Power Feed 10M Single

Bench Model shown with optional coil

adapter and wire.



Power Feed™ 10M





Single and Dual Bench Wire Feeders

When you need a versatile, multi-process industrial wire feeder for welding virtually any material, you need the Power Feed 10M. Choose the Power Feed 10M for automotive manufacturing, shipbuilding, pressure vessels/heavy plate, oil, gas and pipeline construction, particularly when code-quality work is required. The new MSP4 user interface panel features the Infrared Port with a Palm® OS-based interface, allowing wireless communication between a handheld device and the welding system, for fast, easy and accurate process control.

Processes

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

Advantage Lincoln

- · World-class arc performance on steel, stainless steel, aluminum and other materials.
- Waveform Control Technology™ featuring patented processes like Pulse-On-Pulse™, for a TIG-like bead appearance, and Power Mode™, for a stable arc at low current levels.
- \bullet Utilizes $\mathsf{ArcLink^{TM}}$ the leading digital communication protocol for welding, making it the best choice for seamless, time critical integration with the power source.
- . Synergic CV MIG welding with ideal voltage presets for many applications. Adjust as needed based on personal preference.
- Pulsed MIG process great for low spatter, low heat input and out-of-position applications - makes virtually any operator a better
- Weld processes and settings at the feeder add efficiency by placing controls close to the operator.
- Easy-to-understand user interface panel with large numeric displays make it easy to set weld parameters.
- Features push-pull capability for great performance on aluminum.
- Three year warranty on parts and labor.

Description

Output



Input



Single and Dual Bench Models Include:

Wire reel stand, MSP4 Panel, 8 ft. input cable assembly with ArcLink/Linc-Net control and weld power cable, high speed pinion gear, gun trigger cable.

Recommended General Options

ArcLink/LincNet Control Extension Cables, Weld Power Cables, Coaxial Weld Power Cables, Feed Plate Gun Receiver Bushings, Drive Roll and Wire Guide Kits, Magnum Gun and Cable Assemblies, Push-Pull Guns. Push-Pull Gun Connection Kit, Dual Procedure Switch, ArcLink "T" Connector Kit, Foot Amptrol Connector Kit, Wire Straightener, Spindle Adapters, Readi-Reel Adapters, Coil Adapter, Wire Covers, Incoming Bushing for Lincoln Conduit, Gas Guard Regulator, Water Connection Kit, Magnum Flow Sensor, Caster Kit - Light Duty, 6000 Series Welding Arm

Additional Options For Single Bench Model

Dual Procedure/Memory Panel, Swivel Platform, Insulated Lift Bail

Recommended Power Source Options

Power Wave® 355M, Power Wave 455M, Power Wave 455M/STT, Power Wave 655 Robotic, Power Wave 355(1), Power Wave 455(1), Power Wave 455/STT⁽¹⁾.

Order

K2230-1 Power Feed 10M Bench Model K2234-1 Power Feed 10M Dual Bench Model

(1) The LinkNet Power Waves will provide limited capabilities.

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current / Duty Cycle	Wire Feed Speed Range ipm (m/min)	Wire Size Range ipm (m/min) Solid Cored	Dimensions H x W x D Inches (mm)	Net Weight Ibs (kg)
Power Feed 10M Bench Model	K2230-1	40 VDC	600A/60% 500A/100%	High Speed: 75-1200 (2.0-30.5)	High Speed: .025 - 1/16 .035 - 5/64 (0.6 - 1.6) (0.9 - 2.0)	18.5 x 13.5 x 30.5 (470 x 343 x 775)	62 (28.1)
Power Feed 10M Dual Bench Model	K2234-1			Low Speed: 50-800 (1.27-20.3)	Low Speed: .025 - 3/32 .035120 (0.6 - 2.4) (0.9 - 3.0)	20.0 x 20.0 x 30.7 (508 x 508 x 781)	90 (40.8)



FEATURES

MSP4 User Interface Panel

The New MSP4 User Interface Panel provides full control of mode selection, arc control, weld sequence and — through the IR Port — lockout control.



Infrared Port (IR)

Wireless machine configuration and diagnostics using a Palm® OS-based hand-held PDA — no serial cable needed for connection!

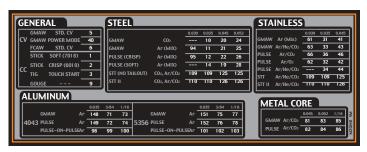
Our Palm® OS-based application configures and troubleshoots Lincoln welding machines that are equipped with the IR Port.

Custom set-up to "lock out" operator or limit access to settings to secure systems, regulate activity and produce reliable results time after time.

Weld Mode provides easy access to the multiple welding waveform programs in the Power Wave power sources.

Arc Control — Also known as Inductance or Wave Control. It allows the operator to vary the arc characteristics from "soft" to "crisp" in most weld modes.

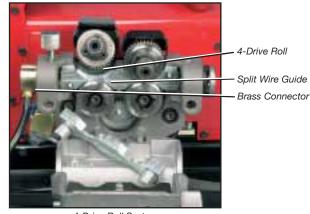




A welding waveform program chart, conveniently located on the Power Feed 10M Control Box panel, makes standard program selection easy. Delivering an unprecedented level of arc control, the Power Feed 10M includes a number of preset welding waveform programs for applications on a variety of materials, including steel, stainless steel, aluminum, nickel alloys and silicon bronze. Lincoln Electric can add or design custom waveform programs for those customers requiring targeted solutions for other materials, joint configurations, welding procedures, shielding gases or other variables. In addition, Lincoln's Wave Designer™ software, available upon request, alllows you to build or customize waveform programs yourself.

PATENTED DRIVE ROLL SYSTEM — FOUR DRIVE

- Split wire guide provides easy wire loading and maintenance.
- Variety of drive rolls for any application.
- New Twist-Lock[™] design.
- High speed gear for most fine wire applications. Low speed gear for higher torque with Innershield® wire.
- Wire feed speed calibrated to monitor and maintain constant speed.
- Tachometer feedback to monitor and maintain constant speed.
- Brass-to-brass connections and rugged aluminum cast housing provide reliable performance.
- Angled for ease of payoff and less stress on cables.
- Interchangeable gun bushings for use with a variety of guns.



4-Drive Roll System



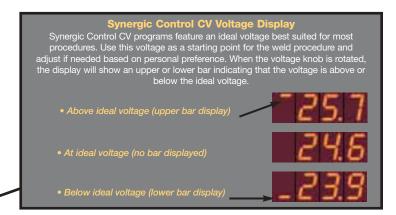
A CLOSER LOOK

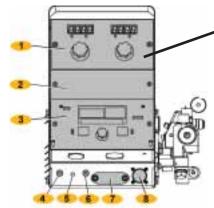
Key Controls

Press to select procedure.



Dual Procedure/Memory Panel Option shown for Power Feed 10M Single Bench Model The Dual Procedure/Memory Panel is standard equipment on Power Feed 10M Dual Bench Models and optional on Single Bench Models. This 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) for each feed head to store your favorite settings.





Front:

- 1. Bright, high intensity large digital display of voltage and wire feed speed.
- Dual Procedure Memory Panel retain settings in memory to switch back and forth between two different weld procedures. Use any of six memories to store your favorite settings.
- 3. MSP4 Panel (see page 2).
- 4. 2-Step/4-Step Trigger Switch change from simple ON/OFF in 2-step position to trigger interlock in 4-step position.
- 5. ArcLink status Lighted Electronic Display.
- 6. Cold Inch/Gas Purge switch feed wire through a gun, or purge gas line to set flow rate all with welding output off for safety and gas savings.
- 7. Water Cooler Kit Connection (Optional).
- 8. 5-pin amphenol gun trigger connector.



- 1. Access Panel remove to change DIP settings.
- 2. Shielding Gas Inlet industry standard 5/8 18 CGA connection.
- 3. Spool Gun/Push-Pull Gun Connector for connecting Python®, CobraMAX™ and Prince XL® guns.
- 4. Remote/Foot Amptrol Connector for TIG welding (Optional).
- 5. ArcLink Control Cable Connector.
- 6. Water Cooler Connector (Optional).

QUALITY AND RELIABILITY

- · Rugged steel case, sturdy controls and quality meter displays.
- Ambient temperature range for operation (-10° C to +40° C) and storage $(-40^{\circ} \text{ C to } +40^{\circ} \text{ C}).$
- Designed to resist electrical noise.
- Conforms to CSAUL / CE Standards: C22.2 No. 60, UL551, EN 60974-5, EN 50199.
- · Meets IP21S rating.
- PC Boards are potted, trayed and filled with epoxy for ultimate protection in harsh environments.
- Three-year Lincoln warranty on parts and labor.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.







WHAT IS NEXTWELD®?

Nextweld integrates Lincoln's technologies, processes and products to create a comprehensive, flexible, user-friendly welding system that can increase efficiency and reduce fabrication costs. Waveform Control Technology™ and digital

communications provide the foundation for Nextweld innovations like Pulse-On-PulseTM, Power ModeTM, STT[®] and ArcLink[®]. Look for Nextweld for ultimate arc control, high efficiency/reliability and seamless system integration.

Waveform Control Technology®

Driving Superior Welding Performance

Lincoln's Waveform Control Technology controls and shapes the output waveforms (or weld modes) to adapt to virtually any application, material or weld position. In addition, you can have our Application Engineering department add or customize standard waveform programs or request Lincoln Wave Designer™ software to build or customize waveform programs yourself.

For more information see Nextweld Document #NX-1.10



Lincoln Nextweld Innovations for Challenging Applications

Waveform Control Technology makes it possible to take advantage of Lincoln innovations like these patented processes using the Power Feed 10M and a Power Wave® power source:



Pulse-On-Pulse on 3 mm Aluminum

Pulse-On-Pulse™ uses a sequence of varying pulse wave shapes to produce a TIG-like bead appearance and excellent weld properties when MIG welding aluminum. Pulse-On-Pulse controls arc length and heat input together, making it easier to achieve good penetration.

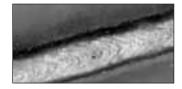
For more information see Nextweld Document #NX-2.10

Power ModeTM uses high-speed regulation of output power to deliver extremely fast response to changes in the arc, for example, when using a whip technique. The result is improved MIG welding performance, including low spatter, very uniform, consistent bead wetting and controlled penetration. Power Mode benefits are especially apparent on low voltage applications on thin steel and stainless steel material less than 20 gauge (0.7 mm). It also delivers excellent arc characteristics on aluminum and other alloys such as silicon bronze and nickel alloys.

For more information see Nextweld Document #NX-2.60

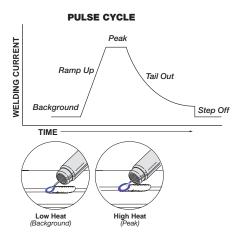


Power Mode reduces spatter and improves bead appearance, even for low voltage procedures on stainless.



Power Mode aids bead wetting and penetration on aluminum.





Pulsed MIG varies weld current between peak (high heat) and background (low heat) current to provide better control of heat input, which reduces warping and burnthrough on thin materials. Pulsed MIG also enables in-the-flat, horizontal, vertical up, or overhead welding without a slag system. It can be used in hard automation, robotic, and high production semiautomatic applications. Optimized GMAW-P waveforms are readily available to use on aluminum, carbon steel, high strength low alloy steel, stainless steel, and nickel alloys.

For more information see Nextweld Document #NX-2.70

STT® (Surface Tension Transfer®) is a controlled GMAW short circuit transfer process that uses current controls to adjust the heat independent of wire feed speed, resulting in superior arc performance, good penetration, low heat input control, and reduced spatter and fumes. STT is especially well-suited for steel and stainless steel applications.

For more information see Nextweld Document #NX-2.20



Conventional CV short circuit transfer using CO₂ and .045" solid wire.



STT using CO₂ and .045" solid wire. Note reduced spatter and fume.

Synergic MIG

Synergic control of voltage and wire feed speed allows you to set weld procedures with only one control for simplicity and ease of use.

Set the wire feed speed and your voltage is automatically set. Override the setting with the voltage control for personal preference.



2. Voltage is automatically set.

knob to set procedures.

Digital Communications

Fast, Reliable, System-Wide

ArcLink. ArcLink is the leading digital communications protocol for the arc welding industry. It integrates all welding components for seamless, time-critical data transfer. The strength of ArcLink lies in the ability to communicate with each system component in a pre-defined welding language. In addition, ArcLink is an open communications protocol, meaning that Lincoln Electric publishes how it works and encourages other companies to adopt it.

For more information see Nextweld Document #NX-1.30





ARCLINK®/LINC-NET CONTROL EXTENSION CABLES

Description		Order Number	
8 ft. (2.5m) Without	weld cable	K1543-8	
16 ft. (4.8m) Without	weld cable	K1543-16	
25 ft. (7.6m) Without	weld cable	K1543-25	
50 ft. (15.2m) Without	weld cable	K1543-50	
100 ft.(30.4m) Without	weld cable	K1543-100	

WELD POWER CABLES

Description	Order Number
Lug to Lug, 3/0, 600A, 60% duty cycle, 10 ft.	K1842-10
Lug to Lug, 3/0, 600A, 60% duty cycle, 35 ft.	K1842-35
Lug to Lug, 3/0, 600A, 60% duty cycle, 60 ft.	K1842-60
Lug to Lug, 4/0, 600A, 60% duty cycle, 110 ft.	K1842-110

COAXIAL WELD POWER CABLES (2)

Description	Order Number
25 ft. (7.6m) 350 amps	K1796-25
50 ft. (15.2m) 350 amps	K1796-50
75 ft. (22.8m) 325 amps	K1796-75
100 ft. (30.4m) 300 amps	K1796-100

(2) Recommended for STT and pulse welding when using long distances between feeder and power source.

DRIVE ROLL AND WIRE GUIDE KITS

Description	Order Number
Solid Steel Wire, Smooth V Groove: .023030" (0.6-0.8mm) .035" (0.9mm) solid .040045" (1.0-1.2mm) .052" (1.4mm) 1/16" (1.6mm)	KP1505-030S KP1505-035S KP1505-045S KP1505-052S KP1505-1/16S
Cored Steel Wire, Knurled V Groove: .030035" (0.8-0.9mm) .040045" (1.0-1.2mm) .052" (1.4mm) 1/16" (1.6mm) 7/64" Hardfacing (Knurled V Groove with matching Smooth U Groove)	KP1505-035C KP1505-045C KP1505-052C KP1505-1/16C KP1505-7/64H
Cored or Solid Steel Wire, Knurled V Groove: .068072" (1.8mm) 5/64" (2.0mm) 3/32" (2.4mm) 7/64" (2.8mm) Cored .120" (3.2mm) Cored	KP1505-068 KP1505-5/64 KP1505-3/32 KP1505-7/64 KP1505-120
Aluminum Wire, Smooth U Groove: .035" (0.9mm) .040" (1.0mm) 3/64" (1.2mm) 1/16" (1.6mm) 3/32" (2.4mm)	KP1507-035A KP1507-040A KP1507-3/64A KP1507-1/16A KP1507-3/32A

	I	FEED PLATE GUN R	ECEIVER BUSHING	S	
K1500-1 Gun Receiver Bushing (Optional)	K1500-2 Gun Receiver Bushing (Standard)	K1500-3 Gun Receiver Bushing (Optional)	K1500-4 Gun Receiver Bushing (Optional)	K1500-5 Gun Receiver Bushing (Optional)	K489-7 Fast-Mate Gun Receiver Bushing (Optional)
Magnum 200, 300 and 400 gun and cable assemblies with K466-1 connector kit. Lincoln Innershield gun and cable assembly. Magnum 550 gun and cable assembly with K613-1 connector kit.	Magnum 200 and 400 fully assembled guns (K497-2x and K471-2x). Magnum 200, 300 and 400 gun and cable assemblies with K466-10 connector kit. Guns with Tweco® #2, #3, and #4 connectors.	 Magnum 550 gun and cable assembly with K613-7 connection. Guns with Tweco #5 connectors. 	Magnum 200, 300 and 400 gun and cable assemblies with K466-3 connector kit.	To adapt to OXO guns.	Magnum gun and cable assemblies with Fast-Mate™ connections. Handles both single and dual procedure guns.

[6]















www.lincolnelectric.com

GENERAL OPTIONS



Magnum® Gas-Shielded Gun & Cable Assemblies

Available 200-550 amps, air-cooled, gasshielded welding guns. Dual procedure capability with gun trigger lock available on 400 amp gun.

See bulletin E12.10



Magnum® Self-Shielded Gun & Cable Assemblies

Available 250-600 amps. **See bulletin E12.110**



Push-Pull Guns

The Python®, CobraMAX™ and Prince® XL provide optimum push-pull performance at a variety of amperages. Available in air-cooled or water-cooled models.

Order K2297-X, K2212-X, and K2252-X



Push-Pull Gun Connection Kit

Required for aluminum welding with the Prince XL, Python and CobraMax air or water-cooled push-pull guns. Includes power block, gun bushing, gas hose adapter, torch gas bypass valve (required for Prince XL Gun only), and wire reel brake limiter. Requires aluminum drive roll kit.

Order K2339-1



Dual Procedure Switch

Allows the use of two welding procedures with each Lincoln Magnum gun connected to an LN-10, DH-10 or Power Feed 10M Bench or Boom model. 15 ft. (7.6m).

Order K683-3



ArcLink "T" Connector Kit

For connecting multiple feeders to a single power source.

Order K2429-1



Foot Amptrol® Connector Kit

Provides 25 ft. (7.6m) of remote ouput control for TIG welding. (6 pin plug connection).

Order K2320-1



Wire Straightener

For Lincoln Electric 10 series wire feeders. Straightens wire for better, smoother feeding.

Order K1733-1



Spindle Adapter for 14 lb. (6 kg)

Innershield® Coils
Permits 14 lb. (6 kg) Innershield electrode

coils to be mounted on 2" (51 mm) O.D. spindles.

Order K435



Spindle Adapter for 8" O.D. Spools Permits 8" (200mm) O.D. spools to be mounted on 2" (51mm) O.D. spindles.

Order K468

GENERAL OPTIONS



30 lb. (14 kg) Readi-Reel® Adapter Adapts 22-30 lb. (10-14 kg) Lincoln Readi-Reels of electrode to 2" (51mm) spindle.

Order K363P



Wire Reel Cover Kit

Plastic enclosure for up to 44 lb. (20 kg) wire packages.

Order K1634-1



50-60 lb. Readi-Reel® Adapter

Adapts 60 lb. (27.2 kg) coils of Lincoln electrode to 2" (51mm) spindle.

Order K438



50-60 lb. Coil Adapter

Adapts 50-60 lb. (22.6-27.2 kg) coils of Lincoln electrode to 2" (51mm) spindle.

Order K1504-1



Plastic Wire Cover

Plastic enclosure for up to 60 lb. (27.2 kg) wire packages.

Order K1634-2



Incoming Bushing for Lincoln

Conduit

Feed Plate Incoming Bushings connect directly to wire conduit (not included), for use in boom system, long distances, or large payoff packages. Bushings can be used with any wire conduit (K515 or K565).

Order K1546-1 for .025-1/16" wire Order K1546-2 for 1/16-1/8" wire



Gas Guard Regulator

For CO₂ and Argon blend gases. Reduces surge caused by excess pressure in supply hose. Includes adjustable flow regulator with removable adjustor key.

Order K659-1

Water Connection Kit

Includes fittings for use with watercooled guns and Magnum Coolers. Kit provides for one gun.

Order K590-6



Magnum Flow Sensor

Rotary Flow Sensor with Leads monitors water cooling flow and shuts off power to gun if water stops.

Order K1536-1



Caster Kit — Light Duty

Mounts to the Universal Wire Reel Stand. Allows for easy movement of wire feeder.

Order K1556-1



6000 Series Welding Arm

Create a safe, uncluttered work environment where floor space is used effectively with a Lincoln Series 6000 Welding Arm. Glide the arm effortlessly into position when in use or swing it conveniently against a wall or beam for safe, out-of-the-way storage. An 18" x 18" (457 x 457mm) footprint ties up very little floor space. Order K1778-1



ADDITIONAL OPTIONS FOR SINGLE BENCH MODEL



Dual Procedure/Memory Panel

Weld procedures are saved into memory for future use. Option on Power Feed 10M Single Bench and Boom.

Order K2360-1



Swivel Platform

Mounts to the lift bail on the power source and bottom of the Universal Wire Reel Stand. Wire feeder may be lifted off if needed. Compatible with Light Duty Caster Kit. Includes "lazy susan" parts tray.

Order K1557-1



Insulated Lift Bail

Allows the entire wire feeder to be hung from a crane or hook. Use with Universal Wire Reel Stand.

Order K1555-1

POWER FEED 10M ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER FEED 10M BENCH MODEL	K2230-1		
POWER FEED 10M DUAL BENCH MODEL	K2234-1		
RECOMMENDED GENERAL OPTIONS			
ArcLink/Linc-Net Control Extension Cables	See table on page 6		
Weld Power Cables	See table on page 6		
Coaxial Weld Power Cables	See table on page 6		
Feed Plate Gun Receiver Bushings	See table on page 6		
Drive Roll and Wire Guide Kits	See table on page 6		
Magnum Gun and Cable Assemblies	See publication E12.10		
Magnum Self-Shielded Gun and Cable Assemblies	See publication E12.110		
Push-Pull Guns	K2297-X, K2212-X, K2252-X		
Push-Pull Gun Connection Kit	K2339-1		
Dual Procedure Switch	K683-3		
ArcLink "T" Connector Kit	K2429-1		
Foot Amptrol Connector Kit	K2320-1		
Wire Straightener	K1733-1		
Spindle Adapter for 14 lb. Innershield Coils	K435		
Spindle Adapter for 8" O.D. Spools	K468		
30 lb. Readi-Reel Adapter	K363P		
Wire Reel Cover Kit	K1634-1		
50-60 lb. Readi-Reel Adapter	K438		
50-60 lb. Coil Adapter	K1504-1		
Plastic Wire Cover	K1634-2		
Incoming Bushing for Lincoln Conduit:	N. ISSTE		
- for .025-1/16" wire	K1546-1		
- for 1/16-1/8" wire	K1546-2		
Gas Guard Regulator	K659-1		
Water Connection Kit	K590-6		
Magnum Flow Sensor	K1536-1		
Caster Kit - Light Duty	K1556-1		
6000 Series Welding Arm	K1778-1		
ooo cenes welang /mi	KIII I		
ADDITIONAL OPTIONS FOR SINGLE BENCH MODEL			
Dual Procedure/Memory Panel	K2360-1		
Swivel Platform	K1557-1		
Insulated Lift Bail	K1555-1		
RECOMMENDED POWER SOURCE OPTIONS			
Power Wave 355M	see publication E5.146		
Power Wave 455M and 455M/STT	see publication E5.161		-
Power Wave 655 Robotic	see publication E10.95		
	TOTAL:		

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter ofpractical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change — This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

