NEW!

Power Wave® 355M

Superior Arc Performance. Revolutionary Communication.

The Power Wave 355M features some of Lincoln's best performance technologies and processes all rolled into one highly efficient inverter power source designed for high-end semiautomatic welding. Lincoln's Waveform Control Technology™ is at the heart of the Power Wave 355M's performance, enabling processes such as Pulse-On-Pulse™ and Power Mode™. Precise control of process parameters allows you to weld on a variety of materials, including steel, stainless steel, aluminum and nickel alloys in virtually any application. Optimize the arc for each wire type and size for a consistent weld time after time with the Power Wave 355M.

Processes

Stick TIG MIG Pulsed Flux-Cored Gouging

Advantage Lincoln

- Lincoln's Waveform Control Technology™ gives you the ability to select the right waveform for each application — that means the arc has been optimized for each wire type and size for exceptionally smooth arc performance.
- Utilizes ArcLink™ — the leading digital communication protocol for welding, making it the best choice for seamless, time critical integration with the power source.
- Push-pull capability for ultimate aluminum welding with the Power Feed 10M wire feeder.
- Pulse-On-Pulse™ welding mode improves cleaning action when welding aluminum and delivers a TIG-like bead appearance.
- Power Mode™ maintains a stable, smooth arc for short arc welding on thin materials.
- State-of-the-art inverter technology provides high power efficiency, excellent welding performance and a lightweight, compact design.
- Rigorous environmental, mechanical and weld testing ensures ruggedness and reliability.
- Three-year warranty on parts and labor.
- Manufactured under a quality system certified to ISO 9001 requirements and 14001 environmental standards.

Description

Output CC CV DC **Input** 1/3 PHASE 50/60 Hz

Unit Includes

- 2/0 welding cable (10 ft.) to be connected to the wire feeder with a Twist-Mate™ on one end and a lug on the other.
- Two male Twist-Mate™ cable plugs (K852-70).
- Input power cable (10 ft.).

Recommended General Options

Deluxe Adjustable Gas Regulator and Hose Kit, Inverter and Wire Feeder Cart, Dual Cylinder Mounting Kit, Valet Style Undercarriage, Twist-Mate™ Cable Plugs, Twist-Mate Cable Receptacles, Twist-Mate to Lug Adapter, Sense Lead Kit, Wave Designer™ Software, Work and Wire Feeder Power Cables Package

Recommended Wire Feeder Options

Power Feed 10M Bench, Power Feed 10M Dual Bench, Power Feed 10M Boom, Power Feed 10M Dual Boom, Power Feed 15M

Recommended Stick Options

Accessory Kit, Twist-Mate™ to Lug Adapter

Recommended TIG Options

TIG-Mate™ 17V TIG Torch Starter Pack

Order

K2368-1	Power Wave 355M
K2372-1	Power Wave 355M Ready-Pak™ (for Steel)
K2373-1	Power Wave 355M Ready-Pak (for Aluminum)

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Voltage	Rated Output Current/Voltage/ Duty Cycle	Input Current @Rated Output	Output Range	Dimensions H x W x D in (mm)	Net Weight lbs. (kg)
Power Wave 355M	K2368-1	3 ph: 200/208-230/380-400/ 415-460/575/3/50/60 1 ph: 208-230/415-460/575/ 1/50/60	350A/34V/60% (300A/32V/100%) 350A/34V/60% (300A/32V/100%)	3 ph: 50/50-42/28-27/26-23/18A 1 ph: 94-85/64-42/37A	5-425A	14.8 x 13.3 x 27.9 (376 x 338 x 709)	81.5 (37)

LINCOLN ELECTRIC
THE WELDING EXPERTS®

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www.lincolnelectric.com

WHAT IS NEXTWELD®?

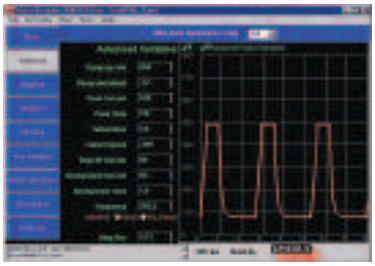
Nextweld integrates Lincoln's technologies, processes and products to create a comprehensive, flexible, user-friendly welding system that can increase efficiency and reduce fabrication costs. Waveform Control Technology™ and digital communications provide the foundation for Nextweld innovations like Pulse-On-Pulse™, Power Mode™, STT® and ArcLink®. Look for Nextweld for ultimate arc control, high efficiency/reliability and seamless system integration.

Waveform Control Technology®

Driving Superior Welding Performance

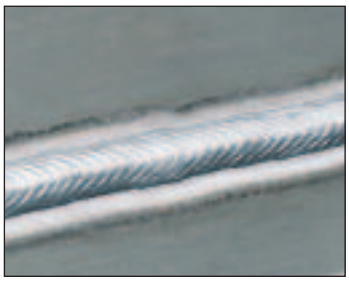
Lincoln's Waveform Control Technology controls and shapes the output waveforms (or weld modes) to adapt to virtually any application, material or weld position. In addition, you can have our Application Engineering department add or customize standard waveform programs or request Lincoln Wave Designer™ 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 Nextweld™ innovations like these patented processes using the Power Wave 355M and a Power Feed wire feeder:



Pulse-On-Pulse on 3mm 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.

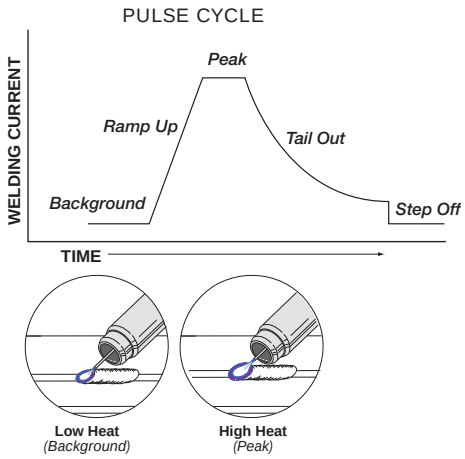
For more information see Nextweld Document #NX-2.10

Power Mode™ 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

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

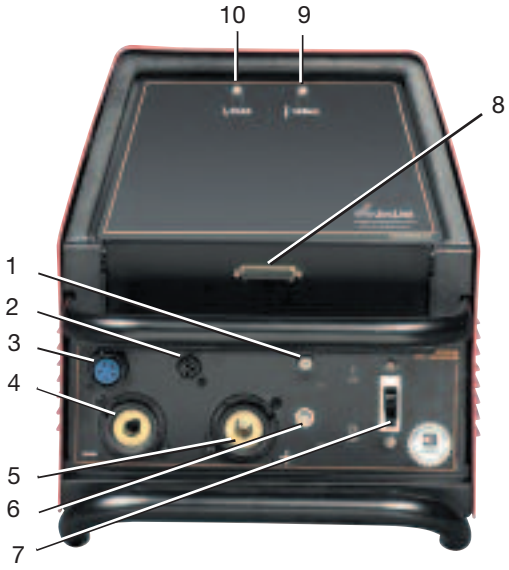
FEATURES

Key Controls

Key Controls

1) CB1 Wire Feeder Circuit Breaker
2) Lead Connector (Sense Lead)
3) Wire Feeder Receptacle (5-Pin)
4) Negative Twist-Mate™ Terminal
5) Positive Twist-Mate Terminal(1)
6) Internal Power Circuit Breaker
7) Power Switch
8) RS232 Serial Communication Port
9) High Temperature Light
10) Status Light

(1) Machine is shipped with a 2/0 welding cable (10 ft.) to be connected to the wire feeder.

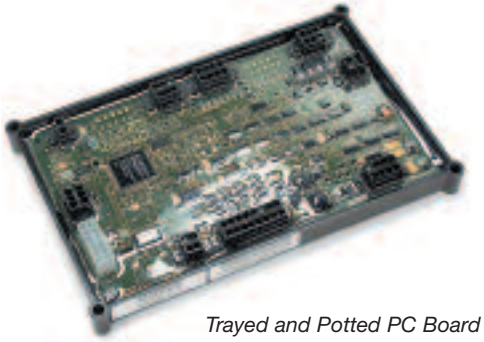


QUALITY AND RELIABILITY

Design

Safety, reliability and serviceability are built into Lincoln's inverter design.

- A Power Wave inverter operates at a high efficiency (88%) at rated output and is capable of operating from a universal input voltage (208 to 575 volts).
- Thermostatically protected.
- Electronic output over-current protection and electronic input over-voltage protection.
- Operating Temperature Range: -20ºC to +40ºC.
- Storage Temperature Range: -40ºC to +40ºC.
- Double insulation and varnish on main transformer.
- Electrical connections coated with insulating compound for long term reliability in harsh environments.
- Tough PC Boards — potted and trayed, filled with epoxy, double locked harness connectors, environmentally protected connectors, electrical silicone grease, high current rating. Extra attention to detail provides excellent protection from dirt, dust and the environment.
- Fan-As-Needed™ — reduces power consumption and the amount of debris that gets drawn into the machine by shutting the fan down when it is not needed.



Trayed and Potted PC Board

A CLOSER LOOK

Testing

All Lincoln inverters are fully tested for reliability before and after assembly.

- Lincoln inverters are tested in an environmental chamber under extreme conditions of temperature and humidity.
- Mechanical testing, including vibration and drop testing, is performed.
- Extensive temperature testing is performed to ensure that all components are running within their allowable range.
- Three-year warranty on parts and labor.
- Manufactured under a quality system certified to ISO 9001 requirements and ISO 14001 environmental standards.
- Designed to the IEC/EN 60974-1 standard.
- Meets tough NEMA EW 1, CSA NRTL/C standards.
- Meets rigorous IP21S environmental rating.

Environmental Chamber

Power Wave® 355M Ready-Pak™ (for Steel)
Take the hassle out of ordering — Order a Ready-Pak™ pre-assembled welding package.

Includes:
- Power Wave 355M Power Source
- Power Feed 10M Wire Feeder (Bench Model)
- .035 (0.9mm) Drive Roll and Split Wire Guide Kit
- .045 (1.1mm) Drive Roll and Split Wire Guide Kit
- Magnum® 400 Gun and Cable Package
- Work and Wire Feeder Power Cables Package
- Inverter and Wire Feeder Cart
- Harris® Flowmeter and Regulator

Order K2372-1

Standard MSP4 panel from the Power Feed 10M wire feeder is the user interface that allows selection of welding processes.

Power Wave® 355M Ready-Pak™ (for Aluminum)
Take the hassle out of ordering — Order a Ready-Pak™ pre-assembled welding package.

Includes:
- Power Wave 355M Power Source
- Power Feed 10M Wire Feeder (Bench Model)
- .035 (0.9mm) Drive Roll and Split Wire Guide Kit (Aluminum)
- 3/64 (1.2mm) Drive Roll and Split Wire Guide Kit (Aluminum)
- Python 25 ft. Air-Cooled Torch
- Push-Pull Torch Connector Kit
- Work and Wire Feeder Power Cables Package
- Inverter and Wire Feeder Cart
- Harris Flowmeter and Regulator

Order K2373-1

GENERAL OPTIONS

Deluxe Adjustable Gas Regulator and Hose Kit
Accommodates CO_2, Argon or Argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft (1.3m) gas hose.
Order K586-1

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 in. (762mm) door.
Order K1764-1

Dual Cylinder Mounting Kit
Permits side-by-side mounting of two full size gas cylinders, with easy loading. For use with Inverter and Wire Feeder Cart and direct mounting to Power MIG models.
Order K1702-1

Valet Style Undercarriage
Offers a unique pull-out handle. It provides cable storage and the ultimate in portability.
Order K1838-1

Twist-Mate Cable Plug
For connecting welding cable to output terminal receptacles. For 1/0-2/0 (50-70mm^2) cable.
Order K852-70

Twist-Mate™ Cable Plug
For connecting welding cable to output terminal receptacles. For 2/0-3/0 (70-95mm^2) cable.
Order K852-95

Twist-Mate™ Cable Receptacle
For connecting welding cable to Twist-Mate cable plug. For 1/0-2/0 (50-70mm^2) cable.
Order K1759-70

Twist-Mate™ Cable Receptacle
For connecting welding cable to Twist-Mate cable plug. For 2/0-3/0 (70-95mm^2) cable.
Order K1759-95

GENERAL OPTIONS CON'T..

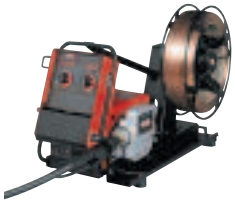
Twist-Mate to Lug Adapter
For connection of lugged cable to Twist-Mate connectors. 18 in. (457mm) long.
Order K2176-1

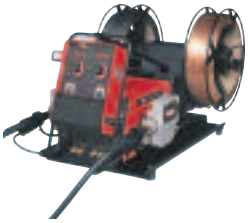
Sense Lead Kit
Recommended for extended cable length. Application allows machine to sense voltage directly at the work piece for improved arc performance. Connects at the front of the machine. 25 ft. (7.6m)
Order K940-25

Wave Designer™ Software
This software allows you to program your own waveforms. Custom parameters include Peak and Background Current, Frequency, Pulse Widths and others.
Contact Lincoln Application Engineering for information.

Work & Wire Feeder Power Cables Package
Includes work cable with ground clamp and Twist-Mate connector and wire feeder power cable with lug and Twist-Mate connector. Capacity is 350 amps at 60% duty cycle.
Order K1803-1

WIRE FEEDER OPTIONS





Power Feed 10M Bench & Dual Bench
Choose the Power Feed 10M Bench Models for automotive manufacturing, shipbuilding, pressure vessels/heavy plate, oil, gas and pipeline construction, particularly where code-quality work is required. The Power Feed 10M Dual Bench has all the features of the Power Feed 10M Bench, plus a second wire reel for twice the productivity.
Order K2230-1 Bench
Order K2234-1 Dual Bench

WIRE FEEDER OPTIONS CON'T..

Power Feed 10M Boom & Dual Boom
Choose the Power Feed 10M Boom Models for boom arm applications in automotive manufacturing, shipbuilding, pressure vessels/ heavy plate, oil, gas and pipeline construction, particularly where code-quality work is required. The Power Feed 10M Dual Boom has all the features of the Power Feed 10M Boom, plus a second wire reel for twice the productivity.
Order K2314-1 Boom
Order K2316-1 Dual Boom

Power Feed 15M
Designed for field construction, pipelines, offshore and shipyards. The only wire feeder on the market that is both digital and portable. Designed exclusively for use with Power Wave power sources.
Order K2196-1

STICK OPTIONS

Accessory Kit
For stick welding. Includes 35 ft. (10.7m) 2/0 electrode cable with lug, 30 ft. (9.1m) 2/0 work cable with lugs, headshield, filter plate, work clamp and electrode holder. 400 amp capacity.
Order K704

Twist-Mate to Lug Adapter
For connection of lugged cable to Twist-Mate connectors. 18 in. (457mm) long.
Order K2176-1

TIG OPTIONS

TIG-Mate 17V 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 torch, parts kit, Harris® flowmeter/regulator, 10 ft. gas hose and work clamp and cable. Includes K960-1 Twist-Mate torch adapter.
Order K2265-1

POWER WAVE 355M ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER WAVE 355M	**K2368-1**		
POWER WAVE 355M READY-PAK™ (FOR STEEL)	**K2372-1**		
POWER WAVE 355M READY PAK (FOR ALUMINUM)	**K2373-1**		
RECOMMENDED GENERAL OPTIONS			
Deluxe Adjustable Gas Regulator and Hose Kit	K586-1		
Inverter and Wire Feeder Cart	K1764-1		
Dual Cylinder Mounting Kit	K1702-1		
Valet Style Undercarriage	K1838-1		
Twist-Mate Cable Plug, 1/0-2/0 (50-70mm^2) cable	K852-70		
Twist-Mate Cable Plug, 2/0-3/0 (70-95mm^2) cable	K852-95		
Twist-Mate Cable Receptacle, 1/0-2/0 (50-70mm^2) cable	K1759-70		
Twist-Mate Cable Receptacle, 2/0-3/0 (70-95mm^2) cable	K1759-95		
Twist-Mate to Lug Adapter	K2176-1		
Sense Lead Kit	K940-25		
Wave Designer Software	Contact Lincoln Application Engineering		
Work & Wire Feeder Power Cables Package	K1803-1		
RECOMMENDED WIRE FEEDER OPTIONS			
Power Feed 10M Bench Model	K2230-1		
Power Feed 10M Dual Bench Model	K2234-1		
Power Feed 10M Boom Model	K2314-1		
Power Feed 10M Dual Boom Model	K2316-1		
Power Feed 15M	K2196-1		
RECOMMENDED STICK OPTIONS			
Accessory Kit, 400 amps	K704		
Twist-Mate to Lug Adapter	K2176-1		
RECOMMENDED TIG OPTIONS			
TIG-Mate 17V TIG Torch Starter Pack	K2265-1		
	TOTAL:		

LINCOLN ELECTRIC
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THE LINCOLN ELECTRIC COMPANY
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