

Lincoln Electric®

Flextec™ 650**Processes**Stick, DC TIG, MIG, Flux-Cored,
Arc Gouging**Product Number**

K3278-1

Input Voltage

380/415-460/575/3/50/60

Input Current at Rated Output

3 Ph / 100% Duty Cycle: 57/52-47/38A

Rated Output

650A/44V/100%

Output Range

10 - 815 Amps

Weight/Dimensions (H x W x D)

74.8 Kg

555 x 409 x 745 mm

FLEXible TEChnology™

This multi-process welder delivers up to 815 amps of welding power for a variety of applications, including construction and fabrication. It features an IP23 rating for outdoor operation and storage, and the latest inverter technology will save you real dollars on the utility costs associated with your welding operations.

FEATURES

- ▶ **Flexible Multi-Process Capability** – Including stick, Touch Start TIG® (DC), MIG, flux-cored, CV submerged arc welding and carbon arc gouging with up to a 12.7 mm carbon.
- ▶ **The Future is Now™** – You no longer have to pay a price premium to gain the advantages of inverter technology over conventional welders.
 - Faster arc response means smoother arc action and more consistent bead appearance.
 - Low power consumption results in daily operational cost savings.
 - Enhanced portability – typically 50% less weight, size and footprint.
- ▶ **Simple Operation** – The user interface is designed with the operator in mind. Set up is easy for even the most novice welder.
- ▶ **Bright Digital Amp and Volt Meters** – Easy to monitor, even in sunlight, and presettable for precise procedure control.
- ▶ **Compact, Durable Case** – Tough IP23 enclosure ensures the Flextec™ 650 will withstand extreme field environments.
- ▶ **Fully Adjustable Hot Start** – Turn it to zero for thin material or dial it up to get the extra starting amperage you need for thick, rusty or dirty material.
- ▶ **Variable Arc Control** – In stick mode, vary the arc force to obtain the “soft” or “crisp” arc you want as conditions require. In CV modes, vary the pinch or inductance to control spatter, fluidity and bead appearance.

**APPLICATIONS**

- ▶ Construction
- ▶ Fabrication
- ▶ Automotive
- ▶ Production
- ▶ Education



Shown K3278-1

WHAT'S INCLUDED**K3278-1 Base Unit Includes:**

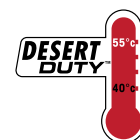
- ▶ Power Source
- ▶ Input Filter Assy

RECOMMENDED WIRE FEEDERS

- ▶ LF-72, LF-74
- ▶ LN-10, DH-10
- ▶ Activ8™
- ▶ LN-25 PRO, LN-25 PRO Dual Power
- ▶ LN-7, LN-8, LN-9, NA Series, LT-7

FEATURES CONT'D

- ▶ **Full-Featured Remote Control Capability** – Use a foot pedal or hand control to remotely vary output up to 30.5 m away.
- ▶ **Desert Duty® Rated** – Welding outputs are rated for extreme temperature operation up to 55°C.
- ▶ **C-Tick Compliance** – Specialised input filter assembly (Electrical installation required)
- ▶ **Built in VRD** – Designed to fail- to- safe factory fitted. VRD offers additional protection for the operator. The VRD operates in CC Mode.

INPUT**OUTPUT**

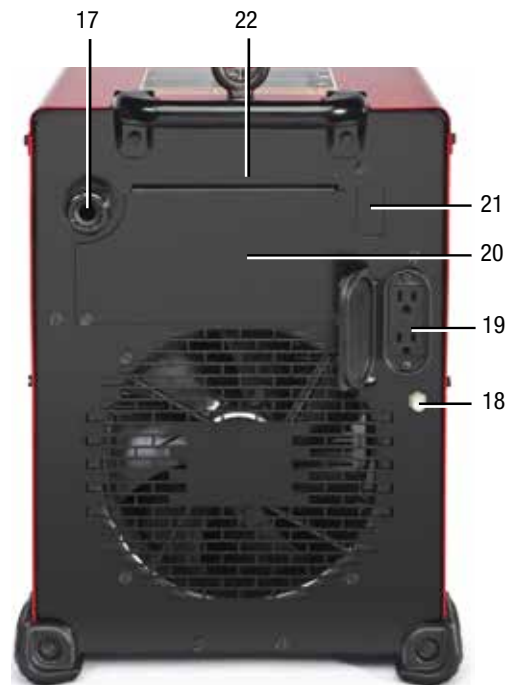
Flextec™ 650

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/ Voltage/ Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D mm	Net Weight kg
Flextec™ 650	K3278-1	380/415-460/575/3/50/60	650A/44V/100% 750A/44V/60% Desert Duty™ Rated: 600A/44V/100%/55°C 650A/44V/50%/55°C 750A/44V/30%/55°C	57/52-47/38A 61/55-50/40A	10-815 Amps	554 x 409 x 584	74.8

KEY CONTROLS

1. Digital Amp Meter
2. Output Control
3. Welding Process Mode
4. Hot Start Control
5. Local/Remote Output Switch
6. Weld Output Terminal
7. Digital Volt Meter
8. Reversible Handles (Patent Pending)
9. Power On/Off
10. Arc Control
11. Weld Terminal On/Off Switch
12. 14 pin Feeder Control Connection
13. 6 pin Remote Control Connection
14. Wire Feeder Input Voltage Switch
15. Feeder Meter Polarity Switch
16. Circuit Breakers for Wire Feeder Connection
17. Input Power
18. Circuit Breaker for 115V Auxiliary Power Receptacle
19. 115V Auxiliary Power Receptacle
20. Access Panel for Input Power Reconnect
21. Optional GFCI protection knockout
22. CE Filter (not shown)



QUALITY AND RELIABILITY

Tough PC Boards - Encapsulated components and protective trays provide best-in-class environmental protection from dust and humidity.

Fan-As-Needed™ - Reduces power consumption, dirt intake and damaging thermal cycling.

Protected Electrical Connections - Help ensure long-term reliability in unforgiving environments.

Temperature and Dirt Resistant - Double insulation and epoxy on all primary components.

Repeated Life and Reliability Testing - Salt, rain, humidity, drop, jerk, vibration, impact and others.

IP23 Rated - While the fan is operating, the machine is subjected to a rain shower that directs water 60 degrees from vertical. While the machine is still wet, it must withstand a high voltage dielectric test and an insulation resistance test.



Among other tests, Flextec™ models are subjected to extreme temperature environmental testing, including heat, cold, humidity, rain and dust.

ENERGY SAVINGS

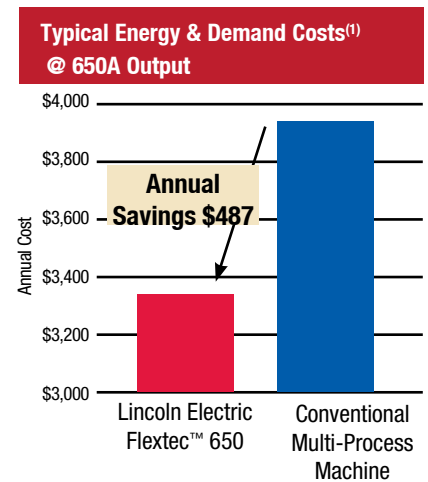
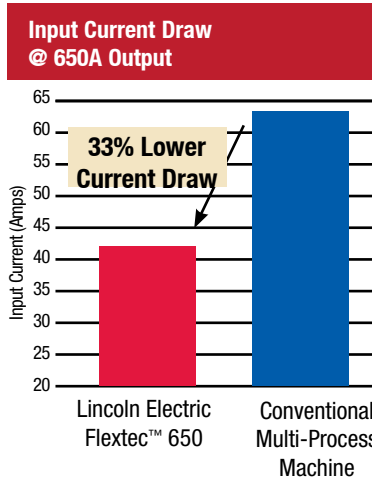
The inverter technology of the Flextec™ 650 yields a higher efficiency and power factor compared to similar conventional power sources.

Flextec™ Energy Savings		
	Lincoln Electric Flextec™ 650	Conventional Multi-Process Machine
Efficiency @ 650 Amps	90%	83%
Power Factor @ 650 Amps	.88	.72

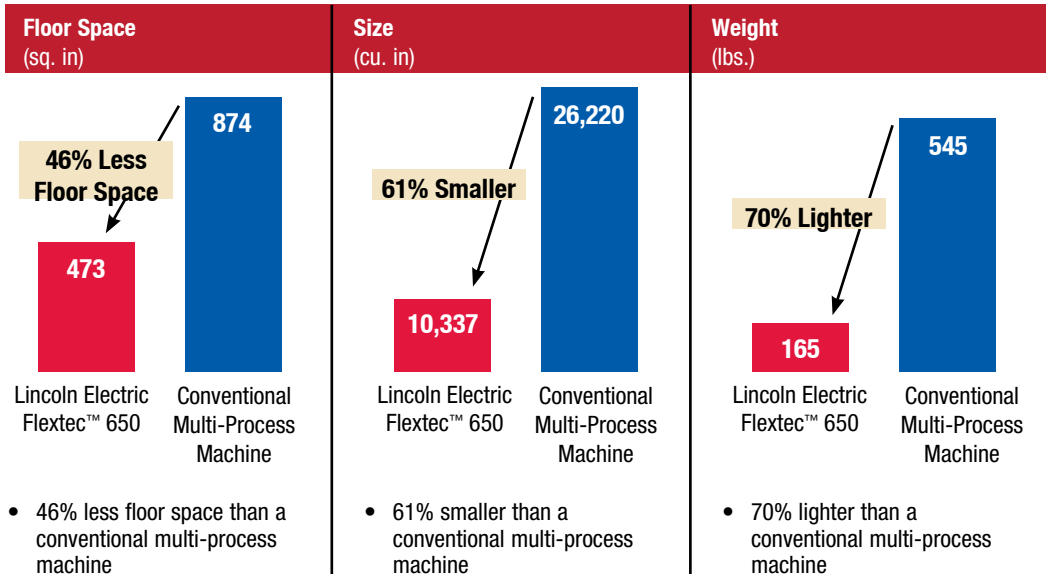


The Result is:

- Lower input current at the same output saves on input cable and fuse costs.
- Lower power consumption results in annual operating cost savings.



(1) Based on: Two shifts, 8 hrs/day 5 days/week, 50 weeks/yr, 30% Operating Factor. Electric Rates of \$0.07/KWH and a demand charge of \$8/KW.



Competitive dimension data was based on published literature available at the time of printing. Actual input power and input current draw product testing was completed by Lincoln Electric personnel in Cleveland, Ohio in March, 2010. Testing results were complete and accurate at the time of posting on www.lincolnelectric.com in April, 2010.

Flextec™ 650

RECOMMENDED ACCESSORIES

GENERAL OPTIONS



Inverter and Wire Feeder Cart
Rear-wheeled cart with front casters and gas bottle platform. Convenient handles allow for easy cable storage. Small footprint fits through 762 mm door. Not intended for use with double head wire feeders.
Order K3059-2

Lincoln Flow meter
Ar/CO₂ Dial
Order LE250- RG002

Lincoln Flow meter
Ar/CO₂ Bobbin
Order LE250- RG003



Arc Tracker™
The Arc Tracker™ monitors information regarding your welding arc by connecting it between any DC welding power source and the work clamp.
Order K3019-1



Weld Fume Control Solutions
Lincoln Electric offers a wide variety of weld fume control solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.
Request Publication E13.40

STICK OPTIONS

Welding Leads

Electrode lead 50mm²
10m c/w twist-lock holder
Order KA1452-8

Work return lead 50mm²
9m c/w work clamp
Order KA1452-7

Pigtail 50mm² c/w lug & female mechconnector
Order KA1452-1



Electrode lead 70mm²
10m c/w twist-lock holder
Order KA1452-10

Work return lead 70mm²
9m c/w work clamp
Order KA1452-9

Extension lead 70mm² 10m c/w male & female mechconnector
Order KA1452-4 (2 required)

Pigtail 70mm² c/w lug & female mechconnector
Order KA1452-12 (2 required)

Extension Lead 70mm² 20m c/w male and female mechconnector
Order KA1452-13 (2 required)

Remote Output Control
Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.
Order K857 for 7.6 m
Order K857-1 for 30 m



TIG OPTIONS

Powercraft™ PC26G TIG Torch
Air-cooled 200 amp torch (2 piece) equipped with valve for gas flow control. 7.6m length.
Order PC 26FS-8I-2



Hand Amptrol™
Provides 7.6 m of remote current control for TIG welding. (6-pin plug connection)
Order K963-3



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



Arc Start Switch
May be used in place of the Foot or Hand Amptrol™. Comes with a 7.6 m cable. Attaches to the TIG torch for convenient finger control to start and stop the weld cycle at the current set on the machine.
Order K814

WIRE FEEDER OPTIONS



Multi-Process Switch
Easily switch between CC and CV processes.
Order K3091-1



LF-72 Wire Feeder
A heavy-duty, semi-automatic wire feeder designed for CV MIG and FCAW welding.
Order K2327-7



LN™-25 PRO Wire Feeder
Portable CC/CV unit for flux-cored and MIG welding. Includes Gas Solenoid & Internal Contactor.
Order K2613-5A1 includes bonus K126 PRO gun
K2613-5A2 includes bonus Magnum® 400 gun



K126PRO Innershield® Gun (for LN™-25 PRO)
For self-shielded wire with 4.5m cable. For 1.7 - 2.4mm wire.
Order K126-12

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Your Lincoln Electric Distributor:

CUSTOMER ASSISTANCE POLICY

Lincoln Electric® business 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 to the extent permitted by law assumes no liability, 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. The provision of information or advice does not create, expand or alter this warranty.

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 this type of fabrication methods and service requirements.

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

LINCOLN®
ELECTRIC
THE WELDING EXPERTS®