

POWER MIG® 350MP

Processes

MIG, Pulsed, Flux-Cored, Stick, TIG

Product Number

K2403-2 - POWER MIG® 350MP

K4023-1 - POWER MIG® 350MP Aluminum

One-Pak® for Trailer Manufacturing/General Fab

K4023-2 - POWER MIG® 350MP Aluminum

One-Pak® for Auto Body Repair

Input Power

208/230/460/575/1/60

Rated Output (Current/Voltage/Duty Cycle)

300A/32V/60% (40% on 208V)

Input Current at Rated Output

76/64/37/29A

Output Range

5-350 Amps, 50-700 ipm WFS
(1.3-17.7 m/min)
Max. OCV 67V

Weight/Dimensions (H x W x D)

255 lbs. (116 kg)
31.8 x 18.9 x 38.8 inches
(808 x 480 x 985 mm)

See back for complete specs

POWER MIG® The Professional's ChoiceSM

When you need more than just a MIG machine, the POWER MIG® 350MP is a 3 in 1 welder that delivers more welding processes – Excellent stick welding, TIG, MIG and flux-cored with advanced processes such as Power Mode® and Pulse-on-Pulse®.

FEATURES

- ▶ **Aluminum Pulse Process** - Welds 4XXX and 5XXX series aluminum for superior quality welding.
- ▶ **Multi-Process capable** - Welds MIG, flux-cored, stick, TIG, pulsed MIG, and advanced processes like Pulse-On-Pulse® and Power Mode®.
- ▶ **Pulse-on-Pulse®** - Delivers a stacked dime appearance when welding aluminum.
- ▶ **Power Mode®** - Maintains a stable, smooth arc for short arc welding on steel. Improved penetration on thicker aluminum sections.
- ▶ **Synergic control** - Set weld procedures with one control.
- ▶ **Rugged MAXTRAC® industrial wire drive** - Allows for constant wire feed speed and consistent welds.
- ▶ **3 Ways to Feed Aluminum** - Electronics built in for all three methods using a Push Gun, Spool Gun or a Push-Pull Gun.

APPLICATIONS

- ▶ Metal Fabrication
- ▶ Maintenance and Repair
- ▶ Auto Body
- ▶ Light Industrial



Shown: K4023-1 POWER MIG 350MP Aluminum One-Pak for Trailer Manufacturing/General Fab

WHAT'S INCLUDED

K2403-2 Includes:

- ▶ POWER MIG® 350MP
- ▶ Magnum® PRO Curve™ 300 Gun 15 ft. (4.5 m)
- ▶ .035/.045 in. (0.9/1.2 mm) Drive Rolls and Guide for Steel
- ▶ Gas Regulator and Hose
- ▶ Work Clamp and Cable
- ▶ 230V Input Cord and Plug
- ▶ 115V AC Auxiliary Power Receptacle
- ▶ Lockable Storage Compartment with Tool Tray

INPUT



OUTPUT



Two Year Extended
Warranty Available in
the U.S.A. and Canada

NEW! K4023-1 Aluminum One-Pak® Package for
Trailer Manufacturing/General Fab

NEW! K4023-2 Aluminum One-Pak® Package for
Auto Body Repair

See page 3 for complete package descriptions



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.

The Professional's ChoiceSM – 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.

ARC PERFORMANCE

Lincoln Innovations for Challenging Applications

Waveform Control Technology[®] makes it possible to take advantage of Lincoln Electric innovations like these patented processes:

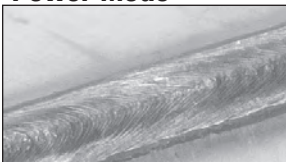
Pulse-on-Pulse[®]



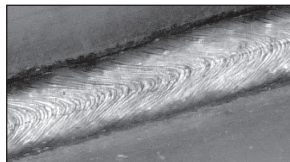
Pulse-On-Pulse[®] on 3 mm Aluminum

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. See NX-2.10

Power Mode[®]



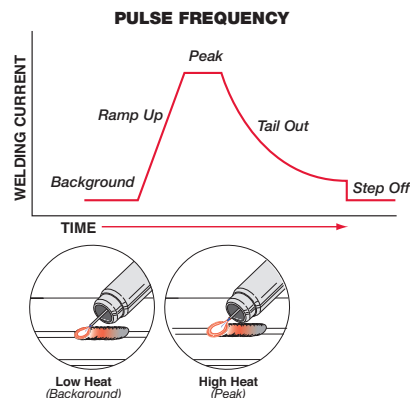
Power Mode[®] reduces spatter and improves bead appearance, even for low voltage procedures on stainless.



Power Mode[®] aids bead wetting and penetration on aluminum.

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). See NX-2.60

Pulsed MIG



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. Optimized GMAW-P waveforms are readily available to use on aluminum, carbon steel, high strength low alloy steel, stainless steel, and nickel alloys. See NX-2.70

Synergic MIG



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.

NEW!

K4023-1 Aluminum One-Pak® Package for Trailer Manufacturing/General Fab includes everything in K2403-2 POWER MIG 350MP and:

- ▶ Magnum PRO AL Gun G225A, 7 pin (25 ft.) (7.6 m)
- ▶ Aluminum Drive roll kit, 2-roll, 3/64 in. (1.2 mm)
- ▶ SuperGlaze® 5356 TM™ 3/64 in. (1.2 mm) 16 lb (7.3 kg) spool

NEW!

K4023-2 Aluminum One-Pak® Package for Auto Body Repair includes everything in K2403-2 POWER MIG 350MP and:

- ▶ Magnum PRO AL Gun G225A, 7 pin (25 ft.) (7.6 m)
- ▶ Aluminum Drive roll kit, 2-roll, 3/64 in. (1.2 mm)
- ▶ SuperGlaze® 5554 3/64 in. (1.2 mm) 16 lb (7.3 kg) spool

**CONTACT TIPS AND LINERS FOR STEEL/
STAINLESS STEEL/SILICON BRONZE**

| Wire Diameter in. (mm) | Description | Order Number |
|------------------------|---|--------------|
| .045 (1.2) | Contact Tips Tapered (10) | KP2744-045T |
| .035 (0.9) | Contact Tips Tapered (10) | KP2744-035T |
| .030 (0.8) | Contact Tips Tapered (10) | KP2744-030T |
| .025 (0.6) | Contact Tips Tapered (10) | KP2744-025T |
| .035 -.045 (0.9 - 1.2) | Magnum PRO Curve 15' Liner Solid Wire (1) | KP44-3545-15 |

CONTACT TIPS AND LINERS FOR ALUMINUM

| Wire Diameter in. (mm) | Description | Order Number |
|-------------------------|--|-----------------|
| .035 (0.9) | Contact Tips Aluminum (10) | KP2745-035A |
| 3/64 (1.2) | Contact Tips Aluminum (10) | KP2745-364A |
| 3/64 (1.2) | Contact Tips 5XXX Series Aluminum (10) | KP2745-364A5356 |
| .030 - 1/16 (0.8 - 1.6) | Magnum PRO AL Push-Pull Gun Liner (1) | KP3991-25 |
| .030 - 1/16 (0.8 - 1.6) | Magnum PRO AL Gooseneck Jump Liner (5) | KP3376-1 |

350A NOZZLES AND DIFFUSERS

| Nozzle Diameter in. (mm) | Description | Order Number |
|--------------------------|-----------------------------|--------------|
| .375 (9.5) | Thread-on Flush Diffuser | KP2742-1-38F |
| .5 (12.7) | Thread-on Flush Diffuser | KP2742-1-50F |
| .375 (9.5) | Thread-on Recessed Diffuser | KP2742-1-38R |
| .5 (12.7) | Thread-on Recessed Diffuser | KP2742-1-50R |
| - | Thread-on Diffuser | KP2746-1 |

550A NOZZLES AND DIFFUSERS

| Nozzle Diameter in. (mm) | Description | Order Number |
|--------------------------|---------------------------|--------------|
| .625 (15.9) | Thread-on Flush Nozzle | KP2743-1-62F |
| .75 (19.0) | Thread-on Flush Nozzle | KP2743-1-75F |
| .625 (15.9) | Thread-on Recessed Nozzle | KP2743-1-62R |
| .75 (19.0) | Thread-on Recessed Nozzle | KP2743-1-75R |
| - | Thread-on Diffuser | KP2747-1 |

For more options, please refer to the Magnum PRO Guide.

DRIVE ROLL KITS

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

⁽¹⁾ Included with K2403-2 Push Model.

RECOMMENDED ACCESSORIES



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



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



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



Canvas Cover

Protect your POWER MIG® when not in use. Made from 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



Foot Amptrol™

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



Spool Gun Holder

Provides neat storage of spool gun cable, and gas hose on POWER MIG®.
Order K1738-1

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



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



Magnum® PRO AL Air-Cooled and Magnum® PRO AL Water-Cooled Push-Pull Guns

The Magnum PRO AL gooseneck-style guns are designed to optimize a push-pull welding operation for aluminum. Uses Magnum PRO MIG Gun expendables.
Order
 Request Publication E12.14

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)



WIRE FEEDER OPTIONS

Fast-Mate™ Adapter

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



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. Feature Sure-Grip™ handle, integrated strain relief and multi-turn potentiometer. Rated 300A @ 60% duty cycle w/Argon.
Order
K2704-2 Air Cooled, 25 ft. (7.6 m)
K2704-3 Air Cooled, 50 ft. (15.2 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



Magnum® 250LX™ Spool Gun

280 amps, 60% duty cycle. Feeds .025-3/64 in. (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

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



Spindle Adapter for Small Spools

Permits 8 in. (200 mm) O.D. spools to be mounted on 2 in. (51 mm) O.D. spindles.
Order K468

PRODUCT SPECIFICATIONS

| Product Name | Product Number | Input Power | Rated Output Current/Voltage/Duty Cycle | Input Current @ Rated Output | Output Range | H x W x D in. (mm) | Net Weight lbs. (kg) |
|---|----------------|----------------------|---|------------------------------|--|---|----------------------|
| POWER MIG® 350MP | K2403-2 | 208/230/460/575/1/60 | 300A/32V/60% (40% on 208V) | 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® 350MP Aluminum One-Pak for Trailer Manufacturing/General Fab | K4023-1 | | | | | | |
| POWER MIG® 350MP Aluminum One-Pak for Auto Body Repair | K4023-2 | | | | | | |

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

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 for any updated information.

LINCOLN®
ELECTRIC
 THE WELDING EXPERTS™