

# OPTIMARC® CV/CC500

## Multi-Process-Reliability-Portability

The digitally controlled OPTIMARC® CV/CC 500 provides constant voltage (CV) / constant current (CC) output for heavy duty welding applications delivering superior welding performance and faster response to changes at the arc. It is an ideally suited for fabricating with MIG and Flux Cored arc welding processes with 1.0mm to 1.6mm diameter solid and flux core welding wires. It is also ideal for use on SMAW with up to 6mm electrodes.

Take advantage of this inverter-based power source to achieve high input power factor ratings for real savings on your electric bills and decrease your welding costs.

Heavy fabrication welding operations will appreciate the broad multi-process performance of the CV/CC500-featuring robust stick, MIG and flux-cored wire welding as well as precision Touch-start TIG performance.

The machine can be operated on generator power which makes it a perfect welder for the field welding jobs using stick and self-shield wires.



## Processes

GMAW, FCAW, GTAW (TIG), SMAW (STICK)

## Description

Output **CV** **CC** **DC** Input **3** **50/60**  
**PHASE** **Hz**

## Suitable Wire Feeders

LWF® -22, LWF® -24 Plus, LWF® -4GS, LN -25PRO

## Available Accessories

*[Requirements will vary based on process to be used]*

Interconnection Cable Assembly (Includes control cable, welding cable and gas hose)  
 Work Cable Assembly (with earth clamp)  
 MIG Welding Torch  
 Gas regulator / flow meter  
 TIG Welding Torch  
 Welding Cable Assembly (with electrode holder)  
 Remote Output Controller

## Lincoln Advantage

- Synergic function, preset voltage is matched with current automatically. Both current and voltage are pre-settable
- Light weight and Portable - easy to move
- Toughness. Test to strict IP 23 Classifications-designed for "Real" industrial conditions
- "Made To Last" PC Boards
  - ▲ "Trayed & Potted" PCB's filled with epoxy double locked and environmentally protected wiring harness connectors
  - ▲ Boards are carefully located to provide maximum protection from the environment
- A five position switch for welding process mode selection enabling the operator to easily select his chosen welding output for his specific welding application
- Full remote and multi-process capability-Stick, Touch-Start TIG, MIG & Flux-cored
- Lincoln Electric's latest generation of worldwide inverter technology for maximum reliability
- Unique low power consumption design with 85% efficiency with a high 0.94 power factor
- Touch-Start TIG for easy to achieve great arc starts minimizing tungsten contamination
- Digital Meters
  - ▲ Provide accurate weld parameter readings which are retained after welding
  - ▲ Allow auto fault diagnostic display
- 5-500 Amp output range for all recommended processes which is low enough for TIG welding on thin sheet metal and robust enough for stick welding with 6 mm electrode
- Sturdy Easy Access Front Panel door protects multi-pin control socket and weld terminals

## TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input power	Rated output Current/Voltage/Duty cycle	Power input at rated output [KVA]	Output range	Dimensions H x W x D [mm]	Net Weight [kg]
OPTIMARC® CV/CC 500	K60128-1	380V-415V[±10%] /3/50 or 60 Hz	<b>SMAW</b> 500A/40V/60% 390A/35.6V/100%	23 @ 60%	20.6-40V 15-500A	540 x 340 x 800	47
			<b>GMAW</b> 500A/39V/60% 390A/33.5V/100%		16-39V 50-500A		
			<b>GTAW</b> 500A/30V/60% 390A/25.6V/100%		10.2-30V 5-500A		

## A CLOSER LOOK



### Front Panel

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 1. GAS SELECTION                     | 11. CRATER VOLTAGE                  |
| 2. WELDING MODE SELECTION            | 12. CRATER CURRENT                  |
| 3. WIRE DIAMETER SELECTION           | 13. HOT START                       |
| 4. ON/OFF POWER SWITCH               | 14. ARC CONTROL                     |
| 5. CONTROL SWITCH                    | 15. LOCAL OUTPUT CONTROL            |
| 6. THERMAL INDICATOR                 | 16. NEGATIVE OUTPUT STUD            |
| 7. 2-STEP AND 4-STEP SELECTION       | 17. POSITIVE OUTPUT STUD            |
| 8. DIGITAL INDICATION VOLTAGE METER  | 18. 6-PIN AMPHENOL CONNECTOR        |
| 9. SYNERGIC                          | 19. 6-PIN LWF WIRE FEEDER CONNECTOR |
| 10. DIGITAL INDICATION CURRENT METER | 20. STATUS INDICATOR                |

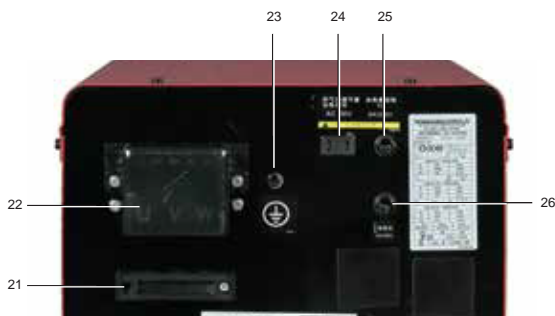
(Auto fault detection appears on 1. Ammeter & 2. Voltmeter)

### \*1 HOT Start

Regulates the starting current at arc initiation for stick or TIG applications. Set it to your preference to help overcome cold starts at the beginning of a weld, restarting AWS E7018 or stainless stick electrodes or to improve starting for tie-in welding on tack welds. Turn it down for thin material or root welding on pipe. Turn it up for thick material or general construction welding.

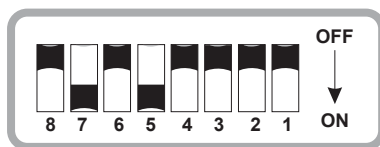
### \*2 Variable Arc Control

Adds or reduces inductance (arc energy), particularly for short-circuit transfer mode. Arc Control increases the size and frequency of arc droplet transfer. Set it to your preference to help control spatter levels or electrode stubbing as well as to improve weld toe wetting or to obtain a uniform bead shape. Turn it down to obtain a softer arc or turn it up for a stiffer, more digging arc. For MIG, you can turn it up to aid with welding on open gaps, out-of-position work or for use with 100% CO<sub>2</sub> or 75% Ar / 25% CO<sub>2</sub>.



### Rear Panel

21. INPUT CABLE HOLDING BRACKET
22. INPUT BOX
23. GROUND LEAD CONNECTION
24. AUX. VOLTAGE RECEPTACLE
25. FUSE AND FUSE HOLDER
26. FUSE AND FUSE HOLDER



DIP switches default setting position ex-work

"DIP" switches located on the internal PCB allow you to program the machine to perform as you want!

- ① ON = PREFLOW
- ② ON = LONG CABLE WELD MODE (Above 20 meters)
- ③ ON = CRATER REPEAT MODE
- ④ ON = TEST MODE
- ⑤ ON = SYNERGIC
- ⑥ ON = FAST RUN-IN
- ⑦ ON = 24V FEEDER APPLICATION
- ⑧ FEEDER SPEED CALIBRATION

## LWF® Wire Feeder

LWF® Wire Feeder	Order No.	Specifaciton	
	K60084-2	LWF®-22	Two feed rolls, insulated hub Asia Connector
	K60086-2	LWF®-24 Plus	Four feed rolls, insulated hub Asia Connector
	K60120-1	LWF®-4GS	Four feed rolls, insulated hub Euro Connector
Euro gun adaptor	KP61108-2	Connection with Euro plug and Asia feeder	



LWF®-22



LWF®-24 Plus



Euro gun adaptor



LWF®-4GS

## INTERCONNECTION CABLES (includes welding cable, control cable and gas hose/water hose)

Product No.	Description	Product No.	Description	Product No.	Description
K60010-50-2M	Air cooled, 2M, 50mm <sup>2</sup>	K60010-70-2M	Air cooled, 2M, 70mm <sup>2</sup>	K69047-70-2M	Water cooled, 2M, 70mm <sup>2</sup>
K60010-50-5M	Air cooled, 5M, 50mm <sup>2</sup>	K60010-70-5M	Air cooled, 5M, 70mm <sup>2</sup>	K69047-70-5M	Water cooled, 5M, 70mm <sup>2</sup>
K60010-50-10M	Air cooled, 10M, 50mm <sup>2</sup>	K60010-70-10M	Air cooled, 10M, 70mm <sup>2</sup>	K69047-70-10M	Water cooled, 10M, 70mm <sup>2</sup>
K60010-50-15M	Air cooled, 15M, 50mm <sup>2</sup>	K60010-70-15M	Air cooled, 15M, 70mm <sup>2</sup>	K69047-70-15M	Water cooled, 15M, 70mm <sup>2</sup>
K60010-50-20M	Air cooled, 20M, 50mm <sup>2</sup>	K60010-70-20M	Air cooled, 20M, 70mm <sup>2</sup>	K69047-70-20M	Water cooled, 20M, 70mm <sup>2</sup>
K60010-50-30M	Air cooled, 30M, 50mm <sup>2</sup>	K60010-70-30M	Air cooled, 30M, 70mm <sup>2</sup>	K69047-70-30M	Water cooled, 30M, 70mm <sup>2</sup>
K60010-50-40M	Air cooled, 40M, 50mm <sup>2</sup>	K60010-70-40M	Air cooled, 40M, 70mm <sup>2</sup>	K69047-70-40M	Water cooled, 40M, 70mm <sup>2</sup>
KP61156	Control Cable Socket				

## LN-25 PRO WIRE FEEDERS

Product Name	Product Number	Input Power	Power Control
LN-25 PRO Standard	K2613-1	15-110VDC	Across the Arc
LN-25 PRO Extra Torque	K2613-2	15-110VDC	Across the Arc
LN-25 PRO Dual Power	K2614-1	15110VDC / 24-42VAC	Control Cable or Across the Arc
Remote Controller, 8M	K60030-8M		
Remote Controller, 15M	K60030-15M		
Remote Controller, 30M	K60030-30M		
Welding Cable Assembly, 50mmx10M	K60031-50-10M		
Welding Cable Assembly, 50mmx30M	K60031-50-30M		



LN - 25 PRO



Remote Controller

## MIG WELDING TORCH

Product Name	Product No.	Specification
	LG351C air cooled MIG Welding Torch	K60111-3
K60111-4		350A@60% CO <sub>2</sub> , 300A@60% Ar+CO <sub>2</sub> , 4M, Asia Adaptor
K60111-5		350A@60% CO <sub>2</sub> , 300A@60% Ar+CO <sub>2</sub> , 5M, Asia Adaptor
K60111-3E		350A@60% CO <sub>2</sub> , 300A@60% Ar+CO <sub>2</sub> , 3M, Euro Adaptor
K60111-4E		350A@60% CO <sub>2</sub> , 300A@60% Ar+CO <sub>2</sub> , 4M, Euro Adaptor
K60111-5E		350A@60% CO <sub>2</sub> , 300A@60% Ar+CO <sub>2</sub> , 5M, Euro Adaptor
LG501C air cooled MIG Welding Torch	K60110-3	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 3M, Asia Adaptor
	K60110-4	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 4M, Asia Adaptor
	K60110-5	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 5M, Asia Adaptor
	K60110-3E	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 3M, Euro Adaptor
	K60110-4E	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 4M, Euro Adaptor
SN 510 Water cooled MIG Welding Torch	K60110-5E	500A@60% CO <sub>2</sub> , 420A@60% Ar+CO <sub>2</sub> , 5M, Euro Adaptor
	K60163-3E	500A@60% CO <sub>2</sub> , 450A@60% Ar+CO <sub>2</sub> , 3M, Euro Adaptor

## RECOMMENDED OPTIONS



### STICK OPTIONS:

Electrode cable with holder

For stick welding, includes electrode cable with lug, and electrode holder, 500 Amp capacity

Order: K60057-70-3M 70mm<sup>2</sup> / 3M  
 K60057-70-5M 70mm<sup>2</sup> / 5M  
 K60057-70-10M 70mm<sup>2</sup> / 10M



### TIG OPTIONS:

TIG Torch

WP-26V Two Cable Torch

Air-Cooled 200Amp, 2pcs, 12.5 or 25 ft, 60% duty cycle

Order: K60056-1 12.5ft  
 K60056-2 25ft



### Remote Output Control

Consists of a control box with choice of two cable length. Permits remote adjustment of output

Order: K857 25ft  
 K857-1 100ft



### Work Cable With Clamp

Used to connect work piece

Order No:  
 K60027-50-4M Work cable with clamp, 50mm<sup>2</sup>, 4M  
 K60027-70-4M Work cable with clamp, 70mm<sup>2</sup>, 4M



### CO<sub>2</sub>, Gas Regulator/Flow Meter

(Inlet G5/8"-14, Outlet M16X1.5/Ø8)

Includes CO<sub>2</sub> flow meter and CO<sub>2</sub> heater

Order No.:

K60012-4-220



### Argon regulator/Gas flowmeter

(Inlet G5/8"-14, Outlet M16X1.5/Ø8)

Includes cylinder pressure gauge, argon flow meter

Order no:

K60012-5



### Water Cooler & Cart

Water Cooler (Coming soon)

Order Number: K60116-1



### Cart

Order Number: K60115-1

### Swivel

Order Number: 7FL15710-1



### Tools Box

Order Number: K60117-1

### 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 liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customers 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 not been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

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