

DC-400



For Multi-Process Welding

DC-400



DC-400 shown with optional Multi-Process Switch

The DC-400 is a multiprocess DC arc welding power source that produces outstanding arc characteristics on both constant voltage and constant current processes. This provides great welding versatility in a single power source.

The DC-400 is designed for GMAW (MIG), FCAW, and submerged arc welding processes within the capacity of the machine, plus the capability of stick and DC TIG welding and air carbon arc gouging up to 5/16" (8mm) diameter. It produces outstanding welding performance with a single range full output control potentiometer.

The DC-400 can be used with the Lincoln LN-7, LN-7 GMA, LN-742, LN-8, LN-9, LN-9 GMA, LN-10, DH-10, LN-23P and LN-25 semiautomatic wire feeders, the NA-3, NA-5 and NA-5R automatic wire feeders, and the LT-7 tractor.

Factory or field installed Multi-Process Switch option for versatility in your

welding applications is available. This 3-position switch allows quick and easy change from electrode positive or negative semiautomatic/automatic wire feed welding to stick or air carbon arc gouging. Order appropriate model and product number.

Factory installed Diode Option is required to utilize the cold starting and sensing features of the NA-3, NA-5, NA-5R or LT-7 automatic wire feeders. Order appropriate model and product number.

ADVANTAGE LINCOLN

- Solid state circuitry provides extra long life for repetitive welding applications.
- Full range output voltage control for easy operation and precise output control.
- Standard ammeter/voltmeter.

- Mode switch used to select the desired output characteristics for the process being used.
- Arc force control to adjust short circuit current for a soft arc or a forceful driving arc in the CC (Stick/TIG) mode.
- Arc control adjustment changes pinch effect of the arc to control spatter, fluidity, and bead shape in the FCAW/GMAW mode.
- Line voltage compensation for maintaining weld consistency, even with line voltage changes of $\pm 10\%$.
- Low profile case allows installation of the DC-400 under a workbench and for stacking up to 3 machines to conserve floor space.
- Removable side panels for easy access to internal parts.
- Fan cooled with electronic and thermostatic protection from current overload and excessive temperatures.
- Windings and rectifiers protected against moisture and corrosive environments.
- 14 pin MS-style cable connection and terminal strip access for remote control and wire feeder connections and output studs for weld cables.
- 42V and 115V wire feeder auxiliary power, protected by circuit breakers.
- 220V AC auxiliary power for water cooler on K1309 models.
- Power on/off switch with pilot light.
- 3 year warranty on parts and labor.
- Manufactured under a quality system certified to ISO 9002 requirements.

TECHNICAL SPECIFICATIONS

Product Name	Rated DC Output ⁽¹⁾ Amps/Volts/Duty Cycle	Output Range	Weight (net)	Dimensions HxWxD ⁽²⁾
DC-400	400A / 36V / 100% 450A / 38V / 60% 500A / 40V / 50%	Volts: 12-42 Amps: 60-500	473 lbs. (215 kg)	27.5 x 22.1 x 33.1 in. (698 x 561 x 840 mm)

⁽¹⁾ NEMA Class I Rated Output / Based on a 10 min. period.

⁽²⁾ Height does not include lift bail.

ORDERING INFORMATION

Standard Voltage	Input Current at Rated DC Output	Product Number		
		DC-400	DC-400 w/ Switch	DC-400 w/ Diode
230/460/3/60	78/39	K1308-11	K1308-12	K1308-19
220/380/440/3/50/60	81/47/40	K1309-20	K1309-21	—

SYSTEM SELECTION

Typical MIG welding systems.

DC-400 / LN-7 GMA

Our most popular MIG and flux-cored welding system!

DC-400 power sourceK1308-11
 LN-7 GMA (Two Roll) wire feeder K440-2
 Input Cable – 10 ft.K594-10
 .045 Drive RollKP653-052S
 Universal StandK1524-1
 Swivel PlatformK1557-1
 Magnum 400 Gun & Cable asbly .K471-2
 Gun Connector KitK466-1

DC-400 / LN-742

Best for applications where more process control is required – for arc starting, welding and crater control!

DC-400 power sourceK1308-11
 LN-742 (Two Roll) wire feeder . .K617-2
 Input Cable – 10 ftK492-10
 .045 Drive RollKP653-052S
 Universal StandK1524-1
 Swivel PlatformK1557-1
 Magnum 400 Gun & Cable asbly .K471-2
 Gun Connector KitK466-1

DC-400 / LN-10

Where premium welding performance is demanded – this system delivers!

DC-400 power sourceK1308-1
 LN-10 wire feederK1559-1
 Input Cable – 10 ft.K1502-10
 .045 Drive RollKP1505-045S
 Swivel PlatformK1557-1
 Magnum 400 Gun & Cable asbly . .K471-21⁽¹⁾

DC-400 / DH-10

For maximum welding flexibility – select the DH-10 dual feeder. Weld with two different types and sizes of wire⁽³⁾ – with two different welding procedures.

DC-400 power sourceK1308-11
 DH-10 wire feederK1499-1
 Input Cable – 10 ft.K1502-10
 .045 Drive RollKP1505-045S⁽²⁾
 Magnum 400 Gun & Cable asbly . .K471-21⁽¹⁾⁽²⁾

(1) Fully assembled, no gun connector required.

(2) Two required.

(3) Both feeders must have the same polarity.

OPTIONS AVAILABLE

Multi-Process Switch

Recommended when using the DC-400 for both semi/auto welding and stick/air carbon arc welding. **Order K804-1.**



Remote Output Control

For remote adjustment of output voltage. Consists of a control box with 25 or 100 ft. (7.6 or 30m) of four conductor cable and 6 pin MS-type connector. Requires K864 Remote Control Adapter.

For 25 ft. (7.6m), **Order K857**
For 100 ft. (30m), **Order K857-1.**

Undercarriage

A mounting frame and three wheels for hand moving. **Order K817P.**

Undercarriage

Platform undercarriage with mountings for two gas cylinders at rear of welder. **Order K841.**

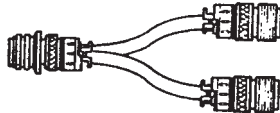
Remote Output Control

For remote adjustment of output. Consists of a control box with 28 ft. (8.5m) of four conductor cable for terminal strip connection. **Order K775**



Remote Control Adapter

Y connection adapter for connecting K857, K963 or K870 (6-pin plug connection) and wire feeder input cable (14-pin plug connection) to DC-400 14 pin receptacle. **Order K864.**



Capacitor Discharge Option

Rapidly discharges output capacitors to prevent possible flash if electrode touches work just after wire feeder gun trigger is released. **Order K828-1.**

TIG Module

Supplies high frequency for superior starting, contactor control, remote control capability and a gas valve for DC TIG welding. **Order K930-2.** A 2 ft. (0.6m) control cable is required to connect the 9-pin socket on the TIG Module to the terminal strip at the DC-400. **Order K936-2.**



Docking Kit

Provides a means to "dock" the TIG Module on top of a flat-roofed power source, or any other flat surface measuring at least 10 x 15 in. (254 x 381mm). It includes a latch and provisions for a user-supplied padlock to lock the TIG Module in place. **Order K939-1.**

Water Valve

For use with TIG Module. Shuts off water flow when the arc is extinguished when using Magnum® water-cooled TIG torches. **Order K844-1.**

OPTIONS **AVAILABLE (CONT.)**

Amptrol™

Provides 25 ft. (7.6m) of remote current control for TIG welding. (6-pin MS-type plug connection). Requires either K864 or K843 adapter.

Hand operated Amptrol,
Order K963-1 for PTA-9, PTA-17
and PTW-20 torches, or Order
K963-2 for PTA-26 and PTW-18
torches.



Foot Operated Amptrol, Order K870.



Amptrol Adapter Kit

Adapts Amptrol's 6-pin MS-type plug connection to DC-400 terminal strip.

Order K843.

Amptrol Adapter ("Y" Cable)

Allows an Amptrol to operate a Hi-Freq™ unit while remotely controlling the output current of a Lincoln power source. Consists of a 6-pin MS-type receptacle which splits into 6-pin and 5-pin MS-type plugs which connect to power source and Hi-Freq respectively. Requires K864 adapter.

Order K915-1.

Adjustable Gas Regulator

Adjustable flow gas regulator for MIG, TIG or FCAW processes.

Order K586-1.



TIG Control Cable Extension

Allows the TIG Module to be operated at up to 22.5-45 ft. (6.9-13.7m) from DC-400. Connects between the 2 ft. (0.6m) control cable and the TIG Module.

22.5 ft. Order K937-22.5.

45 ft. Order K937-45.

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 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.

DC-400 ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
DC-400 (230/460/3/60)	K1308-11		
DC-400 (w/Multi-Process Switch)	K1308-12		
DC-400 (w/Diode)	K1308-19		
DC-400 (200/380/440/3/50/60)	K1309-20		
DC-400 (w/Multi-Process Switch)	K1309-21		
Stick Welding			
Accessory Kit	K702		
TIG Welding			
Pro-Torch™ TIG Torches	See Literature E12.150		
TIG Module	K930-2		
Amptrol™ - Hand Operated			
for: PTA-9, PTA-17, PTW-20, TIG Torches	K963-1		
for: PTA-26, PTW-18, TIG Torches	K963-2		
Amptrol™ - Foot Operated	K870		
Remote Control Adapter for Amptrol	K864		
Amptrol Adapter Kit (for terminal strips)	K843		
Amptrol Adapter ("Y" cable)	K915-1		
Water Valve	K844-1		
TIG Control Cable Extension			
for 22.5 ft.	K937-22.5		
for 45 ft.	K937-45		
Docking Kit	K939-1		
For MIG or Flux-Cored Welding			
LN-7 GMA Industrial Wire Feeder	See Literature E8.10		
LN-10 Advanced 4 Drive Roll Feeder	See Literature E8.200		
DH-10 Dual Head Version of LN-10	See Literature E8.200		
Cobramatic Deluxe Aluminum Feeder	See Literature E8.300		
LN-25 Portable, Field Wire Feeder	See Literature E8.100		
MIG and Flux-Cored Guns	See Literature E12.10 and E12.100		
Optional Features			
Adjustable Gas Regulator	K586-1		
Remote Output Control	K775		
Remote Output Control (use with K864):			
for 25 ft. (7.6m)	K857		
for 100 ft. (30m)	K857-1		
Multi-Process Switch	K804-1		
Capacitor Discharge Option	K828-1		
Undercarriage			
for hand moving	K817P		
for moving with two gas cylinders	K841		



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