



*2014 Welding & Cutting Solutions*

*Catalog*







# ***Table of Contents***

<b><i>Section</i></b> .....	<b><i>Page</i></b>
<b><i>How To Use This Catalog</i></b> .....	<b><i>4</i></b>
<b><i>Stick Welders</i></b> .....	<b><i>5</i></b>
<b><i>TIG Welders</i></b> .....	<b><i>9</i></b>
<b><i>MIG: Wire Feeder/Welders</i></b> .....	<b><i>16</i></b>
<b><i>MIG &amp; FCAW: Industrial Welders</i></b> .....	<b><i>23</i></b>
<b><i>Multi-Process Welders</i></b> .....	<b><i>25</i></b>
<b><i>Advanced Process Welders</i></b> .....	<b><i>30</i></b>
<b><i>Multi-Operator Welding Systems</i></b> .....	<b><i>38</i></b>
<b><i>Engine Drives: Commercial</i></b> .....	<b><i>42</i></b>
<b><i>Engine Drives: Industrial</i></b> .....	<b><i>49</i></b>
<b><i>Semiautomatic Wire Feeders</i></b> .....	<b><i>57</i></b>
<b><i>Submerged Arc &amp; Automatic Equipment</i></b> .....	<b><i>68</i></b>
<b><i>Welding Gear</i></b> .....	<b><i>78</i></b>
<b><i>Guns &amp; Torches</i></b> .....	<b><i>80</i></b>
<b><i>Cutting Systems</i></b> .....	<b><i>87</i></b>
<b><i>Automation Solutions</i></b> .....	<b><i>95</i></b>
<b><i>Mechanized Automation</i></b> .....	<b><i>110</i></b>
<b><i>Weld Fume Control</i></b> .....	<b><i>116</i></b>
<b><i>Training Solutions</i></b> .....	<b><i>127</i></b>
<b><i>Accessories</i></b> .....	<b><i>133</i></b>
<b><i>Welding Consumables</i></b> .....	<b><i>145</i></b>
<b><i>Welding Safety Checklist</i></b> .....	<b><i>165</i></b>
<b><i>Warranty Information</i></b> .....	<b><i>166</i></b>
<b><i>Index</i></b> .....	<b><i>167</i></b>

# How To Use This Catalog

1 MULTI-PROCESS WELDERS

**2 Flextec™ 650**

**3 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.

- Flexible Multi-Process Capability** – Including stick, Touch Start TIG®, MIG, flux-cored, CV submerged arc welding and carbon arc gouging with up to a 1/2 inch (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.
- Compact, Durable Case** – Tough IP23 enclosure ensures the Flextec™ 650 will withstand extreme field environments.
- Standard 115 Volt Auxiliary Power** – For 115 volt wire feeders, grinders, or lights.
- Full-Featured Remote Control Capability** – Use a foot pedal or hand control to remotely vary output up to 100 ft. (30.5 m) away.

**4** **THE LINCOLN ELECTRIC GREEN INITIATIVE**  
Inverter Technology reduces energy demand  
[www.lincolnelectric.com/green](http://www.lincolnelectric.com/green)

**6** *Shown: K3060-1 Flextec™ 650*

**7** **Processes**

- Stick
- DC TIG
- Flux-Cored
- Submerged Arc
- Gouging

**8** **Output** **Input**

**Flextec™ 650/LF-74 Heavy Duty Wire Feeder Ready-Pak® Package (K3146-1) Includes**

- Flextec™ 650
- LF-74 Bench Model, Heavy Duty (K2426-5)
- Drive Roll and Guide Kit
- Magnum® PRO Curve™ 400 Gun
- Gun Connector Kit
- Gun Liner
- Inverter and Wire Feeder Cart
- Weld Power Cable, 10 ft. (3 m)
- Work Lead Package
- Harris® Gas Regulator/Flowmeter and 10 ft. (3 m) Hose Kit

**Recommended Accessories**

- K3059-2 Inverter and Wire Feeder Cart
- K857-1 Remote Output Control, 100 ft. (30.5 m)
- K3091-1 Multi-Process Switch
- More accessories at end of section

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

**Literature** E5.96 **10**

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Flextec™ 650	K3060-1	380/460/575/3/50/60	650/44/100% 750/44/60%	3 Ph / 100% Duty Cycle: 57/47/38A	10-815 Amps	21.8 x 16.1 x 29.3 (554 x 409 x 584) (machine only)	165 (74.8) (machine only)
Flextec™ 650/LF-72 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3145-1		<b>DESERT DUTY® Rated:</b> 600A/44V/100%/55°C 650A/44V/50%/55°C				
Flextec™ 650/LF-74 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3146-1						
Flextec™ 650/LF-74 Heavy Duty Wire Feeder One-Pak® Pkg.	K3147-1						
Flextec™ 650/LN-10 Bench Model Wire Feeder One-Pak® Pkg.	K3158-1						

- 1 Catalog Section Tab**  
Identifies catalog section; makes products easy-to-find.
- 2 Product Name**  
Product Name Index on page 170.
- 3 Product Description**  
Brief description of the product
- 4 Green Initiative**  
Identifies which products are part of the Lincoln Electric awareness program to reduce environmental impact.
- 5 Key Features**  
Top features of the product. More available on literature and website.
- 6 Ready-Pak® Packages**  
Machines available as Ready-Pak® packages.
- 7 Processes**  
Recommended arc welding processes for the product.
- 8 Input & Output Icons**  
See "Icons" below for descriptions
- 9 Unit Includes/Recommended Accessories**  
These sections list accessories that are included or are the most popular accessories requested for each product.
- 10 Literature Number**  
Order number to request more information on website.
- 11 Technical Specifications**  
Product ordering numbers including Ready-Pak® and One-Pak® packages and other important specifications.

## Icons

### Output Icons

 <b>CC</b>	 <b>AC</b>	 <b>11.5 kW</b>	 <b>2-Roll Wire Feeder</b>
For constant current stick and TIG processes	Alternating current welding output	Peak auxiliary power output	
 <b>CV</b>	 <b>DC</b>	 <b>5.5 kW</b>	 <b>4-Roll Wire Feeder</b>
For constant voltage MIG, flux-cored and subarc processes	Direct current welding output	Surge auxiliary power output	
 <b>CC CV</b>	 <b>AC DC</b>	 <b>10 kW</b>	
For multiprocess constant current or constant voltage applications	Alternating or direct current welding output	Continuous auxiliary power output	

### Input Icons

 <b>1 PHASE</b>	 <b>115 VAC</b>	 <b>50 Hz</b>	 <b>Engine Driven: Diesel, Gas or LPG</b>
Single phase input power	115 Volt AC Wire feeder input power	50 Hertz input power	
 <b>3 PHASE</b>	 <b>42 VAC</b>	 <b>60 Hz</b>	 <b>115 V INPUT</b>
Three phase input power	42 Volt AC Wire feeder input power	60 Hertz input power	 <b>230 V INPUT</b>
 <b>1/3 PHASE</b>	 <b>40 VDC</b>	 <b>50/60 Hz</b>	
Single or three phase input power	40 Volt DC Wire feeder input power	50/60 Hertz input power	



# STICK WELDERS

Versatile Stick Welders for Shop or Field

- Weld a Wide Range of Materials and Thicknesses
- Conventional or Inverter Models

## Invertec® V155-S

Portable. Professional. Rugged. Affordable.



## AC225

AC General Purpose Welding



## AC/DC 225/125

Tackle more tasks with AC/DC



## Invertec® V275-S

Weather-Resistant Stick and TIG Welder



## Idealarc® 250

Basic Industrial Stick Welding



## Idealarc® R3R-400 & R3R-500

Heavy Duty Stick Welding and Arc Gouging



COMMERCIAL

INDUSTRIAL

	MODEL	MODE		OUTPUT Current Range (Amps)	PROCESS					INPUT		FEATURES						
		Mode	Polarity		Stick	TIG Scratch	Touch Start TIG®	TIG Hi-Freq™	Arc Gouge	Phase	Hertz	Compact	115/230 Volt Auto-Sensing	Hot Start	Arc Force	Meters	7-Yr. Warranty (on Power Rectifier)	Polarity Switch
1-Phase Transformer	<b>AC225</b>	CC	AC	40-225 AC	●					1	60	●						
	<b>AC/DC 225/125</b>	CC	AC/DC	30-125 DC 40-225 AC	●	●				1	60	●						●
	<b>Idealarc® 250</b>	CC	AC/DC	40-250 DC 35-300 AC	●				●	1	60							●
Inverter	<b>Invertec® V155-S</b>	CC	DC	5-155 DC	●		●			1	50/60	●	●	●	●			
	<b>Invertec® V275-S</b>	CC	DC	5-275 DC	●		●		●	1/3	50,60	●		●	●			
3-Phase Transformer	<b>Idealarc® R3R-400</b>	CC	DC	60-500 DC	●	●		○	●	3	60					●	●	●
	<b>Idealarc® R3R-500</b>	CC	DC	75-625 DC	●	●		○	●	3	60					●	●	●

KEY: ● Excellent ● Good ● Optional

# AC225 & AC/DC 225/125

## Great General Purpose Stick Welding

Choose our popular AC225 for stick welding with AC polarity. Select the AC/DC 225/125 for stick welding with AC or DC polarity. AC polarity is ideal for heavier plate, greater deposition or faster travel speeds. DC polarity provides for extremely stable arc action or out-of-position welding.

Either machine is a great choice for welding on mild steel, low alloy and stainless steels as well as cast iron and hardfacing for maintenance, repair, light fabrication, and hobby projects.

- **40-225 amps AC (and 30-125 amps DC on AC/DC 225/125 model)** stepped output control is enough for 3/16 in. (4.8 mm) diameter mild steel general purpose stick electrodes and 5/32 in. (4.0 mm) diameter of other electrode types.
- **Weld 16 gauge sheet metal to heavy plate** on mild steel, low alloy stainless, cast iron and hardfacing applications.



Shown: K1170 AC225

Shown: K1297 AC/DC 225/125

**Processes**

- Stick

**Output** <sup>(1)</sup> <sup>(2)</sup> **Input** **60 Hz**

**Unit Includes**

- Insulated electrode holder and cable
- Heavy duty work clamp and cable
- Helpful Welder's Guide
- Input Cable with integrated plug

**Recommended Accessories**

- K761 Wheel Kit
- *More accessories at end of section*

**Literature**

E2.30 (AC225)  
E2.60 (AC/DC 225/125)

<sup>(1)</sup>AC225  
<sup>(2)</sup>AC/DC 225/125

**Wheel Kit**

Includes axle, two wheels, and assembly hardware. Can be installed in minutes.

**Order K761** for AC225, AC/DC 225/125



Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
AC225	K1170	230/1/60	225A/25V/20% <sup>(1)</sup>	50A	40-225 Amps Max. OCV: 79V	24 x 17.25 x 12 (610 x 438 x 305)	109 (49.5)
AC/DC 225/125	K1297	230/1/60	AC: 225A/25V/20% DC: 125A/25V/20%	AC: 50A DC: 36A	40-225 Amps AC Max. OCV: 79V 30-125 Amps DC Max. OCV: 73V	24 x 17.25 x 12 (610 x 438 x 305)	124 (56.3)

<sup>(1)</sup> Except 75 amp setting which can be used continuously for 1 hour.

# Idealarc® 250

## Basic Industrial Stick Welding

The Idealarc® 250 delivers up to 300 amps AC (250 amps DC) for stick welding in vocational education, industrial production, maintenance and repair or farm shop environments.

- **Plenty of output** – 300 amps AC and 250 amps DC are enough for up to 1/4 in. (6.4 mm) diameter of some stick electrode types.
- **Run every type of stick electrode**, including cellulose and low hydrogen, and those for stainless steel, hardfacing and cast iron applications.
- **Easy to use full range continuous control** provides precise command of heat input in the weld.
- **Stackable case design** can be stacked up to three high to save valuable floor space.



Shown: K1053-9 Idealarc® 250

**Processes**

- Stick
- Gouging

**Output** **Input** **60 Hz**

**Recommended Accessories**

- K704 Accessory Kit, 400 Amp
- *More accessories at end of section*

**Literature**

E2.70



**Undercarriage**

For hand moving. Includes handle, axle, wheels, front bracket and mounting hardware.

**Order K866** for Idealarc® 250

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® 250	K1053-9 (w/PFC)	208/230/460/1/60	AC: 250A/30V/30% DC: 250A/30V/30%	75/68/34A	35-300 Amps AC Max. OCV: 72V	27 x 19 x 21.5 (686 x 483 x 546)	350 (159)
	K1053-8	230/460/575/1/60		86/43/34A	40-250 Amps DC Max. OCV: 70V		

PFC = Power Factor Capacitors

# Inverter<sup>®</sup> V155-S

**Portable. Professional. Rugged. Affordable.**



The Inverter<sup>®</sup> V155-S offers much more than you would expect from a welder this size. Weighing in at just under 15 lbs. (6.8 kg) the Inverter<sup>®</sup> V155-S is no lightweight contender. It packs the full punch of a heavyweight professional that you can take to the most demanding job sites. It features 120/230V auto reconnect operation and can operate from a portable generator. It can also plug into a 200 ft. (61 m) 230V extension cord so you can weld just about anywhere.

- **Two stick modes**, SOFT and CRISP, provide the right arc characteristics for different types of electrodes.
- **Fan-As-Needed™ (F.A.N.™)** reduces noise and dust inside the machine.
- **Auto-Adaptive Arc Force** minimizes electrode sticking in the puddle without compromising arc stability or increased spatter.
- **Automatic Hot Start** boosts the current during starting to make striking an arc easier.
- **Touch Start TIG<sup>®</sup> mode** – it's like getting a TIG welder for free!



Shown:  
K2605-1 Inverter<sup>®</sup> V155-S  
Base Unit

**Processes**

- Stick
- DC TIG

**Output** **Input**

**Base Unit Includes**

- Inverter<sup>®</sup> V155-S (K2605-1)
- Stick electrode holder, cable and Twist Mate™ plug
- Work cable and clamp with Twist Mate™ plug
- Fully adjustable shoulder strap
- 120/230V input cord, 6.6 ft. (2 m) with a 120V 15 Amp plug
- Extra 120V 20 Amp plug

**TIG Ready-Pak<sup>®</sup> (K2606-1)**

- See TIG Welders Section for details

**Recommended Accessories**

- K2275-1 Welding Cart
- K852-25 Twist Mate™ Cable Plug
- *More accessories at end of section*

**Literature**

E2.141

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(1)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Inverter <sup>®</sup> V155-S	K2605-1 (base unit)	120/1/50/60	75A/23.0V/100% Stick 100A/24.0V/30% Stick 105A/14.2V/100% TIG 130A/15.2V/30% TIG	24.0A 33.8A 21.5A 28.8A	5-155 Amps DC Max. OCV: 75V	11.3 x 6.2 x 15.4 (288 x 158 x 392)	14.7 (6.7)
		230/1/50/60	100A/24.0V/100% Stick 145A/25.8V/30% Stick 100A/14.0V/100% TIG 155A/16.2V/30% TIG	21.0A 31.0A 14.1A 22.8A			

<sup>(1)</sup>Input amps on 60 Hz input.

# Inverter<sup>®</sup> V275-S

**Weather-Resistant Stick and TIG Welder**



The Inverter<sup>®</sup> V275-S Stick and TIG power source is ideal for outdoor construction sites – it's IP23S rated and equipped with weather resistant features. Up to 275 amps of output gives you access to a greater number of stick electrodes, including outstanding AWS E6010 performance.

- **Outstanding AWS E6010 and AWS E7018 performance.**
- **Touch Start TIG<sup>®</sup>** allows the welding arc to be established without high frequency starting.
- **Air Carbon Arc Cutting and Gouging** with up to 3/16 in. (4.8 mm) diameter carbon electrode.
- **Selectable Hot Start** – Turn it off for thin material or flip it on for thick, rusty or dirty material.
- **Variable Arc Force** – Dial in the “soft” or “crisp” arc you want.
- **All-in-one machine** – 208/220/230/380/400/415/440/460/575 input volt settings – no single phase de-rating.



Shown:  
K2269-1 Inverter<sup>®</sup> V275-S

**Processes**

- Stick
- DC TIG
- Gouging

**Output** **Input**

**Recommended Accessories**

- K852-70 Twist Mate™ Cable Plug for 1/0-2/0, 50-70 mm<sup>2</sup> cable
- K1759-70 Twist Mate™ Receptacle for 1/0-2/0, 50-70 mm<sup>2</sup> cable
- K2394-1 Stick Electrode Holder, Work Clamp, Cable and Twist Mate™ Set
- K857 Remote Output Control, 6-pin, 25 ft. (7.6 m)
- K2265-1 TIG-Mate™ 17V TIG Torch Starter Kit (air-cooled)
- *More accessories at end of section*

**Literature**

E2.161

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Inverter <sup>®</sup> V275-S	K2269-1	208/230/460/ 575/3/60	275A/31V/35% 250A/30V/60% 200A/28V/100%	38/37/19/16A 34/33/17/14A 27/25/13/11A	5-275A	13.6 x 9.0 x 20.25 (345 x 229 x 514)	54.5 (24.7)
		208/230/460/ 575/1/60	275A/29-31V/35% 250A/30V/60% 200A/28V/100%	68/67/38/31A 63/62/33/27A 49/48/26/21A			
Inverter <sup>®</sup> V275-S (Tweco <sup>®</sup> ) <sup>(1)</sup>	K2269-3	220/380/400/ 415/440/3/50	250A/30V/35% 200A/28V/100%	32/20/19/18/17A 25/15/15/14/13A			
		220/380/400/ 415/440/1/50		63/42/40/38/36A 48/32/30/29/27A			

<sup>(1)</sup>With Tweco<sup>®</sup>-style output connectors. Tweco<sup>®</sup> is a registered trademark of Thermadyne.

# Idealarc® R3R-400 & R3R-500

## Heavy Duty Stick Welding and Arc Gouging

Look to the Idealarc® R3R-400 and R3R-500 for your heavy-duty stick welding needs. Whether you are using cellulosic, low hydrogen, stainless steel or hardfacing electrodes, the Idealarc® R3R-400 and R3R-500 produce a smooth, quality arc for consistent results day-in and day-out.

- **Substantial amperage ranges** include the R3R-400 at 60-500 amps and the R3R-500 at 72-625 amps.
- **Easy to operate** – Calibrated current control knob makes procedure setting simple and easy.
- **Polarity switch, voltmeter and ammeter are standard** on the K1285-16 R3R-400 and K1286-16 R3R-500.
- **Arc gouge** with the R3R-400 using up to 5/16 in. (7.9 mm) diameter carbon electrode and the R3R-500 using up to 3/8 in. (9.5 mm) diameter carbon electrode.
- **Seven-year warranty** on the power rectifier.



Shown:  
K1285-16 Idealarc®  
R3R-400

Shown:  
K1286-16 Idealarc® R3R-500

### Processes

- Stick
- DC TIG
- Gouging

Output **CC** **DC** Input **3** **60**  
Phase Hz

### Recommended Accessories

- K841 Undercarriage – Hand moving
- K2149-1 Work Lead Package
- K704 Accessory Kit, 400 Amp
- K857-1 Remote Output Control, 6-pin, 100 ft. (30 m)
- *More accessories at end of section*

### Literature

E2.100

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® R3R-400	K1285-16	230/460/3/60	400A/36V/60%	74/37A	60-500A Max. OCV: 67V	27.5 x 22.3 x 32 (699 x 566 x 813)	402 (183)
Idealarc® R3R-500	K1286-16	230/460/575/3/60	500A/40V/60%	88/44A	72-625A Max. OCV: 67V		446 (203)
	K1286-25						

NOTE: 50 Hertz models available.

## Accessories

For complete descriptions go to page 133.

### AC225 and AC/DC 225/125

#### General

- K761 Wheel Kit
- Weld Fume Control System

### Idealarc® 250

#### General

- K866 Undercarriage
- Weld Fume Control System

#### Stick

- K875 Accessory Kit, 150 Amp
- K704 Accessory Kit, 400 Amp

### Invertec® V155-S

#### General

- K2275-1 Welding Cart 80 cu. ft. (2.27 m<sup>3</sup>) bottle capacity
- K852-25 Twist Mate™ Cable Plug for 6-4 cable
- Weld Fume Control System

#### TIG

- K1782-13 PTA-17FV Flex Head Gas Valve TIG Torch w/Ultra-Flex™ Cable (12.5 ft., 1 pc.)
- K960-2 Small Twist Mate™ Torch Adapter (with separate gas)
- KP508 Parts Kit for PTA-17 Series Torches
- K586-1 Deluxe Adjustable Gas Regulator & Hose Kit

### Invertec® V275-S

#### General

- K852-70 Twist Mate™ Cable Plug, for 1/0-2/0, 50-70 mm<sup>2</sup> cable
- K852-95 Twist Mate™ Cable Plug, for 2/0-3/0, 70-95 mm<sup>2</sup> cable
- K1759-70 Twist Mate™ Receptacle, for 1/0-2/0, 50-70 mm<sup>2</sup> cable
- K1759-95 Twist Mate™ Receptacle, for 2/0-3/0, 70-95 mm<sup>2</sup> cable
- K2946-1 Tweco® Style Cam-Lock Adapter Plug
- K3019-1 Arc Tracker™
- Weld Fume Control System

#### Stick

- K2394-1 Stick Electrode Holder, Work Clamp, Cable & Twist Mate™ Set
- K704 Accessory Kit, 400 Amp
- K875 Accessory Kit, 150 Amp
- K857 Remote Output Control, 6-pin, 25 ft. (7.6 m)
- K857-1 Remote Output Control, 6-pin, 100 ft. (30 m)

#### TIG

- K2265-1 TIG-Mate™ 17V TIG Torch Starter Kit (air-cooled)
- K960-1 Twist Mate™ Torch Adapter (with separate gas)
- K870 Foot Amptrol™
- K963-3 Hand Amptrol™ (Rotary Track Style)

### Idealarc® R3R-400 and R3R-500

#### General

- K841 Undercarriage – Hand moving
- K2149-1 Work Lead Package 15 ft. (4.6 m) 4/0 Cable
- K3019-1 Arc Tracker™
- Weld Fume Control System

#### Stick

- K704 Accessory Kit, 400 Amp
- K857 Remote Output Control, 6-pin, 25 ft. (7.6 m)
- K857-1 Remote Output Control, 6-pin, 100 ft. (30 m)

#### TIG

- K930-2 TIG Module
- K939-1 Docking Kit
- K963-3 Hand Amptrol™ (Rotary Track Style)
- K870 Foot Amptrol™
- K938-1 Contactor Kit
- K936-3 Control Cable (9-pin to 6-pin and 115V plug)
- K937-45 Control Cable Extension, 45 ft.
- K586-1 Deluxe Adjustable Gas Regulator & Hose Kit





# TIG WELDERS

Lincoln Electric TIG Welders Give You *The Power to Perform!*<sup>SM</sup>

- Precision Arc Control
- Code Quality Results
- NEW! Wireless Foot Pedal

**Square Wave™ TIG 175**  
Sets the Standard for Premium, Economical TIG Welding Performance



**Precision TIG® 225**  
Great for Motorsports and Other Custom Fabricators



**Precision TIG® 275**  
Serious TIG Performance



**Precision TIG® 375**  
Precision Arc – Maximum Control



**Invertec® V155-S**

Portable. Professional. Rugged. Affordable.



**Invertec® V160-T**

Serious DC TIG Arc – Extremely Small Package



**Invertec® V205-T DC**

Code Quality DC TIG Welding



**Invertec® V205-T AC/DC**

Code Quality AC/DC TIG Welding



RECTIFIER TECHNOLOGY

INVERTER TECHNOLOGY

	MODEL	OUTPUT		Current Range (Amps)	PROCESS			INPUT		FEATURES					
		Mode	Polarity		Stick	Touch Start TIG®	TIG Hi-Freq™	TIG Pulse	Phase	Hertz	Micro-Start™ II	Auto-Balance®	Auto-Reconnect™	Variable AC Frequency	Ready-Pak®
Rectifier Technology	<b>Square Wave™ TIG 175</b>	CC	AC/DC	10-175	●	●		1	60		●				
	<b>Precision TIG® 225</b>	CC	AC/DC	5-230	●	●	●	1	60, 50/60	●	●			●	
	<b>Precision TIG® 275</b>	CC	AC/DC	2-340	●	●	●	○	1	60, 50/60	●	●			●
	<b>Precision TIG® 375</b>	CC	AC/DC	2-420	●	●	●	●	1	60, 50/60	●	●			●
Inverter Technology	<b>Invertec® V155-S</b>	CC	DC	5-155	●	●			1	50/60			●		●
	<b>Invertec® V160-T</b>	CC	DC	5-160	●	●	●	●	1	50/60			●		
	<b>Invertec® V205-T DC</b>	CC	DC	6-200	●	●	●	●	1	50/60			●		●
	<b>Invertec® V205-T AC/DC</b>	CC	AC/DC	6-200	●	●	●	●	1	50/60			●	●	●

KEY: ● Excellent ◐ Good ● Optional

# Square Wave™ TIG 175

## Sets the Standard for Premium, Economical TIG Welding Performance

This great little AC/DC TIG and stick welder delivers a classic smooth DC and stable AC square wave welding output – outstanding TIG performance as well as stick welding – it's like getting a stick welder for FREE!

### • Top TIG Welding Performance

- Square Wave™ Technology – Delivers a low peak current and fast transition time. Experience reduced tungsten spitting, tungsten erosion and a smooth, stable AC welding arc.
- Standard Auto Balance® control automatically delivers optimal mix of cleaning action vs. penetration.
- Excellent low amperage starting performance – down to 10 amps.

• **It's Like Getting a Stick Welder for FREE!** You can tackle AC/DC steel, stainless, cast iron and hardfacing applications, including AWS E6010 applications (Fleetweld® 5P+).

• **Standard Foot Amptrol™** – Remotely controlling your current level with a foot control is an added expense with other TIG welders in this class.

• **Enhanced TIG Torch Handling** – Includes a rugged, removable Series 17 torch with Ultra-Flex™ cable.



Shown:  
K1478-5 Square Wave™ TIG 175

• **Automatic Remote Sensing** – The unit automatically senses when a remote current control, such as a Foot or Hand Amptrol™, has been connected.

• **Shielding gas pre-flow and post-flow** – Built-in 0.50 second pre-flow and 15 second post-flow timers purge and protect the weld and tungsten.

### Processes

- Stick
- TIG

Output Input

### Unit Includes

- Series 17 TIG Torch, 12.5 ft (3.8 m), with one-piece cable
- 3/32 in. (2.4 mm) Collet Body
- 3/32 in. (2.4 mm) Collet
- 3/32 in. x 7 in (2.4 mm x 177 mm) Ceriated Tungsten Electrode
- Long Backcap
- 7/16 in. (11.1 mm) diameter Alumina Gas Cup Nozzle
- Twist Mate™ Torch Adapter
- Foot Amptrol™ with 15 ft. (4.6 m) cable
- Gas Regulator & Hose (3000369)
- Stick Electrode Holder (200 amp) with 10 ft. (3.1 m) cable and Twist Mate™ Connector
- Work Clamp & 10 ft. (3.0 m) Cable
- 6 ft. (1.8 m) Input Cable with NEMA 6-50P Plug

### Recommended Accessories

- K964-1 Undercarriage
- KP508 PTA-17 Parts Kit
- *More accessories at end of section*

### Literature

E3.35

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output <sup>(1)</sup> Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(2)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Square Wave™ TIG 175	K1478-5	208/230/1/60	150A/26V/25%	64/57A	DC: 10-175A Max. OCV: 59V DC AC: 10-175A Max. OCV: 74V AC	19.5 x 13.7 x 25.0 (495 x 348 x 635)	185 (84)

<sup>(1)</sup> Based on a 10 minute period. Additional ratings include: 110A/25V/60% and 90A/24V/100%. All ratings at 104°F (40°C).

<sup>(2)</sup> The National Electrical Code permits operation at rated output and duty cycle from a 50 amp receptacle when supply lines and fuses are properly sized. See Power Source operator's manual.

## YOUR WELDING RESOURCE ONLINE: JUST A CLICK AWAY

[www.lincolnelectric.com](http://www.lincolnelectric.com)

- DETAILED WELDING INFORMATION
- HOW-TO VIDEOS
- TRAINING MATERIALS
- EDUCATIONAL POSTERS
- WELDING SAFETY/MSDS



# Precision TIG® 225

Great for Motorsports and Other Custom Fabricators

The Precision TIG® 225 gives you *The Power to Perform*™. Choose Precision TIG® for general fabrication, automotive/motorsports, vocational schools or serious hobby work. Micro-Start™ II Technology delivers precision arc performance to improve arc starting, welding and weld cratering.

- **5-230 amps** is the widest welding range in its class.
- **Patented Micro-Start™ II Technology** delivers extremely stable low amperage starting, welding and cratering for AC and DC welding.
- **AC Auto-Balance®** automatically sets the optimal cleaning action vs. penetration levels for great looking aluminum welds.
- **Built-in TIG pulser** helps control heat input in the weld.
- **115 volt auxiliary power** receptacles with 20 amp service reliably powers water coolers or other tools. (208/230V models only. 460/575V models feature 6 amp service).



Shown: K2535-2 Ready-Pak® w/Cart Pkg.

**Processes**

- Stick
- TIG

Output Input

**Ready-Pak® Pkg. (K2535-1)**

- Includes**
- Precision TIG® 225
  - Torch Parts Storage Compartment
  - Torch Hanger
  - Removable Lift Eye
  - 9 ft. (2.7 m) Input Power Cord with NEMA 6-50P Plug
  - 10 ft. (3.0 m) Work Cable & Clamp
  - NEMA 6-50R Receptacle
  - TIG Procedure Guide
  - GTAW (TIG) Handbook
  - PTA-17 One-Piece TIG Torch
  - Gas Regulator & Hose (3000369)
  - Foot Amptrol™

**Ready-Pak® w/Cart Pkg. (K2535-2)**

- Includes**
- Everything Listed Above (K2535-1)
  - Understorage Cart

**Recommended Accessories**

- K2266-1 TIG-Mate™ 17 Air-Cooled TIG Torch Starter Pack
- K870 Foot Amptrol™
- K963-3 Hand Amptrol™
- K2348-1 Understorage Cart
- *More accessories at end of section*

**Literature**  
E3.37

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output <sup>(1)</sup> Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(2)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Precision TIG® 225 Ready-Pak® Pkg.	K2535-1	208/230/1/60	90A/23.4V/100%	42/39A	5-230 Amps AC 5-230 Amps DC Max. OCV: 75V	20.7 x 14.5 x 25.6 (526 x 368 x 650)	212 (96)
Precision TIG® 225 Ready-Pak® w/Cart Pkg.	K2535-2					31.2 x 19.8 x 38 (794 x 503 x 966)	258 (117)
Precision TIG® 225 Base Model	K2533-2	460/575/1/60	380/400-415/1/50/60	18/15A	20.7 x 14.5 x 25.6 (526 x 368 x 650)	192 (87)	
	K2534-1	380/400-415/1/50/60		21/20-19A			

<sup>(1)</sup> Tested at 104°F (40°C). <sup>(2)</sup> Inputs and ratings are based on the 115 volt auxiliary receptacle being loaded to its full rating. 208/230V model features a 20 amp rated auxiliary. 460/575V models feature a 6 amp auxiliary.

## Build Your Own Package

Do you need to customize your own TIG welding package to fit your performance needs or budget? Here's everything you need to pick and choose the accessories you want.



1	2	3	4	5
<b>Select Precision TIG® 225 Machine</b>	<b>Optional Under-storage Cart</b>	<b>Select Remote Control Device</b>	<b>Select TIG Torch Starter Pack</b>	<b>Select Water Cooler</b>
K2533-2 460/575/1/60 K2534-1 380/400-415/1/50/60	K2348-1	K870 Foot Amptrol™ K963-3 Hand Amptrol™ K814 Arc Start™ Switch	Air-Cooled K2266-1 TIG-Mate™ 17 Water-Cooled K2267-1 TIG-Mate™ 20	N/A  K1813-1 Cool Arc® 40 115V 50/60Hz K2187-1 Cool Arc® 40 230V 50/60Hz

# Precision TIG® 275 & 375

## Precision Arc – Maximum Control

For fabrication, aerospace, production, motorsports or vocational education, Precision TIG® models help you deliver serious code-level quality.

- **Patented Micro-Start™ II Technology** delivers extremely stable low amperage starting, welding and cratering for AC and DC welding.
- **AC Auto-Balance®** automatically sets the optimal cleaning vs. penetration levels for great looking aluminum welds.
- **Widest Output Range** in class – 2-340 amps for 275 model and 2-420 amps for 375 model.
- **Highest duty cycle in class** – 275 amps @ 40% for 275 model and 375 amps @ 40% for 375 model.
- **Built-in TIG pulser** on 375 model helps control heat input in the weld to reduce distortion and burnthrough on thin materials.
- **Neat/organized cable management** with integrated torch holster.
- **Built-in storage compartment** with removable tray for torch consumables.
- **Fan-As-Needed™ (F.A.N.™)** prevents overheating. F.A.N.™ reduces power consumption, noise, motor wear and dust in the machine.



Shown: K2618-1 Ready-Pak® w/Cart Pkg.



Shown: K2624-1 Ready-Pak® w/Cart Pkg.

### Processes

- Stick
- TIG

Output Input

### Precision TIG® 275 Water-Cooled Ready-Pak® with Cart (K2618-1) Includes

- K2619-1 Precision TIG® 275
- Under-Cooler Cart
- Foot Amptrol™
- Harris® Gas Flowmeter Regulator & 10 ft. (3.0 m) Hose Kit (3100338)
- PTW-20 Pro-Torch™ TIG Torch
- Zippered Torch Cover
- Parts Kit
- Water Hose (2 included)
- 15 ft. (4.5 m) 2/0 Work Cable/Clamp
- PTA-9 or -17 Torch Adapter

### Precision TIG® 375 Water-Cooled Ready-Pak® with Cart (K2624-1) Includes

- K2622-1 Precision TIG® 375
- Under-Cooler Cart
- Foot Amptrol™
- Harris® Gas Flowmeter Regulator & 10 ft. (3.0 m) Hose Kit (3100338)
- PTW-20 Pro-Torch™ TIG Torch
- Zippered Torch Cover
- Parts Kit
- Water Hose (2 included)
- 15 ft. (4.5 m) 2/0 Work Cable/Clamp

### Recommended Accessories

- K3127-1 Wireless Foot Pedal and Receiver
- K963-3 Hand Amptrol™
- K704 Stick Welding Accessory Kit
- *More accessories at end of section*

### Literature

- E3.42 (Precision TIG® 275)
- E3.51 (Precision TIG® 375)

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output <sup>(1)</sup> Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Precision TIG® 275 Ready-Pak® w/Cart Pkg.	K2618-1	208/230/460/1/60	275A/31V/40%	80/72/36A with PFC 104/94/47A w/o PFC	DC: 2-340A AC: 2-340A Max. OCV: 75V	49.7 x 28 x 41 (1262 x 711 x 1041)	641 (291)
Precision TIG® 275	K2619-1	208/230/460/1/60	375A/35V/40%	80/72/36A with PFC 104/94/47A w/o PFC	DC: 2-420A AC: 2-420A Max. OCV: 80V	31 x 22 x 26 (787 x 559 x 660)	397 (180)
	K2619-2	460/575/1/60		35/28A with PFC 47/38A w/o PFC			
	K2620-1	220-230/380-400/415/1/50/60		80/46/43A with PFC 95/55/50A w/o PFC			
Precision TIG® 375 Ready-Pak® w/Cart Pkg.	K2624-1	208/230/460/1/60	375A/35V/40%	112/102/51A with PFC	DC: 2-420A AC: 2-420A Max. OCV: 80V	49.7 x 28 x 41 (1262 x 711 x 1041)	751 (340)
Precision TIG® 375	K2622-1	208/230/460/1/60	375A/35V/40%	102/51/41A with PFC	DC: 2-420A AC: 2-420A Max. OCV: 80V	31 x 22 x 26 (787 x 559 x 660)	507 (230)
	K2622-2	230/460/575/1/60					
	K2623-1	220-230/380-400/415/1/50/60					

<sup>(1)</sup> Tested at 104°F (40°C). PFC = Power Factor Capacitors

## Advanced Control Panel

Standard on Precision TIG® 375  
Optional on Precision TIG® 275

- 1) Trigger Switch (2-step/4-step)
- 2) Pulse/Spot Time Mode Switch
- 3) Pulse Frequency Control
- 4) Pulse % On Time Control
- 5) Pulse Background Current Control
- 6) Downslope Time, In Seconds
- 7) Spot Time



# Invertec® V155-S

Portable. Professional. Rugged. Affordable.



The Invertec® V155-S offers much more than you would expect from a welder this size. It features 120/230V Auto-Reconnect™ operation and can operate from a portable generator. It can also plug into a 200 ft. (61 m) 230V extension cord so you can weld just about anywhere. The Invertec® V155-S is available in two models: a base unit with stick accessories or a complete Stick/TIG ready to weld package in an Easy-Store/Easy-Carry Suitcase.

- **Touch Start TIG® DC operation** allows you to strike the arc easily without high frequency or tungsten contamination.
- **Dent resistant case** is IP23 rated for outdoor use.
- **Fan-As-Needed™ (F.A.N.™)** reduces noise and dust inside the machine.
- **Two stick modes**, SOFT and CRISP, provide the right arc characteristics for different types of electrodes.
- **Auto-Adaptive Arc Force** minimizes electrode sticking in the puddle without compromising arc stability or increased spatter.
- **Automatic Hot Start** boosts the current during starting to make striking an arc easier.



Shown: K2606-1 Ready-Pak® Pkg.

## Processes

- Stick
- DC TIG

Output Input

## TIG Ready-Pak® Welding Package Includes

- Invertec® V155-S (K2605-1)
- Stick electrode holder & cable, 10 ft. (3.0 m) with Twist Mate™ plug
- Work clamp and cable, 10 ft. (3.0 m) with Twist Mate™ plug
- Fully adjustable shoulder strap
- 120/230V input cord [6.6 ft. (2 m)] with a 120V 15 Amp plug
- Extra 120V 20 Amp plug
- Gas Regulator & Hose (3000369)
- PTA-17V TIG torch with Ultra-Flex™ cable and Twist Mate™ adapter
- PTA-17 TIG Accessory Kit (KP508)
- Easy-Store/Easy-Carry Suitcase

## Recommended Accessories

- K2275-1 Welding Cart
- K852-25 Twist Mate™ Cable Plug Kit
- K1782-13 PTA-17FV Flex Head Gas Valve Torch
- More accessories at end of section

Literature: E2.141

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(1)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Invertec® V155-S	K2606-1 (Ready-Pak® Pkg.)	120/1/50/60	75A/23.0V/100% Stick 100A/24.0V/30% Stick 105A/14.2V/100% TIG 130A/15.2V/30% TIG	24.0A 33.8A 21.5A 28.8A	5-155 Amps DC Max. OCV: 75V	11.3 x 6.2 x 15.4 (288 x 158 x 392) (machine only)	14.7 (6.7) (machine only)
		230/1/50/60	100A/24.0V/100% Stick 145A/25.8V/30% Stick 100A/14.0V/100% TIG 155A/16.2V/30% TIG	21.0A 31.0A 14.1A 22.8A			

<sup>(1)</sup>Input amps on 60 Hz input.

# Invertec® V160-T

Serious DC TIG Arc – Extremely Small Package



The Invertec® V160-T is a full function DC TIG inverter intended for alloy fabrication or critical maintenance work.

- **Advanced inverter technology** delivers superior TIG performance.
- **Selectable Touch Start TIG®** starting or high frequency starting makes it easy to establish an arc under a variety of conditions.
- **Built-in pulsing functions** give you greater control over thin materials.
- **Auto-reconnect** between 115/230V 50/60Hz input power eliminates operator error.
- **Auto restore fuse** protects the machine from high input currents.
- **Integral gas and power connector** for simple torch connections and quick changes between TIG and stick welding.



Shown: K1845-1 Invertec® V160-T

## Processes

- Stick
- DC TIG

Output Input

## Unit Includes

- 115V Input Cord (10 ft.) & Plug (NEMA 5-15P)
- 20 Amp Plug (NEMA 5-20P)
- Twist Mate™ Torch Adapter for PTA-9 or -17 one-piece torch
- Adjustable Shoulder Strap
- Work Clamp & Cable

## Recommended Accessories

- K2266-1 TIG-Mate™ 17 Air-Cooled TIG Torch Starter Pack
- K870 Foot Amprol™
- K963-3 Hand Amprol™
- Weld Fume Control System
- More accessories at end of section

Literature E3.105

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(1)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs.(kg)
Invertec® V160-T	K1845-1	115/1/50/60 20A Branch Circuit	90A/13.6V/100% TIG 60A/22.4V/100% Stick	20A	5-160 Amps DC Max OCV: 48V	13 x 8 x 17 (330 x 203 x 432)	24 (10.8)
		115/1/50/60 30A Branch Circuit	110A/14.4V/100% TIG 80A/23.2V/100% Stick	25A			
		230/1/50/60 30A Branch Circuit	130A/15.2V/100% TIG 130A/25.2V/100% Stick	25A			

<sup>(1)</sup>Input amps on 60 Hz input.

# Invertec® V205-T DC & V205-T AC/DC

## Code Quality TIG Welding

These compact AC/DC or DC only model TIG power sources are intended for critical TIG welding in maintenance, fabrication, motorsports, aerospace, nuclear piping and shipbuilding.

- **Stick Crisp Mode** for exceptional Fleetweld® 5P and 5P+ (AWS E6010) performance.
- **Adjustable DC strike mode** – Allows adjustment for a hotter or colder start depending on the tungsten diameter.
- **Voltage Reduction Device™ (VRD®)** – Reduces the open circuit voltage in STICK mode for use in electrically hazardous conditions or when the use of a VRD® is required.
- **200 amps @ 40% duty cycle** – highest output rating in this machine class.
- **Auto-Reconnect** – For single phase 115V or 230V 50/60Hz input power.
- **Fan-As-Needed™ (F.A.N.™)** – Fan only operates when needed to reduce power consumption, noise and dust in machine.



Shown:  
K1855-4 Invertec®  
V205-T AC/DC

Shown:  
K2629-1 Invertec®  
V205-T DC



### Processes

- Stick
- TIG

Output <sup>(1)</sup> <sup>(2)</sup> Input

<sup>(1)</sup>Invertec® V205-T DC.  
<sup>(2)</sup>Invertec® V205-T AC/DC

### DC Model (K2671-1)

#### One-Pak® Pkg. Includes

- K2629-1 Invertec® V205-T DC
- K2266-1 TIG-Mate™ 17 Air-Cooled TIG Torch Starter Kit
- 230V Input Cord & Plug
- K870 Foot Amptrol™
- Adjustable Shoulder Strap

### AC/DC Model (K2350-2)

#### One-Pak® Pkg. Includes

- K1855-4 Invertec® V205-T AC/DC
- K2266-1 TIG-Mate™ 17 Air-Cooled TIG Torch Starter Kit
- 230V Input Cord & Plug
- K870 Foot Amptrol™
- Adjustable Shoulder Strap

### Recommended Accessories

- K2266-1 TIG-Mate™ 17 Air-Cooled TIG Torch Starter Kit
- K870 Foot Amptrol™
- K963-3 Hand Amptrol™
- Weld Fume Control System
- *More accessories at end of section*

### Literature

- E3.110.1 (Invertec® V205-T DC)
- E3.110 (Invertec® V205-T AC/DC)

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output <sup>(1)</sup>	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Invertec® V205-T DC	K2629-1	115/1/50/60	150A/16.0V/40% TIG 120A/14.8V/60% TIG 100A/14.0V/100% TIG	34.0A 25.0A 20.0A	6-200A DC Max OCV: 53.7V	15.0 x 8.5 x 19.0 (381 x 216 x 483) (machine only)	38 (17.3) (machine only)
		230/1/50/60 <sup>(2)</sup>	200A/18.0V/40% TIG 170A/16.0V/60% TIG 140A/15.6V/100% TIG	30.0A 18.0A 15.0A			
		115/1/50/60	110A/24.4V/35% Stick 90A/23.6V/60% Stick 70A/22.8V/100% Stick	34.0A 28.0A 20.0A			
		230/1/50/60 <sup>(2)</sup>	180A/27.2V/35% Stick 150A/26.0V/60% Stick 130A/25.2V/100% Stick	30.0A 23.0A 19.0A			
Invertec® V205-T AC/DC	K1855-4	115/1/50/60	150A/16.0V/40% TIG 120A/14.8V/60% TIG 100A/14.0V/100% TIG	34.0A 25.0A 20.0A	6-200A AC/DC Max OCV: 53.7V	15.0 x 8.5 x 19.0 (381 x 216 x 483) (machine only)	38 (17.3) (machine only)
		230/1/50/60 <sup>(2)</sup>	200A/18.0V/40% TIG 170A/16.0V/60% TIG 140A/15.6V/100% TIG	30.0A 18.0A 15.0A			
		115/1/50/60	110A/24.4V/35% Stick 90A/23.6V/60% Stick 70A/22.8V/100% Stick	34.0A 28.0A 20.0A			
		230/1/50/60 <sup>(2)</sup>	180A/27.2V/35% Stick 150A/26.0V/60% Stick 130A/25.2V/100% Stick	30.0A 23.0A 19.0A			

<sup>(1)</sup>Input current on 60 hertz input. <sup>(2)</sup>Also operates on 208V input.

## TIG-Mate™ Starter Kits

Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case.



K2266-1 TIG-Mate™ 17  
Air-Cooled  
TIG Torch Starter Kit



K2267-1 TIG-Mate™ 20  
Water-Cooled  
TIG Torch Starter Pack

## Accessories

For complete descriptions go to page 133.

### Square Wave™ TIG 175

#### General

K964-1	Undercarriage
—	Weld Fume Control System

#### TIG

K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K814	Arc Start Switch
K1781-9	PTA-9F Flex Head™ w/ Ultra-Flex Cable TIG Torch Package, 12.5 ft. (3.8 m), 1pc
K1622-1	Twist Mate™ Torch Adapter, PTA-9, -17
KP507	Parts Kit For PTA-9 Series Torches
KP508	Parts Kit For PTA-17 Series Torches
KP2414-1	PTA-9/PTW-20 Gas Lens Parts Kit
—	Cut Length Consumables

### Precision TIG® 225

#### General

K2348-1	Understorage Cart
K2617-1	Dual Cylinder Cart
K2378-1	Canvas Cover
—	Weld Fume Control System

#### Stick

K2374-1	Stick Electrode Holder and Cable
---------	----------------------------------

#### TIG

K2266-1	TIG-Mate™ 17 TIG Torch Starter Kit (air-cooled)
K2267-1	TIG-Mate™ 20 TIG Torch Starter Kit (water-cooled)
K1781-9	PTA-9F Flexible Head w/ Ultra-Flex™ Cable Torch Package, 12.5 ft. (3.8 m), 1pc
KP2414-1	PTA-9/PTW-20 Gas Lens Parts Kit
KP508	Parts Kit For PTA-17 Series Torches
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
K1813-1	Cool Arc® 40 Water Cooler 115/1/50/60
—	Cut Length Consumables

### Precision TIG® 275

#### General

K2621-1	Advanced Control Panel
K1869-1	Undercarriage
K2150-1	Work Clamp and Cable Assembly
—	Weld Fume Control System

#### Stick

K875	Accessory Kit, 150 Amp
K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)

#### TIG

—	Pro-Torch™ Air and Water-Cooled TIG Torches
K2166-3	PTA-9, -17 One Cable Torch Adapter
K2166-2	PTA-9, -17, -26 Two Cable Torch Adapter
K2166-1	PTA-26 One Cable Torch Adapter
K1828-1	Under-Cooler Cart Water Cooler
3100211	Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
—	Cut Length Consumables

### Precision TIG® 375

#### General

K1869-1	Undercarriage
K2150-1	Work Clamp and Cable Assembly
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)

#### TIG

—	Pro-Torch™ Air and Water-Cooled TIG Torches
K2166-3	PTA-9, -17 One Cable Torch Adapter
K2166-2	PTA-9, -17, -26 Two Cable Torch Adapter
K2166-1	PTA-26 One Cable Torch Adapter
K1828-1	Under-Cooler Cart Water Cooler
3100211	Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
—	Cut Length Consumables

### Invertec® V155-S

#### General

K2275-1	Welding Cart (80 cu ft bottle capacity)
K852-25	Twist Mate™ Cable Plug Kit for 6-4 Cable
—	Weld Fume Control System

#### TIG

K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K1782-13	PTA-17FV Flex Head Gas Valve TIG Torch w/ Ultra-Flex™ Cable, 12.5 ft. (3.8 m), 1 pc.
K960-2	Small Twist Mate™ Torch Adapter (w/separate gas)
KP508	Parts Kit for PTA-17 Series Torches
K586-1	Deluxe Adjustable Gas Regulator and Gas Hose Kit
—	Cut Length Consumables

### Invertec® V160-T

#### General

K2275-1	Welding Cart (80 cu ft. bottle capacity)
K520	Utility Cart (150 cu ft. bottle capacity)
K2377-1	Canvas Cover
—	Weld Fume Control System

#### Stick

K2394-1	Stick Electrode Holder, Work Clamp, Cable & Twist Mate™ Set
---------	--

#### TIG

K2266-1	TIG-Mate™ 17 TIG Torch Starter Kit (air-cooled)
K2267-1	TIG-Mate™ 20 TIG Torch Starter Kit (water-cooled)
3100211	Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
K1813-1	Cool Arc® 40 Water Cooler 115/1/50/60
—	Cut Length Consumables

### Invertec® V205-T DC and V205-T AC/DC

#### General

K2275-1	Welding Cart (80 cu ft. bottle capacity)
K520	Utility Cart (150 cu ft. bottle capacity)
K2377-1	Canvas Cover
—	Weld Fume Control System

#### Stick

K2394-1	Stick Electrode Holder, Work Clamp, Cable & Twist Mate™ Set
---------	--

#### TIG

K2266-1	TIG-Mate™ 17 TIG Torch Starter Kit (air-cooled)
K2267-1	TIG-Mate™ 20 TIG Torch Starter Kit (water-cooled)
K870	Foot Amptrol™
K3127-1	Wireless Foot Pedal & Receiver
K3350-1	Wireless Foot Pedal
K3351-1	Wireless Receiver
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
K1813-1	Cool Arc® 40 Water Cooler 115/1/50/60
K1859-2	Water Hose Kit, 25 ft. (5/8 LH CGA to 5/8 LH CGA)
K1781-1	PTA-9 TIG Torch, 12.5 ft. (3.8 m), 1pc
K1782-1	PTA-17 TIG Torch, 12.5 ft. (3.8 m), 1pc
K1622-1	Twist Mate™ Torch Adapter, PTA-9 and -17
K1783-1	PTA-26 TIG Torch, 12.5 ft. (3.8 m), 1pc
K1622-3	Twist Mate™ Torch Adapter, PTA-26
K1784-3	PTW-20 Braided TIG Torch, 12.5 ft. (3.8 m), 3pc
K1622-4	Twist Mate™ Torch Adapter - Water-Cooled
—	Cut Length Consumables

# MIG

## WIRE FEEDER WELDERS

### POWER MIG® – The Professional's Choice!™

- Typical applications include – home, farm, autobody, maintenance or fabrication
- Diamond Core Technology™ delivers a superior arc
- Professional Drive System
- Spool Gun Ready
- Three Year Warranty
- Single Phase Input Power



#### The POWER MIG® Family

Our POWER MIG® wire feeder welders provide the ideal solution for home, farm, auto body, or maintenance applications. Diamond Core Technology™ delivers a superior arc with a wide welding output range.

INPUT POWER : 208-230 >>

INPUT POWER : 120V >>



#### SP-140T

120 Volt Input Wire Welder with Tapped Voltage Control

#### POWER MIG® 140C

Premium 120 Volt Input Wire Welder with Continuous Controls

#### POWER MIG® 180 Dual

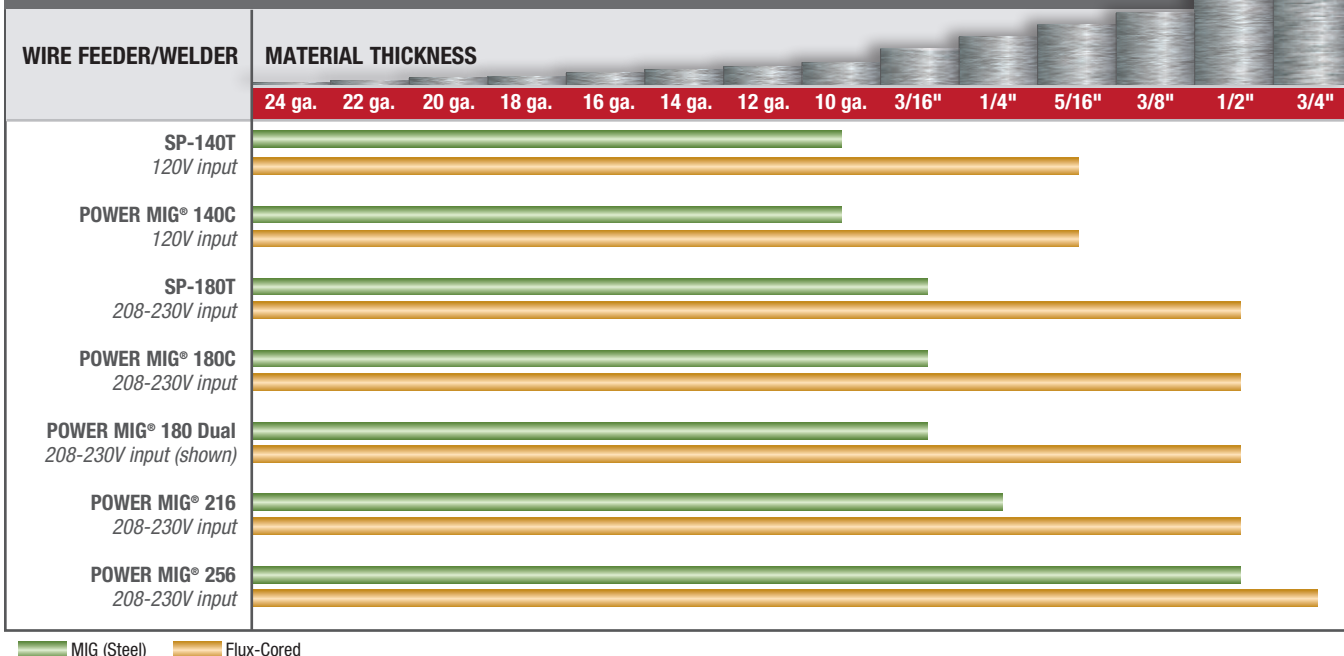
Premium 120 or 230 Volt Input Wire Welder with Continuous Controls



Magnum® PRO Guns and Expendables  
Standard On Wire Feeder Welders.

### Which machine is right for your application?

Use the chart below to check your material thickness and determine which machine is right for you.







**SP-180T**

230 Volt Input Wire Welder with Tapped Voltage Control

**POWER MIG® 180C**

Premium 230 Volt Input Wire Welder with Continuous Controls

**POWER MIG® 216**

The Professional's Choice™ for Autobody and Sheetmetal Welding

**POWER MIG® 256**

The Professional's Choice™ for light industrial, shop fabrication, maintenance or repair work.

**POWER MIG® 350MP**

Stick, TIG, MIG, Flux-Cored and Advanced Process with Power Mode® and Pulse-on-Pulse®

	MODEL	OUTPUT				PROCESS					INPUT		FEATURES							
		Current Range (Amps)	Wire Feed Speed Range ipm (m/min)	Solid Wire Size Range in. (mm)	Cored Wire Size Range in. (mm)	MIG	MIG Pulsed	Flux-Cored	Stick	Touch Start TIG®	Phase	Hertz	Portable	Consumable Storage	Meters	Synergic Control	Push-Pull Model	Diamond Core Technology™	Chopper Technology®	
120 Volt Input	<b>SP-140T</b>	30-140	50-500 (1.3-12.7)	.023-.035 (0.6-0.9)	.030-.035 (0.8-0.9)	●	●				1	60	●							
	<b>POWER MIG® 140C</b>	30-140	50-500 (1.3-12.7)	.023-.035 (0.6-0.9)	.030-.035 (0.8-0.9)	●	●				1	60	●					●		
208-230 Volt Input	<b>SP-180T</b>	30-180	50-500 (1.3-12.7)	.023-.035 (0.6-0.9)	.035-.045 (0.9-1.2)	●	●				1	60	●							
	<b>POWER MIG® 180C</b>	30-180	50-500 (1.3-12.7)	.023-.035 (0.6-0.9)	.030-.045 (0.8-1.2)	●	●				1	60	●					●		
	<b>POWER MIG® 180 Dual</b>	30-140 120V 30-180 230V	50-500 (1.3-12.7)	.023-.035 (0.6-0.9)	.030-.045 (0.8-1.2)	●	●				1	60	●						●	
	<b>POWER MIG® 216</b>	30-250	50-700 (1.3-17.7)	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	●	●				1	50/60	●						●	
	<b>POWER MIG® 256</b>	30-300	50-700 (1.3-17.7)	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	●	●				1	60	●	●					●	
	<b>POWER MIG® 350MP</b>	5-350	50-700 (1.3-17.7)	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	●	●	●	●	●	1	50/60	●	●	●	●	●	●	●	●

KEY: ● Excellent ◐ Good ○ Optional

## Recommended Accessories

140/180 Models



Welding Cart (K2275-1)



Utility Cart (K520)



Canvas Cover (K2377-1)



Spot Timer Kit (K2525-1)



Canvas Accessory Bag (K3071-1)

216/256/350MP Models



Canvas Cover (K2378-1)



Dual Cylinder Mounting Kit (K1702-1)

# SP-140T & SP-180T

## 120 or 208/230 Volt Compact Wire Welders

Choose these great portable welders for project or repair welding in your garage, barn or shop using MIG or self-shielded flux-cored wire welding.

- **Ready to Weld!** Includes mild steel MIG and flux-cored wire spools and regulator. Just add shielding gas for MIG welding (sold separately).
- **Easy to Set** – 5 position tap voltage control and continuous full-range wire feed speed control help you dial in your application.
- **MIG weld** 24 gauge up to 10 gauge with the SP-140T or 3/16 inch (4.8 mm) with the SP-180T in a single pass. Weld up to 5/16 inch (7.9 mm) or 1/2 inch (12.8 mm) steel using self-shielded Innershield® wire (FCAW-S).
- **Spool Gun Ready** – add the optional Magnum® PRO 100SG spool gun for reliable aluminum welding.



**Processes**

- MIG
- Flux-Cored

**Output** CV DC **Input** 1 max 60 Hz

**Unit Includes**

- Magnum® PRO 100L gun 10 ft. (3.0 m)
- Gas and Gasless Nozzles
- Adjustable Gas Regulator & Hose
- .025 in. (0.6 mm) Contact Tips (Qty. 3)
- .035 in. (0.9 mm) Contact Tips (Qty. 3)
- Spindle Adapter, 8 in. (203 mm) Dia. Spools
- .025-.030 in. (0.6-0.7 mm) MIG Drive Roll
- .035 in. (0.9 mm) MIG Drive Roll
- .030-.045 in. (0.7-1.1 mm) Knurled Drive Roll
- Work Clamp & 10 ft. (3.0 m) Cable
- 2 lb. (0.90 kg) Spool of SuperArc® L-56® MIG wire
- 1 lb. (0.45 kg) Spool NR®-211-MP
- Learn-To-Use DVD

**Recommended Accessories**

- K3269-1 Magnum® PRO 100SG Spool Gun
- More accessories at end of section

**Literature**

E7.62 (SP-140T)  
E7.63 (SP-180T)

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
SP-140T	K2688-2	120/1/60	90A/19.5V/20%	20A	30-140 Amps DC 50-500 ipm WFS (1.3-12.7 m/min) Max. OCV: 33V	13.7 x 10.15 x 17.9 (347 x 258 x 454)	54 (24.5)
SP-180T	K2689-2	208/230/1/60	208V: 130A/17V/30% 230V: 130A/20V/30%	20A	30-180 Amps DC 50-500 ipm WFS (1.3-12.7 m/min) Max. OCV: 34V	13.7 x 10.15 x 17.9 (347 x 258 x 454)	64 (29)

# POWER MIG® 140C & 180C

## Premium 120 or 208/230 Volt Wire Welders

Select the POWER MIG® 140 for home projects and repair, sheet metal or autobody work. Step up to the 230 volt POWER MIG® 180C for farm, shop and light fabrication.

- **Exclusive Diamond Core Technology™** delivers an outstanding arc you'll immediately notice:
  - Great arc starts.
  - Wide voltage 'sweet spot' gives you a very forgiving arc.
- **Wide Welding Output Range** – 30-140 amps for the 140C model and 30-180 for the 180C model.
- **MIG weld** 24 gauge up to 10 gauge with the 140C model or 3/16 inch (4.8 mm) with the 180C model in a single pass. Weld up to 5/16 inch (7.9 mm) or 1/2 inch (12.8 mm) steel using self-shielded Innershield® wire.
- **Spool Gun Ready** – add the optional Magnum® PRO 100SG spool gun for reliable aluminum welding.



**Processes**

- MIG
- Flux-Cored

**Output** CV DC **Input** 1 max 60 Hz

**Unit Includes**

- Magnum® PRO 100L Gun, 10 ft. (3.0 m)
- Gas and Gasless Nozzles
- Adjustable Gas Regulator & Hose
- .025 in. (0.6 mm) Contact Tips (Qty. 3)
- .035 in. (0.9 mm) Contact Tips (Qty. 3)
- Spindle Adapter, 8 in. (203 mm) Dia. Spools
- .025-.030 in. (0.6-0.7 mm) MIG Drive Roll
- .035 in. (0.9 mm) MIG Drive Roll
- .030-.045 in. (0.7-1.1 mm) Knurled Drive Roll
- Work Clamp & 10 ft. (3.0 m) Cable
- 2 lb. (0.90 kg) Spool of SuperArc® L-56® Mild Steel MIG Wire
- 1 lb. (0.45 kg) Spool NR®-211-MP
- Learn-To-Use DVD

**Recommended Accessories**

- K3269-1 Magnum® PRO 100SG Spool Gun
- K520 Utility Cart, 150 cu ft. bottle capacity
- K2377-1 Canvas Cover
- K2525-1 Spot Timer Kit
- More accessories at end of section

**Literature**

E7.23 (POWER MIG® 140C)  
E7.24 (POWER MIG® 180C)

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
POWER MIG® 140C	K2471-2	120/1/60	90A/19.5V/20%	20A	30-140 Amps DC 50-500 ipm WFS (1.3-12.7 m/min) Max. OCV: 33V	14 x 10.15 x 18.6 (357 x 258 x 472)	58 (26.3)
POWER MIG® 180C	K2473-2	208/230/1/60	208V: 130A/17V/30% 230V: 130A/20V/30%	20A	30-180 Amps DC 50-500 ipm WFS (1.3-12.7 m/min) Max. OCV: 34V	14 x 10.15 x 18.6 (357 x 258 x 472)	66 (30)

# POWER MIG® 180 Dual

**POWER MIG®. The Professional's Choice!™**

Have it both ways with the POWER MIG® 180 Dual wire welder. With dual 120 or 208/230 volt input power capability, you can use the same machine to weld at home, in the shop or out on the job site. It's a great choice for sheet metal and light autobody work, farm or small shop applications.

- Dual Input Power Capability –**  
 Select 120 volt input power for home and generator-driven environments or choose 208/230 volt input power for shop applications on thicker materials; just change out the input power cable.
- Diamond Core Technology™ –**  
 Delivers a forgiving arc, excellent out-of-position arc action, low spatter and a wide voltage sweet spot at a given wire feed speed for steel, stainless steel and aluminum.
- Spool Gun Ready –** Just remove the standard MIG gun and plug in the economical Magnum® PRO 100SG spool gun (optional) for enhanced aluminum wire feeding performance.



Shown:  
K3018-2  
POWER MIG® 180 Dual

**Processes**

- MIG
- Flux-Cored

**Output** **Input**

**Unit Includes**

- Magnum® PRO 100L gun 10 ft. (3.0 m)
- Gas and Gasless Nozzles
- Adjustable Gas Regulator & Hose
- .025 in. (0.6 mm) Contact Tips (Qty. 3)
- .035 in. (0.9 mm) Contact Tips (Qty. 3)
- Spindle Adapter, 8 in. (203 mm) Dia. Spools
- .025-.030 in. (0.6-0.7 mm) MIG Drive Roll
- .035 in. (0.9 mm) MIG Drive Roll
- .030-.045 in. (0.7-1.1 mm) Knurled Drive Roll
- Work Clamp & 10 ft. (3.0 m) Cable
- 2 lb. (0.90 kg) Spool of SuperArc® L-56® MIG wire
- 1 lb. (0.45 kg) Spool NR®-211-MP
- Learn-To-Use DVD
- Canvas Accessory Bag

**Recommended Accessories**

- K3269-1 Magnum® PRO 100SG Spool Gun
- K2275-1 Welding Cart, 80 cu. ft. bottle capacity
- K520 Utility Cart, 150 cu. ft. bottle capacity
- K2377-1 Canvas Cover
- K2525-1 Spot Timer Kit
- *More accessories at end of section*

**Literature**

E7.28

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	Wire Feed Speed Range	H x W x D inches (mm)	Net Weight lbs. (kg)
POWER MIG® 180 Dual	K3018-2	120/1/60	120V: 90A/19.5V/20%	20A	120V: 30-140 Amps DC, Max. OCV: 33	50-500 ipm (1.3-12.7 m/min.)	14 x 10.15 x 18.6 (357 x 258 x 472)	68 (31)
		208/230/1/60	208V: 130A/17.6V/30% 230V: 130A/20V/30%		230V: 30-180 Amps DC, Max. OCV: 34			



Magnum® PRO 100L  
K3080-1

Magnum® PRO 250L  
K3081-2

Magnum® PRO Curve™ 300  
K29511-2-6-45

# POWER MIG® 216

**POWER MIG®. The Professional's Choice!™**

The POWER MIG® 216 offers the autobody and sheet metal fabrication industries top welding performance with a host of professional features.

- **Diamond Core Technology™** – Delivers a forgiving arc, excellent out-of-position arc action, low spatter and a wide voltage sweet spot for steel, stainless steel or aluminum.
- **Great Value-Adding Features** – Coil Claw™ Cable Management system keeps your workstation organized. Note the convenient top-mounted gun expendables tray and all metal case front.



Shown: K2816-2 POWER MIG® 216

**Processes**

- MIG
- Flux-Cored

**Output**



**Input**



**Unit Includes**

- Magnum® PRO 250L Gun
- Work Clamp and Cable, 10 ft. (3.0 m)
- 230V Input Power Cable w/Plug (208/230V model only)
- Drive Rolls & Guide for Steel
- Adjustable Gas Regulator & Hose

**Recommended Accessories**

- K1702-1 Dual Cylinder Mounting Kit
- K2378-1 Canvas Cover
- K468 Spindle Adapter for 8 inch O.D. Spools
- K3269-1 Magnum® PRO 100SG Spool Gun
- K487-25 Magnum® SG Spool Gun
- K2490-1 Magnum® 250LX™ Spool Gun
- K2703-1 POWER MIG® Spool Gun Adapter
- *More accessories at end of section*

**Literature**

E7.52

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Max. Open Circuit Voltage	Output Range	Wire Feed Speed ipm (m/min)	H x W x D inches (mm)	Net Weight lbs. (kg)
POWER MIG® 216	K2816-2	208/230/1/60 220/1/50	170A/24VDC/60% 216A/22VDC/30%	208V:33A @ 170A/24VDC/60% 208V:40A @ 216A/22VDC/30% 230V:30A @ 170A/24VDC/60% 230V:36A @ 216A/22VDC/30%	36VDC	30-250A	50-700 (1.3-17.8)	32.56 x 19.15 x 39.92 (827 x 487 x 1,014)	206.5 (93.7)

# POWER MIG® 256

**POWER MIG®. The Professional's Choice!™**

The POWER MIG® 256 sets the standard for MIG and flux-cored welding in light industrial job shop fabrication, maintenance or repair work.

- **Diamond Core Technology™** – Delivers a forgiving arc, excellent out-of-position arc stability, low spatter and a wide voltage sweet spot at a given wire feed speed for steel, stainless steel or aluminum.
- **Digital meters** – For set up, meters display your preset voltage and wire feed speed. During welding, actual voltage is displayed.
- **Timer Functions** – 4-step trigger interlock, spot timer, adjustable run-in speed for smoother arc starting, and adjustable burnback time to minimize wire sticking in puddle.
- **Lincoln® Copper Plus™ contact tips** – Larger tip diameter and mass improves heat dissipation to increase tip life.
- **Add a spool gun** – The POWER MIG® 256 is spool gun ready for the premium Magnum® 250LX gun and spool gun capable with the Magnum® SG (requires adapter).
- **Great value-adding features** –
  - Coil Claw™ Cable Management system keeps your workstation organized.
  - Convenient top-mounted gun expendables tray.
  - All metal case front.



Shown: K3068-1 POWER MIG® 256

**Processes**

- MIG
- Flux-Cored

**Output**



**Input**



**Unit Includes**

- Magnum® PRO 250L Gun
- Work Clamp and Cable, 10 ft. (3.0 m)
- 230V Input Power Cable with Plug (208/230V model only)
- Drive Rolls and Guide for Steel
- Adjustable Gas Regulator and Hose

**One-Pak® Package Includes**

- POWER MIG® 256 (K3068-1)
- Magnum® 250LX Spool Gun (K2490-1)
- Dual Cylinder Mounting Kit (K1702-1)
- Extra Regulator (K586-1)

**Recommended Accessories**

- K1702-1 Dual Cylinder Kit
- K2378-1 Canvas Cover
- K487-25 Magnum® SG Spool Gun
- K2490-1 Magnum® 250LX™ Spool Gun
- K2445-1 POWER MIG® SG Spool Gun Control Cable Adapter
- *More accessories at end of section*

**Literature:**

E7.55

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
POWER MIG® 256	K3068-1	208/230/1/60	250A/26V/40%	56/52A <sup>(1)</sup>	30-300 Amps 50-700 ipm WFS (1.3 -17.7 m/min) Max. OCV: 40V	31.8 x 18.9 x 38.8 (808 x 480 x 985)	220 (100) (with gun)
	K3068-2	230/460/575/1/60		50/24/19A			
POWER MIG® 256 One-Pak® w/Spool Gun	K3069-1	208/230/1/60		56/52A <sup>(1)</sup>		—	—

<sup>(1)</sup>Input current is at the rated output with the 115V auxiliary receptacle also drawing 15 amps.

# POWER MIG® 350MP

**POWER MIG®. The Professional's Choice!™**

When you want more than just a MIG machine, the POWER MIG® 350MP is the choice for you. Lincoln Electric's **Chopper Technology®** delivers more welding processes: Stick, TIG, MIG, Flux-cored, and advanced processes such as Power Mode® and Pulse-On-Pulse®.

- **Pulse-on-Pulse®** – Improves cleaning action when welding aluminum and delivers a TIG-like appearance to the MIG weld beads.
- **Synergic control** of voltage and wire feed speed allows you to set weld procedures with one control.
- **Push-Pull or Spool Gun Ready** – A second gas solenoid and other electronics are built-in to drive either a spool gun or push-pull gun.
- **115V auxiliary receptacle** – Powers a grinder or other equipment.
- **Dual Procedure capable** – Select between either two welding procedures or two welding modes.



Shown:  
K2403-2 POWER MIG® 350MP

## Processes

- Stick
- TIG
- MIG
- Pulsed
- Flux-Cored

Output Input

## Unit Includes

- POWER MIG® 350MP
- Magnum® PRO Curve™ 300 Gun, 15 ft. (4.5 m)
- Work Clamp and Cable
- 230V Input Power Cable w/Plug (208/230V model only)
- Drive Rolls & Guide for Steel
- Adjustable Gas Regulator & Hose
- 115V AC Auxiliary Power Receptacle
- Lockable Storage Compartment with Tool Tray

## Recommended Accessories

- K1702-1 Dual Cylinder Kit
- K2378-1 Canvas Cover
- K3356-2 Magnum® PRO AL G225A Air-Cooled Push-Pull Gun, 7-pin, 25 ft. (7.6 m)
- K2704-2 Cougar™ Air-Cooled Push-Pull Gun, 7-pin, 25 ft. (7.6 m)
- K2490-1 Magnum® 250XL™ Spool Gun
- More accessories at end of section

Literature E7.57

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
POWER MIG® 350MP	K2403-2	208/230/460/575/1/50/60	300A/32V/60% <sup>(1)</sup>	72/62/31/25A	5-350 Amps DC 50-700 ipm WFS (1.3 -17.7 m/min) Max. OCV: 67V	31.8 x 18.9 x 38.8 (808 x 408 x 985)	255 (116)
POWER MIG® 350MP Aluminum One-Pak® for Trailer Manufacturing/General Fab	K4023-1						
POWER MIG® 350MP Aluminum One-Pak® for Auto Body Repair	K4023-2						

<sup>(1)</sup>40% on 208V input. Ratings based on 60 Hz operation.

## 3 Ways to Feed Aluminum with the POWER MIG® 350MP

### GOOD

#### Push Gun\*

Good for occasional aluminum work.



#### Magnum® PRO Curve™ Guns

Intended for most .035-.045 inch (0.9-1.1 mm) wire diameter applications in job shops, production or manufacturing for occasional aluminum work.

Request Publication E12.05

### BETTER

#### Spool Gun

Better feeding with integrated 2 lb. spools.



#### Magnum® 250XL™ Spool Gun

280 amps, 60% duty cycle. Feeds .025-3/64 inch (0.6-1.2 mm) diameter aluminum wire on 2 lb. (0.9 kg) spools, with remote wire feed speed control, 25 ft. (7.6 m) cable. Best used in a production environment with 2 lb. (0.9 kg) spools.

Request Publication E12.25

### BEST

#### Push-Pull Gun\*

Best performance for production aluminum welding.



Shown:  
Magnum® PRO AL

#### Magnum® PRO AL and Cougar™ Push-Pull Guns

Magnum® PRO AL gooseneck-style guns for advanced aluminum welding applications. Cougar™ premium semiautomatic push-pull guns have an upright pistol-grip design. Best used in a production environment with larger spools.

Request Publication:  
E12.13 for Magnum® PRO AL Push-Pull Guns  
E12.16 for Cougar™ Push-Pull

\* Requires Aluminum Drive Roll Kit at Power Source

## Accessories

For complete descriptions go to page 133.

### SP-140T and SP-180T

<i>General</i>	
K2275-1	Welding Cart (80 cu. ft. bottle capacity)
K520	Utility Cart (150 cu. ft. bottle capacity)
K2377-1	Canvas Cover
K3071-1	Accessory Bag
K2525-1	Spot Timer Kit
KP2529-1	Drive Roll, .025-.030 in. (0.6-0.8 mm) Smooth
KP2529-2	Drive Roll, .035 in. (0.9 mm) Smooth
KP2529-3	Drive Roll, .030-.045 in. (0.8-1.1 mm) Knurled
—	Weld Fume Control System
<i>Wire Feeder</i>	
K3269-1	Magnum® PRO 100SG Spool Gun
K2528-1	.045 in. (1.1 mm) Innershield® Welding Kit (SP-180T only)

### POWER MIG® 140C, 180C and 180 Dual

<i>General</i>	
K2275-1	Welding Cart (80 cu. ft. bottle capacity)
K520	Utility Cart (150 cu. ft. bottle capacity)
K2377-1	Canvas Cover
K2525-1	Spot Timer Kit
K3071-1	Accessory Bag
KP2529-1	Drive Roll, .025-.030 in. (0.6-0.8 mm) Smooth
KP2529-2	Drive Roll, .035 in. (0.9 mm) Smooth
KP2529-3	Drive Roll, .030-.045 in. (0.8-1.1 mm) Knurled
KP2531-1	Inner Wire Guide, .025-.035 in. (0.6-0.9 mm) Steel
KP2531-2	Inner Wire Guide, .045 in. (1.1 mm) Steel
—	Weld Fume Control System
<i>Wire Feeder</i>	
K3269-1	Magnum® PRO 100SG Spool Gun
K2528-1	.045 in. (1.1 mm) Innershield® Welding Kit (POWER MIG® 180C and 180 Dual only)

### POWER MIG® 216

<i>General</i>	
K2378-1	Canvas Cover
K466-6	Connector Kit – POWER MIG®
K468	8 in. (203.2 mm) O.D. Spool Adapter
K1702-1	Dual Cylinder Mounting Kit
KP1696-030S	Drive Roll Kit, .023-.030 in. (0.6-0.8 mm) Solid Wire
KP1696-035S	Drive Roll Kit, .035 in. (0.9 mm) Solid Wire
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid Wire
KP1696-2	Drive Roll Kit, .040 in. (1.0 mm) Solid Wire
KP1696-045S	Drive Roll Kit, .040-.045 in. (1.0-1.1 mm) Solid Wire
KP1697-035C	Drive Roll Kit, .030-.035 in. (0.8-0.9 mm) Cored Wire
KP1697-045C	Drive Roll Kit, .040-.045 in. (1.0-1.1 mm) Cored Wire
KP1695-3/64A	Drive Roll Kit, 3/64 in. (1.2 mm) Aluminum Wire
—	Weld Fume Control System

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun
K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K2490-1	Magnum® 250LX™ Spool Gun
K2703-1	Adapter Kit for Magnum® SG or Magnum® 250LX™ Spool Gun

### POWER MIG® 256

<i>General</i>	
K1702-1	Dual Cylinder Mounting Kit
K2378-1	Canvas Cover
K466-6	Connector Kit – POWER MIG®
K468	8 in. (203.2 mm) O.D. Spool Adapter
KP1696-030S	Drive Roll Kit, .023-.030 in. (0.6-0.8 mm) Solid Wire
KP1696-035S	Drive Roll Kit, .035 in. (0.9 mm) Solid Wire
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid Wire
KP1696-2	Drive Roll Kit, .040 in. (1.0 mm) Solid Wire
KP1696-045S	Drive Roll Kit, .045 in. (1.1 mm) Solid Wire
KP1697-035C	Drive Roll Kit, .030-.035 in. (0.8-0.9 mm) Cored Wire
KP1697-045C	Drive Roll Kit, .040-.045 in. (1.0-1.1 mm) Cored Wire
KP1695-3/64A	Drive Roll Kit, 3/64 in. (1.2 mm) Aluminum Wire
—	Weld Fume Control System

#### Spool Gun

K2490-1	Magnum® 250LX™ Spool Gun
K2519-1	Control Cable Extension, 25 ft. (7.6 m)
K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K2445-1	Magnum® SG Spool Gun Control Cable Adapter

### POWER MIG® 350MP

<i>General</i>	
KP1696-030S	Drive Roll Kit, .023-.030 in. (0.6-0.8 mm) Solid Wire
KP1696-035S	Drive Roll Kit, .035 in. (0.9 mm) Solid Wire
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid Wire
KP1696-2	Drive Roll Kit, .040 in. (1.0 mm) Solid Wire
KP1696-045S	Drive Roll Kit, .045 in. (1.1 mm) Solid Wire
KP1697-035C	Drive Roll Kit, .030-.035 in. (0.8-0.9 mm) Cored Wire
KP1697-045C	Drive Roll Kit, .040-.045 in. (1.0-1.1 mm) Cored Wire
KP1695-035A	Drive Roll Kit, .035 in. (0.9 mm) Aluminum Wire
KP1695-3/64A	Drive Roll Kit, 3/64 in. (1.2 mm) Aluminum Wire
K1702-1	Dual Cylinder Mounting Kit
K2378-1	Canvas Cover
—	Weld Fume Control System
<i>Stick</i>	
K875	Accessory Kit, 150 Amp
K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
<i>TIG</i>	
—	Pro-Torch™ TIG Torches
KP508	Parts Kit For PTA-17 Series Torches
KP509	Parts Kit For PTW-18 and -26 Series Torches
K870	Foot Amptrol™
K963-3	Hand Amptrol™ (Rotary Track Style)
K814	Arc Start Switch
—	Cut Length Consumables
<i>Wire Feeder</i>	
K489-8	Fast-Mate™ Adapter
<i>Magnum® PRO AL G225A Air-Cooled Push-Pull Guns</i>	
K3355-1	12-pin, 15 ft. (4.5 m)
K3355-2	12-pin, 25 ft. (7.6 m)
K3355-3	12-pin, 35 ft. (10.6 m)
K3355-4	12-pin, 50 ft. (15.2 m)
K3356-1	7-pin, 15 ft. (4.5 m)
K3356-2	7-pin, 25 ft. (7.6 m)
K3356-3	7-pin, 35 ft. (10.6 m)
K3356-4	7-pin, 50 ft. (15.2 m)
<i>Magnum® PRO AL G450W Water-Cooled Push-Pull Guns</i>	
K3357-1	12-pin, 15 ft. (4.5 m)
K3357-2	12-pin, 25 ft. (7.6 m)
K3357-3	12-pin, 35 ft. (10.6 m)
K3357-4	12-pin, 50 ft. (15.2 m)
K3358-1	7-pin, 15 ft. (4.5 m)
K3358-2	7-pin, 25 ft. (7.6 m)
K3358-3	7-pin, 35 ft. (10.6 m)
K3358-4	7-pin, 50 ft. (15.2 m)
K2704-2	Cougar™ Air-Cooled Push-Pull Gun, 7-pin, 25 ft. (7.6 m)
K2704-3	Cougar™ Air-Cooled Push-Pull Gun, 7-pin, 50 ft. (15.2 m)
K468	8 in. (203.2 mm) O.D. Spool Adapter
<i>Spool Gun</i>	
K2490-1	Magnum® 250LX™ Spool Gun
K2519-1	Control Cable Extension, 25 ft. (7.6 m)
K1738-1	Spool Gun Holder



# MIG & FCAW

## INDUSTRIAL WELDERS

- Recommended for industrial job shops and manufacturing applications
- Optimized for CV processes
- Designed for use with a variety of wire feeders
- 100% Duty Cycle

### Idealarc® CV305

Rated 315 Amps @ 100% Duty Cycle for MIG and Flux-Cored welding all day long.

### Idealarc® CV400

Rated 400 Amps @ 100% Duty Cycle for MIG and Flux-Cored welding all day long.



MODEL	OUTPUT		Current Range (Amps)	PROCESS				INPUT		FEATURES		
	Mode	Polarity		MIG	Flux-Cored	Submerged Arc	Arc Gouging	Phase	Hertz	Digital Display	Stackable	7-Yr. Warranty (on Power Rectifier)
<b>Idealarc® CV305</b>	CV	DC	50-400	●	●			3	60	●	●	●
<b>Idealarc® CV400</b>	CV	DC	60-500	●	●		●	3	60		●	●

KEY: ● Excellent   ● Good   ● Optional

# Idealarc® CV305 & CV400

## Dependable High Output Wire Welding

Reliability and exceptional wire welding performance set Lincoln Electric CV series welders apart. Tackle MIG and flux-cored wire welding for fabrication and production in transportation, heavy equipment, structural steel, railroad and furniture.



Shown:  
K2400-1  
Idealarc® CV305

Shown:  
K1346-13  
Idealarc® CV400

### Idealarc® CV305

- **Digital Ammeter/Voltmeter** – view voltage presets.
- **Easy access Twist Mate™** connections on the front of the machine.
- **Two output connectors** allow you to connect to high or low inductance for optimal arc control.
- **Stack three-high.**
- **Compact unit** is 20 lbs. (9.0 kg) lighter and significantly smaller than competitive models.

### Idealarc® CV400

- **Connect wire feeders** via either 14-pin MS-type or terminal strip.
- **115V and 42V** wire feeder auxiliary power with circuit breaker protection.
- **Internal components**, including windings, rectifiers and circuit boards, are coated to protect against moisture and corrosion.
- **Electronic and thermostatic** protection.

### Processes

- MIG
- Flux-Cored

Output **CV DC** Input **3 60**  
Phase Hz

### Idealarc® CV305 Ready-Pak® Package Includes

- CV305 Power Source (K2400-1)
- LF-72 Bench Model (2-Roll) Wire Feeder with standard Wire Reel Stand (K2327-5)
- Control Cable, 10 ft. (3.0 m)
- .035-.045 in. (0.9-1.1 mm) solid wire Drive Roll and Guide Tube Kit
- 15 ft. (4.5 m) Magnum® PRO 350 gun and cable assembly with .035-.045 in. (0.9-1.1 mm) liner
- Work, 15 ft. (4.6 m) and Wire Feeder, 10 ft. (3.0 m) Power Cables Package (K1803-1)
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

### Idealarc® CV400 Ready-Pak® Package (K2439-2) Includes

- CV400 Power Source (K1346-13)
- LF-72 Bench Model, Heavy Duty with Heavy Duty Wire Reel Stand (K2327-6)
- .035-.045 in. (0.9-1.1 mm) Drive Roll and Guide Tube Kit for Solid Wire
- Control Cable, 10 ft. (3.0 m)
- 15 ft. (4.5 m) Magnum® PRO 350 gun and cable assembly with .035-.045 in. (0.9-1.1 mm) liner
- Weld Power Cable, 10 ft. (3.0 m), Qty. 2
- Work Clamp (K910-2)
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

### Literature

- E4.22 (Idealarc® CV305)
- E4.30 (Idealarc® CV400)

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® CV305	K2400-1	208/230/460/3/60	315A/32.6V/100%	52/48/24A	50-400A 7-37V	24.6 x 19.5 x 27.0 (625 x 495 x 686)	300 (136)
	K2400-2	230/460/575/3/60		48/24/19A			
Idealarc® CV305/LF-72 Ready-Pak® Pkg.	K2395-2	208/230/460/3/60		52/48/24A		47.7 x 25.5 x 33.0 (1212 x 648 x 838)	423 (192)
Idealarc® CV400	K1346-22 <sup>(1)</sup>	230/460/575/3/60	400A/36V/100%	77/39/31A 80/40/32A	60-500A 12-42V	27.5 x 22.2 x 32 (699 x 564 x 813)	383 (174)
	K1346-13	230/460/3/60	450A/38V/60%	77/39A			
Idealarc® CV400/LF-72 Ready-Pak® Pkg.	K2439-2			80/40A		42.8 x 22.2 x 32 (1087 x 564 x 813)	475 (215)
Idealarc® CV400/LF-74 Ready-Pak® Pkg.	K2496-2					42.8 x 22.2 x 32 (1087 x 564 x 813)	475 (215)

NOTE: 50 Hertz models also available. <sup>(1)</sup>Made to order.

## Accessories For complete descriptions go to page 124.

### Idealarc® CV305

#### General

- K857 Remote Output Control, 25 ft. (7.6 m)
- K857-1 Remote Output Control, 100 ft. (30 m)
- K864 Remote Control Cable Adapter (required for use of K857 and K857-1)
- K852-70 Twist Mate™ Cable Plug for 1/0-2/0 (50-70 mm<sup>2</sup>) cable
- K852-95 Twist Mate™ Cable Plug for 2/0-3/0 (70-95 mm<sup>2</sup>) cable
- K484<sup>(1)</sup> Jumper Plug Kit
- K874 Undercarriage – Hand moving
- K3019-1 Arc Tracker™
- Weld Fume Control System

#### Wire Feeder

- LF-72 and LF-74, LN-25 PRO

### Idealarc® CV400

#### General

- K857 Remote Output Control, 25 ft. (7.6 m)
  - K857-1 Remote Output Control, 100 ft. (30 m)
  - K864 Remote Control Cable Adapter (required for use of K857 and K857-1)
  - K841 Undercarriage – Hand moving
  - K484<sup>(1)</sup> Jumper Plug Kit
  - K3019-1 Arc Tractor™
  - Weld Fume Control System
- Wire Feeder**
- LF-72 and LF-74, LN-8, LN-9, LN-10 and DH-10, LN-25 PRO, LN-25 PRO Dual Power, FlexFeed™ 74 HT

<sup>(1)</sup>Made to order.





# MULTI-PROCESS WELDERS

- For Heavy Manufacturing and Fabrication
- One Machine For Stick, TIG, Wire Welding and Arc Gouging
- Ruggedly Built For Tough Environments

**Arc Tracker™**  
Portable, Powerful Weld Performance Monitoring.



PERFORMANCE MONITORING

**Invertec® V350 PRO**  
350 Amps @ 60% Duty Cycle.  
Designed Smart. Built Tough.



**FLEXTEC® 450**  
FLEXible TEChnology™  
450 Amps @ 60% Duty Cycle



**FLEXTEC® 650**  
FLEXible TEChnology™  
650 Amps @ 100% Duty Cycle



INVERTER TECHNOLOGY

**Idealarc® DC400**  
400 Amps @ 100 Duty Cycle



**Idealarc® DC600**  
600 Amps @ 100 Duty Cycle for Industrial Manufacturing



RECTIFIER TECHNOLOGY

	MODEL	OUTPUT		Current Range (Amps)	PROCESS						INPUT		FEATURES		
		Mode	Polarity		Stick	TIG	MIG	MIG Pulsed	Flux-Cored	Submerged Arc	Arc Gouge	Phase	Hertz	Stackable	Inverter
Inverter Technology	<b>Invertec® V350 PRO</b>	CC CV	DC	5-425	●	●	●	○	●	●	1/3	50/60		●	
	<b>FLEXTEC® 450</b>	CC CV	DC	5-500	●	●	●		●	●	3	50/60		●	
	<b>FLEXTEC® 650</b>	CC CV	DC	10-815	●	●	●		●	●	3	50/60		●	
Rectifier Technology	<b>Idealarc® DC400</b>	CC CV	DC	60-500	●	●	●		●	●	3	60	●		●
	<b>Idealarc® DC600</b>	CC CV	DC	70-850	●	●	●		●	●	3	60	●		●

KEY: ● Excellent    ◐ Good    ○ Optional

# Invertec® V350 PRO

## Designed Smart. Built Tough.



The multi-process Invertec® V350 PRO is an efficient, lightweight and portable choice for training, fabrication or construction applications. Available in four models: Construction, Factory, Factory (Tweco®) and Advanced Process.

- All input voltages and frequencies are both single and three phase rated – no phase derating necessary on single phase.
- 5-425 amp output range for all recommended processes from DC TIG to arc gouging.
- Input voltage from 208-575V – this one machine is capable of running on virtually any input power supply.
- 50 and 60 Hz operation – can be connected anywhere in the world.
- Touch Start TIG® for contamination-free starts.
- 88% efficiency – low power consumption for energy savings.



Shown: K1728-6 Invertec® V350 PRO (Factory Model)

### Processes

- Stick
- DC TIG
- MIG
- Pulsed MIG (Advanced Process Panel only)
- Flux-Cored
- Gouging

Output Input

### Ready-Pak® Package Includes

- V350 PRO Factory Model (K1728-6)
- LF-72 Heavy Duty Wire Feeder (K2327-6)
- Magnum® PRO 350 Gun & Cable Assembly, 15 ft. (4.6 m)
- Work & Wire Feeder 2/0 Welding Cable Package, 10 ft. (3.0 m)
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)
- Inverter and Wire Feeder Cart (K1764-1)

### Recommended Accessories

- See end of section

Literature E5.91

Product Name	Product Number	Model	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Invertec® V350 PRO	K1728-5	Construction	200-208/230/380-415/	350A/34V/60%	3-Ph: 50/42/28-26/23/18	5-425A Max OCV: 80V DC	14.8 x 13.3 x 27.9 (376 x 338 x 709)	81 (36.7)
	K1728-6	Factory	460/575/1/3/50/60	300A/32V/100%	1-Ph: 94/85/54/42/37			
	K1728-7	Advanced Process	208/230/415/		3-ph: 41-39/36/23-22/19/16			
	K1728-13	Factory (Tweco®)	460/575/1/3/50/60		1-Ph: 76/69/41/36/31			
Invertec® V350 PRO/LF-72 Ready-Pak® Pkg.	K2437-2	Factory				55.2 x 28.5 x 55.5 (1403 x 724 x 1410)	370 (168)	
Invertec® V350 PRO	K1728-12	CE	200-220/380-400/ 415-440/1/3/50/60	350A/34V/60% (3ph) 320A/33V/60% (1ph) 300A/32V/100% (3ph) 275A/31V/100% (1ph)	3-Ph: 48/28-27/26-24 1-Ph: 82/55-50/48-45 3-Ph: 41-37/28-22/22-21 1-Ph: 64/44-43/38-35	14.8 x 13.3 x 27.9 (376 x 338 x 709)	86.5 (37.4)	

# FLEXTEC® 450

## FLEXible TECHNOLOGY™



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.

- **Flexible Multi-Process Capability** – Including stick, Touch Start TIG® (DC), MIG, flux-cored welding and carbon arc gouging with up to a 3/8 inch (9.5 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, Low Power Consumption and Enhanced Portability.
- **VRD® (Voltage Reduction Device™)** reduces OCV (open circuit voltage) when not welding for added safety.
- **Compact, Durable Case** – Tough IP23 enclosure rating for 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.
- **Variable Arc Control** – In stick mode, vary the arc force to obtain a “soft” or “crisp” arc. In CV modes, vary the pinch or inductance to control spatter, fluidity and bead appearance.
- **Desert Duty™ Rated** – Welding outputs are rated for extreme temperature operation up to 55°C (131°F).



Shown: K2882-2 FLEXTEC® 450



### Processes

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

Output Input

### FLEXTEC® 450/LF-72 Heavy Duty Wire Feeder Ready-Pak® Package (K3125-2) Includes

- Flextec™ 450 with VRD® (K2882-2)
- LF-72 Bench Model, Standard Duty (K2327-5)
  - Heavy Duty Wire Reel Stand
  - Drive Roll and Wire Guide Kit .035-.045 in. (0.9-1.1 mm)
  - Control Cable 10 ft. (3.0 m)
- Magnum® PRO Curve™ 400 Ready-Pak®
- 3/0 Welding Cable
- Work Lead Package
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)
- Inverter and Wire Feeder Cart
- Base Mounting Assembly

### Recommended Accessories

- See end of section

### Wire Feeders

FlexFeed™ 74 HT and FlexFeed™ 84, LF-72, LF-74, LN-10, DH-10, Activ8™, LN-25 PRO, LN-25 PRO Dual Power, LN-25 Pipe (115 volt input wire feeders are not supported)

### Literature

E5.95

Product Name	Product Number	Input Power Voltage/Phase/Hz	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 with VRD®	K2882-2	380/460/575/3/50/60	450A/38V/60%	37/27/22A	5-500A	18.8 x 14 x 26.5 (477 x 356 x 673) (machine only)	125 (56.8) (machine only)
FLEXTEC® 450/LF-72 Standard Duty Wire Feeder One-Pak® Pkg.	K2960-2		400A/36V/100%	29/21/17A			
FLEXTEC® 450/LF-72 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3125-2		<b>Desert Duty™ Rated:</b> 340A/34V/100%/55°C				
FLEXTEC® 450/LF-74 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3126-2		375A/35V/60%/55°C 400A/36V/40%/55°C 450A/38V/20%/55°C				

# FLEXTEC® 650

**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.

- **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 1/2 inch (12.7 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.
- **Compact, Durable Case** – Tough IP23 enclosure ensures the FLEXTEC® 650 will withstand extreme field environments.
- **Standard 115 Volt Auxiliary Power** – For grinders, lights, and tools.
- **Full-Featured Remote Control Capability** – Use a foot pedal or hand control to remotely vary output up to 100 ft. (30.5 m) away.



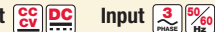
Shown: K3060-1 FLEXTEC® 650



**Processes**

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

**Output**



**FLEXTEC® 650/LF-74 Heavy Duty Wire Feeder Ready-Pak® Package (K3146-1) Includes**

- FLEXTEC® 650
- LF-74 Bench Model, Heavy Duty (K2426-5)
- Drive Roll and Guide Kit
- Magnum® PRO Curve™ 400 Gun
- Gun Connector Kit
- Gun Liner
- Inverter and Wire Feeder Cart
- Weld Power Cable, 10 ft. (3 m)
- Work Lead Package
- Harris® Gas Regulator/Flowmeter and 10 ft. (3 m) Hose Kit

**Recommended Accessories**

- K3059-3 Dual Cylinder Inverter/Wire Feeder Cart
- K857-1 Remote Output Control, 100 ft. (30.5 m)
- K3091-1 Multi-Process Switch
- More accessories at end of section

**Wire Feeders**

FlexFeed™ 74 HT and FlexFeed™ 84, LF-72, LF-74, LN-10, DH-10, Activ8™, LN-25 PRO, LN-25 PRO Dual Power, LN-25 Pipe, LN-7, LN-8, LN-9, NA Series, LT-7

Literature E5.96

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
FLEXTEC® 650	K3060-1	380/460/575/3/50/60	650/44/100% 750/44/60%	3-Ph / 100% Duty Cycle: 57/47/38A	10-815A	21.8 x 16.1 x 29.3 (554 x 409 x 584) (machine only)	165 (74.8) (machine only)
FLEXTEC® 650/LF-72 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3145-1		<b>Desert Duty™ Rated:</b> 600A/44V/100%/55°C 650A/44V/50%/55°C 750A/44V/30%/55°C				
FLEXTEC® 650/LF-74 Heavy Duty Wire Feeder Ready-Pak® Pkg. w/Cart	K3146-1						
FLEXTEC® 650/LF-74 Heavy Duty Wire Feeder One-Pak® Pkg.	K3147-1						
FLEXTEC® 650/LN-10 Bench Model Wire Feeder One-Pak® Pkg.	K3158-1						

# Arc Tracker™

**Portable, Powerful Weld Performance Monitoring**

Connect the Arc Tracker™ between any DC welding power source and the work clamp to access a wide array of data monitoring information regarding your welding arc, including True Energy™. Arc Tracker™ can be used with Production Monitoring™ 2.2 and CheckPoint™.

- **Accurately Monitor Welding Parameters** – Advanced digital controls sample the welding parameters at extremely high speeds.
- **Broad Compatibility** – The Arc Tracker™ is compatible with any DC welding process power source.
- **Simple Plug-n-Play Design** – Connect to any DC welding circuit, attach voltage sense leads and immediately begin monitoring weld performance.
- **Variable Input Voltage** – The Arc Tracker™ auto-senses any input voltage between 120-230 volts AC.
- **Ethernet Connection** – Communicates weld data status to your network via standard Ethernet.
- **Factory Quality System Integration** – Easily calibrated for use in factory quality systems.
- **Powerful Software Tools** – Arc Tracker™ software tools are available at [powerwavesoftware.com](http://powerwavesoftware.com), including Power Wave® Manager<sup>(1)</sup> and Production Monitoring™<sup>(1)</sup>. Visit frequently for updated software and expanded capabilities.

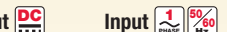


Shown: K3019-1 Arc Tracker™

**Processes**

- DC Arc Welding Circuits Only (10-1000A at 100% Duty Cycle)
- Any DC Polarity Welding Process
- Any Welding Equipment

**Output**



**Unit Includes**

- Detachable input cord 6 ft. (2 m) with NEMA 5-15P plug and an IEC 60320 plug receptacle.
- Polarity specific arc voltage remote sense leads 15 ft. (4.5 m) (Qty. 2).

**Literature**

E5.99

<sup>(1)</sup>The Arc Tracker™ does not support Production Monitoring™ wire feed speed and deposition rate data, consumable package tracking and WeldScore™ functionality.

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
Arc Tracker™	K3019-1 US/International	120-230/1/50/60	NEMA EW1: 1,000/44/100% DC IEC60974-1: 1,000/44/100% DC	0.8A at 120VAC	12 x 9 x 15 (305 x 220x 645)	20 (9)

# Idealarc® DC400 & DC600

## 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.



Shown:  
K1308-25  
Idealarc® DC400

Shown:  
K1288-17  
Idealarc® DC600

### Idealarc® DC400

- **Large, conveniently located controls** make it easy to change between CC (Stick/TIG/arc gouging), CV (MIG/flux-cored) and CV Submerged Arc modes.
- **Arc force control** adjusts 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 MIG/Flux-Cored mode.
- **±10% input line voltage compensation** for maintaining weld consistency.
- **Low profile case** allows stacking machines up to three high to conserve floor space.
- **Seven-year warranty** on power rectifier.

### Idealarc® DC600

- **115V, 15 amps, duplex auxiliary power receptacle** (60Hz models) makes it easy to power lights, grinders and other shop tools at your work station.
- **Full range output voltage control** for easy operation and precise control.
- **Standard analog ammeter and voltmeter.**
- **VRD® (Voltage Reduction Device™)** reduces OCV (open circuit voltage) when not welding for added safety (select models).
- **Mode switch** for selecting desired output characteristics.
- **Windings and rectifiers** protected against moisture and corrosive environments.
- **Flat-top case** with a small footprint can be placed under a workbench or stacked up to 3 high on top of each other.
- **Seven-year warranty** on power rectifier.

### Processes

- Stick
- DC TIG
- MIG
- Flux-Cored
- Submerged Arc (DC600 only)
- Gouging

Output Input

### Recommended Accessories

#### DC400

- K804-1 Multi-Process Switch
- K841 Undercarriage

#### DC600

- K804-1 Multi-Process Switch
- K1611-1 Paralleling Kit<sup>(2)</sup> (for codes above 10500)
- K842 Undercarriage

• *More accessories at end of section*

### Literature

E5.20 (Idealarc® DC400)  
E5.40 (Idealarc® DC600)

<sup>(2)</sup> Cannot be used with VRD® models.

### 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 DC600 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 (available on select models).

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® DC400	K1308-25 w/115V Duplex GFCI	230/460/575/3/60	400A/36V/100% (450A/38V/60%) (500A/40V/50%)	78/39A	60-500A 12-42V	27.5 x 22.3 x 33.1 (698 x 566 x 840)	473 (215)
	K1308-12 w/Multi-Process Switch	230/460/3/60					
Idealarc® DC600	K1288-18 w/Multi-Process Switch	230/460/3/60	600A/44V/100% 680A/44V/60%	108/54A	CV: 70-850A, 13-44V	30.7 x 22.2 x 38 (781 x 565 x 965)	522 (237)
	Idealarc® DC600 w/Meters Idealarc® DC600 VRD®	K1288-17			230/460/575/3/60		
K1288-22							
	K1288-28 <sup>(1)</sup>						

NOTE: 50 Hertz models also available. <sup>(1)</sup> Made to order.

## Accessories

For complete descriptions go to page 133.

### Invertec® V350 PRO

#### General

K1763-1	Advanced Process Panel (Factory and Construction Models Only)
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)
K1803-1	Work and Wire Feeder 2/0 Weld Cable Package, 10 ft. (3.0 m)
K852-70	Twist Mate™ Cable Plug for 1/0-2/0, 50-70 mm <sup>2</sup> cable
K852-95	Twist Mate™ Cable Plug for 2/0-3/0, 70-95 mm <sup>2</sup> cable
K1759-70	Twist Mate™ Receptacle for 1/0-2/0, 50-70 mm <sup>2</sup> cable
K1759-95	Twist Mate™ Receptacle for 2/0-3/0, 70-95 mm <sup>2</sup> cable
K2176-1	Twist Mate™ to Lug Cable Adapter
K2946-1	Tweco® Style Cam-Lock Adapter Plug
K1764-1	Inverter and Wire Feeder Cart
K1702-1	Dual Cylinder Mounting Kit
K867	Universal Adapter Plug <sup>(1)</sup>
K3019-1	Arc Tracker™
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6m)
K857-1	Remote Output Control, 100 ft. (30m)
K864	Remote Control Cable Adapter

#### TIG

K930-2	TIG Module
K936-1	Control Cable (9-pin to 14-pin)
K936-4	Control Cable (9-pin to 115V plug)
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K814	Arc Start™ Switch
K1762-2	Invertec™ TIG Solenoid Kit
K1622-1	Twist Mate™ Torch Adapter, PTA-9, -17
K1622-3	Twist Mate™ Torch Adapter, PTA-26
K1622-4	Twist Mate™ Torch Adapter, Water-Cooled
K960-1	Twist Mate™ Torch Adapter (with separate gas)
K2265-1	TIG-Mate™ 17V TIG Torch Starter Kit (air-cooled)
K2266-1	TIG-Mate™ 17 TIG Torch Starter Kit (air-cooled)
K2267-1	TIG-Mate™ 20 TIG Torch Starter Kit (water-cooled)

#### Wire Feeder

—	FlexFeed™ 74 HT and FlexFeed™ 84, LF-72 and LF-74, LN-10 and DH-10, LN-25 PRO
---	--

### FLEXTEC® 450

#### General

K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)
K3059-2	Inverter and Wire Feeder Cart <sup>(2)</sup>
K3059-3	Dual Cylinder Inverter and Wire Feeder Cart <sup>(2)</sup>
K3019-1	Arc Tracker™
K3056-1	Base Mounting Kit
K3091-1	Multi-Process Switch <sup>(2)</sup>
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30.5 m)

#### TIG

—	Pro-Torch™ TIG Torches
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K814	Arc Start™ Switch

#### Wire Feeder

—	FlexFeed™ 74 HT and FlexFeed™ 84, LF-72, LF-74, LN-10, DH-10, LN-25 PRO, LN-25 PRO Dual Power, LN-25 Pipe
---	---

### FLEXTEC® 650

#### General

K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)
K3059-2	Inverter and Wire Feeder Cart
K3059-3	Dual Cylinder Inverter and Wire Feeder Cart
K3091-1	Multi-Process Switch
K3019-1	Arc Tracker™
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30.5 m)

#### TIG

—	Pro-Torch™ TIG Torches
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K814	Arc Start™ Switch

#### Wire Feeder

—	FlexFeed™ 74 HT and FlexFeed™ 84, LF-72, LF-74, LN-10, DH-10, Activ8™, LN-25 PRO, LN-25 PRO Dual Power, LN-25 Pipe, LN-7, LN-8, LN-9, NA Series, LT-7
---	--

### Idealarc® DC400

#### General

K804-1	Multi-Process Switch
K841	Undercarriage – Hand moving
K2149-1	Work Lead Package
K3019-1	Arc Tracker™
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K864	Remote Control Cable Adapter

#### TIG

K930-2	TIG Module
K936-1	Control Cable (9-pin to 14-pin)
K1798	Adapter Cable – Male 14-pin Control Cable to Terminal Strip
K937-45	Control Cable Extension, 45 ft. (13.7 m)
K939-1	Docking Kit
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K864	Remote Control Cable Adapter
K843 <sup>(1)</sup>	Amptrol™ Adapter Kit
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit

#### Wire Feeder

—	FlexFeed™ 74 HT and FlexFeed™ 84, LF-72 and LF-74, LN-8, LN-9, LN-10 and DH-10, LN-25 PRO, LN-23P
---	---

### Idealarc® DC600

#### General

K804-1	Multi-Process Switch
K842	Undercarriage – Hand moving
K1737-1	All-Terrain Undercarriage
K1611-1 <sup>(1)</sup>	Paralleling Kit (codes above 10500)*
K1897-1	Paralleling Kit (codes below 10500)*
K3019-1	Arc Tracker™
—	Weld Fume Control System

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K864	Remote Control Cable Adapter

#### TIG

K930-2	TIG Module*
K936-1	Control Cable (9-pin to 14-pin)
K1798	Adapter Cable – Male 14-pin Control Cable to Terminal Strip
K937-45	Control Cable Extension, 45 ft. (13.7 m)
K939-1	Docking Kit
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K843 <sup>(1)</sup>	Amptrol™ Adapter Kit
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.2 m)

#### Wire Feeder

—	FlexFeed™ 74 HT and FlexFeed™ 84, LF-72 and LF-74, LN-8, LN-9, LN-10 and DH-10, LN-25 PRO, NA-3 and NA-5, LT-7
---	--

\* Cannot be used with VRD® models.

<sup>(1)</sup> Made to order.

<sup>(2)</sup> Requires K3056-1 Base Mounting Kit.

# ADVANCED PROCESS WELDERS

- A Wide Variety Of Welding Waveforms For Every Application
- Fast, Reliable Digital Communication
- Multi-Process Welding On A Variety Of Materials



INCLUDES STT®  
PROCESS

## Invertec® STT® II

Dedicated Surface Tension Transfer® (STT®) Process Welder. 225 Amps @ 60% Duty Cycle.



## Power Wave® 455M/STT®

Multi-Process including STT®. 450 Amps @ 100% Duty Cycle.



ADD PROCESS  
CAPABILITY

## Power Wave® STT® Module and Advanced Module

Gain outstanding puddle control for critical sheet metal, pipe root pass welding or AC aluminum.



MULTI-PROCESS  
POWER WAVE®

## C300

Portable, Compact  
300 Amps @ 40% Duty Cycle.



## S350

350 Amps @  
40% Duty Cycle.



## 455M

450 Amps @  
100% Duty Cycle.



## S500

450 Amps @  
100% Duty Cycle.



## S700

700 Amps @  
100% Duty Cycle.



	MODEL	OUTPUT		PROCESS					INPUT		FEATURES							
		Mode	Polarity	Current Range (Amps)		Stick	TIG	MIG	MIG-STT®	Tandem MIG®	Pulsed	Flux-Cored	Arc Gauge	Phase	Hertz	Waveform Control Technology®	Arclink® Digital Communication	Inverter Efficiency
STT®	<b>Invertec® STT® II</b>	STT®	DC	0-450 PEAK 0-125 BKGRND					●				3	50,60	●	●		
	<b>Power Wave® 455M/STT®</b>	CC CV	DC	5-570		●	●	●	●		●	●	●	3	50/60	●	●	●
	<b>Power Wave® STT® Module</b>	STT®	DC	N/A					●				N/A			●	●	●
MULTI-PROCESS	<b>Power Wave® C300</b>	CC CV	DC	5-300		●	●	●			●	●		1,3	50/60	●	●	●
	<b>Power Wave® S350</b>	CC CV	DC	5-350		●	●	●	○		●	●	●	1,3	50/60	●	●	●
	<b>Power Wave® 455M</b>	CC CV	DC	5-570		●	●	●			●	●	●	3	50/60	●	●	●
	<b>Power Wave® S500</b>	CC CV	DC	5-550		●	●	●	○		●	●	●	3	50/60	●	●	●
	<b>Power Wave® S700</b>	CC CV	DC	20-900		●	●	●		○	●	●	●	3	50/60	●	●	●

KEY: ● Excellent ◐ Good ○ Optional

# Invertec® STT® II

## Featuring Surface Tension Transfer® (STT®) Process



The Invertec® STT® II power source combines high frequency inverter technology with advanced Waveform Control Technology® to provide a better welding solution than traditional short arc MIG.

- **Controlled penetration and outstanding heat input control**—Ideal for welding joints with open root, gaps, or on thin material with no burnthrough.
- **Reduced spatter and fumes**—Current is controlled to achieve optimal metal transfer.
- **Various shielding gases**—STT® may be used with various gas blends including 100% CO<sub>2</sub> and Argon or Helium blends. Larger diameter wires can typically be used.
- **Good bead control and faster travel speeds**—Can replace TIG (GTAW) in many applications without sacrificing appearance or quality.
- **Background and Tailout Current**—accurately control fine and coarse heat input for reduced distortion and burnthrough as well as proper penetration.
- **Adjustable Hot Start** controls the heat at the start of the weld.



Shown: K1525-1 Invertec® STT® II

**Processes**  
• MIG-STT®

**Output** **Input**

**Unit Includes**

- STT® II Sense Lead Kit, 25 ft. (7.6 m)

**Recommended Accessories**

- K2614-1 LN-25 PRO Dual Power
- K1759-xx Twist Mate™ Cable Receptacles
- K2593-100 Coaxial Power #1 Cable, 100 ft. (30.5 m), 300 amps
- K852-xx Twist Mate™ Welding Cable Plugs
- *More accessories at end of section*

**Literature**  
E4.52

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Invertec® STT® II	K1525-1	208/230/460/3/60	225A/29V/60%	32/30/16A	Peak Current: 0-450A Background Current: 0-125A Max. OCV: 85V	23.2 x 13.2 x 24.4 (589 x 336 x 620)	117 (53)
	K1526-1	200-208/220-230/380-415/440-460/3/50/60	200A/28V/100%	33/30/15/17/16A			
	K1526-2	200/208/380/400/415/3/50/60		36/34/20/19/18A			

# Power Wave® C300

## Portable. Powerful. Compact. One Machine Does it All!



The Power Wave® C300 is an advanced compact multi-process power source with an integrated wire feeder. It's ideal for welding on a wide variety of materials, including aluminum, stainless, and nickel materials – where arc performance is critical.

- **PowerConnect™ Technology (Patent-Pending)** – Automatically adjusts to input power from 200-600V, 50 or 60 Hz, single phase or three phase. Welding output remains constant through the entire input voltage range.
- **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Compact and Durable Case** – IP23 rated to withstand harsh environments.
- **Integrated TIG Torch and Spool Gun Solenoid** – Makes for fast changeovers to TIG welding or spool gun operation.



Shown: K2774-2 Power Wave® C300 Steel Ready-Pak® Pkg.

**Processes**

- Stick
- DC TIG
- Pulsed
- DC TIG
- Pulsed MIG
- MIG
- Flux-Cored

**Output** **Input**

**Steel Ready-Pak® Package (K2774-2) Includes**

- Power Wave® C300 (K2675-2)
- Power Wave® C300 Undercarriage
- Magnum® PRO Curve™ 300 Gun Package
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

**Unit Includes**

- Drive Roll Kit, .035/.045 in. (0.9/1.2 mm)
- Input Cord, 10 ft. (3.0 m)
- Work Lead & Clamp, 10 ft. (3.0 m)

**Recommended Accessories**

- K2734-2 Understorage Cart
- Pro-Torch™ TIG Torches
- K870-2 Foot Amptril™
- K963-4 Hand Amptril™
- *More accessories at end of section*

**Literature**  
E5.100

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® C300	K2675-2	3-Ph 50/60: 208/220-230/380-415/ 460/575	300A/29V/40% 250A/27V/100%	3-Ph/40% Duty Cycle: 30/28/16/14/11A	50-700 (1.27-17.8)	Solid: .023-.045 (0.6-1.2)	18.8 x 14 x 24.8 (478 x 356 x 630)	100 (47.6)
Power Wave® C300 Steel Ready-Pak® Pkg.	K2774-2	1-Ph 50/60: 208/220-230		1-Ph/40% Duty Cycle: 53/48/29A		Cored: .035-.045 (0.9-1.2)	33 x 20 x 42 (838 x 508 x 1067)	180 (81.6)
Power Wave® C300 Educational Ready-Pak® Pkg.	K2774-4							

# Power Wave® 455M & Power Wave® 455M/STT®

Superior Arc Performance. Revolutionary Communication.

- **Waveform Control Technology®** gives you the ability to select the right waveform for each application, enabling patented processes like Pulse-On-Pulse®, Power Mode® and RapidArc®.
- **Choose from over 60 standard welding waveform programs** that offer a broad range of electrode size, type and shielding gas combinations to give you optimal appearance, penetration, beadshape and travel speed for each application.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Push-Pull capability** delivers ultimate aluminum welding with the Power Feed® 10M and Power Feed® 25M wire feeder.
- **Utilizes ArcLink®** – the leading digital communication protocol for welding, making it the best choice for seamless, time critical integration with the wire feeder.



**Processes**

- Stick
- DC TIG
- MIG
- Pulsed
- STT® (455M/STT® only)
- Flux-Cored
- Gouging

Output Input

**Ready-Pak® Pkg. (K2375-1) Includes**

- Power Wave® 455M (K2202-1)
- Power Feed® 10M Bench (K2230-1)
- .040-.045 in. (1.0-1.1 mm) Drive Roll & Guide Tube Kit
- Magnum® 400 Gun Pkg., 15 ft. (4.5 m)
- Work Lead Package
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

**Wire Feeders**

Power Feed® 84, Power Feed® 10M Bench and Boom models, Power Feed® 25M

**Recommended Accessories**

- K1570-1 Dual Cylinder Undercarriage
- More accessories at end of section

Literature: E5.161

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® 455M	K2202-1	208/230/460/575/3/50/60	60Hz: 450A/38V/100% (570A/43V/60%)	60Hz: 58/53/25/22A (82/78/37/31A)	5-570A	26.1 x 19.9 x 32.9 (663 x 505 x 835) (machine only)	286 (130)
Power Wave® 455M/STT®	K2203-1						477 (216)
Power Feed® 10M Ready-Pak®	K2375-1	380/415/3/50/60	60Hz & 50Hz: 400A/36V/100% (500A/40V/60%)	50Hz: 49/45/23/18A (67/61/31/25A)	60Hz & 50Hz: 36/33A (48/44A)		293 (133)
Power Wave® 455M/STT®	K2792-1						549 (249)
Pipefab™ Ready-Pak®	K2202-2	K2203-2					280 (127)
Power Wave® 455M	K2202-2						340 (154)

# Power Wave® S350

Portable, Powerful, Multi-Process.

The multi-process Power Wave® S350 provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs – all in a compact, rugged case.

- **PowerConnect™ Technology (Patent-Pending)** – Automatically adjusts to input power from 200-600V, 50 or 60 Hz, single phase or three phase. Welding output remains constant through the entire input voltage range.
- **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Optional 115V (10A) AC Duplex Auxiliary Power Receptacle** – Patent-pending Surge Blocker™ Technology ensures simultaneous welding performance is not compromised by high starting current devices such as grinders (typically requiring 60A or more peak surge current).
- **Compact and Durable Case** – IP23 rated to withstand harsh environments.
- **Standard Ethernet** – Allows for effortless software upgrades through [www.powerwavesoftware.com](http://www.powerwavesoftware.com).



**Processes**

- Stick
- DC TIG
- Pulsed DC TIG
- MIG
- Pulsed MIG
- Flux-Cored

Output Input

**Base Unit (K2823-3) Includes**

- Input Power Cord, 10 ft. (3.0 m)

**Ready-Pak® Package (K3005-3) Includes**

- Power Wave® S350 (K2823-3)
- Power Feed® 84 Bench Model (K3328-13)
- .035 in. (0.9 mm) and .040-.045 in. (1.0-1.1 mm) Drive Roll & Wire Guide Kits
- Magnum® PRO Curve™ 400 Gun Pkg., 15 ft. (4.5 m)
- Work & Wire Feeder Power Cables Pkg.
- Inverter and Wire Feeder Cart
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

**Wire Feeders**

Power Feed® 84, Power Feed® 10M Bench & Boom models, Power Feed® 25M

Literature: E5.110

Product Name	Product Number	Input Power	Input Current @ Rated Output	Rated Output Current/Voltage/Duty Cycle	Output Range <sup>(3)</sup>	H x W x D inches (mm)	Net Wt. lbs. (kg)
Power Wave® S350	K2823-3	208/230/380-415/460/575/1/3/50/60	3 Ph / 40% Duty Cycle: 39/35/19/17/14 3 Ph / 100% Duty Cycle: 31/28/15/14/11 1 Ph / 40% Duty Cycle: 60/67 <sup>(1)</sup> /NA/NA/NA 1 Ph / 100% Duty Cycle: 60/53/NA/NA/NA	GMAW: 350A/31.5V/40% <sup>(2)</sup> GMAW: 300A/29V/100% SMAW: 325A/33V/40% <sup>2</sup> SMAW: 250A/30V/100% GTAW-DC: 350A/24V/40% GTAW-DC: 300A/22V/100%	5-350A	20.40 x 14 x 24.80 (518 x 356 x 630)	85 (38.6)
Power Wave® S350 Ready-Pak® (Steel)	K3005-3						450 (204.1)

<sup>(1)</sup> Based on the U.S. National Electrical Code <sup>(2)</sup> 230 Volt/1 Phase inputs, the peak rating is at 30% duty cycle, except for GTAW. <sup>(3)</sup> On 208 Volt inputs, the maximum output is limited to 300 amps.



# Power Wave® Advanced Module

## Expand Your Welding Capabilities

The Power Wave® Advanced Module increases flexibility by expanding your welding capabilities. The module has alternating current (AC) welding capability to run aluminum processes. With the module, you'll have the ability to perform several welding processes with AC advanced waveform control – shielded metal arc, metal inert gas (MIG), pulsed MIG, tungsten electrode inert gas (TIG) and Surface Tension Transfer® (STT®).

- **The Power Wave® Advanced Module** – Provides multi-process reverse polarity (DC+), straight polarity (DC-), AC, high frequency TIG and STT® functionality.
- **Integrated Control Cables** – Provides easy connection to compatible Power Wave® models.
- **Quick Lock Mounting System** – Provides a way to safely secure the module to the power source.
- **Ingress Protection (IP23) Safety** – Provides use in outdoor applications.
  - Protects against the entry of medium sized foreign bodies greater than 12 mm in diameter, along with spray water from any direction up to 60° from the vertical.
- **ArcLink® Digital Communications** – Trades status and identification information while receiving high-speed, synchronized switching command from the power source.
- **Intelligent Protection** – Prevents potential damage caused by misconnection and voltage transients.
- **Fan** – Synchronizes operation with the host power source.



Shown: K2912-1  
Power Wave® Advanced Module

**Processes**

- GMAW-STT®
- SMAW
- GMAW
- GMAW-P
- GTAW

Output Input

**Unit Includes**

- Power Source Output Pigtail Adapter Cable (Tweco®-style)
- 25 ft. (7.6 m) Remote Voltage Sense Lead
- ArcLink® Output Receptacle
- Differential Input and Output (Sync Tandem Output)
- Shielding Gas Input

**Literature**

E5.191

Product Name	Product Number	Input Voltage	Rated Output <sup>(1)</sup> Current/Voltage/Duty Cycle	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® Advanced Module	K2912-1	40 VDC	100% Duty Cycle: 300A @ 32V 40% Duty Cycle: 350A @ 34V Peak (Max.): 600A	11.5 x 14 x 25 (292.1 x 355.6 x 635)	70.5 (32)

<sup>(1)</sup> Host welding power source will be limited to these outputs.

# Power Wave® STT® Module

## Add STT® Process Capability



Add STT® (Surface Tension Transfer®) process capability to any compatible Power Wave® S-Series and R-Series power source to gain outstanding puddle control for critical sheet metal or pipe root pass welding.

- **Exceptional Arc Control** - Outstanding burnthrough control on thin metal or critical pipe welding.
- **UltimArc™** - In synergic STT® modes, it dynamically and simultaneously controls all heat input parameters together, including peak, background and tailout currents. The result is easy procedure setting for the operator.
- **Modular Design** - Allows easy connection and fast digital ArcLink® communication with compatible S-Series Power Wave® power sources, Power Feed® wire feeders, and water coolers. Add STT® capability without having to purchase a second power source.



Shown: K2902-1  
US/International Model

**Processes**

- GMAW-STT®

Output Input

**U.S./International Model**

**(K2902-1) Includes**

- Power Source Output Pigtail Adapter Cable (Tweco®-style)
- Remote Voltage Sense Lead, 25 ft. (3.7 m)

**Literature**

E5.190

Product Name	Product Number	Input Voltage	Rated Output <sup>(1)</sup> Current/Voltage/Duty Cycle	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® STT® Module	K2902-1 US/International	40V DC	100% Duty Cycle: 450A 60% Duty Cycle: 500A 40% Duty Cycle: 550A Peak (MAX.): 750A	11.5 x 14 x 24.8 (292 x 356 x 630)	47 (21.3)
	K2921-1 CE Model				

<sup>(1)</sup> Dependent on host welding power source output.

# Power Wave® S500

## Powerful Multi-Process Capability.

The multi-process Power Wave® S500 provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs.

- **PowerConnect™ Technology (Patent-Pending)** – Automatically adjusts to input power from 200-600V, 50 or 60 Hz, single phase or three phase. Welding output remains constant through the entire input voltage range.
- **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Standard 115V (10A) AC Duplex Auxiliary Power Receptacle** – Features patent-pending Surge Blocker™ Technology to ensure simultaneous welding performance is not compromised by high starting current devices such as grinders (typically requiring 60A or more peak surge current).
- **Compact and Durable Case** – IP23 rated to withstand harsh environments.



Shown:  
K2904-1 Power Wave® S500

### Processes

- Stick
- DC TIG
- Pulsed DC TIG
- MIG
- Pulsed MIG
- Flux-Cored

### Output



### Ready-Pak® Pkg. (K3187-2) Includes

- Power Wave® S500 (K2904-1)
- Power Feed® 84 Bench Model (K3328-13)
- Magnum® PRO Curve 400 Gun Pkg., 15 ft. (4.5 m)
- .040-.045 (1.0 - 1.1 mm) Drive Roll & Wire Guide Kit
- Work Lead Package
- Inverter and Wire Feeder Cart
- Harris® Gas Regulator/Flowmeter & 10 ft. (3.0 m) Hose Kit (3100211)

### One-Pak® Pkg. (K3186-2) Includes

Everything listed in the Ready-Pak® Pkg. (K3187-2), except for the Inverter and Wire Feeder Cart

### Wire Feeders

Power Feed® 84, Power Feed® 10M Bench and Boom models, Power Feed® 25M

### Recommended Accessories

- Accessories at end of section

Literature E5.115

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® S500	K2904-1	208/230/380-415/ 460/575/3/50/60	GMAW: 550A/41.5V/40% GMAW: 450A/36.5V/100% SMAW: 550A/42V/40% SMAW: 450A/38V/100% GTAW-DC: 550A/32V/40% GTAW-DC: 450A/28V/100%	3-Ph / 40% Duty Cycle: 81/73/41/37/29A 3-Ph / 100% Duty Cycle: 60/54/31/27/21A	5-550A	22.5 x 14 x 24.8 (571 x 355 x 630)	150 (68)
Power Wave® S500/ Power Feed® 84 Ready-Pak® Pkg.	K3187-2					51.7 x 34.4 x 53.4 (1313 x 874 x 1356)	376 (171)
Power Wave® S500/ Power Feed® 84 One-Pak®	K3186-2					—	—

# Power Wave® S700

## Flexible Configuration With Endless Possibilities.

Choose the Power Wave® S700 model for high amperage, high duty cycle applications in the heavy equipment, transportation and other fabrication industries. Recommended for 1/16 in. (1.6 mm) wire diameter and up, it can be used in semiautomatic, mechanized automation or robotic environments.

- **iARC™ High Speed Digital Controls** – iARC™ (Intelligent Architecture for Regulation and Control) digital welding controls are more than 10 times faster than the previous generation, with 128 times more RAM, and 8 times more flash memory.
- **Coaxial Transformer Technology™** – Eliminates inefficiency and power loss.
- **Rugged Reliability** – Tested under severe conditions to ensure proper operation in the harshest environments.
- **True Energy™** – Get easy, accurate heat input calculations.
- **CheckPoint™ and Production Monitoring™ 2.2** – Advanced weld data collection and monitoring tools to analyze welding operations and processes.



Shown:  
K3279-1  
Power Wave® S700

### Processes

- Stick
- TIG
- MIG
- Pulsed MIG
- Flux-Cored,
- Tandem MIG®
- Carbon Arc Gouging

### Output



### Recommended Accessories

- K2444-4 CE Filter
- K586-1 Deluxe Adjustable Gas Regulator and Hose Kit
- K1811-100 Work Voltage Sense Lead Kit, 100 ft. (30.5 m)
- More accessories at end of section

### Wire Feeders

Power Feed® 84, Power Feed® 10M Bench & Boom Models, Power Feed® 25M, Power Feed® 10R, AutoDrive® 19, AutoDrive® 19 Tandem, AutoDrive® 4R220

### Literature

E5.120

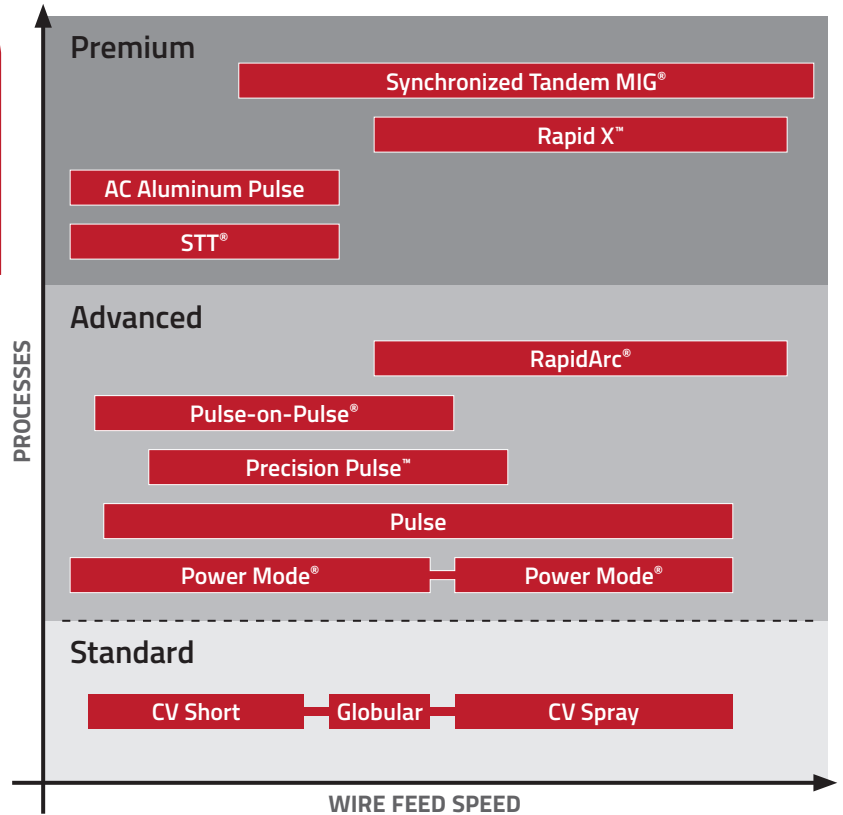
Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® S700	K3279-1 <sup>(1)</sup>	380-415/440-460/ 500/575/3/50/60	700/44/100% (900A/44/60%)	55/46/42/38A (74/60/56/49A)	20-900A	30.1 x 19.1 x 36.7 (765 x 485 x 932)	385 (175)

<sup>(1)</sup> Internal filler is required to meet CE conducted emission requirements. K2444-4 CE Filter must be used with K3279-1.

LINCOLN ELECTRIC

# Advanced MIG (GMAW) Processes

Your local Lincoln Electric distributor and Lincoln Electric Technical Sales Representative, backed by our Applications Engineering Department, can help you select the advanced process and equipment that can improve your results. Request a demo to determine if we can help reduce costs, enhance quality or increase productivity in your operations.



Synchronized Tandem MIG®	<b>Steel :</b> Synchronized Tandem MIG® overcomes deposition rate limitations of a single wire by using two wires and specific waveforms. The result is deposition rates nearly double rates possible with a single wire as well as faster travel speeds.	Power Wave® S700 Power Wave® S500 Power Wave® S350 Power Wave® R500 Power Wave® R350
Rapid X™	<b>Steel &amp; Stainless :</b> Rapid X™ is a premium MIG pulse mode designed to deliver higher travels speeds and extremely low spatter levels with a short arc length.	Power Wave® S500/Digital STT® Power Wave® S350/Digital STT® Power Wave® R500/Digital STT® Power Wave® R350/Digital STT®
AC Aluminum Pulse	<b>Aluminum :</b> With the help of the Power Wave® Advanced Module, GMAW aluminum welding results can be improved over traditional DC positive aluminum MIG welding. By switching the polarity of the arc, heat input is reduced and deposition rates are enhanced.	Power Wave® S500 w/Advanced Module Power Wave® S350 w/Advanced Module
STT®	<b>Steel, Stainless &amp; High Nickel :</b> This precision MIG short arc mode delivers premium and consistent root pass results on pipe with low reject rates and excellent gap bridging capabilities. STT® can also be used to reduce spatter and control heat input on sheet metal applications.	Power Wave® S350/ Digital STT® Power Wave® R350/ Digital STT® Invertec® STT® II Power Wave® 455M/STT®
RapidArc®	<b>Steel &amp; Stainless :</b> RapidArc® is an accelerated MIG pulse mode with a short arc compared to pulse and CV-spray for high travel speed applications.	Power Wave® C300 Power Wave® S700 Power Wave® S500 Power Wave® S350 Power Wave® R500 Power Wave® R350 Power Wave® 455M Power Wave® 355M Power Wave® i400 Power Wave® 455R
Pulse-on-Pulse®	<b>Aluminum :</b> This arc modulation MIG pulse mode can deliver a TIG (GTAW)-like bead appearance.	
Precision Pulse™	<b>Steel &amp; Stainless :</b> This enhanced MIG pulse mode features a tight, focused arc for fast vertical up welding and outstanding out-of-position puddle control.	
Pulse	<b>Steel, Stainless, Aluminum &amp; more :</b> Traditional MIG pulse mode uses a pulse for the metal transfer, which avoids a short and allows for a wide operating range, characterized by low to high wire feed speed, many different materials and virtually no spatter.	
Power Mode®	<b>Steel, Stainless &amp; Aluminum :</b> This enhanced MIG mode can deliver excellent arc stability with reduced spatter at high travels speeds, resulting from an extended short arc range at higher wire feed speed procedures. It also yields a tight and stable arc in spray transfer.	
CV	<b>Steel :</b> CV is the conventional mode for MIG welding. This general purpose MIG welding mode uses constant voltage for short arc, globular and spray transfer.	Any CV MIG-Ready Power Source

# Power Wave Software Solutions

View the Entire Welding Operation



## Power Wave Manager

Combines all the information associated with a welding operation into one, simple interface.



## Weld Sequencer

Simplifies large, complicated assemblies by instructing the operator step-by-step.



## CheckPoint™

Stores data in the cloud and accesses it on almost any device.



## Production Monitoring™ 2.2

Provides a wide array of functionality to help increase productivity.



## WeldScore™

Integrates a weld quality system that increases operational efficiency.



## www.PowerWaveSoftware.com

Upgrade your Power Wave® power source software for FREE and get access to the best welding solutions in the industry.

### Power Wave® Software Allows You To:

- Manage - monitor welding operations across the world in multiple languages.
- Analyze - review welding information in real time.
- Control Cost - track welds and wire consumption.
- Process Control - create unique names and set welding limits for each application.
- Adjust - change welding variable limits.

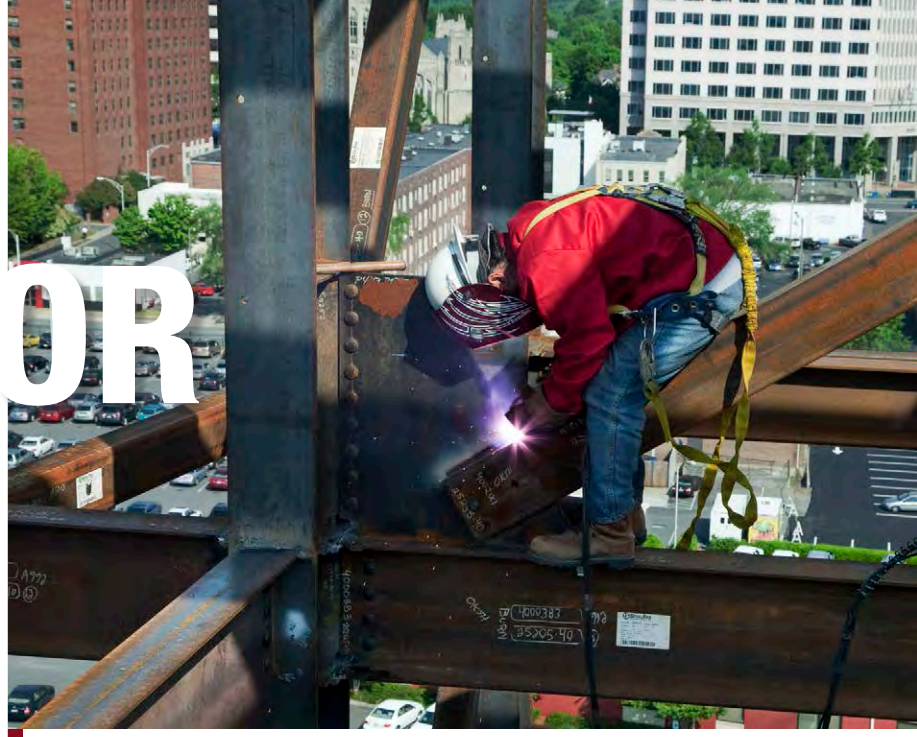
### Power Wave® Software Can:

- Increase productivity and product quality
- Reduce operational costs
- Costs you nothing!





# MULTI-OPERATOR WELDING SYSTEMS



- Great For Field or Shop Applications
- Multiple Arcs
- Simultaneous Welding with a Number of Operators

MULTI-ARC SYSTEMS

## Multi-Weld™ 350

Connect Several DC+ Welders to One Power Supply



POWER SOURCE RACK SYSTEMS

## Invertec® V275-S

Compact Stick/TIG Welding. Select 4 or 8 Pack.

## Invertec® V350 PRO

Compact Multi-Process Welding. Select 4 or 6 Pack.

## Power Wave® S350

Compact Advanced Process Welding. 4 Pack Only.

## FLEXTEC™ 450

Compact Multi-Process Welding. Select 4 or 6 Pack.

## FLEXTEC™ 650

Compact, Powerful Multi-Process Welding. 4 Pack Only.



MODEL

OUTPUT

PROCESS

INPUT

FEATURES

Mode

Polarity

Current Range (Amps)

Stick

TIG

MIG

Pulsed

Flux-Cored

Arc Gauge

Phase

Hertz

DC+ Welding Only

Waveform Control Technology®

Touch-Start TIG®

Meets National Electrical Code

One Disconnect Switch

IP23 Rated

MULTI-ARC

RACKS

Multi-Weld™ 350

CC  
CV

DC+  
only

30-350

●

●

●

●

●

●

—

—

●

Invertec® V275-S

CC  
CV

DC

5-275

●

●

●

○

●

●

3

50,60

●

Invertec® V350 PRO

CC  
CV

DC

5-425

●

●

●

○

●

●

3

50/60

●

Power Wave® S350

CC  
CV

DC

5-350

●

●

●

●

●

●

3

50/60

●

FLEXTEC™ 450

CC  
CV

DC

10-500

●

●

●

●

●

●

3

50/60

●

FLEXTEC™ 650

CC  
CV

DC

10-815

●

●

●

●

●

●

3

50/60

●

KEY: ● Excellent ● Good ● Optional

# Multi-Weld™ 350



## Connect Several DC+ Welders to One Power Supply

The Multi-Weld™ 350 system offers a cleaner, safer job site, and allows operators to have high performance welding control right where they need it – at the arc.

- **Independent arcs.** Starting or stopping one Multi-Weld™ doesn't affect the welding of the others.
- **The Multi-Weld™ 350 is capable of continuous operation** at 350 amps in 122°F (50°C) air temperature.
- **No control cables are needed.** Single weld cable output from the power source to one or several Multi-Weld™ 350s.
- **Controls are located close to the operator** for quick access.
- **High efficiency design** uses less than half the power of other grid systems.
- **Chopper Technology®** for quality welds with instant control of the arc for superior welding results.
- **Additional stick welding controls** include hot start, arc force, and electrode type selection (AWS E7018 & E6010).



Shown: K1735-1 Multi-Weld™ 350

**Processes (DC+ only)**

- Stick
- MIG
- Flux-Cored
- Gouging

**Output** **Input**

**Recommended Accessories**

- K1736-1 Distribution Box
- K852-70 Twist Mate™ Welding Cable Connectors
- K1759-70 Twist Mate™ Female Plug
- K857 Remote Output Control
- *More accessories at end of section*

**Power Sources**

Idealarc® DC1000, Idealarc® DC1500, SAE-400®, SAE-500®, Vantage® 500

**Wire Feeders**

LN-25 PRO

**Literature**

E5.302

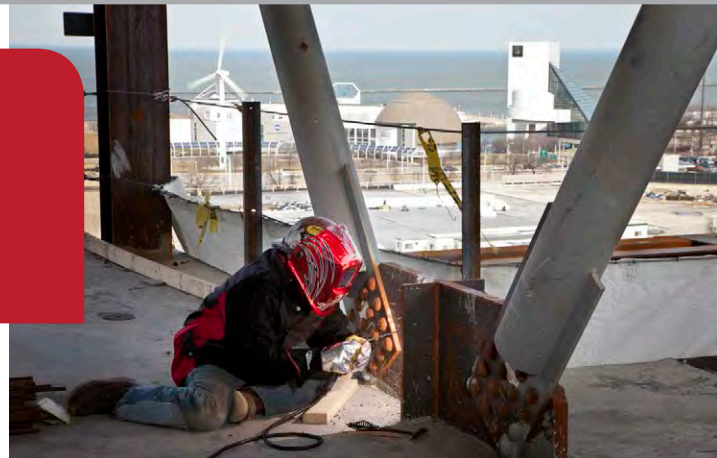
Product Name	Product Number	Input Voltage	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Multi-Weld™ 350	K1735-1	80V DC	350A/34V/100% (DC+ only output)	165A	15-40 Volts 30-350 Amps Max. OCV: 76V	11.6 x 10 x 21.5 (295 x 254 x 546)	59 (27)

# Rack It Up!

## Inverter Rack Systems

Industrial Grade Solutions for Construction and Shipbuilding.

- Compact Multi-Process Welding Power Sources
- Power sources have IP23S or IP23 enclosure rating – will withstand extreme field environments
- Single Power Drop Connection
- Easily Moved Around the Job Site



K2666-2 Invertec® V275-S 8-Pack Inverter Rack (K2666-1 4-Pack Available)



K2667-2 Invertec® V350 PRO 6-Pack Inverter Rack (K2667-1 4-Pack Available)



K2956-2 FLEXTEC™ 450 4-Pack Inverter Rack shown with optional K2665-1 Caster Kit (K2957-2 6-Pack Available)



K3144-1 FLEXTEC™ 650 4-Pack Inverter Rack

# Inverter Racks

Featuring Invertec® V275-S, V350 PRO, Power Wave® S350, or FLEXTEC™ 450 and 650 Power Sources



Lincoln Electric's rack systems are ideal for grouping several inverter power sources in a portable industrial-grade package. These inverter racks are constructed of heavy gauge square tubular steel to ensure long life, yet maintain an extremely compact size.

- **One easy connection** allows power sources to be connected with one primary power drop.
- **Power sources are factory installed** in the rack and wired to the main power distribution panel.
- **Entire system meets National Electrical Code (NEC).** Compare the best in class rated output and wide amperage range.
- **Individual fuses** provide overcurrent protection for each power source.
- **Two overhead lifting eyes, two fork lift slots, and four heavy duty optional casters** provide ease of portability.
- **FLEXTEC™ 450 and 650 power sources are IP23 rated.**
- **Invertec® V275-S and Invertec® V350 PRO:**
  - Standard length input cable ensures the power sources can be placed in any position on the rack.
  - Units have Tweco® output connections.
  - Units have a 200 amp, 600 volt, 3-phase disconnect switch.
  - Units are IP23S rated.



Shown: K2957-1 FLEXTEC™ 450 Tweco® 6-Pack Rack with optional Caster Kit

**Processes:**

**Invertec® V275-S**

- Stick
- TIG
- Gouging

Output Input

**Invertec® V350 PRO**

- Stick
- TIG
- MIG
- Flux-Cored
- Gouging

Output Input

**Power Wave® S350**

- Stick
- DC TIG
- Pulsed DC TIG
- MIG
- Pulsed MIG
- Flux-Cored

Output Input

**FLEXTEC™ 450 and 650**

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

Output Input

**Recommended Accessories**

- K2665-1 Caster Kit

**Literature**

E5.92

Product Name	Product Number	Rack Input Power <sup>(1)</sup>	Rated Output Current/Voltage/Duty Cycle <sup>(2)</sup>	Rack Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
4-Pack Rack Invertec® V275-S	K2666-1	208/230/460/575/3/60	275A/31V/35%	96/89/46/39A	5-275A	60.0 x 38.0 x 33.5 (1524 x 965 x 851)	483 (219)
		220/380/400/415/440/3/50	250A/30V/35%	89/53/53/50/46A			
8-Pack Rack Invertec® V275-S	K2666-2	208/230/460/575/3/60	275A/31V/35%	161/149/77/65A	5-275A	60.0 x 59.0 x 33.5 (1524 x 1499 x 851)	986 (447)
		220/380/400/415/440/3/50	250A/30V/35%	149/89/89/83/77A			
4-Pack Rack Invertec® V350 PRO	K2667-1	208/230/380-415/460/575/3/50/60	350A/34V/60%	138/128/78/67/57A	5-425A	60.0 x 44.5 x 33.5 (1524 x 1130 x 851)	796 (361)
				185/171/104/90/76A			
6-Pack Rack Invertec® V350 PRO	K2667-2					60.0 x 59.0 x 33.5 (1524 x 1499 x 851)	1039 (471)
4-Pack Rack Power Wave® S350	K3009-1	208/230/380-415/460/575/3/50/60	350A/31.5V/40%	57/50/39A	5-350A	67.7 x 37.5 x 33 (1719 x 952 x 838)	1408 (640)
4-Pack Rack FLEXTEC™ 450	K2956-2	380/460/575/3/50/60	450A/38V/60% 400A/36V/100%	103/75/61A	5-500A	70.25 x 37.5 x 33.0 (1784 x 952 x 838)	800 (363)
				138/100/81A			
6-Pack Rack FLEXTEC™ 450	K2957-2					70.25 x 49.5 x 33.0 (1784 x 1257 x 838)	1100 (499)
4-Pack Rack FLEXTEC™ 650	K3144-1	380/460/575/3/50/60	650A/44V/100% 750A/44V/60%	202/167/105A	10-815A	67.7 x 37.5 x 33 (1719 x 952 x 838)	2112 (958)

<sup>(1)</sup>Fused for 380/460/575/3/50/60 VAC operation. For 230 or 208 VAC operation, primary fuses must be changed. <sup>(2)</sup>Based on a 10 minute period. Output is for each individual machine. (Tweco® is a registered trademark of Thermadyne®)

## Accessories

For complete descriptions go to page 133.

### Multi-Weld™ 350

- General*
- K1736-1 Distribution Box
  - K852-70 Twist Mate™ Cable Plug for 1/0-2/0, 50-70 mm<sup>2</sup> cable
  - K852-95 Twist Mate™ Cable Plug for 2/0-3/0, 70-95 mm<sup>2</sup> cable
  - K1759-70 Twist Mate™ Receptacle for 1/0-2/0, 50-70 mm<sup>2</sup> cable
  - K1759-95 Twist Mate™ Receptacle for 2/0-3/0, 70-95 mm<sup>2</sup> cable

### Multi-Weld™ 350, con't.

- General, con't.*
- K2946-1 Tweco® Style Cam-Lock Adapter Plug
  - K857 Remote Output Control, 25 ft. (7.6 m)
  - K857-1 Remote Output Control, 100 ft. (30 m)
  - Weld Fume Control System
- Power Source*
- Idealarc® DC1000, Idealarc® DC1500, SAE-400®, SAE-500®, Vantage® 500
- Wire Feeder*
- K2613-1 LN-25 PRO Wire Feeder

### Inverter Racks

- General*
- K2665-1 Caster Kit





# ENGINE DRIVES

## COMMERCIAL

- For Farm, Contractors, and Maintenance
- Outstanding Arc For Stick, TIG and Wire Welding
- Plenty of AC Generator Power
- Rugged Reliability



### Engine Drive Overview

Our commercial line of engine drives provide diverse welding capabilities along with the convenience of portable generator power. Models are available with gas, diesel, or LPG engines.

BULLDOG®/OUTBACK® >>



#### Bulldog® 5500

Portable AC Welder / AC Generator

#### Outback® 145

Smooth DC Welding / AC Generator

#### Outback® 185

Weld Thicker Material Using DC Welding / AC Generator

#### Key Reasons To Buy

Basic AC Stick Welder and AC Generator

Step up to DC welding performance

More DC welding output and AC generator power

## Selecting an Engine Driven Welder. Ask yourself these questions:

1. Occasional welding or frequent use?  
Outback® welders produce enough amperage for thin materials. Step up to Ranger® models for a wider range of materials and heavy commercial use.
2. Are you most comfortable with one arc welding process? Do you require the ability to handle multiple processes? Stick, TIG, wire welding? If you know you only require stick welding, you can save on purchase costs. However, if you need TIG and wire welding flexibility, look to our multi-process Ranger® models.
3. What type of material will be welded? Steel? Stainless? Aluminum?  
Chopper Technology® delivers an outstanding DC arc for most steel and stainless work, and spool gun work on aluminum. If you intend to TIG weld on aluminum, you'll need AC welding capability.
4. What is the range of material thickness you plan to tackle?  
Generally, you will need up to 300 amps to weld with 3/16 inch (4.8 mm) diameter stick electrode or 5/64 inch (2.0 mm) self-shielded wire. Up to 150 amps is needed to weld with 1/8 inch (3.2 mm) stick electrode.
5. Do you have specific fuel requirements? Gasoline? Diesel? LPG?  
Gasoline is most common, but some buyers prefer diesel to match the fuel in their trucks. Some environments require LPG when gasoline or diesel emissions are not acceptable.
6. How much AC generator power do you need?  
Check the required starting watts of the tools you plan to use. Outback® models generate approximately 4,000 to 5,000 watts while Ranger® models generate about twice as much AC power.

## Recommended ACCESSORIES

BULLDOG® /  
OUTBACK®



Undercarriage  
(K2722-1)



Canvas Cover  
(K2804-1)



Lift Bail Kit  
(K2819-1)

RANGER® >>



**Ranger® 225**

225 Amps DC  
Stick Welding @  
40% Duty Cycle  
Plus CV Wire Welding

DC Stick and  
Wire Welding;  
Economical  
Solution

**Ranger® 250 GXT**

250 Amps AC/DC @  
100% Duty Cycle

AC/DC Stick Welding;  
Excellent AC TIG  
(with TIG Module  
accessory)

**Ranger® 305 G and  
Ranger® 305 G EFI**

300 Amps for more  
DC Stick / Pipe /  
Touch Start TIG® / Wire  
Welding / AC Generator.  
Gasoline Powered.

Gasoline Engine;  
Superior DC  
Multi-Process  
Welding

**Ranger® 305 LPG**

300 Amps for more DC Stick /  
Pipe / DC TIG / Wire Welding /  
AC Generator. Liquid Propane  
Gas Powered.

LPG Engine;  
Superior DC  
Multi-Process  
Welding

**Ranger® 305 D**

300 Amps for more DC Stick /  
Pipe / Touch Start TIG® /  
Wire Welding / AC Generator.  
Diesel Powered.

Diesel Engine;  
Superior DC  
Multi-Process  
Welding

	MODEL	OUTPUT			AC Generator Power (In Watts) (C)=Continuous (P)=Peak (S)=Surge	PROCESS						FEATURES											
		Mode	Polarity	Current Range (Amps)		Stick	Pipe	DC TIG Scratch Start	DC Touch Start TIG®	AC TIG	MIG	Flux-Cored	Arc Gouge inch (mm)	Reactor Technology	Chopper Technology®	Tube Frame	Enclosed Case	Electric Fuel Gauge	Remote Capable	Downhill Pipe Mode	Arc Force Control	Hot Start	Digital Meters
Gasoline	<b>Bulldog® 5500</b>	CC	AC	70-140 AC	5,500(S)/4,000(C)	●							●	●									
	<b>Outback® 145</b>	CC	DC	50-145 DC	4,750(P)/4,250(C)	●							●	●									
	<b>Outback® 185</b>	CC	DC	50-185 DC	5,700(P)/5,200(C)	●							●	●									
	<b>Ranger® 225</b>	CC/CV	DC	50-225 DC	10,500(P)/9,000(C)	●	●	○	●	●	●	5/32 (4.0)	●	●									
	<b>Ranger® 250 GXT</b>	CC/CV	AC/DC	50-250 DC 50-250 AC	11,000(P)/10,000(C)	●	●	○	●	●	●	3/16 (4.8)	●	●	●	●							
	<b>Ranger® 305 G &amp; Ranger® 305 G EFI</b>	CC/CV	DC	20-305 DC 40-300 DC Pipe 20-250 DC TIG	10,500(P)/9,500(C)	●	●	○	●	●	●	3/16 (4.8)	●	●	●	●	●	●	●	●	●	●	●
LPG	<b>Ranger® 305 LPG</b>	CC/CV	DC	20-300 DC 40-300 DC Pipe 20-250 DC TIG	10,000(P)/9,000(C)	●	●	○	●	●	3/16 (4.8)	●	●	●	●	●	●	●	●	●	●	●	
Diesel	<b>Ranger® 305 D</b>	CC/CV	DC	20-305 DC 40-300 DC Pipe 20-250 DC TIG	10,000(P)/9,500(C)	●	●	○	●	●	3/16 (4.8)	●	●	●	●	●	●	●	●	●	●	●	

KEY: ● Excellent ● Good ○ Optional

RANGER®



Canvas Cover (K886-2)



Remote Control (K857-1)



TIG Module (K930-2)



LN-25 PRO Wire Feeder (K2613-5)



All-Terrain Undercarriage (K1737-1)



Road Trailer (K2635-1)



Magnum® SG Spool Gun (K487-25)



Invertac® V205-T AC/DC One-Pak® (K2350-2)

# Bulldog® 5500

## Portable AC Welder / AC Generator

The Bulldog® 5500 is great for homeowners and anyone who needs portable AC stick welding and AC generator power!

- **Patented Low-Lift™ Grab Bars**
  - More leverage for lifting unit on and off truck beds.
  - Extra protection against product damage.
  - Best in class feature!
- **1-1/4 in. (32 mm) Diameter Rugged Tube Frame**
  - Great for all-around sturdy protection.
  - Largest diameter tube frame in its class!
  - Best in class feature!
- **AC Welding with up to 1/8 in. (3.2 mm) Stick Electrode**
  - Up to 140 amps of AC output for many applications.
- **5,500 Watts Surge (4,000 Watts Continuous) AC Generator Power**
  - Many uses! Grinder, work lights, pump, motor starting, or emergency power.
  - Plug in a Lincoln® POWER MIG® 140C for wire welding.



Shown: K2708-2 Bulldog® 5500

**Processes**

- Stick

**Output** **Input**

**Recommended Accessories**

- K875 Accessory Kit
- K2722-1 Undercarriage
- K2819-1 Lift Bail Kit
- K2804-1 Canvas Cover
- K1690-1 GFCI receptacle Kit
- K2471-1 POWER MIG® 140C
- K3269-1 Magnum® PRO 100SG Spool Gun (Requires POWER MIG® 140C)
- *More accessories at end of section*

**Literature** E6.32

**Canvas Cover**

To protect your machine when not in use. Made from attractive red canvas material that is flame retardant, mildew resistant and water repellent.



**Order K2804-1**

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	Number of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Bulldog® 5500	K2708-2	125A AC/20V/30% 100A AC/25V/60%	70 - 140A AC 5,500 Watts Surge 4,000 Watts Continuous	Kohler® CH395	1	9.5 @ 3600	25.6 x 21.8 x 31.5 (651 x 553 x 800)	198 (90)

# Outback® 145 & 185

**Built for the Outdoors!™**

Outback® models are great for service trucks, fence contractors, maintenance crews, farmers, ranchers and anyone who needs portable DC stick welding and AC generator power!

- **Patented Low-Lift™ Grab Bars** – More leverage for lifting unit on and off truck beds. Provides extra protection against product damage.
- **Outback® 185 model includes electric start switch and choke control.** All engine controls on front control panel for easy access, especially when mounted on truck beds.
- **1-1/4 in. (32 mm) Diameter Rugged Tube Frame** for all-around sturdy protection.
- **6.8 Gallon (25.7 Liter) Fuel Tank** for extended run times and less frequent re-fueling. Large fuel fill opening for easy re-fueling, too!
- **DC Welding** with up to 1/8 in. (3.2 mm) stick electrode on Outback® 145 and 5/32 in. (4.0 mm) stick electrode on Outback® 185.
- **Versatile AC Generator Power** – 4,750 Watts Peak (4,250 Watts Continuous) on Outback® 145 and 5,700 Watts Peak (5,200 Watts Continuous) on Outback® 185. Use for many tasks, including powering a grinder, work lights, pump, motor starting, or emergency power. Plug in a Lincoln® POWER MIG® 140C or POWER MIG® 180C for wire welding!



Shown: K2707-2 Outback® 145

Shown: K2706-2 Outback® 185

**Processes**

- Stick

**Output** <sup>(1)</sup> <sup>(2)</sup> **Input**

**Recommended Accessories**

- K2722-1 Undercarriage
- K2819-1 Lift Bail Kit
- K2804-1 Canvas Cover
- K1690-1 GFCI Receptacle Kit (2 Kits Required)
- K2471-1 POWER MIG® 140C
- K2473-1 POWER MIG® 180C
- K3269-1 Magnum® PRO 100SG Spool Gun (Requires POWER MIG® 140C or 180C)
- *More accessories at end of section*

**Literature**

E6.65 (Outback® 145)  
E6.70 (Outback® 185)

<sup>(1)</sup> Outback® 145  
<sup>(2)</sup> Outback® 185

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cyl.	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Outback® 145	K2707-2	80A DC/25V/100% 100A DC/25V/60% 125A DC/25V/30%	50-145A DC 4,750 Watts Peak 4,250 Watts Continuous	Kohler® CH 395	1	9.5 @ 3600	25.6 x 21.8 x 31.5 (651 x 553 x 800)	234 (106)
Outback® 185	K2706-2	100A DC/25V/100% 130A DC/25V/60% 150A DC/25V/20%	50-185A DC 5,700 Watts Peak 5,200 Watts Continuous	Kohler® CH 440	1	14 @ 3600	25.6 x 21.8 x 31.5 (651 x 536 x 800)	295 (134)

# Ranger® 225

## Got It Covered!® Enclosed-Case Welder

The Ranger® 225 is a great choice for getting the job done! For construction contractors, maintenance crews, farmers or ranchers, the Ranger® 225 does a variety of basic welding jobs.

- **Totally Enclosed Case** – The engine is fully protected. The case includes 3 service access doors. Low Noise – 76.4 dBA sound level at 23 ft. (7 m). 100.7 dB sound power (Lwa) at rated output.
- **Versatile DC Welding** – Smooth DC welding output for a broad range of stick electrode types. The machine is also MIG, Flux-Cored and TIG capable (with optional equipment).
- **10,500 Watts Peak Single-Phase AC Generator Power** – Peak for motor starting. Features 9,000 watts continuous power for generator, plasma cutter, inverter welder, lights, grinder, or power tools.
- **23 HP Kohler® Gasoline Engine** – 2 cylinder, 4 cycle overhead valve air-cooled design. Includes oil drain extension for easy oil changes. A 12 gallon (45 L) tank for extended run times. Consumption is only 1.3 gallons/hour at 210 amps DC, 25V, 100% duty cycle. Visual fuel level gauge is on both sides of unit.
- **Rugged Reliability** – Welding and AC Generator Outputs Rated at 104°F (40°C).



Shown:  
K2857-1 Ranger® 225

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Gouging

Output Input

### Recommended Accessories

- K1898-1 Spark Arrestor Kit
- K886-2 Canvas Cover
- K1737-1 All-Terrain Undercarriage
- K704 Accessory Kit
- K2613-5 LN-25 PRO Wire Feeder
- K126-12 K126-PRO 350 amp Innershield® Gun
- KP1697-068 Drive Roll and Guide Tube Kit
- K2473-1 POWER MIG® 180C
- K1816-1 Full KVA Adapter Kit
- K3269-1 Magnum® PRO 100SG Spool Gun (Requires POWER MIG® 180C)
- *More accessories at end of section*

Literature  
E6.89

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	Number of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Ranger® 225	K2857-1	225A DC CC/25V/40% 210A DC CC/25V/100% 200A DC CV/20V/100%	50-225A DC 15-25V CV 10,500 watts peak 9,000 watts continuous	Kohler® OHV Command® CH23S	2	23 @ 3600	29.9 x 21.5 x 42.3 (759 x 546 x 1074) <i>To top of exhaust tube: 36.2 (920)</i>	514 (233)

# Ranger® 250 GXT

## XTra Performance! XTra Power! XTra Protection!

The Ranger® 250 GXT has all of the Xtras you need for construction and maintenance work— 250 amps for AC or DC stick and wire welding, 11,000 watts peak AC generator power and a Lincoln Electric enclosed case.

- **Totally Enclosed Case**
  - Engine is fully protected.
  - Low Noise – 76.4 dBA sound level at 23 ft. (7 m). 100.7 dB sound power (Lwa) at rated output.
  - Choose from painted or stainless steel roof, case sides and engine doors.
- **Versatile AC/DC Welding**
  - AC/DC welding output for a broad range of stick electrode types.
  - Excellent AC TIG welding with optional TIG Module.
  - MIG and Flux-Cored capable (with optional equipment).
  - Remote ready!
- **11,000 Watts Peak Single-Phase AC Generator Power**
  - 10,000 watts continuous power for generator, plasma cutter or inverter welder.
- **23 HP Kohler® Gasoline Engine**
  - 2 cylinder, 4 cycle overhead valve air-cooled design.
  - Electric fuel pump avoids vapor lock.
  - Oil drain extension.
  - 12 gallon (45 L) tank for extended run times.
  - Electric fuel gauge located on control panel.
- **Rugged Reliability**
  - Welding and AC Generator Outputs Rated at 104°F (40°C).



Shown:  
K2382-4  
Ranger® 250 GXT

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Gouging

Output Input

### Recommended Accessories

- K886-2 Canvas Cover
- K930-2 TIG Module
- K1737-1 All-Terrain Undercarriage
- K704 Accessory Kit, 400 Amp
- K857-1 Remote Output Control, 100 ft. (30 m)
- *More accessories at end of section*

Literature  
E6.96

### Available in Stainless



Shown: K2382-5  
Features: Stainless Roof, Sides, Doors

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cyl.	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Ranger® 250 GXT	K2382-4	250 AC/DC CC/25V/100%	50-250A AC/DC 14-28V CV	Kohler® OHV Command CH23S (Electric Fuel Pump)	2	23 @ 3600	29.9 x 21.5 x 42.3 (759 x 546 x 1074) <i>To top of exhaust tube: 36.2 (920)</i>	602
	K2382-5 (Stainless Steel Roof, Case Sides & Engine Doors)	250A DC CV/25V/100%	11,000 watts peak 10,000 watts continuous					(273)

# Ranger® 305 Series

## 300 Amp DC Gasoline or Diesel Engine-Driven Welder/Generators

Whether you run a gasoline or diesel fleet, or require LPG power, these powerful stick, TIG, wire and pipe welders are ready for all day, everyday performance. Rugged and dependable, Ranger® 305 G, 305 D and 305 LPG models feature a totally enclosed case for maximum protection and a 12 gallon (45 L) fuel tank to last the entire day.



Shown: K1726-5  
Ranger® 305 G

Shown: K3928-1  
Ranger® 305 G EFI

Shown: K2937-1  
Ranger® 305 LPG

Shown: K1727-3  
Ranger® 305 D

- **Excellent DC multi-process welding** for general purpose stick, downhill pipe (stick), TIG, CV wire welding up to 5/64 in. (2.0 mm) diameter electrodes, (100% CO<sub>2</sub> and mixed gas) and arc gouging with up to 3/16 in. (4.8 mm) carbons.
- **Chopper Technology®** provides easy starts, a smooth arc, low spatter and excellent bead appearance.
- **Digital Weld Meters** – For amps and volts. Precisely preset procedures and monitor actual welding output.
- **A portable powerhouse –**
  - Ranger® 305 G and 305 G EFI  
10,500 watts peak and 9,500 continuous watts.
  - Ranger® 305 LPG  
10,000 watts peak and 9,000 continuous watts.
  - Ranger® 305 D  
10,000 watts peak and 9,500 continuous watts.
- **Arc force control** provides a soft or more forceful digging arc.
- **Built-in “hot” start** for easier starts and restrikes.
- **Touch Start TIG® DC** – Lift tungsten to start the arc.

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Gouging

Output

Input

### Ranger® 305 G One-Pak®

#### Package Includes

- K1726-5 Ranger® 305G
- K704 Accessory Kit, 400 Amp
- K2614-9 LN-25 Ironworker® Wire Feeder
- K126-12 K126™ PRO 350 Amp Innershield® Gun
- ED033039 5/64 in. (1.8 mm) NR®-233, 25 lb. (11.3 kg) Spool

### Ranger® 305 LPG One-Pak®

#### Package Includes

- K2937-1 Ranger® 305 LPG
- K1770-1 Factory Undercarriage
- K1745-1 Welding Gas Cylinder/LPG Tank Holder
- K2361-1 LPG Tank Strap
- K704 Accessory Kit
- ED032589 1/8 in. (3.2 mm) Excalibur® 7018 MR Stick Electrode - Six 10 lb. (4.5 kg) Easy Open Cans

### Ranger® 305 D One-Pak®

#### Package Includes

- K1727-4 Ranger® 305 D
- K704 Accessory Kit, 400 Amp
- K2614-9 LN-25 Ironworker® Wire Feeder
- K126-12 K126™ PRO 350 amp Innershield® Gun
- ED033039 5/64 in. (1.8 mm) NR®-233, 25 lb. (11.3 kg) Spool

### Recommended Accessories

- K886-2 Canvas Cover (Ranger® 305 G and LPG)
- K704 Accessory Kit, 400 Amp
- K857-1 Remote Output Control, 100 ft. (30 m)
- *More accessories at end of section*

### Literature

- E6.117 (Ranger® 305 G and 305 G EFI)
- E6.119 (Ranger® 305 LPG)
- E6.118 (Ranger® 305 D)

<sup>(1)</sup> 305 G <sup>(2)</sup> 305 LPG <sup>(3)</sup> 305 D <sup>(4)</sup> 305 G EFI

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cyl.	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Ranger® 305 G	K1726-5	305A DC CC/29V/100% 300A DC CV/29V/100%	20-305A DC 40-300A Pipe 20-250A DC TIG 14-29V CV 10,500 watts peak 9,500 watts continuous	Kohler® OHV Command® CH730 Gas Electric Fuel Pump	2	23 @ 3600	29.9 x 21.5 x 42.3 (759 x 546 x 1073) To top of exhaust tube: 36.2 (920)	510 (231)
Ranger® 305 G One-Pak® Package	K2353-2							
Ranger® 305 G EFI	K3928-1			Kohler® OHV Command® ECH740 Gas Electric Fuel Pump Electronic Fuel Injection		25 @ 3600	29.9 x 21.5 x 42.3 (759 x 546 x 1073) To top of exhaust tube: 36.2 (920)	510 (231)
Ranger® 305 LPG	K2937-1	300A DC CC/25V/100% 300A DC CV/25V/100%	20-300A DC 40-300A Pipe 20-250A DC TIG 14-29V CV 10,000 watts peak 9,000 watts continuous	Kohler® OHV Command® CH730 LPG	2	25 @ 3600	29.9 x 21.5 x 42.3 (759 x 546 x 1074) To top of exhaust tube: 36.2 (920)	480 (218)
Ranger® 305 LPG One-Pak® Package	K2944-1							
Ranger® 305 D	K1727-4	305A DC CC/29V/100% 300A DC CV/29V/100%	20-305A DC 40-300A Pipe 20-250A DC TIG 14-29V CV 10,000 watts peak 9,500 watts continuous	Kubota® D722 Diesel EPA Tier 4 Final	3	18.8 @ 3600	29.9 x 21.5 x 52.3 (759 x 546 x 1327) To top of exhaust tube: 35.8 (909)	698 (317)
Ranger® 305 D One-Pak® Package	K2352-5							

## Accessories

For complete descriptions go to page 133.

### Bulldog® 5500

#### General

K875	Accessory Kit, 150 Amp
K2722-1	Undercarriage
K2819-1	Lift Bail Kit
K2804-1	Canvas Cover
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)

#### Wire Feeder

K2471-2	POWER MIG® 140C
---------	-----------------

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 140C)
---------	---

### Outback® 145

#### General

K875	Accessory Kit, 150 Amp
K2722-1	Undercarriage
K2819-1	Lift Bail Kit
K2804-1	Canvas Cover
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)

#### Wire Feeder

K2471-2	POWER MIG® 140C
K2473-2	POWER MIG® 180C

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 140C or 180C)
---------	---

### Outback® 185

#### General

K875	Accessory Kit, 150 Amp
K2722-1	Undercarriage
K2819-1	Lift Bail Kit
K2804-1	Canvas Cover
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)

#### Wire Feeder

K2471-2	POWER MIG® 140C
K2473-2	POWER MIG® 180C

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 140C or 180C)
---------	---

#### Plasma Cutting

K2806-1	Tomahawk® 375 Air
---------	-------------------

### Ranger® 225

#### General

K802N	Power Plug Kit, 20 amp
T12153-9	Full-KVA Power Plug (1-phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)
K1898-1	Spark Arrestor Kit
K886-2	Canvas Cover
K1737-1	All-Terrain Undercarriage
K1770-1	Factory Undercarriage
K1745-1	Welding Gas Cylinder/LPG Tank Holder
K2635-1	Small Two-Wheel Road Trailer with Duo-Hitch®
K2639-1	Fender and Light Kit
K2640-1	Cable Rack

#### Stick

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp

#### TIG

K1783-9	Pro-Torch™ TIG Torch PTA-26V (25ft 2pc)
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

#### Wire Feeder

K2613-5	LN-25 PRO Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Solid/Cored Wire

#### OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
---------------	---

KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid Wire
----------	--

K2473-2	POWER MIG® 180C
---------	-----------------

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 180C)
---------	---

#### Plasma Cutting

K2808-1	Tomahawk® 1000
---------	----------------

### Ranger® 250 GXT

#### General

K802N	Power Plug Kit, 20 Amp
T12153-9	Full KVA Power Plug (1-Phase)
K1816-1	Full KVA Adapter Kit (required)
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)
K1898-1	Spark Arrestor Kit
K886-2	Canvas Cover
K1737-1	All-Terrain Undercarriage
K1770-1	Factory Undercarriage
K1745-1	Welding Gas Cylinder/LPG Tank Holder
K2635-1	Small Two-Wheel Road Trailer with Duo-Hitch®
K2639-1	Fender and Light Kit
K2640-1	Cable Rack

#### Stick

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

#### TIG

K1783-4	Pro-Torch™ TIG Torch PTA-26, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K930-2	TIG Module
K936-3	Control Cable (9-pin to 6-pin and 115V plug)
K937-45	Control Cable Extension, 45 ft. (13.7 m)
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K938-1	Contact Kit
K939-1	Docking Kit

#### Wire Feeder

K2613-5	LN-25 PRO Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)

KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid
------------	---

KP1697-5/64	Drive Roll Kit, 5/64 in. (2.0 mm) Cored/Solid
-------------	---

#### OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
---------------	---

KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid
----------	---

K2473-2	POWER MIG® 180C
---------	-----------------

#### Spool Gun

K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 180C)
---------	---

#### Plasma Cutting

K2808-1	Tomahawk® 1000
---------	----------------

**Accessories**

For complete descriptions go to page 133.

**Ranger® 305 G and 305 G EFI***General*

K802N	Power Plug Kit, 20 amp
T12153-9	Full KVA Power Plug (1-Phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp (2 required)
K1898-1	Spark Arrestor Kit
K886-2	Canvas Cover
K1737-1	All-Terrain Undercarriage
K1770-1	Factory Undercarriage
K1745-1	Welding Gas Cylinder/LPG Tank Holder
K2635-1	Small Two-Wheel Road Trailer with Duo-Hitch®
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit

*Stick*

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

*TIG*

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

*Wire Feeder*

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

*OR*

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid
K2473-2	POWER MIG® 180C

*Spool Gun*

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)
K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 180C)

*Plasma Cutting*

K2808-1	Tomahawk® 1000
---------	----------------

**Ranger® 305 LPG***General*

K802N	Power Plug Kit, 20 Amp
T12153-9	Full-KVA Power Plug (1-phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K1898-1	Spark Arrestor Kit
K886-2	Canvas Cover
K1770-1	Factory Undercarriage
K1745-1	Welding Gas Cylinder/LPG Tank Holder
K2361-1	LPG Tank Strap (requires K1745-1)
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit

*Stick*

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30.5 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30.5 m)

*TIG*

K1783-9	PTA-26V Pro-Torch TIG Torch, 25 ft. (7.6 m), 2pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K1478-5	Square Wave™ TIG 175
K1816-1	Full-KVA Adapter Kit (1-phase)
K2350-2	Invertec® V205-T AC/DC One-Pak®

*Wire Feeder*

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Solid/Cored Wire

*OR*

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 & .045 in. (0.9 & 1.1 mm) Solid Wire
K2473-2	POWER MIG® 180C

*Spool Gun*

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)
K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 180C)

*Plasma Cutting*

K2808-1	Tomahawk® 1000
---------	----------------

**Ranger® 305 D***General*

K802N	Power Plug Kit, 20 Amp
T12153-9	Full KVA Power Plug (1-Phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K1898-1	Spark Arrestor Kit
K2635-1	Small 2-Wheel Road Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit

*Stick*

K704	Accessory Kit, 400 Amp
K875	Accessory Kit, 150 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

*TIG*

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), qty. 2
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K963-3	Hand Amptrol™ (Rotary Track Style)
K870	Foot Amptrol™
K1478-5	Square Wave™ TIG 175
K1816-1	Full-KVA Adapter Kit (1-phase)
K2350-2	Invertec® V205-T AC/DC One-Pak®

*Wire Feeder*

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

*OR*

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid
K2473-2	POWER MIG® 180C

*Spool Gun*

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)
K3269-1	Magnum® PRO 100SG Spool Gun (requires POWER MIG® 180C)

*Plasma Cutting*

K2808-1	Tomahawk® 1000
---------	----------------



# ENGINE DRIVES

## INDUSTRIAL

- World's Most Respected Products Among Pipe Welders
- Built Tough for Extreme Environments
- Strong Arc Gouging Capability

### Classic® 300 HE

Excellent for Pipe, Construction and Maintenance



### SAE-300® HE

Excellent for Pipe, Construction and Maintenance



### Vantage® 300

Compact, Multi-Process



### Vantage® 400

Compact, Multi-Process, High Output AC Generator



### SAE-500®

Heavy Duty Pipe and Construction Welding



### SAE-500® Severe Duty™

Offshore and Other Corrosive Environments



### Vantage® 500 & Vantage® 500 Compact Case

High Output Multi-Process Powerhouse for Welding and AC Generator Power



### Air Vantage® 500

Three-in-One: Welder, Generator and Air Compressor



200-400 AMP MODELS

500-700 AMP MODELS

	MODEL		OUTPUT		PROCESS							FEATURES							
	Mode	Polarity	Current Range (Amps)	AC Generator Power (Watts) (P)=Peak (C)=Continuous	Stick	Pipe	DC TIG Scratch Start	DC Touch Start TIG®	AC TIG	MIG	Flux-Cored	Arc Gouge (inch (mm))	Pure DC Generator	Chopper Technology®	Stainless Steel Case	Corrosive Environments	Weld Meters	Voltage Reduction Device™ (VRD™)	Air Compressor
Diesel	Classic® 300 HE	CC	DC	40-350 DC	1-Phase: 3,000 (C)	●	●	●	○	○	●	3/16 (4.8)	●						
	SAE-300® HE	CC	DC	50-390 DC	1-Phase: 3,000 (C)	●	●	●	○	○	●	1/4 (6.3)	●						
	Vantage® 300	CC/CV	DC	30-400 DC 40-300 DC Pipe 20-250 DC TIG	3-Phase: 12,500(P)/11,000(C) 1-Phase: 11,500(P)/10,000(C)	●	●	●	○	●	●	1/4 (6.3)	●	●	●	●	●	●	●
	Vantage® 400	CC/CV	DC	30-500 DC 40-300 DC Pipe 20-250 DC TIG	3-Phase: 19,000(P)/17,000(C) 1-Phase: 12,000(P)/11,000(C)	●	●	●	○	●	●	5/16 (8.0)	●	●	●	●	●	●	●
	SAE-500®	CC	DC	80-575 DC	1-Phase: 3,000 (C)	●	●	●				3/8 (10)	●						
	SAE-500® Severe Duty™	CC	DC	80-575 DC	1-Phase: 3,000 (C)	●	●				○	3/8 (10)	●		●				
	Vantage® 500	CC/CV	DC	30-575 DC 40-300 DC Pipe 20-250 DC TIG	3-Phase: 20,000 (C) 1-Phase: 12,000 (C)	●	●	●	○	●	●	3/8 (10)	●	●	●	●	●	●	●
	Vantage® 500 (Compact Case)	CC/CV	DC	30-575 DC 40-300 DC Pipe 20-250 DC TIG	3-Phase: 22,000 (P) / 20,000 (C) 1-Phase: 13,000 (P) / 12,000 (C)	●	●	●	○	●	●	3/8 (10)	●	●	●	●	●	●	●
	Air Vantage® 500	CC/CV	DC	30-575 DC 40-300 DC Pipe 20-250 DC TIG	3-Phase: 20,000(C) 1-Phase: 12,000(C)	●	●	●	○	●	●	3/8 (10)	●	●	●	●	●	●	●

KEY: ● Excellent ● Good ● Optional

# Classic® 300 HE

Excellent for Pipeline, Construction and Maintenance

The Classic® 300 HE, with proven, rugged construction, is recommended for pipeline, construction and maintenance welding, featuring Lincoln Electric's pure DC generator design.

- **Fuel Efficient Industrial Diesel Engine**
  - 3-cylinder, water-cooled, 1800 RPM engine.
  - Big fuel savings compared to previous engine!
  - Kubota®: 15% at 300A, 30% at low idle vs. the Classic® 300 D.
  - Fuel gauge on control panel.
- **Pure DC Generator Welding Output**
  - Produces the welding arc preferred by pipeline operators and contractors for precise control of the arc in demanding code applications.
- **All Copper Windings**
  - Enhances arc stability for a really smooth, high performance arc.
- **Five Current Ranges with Overlap**
  - For stick welding and other processes where slope control is desired. Fine-tuning within each range.
- **300 Amps Output @ 60% Duty Cycle**
  - Welds up to 7/32 in. (5.6 mm) Fleetweld® 5P+ cellulosic and Excalibur® low hydrogen electrode.



Shown: K3198-1 Classic® 300 HE

**Processes**

- Stick
- TIG
- MIG<sup>(1)</sup>
- Flux-Cored<sup>(1)</sup>
- Gouging

**Output** CC CV DC 3 kW **Input**

**Classic® 300 HE Ready-Pak® Package Includes**

- Classic® 300 HE (without Wire Feed Module)
- Medium Welder Trailer
- Duo-Hitch® 2 in (51 mm) Ball/Lunette Eye Hitch
- Fender and Light Kit
- Cable Rack
- Cable Connectors
- Electrode Cable 2/0, two 50 ft. (15.3 m) lengths
- Electrode Cable 2/0, 10 ft. (3 m)
- Work Cable 2/0, 50 ft. (15.3 m)
- 300A Electrode Holder
- 300A Work Clamp

**Recommended Accessories**

- K2636-1 Medium Two-Wheel Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- K704 Accessory Kit, 400 Amp
- K924-4 Remote Control Kit, 100 ft. (30.5 m) (for use w/o Wire Feed Module)
- *More accessories at end of section*

**Literature**

E6.156 (Classic® 300 HE)

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Classic® 300 HE	K3198-1	250A/30V/100%	40-350A DC	Kubota® D1503 Diesel	3	24.7 @ 1800	37.1 x 24.3 x 62.8	1371 (622)
Classic® 300 HE One-Pak®	K2386-5	300A/32V/50%	3,000 watts	EPA Tier 4			(943 x 616 x 1594)	—
Classic® 300 HE Ready-Pak®	K2387-5		AC power				To top of exhaust tube: 45.5 (1156), machine only	—

<sup>(1)</sup>With Wire Feed Module. Rated 300 amps, 35 volts at 60% duty cycle.

## Pure DC Generator Welding Output

Produces the arc preferred by pipeline operators.



**The Reactor**

A key component of the Dual Continuous Control™ System: coarse current adjustment without the need for taps.



# SAE-300® HE

## Superior Choice for Pipeline Work!™



The SAE-300® HE combines a rugged design with traditional pure DC generator technology for excellent welding performance in pipe, construction and maintenance applications.

- Fuel Efficient Industrial Diesel Engines**
  - 3-cylinder, water-cooled, 1800 RPM engines.
  - Big fuel savings compared to previous engines!
  - Perkins®: 13% at 300A, 20% at low idle vs. the SAE-300®
  - Kubota®: 15% at 300A, 30% at low idle vs. the Classic® 300 D.
  - Fuel gauge on control panel.
- Dual Continuous Control™ of Output**
  - Two continuous dials on the control panel allow for a precise setting of both voltage and current for critical pipe welding applications.
  - Adjust the arc for a snappy “digging” arc for root and hot passes on pipe with cellulosic electrode, or for a soft “buttery” arc for pipe welding with low hydrogen electrode.
- Pure DC Generator Welding Output**
  - Pipeline operators will enjoy welding with the arc produced from the rotating armature/field coil system manufactured for many years by Lincoln Electric.
- All Copper Windings**
  - Arc stability, dependability and long-life are enhanced with all-copper windings.
- 300 Amps Output @ 60% Duty Cycle**
  - Welds up to 7/32 in. (5.6 mm) Fleetweld® 5P, Fleetweld® 5P+, Pipeliner® and Excalibur® electrode.



Shown:  
K3201-1  
SAE-300® HE



### Processes

- Stick
- TIG
- MIG<sup>(1)</sup>
- Flux-Cored<sup>(1)</sup>
- Gouging

Output **CC** **CV** **DC** **3 kW** Input

### SAE-300® HE Ready-Pak® Package Includes

- SAE-300® HE (without Wire Feed Module)
- Medium Welder Trailer
- Duo-Hitch® 2 in (51 mm) Ball/Lunette Eye Hitch (included)
- Fender and Light Kit
- Cable Rack
- Cable Connectors
- Electrode Cable 2/0, two 50 ft. (15.3 m) lengths
- Electrode Cable 2/0, 10 ft. (3 m)
- Work Cable 2/0, 50 ft. (15.3 m)
- 300A Electrode Holder
- 300A Work Clamp

### Recommended Accessories

- K802D Power Plug Kit
- K903-1 Spark Arrestor Kit
- K2636-1 Medium Two-Wheel Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- K704 Accessory Kit
- *More accessories at end of section*

### Literature

E6.162

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
SAE-300® HE (Kubota®) w/Wire Feed Module	K3201-1	250A/30V/100%	Welding: 50-390A DC  AC Power: 3,000 watts	Kubota® D1503 Diesel EPA Tier 4	3	24.7 @ 1800	37.1 x 24.3 x 62.8 (943 x 616 x 1,594) <i>To top of exhaust tube: 45.5 (1156)</i>	1432 (649)
SAE-300® HE One-Pak® (Kubota®)	K3956-5	300A/32V/60%						
SAE-300® HE Ready-Pak® (Kubota®)	K3959-5							
SAE-300® HE (Perkins®)	K3202-1			Perkins® 403F-15T Turbo-Charged Diesel EPA Tier 4				1419 (644)
SAE-300® HE One-Pak® (Perkins®)	K3957-5							
SAE-300® HE Ready-Pak® (Perkins®)	K3960-5							

<sup>(1)</sup>With Wire Feed Module. Rated 300 amps, 35 volts at 60% duty cycle.

## Dual Continuous Control

Precise control of both voltage and current for critical pipe applications.



# Vantage® 300 & Vantage® 400

**Compact, Multi-Process, Excellent Value**

Quiet, compact Vantage® 300 & 400 models are an ideal choice for construction teams, pipe rig owners and rental fleet managers. Select your choice of proven 4 cylinder 1800 RPM diesel engines.



Shown:  
K2410-4  
Vantage® 400



Shown:  
K2409-4  
Vantage® 300

- **Compact Case** with stainless steel enclosure.
- **Chopper Technology®** delivers great arc starts and a smooth arc for stick, TIG or wire welding.
- **Multi-Process Welding** – Five process modes, including:
  - CC-Stick: 3/16 in. (4.8 mm) with Vantage® 300, 1/4 in. (6.4 mm) with Vantage® 400
  - Downhill Pipe (for stick)
  - Touch Start TIG® DC
  - CV-Wire: 5/64 in. (2.0 mm) with Vantage® 300, 3/32 in. (2.4 mm) with Vantage® 400
  - Arc Gouging: Carbon sizes up to 1/4 in. (6.4 mm) with Vantage® 300 and 5/16 in. (8.0 mm) with the Vantage® 400.

- **Plenty of AC Generator Power**
  - Vantage® 300*
    - 12.5 kW peak (11 kW continuous)
    - 3-phase 240V AC
    - 11.5 kW peak (10 kW continuous)
    - 1-phase 120/240 AC
  - Vantage® 400*
    - 19 kW peak (17 kW continuous)
    - 3-phase 240V AC
    - 12 kW peak (11 kW continuous)
    - 1-phase 120/240V AC
- **Low Noise** – As low as 99.1 dBA Lwa sound power (74.8 dB at 23 ft./7 m) with Vantage® 400.

Processes

- Stick
- Flux-Cored
- TIG
- Gouging
- MIG

Output Input

**Vantage® 300 Ready-Pak® Package Includes**

- Vantage® 300
- Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- Fender and Light Kit
- Cable Rack
- Cable Connectors (qty. 2)
- Electrode Cable 2/0, two 50 ft. (15.3 m) lengths
- Electrode Cable 2/0, 10 ft. (3.0 m)
- Work Cable 2/0, 50 ft. (15.3 m)
- 300A Electrode Holder
- 300A Work Clamp

**Vantage® 400 Ready-Pak® Package Includes**

- Vantage® 400
- Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- Fender and Light Kit
- Cable Rack
- Cable Connectors (qty. 2)
- Electrode Cable 3/0, two 50 ft. (15.3 m) lengths
- Electrode Cable 3/0, 10 ft. (3 m)
- Work Cable 3/0, 50 ft. (15.3 m)
- 400A Electrode Holder
- 500A Work Clamp

**Recommended Accessories**

- K2636-1 Medium Two-Wheel Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- K2627-2 Remote Output Control w/120V AC, 100 ft. (30.5 m), 20A capacity
- *More accessories at end of section*

**Literature**

E6.206 (Vantage® 300)  
E6.210 (Vantage® 400)

<sup>(1)</sup>Vantage® 300 <sup>(2)</sup>Vantage® 400

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Vantage® 300	K2409-4	300A/32V/100% 350A/28V/100%	30-400A DC 40-300A Pipe 20-250A DC TIG 14-32V CV	Kubota® V1505 Diesel EPA Tier 4	4	22 @ 1800	35.9 x 25.3 x 60.0 (913 x 642 x 1524) <i>To top of exhaust tube:</i> 44.3 (1124) <i>machine only</i>	1035 (469)
Vantage® 300 One-Pak®	K2452-5							
Vantage® 300 Ready-Pak®	K2453-5							
			3-Phase AC Power: 12.5 kW Peak , 11 kW Continuous 1-Phase AC Power: 11.5 kW Peak , 10 kW Continuous					
Vantage® 400	K2410-4	400A/36V/100% 450A/32V/100%	30-500A DC 40-300A Pipe 20-250A DC TIG 14-36V CV	Perkins® 404D-22 Diesel EPA Tier 4i Flex	4	32.7 @ 1800	35.9 x 25.3 x 60 (913 x 642 x 1524) <i>To top of exhaust tube:</i> 46.6 (1184) <i>machine only</i>	1230 (559)
Vantage® 400 One-Pak®	K2508-4							
Vantage® 400 Ready-Pak®	K2509-4			Kubota® V2403M Diesel EPA Tier 4i Flex	4	35.5 @ 1800		1245 (565)
Vantage® 400	K2711-2							
			3-Phase AC Power: 19 kW Peak , 17 kW Continuous 1-Phase AC Power: 12 kW Peak , 11 kW Continuous					
Vantage® 400 One-Pak®	K2717-4							
Vantage® 400 Ready-Pak®	K2718-4							

# SAE-500® & SAE-500® Severe Duty™

**Heavy Duty Industrial Pipe and Construction Stick Welder (Select SAE-500® Severe Duty™ for Off-Shore Salt Spray and other Corrosive Environments.)**

For high amperage stick applications in demanding environments, the SAE-500® and SAE-500® Severe Duty™ deliver 500 amps for DC stick welding and 3,000 watts of AC power. Both models are powered by a heavy duty Kubota® industrial turbo-charged diesel engine, offering low maintenance and a long service life.

For offshore salt spray and other corrosive environments, the SAE-500® Severe Duty™ (“Silver Bullet”) is the preferred choice – featuring great arc performance, design simplicity, high reliability and extreme ruggedness.



## Processes

- Stick
- TIG
- Flux-Cored<sup>(1)</sup>
- Gouging

Output **CC** **CV** **DC** **3** kW Input

## SAE-500® Ready-Pak®

### Package Includes

- SAE-500®
- Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- Fender and Light Kit
- Cable Rack
- Cable Connectors (qty. 2)
- Electrode Cable 3/0, two 50 ft. (15.3 m) lengths
- Electrode Cable 3/0, 10 ft. (3 m)
- Work Cable 3/0, 50 ft. (15.3 m)
- 400A Electrode Holder
- 500A Work Clamp

## Recommended Accessories

- K924-4 Remote Control Kit, 100 ft. (30 m)
- K2637-2 Large Two-Wheeled Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
- K704 Accessory Kit, 400 Amp
- K385-2 CV Adapter
- *More accessories at end of section*

## Literature

E6.182 (SAE-500®)

E6.184 (SAE-500® Severe Duty™)

<sup>(1)</sup>With CV Adapter. Rated at 400 amps, 35 volts at 60% duty cycle. (Not available with upgrades for severe duty environments.)



Shown:  
K1278-11 SAE-500®

Shown:  
K1278-12  
SAE-500® Severe Duty™



## Both Models

- **Rugged Construction** – Withstands rough field handling, protecting internal parts.
- **High Welding Output** – 60% duty cycle at 500 amps for demanding applications.
- **Large diameter stick welding and arc gouging** with up to 3/8 in. (10 mm) carbons.
- **Dual Continuous Output Control** – Continuous adjustment of voltage and current. Select either a soft “buttery” arc or snappy “digging” arc.
- **Multiple Arcs** – Robust DC weld output makes the SAE-500® the #1 choice for the multi-arc Multi-Weld™ 350 system.

## SAE-500® Severe Duty™ Only

- **Stainless steel and hot-dip galvanized case** and internal sheet metal parts.
  - Stainless steel brushholder assemblies.
  - All copper coils.
  - Coated radiator, laminations and wire connections.
  - Sealed switches.
- **Spark arrestor and engine air intake shutdown** per Mineral Management Services Code.
- **Remote Control Included**



Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cylinders	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
SAE-500®	K1278-11	400A/40V/100% 500A/40V/60%	80-575A DC 3,000 Watts AC Power	Kubota® V3600-T Turbo Diesel EPA Tier 4i	4	57.8 @ 1800	45.8 x 28 x 83 (1164 x 711 x 2109) To top of exhaust tube: 54.3 (1379), machine only	2048 (928)
SAE-500® One-Pak®	K2726-3							
SAE-500® Ready-Pak®	K2730-3							
SAE-500® Severe Duty™	K1278-12	400A/40V/100% 500A/40V/60%	80-575A DC 3,000 Watts AC Power	Kubota® V3600-T Turbo Diesel EPA Tier 4i	4	57.8 @ 1800	45.8 x 28 x 83 (1164 x 711 x 2109) To top of exhaust tube: 54.3 (1379), machine only	2048 (928)

# Vantage® 500



## 500 Amps at 100% Duty Cycle, 20,000+ Watts AC Generator Power!

Select our full-size Deutz®-driven model or the compact case, turbo-charged Perkins®-driven model for truck bed installation where space and weight capacity are limited. Both are rugged welders intended for demanding construction, rental fleet or repair applications. Both deliver the low maintenance, long service life, easy operation and great arc performance every owner appreciates.

- **Stainless steel enclosure** for corrosion-resistant protection and durability.
- **Multi-Process Welding** – 500 amps at 100% duty cycle for CC-stick, pipe, CV-wire, DC Touch-Start TIG® and arc gouging.
- **Plenty of AC Generator Power:**  
Vantage® 500 (Deutz®)  
- 20 kW continuous 3-phase 240V AC  
- 12 kW continuous 1-phase 120/240V AC  
Vantage® 500 Compact Case (Perkins®)  
- 22 kW peak (20 kW continuous) 3-Phase 240V AC  
- 13 kW peak (12 kW continuous) 1-phase 120/240V AC
- **Arc gouging** – With up to 3/8 in. (9.5 mm) carbons.
- **Reliable Industrial Diesel Engines** – Deutz® and Perkins® 4 cylinder, water-cooled.



- Processes**
- Stick
  - MIG
  - Gouging
  - TIG
  - Flux-Cored
- Output** **Input**

- Ready-Pak® Package Includes**
- Vantage® 500
  - Two-Wheeled Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
  - Fender and Light Kit
  - Cable Rack
  - Electrode Cable 3/0, two 50 ft. (15.3 m) lengths
  - Electrode Cable 3/0, 10 ft. (3 m)
  - Work Cable 3/0, 50 ft. (15.3 m)
  - 400A Electrode Holder
  - 500A Work Clamp
- Recommended Accessories**
- K2636-1 Medium Two-Wheel Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
  - K704 Accessory Kit, 400 Amp
  - K857-1 Remote Control, 100 ft. (30.5 m)
  - More accessories at end of section

**Literature:**  
E6.216 (Vantage® 500)  
E6.214 (Vantage® 500, Compact Case)

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cyl.	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Vantage® 500 (Export & Canada)	K2405-2	500A/40V/100% 550A/36V/60% 575A/35V/50%	30-575A DC 40-300A Pipe 20-250A DC TIG 14-40V CV	Deutz® D2011 L4i Diesel EPA Tier 4i	4	48 @ 1800	42.0 x 31.5 x 63.1 (1069 x 800 x 1603) To top of exhaust tube: 50.8 (1290) machine only	1532 (695)
Vantage® 500 Ready-Pak® (Canada)	K2290-3		3-Phase AC Power: 20 kW Continuous 1-Phase AC Power: 12 kW Continuous					
Vantage® 500 Compact Case	K2686-2	500A/40V/100% 525A/38V/60%	30-525A DC 40-300A Pipe 20-250A DC TIG 14-40V CV	Perkins® 404D-22T Turbo Diesel EPA Tier 4i	4	45 @ 1,850	35.9 x 25.3 x 60.0 (913 x 642 x 1524) To top of exhaust tube: 46.6 (1184) machine only	1290 (586)
Vantage® 500 One-Pak®	K3244-3							
Vantage® 500 Ready-Pak®	K2728-3		3-Phase AC Power: 20 kW Continuous 1-Phase AC Power: 12 kW Continuous					

# Air Vantage® 500



## It's Three-in-One—Welder, Generator and Air Compressor

When you need it all, consider the rugged Air Vantage® 500 for railroad, mining, heavy duty construction, and rental fleet use. A compressor pumps plenty of air for arc gouging with up to 3/8 in. (10 mm) carbons, plasma cutting or other air tools. A powerful 500 amps @ 100% duty cycle is enough for almost any stick, TIG, MIG or flux-cored welding project.

- **Rotary screw compressor** rated at 60 CFM, 100 PSI, 100% duty cycle.
- **Multi-process powerhouse** – 500 amps at 100% duty cycle, or 575 amps at 50%.
- **Plenty of AC Generator Power**  
– 20 kW continuous 3-phase 240V AC  
– 12 kW continuous 1-phase 120/240V AC
- **Stainless steel corrosion-resistant enclosure.**
- **Reliable Industrial Diesel Engine** – Kubota® turbo-charged 4 cylinder, water-cooled.



- Processes**
- Stick
  - MIG
  - Gouging
  - TIG
  - Flux-Cored
- Output** **Input**

- Ready-Pak® Package Includes**
- Air Vantage® 500
  - Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
  - Fender and Light Kit
  - Cable Rack
  - Cable Connectors (qty. 2)
  - Electrode Cable 3/0, 50 ft. (15.3 m) (qty. 2)
  - Electrode Cable 3/0, 10 ft. (3 m)
  - Work Cable 3/0, 50 ft. (15.3 m)
  - 400A Electrode Holder & 500A Work Clamp
- Recommended Accessories**
- K2636-1 Medium Two-Wheel Road Trailer with Duo-Hitch®: Ball/Eye Hitch Combo
  - K704 Accessory Kit, 400 Amp
  - K857-1 Remote Control, 100 ft. (30.5 m)
  - More accessories at end of section

**Literature:** E6.217

Product Name	Product Number	Rated Output Current/Voltage/Duty Cycle	Output Range	Engine	No. of Cyl.	HP & Speed (rpm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Air Vantage® 500	K2325-2	500A/40V/100% 550A/36V/60% 575A/35V/50%	30-575A DC 40-300A Pipe 20-250A DC TIG 14-40V CV	Kubota® V3600-T Turbo Diesel EPA Tier 4i	4	58 @ 1,850	42.0 x 32.7 x 63.1 (1067 x 831 x 1603) To top of exhaust tube: 48.9 (1243) machine only	1730 (785)
Air Vantage® 500 One-Pak®	K2725-3							
Air Vantage® 500 Ready-Pak®	K2729-3		3-Phase AC Power: 20 kW Continuous 1-Phase AC Power: 12 kW Continuous Compressor: 60 CFM, 100 PSI					

## Accessories

For complete descriptions go to page 133.

### Classic® 300 HE (Kubota®)

#### General

K802D	Power Plug Kit
K903-1	Spark Arrestor Kit
K2636-1	Medium Two-Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2423-1	Stainless Steel Sheet Metal Kit

#### Stick

K704	Accessory Kit, 400 Amp
K924-4	Remote Control Kit, 100 ft. (30.5 m)

#### TIG

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K930-2	TIG Module
K936-4	Control Cable (9-pin to 115V plug)
K937-45	Control Cable Extension, 45 ft. (13.7 m)
K814	Arc Start™ Switch
K938-1	Contacting Kit

#### Wire Feeder

K3964-1	Wire Feed Module
K2464-1	Remote Control Kit, 100 ft. (30.5 m) (use when Wire Feed Module is installed)
K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid
OR	
K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid

### Classic® 300 HE (Kubota®), con't.

#### Spool Gun

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

### SAE-300® HE (Perkins® and Kubota®)

#### General

K802D	Power Plug Kit
K903-1	Spark Arrestor Kit
K2636-1	Medium Two-Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2423-1	Stainless Steel Sheet Metal Kit

#### Stick

K704	Accessory Kit, 400 Amp
K924-4	Remote Control Kit, 100 ft. (30.5 m)

#### TIG

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K930-2	TIG Module
K936-4	Control Cable (9-pin to 115V plug)
K937-45	Control Cable Extension, 45 ft.
K814	Arc Start™ Switch
K938-1	Contacting Kit

### SAE-300® (Perkins® and Kubota®), con't.

#### Wire Feeder

K3964-1	Wire Feed Module
K2464-1	Remote Control Kit, 100 ft. (30.5 m) (use when Wire Feed Module is installed)
K2614-5	LN-25 Pipe Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. Cored/Solid
OR	
K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid

#### Spool Gun

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

### Vantage® 300 (Kubota®)

#### General

K802N	Power Plug Kit, 20 amp
T12153-9	Full KVA Power Plug (1-Phase)
T12153-10	Full KVA Power Plug (3-Phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K2636-1	Medium Two-Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch
K1898-1	Spark Arrestor Kit
K2467-1	Digital Weld Meters Kit (for K2409-1 & K2499-1)
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30.5 m), 20 amp capacity

#### TIG

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K870	Foot Amptrol™
K963-3	Hand Amptrol™ (Rotary Track Style)
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

#### Wire Feeder

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

#### OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid

#### Spool Gun

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

#### Plasma Cutting

K2808-1	Tomahawk® 1000
---------	----------------

### Vantage® 400 (Perkins® and Kubota®)

#### General

K802N	Power Plug Kit, 20 amp
T12153-9	Full-KVA Power Plug (1-Phase)
T12153-10	Full-KVA Power Plug (3-Phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K2636-1	Medium Two-Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch
K903-1	Spark Arrestor Kit
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit
K2679-1	Cold Weather Heater and Tarp Kit (Perkins®)
K2735-1	Cold Weather Heater and Tarp Kit (Kubota®)

#### Stick

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

#### TIG

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit For PTW-18 and PTA-26 Series Torches
K870	Foot Amptrol™
K963-3	Hand Amptrol™ (Rotary Track Style)
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

#### Wire Feeder

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

#### OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 mm), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 in. and .045 in. (0.9 and 1.1 mm) Solid

#### Spool Gun

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

#### Plasma Cutting

K2808-1	Tomahawk® 1000
---------	----------------

**Accessories**

For complete descriptions go to page 133.

**SAE-500® (Kubota®)***General*

K802D	Power Plug Kit
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp
K2637-2	Large Two-Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch
K1735-1	Multi-Weld™ 350 (For DC+ Welding Only)

*Stick*

K704	Accessory Kit, 400 Amp
K924-4	Remote Control Kit, 100 ft. (30.5 m)

*TIG*

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc.
KP509	Parts Kit for PTW-18 and PTA-26 Series Torches
K930-2	TIG Module
K936-4	Control Cable (9-pin to 115V plug)
K937-45	Control Cable Extension, 45 ft.
K814	Arc Start™ Switch
K938-1	Contact Kit

*Wire Feeder*

K385-2	CV Adapter (with MS-Type connection, local/remote switch)
K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. Cored/Solid
OR	
K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid

**SAE-500® Severe Duty™ (Kubota®)***General*

K802D	Power Plug Kit
K1690-1	GFCI Receptacle Kit, 120V, 20 Amp
K2637-2	Large Two Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch

*Stick*

K704	Accessory Kit, 400 Amp
------	------------------------

**Vantage® 500 (Deutz® and Perkins®)***General*

K802N	Power Plug Kit, 20 amp
T12153-9	Full-KVA Power Plug (1-Phase)
T12153-10	Full-KVA Power Plug (3-Phase) (Perkins®)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K2636-1	Medium Two Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch
K887-1	Ether Start Kit (Deutz®)
K1847-1	Spark Arrestor Kit (Deutz®)
K903-1	Spark Arrestor Kit (Perkins®)
K2679-1	Cold Weather Heater & Tarp Kit (Perkins®)
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit

*Stick*

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

*TIG*

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit for PTW-18 and PTA-26 Series Torches
K870	Foot Amprol™
K963-3	Hand Amprol™ (Rotary Track Style)
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

*Wire Feeder*

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

## OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid

*Spool Gun*

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

*Plasma Cutting*

K2808-1	Tomahawk® 1000
---------	----------------

**Air Vantage® 500 (Kubota®)***General*

K802N	Power Plug Kit, 20 amp
T12153-9	Full-KVA Power Plug (1-Phase)
K1816-1	Full-KVA Adapter Kit (1-Phase)
K2636-1	Medium Two Wheel Trailer & Duo-Hitch® Ball/Eye Hitch
K2639-1	Fender and Light Kit
K2640-1	Cable Rack
K2641-2	Four-Wheel Yard Trailer with Duo-Hitch® Ball/Eye Hitch
K2354-2	Air Dryer Kit (Kubota®)
K2642-1	Polarity/Multi-Process Switch
K2663-1	Docking Kit
K3085-1	Check Valve Kit

*Stick*

K704	Accessory Kit, 400 Amp
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30 m)
K2627-2	Remote Output Control with 120V AC, 100 ft. (30 m), 20 amp capacity

*TIG*

K1783-9	Pro-Torch™ TIG Torch PTA-26V, 25 ft. (7.6 m), 2 pc
KP509	Parts Kit for PTW-18 and PTA-26 Series Torches
K870	Foot Amprol™
K963-3	Hand Amprol™ (Rotary Track Style)
K1478-5	Square Wave™ TIG 175
K2350-2	Invertec® V205-T AC/DC One-Pak®

*Wire Feeder*

K2614-9	LN-25 Ironworker® Wire Feeder
K126-12	K126™ PRO FCAW-SS Gun, 15 ft. (4.6 m), .062-5/64 in. (1.6-2.0 mm)
KP1697-068	Drive Roll Kit, .068-.072 in. (1.7-1.8 mm) Cored/Solid

## OR

K2652-2-10-45	Magnum® PRO 350 Ready-Pak®, 15 ft. (4.6 m), .035-5/64 in. (0.9-2.0 mm). Includes K466-10 Connector Kit
KP1696-1	Drive Roll Kit, .035 and .045 in. (0.9 and 1.1 mm) Solid

*Spool Gun*

K487-25	Magnum® SG Spool Gun, Air-Cooled, w/Remote, 25 ft. (7.6 m)
K488	SG Control Module
K691-10	Control Module Input Cable, 14-pin MS-type & Lug, 10 ft. (3.0 m)

*Plasma Cutting*

K2808-1	Tomahawk® 1000
---------	----------------



# SEMI-AUTOMATIC WIRE FEEDERS

## LF-72 & LF-74

2 or 4 Roll MAXTRAC® Drives, Heavy Duty Industrial Applications



## LN-8 & LN-9

Heavy Duty, Recommended for Larger Wire Sizes



## FlexFeed™ 74 HT, 84 & 84 Dual

Heavy Duty Industrial Feeder



## Power Feed® 84 & Power Feed® 84 Dual

Single 4-Roll Drive, Bench or Boom, and Dual 4-Roll Drive, Bench or Boom



## Activ8™

Lightweight, portable, rugged. For shipbuilding.



## LN-23P

Lightweight, excellent for pipe welding.



## LN-25 PRO, Pipe and Ironworker®

For construction, ship, pipeline or iron work. Select Standard, Extra Torque or Dual Power.



## Power Feed® 25M

Portable, Shop or Field, Push-Pull Capable, 2 Roll MAXTRAC® Drive



BENCH AND BOOM MODELS

FIELD MODELS

	MODEL	PROCESS					WIRE FEED SPEED RANGE ipm (m/min)	WIRE SIZE RANGE inches (mm)		MAXTRAC® Wire Drive System	FEATURES	
		MIG	Pulsed MIG	MIG-STT®	Flux-Cored	Submerged Arc		High Speed Low Speed	High Speed Solid Low Speed Solid		High Speed Cored Low Speed Cored	2-Roll Drive
BENCH AND BOOM Analog	LF-72	●	●	●			50-800 (1.3-20.3)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓	●	
	LF-74	●	●	●			100-800 (2.5-20.3)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓		●
	LN-8 and LN-9	●		●	●	●	50-600 (1.3-15.2)	.040-3/32 (1.0-2.4)	.045-.120 (1.2-3.0)		●	LN-9
	FlexFeed™ 74 HT	●		●	●		50-700 (1.3-19.0) 50-500 (1.3-12.7)	.025-1/16 (0.6-1.6) .025-3/32 (0.6-2.4)	.035-5/64 (0.9-2.0) .035-.120 (0.9-3.0)	✓	●	● <sup>(1)</sup>
	FlexFeed™ 84	●		●	●	●	50-700 (1.3-19.0) 50-500 (1.3-12.7)	.025-1/16 (0.6-1.6) .025-3/32 (0.6-2.4)	.035-5/64 (0.9-2.0) .035-.120 (0.9-3.0)	✓	●	●
	FlexFeed™ 84 Dual <sup>(2)</sup>	●		●	●	●	50-700 (1.3-19.0) 50-500 (1.3-12.7)	.025-1/16 (0.6-1.6) .025-3/32 (0.6-2.4)	.035-5/64 (0.9-2.0) .035-.120 (0.9-3.0)	✓		
ArcLink®	Power Feed® 84	●	●	●	●		50-700 (1.3-19.0) 50-500 (1.3-12.7)	.025-1/16 (0.6-1.6) .025-3/32 (0.6-2.4)	.035-5/64 (0.9-2.0) .035-.120 (0.9-3.0)	✓	●	●
	Power Feed® 84 Dual <sup>(2)</sup>	●	●	●	●		50-700 (1.3-19.0) 50-500 (1.3-12.7)	.025-1/16 (0.6-1.6) .025-3/32 (0.6-2.4)	.035-5/64 (0.9-2.0) .035-.120 (0.9-3.0)	✓	●	●
FIELD Analog	Activ8™	●	◐	●			50-800 (1.3-20.3)	.025-.045 (0.6-1.2)	.035-5/64 (0.9-2.0)	✓	●	
	LN-23P			●	●		30-170 (0.76-4.3)	.023-.052 (0.6-1.3)	.068-5/64 (1.7-2.0)		●	
	LN-25 PRO Standard	●	◐	●			50-700 (1.3-17.7)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓	●	
	LN-25 PRO Extra Torque	●	◐	●			50-400 (1.3-10.1)	.023-1/16 (0.6-1.6)	.030-3/32 (0.8-2.4)	✓	●	
	LN-25 PRO Dual Power	●	◐	◐	●		50-700 (1.3-17.7)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓	●	●
	LN-25 PRO Pipe	●	◐	●			50-700 (1.3-17.7)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓	●	●
	LN-25 PRO Ironworker®	●	◐	●			50-700 (1.3-17.7)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	✓	●	●
ArcLink®	Power Feed® 25M	●	●	●			50-800 (1.3-20.3) 30-400 (0.76-10.1)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0) .030-3/32 (0.8-2.4)	✓	●	●

KEY: ● Excellent ◐ Good ○ Optional

<sup>(1)</sup>Select models <sup>(2)</sup>Extended wire feed speed and wire size range on dual models.

# LF-72 & LF-74

## Heavy Duty Industrial 2-Roll and 4-Roll Wire Feeders



Designed for MIG and cored wire welding in job shop and manufacturing environments, the rugged LF-72 and LF-74 wire feeders are built to deliver reliable performance day after day. Select the LF-74 for large diameter wires, longer gun cables or long boom conduits.

- Patented MAXTRAC® heavy-duty cast aluminum wire drive system provides reliable feeding and durability.
- Brass-to-brass gun connections for better electrical conductivity that results in better arc performance.
- Totally tool-less drive rolls and wire guide installation. Gear-driven wire drive rolls easily slide on and off.
- Calibrated wire feed speed dial for precise and accurate settings.



**Processes**

- MIG
- Pulsed MIG
- Flux-Cored

**Output** <sup>(1)</sup> <sup>(2)</sup> **Input**

**Required Accessories**

- Weld Power Cable

**Recommended Accessories**

- Magnum® PRO Gun and Cable Assembly (for models where gun and cable is not supplied)
- K2330-1 Postflow and Burnback Timer Kit
- K2329-1 Remote Voltage Control Kit
- K1546-1 Incoming Bushing for Lincoln Electric Conduit
- More accessories at end of section

**Literature**

E8.11

<sup>(1)</sup>LF-72  
<sup>(2)</sup>LF-74

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
LF-72 Base Model (w/o gun or cable)	K2327-4	24-42 VAC 50/60 Hz 9 Amps	500A/60%	50-800 (1.3-20.3)	Solid: .023-1/16 (0.6-1.6) Cored: .030-5/64 (0.8-2.0)	11.1 x 10.2 x 12.9 (282 x 259 x 328)	24 (11)
LF-72 Bench Model Standard Duty	K2327-5					12.6 x 10.9 x 22.5 (320 x 277 x 574)	52 (24)
LF-72 Bench Model Heavy Duty	K2327-6					15.3 x 13.0 x 27.7 (389 x 330 x 704)	69 (31)
LF-72 Bench Model Heavy Duty (w/o gun)	K2327-7					15.3 x 13.0 x 27.7 (389 x 330 x 704)	63 (29)
LF-74 Base Model	K2426-4	24-42 VAC 50/60 Hz 9 Amps	600A/60%	50-800 (1.3-20.3)	Solid: .023-1/16 (0.6-1.6) Cored: .030-5/64 (0.8-2.0)	11.1 x 10.2 x 12.9 (282 x 259 x 328)	27 (12)
LF-74 Bench Model Heavy Duty	K2426-5					15.3 x 13.0 x 27.7 (389 x 330 x 704)	63 (29)

## LF Model Selection What's Included:



Model	LF-72 Base Model	LF-72 Bench Model, Standard Duty	LF-72 Bench Model, Heavy Duty	LF-72 Bench Model, Heavy Duty	LF-74 Base Model	LF-74 Bench Model, Heavy Duty
<b>Product Number</b>	K2327-4	K2327-5	K2327-6	K2327-7	K2426-4	K2426-5
<b>Application</b>	Boom or Bulk Pack	General, 45 lb (20 kg) spool	General, 60 lb (27 kg) spool	General, 60 lb (27 kg) spool	Boom or Bulk Pack	General, 60 lb (27 kg) spool
<b>Drive Roll &amp; Wire Guide Kit .035/.045 in. (0.9/1.2 mm)</b>	•	•	•	•	•	•
<b>Control Cable, 10 ft. (3.0 m)</b>		•	•	•	•	•
<b>Magnum® PRO 350 Gun</b>		•	•			
<b>Wire Reel Stand, 45 lb. (20.4 kg)</b>		•				
<b>Wire Reel Stand, 60 lb. (27 kg)</b>			•	•		•

# LN-8 & LN-9

## Semiautomatic Wire Feeders

The LN-8 and LN-9 are semiautomatic wire feeders that deliver dependable performance and reliable operation, making them ideal for shop or field operations. Heavy duty wire drive, recommended for larger size wires.

- **Completely enclosed case** protects the heavy duty wire drive mechanism from damage, yet allows easy access to drive rolls.
- **Rugged and durable design** recognized throughout the industry for its long life and years of trouble-free wire feeding.
- **Standard digital meter** can be set to read volts, inches or meters/minute on the LN-9.
- **Control of wire feed speed and voltage** at the wire feeder eliminates the need to return to the power source to adjust procedures.



### Processes

- Flux-Cored
- Submerged Arc

Output  Input 

### Required Accessories

- Drive Roll Kit
- Control Cable
- Control Extension Cable
- Weld Power Cable

### Recommended Accessories

- K1524-3 Heavy Duty Wire Reel Stand
- K1555-1 Insulated Lift Bail
- K1556-1 Light Duty Caster Kit
- K1557-1 Swivel Platform
- K1798 Terminal Strip Adapter Cable
- *More accessories at end of section*

### Literature

E8.30

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
LN-8	K297	115 VAC 50/60 Hz	600A/60%	50-600 (1.3-15.2)	Solid: .040-.3/32 (1.0-2.4) Cored: .045-.120 (1.2-3.0) Hardfacing: 7/64 (2.8)	10.9 x 9.8 x 9.6 (277 x 248 x 244)	36 (16.3)
LN-9	K357-1					11.5 x 11.3 x 11.5 (292 x 287 x 292)	42 (19)

LINCOLN ELECTRIC

# Semiautomatic Wire Feeders

Rugged. Reliable. Ready to Go to Work.

Choose The Feeder That's Right For Your Application:

- Two Roll or Four Roll Drive Systems
- Analog or Digital ArcLink® Control
- Advanced or Basic Interfaces
- Pre-Configured Packages or User-Selected Configurations
- Bench, Boom, Structural and Bulk Models
- Portable Models for Field Construction, Erection or Marine Applications



**LINCOLN**  
**ELECTRIC**

# FlexFeed™ 74 HT

## Semiautomatic Wire Feeder

The FlexFeed™ 74 HT (High Torque) semiautomatic wire feeder models deliver superior performance with additional torque for general and structural fabrication. Select a Structural Steel package with integrated gouging option for heavy structural shop fabrication.

- The **base model** features analog WFS and remote voltage control without meters. The **Advanced Interface** models include digital meters for actual weld display of amps and voltage. Includes timers for preflow, burnback and postflow.
- **Feed plate** can be located on either right or left side of the wire drive housing for easy integration into any work center.
- **Select models include contactors** to electrically isolate the gouging stud.
- **2-step Trigger Interlock** enhances operator comfort for long welds.
- **New Gun Adapters** – Deliver improved electrical reliability, less voltage loss and simplified connection.
- **Electrode input stud** is mounted on the wire drive frame – protects the feed plate from misuse caused by pulling on the gun cable.



Shown:  
K3883-12 FlexFeed™ 74 HT

Additional system configurations and boom packages are available. Visit [lincolnelectric.com](http://lincolnelectric.com) for more information.

### Processes

- MIG
- Flux-Cored
- Hand-held SAW
- Gouging (CCAG) – w/ gouging option installed

Output Input

### Unit Includes

- Bench models include a 10 ft. (3.0 m) control cable
- All models include a standard #4 gun adapter
- Models with the Heavy Duty Wire Reel stand include a lift bail
- Models without a wire reel stand include a quick disconnect inlet bushing (K3929-1)

### Required Accessories

- Drive Roll Kits
- Control Cable
- Weld Power Cable

### Recommended Accessories

- Magnum® PRO Gun and Cable
- Incoming Bushing for Lincoln® Conduit
- More accessories at end of section

### Literature

E8.203

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range - inches (mm)		H x W x D inches (mm)	Net Weight lbs. (kg)
					Solid	Cored		
FlexFeed™ 74 HT MIG package with basic interface and Standard Duty Reel Stand	K3883-5	24-42V AC 50/60 Hz	600A/60% (wire drive only)	20 Tooth <sup>(1)</sup> : 50-500 (1.3-12.7)	.025-3/32 (0.6-2.4)	.035-.120 (0.9-3.0)	13.3 x 15.5 x 23.6 (338 x 394 x 599) wire drive only	54 (24)
FlexFeed™ 74 HT Advanced MIG package w/digital interface and Heavy Duty Reel Stand	K3883-12		500A/60% (wire drive w/gouging kit)	30 Tooth: 50-700 (1.3-19.0)	.025-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	25.2 x 15.5 x 27.9 (640 x 394 x 709)	62 (28)
FlexFeed™ 74 HT Structural Steel package with basic interface, gouging kit and Heavy Duty Reel Stand	K3883-13		600A/30% (gouging stud)				25.2 x 15.5 x 27.9 (640 x 394 x 709)	64 (29)
FlexFeed™ 74 HT Heavy Fab One-Pak® Pkg. with basic interface, gouging kit, .035-.045 gun, and Heavy Duty Reel Stand	K3883-15						25.2 x 15.5 x 27.9 (640 x 394 x 709)	76 (34)

<sup>(1)</sup>Installed from factory.

# FlexFeed™ 84 & FlexFeed™ 84 Dual

## Single and Dual Semiautomatic Wire Feeders

The FlexFeed™ 84 single and dual wire feeders are ideal for applications requiring preset voltage display at the wire feeder. This four roll feeder is ready to feed large diameter wire electrodes and delivers reliable feeding over long conduit runs. Select single, dual, bench or boom configurations.

- **Advanced Interface** includes digital meters for actual AND preset weld display and full weld sequence control including run-in, start, weld, burnback and crater parameters.
- Includes **four user memories** per wire drive.
- **Select models include contactors** to electrically isolate non-active wire drives and gouging stud.
- Built-in interface for **hard automation**.
- **Feed plate** can be located on either right or left side of the wire drive housing for easy integration into any work center.
- **Electrode input stud** is mounted on the wire drive frame – protects the feed plate from misuse caused by pulling on the gun cable.
- **New Gun Adapters** – Deliver improved electrical reliability, less voltage loss and simplified connection.






Shown:  
K5000-2 FlexFeed™ 84

Additional system configurations and boom packages are available.  
Visit [lincolnelectric.com](http://lincolnelectric.com) for more information.

### Processes

- MIG
- Flux-Cored
- Hand-held SAW
- Gouging (CCAG) – w/ gouging option installed

Output  Input  

### Unit Includes

- Bench models include a hardwired, 10 ft. (3.0 m) control cable
- All models include a standard #2-#4 gun adapter

### Required Accessories

- Drive Roll Kits
- Control Cable
- Weld Power Cable

### Recommended Accessories

- Magnum® PRO Gun and Cable
- Incoming Bushing for Lincoln® Conduit
- More accessories at end of section

### Literature

E8.204

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range - inches (mm)		H x W x D inches (mm)	Net Weight lbs. (kg)
					Solid	Cored		
FlexFeed™ 84 Large diameter package with a single wire drive and Heavy Duty Wire Reel Stand	K5000-2	24-42V AC 50/60 Hz	600A/60% (wire drive only)	20 Tooth <sup>(1)</sup> 35-500 (0.9-12.7)	.025-3/32 (0.6-2.4)	.035-.120 (0.9-3.0)	25.2 x 15.5 x 27.9 (640 x 394 x 709)	62 (28)
FlexFeed™ 84 Structural Steel and Heavy Fabrication One-Pak® Pkg. with a single wire drive, Heavy Duty Wire Reel Stand, Gouging Kit, and Magnum® PRO Curve™ Gun	K5001-5		500A/60% (wire drive w/gouging kit)	30 Tooth 50-750 (1.3-19.0)	.025-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	25.2 x 15.5 x 27.9 (640 x 394 x 709)	88 (40)
FlexFeed™ 84 Dual Heavy Fab Package with dual wire drives, contactors, and Heavy Duty Wire Reel Stand	K5002-2		600A/60% (w/o PowerPath™ contactors)	20 Tooth <sup>(1)</sup> 35-500 (0.9-12.7)	.025-3/32 (0.6-2.4)	.035-.120 (0.9-3.0)	25.2 x 22.5 x 30.6 (640 x 572 x 777)	105 (48)
FlexFeed™ 84 Dual Bench Model with dual wire drives and Standard Duty Wire Reel Stand for MIG	K5002-6	500A/60% (w/PowerPath™ contactors)	30 Tooth 50-750 (1.3-19.0)	.025-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	13.3 x 22.5 x 26.2 (338 x 572 x 665)	87 (39)	
FlexFeed™ 84 Dual with dual wire drives, contactors, Standard Duty Wire Reel Stand and Magnum® PRO Curve™ Gun	K5003-2						13.3 x 22.5 x 26.2 (338 x 572 x 665)	113 (51)

<sup>(1)</sup>Installed from factory.

# Power Feed® 84 & Power Feed® 84 Dual

## Single and Dual Digital Control Semiautomatic Wire Feeders

The new and improved Power Feed® 84 and Power Feed® 84 Dual feeder were developed using the legacy Power Feed® 10 platform – keeping the features you like – with advancements to make the new feeders even better. These multi-process wire feeders are completely customizable with additional system configurations and boom packages available for any requirement.

- Programmed **Auto Settings for process controls** include run-in, start, weld, burnback and crater parameters per each weld mode for efficient system set-up.
- **USB Port** included on select models to simplify procedure management and allow customization for individual operators.
- Includes **Eight User Memories** per drive for complete WPS recall.
- **Select models include contactors** to electrically isolate non-active wire drives and gouging stud.
- **Feed plate** can be located on either right or left side of the wire drive housing for easy integration into any work center.
- **Advanced Interface** includes digital meters for actual and preset weld display.
- **Electrode input stud** is mounted on the wire drive frame – protects the feed plate from misuse caused by pulling on the gun cable.
- **New Gun Adapters** – Deliver improved electrical reliability, less voltage loss and simplified connection.
- **Optional Digital Gas Flow Kit** displays actual gas flow rate while welding.
- **Push-pull capable** drive systems.



Shown:  
K3330-10 Power Feed® 84  
Dual Bench Model



Shown:  
K3328-13 Power Feed® 84  
Single Bench Model

Additional system configurations and boom packages are available. Visit [lincolnelectric.com](http://lincolnelectric.com) for more information.

### Processes

- MIG
- Pulsed MIG
- MIG-STT®
- Flux-Cored
- Stick
- TIG
- Gouging (CCAG)

Output

Input

### Bench Models Include

- All models include a standard #2-#4 gun adapter
- 30 tooth pinion gear
- All wire feeders with a wire reel stand include a 8 ft. (2.4 m) control cable (K1543-8)
- All wire feeders without a wire reel stand include a conduit inlet bushing (K3929-10)

### Required Accessories

- Drive Roll Kits
- Control Cable

### Recommended Accessories

- Magnum® PRO Gun and Cable
- Incoming Bushing for Lincoln® Conduit
- *More accessories at end of section*

### Literature

E8.268

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range - inches (mm)		H x W x D inches (mm)	Net Weight lbs. (kg)
					Solid	Cored		
Power Feed® 84 Single Bench Model for heavy fabrication with Heavy Duty Wire Reel Stand and a USB	K3328-13	40 VDC	600A/60% (wire drive only)	20 Tooth <sup>(1)</sup> 50-750 (1.3-19.0)	.025-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	25.2 x 15.5 x 27.9 (640 x 394 x 709) <i>single wire drive only</i>	62 (28)
			500/60% (wire drive w/gouging kit)	30 Tooth 50-1200 (1.3-30.4)	.025-.045 (0.6-1.2)	.035-1/16 (0.9-1.6)		
			600/30% (gouging stud)					
Power Feed® 84 Dual Bench Model for heavy fabrication with Heavy Duty Wire Reel Stand, contactors and a USB	K3330-5	40 VDC	600A/60% (w/o PowerPath™ contactors)	20 Tooth <sup>(1)</sup> 50-750 (1.3-19.0)	.025-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	25.2 x 22.5 x 30.6 (640 x 572 x 777) <i>dual wire drive only</i>	105 (48)
			500/60% (w/PowerPath™ contactors)	30 Tooth 50-1200 (1.3-30.4)	.025-.045 (0.6-1.2)	.035-1/16 (0.9-1.6)		

<sup>(1)</sup>Installed from factory.

# Activ8™

## Portable, Semiautomatic Wire Feeder

Activate your shipbuilding, offshore, construction or pipe welding operations with the Activ8™ portable wire feeder. Small enough to fit through ship manways and light enough to carry around the site, the Activ8™ is designed for tough welding environments with limited access. Compatible with compact 8 inch (203 mm) wire spools, the Activ8™ can be used with most DC CV or CC power sources.

- **Breakthrough Size and Weight** – Smallest and lightest construction wire feeder on the market today.
- **Simple Controls** – WFS knob on the front; Cold Feed/Gas Purge, Trigger Interlock and CV/CC switches inside.
- **Across-The-Arc Operation (Voltage Sensing)** – uses a sense lead and a contactor for enabling welding current.
- **Gas apparatus** – can be used for FCAW-G and GMAW processes.
- **Tough Plastic Case** – Molded from a high impact, flame retardant material for high durability and low weight.
- **MAXTRAC® Wire Drive System** – The patented features on the wire drive offer tool-less changing of the drive rolls and wire guides for quick spool changes. A tachometer controlled motor powers the patented drive rolls for smooth, steady feeding without slippage.

**Processes**

- MIG
- Flux-Cored

Output

Input

**Unit Includes**

- Internal Contactor
- Gas Solenoid
- Arc Sensing Lead & Clip, 15 ft. (4.5 m)
- Gun Bushing (K1500-2)

**One-Pak® Pkg. Includes**

Activ8™ and Magnum® PRO Curve™ 300 Ready-Pak® (K2951-2-10-116).

**Recommended Accessories**

- Magnum® PRO Gun and Cable Assembly
- K3061-1 Plastic Case
- K1803-1 Work and Wire Feeder 2/0 Weld Cable Package
- K852-95 Twist-Mate™ Cable Plug
- K586-1 Deluxe Adjustable Gas Regulator & Hose Kit
- K3156-1 Flow Meter Kit
- More accessories at end of section

**Literature**

E8.61

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Activ8™	K2999-1	15-110 VDC	330A/60%	50-800 (1.3-20.3)	GMAW: .023-.052 (0.6-1.3) FCAW: .035-5/64 (0.9-2.0)	11.8 x 7.6 x 19.8 (298 x 193 x 503)	27 (12.2)
Activ8™ One-Pak®	K3289-1						

# LN-23P

## Semiautomatic Wire Feeder

The LN-23P semiautomatic wire feeder is able to handle the toughest work sites and is an excellent choice for pipe welding applications. It is portable, easy to set-up, and ideal for reaching difficult locations.

- **Weighs less than 50 lbs. (22.7 kg)** including optional Innershield® gun and 14 lb. (6.3 kg) coil of electrode.
- **Continuous wire feed speed control**, voltage control and analog voltmeter are standard.
- **Completely enclosed wire reel** keeps the wire free of contaminants.
- **Equipped with trigger interlock circuit** to reduce operator fatigue.
- **Gun-mounted two-position switch** allows on-the-fly change to 83% of the preset wire feed speed.

**Processes**

- Flux-Cored

Output

Input

**Unit Includes**

- 25 ft. (7.6 m) Control Cable
- 25 ft. (7.6 m) 1/0 Electrode Cable
- 3/32 in. (2.4 mm) Drive Rolls and Guide Tubes

**Required Accessories**

- K345-10 Magnum® Self-Shielded Gun and Cable Assembly
- K350 Adapter Kit – connect to power sources with terminal strip connection
- K350-1 Adapter Kit – connect to power sources with 14-pin MS-type connection

**Literature**

E8.90

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
LN-23P	K316L-1	14-50V DC (90V DC Max. OCV)	350A/60%	30-170 (0.8-4.3)	.068-5/64 (1.7-2.0)	20.5 x 9 x 19 (520 x 230 x 480)	27 (12.3)

# LN-25 Wire Feeders

## Portable Industrial Wire Feeder

LN-25 wire feeders are designed to be simple, reliable and easy to service. Whether you are an ironworker, pipeline welder, or weld at a construction site, shipbuilding facility or metal fabrication shop, we have the right semiautomatic wire feeder for you.

- **MAXTRAC® Wire Drive System** – Heavy-duty cast aluminum wire drive system provides reliable feeding and durability.
- **Dual Range Wire Feed Speed** – Delivers greater precision at low end wire feed speeds.
- **Trigger Interlock Switch** – Provides operator comfort for long welds.
- **Replaceable and Flame Resistant Case** – Rugged and durable case can be replaced in less than five minutes.
- **Potted PC Boards** – For moisture and corrosion protection.



Shown:  
K2614-5  
LN-25 Pipe

Shown:  
K2613-5  
LN-25 PRO Standard

Shown:  
K2614-9  
LN-25 Ironworker®

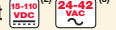
### Processes

- MIG
- MIG-STT<sup>(1)</sup>
- Pulsed
- Flux-Cored

### Output



### Input



### LN-25 PRO Standard/Extra Torque/Dual Power Includes

- Internal Contactor
- Gas Solenoid
- Flow Meter
- Arc Sensing Lead & Clip, 15 ft. (4.5 m)
- 2 Gun Bushings (K1500-2 installed; K1500-1 loose)

### LN-25 Pipe Includes

- 14 lb. Innershield® coil adapter (K435)
- 5/64 in. (2.0 mm) cored wire drive rolls and guide kit (KP1697-5/64)
- Variable WFS range set at factory to Low (50-400 ipm)
- Everything listed with Standard Model except Flow Meter

### LN-25 Ironworker® Includes

- 5/64 in. (2.0 mm) cored wire drive rolls and guide kit (KP1697-5/64)
- Variable WFS range set at factory to High (50-700 ipm)
- Everything listed with Standard model except Flow Meter

### Literature E8.101

<sup>(1)</sup> STT® capability only w/K2614-6 Dual Power Model.

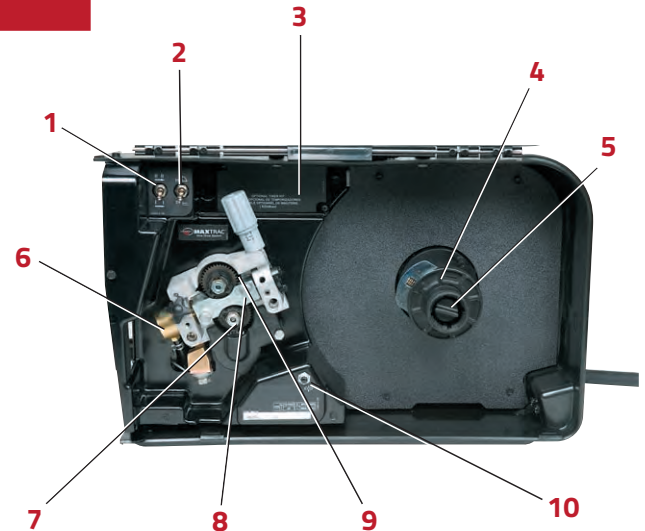
<sup>(2)</sup> All models; Across-the-Arc

<sup>(3)</sup> K2614-6 Only; Control Cable

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Flow Meter	Wire Feed Speed Range ipm (m/min)	Wire Size Range - inches (mm)			H x W x D inches (mm)	Net Weight lbs. (kg)
						Solid	Cored	Aluminum		
LN-25 PRO Standard	K2613-5	15-110V DC	450A/60%	Yes	50-700 (1.3-17.7)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	.035-1/16 (0.9-1.6)	15 x 8.7 x 23.2 (381 x 221 x 589)	37 (16)
LN-25 PRO Extra Torque	K2613-7				30-400 (0.8-10.1)		.030-3/32 (0.8-2.4)			
LN-25 PRO Dual Power	K2614-6				15-110V DC or 24-42V AC		50-700 (1.3-17.7)			
LN-25 Pipe	K2614-5	15-110V DC		No						
LN-25 Ironworker®	K2614-9									

## The LN-25 PRO - All Business.

- 1. 2 Step/Trigger Interlock Switch**
  - Provides comfort for long welds
- 2. CV/CC Switch**
  - Allows use of CC power source
- 3. Optional Timer Kit (Prewflow, Postflow & Burnback)**
  - Prevents electrode from sticking in crater when using high wire feed speeds
- 4. Spool Retainer**
- 5. Spindle Brake**
  - Heavy-duty design with an adjustable brake incorporated
- 6. Brass to Brass Interchangeable Gun Bushings**
  - More reliable electrical conductivity – no oxide build-up
  - More efficient energy transfer – lower voltage drops
  - Easily adapt any number of Lincoln Magnum® or alternate brand guns
- 7. Patented Drive Rolls (not shown)**
  - Steel Wire – delivers 20% more feeding force than previous generation
  - Aluminum Wire – chrome-plated to resist aluminum build-up
- 8. Patented Split Wire Guides**
  - Full support for wire throughout the drive path
  - Removable outer wire guide for easy access
  - No tools required
  - No birdnesting
- 9. Twist-Lock Drive Roll Hubs**
  - Fast, tool-less changeovers
- 10. Cold Feed Switch**
  - Provides added safety by keeping welding wire electrically "cold" until trigger is pressed





# Power Feed® 25M

Premium Welding Solution with a Portable Design!



**Processes**

- MIG
- Pulsed MIG
- MIG-STT®
- Flux-Cored
- Stick
- TIG
- Gouging

Output

Input

**Unit Includes**

- Electrode Pigtail
- Mode Select Panel
- Push-Pull Gun Connector
- Remote Control Connector
- Gun Receiver Bushing
- Standard & Extra Torque Gearing

**Recommended Accessories**

- Magnum® PRO Gun & Cable Assemblies
- Self-Shielded Gun & Cable Assemblies
- K1543-25 ArcLink®/Linc-Net™ Control Cables
- K1733-4 Micro Wire Straightener
- More accessories at end of section

**Literature**  
E8.271

Lincoln Electric offers this full featured design in a robust package that can meet industry challenges. The lightweight construction, durable case, as well as the patented design of the MAXTRAC® wire drive system deliver the results you need.

- **Push-Pull Capability** is a standard function that delivers premier performance on aluminum by offering uniform feeding, as well as a flexible system for extending the gun.
- **Hardened and Construction Ready.** Built tough for rough environments. From construction to shipbuilding, this design will meet your expectations. Packaged standard with either a durable aluminum or plastic case.
- **Internal Lighting.** High intensity LEDs illuminate the wire drive.
- **Internal heating** maintains control of humidity on your consumable by keeping the package warmed and protected in an enclosed case.
- **Mode Select Panel** allows easy access to the Power Wave® library of waveforms. Advanced controls and set-up options are only a fingertip away!
- **Dual Procedure and Memory Buttons** allow you to set-up an A and B procedure to simplify “on-the-fly” switching.



Shown:  
K2536-4  
Power Feed® 25M  
(Aluminum Case)

Shown:  
K2536-5  
Power Feed® 25M  
(Plastic Case)

Product Name	Product Number	Input Power	Gearing	Wire Feed Speed Range ipm (m/min)	Wire Size Range – Solid inches (mm)	Wire Size Range – Cored inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Feed® 25M	K2536-4 (Aluminum Case)	40 VDC	Standard Speed (factory setting)	Solid: 50-800 (1.3-20.3) Cored: 50-800 (1.3-20.3)	.023-1/16 (0.6-1.6)	.030-5/64 (0.8-2.0)	14.5 x 8.5 x 23.5 (368 x 216 x 597)	35 (15.9)
	K2536-5 (Plastic Case)		Extra Torque	Solid: 30-400 (0.8-10.2) Cored: 30-400 (0.8-10.2)	.023-1/16 (0.6-1.6)	.030-3/32 (0.8-2.4)		

## Power Feed® 25M

Advanced process control. Rugged, portable design

- Push-Pull capable for premium aluminum welding.
- Access advanced Power Wave® waveforms for optimized welding performance.
- User Memories recall frequently used procedures.



**Accessories**

For complete descriptions go to page 133.

**LF-72 and LF-74 Wire Feeders***Required**Weld Power Cables*

See Weld Power Cables chart in the "Accessories" section.

*General*

K1500-1	Gun Receiver Bushing
K1500-2	Gun Receiver Bushing
K1500-3	Magnum® 550 Gun Adapter
K1500-4	Miller® Gun Receiver Bushing
K1500-5	OXO® Gun Receiver Bushing
K489-7	Dual Schedule Fast-Mate™ Adapter 10 Series

*Drive Roll and Wire Guide Kits*

See Drive Roll and Wire Guide Kits chart in the "Accessories" section.

*Control Cables and Adapters*

See Control Cables and Adapters chart in the "Accessories" section.

K2330-1	Postflow and Burnback Timer Kit
K2329-1	Remote Voltage Control Kit
K1546-1	Incoming Bushing for Lincoln® Conduit, .025-1/16 in. (0.6-1.6 mm) wire
K1546-2	Incoming Bushing for Lincoln® Conduit, 1/16-1/8 in. (1.6-3.2 mm) wire
K162-1	Spindle Kit, 2 Inch (50.8 mm) Hub
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)
3100211	Harris® Argon/CO <sub>2</sub> Flowmeter Regulator & Hose Kit, 10 ft. (3.0 m)
K2335-1	Adapter for Competitive Power Sources
K1798	Adapter Cable, Male 14-pin Control Cable to Terminal Strip
K1520-1	42 Volt Transformer Kit
<i>Additional Accessories For Base Model</i>	
K2328-1	Standard Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max.
K1524-3	Heavy Duty Wire Reel Stand, 60 lbs. (27.2 kg) spools, max.

*Additional Accessories For Feeders Equipped With**Standard Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max.*

K163	Undercarriage
K435	14 lb. (6.4 kg) Innershield® Coil Adapter
K468	8 in. (203 mm) O.D. Spool Adapter
K1634-1	Plastic Wire Cover, 30-40 lbs. (13.6-18.1 kg)

*Additional Accessories For Feeders Equipped With**Heavy Duty Wire Reel Stand*

K1555-1	Insulated Lift Bail, 60 lbs. 27.2 kg) spools, max.
K1556-1	Light Duty Caster Kit
K1557-1	Swivel Platform
K163	Undercarriage
K435	14 lb. (6.4 kg) Innershield® Coil Adapter
K468	8 in. (203 mm) O.D. Spool Adapter
K1634-1	Plastic Wire Cover, 30-40 lbs. (13.6-18.1 kg)
K1504-1	50-60 lb. (22.7-27.2 kg) Coil Adapter, 2 inch (50.8 mm) spindle
K1634-2	Plastic Wire Cover, up to 60 lbs. (27.2 kg)

*Power Sources*

—	MIG Welders (CV), Multi-Process Welders (CC/CV)
---	--

**LN-8 and LN-9 Wire Feeders***Required**Drive Roll and Guide Tube Kits*

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

*Control Cables and Adapters*

See Control Cables and Adapters chart in the "Accessories" section.

*Weld Power Cables*

See Weld Power Cables chart in the "Accessories" section.

*General*

K1524-3	Heavy Duty Wire Reel Stand
K1555-1	Insulated Lift Bail
K1556-1	Light Duty Caster Kit
K1557-1	Swivel Platform
K363P	22-30 lb. (10-13.6 kg) Readi-Reel® Adapter
K1504-1	50-60 lb. (22.7-27.2 kg) Coil Adapter, 2 inch (50.8 mm) spindle
K435	14 lb. (6.4 kg) Innershield® Coil Adapter
K468	8" (203.2 mm) O.D. Spool Adapter
K1634-1	Plastic Wire Cover, 30-40 lbs. (13.6-18.1 kg)
K1634-2	Plastic Wire Cover, up to 60 lbs. (27.2 kg)
K425	Gas Solenoid Kit (for codes above 9131)
K261	Wire Feed Speed Meter Kit (LN-8)
K202	Burnback Kit
K305	Wire Reel and Flux Tank Assembly
K163	Undercarriage
K110	Mechanized Hand Travel Unit
K161-50	Squirtmobile® Power Pack, 50 ft. (15.2 m)
K283	Portable Digital Wire Feed Speed Meter

*Power Sources*

—	Multi-Process Welders (CC/CV) excludes Invertec® V350 PRO and Flextec™ 450
---	---

**Flex Feed™ 74 HT***Required**Drive Roll and Guide Tube Kits*

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

*Control Cables and Adapters*

See Control Cables and Adapters chart in the "Accessories" section.

*Weld Power Cables*

See Weld Power Cables chart in the "Accessories" section.

*General*

K3974-1	Gouging Contactor Kit (2 required for dual drives)
K1546-1	Incoming Bushing for Lincoln® Conduit, .025-1/16 in. (0.6-1.6 mm) wire
K1546-2	Incoming Bushing for Lincoln® Conduit, 1/16-1/8 in. (1.6-3.2 mm) wire
K3929-1	Inlet Bushing, quick connect style
K1733-1	Wire Straightener
K1504-1	50-60 lb. (22.7-27.2 kg) Coil Adapter, 2 inch (50.8 mm) spindle
K590-6	Water Connection Kit
K1520-1	42 Volt Transformer Kit
K283	Portable Digital Wire Feed Speed Meter
K3342-1	Standard Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max.
K3343-1	Heavy Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max. and up to 60 lbs. (27.2 kg) coils. (includes K3341-1 Lift Bail)
K3341-1	Lift Bail
K1634-4	Spool Cover, 30-40 lbs. (13.6-18.1 kg) spools
K3340-1	Spool Cover, 50-60 lbs. (22.7-27.2 kg) coils
KP3103-1	Shielding Gas Filter

*Power Sources*

—	Multi-Process Welders (CC/CV)
---	-------------------------------

**Flex Feed™ 84 and Flex Feed™ 84 Dual***Required**Drive Roll and Guide Tube Kits*

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

*Control Cables and Adapters*

See Control Cables and Adapters chart in the "Accessories" section.

*Weld Power Cables*

See Weld Power Cables chart in the "Accessories" section.

*General*

K3974-1	Gouging Contactor Kit
K1546-1	Incoming Bushing for Lincoln® Conduit, .025-1/16 in. (0.6-1.6 mm) wire
K1546-2	Incoming Bushing for Lincoln® Conduit, 1/16-1/8 in. (1.6-3.2 mm) wire
K3929-1	Inlet Bushing, quick connect style
K1733-1	Wire Straightener
K1504-1	50-60 lb. (22.7-27.2 kg) Coil Adapter, 2 inch (50.8 mm) spindle
K590-6	Water Connection Kit
K1520-1	42 Volt Transformer Kit
K283	Portable Digital Wire Feed Speed Meter
K3342-1	Standard Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max.
K3343-1	Heavy Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max. and up to 60 lbs. (27.2 kg) coils. (includes K3341-1 Lift Bail)
K3341-1	Lift Bail
K1634-4	Spool Cover, 30-40 lbs. (13.6-18.1 kg) spools
K3340-1	Spool Cover, 50-60 lbs. (22.7-27.2 kg) coils
KP3103-1	Shielding Gas Filter

*Power Sources*

—	Multi-Process Welders (CC/CV)
---	-------------------------------

**Power Feed® 84 Bench Model Single and Dual Wire Feeders***Required**Drive Roll and Wire Guide Kits*

See Drive Roll and Wire Guide Kits chart in the "Accessories" section.

*Weld Power Cables*

See Weld Power Cables chart in the "Accessories" section.

*General**Control Cables and Adapters*

See Control Cables and Adapters chart in the "Accessories" section.

K1546-1	Incoming Bushing for Lincoln® Conduit, .025-1/16 in. (0.6-1.6 mm) wire
K1546-2	Incoming Bushing for Lincoln® Conduit, 1/16-1/8 in. (1.6-3.2 mm) wire
K1733-1	Wire Straightener
K590-6	Water Connection Kit
K283	Portable Digital Wire Feed Speed Meter
K3341-1	Lift Bail
K3342-1	Standard Duty Wire Reel Stand, 44 lbs. (13.6-18.1 kg) spools
K3974-1	Gouging Contactor Kit
K3343-1	Heavy Duty Wire Reel Stand, 44 lbs. (20 kg) spools, max. and up to 60 lbs. (27.2 kg) coils. (includes K3341-1 Lift Bail)
K1634-4	Spool Cover, 30-40 lbs. (13.6-18.1 kg) spools
K3340-1	Spool Cover, 50-60 lbs. (22.7-27.2 kg) coils
KP3103-1	Shielding Gas Filter
K3338-1	Shield Gas Flow Sensor
K3929-1	Quick Connect Conduit Inlet Bushing

*Power Sources*

—	Power Wave® models
---	--------------------

## Accessories

For complete descriptions go to page 133.

### Activ8™

#### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

#### Coaxial Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

#### Drive Roll and Wire Guide Kits

See Drive Roll and Wire Guide Kits chart in the "Accessories" section.

#### General

K1500-1	Gun Receiver Bushing
K1500-2	Gun Receiver Bushing
K1500-3	Magnum® 550 Gun Adapter
K1500-4	Miller® Gun Receiver Bushing
K489-7	Dual Schedule Fast-Mate Adapter™ 10 Series
K3061-1	Plastic Case
K1803-1	Work and Wire Feeder 2/0 Weld Cable, 10 ft. (3.0 m) Package
K852-95	Twist Mate™ Cable Plug, For 2/0-3/0, 70-95 mm <sup>2</sup> cable
K2946-1	Tweco®-Style Adapter Plug
K484	Jumper Plug Kit
K910-1	GC-300 Work Clamp
K910-2	GC-500 Work Clamp
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)
K283	Portable Digital Wire Feed Speed Meter
K1546-2	Incoming Bushing for Lincoln® Conduit, 1/16-1/8 in. (1.6-3.2 mm) wire
K3156-1	Flow Meter Kit

#### Power Sources

—	CV400, Invertec® STT® II, Engine Driven Welders, Multi-Process Welders (CC/CV)
---	--

### LN-23P Wire Feeder

#### Required

K345-10	350A FCAW-SS Gun, 10 ft. (3.0 m), .068-5/64 in. (1.7-2.0 mm)
---------	--

#### Options for K316L-1 only

K350	LN-23P Adapter Kit, For Terminal Strip Connection
K350-1	LN-23P Adapter Kit, For 14-pin Connection

#### Power Source

—	MIG Welders (CV)
—	Multi-Process Welders (CC/CV)
—	Engine Driven Welders

### LN-25 PRO, Pipe, and Ironworker® Wire Feeders (includes Dual Power and Extra Torque models)

#### Required

##### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

##### Drive Roll and Wire Guide Kits

See Drive Roll and Wire Guide Kits chart in the "Accessories" section.

#### General

##### Control Cables and Adapters

See Control Cables and Adapters chart in the "Accessories" section.

K1500-1	Gun Receiver Bushing
K1500-2	Gun Receiver Bushing
K1500-3	Magnum® 550 Gun Adapter
K1500-4	Miller® Gun Receiver Bushing
K1500-5	OXO® Gun Receiver Bushing
K489-7	Dual Schedule Fast-Mate Adapter 10 Series
K2335-1	Adapter for Competitive Power Sources
K2330-2	Preflow, Postflow and Burnback Timer Kit
K484	Jumper Plug Kit
K435	14 lb Innershield Coil Adapter
K468	8 in. (203.2 mm) O.D. Spool Adapter
K2596-2	Replacement Case Kit - Polycarbonate
K852-95	Twist Mate™ Plug, For 2/0-3/0, 70-95 mm <sup>2</sup> Cable
K1733-4	Micro Wire Straightener

### Power Feed® 25M Wire Feeder

#### General

##### Push-Pull Guns

See Push-Pull Guns chart in the "Guns & Torches" section.

K590-6	Water Connection Kit
K2339-1	Push-Pull Gun Adapter Kit
K586-1	Deluxe Adjustable Gas Regulator & Hose Kit, 4.3 ft. (1.3 m)

##### ArcLink®/Linc-Net™ Control Cables

See Control Cables and Adapters chart in the "Accessories" section.

##### Drive Roll and Wire Guide Kits

See Drive Roll and Wire Guide Kits chart in the "Accessories" section.

##### Coaxial Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

##### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

K1500-1	Gun Receiver Bushing
K1500-2	Gun Receiver Bushing
K1500-3	Magnum® 550 Gun Adapter
K1500-4	Miller® Gun Receiver Bushing
K1500-5	OXO® Gun Receiver Bushing
K489-7	Dual Schedule Fast-Mate™ Adapter 10 Series
K1733-4	Micro Wire Straightener
K2429-1	ArcLink® "T" Cable Connector
K2596-2	Replacement Case (Polycarbonate)
K2909-1	12-Pin to 6-Pin Adapter Cable
K2910-1	12-Pin to 7-Pin Adapter Cable
K857-2	Remote Output Control (12-Pin), 25 ft. (7.6 m)

#### TIG

K1782-2	PTA-17 Pro-Torch TIG Torch, 12.5 ft. (3.8 m), 2 pc
K1782-4	PTA-17 Pro-Torch TIG Torch, 25 ft. (7.6 m), 2pc
K1783-2	PTA-26 Pro-Torch TIG Torch, 12.5 ft. (3.8 m), 2pc
K1783-4	PTA-26 Pro-Torch TIG Torch, 25 ft. (7.6 m), 2pc
K870-2	Foot Amptrol®, 12-Pin
K963-4	Hand Amptrol®, 12-Pin

#### Power Sources

—	Power Wave® 355M, 455M, 455M/STT®, 655R, R350 and S350
---	--

# SUBMERGED ARC & AUTOMATIC EQUIPMENT

ADVANCED DIGITAL PROCESS EQUIPMENT

## MAXsa® 10 Controller & MAXsa® 22 Feed Head

Full control over hard automation applications.



## MAXsa® 19 Controller & MAXsa® 29 Feed Head

Recommended for integrator or robotic SAW applications.



## Power Wave® AC/DC 1000® SD

Maximum control over deposition and penetration in single or multi-arc environments.



FEEDER / HEADS / DRIVES

## LN-8 and LN-9

Semiautomatic, Shop or Field, Fabrication or Hardfacing.



## Cruiser™ Tractor

1,000 amps at 100% duty cycle.



## LT-7 Tractor

Self-Propelled, Mechanized Track Capable.



## NA-3S, NA-4 & NA-5 Controls & Heads

Automatic, High Deposition, Beam Mountable.



POWER SOURCES

## Idealarc® DC600

600 Amps @ 100% Duty Cycle for industrial manufacturing.



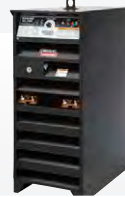
## Idealarc® DC1000

1000 amps @ 100% duty cycle.



## Idealarc® DC1500

1500 amps @ 100% duty cycle.



## Idealarc® AC1200

Specifically designed for NA-4 equipment. 1200 amps @ 100% duty cycle.



	WIRE FEEDER MODEL	OUTPUT			PROCESS			INPUT	FEATURES			
		Power Source Required	Wire Feed Speed Range ipm (m/min)	Solid Wire Size Range inches (mm)	Cored Wire Size Range inches (mm)	MIG	Flux-Cored		Submerged Arc	ArcLink®	Waveform Control Technology®	Digital Display
Semi-automatic (Hand-Head)	LN-8 Feeder	DC600	50-600 (1.3-15.2)	.040-3/32 (1.0-2.4)	.045-.120 (1.1-3.0)		●	●	115 VAC			
	LN-9 Feeder	DC600	50-600 (1.3-15.2)	.040-3/32 (1.0-2.4)	.045-.120 (1.1-3.0)		●	●	115 VAC			
Mechanized (Tractors)	LT-7 Tractor	DC600, DC1000	100-400 (2.5-10.2)	3/32-3/16 (2.4-4.8)	—			●	115 VAC			
	Cruiser™ & Tandem Cruiser™	Power Wave® AC/DC 1000®SD	15-500 (0.4-12.5)	1/16-7/32 (1.6-5.6)	—			●	40 VDC	●	●	●
Automatic	NA-3 Control & Heads	DC600, DC1000, DC1500	25-600 (0.6-15.2)	.035-7/32 (0.9-5.6)	.045-5/32 (1.1-4.0)	●	●	●	115 VAC			
	NA-4 Control & Heads	AC1200	Subject to arc voltage used	1/16-7/32 (1.6-5.6)	—			●	115 VAC			
	NA-5 Control & Heads	DC600, DC1000, DC1500	25-775 (0.6-19.7)	.035-7/32 (0.9-5.6)	.045-5/32 (1.1-4.0)	●	●	●	115 VAC			●
	MAXsa® 10 Controller & 22 Feed Head	Power Wave® AC/DC 1000®SD	10-500 (0.25-12.7)	1/16-7/32 (1.6-5.6)	—			●	40 VDC	●	●	●
	MAXsa® 19 Controller & 29 Feed Head	Power Wave® AC/DC 1000®SD	10-500 (0.25-12.7)	1/16-7/32 (1.6-5.6)	—			●	40 VDC	●	●	●

	WELDER MODEL	OUTPUT		PROCESS						INPUT		FEATURES					
		Mode	Polarity	Current Range (Amps)	Stick	TIG	MIG	Pulsed	Flux-Cored	Submerged Arc	Arc Gauge	Phase	Hertz	Waveform Control Technology®	ArcLink®	Production Monitoring	Stackable
Analog	Idealarc® DC600	CC CV	DC	70-680	●	●	●	●	●	●	3	60				●	●
	Idealarc® DC1000	CC CV	DC	150-1300				●	●	●	3	60				●	●
	Idealarc® DC1500	CC CV	DC	200-1500				●	●	●	3	60					●
	Idealarc® AC1200	CC CV	AC	200-1500						●	1	60					●
Digital	Power Wave® AC/DC 1000® SD	CC CV	AC/DC	100-1000						●	3	50/60	●	●	●		

KEY: ● Excellent ● Good ● Optional ■ Analog □ Digital

# Power Wave® AC/DC 1000® SD

## Increase Productivity, Quality and Flexibility

Software-driven output delivers maximum control over the deposition rate and penetration in single or multi-arc environments.

- **380-575 VAC, 50/60Hz Voltage Input** – Offers the ability to be connected anywhere in the world.
- **No Hardware Reconfiguration Required with Easy Polarity Switching** – Eliminates downtime.
- **Easy to Parallel Machines or Run Multiple Arcs.**
- **3-Phase Voltage Input** – Eliminates the imbalance associated with transformer-based AC welding machines.
- **95% Power Factor Correction** – Enables connection of multiple machines on the same plant infrastructure for lower installation costs.
- **Severe Duty** – Can be stored outdoors. IP23 Rated.
- **ArcLink®, Ethernet, and DeviceNet™ Communication** – Offers remote process monitoring, control and troubleshooting.
- **True Energy™** – Measures, calculates and displays instantaneous energy in the weld for critical heat input calculations.
- **Production Monitoring™ 2.2** – Track equipment usage, store weld data and configure limits to assist in welding efficiency analysis.
- **Software Based Controls** – Can be upgraded as new features become available.
- **iARC™ Digital Control** – 90 times faster than the previous generation, delivering a responsive arc.



Shown: K2803-1 Power Wave® AC/DC 1000® SD

- Processes**
- DC+ Submerged Arc
  - DC- Submerged Arc
  - Balanced AC Submerged Arc
  - Variable AC Submerged Arc

**Output** **Input**

**Recommended Accessories**

- K3048-1 Cruiser™ Tractor
- K3083-1 Tandem Cruiser™
- K2814-1 MAXsa® 10 Controller
- K2370-2 MAXsa® 22 Feed Head
- *More accessories at end of section*

**Literature** E9.181



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)
Power Wave® AC/DC 1000® SD	K2803-1 <sup>(1)</sup>	380/400/460/500/575/3/50/60	1000A/44V/100%	82/79/69/62/55	100-1000A	49.2 x 19.2 x 46.2 (1250 x 488 x 1174)	800 (363)

<sup>(1)</sup>Filter is required to meet CE conducted emission requirements. The K2444-3 must be used with the K2803-1.

# Cruiser™ & Tandem Cruiser™

## Submerged Arc Welding Tractor



The self-propelled, modular Cruiser™ and Tandem Cruiser™ travel carriages can deliver deposition rates up to 30 lbs. (13.61 kg) per arc, per hour for butt and fillet joints on lengthy plate welding applications common in bridge or barge decking, large tank fabrication or shipbuilding.

- **Reliable Operation** – Strong, rigid and stiff especially where you need it most.
  - Sturdy welded base frame.
  - Substantial steel stand up to daily construction site use.
  - Simple cast wheels – Equipped with high temperature and slip resistant rubber tires.
  - Robust Tube and Clamp Design – Trouble-free feeding component mounting.
  - Adjustable Extended Length Outriggers – Make it easy to guide tractor movement.
- **Advanced Control Pendant** – Removable, lightweight, impact resistant aluminum user interface can be used to save procedures, apply limits and lockouts for any or all controls.
- **Multiple Configurations** – Flexible system allows set up with or without a track and three or four wheel operation. Tandem model not recommended for three wheel operation.



Shown: K3048-1 Cruiser™ Tractor

- Processes**
- Submerged Arc

**Output** **Input**

**Units Include**

- Conduit Tubing, 5 feet (1.5 m)
  - 5/32 in., 600 Amp Contact Nozzle Assembly; 5/32 in. Contact Tip
  - Nozzle Extension, 5 in. (127 mm)
  - Curved Nozzle Extension, 45°
  - Nozzle Extension Insulator
  - Flux Tubing and Hose Clamps
  - Wire Reel Assembly
  - Wheels for Track Operation
  - Front and Rear Outriggers
  - Enclosed Wire Reel (2 for Tandem)
- Note: Does not include a control cable.*

**Recommended Accessories**

- K1543-XX ArcLink® Control Cable
- K396 Track Section
- *More accessories at end of section*

**Power Source**

- K2803-1 Power Wave® AC/DC 1000® SD
- Literature** E9.170

Product Name	Product Number	Input Power	Rated Output Current/Duty Cycle	Travel Speed in/min (m/min)	Gearing	Wire Feed Speed Range ipm (m/min)	Wire Size Range Solid – inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Cruiser™ Tractor	K3048-1	40 VDC	1000A / 100%	10 - 100 (0.25 - 2.5)	142:1	15 - 200 (0.4 - 5.0)	3/32 - 7/32 (2.4 - 5.6)	29 x 23 x 36 (736 x 584 x 914)	207 (94)
Tandem Cruiser™ Tractor	K3083-1			95:1 <sup>(1)</sup>	15 - 300 (0.4 - 7.6)	1/16 - 1/8 (1.6 - 3.2)			
					57:1 <sup>(1)</sup>	50 - 500 (1.3 - 12.7)	1/16 - 3/32 (1.6 - 2.4)	36.5 x 45.5 x 41.5 (927 x 1156 x 1054)	300 (136)

<sup>(1)</sup>Optional

# MAXsa® 10 Controller



## ArcLink®-enabled Controller for Power Wave® AC/DC 1000® SD Systems

The MAXsa® 10 controller offers a single monitoring and control point for the entire hard automation welding system. Operators have full control over AC and DC welding parameters and easy PLC interfacing to control fixture travel, timers and other system commands.

- **Severe Duty Ready** – The controller is IP23 rated and ready for operation in harsh environments.
- **Pendant Box** – Mount the controller in the standard protective box or remove the pendant for hand-held operation. Extend hand-held operation from 4 feet (1.2 m) up to 100 feet (30.5 m) with an ArcLink® extension cable.
- **Eight Procedure Memories** – Pre-set and save your optimal welding parameters for repeating applications and recall later for fast changeovers.
- **User-Friendly Controls** – Clear digital display and controls make it easy to set weld modes, AC operation, strike/start/end options, travel stop/start, timers and other parameters.
- **Limit Control** – Apply operator procedure limits or lockout on any or all parameters.
- **Waveform Control Technology®** – Allows the user to choose from a library of pre-programmed weld modes. Parameters for each mode can be adjusted within a limited range to achieve optimal balance between deposition rate and penetration.



Shown: K2814-1 MAXsa® 10 Controller

**Processes**

- Submerged Arc

Output

Input

**Recommended Accessories**

- K2462-1 MAXsa® 10 Mounting Bracket (Only required for TC-3 Travel Carriage)
- More accessories at end of section

**Literature**

E9.181



**IP23 Rated** – Tested and approved to withstand rain, humidity, dust and other environmental conditions. When mounted vertically, the unit can be operated outdoors.

Product Name	Product Number	Input Power	Rated Output Current / Duty Cycle	H x W x D inches (mm)	Net Weight lbs. (kg)
MAXsa® 10	K2814-1	40 VDC	N/A	15 x 13 x 4 (381 x 259 x 102)	25 (11.3)

# MAXsa® 22 Feed Head



## Submerged Arc Hard Automation Wire Drive for Power Wave® AC/DC 1000® SD Systems

Designed specifically for hard automation applications, the MAXsa® 22 Wire Drive delivers accurate wire feeding of large diameter submerged arc wires. Based on Lincoln's proven gearbox and extruded aluminum feedplate, the MAXsa® 22 model features a 32VDC permanent magnet, high torque motor that delivers plenty of torque to push up to 7/32 inch (5.6 mm) diameter solid wire. A top speed of up to 500 ipm (12.7 m/min) can be achieved by changing the gear ratio.

- **Flexible Configuration** – Can be used in single, tandem, Twinarc® or multiple arc applications.
- **Closed Loop Speed Control** – Facilitates full control over starting, running and stopping wire feed speed.
- **IP23 Rated** – Tested to withstand harsh environments.
- **Standard Conversion Kits** – Used to change the speed ratio to match the requirements of your application.
- **Multi-Axis Rotation** – Rotational feed head adjustment in two planes allows flexible, accurate setup for fixturing or arc locating. Additional positioning flexibility can be achieved with the optional horizontal and vertical lift adjuster.
- **Standard Accessories** – Including an adjustable wire straightener, cross-seam adjuster and electrical valve flux hopper and mounting bracket.



Shown: K2370-2 MAXsa® 22 Feed Head

**Processes**

- Submerged Arc

Output

Input

**Recommended Accessories**

- K325HCS TC-3 Self-Propelled Travel Carriage (5-75 ipm)
- K231-1 Submerged Arc Contact Nozzle Assembly
- More accessories at end of section

**Literature**

E9.181



**TC-3**  
The TC-3 travel carriage allows the mounting of up to two feed heads/controllers and wire reels to a beam for basic hard automation installations.

Product Name	Product Number	Input Power	Rated Output Current / Duty Cycle	Gear Box <sup>(1)</sup>	Wire Feed Speed Range <sup>(1)</sup> ipm (m/min)	Wire Size Range <sup>(1)</sup> Solid - inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
MAXsa® 22 Head (includes flux hopper)	K2370-2	40 VDC	1000A / 100%	142:1	15-200 (0.4-5.0)	3/32-7/32 (2.4-5.6)	12 x 14 x 10 (305 x 355 x 254)	80 (36.3)
				95:1	15-300 (0.4-7.6)	1/16-1/8 (1.6-3.2)		
				57:1	50-500 (1.3-12.7)	1/16-3/32 (1.6-2.4)		

<sup>(1)</sup> 142:1 gear box is standard. Conversion Kit supplied for conversion to 95:1 with Wire Drive (K2370-2, K2312-2, or K2311-1)

# MAXsa® 19 Controller



## Submerged Arc Systems for Integrators and Robotic Applications for Power Wave® AC/DC 1000® SD Systems

The MAXsa® 19 controller is specifically designed to relay wire feed commands to the MAXsa® 29 when a customer-supplied user interface is used in place of the MAXsa® 10 controller. Typically, this occurs in a variety of third party integrator solutions that include integration hardware like turning rolls, panel lines, seamers and pipe mills fixturing.

- **Compact Size** – Makes it easy to position in custom integrator solutions.
- **Fast Digital Communication** – with the Power Wave® AC/DC 1000® SD via ArcLink® cable and to the wire drive via a 14 pin control cable.
- **Standard I/O Connector Block** – for start/stop, forward/reverse feed and shutdown input interfacing with external accessories.
- **Standard Status Indicator** – aids diagnostic system troubleshooting.
- **IP23 Rated** – Tested to withstand harsh environments.



Shown: K2626-2  
MAXsa® 19 Controller

Processes  
• Submerged Arc

Output Input

Literature  
E9.181

Contact us at [automation@lincolnelectric.com](mailto:automation@lincolnelectric.com) for more information on robotic applications.

Product Name	Product Number	Input Power	Rated Output Current / Duty Cycle	H x W x D inches (mm)	Net Weight lbs. (kg)
MAXsa® 19	K2626-2	40 VDC	N/A	9 x 10.5 x 3 (229 x 267 x 76)	7 (3.2)

# MAXsa® 29 Feed Head



## Submerged Arc Systems for Integrators and Robotic Applications for Power Wave® AC/DC 1000® SD Systems

The compact MAXsa® 29 Feed Head is intended for integrator solutions as well as the latest submerged arc robotic applications.

- **Closed Loop Speed Control** – Facilitates full control over starting, running and stopping wire feed speed.
- **32V DC Permanent Magnet, High Torque Motor** – Delivers plenty of torque to push up to 7/32 inch (5.6 mm) diameter solid wire. Top speed of up to 500 ipm (12.7 m/min) can be achieved by changing the gear ratio.
- **IP23 Rated** – Tested to withstand harsh environments.
- **Standard Conversion Kits** – Used to change the speed ratio to match the requirements of your application.
- **Multi-Axis Rotation** – Rotational feed head adjustment in one plane allows flexible, accurate setup for fixturing.
- **Standard adjustable wire straightener.**



Shown:  
K2312-2  
MAXsa® 29  
Feed Head

Processes  
• Submerged Arc

Output Input

Recommended Accessories  
• K231-1 Submerged Arc Contact Nozzle Assembly  
• More accessories at end of section

Literature  
E9.181



Contact us at [automation@lincolnelectric.com](mailto:automation@lincolnelectric.com) for more information on robotic applications.

Product Name	Product Number	Input Power	Rated Output Current / Duty Cycle	Gear Box <sup>(1)</sup>	Wire Feed Speed Range <sup>(1)</sup> ipm (m/min)	Wire Size Range <sup>(1)</sup> Solid – inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
MAXsa® 29 Head	K2312-2	40 VDC	1000A / 100%	142:1	15-200 (0.4-5.0)	3/32-7/32 (2.4-5.6)	13 x 16 x 10 (330 x 406 x 254)	35 (15.9)
				95:1	15-300 (0.4-7.6)	1/16-1/8 (1.6-3.2)		
				57:1	50-500 (1.3-12.7)	1/16-3/32 (1.6-2.4)		

<sup>(1)</sup> 142:1 gear box is standard. Conversion Kit supplied for conversion to 95:1 with Wire Drive (K2370-2, K2312-2, or K2311-1)

# Idealarc® DC600 & DC1000

## Industrial DC Multi-Process Welders

Rugged construction, simple controls and rated 100% duty cycle output make these machines a sound investment for heavy duty shop applications.



Shown:  
K1288-17  
Idealarc® DC600

Shown:  
K1386-3  
Idealarc® DC1000

### Idealarc® DC600

- **115V, 15 amps, duplex auxiliary power receptacle** (60Hz models) makes it easy to power lights, grinders and other shop tools at your work station.
- **Full range output voltage control** for easy operation and precise control.
- **Standard analog ammeter and voltmeter.**
- **Mode switch** for selecting desired output characteristics.
- **Windings and rectifiers** protected against moisture and corrosive environments.
- **Flat-top case** with a small footprint can be placed under a workbench or stacked up to 3 high on top of each other.
- **Seven-year warranty** on power rectifier.

### Idealarc® DC1000

- **500 amp output connections** provide enhanced arc characteristics for low amperage flux-cored (FCAW) and MIG welding procedures.
- **Single range control** for precise output control and easy operation.
- **Terminal strip and output studs** for remote connections and cable.
- **Low profile case** allows installation of a work-bench and for stacking up to 2 machines to conserve floor space.
- **Removable side panels** for easy access to internal parts.
- **Line voltage compensation** maintains weld consistency, even with line voltage changes of  $\pm 10\%$ .
- **Internal components**, including windings, rectifiers and circuit boards, are coated to protect against the effects of moisture and corrosion.
- **Seven-year warranty** on power rectifier.

#### Processes

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

Output Input

#### Recommended Accessories

##### DC600

- K804-1 Multi-Process Switch
- K1611-1 Paralleling Kit (for codes above 10500)
- K1897-1 Paralleling Kit\* (for codes below 10500)
- K842 Undercarriage
- *More accessories at end of section*

##### DC1000

- K1897-1 Paralleling Kit
- K857 Remote Output Control
- K843 Amptrol™ Adapter Kit
- K1798 Terminal Strip Adapter Cable
- *More accessories at end of section*

#### Literature

- E5.40 (Idealarc® DC600)
- E5.50 (Idealarc® DC1000)

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® DC600 w/Multi-Process Switch Idealarc® DC600	K1288-18	230/460/3/60	600A/44V/100% 680A/44V/60%	108/54A	CV: 70-850A, 13-44V CC: 90-850A, 24-42V	30.7 x 22.2 x 38 (781 x 565 x 965)	522 (237)
	K1288-17						
	K1288-22	230/460/575/3/60	108/54/43.2A				
Idealarc® DC1000	K1386-3	230/460/3/60	1000A/44V/100%	193/96.5A	16-46V 150-1300A	30.7 x 22.5 x 39 (781 x 572 x 991)	821 (372)
	K1386-4	575/3/60		77.2A			

NOTE: 50 Hertz models also available.

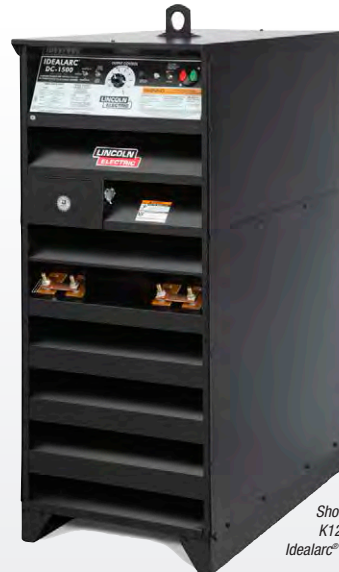


# Idealarc® DC1500

## Multi-Process DC Arc Welding Power Source

The precise output of the DC1500 enhances productivity and quality control when used with Lincoln Electric NA-3 and NA-5 automatic wire feeders, and the LT-7 tractors.

- **Full range output voltage control** for easy operation and precise output control.
- **Mode switch** used to select the desired output characteristics for the process being used.
- **Line voltage compensation** for maintaining weld consistency, even with line voltage changes of  $\pm 10\%$ .
- **Fan cooled** with electronic and thermostatic protection from current overload and excessive temperatures.
- **Function lights** built into the printed circuit boards speed diagnostics.
- **Windings and rectifiers** protected against moisture and corrosive environments.
- **Removable side panels** for easy access to internal parts.
- **Recessed front panel** protects operating controls.
- **Terminal strip and output studs** for remote connections and cable.
- **Seven-year warranty** on power rectifier.



Shown:  
K1275  
Idealarc® DC1500

### Processes

- Flux-Cored
- Submerged Arc
- Gouging

Output Input

### Recommended Accessories

- K1900-1 Paralleling Kit
- K857 Remote Output Control, 25 ft. (7.6 m)
- K857-1 Remote Output Control, 100 ft. (30.5 m)
- K1798 Adapter Cable
- K843 Amptrol™ Adapter Kit
- *More accessories at end of section*

### Literature

E5.60

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® DC1500	K1275	460/3/60	1500A/44V/100% 1500A/60V/100%	184A	200-1500A 20-60V	57.2 x 22.3 x 38 (1453 x 566 x 965)	1420 (644)

NOTE: 50 Hertz models also available.

# Idealarc® AC1200

## Automatic Submerged Arc Welding Power Source

The AC1200 submerged arc power source is specifically designed for operation with Lincoln Electric's NA-4 automatic wire feeder. It is a power source that you can count on day-in and day-out to provide proven performance.

- **Scott® connection taps** standard for two AC welding heads operated in tandem.
- **Rheostat** adjusts the output settings while welding or at idle.
- **Three output studs** with overlapping ranges.
- **$\pm 10\%$  input line voltage compensation** for maintaining weld consistency.
- **Thermostat protection** from current overload and excessive temperatures.
- **Terminal strip** for remote control and wire connections and output studs for welding cables.
- **Removable side panels** for easy access to internal parts.
- **Windings and rectifiers** protected against moisture and corrosive environments.
- **Seven-year warranty** on power rectifier.



Shown:  
K3140-1  
Idealarc® AC1200

### Processes

- Submerged Arc

Output Input

### Recommended Accessories

- NA-4 Automatic Wire Feeder
- K1798 Adapter Cable

### Literature

E5.70

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Idealarc® AC1200	K3140-1	380/415/440/460 <sup>(1)</sup> /1/50/60	1200A/44V/100%	230/201/190/182A	240-1500A, 30-44V (50/60 Hz) 200-1500A, 28-44V (60 Hz)	62.2 x 22 x 38 (1580 x 559 x 965)	1636 (742)

<sup>(1)</sup> 60 Hertz models only.

# NA-3S, NA-4 & NA-5 Control & Heads

## Automatic Welding Systems

Improve productivity with the NA-3S, NA-4, or NA-5 automatic wire feeders. These systems have been specially designed to deposit more weld metal at faster travel speeds which eliminates bottlenecks and cuts costs.

- **Solid state controls** allow for precise control of welding procedures, striking characteristics, as well as bead size and shape.
- **Easily adjusted** for a wide range of processes, feed speeds, and wire sizes.
- **Compact units with excellent flexibility** to fit into simple fixtures or the most complex automated production lines.
- **Rugged construction** minimizes downtime and maintenance costs.



Shown:  
K356-2 NA-5

### Processes

- Flux-Cored
- Submerged Arc

### Output



### Input



### Required Options

- Nozzle Assembly
- Control Cable
- Weld Power Cable
- Power Source
- Wire Reel(s) and mounting

### Recommended Accessories

- K29 Vertical Lift Adjuster
- K96 Horizontal Adjuster
- K1733-5 Wire Straightener
- *More accessories at end of section*

### Literature

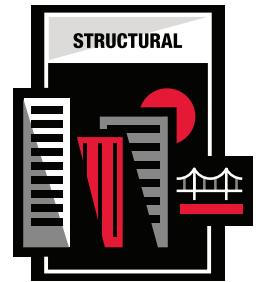
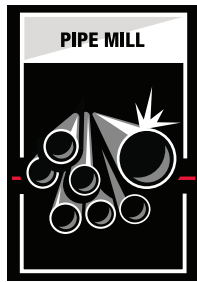
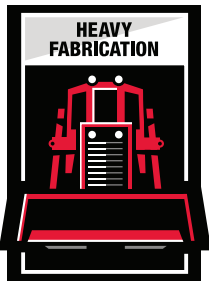
- E9.10 (NA-3S, NA-4)
- E9.30 (NA-5)

Product Name	Product Number	Wire Feed Speed Range ipm (m/min)	Wire Size Range - inches (mm) Solid
NA-3S Controller	K210-2	25-650 (0.6-16.5)	.035-7/32 (0.9-5.6)
NA-4 Controller	K388-2	25-650 (0.6-16.5)*	.035-7/32 (0.9-5.6)
NA-5 Controller	K356-2	25-775 (0.6-16.5)	.035-7/32 (0.9-5.6)
NA-3S/NA-4 Head	K208A	15-290 (0.4-7.4)*	3/32-7/32 (2.4-5.6)
NA-3S/NA-4 Head	K208B	22-425 (0.6-10.8)*	.035-3/32 (0.9-2.4)
NA-3SF/NA-4F Head	K209A	15-290 (0.4-7.4)*	3/32-7/32 (2.4-5.6)
NA-3SF/NA-4F Head	K209B	22-425 (0.6-10.8)*	.035-3/32 (0.9-2.4)
NA-5S Head	K346A	15-290 (0.4-7.4)	3/32-7/32 (2.4-5.6)
NA-5S Head	K346B	22-425 (0.6-10.8)	1/16-3/32 (1.6-2.4)
NA-5SF Head	K347A	15-290 (0.4-7.4)	3/32-7/32 (2.4-5.6)
NA-5SF Head	K347B	22-425 (0.6-10.8)	1/16-3/32 (1.6-2.4)

\* Subject to arc voltage used.

# Submerged Arc Welding

For Every Industry



TECHNICAL EXPERTISE ■ PRODUCTIVITY SOLUTIONS ■ GLOBAL APPLICATION SUPPORT

[www.lincolnelectric.com/industries](http://www.lincolnelectric.com/industries)

# LN-8 & LN-9

## Semiautomatic Wire Feeders

The LN-8 and LN-9 are semiautomatic wire feeders that deliver dependable performance and reliable operation, making them ideal for shop or field operations. Heavy duty wire drive, recommended for larger size wires.

- **Completely enclosed case** protects the heavy duty wire drive mechanism from damage, yet allows easy access to drive rolls.
- **Rugged and durable design** recognized throughout the industry for its long life and years of trouble-free wire feeding.
- **Standard digital meter** can be set to read volts, inches or meters/minute on the LN-9.
- **Control of wire feed speed and voltage** at the wire feeder eliminates the need to return to the power source to adjust procedures.



Shown: K357-1 LN-9 (shown with accessories and optional wire.)

Shown: K297 LN-8 (shown with accessories and optional wire.)

**Processes**

- Flux-Cored
- Submerged Arc

Output Input

**Required Options**

- Drive Roll Kit
- Control Cable
- Control Extension Cable
- Weld Power Cable

**Recommended Accessories**

- K305 Wire Reel and Flux Tank Assembly
- K1524-3 Heavy Duty Wire Reel Stand
- K1555-1 Insulated Lift Bail
- K1556-1 Light Duty Caster Kit
- K1557-1 Swivel Platform
- K1798 Terminal Strip Adapter Cable
- *More accessories at end of section*

**Literature**

E8.30

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
LN-8	K297	115 VAC 50/60 Hz	600A/60%	50-600 (1.3-15.2)	Solid: .040-3/32 (1.0-2.4) Cored: .045-.120 (1.2-3.0) Hardfacing: 7/64 (2.8)	10.9 x 9.8 x 9.6 (277 x 248 x 244)	36 (16.2)
LN-9	K357-1					11.5 x 11.3 x 11.5 (292 x 287 x 292)	42 (19)

# LT-7 Tractor

## Submerged Arc DC Wire Feeder

The LT-7 Tractor is a self-propelled mechanized wire feeder, designed for the submerged arc process with track system capabilities. It is self-guiding and easy to operate – only one operator is usually required.

- **Feeds 3/32-3/16 in. (2.4-4.8 mm) solid wires**, from 100-400 inches per minute (2.5-10.2 m/min) wire feed speed.
- **Calibrated tractor drive** adjusts travel speeds from 6-70 inches per minute (0.12-1.8 m/min).
- **Vertical head lift adjuster** for adjusting electrical stick-out from 1/2-5 inches (12.7-127.0 mm).
- **Weld angle is up to 50° from vertical** on either side; drag angle is up to 30° from vertical.
- **Control box can be mounted either left or right**, eliminating the need to return to the power source for routine procedure changes.
- **Welds butts, horizontal fillet and lap joints** to the left or right side of the tractor frame for convenience.



Shown: K395-1 LT-7 Track Model with K396 Track Section

**Processes**

- Submerged Arc

Output Input

**Unit Includes**

- Control Cable, 25 ft. (7.6 m)

**Required Options**

- Nozzle Assembly
- Weld Power Cable

**Recommended Accessories**

- K232 Horizontal Fillet and Lap Adapter Kit
- K229 Flat Fillet Adapter Kit
- K285 Concentric Flux Cone Assembly
- *More accessories at end of section*

**Literature**

E9.70

Product Name	Product Number	Input Power	Output Capacity Current/Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range Solid – inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
LT-7 Standard	K227-1	115 VAC 50/60 Hz	600A/100% 1100A/100% (with water cooling)	100 - 400 (2.5 - 10.2)	3/32 - 3/16 (2.4 - 4.8)	27.5 x 33 x 14 (698 x 838 x 356)	120 (54)
LT-7 Track Model	K395-1						130 (59)

**Accessories**

For complete descriptions go to page 133.

**Power Wave® AC/DC 1000® SD***General*

K2444-3	CE Filter
K1811-50	Heavy Duty Process Sense Lead, 50 ft. (15.2 m)
K1811-100	Heavy Duty Process Sense Lead, 100 ft. (30.5 m)
K2683-25	Heavy Duty ArcLink® Control Cable, 25 ft. (7.6 m)
K2683-50	Heavy Duty ArcLink® Control Cable, 50 ft. (15.2 m)
K2683-100	Heavy Duty ArcLink® Control Cable, 100 ft. (30.5 m)
K1785-4	Control Cable (Heavy Duty), 4 ft. (1.2 m)
K1785-16	Control Cable (Heavy Duty), 16 ft. (4.9 m)
K1785-25	Control Cable (Heavy Duty), 25 ft. (7.6 m)
K1785-50	Control Cable, 14-pin, 50 ft. (15.2 m)
K1785-100	Control Cable, 14-pin, 100 ft. (30.5 m)
K1805	Robotic Cable Adapter, 14-Pin to 22-Pin, 18 in. (457 mm)

*Wire Feeders*

—	MAXsa® Controllers, Cruiser™ Tractor, Tandem Cruiser™ Tractor
---	---

**Cruiser™ and Tandem Cruiser™ Tractors***General*

K3090-1	Tube and Clamp Kit
K3089-1	Cross Slide Assembly
K1733-5	Wire Straightener
K396	Track Section
KP3095-1	Conduit
K1504-1	50-60 lb. (23-27.2 kg) Coil Adapter
K3070-1	Tiny Twin Kit
K3154-1	Butt Joint Guide (Tandem Only)
KP2721-2	Nozzle Extension, 45°

**MAXsa® Controllers and Heads***General*

K2163-35	Weld Power Cable, Lug to Lug (4/0), 35 ft. (10.7 m), two cables per package
K2163-60	Weld Power Cable, Lug to Lug (4/0), 60 ft. (18.3 m), two cables per package
K1842-110	Weld Power Cable, Lug to Lug (4/0, 600A, 60%), 110 ft. (33.5 m)
K387	Tandem Arc Framework Assembly
K390	Tandem Arc Wire Reels and Mountings
K389	Flux Hopper Assembly
K219	Automatic Flux Hopper Assembly

*Submerged Arc Contact Nozzle Assembly*

K231-1	Contact Nozzle Assembly for 3/32, 1/8 and 5/32 in. (2.4, 3.2, 4.0 mm) Wire
--------	--

KP2721-1	Nozzle Extension, 5 inches
KP2721-2	Nozzle Extension, 45°
K226R	Contact Jaw Assembly for 1/8-7/32in. (3.2-5.6 mm) Wire

K148A	Positive Contact Nozzle Assembly for 3/32-1/8 in. (2.4-3.2 mm) Wire
-------	---

K148B	Positive Contact Nozzle Assembly for 5/32-3/16 in. (4.0-4.8 mm) Wire
-------	--

K149-5/32	Nozzle Extension for 5/32 in. (4.0 mm) Wire
K386	Narrow Gap Deep Groove Nozzle
KP2095-15	Liner Spring, .133 in. ID, .240 in. OD, 12.60 in. (3.4 mm ID, 6.1 mm OD, 320.0 mm)

KP2108-1B1	Nozzle Tip
K285	Concentric Flux Cone Assembly
K225	Sub Arc Twinarc® Nozzle for 5/64 in., 3/32 in. and 1/8 in. Wire

K129-1/16	Tiny Twinarc® Assembly, 1/16 in. (1.6 mm) Wire
K129-5/64	Tiny Twinarc® Assembly, 5/64 in. (2.0 mm) Wire
K129-3/32	Tiny Twinarc® Assembly, 3/32 in. (2.4 mm) Wire
K281	Tiny Twinarc® Solid Wire Straightener

*TC-3 Travel Carriage*

K325HCS	TC-3 High Capacity Travel Carriage, 5-75 ipm
K299	Wire Reel Assembly for 50-60 lb. (22.7-27.2 m) Coils.

K162-1	Spindle Kit, 2 Inch Hub
K29	Vertical Lift Adjuster, 4 in. (101.6 mm)
K96	Horizontal Adjuster, 2 in. (50.8 mm)
K278-1	Spreadarc Oscillator
K2462-1	Mounting Bracket for TC-3
K1733-5	Wire Straightener (Automatics)

*Expendable Parts*

KP3162-3B1	Extended Life Contact Tip, 3/32 in. (2.4 mm)
KP3162-1B1	Extended Life Contact Tip, 1/8 in. (3.2 mm)
KP3162-4B1	Extended Life Contact Tip, 5/32 in. (4.0 mm)
KP3162-2B1	Extended Life Contact Tip, 3/16 in. (4.8 mm)
KP3162-5B1	Extended Life Contact Tip, 7/32 in. (5.6 mm)
KP1966-2B1	Contact Tip, Pressure Shoe Type, 1/16 in. (1.6 mm) wire diameter

**Idealarc® DC600***General*

K804-1	Multi-Process Switch
K842	Undercarriage - Hand moving
K1737-1	All-Terrain Undercarriage
K1611-1	Paralleling Kit*
K1897-1	Paralleling Kit*
K3019-1	Arc Tracker™
—	Weld Fume Control System

*Wire Feeders*

—	LN-8, LN-9, LT-7, NA-3S, NA-5
---	-------------------------------

**Idealarc® DC1000***General*

K1897-1	Paralleling Kit
K1520-1	42 Volt Transformer Kit
K857	Remote Output Control, 25 ft., (7.6 m)
K857-1	Remote Output Control, 100 ft., (30.5 m)
K843	Amptrol™ Adapter Kit
K1798	Adapter Cable - Male 14-pin Control Cable to Terminal Strip
K1770-1	Factory Undercarriage
K1737-1	All-Terrain Undercarriage
K3019-1	Arc Tracker™
—	Weld Fume Control System

*Wire Feeders*

—	LN-9, LT-7, NA-3S, NA-5
---	-------------------------

**Idealarc® DC1500***General*

K1900-1	Paralleling Kit
K857	Remote Output Control, 25 ft. (7.6 m)
K857-1	Remote Output Control, 100 ft. (30.5 m)
K843	Amptrol™ Adapter Kit
—	Weld Fume Control System

*Wire Feeders*

—	NA-3S, NA-5, LT-7
---	-------------------

**Idealarc® AC1200***General*

—	Weld Fume Control System
---	--------------------------

*Wire Feeders*

—	NA-4
---	------

\* Cannot be used with VRD® models.

## Accessories

For complete descriptions go to page 133.

### NA-3S and NA-4

#### Required

##### Control Cables and Adapters

See Control Cables and Adapters chart in the "Accessories" section.

##### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

#### General

##### Drive Roll and Guide Tube Kits

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

K221	Start Controls P.C. Board for Automatics
K245	Crater Fill Controls P.C. Board for Automatics
K96	Horizontal Adjuster, 2 in. (50.8 mm)
K29	Vertical Lift Adjuster, 4 in. (101.6 mm)
K325HCS	TC-3 High Capacity Travel Carriage, Multiple Heads & Controls, 5-75 ipm.
K219	Automatic Flux Hopper Assembly
K299	Wire Reel Assembly for 50-60 lb. (22.7-27.2 kg) Coils (without high frequency insulation)
K278-1	Spreadarc Oscillator
K1733-5	Wire Straightener (Automatics)

#### Single Electrode

K231-1	Contact Nozzle Assembly for 3/32, 1/8 and 5/32 in. (2.4, 3.2 and 4.0 mm) Wire
KP2721-1	Nozzle Extension, 5 in.
K148A	Positive Contact Nozzle Assembly for 3/32-1/8 in. (2.4-3.2mm) Wire
K148B	Positive Contact Nozzle Assembly for 5/32-3/16 in. (4.0-4.8mm) Wire
K285	Concentric Flux Cone Assembly
K386	Narrow Gap Deep Groove Nozzle
K226R	Contact Jaw Assembly for 1/8-7/32 in. (3.2-5.6 mm) Wire
K149-5/32	Nozzle Extension for 5/32 in. (4.0 mm) Wire

#### Expendable Parts

KP2082-2B1	Contact Tip, 5/64 in. (2.0 mm), 3/8-24 in. (9.5-609.6 mm) thread
KP1962-3B1	Severe Duty Contact Tip, 3/32 in. (2.4 mm)
KP1962-1B1	Severe Duty Contact Tip, 1/8 in. (3.2 mm)
KP1962-4B1	Severe Duty Contact Tip, 5/32 in. (4.0 mm)
KP1962-2B1	Severe Duty Contact Tip, 3/16 in. (4.8 mm)
KP1962-5B1	Severe Duty Contact Tip, 7/32 in. (5.6 mm)
KP3162-3B1	Extended Life Contact Tip, 3/32 in. (2.4 mm)
KP3162-1B1	Extended Life Contact Tip, 1/8 in. (3.2 mm)
KP3162-4B1	Extended Life Contact Tip, 5/32 in. (4.0 mm)
KP3162-2B1	Extended Life Contact Tip, 3/16 in. (4.8 mm)
KP3162-5B1	Extended Life Contact Tip, 7/32 in. (5.6 mm)

#### Twinarc®

K129-1/16	Tiny Twinarc® Assembly for 1/16 in. (1.6 mm) Wire
K129-5/64	Tiny Twinarc® Assembly for 5/64 in. (2.0 mm) Wire
K129-3/32	Tiny Twinarc® Assembly for 3/32 in. (2.4 mm) Wire
K225	Submerged Arc Twinarc® Nozzle for 5/64, 3/32 and 1/8 in. (2.0, 2.4 and 3.2 mm) Wire
K281	Tiny Twinarc® Solid Wire Straightener

#### Tandem Arc

K387	Tandem Arc Framework Assembly
K390	Tandem Arc Wire Reels and Mountings
K389	Flux Hopper Assembly

#### Power Sources

For NA-3S	Idealarc® DC600, DC1000 and DC1500
For NA-4	Idealarc® AC1200

### NA-5

#### General

##### Drive Roll and Guide Tube Kits

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

##### Control Cables and Adapters

See Control Cables and Adapters chart in the "Accessories" section.

K2163-35	Weld Power Cable, Lug to Lug (4/0), 35 ft. (10.7 m)
K2163-60	Weld Power Cable, Lug to Lug (4/0), 60 ft. (18.3 m)
K1842-110	Weld Power Cable, Lug to Lug (4/0, 600A, 60%), 110 ft. (33.5 m)
K338-46	Control to Head Cable Extension, 46 ft. (14.0 m)
K335-26	Control to Head Cable Extension, 26 ft. (7.9 m)
K231-1	Contact Nozzle Assembly for 3/32, 1/8 and 5/32 in. (2.4, 3.2, 4.0 mm) Wire
KP2721-1	Nozzle Extension, 5 in. (127 mm)
K226R	Contact Jaw Assembly for 1/8-7/32 in. (3.2-5.6 mm) Wire
K148A	Positive Contact Nozzle Assembly for 3/32-1/8 in. (2.4-3.2 mm) Wire
K148B	Positive Contact Nozzle Assembly for 5/32-3/16 in. (4.0-4.8 mm) Wire
K149-5/32	Nozzle Extension for 5/32 in. (4.0 mm) Wire
K386	Narrow Gap Deep Groove Nozzle
K285	Concentric Flux Cone Assembly
K225	Sub Arc Twinarc® Nozzle for 5/64, 3/32 & 1/8 in. (2.0, 2.4, 3.2 mm) Wire
K129-1/16	Tiny Twinarc® Assembly, 1/16 in. (1.6 mm) Wire
K129-5/64	Tiny Twinarc® Assembly, 5/64 in. (2.0 mm) Wire
K129-3/32	Tiny Twinarc® Assembly, 3/32 in. (2.4 mm) Wire
K281	Tiny Twinarc® Solid Wire Straightener
K223	Solenoid Kit
K325HCS	TC-3 High Capacity Travel Carriage, Multiple Heads & Controls, 5-75 ipm.
K299	Wire Reel Assembly for 50-60 lb. (22.7-27.2 kg) Coils (without high frequency insulation).
K162-1	Spindle Kit, 2 Inch (50.8 mm) Hub
K29	Vertical Lift Adjuster, 4 in. (101.6 mm)
K96	Horizontal Adjuster, 2 in. (50.8 mm)
K278-1	Spreadarc Oscillator
K334	Start or Crater Module
K337-10	Weld Timer Module - maximum time 9.99 sec.
K336	Remote Interface Module
K219	Automatic Flux Hopper Assembly (NA-5N only)
K1733-5	Wire Straightener (Automatics)

#### Expendable Parts

KP2095-15	Liner Spring, .133 in. ID, .240 in. OD, 12.60 in. (3.4 mm ID, 6.1 mm OD, 320.0 mm)
KP2108-1B1	Nozzle Tip
KP1966-2B1	Contact Tip, Pressure Shoe Type, 1/16 in. (1.6 mm) wire diameter

### LN-8 and LN-9 Wire Feeders

#### Required

##### Submerged Arc Gun and Cable Assemblies

See Submerged Arc Guns in the "Guns and Torches" section.

##### Drive Roll and Guide Tube Kits

See Drive Roll and Guide Tube Kits chart in the "Accessories" section.

##### Control Cables and Adapters

See Control Cables and Adapters chart in the "Accessories" section.

##### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

#### General

K305	Wire Reel and Flux Tank Assembly
K1524-3	Heavy Duty Wire Reel Stand
K1555-1	Insulated Lift Bail
K1556-1	Light Duty Caster Kit
K1557-1	Swivel Platform
K1504-1	50-60 lb. (22.4-27.2 kg) Coil Adapter, 2 inch (50.8 mm) spindle
K1634-2	Plastic Wire Cover - up to 60 lbs. (27.2 kg)
K261	Wire Feed Speed Meter Kit (LN-8)
K202	Burnback Kit
K163	Undercarriage
K110	Mechanized Hand Travel Unit
K161-50	Squirtmobile® Power Pack, 50 ft. (15.2 m)
K283	Portable Digital Wire Feed Speed Meter

### LT-7 Tractor

#### Required

##### Weld Power Cables

See Weld Power Cables chart in the "Accessories" section.

K231-1	Contact Nozzle Assembly for 3/32, 1/8 and 5/32 in. (2.4, 3.2 and 4.0 mm) Wire
K148A	Positive Contact Nozzle Assembly for 3/32-1/8 in. (2.4-3.2 mm) Wire
K148B	Positive Contact Nozzle Assembly for 5/32-3/16 in. (4.0-4.8 mm) Wire

#### General

KP2268-1	LT-7 Drive Roll 052-1/16 (2 required)
KP2268-2	LT-7 Drive Roll 068-3/32 (2 required)
KP2268-3	LT-7 Drive Roll 3/32-3/16 (2 required)
KP2268-4	LT-7 Drive Roll 045-052 (2 required)
KP1890-1	Drive Roll Center 5/64-3/32 Tiny Twin
KP1890-2	Drive Roll Side 5/64-3/32 Tiny Twin
KP1984-1	Guide Tube Assembly 068-3/16 Incoming
KP1985-1	Guide Tube 3/32-3/16 Outgoing
KP1986-1	Guide Tube Outgoing Tiny Twinarc®
KP2127-1	Guide Tube Incoming TinyTwin Tractor

#### Control Cables and Adapters

See Control Cables and Adapters chart in the "Accessories" section.

K149-5/32	Nozzle Extension for 5/32 in. (4.0 mm) Wire
KP2721-1	Nozzle Extension, 5 in. (127 mm)
K232	Horizontal Fillet and Lap Adapter Kit
K229	Flat Fillet Adapter Kit
K230	Butt Seam Guide Kit
K396	Track Section, 70 in. (1.8m)
K285	Concentric Flux Cone Assembly

# WELDING GEAR

Take the full welding gear catalog with you!

Publication No. E14.001

Use the bound-in tear away.

WELDING HELMETS

SAFETY GLASSES

FACIAL PROTECTION



## VIKING® WELDING HELMETS

Select a helmet that's right for your application, budget and style. Whether you go old school with a passive helmet, step up to a basic auto-darkening helmet or move to one of our latest 3350 Series helmets with top quality 1/1/1 optical clarity, pivot headgear and a full three year warranty, you'll find a helmet that's just right. Then choose black or a graphic design of your choice to reflect your personal style.

## FACIAL PROTECTION

When it comes to personal protection equipment, protecting your eyes is usually considered job number one. With Red Line™ safety apparel, you can choose among a number of goggle, face shield and safety glass options. All are designed to protect your eyes. Some will also enhance your personal style on the job, on your break or after hours.

TOOLS & DOOR CAPS & RAGS



## RADIUS™ WELDING TOOLS

Every fabricator knows that, to get a job done right, it pays to invest in a good set of tools. Whether it's using our sturdy welding brushes or protecting your surrounding equipment with our high temperature resistant curtains or blankets, an investment in Lincoln Electric's new Radius™ Tools can help you get it done.

## CAPS & DOO RAGS

You can't forget to protect the top of your head. Line your helmet with a welding cap, beanie or doo rag.

You'll be glad you did.

Look for the Red Line™ apparel at your local welding store.

# WELDING JACKETS & APPAREL



## WELDING JACKETS

Welding apparel has come a long way. . . it's no longer one size fits all. Today, it's all about technical garments for specialized tasks. Flame retardant cloth helps keep you cool. Heavy duty leather panels resist wear in all the right places. It's pedal to the metal protection.



## WELDING GLOVES

Choose the welding or fabrication gloves that are right for the task at hand. Whether you're planning to MIG, TIG or stick weld, or you need to handle hot or rusty material, we have the pair that fits. . . like a glove.

# WOMEN'S WELDING GEAR

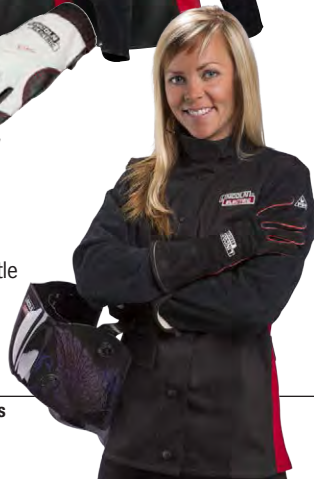


## WOMEN'S WELDING GEAR

Designed With Women In Mind.

Smaller hands, smaller jackets-nothing fits right... until now. Now you don't have to wrestle with oversize jackets and gloves that don't fit. Order our women's sized welding apparel... designed just for women.

  
Jessi Combs



## WELDING GEAR READY-PAK®

Get all the Gear you need.

Choose from one of our many different Welding Gear Ready-Paks® loaded with top-grade personal protection equipment. Design for professional level fabricators, welding students or the occasional welder.

# GUNS & TORCHES

MIG / FLUX-CORED GUNS

## Magnum<sup>®</sup> PRO Curve™

Standard Duty, 60% Duty Cycle, 200-400 Amps



## Magnum<sup>®</sup> PRO

Heavy Duty, 100% Duty Cycle, 250-550 Amps



## FCAW-S Guns

Proven Innershield<sup>®</sup> Guns for Construction, Erection, Shipbuilding



## Fume Guns

Remove welding fume at the source



ALUMINUM WELDING GUNS

## Spool Guns

Self-Contained Small Spool Aluminum Welding Drive Systems



## Push-Pull Guns

Premium Aluminum Welding Performance



TIG TORCHES

## PRO-TORCH™

Light and easy to use.



SPECIAL PROCESS / APPLICATIONS

## SubArc Guns

Hand-Held Semiautomatic Guns



	MODEL	OUTPUT			PROCESS					FEATURES					
		Current Range (Amps)	Duty Cycle	Wire Diameter Range in. (mm)	MIG	Aluminum MIG	Flux-Cored, Gas-Shielded	Flux-Cored, Self-Shielded	Submerged Arc	Copper Plus™ Tips	Dual Schedule	Dual Procedure	Water-Cooled	Fume Extraction	Locking Trigger
Gas-Shielded	Magnum <sup>®</sup> PRO 100L Gun	100	40%	.025-.045 (0.6-1.2)	●		●								
	Magnum <sup>®</sup> PRO 250L Gun	250	40%	.025-.045 (0.6-1.2)	●		●								
	Magnum <sup>®</sup> PRO Curve™ 200 Gun	200	60%	.035-.045 (0.9-1.2)	●		●								●
	Magnum <sup>®</sup> PRO Curve™ 300 Gun	300	60%	.035-.045 (0.9-1.2)	●		●			●	●	●			●
	Magnum <sup>®</sup> PRO Curve™ 400 Gun	400	60%	.035-.045 (0.9-1.2)	●		●			●	●	●			●
	Magnum <sup>®</sup> PRO 250 Gun	250	100%	.035-5/64 (0.9-2.0)	●		●			●					●
	Magnum <sup>®</sup> PRO 350 Gun	350	100%	.035-5/64 (0.9-2.0)	●		●			●	●	●			●
	Magnum <sup>®</sup> PRO 450 Gun	450	100%	.035-5/64 (0.9-2.0)	●		●			●	●	●			●
	Magnum <sup>®</sup> PRO 550 Gun	550	100%	.035-1/8 (0.9-3.2)	●		●			●	●	●			●
	Magnum <sup>®</sup> 200 Gun	200	60%	.025-.045 (0.6-1.2)	●		●								●
	Magnum <sup>®</sup> 300 Gun	300	60%	.035-.045 (0.9-1.2)	●		●								●
	Magnum <sup>®</sup> 400 Gun	400	60%	.035-5/64 (0.9-2.0)	●		●				●	●			●
	Magnum <sup>®</sup> 550 Gun	550	60%	.035-1/8 (0.9-3.2)	●		●								●
	Magnum <sup>®</sup> 450WC Gun	450	100%	.035-5/64 (0.9-2.0)	●		●						●		
Spool Guns	Magnum <sup>®</sup> 100SG Spool Gun	130	30%	.030-.035 (0.8-0.9)	●	●									
	Magnum <sup>®</sup> PRO 100SG Spool Gun	130	30%	.030-.035 (0.8-0.9)	●	●				●					
	Magnum <sup>®</sup> SG Spool Gun	250	60%	.023-3/64 (0.6-1.2)	●	●									
	Magnum <sup>®</sup> 250LX™ Spool Gun	300	60%	.023-3/64 (0.6-1.2)	●	●									
Push-Pull	Magnum <sup>®</sup> PRO AL G225A Gun	225	60%	.030-1/16 (0.8-1.6)		●							●		
	Magnum <sup>®</sup> PRO AL G450W Gun	450	60%	.030-1/16 (0.8-1.6)		●							●		
Fume Extraction	Magnum <sup>®</sup> PRO Fume 350 Gun	350	100%	.035-5/64 (0.9-2.0)	●		●			●			●	●	●
	Magnum <sup>®</sup> PRO Fume 550 Gun	550	100%	.035-1/8 (0.9-3.2)	●		●			●			●	●	●
Self-Shielded (FCAW-S)	K126™ PRO	350	60%	.062-3/32 (1.6-2.4)				●		●					
	350 Amp Gun	350	60%	.062-3/32 (1.6-2.4)				●							
	450 Amp Gun	450	60%	3/32-.120 (2.4-3.0)				●							
	600 Amp Gun	600	60%	7/64-.120 (2.8-3.0)				●							
Sub Arc	600 Amp Gun	600	60%	5/64-3/32 (2.0-2.4)					●						

KEY: ● Excellent ● Good ● Optional



# Magnum® PRO Welding Guns

## Magnum® PRO L-Series

### Semiautomatic Air-Cooled Guns

The Magnum® PRO L-Series guns for MIG or flux-cored welding features extremely light and compact guns for lower amperage applications - autobody, projects, repair, maintenance and light sheet metal fabrication.



Shown: K3080-1

#### Magnum® PRO 100L Gun and Cable Assembly

Extremely small, lightweight gun that's great for most home, farm and small shop projects, autobody work and light maintenance or repair applications. Standard equipment on SP-140T and SP-180T, POWER MIG® 140C, 180C and 180 Dual wire feeder/welders. Includes gun connector.



Shown: K3081-2

#### Magnum® PRO 250L Gun and Cable Assembly

Recommended for medium duty job shop and production applications. Standard equipment on the POWER MIG® 216 and POWER MIG® 256 wire feeder/welders. Includes gun connector.

	Rated Current (Amps)	Duty Cycle (100% CO <sub>2</sub> )	Wire Diameter Range inches (mm)
Magnum® PRO 100L Gun	100A	40%	.025-.045 (0.6-1.2)
Magnum® PRO 250L Gun	250A	40%	.025-.045 (0.6-1.2)

## Magnum® PRO Curve™

### Semiautomatic Air-Cooled Guns

Magnum® PRO Curve™ guns for MIG or flux-cored welding combine our classic curved handle with our Copper Plus™ contact tips and Magnum® PRO gun expendables to deliver long hours of fabrication welding with less frequent tip and gun expendable parts changes. Ideal for shop production, maintenance and repair, and construction applications.

Request Publication E12.05



Shown: K2951-2

	Rated Current (Amps)	Duty Cycle (100% CO <sub>2</sub> )	Wire Diameter Range inches (mm)
Magnum® PRO Curve™ 200 Gun	200A	60%	.025-3/64 (0.6-1.2)
Magnum® PRO Curve™ 300 Gun	300A	60%	.025-5/64 (0.6-2.0)
Magnum® PRO Curve™ 400 Gun	400A	60%	.025-5/64 (0.6-2.0)

## Magnum® PRO Barrel



### Semiautomatic Air-Cooled Guns

Magnum® PRO Barrel guns for MIG and flux-cored welding are specifically designed and tested for extreme environment welding applications. These guns are built for high amperage, high duty cycle applications where heat-resistance and fast serviceability are key.

Request Publication E12.01

	Rated Current (Amps)	Duty Cycle (100% CO <sub>2</sub> )	Wire Diameter Range inches (mm)
Magnum® PRO 250 Gun	250A	100%	.025-5/64 (0.6-2.0)
Magnum® PRO 350 Gun	350A	100%	.025-5/64 (0.6-2.0)
Magnum® PRO 450 Gun	450A	100%	.025-5/64 (0.6-2.0)
Magnum® PRO 550 Gun	550A	100%	.035-1/8 (0.9-3.2)



Order a Magnum® PRO Ready-Pak® with everything you need to start welding

Product Name	Product Number	Rated Current @ Duty Cycle		Wire Diameter Range		Cable Length ft. (m)
		100% CO <sub>2</sub>	Mixed	inches	(mm)	
Magnum® PRO Curve™ 200 Ready-Pak® (with K466-10 Gun Connector)	K2950-2-10-45	200A @ 60%	150A @ 60%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO Curve™ 300 Ready-Pak® (with K466-6 Gun Connector)	K2951-2-6-45	300A @ 60%	200A @ 60%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO Curve™ 300 Ready-Pak® (with K466-10 Gun Connector)	K2951-2-10-45	300A @ 60%	200A @ 60%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO Curve™ 300 Ready-Pak® (with K466-10 Gun Connector)	K2951-2-10-116	300A @ 60%	200A @ 60%	.052 - 1/16	(1.3 - 1.6)	15 (3.0)
Magnum® PRO Curve™ 400 Ready-Pak® (with K466-10 Gun Connector)	K2952-2-10-45	400A @ 60%	400A @ 50%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO 250 Ready-Pak® (with K466-6 Gun Connector)	K2651-2-6-45	250A @ 100%	250A @ 100%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO 350 Ready-Pak® (with K466-10 Gun Connector)	K2652-2-10-45	350A @ 100%	285A @ 100%	.035 - .045	(0.9 - 1.2)	15 (3.0)
Magnum® PRO 450 Ready-Pak® (with K466-10 Gun Connector)	K2653-2-10-45	450A @ 100%	325A @ 100%	.035 - .045	(0.9 - 1.2)	15 (3.0)

...Or customize your Magnum® PRO Gun. See Publication E12.09 for details.

# Magnum® PRO Welding Guns

## Magnum® PRO Fume Guns



### Semiautomatic Fume Extraction Guns

Magnum® PRO Fume guns are designed to stand up to high productivity fabrication and production environments. For high amperage MIG (GMAW) and flux-cored (FCAW-GS) semiautomatic welding applications.

Request Publication E12.02

	Rated Current (Amps)	Duty Cycle (100% CO <sub>2</sub> )	Wire Diameter Range inches (mm)
Magnum® PRO Fume 350 Gun	350A	100%	.035-5/64 (0.9-2.0)
Magnum® PRO Fume 550 Gun	550A	100%	.035-1/8 (0.9-3.2)



Shown:  
K2649-1 Magnum® PRO  
350 Fume Gun

Shown:  
K2650-1 Magnum® PRO  
550 Fume Gun

\* Recommended with X-Tractor® 3A, 5A, and 8A. See Weld Fume Control Section for other Fume Extraction attachments and accessories.

## K126™ PRO

### Semiautomatic Air-Cooled Self-Shielded Innershield® Guns

Lincoln Electric has been the leader in self-shielded wire, feeders and guns for more than 50 years. The K126™ PRO guns feature replaceable liners, interchangeable backends, long life Magnum® PRO contact tips, improved heat resistant gun tubes and better trigger lead protection. Select the K126™ PRO series for your construction welding applications.

Request Publication E12.111

	Rated Current (Amps)	Duty Cycle	Wire Diameter Range inches (mm)
K126™ PRO	350	60%	.035-.120 (0.9-3.0)



Shown:  
K126-10

## Magnum® PRO Robotic

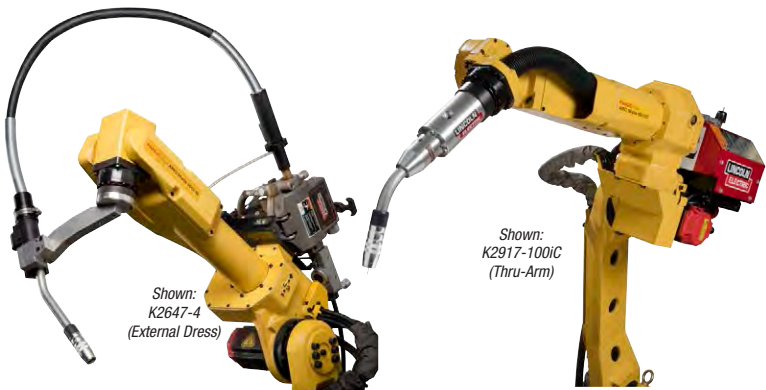


### External Dress and Thru-Arm Guns

Magnum® PRO Robotic Guns combine a robust design with industry leading expendable parts to produce a consistent high performing arc. Choose either the Thru-Arm or External Dress model. Both models are ideal for industrial fabrication, heavy equipment and automotive robotic welding applications. Added features include Air Blast and Wire Brake capable models which enhance weld quality and extend expendable life.

Request Publication E12.03

	Rated Current (Amps)	Duty Cycle	Wire Diameter Range inches (mm)
External Dress Gun (Air-Cooled)	550A	100%	.035-5/64 (0.9-2.0)
Thru-Arm Guns (Air-Cooled)	550A	100%	.035-5/64 (0.9-2.0)



Shown:  
K2647-4  
(External Dress)

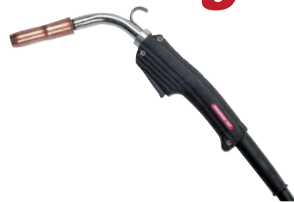
Shown:  
K2917-100IC  
(Thru-Arm)

# Magnum® Welding Guns



**Magnum® 100L Gun and Cable Assembly**  
Extremely small, lightweight gun that's great for most home, farm and small shop projects, auto body work and light maintenance or repair applications. Includes gun connector.

Request Publication E12.10



**Magnum® 200 Gun and Cable Assembly**  
A small, lightweight gun intended for light job shop and fabrication applications. Best suited for welding on thin materials using .025-.030 in. (0.6-0.8 mm) wire.

Request Publication E12.10



**Magnum® 250L Gun and Cable Assembly**  
Recommended for medium duty job shop and production applications. Includes gun connector.

Request Publication E12.10



**Magnum® 300 Gun and Cable Assembly**  
This popular Magnum® gun is intended for most .035-.045 in. (0.9-1.1 mm) wire diameter applications in job shops, production or manufacturing.

Request Publication E12.10



**Magnum® 400 Gun and Cable Assembly**  
The Magnum® 400 gun is built for operator comfort when welding with the greater heat levels generated by higher amperage applications. Select the Magnum® 400 gun for most .045-1/16 in. (1.2-1.6 mm) gas-shielded operations. Available in standard, dual schedule, dual procedure and short neck models.

Request Publication E12.10



**Magnum® 450WC Gun and Cable Assembly**  
The Magnum® 450WC is a water-cooled gun and cable assembly designed for both gas-shielded solid (GMAW) and gas-shielded, flux-cored (FCAW-GS) continuous feed arc welding wires. Rated 450 amps @ 100% duty cycle with CO<sub>2</sub> shielding gas.

Request Publication E12.70



**Magnum® 550 Gun and Cable Assembly**  
Choose our 550 gun for high amperage, large wire diameter welding, including up to .052 in. and .062 in. (1.3 and 1.6 mm) MIG or 3/32-1/8 in. (2.4-3.2 mm) gas-shielded flux-cored applications.

Request Publication E12.10



Shown:  
K289-1 500A Gun

**Fume Guns**

For welding with Innershield® or Lincore® electrodes.

- Rated 350 amps at 60% duty cycle. Use .062-3/32 in. (1.6-2.4 mm) diameter wires. 62° gun tube angle. Includes 15 ft. cable.
- Rated 500 amps at 60% duty cycle. Use 5/64-.120 in. (2.0-3.0 mm) diameter wires. 82° gun tube angle. Includes 15 ft. cable.

Order K206 for 350A Gun  
Order K289-1 for 500A Gun

Product Name	Cable Length ft. (m)	Wire Diameter .025-.035 inches (0.6-0.9 mm)			Wire Diameter .035-.045 inches (0.9-1.2 mm)			Wire Diameter .052-1/16 inches (1.3-1.6 mm)			Wire Diameter 1/16-5/64 inches (1.6-2.0 mm)		
		Open-End	Fast-Mate™	Package	Open-End	Fast-Mate™	Package	Open-End	Fast-Mate™	Package	Open-End	Fast-Mate™	Package
Magnum® 100L	10 (3.0)		K530-5 K530-6 <sup>(1)</sup>		K530-3 (FCAW-SS only)								
Magnum® 200	10 (3.0) 15 (4.5)				K497-2 K497-1	K498-1	K497-21 <sup>(3)</sup>						
Magnum® 250L	12 (3.6) 15 (4.5)				K533-7 (Fixed Gas Nozzle) K533-3 (Adjustable Gas Nozzle)								
Magnum® 300	10 (3.0) 15 (4.5)				K470-1 K470-2		K1802-1 <sup>(2)</sup>	K470-4				K470-6	
Magnum® 400 STANDARD	10 (3.0) 12 (3.6) 15 (4.5) 20 (6.1) 25 (7.6)				K471-1 K471-2 K471-10 K471-13	K479-2	K2286-1 <sup>(2)</sup> K471-21 <sup>(3)</sup>	K471-4 K479-4 K471-22 <sup>(3)</sup> K471-11 K471-14				K471-6 K479-6 K471-15	
Magnum® 400 DUAL SCHEDULE	15 (4.5)							K575-2					
Magnum® 400 DUAL PROCEDURE	15 (4.5)				K1722-2								
Magnum® 400 SHORT NECK	15 (4.5)				K541-3								
Magnum® 450WC	15 (4.5)				K684-12 <sup>(4)</sup>			K684-12 <sup>(4)</sup>				K684-12 <sup>(4)</sup>	

<sup>(1)</sup> Includes 4-pin MS-Type connection for trigger control. <sup>(2)</sup> Includes K466-1 Connector Kit. <sup>(3)</sup> Includes K466-10 Connector Kit. <sup>(4)</sup> .035-1/16 in. (0.9-1.6 mm) Solid Wire, .045-5/64 in. (1.2-2.0 mm) Flux-Cored Wire.

Product Name	Cable Length ft. (m)	Wire Diameter	
		.052-1/16 inches (1.3-1.6 mm)	5/64-3/32 inches (2.0-2.4 mm)
Magnum® 550	15 (4.5)	600A Open-End	600A Open-End
		K598-7	K598-11

## Spool Guns



Shown: K3269-1  
Magnum® PRO 100SG  
Spool Gun

**Magnum® PRO 100SG and Magnum® 100SG Spool Guns**  
The Magnum® PRO 100SG and Magnum® 100SG spool guns are the lowest cost way to add reliable and precise spool gun wire feeding performance for soft aluminum wire. They're easy to set up and do not require a bulky outboard adapter/power module.

The Magnum® PRO 100SG spool gun features Magnum® PRO expendables and Copper Plus™ contact tips. For convenience, these parts are shared with the standard Magnum® PRO 100L MIG gun included with POWER MIG® and SP wire feeder models.

Request publication E12.20 (Magnum® PRO 100SG)  
Request publication E12.21 (Magnum® 100SG)



### Magnum® SG Spool Gun

The Magnum® SG is a lightweight, well balanced semiautomatic spool gun designed for easy and reliable aluminum wire feeding with a variety of CV power sources and engine-driven welders. Rated 250 amps @ 60%, the Magnum® SG features a generous 25 ft (7.5 m) gun cable and integrated wire feed speed control in the handle to cut your trips back to the power source. Easy to set up, operate and maintain. . . the Magnum® SG is a great addition to your welding tool set.

Request publication E12.22



### Magnum® 250LX™ Spool Gun

The Magnum® 250LX™ spool gun is a professional grade solution for feeding small spools of aluminum and steel wire. Featuring a 1-year warranty and a 280A 60% duty cycle rating (Ar), the Magnum® 250LX™ is a combination of durability and performance. The gun is well balanced and lightweight, and the unique oval shaped handle with finger ribs ensures both comfort and a sure grip. The Magnum® 250LX™ is an ideal complement to the POWER MIG® 350MP and POWER MIG® 256.

Request publication E12.25

## Spool Guns

Model	Product Number	Length ft. (m)	Wire Size Range inches (mm)	Rated Current/Duty Cycle	Machine	Adapter
Magnum® PRO 100SG	K3269-1	10 (3.0)	.030-.035 (0.8-0.9)	130A/30%	POWER MIG® 216 POWER MIG® 180C POWER MIG® 140C POWER MIG® 180 Dual	None
Magnum® 100SG	K2532-1					
Magnum® SG	K487-25	25 (7.5)	.025-3/64 (0.6-1.2)	250A/60%	POWER MIG® 216 POWER MIG® 256	K2703-1 K2445-1
Magnum® 250LX™	K2490-1	25 (7.5)	.025-3/64 (0.6-1.2)	CO <sub>2</sub> : 300A/60% Ar: 280A/60% Ar: 200A/100%	POWER MIG® 350MP POWER MIG® 256 POWER MIG® 216 Power Wave® C300	None None K2703-1 K2910-1

## Innershield® Guns (Flux-Cored Self-Shielded)



**K126™ Classic**  
Rated 350 amps. Use .062-3/32 in. (1.6-2.8 mm) diameter wires. Choose from 10 or 15 ft. (3.0 or 4.5 m) cable lengths.

Request publication E12.110



**K345**  
Rated 350 amps. Use .068-5/64 in. (1.7-2.0 mm) diameter wires. Cable is 10 ft. (3.0 m) in length. Reduced wire feed speed thumb switch.

Request publication E12.110



**K115**  
Rated 450 amps. Use 3/32-.120 in. (2.4-3.0 mm) diameter wires. Choose from 10 or 15 ft. (3.0 or 4.5 m) cable lengths.

Request publication E12.110



**K116**  
Rated 600 amps. Use 7/64-.120 in. (2.8-3.0 mm) diameter wire. 15 ft. (4.5 m) cable length. Adjustable grip angle.

Request publication E12.110

Product Name	Rated Current @ 60% Duty Cycle	Length ft. (m)	Feeding Capability - Wire Diameter, inches (mm)								Tube Angle
			.062 (1.6)	1/16 (1.6)	.068 (1.7)	.072 (1.8)	5/64 (2.0)	3/32 (2.4)	7/64 (2.8)	.120 (3.0)	
K126-1 Classic	350A	10 (3.0)	•	•	•	•	•	•			62°
K126-2 Classic	350A	15 (4.5)	•	•	•	•	•	•			62°
K345-10	350A	10 (3.0)			•	•	•				90°
K115-1	450A	10 (3.0)								•	82°
K115-2	450A	15 (4.5)								•	82°
K115-3	450A	10 (3.0)						•			82°
K115-4	450A	15 (4.5)						•			82°
K115-8	450A	15 (4.5)							•	•	45°
K115-10	450A	15 (4.5)						•			45°
K116-2	600A	15 (4.5)								•	Straight

## Push-Pull Guns



### Magnum® PRO AL Air-Cooled Push-Pull Gun and Magnum® PRO AL Water-Cooled Push Pull Gun

The Magnum® PRO AL air-cooled push-pull guns feature a Magnum® backend that integrates power, gas and wire conduit into a single easy connection for direct connection with a POWER MIG® 350MP wire feeder welder, Power Wave® C300 or Power Feed® 10M or Power Feed® 25M semiautomatic wire feeder. The Magnum® PRO AL water-cooled push-pull gun has separate wire and conduit, power and gas connections and requires a connection adapter. *See chart below for specifications.*

**Request Publication E12.14**



### Cougar™ Pistol-Grip Air-Cooled Push-Pull Guns

Cougar™ Push-Pull guns are intended for those operators who prefer an upright pistol-grip design for aluminum welding fabrication or production. These guns feature a Sure-Grip™ handle, integrated strain relief and multi-turn potentiometer. Rated 300A @ 60% duty cycle w/Argon. *See chart below for specifications.*

**Request Publication E12.16**

Product Name	Product Number	Current Rated Current 100% Argon	Wire Diameter Range inches (mm)	Cable Length ft. (m)
Magnum® PRO AL G225A Air-Cooled, 12-pin	K3355-1	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	15 (4.5)
Magnum® PRO AL G225A Air-Cooled, 12-pin	K3355-2	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	25 (7.6)
Magnum® PRO AL G225A Air-Cooled, 12-pin	K3355-3	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	35 (10.6)
Magnum® PRO AL G225A Air-Cooled, 12-pin	K3355-4	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	50 (15.2)
Magnum® PRO AL G225A Air-Cooled, 7-pin	K3356-1	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	15 (4.5)
Magnum® PRO AL G225A Air-Cooled, 7-pin	K3356-2	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	25 (7.6)
Magnum® PRO AL G225A Air-Cooled, 7-pin	K3356-3	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	35 (10.6)
Magnum® PRO AL G225A Air-Cooled, 7-pin	K3356-4	225A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	50 (15.2)
Magnum® PRO AL G450W Water-Cooled, 12-pin	K3357-1	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	15 (4.5)
Magnum® PRO AL G450W Water-Cooled, 12-pin	K3357-2	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	25 (7.6)
Magnum® PRO AL G450W Water-Cooled, 12-pin	K3357-3	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	35 (10.6)
Magnum® PRO AL G450W Water-Cooled, 12-pin	K3357-4	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	50 (15.2)
Magnum® PRO AL G450W Water-Cooled, 7-pin	K3358-1	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	15 (4.5)
Magnum® PRO AL G450W Water-Cooled, 7-pin	K3358-2	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	25 (7.6)
Magnum® PRO AL G450W Water-Cooled, 7-pin	K3358-3	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	35 (10.6)
Magnum® PRO AL G450W Water-Cooled, 7-pin	K3358-4	450A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	50 (15.2)
Cougar™ Air-Cooled, 7-pin	K2704-2	300A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	25 (7.6)
Cougar™ Air-Cooled, 7-pin	K2704-3	300A @ 60% Duty Cycle	.035 - 1/16 (0.9 - 1.6)	50 (15.2)

## Submerged Arc Guns



### Submerged Arc Gun

Rated 600 amps, 15 ft. (4.5 m) cable.

**Order K113-1** for 5/64 in. (2.0 mm)

**Order K113-2** for 3/32 in. (2.4 mm)



### Mechanized SAW Gun

Rated 600 amps, for 5/64 and 3/32 in. (2.0 and 2.4 mm) solid electrode. Includes flux valve interlock switch and receptacle for Hand Travel Unit or Squirtmobile®.

**Order K114**

# TIG Torches

## Air-Cooled



### PTA-9 & PTA-9F

Air-cooled TIG torch, rated 125 amps at 60% duty cycle. The PTA-9F is equipped with a flexible head for easy maneuverability into tight places.

**Request Publication E12.150**

### PTA-17, PTA-17V, PTA-17F & PTA-17FV

Air-cooled TIG torch, rated 150 amps at 60% duty cycle. The PTA-17V is equipped with a valve for gas flow control. The PTA-17F is equipped with a flexible head for easy maneuverability into tight spaces. The PTA-17FV is equipped with both a gas valve and a flexible head.

**Request Publication E12.150**

### PTA-26, PTA-26V, PTA-26F & PTA-26FV

Air-cooled TIG torch, rated 200 amps at 60% duty cycle. The PTA-26V is equipped with a valve for gas flow control. The PTA-26F is equipped with a flexible head for easy maneuverability into tight spaces. The PTA-26FV is equipped with both a gas valve and flexible head.

**Request Publication E12.150**

## Water-Cooled



### PTW-18

Water-cooled TIG torch, rated 350 amps at 100% duty cycle.

**Request Publication E12.150**

### PTW-20

Water-cooled TIG torch, rated 250 amps at 100% duty cycle.

**Request Publication E12.150**

## Pro-Torch™ TIG Torches

Model	Product Number	Rated Current	Tungsten Range inches (mm)	Length ft. (m)	Number of Cables	
<b>Air-Cooled TIG Torches</b>						
PTA-9	K1781-1	125A	.020-1/8 (0.5-3.2)	12.5 (3.8)	1	
	K1781-3	125A	.020-1/8 (0.5-3.2)	25.0 (7.6)	1	
PTA-9F Ultra-Flex™	K1781-9 <sup>(1)</sup>	125A	.020-1/8 (0.5-3.2)	12.5 (3.8)	1	
PTA-17	K1782-1	150A	.020-5/32 (0.5-4.0)	12.5 (3.8)	1	
	K1782-2	150A	.020-5/32 (0.5-4.0)	12.5 (3.8)	2	
	K1782-3	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
	K1782-4	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	2	
PTA-17F	K1782-10	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
PTA-17FV	K1782-11	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
PTA-17V Ultra-Flex™	K1782-6	150A	.020-5/32 (0.5-4.0)	12.5 (3.8)	1	
	K1782-7	150A	.020-5/32 (0.5-4.0)	12.5 (3.8)	2	
	K1782-8	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
	K1782-9	150A	.020-5/32 (0.5-4.0)	25.0 (7.6)	2	
PTA-17 Ultra-Flex™	K1782-12	150A	.020-5/32 (0.5-4.0)	12.5 (3.8)	1	
	PTA-26	K1783-1	200A	.020-5/32 (0.5-4.0)	12.5 (3.8)	1
		K1783-2	200A	.020-5/32 (0.5-4.0)	12.5 (3.8)	2
		K1783-3	200A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1
PTA-26F	K1783-4	200A	.020-5/32 (0.5-4.0)	25.0 (7.6)	2	
	K1783-10	200A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
PTA-26FV	K1783-11	200A	.020-5/32 (0.5-4.0)	25.0 (7.6)	1	
				25.0 (7.6)	1	
PTA-26V	K1783-7	200A	.020-5/32 (0.5-4.0)	12.5 (3.8)	2	
				25.0 (7.6)	1	
				25.0 (7.6)	2	

## Water-Cooled TIG Torches

PTW-18	K1784-1	350A	.020-5/32 (0.5-4.0)	12.5 (3.8)	3
	K1784-2	350A	.020-5/32 (0.5-4.0)	25.0 (7.6)	3
PTW-20	K1784-3	250A	.020-1/8 (0.5-3.2)	12.5 (3.8)	3
	K1784-4	250A	.020-1/8 (0.5-3.2)	25.0 (7.6)	3

## Lincoln Electric Adapters

Model	Product Number
<b>For Precision TIG® 275/375 Power Sources</b>	
PTA-26 (one-piece power cable)	K2166-1
PTA-9, -17 (one-piece power cable)	K2166-3
PTA-9, -17, -26 (two-piece power cable)	K2166-2
PTW-18, -20	No adapter required.
<b>For Invertec® V160-T, V205-T AC/DC, V205-T DC &amp; Precision TIG® 225, Square Wave™ TIG 175 Power Sources</b>	
PTA-9, -17	K1622-1
PTW-18, -20	K1622-4
PTA-26	K1622-3
<b>For TIG Module &amp; Power Sources with 1/2 in. (50.8 mm) Stud Output Terminals</b>	
PTW-18, -20	K2505-2 and K1622-4
PTA-26, -26V	K2505-2 and K1622-3
PTA-9, -17	K2505-2 and K1622-1
PTA-9, -17, -26 (two-piece power cable)	No adapter required
<b>For Invertec® V160-S, V275-S, V350 PRO and Power Sources with Twist Mate™ Power and Separate Gas</b>	
PTA-9FV, -17V, -17FV	K2505-1 and K1622-1
<b>For Invertec® V155-S and Power Sources with small Twist Mate™ Power and Separate Gas</b>	
PTA-9FV, -17V, -17FV	K960-2



### Zippered Cable Covers

Protect TIG torch cables in high abrasion applications with zippered cable covers. Available for 12.5 ft. (3.8 m) and 25 ft. (7.6 m) TIG torches.

**Order K918-1 (12.5 ft.)  
K918-2 (25 ft.)**

<sup>(1)</sup> Pre-configured package with K1622-1 Twist Mate™ adapter and 1/16 in. (1.6 mm) gas lens collet body, collet, and gas lens installed.



# CUTTING SYSTEMS

**Tomahawk® 375 Air**



**Tomahawk® 625**



**Tomahawk® 1000**



**Tomahawk® 1000 Mechanized**



**Spirit® II 150**



**Spirit® II 275**



**Spirit® II 400**



**Growth Series™ 2X2™**



**Growth Series™ 2X4™**



**Growth Series™ 4X4™**



MANUAL CUTTING

CNC CUTTING

PORTABLE CNC CUTTING SYSTEMS

	MODEL	OUTPUT	CUTTING CAPABILITY – MILD STEEL							FEATURES				
			CNC Machine Torch		Hand Torch									
			CNC Pierce		Recommended		Maximum		Severance		CNC Capable	Standard Cut	Contact Cut	Gouging
			Production in. (mm)	Maximum in. (mm)	Production Cut @ ipm (m/min)	Max Thickness in. (mm)	Production Cut @ ipm (m/min)	Max Thickness in. (mm)	Production Cut @ ipm (m/min)	Max Thickness in. (mm)				
Manual Cutting	<b>Tomahawk® 375 Air</b>	10-25			22 (0.56)	5/16 (7.9)	14 (0.36)	3/8 (9.5)	5 (0.13)	1/2 (12.7)	●			●
	<b>Tomahawk® 625</b>	10-40			20 (0.51)	1/2 (12.7)	12 (0.30)	5/8 (15.9)	5 (0.13)	3/4 (19.1)	●	●		●
	<b>Tomahawk® 1000</b>	20-60	1/4 (6.4)	1/2 (12.7)	19 (0.51)	3/4 (19.01)	10 (0.30)	1.0 (25.4)	5 (0.13)	1-1/4 (31.75)	●	●	●	●

KEY: ● Excellent ◐ Good ○ Optional

# Tomahawk® 375 Air

## Plasma Cutting - Anywhere, Anytime



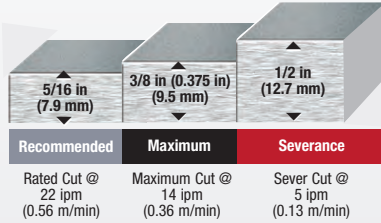
The Tomahawk® 375 Air plasma cutting system arrives ready to go, for fast and precise cutting. With the 375 Air, forget the grinder – simply pick up the torch and cut in seconds.

- **Ultimate Portability** – Internal air compressor enables operation in environments where external compressed air is not available.
- **Touch Start system** – Reliable plasma arc initiation without high frequency.
- **Rapid Arc Restrike** – Fast cutting through gaps, even expanded metal.
- **Front Panel Purge Control** – Makes it easy to set the air flow rate without initiating the plasma arc.
- **Cool Operation, Long Consumable Life** – New electrode and nozzle design save you money in the long run. Vantage® to power your Tomahawk® in remote locations.



Shown: K2806-1 Tomahawk® 375 Air

CUT PERFORMANCE



**Processes**

- Plasma Cutting

**Output** DC

**Input** 3 PHASE 60 Hz

**Unit Includes**

- Internal air compressor (external air connection also standard)
- LC25 Torch with 10 ft. (3.0 m) cable
- Air regulator and pressure gauge
- Internal water separator
- Work clamp and cable
- Spare consumables
- Shoulder strap
- Input power cord

**Recommended Accessories**

- K2886-1 Plasma Circle Cutting Guide Kit
- K2377-1 Canvas Cover
- K2846-1 LC25 Handheld Plasma Torch, 10 ft. (3 m)

**Consumables Options**

- KP2842-1 Electrode (LC25)
- KP2842-2 Nozzle, 25A (LC25)
- KP2842-3 Retaining Cap (LC25)
- KP2842-4 Swirl Ring (LC25, LC40)
- KP2842-5 Spacer (LC25)

**Literature**

E11.100

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Pilot Current	Output Range	Air Pressure Required	Air Flow Rate	H x W x D inches (mm)	Net Weight (w/o Torch) lbs. (kg)
Tomahawk® 375 Air	K2806-1	208/230/1/60	13A@85.2V 100% 18A@87.2V 60% 25A@90V 35%	21.7A	17A	10-25A	80-110 PSI (6-7.5 Bar)	70 psi@ 125-200 SCFH 5 Bar@80 L/min	15.2 x 8.5 x 18.9 (385 x 215 x 480)	40 (18)

# Tomahawk® 625

## Plasma Cutting - Anywhere, Anytime



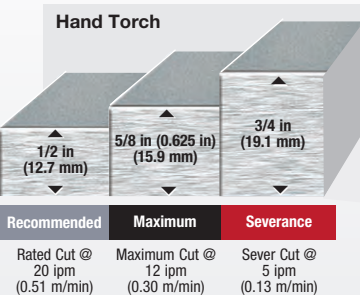
Tomahawk® plasma cutting systems are portable enough to carry to any jobsite. Hook up the compressed air, grab the torch and start cutting right away.

- **Touch Start System** – Reliable plasma arc initiation without high frequency.
- **Rapid Arc Restrike** – Fast cutting through gaps, even expanded metal.
- **Front Panel Purge Control** – Makes it easy to set the air flow rate without initiating the plasma arc.
- **Cool Operation, Long Consumable Life** – New electrode and nozzle design save you money in the long run.
- **Engine Drive Compatible** – Select a Lincoln Electric Ranger® or Vantage® to power your Tomahawk® in remote locations.



Shown: K2807-1 Tomahawk® 625

CUT PERFORMANCE



**Processes**

- Plasma Cutting

**Output** DC

**Input** 1 PHASE 60 Hz

**Unit Includes**

- LC40 Hand Torch, 20 ft. (6.0 m) cable
- Air regulator and pressure gauge
- Internal water separator
- Work clamp and cable
- Spare consumables
- Shoulder strap
- Input power cord

**Recommended Accessories**

- K2886-1 Plasma Circle Cutting Guide Kit
- K2377-1 Canvas Cover
- K2847-1 LC40 Handheld Plasma Torch, 20 ft. (6 m)
- K2847-2 LC40 Machine Plasma Torch, 25 ft. (7.5 m)

**Consumables Options**

- KP2843-1 Electrode (LC40)
- KP2843-2 Nozzle, 40A (LC40)
- KP2843-3 Nozzle (Direct Contact), 40A (LC40)
- KP2843-5 Retaining Cap (LC40)
- KP2842-4 Swirl Ring
- KP2843-9 Nozzle (Direct Contact), 25A (LC40)
- KP2843-10 Spacer (LC40, LC65)

**Literature**

E11.200

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Pilot Current	Output Range	Air Pressure Required	Air Flow Rate	H x W x D inches (mm)	Net Weight (w/o Torch) lbs. (kg)
Tomahawk® 625 w/Hand Torch	K2807-1	208/230/1/50/60	24A@89.6V 100% 29A@91.8V 60% 40A@96.0V 35%	36.8A	17A	10-40A	80-110 PSI (6-7.5 Bar)	70 psi @ 125-200 SCFH 5 Bar@ 80 L/min	15.2 x 8.5 x 18.9 (385 x 215 x 480)	34 (15.42)



# Tomahawk® 1000

## Plasma Cutting - Anywhere, Anytime



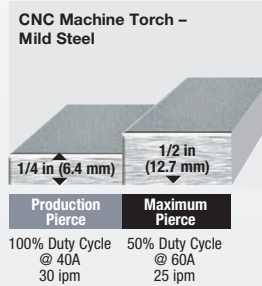
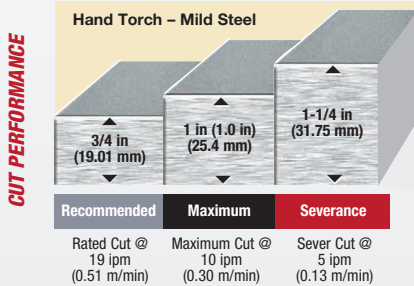
The Tomahawk® 1000 plasma cutting system is portable enough to use on the jobsite and rugged enough to use on up to one inch material in a production environment.

- **PowerConnect® Technology** – Automatically senses and adjusts to input power for a range of 200 up to 600 volts, single or three phase, 50 or 60 hertz. Cutting output remains constant throughout the entire input voltage range.
- **Continuous Output Control** – Focus the arc for different material thicknesses.
- **Touch Start™ System** – Reliable plasma arc initiation without high frequency.
- **Front Panel Purge Control** – Makes it easy to set the air flow rate without initiating the plasma arc.
- **Cool Operation, Long Consumable Life** – New electrode and nozzle design saves you money in the long run.
- **Added Safety** – Our Parts-in-Place™ system detects correct installation of consumables and torch.
- **Engine Drive Compatible** – Select a Lincoln Electric Ranger® or Vantage® to power your Tomahawk® in remote locations.
- **CNC (Computer Numeric Control) and Robotic Plasma Cutting** – Set up a fast, reliable production cutting cell with the optional machine torch.



Shown:  
K2808-2 Tomahawk® 1000  
Mechanized

Shown:  
K2808-1 Tomahawk® 1000  
with Hand Torch



**Processes**  
• Plasma Cutting

**Output** DC **Input** 1/3 50/60

- Hand Torch Model (K2808-1) Includes**
- LC65 Hand Torch with 25 ft. (7.5 m) cable
  - Air regulator and pressure gauge
  - Internal water separator
  - Work clamp and cable
  - Spare consumables
  - Input power cord

- Mechanized Model (K2808-2) Includes**
- LC65M Machine Torch with 25 ft. (7.5 m) lead
  - CNC Interface Cable
  - Air regulator and pressure gauge
  - Internal water separator
  - Work clamp and cable
  - Spare consumables
  - Input power cord

- Recommended Accessories**
- K2886-1 Plasma Circle Cutting Guide Kit
  - K2377-1 Canvas Cover
  - K2848-3 LC65M Machine Plasma Torch, 25 ft. (7.5 m)
  - K3071-1 Accessory Bag

- Consumables Options**
- K2848-1 LC65 Handheld Plasma Torch, 25 ft. (7.5 m)
  - K2848-2 LC65 Handheld Plasma Torch, 50 ft. (15 m)
  - K2848-3 LC65M Machine Plasma Torch, 25 ft. (7.5 m)
  - KP2844-1 Electrode (60A)
  - KP2844-4 Nozzle (60A)
  - KP2844-9 Retaining Cap (40A-60A)
  - KP2844-13 Spacer
  - KP2844-14 Swirl Ring (40, 50, 60A)

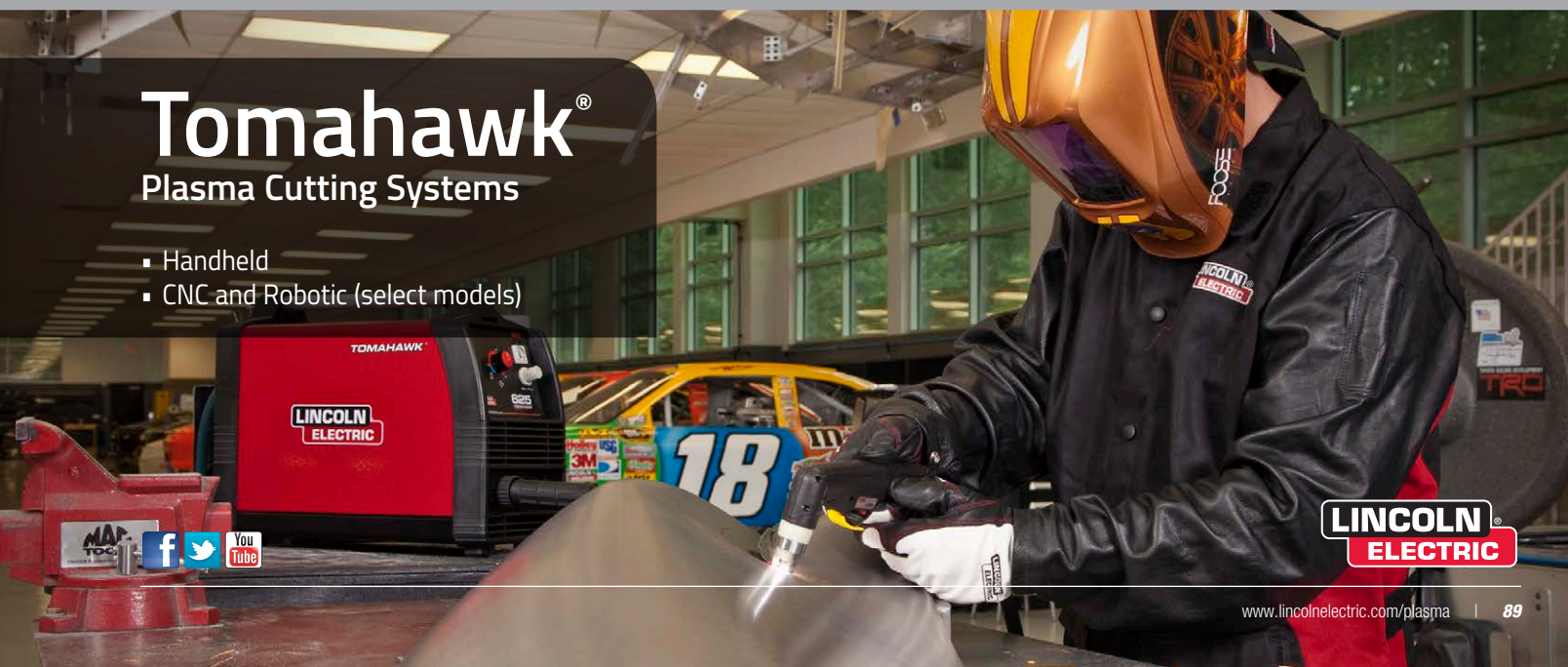
**Literature**  
E11.300 Tomahawk® 1000 w/Hand Torch  
E11.310 Tomahawk® 1000 Mechanized

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Pilot Current	Output Range	Air Pressure Required	Air Flow Rate	H x W x D inches (mm)	Net Weight lbs. (kg)
Tomahawk® 1000 w/Hand Torch	K2808-1	208/230/380-415/460/575/1/3/50/60	3-Ph / 50% Duty Cycle: 24.6/21.1/11.4/9.3/7.6 3-Ph / 100% Duty Cycle: 17.4/14.9/7.3/6.6/5.4	37.8A (Max.)	20A	20-60A	87-109 PSI (6-7.5 Bar)	80 psi @ 275 SCFH 5.5 Bar @ 130 L/min	15.2 x 8.5 x 22.1 (385 x 215 x 561)	62 (28.1)
Tomahawk® 1000 Mechanized	K2808-2	208-575/1/3/50/60	1-Ph / 50% Duty Cycle: 26.7/24.3/NA/NA/NA 1-Ph / 100% Duty Cycle: 37.8/34.3/NA/NA/NA							

# Tomahawk®

## Plasma Cutting Systems

- Handheld
- CNC and Robotic (select models)



# Spirit® II 150, 275 and 400

## High Definition Plasma Cutting

The Spirit® II Series plasma systems feature the unique FineLine™ High Definition Plasma Cutting Technology that delivers excellent performance in cut quality at low operational costs. Designed to be the ultimate process tool when precise, square and virtually dross free cuts are important. With ease of use and high processing speed, the Spirit® II Series truly sets the standard in precision plasma cutting.



Shown:  
Spirit II® 150

Shown:  
Spirit II® 275

Shown:  
Spirit II® 400

- **Impulse Start Technology™** – Eliminate high frequency starting.
- **Longer Consumable Life** – Hafnium Optimizing Technology (HfOT™) significantly increases electrode life by minimizing consumable wear during system start up and shut down.
- **Lower Operating Costs** – Fast Proportional Valve Gas Regulation reducing the amount of plasma gas by 78% less than the competition.
- **Self-Diagnostics** – Track pierces, pierce errors and type of errors for the last six electrodes.
- **Gas Console Flexibility** – Select between an Auto Gas and Manual Gas Console.
- **User-Friendly Interface** – Plasma Console provides automatic PC controlled process variables through a touch screen HMI display.

### Processes

- Plasma Cutting

Output Input

### One-Pak® Packages

- Spirit® II 275A Phantom (BK300038-13720)
- Spirit® II 275A Phantom 2-Axis (BK300038-13651)
- Spirit® II 275A Phantom 3-Axis (BK300038-13652)
- Spirit® II 275A 10LCD (BK300038-B10013STD)

### Electrode Options

#### Mild Steel

- BK277130 Electrode Copper, 30A
- BK277131 Electrode Copper, 50A/70A
- BK277282 Electrode Copper, 100A
- BK277292 Electrode Copper, 150A
- BK279410 Electrode Silver, 100A
- BK279420 Electrode Silver, 150A

#### Stainless Steel (Air)

- BK277137 Electrode Copper, 30A/50A
- BK277131 Electrode Copper, 50A/70A
- BK277282 Electrode Copper, 100A
- BK279410 Electrode Silver, 100A
- BK277292 Electrode Copper, 150A
- BK279420 Electrode Silver, 150A

#### Stainless Steel (H17)

- BK277132 Electrode Copper, 70A
- BK277133 Electrode Copper, 100A
- BK277135 Electrode Copper, 150A-260A

#### Aluminum

- BK277131 Electrode Copper, 50A/70A
- BK277282 Electrode Copper, 100A
- BK277292 Electrode Copper, 150A
- BK279410 Electrode Silver, 100A
- BK279420 Electrode Silver, 150A
- BK277130 Electrode Copper, 30A

### Literature

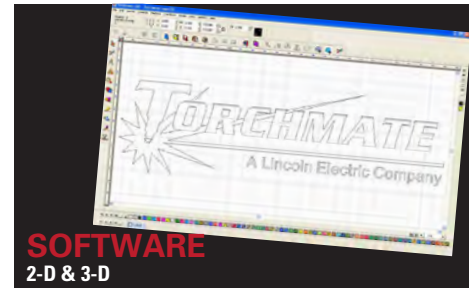
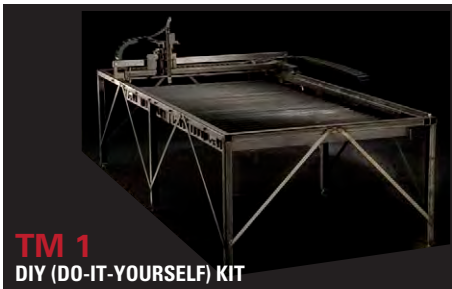
- E15.16 (Spirit® II 150)
- E15.15 (Spirit® II 275)
- E15.14 (Spirit® II 400)

Product Name	Product Number	Input Power Voltage/Amperage	Rated Output <sup>(1)</sup> Current/Duty Cycle	Mild Steel Production Capacity - inches (mm)	Max. Thickness (Edge Start w/dross) inches (mm)	Gas Supply		
						Plasma	Shield	Marking
Spirit® II 150	See Literature	208	275A DC @ 100%	1 (25)	1.5 (38)	O <sub>2</sub> AIR H17 <sup>(2)</sup> N <sub>2</sub>	O <sub>2</sub> AIR H17 <sup>(2)</sup> N <sub>2</sub>	AT N <sub>2</sub>
Spirit® II 275		220						
		240						
		380						
		400						
		415						
		440						
	480							
	600							
Spirit® II 400		220	400A DC @ 100%	2.0 (50)	3 (75)			
	240							
	380							
	400							
	415							
	440							
	480							
	600							

<sup>(1)</sup>@ 104°F (40°C). <sup>(2)</sup>H17=50% N<sub>2</sub>, 32.5% Ar, 17.5% H<sub>2</sub>

# Torchmate® CNC Cutting Systems

Wherever the job, Torchmate® has the CNC solution for your needs.



## AT HOME.

For your home garage Torchmate® offers easy assembly bolt together tables. The bolt together feature allows the home hobbyist to enjoy the ease of CNC technology with the comfort of portability. Bolt together tables can be broken down in no time and moved as needed. Torchmate's affordability, quality, service and commitment will lend you a lifetime of quality cuts and technical support that is second to none.

## ON THE ROAD.

If you are always on the road the Torchmate® CNC Prototyping system is portable, versatile, and easy to use. The time has come that CNC technology can travel with you. This small mobile system is designed as a multi-use platform to handle secondary tooling for plasma cutting, routing, drilling, engraving, or milling.

## IN THE SHOP.

The Torchmate® X for industrial applications is a turn-key system delivered to you ready to handle heavy-duty use with power, speed, and accuracy. With your choice of a water table or downdraft system, the Torchmate® X is a full-scale industrial grade production machine. The Torchmate® X includes technology found in machines costing much more.

Additional information can be found at [www.Torchmate.com](http://www.Torchmate.com)

**LINCOLN**  
**ELECTRIC** Cutting Systems

# Robotic Tube Profiler

## Robotic Tube Cutting and Profiling Solution

The Robotic Tube Profiler uses cutting edge technology for automated tube cutting and profiling. This system is designed to increase tube fabricators' productivity, quality and overall operations.

- **CAD/CAM capabilities** – eliminates teach and learn programming.
- **Consolidates set-up, layout and multiple machine routings into one operation** – achieve improvements in productivity and quality.
- **Affordable alternative** to expensive laser tube cutting equipment.
- **Easy to program and operate** – no special skills required.
- **Optional Hi-Def plasma available** – for cutting speeds up to 320 ipm (8.1 mpm).



### Processes

- Plasma cutting
- Oxyfuel cutting

### System Cut Capabilities:

- Straight
- Miter
- Saddle
- Centerline Offset
- Multiple Intersection
- Round, Rectangular and Overlapping Pipe Holes
- Gusset Slot
- Custom Shapes and Profiles

Input  

Literature  
MC11-58

**LINCOLN**  
**ELECTRIC** | Cutting Systems

Product Name	Input Power Voltage/Phase/Hertz	Length	Pipe Capacity Weight	Cutting Speed* ipm (m/min)	H x W x D ft. (m)	Net Weight lbs. (kg)
Robotic Tube Profiler (RTP)	480/3/60	20 ft. (6.1 m) [expandable to 40 ft. (12.2 m)]	1,000 lbs. (454 kg) total max. 50 lbs./foot max.	320 (8.1) max.	Dependent on system configuration	Dependent on system configuration

\* Dependent on system configuration and material being cut.

# MASTERPIPE™ Profiler

## Economical CNC Pipe Cutting Solution

The MASTERPIPE™ Profiler is a 2-axis, CNC pipe cutting machine capable of cutting and profiling pipe having an outside diameter of 1-12 in. and a length of up to 40 ft.

- **Economically priced** – great choice for smaller shops.
- **Consolidates set-up, programming and cutting into one operation** – achieve improvements in productivity and quality.
- **Menu-driven WinMPM programming software** – easy to use; no special skills required.
- **Large pre-loaded cut library** – provides maximum pipe configuration flexibility.
- **Ve-Assist™ internet diagnostics** – maximizes machine uptime.



### Processes

- Plasma cutting
- Oxyfuel cutting

### System Cut Capabilities:

- Straight
- Miter
- Saddle
- Centerline Offset
- Multiple Intersection
- Round, Rectangular and Overlapping Pipe Holes
- Gusset Slot

Input  

Literature  
MC10-112

**LINCOLN**  
**ELECTRIC** | Cutting Systems

Product Name	Input Power Voltage/Phase/Hertz	Pipe Capacity Dimensional	Weight	Cutting Speed ipm (m/min)	H x W x D ft. (m)	Net Weight lbs. (kg)
MASTERPIPE™ Profiler	120/1/60	OD: 1-12 in. Length: up to 40 ft.	600 lbs. max. 50 lbs./ft. max.	200 (5.1) max	6 x 12 x 4 (1.83 x 3.66 x 1.22)	2500 (1134)

# MASTERPIPE™ Mini Profiler

## Dual-Axis CNC Pipe Cutting Machine

The MASTERPIPE™ Mini Profile cutting system delivers a smaller, more economical package for cutting pipe and tube to length quickly and efficiently. The standard MASTERPIPE™ Mini Profiler automated profiler uses a variable-angle, manual height-control with the plasma torch.

- **Flexible Configurations** – system is available in five sizes for cutting pipe lengths from 4-24 ft.
- **Expandable Pipe Bed** – flexible from 5-25 ft. to increase work capacity while allowing for space limitations
- **Easy Loading** – Adjustable ball transfer cradle for easy movement of the pipe on the bed
- **Torch Adjustment** – One-touch button can move the torch so material can be easily loaded, positioned for cutting, and unloaded.
- **Easy-to-use, wizard-based Software** – compact CNC controller and driver software package for full automation efficiency
- **Large pre-loaded cut library** – provides maximum pipe configuration flexibility.



Shown:  
MASTERPIPE™ Mini Profiler

### Processes

- Plasma Cutting
- Oxyfuel Cutting

### System Cut Capabilities:

- Miter
- Saddle
- Centerline Offset
- Multiple Intersection
- Round, Rectangular and Overlapping Pipe Holes
- Gusset Slots

### Input



### Literature

E11.501

Product Name	Input Power Voltage/Phase/Hertz	Pipe Capacity Diameter: in (mm)	Weight: lbs. (kg)	Cutting Speed* ipm (m/min)	H x W x L ft. (m)	Net Weight lbs. (kg)
MASTERPIPE™ Mini Profiler Base 5 ft. Section	120/1/60	OD: 1-8 (25.4-203.2) (recommended production) OD: 1-12 (25.4-304.8) (max. capacity)	700 lbs./ft. (317.5 kg/m) 1,000 (453.59) max.	200 (5.1) max (depending on cutting tool)	52 x 28 x 92 (15.85 x 8.53 x 28.04)	1,000 (453.6)
MASTERPIPE™ Mini Profiler Base 5 ft. Expansion					37 x 23 x 63 (15.85 x 8.53 x 28.04)	Dependent on Configuration

## Abrasive Saw, Pipe Cutting Machines and Master Tube Plasma Profilers

### Pipe Cutting Solutions

The industry's preferred source and global supplier of 3D profiling, customized pipe cutting, and metal fabrication machinery. You'll find our products in the process piping, offshore, structural, pressure vessel, and shipbuilding industries.

#### Abrasive Saw

- Pipe sizes 1-24 in. (2.5-61 cm) O.D.
- Semiautomatic material handling.
- Uncontaminated machine-like finish on all pipe materials.

#### Pipe Cutting Machine

- Flame-cutting machines can supply enough pipe to satisfy 5 to 10 fit-up and welding stations.
- Product range accommodates up to 60 in. diameter pipe.
- CAD-CAM compatible.
- An excellent tool to improve the speed and repeatability of each contour to feed Robo Pipe™ systems.

#### MasterTube Cutter

- Accommodates up to 6 in. (15.2 cm) circular tube.
- Accommodates up to 4 x 6 in. (10.1 x 15.2 cm) or 5 x 5 in. (12.7 x 12.7 cm) rectangular tube.
- Minimum-Maximum tube length is 14-44 ft. (4.3-13.4 m).

**LINCOLN**  
**ELECTRIC**

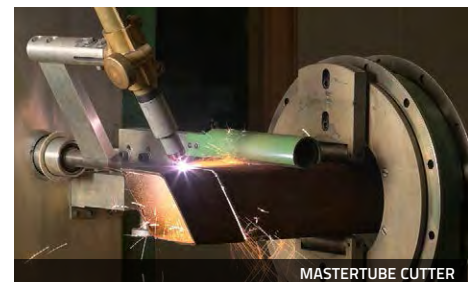
**Automation**  
**Solutions**



ABRASIVE SAW



PIPE CUTTING MACHINE



MASTERTUBE CUTTER

## Accessories

For complete descriptions go to page 133.

### Tomahawk® 375 Air

#### Expendable Parts - Standard Cutting

KP2842-1	Electrode (LC25)
KP2842-2	Nozzle - 25A (LC25)
KP2842-3	Retaining Cap (LC25)
KP2842-4	Swirl Ring (LC25, LC40)
KP2842-5	Spacer (LC25)

#### General

K2886-1	Plasma Circle Cutting Guide Kit
K2377-1	Canvas Cover
K2846-1	LC25 Handheld Plasma Torch, 10 ft. (3.0 m)
K3071-1	Accessory Bag

### Tomahawk® 625

#### Expendable Parts - Standard Cutting

KP2843-1	Electrode (LC40)
KP2843-2	Nozzle, 40A (LC40)
KP2842-4	Swirl Ring (LC25, LC40)
KP2843-5	Retaining Cap (LC40)
KP2843-10	Spacer (LC40, LC65)

#### Expendable Parts - Contact Cutting

KP2843-9	Nozzle (Direct Contact), 25A (LC40)
KP2843-3	Nozzle (Direct Contact), 40A (LC40)

#### Expendable Parts - Gouging

KP2843-4	Nozzle (Gouging) (LC40)
KP2843-6	Retaining Cap (Gouging) (LC40)
KP2843-8	Gouge Shield (LC40)

#### General

K2886-1	Plasma Circle Cutting Guide Kit
K2377-1	Canvas Cover
K2847-1	LC40 Handheld Plasma Torch, 20 ft. (6.1 m)
K2847-2	LC40 Machine Plasma Torch, 20 ft. (6.1 m)
K3071-1	Canvas Accessory Bag
K3128-1	Torchmate® 2X2™ CNC Prototyping System/ Tomahawk® 625 One-Pak®

### Tomahawk® 1000

#### Expendable Parts - Standard Cutting

KP2844-1	Electrode (LC65)
KP2844-14	Swirl Ring - 40,50,60A (LC65)
KP2844-2	Nozzle - 40A (LC65)
KP2844-3	Nozzle - 50A (LC65)
KP2844-4	Nozzle - 60A (LC65)
KP2844-9	Retaining Cap - 40, 60A (LC65)
KP2844-13	Shield - 40, 60A (LC65M)

#### Expendable Parts - Contact Cutting

KP2844-14	Swirl Ring - 40, 50, 60A (LC65)
KP2844-5	Nozzle (Direct Contact) - 40A (LC65)
KP2844-9	Retaining Cap - 40, 60A (LC65)
KP2844-6	Nozzle (Shielded Contact) - 50A (LC65)
KP2844-7	Nozzle (Shielded Contact) - 60A (LC65)
KP2844-10	Retaining Cap (Shielded Contact) (LC65)
KP2844-11	Shield - 50, 60A (LC65)

#### Expendable Parts - Gouging

KP2844-14	Swirl Ring - 40, 50, 60A (LC65)
KP2844-8	Nozzle (Gouging) (LC65)
KP2844-10	Retaining Cap (Shielded Contact) (LC65)
KP2844-12	Gouge Shield (LC65)

#### General

K3071-1	Accessory Bag
K2377-1	Canvas Cover
K2886-1	Plasma Circle Cutting Guide Kit
K2848-1	LC65 Handheld Plasma Torch 25 ft. (7.5 m)
K2848-2	LC65 Handheld Plasma Torch 50 ft. (15 m)
K2848-3	LC65M Machine Plasma Torch 25 ft. (7.5 m)

### Spirit® II 150, 275, and 400

#### Expendable Parts - Shield Cap

BK277145	Shield Cap, 30A (Mild Steel, Aluminum)
BK277115	Shield Cap, 50A (Mild Steel)
BK277150	Shield Cap, 50A (Aluminum), 70A (Mild Steel, Stainless Steel-Air, Stainless Steel-H17, Aluminum)
BK277286	Shield Cap, 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277117	Shield Cap, 150A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277144	Shield Cap, 30A (Stainless Steel-Air)
BK277149	Shield Cap, 50A (Stainless Steel-Air)
BK277146	Shield Cap, 100A (Stainless Steel-H17)
BK277298	Shield Cap, 150A (Stainless Steel-H17)

#### Expendable Parts - Inner Retaining Cap

BK277153	Inner Retaining Cap, 30A-70A (Mild Steel, Aluminum), 70A (Stainless Steel-Air)
BK277151	Inner Retaining Cap, 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277152	Inner Retaining Cap, 150A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277266	Inner Retaining Cap, 150A (Stainless Steel-H17), 200A/275A (Mild Steel, Stainless Steel-Air, Stainless Steel-H17, Aluminum)
BK277110	Inner Retaining Cap, 30A/50A (Stainless Steel-Air)

#### Expendable Parts - Nozzle

BK277120	Nozzle, 30A (Mild Steel, Aluminum)
BK277122	Nozzle, 50A (Mild Steel, Aluminum)
BK277125	Nozzle, 70A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277284	Nozzle, 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277293	Nozzle, 150A (Mild Steel, Stainless Steel-Air, Aluminum)
BK279484	Nozzle (for Silver), 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK279493	Nozzle (for Silver), 150A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277121	Nozzle, 30A (Stainless Steel-Air) Stainless Steel (Air)
BK277123	Nozzle, 50A (Stainless Steel-Air) Stainless Steel (Air)
BK277124	Nozzle, 70A (Stainless Steel-H17) Stainless Steel (H17)
BK277126	Nozzle, 100A (Stainless Steel-H17) Stainless Steel (H17)
BK277297	Nozzle, 150A (Stainless Steel-H17) Stainless Steel (H17)

#### Expendable Parts - Swirl Ring

BK277140	Swirl Ring, 30A (Aluminum), 30A/50A (Mild Steel), 70A (Stainless Steel-H17)
BK277142	Swirl Ring, 50A/70A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277283	Swirl Ring, 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK279483	Swirl Ring (for Silver), 100A (Mild Steel, Stainless Steel-Air, Aluminum)
BK279439	Swirl Ring (for Silver), 150A (Mild Steel, Stainless Steel-Air, Aluminum)
BK277139	Swirl Ring, 150A (Mild Steel, Stainless Steel-Air, Stainless Steel-H17, Aluminum), 260A (Stainless Steel-H17)
BK277138	Swirl Ring, 30A (Stainless Steel-Air) Stainless Steel (Air)
BK277141	Swirl Ring, 100A (Stainless Steel-H17) Stainless Steel (H17)



# AUTOMATION SOLUTIONS

## System 5

Small to medium sized parts



## System 10

Small to medium sized parts.



## System 30

Medium sized parts.



## System 35

Medium to large sized parts.



FIXED TABLE SYSTEMS

## System 15

Small to medium sized parts.



## System 20

Small to medium sized parts.



## System 40

Small to medium sized parts.



TURNTABLE SYSTEMS

## System 30HS

Dual headstock/Fixed table. Small to medium sized parts.



## System 50HP

Dual headstock. Medium sized parts.



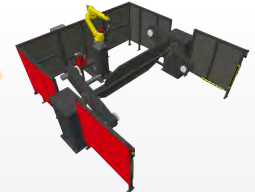
## System 55

Dual headstock. Large sized parts.



## Ferris Wheel

Dual headstock/Triple Axis. Large sized parts.



POSITIONING SYSTEMS

POWER SOURCE MODEL	OUTPUT		CURRENT RANGE (Amps)	PROCESS				INPUT	FEATURES				
	Mode	Polarity		MIG	Pulsed	Flux-Cored	STT <sup>®</sup>		Submerged Arc	Phase	Hertz	Waveform Control Technology <sup>®</sup>	ArcLink <sup>®</sup>
<b>Power Wave<sup>®</sup> R350</b>	CC CV	DC	5-350	●	●	●	○		1, 3	50/60	●	●	●
<b>Power Wave<sup>®</sup> i400</b>	CC CV	DC	5-420	●	●	●			3	50/60	●	●	●
<b>Power Wave<sup>®</sup> 455M Robotic</b>	CC CV	DC	5-570	●	●	●			3	50/60	●	●	●
<b>Power Wave<sup>®</sup> 455M/STT<sup>®</sup> Robotic</b>	CC CV	DC	5-570	●	●	●	●		3	50/60	●	●	●
<b>Power Wave<sup>®</sup> R500</b>	CC CV	DC	5-550	●	●	●	○		3	50/60	●	●	●
<b>Power Wave<sup>®</sup> 655R</b>	CC CV	DC	20-880	●	●	●			3	50/60	●	●	●
<b>Power Wave<sup>®</sup> AC/DC 1000<sup>®</sup> SD<sup>(1)</sup></b>	CC CV	DC	100-1000					●	3	50/60	●	●	●

WIRE DRIVE MODEL	PROCESS					WIRE FEED SPEED RANGE ipm (m/min)		WIRE SIZE RANGE in. (mm)		FEATURES		
	MIG	Pulsed	Flux-Cored	STT <sup>®</sup>	Metal-Cored	High Speed Solid Low Speed Solid	High Speed Cored Low Speed Cored	High Speed Solid Low Speed Solid	High Speed Cored Low Speed Cored	MAXTRAC <sup>®</sup>	ArcLink <sup>®</sup>	4-Roll Drive
<b>AutoDrive<sup>®</sup> 4R220</b>	●	●	●	●	●	50-1200 (1.3-30.5)	50-1200 (1.3-30.5)	.023-.1/16 (0.6-1.6)	.035-.5/64 (0.9-2.0)	●	●	●
<b>AutoDrive<sup>®</sup> 4R100</b>	●	●	●	●	●	50-800 (1.3-20.3)	50-800 (1.3-20.3)	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	●	●	●
<b>Power Feed<sup>®</sup> 10R</b>	●	●	●	●	●	75-1200 (2.0-30.5) 50-800 (1.3-20.3)	75-1200 (2.0-30.5) 50-800 (1.3-20.3)	.025-.1/16 (0.6-1.6) .025-.3/32 (0.6-2.4)	.035-.5/64 (0.9-2.0) .035-.120 (0.9-3.0)		●	●

KEY: ● Excellent ○ Good ● Optional

(1) See "Submerged Arc and Automatic Equipment" section for details.

# Robotic Welding Automation

## Pre-Engineered Systems

Lincoln Electric offers a wide spectrum of pre-engineered systems to meet virtually any fabrication need. Our welding automation experts will work with your team to analyze your manufacturing process and recommend system options.

### FIXED TABLE SYSTEMS

Provides a table on which a work piece is fixed for applications that do not require part-rotation or repositioning.

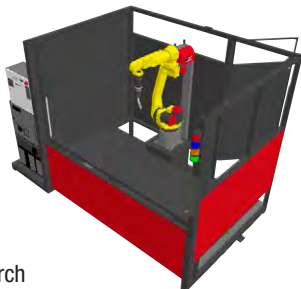
#### SYSTEM 5

**Single Zone/Fixed Table System**  
Literature: E10.130

Small to medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 1753 x 3124 mm (69 x 123 inches)



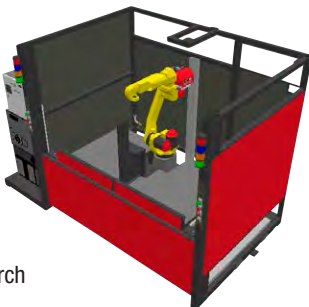
#### SYSTEM 10

**Dual Zone/Fixed Table System**  
Literature: E10.140

Small to medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC Robot or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 1753 x 3226 mm (69 x 127 inches)



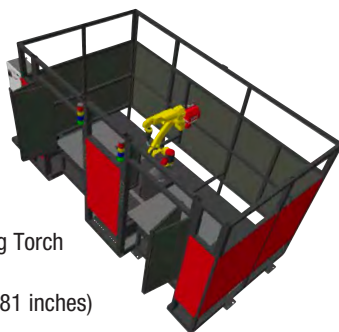
#### SYSTEM 30

**Dual Zone/Fixed Table System**  
Literature: E10.160

Medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC Robot or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 2235 x 4597 mm (80 x 181 inches)



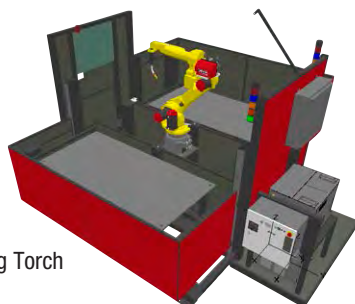
#### SYSTEM 35

**Dual Fixed Table System**  
Literature: E10.170

Medium to large sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 3912 x 3480 mm (154 x 137 inches)



### TURNTABLE SYSTEMS

Provides a table for work piece placement for applications that require part-rotation or repositioning.

#### SYSTEM 15

**Dual Zone/Manual Turntable System**  
Literature: E10.145

Small to medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 50iC/5L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 1588 x 2260 mm (62.5 x 89 inches)



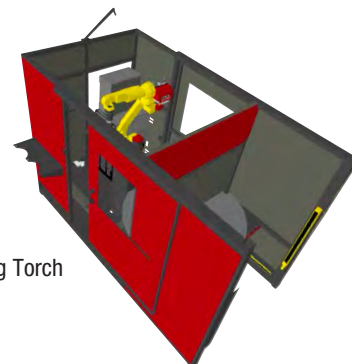
#### SYSTEM 20

**Dual Zone/Horizontal Turntable System**  
Literature: E10.150

Small to medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 1753 x 3226 mm (69 x 127 inches)



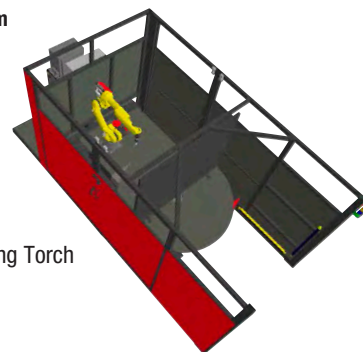
#### SYSTEM 40

**Dual Zone/Horizontal Turntable System**  
Literature: E10.180

Small to medium sized parts

Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 2184 x 3772 mm (86 x 148 inches)





# Robotic Welding Automation

## Pre-Engineered Systems

### POSITIONING SYSTEMS

Features the flexibility of reorientation through a variety of different positioning options incorporated into the cell. Additional dual zone configuration allows for unloading of a part while the other side is welding, for maximum throughput and productivity.

#### SYSTEM 30HS

##### Dual Headstock/Fixed Table System

Literature: E10.162

##### Small to medium sized parts

##### Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC or or 100/6L Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 2235 x 4597 mm (80 x 181 inches)



#### SYSTEM 55

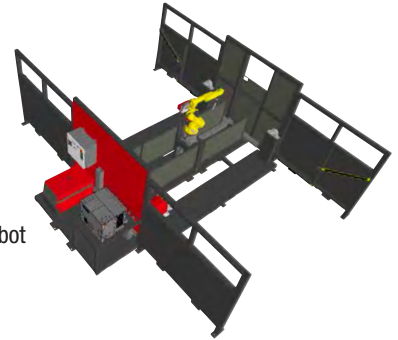
##### Dual Headstock System

Literature: E10.200

##### Large sized parts

##### Includes:

- Power Wave® R350 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 6782 x 4902 mm (267 x 193 inches)



#### SYSTEM 50HP

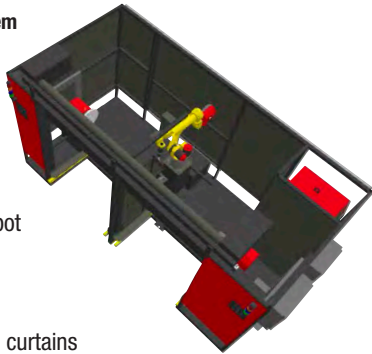
##### Dual Headstock/Fixed Table System

Literature: E10.190

##### Medium sized parts

##### Includes:

- Power Wave® i400 Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® 100iC Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Bi-fold doors with optional roll curtains
- Footprint: 2083 x 4775 mm (82 x 188 inches)



#### FERRIS WHEEL

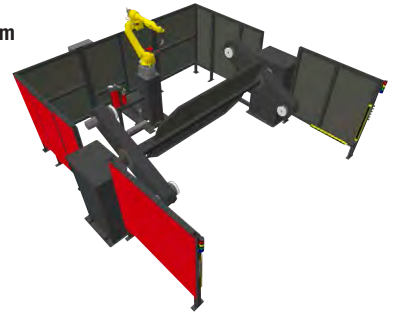
##### Dual Headstock/Triple Axis System

Literature: E10.210

##### Large sized parts

##### Includes:

- Power Wave® Power Source
- AutoDrive® 4R220 Wire Drive
- FANUC® ARC Mate® iC Robot
- 350 or 500 Amp Air-Cooled Welding Torch
- Torch Guard Software
- Footprint: 2743 x 4470 mm (108 x 176 inches)



# Robotic Welding Automation

## Custom Systems

Combine Lincoln Electric's industry leading welding and cutting expertise with the most recognized name in robotics, FANUC®, and you have a great robotics solution regardless of your application. We have the ability to seamlessly integrate all aspects of the automated welding/cutting process, from analysis to custom and pre-engineered cells, to software, service, and training.

### Custom Robotic Solutions

From concept to design and build, Lincoln Electric automation engineers work closely with you to understand your manufacturing needs. Correct synergy, creative positioning design and production efficiency are all critical to producing repeatable, high quality, high volume solutions.



Shown:  
Custom System 55 Dual Arm  
with 45" Indexer

### Robot Arm Selections (6-axes)

#### ARC Mate® 50iC/5L

- 5 kg (11.2 lbs) wrist loading capacity
- 892 mm (35.1 in.) reach

#### ARC Mate® 100iC

- 10 kg (22.4 lbs) wrist loading capacity
- 1420 mm (55.9 in.) reach

#### ARC Mate® 100iC/6L

- 6 kg (13.2 lbs) wrist loading capacity
- 1632 mm (64.2 in.) reach

#### ARC Mate® 120iC

- 20 kg (44.8 lbs) wrist loading capacity
- 20 kg (44.8 lbs) on J3 casting
- 1811 mm (71.3 in.) reach

#### ARC Mate® 120iC/10L

- 10 kg (22.4 lbs) wrist loading capacity
- 12 kg (26.5 lbs) on J3 casting
- 2009 mm (79.1 in.) reach

#### ARC Mate® R2000-165F

- 165 kg (360 lbs.) wrist loading capacity
- 2660 mm (104 in.) reach

#### ARC Mate® M-710iC/20L

- 20 kg (44 lbs.) wrist loading capacity
- 3110 mm (122 in.) reach

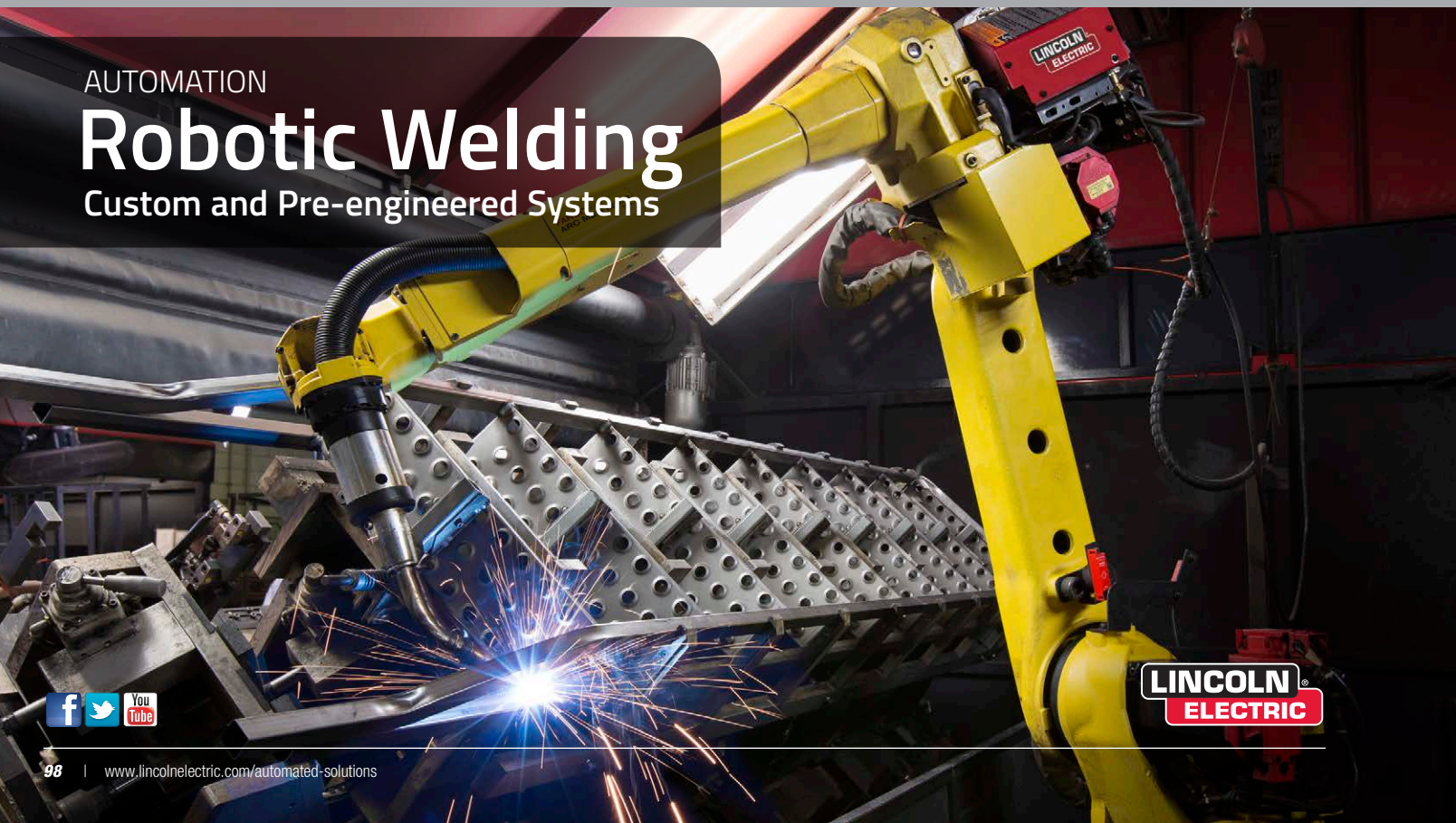
### Complete Single Source Automation Solutions

- Welding applications evaluation
- Robot feasibility testing
- Sample part welding
- Computer robot simulations
- Return on investment calculations
- Complete system design and build
- Pre-engineered systems
- 24-hour hotline assistance
- Operator training
- Robot repair/rebuild
- In-the-field service support
- In-plant start-up assistance
- Emergency welder/robot part delivery
- Long-term preventative maintenance programs

AUTOMATION

# Robotic Welding

## Custom and Pre-engineered Systems



# Power Wave® R350

## Compact Multi-Process Robotic Power Source

The Power Wave® R350, with built-in wire feeder control, is especially designed for use in robotic welding applications. It provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs – all in a compact, rugged case.

- **Built-In Feeder Control** – Standard internal control for compatible wire feeders, allowing the user to modify settings at the robot pendant.
- **PowerConnect™ Technology (patent pending)** – Automatically adjusts to input power while maintaining a constant welding output throughout the entire input voltage range.
- **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Auxiliary Power Surge Blocker™ Technology (patent pending)** – Welding performance is not compromised by simultaneous use of grinders and other devices requiring high starting current (60A or more peak surge current) using the standard 115V (10A) AC duplex auxiliary power receptacle.
- **Compact and Durable Case** – IP23 rated to withstand harsh environments.
- **Standard Ethernet** – Allows easy software upgrades through powerwavesoftware.com.



Shown:  
Power Wave® R350 Power Source

### Processes

- Stick
- DC TIG
- Pulsed DC TIG
- MIG
- Pulsed MIG
- Flux-Cored

Output Input

### Recommended Accessories

- K1785-25 14-pin to 14-pin Control Cable (Heavy Duty)
- K2827-1 DeviceNet™ Kit
- K2902-1 Power Wave® STT® Module
- *More accessories at end of section*

### Wire Feeders

- K3002-1 AutoDrive® 4R100
- K2685-1 AutoDrive® 4R220

### Literature

E10.13



www.lincolnelectric.com/green

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® R350	K3022-1	208/230/380-415/460/575/1/3/50/60	GMAW: 350A/31.5V/40% <sup>(2)</sup> GMAW: 300A/29V/100% SMAW: 325A/33V/40% <sup>(2)</sup> SMAW: 250A/30V/100% GTAW-DC: 350A/24V/40% GTAW-DC: 300A/22V/100	3-Ph/40% Duty Cycle: 37/21/18/15 3-Ph/100% Duty Cycle: 31/28/15/14/11 1-Ph/40% Duty Cycle: 60 <sup>(1)</sup> /67 <sup>(2)</sup> /NA/NA/NA 1-Ph/100% Duty Cycle: 60/53/NA/NA/NA	5-350A	20.4 x 14.0 x 24.8 (518 x 356 x 630)	85 (38.6)

(1) On 208 Volt inputs, the maximum output is limited to 300 amps.

(2) On 230 Volt/1-Phase inputs, the peak rating is at a duty cycle of 30%, except for GTAW processes.

# Power Wave® i400

## Intelligent Robotic Solution

The Power Wave® i400 delivers Lincoln Electric exclusive technologies and welding processes rolled into one highly efficient inverter power source.

- **Flexible Design** – Designed for simple, seamless integration with the FANUC® Robotics R-30iB Controller, or use as a separated configuration to meet your weld cell requirements.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **High Performance Digital Communications** – The Power Wave® i400 can communicate via traditional ArcLink® over a CAN-based network or via ArcLink® XT over an industrial Ethernet connection.
- **Best in Class Power** – 5-420 amps output delivers the power you need for a wide range of processes and materials, with no derating for pulse waveforms.
- **Ready to Perform** – Auxiliary outlet offers flexibility to add fume extraction, water cooler, computer or other accessories quickly and easily.



Shown:  
Power Wave® i400 Power Source



www.lincolnelectric.com/green



### Processes

- TIG (Lift Start Only)
- MIG
- Pulsed-MIG
- Flux-Cored
- Metal-Cored

Output Input

### Recommended Accessories

- K1785-25 14-pin to 14-pin Control Cable
- K2670-1 CE Filter Kit
- K2677-2 Integration Kit
- *More accessories at end of section*

### Wire Feeders

- K2685-1 AutoDrive® 4R220
- K3002-1 AutoDrive® 4R100
- K1780-2 Power Feed® 10R

### Literature

E10.11

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® i400	K2669-1	200-208/230/380-415/460/575/3/50/60  (380-415/3/50/60 with CE Filter Kit installed)	350A/31.5V/100% 400A/34V/60% 420A/35V/40%	40/37/21/18/15A 50/45/26/23/18A 54/49/28/25/20A	5-420A 10-37V	22.7 x 24.4 x 21.5 (577 x 620 x 546)	209 (95)

# Power Wave® 455M Robotic & 455M/STT® Robotic

## High Performance Robotic and Hard Automation Inverter Power Sources



These digitally-controlled inverter-based welding power sources are specifically intended for robotic and hard automation applications while retaining semiautomatic welding capabilities.

Select the Power Wave® 455M/STT® Robotic model with Lincoln's STT® (Surface Tension Transfer®) process for applications in which precise heat input control, minimal distortion, reduced spatter and low fumes are essential.

- Choose from over 60 standard welding waveform programs.
- Utilizes ArcLink® – the leading digital communication protocol for welding, making it the best choice for seamless, time critical integration to the power source and networked equipment.
- Software-based controls can be upgraded as new features become available. Go to [www.PowerWaveSoftware.com](http://www.PowerWaveSoftware.com) for the latest software release.
- CheckPoint™ and Production Monitoring™ 2.2 – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- High efficiency operation – These inverter models operate at a high efficiency (88-90%) with a 95% minimum power factor (at rated output).



Shown: K2263-1 Power Wave® 455M/STT® Robotic

### Processes

- MIG
- Pulsed
- MIG-STT® (K2263-1 only)
- Flux-Cored
- Metal-Cored

Output Input

### Recommended Accessories

- K2207-2 Ethernet/DeviceNet™ Interface Module
- K1570-1 Dual Cylinder Platform Undercarriage
- K1813-1 Cool Arc® 40 115/1/50/60
- More accessories at end of section

### Wire Feeders

- K2685-1 AutoDrive® 4R220
- K3002-1 AutoDrive® 4R100
- K1780-2 Power Feed® 10R

### Literature

E10.90

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® 455M Robotic	K2262-1	208/230/460/575/3/50/60	60Hz: 450A/38V/100%	60Hz: 58/53/25/22A	5-570A	26.1 x 19.9 x 32.9 (663 x 505 x 835)	286 (130)
Power Wave® 455M/STT® Robotic	K2263-1		570A/43V/60%	82/78/37/31A			293 (133)
			50Hz: 400A/36V/100%	50Hz: 49/45/23/18A			
			500A/40V/60%	67/61/31/25A			

# AutoDrive® 19 and AutoDrive® 19 Tandem



The AutoDrive® 19 module relays wire feed commands from an appropriate non-robotic Power Wave® power source to any AutoDrive® Series robotic wire drive to enable automated welding operations.

The AutoDrive® 19 Tandem module relays wire feed commands from an appropriate Power Wave® power source to any AutoDrive® Series robotic wire drive for automated tandem welding operations. Add two AutoDrive® 19 Tandem modules to access waveform modes specifically designed for Synchronized Tandem MIG® multi-arc applications.



Shown: K3004-1 AutoDrive® 19

Shown: K3171-1 AutoDrive® 19 Tandem

### Processes

- MIG
- Pulsed MIG
- Surface Tension Transfer® (STT®)

Output Input

### Wire Feeders

AutoDrive® 4R100, AutoDrive® 4R220, Power Feed® 10R

### Literature

TE12.003 (AutoDrive® 19 Tandem)

Product Name	Product Number	Input Power Volts / Amps	Rated Output Current / Duty Cycle	H x W x D inches (mm)	Net Weight lbs. (kg)
AutoDrive® 19	K3004-1	40 VDC / 1.0A	N/A	8.8 x 10.4 x 3.1 (224 x 264 x 80)	7 (3.2)
AutoDrive® 19 Tandem	K3171-1				

# Power Wave® R500

## Compact Multi-Process Robotic Power Source

The Power Wave® R500, with built-in wire feeder control, is especially designed for use in robotic welding applications. It provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs – all in a compact, rugged case.

- **Built-In Feeder Control** – Standard internal control for compatible wire feeders, allowing the user to modify settings at the robot pendant.
- **PowerConnect™ Technology (patent pending)** – Automatically adjusts to input power while maintaining a constant welding output throughout the entire input voltage range.
- **Tribrid™ Power Module** – Exceptional welding performance with high power factor and efficiency.
- **CheckPoint™ and Production Monitoring™ 2.2** – Use your server or our cloud-based server to track equipment usage, store weld data, configure fault limits and more.
- **Auxiliary Power Surge Blocker™ Technology (patent pending)** – Welding performance is not compromised by simultaneous use of grinders and other devices requiring high starting current (60A or more peak surge current) using the standard 115V (10A) AC duplex auxiliary power receptacle.
- **Compact and Durable Case** – IP23 rated to withstand harsh environments.
- **Standard Ethernet** – Allows easy software upgrades through powerwavesoftware.com.



Shown: K3169-1 Power Wave® R500



### Processes

- Stick
- DC TIG
- Pulsed DC TIG
- MIG
- Pulsed MIG
- Flux-Cored

Output Input

### Recommended Accessories

- K2902-1 Power Wave® STT® Module
- K2827-1 DeviceNet™ Kit
- K940-25 Sense Lead Kit, 25 ft. (7.6 m)
- K940-25 Sense Lead Kit, 75 ft. (23 m)
- *More accessories at end of section*

### Wire Feeders

- K2685-1 AutoDrive® 4R220
- K3002-1 AutoDrive® 4R100

### Literature

E10.14

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range <sup>(1)</sup>	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® R500	K3169-1	208/230/380-415/460/575/3/50/60	GMAW: 550A/41.5V/40% GMAW: 450A/36.5V/100% SMAW: 550A/42V/40% SMAW: 450A/38V/100% GTAW-DC: 550A/32V/40% GTAW-DC: 450A/28V/100%	3-Ph/40% Duty Cycle: 80/73/41/37/29A  3-Ph/100% Duty Cycle: 60/54/30/27/21A	5-550A	22.5 x 14 x 24.8 (571 x 355 x 630)	150 (68)

<sup>(1)</sup>On 208 Volt inputs, the maximum output is limited to 300 amps.

## Regional Service & Support

### UNITED STATES

Cleveland, OH  
Ph: (888) 935-3878

Nashville, TN  
Ph: (615) 291-9927

### CANADA

Mississauga, Ontario  
Ph: (905) 565-5600

### MEXICO

Industrial Vallejo,  
Mexico City DF  
Ph: +52 (55) 5063 0330

Lincoln Electric's welding and automation experts are always as close as your phone – ready to provide fast, professional service and support.

Offering a variety of options:

- Preventative maintenance
- Repair services
- Upgrade services
- Redeployment capabilities

Covered equipment includes:

- Power Wave® Power Sources
- AutoDrive® Wire Drives
- Power Feed® 10R



Automation Solutions



# AutoDrive® 4R100 & 4R220

## Industry Leading Design



The AutoDrive® 4R100 and 4R220 are powerful yet compact 4-roll wire drives for robotic and hard automation applications. Both models feature the MAXTRAC® Wire Drive System. Select the 4R220 for feeding larger diameter wires, pulling wire through long conduits and in applications requiring extra ruggedness.

- **Integrated Design** – Designed to “nest” in the upper arm of the FANUC® Robotics ARC Mate® iC family of arms.
- **Best in Class Torque** – Results in faster acceleration and reliably pulls wire through conduit.
- **Welding Results** – High resolution tachometer for accurate wire feed speed control.
- **Durable and Rugged** – Patented MAXTRAC® wire drive is precision cast aluminum designed to provide reliable feed force.
- **Ease of Use** – Unlike competitive models, no tools are required for drive roll, wire guide or pressure arm adjustment.
- **High Performance** – Brass-to-brass gun connections provide more reliable electrical connectivity and more efficient energy transfer.
- **Optimized Robotic Solution** – Compact, lighter weight package maximizes robot acceleration performance and throughput.



Shown:  
K2685-1 AutoDrive® 4R220 (mounted on FANUC® arm)

### Processes

- MIG
- Pulsed MIG
- MIG-STT®
- Flux-Cored
- Metal-Cored

Output

Input

### Recommended Accessories

- KP1505-035S Four-Roll Drive & Split Wire Guide Kit (Solid Steel Wire)
- KP1505-045S Four-Roll Drive & Split Wire Guide Kit (Solid Steel Wire)
- *More accessories at end of section*

### Literature

E10.12

Product Name	Product Number	Wire Feed Speed Range in/min (m/min)	Wire Size Range – Solid inches (mm)	Wire Size Range – Cored inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
AutoDrive® 4R100	K3002-1	50-800 (1.3-20.3)	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	8.4 x 7.5 x 8.1 (213 x 191 x 231)	13.2 (6.0)
AutoDrive® 4R220	K2685-1	30-1200 (0.8-30.5)	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	10.43 x 10.07 x 9.92 (265 x 256 x 252)	20.9 (9.5)

# Power Feed® 10R

## Compact Wire Drive System for Automation



The Power Feed® 10R is a high performance, digitally controlled wire drive for modular, multi-process welding system. It is specifically designed to mount to a robot arm or for use in hard automation applications.

- **Digital Control** – Yields industry leading performance.
- **Fast Braking** – Goes from maximum speed to zero in milliseconds, minimizing the chance of wire sticking in the puddle.
- **Two Speed Settings** – Select low or high speed gears for a wide wire feed speed range.
- **Split Wire Guides** – Trouble-free feeding and fast, tool-less wire installation, changeover and maintenance.
- **Tachometer Feedback** – Provides calibration and precise control of wire feed speed.
- **Brass-to-Brass Connections** – Enhanced electrical connectivity between torch and feeder results in improved arc performance.
- **Drive Roll Tension Gauge** – Easy-to-read for accurate tension setting.
- **Self-loading Wire Capability** – Easy set-up.
- **Modular Construction** – Simplifies drive maintenance.



Shown:  
K1780-2 Power Feed® 10R (mounted on FANUC® arm)

### Processes

- MIG
- Pulsed
- MIG-STT®
- Flux-Cored
- Metal-Cored

Output

Input

### Recommended Accessories

- K1785-25 Control Cable, Heavy Duty, 25 ft.
- K590-7 Water Connection Kit
- K1733-1 Wire Straightener
- K1546-1 Incoming Conduit Bushings, .025 in.-1/16 in.
- K1546-2 Incoming Conduit Bushings, 1/16 in.-3/32 in.
- *More accessories at end of section*

### Literature

E10.15

Product Name	Product Number	Wire Feed Speed Range in/min (m/min)	Wire Size Range – Solid inches (mm)	Wire Size Range – Cored inches (mm)	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Feed® 10R	K1780-2	50-800 (1.3-20.3) 75-1200 (2.0-30.5)	.025-3/32 (0.6-2.4) .025-1/16 (0.6-1.6)	.035-.120 (0.9-3.0) .035-5/64 (0.9-2.0)	8.9 x 12.0 x 9.9 (226 x 306 x 251)	22.4 (10.2)

# Laser Systems



## Flex Lase® Systems

The Flex Lase® system for laser processing is an extremely flexible tool that can address a variety of needs – from laser welding, cutting, brazing and cladding to laser heat treating, marking, etching or paint and coating removal.

- Flex Lase Universal Laser Processing Cell
- Flex Lase Pro Scanner-Based Laser Processing System
- Flex Cut I and II Laser Cutting Systems
- Flexweld II Multi-Axis Laser Blank Welding System
- LW-B Series Linear Laser Blank Welding Systems
- Gen I, III and IV Single and Double-Sided Edge Prep Systems for Tailored Blank Welding
- Laser Hot Wire and Hybrid Laser Welding and Cladding Solutions

# Advanced Systems

Lincoln Electric takes pride in the ability to offer a variety of advanced, fully automated system solutions. From robotic integration to fixturing and tooling, Lincoln Electric has everything required for a complete integrated system solution.

## Robotic Integration

Lincoln Electric is a supplier of advanced robotic systems that can be fully or semi-automated for virtually any application – ranging from MIG, TIG or spot welding – to vision-based systems for material handling, machine tending, palletizing, dispensing and more.

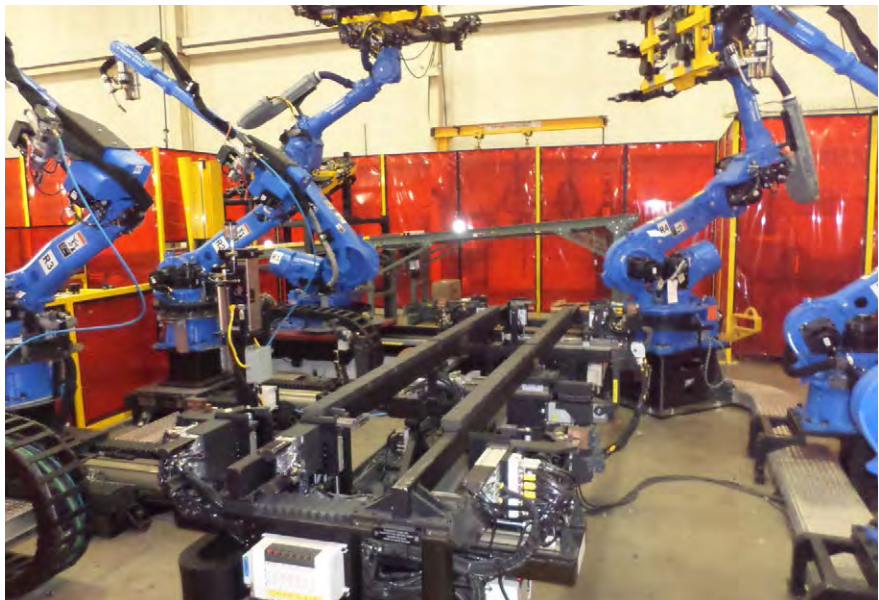
Whether your plan is to use new or re-deployed robots, or any combination, Lincoln Electric can integrate the design and bring your project to a safe, efficient and affordable conclusion.



## Line Engineering and Builds

The Advanced Systems group can provide two important value-added capabilities to any complex automation project. First, we can provide extensive 3D modeling, using CAD translation from customer supplied part geometry data. Finite Element Analysis is also used to optimize line engineering designs, identify and resolve time and resource issues and reduce lead times. The use of these programs allows our team and yours to visualize and evaluate automation and tooling early in an 'off-line' mode. Benefits include reduced de-bug analysis during the system build and validation of cycle time projections for complex systems.

We also have a complete, modern machine shop and a dedicated tool building group, capable of producing precision-machined components and subassemblies to specifications. This capability eliminates the need to contract with third party machining houses to build line components, reducing opportunity for miscommunication as well as final system costs. The result is optimized system performance leading to high part yield and quality.





# Advanced Systems

Lincoln Electric takes pride in the ability to offer a variety of advanced, fully automated system solutions. From advanced laser technology to fixturing and tooling, Lincoln Electric has everything needed for a complete system solution.

## Fixturing and Tooling Solutions

We provide complex, automated Tennessee Rand tooling for meeting all production and tolerance requirements. With extensive, in-house manufacturing capabilities, we provide tooling solutions for the most complex part designs to simple and manually clamped fixtures.

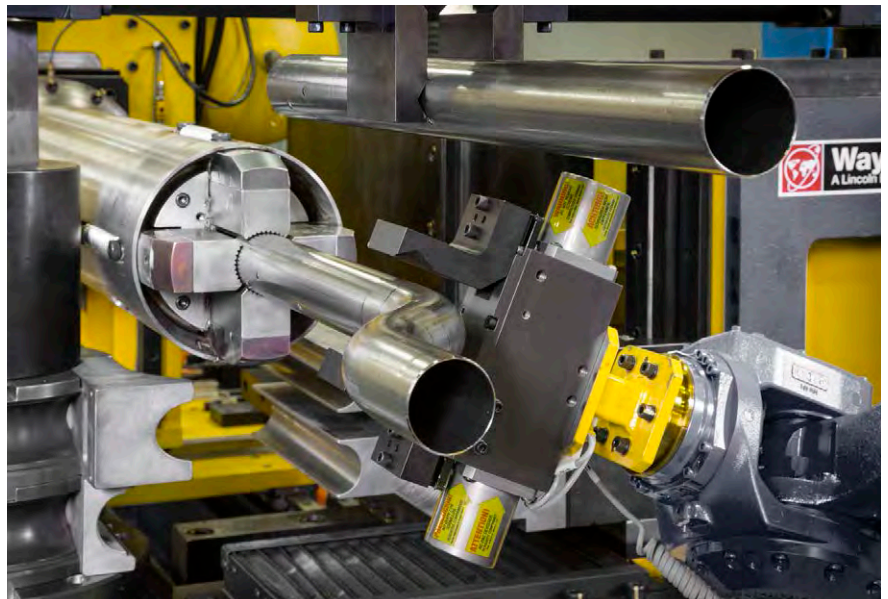
- MIG, TIG, Spot, Stud and Nut Welding Fixtures
- Laser Cutting and Welding Applications
- Specialized Systems for Assembly and Inspection
- Re-tooling of Existing Systems for Model or Product Changes
- Dimensional Gauges
- Material Handling Grippers



## Tube Bending and Fabricating Systems

Flexible tube bending and fabricating solutions range from fully automated, high volume, quick change, CNC-based Flexbending® systems to semi-automated or manually tended bending systems. Stand-alone workstations and cells can be customized to fit any system.

- Flexbending Systems
- Fully Integrated Material Handling Systems – De-bundling, Weld Seam Inspection, Gantry or Robotic Automation, Controls and QA/QC Inspection Stations
- Dedicated Tube Bending Systems
- System Upgrades, Updates and Reconfiguration for Model or Product Change and Productivity Improvement



# Advanced Systems

Lincoln Electric takes pride in the ability to offer a variety of advanced, fully automated system solutions. From advanced laser technology to fixturing and tooling, Lincoln Electric has everything needed for a complete system solution.

## Press Automation Systems

Servo based transfer systems are modular, fully programmable and can be added to any press design – new or existing. Cost efficient transfer die operation is enabled while maintaining the user's ability to run progressive, blanking or manually loaded dies. Fully integrated solutions can include stackers, de-stackers, press-to-press automation, die transfer and more.

- Through-the-window Design Servo Transfers
- Front and Back Mounted Servo Transfers
- Cross-bar Servo Transfers, Press Bed or Floor Mounted Systems
- Between Press or in Press Servo Transfers and Automation
- De-stacking, Stacking and Racking Systems



## Pre and Post Hydroforming and Structural Frame Automation Systems

Tubular hydroforming or conventionally designed structural frame components require an integrated approach – de-bundling, weld seam detection, pre-bending and pre and post hydroforming, shearing, laser cutting, punching, marking, cleaning, inspection and racking. Automation packages, whether for new or retro-fit/upgrade applications can include overall system control and diagnostics, along with the integration of existing or redeployed process stations.

- Pre-Hydroforming Automation, Including CNC Benders
- Post Hydroforming Processing Systems and Stand-Alone Work Cells
- End of Line Inspection, Marking, Racking and Parts Handling
- Complete System Integration Services
- Vintage System Reconfiguration and Relocation Services



# Wire Delivery

**Lincoln Electric has an extensive line of wire delivery products for dispensing and transporting welding wire from a bulk package to the wire feeder for robotic welding cell support.**

**The offering also includes products for maintaining robotic welding torches, handling devices to move bulk wire packages around the shop, and miscellaneous tools.**



## Hoods and Accessories for Drums and Boxes

- Constructed of tough polyethylene for long shop life.
- Dual windows provide easy access for operator.
- Available for round, square and octagon-shaped packages.



## Drum Cover

- Constructed of tough fire resistant PVC material.
- Provides effective protection of fiber or cardboard packaging located near the weld cell.
- Available for round, square and octagon-shaped bulk wire packages.



## Wire Level Gauge

- Detects amount of wire left in drum or box.
- Wire level shown visually with color and percentage scale.
- Useable with 500 lb. (227 kg) or 1,000 lb. (453 kg) package.



## Infinity Pak® Dispensing System for Bulk Boxes

- Reduces downtime for wire changeover.
- Designed for use with optional Wire Pilot® Feed Assist and Wire Guide Modules.
- Easy to use process joins the end wire from an empty drum with start wire of the next full drum.



## Dispensing Equipment for Bulk Reels

- Universal base plate design fits wood or plastic reels with 1-5/16 inch (33 mm) or 5 inch (127 mm) arbor holes.
- Twin locking cams secure base plate to reel for stability.
- Smooth acceleration and deceleration of feed arm.



## Motorized Dispensing System for Stems and Wood Reels

- Motorized wire dispensing system designed for larger wire sizes.
- Helps to eliminate common bulk wire challenges such as wire flip, flux-cored wire splitting, excessive tip wear, pulsating and burn back.
- Compatible with bulk stems weighing up to 2,200 lbs. (1,000 kg).



# Wire Delivery

## Wire Feed Assist

- Reduces pulling force required from feed motor.
- Enables longer conduit runs.
- Adjustable torque setting prevents “bird nesting”.



## Weld Wire Conduit

- Choose from polymer or extra flexible type.
- Available in pre-cut lengths up to 30 ft. (9.1 m) or in bulk.
- Self-threading or compression style connectors available.



## Conduit Connectors

- Variety of types and sizes available.
- Rounded internal shoulders for smooth wire feeding.
- Union kits and bulkhead connector kits available.



## Conduit Hangers, Clamps and Sleeves

- Hanger prevents excessive sag in conduit run.
- Sleeves protect conduit from operating environment.
- Use clamps to secure conduit to existing structures.



## Wire Straighteners

- Straighten or recast all types of wire.
- Lightweight, yet rugged.
- Equipped with locating calibration on face of unit and fine adjustment scale on tension knob.



## Power REAM® Torch Maintenance System

- Removes and reduces spatter accumulation for improved welding performance.
- Simple pushbutton “No Error” programming technique.
- Only reamer to offer an automatic retry feature.



## Drum, Reel and Box Handling Equipment

- Dollies available for drums or boxes.
- Staging carts available for drums or reels.
- Variety of lifters for chimeless and chimed drums.



## Maintenance Equipment

- Draw Gauge accurately measures the draw weight of welding wire pulling through conduit.
- Nozzle cleaning tool removes spatter; choice of five sizes.
- Conduit Cutter trims all diameters of polymer conduit with ease.



## Accessories

For complete descriptions go to page 133.

### Robotic Welding Systems

K2391-1 Power REAM® Torch Maintenance Center

#### General

KP2435-1 Reaming Bit, 1/2 in. (12.7 mm) with Washer  
 KP2435-3 Reaming Bit, 5/8 in. (15.9 mm) with Washer  
 KP2435-5 Reaming Bit, 3/4 in. (19.1 mm) with Washer  
 KP2457-1 Anti-Spatter Fluid, 1 gallon (3.8 L)  
 K2433-1 Power REAM® Robotic Cable, 20 ft. (6.1 m)  
 K2434-1 Remote Power REAM® Reservoir Kit

### Power Wave® R350

#### General

K2827-2 DeviceNet™ Kit  
 K940-25 Sense Lead Kit, 25 ft. (7.6 m)  
 K940-75 Sense Lead Kit, 75 ft. (22.9 m)  
 K2902-1 Power Wave® STT® Module  
 — Weld Fume Control System

#### Wire Feeder

K2685-1 AutoDrive® 4R220  
 K3002-1 AutoDrive® 4R100

### Power Wave® i400

#### General

K2673-1 Inverter Chassis  
 K2677-2 Integration Kit  
 K2670-1 CE Filter  
 K2780-1 DeviceNet Kit  
 K940-25 Sense Lead Kit, 25 ft. (7.6 m)  
 K940-75 Sense Lead Kit, 75 ft. (22.9 m)  
 K1785-16 Control Cable, 14-pin to 14-pin, 16 ft. (4.9 m)  
 K1785-25 Control Cable, 14-pin to 14-pin, 25 ft. (7.6 m)  
 K1785-50 Control Cable, 14-pin to 14-pin, 50 ft. (15.2 m)  
 K1785-100 Control Cable, 14-pin to 14-pin, 100 ft. (30.5 m)  
 K1813-1 Cool Arc® 40 Water Cooler 115/1/50/60  
 K3004-1 AutoDrive® 19 Controllor  
 K3171-1 AutoDrive® 19 Tandem Controllor  
 — Weld Fume Control System

#### Wire Feeder

K2685-1 AutoDrive® 4R220  
 K3002-1 AutoDrive® 4R100  
 K1780-2 Power Feed® 10R

### Power Wave® 455M Robotic & 455M/STT® Robotic

#### General

K2206-1 DeviceNet™ Interface Module  
 K2207-2 Ethernet/DeviceNet™ Interface Module  
 K1570-1 Dual Cylinder Platform Undercarriage  
 K1813-1 Cool Arc® 40 Water Cooler 115/1/50/60  
 — Weld Fume Control System

#### Wire Feeder

K2685-1 AutoDrive® 4R220  
 K3002-1 AutoDrive® 4R100  
 K1780-2 Power Feed® 10R

### Power Wave® R500

#### General

K2827-2 DeviceNet Kit™  
 K3001-2 User Interface Kit  
 K940-25 Sense Lead Kit, 25 ft. (7.6 m)  
 K940-75 Sense Lead Kit, 75 ft. (22.9 m)  
 K3086-1 Cool Arc® 55  
 — Weld Fume Control System

#### Wire Feeder

K3002-1 AutoDrive® 4R100  
 K2685-1 AutoDrive® 4R220  
 K2902-1 Power Wave® STT® Module

### Power Wave® 655R

#### General

K1570-1 Dual Cylinder Platform Undercarriage  
 K2681-1 22-pin to 14-pin Adapter Cable Assembly  
 K1813-1 Cool Arc® 40 Water Cooler 115/1/50/60  
 — Weld Fume Control System

#### Wire Feeder

K2685-1 AutoDrive® 4R220  
 K3002-1 AutoDrive® 4R100  
 K1780-2 Power Feed® 10R

### AutoDrive® 4R100 and 4R220

#### Drive Roll and Wire Guide Kits

See chart in the "Accessories" section.

#### General

*Wire Drive Control Cable (14-pin to 14-pin; for use with FANUC® arms having integrated cable)*

K1785-4 Control Cable (Heavy Duty), 4 ft. (1.2 m)  
 K1785-16 Control Cable (Heavy Duty), 16 ft. (4.9 m)  
 K1785-25 Control Cable (Heavy Duty), 25 ft. (7.6 m)  
 K1785-50 Control Cable, 14-pin, 50 ft. (15.2 m)  
 K1785-100 Control Cable, 14-pin, 100 ft. (30.5 m)

*Wire Drive Control Cable (14-pin to 14-pin; for external dress of FANUC® arm or hard automation)*

K2709-25 Wire Drive Cable, 25 ft. (7.6 m)  
 K2709-50 Wire Drive Cable, 50 ft. (15.2 m)  
 K1733-1 Wire Straightener  
 K1546-1 Incoming Bushing for Lincoln Conduit,

.025-1/16 in. (.64-1.6 mm) wire  
 K1546-2 Incoming Bushing for Lincoln Conduit,  
 1/16-1/8 in. (1.6-3.2 mm) wire

K590-7 Water Connection Kit

#### Power Source

— Power Wave® 455M Robotic  
 — Power Wave® 455M/STT® Robotic  
 — Power Wave® 655R  
 — Power Wave® i400  
 — Power Wave® R350  
 — Power Wave® R500

### Power Feed® 10R

#### Drive Roll and Wire Guide Kits

See chart in the "Accessories" section.

#### General

K590-7 Water Connection Kit  
 K1785-2 Robotic Cable Adapter, 18 in. (.46 m)  
 K1785-16 Robotic Cable Adapter, 14-pin to 14-pin, 16 ft. (4.9 m)  
 K1785-25 Robotic Cable Adapter, 14-pin to 14-pin, 25 ft. (7.6 m)  
 K1785-50 Robotic Cable Adapter, 14-pin to 14-pin, 50 ft. (15.2 m)  
 K1785-100 Robotic Cable Adapter, 14-pin to 14-pin, 100 ft. (30.5 m)  
 K1795-10 Control Cable, 10 ft. (3.0 m)  
 K1795-25 Control Cable, 25 ft. (7.6 m)  
 K1795-50 Control Cable, 50 ft. (15.2 m)  
 K1795-100 Control Cable, 100 ft. (30.5 m)  
 K1804-1 Robotic Cable Adapter,  
 22-pin to 14-pin, 10 ft. (3.0 m)  
 K1804-2 Robotic Cable Adapter,  
 22-pin to 14-pin, 18 in. (.46 m)  
 K1805-1 Robotic Cable Adapter,  
 14-pin to 22-pin, 18 in. (.46 m)  
 — Weld Fume Control System

#### Power Source

— Power Wave® 455M Robotic  
 — Power Wave® 455M/STT® Robotic  
 — Power Wave® 655R  
 — Power Wave® i400

# MECHANIZED AUTOMATION

## Mechanized Automation

- Encompasses Fixed & Programmable Automation
- Precision Orbital Welding Systems
- Column and Boom Positioners
- Automated Seam Tracking and Motorized Slide Systems



### Components that create the APEX™ 2100 Orbital Welding System:

#### APEX™ 2100 Orbital Controller and Pendant



#### HELIX™ T55 Weld Head



#### HELIX™ Track Ring



#### Cool Arc® 55 Water Cooler



#### Power Wave® S500



#### APEX™ Cabinet



APEX™ 2100 ORBITAL  
WELDING SYSTEM

### Seam Tracker™ Systems



### Motorized Slide Systems



HORIZONTAL / VERTICAL  
AXIS SYSTEMS

# APEX™ 2100 Orbital Controller

Lincoln Electric's APEX™ 2100 Orbital Controller is a fully integrated and synchronized system for controlling mechanical oscillation, torch height control (AVC), and wire and gas delivery. With the controller, operators have immediate access to monitor, adjust and control weld parameters throughout the welding process. The system and pendant capture and store all critical weld information and data in real-time accuracy.

- **Simple menus, large control buttons,** and LCD screen display for ease of operation and use.
- **Ergonomic pendant** is lightweight and balanced for one-handed operation.
- **Durable system design** to sustain operator and environmental abuse.
- **Up to 90 welding programs** can be stored on the controller or a USB for effortless operator selection and system set up.
- **Operators can quickly and easily access and replace** PC boards while in the field reducing service time and maintenance costs.
- **USB port** for quick transfer of data and information from system-to-system or system-to-PC for future analytical and statistical reporting.



Shown:  
K52073-1 APEX™ 2100 Controller  
with K52074-1 APEX™ 2100 Pendant

Product Name	Product Number	Input Power Voltage/Phase/Hz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	H x W x D inches (mm)	Net Weight lbs. (kg)
APEX™ 2100 Controller	K52073-1	115/1/50/60	N/A	50/60 Hz: 5.0A @115V	34.5 x 9.5 x 26.25 (876.3 x 241.3 x 668)	78 (35.4)
APEX™ 2100 Pendant	K52074-1	N/A	N/A	1.0A	11.5 x 8 x 3.75 (292.1 x 203.2 x 96.5)	6.0 (2.7) (with cable)
APEX™ Cabinet	K52075-1	N/A	N/A	N/A	49 x 27.5 x 29 (1244 x 699 x 739.6)	175 (79.4) (with cable)

# HELIX™ T55 Weld Head and Track Ring

Lincoln Electric's HELIX™ T55 weld head and patent-pending gear-driven track ring system are designed to work as a complete solution for orbital TIG welding. Designed to be lightweight and durable, the HELIX™ T55 is portable, and easy to install and position on pipes. Engineered for diverse applications in demanding environments, the weld head and track ring are easy to operate, maintain and service.

- **Heavy-duty construction** and robust design of the track ring and tractor for reliable operation.
- **Spring-loaded travel mechanism** drives over debris for smooth, uninterrupted travel.
- **Rigid design** provides stable, constant travel of the weld head on the track.
- **One clamp knob** used to secure tractor to the track ring.
- **Quick release travel clutch** is easily disengaged for rapid track relocation of the weld head around the pipe.
- **One easy step** to feed the wire through the exit guide to the torch. No disassembly required.
- **Countless track ring diameters** and shoe extensions.
- **Mounting shoes** contain spring-loaded cushions to allow for work surface heat expansion, eliminating bending and ring distortion.



Shown:  
K52002-1  
HELIX™ T55 Weld Head  
with Track Ring

Product Name	Product Number	Input Voltage	Travel Speed ipm (m/min)	Wire Feed Speed ipm (m/min)	Net Weight lbs. (kg)
HELIX™ T55 Weld Head	K52002-1	25V DC	1-20	0.1-130	57 (25.9)

Product Name	Product Number	Size Range inches (mm)	Pieces/Shoes	Increments inches (mm)
Track Ring	K52000-XX*	8-22 (203.2-559)	2 / 6	2 (51)
		24 (610)	2 / 8	2 (51)
		28-32 (711.2-813)	2 / 8	4 (102)
		36-64 (914.4-1626)	4 / 12	4 (102)

(\* -XX = pipe diameter)

## Processes

- TIG

Input  

## Applications

- Nuclear Power Facilities
- Energy Generation
- Petroleum Processing
- Aerospace

## Literature

E9.600

## Processes

- TIG

Input 

## Recommended Accessories

- K52060-05 Shoe Extensions, 0.5 inch (13 mm)
- K52060-10 Shoe Extensions, 1 inch (25.4 mm)
- K52060-20 Shoe Extensions, 2 inch (50.8 mm)
- K52060-30 Shoe Extensions, 3 inch (76.2 mm)
- KP52081-1 Single Replacement Shoe

## Applications

- Nuclear Power Facilities
- Energy Generation
- Petroleum Processing
- Aerospace

## Literature

E9.610

# Seam Tracker™ Systems

## Precise Automated Seam Tracking

The Seam Tracker™ Systems deliver precise automated weld joint tracking for submerged arc, GMAW and FCAW arc welding processes. Ideal for repetitive welding applications, these systems are recommended over manual and semiautomatic welding to improve quality and consistency while reducing operational costs. A range of standard systems or customized solutions are available to meet the requirements of many tough production environments.

- **Easy to Set Up** – Often installed and operating in one day.
- **Easy to Operate** – With a welding background, most operators can quickly learn to configure and operate.
- **Simple System Selection** – (Pre-configured systems are available):
  - Select desired level of automation – standard or APC
  - Choose a cross slide assembly based on load capacity required to handle the weight of the welding drive components
  - Determine the travel stroke length of each axis necessary to complete the weld
  - Select the application-specific seam sensor tip
- **Advanced Programming Control (APC)** – Gain these additional capabilities with the APC:
  - Program the entire sequence of the weld cycle with position-based or time-based commands
  - Store up to 19 weld programs
- **Widespread Integration Capability** – Build a system around almost any welding power source, feeder and controller group.



Shown:  
K52008-1010  
ST250 Seam Tracker™ One-Pak®

### Processes

- Submerged Arc
- MIG
- Flux-Cored

### Input



### One-Pak® Package Includes

- Seam Tracker™ Control
  - Advanced Programming Control (K52021-1)
  - OR
  - Standard Control (K52020-1)
- Pendant
  - Advanced Programming Control (APC) Pendant with 10 ft. (3 m) Cable (K52023-1)
  - OR
  - Standard Pendant with 10 ft. (3 m) Cable (K52022-1)
- Sensor Cable
  - 4 ft. (1.2 m) for all systems (K52033-1)
- Drive Cable
  - 10 ft. (3 m) for CS250 and CS450 (K52030-1)
- Cross Slide Assembly (select 1 and stroke length)
  - CS40
  - CS250
  - CS450
- Seam Sensor Components
  - Seam Sensor Assembly (K52019-1)
  - Five Axis Probe Bracket (KP52026-1)
  - Weld Torch Mounting Kit (KP52027-1)
  - Sensor Insulator (KP52029-1)
  - Seam Sensor Tip (KP52028-1)

### APC Assemblies

- K52031-1 Cable Assembly Output Interface, 12 ft. (3.6 m)
- K52032-1 Cable Assembly Input Interface, 12 ft. (3.6 m)

### Cross Slide Assemblies

- K52013-0303 CS40  
3 x 3 inch (76 x 76 mm)
- K52013-0606 CS40  
6 x 6 inch (152 x 152 mm)
- K52014-0505 CS250  
5 x 5 inch (127 x 127 mm)
- K52014-1010 CS250  
10 x 10 inch (254 x 254 mm)
- K52015-0505 CS450  
5 x 5 inch (127 x 127 mm)
- K52015-1010 CS450  
10 x 10 inch (254 x 254 mm)

Custom lengths available.

### Literature

E9.501

One-Pak® Description inches (mm)	Product Number	
	Complete Standard Systems	Complete APC Systems
ST40 3 x 3 (76 x 76)	K52004-0303	K52005-0303
ST40 6 x 6 (152 x 152)	K52004-0606	K52005-0606
ST250 5 x 5 (127 x 127)	K52007-0505	K52008-0505
ST250 10 x 10 (254 x 254)	K52007-1010	K52008-1010
ST450 5 x 5 (127 x 127)	K52010-0505	K52011-0505
ST450 10 x 10 (254 x 254)	K52010-1010	K52011-1010

Product Name (Std. & APC)	Load Capacity lbs. (kg) @ inches (mm)	Std. Stroke Lengths inches (mm)	Min. Envelope inches (mm)	Tracking Accuracy inches (mm)	Std. System Weight lbs. (kg)	Travel Speed ipm (m/min)	Tracking Controls	Input Power Voltage/Phase/Hz
ST40	40 (18) @ 6 (152) from faceplate	3 x 3 (76 x 76)	3 x 3 (76 x 76) stroke = 12 (305) dia.	Within 0.005 (0.127)	79 (36)	24 (0.61) max	Automatic Control w/Seam Sensor or Manual Up/Down and Left/Right w/Pendant	120/230/1/50/60
		6 x 6 (152 x 152)			90 (41)			
ST250	250 (113) @ 12 (305) from faceplate	5 x 5 (127 x 127)	5 x 5 (127 x 127) stroke = 17 (432) dia.		105 (48)	32 (0.81) max		
		10 x 10 (254 x 254)			118 (54)			
ST450	450 (204) @ 24 (610) from faceplate	5 x 5 (127 x 127)	5 x 5 (127 x 127) stroke = 22.5 (572) dia.		162 (74)	17 (0.43) max		
		10 x 10 (254 x 254)			178 (81)			



# Motorized Slide Systems

## Manual Joint Positioning

The Motorized Slide System allows operators horizontal and vertical axis positioning for a submerged arc, GMAW and FCAW welding arc. Operators manually control movement using an intuitive joystick pendant. These systems are recommended for simple, repetitive welding applications to improve weld consistency and quality while reducing operational costs and operator fatigue. Standard or customized solutions are available for welding in a number of production environments.

- **Responsive Arc Positioning Control** – Less operator fatigue and error compared to hand crank-operated manual slides.
- **Easy Installation and Set Up** – Minimal fixturing required. Lowest cost entry to hard automation.
- **Easy to Operate** – Simple two axis joystick control.
- **Simple System Selection** – (Pre-configured systems are available)
  - Choose a cross slide assembly based on load capacity required to handle the weight of the welding drive components
  - Determine the travel stroke length of each axis necessary to complete the weld
- **Flexible Integration** – Incorporate with almost any welding power source, feeder and controller group.
- **High/Low Speed Switch** – Use high speed for application set up or switch to low speed with speed adjustment for production runs.



### Processes

- Submerged Arc
- MIG
- Flux-Cored

### Input



### One-Pak® Package Includes

- MS Control Unit (K52025-1)
- MS Control Pendant, 10 ft. (3 m) Cable (K52024-1)
- Drive Cable
  - 10 ft. (3 m) for CS250 & CS450 (K52030-1)
- Cross Slide Assembly (select 1 and length)
  - CS40
  - CS250
  - CS450

### Cross Slide Assemblies

- K52013-0303 CS40
  - 3 x 3 inch (76 x 76 mm)
- K52013-0606 CS40
  - 6 x 6 inch (152 x 152 mm)
- K52014-0505 CS250
  - 5 x 5 inch (127 x 127 mm)
- K52014-1010 CS250
  - 10 x 10 inch (254 x 254 mm)
- K52015-0505 CS450
  - 5 x 5 inch (127 x 127 mm)
- K52015-1010 CS450
  - 10 x 10 inch (254 x 254 mm)

### Options

- Kit easily converts the unit to a Seam Tracking™ System.
- System integrates with the Weld Oscillator.

Custom lengths available.

### Literature

E9.502

One-Pak® Description inches (mm)	Product Number Complete Motorized Slide Systems
MS40 3 x 3 (76 x 76)	K52006-0303
MS40 6 x 6 (152 x 152)	K52006-0606
MS250 5 x 5 (127 x 127)	K52009-0505
MS250 10 x 10 (254 x 254)	K52009-1010
MS450 5 x 5 (127 x 127)	K52012-0505
MS450 10 x 10 (254 x 254)	K52012-1010

Product Name (Std. & APC)	Load Capacity lbs. (kg) @ inches (mm)	Std. Stroke Lengths inches (mm)	Min. Envelope inches (mm)	Tracking Accuracy inches (mm)	Std. System Weight lbs. (kg)	Travel Speed ipm (m/min)	Tracking Controls	Input Power Voltage/Phase/Hertz
ST40	40 (18) @ 6 (152) from faceplate	3 x 3 (76 x 76)	3 x 3 (76 x 76) stroke = 12 (305) dia.	Within 0.005 (0.127)	79 (36)	24 (0.61) max	Manual Up/Down and Left/Right w/Pendant	120/230/1/50/60
		6 x 6 (152 x 152)			90 (41)			
ST250	250 (113) @ 12 (305) from faceplate	5 x 5 (127 x 127)	5 x 5 (127 x 127) stroke = 17 (432) dia.		105 (48)	32 (0.81) max		
		10 x 10 (254 x 254)			118 (54)			
ST450	450 (204) @ 24 (610) from faceplate	5 x 5 (127 x 127)	5 x 5 (127 x 127) stroke = 22.5 (572) dia.		162 (74)	17 (0.43) max		
		10 x 10 (254 x 254)			178 (81)			

## Weld Oscillator

Reliable, Programmable Weld Joint Weaving



### Process

- TIG
- MIG
- Submerged Arc

Input  

### Unit Includes

- Weld Oscillator Slide
- Control Unit
- Cables

### Slide Specifications

- 5 inch (12.7 mm) Stroke
- 40 lb. (18 kg) load capacity
- 1-axis slide

The Weld Oscillator System from Arc Products™ is an economical solution for automated MIG, and submerged arc welding. The Oscillator provides a side-to-side programmable weave for precise filling of a weld joint. Dwell times and excursion speeds can be controlled independently and customized for the application. The Oscillator can be easily added to an existing system and it integrates well with Seam Tracking and Motorized Slide Systems.

## AVC-5

Arc Voltage Control for Consistent Torch Height



### Process

- TIG
- Plasma Welding
- Plasma Transferred Arc

Input  

### Unit Includes

- Drive Unit
- Torch Bracket
- Control Unit
- Cable Assembly

### Drive Unit Options

- AVC-5 6 inch Drive
- C-AVC-5 1 inch Drive

The AVC-5 System from Arc Products™ utilizes a control and drive unit to maintain precise TIG and plasma arc length in automated systems. The drive compensates tungsten electrode erosion, keeping the weld zone and heat input consistent throughout the length of the weld. The system is easy to configure and integrates with a wide range of power supplies, torches, and positioners for assembling turn-key automation systems.

## DWF-4

Digital Wire Feed for Precision Wire Input



Shown:  
Control Unit Only

### Process

- TIG
- Plasma Welding

Input  

### Unit Includes

- Control Unit
- Wire Drive Unit
- Wire Guide Manipulator
- Conduit (standard only)
- Wire Tips
- Cables

### Drive Unit Options

- DWF-4 Standard Drive

The DWF-4 System from Arc Products™ provides exact wire input for high precision welding applications. The system utilizes a controller, wire manipulator, and a stepper motor drive unit with urethane drive rolls. The system is easy to program and integrates with a wide range of power supplies, torches, and positioners for assembling turn-key automation systems.

## DirectArc™

Welding Arc Control through Magnetic Fields



### Process

- TIG
- MIG (Spray Arc only)
- Submerged Arc (Limited)
- Plasma Welding
- Plasma Transferred Arc

Input  

### Unit Includes

- Control Unit
- Magnetic Probe
- Probe Tips
- Cables

### System Options

- MA-10 DirectArc™ Arc Stabilizer
- MA-20 DirectArc™ Arc Control
- MA-40 DirectArc™ Pattern Control
- MP-1 Probe
- MP-2 Probe
- MP-4 Probe (MA-40 only)
- MP-22 Probe
- MP-100 Probe

DirectArc™ Systems from Arc Products™ utilize a controller and water-cooled probe mounted at the torch to provide complete control of the TIG arc. Depending on the application, the system can counteract arc blow, drag and wander, increase penetration, reduce porosity, or smooth the weld puddle. The system is easy to setup and integrates with a wide range of power supplies, torches, and positioners for assembling turn-key automation systems.

## Accessories

### APEX™ 2100 Orbital Welding System

#### General

KP52062-1	Pyrex® Cup (short)
KP52063-1	1/8 Tungsten Adaptor
KP52069-1	5/32 Tungsten Adaptor
KP52064-1	Collet Body
KP52065-1	1/8 Collet
KP52070-1	5/32 Collet
KP52066-1	1/8 Tungsten
KP52071-1	5/32 Tungsten
KP52067-1	Back Cap Long
KP52068-1	Back Cap Medium
K52060-05	HELIX™ Shoe Extensions, 0.5 in. (12.7 mm)
K52060-10	HELIX™ Shoe Extensions, 1 in. (25.4 mm)
K52060-05	HELIX™ Shoe Extensions, 2 in. (50.8 mm)
K52060-10	HELIX™ Shoe Extensions, 3 in. (76.2 mm)
KP52081-1	HELIX™ Single Shoes
KP52077-1	HELIX™ T55 Wire Liner, Standard Length
KP52077-2	HELIX™ T55 Wire Liner, Extended Length
KP52078-035	HELIX™ T55 Wire Guide, 0.035 in. (0.9 mm) Wire Size
KP52078-045	HELIX™ T55 Wire Guide, 0.045 in. (1.1 mm) Wire Size
KP52079-035	HELIX™ T55 Drive Rolls, 0.035 in. (0.9 mm) Wire Size
KP52079-045	HELIX™ T55 Drive Rolls, 0.045 in. (1.1 mm) Wire Size

KP52080-035	HELIX™ T55 Inlet / Outlet Guide, 0.035 in. (0.9 mm) Wire Size
KP52080-045	HELIX™ T55 Inlet / Outlet Guide, 0.045 in. (1.1 mm) Wire Size
K52072-25	HELIX™ T55 Cable/Hose Extension, 25 ft. (7.6 m)
K52072-50	HELIX™ T55 Cable/Hose Extension, 50 ft. (15.2 m)
K52072-75	HELIX™ T55 Cable/Hose Extension, 75 ft. (22.9 m)

#### Track Ring

K52000-8	HELIX™ Track Ring, 8 in. (203.2 mm) (2 pieces, 6 shoes)
K52000-10	HELIX™ Track Ring, 10 in. (254 mm) (2 pieces, 6 shoes)
K52000-12	HELIX™ Track Ring, 12 in. (304.8 mm) (2 pieces, 6 shoes)
K52000-14	HELIX™ Track Ring, 14 in. (355.6 mm) (2 pieces, 6 shoes)
K52000-16	HELIX™ Track Ring, 16 in. (406.4 mm) (2 pieces, 6 shoes)
K52000-18	HELIX™ Track Ring, 18 in. (457.2 mm) (2 pieces, 6 shoes)
K52000-20	HELIX™ Track Ring, 20 in. (508 mm) (2 pieces, 6 shoes)

K52000-22	HELIX™ Track Ring, 22 in. (558.8 mm) (2 pieces, 6 shoes)
K52000-24	HELIX™ Track Ring, 24 in. (609.6 mm) (2 pieces, 8 shoes)
K52000-28	HELIX™ Track Ring, 28 in. (711.2 mm) (2 pieces, 8 shoes)
K52000-32	HELIX™ Track Ring, 32 in. (812.8 mm) (2 pieces, 8 shoes)
K52000-36	HELIX™ Track Ring, 36 in. (914.4 mm) (4 pieces, 12 shoes)
K52000-40	HELIX™ Track Ring, 40 in. (1016 mm) (4 pieces, 12 shoes)
K52000-44	HELIX™ Track Ring, 44 in. (1117.6 mm) (4 pieces, 12 shoes)
K52000-48	HELIX™ Track Ring, 48 in. (1219.2 mm) (4 pieces, 12 shoes)
K52000-52	HELIX™ Track Ring, 52 in. (1320.8 mm) (4 pieces, 12 shoes)
K52000-56	HELIX™ Track Ring, 56 in. (1422.4 mm) (4 pieces, 12 shoes)
K52000-60	HELIX™ Track Ring, 60 in. (1524 mm) (4 pieces, 12 shoes)
K52000-64	HELIX™ Track Ring, 64 in. (1625.6 mm) (4 pieces, 12 shoes)

# Orbital Welding Systems

## TIG Systems

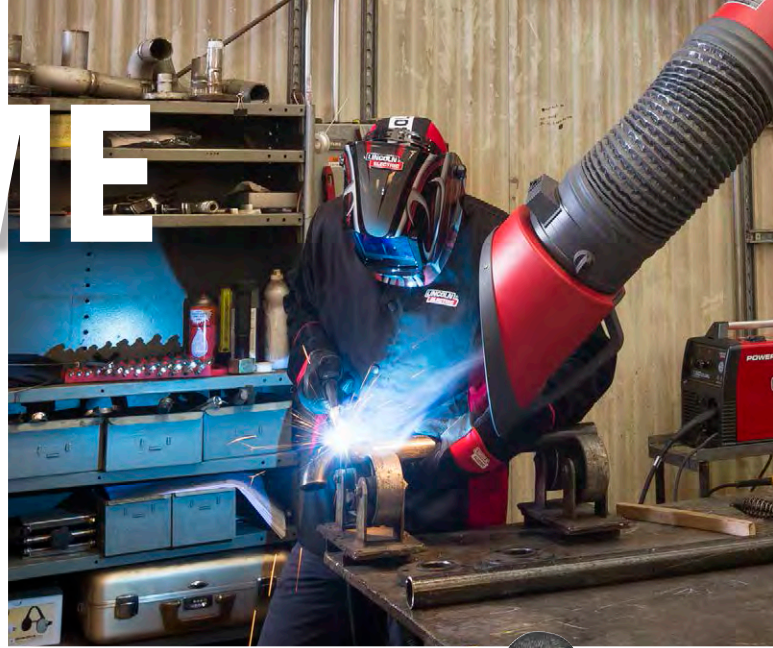
#### What's Included:

- APEX™ 2100 Controller and Pendant
- HELIX™ T55 Weld Head
- HELIX™ Track Ring
- Cool Arc® 55 Water Cooler
- Power Wave® S500
- APEX™ Cabinet



# WELD FUME CONTROL

- Improve working environment
- Meet regulatory standards
- Manage energy costs



PORTABLE SYSTEMS

## Miniflex®

Portable light duty, high vacuum system extracts up to 135 CFM.



## X-Tractor® 1GC

Portable light duty, high vacuum system extracts up to 115 CFM.



## Mobiflex® 100-NF

Portable low vacuum exhaust-only system handles up to 765 CFM.



## Mobiflex® 200-M & 400 MS

Low vacuum systems move up to 735 CFM.



STATIONARY SYSTEMS

## X-Tractor® 3A, 5A, 8A

Compact high vacuum, low volume system extracts up to 475 CFM.



## DownFlex® 100-NF, 200-M & 400-MS/A

Workbench/Downdraft extraction systems – move up to 1750 CFM.



## Statiflex® 200-M & 400 MS

Wall mounted low vacuum systems extract up to 735 CFM.



## Modular Extraction Hood

Ideal for robotic, hard automation and manual applications.



	MODEL	PROCESS				FILTER		INPUT	FEATURES				
		Stick	TIG	MIG	Flux-Cored	System	Size		Mobile	Start/Stop Sensor	Filter Indicator Gauge	Single Arm System	Dual Arm System
Mobile	Miniflex®	●	●	●	●	Disposable	130 ft <sup>2</sup> (12 m <sup>2</sup> )	115V/1/60 230V/1/50/60	●	●			●
	X-Tractor® 1GC	●	●	●	●	Self-Cleaning	30 ft <sup>2</sup> (2.8 m <sup>2</sup> )	120V/1/50/60 220V/1/50/60	●	●			●
	Mobiflex® 100-NF	●	●	●	●	Non-Filtration	—	115V/1/60	●				
	Mobiflex® 200-M	●	●	●	●	Disposable	538 ft <sup>2</sup> (50 m <sup>2</sup> )	115V/1/60	●	●	●		●
	Mobiflex® 400-MS	●	●	●	●	Self-Cleaning	325 ft <sup>2</sup> (30 m <sup>2</sup> )	115V/1/60	●	●	●		●
Stationary	X-Tractor® 3A, 5A, 8A	●	●	●	●	Self-Cleaning	up to 110 ft <sup>2</sup> (10 m <sup>2</sup> )	230/3/60 460/3/60		●			
	DownFlex® 100-NF	●	●	●	●	Non-Filtration	—	Central System					
	DownFlex® 200-M	●	●	●	●	Disposable	560 ft <sup>2</sup> (52 m <sup>2</sup> )	208/230/460/3/60	●		●		
	DownFlex® 400-MS/A	●	●	●	●	Self-Cleaning	560 ft <sup>2</sup> (52 m <sup>2</sup> )	208/230/460/3/60	●	●	●		
	Statiflex® 200-M	●	●	●	●	Disposable	538 ft <sup>2</sup> (50 m <sup>2</sup> )	—		●		●	●
	Statiflex® 400-MS	●	●	●	●	Self-Cleaning	325 ft <sup>2</sup> (30 m <sup>2</sup> )	—		●		●	●
	Modular Extraction Hood	●	●	●	●	—	—	—					

KEY: ● Excellent ● Good ● Optional

The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

# Miniflex®

## Portable Welding Fume Extractor

Lincoln Electric's Miniflex® is a high vacuum, portable system designed for the removal and filtration of welding fumes from light duty welding applications. The Miniflex® is unique with its standard wheels, handle and light weight synthetic materials. The convenient automatic start/stop function can extend the life of the motor brushes and reduces energy consumption.

- **NEW! Carbon Brushes Early Warning System** – Alerts the user when 80% of the carbon brushes have been consumed.
- **NEW! System Airflow Check** – Allows the user to check the extraction performance of the unit.
- **Five-Stage Filtration System** – Delivers higher filtration efficiency. Final stage includes a HEPA H12 Class filter.
- **Activated Carbon Filter (optional)** – Reduces the recirculation of odors into the environment.
- **Current Sensor** – Allows convenient automatic start/stop capability by sensing welding current.
- **Multiple Extraction Settings** – Select extraction capacity of 94 CFM (Low) or 135 CFM (High).
- **Quiet Operation** – Sound level < 70 dB(A).
- **Airflow/Static Pressure Control System** – Monitors extraction performance of the unit.



Shown: K3972-1 Miniflex® with optional EN 20 Extraction Nozzle

**Processes**

- Stick (light duty)
- TIG
- MIG
- Flux-Cored (light duty)

**Input**

**Unit Includes**

- 9 ft. (2.7 m) cord (AWG 14) with 15 amp plug (NEMA 5-15)
- 8 ft. (2.4 m) length x 1-3/4 in. (44.5 mm) O.D. extraction hose.
- LongLife-H main filter
- HEPA filter
- 2 spare sets of carbon brushes and seals for motors

**Recommended Accessories**

- K2389-8 16 ft. (4.9 m) Extraction Hose
- K2389-9 8 ft. (2.4 m) Extraction Hose
- K2389-5 EN 20 Extraction Nozzle
- K2389-6 EN 40 Extraction Nozzle
- *More accessories at end of section*

**Literature**

MC12-73

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Input Current	H x W inches (mm)	Net Weight lbs. (kg)
Miniflex®	K3972-1	115/1/50/60	14.6A	28-3/4 x 16-1/2 (730 x 420)	38 (17)
	K3973-1	230/1/50/60	7.4A max.		

# X-Tractor® 1GC

## Portable Welding Fume Extraction and Filtration

Lincoln Electric's X-Tractor® 1GC is a high vacuum extraction system designed for the removal and filtration of welding fume. The 1GC is a great choice for fume removal on the light duty welding applications typically found in shops or companies with a small number of welding stations. The compact size and light weight of the X-Tractor® 1GC make the unit easy to move to where it's needed.

- **Simple to Configure** – Uses a single fume extraction welding gun or suction nozzle attachment.
- **Filter Cleaning System** – Unique rotary air jet system allows the polyester filter to be cleaned using compressed air without removing it from the X-Tractor® 1GC.
- **Automatic Start/Stop Sensor** – Provides extraction only when needed, extends motor life, and reduces energy consumption.
- **Wide Variety of Extraction Nozzles Available** – Easily adapt the X-Tractor® 1GC for many different welding applications.
- **Low noise operation** – 74 dB(A).



Shown with optional K639-5 Suction Nozzle

**Processes**

- Stick
- TIG
- MIG
- Flux-Cored

**Input**

**Unit Includes**

- Adapter for 1-3/4 in. (44.5 mm) hose (S20591-8)
- 8 ft. (2.4 m) long x 1-3/4 in. (44.5 mm) diameter flexible hose
- 2 spare sets of carbon brushes for motors
- Filter cartridge
- 12 ft. (3.6 m) power cord

**Recommended Accessories**

- K2389-5 EN 20 Extraction Nozzle
- K2389-6 EN 40 Extraction Nozzle
- K639-5 SHFA Flat Suction Nozzle
- K2389-9 8 ft. (2.4 m) Extraction Hose
- *More accessories at end of section*

**Literature**

E13.17

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
X-Tractor® 1GC	K652-1	120/1/50/60	15A	13.4 x 26.8 x 15.8 (340 x 680 x 400)	37 (17)
	K652-2	220/1/50/60	9A		

# X-Tractor® 3A, 5A, 8A

## Welding Fume Extractors

Lincoln Electric's self-contained X-Tractor® units are specifically designed for the removal and filtration of welding fume. These high vacuum, systems are engineered to provide suction for multiple nozzles and fume guns and feature an integrated automatic self-cleaning filter system. They are ideally suited for continuous use in heavy duty welding applications.

- **Integrated automatic filter cleaning.**
- **Automatic operation capability** – Using wire feeder trigger signal.
- **For 1 to 8 operators simultaneously.**
- **Rugged design** – For industrial use and impact resistance.
- **Wide range of accessories** available.
- **Compact design** – For easy installation in narrow spaces.
- **Easy to Empty** – Particulate bin is readily accessible.



Shown (L-R):  
X-Tractor® 3A, X-Tractor® 8A,  
X-Tractor® 5A

### Processes

- Stick
- TIG
- MIG
- Flux-Cored

Input

### Unit Includes

- Extraction Unit
- Filter Cartridge
- Automatic Filter Cleaning System
- Internal Compressed Air Regulator
- Automatic Operation Connection
- Starter/Overload Switch

### Recommended Accessories

- K2389-5 EN 20 Extraction Nozzle
- K2389-6 EN 40 Extraction Nozzle
- K639-5 SHFA Flat Suction Nozzle
- *More accessories at end of section*

### Literature

E13.19

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Input Current	CFM	H x W x D inches (mm)	Net Weight lbs. (kg)
X-Tractor® 3A	K3965-1	230/3/60	14A	165	29.1 x 16.9 x 43.3 (740 x 430 x 1100)	192 (87)
	K3965-2	460/3/60	6.5A			
X-Tractor® 5A	K3966-1	230/3/60	20A	285	33.1 x 28.0 x 55.1 (840 x 710 x 1400)	242 (110)
	K3966-2	460/3/60	10A			
X-Tractor® 8A	K3967-1	230/3/60	40A	475	43.3 x 28.0 x 55.1 (1100 x 710 x 1400)	309 (140)
	K3967-2	460/3/60	21A			

# DownFlex® 200-M, 400-MS/A & 100-NF

## Rugged Workbench and Fume Extraction Downdraft Table

The Lincoln Electric DownFlex® table is a rugged welding workbench and extraction system, all in one self-contained unit. Great for welding, plasma cutting and grinding<sup>(1)</sup>.

### DownFlex® 200-M and 400-MS/A Models:

- **Strong Backdraft (80%) and Downdraft (20%) Extraction Capacity** – Ideal for welding, grinding<sup>(1)</sup>, and light duty plasma cutting.
- **Innovative 3 Stage Spark Arrestor** – Captures hot particulate before it can get into the filter chamber.
- **Oval Shaped Filters Deliver an Impressive 560 ft<sup>2</sup> (52 m<sup>2</sup>) of Total Filter Media** – Results in longer filter life.
- **All Controls and Doors on Front** – Offers complete access to filters and collection draws for easy maintenance.
- **UL® Approved**

### DownFlex® 100-NF:

- **Available for customers who need a rugged downdraft table**, but prefer to build their own customized extraction system. (no filtration, fan or electrical controls supplied).



Shown:  
K2751-3  
DownFlex® 400-MS/A

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Plasma Cutting
- Grinding<sup>(1)</sup>

Input

### Unit Includes

- Sturdy Welding Table
- Backdraft Panel
- Side Panels
- Filters & Controls

### Recommended Accessories

- (for 200-M and 400-MS/A Models)
- K2752-1 HEPA Filter Kit
- K2752-2 Plasma Cutting Work Grid
- K2752-3 Working Light Kit
- K2752-6 Wheel Kit
- *More accessories at end of section*

### Literature

MC13-38

<sup>(1)</sup>Not suitable for use when grinding Aluminum, Magnesium or other explosive materials.

Product Name	Product Number	Filter Type/ Filter Size	Input Power Voltage/Phase/Hertz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
DownFlex® 200-M	K2751-2	Cellulose/Polyester Fiber Filter/ 560 ft <sup>2</sup> (52 m <sup>2</sup> )	208/230/460/3/60	11/10/5A	36.2 x 54.3 x 39.4 (920 x 1380 x 1005)	540 (245)
DownFlex® 400-MS/A	K2751-3					562 (255)
DownFlex® 100-NF	K2751-1	No Filtration	N/A	—	36.2 x 53.8 x 35.9 (920 x 1366 x 911)	330 (150)

# Mobiflex® 100-NF

## Portable Welding Exhaust System

The Mobiflex® 100-NF is a portable, lightweight welding fume extraction unit that provides source capture exhaust only capability. Great for field construction sites, repair & maintenance operations and/or shop welding applications where removing welding fumes at the source is needed. No filtration.

- **Lightweight** and portable.
- **Weighs** only 37.5 lbs (17 kg).
- **Handle and sturdy base** included.
- **Great for field or shop** welding.
- **Exhaust only capability**, airflow up to 765 CFM depending on length of hose(s) used.
- **Low noise** operation (69dBA).
- **One-year warranty**.



Shown: Mobiflex® 100-NF with K1668-1 Hose and Hood Set and K1668-2 Extension Hose Kit

**Processes**

- Stick
- TIG
- MIG
- Flux-Cored

**Input**

**Unit Includes**

- Exhaust Fan Unit
- Carrying Handle
- Sturdy Base/Stand

**Required Options**

- K1668-1 Hose and Hood Set, 16 ft. (4.9 m)
- *More accessories at end of section*

**Literature**

E13.42

Product Name	Product Number	Filter Type/Filter Size	Input Power Voltage/Phase/Hertz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
Mobiflex® 100-NF	K1666-1	Non-Filtration Exhaust Only	115/1/60	10A	23.1 x 18.9 x 18.9 (587 x 480 x 480)	37.5 (17)

# Mobiflex® 200-M & 400-MS

## Mobile Welding Fume Extractors

These low vacuum extractor and filtration systems are designed for light to medium duty extraction of welding fumes. Select the Mobiflex® 400-MS system to add self-cleaning capability. Mobiflex® units are ideal for facilities that require welding fume extraction in multiple locations including maintenance departments, general fabrication or job shops and industrial environments.

**All Models**

- **Generous 735 CFM** airflow with LFA 3.1/4.1 extraction arm<sup>(1)</sup>.
- **Internal aluminum mesh spark arrestor**.
- **Choice of filter types** – Cellulose or high efficiency cellulose/polyester.
- **One-year warranty on equipment**. (30 day warranty on filter cartridge.)

**200-M Model**

- **Large Filter Capacity** – 538 ft<sup>2</sup> (50 m<sup>2</sup>).
- **Filter Status Indicator** – Indicates amount of particulate in filter cartridge to alert for system maintenance and filter replacement.

**400-MS Model**

- **RotaPulse®** automatic filter cleaning system.
- **Electronic filter pressure system** monitors internal static pressure and controls filter cleaning.
- **Large Filter Capacity** – 325 ft<sup>2</sup> (30 m<sup>2</sup>).
- **Indicator Light** – Indicates saturated filter.



Shown: Mobiflex® 200-M with required Extraction Arm

Shown: Mobiflex® 400-MS with required Extraction Arm

**Processes**

- Stick
- TIG
- MIG
- Flux-Cored

**Input**

**Unit Includes**

- Filter
- Plastic housing
- 8 in. (203 mm) Flexible Hose
- 19 ft. (6 m) 115 VAC Input Power Cord

**Required Options**

- Extraction Arm
  - K2633-1 LFA 3.1
  - K2633-2 LFA 3.1 w/Lamp & Arc Sensor
  - K2633-3 LFA 4.1
  - K2633-4 LFA 4.1 w/Lamp & Arc Sensor
- K1668-3 Hose and Hood Kit

**Recommended Accessories**

- K1494-3 Starter Overload Switch for 230V
- *More accessories at end of section*

**Literature**

E13.12

<sup>(1)</sup>CFM level is dependent on extraction arm length, fan type and system maintenance.

Product Name	Product Number	Filter Type	Input Power Voltage/Phase/Hertz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
Mobiflex® 200-M Base Unit	K1653-2	Cellulose	115/1/60	12A	36 x 32 x 48 (900 x 810 x 1210)	243 (111)
	K2497-2	538 ft <sup>2</sup> (50 m <sup>2</sup> )	230/1/50	9A		
	K1653-3	Cellulose/Polyester	115/1/60	12A		
Mobiflex® 400-MS Base Unit	K1741-1	Cellulose	115/1/60	12A	40 x 32 x 48 (1020 x 810 x 1210)	286 (130)
	K2497-4	325 ft <sup>2</sup> (30 m <sup>2</sup> )	230/1/50	9A		
	K1741-2	Cellulose/Polyester	115/1/60	12A		

# Statiflex® 200-M & 400-MS

## Wall-mounted Welding Fume Extractors

The Statiflex® 200-M and 400-MS are stationary, wall-mounted low vacuum systems designed for light to medium duty extraction and filtration of welding fume<sup>(1)</sup>. A self-cleaning filter is standard on the Statiflex® 400-MS. Statiflex® units are ideal for facilities with fixed location work stations and little available floor space including general fabrication, job shops, welding schools, and maintenance departments.

### All Models

- **Generous airflow** – 735 CFM with LFA 3.1 or 4.1 extraction arms and SF 2400 fan<sup>(2)</sup>.
- **Internal spark arrester** – Also functions as a pre-filter for larger-sized particulate.
- **Choice of filter types** – Cellulose or high efficiency cellulose/polyester.
- **One-year warranty** (30 day warranty on filter).

### 200-M Model

- **Filter status indicator** – Visual guide to remaining filter life.
- **Large filter capacity** – 538 ft<sup>2</sup> (50 m<sup>2</sup>).
- **Flexible configuration** – choose single or dual arm system.



### 400-MS Model

- **RotaPulse® automatic cleaning system** – simplifies filter maintenance.
- **Large filter capacity** – 325 ft<sup>2</sup> (30 m<sup>2</sup>).

### Processes

- Stick
- TIG
- MIG
- Flux-Cored

### Required Options

- Extraction Arm(s)
- Stationary Fan
- Overload Switch
- Lamp Kit with Arc Sensor

### Recommended Accessories

- K1534-2 Air Exhaust Silencer
- K1750-1 230V Conversion Kit for SF 2400 Fan
- *More accessories at end of section*

### Literature

MC13-96

<sup>(1)</sup> Not suitable for use with cutting or arc gouging operations.

<sup>(2)</sup> CFM level is dependent on extraction arm length, fan type and system maintenance.

Product Name	Product Number	Filter Type	Filter Size ft <sup>2</sup> (m <sup>2</sup> )	H x W x D inches (mm)	Net Weight lbs. (kg)
Statiflex® 200-M Single Arm Base Unit	K1654-1	Cellulose	538 (50)	36 x 32 x 29 (900 x 810 x 730)	66 (30)
	K1654-3	High Efficiency Cellulose/Polyester			
Statiflex® 200-M Dual Arm Base Unit	K1654-2	Pretreated Cellulose	538 (50)	36 x 32 x 29 (900 x 810 x 730)	66 (30)
Statiflex® 400-MS Base Unit	K1742-1	Cellulose	325 (30)	41 x 27 x 26 (1040 x 670 x 660)	187 (85)
	K1742-2	High Efficiency Cellulose/Polyester			

# Fume Extraction Arms

## Low Vacuum Flexible Extraction Arms

These flexible extraction arms are built the Lincoln Electric way, rugged and reliable. Designed with the welder in mind, the arms come equipped with the 360° rotatable hood for optimal positioning to the welding point.

- **Ultra-light** dent and scratch resistant material.
- **Minimal** maintenance.
- **Unique spring-balanced** internal mechanism: LFA 3.1/4.1/4.1-LC.
- **Unique advanced friction** internal mechanism: LTA 2.0/LFA 2.0.
- **360°** rotatable hood.
- **Airflow** throttle valve.
- **One-year warranty.**



### Processes

- Stick
- TIG
- MIG
- Flux-Cored

### Literature

E13.16

Product Name	Product Number	Arm Length ft. (m)	H x W inches (mm)	Net Weight lb. (kg)	CFM with SF 2400 Fan (with no filtration)	Use With:
LFA 3.1	K2633-1	10 (3.1)	8 x 118 (208 x 3,000)	33 (15)	760	Mobiflex®
	K1655-1					Statiflex®
LFA 3.1 (w/Lamp & Arc Sensor)	K2633-2	10 (3.1)	8 x 118 (208 x 3,000)	35 (16)	760	Mobiflex®
LFA 4.1	K2633-3	13 (4.1)	8 x 157 (208 x 4,000)	37.5 (17)	760	Mobiflex®
	K1655-2					Statiflex®
LFA 4.1 (w/Lamp & Arc Sensor)	K2633-4	13 (4.1)	8 x 157 (208 x 4,000)	39.5 (18)	760	Mobiflex®
LFA 4.1-LC (Low Ceiling)	K1655-6	13 (4.1)	8 x 157 (208 x 4,000)	37.5 (17)	760	Statiflex®
LFA 2.0	K1655-5	6.5 (2.0)	8 x 85 (208 x 2,160)	33 (15)	760	Statiflex®
LTA 2.0	K1655-3	Retracts from 3-4.5 (1-1.5)	8 x 39.5-55 (208 x 1,000-1,400)	15.4 (7)	780	Statiflex®
LTA 2.0 CW	K1655-7	Retracts from 5-8.2 (1.5-2.5)	8 x 62-100.5 (208 x 1,575-2,553)	59.5 (27)	760	Statiflex®



# Modular Extraction Hood

## For Containing and Extracting Fume from Metalworking Operations

Lincoln Electric's Modular Extraction Hood is engineered to contain and extract welding, cutting, arc gouging, and grinding<sup>(1)</sup> fume from the work environment. Its innovative design brings a reliable and practical solution to the market. These units are ideal for robotic, hard automation and manual applications.

- **Modular, extruded aluminum construction** – Easy to assemble, install, and relocate.
- **Unique double panel roof configuration** – Acts as an in-line baffle, deflection plate and spark arrestor.
- **Lincoln's innovative perimeter pull technology** – Maximizes fume extraction effectiveness at lower overall airflow rates.
- **Efficient airflow control** – Results in reduced energy consumption and lower capital equipment costs.
- **Modular design** – Allows for cleaning and servicing of key components.
- **Pre-Engineered Statiflex® Filter Banks** – Optimized for each hood's size and airflow requirements.
- **One-year warranty.**



Shown: System 35 with Modular Extraction Hood and Statiflex® Filter Bank

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Plasma Cutting
- Arc Gouging
- Grinding<sup>(1)</sup>

### Recommended Accessories

- S28058-24 Light Kit
- S28058-25 Leg, 6.56 ft. (2.0 m)
- S28058-26 Leg, 8.2 ft. (2.5 m)
- S28058-27 Leg, 9.84 ft. (3.0 m)
- S28058-52 Leg, 11.48 ft. (3.5 m)
- S28058-28 Leg Mounting Kit
- S28058-22 Curtain Bracket Kit
- S28058-53 Semi-transparent (red) Curtain Strip: 82 ft. Roll (25 m)
- S28058-59 Non-transparent (green) Curtain Strip: 82 ft. Roll (25 m)

### Literature

MC12-05

<sup>(1)</sup> Not suitable for use when grinding Aluminum, Magnesium or other explosive materials.

Product Name	Product Number/Sizes	Recommended Extraction Capacity	Recommended Air Velocity in Connected Duct
Modular Extraction Hood	See end of section for full list of product numbers and sizes.	290-474 CFM per square meter of hood (27-44 CFM per square foot of hood)	2,000 feet/minute (FPM)

# Formed Extraction Hood

## For Fume Extraction from Robotic Welding Cells

Lincoln Electric robotic extraction hoods are the ideal solution for welding fume extraction on robotic cells. There's a model for each of our pre-engineered cells or one can be customized to fit a nonstandard cell.

For filtration of welding fume, a Statiflex® Filter Bank can be incorporated into the extraction hood design. The Statiflex® Filter Bank's modular layout, higher efficiency and innovative cartridge cleaning system make it a robust filtration solution.

- **Lightweight design.**
- **Sized to fit** Lincoln Electric pre-engineered cells.
- **Modular-style hood also available** for custom cell designs.



Shown: System 20 with Fume Hood

### Processes

- TIG
- MIG
- Flux-Cored
- Metal-Cored

### Recommended Accessories

- Interior lighting
- Statiflex® Filter Bank
- Preventive maintenance contract

### Literature

MC12-05

# Statiflex® Filter Banks

## For Filtering Industrial Welding Fume and Particulate

The Statiflex® Filter Bank is ideal for filtering fume and particulate generated by welding, cutting, arc gouging and grinding. Its higher efficiency, innovative cartridge cleaning system, and modular design make the Statiflex® Filter Bank a more robust filtration solution for your metalworking operations.

- **Compact, high performance system** available in 2 to 48 filter versions.
- **Multi-Flow Technology** – Disperses incoming air evenly throughout the filter bank, resulting in longer filter life.
- **Self-Cleaning System** – Pulse amplifier technology utilizes a uniform high energy pulse of compressed air for filter cleaning.



Shown:  
Statiflex® Filter Bank, 8-Bank

### Processes

- Stick
- TIG
- MIG
- Flux-Cored
- Plasma Cutting
- Arc Gouging
- Grinding<sup>(1)</sup>

### Input



### Unit Includes

- Filter Bank
- Filters
- Fan
- Cleaning Controls
- Starter Controls
- Dust Drum

User to supply electrical power, compressed air and ductwork. Assembly required.

### Literature

MC12- 05

<sup>(1)</sup> Not suitable for use when grinding Aluminum, Magnesium or other explosive materials.

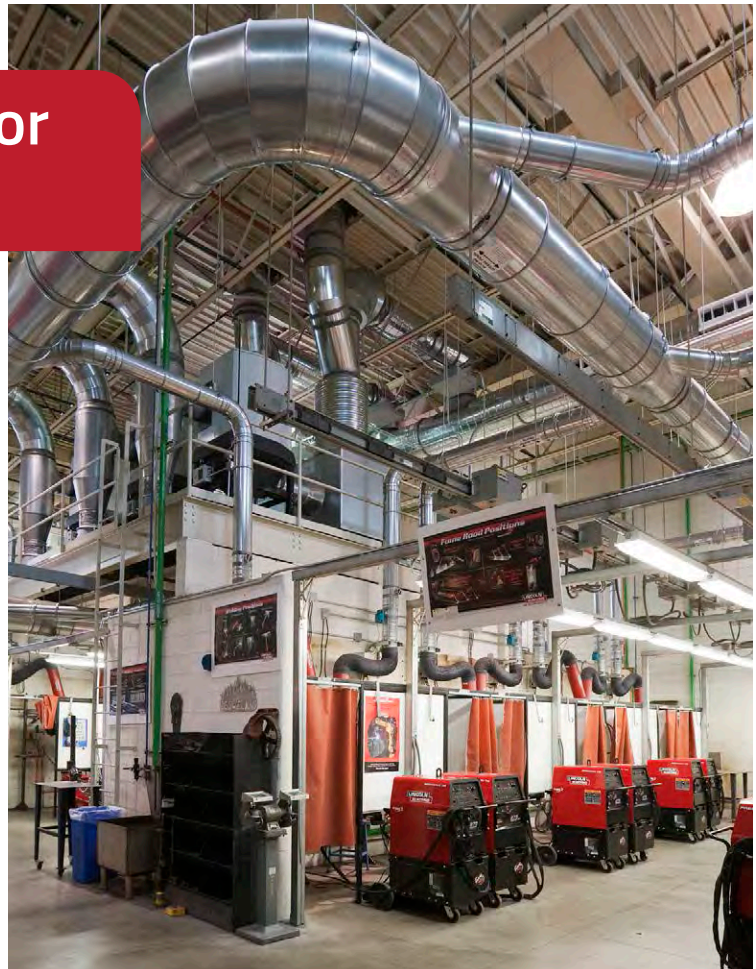
Product Name	Filter Type	Fan Sizes HP
Statiflex® Filter Banks (2 to 48 cartridges)	MERV 16 Rated Filters	1-1/2 to 100

## Ask About Our School or Factory Installations

- Low Vacuum
- High Vacuum
- Push-Pull Systems
- The Circulator™

**“We want our students to understand the intrinsic importance of fume control in a welding environment.”**

Catherine Lindquist  
Welding Instructor, Lansing Community College



# Engineered Systems

*Solutions customized to meet your individual needs.*

## The Circulator™

The Circulator™ is a free-standing general filtration system for weld fume control. It is ideal for manufacturing and fabrication facilities which have obstructions for ductwork – overhead cranes and large amounts of infrastructure – offering an economical alternative to a Push/Pull System. The Circulator™ is intended to be used to supplement an existing source extraction system.

The Circulator™ is designed to create a cleaner work environment by reducing the amount of dust and dirt in operator and surrounding work areas. It also supplements the natural (draft) and/or forced ventilation (roof/wall fans) which may be present to reduce the overall concentration of welding fume in the workshop.

The innovative Green-Drive™ Control System continually monitors system operation and automatically adjusts airflow to maintain required performance levels. This results in energy savings of up to 50% and increased filter life of up to 30% over traditional on/off systems.

Literature: MC11-37



## Push/Pull Systems

### For Welding and Fabrication Facilities

Fume and metal particulate from metalworking operations such as welding, plasma cutting, arc gouging and grinding can build-up as a layer in the air of a facility. Eventually, the particulate may settle back to the floor. Lincoln Electric Automation's Push/Pull System can remove this layer in a controlled manner, filter it and circulate the filtered air back into the facility.

Use a Push/Pull System when:

- Workers are in spaces where effective source capture is difficult.
- Fabricating large weldments and when the welder needs to frequently shift positions.
- Improvement of general workplace air quality by removing welding particulate layer is desired.

Literature: MC11-106



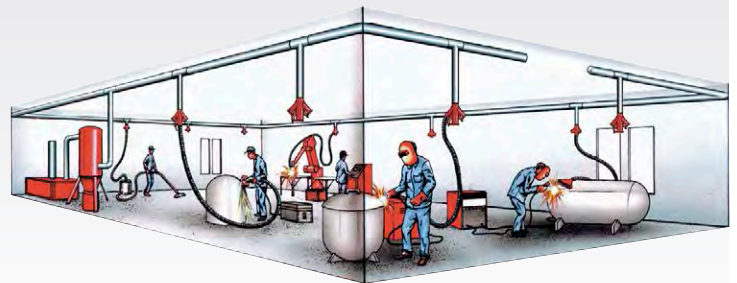
Push/Pull System installed at Elgin Sweeper Company

## High Vacuum Central Systems

### For Welding, Cutting and Grinding

High vacuum central systems are a cost effective choice. These systems use a central turbine and filter, and supply suction throughout the plant. Since the airflow is one-tenth the volume of low vacuum systems, and the vacuum pressures are ten times higher, these systems use smaller ductwork and less CFM. Header ducts are frequently one size through the whole system.

Literature: MC11-107



## Low Vacuum Central Systems

### For Schools and Industry

Lincoln Electric offers low vacuum, high volume exhaust systems for source capture applications. They are an ideal solution to address welding fume removal in educational environments and manufacturing plants that require multiple station drops.

Literature: MC11-107



Low Vacuum Central Systems installed at Cuyahoga Community College Welding School

**For further information, contact the Environmental Team at: [weldfumecontrol@lincolnelectric.com](mailto:weldfumecontrol@lincolnelectric.com) or call 216-383-2667**

# Guardian™ Fire Safety Solutions

## For Fume Control Systems

Guardian™ products are an engineered solution for controlling fire risks in welding fume extraction filter systems for the metalworking and fabrication industry. The Guardian™ solution contains multiple components that are divided into three categories – products to prevent, detect and suppress fires.

Early detection and suppression are initiated in the event of a fire to minimize the fire hazard, to limit the system damages and to avoid the risk of escalation and accumulation of smoke in your manufacturing environment.

**Prevention:** Averting sparks, spatter and dust from reaching the combustible filter cartridge and debris in the dustbin or collection location, preventing potential ignition.

**Detection:** Early detection by a fire suppression system reduces damage to your filter system and keeps the risk of fire to a minimum.

**Suppression:** Detection equipment activates the suppression methods, which are designed to suppress and extinguish a fire quickly and reliably.

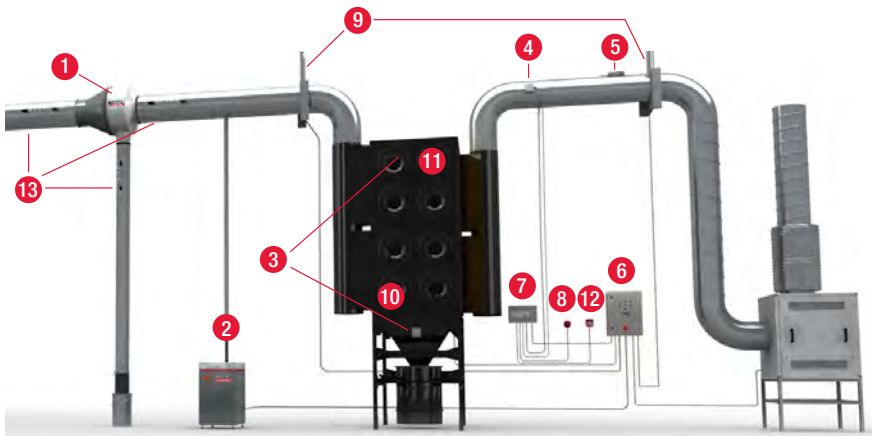
### Guardian™ Fire Safety Solutions Features

- Reduce the risk of fire to a minimum
- Detect possible fire starters
- Suppress the start of fires immediately
- Reduce system damage to a minimum
- Minimize replacement, maintenance and filter downtime in case of fire
- Increase the effectiveness and lifespan of your entire extraction system

Literature: MC12-20



### SYSTEM OVERVIEW



Shown: Complete central system with Guardian™ components installed.

#### Prevention

1. Spark Guardian™ (Spark arrestor)
2. Oil Guardian™ (Limestone feeder)
3. Heat Detector
4. Spark Detector
5. Smoke Detector

#### Detection

6. System Control Panel
7. Guardian Control™ (Fire detection panel)
8. Fire Alarm Sounder

#### Suppression

9. Sliding Valve
10. Solenoid Valve (Backside of the Statiflex® filter bank)
11. Flame Guardian™ (Aerosol Generator Inside the Statiflex® filter bank)

#### Additional Features

12. Manual Call Point (Manual alarm point)
13. Inspection Hatch (3 pieces)

For further information, contact the Environmental Team at: [weldfumecontrol@lincolnelectric.com](mailto:weldfumecontrol@lincolnelectric.com) or call 216-383-2667

## Accessories

### Miniflex®

#### General

K2389-5	EN 20 Nozzle
K2389-6	EN 40 Nozzle
K639-1	SHM-300 Suction Head for Manual Welding, 12 in. (300 mm)
K639-2	SHM-400 Suction Head for Manual Welding, 16 in. (400 mm)
K639-3	SHM-500 Suction Head for Manual Welding, 20 in. (500 mm)
K639-4	SHMS Low Noise Suction Nozzle
K639-5	SHFA Flat Suction Head with Flexible Arm
K639-6	UNM Suction Head for Heavy Smoke
K2389-3	NKT Nozzle Kit, 1 in. x 8 ft. Hose, 1-3/4 in. (44.5 mm) Hose Adapter
K2389-4	NKC Nozzle Kit, 1 in. x 8 ft. Hose, 1-3/4 in. (44.5 mm) Hose Adapter
K2389-8	Extraction Hose, 1-3/4 in. x 16 ft. (44.5 mm x 4.9 m)
K2389-9	Extraction Hose, 1-3/4 in. x 8 ft. (44.5 mm x 2.4 m)
K2389-10	Hose-to-Hose Adapter, 1-3/4 x 1-3/4 in. (44.5 x 44.5 mm)
K2389-2	Hose Connection Outlet
K2389-1	Activated Carbon Filter
K2389-7	Wall Mounting Bracket

#### Expendable Parts

KP2390-1	LongLife-H Filter
KP2390-2	HEPA Filter
KP2390-3	Pre-filter

### X-Tractor® 1GC

#### General

K639-1	SHM-300 Suction Head for Manual Welding, 12 in. (300 mm)
K639-2	SHM-400 Suction Head for Manual Welding, 16 in. (400 mm)
K639-3	SHM-500 Suction Head for Manual Welding, 20 in. (500 mm)
K639-4	SHMS Low Noise Suction Nozzle
K639-5	SHFA Flat Suction Head with Flexible Arm
K639-6	UNM Suction Head for Heavy Smoke
K639-20	Gun Mounted Nozzle Kit (OT-25)

#### Expendable Parts

KP2069-1	Filter Cartridge for K652-XX
----------	------------------------------

### X-Tractor® 3A, 5A, 8A

#### General

K639-1	SHM-300 Suction Head for Manual Welding, 12 in. (300 mm)
K639-2	SHM-400 Suction Head for Manual Welding, 16 in. (400 mm)
K639-3	SHM-500 Suction Head for Manual Welding, 20 in. (500 mm)
K639-4	SHMS Low Noise Suction Nozzle
K639-5	SHFA Flat Suction Head with Flexible Arm
K639-6	UNM Suction Head for Heavy Smoke
K639-20	Gun Mounted Nozzle Kit (OT-25)
K2389-5	EN 20 Nozzle
K2389-6	EN 40 Nozzle
K2389-3	NKT Nozzle Kit, 1 in. x 8 ft. (25.4 mm x 2.4 m) Hose, 1-3/4 in. (44.6 mm) Hose Adapter
K2389-4	NKC Nozzle Kit, 1 in. x 8 ft. (25.4 mm x 2.4 m) Hose, 1-3/4 in. (44.6 mm) Hose Adapter

( See "Guns and Torches" section for weld fume extraction guns. )

### DownFlex® 200-M and 400-MS/A

#### General

K2752-1	HEPA Filter Kit
K2752-2	Plasma Cutting Work Grid
K2752-3	Working Light Kit
K2752-4	Current Activated Start/Stop Sensor (400-MS/A only)
K2752-5	Motion Activated Start/Stop Sensor (400-MS/A only)
K2752-6	Wheel Kit (max. load 330 lb./149.7 kg)
K2752-7	Silencer/Outlet Duct
K2752-8	Mounting Kit for Bench Vice
K2752-9	Dust Tray Lid

#### Expendable Parts

K2752-13	LongLife Filter
K2752-14	HEPA Filter

### DownFlex® 100-NF

#### General

K2752-10	Central System Connection Kit
K2752-11	Dust Container
K2752-12	Spark Arrestor
K2752-2	Plasma Cutting Work Grid
K2752-3	Working Light Kit
K2752-8	Mounting Kit for Bench Vice

### Mobiflex® 100-NF

#### Required

K1668-1	Hose and Hood Set, 16 ft. (4.9 m)
K1668-2	Exhaust or Extension Hose Set, 16 ft. (4.9 m)

### Mobiflex® 200-M and 400-MS

#### Hose/Hood Set or Extraction Arm

K1668-3	Hose and Hood Kit
K2633-1	LFA 3.1 10 ft. (3.0 m) Extraction Arm
K2633-2	LFA 3.1 10 ft. (3.0 m) Extraction Arm with Lamp/Arc Sensor
K2633-3	LFA 4.1 13 ft. (4.0 m) Extraction Arm
K2633-4	LFA 4.1 13 ft. (4.0 m) Extraction Arm with Lamp/Arc Sensor

#### General, Both Models

K1494-3	Starter Overload Switch for 230V
---------	----------------------------------

#### General, Mobiflex® 200-M

K1673-1	Cellulose Filter
K1673-3	High Efficiency Cellulose/Polyester Filter
K1852-1	Activated Carbon Filter

#### General, Mobiflex® 400-MS

K1673-2	Cellulose Filter
K1673-4	High Efficiency Cellulose/Polyester Filter

### Statiflex® 200-M Single and Dual Arm

FOR A SINGLE ARM PACKAGE, CHOOSE ONE ITEM FROM CATEGORY 2, AND ONE ITEM EACH FROM SYSTEMS 3A OR 3B

FOR A DUAL ARM PACKAGE, CHOOSE TWO ITEMS FROM CATEGORY 2, AND TWO ITEMS EACH FROM SYSTEMS 3A OR 3B

#### Extraction Arms (Category 2)

K1655-3	LTA 2.0 Telescopic Extraction Arm
K1655-5	LFA 2.0 6.5 ft. (2.0 m) Extraction Arm
K1655-1	LFA 3.1 10 ft. (3.0 m) Extraction Arm
K1655-2	LFA 4.1 13 ft. (4.0 m) Extraction Arm
K1655-6	LFA 4.1-LC Low Ceiling 13 ft. (4.0 m) Extraction Arm
K1655-7	LTA 2.0-CW Telescopic Extration Arm

Standard System (Category 3A) – requires fan, starting control and mounting brackets

K1656-1	SF 2400 Stationary Fan (1 HP)
K1494-2	Starter Overload Switch for 115V
K1494-3	Starter Overload Switch for 230V
K1669-4	Lamp Kit with Arc Sensor for Wall Mounted Arms
K1657-1	SF 2400 Wall Mounting Bracket (use with LFA 3.1, 4.1 and 4.1-LC)
K1657-2	SF 2400 Wall Mounting Bracket (use with LTA 2.0 and LFA 2.0)

Extension Crane System (Category 3B) – requires fan, starting control and extension crane

K1656-4	SF 4200 Stationary Fan (2 HP)
K1494-10	Starter/Overload Switch for SF 4200 Fan
K1669-10	Lamp with Arc Sensor for SF 4200 Fan
K1671-1	EC 2 Extension Crane, 7 ft. (2.1 m)
K1671-2	EC 4 Extension Crane, 14 ft. (4.3 m)
K1672-1	Feeder Hanging Rail

#### General

K1750-1	230V Conversion Kit for SF 2400 Fan
K1673-1	Cellulose Filter
K1673-3	High Efficiency Cellulose/Polyester Filter
K1852-1	Activated Carbon Filter
K1534-2	Air Exhaust Silencer
K1743-2	Non-Return Valve

### Statiflex® 400-MS Single Arm

FOR A SINGLE ARM PACKAGE, CHOOSE ONE ITEM FROM CATEGORY 2, AND ONE ITEM EACH FROM CATEGORY 3A OR 3B

(Requires Lamp/Arc Sensor Kit to operate Statiflex® 400-MS Self-Cleaning Controls).

#### Extraction Arms (Category 2)

K1655-3	LTA 2.0 Telescopic Extraction Arm
K1655-5	LFA 2.0 6.5 ft. (2.0 m) Extraction Arm
K1655-1	LFA 3.1 10 ft. (3.0 m) Extraction Arm
K1655-2	LFA 4.1 13 ft. (4.0 m) Extraction Arm
K1655-6	LFA 4.1-LC Low Ceiling 13 ft. (4.0 m) Extraction Arm
K1655-7	LTA 2.0-CW Telescopic Extration Arm

Standard System (Category 3A) – requires fan, starting control and mounting brackets

K1656-1	SF 2400 Stationary Fan (1 HP)
K1669-4	Lamp Kit with Arc Sensor for Wall Mounted Arms
K1657-1	SF 2400 Wall Mounting Bracket (use with LFA 3.1, 4.1 and 4.1-LC)
K1657-2	SF 2400 Wall Mounting Bracket (use with LTA 2.0 and LFA 2.0)

Extension Crane System (Category 3B) – requires fan, starting control and extension crane

K1656-4	SF 4200 Stationary Fan (2 HP)
K1669-10	Lamp with Arc Sensor for SF 4200 Fan
K1671-1	EC 2 Extension Crane, 7 ft. (2.1 m)
K1671-2	EC 4 Extension Crane, 14 ft. (4.3 m)
K1672-1	Feeder Hanging Rail

#### General

K1750-1	230V Conversion Kit for SF 2400 Fan
K1673-2	Cellulose Filter
K1673-4	High Efficiency Cellulose/Polyester Filter
K1534-2	Air Exhaust Silencer

## Accessories

## Modular Extraction Hood

<i>Product Number</i>	<i>Modular Extraction Hood Size - ft. (m)</i>
AD1234-80	3.28 x 4.92 (1.0 x 1.5)
AD1234-81	3.28 x 6.56 (1.0 x 2.0)
AD1234-82	3.28 x 8.20 (1.0 x 2.5)
AD1234-83	3.28 x 9.84 (1.0 x 3.0)
AD1234-84	3.28 x 11.48 (1.0 x 3.5)
AD1234-85	3.28 x 13.12 (1.0 x 4.0)
AD1234-86	4.92 x 4.92 (1.5 x 1.5)
AD1234-87	4.92 x 8.20 (1.5 x 2.5)
AD1234-88	4.92 x 9.84 (1.5 x 3.0)
AD1234-89	4.92 x 11.48 (1.5 x 3.5)
AD1234-90	4.92 x 13.12 (1.5 x 4.0)
AD1234-91	6.56 x 4.92 (2.0 x 1.5)
AD1234-92	6.56 x 6.56 (2.0 x 2.0)
AD1234-93	6.56 x 8.20 (2.0 x 2.5)
AD1234-94	6.56 x 9.84 (2.0 x 3.0)
AD1234-95	6.56 x 11.48 (2.0 x 3.5)
AD1234-96	6.56 x 13.12 (2.0 x 4.0)
AD1234-98	3.28 x 14.76 (1.0 x 4.5)
AD1234-99	3.28 x 16.40 (1.0 x 5.0)
AD1234-100	3.28 x 18.04 (1.0 x 5.5)
AD1234-101	4.92 x 14.76 (1.5 x 4.5)
AD1234-102	4.92 x 16.40 (1.5 x 5.0)
AD1234-103	4.92 x 18.04 (1.5 x 5.5)
AD1234-104	6.56 x 14.76 (2.0 x 4.5)
AD1234-105	6.56 x 16.40 (2.0 x 5.0)
AD1234-106	6.56 x 18.04 (2.0 x 5.5)
AD1234-107	8.20 x 8.20 (2.5 x 2.5)
AD1234-108	9.84 x 8.20 (3.0 x 2.5)
AD1234-109	9.84 x 9.84 (3.0 x 3.0)
AD1234-110	9.84 x 14.76 (3.0 x 4.5)
AD1234-111	11.48 x 8.20 (3.5 x 2.5)
AD1234-112	11.48 x 9.84 (3.5 x 3.0)
AD1234-113	11.48 x 11.48 (3.5 x 3.5)
AD1234-114	11.48 x 14.76 (3.5 x 4.5)
AD1234-115	11.48 x 16.40 (3.5 x 5.0)
AD1234-116	13.12 x 8.20 (4.0 x 2.5)
AD1234-117	13.12 x 9.84 (4.0 x 3.0)
AD1234-118	13.12 x 11.48 (4.0 x 3.5)
AD1234-119	13.12 x 13.12 (4.0 x 4.0)
AD1234-120	13.12 x 14.76 (4.0 x 4.5)
AD1234-121	13.12 x 16.40 (4.0 x 5.0)
AD1234-122	13.12 x 18.04 (4.0 x 5.5)
AD1234-123	14.76 x 8.20 (4.5 x 2.5)
AD1234-124	14.76 x 14.76 (4.5 x 4.5)
AD1234-125	16.40 x 8.20 (5.0 x 2.5)
AD1234-126	16.40 x 9.84 (5.0 x 3.0)
AD1234-127	16.40 x 14.76 (5.0 x 4.5)
AD1234-128	16.40 x 16.40 (5.0 x 5.0)
AD1234-129	18.04 x 8.20 (5.5 x 2.5)
AD1234-130	18.04 x 9.84 (5.5 x 3.0)
AD1234-131	18.04 x 11.48 (5.5 x 3.5)
AD1234-132	18.04 x 14.76 (5.5 x 4.5)
AD1234-133	18.04 x 16.40 (5.5 x 5.0)
AD1234-134	18.04 x 18.04 (5.5 x 5.5)

*General*

S28058-24	Light Kit
S28058-25	Leg, 6.56 ft. (2.0 m)
S28058-26	Leg, 8.2 ft. (2.5 m)
S28058-27	Leg, 9.84 ft. (3.0 m)
S28058-52	Leg, 11.48 ft. (3.5 m)
S28058-28	Leg Mounting Kit
S28058-22	Curtain Bracket Kit
S28058-53	Semi-transparent (red), Curtain Strip: 82 ft. (25 m) Roll
S28058-59	Non-transparent (green), Curtain Strip: 82 ft. (25 m) Roll

## Guardian™ Fire Safety Solutions

*General*

AD1387-4	Spark Guardian™ 10
AD1387-5	Spark Guardian™ 16
AD1387-6	Spark Guardian™ 20
AD1387-22	Oil Guardian™ 400/3/50
AD1387-23	Oil Guardian™ 480/3/60
AD1387-24	Oil Guardian™ 600/3/60
AD1387-29	Guardian™ Control
AD1387-57	Flame Guardian™ 200
AD1387-58	Flame Guardian™ 500
AD1387-28	Smoke Detector
AD1387-25	Heat Detector Set
AD1387-27	Spark Detector Set
AD1387-54	Solenoid Valve

*Sliding Valves*

AD1387-44	Sliding Valve, 250 mm
AD1387-45	Sliding Valve, 315 mm
AD1387-46	Sliding Valve, 400 mm
AD1387-47	Sliding Valve, 500 mm
AD1387-48	Sliding Valve, 630 mm
AD1387-49	Sliding Valve, 10 inch (254 mm)
AD1387-50	Sliding Valve, 12 inch (305 mm)
AD1387-51	Sliding Valve, 16 inch (406 mm)
AD1387-52	Sliding Valve, 20 inch (508 mm)
AD1387-53	Sliding Valve, 24 inch (610 mm)



# TRAINING SOLUTIONS

- Comprehensive Training Solutions for Educational Institutions and Industrial Training
- Blended Learning Approach combining Virtual Reality and Hands-on Welding
- For more educational information and resources visit us at: [www.lincolnelectric.com/training-equipment](http://www.lincolnelectric.com/training-equipment)

## VRTEX® Mobile

Portable welding training simulator.

## VRTEX® 360

Advanced welding simulator.



VIRTUAL REALITY

## Education Cell 2.0

Portable, self-contained robotic welding package.



## Power Wave® C300 Ready-Pak® Package

Multi-process Education Package.



(See page 31 for details.)

## Welding Booth

Stationary production or training space.



## Traditional Welding Gear Ready-Pak®



EQUIPMENT

MODEL	PROCESSES				JOINT CONFIGURATIONS					POSITIONS						STAND		
	SMAW	GMAW	FOAW-GS	FOAW-SS	Flat Plate	Tee Joint	Groove Joint	6" Diameter Schedule 40 Pipe	2" Diameter XXS Pipe	1G	2F	2G	3F	3G	4F	4G	All Position	Tabletop
VRTEX® 360	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
VRTEX® Mobile	optional	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

# Education Cell 2.0

## Robotic Welding

The Lincoln Electric Robotic Welding Education Cell is ideal for training and demonstration purposes in a welding lab, classroom or even at a recruitment event. The self-contained, advanced manufacturing and robotic welding training package makes it an ideal solution for technical training at universities, trade schools and workforce development programs.

- **Expandable work surface** provides the instructor room to teach robotic programming and welding skills.
- **Small system footprint** – Designed to fit through a standard doorway to easily move into a classroom or welding lab and simply positioned for best viewing during demonstrations, training and programming.
- **Ready to Perform** – The Education Cell includes Lincoln Electric robotic welding equipment and welding wire, integrated safety measures in the work cell design and FANUC® Robotics robot and software.
- **Integrated Safety Measures** throughout the work cell design and robotic software, and 2 welding hand shields supplied with the robotic system.
- **Flexible Design** – Includes an integrated gas bottle fixture or connection option and a fume extractor bracket for connecting to a central welding ventilation system.



Shown: AD1222-48  
Robotic Welding Education Cell 2.0

[www.lincolnelectric.com/schoolrobots](http://www.lincolnelectric.com/schoolrobots)

### Processes

- GMAW
- Pulsed
- Flux-Cored

Input 60 Hz

### System Features

- Power Wave® R350
- Power Wave® Software Capability
  - Production Monitoring™ 2.2
  - CheckPoint™
- AutoDrive® 4R100 Wire Drive
- Magnum® PRO robotic welding torch and consumables
- SuperArc® L-56® GMAW welding wire
- FANUC® Robotics ARC Mate® 50iC/5L Robot Arm
- FANUC® Robotics R-30iA Mate Controller
- FANUC® Robotics LR ArcTool® Software

### Literature

E10.122

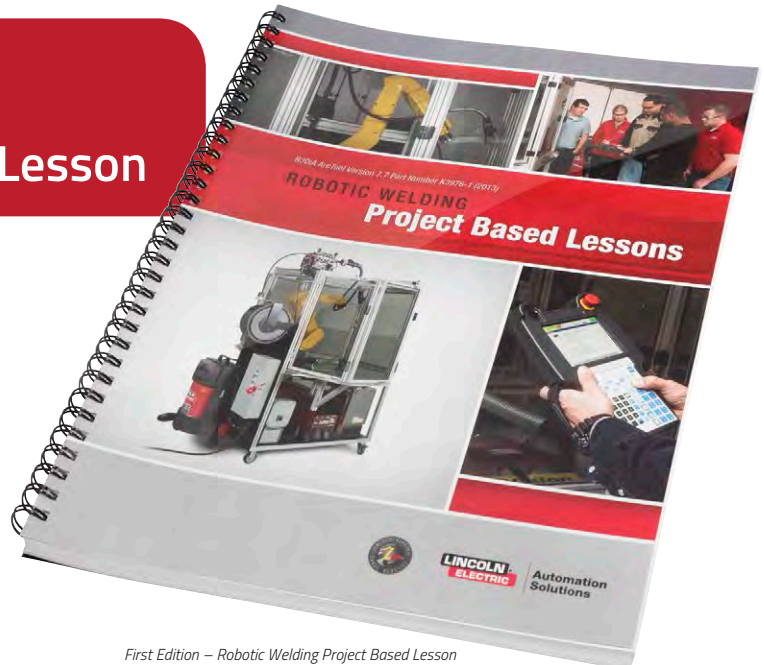
Product Name	Product Number	Work Surface Area ft <sup>2</sup> (m <sup>2</sup> )	Input Power	H x W x D inches (mm)	Net Weight lbs. (kg)
Robotic Welding & Programming Training Pkg.	AD1222-48	13.89 (1.29)	230V Standard/welding voltage 120V Optional/robot operation and programming	sides expanded: 81.23 x 64.82 x 66 (2057 x 1651 x 1676)	870 (304)
Classroom Ready Robotic Welding & Programming Training Pkg.	AD1222-50				
Vision Enabled Robotic Welding & Programming Training Pkg.	AD1222-49			sides folded: 81.23 x 64.82 x 32 (2057 x 1651 x 813)	
Classroom Ready and Vision Enabled Robotic Welding & Programming Training Pkg.	AD1222-51				

# NEW!

## Robotic Welding Project Based Lesson

### The Robotic Welding Project Based Lessons

- Designed for use with the Welding Education Cell 2.0
- 13 Lessons geared for varying education levels
- Interactive real-world approach for production welding instruction
- Develops problem solving and decision-making skills
- Includes step-by-step instructions and discussion questions



First Edition – Robotic Welding Project Based Lesson  
Order K3976-1



# Welding Booth

## Effective Production or Training Space with Integrated Weld Fume Control

The Lincoln Electric Welding Booth is ideal for use in stationary production welding applications, vocational centers, and training facilities. It can be configured with shelving, brackets, hooks, lighting, and air/gas connections to meet the needs of the welding operator or student. Source extraction weld fume control can be easily integrated into the booth, with an extraction arm and connection to a Central System.



### Processes

(Power Source Controlled)

- Stick
- TIG
- MIG
- Flux-Cored
- Metal-Cored
- Submerged Arc

### Recommended Accessories

- Work Table with Adjustable Overhead Welding Bracket
- Welding Curtain
- Tool Shelves with Torch Holders
- Locker Box

### Literature

MC10-87

### Welding Booth

- **Rugged Steel Construction** – Endures the rigors of production welding operations or training environment.
- **Easy Installation** – Helps to minimize start-up costs.
- **Generously Sized** – Plenty of room to maneuver within the work or training space. Standard booth sizes of 5 ft. x 5 ft. (1.5 x 1.5 m) and 6 ft. x 6 ft. (1.8 x 1.8 m) with a height of 7.5 ft. (2.3 m) for both sizes meet AWS guidelines for booth width and depth.

[www.lincolnweldfumecontrol.com](http://www.lincolnweldfumecontrol.com)

### Optional Extraction Arm

- **Telescopic Arm with 360° Rotatable Hood** – Telescopic tube design allows maximum extension and compression. Spring-balanced mechanism provides easy movement and ensures the hood stays where it is positioned. Ideal for pipe welding; position the arm at the start of the weld and no additional adjustment is necessary. Arm length is 40-80 inches (1016 x 2032 mm).
- **Rugged Design** – Made from durable dent and scratch resistant material.
- **Source Capture Solution** – More effective than back draft designs as a means of controlling weld fume.



Welding Booth shown with optional Welding Curtain

# Comprehensive Training Solutions

## Helping Communities Close the Manufacturing Skills Gap – One Job at a Time.

- VRTEX® 360 and Mobile Virtual Reality Welding Training Systems
- Robotic Education Cell
- Welding Booths and Fume Removal Booths
- Power Wave® C300 Education Ready-Pak®
- Plasma Cutting CNC Table Educational Packages

Visit [www.lincolnelectric.com/training-equipment](http://www.lincolnelectric.com/training-equipment)

**“The center exists to find, train, and place the right people in the right jobs –it is always all about jobs,”**

Susan Muha  
Executive Vice President, Workforce and Economic Development  
Advanced Technology Training Center  
Cuyahoga Community College, Cleveland, Ohio



# VRTEX® Mobile

**The Virtual Welding Revolution Has Arrived**

The VRTEX® Mobile is a basic, entry level welding training system. It is designed to provide mobility in an easy to use and engaging welding training tool. It is ideal for initial, basic welding training, as a recruitment and engagement tool for educational and industry, and for employment and screening for human resources. The system can also be used as an evaluation tool for instructors and educators to get a baseline on student knowledge.

- Innovation
- Performance
- Eco Friendly
- Flexibility
- Service and Support



Shown: K3165-1 VRTEX® Mobile

**Simulates Processes**

- GMAW: Short arc, spray & pulse
- FCAW: Gas-shielded & Self-shielded
- SMAW (optional)



**System Includes**

- Mobile Welding Machine
- Tabletop Stand
- Welding Helmet
- MIG/MAG Gun
- Coupons
  - Flat plate
  - Tee Joint
  - Groove Joint

**Recommended Accessories**

- K3165-3 VRTEX® Mobile SMAW Kit
- K3268-1 VRTEX® Mobile Arm Rest

**Literature**

MC12-93

[www.vrtex.com](http://www.vrtex.com)

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
VRTEX® Mobile Standard Frequency	K3165-1	115/230/1/50/60	4A/115/2A/230	Machine: 32.5 x 19.5 x 38.5 (826 x 496 x 978) Coupon Stand w/Arm: 17 x 12 x 14 (431 x 305 x 356) Monitor: 14.4 x 15.4 x 8.0 (366 x 392 x 204) Crate: 42.5 x 24 x 48 (1080 x 610 x 1220)	Machine & Stand: 125 (56.7) Monitor: 20 (9) Crate: 135 (61.3)
VRTEX® Mobile Standard Frequency One-Pak®	K4012-1				
VRTEX® Mobile Alternate Frequency	K3165-2				
VRTEX® Mobile Alternate Frequency One-Pak®	K4013-1				

## NEW! Project Based Lessons for the VRTEX® Welding Training Systems

A blended training approach of hands on welding combined with virtual welding.

The Project Based Lessons for VRTEX:

- Designed with reference and ties to educational common core standards and Welding Society SENSE standards.
- Solve complex problems in a multi-disciplinary approach.
- Utilize fundamental skills - reading, writing, and math.
- Incorporate and teach teamwork, problem solving, research gathering, time management, and information synthesizing.



Project Based Lesson for the VRTEX® Welding Training Systems Order K4057-1

## NEW! Lessons In Arc Welding Curriculum for the VRTEX® 360

Based on AWS EG 2.0

(Guide for the Training of Welding Personnel: Level-Entry Welder)

The VRTEX® curriculum:

- Designed for learning welding practices using traditional welding and virtual welding.
- Detailed lesson plans with exercises, assignments and review questions.
- Video demonstrations with quick facts and resources for each lesson.
- Complete answer key for instructors.



First Edition - SMAW Welding Training Curriculum Order K3205-1

# VRTEX® 360

**The Virtual Welding Revolution Has Arrived**

The VRTEX® 360 is a virtual reality arc welding trainer. This computer based training system is an educational tool designed to allow students to practice their welding technique in a simulated environment. It promotes the efficient transfer of welding skills to the welding booth while reducing material waste associated with traditional welding training. The combination of realistic puddle simulation and arc welding sound tied to an exciting, hands-on training experience.

- Innovation
- Performance
- Eco Friendly
- Flexibility
- Service and Support



Shown: K1332-1  
VRTEX® 360



**Simulates Processes**

- SMAW: 6010, 6013 and 7018
- GMAW: Short arc, spray, pulse & STT®
- FCAW: Gas-Shielded & Self-Shielded

**Input**



**System Includes**

- Welding Machine
- Welding Stand
- Welding Helmet
- MIG/MAG Gun
- Retractable Stinger
- Coupons
  - Flat Plate
  - Tee Joint
  - Groove Joint
  - 2 in. (50.8 mm) diameter XXS Pipe
  - 6 in. (152.4 mm) diameter Sch 40 Pipe

**Literature**  
MC09-98

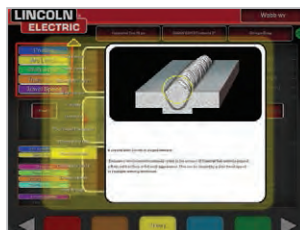
[www.vrtext.com](http://www.vrtext.com)

Product Name	Product Number	Input Power Voltage/Phase/Hz	Input Current	H x W x D inches (mm)	Net Weight lbs. (kg)
VRTEX® 360 Standard Frequency	AD1332-1	115/230/1/50/60	4/2A	Machine: 71 x 30 x 50 (1803 x 762 x 1270) Stand: 78 x 39 x 47 (1981 x 990 x 1194)	Machine: 360 (163) Stand (w/o arm): 102 (46)
VRTEX® 360 Alternate Frequency	AD1332-2				

## VRTEX® 360 Extensions™ Upgrade Program

The Lincoln Electric VRTEX® 360 Extensions™ software upgrade program ensures the development of new and exciting features and functionality to the VRTEX® 360. The upgrade program, is ideal for schools, unions and other training facilities.

The VRTEX® 360 Extensions™ upgrade program offers the following releases:



**UPGRADE 1 :**

Product # AD1390-1

- THEORY function which explains and defines elements within the virtual environment
- AWS E6013 stick electrode
- Process piping manufacturing welding environment



**UPGRADE 2 :**

Product # AD1390-2

- AWS virtual bend test
- Advanced scoring modules based on the American Welding Society D1.1 or ASME
- Motorsports garage welding environment
- Instructor panning view function



**UPGRADE 3 :**

Product # AD1390-3

- GMAW aluminum welding support including visual and audio sound differences
- Shielding gas selections for aluminum welding
- Video replay for instructor or student review
- Various welder learning levels



**UPGRADE 4 :**

Product # AD1390-4

- GMAW stainless upgrade
- Expanded THEORY functionality
- Demo Weld functionality
- Support includes 0.052 solid wire and SMAW on thinner material



**UPGRADE 5 :**

Product # AD1390-5

- New lap weld coupon with support for mild steel, aluminum and stainless steel
- Ability to provide a score on a welding pad
- Additional GMAW-P, pulse spray welding modes for use on mild steel

# Plasma Cutting 2x2 and 4x4 Educational Packages

## CNC Cutting

Torchmate® Plasma Cutting Education Packages are the perfect solution to teach CNC plasma cutting in schools, colleges and training centers. The education packages are equipped with advanced technology and CAD/CAM software to provide a real-world learning experience for students.

- **Small footprint** – Designed with a small table footprint for easy placement in a welding or training lab.
- **Easy to Use Software** – Torchmate® CAD/CAM shape creation software is user-friendly and provides students the ability to learn about nesting, scanning, tool path and more.
- **Unlimited Software License** – Unlimited Student CAD/CAM software licenses and One Master Teacher license.
- **Full Assembled** – Table is completely assembled with base and slates. Just connect air and water.



Shown:  
Torchmate® 4x4 CNC Educational System

### Processes

- Plasma Cutting

### System Features

- Torchmate® 2x2  
CNC Educational System*
- 2x2 Portable CNC Table
  - Waterbed Table
  - True Arc Voltage Height Control
  - USB Electronics Box (cabling included)
  - Torchmate® CAD/CAM Shape Creation Software
  - Clip Art DXF Package

- Torchmate® 4x4  
CNC Educational System*
- 4x4 Portable CNC Table
  - Waterbed Table
  - True Arc Voltage Height Control
  - USB Electronics Box (cabling included)
  - Torchmate® CAD/CAM Shape Creation Software
  - Clip Art DXF Package

# CNC Cutting Solutions

- Small table footprint – expandable for larger parts.
- No student seat licenses.
- Easy to learn, easy to teach intuitive software.



# ACCESSORIES



**K29 Vertical Lift Adjuster**  
Provides 4 inch (102 mm) hand crank vertical adjustment of head position. Also includes up to 3-3/4 inch (95.2 mm) in-and-out horizontal adjustment with stops that can be preset for simple repetition of the same adjustment.



**K96 Horizontal Head Adjuster**  
Provides crank adjustment of head position. Has 2 inch (51 mm) horizontal travel.



**K119 Flux Cone**  
Fits K113 submerged arc guns for welding without the Continuous Flux Feed Tank Assembly.



**K162-1 Spindle Adapter for Readi-Reels® and Spools**  
2 inch (51 mm) O.D. spindle for mounting Readi-Reels® and 2 inch (51 mm I.D. spools up to 60 lb. (27.2 kg) capacity to custom installations.



**K163 Undercarriage**  
Includes mounting frame, front casters, rear wheels and handle for hand towing. For use with Wire Reel Stand.



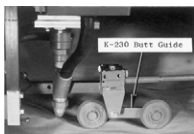
**K202 Burnback Kit**  
Provides adjustable delay of power source output shut off to prevent electrode sticking in crater when using high wire feed speeds. Includes a cold inch switch.



**K219 Automatic Flux Hopper Assembly**  
For submerged arc welding. Includes electric flux valve.



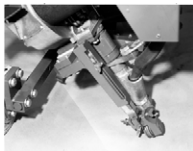
**K230 Butt Seam Guide Kit**  
Mount in place of the standard front wheel to ride in a V-groove or open 1/8-3/8 inch (3.2-9.5 mm) butt joint, keeping the wire in required alignment.



**K231-1 Submerged Arc Contact Nozzle Assembly**  
For 5/64 thru 3/16 inch (2.0 thru 4.8 mm) wire electrode at currents generally below 600 amps. Outer flux cone gives full flux coverage with minimum consumption.



**K232 Horizontal Fillet and Lap Adapter Kit**  
Includes a rear guide wheel, head tension spring and front guide wheel assembly on an adjustable arm which rides in the joint to maintain alignment and electrode angle. Kit includes separate front guide wheel assemblies for fillet and lap joints. Welds to the left or right of the tractor's center line.



**K283 Portable Digital Wire Feed Speed Meter**  
When clamped on an exposed section of continuously fed electrode, unit reads wire feed speed in inches per minute.



**K285 Concentric Flux Cone Assembly**  
For use with K148B, Positive Contact Nozzle Assembly. Provides concentric flux coverage around the electrode.



**K299 Wire Reel Assembly**  
Includes wire reel for 50-60 lb. (22.7-27.2 kg) coils, wire reel mounting and brake.



**K305 Wire Reel and Flux Tank Assembly**  
Includes flux tank, undercarriage, wire reel and brake assembly in open shroud.



**K334 Starting or Crater Module**  
Permits additional settings of wire feed speed and voltage for an adjustable period of time (10 seconds max). Can be used for either a starting procedure or a crater fill procedure. If both are required, two assemblies must be ordered.



**K336 Remote Interface Module**  
Permits remote operation of the NA-5 Inch Up, Inch Down, Start and Stop Functions by either of the following user-supplied external signals and provides electrical isolation of the NA-5 control circuitry from these signals:

- Switches – Momentary closure of contacts rated for 24 volts, 5 milliamperes, DC.
- 24 Volt Signals – Momentary application of 24 volt  $\pm 10\%$  AC or DC signal capable of 5 milliamperes steady state. (.15 amp peak capacitive in rush) per input. This module can be used with all codes of NA-5 Controls and replaces the earlier K336 Remote Pushbutton Interface Module, which provided for only external switch closure signals.



**K363P 22-30 lb. Readi-Reel® Adapter**  
Adapts 22-30 lb. (10-14 kg) Lincoln Electric Readi-Reels® of electrode to 2 inch (51 mm) spindle.



**K385-2 CV Adapter**  
Provides constant voltage output for semiautomatic wire welding. Includes 14-pin MS-Type connection and local/remote switch.



**K396 Track Section**  
Each section provides 70 inch (1.8 m) of travel.



**K425 Gas Solenoid Kit**  
Includes solenoid valve and mounting bracket.



**K435 14 lb. Innershield® Coil Adapter**  
Permits 14 lb. (6 kg) Innershield® electrode coils to be mounted on 2 inch (51 mm) O.D. spindles.



**K468 8 inch O.D. Spool Adapter**  
Permits 8 inch (200 mm) O.D. spools to be mounted on 2 inch (51 mm) O.D. spindles.



**K484 Jumper Plug Kit**  
Required to close the contactor in the power source when the power source is used with a remote output contactor such as the contactor in across-the-arc wire feeders.



**K487-25 Magnum® SG Spool Gun**  
Lightweight, well-balanced, semiautomatic spool gun designed primarily for easy, accurate aluminum wire feeding. Includes 25 ft. (7.5 m) gun cable, .035 inch (0.9 mm) contact tip installed, package of six contact tips, 5/64 inch (2.0 mm) Allen wrench and operating manual.



**K488 SG Control Module**  
Provides control of wire speed and gas flow. For use with CV power sources and CV Engine Drives with output contactor.



**K492-10 Control Module Input Cable**  
Terminal Strip and Lug. Required for connection of control module to power source. Consists of control and electrode cables and gas line. 10 ft. (3.0 m). For Lincoln power sources having terminal strip and lug connections.



**K493-10 Control Module Input Cable**  
14-pin MS-type and Twist Mate™. Required for connection of control module to power source. Consists of control and electrode cables and gas line. 10 ft. (3.0 m). For Lincoln power sources having 14-pin MS-type control connections and Twist Mate™ power connections.



**K494 Gas Solenoid Assembly**  
Includes solenoid valve and mounting bracket.



**K520 Utility Cart**

Heavy duty cart stores and transports welder, 150 cubic foot shielding gas cylinder, welding cables and accessories. Includes stable platforms for welder and gas bottle, lower tray for added storage capacity and adjustable height handle.



**K586-1 Deluxe Adjustable Gas Regulator and 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.



**K590-6 Water Connection Kit**

Includes quick connect fittings on front and back of wire drive for use with water-cooled guns and coolers. Kit provides for one gun.



**K623-1 Wire Feed Module**

Provides constant voltage (CV) output with improved arc stability for welding with Innershield® wire. Also excellent for MIG welding. Includes 14-pin MS-type connection and local/remote switch. Easy installation. The recommended wire feeder is the LN-25 Ironworker®.



**K639-1 SHM-300 Nozzle, 12 inches (300 mm)**

**K639-2 SHM-400 Nozzle, 16 inches (400 mm)**

**K639-3 SHM-500 Nozzle, 20 inches (500 mm)**

**Aluminum Suction Nozzles with Magnetic Mounting**  
Includes S20591-7 adapter for 1-3/4 inch (45 mm) hose. Best capture distance: approximately 1-1/2 inches (38 mm).



**K639-4 SHMS-400 Low Noise Nozzle**

16 inch (400 mm) aluminum suction nozzle with magnetic mounting. Includes S20591-7 adapter for 1-3/4 inch (45 mm) hose. Best capture distance: 1-1/2 inches (38 mm).



**K639-5 SHFA Flat Suction Nozzle**

6 inch (150 mm) aluminum suction nozzle with 20 inches (500 mm) flexible steel hose and magnetic mounting. Includes S20591-7 adapter for 1-3/4 inch (45 mm) hose. Best capture distance: < 4 inches (100 mm).



**K639-6 UNM Suction Nozzle for Heavy Smoke**

8 inch (200 mm) aluminum suction nozzle with magnetic mounting. Includes S20591-7 adapter for 1-3/4 inch (45 mm) hose. Best capture distance: < 4 inches (100 mm).



**K639-20 Gun Mounted Nozzle Kit (OT-25)**

Nickel plated brass nozzle slips over the gun's gas nozzle and secures with screw. Includes a total of 16 ft. (5 m) of hose and all necessary adapters including SS-3245 for connection to 1-3/4 inch (45 mm) hose. Gun sold separately.



**K683-3 Dual Procedure Switch**

Allows the use of two welding procedures with one Lincoln Electric Magnum® gun. 15 ft. (4.5 m).



**K691-10 Control Module Input Cable**

14-pin MS-type and Lug. Required for connection of control module to power source. Consists of control and electrode cables and gas line. 10 ft. (3.0 m). For Lincoln engine driven power sources with 14-pin MS-type connection, separate 115V NEMA receptacles and lug power connections.



**K704 Accessory Kit, 400 Amp**

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, work clamp and electrode holder.



**K761 Wheel Kit**

Includes axle, two wheels, and assembly hardware. Can be installed in minutes.



**K802D Power Plug Kit**

Provides two 115V plugs rated at 20 amps each, and two 230V plugs rated at 15 amps each. 115V plugs may not be compatible with common household receptacles.



**K802N Power Plug Kit**

Provides four 120V plugs rated at 20 amps each, and one dual voltage, full KVA plug rated at 120/240V, 50 amps. 120V plug may not be compatible with common household receptacles.



**K804-1 Multi-Process Switch**

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.



**K814 Arc Start™ Switch**

May be used in place of the Foot or Hand Ampctrl™. Comes with a 25 ft. (7.6 m) cable and 6 pin plug connector. Attaches to the TIG torch for convenient finger control to start and stop the weld cycle at the current set on the machine.



**K841 K842 Undercarriage**

Platform undercarriage with mounting for two gas cylinders at rear of welder.



**K843 Ampctrl™ Adapter Kit**

Adapts Ampctrl™'s 6-pin MS-type plug connection to terminal strip on power source.



- K852-25** for #4-#6 cable
- K852-50** for #1-#2 cable
- K852-70** for 1/0-2/0 (50-70 mm<sup>2</sup>) cable
- K852-95** for 3/0 (95 mm<sup>2</sup>) cable

**Twist Mate™ Cable Plug**

For connecting welding cable to output terminal receptacles.



**K857 K857-1 Remote Output Control**

For remote output of welding voltage. Consists of control box with four conductor cable and 6-pin MS-type connector. K857 has cable length of 25 ft. (7.6 m). Cable length of K857-1 is 100 ft. (30 m).



**K857-2 Remote Output Control with 12-pin Universal Connector**

Permits remote adjustment of output. 25 ft. (7.6 m) cable.



**K864 Remote Control Cable Adapter**

Y connector 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.



**K866 Undercarriage**

For hand moving. Includes handle, axle, wheels, front bracket and mounting hardware.



**K867 Universal Adapter Plug**

The adapter plug allows user connection of any suitable accessory or wire feeder cable to the output contactor and auxiliary power circuitry of power source with 14-pin receptacle. Consists of a 14-pin MS-type (Amphenol) plug with 8 inch (203 mm) stripped leads.



**K870 Foot Ampctrl™**

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



**K870-2 Foot Ampctrl™ with 12-pin Universal Connector**

Provides 25 ft. (7.6 m) of remote current control for TIG welding.



**K874 Undercarriage**

Platform undercarriage with mounting for two gas cylinders at rear of welder.



**K875  
Accessory  
Kit, 150 Amp**

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, filter plate, work clamp and electrode holder.



**K884-5  
K884-6  
Accu-Trak®  
Drum Payoff  
Kit**

A Payoff Kit must be used with Accu-Trak® Drums to ensure precise feeding. The fitting on the top of the Payoff Kit has a 1/2-14 NPT internal pipe thread to facilitate the connection of the conduit. Use K884-5 for 500 lb. drums and K884-6 for 250 lb. and 1,000 lb. drums.



**K886-2  
Ranger® Canvas  
Cover**

Protect your machine when not in use. Made from attractive red canvas that is flame retardant, mildew resistant and water repellent.



**K887-1  
Ether  
Start Kit**

Provides maximum cold weather starting assistance for frequent starting below 10°F (-12°C). Required ether tank is not provided with kit.



**K903-1  
Spark Arrestor Kit**

Attaches to muffler exhaust tube. Virtually eliminates spark emissions.



**K910-1  
K910-2  
Work Clamp**

Jaws open full 2-1/2 inches (63 mm). Welding cable lug bolts directly to the work clamp. 60% duty cycle. Select K910-1 for 300 Amp applications. K910-2 for 500 Amp.



**K924-4  
Remote Control**

Remote control rheostat permits machine output changes up to 100 ft. (30.5 m) from the machine. Includes local/remote switch and receptacle for older machine control panels.



**K930-2  
TIG Module**  
Portable, high frequency unit with gas valve for TIG welding. Rated at 300 amps/60% duty cycle.



**K936-1** for 9-pin to 14-pin  
**K936-3** for 9-pin to 6-pin plus 115V  
**K936-4** for 9-pin to 115V



**Control Cable**  
Connects TIG Module to power source.

**K937-45  
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.



**K938-1  
Contactor Kit**  
Installs in the K930-2 TIG Module for use with welders without a contactor. Makes the TIG torch electrode electrically "cold" until the Amptrol™ is activated.



**K939-1  
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 inches (254 x 381 mm). Includes a latch and provisions for a user-supplied padlock to lock the TIG Module in place.



**K940-25  
K940-75  
Sense Lead Kit**  
Recommended for extended cable length. Lead allows machine to sense voltage directly at the work piece for improved arc performance. Lead length of K940-25 is 25 ft. (7.6 m). K940-75 is 75 ft. (23 m) in length.



**K963-3  
Hand Amptrol™**  
Provides 25 ft. (7.6 m) of remote current control for TIG welding. (6-pin plug connection). Hook and loop straps secure it to the torch.



**K963-4  
Hand Amptrol™ with  
12-pin Universal  
Connector**  
Provides 25 ft. (7.6 m) of remote current control for TIG welding.



**K964-1  
Undercarriage**  
Comes complete with single gas cylinder platform, bracket, and chain, to accommodate 6 to 9 inch (152 to 229 mm) diameter gas cylinders, from 24 to 56 inch (610 to 1422 mm) high. The undercarriage features a pivoting gas platform to easily load the bottle without lifting.



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



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



**K1504-1  
50-60 lb. Coil  
Adapter**  
Adapts 50-60 lb. (22.6-27.2 kg) coils of Lincoln Electric electrode to 2 inch (51 mm) spindle.



**K1520-1  
115V/42V  
Transformer Kit**  
Provides a way to use wire feeders requiring 42V input power with power sources that have 115V AC available on the terminal strip.



**K1524-3  
Heavy Duty Wire  
Reel Stand**  
For use with Lincoln Electric 10-60 lb. (4.5-27.2 kg) wire packages that use a 2 inch (51 mm) spindle. Hole in stand fits over lift bail.



**K1528-1  
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.



**K1546-1  
K1546-2  
Incoming Bushings  
for Weld Wire  
Conduit**  
Installs in wire feeder and connects directly to weld wire conduit (not included). For use in boom systems, long distances, or large payoff packages. Use K1546-1 with .025-1/16 inch (0.6-1.6 mm) diameter wire and K1546-2 for 1/16-1/8 inch (1.6-3.2 mm) diameter wire.



**K1555-1  
Insulated Lift Bail**  
Allows the entire wire feeder to be hung from a crane or hook. Use with Heavy Duty Wire Reel Stand.



**K1556-1  
Caster Kit –  
Light Duty**  
Mounts to the Heavy Duty Wire Reel Stand. Allows for easy movement of wire feeder.



**K1557-1  
Swivel Platform**  
Mounts to the lift bail on the power source and bottom of the Heavy Duty Wire Reel Stand. Wire feeder may be lifted off if needed. Compatible with Light Duty Caster Kit. Includes "lazy susan" parts tray.



**K1570-1  
Dual Cylinder  
Platform  
Undercarriage**  
Platform undercarriage for mounting two gas cylinders at rear of welder.



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



**K1622-1  
Twist Mate™ Torch  
Adapter**  
Use to connect 1-piece air-cooled TIG torches (PTA-9/PTA-17) to power sources with combined gas/power Twist Mate™ connectors.



**K1634-1  
Plastic Wire Cover Kit**  
Plastic enclosure for 30-44 lbs. (13.6-19.9 kg) wire packages.





**K1634-2**  
**Plastic Wire Cover Kit**  
 Plastic enclosure for up to 60 lb. (27.2 kg) wire packages.



**K1634-4**  
**Spool Cover**  
 For use with 30-40 lb. (13.6-18.1 kg) spools.

**K1656-1**  
**SF 2400 Fan**  
 The 1HP, 115/1/60 fan has self-cleaning concave blades and provides an open air flow of 1200 CFM. Requires Wall Mounting Bracket.



**K1656-4**  
**SF 4200 Fan**  
 The 2 HP, 230/3/60 fan has self-cleaning concave blades and provides a minimum airflow of 1750 CFM. Includes mounting bracket.



**K1657-1**  
**K1657-2**  
**SF 2400 Wall Mounting Bracket**  
 Kit allows mounting of SF 2400 fan and extraction arm or extension crane to wall. Use K1657-1 for LFA 3.1, 4.1, and 4.1-LC extraction arms. Use K1657-2 for LFA 2.0 extraction arm and EC 2 / EC 4 extension cranes.



**K1668-1**  
**Hose and Hood Set**  
 Completely flexible extraction hose with magnetic hood. Ideal for those hard to access fume extraction applications. Hose is reinforced with outside steel rings to protect against wear and crushing. Diameter of hose is 5.75 inches (146 mm), length is 16.4 ft. (5 m). Includes one clamp.



**K1668-2**  
**Exhaust or Extension Hose Set**  
 Use as exhaust hose for Mobiflex® 100-NF or to extend K1668-1. Hose is reinforced with outside steel rings to protect against wear and crushing. Diameter of hose is 5.75 inches (146 mm), length is 16.4 ft. (5 m). Includes two clamps.



**K1668-3**  
**Hose and Hood Set**  
 Flexible extraction hose with magnetic hood set. Ideal for those hard to access fume extraction



applications. Hose is reinforced with outside steel rings to protect against wear and crushing. Diameter of hose is 5.75 inches (146 mm), length is 16.4 ft. (5 m). Includes one clamp.

**K1669-4**  
**K1669-10**  
**Lamp Kit with Arc Sensor**  
 Mounted in the lamp housing, the arc sensor turns the fan on when sensing the arc flash, and turns off 20 seconds after the arc extinguishes. Hood mounted switches turn the unit on and off independently of the arc sensor. Kit includes lamp housing with arc sensor, control box, interconnect wire, hood mounted lamp/fan switch and instruction manual. Required for Statiflex® 400-MS. For SF 2400 Fan, use K1669-4. For SF 4200 Fan, use K1669-10.



**K1671-1** for 7 ft. (2 m)  
**K1671-2** for 14 ft. (4 m)  
**EC 2 / EC 4 Extension Cranes**  
 For large work areas, extend your reach 7 ft. (2 m) or 14 ft. (4 m). A side to side hinge has a unique spring controlled lock to hold the arm in place for steady positioning. Each crane includes support boom, mounting plate, 8 inch tubing, flexible hose, and mounting brackets.



**K1673-1**  
**Cellulose Filter**  
 Use as replacement for cellulose filter included with models K1653-2 and K2497-2 Mobiflex® 200-M.



**K1673-2**  
**Cellulose Filter**  
 Use as replacement for cellulose filter included with models K1741-1 and K2497-4 Mobiflex® 400-MS.



**K1673-3**  
**Cellulose/Polyester High Efficiency Filter**  
 Use as replacement for cellulose/polyester high efficiency filter included with model K1653-3 Mobiflex® 200-M. Filter class MERV 16 per ASHRAE 52.2. Filter can also be used in models K1653-2 and K2497-2.



**K1673-4**  
**Cellulose/Polyester High Efficiency Filter**  
 Use as replacement for cellulose/polyester high efficiency filter included with model K1741-2



Mobiflex® 400-MS. Filter class MERV 16 per ASHRAE 52.2. Filter can also be used in models K1741-1 and K2497-4.

**K1690-1**  
**GFCI Receptacle Kit**  
 Includes one UL approved 120V ground fault circuit interrupter duplex type receptacle and installation instructions. Replaces the factory-installed 120V duplex receptacle. Each receptacle of the GFCI duplex is rated at 20 amps. Maximum total current from the GFCI duplex is limited to 20 amps. Two kits required for all 120V receptacles on Bulldog®, Outback® and Ranger® products.



**K1701-1**  
**Timer Kit**  
 Adds 4-step trigger interlock, spot mode, adjustable run-in speed for smoother arc starting, and adjustable burnback time to minimize wire sticking in puddle. Easy to install.



**K1702-1**  
**Dual Cylinder Kit**  
 Permits side-by-side mounting of two full size gas cylinders, with easy loading.



**K1733-1**  
**Wire Straightener**  
 Straightens wire for better, smoother feeding.



**K1733-4**  
**Micro Wire Straightener**  
 Straightens .035-1/16 inch (0.9-1.6 mm) wire for use with portable feeders.



**K1733-5**  
**Wire Straightener (Automatics)**  
 Includes a three roll wire straightener with adjustable pressure. For up to 7/32 inch (5.6 mm) diameter wire.



**K1736-1**  
**Distribution Box**  
 Makes connecting up to 10 Multi-Weld™ 350 units quick and easy. Contains copper bus bar for connecting multiple "pig-tails". Four "pig tails" included.



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



**K1738-1**  
**Spool Gun Holder**  
 Provides neat storage of spool gun cable, and gas hose on power source.



**K1745-1**  
**Welding Gas Cylinder/LPG Tank Holder**  
 Holds welding gas cylinder or LPG tank (for products with LPG engine). For LPG: Use one holder for LPG tank and a second holder for welding gas cylinder. Both holders will attach to the K1770-1 Undercarriage.



**K1759-70**  
**K1759-95**  
**Twist Mate™ Cable Receptacle**  
 For connecting welding cable to Twist Mate™ cable plug. Use K1759-70 for 1/0-2/0 (50-70 mm<sup>2</sup>) cable and K1759-95 for 2/0-3/0 (70-95 mm<sup>2</sup>) cable.



**K1762-2**  
**TIG Solenoid Kit**  
 Mounts inside the back of the Invertec® V350 PRO. Controls gas flow into the V350 PRO through the Twist Mate™ connector. Includes gas hose and solenoid. (Not compatible with construction model.)



**K1763-1**  
**Advanced Process Panel**  
 Includes Pulsed MIG, Pulse-On-Pulse® and Power Mode® capabilities. Alpha-numeric display for accurate setting.




**K1764-1**  
**Inverter and Wire Feeder Cart**  
 Rear-wheeled cart includes front casters and no-lift gas bottle platform. Convenient handles allow for easy cable storage while full length side trays store parts and tools. Shipped fully assembled. Small footprint fits through 30 inch door.



**K1770-1  
Factory Undercarriage**  
For moving by hand on smooth surface floors. Heavy-duty, puncture-resistant tires and front caster. Convenient steering handle.



**K1803-1  
Work and Wire Feeder 2/0 Weld Cable Package**  
Includes Twist Mate™ connectors, work clamp, 15 ft. (4.5 m) work cable and 10 ft. (3.0 m) electrode cable. Rated 350 amps, 60% duty cycle.



**K1803-2  
Work and Wire Feeder 2/0 Weld Package**  
Includes Tweco®-style Cam-Lock connectors, work clamps, 15 ft. (4.5 m) work cable and 10 ft. (3.0 m) electrode cable. Rated 350 amps, 60% duty cycle.




**K1811-50  
K1811-100  
Sense Lead Kit**  
Required to accurately monitor voltage at the arc for heavy duty applications. Length of K1811-50 is 50 ft. (15.2 m). Length of K1811-100 is 100 ft. (30 m).



**K1813-1  
Cool Arc® 40 Water Cooler**  
Reliable and affordable water cooler for water-cooled TIG, MIG, or plasma cutting applications. Input power: 115/1/50/60. See publication E12.170.



**K1816-1  
Full-KVA Adapter Kit (1-Phase)**  
Provides convenient connection of Lincoln Electric® equipment with NEMA 6-50P plug to Lincoln® engine driven welders having a full KVA receptacle.



**K1828-1  
Under-Cooler Cart Water Cooler**  
Includes "cooler-in-a-drawer" with hoses and a lockable storage drawer on a dual bottle undercarriage.



**K1847-1  
Spark Arrestor Kit**  
Mounts to muffler exhaust tube. Virtually eliminates spark emissions.



**K1859-2  
Water Cooler Hoses (CGA to CGA)**  
For 5/8 inch (15.9 mm) LH CGA fitting applications at both cooler and wire feeder. Kit contains two 25 ft. (7.6 m) hoses with 5/8 inch left hand CGA fittings on both ends of hose.



**K1869-1  
Undercarriage**  
Includes a dual bottle rack with chain and front casters, rear wheels and a handle.



**K1897-1  
Paralleling Kit**  
Permits paralleling of two power sources.



**K1898-1  
Spark Arrestor Kit**  
Attaches to muffler exhaust tube. Virtually eliminates spark emissions.



**K1900-1  
Paralleling Kit**  
Permits paralleling of two power sources.



**K2149-1  
Work Lead Package**  
15 ft. (4.5 m) 4/0 cable with 1/2 inch (12.7 mm) stud lug and work clamp.



**K2150-1  
Work Clamp and Cable Assembly**  
15 ft. 2/0 cable with 1/2 inch (12.7 mm) stud lug and work clamp.



**K2175-1  
K2175-2  
Accu-Pak® Box Payoff Kit**  
A Payoff Kit is necessary to ensure precise feeding from our 100% recyclable Accu-Pak® Box. The fitting on the top of the Payoff Kit has a 1/2-14 NPT internal pipe thread to facilitate the connection of the weld wire conduit. Use K2175-1 for 500 lb. Accu-Pak® Boxes and K2175-2 for 1,000 lb. Accu-Pak® Boxes.



**K2176-1  
Twist Mate™ to Lug Adapter**  
For connection of lugged cable to Twist Mate™ connectors, 18 inch (457 mm) long.



**K2187-1  
Cool Arc® 40 Water Cooler**  
Reliable and affordable water cooler for water-cooled TIG, MIG or plasma cutting applications. Input power: 220-240/1/50/60. See publication E12.170.



**K2207-2  
Ethernet/DeviceNet™ Interface Module**  
This module provides all DeviceNet™ functionality, networking capabilities for Weld Development, Data Logging, Systems Updates, Diagnostics, Weld Settings and Weld Mode Selection.



**K2265-1  
TIG-Mate™ 17V Air-Cooled TIG Torch Starter Pack**  
Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case. Includes: PTA-17V Ultra-Flex™ torch, parts kit, Harris® flowmeter/regulator, 10 ft. (3.0 m) gas hose, and work clamp and cable.



**K2266-1  
TIG-Mate™ 17 Air-Cooled TIG Torch Starter Pack**  
Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case. Includes: PTA-17 Ultra-Flex™ torch, parts kit, Harris® flowmeter/regulator, 10 ft. (3.0 m) gas hose, Twist Mate™ adapter, and work clamp and cable.



**K2267-1  
TIG-Mate™ 20 Water-Cooled TIG Torch Starter Pack**  
Get everything you need for TIG welding in one complete easy-to-order kit packaged in its own portable carrying case. Includes: PTW-20 torch, parts kit, Harris® flowmeter/regulator, 10 ft. (3.0 m) gas hose, Twist Mate™ adapter, work clamp and cable and 10 ft. (3.0 m) water hose.




**K2275-1  
Welding Cart**  
Lightweight cart stores and transports welder, 80 cubic foot shielding gas cylinder, welding cables and accessories. Includes an angled top shelf for easy access to controls, lower tray for added storage capacity, a sturdy fixed handle and convenient cable wrap hanger.




**K2320-1  
Foot Amptrol™ Connector Kit**  
Provides 25 ft. (7.6 m) of remote output control for TIG welding. (6-pin plug connection).



**K2328-1  
Standard Duty Wire Reel Stand**  
For use with Lincoln Electric 10-44 lb. (4.5-20 kg) wire packages that use a 2 inch (51 mm) spindle.



**K2329-1  
Remote Voltage Control Kit**  
Allows arc voltage to be changed at the feeder.



**K2330-1  
Postflow and Burnback Timer Kit**  
Provides adjustable delay of power source output shut off to prevent electrode sticking in crater when using high wire feed speeds.



**K2330-2  
Prewflow, Postflow and Burnback Timer Kit**  
Provides adjustable delay of power source output shut off to prevent electrode sticking in crater when using high wire feed speeds.



**K2335-1  
Adapter for Competitive Power Sources**  
Allows wire feeder to connect to select Miller Electric® power sources.



**K2339-1  
Push-Pull Gun Connection Kit**  
For push-pull guns. Includes push-pull gun receiver bushing, fittings, modified gas-bypass valve, valve removal tool, and control cable extension assembly.



**K2348-1**

**Understorage Cart**  
Adds easy shop mobility and provides shielding gas bottle platform, handy storage drawer and two filler rod holders.



**K2354-2**

**Air Dryer Kit**

Minimizes water content in supply air. Avoids cold weather air hose ice up and water condensation in air tools during humid weather. Highly recommended for use with plasma cutter. Installs inside the machine for compact operation.



**K2360-1**

**Dual Procedure / Memory Panel**

Panel performs three functions: weld procedure selection, feed head selection and memory saving/recall. There are two procedure memories (A and B) and six user memories (1- 6) to store your favorite settings for each feed head.



**K2361-1**

**LPG Tank Strap**

Mounts to K1745-1 Gas Cylinder/ LPG Tank Holder to secure LPG tank.



**K2374-1**

**Stick Electrode Holder and Cable**

Includes 12.5 ft. (3.8 m) electrode cable with Twist Mate™ connectors.



**K2377-1**

**Canvas Cover**

Protect your machine when not in use. Made from attractive red canvas that is flame retardant, mildew resistant and water repellent. Includes a convenient side pocket to hold welding torch or gun.



**K2378-1**

**Canvas Cover**

Protect your machine when not in use. Made from attractive red canvas that is flame retardant, mildew resistant and water repellent.



**K2389-1**

**Activated Carbon Filter**

To neutralize or prevent the



recirculation of odors or smells into the environment, the optional FAC HV, activated carbon filter can be placed on top of the Miniflex® LongLife-H main filter.

**K2389-5**

**EN 20 Extraction Nozzle**

The EN 20 nozzle is designed for a wide array of welding applications. With its funnel extraction opening and magnetic mounting stand, it gives the welder a greater amount of versatility.



**K2389-6**

**EN 40 Extraction Nozzle**

The EN 40 nozzle is designed for stick electrode applications. With its L-shaped tube and an elongated slotted opening, the EN 40 nozzle is designed to coincide with the time it takes the welder to use one stick electrode. This design alleviates the welder from having to continuously reposition the nozzle. Magnetic mounting stand included.



**K2389-8**

**K2389-9**

**Extraction Hoses**

Flexible high temperature hoses with spring steel reinforcement. Use to extend or replace 8 ft. (2.5 m) hose included with the Miniflex®. To ensure an effective performance level, it is recommended that a maximum hose length of 24 ft. (7.5 m) be used on extraction side of the Miniflex®. Includes two hose adapter ends. Length of K2389-8 is 16 ft. (5 m). Length of K2389-9 for 8 ft. (2.5 m). Both hoses are 1-3/4 inches (45 mm) in diameter.



**K2394-1**

**Stick Electrode Holder, Work Clamp, Cable & Twist Mate™ Set**

Includes 200 amp stick holder, welding cable, work cable, work clamp and Twist Mate™ connections.



**K2423-1**

**Stainless Steel Sheet Metal Kit**

Stainless steel roof and doors. Also includes decals (mounted), door latches, door hooks, bumpers and all required mounting hardware.



**K2429-1**

**ArcLink® "T" Connector Kit**

For connecting multiple feeders to a single power source.



**K2444-3**

**CE Filter**

This high power filter that enables Power Wave® AC/DC 1000® CE "ready" machine to conform to the EMC standards of Europe and Australia.



**K2445-1**

**Magnum® SG Spool Gun Control Cable Adapter Plug**

Allows K487-25 Magnum® SG Spool Gun's 6-pin control cable to plug into the POWER MIG® 256's 7-pin spool gun control receptacle.



**K2464-1**

**Remote Output Control (Stick and Wire Welding)**

For machines that have the Wire Feed Module. Contains rheostat for stick output, potentiometer for wire output, and 100 ft. (30.5 m) long control cable.



**K2467-1**

**Digital Weld Meters Kit**

Easy-to-read digital meters for volts and amps. Easy to install.



**K2490-1**

**Magnum® 250LX™ Spool Gun**

300 amps, 60% duty cycle. Feeds .035-3/64 inch (0.9-1.2 mm) dia. aluminum wire on 2 lb. (0.9 kg) spools. Includes 25 ft. (7.5 m) gun cable with 7-pin MS-Type connector and two contact tips [one each .035 inch (0.9 mm), 3/64 inch (1.2 mm)].



**K2505-3**

**TIG Torch Twist Mate™ to Stud Adapter Cable, 2 ft. (0.61 m) Gas Hose**

Use for connecting a one piece TIG torch and Twist Mate™ connector to the Power Wave® C300 and TIG solenoid.



**K2525-1**

**Spot Timer Kit**

This timer allows you to set a fixed weld time of up to 10 seconds that is initiated when you pull the gun trigger. Ideal for making consistent spot welds on thin sheet metal.



**K2528-1**

**.045 inch Innershield® Welding Kit**

Includes everything needed to weld with .045 inch (1.1 mm) Innershield® self-shielded flux-cored wire. Includes an .035-.045 inch (0.9-1.1 mm) Magnum® 100L gun liner, a .045 inch (1.1 mm) contact tip, a gasless nozzle, knurled drive roll, .045 inch (1.1 mm) inner wire guide and 10 lb. (4.5 kg) spool of .045 inch (1.1 mm) Innershield® NR®-212 wire.



**K2532-1**

**Magnum® 100SG Spool Gun**

Designed to easily feed 4 inch (102 mm) diameter 1 lb. (0.45 kg) spools of .030 inch (0.8 mm) or .035 inch (0.9 mm) diameter SuperGlaze® aluminum MIG wire. Includes gun, adapter kit, .035 inch (0.9 mm) contact tips (qty. 3), gas nozzle, and a 1 lb. (0.45 kg) spool of SuperGlaze® 4043 .035 inch (0.9 mm) MIG wire. Packaged in a convenient carrying case.



**K2596-2**

**Polycarbonate Portable Feeder Case**

Replace a damaged case without replacing the entire unit.



**K2617-1**

**Dual Cylinder Cart**

Adds easy shop mobility and provides side-by-side mounting for two full size gas cylinders. Cart includes handy storage drawer and TIG filler rod holders.



**K2621-1**

**Advanced Control Panel**

Provides 2/4-step trigger with adjustable Pulser controls and Downslope timer for TIG welding. Also includes adjustable Hot Start and Arc Force internal panel controls for stick welding, and other user selectable features.



**K2627-2 Remote Output Control with 120V AC Receptacles**



Remote weld output control box with two 120V AC receptacles having GFCI (Ground Fault Circuit Interrupter) protection. One cord for both remote and power. 100 ft. (30.5 m) long. Permits remote adjustment of weld output and power for tools. 20 amp capacity.

**K2635-1 Small Two Wheel Trailer\***



For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 13 in. wheels. Stiff .120 inch welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheels bearings packed with high viscosity, high pressure, low washout Lubriplate® grease. Includes a Duo-Hitch® (2 inch Ball/Lunette Eye combination hitch). Overall width 60 inch (1524 mm). *Shown with K2639-1 Fender & Light Kit, sold separately.*

**K2636-1 Medium Two Wheel Trailer\***



For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 13 inch wheels. Stiff .120 inch welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheels bearings packed with high viscosity, high pressure, low washout Lubriplate® grease. Includes a Duo-Hitch® (2 inch Ball/Lunette Eye combination hitch). Overall width 60 inch (1524 mm). *Shown with K2639-1 Fender & Light Kit, sold separately.*

**K2637-2 Large Two Wheel Trailer\***



For heavy-duty road, off-road, plant and yard use. Includes pivoting jack stand, safety chains, and 14 inch. wheels. Stiff .120 inch welded rectangular steel tube frame construction is phosphate etched and powder coat painted for superior rust and corrosion resistance. Low sway suspension gives outstanding stability with manageable tongue weight. Wheels bearings packed with high viscosity, high pressure, low washout Lubriplate® grease. Includes a Duo-Hitch® (2 inch Ball/Lunette

Eye combination hitch). Overall width 60 inch (1524 mm). *Shown with K2639-1 Fender & Light Kit, sold separately.*

**K2639-1 Fender & Light Kit**



Allows use of trailer at night and as required by local regulations. Includes fenders, lights with guards, mounting brackets, wiring and hardware.

**K2640-1 Cable Rack**



For storage of approximately 100 ft. (30.5 m) of 2/0 (70 mm<sup>2</sup>) welding cable per side.

**K2641-2 Four-Wheeled Steerable Yard Trailer**



For off-road, plant and yard use. Includes an automatically engaging drawbar lock when the drawbar is raised to the vertical position. 13 inch wheels. Wheel bearings are packed with high viscosity, high pressure, low washout Lubriplate® grease. Stiff 3/16 inch welded rectangular steel frame construction is phosphate etched and powder-coat painted for superior rust and corrosion resistance. Also includes a Duo-Hitch® (2 inch Ball/Lunette Eye combination hitch). Overall width 55 inch (1397 mm).

**K2642-1 Polarity/Multi-Process Switch**



For easy polarity switching. 6-pin and 14-pin remote connections can be made to this unit. Mounts on roof of engine-driven welder with K2663-1 Docking Kit.

**K2663-1 Docking Kit**



Secures the K2642-1 Polarity/Multi-Process Switch to the engine-driven welder roof. Release latch permits removal of Polarity/Multi-Process Switch. Made from stainless steel for rust-free operation.

**K2665-1 Caster Kit**



For use on Inverter Racks.

**K2679-1 Cold Weather Kit**



For engine starting and operation in extreme cold weather conditions down to -40°F/-40°C (with the use of 0W40 synthetic oil and arctic diesel fuel). Includes 120V AC oil pan heater, 120V AC engine block heater, and radiator grill tarp.

**K2694-1 Inverter Cart**



Conveniently holds the Cool Arc® 35 and Invertec® V311-T AC/DC power source. Features a convenient storage tray for tools and a cylinder platform to hold a gas bottle.

**K2703-1 POWER MIG® 216 Spool Gun Adapter**



This kit is designed to allow the Magnum® SG or Magnum® 250LX™ spool gun to operate with the POWER MIG® 216. The kit includes the solenoid, gas lines, wiring harness and gun connection panel. The gun connection panel features a 6-pin MS-type connector for the Magnum® SG spool gun and a 7-pin MS-type connector for the Magnum® 250LX™ spool gun and a selector switch to choose which gun you are using. *(Note: The K2703-1 Spool Gun Adapter disables the Magnum® 100SG capability.)*

**K2722-1 Undercarriage**



Puncture-proof (foam-filled) tires for easy transport and durability. Fold downs handles for easy storage when not needed, and convenient holders for wrapping welding output cables.

**K2734-2 Understorage Cart**



For easy shop mobility. Provides shielding gas bottle platform, and handy storage drawer.

**K2735-1 Cold Weather Kit**



For engine starting and operation in extreme cold weather conditions down to -40°F/-40°C (with the use of 0W40 synthetic oil and arctic diesel fuel). Includes 120V AC engine block heater, and radiator grill tarp.

**K2752-13 LongLife Filter**



Replacement LongLife Filter. Includes two (2) oval shaped filters.

**K2804-1 Canvas Cover**



To protect your engine driven welders when not in use. Made from attractive red canvas material that is flame retardant, mildew resistant and water repellent.

**K2819-1 Lift Bail Kit**



Easily installed kit for lifting the machine with a fixed lifting point.

**K2827-2 DeviceNet™ Kit**



The kit allows DeviceNet™ connectivity to control the power source. Includes internal harness and 5-pin DeviceNet™ receptacle for mounting on power source back panel.

**K2829-1 115V Auxiliary Kit**



Add a duplex 115V receptacle to the back of the machine. Includes PC board and harness which must be installed.

**K2909-1 6-pin to 12-pin Adapter**



Use for adapting existing 6-pin remote controls such as the K870, K857, and K963-3 to the new 12-pin connector.

**K2910-1 7-pin to 12-pin Adapter**



Use for connecting 7-pin push-pull guns such as the Python® Plus to the new 12-pin connector.

**K2946-1 Tweco® Style Cam-Lock Adapter Plug for Work and Electrode Cables**



Cable plug for 2/0 (50 mm<sup>2</sup>) cable.

**K3001-2**  
**S-Series User Interface Kit**

This kit allows local control of stick, TIG and wire processes from the power source control panel. Includes TIG Solenoid and Remote Control Connector.



**K3004-1**  
**AutoDrive® 19 Controller**

Relays wire feed commands from a Power Wave® S-Series power source to any AutoDrive® Series robotic wire drive for automated welding operation. Not compatible with Power Wave® R-Series power sources.



**K3019-1**  
**Arc Tracker™**

Connect the Arc Tracker™ between any DC welding power source and the work clamp to access a wide array of data monitoring information regarding your welding arc, including True Energy™ and Production Monitoring™.



**K3056-1**  
**Base Mounting Kit**

Used to secure power source to Inverter Rack.



**K3059-2**  
**Inverter and Wire Feeder Cart**

Rear-wheeled cart with front casters and gas cylinder platform. Convenient handles allow for easy cable storage. Small footprint fits through 30 inch (762 mm) door. Not intended for use with double head wire feeders.



**K3059-3**  
**Dual Cylinder Inverter & Wire Feeder Cart**

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.



**K3061-1**  
**Plastic Case**  
A complete replacement plastic case for Activ8™ Wire Feeder.



**K3070-1**  
**Tiny Twin Kit for Cruiser™**

Includes a second spindle, drive rolls and 95:1 gears.



**K3071-1**  
**Canvas Accessory Bag**

Canvas bag to store your welding accessories with convenient carrying handle and snaps to attach to your equipment.



**K3085-1**  
**Check Valve Kit**

Improves compressor shutdown when the compressed air shut off valve is occasionally left open. Installs to the outlet side of the shut off valve.



**K3086-1**  
**Cool Arc® 55**

Designed to integrate directly with Power Wave® S-Series power sources, the Cool Arc® 55 is a rugged, reliable water cooler capable of cooling torches rated up to 500 amps. It is recommended for robotic and hand-held MIG, TIG and plasma cutting applications. Input power: 115V/1/60.



**K3086-2**  
**Cool Arc® 55 S**

Designed to integrate with Power Wave® S350 and S500 power sources to cool water-cooled welding guns or torches rated up to 500 amps. Recommended for robotic and hand-held MIG, TIG and Plasma cutting operations. 115V/1/60. The 55 S model includes a ArcLink® communication flow sensor that detects water flow to prohibit welding when no flow is present.



**K3088-1**  
**Air Filter Kit**

Reduces water, oil aerosols, oil vapor and particulates from compressed air. Also reduces the risk of rust in tools, tip wear in plasma cutters and frequency of tip changes. Mounting bracket and hose included.



**K3089-1**  
**Cross Slide Assembly**

Includes: two slides with 4 in. (102 mm) of travel. (1 cross slide assembly included with each tractor.)



**K3090-1**  
**Tube and Clamp Kit**

One 30 inch (762 mm) aluminum splined tube; two 15 inch (381 mm) aluminum splined tubes; one 30 inch (762 mm) steel tube; 8 clamp assemblies with keys; 2 outrigger assemblies; hardware.



**K3091-1**  
**Multi-Process Switch**

Easily switch between CC and CV processes.



**K3127-1**  
**Wireless Foot Pedal and Receiver**

Reduce work site clutter and worn cable assemblies. Connects to any Lincoln Electric TIG welding power source with a 6-pin connection. Operates on 2.4 GHz frequency bandwidth with a 100 foot range. Includes the K3350-1 Wireless Foot Pedal, Transmitter and K3351-1 Wireless Foot Pedal, Receiver.



**K3154-1**  
**Butt Joint Guide Kit**

Used to track the joint and guide the Tandem Cruiser™ for plate and decking applications.



**K3156-1**  
**Flow Meter Kit**  
Used to display and control the flow rate of shielding gas to the gun. Includes a valve for flow control. Scaled for CO<sub>2</sub>, Argon and Ar/CO<sub>2</sub> blends.



**K3157-1**  
**GFCI Kit**  
Includes one UL approved 120V blank face ground fault circuit interrupter and installation instructions. Connects in series with the 120V receptacle on the Flextec™ 650 via a terminal strip inside the welder, and mounts to the case back near the existing receptacle. The receptacle rating is maintained at 15A after the GFCI is installed.



**K3269-1**  
**Magnum® PRO 100SG Spool Gun**

Designed to easily feed 4 inch (102 mm) diameter 1 lb. (0.45 kg) spools of .030 inch (0.8 mm) or .035 inch (0.9 mm) diameter SuperGlaze® aluminum MIG wire. Features Magnum® PRO expendables. Includes gun, adapter kit, .035 inch (0.9 mm) Copper Plus™ contact tips (qty. 3), gas nozzle, and a 1 lb. (0.45 kg) spool of SuperGlaze® 4043 .035 inch (0.9 mm) MIG wire. Packaged in a convenient carrying case.



**K3338-1**  
**Shield Gas Flow Sensor**

This precision mass flow sensor measures shielding gas flow. Used on the Power Feed® 84 feeder.



**K3340-1**  
**Spool Cover**

For use with 50-60 lb. (22.7-27.2 kg) coils.



**K3341-1**  
**Lift Bail**

Insulated lift bail for suspending the wire feeder. Requires either standard duty or heavy duty wire reel stand.



**K3342-1**  
**Standard Duty Wire Reel Stand**

Use for spools up to 44 lbs (20 kg) max.



**K3343-1**  
**Heavy Duty Wire Reel Stand**

For spools up to 44 lbs (20 kg) and coils up to 60 lbs. Includes K3341-1 Lift Bail.



**K3350-1**  
**Wireless Foot Pedal – Transmitter**

Wireless foot pedal unit transmits TIG welding current information to the K3351-1, Wireless Foot Pedal – Receiver. Both are included in the K3127-1 Wireless Foot Pedal & Receiver Kit.



**K3351-1**  
**Wireless Foot Pedal – Receiver**


Receives welding current information from the K3350-1 Wireless Foot Pedal – Transmitter unit at a range of up to 100 ft. (30.5 m). Both are included in the K3127-1, Wireless Foot Pedal & Receiver Kit. Magnetically attaches to welding power source.



**K3929-1**  
**Quick Connect Conduit Inlet Bushing**  
 Used for FlexFeed™ 74 HT, FlexFeed™ 84 or Power Feed® 84 feeders.



**K3964-1**  
**Wire Feed Module**  
 Provides constant voltage (CV) output with excellent arc stability for Innershield® welding and MIG welding. Easy installation. Recommended wire feeder is the LN-25 Ironworker™ or the LN-25 Pipe.




**K3974-1**  
**Gouging Contactor Kit**  
 Includes contactors and a switch to change electrode power from the feeder to a gouging torch. May only be used with single wire drives.

**KP3103-1**  
**Shielding Gas Filter**  
 Protects the gas solenoid and gun from contaminants.



**T12153-9**  
**Full-KVA Power Plug (1-Phase)**  
 One dual voltage plug rated at 120/240V, 50 amps. NEMA 14-50P.



**T12153-10**  
**Full-KVA Power Plug (3-Phase)**  
 One plug rated at 240V, 50 amps. NEMA 15-50P.



**3100211**  
**Harris® Argon/CO<sub>2</sub> Flowmeter Regulator**  
 Flowmeter and regulator in one compact unit. Dual calibration on flow tube. Includes 10 ft. (3.0 m) shielding gas hose with 5/8-18 male connectors on both ends.



**3100338**  
**Harris® Argon/Helium Flowmeter Regulator**  
 Flowmeter and regulator in one compact unit. Dual calibration on flow tube. Includes 10 ft. (3.0 m) shielding gas hose with 5/8-18 male connectors on both ends.



**FEED PLATE GUN ADAPTERS**

K1500-1	K1500-2	K1500-3	K1500-4	K1500-5	Magnum® PRO Fast-Mate™
Lincoln Electric Compatible Gun Connector Kits K466-1 K613-1 K613-6 K466-8	Tweco® #2 - #4 Compatible Gun Connector Kits K466-10 K466-2 K466-6	Tweco® #5 Compatible Gun Connector Kits K613-7 K613-2	Miller® guns Compatible Gun Connector Kits K466-3 K613-3	OXO® guns	Compatible Gun Connector Kits K489-1 K489-2 K489-7 K489-8
					

**FEED PLATE GUN ADAPTERS**

K3344-1	K3345-1	K3346-1	K3347-1	K3348-1	K3349-1
Lincoln Electric Compatible Gun Connector Kits K466-1 K613-1 K613-6 K466-8	Tweco® #2 - #4 Compatible Gun Connector Kits K466-10 K466-2 K466-6	Tweco® #5 Compatible Gun Connector Kits K613-7 K613-2	Miller® guns Compatible Gun Connector Kits K466-3 K613-3	OXO® guns	Magnum® Fast-Mate™ Single and dual procedure guns
					

Tweco® is a registered trademark of Victor Technologies.  
 Miller® is a registered trademark of Miller Electric Mfg. Co.  
 Oxo® is a registered trademark of Miller Electric Mfg. Co.

### Control Cables and Adapters



	Product Number	Description	Connection	Use	Length ft. (m)
Wire Feeder Control Cables	K1501-10	Wire Feeder Control Cable	Male 14-pin to Female 9-pin	LN-10, DH-10	10 (3.1)
	K1818-10	Wire Feeder Control Cable	Female 6-pin to Male 14-pin	LN-7	10 (3.1)
	K1819-10	Wire Feeder Control Cable	Female 8-pin to Male 14-pin	LN-742, LN-25	10 (3.1)
	K1820-10	Wire Feeder Control Cable	Female 9-pin to Male 14-pin	LN-8, LN-9, NA-3, NA-4, NA-5	10 (3.1)
	K1822-25	Wire Feeder Control Cable	—	LT-7	25 (7.6)
	K2393-1 K2393-2	Wire Feeder Control Cable Wire Feeder Control Cable	Male 14-pin to Female 8-pin Male 14-pin to Female 8-pin	LN-23P (K316L-2) LN-23P (K316L-2)	25 (7.6) 75 (22.8)
Extensions and Adapters	K1797-10	Wire Feeder Control Cable Extension	Male 14-pin to Female 14-pin	May require K1501-10, K1818-10, K1819-10 or K1820-10, depending on the feeder.	10 (3.1)
	K1797-25	Wire Feeder Control Cable Extension	Male 14-pin to Female 14-pin		25 (7.6)
	K1797-50	Wire Feeder Control Cable Extension	Male 14-pin to Female 14-pin		50 (15.2)
	K1797-100	Wire Feeder Control Cable Extension	Male 14-pin to Female 14-pin		100 (30.4)
	K1798	Adapter Cable for Control Cable to Terminal Strip of Power Source	Female 14-pin control cable to terminal strip		
ArcLink®/Linc-Net™ Control Cables	K1543-8	ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin	For Power Wave®/Power Feed® Systems	8 (2.4)
	K1543-16	ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin		16 (4.9)
	K1543-25	ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin		25 (7.6)
	K1543-50	ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin		50 (15.2)
	K1543-100	ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin	100 (30.4)	
	K2683-25 K2683-50 K2683-100	Heavy Duty ArcLink®/Linc-Net™ Control Cable Heavy Duty ArcLink®/Linc-Net™ Control Cable Heavy Duty ArcLink®/Linc-Net™ Control Cable	Male 5-pin to Female 5-pin Male 5-pin to Female 5-pin Male 5-pin to Female 5-pin	For Power Wave®/Power Feed® Systems	25 (7.6) 50 (15.2) 100 (30.4)
Submerged Arc/Automation	K1785-2	Heavy Duty Control Cable	14-pin	For synchronizing Power Wave® AC/DC 1000® SD units and connecting MAXsa™ Feed Heads and MAXsa™ Controllers. For use with FANUC® arms having integrated cable. For connecting Control Unit to Wire Drive in LN-10, DH-10 Boom applications.	1.5 (0.46)
	K1785-4	Heavy Duty Control Cable			4 (1.2)
	K1785-8	Heavy Duty Control Cable			8 (2.4)
	K1785-12	Heavy Duty Control Cable			12 (3.6)
	K1785-16	Heavy Duty Control Cable			16 (4.9)
	K1785-25	Heavy Duty Control Cable			25 (7.6)
	K1785-50	Control Cable			50 (15.2)
	K1785-100	Control Cable			100 (30.4)
K2709-25	Wire Drive Control Cable	Male 14-pin to Female 14-pin	For external dress of FANUC® robotic arm or hard automation.	25 (7.6)	
K2709-50	Wire Drive Control Cable	Male 14-pin to Female 14-pin		50 (15.2)	
K2709-100	Wire Drive Control Cable	Male 14-pin to Female 14-pin		100 (30.4)	

### Weld Power Cables



	Product Number	Description	Connection	Length ft. (m)
	K1840-10	Weld Power Cable, 1/0, 350A, 60% duty cycle	Twist Mate™ to Lug	10 (3.1)
	K1842-10	Weld Power Cable, 3/0, 600A, 60% duty cycle	Lug to Lug	10 (3.1)
	K1842-35	Weld Power Cable, 3/0, 600A, 60% duty cycle	Lug to Lug	35 (10.7)
	K1842-60	Weld Power Cable, 3/0, 600A, 60% duty cycle	Lug to Lug	60 (18.3)
	K1842-110	Weld Power Cable, 4/0, 600A, 60% duty cycle	Lug to Lug	110 (33.5)
	K1841-25	Weld Power Cable, 1/0, 350A, 60% duty cycle	Twist Mate™ to Twist Mate™	25 (7.6)
	K1841-50	Weld Power Cable, 2/0, 350A, 60% duty cycle	Twist Mate™ to Twist Mate™	50 (15.2)
	K2163-35 <sup>(1)</sup>	Weld Power Cable, 4/0	Lug to Lug	35 (10.7)
	K2163-60 <sup>(1)</sup>	Weld Power Cable, 4/0	Lug to Lug	60 (18.3)
	K1796-25	Coaxial Weld Power Cable, 1/0, 350A, 60% duty cycle	Lug to Lug	25 (7.6)
	K1796-50	Coaxial Weld Power Cable, 1/0, 350A, 60% duty cycle	Lug to Lug	50 (15.2)
	K1796-75	Coaxial Weld Power Cable, 1/0, 325A, 60% duty cycle	Lug to Lug	75 (22.8)
	K1796-100	Coaxial Weld Power Cable, 1/0, 300A, 60% duty cycle	Lug to Lug	100 (30.4)
	K2593-100	Coaxial Weld Power Cable, #1, 250A, 100% duty cycle	Lug to Lug	100 (30.4)

<sup>(1)</sup> Two cables per package.

### Drive Roll and Wire Guide Kits



**2-Roll Wire Drive Systems**

**LF-72 • LN-25 PRO • LN-25 PRO Dual Power • Power Feed® 25M • POWER MIG® 216, 256 & 350MP**

Product Number	Description/Wire Size inches (mm)
<i>Solid Wire (includes stainless steel)</i>	
KP1696-030S	.023-.030 (0.6-0.8)
KP1696-035S	.035 (0.9)
KP1696-1	.035, .045 (0.9, 1.2)
KP1696-2	.040 (1.0)
KP1696-045S	.045 (1.2)
KP1696-052S	.052 (1.4)
KP1696-1/16S	1/16 (1.6)
<i>Cored Wire</i>	
KP1697-035C	.030-.035 (0.8-0.9)
KP1697-045C	.040-.045 (1.0-1.2)
KP1697-052C	.052 (1.4)
KP1697-1/16C	1/16 (1.6)
KP1697-068	.068-.072 (1.7-1.8)
KP1697-5/64	5/64 (2.0)
KP1697-3/32 <sup>(1)</sup>	3/32 (2.4)
<i>Aluminum Wire</i>	
KP1695-035A	.035 (0.9)
KP1695-040A	.040 (1.0)
KP1695-3/64A	3/64 (1.2)
KP1695-1/16A	1/16 (1.6)



**4-Roll Wire Drive Systems**

**FlexFeed™ 74 HT • FlexFeed™ 84 Single & Dual, Power Feed® 84 Single & Dual • AutoDrive® 4R100 & 4R200 • AutoDrive® 4R100 & 4R200 • DH-10 • LF-74 • LN-10 • Power Feed® 10M, 10M Dual & 10R**

Product Number	Description/Wire Size inches (mm)
<i>Solid Wire, Smooth V Groove</i>	
KP1505-030S	.023-.030 (0.6-0.8)
KP1505-035S	.035 (0.9)
KP1505-040S	.040 (1.0)
KP1505-045S	.045 (1.2)
KP1505-052S	.052 (1.4)
KP1505-1/16S	1/16 (1.6)
KP1505-1	.035, .045 (0.9, 1.2)
KP1505-2	.040 (1.0)
<i>Cored Steel Wire, Knurled V Groove</i>	
KP1505-035C	.030-.035 (0.8-0.9)
KP1505-045C	.040-.045 (1.0-1.2)
KP1505-052C <sup>(3)</sup>	.052 (1.4)
KP1505-1/16C <sup>(3)</sup>	1/16 (1.6)
KP1505-7/64H <sup>(2)(3)</sup>	7/64 (2.8) Hardfacing (Knurled V Groove with matching Smooth U Groove)
<i>Cored or Solid Steel Wire, Knurled V Groove</i>	
KP1505-035C	.030-.035 (0.8-0.9)
KP1505-045C	.040-.045 (1.0-1.2)
KP1505-052C <sup>(3)</sup>	.052 (1.4)
KP1505-1/16C <sup>(3)</sup>	1/16 (1.6)
KP1505-068 <sup>(3)</sup>	.068-.072 (1.8)
KP1505-5/64 <sup>(3)</sup>	5/64 (2.0)
KP1505-3/32 <sup>(3)</sup>	3/32 (2.4)
KP1505-7/64 <sup>(2)(3)</sup>	7/64 (2.8)
KP1505-.120 <sup>(2)(3)</sup>	.120 (3.2)
<i>Hardfacing Wires, Knurled, Smooth V Groove</i>	
KP1505-7/64C	7/64 (2.8)
KP1505-7/64H <sup>(2)(3)</sup>	7/64 (2.8) Hardfacing
<i>Aluminum Wire, Smooth U Groove</i>	
KP1507-035A	.035 (0.9)
KP1507-040A	.040 (1.0)
KP1507-3/64A	3/64 (1.2)
KP1507-1/16A <sup>(3)</sup>	1/16 (1.6)
KP1507-3/32A <sup>(2)</sup>	3/32 (2.4)



(1) Not for use with the LF-72.  
 (2) Not for use with the LF-74.  
 (3) Not for use with the AutoDrive® 4R100.

### Drive Roll and Guide Tube Kits



**2-Roll Wire Drive Systems**

**LN-7 GMA • LN-23P • LN-25**

Product Number	Description/Wire Size inches (mm)
<i>Solid Wire</i>	
KP653-025S	.023-.025 (0.6-0.9)
KP653-030S	.030 (0.8)
KP653-035S	.035-.040 (0.9-1.0)
KP653-052S	.045-.052 (1.2-1.4)
<i>Cored Wire</i>	
KP653-035C	.035 (0.9)
KP653-052C	.045-.052 (1.2-1.4)
<i>Solid or Cored Wire</i>	
KP653-1/16	1/16 (1.6)
KP653-3/32 <sup>(2)</sup>	.068-3/32 (1.7-2.4)
<i>Hardfacing</i>	
KP653-7/64H <sup>(1)</sup>	7/64 (2.8)
<i>Aluminum Wire</i>	
KP654-035A	.035 (0.9)
KP654-3/64A	3/64 (1.2)
KP654-1/16A	1/16 (1.6)



**LN-8 • LN-9**

<i>Solid Wire</i>	
KP502-052	.040, .045-.052 (1.0, 1.2-1.4)
KP502-1/16	1/16 (1.6)
<i>Cored Wire</i>	
KP502-052C	.045-.052 (1.0-1.4)
KP502-1/16C	1/16-.062 (1.6)
KP502-120	7/64-.120 in. (2.8-3.0)
<i>Solid or Cored Wire</i>	
KP502-3/32	.068-3/32 (1.7-2.4)
<i>Hardfacing</i>	
KP502-7/64H	7/64 (2.8)

(1) Not for use with the LN-25 PRO and LN-25 PRO Dual Power  
 (2) For LN-7 only.



**2-Roll Wire Drive Systems**

**NA-3S • NA-4 • NA-5**

Product Number	Description/Wire Size inches (mm)
<i>Solid Wire Drive Roll</i>	
KP1899-1	3/32-7/32 (2.4-5.6)
KP1899-2	1/16, 5/64, 3/32 (1.6, 2.0, 2.4)
KP1899-3	.035, .045, .052 (0.9, 1.2, 1.4)
<i>Cored Wire Drive Roll</i>	
KP1899-4	.045-.052 (1.0-1.4)
<i>Knurled Drive Roll</i>	
KP1885-1	3/32-7/32 (2.4-5.6)
KP1886-1	1/16-3/32 (1.6-2.4)
<i>Outgoing Guide</i>	
KP1963-1	3/32-7/32 (2.4-5.6)
<i>Incoming Guide</i>	
KP2116-2	3/32-7/32 (2.4-5.6)



**BULK PACKAGING KEY:**

AD : Accu-Trak<sup>®</sup> Drum

AP : Accu-Pak<sup>®</sup> Box

B : Bag

BB : Bulk Bag

BD : Bulk Drum

C : Coil

CT : Cardboard Carton

D : Speed-Feed<sup>®</sup> Drum (wire)  
or Steel Drum (flux)

EO : Easy Open Hermetic Can

FB : Foil Bag

FS : Fiber Spool

GP : Gem-Pak<sup>™</sup> Box

HS : Hermetically Sealed Pail

PLB : Plastic Bag

PP : Plastic Pail

PTR : Precise-Trak Reel

R : Speed-Feed<sup>®</sup> Reel

SP : Plastic Spool

SSP : Steel Spool

ST : Speed-Feed<sup>®</sup> Stem

TB : Tube

TP : Tube-Plastic

VFB : Vacuum Sealed  
Foil Bag

## *Welding Consumables*



For more information on Lincoln Electric consumable products,  
please see publication C1.10 available online at [www.lincolnelectric.com](http://www.lincolnelectric.com).

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>STICK</b>			
<i>Stick (SMAW) Electrode</i>			
<b>Mild Steel, Cellulosic</b>			
<b>Fleetweld® 5P-RSP</b> AWS E6010	3/32	20CT(5TB)	ED033509
	1/8	20CT(5TB)	ED033510
	5/32	20CT(5TB)	ED033511
<b>Fleetweld® 5P</b> AWS E6010	3/32	30CT(10EO)	ED032561
	1/8	30CT(10EO)	ED032562
	5/32	30CT(10EO)	ED032563
	3/32	50EO	ED010211
	1/8	50EO	ED010203
	5/32	50EO	ED010216
	3/16	50EO	ED010207
	7/32	50EO	ED010219
<b>Fleetweld® 5P+</b> AWS E6010	1/4	50EO	ED010200
	3/32	30CT(10EO)	ED032564
	1/8	30CT(10EO)	ED032565
	5/32	30CT(10EO)	ED032566
	3/32	50EO	ED010283
	1/8	50EO	ED010278
	5/32	50EO	ED010285
<b>Fleetweld® 180-RSP</b> AWS E6011	3/16	50EO	ED010281
	3/32	6CT(1TB)	ED033494
	1/8	6CT(1TB)	ED033495
	3/32	20CT(5TB)	ED033496
	1/8	20CT(5TB)	ED033497
<b>Fleetweld® 180</b> AWS E6011	5/32	20CT(5TB)	ED033498
	3/32	6CT(1TB)	ED031152
	1/8	6CT(1TB)	ED031722
	3/32	50EO	ED010110
	1/8	50EO	ED010105
<b>Fleetweld® 35</b> AWS E6011	5/32	50EO	ED010114
	3/32	50CT	ED028152
	1/8	50CT	ED028153
	5/32	50CT	ED028154
<b>Fleetweld® 35LS</b> AWS E6011	3/16	50CT	ED028155
	7/32	50CT	ED032301
	1/4	50CT	ED028157
<b>Fleetweld® 35LS</b> AWS E6011	1/8	50CT	ED028158
	5/32	50CT	ED028159
<b>Mild Steel, Rutile</b>			
<b>Fleetweld® 37-RSP</b> AWS E6013	3/32	6CT(1TB)	ED033499
	1/8	6CT(1TB)	ED033500
	3/32	20CT(5TB)	ED033501
	1/8	20CT(5TB)	ED033502
	5/32	20CT(5TB)	ED033503

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Fleetweld® 37</b> AWS E6013	3/32	6CT(1TB)	ED031726
	1/8	6CT(1TB)	ED031727
	5/64	50CT	ED010170
	3/32	50CT	ED010161
	1/8	50CT	ED010153
	5/32	50CT	ED010165
	3/16	50CT	ED010156
<b>Fleetweld® 22</b> AWS E6022	1/8	50CT	ED021896
	5/32	50CT	ED021895
<b>Jetweld® 2</b> AWS E6027	3/16	50CT	ED010501
	1/4	50CT	ED010500
<b>Fleetweld® 47-RSP</b> AWS E7014	3/32	6CT(1TB)	ED033504
	1/8	6CT(1TB)	ED033505
	3/32	20CT(5TB)	ED033506
	1/8	20CT(5TB)	ED033507
	5/32	20CT(5TB)	ED033508
<b>Fleetweld® 47</b> AWS E7014	3/32	6CT(1TB)	ED031713
	1/8	6CT(1TB)	ED031153
	3/32	50CT	ED010189
	1/8	50CT	ED010183
	5/32	50CT	ED010193
	3/16	50CT	ED010186
<b>Mild Steel, High Deposition</b>			
<b>Jetweld® 1</b> AWS E7024-1	1/8	50CT	ED010362
	5/32	50CT	ED010372
	3/16	50CT	ED010366
	7/32	50CT	ED010375
	1/4	50CT	ED010360
<b>Mild Steel, Low Hydrogen</b>			
<b>Lincoln® 7018 AC-RSP</b> AWS E7018 H8	3/32	6CT(1TB)	ED033512
	1/8	6CT(1TB)	ED033513
	3/32	20CT(5TB)	ED033514
	1/8	20CT(5TB)	ED033515
	5/32	20CT(5TB)	ED033516
<b>Lincoln® 7018 AC</b> AWS E7018 H8	3/32	6CT(1TB)	ED031714
	1/8	6CT(1TB)	ED031715
	3/32	50EO	ED031732
	1/8	50EO	ED031734
	5/32	50EO	ED031738
<b>Excalibur® 7018 MR®</b> AWS E7018 H4R	3/32	6CT(1TB)	ED032086
	1/8	6CT(1TB)	ED031468
	3/32	30CT(10EO)	ED032588
	1/8	30CT(10EO)	ED032589
	5/32	30CT(10EO)	ED032590
	3/32	50EO	ED028280
	1/8	50EO	ED028281
	5/32	50EO	ED028282
	3/16	50EO	ED028283
	7/32	50EO	ED028917
	1/4	50EO	ED028918

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Jetweld® LH-70 AWS E7018 H4R	3/32	50EO	ED010568
	1/8	50EO	ED010561
	5/32	50EO	ED010575
	3/16	50EO	ED010564
	7/32	50EO	ED010577
	1/4	50EO	ED010558
Jet-LH® 78 MR-RSP AWS E7018 H4R	3/32	20CT(5TB)	ED033517
	1/8	20CT(5TB)	ED033518
	5/32	20CT(5TB)	ED033519
Jet-LH® 78 MR® AWS E7018 H4R	3/32	50EO	ED015161
	1/8	50EO	ED015198
	5/32	50EO	ED015141
	3/16	50EO	ED015186
	1/4	50EO	ED015383
Excalibur® 7018-1 MR® AWS E7018-1 H4R	3/32	24CT(8EO)	ED033179
	3/32	30CT(10EO)	ED032591
	1/8	30CT(10EO)	ED032592
	3/32	50EO	ED028700
	1/8	50EO	ED028702
	5/32	50EO	ED028704
	3/16	50EO	ED028706
	7/32	50EO	ED028919
	1/4	50EO	ED028920
Excalibur® 7028 AWS E7028 H8	5/32	50EO	ED032636
	3/16	50EO	ED032790
	7/32	50EO	ED032638
<b>Low Alloy, Cellulosic</b>			
Shield-Arc® HYP+ AWS E7010-P1, E7010-G	1/8	50EO	ED029511
	5/32	50EO	ED029513
	3/16	50EO	ED029509
Shield-Arc® 85 AWS E7010-A1	3/32	50EO	ED012893
	1/8	50EO	ED012885
	5/32	50EO	ED012896
	3/16	50EO	ED012889
Shield-Arc® 70+ AWS E8010-G (also meets E8010-P1)	1/8	50EO	ED012841
	5/32	50EO	ED012849
	3/16	50EO	ED012845
Shield-Arc® 90 AWS E9010-G	(3.2)	50EO	EDS01693
	(4.0)	50EO	EDS01694
	(5.0)	50EO	EDS01695
<b>Low Alloy, Low Hydrogen</b>			
Excalibur® 7018-A1 MR® AWS E7018-A1 H4R	3/32	24CT(8EO)	ED032893
	1/8	30CT(10EO)	ED032873
	3/32	25EO	ED032875
	1/8	50EO	ED032876
	5/32	50EO	ED032877

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Excalibur® 8018-B2 MR® AWS E8018-B2 H4R	3/32	24CT(8EO)	ED032878
	1/8	30CT(10EO)	ED032879
	3/32	25EO	ED032881
	1/8	50EO	ED032882
	5/32	50EO	ED032883
Excalibur® 8018-C1 MR® AWS E8018-C1 H4R	3/32	50EO	ED030876
	1/8	50EO	ED030877
	5/32	50EO	ED030878
	3/16	50EO	ED030879
Excalibur® 8018-C1 MR® AWS E8018-C1 H4R	1/4	50EO	ED030880
	5/32	50EO	ED030880
Excalibur® 8018-C3 MR® AWS E8018-C3 H4R	3/32	30CT(10EO)	ED032599
	1/8	30CT(10EO)	ED032600
	3/32	50EO	ED030892
	1/8	50EO	ED030893
	5/32	50EO	ED030894
	3/16	50EO	ED030895
	7/32	50EO	ED030897
	1/4	50EO	ED030896
	5/32	50EO	ED030896
Excalibur® 9018-B3 MR® AWS E9018-B3 H4R	3/32	24CT(8EO)	ED032884
	1/8	30CT(10EO)	ED032885
	3/32	25EO	ED032887
	1/8	50EO	ED032888
	5/32	50EO	ED032889
Excalibur® 9018M MR® AWS E9018M H4R	3/32	30CT(10EO)	ED032602
	1/8	30CT(10EO)	ED032603
	3/32	50EO	ED030868
	1/8	50EO	ED030869
	5/32	50EO	ED030870
Excalibur® 10018-D2 MR® AWS E10018-D2 H4R	3/32	25EO	ED033162
	1/8	50EO	ED033163
	5/32	50EO	ED033164
Excalibur® 11018M MR® AWS E11018M H4R	1/8	30CT(10EO)	ED032607
	5/32	30CT(10EO)	ED032608
	3/32	50EO	ED031975
	1/8	50EO	ED031976
	5/32	50EO	ED031977
Excalibur® 11018M MR® AWS E11018M H4R	3/16	50EO	ED031978
	5/32	50EO	ED031978
	3/16	50EO	ED031978
	5/32	50EO	ED031978
Chromet® 1X AWS E8018-B2	(2.5)	4.2EO	ED033570
	(3.2)	5EO	ED033563
	(4.0)	5.6EO	ED033564
	(5.0)	5.8EO	ED033571
Chromet® 2X AWS E9018-B3	(2.5)	4.1EO	ED033572
	(3.2)	4.6EO	ED033573
	(4.0)	5.7EO	ED033574
	(5.0)	5.7EO	ED033575
	(5.0)	5.7EO	ED033575
Chromet® 9-B9 AWS E9015-B9	(2.5)	4.5EO	ED033379
	(3.2)	5EO	ED033380
	(4.0)	5EO	ED033381
	(5.0)	5.5EO	ED033382

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>MIG &amp; TIG</b>			
<i>MIG (GMAW) Wire</i>			
<b>Mild Steel, Bare</b>			
<b>SuperGlide® S6</b> AWS ER70S-6	.035	44FS	ED028635
	.045	44FS	ED028636
	.035	900AD	ED034560
	.045	900AD	ED034561
<b>SuperGlide® S3</b> AWS ER70S-3	.035	44FS	ED028621
	.045	44FS	ED028622
	.035	500AD	ED030772
	.045	500AD	ED030773
<b>Mild Steel, Copper Coated</b>			
<b>SuperArc® L-50®</b> AWS ER70S-3 & EM13K	.030	33SP	ED032923
	.035	33SP	ED032924
	.045	33SP	ED032925
	.030	33SSP	ED031407
	.035	33SSP	ED031408
	.045	33SSP	ED031409
	.035	44SSP	ED031914
	.045	44SSP	ED031915
	.052	44SSP	ED031916
	.035	44FS	ED021268
	.045	44FS	ED021270
	1/16	60C	ED011317
	.035	60FS	ED021269
	.045	60FS	ED021271
	.052	60FS	ED021273
	1/16	60FS	ED027274
	.030	500AD	ED029223
	.035	500AD	ED021052
	.045	500AD	ED020526
	.052	500AD	ED020527
	.035	500AP	ED032899
	.045	500AP	ED032901
	.052	500AP	ED032902
	1/16	500AP	ED032903
	1/16	600D	ED011316
	.035	1000AD	ED028825
	.045	1000AD	ED028826
	.052	1000AD	ED029082
	1/16	1000AD	ED029083
	.035	900AP	ED032842
	.040	1000AP	ED033292
	.045	1000AP	ED032844
	.052	1000AP	ED032845
	1/16	1000AP	ED032846

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
	.035	1000PTR	ED032379
	.040	1000PTR	ED032380
	.045	1000PTR	ED031614
	.052	1000PTR	ED031615
	1/16	1000PTR	ED033270
<b>SuperArc® L-56®</b> AWS ER70S-6 & EH11K	.025	10CT(2SP)	ED030583
	.030	10CT(2SP)	ED030631
	.035	10CT(2SP)	ED030632
	.025	12.5SP	ED015790
	.030	12.5SP	ED023334
	.035	12.5SP	ED028676
	.045	12.5SP	ED029042
	.030	33SP	ED032926
	.035	33SP	ED032927
	.045	33SP	ED032928
	.035	33SSP	ED031411
	.045	33SSP	ED031412
	.035	44SSP	ED025945
	.045	44SSP	ED025946
	.035	44FS	ED021274
	.040	44FS	ED027384
	.045	44FS	ED021276
	.052	44FS	ED021278
	1/16	60C	ED011666
	.035	60FS	ED021275
	.045	60FS	ED021277
	.052	60FS	ED021279
	.035	250AD	ED029914
	.045	250AD	ED029915
.052	250AD	ED029916	
.030	500AD	ED030771	
.035	500AD	ED021056	
.040	500AD	ED031937	
.045	500AD	ED020532	
.052	500AD	ED020533	
1/16	500AD	ED029225	
.035	500AP	ED032904	
.045	500AP	ED032906	
.052	500AP	ED032907	
.035	1000AD	ED028827	
.040	1000AD	ED031032	
.045	1000AD	ED028828	
.052	1000AD	ED029084	
1/16	1000AD	ED029085	
.035	900AP	ED032847	
.045	1000AP	ED032849	
.052	1000AP	ED032850	
1/16	1000AP	ED032851	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
	.035	1000PTR	ED033271
	.045	1000PTR	ED031616
	.052	1000PTR	ED031617
<b>SuperArc® L-56® (Tested)</b> AWS ER70S-6	.045	44FS	ED033328
<b>SuperArc® L-59®</b> AWS ER70S-6	.035	44SSP	ED032366
	.045	44SSP	ED032367
	.052	44SSP	ED032368
	1/16	44SSP	ED032968
	.035	44FS	ED033033
	.052	60FS	ED032814
	.035	500AP	ED032894
	.040	500AP	ED032895
	.045	500AP	ED032896
	.052	500AP	ED032897
	.035	900AP	ED032861
	.045	1000AP	ED032863
	.052	1000AP	ED032864
	1/16	1000AP	ED032865
	.045	1000PTR	ED032808
	.052	1000PTR	ED032809
<b>Low Alloy, Copper Coated</b>			
<b>SuperArc® LA-75</b> AWS ER80S-Ni1 & ENi1K	.035	33SSP	ED031415
	.045	33SSP	ED031416
<b>SuperArc® LA-90</b> AWS ER80S-D2, ER90S-D2, EA3K	.035	33SSP	ED031413
	.045	33SSP	ED031414
	.035	44SSP	EDS30775
	.045	44SSP	EDS30776
	.052	44SSP	EDS30777
	.035	44FS	ED029546
	1/16	60C	ED013999
	.045	60FS	EDS01380
	.035	500AD	EDS01372
	.045	500AD	ED001378
	.052	500AD	ED026627
	.045	500AP	ED032919
	.052	500AP	ED032920
	.035	1000AD	EDS29590
	.045	1000AD	ED029591
	.052	1000AD	EDS29592
	.045	1000AP	ED034436
<b>SuperArc® LA-100</b> AWS ER100S-G, ER110S-G, MIL-100S-1	.045	33SSP	ED031417
	.035	44SSP	EDS30778
	.045	44SSP	EDS30779
	1/16	60C	ED010996
	.035	500AD	ED031445
	.045	500AD	EDS01162
<b>Techalloy® 4130</b>	.035	33SSP	MG4130035659
	.045	33SSP	MG4130045659
	1/16	33SSP	MG4130062659

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER	
<b>Techalloy® AK-10</b> AWS ER100S-G	.035	33SP	MGAK10035659	
	.045	33SP	MGAK10045659	
<b>TIG (GTAW) Wire</b>				
<b>Low Alloy Steel</b>				
<b>9CrMoV-N</b> AWS ER90S-B9	(2.4)	5TB	ED033377	
	(3.2)	5TB	ED033378	
<b>Techalloy® 4130</b>	1/16	30CT(10TB)	TG4130062628	
	3/32	30CT(10TB)	TG4130093628	
	1/8	30CT(10TB)	TG4130125628	
<b>Techalloy® AK-10</b> AWS ER100S-G	3/32	50CT	TGAK10093628	
	1/8	50CT	TGAK10125628	
<b>Mild Steel, Copper Coated</b>				
<b>Lincoln® ER70S-2</b> AWS ER70S-2	1/16	20CT(5TB)	ED034325	
	3/32	20CT(5TB)	ED034326	
	1/8	20CT(5TB)	ED034327	
	1/16	30CT(10TB)	ED034328	
	3/32	30CT(10TB)	ED034329	
	1/8	30CT(10TB)	ED034330	
	1/16	50CT	ED034331	
	3/32	50CT	ED034332	
	1/8	50CT	ED034333	
	<b>Lincoln® ER70S-6</b> AWS ER70S-6	1/16	20CT(5TB)	ED034334
		3/32	20CT(5TB)	ED034335
1/8		20CT(5TB)	ED034336	
1/16		30CT(10TB)	ED034337	
3/32		30CT(10TB)	ED034338	
1/8		30CT(10TB)	ED034339	
1/16		50CT	ED034340	
3/32		50CT	ED034341	
1/8		50CT	ED034342	

**METAL-CORED**

**GMAW-C Wire**

<b>Mild Steel</b>			
<b>Metalshield® MC-6®</b> AWS E70C-6M H4	.045	33SSP	ED030392
	.052	33SSP	ED030393
	1/16	33SSP	ED030394
	.045	50FS	ED030554
	.052	50FS	ED030556
	1/16	50FS	ED030555
	.045	60C	ED030549
	.052	60C	ED030550
	1/16	60C	ED030577
	.045	500AD (20" dia)	ED031011
	.052	500AD (20" dia)	ED030946
	1/16	500AD (20" dia)	ED030947

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Metalshield® MC®-706</b> AWS E70C-6M H4	.045	33SSP	ED031583
	.052	33SSP	ED031584
	1/16	33SSP	ED031585
	.045	50FS	ED031586
	.052	50FS	ED031587
	1/16	50FS	ED031588
	.045	50C	ED031589
	.052	50C	ED031590
	1/16	50C	ED031591
	.045	500AD (20" dia)	ED031592
.052	500AD (20" dia)	ED031593	
1/16	500AD (20" dia)	ED031594	
<b>Metalshield® MC®-710XL®</b> AWS E70C-6M H8, E70C-G H8	.045	33SSP	ED030592
	.045	60C	ED028526
	.052	60C	ED028527
	1/16	60C	ED028528
	1/16	600AD (23" dia)	ED028450
<b>Low Alloy</b>			
<b>Metalshield® MC®-80Ni1</b> AWS E80C-Ni1 H4	.045	33SP(VFB)	ED034213
	.052	33SP(VFB)	ED034214
	1/16	33SP(VFB)	ED034215
	.045	500AD (20" dia)	ED034216
	.052	500AD (20" dia)	ED034217
	1/16	500AD (20" dia)	ED034218
<b>Metalshield® MC®-90</b> AWS E90C-K3 H4	.045	33SP(FB)	ED033904
	.052	33SP(FB)	ED033905
	1/16	33SP(FB)	ED033906
	.045	500AD (20" dia)	ED033907
	.052	500AD (20" dia)	ED033908
	1/16	500AD (20" dia)	ED033909
<b>Metalshield® MC®-110</b> AWS E110C-K4 H4	.045	33SP(FB)	ED033910
	.052	33SP(FB)	ED033911
	1/16	33SP(FB)	ED033912
	.045	500AD (20" dia)	ED033913
	.052	500AD (20" dia)	ED033914
	1/16	500AD (20" dia)	ED033915

**FLUX-CORED**

*Self-Shielded (FCAW-S) Wire*

**Mild Steel, Flat and Horizontal**

<b>Innershield® NR®-5</b> AWS E70T-3	.120	600R	ED012698
	3/32	600D	ED012699
<b>Innershield® NS-3M</b> AWS E70T-4	5/64	56CT(14C)	ED012739
	5/64	50C	ED012740
	3/32	50C	ED012736
	.120	50C	ED012732
	3/32	600D	ED012735
	.120	600D	ED012731

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Innershield® NR®-305</b> AWS E70T-6 H16	5/64	25SSP	ED034185
	3/32	25SP(VFB)	ED030971
	3/32	50C	ED012593
	3/32	50C(VFB)	ED030005
<b>Innershield® NR®-311</b> AWS E70T-7	5/64	56CT(14C)	ED014464
	5/64	25SSP	ED030649
	5/64	50C	ED014459
	3/32	50C	ED012629
	7/64	50C	ED012632
	7/64	600R	ED012633
	3/32	600D	ED012628
	3/32	600R	ED012163
<b>Innershield® NR®-131</b> AWS E70T-10			
<b>Innershield® NR®-152</b> AWS E71T-14	.045	25SP	ED001702
	.062	50C	ED012185
	.068	50C	ED012186
	.062	500D	ED024301
<b>Innershield® NR®-211-MP</b> AWS E71T-11	.030	5CT(1SP)	ED031448
	.035	10CT(1SP)	ED027641
	.030	10SP	ED033130
	.035	10SP	ED016354
	.045	10SP	ED016363
	.068	56CT(14C)	ED012506
	5/64	56CT(14C)	ED012508
	.035	25SSP	ED030637
	.045	25SSP	ED030638
	.068	25SSP	ED030641
	5/64	25SSP	ED030645
	.068	50C	ED012507
	5/64	50C	ED012509
3/32	50C	ED013869	
<b>Innershield® NR®-203MP</b> AWS E71T-8-JH16	5/64	56CT(14C)	ED021604
	.068	25SSP	ED030640
<b>Innershield® NR®-232</b> AWS E71T-8-H16	.068	54CT(13.5C)	ED012518
	.072	54CT(13.5C)	ED012522
	5/64	54CT(13.5C)	ED012525
	.072	54HS(13.5C)	ED030232
	.068	25SSP	ED030643
	.072	25SSP	ED030644
	5/64	25SSP	ED030647
	.072	25SP(VFB)	ED030949
	.068	50C	ED012519
	.072	50C	ED012523
<b>Innershield® NR®-233</b> AWS E71T-8-H16	5/64	50C	ED012526
	1/16	50CT(12.5SP)	ED030933
	1/16	25SP	ED030934
	.072	25SP	ED031030
	5/64	25SP	ED033039
	1/16	25SP(VFB)	ED031576
5/64	25SP(VFB)	ED033024	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Low Alloy, Flat And Horizontal</b>			
<b>Innershield® NR®-311 Ni</b> AWS E70T7-K2-H16, E80TG-K2	5/64	25SSP	ED030650
	3/32	50C	ED017822
	7/64	50C	ED017824
	3/32	50C(VFB)	ED032530
<b>Innershield® NR®-FAB-70</b> AWS E70T7-G	3/32	25SP	ED033628
	3/32	25SP(VFB)	ED033631
<b>Low Alloy, All Position</b>			
<b>Innershield®</b> NR-203 Nickel (1%) AWS E71T8-Ni1-H16	5/64	56CT(14C)	ED012385
	5/64	50C	ED012386
<b>Innershield NR-212</b> AWS E71TG-G	.045	10SP	ED026090
	.068	56CT(14C)	ED027803
	5/64	56CT(14C)	ED027794
	.045	25SSP	ED030639
	.068	25SSP	ED030642
	5/64	25SSP	ED030646
	5/64	50C	ED026858
<b>Innershield®</b> NR-203 Ni C Plus-H AWS E71T8-K2	5/64	56HS(14C)	ED033040
<b>Innershield® NR®-440Ni2</b> AWS E71T8-Ni2-JH8	5/64	56HS(14C)	ED033827
<b>Innershield® NR®-207</b> AWS E71T8-K6-H16	.068	56HS(14C)	ED016312
	5/64	56HS(14C)	ED012438
<b>Innershield® NR®-208-H</b> AWS E91T8-G-H8	5/64	56HS(14C)	ED023366
<b>Gas-Shielded (FCAW-G) Wire</b>			
<b>Mild Steel, All Position</b>			
<b>UltraCore® 71A85</b> AWS E71T-1M-H8, E71T-9M-H8	.045	60CT(15SP)	ED031885
	.052	60CT(15SP)	ED031886
	1/16	60CT(15SP)	ED031887
	.045	33FS	ED031663
	.052	33FS	ED031664
	1/16	33FS	ED031665
	.045	50FS(FB)	ED031847
	.052	50FS(FB)	ED031848
	1/16	50FS(FB)	ED031849
	.045	500AD (23" dia)	ED032047
	.052	500AD (23" dia)	ED032048
	1/16	500AD (23" dia)	ED032049
	<b>UltraCore® HD-M</b> AWS E71T-1M-H8, E71T-9M-H8	.045	60CT(15SP)
.052		60CT(15SP)	ED033987
1/16		60CT(15SP)	ED033988
.045		33FS	ED033989
.052		33FS	ED033990
1/16		33FS	ED033991
.045		50FS	ED033992
.052		50FS	ED033993
1/16		50FS	ED033994

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER	
<b>UltraCore® 71C</b> AWS E71T-1C-H8, E71T-9C-H8	.045	60CT(15SP)	ED031818	
	.052	60CT(15SP)	ED031819	
	1/16	60CT(15SP)	ED031820	
	.045	33FS	ED031666	
	.052	33FS	ED031667	
	1/16	33FS	ED031668	
	.045	50FS(FB)	ED031822	
	.052	50FS(FB)	ED031823	
	1/16	50FS(FB)	ED031824	
	.045	500AD (23" dia)	ED031876	
	.052	500AD (23" dia)	ED031877	
1/16	500AD (23" dia)	ED031878		
<b>UltraCore® HD-C</b> AWS E71T-1C-H8, E71T-9C-H8	.045	60CT(15SP)	ED033756	
	.052	60CT(15SP)	ED033759	
	1/16	60CT(15SP)	ED033762	
	.045	33FS	ED033755	
	.052	33FS	ED033758	
	1/16	33FS	ED033761	
	.045	50FS	ED033757	
	.052	50FS	ED033760	
	1/16	50FS	ED033763	
	.052	500AD (23" dia)	ED034376	
	1/16	500AD (23" dia)	ED033785	
<b>UltraCore® 71A75 Dual</b> AWS E71T-1C, -1M, -9C, -9M (all -H8)	.045	60CT(15SP)	ED031882	
	.045	33FS	ED031669	
	.052	33FS	ED031670	
	1/16	33FS	ED031671	
	.045	50FS(FB)	ED031844	
	.052	50FS(FB)	ED031845	
	1/16	50FS(FB)	ED031846	
	.045	500AD (23" dia)	ED032044	
	1/16	500AD (23" dia)	ED032046	
	<b>UltraCore® 712C</b> AWS E71T-1, -9, -12 (all C-JH8)	1/16	60CT(15SP)	ED031896
		.045	33FS	ED031672
.052		33FS	ED031673	
1/16		33FS	ED031674	
.052		50FS(FB)	ED031839	
1/16		50FS(FB)	ED031840	
.045		500AD (23" dia)	ED031681	
1/16		500AD (23" dia)	ED031799	
<b>UltraCore® HD-12C</b> AWS E71T-1, -9, -12 (all C-JH8)		.045	33FS	ED034274
		.052	33FS	ED034275
	1/16	33FS	ED034276	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>UltraCore® 712A80</b> AWS E71T-1, -9, -12 (all M-JH8)	1/16	60CT(15SP)	ED031890
	.045	33FS	ED031675
	.052	33FS	ED031676
	1/16	33FS	ED031677
	.045	50FS(FB)	ED031850
	.052	50FS(FB)	ED031851
	1/16	50FS(FB)	ED031852
	.045	500AD (23" dia)	ED032050
	.052	500AD (23" dia)	ED032051
	1/16	500AD (23" dia)	ED032052
<b>UltraCore® HD-12C</b> AWS E71T-1, -9, -12 (all CJ-H8)	.045	33SP	ED034274
	0.052	33SP	ED034275
	1/16	33SP	ED034276
<b>UltraCore® HD-12M</b> AWS E71T-1, -9, -12 (all M-JH8)	.045	33FS	ED034277
	.052	33FS	ED034278
	1/16	33FS	ED034279
<b>UltraCore® 712A80-H</b> AWS E71T-1, -9, -12 (all M-JH4)	.045	60CT(15SP)	ED031891
	1/16	60CT(15SP)	ED031893
	.045	33SP(FB)	ED031678
	.052	33SP(FB)	ED031679
<b>Outershield® 71 Elite</b> AWS E71T-1C, -9C, -1M, -9M (all -H8)	.045	60CT(15SP)	ED029418
	.052	60CT(15SP)	ED029419
	.045	33SSP	ED029201
	.052	33SSP	ED029204
	1/16	33SSP	ED029206
	.045	60C	ED029202
	.052	60C	ED029205
	1/16	60C	ED029207
	1/16	600AD (23" dia)	ED029387
	<b>Outershield® 71 Supreme</b>	.045	33SP
.052		33SP	ED503041
1/16		33SP	ED503042
<b>Outershield® 71M</b> AWS E71T-1C, -1M, -9C, -9M (all -JH16)	.035	10SP	ED026804
	.045	10SP	ED020836
	.035	25SP	ED026805
	.045	25SP	ED022659
	.052	25SP	ED022660
	1/16	25SP	ED022661
	.045	33SSP	ED030007
	.052	33SSP	ED030008
	1/16	33SSP	ED030009
	.045	50C	ED020844
	.052	50C	ED020845
	1/16	50C	ED020846
	1/16	300R	ED020848
	1/16	600R	ED020851
	.045	500AD (23" dia)	ED027364
	.052	500AD (23" dia)	ED029778
1/16	500AD (23" dia)	ED029779	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Mild Steel, Flat And Horizontal</b>			
<b>UltraCore® 70C</b> AWS E70T-1C-H8, E70T-9C, E70T-9C-H8	1/16	50C(VFB)	ED032978
	5/64	50C(VFB)	ED032977
	3/32	50C(VFB)	ED032941
	1/16	500AD (23" dia)	ED033064
	5/64	500D	ED033065
	3/32	500D	ED033066
	<b>UltraCore® 75C</b> AWS E70T-5C-JH4	1/16	50C(VFB)
5/64		50C(VFB)	ED032975
3/32		50C(VFB)	ED032940
<b>Outershield® 70</b> AWS E70T-1C-H16, E70T-9C-H16	1/16	50C	ED012782
	5/64	50C	ED012785
	3/32	50C	ED012784
	1/16	600R	ED014588
	3/32	600R	ED014120
	3/32	600D	ED030262
<b>Outershield® XLH-70</b> AWS E70T-1C-H8, E70T-9C-H8	3/32	50C(VFB)	ED030236
	3/32	500D	ED030360
<b>Low Alloy, All Position</b>			
<b>UltraCore® 81Ni1A75-H</b> AWS E81T1-Ni1M-JH4	.045	33SP(FB)	ED032206
	.052	33SP(FB)	ED032279
	1/16	33SP(FB)	ED032207
<b>UltraCore® 81Ni1C-H</b> AWS E81T1-Ni1C-JH4	.045	33SP(FB)	ED032204
	.052	33SP(FB)	ED032280
	1/16	33SP(FB)	ED032205
	1/16	50FS(FB)	ED032745
	.045	33SP(FB)	ED032217
<b>UltraCore® 81Ni2A75-H</b> AWS E81T1-Ni2M-JH4	.045	33SP(FB)	ED032217
	.052	33SP(FB)	ED032277
	1/16	33SP(FB)	ED032216
<b>UltraCore® 81Ni2C-H</b> AWS E81T1-Ni2C-JH4	.045	33SP(FB)	ED032215
	.052	33SP(FB)	ED032278
	1/16	33SP(FB)	ED032214
<b>UltraCore® 81K2A75-H</b> AWS E81T1-K2M-JH4	.045	33SP(FB)	ED032385
	.052	33SP(FB)	ED032386
	1/16	33SP(FB)	ED032387
<b>UltraCore® 81K2C-H</b> AWS E81T1-K2C-JH4	.045	33SP(FB)	ED032388
	.052	33SP(FB)	ED032389
	1/16	33SP(FB)	ED032390
<b>Outershield® 91K2-H</b> AWS E91T1-K2M H8	.045	25SP(VFB)	ED030975
	.052	25SP(VFB)	ED030976
	1/16	25SP(VFB)	ED030977
<b>Pipelinor® G90M</b> AWS E111T1-K3M-JH8	(1.2)	33SP(VFB)	ED031931
	(1.3)	10SP(VFB)	ED032664
<b>Cormet® 1</b> AWS E81T1-B2	(1.2)	15SP	ED033354
<b>Cormet® 2</b> AWS E91T1-B3	(1.2)	15SP	ED033365
<b>Supercor® F91</b> AWS E91T1-B9	(1.2)	15SP	ED033387



DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Nickel</b>			
Supercore® 625P AWS ENiCrMo3T1-4	(1.2)	15SP	ED034130
<b>SUBMERGED ARC</b>			
<i>Flux</i>			
<b>700 Series Active Flux</b>			
Lincolnweld® 760®	N/A	50PLB	ED032799
Lincolnweld® 761®	N/A	50PLB	ED032765
Lincolnweld® 780®	N/A	50B	ED019586
	N/A	550D	ED032007
	N/A	3000BB	ED033188
Lincolnweld® 781™	N/A	50B	ED019587
<b>800 Series Active Flux</b>			
Lincolnweld® 842-H™	N/A	50HS	ED034371
Lincolnweld® 860®	N/A	50B	ED019589
Lincolnweld® 860® (Tested)	N/A	50B	ED030840
Lincolnweld® 865™	N/A	50B	EDS27857
Lincolnweld® 880™	N/A	50B	ED027866
	N/A	550D	ED028322
Lincolnweld® 880M®	N/A	50PLB	ED031853
Lincolnweld® 882™	N/A	50B	ED027859
Lincolnweld® 888™	N/A	50PLB	ED031596
	N/A	2600BB	ED033490
Lincolnweld® 8500™	N/A	50PLB	ED031854
Lincolnweld® MIL800-H™	N/A	50HS	ED020925
Lincolnweld® 812-SRC™	N/A	50PLB	ED034171
<b>Special Neutral Flux</b>			
Lincolnweld® 960®	N/A	50B	ED022412
Lincolnweld® 960® (Tested)	N/A	50B	ED030841
Lincolnweld® 980™	N/A	50B	ED027861
Lincolnweld® WTX™	N/A	50PLB	ED032990
<b>Flux For Seam Welding Of Pipe</b>			
Lincolnweld® 761-Pipe™	N/A	50PLB	ED032797
Lincolnweld® P223™	N/A	50PLB	ED032764
	N/A	2600BB	ED032767
Lincolnweld® SPX80™	N/A	50PLB	ED032960
	N/A	2600BB	ED033319
Lincolnweld® 995N™	N/A	50PLB	ED032831
<b>High Performance / Alloy Flux</b>			
Lincolnweld® A-XXX-10™	N/A	50B	ED027862
Lincolnweld® MIL800-HPNi™	N/A	50HS	ED028657
<i>Solid Wire</i>			
<b>Mild Steel</b>			
Lincolnweld® L-50® AWS EM13K & ER70S-3	5/64	60C	ED011335
	3/32	60C	ED011328
	1/8	60C	ED011323
	5/32	60C	ED011332
	5/64	1000D	ED011334
	3/32	1000D	ED011327

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
	1/8	1000D	ED011322
	5/32	1000D	ED011331
	1/8	2200ST	ED033481
	5/32	2200ST	ED032997
Lincolnweld® L-56® AWS EH11K & ER70S-6	5/64	60C	ED011678
	3/32	60C	ED011674
	1/8	60C	ED011671
	5/32	60C	EDS11677
	3/32	1000D	ED030425
	1/8	1000D	ED030426
	5/32	1000D	ED028264
	5/64	1000R	EDS01631
	1/8	2200ST	ED032998
5/32	2200ST	ED032999	
Lincolnweld® L-60 AWS EL12	5/64	60C	ED011762
	3/32	60C	ED011752
	1/8	60C	ED011743
	5/32	60C	ED011758
	3/16	60C	ED011749
	5/64	600D	EDS11760
	1/8	600D	EDS11741
	5/64	1000D	ED011761
	3/32	1000D	ED011751
	1/8	1000D	ED011742
	5/32	1000D	ED011757
	3/16	1000D	ED011748
	Lincolnweld® L-61® AWS EM12K	1/16	60C
5/64		60C	ED011825
3/32		60C	ED011815
1/8		60C	ED011807
5/32		60C	ED011821
3/16		60C	ED011812
3/32		250R	ED033074
1/8		250R	ED033075
5/32		250R	ED033076
5/32		300R	ED030412
5/64		750R	ED011826
3/32		750R	EDS11817
1/8		750R	EDS11809
5/32		750R	ED030012
5/32		300D	ED030628
5/64		600D	EDS11823
3/32		600D	EDS11813
1/8		600D	EDS11805
5/32		600D	EDS11819
5/64		1000D	ED011824
3/32		1000D	ED011814
1/8	1000D	ED011806	
5/32	1000D	ED011820	
3/16	1000D	ED011811	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
	1/8	2200ST	ED032973
	5/32	2200ST	ED032972
	3/16	2200ST	ED032994
<b>Lincolnweld® L-61® (Tested)</b> AWS EM12K	3/32	60C	ED030838
<b>Lincolnweld® L-61® (Tested w/WTX)</b> AWS EM12K	5/32	60C	ED032097
	5/32	250R	ED033123
	5/32	1000D	ED030703
<b>Lincolnweld® L-53</b> AWS EH12K	1/8	60C	ED016767
	5/32	60C	ED016248
<b>Lincolnweld® LA-71</b> AWS EM14K	3/32	60C	ED011052
	1/8	60C	ED011051
	5/32	60C	ED011053
	1/8	1000D	EDS30781
	5/32	1000D	EDS30782
<b>Low Alloy</b>			
<b>Lincolnweld® L-70</b> AWS EA1	5/64	60C	ED012054
	1/8	60C	ED012051
	5/32	60C	ED012053
	3/16	60C	ED012052
	1/8	1000D	ED021192
	5/32	1000D	ED021193
	3/16	1000D	EDS21194
	1/8	2200ST	ED032971
	5/32	2200ST	ED032970
	3/16	2200ST	ED032996
<b>Lincolnweld® LA-75</b> AWS ENi1K & ER80S-Ni1	5/64	60C	ED011066
	3/32	60C	ED011064
	1/8	60C	ED011062
	5/32	60C	ED011065
	3/32	1000D	ED027225
	5/32	1000D	ED027224
<b>Lincolnweld® LA-75 (Tested)</b> AWS ENi1K	3/32	60C	ED030839
<b>Lincolnweld® LA-81</b> AWS EG	5/32	60C	ED023163
	5/32	1000D	EDS31060
	1/8	2200ST	ED032993
	5/32	2200ST	ED032992
	3/16	2200ST	ED032995
<b>Lincolnweld® LA-82</b> AWS EF2	3/32	60C	EDS30785
	1/8	60C	ED026958
	5/32	60C	ED026959
<b>Lincolnweld® LA-84</b> AWS EF3	5/64	60C	ED034211
	3/32	60C	ED031871
	1/8	60C	ED033323
	5/32	60C	ED034212
	3/32	1000D	ED031872
	5/32	1000D	ED033727

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Lincolnweld® LA-85</b> AWS ENi5	3/32	60C	ED023166
	1/8	60C	ED023167
	5/32	60C	ED023168
	3/16	60C	ED023169
	3/32	1000D	ED029965
<b>Lincolnweld® LA-90</b> AWS EA3K, ER80S-D2, ER90S-D2, ER90S-G"	5/64	60C	ED011086
	3/32	60C	ED011084
	1/8	60C	EDS11083
	5/32	60C	EDS11085
	5/32	750R	EDS01154
	5/32	1000D	EDS01152
<b>Lincolnweld® LA-92</b> AWS EB2R	3/32	60C	EDS30783
	1/8	60C	EDS26960
	5/32	60C	EDS26961
<b>Lincolnweld® LA-93</b> AWS EB3R	3/32	60C	EDS30784
	1/8	60C	EDS26962
	5/32	60C	EDS26963
	3/32	1000D	ED032185
<b>Lincolnweld® LA-100</b> AWS EM2	5/64	60C	ED011002
	3/32	60C	ED010999
	1/8	60C	ED010998
	5/32	60C	EDS11001
<b>Techalloy® 4130</b>	3/32	55SSP	SA4130093726
	1/8	55SSP	SA4130125726
<b>Techalloy® AK-10</b>	5/64	55SSP	SAAK10078726
	3/32	55SSP	SAAK10093726
	1/8	55SSP	SAAK10125726
	5/32	55SSP	SAAK10156726
<b>Cored Wire</b>			
<b>Mild Steel</b>			
<b>Lincolnweld® LC-72</b> AWS EC1	5/64	50C	ED011099
	3/32	50C	ED011098
	3/32	300R	EDS01186
	5/64	600R	EDS27184
	3/32	600D	EDS01187
<b>Lincolnweld® LAC-B2</b> AWS ECB2	3/32	50C	ED010954
	5/32	50C	ED010955
	3/32	600D	ED019581
	5/32	600D	ED019582
<b>Lincolnweld® LAC-M2</b> AWS ECM2	3/32	50C	ED010981
	5/32	50C	ED010982
<b>Lincolnweld® LAC-Ni2</b> AWS ECNi2	3/32	50C	ED010986
<b>Lincolnweld® LAC-690</b> AWS ECG	3/32	50C	ED032958
	1/8	50C	ED032959
	5/32	50C	ED033302
<b>STAINLESS</b>			
<b>Stick Electrode</b>			
<b>Excalibur® 308/308L-15</b> AWS E308-15 & E308L-15	3/32	8EO	ED033087
	1/8	8EO	ED033088

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Excalibur® 308L-16</b> AWS E308L-16	3/32	8EO	ED033079
	1/8	10EO	ED033080
	5/32	10EO	ED033081
	3/16	10EO	ED033082
<b>Excalibur® 308/308H-16</b> AWS E308-16 & E308H-16	3/32	8EO	ED033083
	1/8	10EO	ED033084
	5/32	10EO	ED033085
	3/16	10EO	ED033086
<b>Excalibur® 308/308L-17</b> AWS E308-17 & E308L-17	1/8	6CT(1TB)	ED033093
	3/32	8EO	ED033089
	1/8	10EO	ED033090
	5/32	10EO	ED033091
	3/16	10EO	ED033092
<b>Excalibur® 309/309L-15</b> AWS E309-15 & E309L-15	3/32	8EO	ED033098
	1/8	8EO	ED033099
<b>Excalibur® 309/309L-16</b> AWS E309-16 & E309L-16	3/32	8EO	ED033097
	1/8	10EO	ED033094
	5/32	10EO	ED033095
	3/16	10EO	ED033096
<b>Excalibur® 309/309L-17</b> AWS E309-17 & E309L-17	3/32	8EO	ED033100
	1/8	10EO	ED033101
	5/32	10EO	ED033102
	3/16	10EO	ED033103
<b>Excalibur® 316/316L-15</b> AWS E316-15 & E316L-15	3/32	8EO	ED033108
	1/8	8EO	ED033109
<b>Excalibur® 316/316L-16</b> AWS E316-16 & E316L-16	3/32	8EO	ED033104
	1/8	10EO	ED033105
	5/32	10EO	ED033106
	3/16	10EO	ED033107
<b>Excalibur® 316/316L-17</b> AWS E316-17 & E316L-17	3/32	8EO	ED033110
	1/8	10EO	ED033111
	5/32	10EO	ED033112
	3/16	10EO	ED033113
<b>Tech-Rod® 308/308H</b> ER308H	3/32	24CT(8TB)	EL308H16093632
	1/8	30CT(10TB)	EL308H16125634
	5/32	30CT(10TB)	EL308H16156634
	3/16	30CT(10TB)	EL308H16187634
<b>Tech-Rod® 308/308L</b> AWS E308L-16	3/32	24CT(8TB)	EL308L16093632
	1/8	30CT(10TB)	EL308L16125634
	5/32	30CT(10TB)	EL308L16156634
	3/16	30CT(10TB)	EL308L16187634
<b>Tech-Rod® 309/309L</b> AWS E309L-16	3/32	24CT(8TB)	EL309L16093632
	1/8	30CT(10TB)	EL309L16125634
	5/32	30CT(10TB)	EL309L16156634
	3/16	30CT(10TB)	EL309L16187634
<b>Tech-Rod® 310</b> AWS E310-16	3/32	24CT(8TB)	EL31016093632
	1/8	30CT(10TB)	EL31016125634
	5/32	30CT(10TB)	EL31016156634

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Tech-Rod® 312</b> AWS E312-16	1/8	30CT(10TB)	EL31216125634
	5/32	30CT(10TB)	EL31216156634
	3/16	30CT(10TB)	EL31216187634
<b>Tech-Rod® 316/316L</b> AWS E316L-16	3/32	24CT(8TB)	EL316L16093632
	1/8	30CT(10TB)	EL316L16125634
	5/32	30CT(10TB)	EL316L16156634
	3/16	30CT(10TB)	EL316L16187634
<b>Tech-Rod® 317L</b> AWS E317L-16	3/32	24CT(8TB)	EL317L16093632
	1/8	30CT(10TB)	EL317L16125634
	5/32	30CT(10TB)	EL317L16156634
<b>Tech-Rod® 320LR</b> AWS E320LR-16	3/32	24CT(8TB)	EL320LR16093632
	1/8	30CT(10TB)	EL320LR16125634
	5/32	30CT(10TB)	EL320LR16156634
	3/16	30CT(10TB)	EL320LR16187634
<b>Tech-Rod® 330</b> AWS E330-16	3/32	24CT(8TB)	EL33016093632
	1/8	30CT(10TB)	EL33016125634
	5/32	30CT(10TB)	EL33016156634
<b>Tech-Rod® 347</b> AWS E347-16	3/32	24CT(8TB)	EL34716093632
	1/8	30CT(10TB)	EL34716125634
	5/32	30CT(10TB)	EL34716156634
	3/16	30CT(10TB)	EL34716187634
	<b>Tech-Rod® 385</b> AWS E385-16	1/8	30CT(10TB)
	5/32	30CT(10TB)	EL38516156634
<b>Tech-Rod® 410</b> AWS E410-16	1/8	30CT(10TB)	EL41016125634
	5/32	30CT(10TB)	EL41016156634
	3/16	30CT(10TB)	EL41016187634
<b>Tech-Rod® 410NiMo</b> AWS E410NiMo-16	1/8	30CT(10TB)	EL410NM16125634
	5/32	30CT(10TB)	EL410NM16156634
	3/16	30CT(10TB)	EL410NM16187634
<b>Tech-Rod® 630</b> AWS E630-16	3/32	24CT(8TB)	EL63016093632
	1/8	30CT(10TB)	EL63016125634
	5/32	30CT(10TB)	EL63016156634
	3/16	30CT(10TB)	EL63016187634
<b>Tech-Rod® 2209</b> AWS E2209-16	3/32	24CT(8TB)	EL220916093632
	1/8	30CT(10TB)	EL220916125634
	5/32	30CT(10TB)	EL220916156634
	3/16	30CT(10TB)	EL220916187634
<b>Tech-Rod® 2594</b> AWS E2594-16	3/32	24CT(8TB)	EL259416093632
	1/8	30CT(10TB)	EL259416125634
	5/32	30CT(10TB)	EL259416156634
	3/16	30CT(10TB)	EL259416187634
<b>MIG Wire</b>			
<b>Blue Max® MIG 308LSi</b> AWS ER308LSi & ER308Si	.030	25SP	ED023961
	.035	25SP	ED019292
	.045	25SP	ED019293
	1/16	25SP	ED019294
	.035	500AD	ED029768
	.045	500AD	ED029769
	.035	1000PTR	ED032834

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Blue Max® MIG 309LSi</b> AWS ER309LSi & ER309Si	.030	25SP	ED023962
	.035	25SP	ED019295
	.045	25SP	ED019296
	1/16	25SP	ED019297
	.035	500AD	ED029770
	.045	500AD	ED029771
<b>Blue Max® MIG 316LSi</b> AWS ER316LSi & ER316Si	.030	25SP	ED023963
	.035	25SP	ED019298
	.045	25SP	ED019299
	1/16	25SP	ED019300
	.035	500AD	ED029772
	.045	500AD	ED029773
<b>Blue Max® LNM 347Si</b> AWS ER347-Si	(1.2)	33SSP	ED031352
<b>Blue Max® LNM 4462</b> AWS ER2209	.035	33SSP	ED033716
	(1.0)	33SSP	ED031302
	(1.2)	33SSP	ED031303
<b>Techalloy® 307</b>	.045	33SSP	MG307045667
<b>Techalloy® 308/308H MIG</b> AWS ER308/308H	.030	33SSP	MG308H030667
	.035	33SSP	MG308H035667
	.045	33SSP	MG308H045667
	1/16	33SSP	MG308H062667
	.045	500TP	MG308H045685
<b>Techalloy® 308/308L MIG</b> AWS ER308L	.030	33SSP	MG308L030667
	.035	33SSP	MG308L035667
	.045	33SSP	MG308L045667
	1/16	33SSP	MG308L062667
	.035	250TP	MG308L035684
	.035	500TP	MG308L035685
<b>Techalloy® 308/308L MIG</b> AWS ER308LSi	.030	33SSP	MG308LH5030667
	.035	33SSP	MG308LH5035667
	.045	33SSP	MG308LH5045667
	1/16	33SSP	MG308LH5062667
	.035	250TP	MG308LH5035684
	.045	250TP	MG308LH5045684
	.035	500TP	MG308LH5035685
	.045	500TP	MG308LH5045685
	1/16	500R	MG308LH5062692
<b>Techalloy® 309/309L MIG</b> AWS ER309/309L	.035	33SSP	MG309L035667
	.045	33SSP	MG309L045667
	1/16	33SSP	MG309L062667
<b>Techalloy® 309LHS MIG</b> AWS ER309LSi	.030	33SSP	MG309LH5030667
	.035	33SSP	MG309LH5035667
	.045	33SSP	MG309LH5045667
	.045	250TP	MG309LH5045684
	.035	500TP	MG309LH5035685
<b>Techalloy® 309LMo MIG</b> AWS ER309LMo	.035	33SSP	MG309LM0035667
	.045	33SSP	MG309LM0045667
	1/16	33SSP	MG309LM0062667

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Techalloy® 310 MIG</b> AWS ER310	.035	33SSP	MG310035667
	.045	33SSP	MG310045667
	1/16	33SSP	MG310062667
<b>Techalloy® 312 MIG</b> AWS ER312	.045	33SSP	MG312045667
	1/16	33SSP	MG312062667
<b>Techalloy® 316/316L MIG</b> AWS ER316L	.030	33SSP	MG316L030667
	.035	33SSP	MG316L035667
	.045	33SSP	MG316L045667
	1/16	33SSP	MG316L062667
	.035	250TP	MG316L035684
	.045	250TP	MG316L045684
<b>Techalloy® 316LHS</b> AWS ER316LSi	.030	33SSP	MG316LH5030667
	.035	33SSP	MG316LH5035667
	.045	33SSP	MG316LH5045667
	1/16	33SSP	MG316LH5062667
	.045	250TP	MG316LH5045684
	.045	500TP	MG316LH5045685
<b>Techalloy® 317L MIG</b> AWS ER317L	.035	33SSP	MG317L035667
	.045	33SSP	MG317L045667
	1/16	33SSP	MG317L062667
<b>Techalloy® 320LR MIG</b> AWS ER320LR	.035	33SSP	MG320LR035667
	.045	33SSP	MG320LR045667
	1/16	33SSP	MG320LR062667
<b>Techalloy® 330 MIG</b> AWS ER330	.035	33SSP	MG330035667
	.045	33SSP	MG330045667
<b>Techalloy® 347 MIG</b> AWS ER347	.035	33SSP	MG347035667
	.045	33SSP	MG347045667
	1/16	33SSP	MG347062667
	1/16	500R	MG347062692
<b>Techalloy® 385 MIG</b> AWS ER385	.035	33SSP	MG385035667
	.045	33SSP	MG385045667
	1/16	33SSP	MG385062667
<b>Techalloy® 409Nb MIG</b> AWS ER409Nb	.035	33SSP	MG409NB035667
	.045	33SSP	MG409NB045667
<b>Techalloy® 410 MIG</b> AWS ER410	.035	33SSP	MG410035667
	.045	33SSP	MG410045667
	1/16	33SSP	MG410062667
	.045	500R	MG410045692
<b>Techalloy® 410NiMo MIG</b> AWS ER410NiMo	.035	33SSP	MG410NM035667
	.045	33SSP	MG410NM045667
<b>Techalloy® 420</b>	1/16	33SSP	MG420062667
<b>Techalloy® 630 MIG</b> AWS ER630	.035	33SSP	MG630035667
	.045	33SSP	MG630045667
<b>Techalloy® 2209 MIG</b> AWS ER2209	.035	33SSP	MG2209035667
	.045	33SSP	MG2209045667
	1/16	33SSP	MG2209062667
<b>Techalloy® 2594</b> AWS ER2594	.035	33SSP	MG2594035667

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Flux-Cored (FCAW-G) Wire</b>			
UltraCore® FC 308L AWS E308LT0-1/-4 and E308T0-1/-4	.045	25SP	ED033004
	1/16	25SP	ED033005
	.045	25SP	ED033006
UltraCore® FCP 308L AWS E308LT1-1/-4 and E308T1-1/-4	.045	25SP	ED027949
	1/16	25SP	ED027950
UltraCore® FC 309L AWS E309LT0-1/-4 and E309T0-1/-4	1/16	25SP	ED033007
UltraCore® FCP 309L AWS E309LT1-1/-4 and E309T1-1/-4	.045	25SP	ED033010
	1/16	25SP	ED033011
UltraCore® FC 316L AWS E316LT0-1/-4 and E316T0-1/-4	.045	25SP	ED033008
	1/16	25SP	ED033009
UltraCore® FCP 316L AWS E316LT1-1/-4 and E316T1-1/-4	.045	25SP	ED033012
	1/16	25SP	ED033013
Supercore® 2205P AWS E2209T1-4	(1.2)	15SP	ED033462
Supercore® 347 AWS E347T0-4	(1.2)	12.5SP	ED034129
<b>Submerged Arc Wire</b>			
Lincolnweld® 308/308L AWS ER308 & ER308L	5/64	60C	ED033147
	3/32	60C	ED033148
	1/8	60C	ED033149
	5/32	60C	ED033150
Lincolnweld® 309/309L AWS ER309 & ER309L	5/64	60C	ED033151
	3/32	60C	ED033152
	1/8	60C	ED033153
Lincolnweld® 316/316L AWS ER316 & ER316L	5/64	60C	ED033155
	3/32	60C	ED033156
	1/8	60C	ED033157
	5/32	60C	ED033158
Techalloy® 308/308H SAW AWS ER308H	3/32	55SSP	SA308H093726
	1/8	55SSP	SA308H125726
Techalloy® 308/308L SAW AWS ER308L	1/16	55SSP	SA308L062726
	3/32	55SSP	SA308L093726
	1/8	55SSP	SA308L125726
	5/32	55SSP	SA308L156726
	3/32	500PP	SA308L093688
Techalloy® 309/309L SAW AWS ER309L	3/32	55SSP	SA309L093726
	1/8	55SSP	SA309L125726
	5/32	55SSP	SA309L156726
	3/32	500PP	SA309L093688
Techalloy® 309LMO SAW AWS ER309LMO	3/32	55SSP	SA309LMO093726
Techalloy® 310 SAW AWS ER310	1/16	55SSP	SA310062726
	3/32	55SSP	SA310093726

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER	
Techalloy® 316/316L SAW AWS ER316L	1/16	55SSP	SA316LHS062726	
	5/64	55SSP	SA316L078726	
	3/32	55SSP	SA316L093726	
	1/8	55SSP	SA316L125726	
	5/32	55SSP	SA316L156726	
Techalloy® 317L SAW AWS ER317L	3/32	55SSP	SA317L093726	
	1/8	55SSP	SA317L125726	
Techalloy® 320LR SAW AWS ER320LR	3/32	55SSP	SA320LR093726	
Techalloy® 347 SAW ER347	3/32	55SSP	SA347093726	
	1/8	55SSP	SA347125726	
	3/32	500R	SA347093692	
Techalloy® 385 SAW AWS ER385	3/32	55SSP	SA385093726	
Techalloy® 410NiMo SAW AWS ER410	1/8	55SSP	SA410NM125726	
Techalloy® 630 SAW AWS ER630	3/32	500R	SA630093692	
Techalloy® 2209 SAW	3/32	55SSP	SA2209093726	
	1/8	55SSP	SA2209125726	
Techalloy® 2594 SAW	3/32	55SSP	SA2594093726	
	1/8	55SSP	SA2594125726	
<b>Submerged Arc Flux</b>				
Lincolnweld® P2000™	N/A	50PLB	ED034290	
Lincolnweld® P2007™	N/A	50PLB	ED033159	
Lincolnweld® ST-100™	N/A	60PLB	ED031856	
<b>TIG Cut Length</b>				
Lincoln® ER308/308L AWS ER308 & ER308L	1/16	10CT(1TB)	ED025410	
	3/32	10CT(1TB)	ED025413	
	1/8	10CT(1TB)	ED025416	
	1/16	10CT	ED025412	
	3/32	10CT	ED025415	
	1/8	10CT	ED025418	
	1/16	30CT(10TB)	ED034439	
	3/32	30CT(10TB)	ED034440	
	1/8	30CT(10TB)	ED034441	
	1/16	50CT	ED026655	
	3/32	50CT	ED026656	
	1/8	50CT	ED026657	
	Lincoln® ER309/309L AWS ER309 & ER309L	1/16	10CT(1TB)	ED025419
		3/32	10CT(1TB)	ED025422
1/8		10CT(1TB)	ED025425	
1/16		10CT	ED025421	
3/32		10CT	ED025424	
1/8		10CT	ED025427	
1/16		30CT(10TB)	ED034442	
3/32		30CT(10TB)	ED034443	
1/8		30CT(10TB)	ED034444	
1/16		50CT	ED026658	
3/32		50CT	ED026659	
1/8		50CT	ED026660	

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Lincoln® ER316/316L AWS ER316 & ER316L	1/16	10CT(1TB)	ED025428
	3/32	10CT(1TB)	ED025431
	1/8	10CT(1TB)	ED025434
	1/16	10CT	ED025430
	3/32	10CT	ED025433
	1/8	10CT	ED025436
	1/16	30CT(10TB)	ED034445
	3/32	30CT(10TB)	ED034446
	1/8	30CT(10TB)	ED034447
	1/16	50CT	ED026661
	3/32	50CT	ED026662
1/8	50CT	ED026663	
Blue Max® LNT 4462 AWS ER2209	(2.4)	22CT	ED031311
	(3.2)	22CT	ED031312
Techalloy® 308/308H TIG AWS ER308/308H	1/16	30CT(10TB)	TG308H062638
	3/32	30CT(10TB)	TG308H093638
	1/8	30CT(10TB)	TG308H125638
Techalloy® 308/308L TIG AWS ER308L	1/16	30CT(10TB)	TG308L062638
	3/32	30CT(10TB)	TG308L093638
	1/8	30CT(10TB)	TG308L125638
	5/32	30CT(10TB)	TG308L156638
Techalloy® 308LHS TIG AWS ER308LSi	1/8	30CT(10TB)	TG308LHS125638
Techalloy® 309/309L TIG AWS ER309/309L	1/16	30CT(10TB)	TG309L062638
	3/32	30CT(10TB)	TG309L093638
	1/8	30CT(10TB)	TG309L125638
	5/32	30CT(10TB)	TG309L156638
Techalloy® 310 TIG AWS ER310	3/32	30CT(10TB)	TG310093638
Techalloy® 312 TIG AWS ER312	1/16	30CT(10TB)	TG312062638
	3/32	30CT(10TB)	TG312093638
	1/8	30CT(10TB)	TG312125638
Techalloy® 316/316L TIG AWS ER316L	1/16	30CT(10TB)	TG316L062638
	3/32	30CT(10TB)	TG316L093638
	1/8	30CT(10TB)	TG316L125638
	5/32	30CT(10TB)	TG316L156638
Techalloy® 317L TIG AWS ER317L	1/16	30CT(10TB)	TG317L062638
	3/32	30CT(10TB)	TG317L093638
	1/8	30CT(10TB)	TG317L125638
	5/32	30CT(10TB)	TG317L156638
Techalloy® 320LR TIG AWS ER320LR	1/16	30CT(10TB)	TG320LR062638
	3/32	30CT(10TB)	TG320LR093638
	1/8	30CT(10TB)	TG320LR125638
Techalloy® 330 TIG AWS ER330	3/32	30CT(10TB)	TG330093638
	1/8	30CT(10TB)	TG330125638
Techalloy® 347 TIG AWS ER347	1/16	30CT(10TB)	TG347062638
	3/32	30CT(10TB)	TG347093638
	1/8	30CT(10TB)	TG347125638
Techalloy® 385 TIG AWS ER385	1/16	30CT(10TB)	TG385062638
	3/32	30CT(10TB)	TG385093638

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Techalloy® 409Nb TIG AWS ER409Nb	1/16	30CT(10TB)	TG409NB062638
	3/32	30CT(10TB)	TG409NB093638
Techalloy® 410 TIG AWS ER410	1/16	30CT(10TB)	TG410062638
	3/32	30CT(10TB)	TG410093638
	1/8	30CT(10TB)	TG410125638
Techalloy® 410NiMo TIG AWS ER410NiMo	1/16	30CT(10TB)	TG410NM062638
	3/32	30CT(10TB)	TG410NM093638
Techalloy® 630 TIG AWS ER630	1/16	30CT(10TB)	TG630062638
	3/32	30CT(10TB)	TG630093638
Techalloy® 2209 TIG AWS ER2209	1/16	30CT(10TB)	TG2209062638
	3/32	30CT(10TB)	TG2209093638
	1/8	30CT(10TB)	TG2209125638
Techalloy® 2594 TIG AWS ER2594	1/16	30CT(10TB)	TG2594062638
	3/32	30CT(10TB)	TG2594093638
	1/8	30CT(10TB)	TG2594125638
<b>Metal-Cored Wire</b>			
PRIMALLOY™ T-409Ti AWS EC409	.045	33SP	ED034208
	.045	500BD	ED034209
PRIMALLOY™ T-439Ti AWS EC439	.045	33SP	ED034293
	.045	500BD	ED034294
<b>NICKEL</b>			
<b>Stick Electrode</b>			
Tech-Rod® 55 AWS ENiFe-CI	3/32	24CT(8TB)	EL55093632
	1/8	30CT(10TB)	EL55125634
	5/32	30CT(10TB)	EL55156634
Tech-Rod® 99 AWS ENi-CI	3/32	24CT(8TB)	EL99093632
	1/8	30CT(10TB)	EL99125634
	5/32	30CT(10TB)	EL99156634
Tech-Rod® 112 AWS ENiCrMo-3	3/32	24CT(8TB)	EL112093632
	1/8	30CT(10TB)	EL112125634
	5/32	30CT(10TB)	EL112156634
	3/16	30CT(10TB)	EL112187634
Tech-Rod® 112LFe AWS ENiCrMo-3	1/8	30CT(10TB)	EL112LFE125634
	5/32	30CT(10TB)	EL112LFE156634
	3/16	30CT(10TB)	EL112LFE187634
Tech-Rod® 117 AWS ENiCrCoMo-1	3/32	24CT(8TB)	EL117093632
	1/8	30CT(10TB)	EL117125634
	5/32	30CT(10TB)	EL117156634
	3/16	30CT(10TB)	EL117187634
Tech-Rod® 122 AWS ENiCrMo-10	3/32	24CT(8TB)	EL122093632
	1/8	30CT(10TB)	EL122125634
	5/32	30CT(10TB)	EL122156634
Tech-Rod® 141 AWS ENi-1	3/32	24CT(8TB)	EL141093632
	1/8	30CT(10TB)	EL141125634
	5/32	30CT(10TB)	EL141156634
	3/16	30CT(10TB)	EL141187634
Tech-Rod® 182 AWS ENiCrFe-3	3/32	24CT(8TB)	EL182093632
	1/8	30CT(10TB)	EL182125634
	5/32	30CT(10TB)	EL182156634
	3/16	30CT(10TB)	EL182187634

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Tech-Rod® 187</b> AWS ECuNi	3/32	24CT(8TB)	EL187093632
	1/8	30CT(10TB)	EL187125634
<b>Tech-Rod® 190</b> AWS ENiCu-7	3/32	24CT(8TB)	EL190093632
	1/8	30CT(10TB)	EL190125634
	5/32	30CT(10TB)	EL190156634
	3/16	30CT(10TB)	EL190187634
<b>Tech-Rod® 276</b> AWS ENiCrMo-4	3/32	24CT(8TB)	EL276093632
	1/8	30CT(10TB)	EL276125634
	5/32	30CT(10TB)	EL276156634
	3/16	30CT(10TB)	EL276187634
<b>Tech-Rod® Weld A</b> AWS ENiCrFe-2	3/32	24CT(8TB)	ELWLDA093632
	1/8	30CT(10TB)	ELWLDA125634
	5/32	30CT(10TB)	ELWLDA156634
	3/16	30CT(10TB)	ELWLDA187634
<b>MIG Wire</b>			
<b>Techalloy® 55 MIG</b> AWS ENIFE-CL	.035	33SSP	MG55035667
	.045	33SSP	MG55045667
<b>Techalloy® 99 MIG</b> AWS ERNiC	.035	33SSP	MG99035667
	.045	33SSP	MG99045667
	.045	250TP	MG99045684
<b>Techalloy® 208 MIG</b> AWS ERNi-1	.035	33SSP	MG208035667
	.045	33SSP	MG208045667
	1/16	33SSP	MG208062667
<b>Techalloy® 276 MIG</b> AWS ERNiCrMo-4	.035	33SSP	MG276035667
	.045	33SSP	MG276045667
	1/16	33SSP	MG276062667
<b>Techalloy® 413 MIG</b> AWS ERCuNi	.035	33SSP	MG413035667
	.045	33SSP	MG413045667
	1/16	33SSP	MG413062667
<b>Techalloy® 418 MIG</b> AWS ERNiCu-7	.035	33SSP	MG418035667
	.045	33SSP	MG418045667
	1/16	33SSP	MG418062667
<b>Techalloy® 606 MIG</b> AWS ERNiCr-3	.035	33SSP	MG606035667
	.045	33SSP	MG606045667
	1/16	33SSP	MG606062667
<b>Techalloy® 617 MIG</b> AWS ERNiCrCoMo-1	.035	33SSP	MG617035667
	.045	33SSP	MG617045667
	1/16	33SSP	MG617062667
<b>Techalloy® 622 MIG</b> AWS ERNiCrMo-10	.035	33SSP	MG622035667
	.045	33SSP	MG622045667
	1/16	33SSP	MG622062667
<b>Techalloy® 625 MIG</b> AWS ERNiCrMo-3	.035	33SSP	MG625035667
	.045	33SSP	MG625045667
	1/16	33SSP	MG625062667
	.045	60SP	MG625045679
	.045	250TP	MG625045684
	1/16	300R	MG625062693

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Techalloy® 625HWT</b> AWS ERNiCrMo-3*	.035	33SP	MG625HWT035659
	.035	33SSP	MG625HWT035667
	.045	33SSP	MG625HWT045667
	.035	250TP	MG625HWT035684
<b>Techalloy® 718 MIG</b> AWS ERNiFeCr-2	.035	33SSP	MG718035667
	.045	33SSP	MG718045667
	1/16	33SSP	MG718062667
	<b>Techalloy® 825 MIG</b> AWS ERNiFeCr-1	.035	33SSP
.045		33SSP	MG825045667
1/16		33SSP	MG825062667
	.045	60SP	MG825045679
	<b>TIG Cut Length</b>		
<b>Techalloy® 55 TIG</b> AWS ENIFE-CL	1/8	30CT(10TB)	TG55125638
<b>Techalloy® 99 TIG</b> AWS ERNiC	3/32	30CT(10TB)	TG99093638
<b>Techalloy® 208 TIG</b> AWS ERNi-1	1/16	30CT(10TB)	TG208062638
	3/32	30CT(10TB)	TG208093638
	1/8	30CT(10TB)	TG208125638
<b>Techalloy® 276 TIG</b> AWS ERNiCrMo-4	1/16	30CT(10TB)	TG276062638
	3/32	30CT(10TB)	TG276093638
	1/8	30CT(10TB)	TG276125638
	5/32	30CT(10TB)	TG276156638
<b>Techalloy® 413 TIG</b> AWS ERCuNi	1/16	30CT(10TB)	TG413062638
	3/32	30CT(10TB)	TG413093638
	1/8	30CT(10TB)	TG413125638
<b>Techalloy® 418 TIG</b> AWS ERNiCu-7	1/16	30CT(10TB)	TG418062638
	3/32	30CT(10TB)	TG418093638
	1/8	30CT(10TB)	TG418125638
<b>Techalloy® 606 TIG</b> AWS ERNiCr-3	1/16	30CT(10TB)	TG606062638
	5/64	30CT(10TB)	TG606078638
	3/32	30CT(10TB)	TG606093638
	1/8	30CT(10TB)	TG606125638
	5/32	30CT(10TB)	TG606156638
	<b>Techalloy® 617 TIG</b> AWS ERNiCrCoMo-1	1/16	30CT(10TB)
3/32		30CT(10TB)	TG617093638
1/8		30CT(10TB)	TG617125638
5/32		30CT(10TB)	TG617156638
<b>Techalloy® 622 TIG</b> AWS ERNiCrMo-10	1/16	30CT(10TB)	TG622062638
	3/32	30CT(10TB)	TG622093638
	1/8	30CT(10TB)	TG622125638
<b>Techalloy® 625 TIG</b> AWS ERNiCrMo-3	1/16	30CT(10TB)	TG625062638
	3/32	30CT(10TB)	TG625093638
	1/8	30CT(10TB)	TG625125638
	5/32	30CT(10TB)	TG625156638
<b>Techalloy® 718 TIG</b> AWS ERNiFeCr-2	3/32	30CT(10TB)	TG718093638
	1/8	30CT(10TB)	TG718125638
<b>Techalloy® 825 TIG</b> AWS ERNiFeCr-1	1/16	30CT(10TB)	TG825062638
	3/32	30CT(10TB)	TG825093638
	1/8	30CT(10TB)	TG825125638

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Submerged Arc Wire</b>			
Techalloy® 276 SAW AWS ERNiCrMo-4	3/32	55SSP	SA276093726
	1/8	55SSP	SA276125726
Techalloy® 418 SAW AWS ERNiCu-7	3/32	55SSP	SA418093726
	1/8	55SSP	SA418125726
Techalloy® 606 SAW AWS ERNiCr-3	3/32	55SSP	SA606093726
	1/8	55SSP	SA606125726
Techalloy® 617 SAW AWS ERNiCrCoMo-1	1/8	55SSP	SA617125726
Techalloy® 622 SAW AWS ERNiCrMo-10	3/32	55SSP	SA622093726
Techalloy® 625 SAW AWS ERNiCrMo-3	3/32	55SSP	SA625093726
	1/8	55SSP	SA625125726
Techalloy® 718	3/32	500R	SA718093692

**HARDFACING**

*Stick (SMAW) Electrode*

<b>Cobalt</b>			
Weartech® WT-1 SMAW	1/8	10CT	ED034876
	5/32	10CT	ED034877
Weartech® WT-6 SMAW	1/8	10CT	ED034878
	5/32	10CT	ED034879
	3/16	10CT	ED034880
Weartech® WT-12 SMAW	1/8	10CT	ED034881
Weartech® WT-21 SMAW	1/8	10CT	ED034882
	5/32	10CT	ED034883
	3/16	10CT	ED034884
<b>Build-Up</b>			
Wearshield® BU	5/32	40CT(10CT)	ED021991
	3/16	40CT(10CT)	ED021993
<b>Metal-To-Metal Wear</b>			
Wearshield® MI	1/8	40CT(10CT)	ED022003
	5/32	40CT(10CT)	ED022005
	3/16	40CT(10CT)	ED022007
Wearshield® Mangjet®	5/32	50CT	ED021976
	3/16	50CT	ED021978
	1/4	50CT	ED021979
<b>Severe Impact</b>			
Wearshield® 15CrMn	1/8	40CT(10CT)	ED021980
	5/32	40CT(10CT)	ED021982
	3/16	40CT(10CT)	ED021984
Wearshield® FROG MANG®	5/32	30CT(10EO)	ED033134
	3/16	30CT(10EO)	ED033135
	1/4	36CT(12EO)	ED033133
<b>Abrasion Plus Impact</b>			
Wearshield® ABR	1/8	40CT(10CT)	ED021996
	5/32	40CT(10CT)	ED021998
	3/16	40CT(10CT)	ED022000
Wearshield® 44	1/8	40CT(10CT)	ED024940
	5/32	40CT(10CT)	ED024941

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Metal-To-Earth Wear</b>			
Wearshield® ME	1/8	40CT(10CT)	ED023323
	5/32	40CT(10CT)	ED023324
	3/16	40CT(10CT)	ED023325
<b>Severe Abrasion</b>			
Wearshield® 60	1/8	40CT(10CT)	ED022010
	5/32	40CT(10CT)	ED022011
	3/16	40CT(10CT)	ED022012
<b>Maintenance And Repair</b>			
Blue Max® 2100	(2.5)	10EO	ED032298
	(3.2)	10EO	ED032299

*Flux-Cored (FCAW-G) Wire*

<b>Build-Up</b>			
Lincore® BU-G	.045	25SP	ED029079
	1/16	25SP	ED029080
<b>Metal-To-Metal</b>			
Lincore® 55-G	.045	25SP	ED028176
	1/16	25SP	ED028177
	.045	500AD (20" dia)	ED031475
	1/16	500D	ED032661

*Metal-Cored (GMAW-C) Wire*

<b>Cobalt</b>			
Weartech® WT-1 GMAW-C	.045	33SP	ED034885
Weartech® WT-6 GMAW-C	.045	33SP	ED034886
	1/16	33SP	ED034887
Weartech® WT-12 GMAW-C	.045	33SP	ED034888
	1/16	33SP	ED034888
Weartech® WT-21 GMAW-C	.045	33SP	ED034890
	1/16	33SP	ED034891
<b>Build-Up</b>			
Lincore® 60-G	.045	25SP	ED029936

*Flux-Cored (FCAW-S) Wire*

<b>Cobalt</b>			
Weartech® WT-1 TIG	1/8	10CT	ED034870
Weartech® WT-6 TIG	1/8	10CT	ED034871
	5/32	10CT	ED034872
	3/16	10CT	ED034873
Weartech® WT-12 TIG	1/8	10CT	ED034874
Weartech® WT-21 TIG	1/8	10CT	ED034875

*Flux-Cored (FCAW-S) Wire*

<b>Build-Up</b>			
Lincore® BU	5/64	25SSP	ED031115
	5/64	50C	ED022064
	7/64	50C	ED022065
Lincore® 33	5/64	56CT(14C)	ED011237
	.045	25SSP	ED031116
	1/16	25SSP	ED031117
	5/64	25SSP	ED031118
	5/64	50C	ED011238
	7/64	50C	ED011240



DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Metal-To-Metal</b>			
Lincore® 40-O	5/64	25SSP	ED031119
	5/64	50C	ED025907
Lincore® 55	5/64	56CT(14C)	ED011277
	.045	25SSP	ED031120
	1/16	25SSP	ED031121
	5/64	25SSP	ED031122
	5/64	50C	ED011278
	7/64	50C	ED011280
Lincore® T&D	1/16	25SSP	ED031134
<b>Severe Impact</b>			
Lincore® M	.045	25SSP	ED031128
	1/16	25SSP	ED031129
	5/64	25SSP	ED031130
	5/64	50C	ED011160
	7/64	50C	ED011164
	7/64	125D	ED011163
	7/64	600D	ED011162
	Lincore® 15CrMn	5/64	25SSP
5/64		50C	ED022060
7/64		50C	ED022061
7/64		125D	ED022068
Lincore® FROG MANG®	1/16	25SP	ED026106
	5/64	25SP	ED026105
<b>Abrasion Plus Impact</b>			
Lincore® 50	.045	25SSP	ED031123
	1/16	25SSP	ED031124
	5/64	25SSP	ED031125
	1/16	50C	ED020829
	5/64	50C	ED017825
	7/64	50C	ED011275
	7/64	125D	ED011274
<b>Severe Abrasion</b>			
Lincore® 60-O	.045	25SSP	ED031131
	1/16	25SSP	ED031132
	5/64	25SSP	ED031133
	5/64	50C	ED019887
	7/64	50C	ED019888
Lincore® 65-O	7/64	50C	ED026077
	7/64	500D	ED026083
<b>Metal-Cored Submerged Arc Wire</b>			
<b>Build-Up</b>			
Lincore® 30-S	3/32	50C	ED011200
	1/8	50C	ED015889
	3/32	600D	ED011199
	1/8	600D	ED015891
<b>Metal-To-Metal, Build-Up</b>			
Lincore® 32-S	3/32	300D	ED025656
	1/8	600D	ED025131

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Lincore® 35-S	3/32	50C	ED019880
	1/8	50C	ED019881
	1/8	600D	ED019884
	5/32	600D	ED019885
<b>Metal-To-Metal</b>			
Lincore® 40-S	1/8	50C	ED015892
	1/8	600D	ED015909
Lincore® 42-S	1/8	300D	ED029264
	1/8	600D	ED029161
<b>Roll Rebuilding, Build Up</b>			
Lincore® 20	3/32	50C	ED018565
	1/8	50C	ED018566
	1/8	600D	ED018569
	5/32	600D	ED018570
Lincore® 8620	1/8	50C	ED020788
	1/8	600D	ED020791
Lincore® 4130	3/32	50C	ED015265
	1/8	50C	ED015266
	3/32	600D	ED015532
	1/8	600D	ED015405
<b>Roll Rebuilding, Metal-To-Metal</b>			
Lincore® 410	3/32	50C	ED018583
	5/32	600D	ED018588
Lincore® 410NiMo	1/8	50C	ED018590
	5/32	50C	ED018591
	1/8	600D	ED018593
	5/32	600D	ED018594
Lincore® 423L	1/8	600D	ED018551
Lincore® 423Cr	3/32	50C	ED018553
	1/8	50C	ED018554
	1/8	600D	ED018557
Lincore® 420	3/32	50C	ED015260
	1/8	50C	ED015262
	3/32	600D	ED015261
	1/8	600D	ED015268
	5/32	600D	ED015264
Lincore® 965	3/32	600D	ED018574
	1/8	600D	ED018575
	5/32	600D	ED018576
Lincore® 102W	1/8	50C	ED018578
	3/32	600D	ED018580
	1/8	600D	ED018581
	5/32	600D	ED018582
Lincore® 102HC	1/8	50C	ED026085
	3/32	600D	ED026086
	1/8	600D	ED026087

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Submerged Arc (SAW) Flux</b>			
<b>Hardfacing</b>			
Lincolnweld® A-96-S	N/A	60PLB	ED031860
Lincolnweld® H-535™	N/A	50B	ED027865
Lincolnweld® H-560™	N/A	100B	ED010345
<b>Neutral</b>			
Lincolnweld® 801®	N/A	50B	ED019588
	N/A	550D	ED023403
	N/A	3000BB	ED030786
Lincolnweld® 802®	N/A	50PLB	ED032800
	N/A	450D	ED023365
	N/A	2700BB	ED030787

**ALUMINUM AND CAST IRON**

**Aluminum**

**MIG Wire**

SuperGlaze® 4043 AWS ER4043	.030	20CT(1SP)	ED030307
	.035	20CT(1SP)	ED030308
	3/64	20CT(1SP)	ED030310
	.035	16SP	ED028395
	3/64	20SP	ED029234
	1/16	20SP	ED030281
	.035	275AP	ED033117
	3/64	275AP	ED030982
	1/16	275AP	ED030983
	.035	275GP	ED034721
SuperGlaze® 4047 AWS ER4047	3/64	16SP	EDS28417
	1/16	16SP	EDS28418
SuperGlaze® 5183 AWS ER5183	3/64	16SP	EDS28437
	1/16	16SP	EDS28438
SuperGlaze® 5356 AWS ER5356	.035	20CT(1SP)	ED030312
	3/64	20CT(1SP)	ED030314
	.035	16SP	ED028385
	3/64	20SP	ED030282
	1/16	20SP	ED030283
	.035	300AP	ED033178
	3/64	300AP	ED031826
	1/16	300AP	ED030985
	.035	300GP	ED034722
	3/64	300GP	ED034550
SuperGlaze® 5356 TM™ AWS ER5356	1/16	300GP	ED034551
	.035	20CT(1SP)	ED034064
	3/64	20CT(1SP)	ED034065
	1/16	20CT(1SP)	ED034066
	.035	16SP	ED034067
	3/64	16SP	ED034068
	1/16	16SP	ED034069
	3/64	20SP	ED034070
	1/16	20SP	ED034071

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
	.035	300AP	ED034090
	3/64	300AP	ED034091
	1/16	300AP	ED034092
	.035	300GP	ED034723
	3/64	300GP	ED034724
	1/16	300GP	ED034729
SuperGlaze® 5554 AWS ER5554	3/64	16SP	ED029573
SuperGlaze® 5556 AWS ER5556	3/64	20CT(1SP)	EDS30329
	3/64	16SP	EDS29581
	1/16	16SP	EDS29582
	3/32	16SP	ED034175
	1/16	20SP	ED032141
	1/16	300AP	ED031940
	1/16	300GP	ED034731
<b>TIG Cut Length</b>			
SuperGlaze® 4043 AWS ER4043	1/16	10CT	ED031111
	3/32	10CT	ED031112
	1/8	10CT	ED031113
SuperGlaze® 5356 AWS ER5356	1/16	10CT	ED031108
	3/32	10CT	ED031109
	1/8	10CT	ED031110

**Cast Iron**

**Stick Electrode**

Ferroweld™ AWS ESt	1/8	6CT(1TB)	ED031542
	1/8	30CT(10EO)	ED033882

**PIPELINER**

**Stick (SMAW) Electrode**

**Mild Steel, Cellulosic**

Pipeliners® 6P+ AWS E6010	(2.5)	30CT(10EO)	ED032609
	(3.2)	30CT(10EO)	ED032610
	(4.0)	30CT(10EO)	ED032611
	(3.2)	50EO	ED030848
	(4.0)	50EO	ED030849

**Mild Steel, Low Hydrogen**

Pipeliners® 16P AWS E7016 H4	(2.5)	30CT(10EO)	ED033835
	(3.2)	30CT(10EO)	ED033836
	(4.0)	30CT(10EO)	ED033837
	(2.5)	50EO	ED030916
	(3.2)	50EO	ED030917
	(4.0)	50EO	ED030918

**Low Alloy, Cellulosic, Pipe**

Pipeliners® Arc 80 AWS E8010 P1, E8010-G	4.0 mm	50EO	ED034456
	3/16 in	50EO	ED034458
	5.0 mm	50EO	ED034457
Pipeliners® 7P+ AWS E7010-P1	(3.2)	50EO	ED031611
	(4.0)	50EO	ED031612
	(5.0)	50EO	ED031613

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
Pipeliner® 8P+ AWS E8010-P1 (also meets E8010-G)	(3.2)	50EO	ED030826
	(4.0)	50EO	ED030827
	(5.0)	50EO	ED030828
<b>Low Alloy, Low Hydrogen</b>			
Pipeliner® 18P AWS E8018-G H4	(3.2)	30CT(10EO)	ED032620
	(4.0)	30CT(10EO)	ED032621
Pipeliner® LH-D80 AWS E8045-P2 H4R	(3.2)	30CT(10EO)	ED032626
	(4.0)	30CT(10EO)	ED032627
	(4.5)	30CT(10EO)	ED032628
Pipeliner® LH-D90 AWS E9045-P2 H4R	(3.2)	30CT(10EO)	ED032629
	(4.0)	30CT(10EO)	ED032630
	(4.5)	30CT(10EO)	ED032631
Pipeliner® 19P AWS E10018-G H4R	(3.2)	30CT(10EO)	ED032622
	(4.0)	30CT(10EO)	ED032623
Pipeliner® LH-D100 AWS E10045-P2 H4R	(3.2)	30CT(10EO)	ED032632
	(4.0)	30CT(10EO)	ED032633
	(4.5)	30CT(10EO)	ED032634

**MIG (GMAW) Electrode**

**Mild Steel And Low Alloy Steel Pipe**

Pipeliner® 70S-G AWS ER70S-G	.045	10SP(VFB)	ED030904
	.045	30SP(VFB)	ED030905
Pipeliner® 80S-G AWS ER80S-G	.045	10SP(VFB)	ED031493
	.045	30SP(VFB)	ED031494
Pipeliner® 80Ni1 AWS ER80S-G	(1.0)	10SP(VFB)	ED033121
	(1.2)	10SP(VFB)	ED033122
	(1.0)	33SP(VFB)	ED033119
	(1.2)	33SP(VFB)	ED033120

**Flux-Cored (FCAW-S) Electrode**

**Low Alloy, All Position**

Pipeliner® NR®-207+ AWS E71T8-K6	5/64	56HS(14C)	ED030924
Pipeliner® NR®-208-XP AWS E81T8-G	(2.0)	56HS(14C)	ED031968

**Flux-Cored (FCAW-G) Electrode**

**Low Alloy, All Position**

Pipeliner® 81M AWS E81T1-GM	(1.2)	10SP(VFB)	ED033320
	(1.2)	25SP(VFB)	ED033321
Pipeliner® 101M AWS E101T1-GM	(1.2)	10SP(VFB)	ED033807
	(1.2)	25SP(VFB)	ED033808
Pipeliner® 111M AWS E111T1-GM	(1.2)	10SP(VFB)	ED033745
	(1.2)	25SP(VFB)	ED033746

**POWER GENERATION AND NUCLEAR**

**Stick (SMAW) Electrode**

**Mild Steel**

Excalibur® 7018 MR® N AWS E7018 H4R, E7018-1 H4R	3/32	24CT(8EO)	ED033940
	1/8	30CT(10EO)	ED033838
	5/32	30CT(10EO)	ED033839

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Low Alloy</b>			
Excalibur® 9018-G MR® N AWS E9018-G H4R	3/32	24CT(8EO)	ED033897
	1/8	30CT(10EO)	ED033898
	5/32	30CT(10EO)	ED033865

**MIG (GMAW) Electrode**

**Mild Steel**

SuperArc® L-56® N AWS ER70S-6	.035	33SP	ED033842
	.045	33SP	ED033843

**Low Alloy**

SuperArc® LA-75 (Q2) AWS ER80S-Ni1	.035	33SP	ED033949
---------------------------------------	------	------	----------

**Stainless Steel**

Blue Max® MIG 308L N AWS ER308, ER308L	.035	33SSP	ED033848
	.045	33SSP	ED033849
Blue Max® MIG 309L N AWS ER309, ER309L	.035	33SSP	ED033850
	.045	33SSP	ED033851
Blue Max® MIG 316L N AWS ER316, ER316L	.035	33SSP	ED033852
	.045	33SSP	ED033853
Blue Max® LNM 4462 N AWS ER2209	.035	33SP	ED033955
	.045	33SP	ED033956

**TIG (GTAW) Cut Length**

**Mild Steel**

Lincoln® ER70S-2 (Q2) AWS ER70S-2	1/16	10CT	ED033952
	3/32	10CT	ED033953
	1/8	10CT	ED033954

**Stainless Steel**

Lincoln® ER308/308L N AWS ER308, ER308L	3/32	30CT(10TB)	ED033854
	1/8	30CT(10TB)	ED033855
Lincoln® ER309/309L N AWS ER309, ER309L	3/32	30CT(10TB)	ED033856
	1/8	30CT(10TB)	ED033857
Blue Max® LNT 4462 N AWS ER2209	3/32	30CT(10TB)	ED033957
	1/8	30CT(10TB)	ED033958

**TIG (GTAW) Cut Length - Orbital**

**Mild Steel**

SuperArc® Orbital TIG L-52 N AWS ER70S-2	.035	8CT(2SP)	ED033947
	.035	10SP	ED033948
SuperArc® Orbital TIG L-56 N AWS ER70S-6	.035	8CT(2SP)	ED033840
	.035	10SP	ED033841

**Flux-Cored (FCAW-G) Wire**





**Mild Steel**

UltraCore® 71A85 (Q2) AWS E71T-1M-H8, E71T-9M-H8	.045	33SP	ED033950
	1/16	33SP	ED033951
UltraCore® SR-12H AWS E71T-1, -9, -12 (all M-JH4)	.045	60CT(15SP)	ED034122

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>BUY AMERICA PRODUCTS</b>			
<b>Stick Electrode</b>			
<b>Excalibur® 7018 MR®</b> AWS E7018 H4R	3/32	50EO	ED033868
	1/8	50EO	ED033869
	5/32	50EO	ED033870
	3/16	50EO	ED033871
	7/32	50EO	ED034307
<b>Excalibur® 7018-1 MR®</b> (Buy America) AWS E7018-1 H4R	3/32	50EO	ED034308
	1/8	50EO	ED034309
<b>Excalibur® 7028</b> (Buy America) AWS E7028 H8	5/32	50EO	ED034312
	3/16	50EO	ED034313
	7/32	50EO	ED034314
<b>Excalibur® 8018-C3 MR®</b> (Buy America) AWS E8018-C3 H4R	3/32	50EO	ED034039
	1/8	50EO	ED034040
	5/32	50EO	ED034041
	3/16	50EO	ED034042
	7/32	50EO	ED034315
<b>Flux-Cored Wire</b>			
<b>UltraCore® 71C</b> (Buy America) AWS E71T-1C-H8, E71T-9C-H8	.045	33FS	ED033872
	.052	33FS	ED033873
	1/16	33FS	ED033874
	1/16	50FS	ED034410
<b>UltraCore® 712C</b> (Buy America) AWS E71T-1, -9, -12 (all C-JH8)	.052	33FS	ED034418
	1/16	33FS	ED034419
	.052	50FS	ED034420
	1/16	50FS	ED034421
<b>UltraCore® 81Ni1A75-H</b> (Buy America) AWS E81T1-Ni1M-JH4	.045	33SP(FB)	ED034411
	1/16	33SP(FB)	ED034413
	.052	500AD	ED034412
<b>UltraCore® 81Ni1C-H</b> (Buy America) AWS E81T1-Ni1C-JH4	.045	33SP(FB)	ED034414
	.052	33SP(FB)	ED034415
	1/16	50FS(FB)	ED034416
<b>MIG Wire</b>			
<b>SuperArc® L-50®</b> (Buy America) AWS ER70S-3 & EM13K	.045	44FS	ED034428
<b>SuperArc L-56®</b> (Buy America) AWS ER70S-6 & EH11K	.035	44FS	ED033704
	.045	44FS	ED033703
	.052	44FS	ED033705
	1/16	60C	ED033710
	1/16	500AP	ED033707
	.035	900AP	ED034429
	.045	1000AP	ED033706
	.052	1000AP	ED033702
<b>SuperArc® L-59®</b> (Buy America) AWS ER70S-6	.052	44FS	ED034430
	.052	1000AP	ED034431
<b>SuperArc® LA-75</b> (Buy America) AWS ER80S-Ni1 & ENi1K	.045	33SSP	ED034432

DESCRIPTION (AWS CODE)	DIA (in.)	PKG WT (lbs.)	PRODUCT NUMBER
<b>Submerged Arc Flux</b>			
<b>Lincolnweld® L-61</b> (Buy America) AWS EM12K	5/64	60C	ED030756
	3/32	60C	ED033875
	1/8	60C	ED033876
	5/32	60C	ED033877
	3/16	60C	ED034055
	3/32	1000D	ED034043
	1/8	1000D	ED034044
	5/32	1000D	ED034045
<b>Submerged Arc Wire</b>			
<b>Lincolnweld® LA-75</b> (Buy America) AWS ENi1K	5/64	60C	ED034196
	3/32	60C	ED033878
	1/8	60C	ED033879
	5/32	60C	ED033880
	3/32	1000D	ED034046
	5/32	1000D	ED034048
<b>Lincolnweld® LA-85</b> (Buy America) AWS ENi5	3/32	60C	ED034426
	5/32	60C	ED034427

# Welding Safety Checklist

HAZARD	FACTORS TO CONSIDER	PRECAUTION SUMMARY
<b>Electric shock can kill</b> 	<ul style="list-style-type: none"> <li>• <b>Wetness</b></li> <li>• <b>Welder in or on workpiece</b></li> <li>• <b>Confined space</b></li> <li>• <b>Electrode holder and cable insulation</b></li> </ul>	<ul style="list-style-type: none"> <li>• Insulate welder from workpiece and ground using <i>dry</i> insulation. Rubber mat or dry wood.</li> <li>• Wear <i>dry, hole-free</i> gloves. (Change as necessary to keep dry.)</li> <li>• Do not touch electrically “hot” parts or electrode with bare skin or wet clothing.</li> <li>• If wet area and welder cannot be insulated from workpiece with dry insulation, use a semiautomatic, constant-voltage welder or stick welder with voltage reducing device.</li> <li>• Keep electrode holder and cable insulation in good condition. Do not use if insulation damaged or missing.</li> </ul>
<b>Fumes and gases can be dangerous</b> 	<ul style="list-style-type: none"> <li>• <b>Confined area</b></li> <li>• <b>Positioning of welder’s head</b></li> <li>• <b>Lack of general ventilation</b></li> <li>• <b>Electrode types, i.e., manganese, chromium, etc. See MSDS</b></li> <li>• <b>Base metal coatings, galvanize, paint</b></li> </ul>	<ul style="list-style-type: none"> <li>• Use ventilation or exhaust to keep air breathing zone clear, comfortable.</li> <li>• Use helmet and positioning of head to minimize fume in breathing zone.</li> <li>• Read warnings on electrode container and material safety data sheet (MSDS) for electrode,</li> <li>• Provide additional ventilation/exhaust where special ventilation requirements exist.</li> <li>• Use special care when welding in a confined area.</li> <li>• Do not weld unless ventilation is adequate.</li> </ul>
<b>Welding sparks can cause fire or explosion</b> 	<ul style="list-style-type: none"> <li>• <b>Containers which have held combustibles</b></li> <li>• <b>Flammable materials</b></li> </ul>	<ul style="list-style-type: none"> <li>• Do not weld on containers which have held combustible materials (unless strict AWS F4.1 procedures are followed). Check before welding.</li> <li>• Remove flammable materials from welding area or shield from sparks, heat.</li> <li>• Keep a fire watch in area during and after welding.</li> <li>• Keep a fire extinguisher in the welding area.</li> <li>• Wear fire retardant clothing and hat. Use earplugs when welding overhead.</li> </ul>
<b>Arc rays can burn eyes and skin</b> 	<ul style="list-style-type: none"> <li>• <b>Process: gas-shielded arc most severe</b></li> </ul>	<ul style="list-style-type: none"> <li>• Select a filter lens which is comfortable for you while welding.</li> <li>• Always use helmet when welding.</li> <li>• Provide non-flammable shielding to protect others.</li> <li>• Wear clothing which protects skin while welding.</li> </ul>

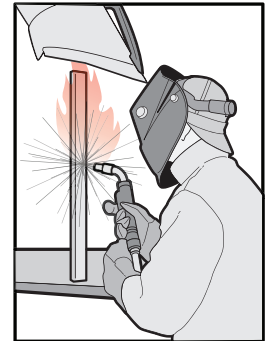
## Arc Welding Fumes and Gases

The **fume plume** contains solid particles from the consumables, base metal, and base metal coating. For common mild steel arc welding, depending on the amount and length of exposure to these fumes, most immediate or short term effects are temporary, and include symptoms of burning eyes and skin, dizziness, nausea, and fever. Long-term exposure to welding fumes can lead to siderosis (iron deposits in the lungs) and may affect pulmonary function. Bronchitis and some lung fibrosis have been reported.

Some compounds which may be in welding fume, and reported health effects of overexposure are below. See the MSDS for the consumable product used for specific information.

- ▶ **Barium** may cause severe stomach pain, slow pulse rate; irregular heartbeat, ringing of the ears, convulsion and muscle spasms. In extreme cases can cause death.
- ▶ **Cadmium** fumes can be fatal even under brief overexposures, with symptoms much like metal fume fever.
- ▶ **Chromium** and its compounds are on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a cancer risk to humans. Some forms of these metals are known or suspected to cause lung cancer in processes other than welding and asthma has been reported.
- ▶ **Manganese:** Manganese overexposure may affect the central nervous system, resulting in poor coordination, difficulty in speaking, and tremor of arms or legs. This condition is considered irreversible.
- ▶ **Nickel:** Nickel and its compounds are on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a cancer risk to humans.
- ▶ **Silica:** Overexposure can cause severe lung damage (silicosis). Crystalline silica is present in submerged arc flux.
- ▶ **Zinc:** Overexposure to zinc may cause metal fume fever with symptoms similar to the common flu.

Your work area has adequate ventilation when there is enough ventilation and/or exhaust to control worker exposure to hazardous materials in the welding fumes and gases so the applicable limits for those materials is not exceeded. See the MSDS for the legal limits, the OSHA PEL (Permissible Exposure Limit), and the recommended guideline, the ACGIH TLV (Threshold Limit Value). Confirm that if the worker exposure does not exceed the applicable exposure limit for compounds in the fumes and gases by having an industrial hygienist take and analyze a sample of the breathing air. A respirator may be required if exposure cannot be controlled to the PEL or TLV.



Read the product label and material safety data sheet for the electrode posted in the work place or in the electrode or flux container to see what fumes can be reasonably expected from use of the product and to determine if special ventilation is needed. Know what the base metal is, and determine if these is any paint, plating, or coating that could expose you to toxic fumes and/or gases. Remove it from the metal being welded, if possible.

If you start to feel uncomfortable, dizzy or nauseous, you may be overexposed to fumes and gases, or suffering from oxygen deficiency. Stop welding and get some fresh air immediately. Notify your supervisor and co-workers so the situation can be corrected and other workers can avoid the hazard. Be sure you are following these safe practices, the consumable labeling and MSDS and improve the ventilation in your area. Do not continue welding until the situation has been corrected.

# Warranty Commitment



## 3 Year Warranty

You have a right to expect that the welding and cutting equipment, electrode and flux you purchase will be free of defects in workmanship and material. Standing behind the high quality of our products, Lincoln Electric's warranty commitment to its customers leads the industry in breadth and scope.

For example, our limited warranty extends to 7 Years on many of our main power rectifiers. With few exceptions, all industrial welders and power sources carry a full 3 Year Lincoln warranty. Electrode, wire and flux are warranted for 1 full year, as are environmental systems.



## Extended Warranty Available

If you choose, you can extend the duration of the Lincoln warranty on your Lincoln industrial welder and cutting machines by two years with the Lincoln Electric Extended Warranty. Available only in the United States and Canada. Visit our web site for more information.



## Quality Systems

Choose welding suppliers wisely. . . look for third party certifications on the companies and products you select. In fact, some of your projects or customers may require it. Many Lincoln manufacturing sites have been inspected and registered to the world's ISO standards. In fact, Lincoln Electric was the first welding manufacturer to be registered to the tough ISO 9001 and 14001 standards.

However, there's more. Equipment destined for harsh environments is often tested to IP21, IP23 and IP23S standards. Products intended for the Canadian market meet stringent CSA (Canadian Standards Association) standards. Electrode is tested to comply with AWS (American Welding Society) and often ASME Boiler Pressure codes, ABS (American Bureau of Shipping), CWB/CSA (Canadian Welding Bureau) and MIL qualifications. Certificates of Conformance are available at our web site.

# Lincoln Electric Promo Gear

Shirts, Hats, Tradeshow and Showroom Items

View more items at [www.lincolnpromos.com](http://www.lincolnpromos.com)



- A**
- AC225 ..... 6
  - Accessories ..... 133
  - AC/DC 225/125 ..... 6
  - Activ8™ ..... 63
  - Advanced Process Welders ..... 30
  - Air Vantage® 500 ..... 54
  - Aluminum and Cast Iron Consumables ..... 162
  - APEX™ 2100 Orbital Controller ..... 111
  - Arc Tracker™ ..... 27
  - AutoDrive® 4R100 ..... 102
  - AutoDrive® 4R220 ..... 102
  - AutoDrive® 19 ..... 100
  - AutoDrive® 19 Tandem ..... 100
  - Automation Solutions ..... 95
  - AVC-5 ..... 114
- B**
- Bulldog® 5500 ..... 44
  - Buy America Consumables ..... 164
- C**
- The Circulator™ ..... 123
  - Classic® 300 HE ..... 50
  - CNC Cutting Systems (Torchmate®) ..... 91
  - Consumables ..... 145
  - Cruiser™ Tractor ..... 69
  - Custom Robotic Systems ..... 98
  - Cutting Systems ..... 87
- D**
- DirectArc™ System ..... 114
  - DownFlex® 100-NF ..... 118
  - DownFlex® 200-M ..... 118
  - DownFlex® 400-MS/A ..... 118
  - DWF-4 ..... 114
- E**
- Education Cell 2.0 ..... 128
  - Engine Drives: Commercial ..... 42
  - Engine Drives: Industrial ..... 49
  - Engineered Fume Systems ..... 123
- F**
- Ferris Wheel Robotic System ..... 97
  - FlexFeed™ 74 HT ..... 60
  - FlexFeed™ 84 ..... 61
  - FlexFeed™ 84 Dual ..... 61
  - FLEXTEC® 450 ..... 26
  - FLEXTEC® 650 ..... 27
  - Flux-Cored Consumables ..... 150
  - Formed Extraction Hood ..... 121
  - Fume Extraction Arms ..... 120
- G**
- Guardian™ Fire Safety Solutions ..... 124
  - Guns & Torches ..... 80
- H**
- Hardfacing Consumables ..... 160
  - HELIX™ T55 Weld Head & Track Ring ..... 111
  - High Vacuum Central Systems ..... 123
- I**
- Idealarc® 250 ..... 6
  - Idealarc® AC1200 ..... 73
  - Idealarc® CV305 ..... 24
  - Idealarc® CV400 ..... 24
  - Idealarc® DC400 ..... 28
  - Idealarc® DC600 ..... 28, 72
  - Idealarc® DC1000 ..... 72
  - Idealarc® DC1500 ..... 73
  - Idealarc® R3R-400 ..... 8
  - Idealarc® R3R-500 ..... 8
  - Innershield® Guns ..... 84
  - Invertec® STT® II ..... 31
  - Invertec® V155-S ..... 7, 13
  - Invertec® V275-S ..... 7
  - Invertec® V160-T ..... 13
  - Invertec® V205-T DC ..... 14
  - Invertec® V205-T AC/DC ..... 14
  - Invertec® V350 PRO ..... 26
  - Inverter Racks ..... 40
- L**
- LF-72 ..... 58
  - LF-74 ..... 58
  - LN-8 ..... 59, 75
  - LN-9 ..... 59, 75
  - LN-23P ..... 63
  - LN-25 Wire Feeders ..... 64
  - Low Vacuum Central Systems ..... 123
  - LT-7 Tractor ..... 75
- M**
- Magnum® PRO Welding Guns ..... 81
  - Magnum® Welding Guns ..... 83
  - MASTERPIPE™ Profiler ..... 92
  - MASTERPIPE™ Mini Profiler ..... 93
  - MAXsa™ 10 Controller ..... 70
  - MAXsa™ 19 Controller ..... 71
  - MAXsa™ 22 Feed Head ..... 70
  - MAXsa™ 29 Feed Head ..... 71
  - Mechanized Automation ..... 110
  - Metal-Cored Consumables ..... 149
  - MIG & FCAW: Industrial Welders ..... 23
  - MIG Consumables ..... 148
  - MIG: Wire Feeder/Welders ..... 16
  - Miniflex® ..... 117
  - Mobiflex® 100-NF ..... 119
  - Mobiflex® 200-M ..... 119
  - Mobiflex® 400-MS ..... 119
  - Modular Extraction Hood ..... 121
  - Motorized Slide System ..... 113
  - Multi-Operator Welding Systems ..... 38
  - Multi-Process Welders ..... 25
  - Multi-Weld™ 350 ..... 39
- N**
- NA-3S Control & Heads ..... 74
  - NA-4 Control & Heads ..... 74
  - NA-5 Control & Heads ..... 74
  - Nickel Consumables ..... 158
- O**
- Outback® 145 ..... 44
  - Outback® 185 ..... 44
- P**
- Pipeliner Consumables ..... 162
  - Plasma Cutting 2x2 Educational Pkgs ..... 132
  - Plasma Cutting 4x4 Educational Pkgs ..... 132
  - Power Generation and Nuclear ..... 163
  - Precision TIG® 225 ..... 11
  - Precision TIG® 275 ..... 12
  - Precision TIG® 375 ..... 12
  - Power Feed® 10R ..... 102
  - Power Feed® 25M ..... 65
  - Power Feed® 84 ..... 62
  - Power Feed® 84 Dual ..... 62
  - POWER MIG® 140C ..... 18
  - POWER MIG® 180C ..... 18
  - POWER MIG® 180 Dual ..... 19
  - POWER MIG® 216 ..... 20
  - POWER MIG® 256 ..... 20
  - POWER MIG® 350MP ..... 21
  - Power Wave® AC/DC 1000® SD ..... 69
  - Power Wave® Advanced Module ..... 33
  - Power Wave® C300 ..... 31
  - Power Wave® i400 ..... 99
  - Power Wave® R350 ..... 99
  - Power Wave® R500 ..... 101
  - Power Wave® S350 ..... 32
  - Power Wave® S500 ..... 34
  - Power Wave® S700 ..... 34
  - Power Wave® STT® Module ..... 33
  - Power Wave® 455M ..... 32
  - Power Wave® 455M/STT® ..... 32
  - Power Wave® 455M Robotic ..... 100
  - Power Wave® 455M/STT® Robotic ..... 100
  - Push-Pull Guns ..... 85
  - Push/Pull Fume Systems ..... 123
- R**
- Radius™ Welding Tools ..... 78
  - Ranger® 225 ..... 45
  - Ranger® 250 GXT ..... 45
  - Ranger® 305 G EFI ..... 46
  - Ranger® 305 LPG ..... 46
  - Ranger® 305 D ..... 46
  - Red Line™ Welding Apparel ..... 78
  - Robotic Tube Profiler ..... 92
  - Robotic Welding Systems ..... 96
- S**
- SAE-300® HE ..... 51
  - SAE-500® ..... 53
  - SAE-500® Severe Duty™ ..... 53
  - Seam Tracker™ Systems ..... 112
  - Semiautomatic Wire Feeders ..... 57
  - Square Wave™ TIG 175 ..... 10
  - SP-140T ..... 18
  - SP-180T ..... 18
  - Spirit® II 150 ..... 90
  - Spirit® II 275 ..... 90
  - Spirit® II 400 ..... 90
  - Spool Guns ..... 84
  - Stainless Consumables ..... 154
  - Statiflex® 200-M ..... 120
  - Statiflex® 400-MS ..... 120
  - Statiflex® Filter Banks ..... 122
  - Stick Consumables ..... 146
  - Stick Welders ..... 5
  - Submerged Arc & Automatic Equipment ..... 68
  - Submerged Arc Consumables ..... 153
  - Submerged Arc Guns ..... 85

\*Consumable products in italic

System 5 ..... 96  
 System 10 ..... 96  
 System 15 ..... 96  
 System 20 ..... 96  
 System 30 ..... 96  
 System 30HS ..... 97  
 System 35 ..... 96  
 System 40 ..... 96  
 System 50HP ..... 97  
 System 55 ..... 97

**T**  
 Tandem Cruiser™ Tractor ..... 69  
 TIG Consumables ..... 148  
 TIG Torches ..... 86

TIG Welders ..... 9  
 Tomahawk® 375 Air ..... 88  
 Tomahawk® 625 ..... 88  
 Tomahawk® 1000 ..... 89  
 Torchmate® CNC Cutting Systems ..... 91  
 Training Solutions ..... 127

**V**  
 Vantage® 300 ..... 52  
 Vantage® 400 ..... 52  
 Vantage® 500 ..... 54  
 VRTEX® 360 ..... 131  
 VRTEX® Mobile ..... 130  
 VIKING™ Welding Helmets ..... 78

**W**  
 Warranty Information ..... 166  
 Weld Fume Control ..... 116  
 Welding Booth ..... 129  
 Welding Consumables ..... 145  
 Welding Gear ..... 78  
 Welding Guns & Torches ..... 80  
 Welding Safety Checklist ..... 165  
 Welding Safety Glasses ..... 78  
 Weld Oscillator ..... 114  
 Wire Delivery ..... 107

**X**  
 X-Tractor® 1GC ..... 117  
 X-Tractor® 3A, 5A, 8A ..... 118

\*Consumable products in italic

SIGN UP FOR THE  
**iWELD**  
 Newsletter  
[lincolnelectric.com/iweld](http://lincolnelectric.com/iweld)

Get the latest welding news direct from Lincoln Electric.

The iWeld™ Newsletter will arrive in your email inbox around mid-month and includes the latest product information and updates, welding tips, application stories, welding projects, company news and events.



**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](http://www.lincolnelectric.com) for any updated information.

Availability and/or specifications of products listed in this catalog are subject to change at any time without notice.



23 <b>V</b> 50.942 Vanadium	24 <b>Cr</b> 51.996 Chromium	25 <b>Mn</b> 54.938 Manganese	26 <b>Fe</b> 55.845 Iron	27 <b>Co</b> 58.933 Cobalt	28 <b>Ni</b> 58.693 Nickel
41 <b>Nb</b> 92.906 Niobium	42 <b>Mo</b> 95.94 Molybdenum	Tc	Ru	Rh	Pd
Ta	74 <b>W</b> 183.84 Tungsten	<b>THE MISSING ELEMENT IS</b>			

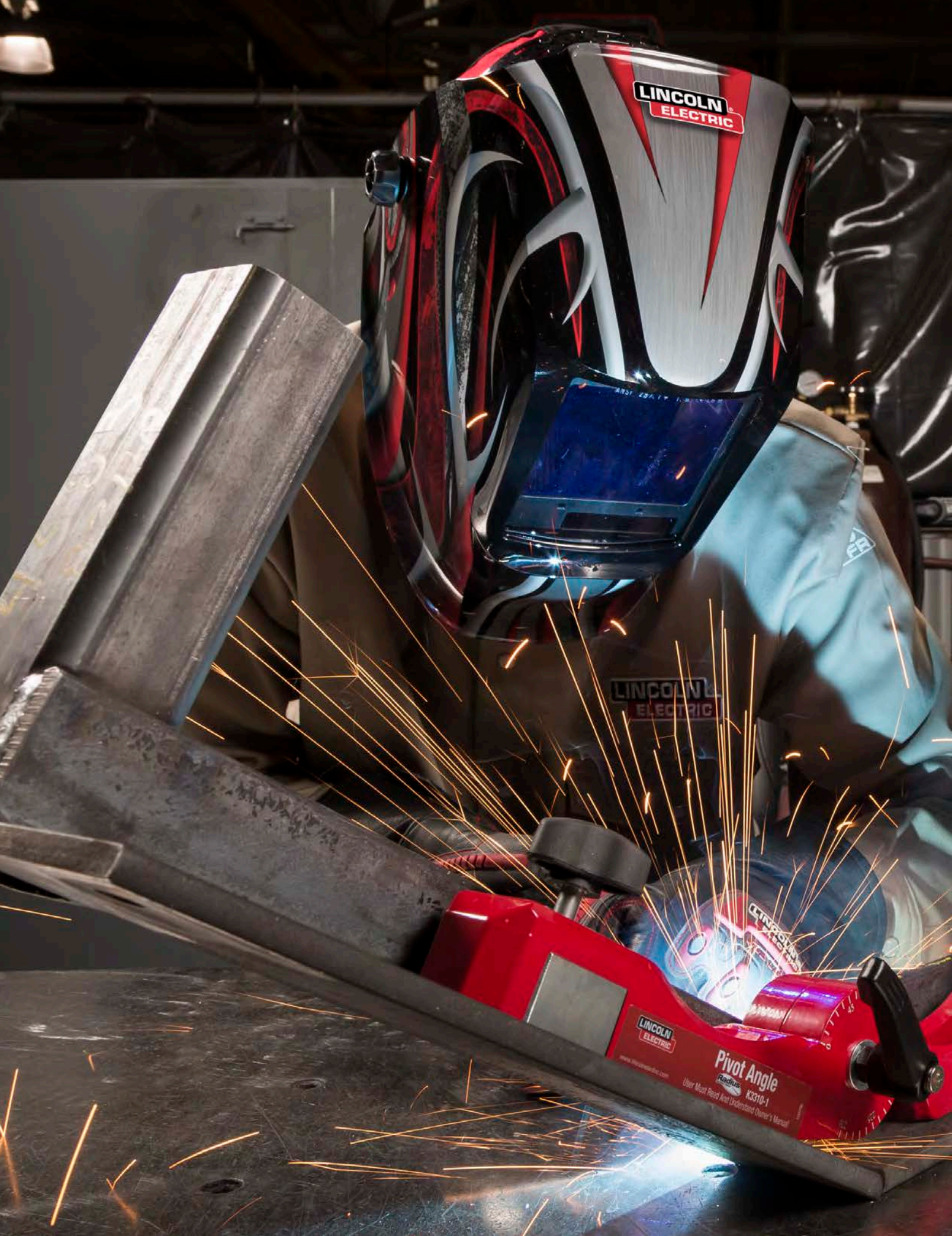
119  
**Le**  
1895  
Lincoln Electric

Get the whole story at  
[www.lincolnelectric.com/alloys](http://www.lincolnelectric.com/alloys)



© The Lincoln Electric Co. All Rights Reserved.





LINCOLN  
ELECTRIC

LINCOLN  
ELECTRIC

LINCOLN  
ELECTRIC

Pivot Angle  
Radius  
K3310-1

User Must Read And Understand Owner's Manual



