

# POWER MIG® 350MP

THE PROFESSIONAL'S CHOICE<sup>SM</sup>.



Shown:  
POWER MIG® 350 MP, K2403-1

## WIRE FEEDER/WELDERS

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®.

### Processes »

MIG, Pulsed, Flux-Cored, Stick, TIG

### Applications »

Metal Fabrication, Maintenance and Repair, Auto Body, Light Industrial

### Output »



### Input »



### Product Numbers »

- 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

## 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.

## WHAT'S INCLUDED

### K2403-2 INCLUDES:

- POWER MIG® 350MP
- Magnum® PRO Curve™ 300 Gun 15 ft. (4.5 m)
- 0.035/.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

### K4023-1 ALUMINUM ONE-PAK® PACKAGE FOR TRAILER MANUFACTURING/GENERAL FAB

See page 3 for complete package descriptions

### K4023-2 ALUMINUM ONE-PAK® PACKAGE FOR AUTO BODY REPAIR

See page 3 for complete package descriptions

## CONTROLS

Easy to use controls for high productivity and accurate settings.

- Continuous WFS/Amps Control** – In wire feed welding, adjusts wire feed speed. In stick or TIG modes, adjusts amperage.
- Continuous Volts/Trim Control** – Adjusts voltage when MIG welding. Adjusts the arc length (trim) when Pulse-MIG welding.

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

- Weld Mode** – Many synergic modes to select from for simple one-knob control.
- Preflow** – Adjustable timer to initiate gas flow before the arc.
- Post-Flow** – Further protect your weld integrity by automatically setting the gas to run a few seconds after the trigger is released.
- Run-In** – Adjustable speed at which wire strikes the plate to enhance starting.
- Start Procedure** – Set start procedure, wire feed speed and volts for an adjustable starting time.
- 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.
- Crater Control** – Adjusts the ending weld procedure and ramp down time.
- Burnback** – Adjustable time delay between turning off the arc and the wire feed to prevent wire sticking to the puddle.
- 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:

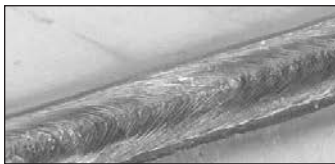
#### Pulse-on-Pulse®



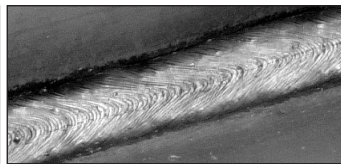
*Pulse-On-Pulse® on 3 mm Aluminum*

**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®



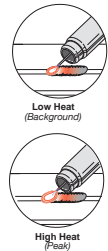
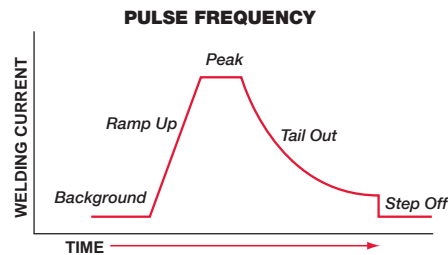
*Power Mode® reduces spatter and improves bead appearance, even for low voltage procedures on stainless.*



*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.

## ACCESSORIES

### 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

### 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



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

**CONTACT TIPS AND LINERS**

| Wire Diameter - in. (mm)                            | Description   | Order No.        |
|---|---|------------------|
| <b>FOR STEEL / STAINLESS STEEL / SILICON BRONZE</b> |   |                  |
| 0.045 [1.2]   | Contact Tips Tapered (10)                                   | KP2744-045T      |
| 0.035 [0.9]   | Contact Tips Tapered (10)                                   | KP2744-035T      |
| 0.030 [0.8]   | Contact Tips Tapered (10)                                   | KP2744-030T      |
| 0.025 [0.6]   | Contact Tips Tapered (10)                                   | KP2744-025T      |
| 0.035 - 0.045 [0.9 - 1.2]                           | Magnum PRO Curve 15' Liner Solid Wire (1)                   | KP44-3545-15     |
| <b>FOR ALUMINUM</b>                                 |   |                  |
| 0.035 [0.9]   | Contact Tips Aluminum (10)                                  | KP2745-035AT     |
| 3/64 [1.2]  | Contact Tips Aluminum (10)                                  | KP2745-364AT     |
| 3/64 [1.2]  | Contact Tips 5XXX Series Aluminum (10)                      | KP2745-364AT5356 |
| 0.030 - 1/16 [0.8 - 1.6]                            | Magnum PRO AL Push-Pull Conduit Gun Liner 25 ft (7.6 m) (1) | KP3991-25        |
| 1/16 [1.6]  | Magnum PRO AL Gooseneck Jump Liner (5)                      | KP3376-1         |
| 0.035 - 3/64 [0.9 - 1.2]                            | Magnum PRO AL Gooseneck Jump Liner (5)                      | KP3376-3         |



Shown: KP2744-045T, Tapered Contact Tip



Shown: KP3376-1, Magnum® PRO Liner

**NOZZLES AND DIFFUSERS**

| Nozzle Diameter - in. (mm) | Description                 | Order No.     |
|----------------------------|-----------------------------|---------------|
| <b>350A</b>                |                             |               |
| 0.375 [9.5]                | Thread-on Flush Diffuser    | KP2742-1-38F  |
| 0.5 [12.7]                 | Thread-on Flush Diffuser    | KP2742-1-50F  |
| 0.375 [9.5]                | Thread-on Recessed Diffuser | KP2742-1-38R  |
| 0.5 [12.7]                 | Thread-on Recessed Diffuser | KP2742-1-50R  |
| -                          | Thread-on Diffuser          | KP2746-1      |
| <b>550A</b>                |                             |               |
| 0.625 [15.9]               | Thread-on Flush Nozzle      | KP2743-1-62F  |
| 0.75 [19.0]                | Thread-on Flush Nozzle      | KP2743-1-75F  |
| 0.625 [15.9]               | Thread-on Recessed Nozzle   | KP2743-1-62RA |
| 0.75 [19.0]                | Thread-on Recessed Nozzle   | KP2743-1-75R  |
| -                          | Steel Thread-on Diffuser    | KP2747-1      |
| -                          | Aluminum Thread-on Diffuser | KP2747-1A     |



Shown: KP2746-1, Thread-on Diffuser



Shown: KP2747-1, Steel Thread-on Diffuser

For more options, please refer to the Magnum® PRO Instruction Manual.

**DRIVE ROLL KITS**

| Wire Type | Wire Diameter - in. (mm) | Order No.               |             |
|-----------|--------------------------|-------------------------|-------------|
| Solid     | 0.023-0.030 [0.6-0.8]    | KP1696-030S             |             |
|           | 0.035 [0.9]              | KP1696-035S             |             |
|           | 0.035/0.045 Combination  | KP1696-1 <sup>(1)</sup> |             |
|           |                          | 0.040 [1.0]             | KP1696-2    |
|           |                          | 0.045 [1.2]             | KP1696-045S |
| Cored     | 0.035 [0.9]              | KP1697-035C             |             |
|           | 0.045 [1.2]              | KP1697-045C             |             |
| Aluminum  | 0.035 [0.9]              | KP1695-035A             |             |
|           | 3/64 [1.2]               | KP1695-3/64A            |             |



Shown: KP1697-035C, Cored Drive Roll Kit

<sup>(1)</sup> 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 K702-1**

### 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**



### 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 Ampctrl™

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



### Hand Ampctrl™

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 Ampctrl™ 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**



### WIRE FEEDER OPTIONS

#### Fast-Mate™ Adapter

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



#### Magnum® 250LX™ Spool Gun

280 amps, 60% duty cycle. Feeds 0.025-3/64 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**



#### Harris® Aluminum Flow/Regulator

355-2CD 100-580  
**Order 3100546**



#### 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**



#### 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



#### 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)



#### 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   | Dimensions H x W x D in (mm)            | Net Weight lb (kg) |
|--|----------------|----------------------|---|------------------------------|--|---|--------------------|
| POWER MIG® 350MP                                   | K2403-2        | 208/230/460/575/1/60 | 300A/32V/60%<br>(40% on 208V)           | 76/64/37/29A                 | 5-350 Amps<br>50-700 ipm WFS<br>(1.3-17.7 m/min)<br>Max. OCV 67V | 31.8 x 18.9 x 38.8<br>(808 x 480 x 985) | 255<br>(116)       |
| Aluminum One-Pak Pkg. for Trailer Mfg./General Fab | K4023-1        |                      |   |                              |  |   |                    |
| 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](http://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.

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