SEMIAUTOMATIC FEEDER & MULTI-PROCESS POWER SOURCE

The Power Feed™ 25M & Power Wave® System

Wire Drive System

Premium welding solution with a portable design!

Industry focused welding solutions that meet your needs - isn't that what you're looking for?

The Power Feed[™]/Power Wave[®] packages have traditionally offered advanced controls, premium welding, reliable and quality products. Now with the introduction of a portable, high technology feeder, we bring these features to the operator in a package that can weld anywhere.

Lincoln 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 delivers the results you need. Recommended equipment packages are prepared to meet your needs for aluminum fabrication, high-alloy construction, and pipeline welding environments.

Processes

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

Advantage Lincoln

- TOTAL s2f[™] Aluminum Welding Solution
- TOTAL s2fTM is Lincoln Electric's complete aluminum welding solution from equipment to consumable to welding process – the premier welding solution.
- Push-Pull Capability Standard

 Push-pull functionality delivers premier aluminum performance 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 a durable aluminum case or an optional plastic case.
- Internal Lighting
 - Working in an environment with little light? We have the answer with high intensity LEDs that will 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 (MSP4)
 - High tech made easy to use, the Mode Select Panel introduced on the Power Feed[™] 10M is now portable. The 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
 - Dual procedures allow you to set-up an A and B procedure to simplify 'on the-fly' switching. Memory buttons are here so you do not have to memorize procedures! Allows the operator to easily press a button to get the waveform and specify the range of operation for their application.

Portable

 Fits through a 16" (406 mm) diameter or 12x18" (305 x 457 mm) elliptical manhole and weighs 35 lbs. (15.9 kg).

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Gearing	Wire Feed Speed Range IPM (m/min)	Wire Size Range in. (mm)	Dimensions HxWxD Inches (mm)	Net Weight Ibs (kg)
Power Feed™ 25M	K2536-1	40 VDC	Standard speed (factory setting)	GMAW: 50-800 ipm (2.5 - 20.3 m/min) FCAW: 50-800 ipm (2.5 - 20.3 m/min)	GMAW: .023- 1/16" (0.6-1.6mm) FCAW: .030-5/64" (0.8-2.0mm)	14.5 x 8.5 x 23.5 (368 x 216 x 597)	35 (15.9)
			Extra-torque	GMAW: 30-400 ipm (1.3-10.4 m/min) FCAW: 30-400 ipm (1.3-10.4 m/min)	GMAW: .023- 1/16" (0.6-1.6mm) FCAW: .030-3/32" (0.8-2.4mm)		



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FEATURES

Case Front Controls

The Power Wave[®]/Power Feed[™] digital solution provides all controls to the user where they need them - in the hands of the operator. The Power Feed[™] 25M portable design delivers the precision of digital meters and displays and permits full control over the welding variables, and in a design to meet the field industry needs. The system incorporates the ability to provide the operator a range of operation and then the ability to lock the controls to ensure that welding is done according to the procedures defined.





HARDWARE FEATURES



Flowmeter with Control Value

• Used to regulate and monitor shielding gas flow at the feeder to compensate for long shielding gas hoses.

Shielding Gas Input

• Rugged, one piece solenoid includes a screen to filter dirt.

(C) 5 Pin ArcLink[®] Connector

• Now with a patent pending Spin-Nut for easy connection of the cable.

4/0 Electrode Lead ⁽¹⁾

• Rated for high amperage welding.

⁽¹⁾ Add Connector of your choice



A 2 Roll - MAXTRAC" Drive

- Two gear driven rolls with patent pending groove design. No tools needed to take rolls on or off. (Note: some rolls have grooves of different sizes)
- Revolutionary split wire guide precisely aligns and supports wire through the entire system. Maximizes support and minimizes feeding problems.
- Two piece split wire guide construction provides easy access for inspection, cleaning or changing to different wire sizes.

2 Step/4 Step Switch

• Offers the user flexibility in choosing 2 Step for switching weld output on and off in direct response to the trigger, or 4 Step which offers a 'trigger interlock' capability or to give the welder control over the amount of time spent in arc start, weld, and arc end time.

C Gas Purge/Cold Feed Switch

• Clears shielding gas with cold feed electrode for safety.

(D) Light Switch

• Turns on high intensity LED's to illuminate the inside of wire feeder.

E Heater Switch

• The built-in heater warms the inside air to protect consumables from moisture.



Power Feed[™] 25M & Power Wave[®] System

TOTAL S2f

PROCESS

EQUIPMENT

CONSUMABLES

TOTAL s2f[™] is Lincoln Electric's complete aluminum welding solution from equipment to consumable to welding process - the premier welding solution for your needs. The TOTAL s2f[™] aluminum welding process focuses on the details from the start 2 finish of every weld. Delivering a soft aluminum arc, consistent starting, conditioned ending, and improved cleaning action, the result is superior welding on tough aluminum jobs.

TOTAL s2f[™] is the answer!

PROCESS • Excellent Starting - The Pulse and Pulse-on-Pulse™ aluminum waveforms provide smooth reliable starting for a great beginning to every weld. • Superior Bead Appearance - With the fine-tuned controls of the Power Wave® product platform, the welding variables can be carefully controlled. The result is an improved ability to reduce fine spatter and provide a robust waveform against soot on the weld. • Hybrid Crater Fill Function - The termination of the weld is done in a gradual manner to ensure the creation of a convex bead to prevent crater cracking. • An Outstanding End - Ending the weld with a consistent length and no ball on the end of the wire provides for a great start to the next weld. This is done by ensuring that the arc is extinguished at the same point every time; creating a wire tip consistently conditioned for the next start. CONSUMABL For superior welding performance, turn to Super Glaze® aluminum MIG wire from Lincoln Electric®. Super Glaze® minimizes the problems usually associated with aluminum wire feeding such as birdnesting, tangling and burnback to provide a stable arc, great feedability and exceptional control - every time you



duces a quality weld, Start-2-Finish.

weld! The keys are Super Glaze's smooth surface finish and consistent chemical composition. What this means for you is quality wire that pro-



RECOMMENDED EQUIPMENT ALUMINUM

	Product Number	Product Description	Quantity Required
	K2368-1 or	Power Wave® 355M	1
	K2202-1 or	Power Wave® 455M	
	K2203-1	Power Wave® 455M/STT	
2	K2536-1	Power Feed™ 25M	1
3	K1543-xx	ArcLink [®] Control Cable	1
4	K1803-1	Work and Wire Feeder 2/0 Weld Cable Package	1
5	K910-2	Work Clamp (500A @ 60% Duty Cycle)	1
	K2447-x or	Python [®] Plus Push-Pull Air-Cooled Gun (no adapter required)	1
	K2212-x	Python [®] Push-Pull Water-Cooled Gun	1
		(requires water connection and push-pull gun connection kits)	
	K590-6	Water Connection Kit	1
	K2339-1	Push-Pull Gun Connection Kit	1
	VEOC 1	Deluxe Regulator for Mixed Shielding	1
	N300-1	Gases and Hose (4.3 ft)	
	KP1695-xx	Drive Roll Kit, 2 Roll, Aluminum Wire (specify wire size)	1
$\overline{}$	ER5356	Super Glaze [®] Aluminum MIG Wire (16 lb. Spool)	



PROCESS CONTROLS

Coaxial Weld Cables

Coaxial welding cables are specially designed welding cables for pulse welding or STT[®] welding. Coaxial weld cables feature low inductance, allowing fast changes in the weld current. Regular cables have a higher inductance which may distort the pulse or STT[®] waveshape. Inductance becomes more severe as the weld cables become longer.

A coaxial weld cable is constructed with multiple smaller leads wrapped around one large lead. The large inner lead connects to the electrode stud on the power source and the electrode connection on the wire feeder. The small leads combine together to form the work lead, one end attached to the power source and the other end to the work piece.

Coaxial weld cables are recommended for all pulse and STT[®] welding, especially when the total weld cable length (electrode cable + work cable) exceeds 50 feet (7.6m)



QUALITY AND RELIABILITY

- Rugged aluminum case, sturdy controls and quality meter displays.
- Ambient temperature range for operation (-40° C to +50° C) (-40° F to +122° F).
- Designed to resist electrical noise.
- Conforms to $_{\rm c}{\rm CSA}_{\rm \scriptscriptstyle UL}$ / CE Standards: EN 60974-5.
- Meets IP23 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.





Power Feed[™] 25M & Power Wave[®] System



RECOMMENDED EQUIPMENT FOR STT[®]

	Product Number	Product Description	Quantity Required
1	K2203-1	Power Wave [®] 455M/STT	1
2	K2536-1	Power Feed [™] 25M	1
3	K1543-xx	ArcLink [®] Digital Control Cables	1
	K1796-xx or	Coaxial Weld Power Cable, Lug to Lug, 1/0	1
♥	K2593-xx	Coaxial Weld Power Cable, Lug to Lug, #1	
5	K910-2	Work Clamp (500A @ 60% Duty Cycle)	1
6	K497-6	Magnum [®] 200 Gun (requires connection kit)	1
	K466-1	Gun connector kit	1
7	K586-1	Deluxe Regulator for Mixed Shielding Gases and Hose (4.3 ft)	1
	KP1696-xx	Drive Roll Kit (Solid)	1
	KP1695-xx	Drive Roll Kit (Cored)	1
	WK1811-75	Heavy Duty Sense Lead	1
$\overline{}$	K857	Remote Output Control	1 /

Note: For best results: Attach the work sense lead as close as possible to the welding arc.



POWER GENERATION INDUSTRY SOLUTION

FLUE GAS DESULFURIZATION (FGD) FABRICATION

Waveform Development, Equipment and Consumables

The installation of air pollution control equipment in the power generation industry, required by government environmental regulatory agencies, permits the use of higher sulfur bearing coal. The primary purpose of the air pollution control systems, also referred to as flue gas desulfurization (FGD) equipment, is to remove sulfur compounds that form during combustion before they enter the atmosphere.

The base materials used to contain and remove the sulfur from the plume offer excellent corrosion resistance to the higher concentrations of acids that form during the plume processing. The base materials employed in these acidic environments include 2205, Ferallium 255, and several of the common chrome bearing nickel alloy base materials (625, C276, C22, and others).

Refer to NX 3.80 Flue Gas Desulfurization (FGD) Fabrication

Waveform Control Technology®

from the Lincoln Electric Company is suited to meet the demands of these code quality installations. Special GMAW pulsed spray metal transfer welding programs are available for use with Lincoln consumables and recommended shielding gas blends designed to meet quality and productivity expectations.

Consumable Technology

Lincoln Electric's extensive line of stainless steel and high alloy products are available in a variety of packaging options.







POWER GENERATION SYSTEM FIELD SET-UP



Product Quantity Number Product Description Required K2368-1 or Power Wave® 355M 1 Power Wave® 455M K2202-1 or ◑ K2203-1 Power Wave® 455M/STT 2 K2536-1 Power Feed[™] 25M 1 3 K1543-xx ArcLink® Digital Control Cables 1 K1796-xx or Coaxial Weld Power Cable, Lug to Lug, 1/0 1 4 K2593-xx Coaxial Weld Power Cable, Lug to Lug, #1 5 K910-2 Work Clamp (500A @ 60% Duty Cycle) 1 6 WK1811-75 Heavy Duty Sense Lead 1 7 K470-1 Magnum[®] 10 ft, 300A GMAW Torch 1 K466-10 Gun connector kit 1 Deluxe Regulator for Mixed Shielding 1 8 K586-1 Gases and Hose (4.3 ft) Twist-Mate[™] to lug cable adapter K2176-1 2 KP23-37 Tapered nozzle (3/8" ID) 1 KP14T-35 KP14T-40 Tapered contact tips 1 KP14T-45 KP1696-xx Drive Roll Kit (Solid) 1 KP1697-xx Drive Roll Kit (Cored) 1 K1733-4 Micro wire straightener 1

RECOMMENDED EQUIPMENT PULSED MIG

Note: Power Wave® 355M comes with Twist-Mate™ to lug connection.



Power Feed[™] 25M & Power Wave[®] System





PATENT PENDING EASY CASE REPLACEMENT

Now a damaged case does not require ordering a new unit.

1 Remove screws



(2) Remove inside module from case



3 Put module in a new case and assemble screws

OPTIONS

ARCLINK[®]/LINC-NET CONTROL CABLES

Length ^{ey} ft. (m)	Order Number
8 (2.5)	K1543-8
16 (4.8)	K1543-16
25 (7.6)	K1543-25
50 (15.2)	K1543-50
100 (30.4)	K1543-100

⁽¹⁾ Without weld cable

WELD POWER CABLES							
Length ft. (m)	Amperage	Duty Cycle	Size	Order Number			
10 (3)	600	60%	3/0	K1842-10			
35 (10.5)	600	60%	3/0	K1842-35			
60 (18)	600	60%	3/0	K1842-60			
110 (33.5)	600	60%	3/0	K1842-110			

Note: All sizes are lug to lug connection type.

COAXIAL WELD POWER CABLES						
Length ft. (m)	Amperage	Duty Cycle	Size	Order Number		
25 (7.6)	250	100%	#1	K2593-25		
	300	60%	#1	K2593-25		
	350	60%	1/0	K1796-25		
50 (15.2)	250	100%	#1	K2593-50		
	300	60%	#1	K2593-50		
	350	60%	1/0	K1796-50		
75 (22.8)	300	60%	1/0	K1796-75		
100 (30.4)	250	100%	#1	K2593-100		
	300	60%	1/0	K1796-100		

 $^{\text{(2)}}$ Recommended for STT $^{\circ}$ and pulse welding when using long distances between feeder and power source.

Note: All sizes are lug to lug connection type.

DRIVE ROLL & WIRE GUIDE KITS

Description	Power Feed 25M				
Steel Wire Sizes (includes stainless steel):					
.023030" (0.6-0.8 mm)	KP1696-030S				
.035" (0.9 mm)	KP1696-035S				
.045" (1.2 mm)	KP1696-045S				
.052" (1.4 mm)	KP1696-052S				
.035", .045" (0.9, 1.2 mm)	KP1696-1				
.040" (1.0 mm)	KP1696-2				
1/16" (1.6 mm)	KP1696-1/16S				
Cored Wire Sizes:					
.030035" (0.8-0.9 mm)	KP1697-035C				
.040045" (1.0-1.2 mm)	KP1697-045C				
.052" (1.4 mm)	KP1697-052C				
1/16" (1.6 mm)	KP1697-1/16C				
Staal or Carad Wire Sizee					
068- 072" (1.8 mm)	KP1607-068				
5/6/1" (2.0 mm)	KP1607-5/6/				
3/32" (2.4 mm)	KP1607-3/32				
5/52 (2.4 mm)	111037 3/32				
Aluminum Wire Sizes:					
.035" (0.9 mm)	KP1695-035A				
.040" (1.0 mm)	KP1695-040A				
3/64" (1.2 mm)	KP1695-3/64A				
1/16" (1.6 mm)	KP1695-1/16A				

FEED PLATE GUN RECEIVER BUSHINGS							
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.	 Magnum[®] 200 and 400 fully assembled guns (K497-2x and K471-2x). 	 Magnum[®] 550 gun and cable assembly with K613-7 connection. 	 Magnum[®] 200, 300 and 400 gun and cable assemblies with K466-3 connector kit. 	 To adapt to 0X0[®] guns. 	 Magnum[®] gun and cable assemblies with Fast-Mate[™] connections. 		
 Lincoln Innershield[®] gun and cable assembly. Magnum[®] 550 gun and cable assembly with K613-1 connector kit. 	 Magnum[®] 200, 300 and 400 gun and cable assemblies with K466-10 connector kit. Guns with Tweco[®] #2, #3, and #4 connectors. 	Guns with Tweco® #5 connectors.			Handles both single and dual procedure guns.		
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ELECTRIC THE WELDING EXPERTS®

GENERAL OPTIONS

Magnum[®] Gas-Shielded Gun and Cable Assemblies Available 200-550 amps, aircooled, gas-shielded welding guns. See publication E12.10

Magnum[®] Self-Shielded Gun and Cable Assemblies Available 250-600 amps. See publication E12.110

Python[®] Plus Push-Pull Air-Cooled Gun (no connection kit required)

The Python® Plus push-pull aircooled gun features the same great performance and ergonomics as the standard Python® gun but features a Magnum® style back end for easy connection to a Lincoln Wire Feeder without an adapter. The ergonomic handle design, fingertip controls and foolproof setup make the Python® the most advanced gooseneck gun on the market. The Python® Plus gun with standard air-cooled barrel is rated 200A @100% duty cycle, 250A @50% duty cycle. Order K2447-1 for Air-Cooled 15 ft. (4.5 m) Order K2447-2 for Air-Cooled 25 ft. (7.6 m) Order K2447-3 for Air-Cooled 50 ft. (15.2 m)

Python® Push-Pull Water-Cooled Gun (requires water connection and push-pull gun connection kits) The Python® gun has a separate wire and conduit, power and gas connections. Order K2212-1 for Water-Cooled 15 ft. (4.5 m) Order K2212-2 for Water-Cooled 25 ft. (7.6 m) Order K2212-3 for Water-Cooled 50 ft. (15.2 m)

Water Connection Kit Includes fittings for use with watercooled guns and Magnum[®] Coolers. Kit provides for one gun. Order K590-6

Push-Pull Gun Connection Kit For push-pull guns. Includes push-

Por push-pull guns. Includes pushpull gun receiver bushing, fittings, modified gas-bypass valve, valve removal tool and control cable extension assembly. Order K2339-1

Deluxe Adjustable Gas Regulator & Hose Kit

Accommodates CO₂, Argon, or Argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose. **Order K586-1**

Micro Wire Straightener

Straightens .035^{°−}1/16" (0.9–1.6 mm) wire for use with portable feeders. **Order K1733-4** for Power Feed[™] 25M

ArcLink[®] "T" Connector Kit

For connecting multiple feeders to a single power source. Order K2429-1

Portable Feeder Case

Replace a damaged case without replacing the entire unit. Order K2596-1 Aluminum (shown) Order K2596-2 Plastic

POWER FEED™ 25M & POWER WAVE[®] SYSTEM ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER FEED™ 25M & POWER WAVE [®] SYSTEM	K2536-1		
RECOMMENDED GENERAL OPTIONS			
Magnum [®] Gun and Cable Assemblies	See publication E12.10		
Magnum [®] Self-Shielded Gun and Cable Assemblies	See publication E12.110		
Python [®] Plus Push-Pull Air-Cooled Gun (no connection kit required)			
- 15 ft. (4.5 m)	K2447-1		
- 25 ft. (7.6 m)	K2447-2		
- 50 ft. (15.2 m)	K2447-3		
Python [®] Push-Pull Water-Cooled Gun (requires water connection and push-pull gun connection kits)			
- 15 ft. (4.5 m)	K2212-1		
- 25 ft. (7.6 m)	K2212-2		
- 50 ft. (15.2 m)	K2212-3		
Water Connection Kit	K590-6		
Push-Pull Gun Connection Kit	K2339-1		
Deluxe Regulator for Mixed Shielding Gases and Hose 4.3 ft.	K586-1		
ArcLink/Linc-Net Control Cables without weld cable	See table on page 10		
Drive Roll and Wire Guide Kits	See table on page 10		
Coaxial Weld Power Cables	See table on page 10		
Weld Power Cables	See table on page 10		
Micro Wire Straightener	K1733-4		
ArcLink [®] "T" Connector Kit	K2429-1		
Portable Feeder Case			
- Aluminum	K2596-1		
- Plastic	K2596-2		
RECOMMENDED POWER SOURCE OPTIONS			
Power Wave® 355M	see publication E5 146		
Power Wave® 455M	see publication E5.161		
Power Wave® 455M/STT	see publication E5.161		
	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 of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice orce 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.

THE LINCOLN ELECTRIC COMPANY

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