

# Flextec<sup>®</sup> 450

## Processes

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

## Product Number

K2882-2 Flextec 450 w/VRD<sup>®</sup>

See back for complete specs

## Input Voltage

380/460/575/3/50/60

## Input Current at Rated Output

3 Ph / 60% Duty Cycle: 37/27/22A

## Rated Output

450A/38V/60%

## Output Range

10 - 500 Amps

## Weight/Dimensions (H x W x D)

125 lbs. (56.8 Kg)

18.8 x 14 x 26.5 in.

(477 x 356 x 673 mm)

## FLEXible TECHNOLOGY<sup>SM</sup>

This multi-process welder delivers up to 500 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<sup>®</sup> (DC), MIG, flux-cored welding and carbon arc gouging with up to a 3/8 in. (9.5 mm) carbon.
- ▶ **The Future is Now<sup>SM</sup>** – 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.
- ▶ **VRD (Voltage Reduction Device<sup>™</sup>)** reduces OCV (open circuit voltage) when not welding for added safety.
- ▶ **Bright Digital Amp and Volt Meters** – Easy to monitor, even in sunlight, and presettable for precise procedure control.
- ▶ **Compact, Durable Case** – Tough IP23 enclosure rating ensures the Flextec 450 will withstand extreme field environments.
- ▶ **Selectable Hot Start** – Turn it off for thin material or flip it on to get the extra starting amperage you need for thick, rusty or dirty material.

## APPLICATIONS

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



Shown K2882-2

## WHAT'S INCLUDED

**K2882-2 Base Unit Includes:**

- ▶ Power Source

## RECOMMENDED WIRE FEEDERS

- ▶ LF-72, LF-74
- ▶ LN-10, DH-10
- ▶ LN-15
- ▶ LN-25 PRO, LN-25 PRO Dual Power
- ▶ LN-25 Pipe
- ▶ 115 volt input wire feeders are not supported.

## FEATURES CONT'D

- ▶ **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.
- ▶ **Full-Featured Remote Control Capability** – Use a foot pedal or hand control to remotely vary output up to 100 ft. (30.5 m) away.
- ▶ **Desert Duty<sup>®</sup> Rated** – Welding outputs are rated for extreme temperature operation up to 55°C.

## INPUT



## OUTPUT

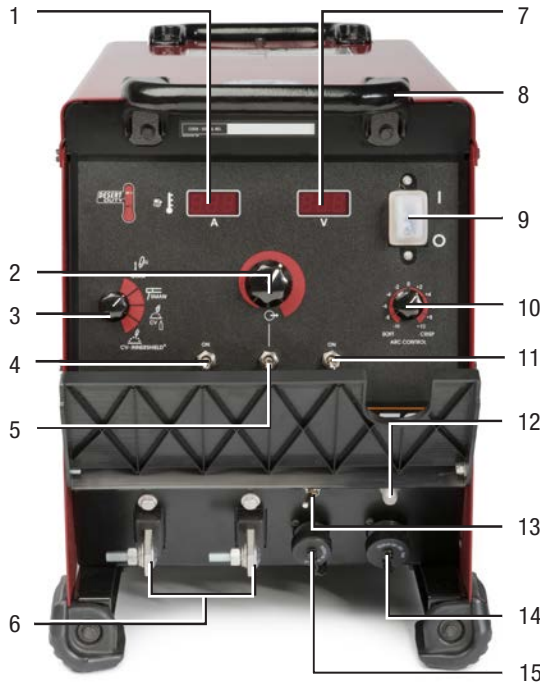


Two Year Extended Warranty Available in the U.S.A. and Canada



## KEY CONTROLS

1. Digital Amp Meter
2. Output Control
3. Welding Process Mode
4. Hot Start Control
5. Local/Remote
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 Control
12. Circuit Breaker
13. Feeder Meter Polarity Switch
14. 14 pin Feeder Control Connection
15. 6 pin Remote Control Connection



## WHAT IS VRD®?

The VRD (Voltage Reduction Device) provides an additional measure of safety, especially when working in an environment with a higher risk of electrical shock such as wet areas and hot, humid, sweaty conditions. The VRD® reduces the OCV (open circuit voltage) at the welding output terminals while not welding to less than 2 volts DC. Indicator lights will also signal when OCV during welding is above or below 30 volts DC.

Use of VRD does not degrade the machine rating or the ability to drive current through cables up to 200 ft. (61 m). No new welding techniques are required. The internal system does not require separate modules to operate.

## SYSTEM SELECTION

**Ready-Pak® Packages** are assembled and shipped on one pallet. **One-Pak® Packages** are not assembled. All packages are ordered using a single product number (K#). Welding wire and shielding gas must be ordered separately.

### Flextec™ 450 / LF-72 Standard Duty One-Pak®, Includes:

- Flextec 450 (K2882-2)
- LF-72 Bench Model, Standard Duty (K2327-5)
  - Standard Duty Wire Reel Stand
  - Drive Roll and Wire Guide Kit .035-.045 (KP1696-1)
  - Control Cable 10 ft. (3 m)
- 3/0 Welding Cable (K1842-10)
- Work Lead Package (K2149-1)
- Harris® Flowmeter Regulator and Hose (3100211)

**Order K2960-2**

### Flextec 450 / LF-72 Heavy Duty Ready-Pak®, Includes:

- Flextec 450 (K2882-2)
- LF-72 Bench Model, Heavy Duty (K2327-7)
  - Heavy Duty Wire Reel Stand
  - Drive Roll and Wire Guide Kit .035-.045 (KP1696-1)
  - Control Cable 10 ft. (3 m)
- Magnum® PRO Curve 400 Gun and Cable Assembly (K2952-2-10-45)
- 3/0 Welding Cable (K1842-10)
- Work Lead Package (K2149-1)
- Harris® Flowmeter Regulator and Hose (3100211)
- Inverter and Wire Feeder Cart (K3059-2)
- Base Mounting Assembly (K3056-1)

**Order K3125-2**

### Flextec 450 / LF-74 Heavy Duty Ready-Pak®, Includes:

- Flextec 450 (K2882-2)
- LF-74 Bench Model, Heavy Duty (K2426-5)
  - Heavy Duty Wire Reel Stand
  - Drive Roll and Wire Guide
  - Control Cable 10 ft. (3 m)
- Magnum® PRO Curve 400 Gun and Cable Assembly (K2952-2-10-45)
- 3/0 Welding Cable (K1842-10)
- Work Lead Package (K2149-1)
- Harris® Flowmeter Regulator and Hose (3100211)
- Inverter and Wire Feeder Cart (K3059-2)
- Base Mounting Assembly (K3056-1)

**Order K3126-2**

### Flextec™ 450 Racks

Available in a 4-Pack Rack or 6-Pack Rack

- 4-Pack Rack, **Order K2956-2**
- 6-Pack Rack, **Order K2957-2**

See Lincoln Electric bulletin E5.92 for more detailed rack information.

Shown K2956-2



Shown K2957-2



## ENERGY SAVINGS

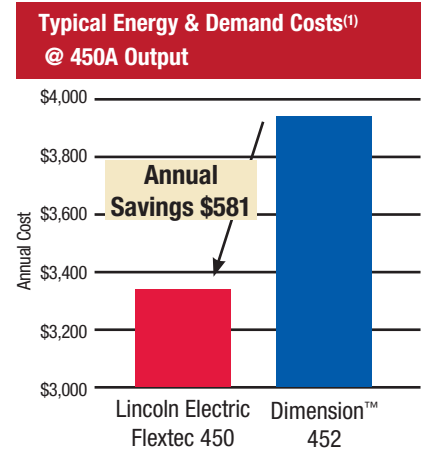
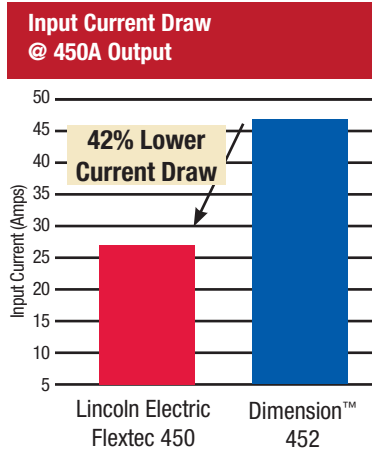
The inverter technology of the Flextec 450 yields a higher efficiency and power factor compared to similar conventional power sources.

Flextec Energy Savings		
	Lincoln Electric Flextec 450	Miller Electric Dimension™ 452
Efficiency (@450A Output)	87%	74%
Power Factor (@450A Output)	.95	.59

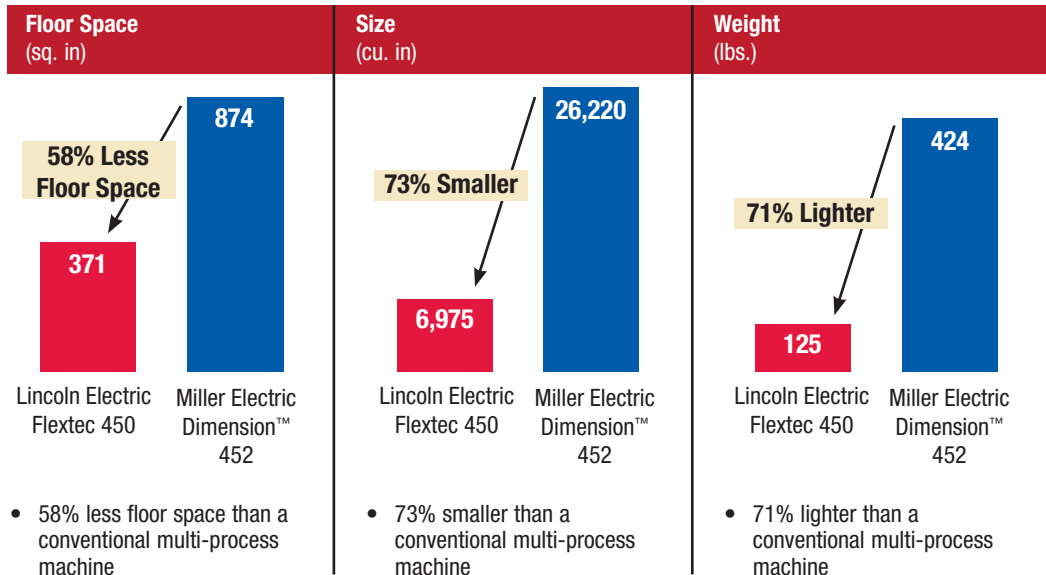


### The Result is:

- 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.



The trademarks Miller Electric® and Dimension™ are the property of Illinois Tool Works Inc. 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.

## 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 varnish 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, the Flextec 450 was subjected to extreme temperature environmental testing, including heat, cold, humidity, rain and dust.

## RECOMMENDED ACCESSORIES

### GENERAL OPTIONS



**Deluxe Adjustable Gas Regulator & Hose Kit**  
Accommodates CO<sub>2</sub>, 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**



**Harris Argon Flowmeter/Regulator and Hose Kit**  
**Order 3100211**



**Inverter and Wire Feeder Cart<sup>(1)</sup>**  
Rear-wheeled cart with front casters and gas bottle platform. Convenient handles allow for easy cable storage. Small footprint fits through 30 in. (762 mm) door. Not intended for use with double head wire feeders.  
**Order K3059-2**



**Dual Cylinder Inverter & Wire Feeder Cart<sup>(1)</sup>**  
Rear-wheeled cart with front casters and dual cylinder platform. Convenient handles allow for easy cable storage. Small footprint fits through 30 inch (762 mm) door.  
**Order K3059-3**



**Multi-Process Switch<sup>(1)</sup>**  
Easily switch between CC and CV processes.  
**Order K3091-1**



### STICK OPTIONS

**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**



**Accessory Kit**  
For stick welding. Includes 20 ft. (6.1 m) #6 electrode cable with lug, 15 ft. (4.6 m) #6 work cable with lugs, headshield, work clamp and electrode holder. 150 amp capacity.  
**Order K875**



**Remote Output Control**  
Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.  
**Order K857** for 25 ft. (7.6 m)  
**Order K857-1** for 100 ft. (30 m)

### TIG OPTIONS



**Pro-Torch™ TIG Torches**  
A full line of air-cooled and water-cooled torches available. Request Lincoln publication E12.150



**Hand Amptrol™**  
Provides 25 ft. (7.6 m) of remote current control for TIG welding. (6-pin plug connection)  
**Order K963-3**



**Foot Amptrol™**  
Provides 25 ft. (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 25 ft. (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**

(1)Requires K3056-1 Base Mounting Kit

## 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)
Flextec 450	K2882-2	380/460/575/3/50/60	450/38V/60% 400A/36V/100%	37/27/22 29/21/17	5 - 500 Amps	18.8 x 14 x 26.5 (477 x 356 x 673)	125 (56.8)
Flextec 450/LF-72 Standard Duty One-Pak	K2960-2						—
Flextec 450/LF-72 Heavy Duty Ready-Pak	K3125-2						350 (159)
Flextec 450/LF-74 Heavy Duty Ready-Pak	K3126-2						350 (159)
4-Pack Rack Flextec™ 450	K2956-2			103/75/61A		70.25 x 37.5 x 33.0 (1784 x 952 x 838)	800 (363)
6-Pack Rack Flextec 450	K2957-2			138/100/81A		70.25 x 49.5 x 33.0 (1784 x 1257 x 838)	1,100 (499)

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit [www.lincolnelectric.com](http://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.

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**LINCOLN**  
**ELECTRIC**  
THE WELDING EXPERTS®