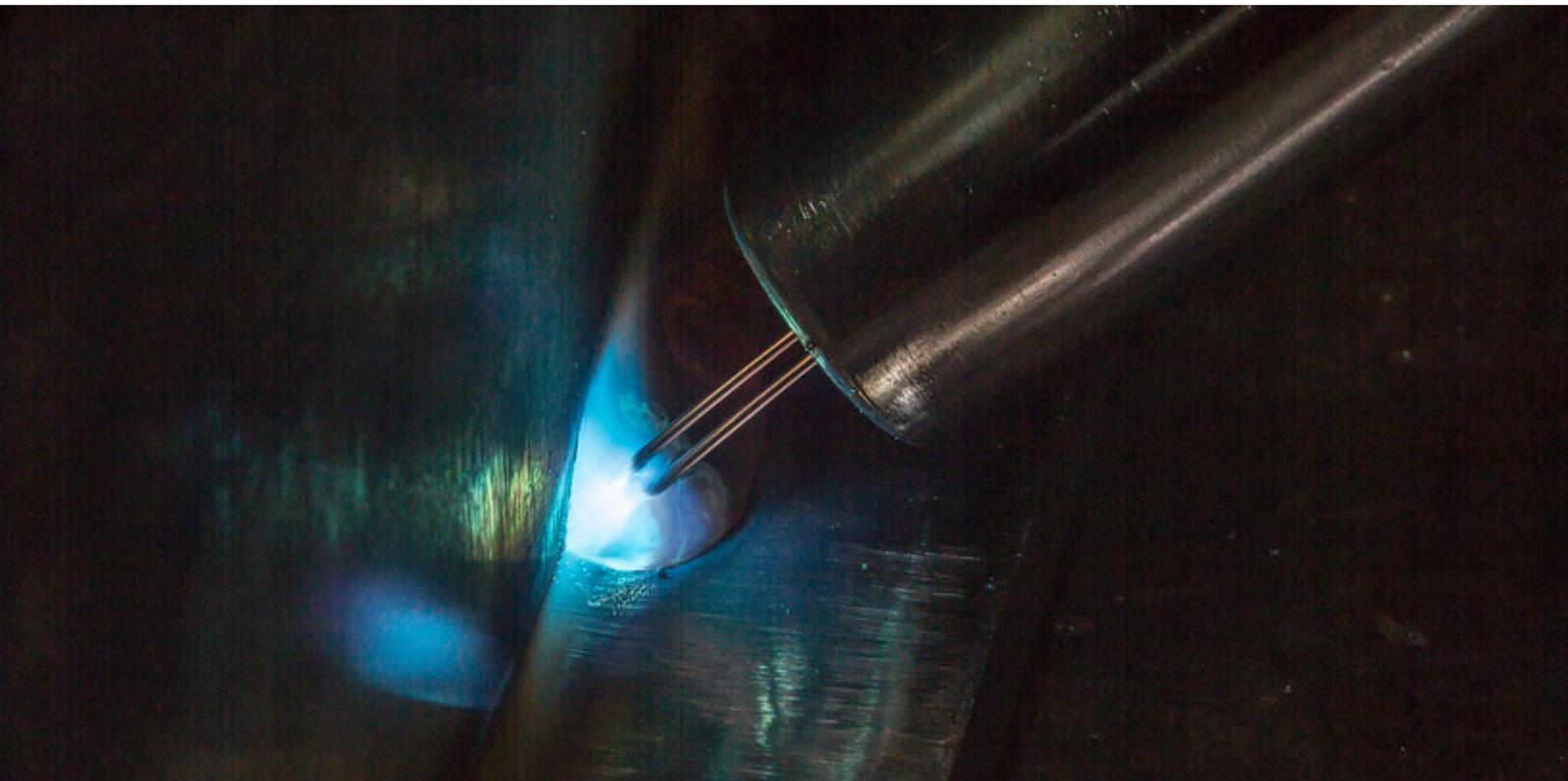


# HYPERFILL®

**BIGGER WELDS -FASTER. EASIER.**



The HyperFill® twin-wire MIG solution was developed to revolutionize heavy fabrication productivity. Designed for semiautomatic and robotic applications, HyperFill redefines high deposition welding – allowing you to make larger welds, faster and more easily. With its innovative twin-wire design, HyperFill allows for deposition rates above 18 lbs/hr (24+ lbs/hr robotically) without compromising weld quality or operator ease-of-use.

- » Maximize productivity – Increases deposition rates over single wire applications
- » Improve weld quality – Stable arc for easy control of large weld puddles
- » Low system complexity – Powered by a single power source. Fed through a single wire feeder and single contact tip

#### » Processes »

Patented  
Twin-Wire GMAW

#### » Applications »

Heavy Fabrication  
High Deposition Welds

#### » Solution Requirements »

HyperFill® is a patented and licensed twin-wire MIG solution that is designed to perform specifically with select Lincoln Electric welding wire. The solution requires a licensed waveform which may require an additional purchase. [For more details, reference document MC20-106.](#)

## HyperFill Ready-Pak® Packages

HyperFill Ready-Pak® Packages include everything needed to run the HyperFill process assembled and shipped on one pallet. Welding wire, shielding gas, and coolant must be ordered separately.

### HyperFill - Single Ready-Pak, includes:

- Power Wave® S500 [K2904-1]
- Power Feed® 84 Wire Feeder [K3328-3]
- Cool Arc® 55S Water Cooler [K3086-2]<sup>(1)</sup>
- Magnum® PRO Water Cooled 500A Gun [K4522-2-10-564]
- 7 ft. Water Hose Kit [K4544-7]
- HyperFill Dual Reel Cart Kit [K4630-1]
- 4-Ball Inlet Guide [K1551-2]
- HyperFill .035-.040 (0.9-1.0 mm) Drive Roll Kit [KP4388-1]
- HyperFill Diffuser [KP4481-1]
- HyperFill .035 Contact Tip [KP4482-035]
- 1/8 in. Recess Nozzle [KP4523-1-75R]
- 15 ft., 5/64 in. Liner [KP44-564-15]
- Work Lead Package [K2149-1]
- Electrode Cable [K1842-10]
- ArcLink® Cable [K1543-8]
- Inverter and Wire Feeder Cart [K3059-4]
- Gas Y Fitting [KP4773-1]
- Gateway Pendant Kit [K4997-1]<sup>(2)</sup>
- Harris Flowmeter Kit [310021]

Complete Ready-Pak, Order K4650-5

### HyperFill - Dual Feeder Ready-Pak, Dual Cylinder Cart includes:

Includes all components from Dual-Feeder Ready-Pak (K4650-4), substituting the K3059-4 cart with:

- Dual Cylinder Cart [K3059-5]

Complete Ready-Pak, Order K4650-6

### HyperFill - Dual Feeder Ready-Pak, includes:

- Power Wave® S500 [K2904-1]
- Power Feed® 84 Dual Wire Feeder [K3330-3]
- Cool Arc® 55S Water Cooler [K3086-2]<sup>(1)</sup>
- Magnum® PRO Water Cooled 500A Gun [K4522-2-10-564]
- 7 ft. Water Hose Kit [K4544-7]
- HyperFill Dual Reel Cart Kit [K4630-1]
- 4-Ball Inlet Guide [K1551-2]
- HyperFill .035-.040 (0.9-1.0 mm) Drive Roll Kit [KP4388-1]
- HyperFill Diffuser [KP4481-1]
- HyperFill .035 Contact Tip [KP4482-035]
- 1/8 in. Recess Nozzle [KP4523-1-75R]
- 15 ft., 5/64 in. Liner [KP44-564-15]
- Standard Duty Wire Reel Stand [K3342-1]
- Magnum® PRO Curve™ 300A Gun [K2951-2-10-45]
- Standard .040-.045 (1.0-1.1 mm) Drive Roll Kit [KP1505-045S]
- Work Lead Package [K2149-1]
- Electrode Cable [K1842-10]
- ArcLink® Cable [K1543-8]
- Inverter and Wire Feeder Cart [K3059-4]
- Gas Y Fitting [KP4773-1]
- Gateway Pendant Kit [K4997-1]<sup>(2)</sup>
- Harris Flowmeter Kit [310021]

Complete Ready-Pak, Order K4650-4



Shown: K4650-6 HyperFill - Dual Feeder Ready-Pak, Dual Cylinder Cart

(1) Coolant and regulators must be ordered separately.

(2) Includes: Gateway Pendant [K4997-1], 5" Screen Protector [KP4735-2], and 8ft. Control Cable [K1543-8]

## Solid Wire Component One-Pak Packages

HyperFill Component One-Pak® Packages include all gun and wire drive components needed to run the HyperFill process. Power source, Gateway Pendant Kit, wire feeder, water cooler, welding wire and shielding gas must be ordered separately.

| Accessories   | Qty. | Product Number | SEMI-AUTOMATIC           |                          |   | ROBOTIC <sup>(2)</sup>   |                          |   |
|---|------|----------------|--------------------------|--------------------------|---|--------------------------|--------------------------|---|
|   |      |                | HyperFill .035 K4586-035 | HyperFill .040 K4586-040 | HyperFill .045 K4586-045 <sup>(3)</sup> | HyperFill .035 K4587-035 | HyperFill .040 K4587-040 | HyperFill .045 K4587-045 <sup>(3)</sup> |
| Magnum Pro 500A WC w/564 liner, 60 deg std length neck  | 1    | K4522-2-10-564 | .                        | .                        | .                                       |                          |                          |   |
| HyperFill Diffuser                                      | 2    | KP4481-1       | .                        | .                        | .                                       | .                        | .                        | .                                       |
| HyperFill Contact Tip - 0.035                           | 10   | KP4482-035     | .                        |                          |   | .                        |                          |   |
| HyperFill Contact Tip - 0.040                           | 10   | KP4482-040     |                          | .                        |   |                          | .                        |   |
| HyperFill Contact Tip - 0.045 <sup>(3)</sup>            | 10   | KP4482-045     |                          |                          | .                                       |                          |                          | .                                       |
| HyperFill Drive Roll Kit (.035 - .040 / 0.9 -1.0 mm)    | 1    | KP4388-1       | .                        | .                        |   | .                        | .                        |   |
| HyperFill Drive Roll Kit (.045 / 1.2 mm) <sup>(3)</sup> | 1    | KP4388-2       |                          |                          | .                                       |                          |                          | .                                       |
| Magnum PRO Gun Liner - 5/64                             | 1    | KP44-564-15    |                          |                          |   | .                        | .                        | .                                       |
| Magnum PRO Gun Liner - 3/32                             | 1    | KP44-332-15    |                          |                          |   |                          | .                        | .                                       |
| HyperFill Inlet Bushing                                 | 1    | K4389-1        | .                        | .                        | .                                       | .                        | .                        | .                                       |
| Gun Nozzle (Semi-Automatic)                             | 2    | KP4523-1-75R   | .                        | .                        | .                                       |                          |                          |   |
| Gun Nozzle (Robotic)                                    | 2    | KP4120-1-75R   |                          |                          |   | .                        | .                        | .                                       |

(2) A K3593-XXX Magnum PRO Robotic Water-Cooled Torch One-Pak\* should be ordered in addition to the Hyperfill Robotic One-Pak. Please refer to literature E12.07 to select the correct Torch One-Pak for your application.

(3) Power Wave s700 required to run HyperFill with .045 solid wire.

## HYPERFILL – REVEAL COMPONENTS



### GATEWAY PENDANT COMPONENTS

| Product Number | Description                          |
|----------------|--------------------------------------|
| K4997-1        | Gateway Pendant                      |
| KP4735-2       | 5 in. (12.7 cm) Screen Protector Kit |
| K1543-8        | 8 ft. (2.4 m) Control Cable          |



### HYPERFILL® REVEAL™ ACCESS CARD

| Product Number | Description                |
|----------------|----------------------------|
| K4966-88       | HyperFill Steel, 88 lbs.   |
| K4966-500      | HyperFill Steel, 500 lbs.  |
| K4966-1000     | HyperFill Steel, 1000 lbs. |
| K4967-32       | HyperFill Steel, 32 kg     |
| K4967-250      | HyperFill Steel, 250 kg    |
| K4967-500      | HyperFill Steel, 500 kg    |

## HYPERFILL – INDIVIDUAL COMPONENTS

### GUN COMPONENTS

| Product Number | Description   |
|----------------|---|
| K4522-2-10-564 | Magnum PRO 500A WC with Tweco Connector & Std 60° Gun Tube - 5/64 in (2.0 mm), 15ft     |
| K4885-2-10-332 | Magnum PRO 500A WC with Tweco Connector & Ext 60° Gun Tube - 3/32 in (2.4 mm), 15ft     |
| K4885-2-FM-332 | Magnum PRO 500A WC with Fast-Mate Connector & Ext 60° Gun Tube - 3/32 in (2.4 mm), 15ft |
| KP4481-1       | HyperFill Diffuser  |

#### 0.035 – 0.040 (0.9mm – 1.0mm) Wire

|             |  |
|-------------|--|
| KP44-564-15 | Magnum PRO Gun Liner - 5/64 (2.0mm) 15 ft (4.5m) |
| KP44-564-25 | Magnum PRO Gun Liner - 5/64 (2.0mm) 25 ft (7.6m) |
| KP4482-035  | HyperFill Contact Tip - 0.035 (0.9 mm)           |
| KP4482-040  | HyperFill Contact Tip - 0.040 (1.0 mm)           |

#### 0.045 (1.2mm) Wire<sup>(3)</sup>

|             |  |
|-------------|--|
| KP44-332-15 | Magnum PRO Gun Liner - 3/32 (2.4mm) 15ft (4.5m)      |
| KP44-332-25 | Magnum PRO Gun Liner - 3/32 (2.4mm) 25ft (7.6m)      |
| KP4482-045  | HyperFill Contact Tip - 0.045 (1.2 mm)               |
| KP4482-047  | HyperFill Contact Tip - 0.047 (1.2 mm) International |

### GUN COMPONENTS CONT.

| Product Number | Description                                      |
|----------------|--|
| KP4526-45      | Water Cooled, 500A, 45° Gun Tube                 |
| KP4526-60      | Water Cooled, 500A, 60° Gun Tube                 |
| KP4526-45L3    | Water Cooled, 500A, 45° Extended Length Gun Tube |
| KP4526-60L3    | Water Cooled, 500A, 60° Extended Length Gun Tube |

### WIRE FEEDER COMPONENTS

| Product Number | Description   |
|----------------|---|
| KP4388-1       | Solid Wire HyperFill Drive Roll Kit (.035 - .040 / 0.9 -1.0 mm) |
| KP4388-2       | Solid Wire HyperFill Drive Roll Kit (.045 / 1.2 mm)             |
| KP4388-3       | Cored Wire HyperFill Drive Roll Kit (.045/1.2mm)                |
| 3100211        | Harris Flow Meter/Regulator and Hose Kit                        |
| K4389-1        | HyperFill Inlet Bushing   |
| K4544-7        | M-F Water Hose Kit (7ft / 2.1 m)                                |
| K4544-25       | M-F Water Hose Kit (25ft / 7.6m)                                |

\* Gun cable lengths over 20 ft (6.1m) are not recommended with 0.045/1.2 diameter HyperFill.

(3) For use with .045/1.2mm solid and cored wire HyperFill

## RECOMMENDED PRODUCTS

### SEMI-AUTOMATIC

| Product Number             | Description                                 |
|----------------------------|---|
| K3734-1                    | PIPEFAB™ Ready-PAK®                         |
| K2904-1                    | Power Wave® S500 Advanced Process Welder    |
| K3279-1                    | Power Wave S700 Advanced Process Welder     |
| K3328-3                    | Power Feed® 84 Advanced Process Wire Feeder |
| K3086-2 <sup>[1,3]</sup>   | Cool Arc® 55s Water Cooler                  |
| K4713-1 <sup>[1,2,3]</sup> | Cool Wave™ 20S Water Cooler                 |
| K3737-1                    | PIPEFAB™ Cooler                             |
| K4997-1                    | Gateway Pendant Kit                         |

(1) Coolant must be ordered separately.

(2) Cool Wave 20S Required for Power Wave S700 applications or when HyperFill is used in robotic or mechanized configurations.

(3) In Magnum PRO Water Cooled Gun applications exceeding 425A @ 70% duty cycle, the Cool Wave 20S should be used. For applications with water hose lengths longer than 25ft (distance from water cooler to gun connection), 3/8" ID water hoses should be used.

### ROBOTIC

| Product Number             | Description                             |
|----------------------------|---|
| K3451-1 <sup>[2]</sup>     | Power Wave R450 Advanced Process Welder |
| K3279-1 <sup>[2]</sup>     | Power Wave S700 Advanced Process Welder |
| K3561-1                    | AutoDrive® 4R220 Robotic Wire Feeder    |
| K4713-1 <sup>[1,2,3]</sup> | Cool Wave 20S Water Cooler              |
| K3004-2                    | AutoDrive 19                            |
| K4997-1                    | Gateway Pendant Kit                     |

## RECOMMENDED WIRE



### LINCOLN ELECTRIC PREMIUM WIRE

The Hyperfill® process was designed and optimized with premium Lincoln Electric wire. The premium wire's tight manufacturing tolerances and chemistry control ensure consistent wire feeding and arc performance.

Please consult your local Lincoln Electric representative for wire recommendations based on your specific application.

## RECOMMENDED ACCESSORIES

### GENERAL OPTIONS



#### HyperFill Reel Stand Conversion Kit - Power Feed® 84

(For Inverter Cart K3059-4). BRACKET AND STAND ONLY – Power source, wire feeder, cart, gun and HyperFill components must be ordered separately.  
**Order K4630-1**



#### HyperFill Bench Top Mounting Kit - Power Feed® 84

BRACKET AND STAND ONLY – Power source, wire feeder, cart, gun and HyperFill components must be ordered separately.  
**Order K4630-2**



#### HyperFill Undercarriage Mounting Kit - Power Feed® 84

(For Undercarriage Cart K163) BRACKET ONLY – Power source, wire feeder, cart, gun and HyperFill components must be ordered separately.  
**Order K4630-3**



#### PIPEFAB HyperFill Reel Stand

(For PIPEFAB Ready-Pak K3734-1). BRACKET AND STAND ONLY – Power source, wire feeder, cart, gun and HyperFill components must be ordered separately.  
**Order K4793-1**

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit [www.lincolnelectric.com](http://www.lincolnelectric.com) for more detail.

### HyperFill® Waveform Activation Capability with Power Wave® and PIPEFAB™ Systems

Your purchase of a Lincoln Power Wave or PIPEFAB Welding System comes with (i) a license to use Lincoln Electric standard Power Wave / PIPEFAB waveforms, and (ii) HyperFill waveform capability, which requires the purchase of premium Lincoln Electric wire or purchase of a separate license. Unless one of these is purchased, the HyperFill waveform will not be available for use on these machines, and only the standard Power Wave / PIPEFAB waveforms are usable.

### 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.

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