler and engine protection is potted to provide a robust environment shield.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.
- Canadian Standards Association (CSA) certified.
- Three-year Lincoln Electric warranty (engine is warranted separately by the manufacturers).

MACHINE SPECIFICATIONS

| Product Name | Ordering Information | Description | CC Rated Output ⁽¹⁾ Current/Voltage/Duty Cycle | Generator AC Power ⁽²⁾ | HxWxL in (mm) | Dimensions Weight lbs. (kg) |
|--------------|------------------------------------|--|--|--|---|-----------------------------------|
| SAE-500® | K1278-11 Kubota® EPA Tier 4i | 500 Amp DC Arc Welder with 3,000 Watts of AC Power Includes Polarity Switch & Oil Drain System | Lincoln Rating 500A/40V/60% 400A/40V/100% 80-575 Amps Continuous Adjustment of Voltage and Current 97V Max. OCV @ 1800 RPM | 3,000 Watts 60 Hz, AC 26 Amps @ 115V 13 Amps @ 230V | 45.8 x 28 x 83 (1164 x 711 x 2109) To Top of Exhaust TUBE: 54.3 (1379) | 2048 (928) |

⁽¹⁾ Based on 10 minute period. High Altitude: For maximum rating, derate the output 5% for every 1,640 ft. (500 m) above 1,312 ft. (400 m).

⁽²⁾ 115V 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 |
|---|--|--|--|---|---|
| Kubota® Diesel ⁽³⁾ V3600-T EPA Tier 4i | 4 Cylinder, 4 Cycle Water-Cooled Turbo-Charged Diesel Engine with Dry Cartridge Air Filter | 57.8 HP @ 1800 RPM 221 cu in (3.6 ltrs) | Fuel: 29.0 gals (109.8 ltrs) Oil: 14.0 qts (13.2 ltrs) Radiator Coolant: 3.4 gals (12.8 ltrs) | Full Load: 1,725 (500) High Idle: 1,800 RPM Low Idle: 1,100 RPM | 2.5 gals/hr - 9.3 ltrs/hr 0.7 gals/hr - 2.6 ltrs/hr 0.3 gals/hr - 1.2 ltrs/hr |

⁽³⁾ Kubota® warranty is 2 years/2,000 hours for machines shipped within the U.S., Canada, Pacific Ocean region and Western Europe. Warranty is 1 year/1,000 hours for Central and South America, Asia, Africa and Middle East.

SYSTEM SELECTION

One-Pak® Welding Packages

Order a Lincoln Electric One-Pak® and get everything you need to complete a welding package — all with one order number.

(Packages require assembly.)

Each Unassembled Package Contains:

- SAE-500® (K1278-11 with Kubota® EPA Tier 4i engine)
- Large Welder Trailer (K2637-2)
- Duo-Hitch™: 2 in. Ball/Lunette Eye Hitch (included)
- Fender and Light Kit (K2639-1)
- Cable Rack (K2640-1)
- Cable Connectors - two (K2487-1)
- Electrode Cable 3/0, two 50 ft. (15.3 m) lengths (K2485-3)
- Electrode Cable 3/0, 10 ft. (3 m) (K2483-3)
- Work Cable 3/0, 50 ft. (15.3 m) (K2484-3)
- 400A Electrode Holder (K909-8)
- 500A Work Clamp (K910-2)

Order:

K2726-3 SAE-500® Kubota® (EPA Tier 4i) One-Pak® Package

Ready-Pak® Welding Packages

Order a Lincoln Electric Ready-Pak® and get an **assembled** welding package. Each completely assembled package contains:

- SAE-500® (K1278-11 with Kubota® EPA Tier 4i engine)
- Large Welder Trailer (K2637-2)
- Duo-Hitch™: 2 in. Ball/Lunette Eye Hitch (included)
- Fender and Light Kit (K2639-1)
- Cable Rack (K2640-1)
- Cable Connectors - two (K2487-1)
- Electrode Cable 3/0, two 50 ft. (15.3 m) lengths (K2485-3)
- Electrode Cable 3/0, 10 ft. (3 m) (K2483-3)
- Work Cable 3/0, 50 ft. (15.3 m) (K2484-3)
- 400A Electrode Holder (K909-8)
- 500A Work Clamp (K910-2)

Order:

K2730-3 SAE-500® Kubota® (EPA Tier 4i) Ready-Pak® Package



K1278-11
SAE-500®



K2640-1
Cable Rack



K2637-2 Large
Welder Trailer



Duo-Hitch™:
2 in. Ball/Lunette
Eye Hitch (included)



Completely Assembled
Ready-Pak® Package

RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES



GENERAL OPTIONS

Power Plug Kit

Provides two 115V plugs rated at 20 amps each, and two 230V plugs rated at 15 amps each. 120V plug may not be compatible with common household receptacles.

Order **K8020**



GFCI Receptacle Kit

Includes one UL approved 115V ground fault circuit interrupter duplex type receptacle and installation instructions. Replaces the factory installed 115V duplex receptacle. Each receptacle of the GFCI duplex is rated at 20 amps. Maximum total current from the GFCI duplex is limited to 20 amps.

Order **K1690-1**



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. Includes local/remote switch and receptacle for older machine control panels.

Order **K924-4**



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

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**



TIG Module

Portable, high frequency unit with gas valve for TIG welding. Rated at 300 amps/60% duty cycle.

Order **K930-2**



Control Cable

Connects TIG Module to the SAE-500.

Order **K936-4**



Control Cable Extension

Allows the TIG Module to be operated at distances up to 200 ft. from the power source. Available in 45 ft. (13.7 m) sections.

Order **K937-45**



Arc Start™ Switch

Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control.

Order **K814**



Contactor Kit

For use with TIG Module.

Order **K938-1**



WIRE FEEDER OPTIONS

CV Adapter

Provides constant voltage output for semiautomatic wire welding. Includes connector for 14-pin control cable and local/remote switch. Mounts inside SAE-500.

Order **K385-2**



LN-25 Ironworker™ Wire Feeder

Portable CV unit for flux-cored and MIG welding with MAXTRAC® wire drive system. Includes digital meters for wire feed speed/amperage and voltage, gas solenoid, internal contactor and 5/64 in. (2.0 mm) drive roll kit for cored wire. Has 83% reduced wire feed speed capability for 6 o'clock pipe welding with Innershield® wire.

Order **K2614-9**



K126™ PRO Innershield® Gun

For self-shielded wire with 15 ft. (4.5 m) cable. For .062-5/64 in. (1.6-2.0 mm) wire. Includes K466-10 Connector Kit.

Order **K126-12**



Drive Roll and Guide Tube Kit

For .068-.072 in. (1.7-1.8 mm) cored or solid steel wire.

Order **KP1697-068**



Magnum® PRO 350 Ready-Pak® 15 ft. .035-5/64 in.

Magnum® PRO MIG/flux-cored welding guns are rated 100% duty cycle. The guns are designed for high amperage, high duty cycle applications in extreme environments where heat-resistance and fast serviceability are key.

Order **K2652-2-10-45**



Drive Roll and Guide Tube Kit

For .035 in. and .045 in. (0.9-1.1 mm) solid steel wire.

Order **KP1696-1**



Large Welder Trailer

For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 14 in. (356 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:

K2637-2 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. Also includes a Duo-Hitch™ – a 2 in. (51 mm) Ball/Lunette Eye combination hitch. Overall width 55 in. (1397 mm). Overall length 132 in. (3353 mm).

Order **K2641-2**



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**

PRODUCT SPECIFICATIONS

| Product Name | Product Number | Rated Output Current/Voltage/Duty Cycle | Output Range | Type of Engine | No. of Cylinders | HP & Speed (rpm) | H x W x D inches (mm) | Net Weight lbs. (kg) |
|--------------|----------------|---|--------------------------|--|------------------|------------------|---|----------------------|
| SAE-500® | K1278-11 | 500A DC/40V/60% 400A DC/40V/100% | 80-575A DC 3000 watts | Kubota® V3600-T Turbo Diesel EPA Tier 4i | 4 | 57.8 @ 1800 | 45.8 x 28 x 83 (1164 x 711 x 2109) To Top of Exhaust Tube: 54.3 (1379) | 2048 (928) |

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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THE WELDING EXPERTS®