Power MIG® 350MP

Output

CC CV

DC

Input

1 PHASE

60 Hz

Power MIG®. The Professional's Choice℠.

When you need more than just a MIG machine, the Power MIG® 350MP is the choice for you. Lincoln CT Chopper Technology® delivers more welding processes—MIG and flux-cored, along with excellent stick welding, TIG and advanced processes such as Power Mode™ and Pulse-on-Pulse®. In addition, future waveforms of special or improved welding processes can be downloaded into the Power MIG, making it expandable. This means the welder you buy today won't be obsolete tomorrow. Factor in the simplicity and sophistication of synergic control, and you'll agree—no other power source in this category offers so much!

Processes
Stick, TIG, MIG, Pulsed, Flux-Cored

Advantage Lincoln

Arc Performance:

- **Lincoln CT Chopper Technology®** delivers high quality welds by increasing the control over the welding arc.
- **Multi-Process capable** — Welds MIG, flux-cored, stick, TIG, pulsed MIG, and advanced processes like Pulse-On-Pulse™ and Power Mode®.
- **Pulse-on-Pulse™** improves cleaning action when welding aluminum and delivers a TIG-like appearance to the weld beads.
- **Power Mode®** maintains a stable, smooth arc for short arc welding on thin material – great arc length control for aluminum welding.
- **Synergic control** of voltage with wire feed speed allows you to set weld procedures with only one control for simplicity.

Superb Quality:

- **Rugged cast aluminum industrial wire drive** features dual driven rolls, easy-turn numeric tension indicator, brass-to-brass gun connections and Lincoln's 100% wire-supporting split wire guide system.
- **Three-year warranty** on parts and labor (90 days warranty on gun).

Professional Features:

- **Push-Pull or Spool Gun Ready** — The Power MIG® 350*MP* has the electronics built-in to drive either a spool gun or push-pull gun giving you more ways to feed aluminum.
- **115V auxiliary receptacle** to power a grinder or other auxiliary equipment in your work area.
- **A second gas solenoid** is built-in for spool gun use or TIG welding.
- **Dual Procedure capable** — Easily select between either two welding procedures or two welding modes.

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	Dimensions H x W x D inches (mm)	Net Weight lbs.(kg)
Power MIG® 350*MP* Push-Pull One-Pak® Model	K2451-2	208/230/460/575/1/60	300A/32V/60%(1)	76/64/37/29A	5-350 Amps 50-700 ipm WFS (1.3-17.7 m/min) Max. OCV 67V	31.8 x 18.9 x 38.8 (808 x 480 x 985)	255 (116)
Power MIG® 350*MP* Push Model	K2403-1						

(1) 40% on 208V input.

POWER MIG 350MP

MULTI-PROCESS

ARC PERFORMANCE

Multi-Process/Multi-Feed Capability
One machine does it all! Stick
TIG
MIG
Pulsed
Flux-Cored
Spool Gun
Push-Pull

Advanced Nextweld® Processes
Innovations like Pulse-On-Pulse™ and Power Mode® are designed to address specific or difficult applications, including aluminum and low amperage short arc welding.

3 Ways To Feed Aluminum
- Standard Push Gun
- Spool Gun
- Push-Pull

No PC board add-ons required.

Expandability
Load in updated or additional welding waveforms as your needs expand to other materials. Built-in D-shell computer connector makes upgrades easy.

What is Nextweld®?

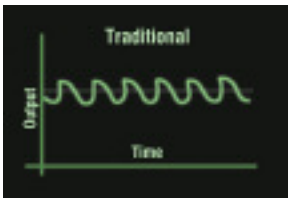
Nextweld® integrates Lincoln's technologies, processes and products to create a comprehensive, flexible, user-friendly welding system that can increase efficiency and reduce fabrication costs. Waveform Control Technology® and digital communications provide the foundation for Nextweld® innovations like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

Lincoln CT Chopper Technology®

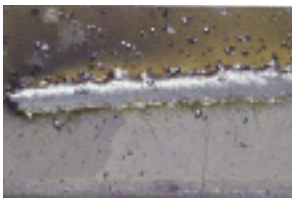
Provides a smooth, stable arc with easy starts, low spatter and excellent bead appearance.

CT Chopper Technology® for extremely fast response for smoother output control.

CT Chopper Technology® CV-Wire Mode



Traditional weld control is more variable around the desired output.

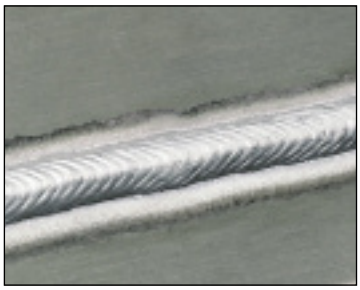


Traditional Reactor Technology CV-Wire Mode

ARC PERFORMANCE, CON'T.

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 MIG® 350*MP* power source:



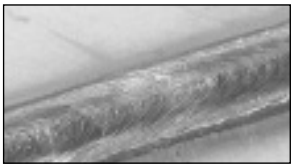
Pulse-On-Pulse™ on 3 mm Aluminum

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.

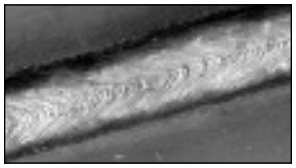
For more information see Nextweld® Document NX-2.10

Power 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.

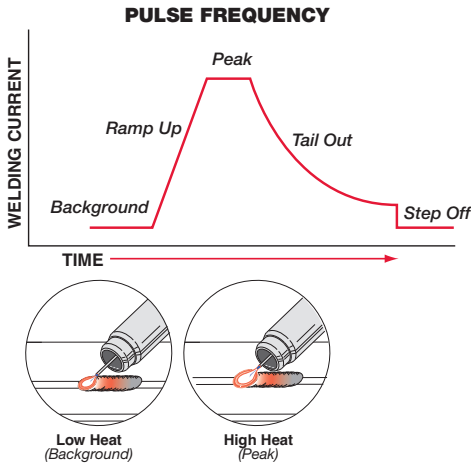
For more information see Nextweld® Document NX-2.60



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 minimizes warping and burnthrough on thin materials. Pulsed MIG also enables 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

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/trim control for personal preference.

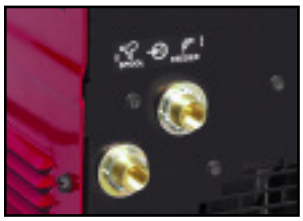
2. Voltage is automatically set.

1. Use one knob to set procedures.

FEATURES

Compare These Innovations – Make the Professional's Choice℠!

115 Volt AC Auxiliary Power



Additional Gas Solenoid – connect 2-piece TIG torch or control gas flow to a spool gun.

Extra Length 15 ft. (4.5 m) gun

Easy Load Gas Cylinder Platform

Accessible Wire Compartment

Handy MIG gun expendables chart

Built-in gun holder conveniently stores welding gun.

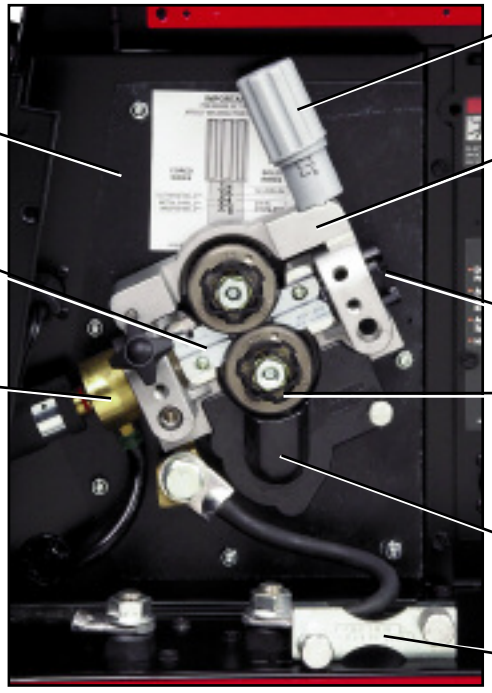
Lockable Storage Compartment with Tool Tray

Professional Heavy Duty Wire Drive System

Internal tachometer feedback drive system allows you to maintain constant wire feed speed for consistent welds.

Split guides support the wire through the entire drive system to minimize feeding problems.

Reliable brass-to-brass gun receiver bushings provide connectivity to Magnum or competitive guns. Easier interchangeability, better mechanical support and electrical current transfer.



Easy turn numeric tension indicator with optimized ranges for different wire types.

Wide idler arm hinge provides improved drive roll clamping pressure.

Input bushing protects the wire from damage.

Two gear driven rolls. No tools needed to swap rolls on or off.

Separate drive gear reduces pressure on motor shaft for long life.

Removable outer wire guide for easy access.

DRIVE ROLL KITS

	Wire Size	Order Number
Solid	.023"-.030" (0.6-0.8 mm) .035" (0.9 mm) .035/.045 Combination .040" (1.0 mm) .045" (1.2 mm)	KP1696-030S KP1696-035S KP1696-1(1) KP1696-2 KP1696-045S
Cored	.035" (0.9 mm) .045" (1.2 mm)	KP1697-035C KP1697-045C
Aluminum	.035" (0.9 mm) 3/64" (1.2 mm)	KP1695-035A KP1695-3/64A(2)(3)

(1) Included with K2403-1 Push model and K2451-2 Push-Pull One-Pak® model.
(2) Included in the K2153-1 Aluminum Feeding Kit.
(3) Included with K2451-2 Push-Pull One-Pak® model.

FEATURES, CON'T.

Key Controls

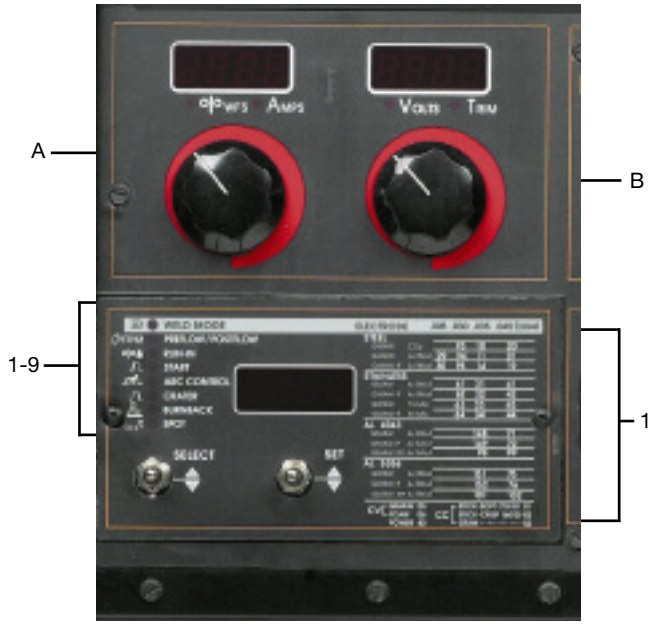
Easy to use controls for high productivity and accurate settings.

A. Continuous WFS/Amps Control – In wire feed welding, adjusts wire feed speed. In stick or TIG modes, adjusts amperage.

B. Continuous Volts/Trim Control – Adjusts voltage when MIG welding. Adjusts the arc length (trim) when Pulse-MIG welding.

Professional's Choice – weld with traditional manual control or take advantage of the included MSP3 digital panel for high tech weld features:

1. Weld Mode – Many synergic modes to select from for simple one-knob control.
2. Preflow – Adjustable timer to initiate gas flow before the arc.
3. Post-Flow – Further protect your weld integrity by automatically setting the gas to run a few seconds after the trigger is released.
4. Run-In – Adjustable speed at which wire strikes the plate to enhance starting.
5. Start Procedure – Set start procedure, wire feed speed and volts for an adjustable starting time.
6. Arc Control – Set arc control to crisp or soft depending on your preference and application. In pulsed MIG, this control varies the pulse frequency and background current. In Stick mode, it adjusts the arc force.
7. Crater Control – Adjusts the ending weld procedure and ramp down time.



8. Burnback – Adjustable time delay between turning off the arc and the wire feed to prevent wire sticking to the puddle.
9. Spot Timer – Adjustable arc time for repetitive tack and spot welds.

3 Ways To Feed Aluminum

Good

Push Gun
Good for occasional aluminum work

Better

Spool Gun
Better feeding with integrated 2 lb. spools

Best

Push-Pull Gun
Best performance for production aluminum welding - Use larger spools.

Python®-*Plus* Air-Cooled Push-Pull Guns
Features the same Magnum® back end as the Magnum® 300 gun, eliminating the need for the K2154-1 adapter. Effortless, fast changes between Magnum® 300 MIG gun and Python®-*Plus* push-pull gun.

- 15 ft. (4.5 m) **Order K2447-1**
- 25 ft. (7.6 m) **Order K2447-2**
- 50 ft. (15.2 m) **Order K2447-3**

(Note: Standard air-cooled and water-cooled Python®, CobraMax™ and Prince® XL push-pull guns still require the K2154-1 connection kit.)

Base Unit Includes:

Push Model (K2403-1): Power MIG® 350*MP*, Magnum® 300 Gun 15 ft. (4.5 m), .035" (0.9 mm)/.045" (1.2 mm) Drive Rolls and Guide for Steel, Regulator and Hose, Work Clamp and Cable, 230V Input Cord and Plug.

Push-Pull One-Pak® Model (K2451-2): Includes Power MIG® 350*MP* (K2403-1) push model, Python®-*Plus* push-pull gun 25 ft. (K2447-2), 3/64 Aluminum Drive Roll Kit (KP1695-3/64A).

GENERAL OPTIONS

Dual Cylinder Mounting Kit
Permits side-by-side mounting of two full size gas cylinders, with easy loading. Attaches easily to Power MIG undercarriage.
Order K1702-1

Canvas Cover
Protect your Power MIG® when not in use. Made from attractive red canvas that is flame retardant, mildew resistant and water repellent. Fits any Power MIG® machine with or without a gas cylinder in the cylinder rack. Will not fit if spool gun holder is attached to the machine.
Order K2378-1

STICK OPTIONS

Accessory Kit
Complete kit for stick welding. Includes 30 ft. (9.1 m) electrode cable, 25 ft. (7.6 m) work cable, headshield, work clamp and electrode holder.
Order K875 for 150 amps
Order K704 for 400 amps

Remote Output Control
Consists of a control box with choice of two cable lengths. Permits remote adjustment of output.
Order K857 for 25 ft. (7.6 m)
Order K857-1 for 100 ft. (30.5 m)

TIG OPTIONS

PTA-17 150 Amp Air-Cooled TIG Torch
Order K1782-2
for 12.5 ft. (3.8 m) length, 2-cable
Order K1782-4
for 25 ft. (7.6 m) length, 2-cable

PTA-26 200 Amp Air-Cooled TIG Torch
Order K1783-2
for 12.5 ft. (3.8 m) length, 2-cable
Order K1783-4
for 25 ft. (7.6 m) length, 2-cable

Parts Kits
Magnum® Parts Kits provide all the torch accessories you need to start welding. Parts kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.
Order KP508 for PTA-17
Order KP509 for PTA-26

Foot Amptrol®
Provides 25 ft. (7.6 m) of remote current control for TIG welding. (6-pin plug connection).
Order K870

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

Arc Start Switch
Needed if an Amptrol® is not used when TIG welding. Comes with a 25 ft. (7.6 m) cable. Attaches to the TIG torch for convenient finger control.
Order K814

Cut Length Consumables
TIG welding filler metals are available for welding stainless steel, mild steel, aluminum and copper alloys.
See publication C9.10

WIRE FEEDER OPTIONS

Aluminum Feeding Kit
Conversion kit for welding with 3/64" (1.2 mm) aluminum wire. Includes drive rolls, contact tips (qty. 2), polished wire guides and cable liner.
Order K2153-1

Fast-Mate™ Adapter
Allows guns with a Fast-Mate™ type back end to plug into a Power MIG®.
Order K489-8

RECOMMENDED OPTIONS

Dual Procedure Switch
Easily mounts to gun using convenient velcro straps to allow welding operators to select between two preset welding procedures or modes. Plugs into the gun trigger connector on the wire feeder.
Order K2449-1

Magnum® 250LX™ Spool Gun
280 amps, 60% duty cycle. Feeds .025"-3/64" (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.
Order K2490-1

Magnum® 250LX™ Spool Gun Control Cable Extension
Extend your spool gun reach with a 25 ft. (7.6 m) Control Cable Extension. Features a 7-pin female MS-type connector on the spool gun end and a 7-pin male MS-type connector on the power source end.
Order K2519-1

Spool Gun Holder
Provides neat storage of spool gun cable, and gas hose on Power MIG.
Order K1738-1

Python®-*Plus* Air-Cooled Push-Pull Gun
The Python®-*Plus* push-pull 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® Power MIG® without an adapter. The ergonomic handle design, fingertip controls and foolproof set-up 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)

Prince® XL Push-Pull Gun
The Prince® XL is the smallest, lightest pistol grip push-pull gun you can buy. Choose the standard straight barrel or optional curved barrel with ratings up to 225 amps 100% duty cycle. The patented EZ-Lock system make rotating or changing the barrel an easy no-tool twist of the wrist.
Order K2296-2
for Air-Cooled 25 ft. (7.6 m)

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, gun gas bypass valve (required for Prince® XL Gun only), and wire reel brake limiter. Requires aluminum drive roll kit.
**Not required for Python®-Plus Guns.*
Order K2154-1

Spindle Adapter for Small Spools
Permits 8" (200 mm) O.D. spools to be mounted on 2" (51 mm) O.D. spindles.
Order K468

Welding Fume Extractors
Lincoln offers a wide variety of welding fume extraction environmental system solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.
Request Publication E13.40

POWER MIG® 350MP ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER MIG® 350MP PUSH MODEL 208/230/460/575/1/60	**K2403-1**		
POWER MIG® 350MP PUSH-PULL ONE-PAK® MODEL	**K2451-2**		
RECOMMENDED GENERAL OPTIONS			
Dual Cylinder Mounting Kit	K1702-1		
Canvas Cover	K2378-1		
RECOMMENDED STICK OPTIONS			
Accessory Kit:			
150 amps	K875		
400 amps	K704		
Remote Output Control:			
25 ft. (7.6 m)	K857		
100 ft. (15.2 m)	K857-1		
RECOMMENDED TIG OPTIONS			
Pro-Torch™ TIG Torches	See publication E12.150		
Part Kits:			
For PTA-17	KP508		
For PTA-26	KP509		
Foot Amptrol®	K870		
Hand Amptrol®	K963-3		
Arc Start Switch	K814		
Cut Length Consumables	See publication C9.10		
RECOMMENDED WIRE FEEDER OPTIONS			
Aluminum Feeding Kit	K2153-1		
Fast-Mate™ Adapter	K489-8		
Dual Procedure Switch	K2449-1		
Magnum® 250LX™ Spool Gun	K2490-1		
Spool Gun Holder	K1738-1		
Python®-*Plus* Air-Cooled Push-Pull Gun			
15 ft. (4.5 m)	K2447-1		
25 ft. (7.6 m)	K2447-2		
50 ft. (15.2 m)	K2447-3		
Prince® XL Push-Pull Gun Air-cooled, 25 ft. (7.6 m)	K2296-2		
Push-Pull Gun Connection Kit	K2154-1		
Spindle Adapter for Small Spools	K468		
Welding Fume Extractors	See publication E13.40		
	TOTAL:		

LINCOLN® ELECTRIC
THE WELDING EXPERTS®

THE LINCOLN ELECTRIC COMPANY®

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