

# RANGER 405D



*Multi-Process Engine Driven Welder*

*Max output 405 amps / 15 kVA AC power*

**LINCOLN**<sup>®</sup>  
**ELECTRIC**  
THE WELDING EXPERTS

# The Most Versatile Welder on the Market

- ✓ **405 amp DC Multi-Process Diesel Engine Driven Welder**
- ✓ **Designed especially for contractors, hire companies, rural, maintenance / repair, standby power applications**
- ✓ **15 kVA of AC power, 240 & 415 volt**
- ✓ **Insonorised case for low noise**
- ✓ **Designed and Manufactured in Australia for the World Market.**



## **THE TOTAL SOLUTION**

Lincoln's Ranger 405D offers smooth arc welding performance for stick, TIG, flux-cored wire and MIG applications. The Ranger 405D uses a rugged Kubota 3-cylinder liquid-cooled diesel engine to develop the welding and AC power outputs. The large capacity AC generator can be used for standby emergency power when needed for 240 and 415 volt applications to operate a variety of power tools, lighting, etc. Using the latest development in Lincoln stator design the Ranger 405D delivers smoother, more stable aux. power suitable for powering Inverter welders.

## **FEATURES**

### **Constant Voltage / Constant Current**

- Gives you versatility for multi-process welding.

### **Continuous Output Control**

- Allows selection of precise output amperage to suit the application at hand.

### **Arc Force Control**

- Allows flexibility depending on the electrode selection and application. Prevents sticking and shorting of the electrode.

### **Dual Inductance Range**

- For optimum arc characteristics for the selected process.

### **High Power 3 Ph Auxiliary Power & Welding in the One Machine**

- Versatility, replaces the need for two separate machines.

### **Digital volt / amp meters**

- Allows accurate setting of welding procedures.

### **Hourmeter**

- Allows you to easily track your machines maintenance schedule.

### **Compact Design**

- Reduced size and weight means smaller trailers and/or vehicles can be used to transport your Ranger 405D.

### **Single Sided Service**

- For easy access during servicing.

### **Remote Coolant and Oil Drain Facilities**

- Aids in ease of servicing machine.

### **Provision for Fork Lift Truck and Crane Lifting**

- Makes moving the machine easy.

## A CLOSER LOOK



- Field proven Kubota 3-cylinder, liquid-cooled diesel engine. Glow plugs for quick starting. Delivering 18.6kW @ 3000rpm.

- Fuel Gauge and Hourmeter, standard equipment.
- 45 litre fuel capacity for up to 12 hours operation.

- Automatic engine idler for greater fuel economy.

- Engine protection system automatic shutdown for low oil pressure or high coolant temperature, battery not charging indicator lights on front panel.

- Remote output (14 pin MS) plug for easy connection of wire feeders and Lincoln remote control.

- Smoother and more stable AC aux power suitable for use with Inverter power sources. Delivering 15 kVA of AC power from 3 x 240V, 15A and 1 x 415V, 20A receptacles. Housed in a fully enclosed, weather resistant casing. All circuit breaker RCD protected.

- Lockable Control Panel for on site protection.

- Designed and manufactured in Australia for long life, easy maintenance, excellent fuel economy and low noise.

- 2 year worldwide Lincoln warranty. (Engine is warranted separately by the manufacturer).

## ADVANTAGE LINCOLN

- Superior DC multi-purpose welding for stick, TIG, wire welding for Innershield (self-shielded), Outershield (gas-shield) and MIG welding applications.

- 30 to 405 amp DC welding output, 370 amps @ 60% duty cycle.

- Single, full range output control for general purpose stick and CV wire applications.

- Digital volt / amp meters. Also displays reduced OCV in CC mode.

- VRD Device (for additional operator safety) - Industry first - engine driven welder with factory fitted, built-in voltage reduction device (VRD) offers additional protection for the operator. The VRD operates in the CC mode reducing the OCV to a safer < 8 volts, increasing operator safety when welding is performed in environments with increased hazard of electric shock.

- Indicator lights for low oil pressure, high coolant temperature, high welder temperature, welder electric failure, battery not charging.

- Housed in an insonorised case for low noise level. 70dBA @7m.

# Technical Specifications

## Welding Output

Part Number	Current Range	Duty Cycle	Max OCV	Weight	Dimensions L x W x H (mm)
KA1453-7	CC 30-405 amps	370A, 34V @ 60%	CC 62V	530kg	1600 x 720 x 970
	CV up to 405 amps	300A, 32V @ 100%	CV 49V		

## Auxiliary Power

Rated Voltages 1 Phase/3 Phase	Rated Output (Duty Cycle)	Receptacles	Residual Current Device	Wire Feeder Supply
220-240/1/50/60 400-415/3/50/60	15 kVA @ 100% 12 kW @ 0.8pf 100%	3 x 240V, 15A 1 x 415V, 20A (All circuit breaker protected)	4 pole, 25A (30mA trip current)	42V AC @ 10A 115V AC @ 5A

## Recommended Options

Multi-process means you can use any of the major welding process. Lincoln provides a full range of equipment to satisfy your specific welding needs.

### Stick Welding

KIT1600T - Lead Kit  
1 x 10m & 1 x 9m length 50mm<sup>2</sup> cable with twistmate connector fitted.

KIT400 - Accessory Kit  
Cooltong holder, work clamp, headshield, wire brush and chipping hammer.

### MIG Welding

KA1442 - LN214 - 4 Drive Roll Wire Feeder for gas shielded MIG welding.

KA1379-3 - Interconnection Cable  
10m leads for connection of LN214 to Ranger 405D.

K479-7 - Magnum 400FM  
3.6m, MIG welding torch.

801E30LKAR21 Harris Flowmeter for Argon / CO<sup>2</sup> gas shielding.

### Innershield Welding

K449 - LN-25 Wire Feeder  
Portable CC/CV unit, designed for maximum versatility. Ideal for Innershield and gas shielded wires.

K126 - Innershield Gun  
4.6m, 350 amp gun designed for self shielded cored wires.

### TIG Welding

K1783-1 - Magnum PTA26  
200 amp air cooled TIG torch 3.6m.

K963-2 - Hand Amptrol  
Convenient remote adjustment of TIG welding output at the operator's fingertips.

K870 - Foot Amptrol  
Remote foot control of TIG welding output.

K930-2 - TIG Module  
HF arc start, post gas flow and output control module.

### Arc Gouging

KA1207 - B3 Gouging Torch  
600 amp carbon arc gouging torch.

### Accessories

KA1450 - Undercarriage  
Two wheel sprung undercarriage for greater mobility.

K857 - Remote Control  
8.5m for remote adjustment of welding output.

### Spark Arrestor

Meets stringent requirements where operating conditions specify the control of exhaust emissions.

## Engine Specifications

Make / Model	Kubota / D1105		
Type	3 Cyl, liquid-cooled, 4 cycle, diesel		
Displacement	1124cc		
Power (SAE, J1349 net intermittent)	18.6kW @ 3000 rpm		
Electrical System	12V battery & starter, key start & stop, glow plugs, alternator battery charger (internal regulator)		
Governor Type	Centrifugal (flywheel high speed mechanical)		
Lubrication	Forced feed. Full flow oil filter		
Cooling System	Pressurised (0.9 kg/cm <sup>2</sup> ) Radiator. Pump forced circulation, (50% Ethylene Glycol - 50% water) and an overflow reservoir bottle		
Fuel System	Indirect Injection, 2x fuel filters, lift pump, automatic bypass valve for easy bleeding		
Fuel Tank Capacity	45 litres		
Air Cleaner	Heavy duty, 2 stage dry cartridge type		
Muffler	Low noise mounted within machine casing		
Operating Speeds & Sound Levels (approx)	Speed	@7m	@1m
High Idle	3150rpm	69dBA	78dBA
Low Idle	1550rpm	66dBA	68dBA
Full Load	3000rpm	70dBA	78dBA

*In line with company policy of continuing improvement, specifications are subject to change without notice. Packages include listed items.*

### 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 advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice and assumes no responsibility, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change - This information is accurate to the best of our knowledge at the time of printing.

## The Lincoln Electric Company (Australia) Pty. Ltd.



35 Bryant Street, Padstow, NSW 2211

Ph: 1300 728 720 (AUST ONLY)

Ph: +61 2 9772 7222

Asia Pacific Head Office

11 Pandan Crescent, Singapore

Ph: +65 6773 6689

Your local Lincoln distributor is:

### THE LINCOLN ELECTRIC COMPANY

Cleveland, Ohio, U.S.A. - Subsidiary companies established in Australasia, Asia, Canada, Europe, North and South America.