

Idealarc® DC-655

Processes

Stick, TIG, MIG, Flux-Cored,
Submerged Arc, Gouging

Product Number

K1609-2 230/460/575V

K1610-1 230/400V CE

See back for complete specs

Input Power (Voltage/Phase/Hertz)

K1609-2: 230/460/575V/3/60

K1610-1: 230/400V/3/50/60

Input Current at Rated Output (100% Duty Cycle)

230V: 122A

400V: 70A

460V: 61A

575V: 49A

Rated Output

650A/44V/100%

815A/44V/60%

Output Range

CV/CC: 50A/13V - 815A/44V

Max. OCV: 46V (CV), 68V (CC)

Weight/Dimensions (H x W x D)

720 lbs. (327 kg)

27.5 x 22.2 x 38.0 in.

(699 x 564 x 965 mm)

Industrial DC Multi-Process Welders

Rugged construction, simple controls and a 100% duty cycle output rating make these machines a sound investment for heavy duty shop applications. Add the outstanding traditional SCR rectifier arc action delivering high quality, attractive welds and your operators will agree – it's hard to go wrong with an Idealarc® DC-655.

FEATURES

- ▶ **CC arc force control knob** with built-in "hot start".
- ▶ **"Idle shutdown mode"** automatically shuts machine off when not in use to minimize power consumption.
- ▶ **Fan-As-Needed™ (F.A.N.™)** solid state thermally controlled cooling fan operates only when required. Minimizes power consumption, operating noise and dust intake.
- ▶ **115V duplex receptacle** provides 20 amps of auxiliary power (no receptacle on CE model).
- ▶ **Separate output studs** let you choose low or high inductance. Select high for most stick or wire processes. Select low for Innershield® NR-211-MP, NR-212 and NR-203.
- ▶ **Remote and mode switches** are behind front latched panel for added protection.
- ▶ **Low profile case** allows stacking machines up to three high to conserve floor space.
- ▶ **Seven-year warranty** on power rectifier.



Shown: K1609-2

APPLICATIONS

- ▶ Metal Fabrication
- ▶ Heavy Industrial
- ▶ Construction

INPUT



OUTPUT



⁽¹⁾ CE model only.



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



RECOMMENDED ACCESSORIES

GENERAL OPTIONS



Digital Meter Kit
Accurately displays welding amps and volts.
Order K1482-1



Air Filter Kit
Mounts on the front of the machine and uses cleanable, all metal air filters. Not compatible with Dual Process Switch.
Order K1486-1



Dual Process Switch
Mounts on front of machine and provides polarity change or electrical isolation. Great for arc gouging applications and where two separate feeders require different output polarity or inductance settings. Not compatible with Air Filter Kit.
Order K1528-1



Paralleling Kit
Permits paralleling of two power sources.
Order K1611-1



Undercarriage
Platform undercarriage with mountings for two gas cylinders at rear of welder.
Order K842



All-Terrain Undercarriage
For moving by hand at construction sites. Maneuvers over obstacles. Heavy-duty puncture-resistant tires.
Order K1737-1



Welding Fume Extractors
Lincoln offers a wide variety of welding fume extraction environmental system solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.
Request Publication E13.40



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, cover plate, work clamp and electrode holder. 400 amp capacity.
Order K704



Remote Output Control
Provides 25 ft. or 100 ft. (7.6 m or 30 m) of remote output control (6-pin plug connection). Requires K864 Control Cable Adapter.
Order K857 25 ft. (7.6 m)
Order K857-1 100 ft. (30 m)



Remote Control Adapter
Y connection adapter for connecting K857 Remote Output Control (6-pin plug connection) and wire feeder input cable (14-pin plug connection) to power source 14-pin receptacle.
Order K864



TIG Module
Supplies high frequency for superior starting, contactor control, remote control capability and a gas valve for TIG welding.
Order K930-2



Control Cable
Connects TIG Module to power source.
Order K936-1 for 9-pin to 14-pin



Adapter Cable
Male 14-pin control cable to terminal strip of power source.
Order K1798



Control Cable Extension
Allows the TIG Module to be operated at distances up to 200 ft. (61 m) from the power source. Available in 45 ft. (13.7 m) sections.
Order K937-45



Docking Kit
Allows you 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 381 mm). Includes a latch and provisions for a user-supplied padlock to lock the TIG Module in place.
Order K939-1



Foot Amptrol™
Provides 25 ft. (7.6 m) of remote output control for TIG welding. (6-pin plug connection).
Order K870



Amptrol™ Adapter Kit
Adapts Amptrol's 6-pin MS-type plug connection to terminal strip on power source.
Order K843



Deluxe Adjustable Gas Regulator & Hose Kit
Accommodates CO₂, Argon or Argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose.
Order K586-1

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® DC-655	K1609-2	230/460/575/3/60	650A/44V/100%	122/61/49A	50-815A	27.5 x 22.2 x 38.0	720
Idealarc® DC-655 CE	K1610-1	230/400/3/50/60	815A/44V/60%	122/70A	13-44V Max. OCV: 46V (CV) 68V (CC)	(699 x 564 x 965)	(327)

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.

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. Please refer to www.lincolnelectric.com for any updated information.