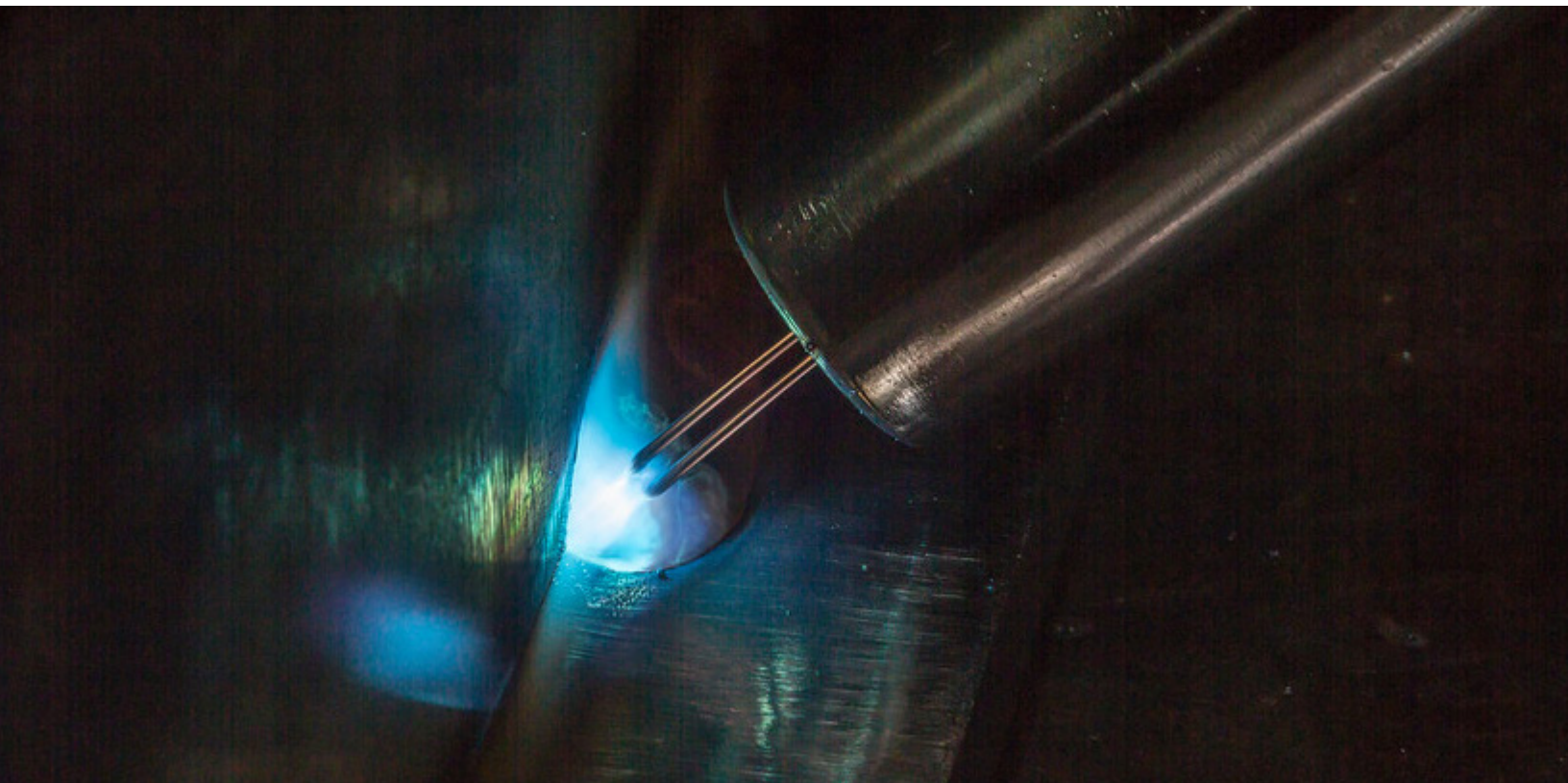


HYPERFILL®

Ready-Pak® Packages and Components



High Deposition Welds- Faster, Easier

The HyperFill® twin-wire 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 Solution

Applications »

Heavy Fabrication
High Deposition Welds

Solution Requirements »

HyperFill® is a patented and licensed twin-wire solution that is designed to perform specifically with select Lincoln Electric welding wire. To access this licensed solution, activation is required through the Lincoln Electric REVEAL™ Activation Platform.

[For more details, reference document MC20-106](#)

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]⁽¹⁾
- 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]⁽²⁾
- Harris Flowmeter Kit [3100856]

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

Power Feed 25M HyperFill FCAW .045 (1.2 mm) – One-Pak, includes:

- Power Feed 25M HyperFill Spindle Kit [K5474-1]
- HyperFill .045 (1.2 mm) 2-Roll Drive Roll Kit [KP4388-4]
- Gateway Pendant Kit [K4997-1]⁽²⁾
- Magnum PRO 450HDE HyperFill Gun [K5383-2-10-047H]

Complete One-Pak, Order K5547-045⁽³⁾



Shown: K5547-045 Power Feed 25M HyperFill FCAW .045 (1.2 mm) – One-Pak

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]⁽¹⁾
- 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 Qty. 2 [K1543-8]
- Inverter and Wire Feeder Cart [K3059-4]
- Gas Y Fitting [KP4773-1]
- Gateway Pendant Kit [K4997-1]⁽²⁾
- Harris Flowmeter Kit [3100856]

Complete Ready-Pak, Order K4650-4



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

(1) Coolant must be ordered separately.

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

(3) Power Feed 25M HyperFill One-Pak includes components to run the HyperFill Solution. The Power Feed 25M must be ordered separately.

HYPERFILL® WIRE-FEEDER / UNDERCARRIAGE ONE-PAK PACKAGES

HyperFill One-Pak Packages below do not include Power Sources, control cables, or work / electrode leads.

Accessories	Qty.	Product Number	SINGLE		DUAL	
			Power Feed 84 HyperFill Cool Arc 55S [K5440-1]	Power Feed 84 HyperFill Cool Wave 20S [K5440-3]	Power Feed 84 HyperFill Cool Arc 55S [K5440-2]	Power Feed 84 HyperFill Cool Wave 20S [K5440-4]
Power Feed® 84 - U/I, No Reel , USB	1	K3328-3	.	.		
Power Feed® 84 Dual Wire Feeder - U/I, No Reel, USB		K3330-3			.	.
Magnum® PRO 500 Water Cooled Welding Guns		K4522-2-10-564	.	.	.	.
M-F Quick Disconnect Water Hose Kit (7 ft)		K4544-7	.	.	.	.
Four Wheeled Wire Feeder Undercarriage		K163-1	.	.	.	.
Incoming Ball Bearing Bushing for Lincoln® Conduit		K1551-2	.	.	.	.
HYPERFILL® Drive Roll Kit (.035 -.040 in or 0.9 -1.0 mm)		KP4388-1	.	.	.	.
HyperFill® Diffuser		KP4881-1	.	.	.	.
Hyperfill™ Contact Tip - .035 - 10/pack		KP4482-035	.	.	.	.
Magnum® PRO Water-Cooled Gas Nozzle - Thread-On, 1/8 in. Recess, 3/4 in. ID		KP4523-1-75R	.	.	.	.
Gateway Pendant		K4997-1	.	.	.	.
Inert Gas Y-Fitting		KP4773-1			.	.
Harris Flowmeter and Regulator Kit		3100856	.	.	.	.
Cable Liner 1/16-5/64 in (1.6-2.0 mm) 15 ft (4.6 m)		KP44-564-15			.	.
Wire Reel Stand - Standard Duty		K3342-1			.	.
Magnum® PRO Curve™ 300 Welding Gun		K2951-2-10-45			.	.
Drive Roll Kit .040-.045 in (1.0-1.1 mm) Solid Wire		KP1505-045S			.	.
HYPERFILL® Bench Top Kit		K4630-2	.	.	.	.
HYPERFILL® Undercarriage Mounting Kit		K4630-3	.	.	.	.
Cool Wave 20S		K4713-1		.		.
Cool Arc 55S		K3086-2	.		.	

* KP44332-15 ft liner will be needed for .045 HyperFill applications.



[K5440-1] Power Feed 84- Single Cool Arc 55S



[K5440-2] Power Feed 84- Dual Cool Arc 55S



[K5440-3] Power Feed 84- Single Cool Wave 20S



[K5440-4] Power Feed 84-Dual Cool Wave 20S

Not shown in image, Magnum PRO Water Cooled Gun

HYPERFILL – POWER SOURCES

SEMI-AUTOMATIC POWER SOURCES

Product Number	Description
K2904-1	Power Wave® S500 Advanced Process Welder
K3168-1	Power Wave S500 CE Advanced Process Welder
K3279-1	Power Wave S700 Advanced Process Welder
K3734-1	PIPEFAB™ Ready-PAK®

ROBOTIC / MECHANIZED POWER SOURCES

Product Number	Description
K3451-1 ⁽²⁾	Power Wave R450 Advanced Process Welder
K3455-1 ⁽²⁾	Power Wave R450 CE Advanced Process Welder
K3279-1 ⁽²⁾	Power Wave S700 Advanced Process Welder

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

HYPERFILL - WIRE FEEDERS & COMPONENTS

SEMI-AUTOMATIC WIRE FEEDERS

Product Number	Description
K3328-3	Power Feed® 84 Advanced Process Wire Feeder
K2536-5	Power Feed 25M Advanced Process Wire Feeder

DRIVE ROLL KITS

Product Number	Description
KP4388-1	HyperFill Drive Roll Kit -.035 - .040 / 0.9 -1.0 mm) Solid Wire
KP4388-2	HyperFill Drive Roll Kit (.045 / 1.2 mm)- Solid Wire
KP4388-3	HyperFill Drive Roll Kit (.045 / 1.2mm) - Cored Wire
KP4388-4	HyperFill 2-Roll Drive Roll Kit (.045 / 1.2 mm) - Cored Wire
KP4388-5	HyperFill 2-Roll Drive Roll Kit (.035 - .040 / 0.9 -1.0 mm) - Cored Wire

ROBOTIC WIRE FEEDERS

Product Number	Description
K3561-1	AutoDrive® 4R220 Robotic Wire Feeder
K3004-2	AutoDrive 19
AD1250-14	HyperFill Reamer Bit

WIRE FEED COMPONENTS

Product Number	Description
K4389-1	HyperFill Inlet Bushing
K1733-1	Wire Straightener
AD1329-60	Dual Wire Straightener Adapter (coupler)
K5475-1	Power Feed 25M HyperFill Spindle Kit

HYPERFILL-WATER COOLERS

SEMI-AUTOMATIC WATER COOLERS

Product Number	Description
K3086-2	Cool Arc® 55s Water Cooler
K4713-1	Cool Wave™ 20S Water Cooler
K3737-1	PIPEFAB™ Cooler

WATER COOLER HOSE ADAPTERS

Product Number	Description
KP1529-1	CGA Male to Quick Disconnect Female Adapter (1 needed per hose)
KP4642-1	CGA Female to Quick Disconnect Male Adapter (1 needed per hose)

ROBOTIC WATER COOLERS

Product Number	Description
K4713-1	Cool Wave 20S Water Cooler

WATER COOLER HOSES & KITS

Product Number	Description
K5444-7	3/16" ID, Male-Female Quick Disconnect Water Hose Kit (7ft / 2.1 m)
K5396-7	3/8" ID, CGA Fitting Water Hose One-Pak 7ft
K5396-25	3/8" ID, CGA Fitting Water Hose One-Pak 25ft
K5396-50	3/8" ID, CGA Fitting Water Hose One-Pak 50ft

HYPERFILL-REELSTANDS

REELSTANDS/MOUNTS

Product Number	Description
K4630-1	HyperFill Reel Stand Conversion Kit - Power Feed® 84 (For Inverter Cart K3059-4)
K4630-2	HyperFill Bench Top Mounting Kit - Power Feed® 84
K4630-3	HyperFill Undercarriage Mounting Kit - Power Feed® 84 (For Undercarriage Cart K163)
K4793-1	PIPEFAB HyperFill Reel Stand Conversion Kit (For PIPEFAB Ready-Pak K3734-1).



K4630-1



K4630-2



K4630-3



K4793-1

RECOMMENDED PRODUCTS

HyperFill GMAW 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 ⁽²⁾		
			HyperFill .035 in K4586-035	HyperFill .040 in K4586-040	HyperFill .045 in K4586-045 ⁽³⁾	HyperFill .035 in K4587-035	HyperFill .040 in K4587-040	HyperFill .045 in K4587-045 ⁽³⁾
Magnum PRO 500A WC w/5/64 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 ⁽³⁾	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) ⁽³⁾	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 and 3/32 Gun Liner required to run HyperFill with .045 solid wire.

HYPERFILL-GUN COMPONENTS

MECHANIZED TORCH

Product Number	Description
K52293-15	Magnum PRO 500A WC Mechanized Torch, 15ft
K52293-25	Magnum PRO 500A WC Mechanized Torch, 15ft

GUN NOZZLES

Product Number	Description
KP4523-1-75R	Magnum PRO Water-Cooled Gas Nozzle - Thread-On, 1/8 in. Recess, 3/4 in. ID
KP4120-1-75R	Magnum® PRO Water-Cooled Robotic Gas Nozzle - Thread-On, 1/8 in. Recess, 3/4 in. ID
KP2743-1-75R	Magnum PRO Air-Cooled Gas Nozzle - Thread-On, 1/8 in. Recess, 3/4 in. ID

*For more information on HyperFill Welding Guns, refer to the HyperFill Welding Gun Selection Guide

GUNLINERS

Product Number	Description
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)
KP44-564-15	Magnum PRO Gun Liner 5/64 in (2.0 mm) 15 ft (4.5 m)
KP44-564-25	Magnum PRO Gun Liner 5/64 in (2.0 mm) 25 ft (7.6 m)

TIPS/DIFFUSERS ⁽⁴⁾

Product Number	Description
KP4482-035	HyperFill Contact Tip - 0.035 (0.9 mm) - Solid Wire
KP4482-040	HyperFill Contact Tip - 0.040 (1.0 mm) - Solid Wire
KP4482-045	HyperFill Contact Tip - 0.045 (1.2 mm) - Solid Wire
KP4482-047	HyperFill Contact Tip - 0.047 (1.2 mm) - Solid Wire
KP5344-047	HyperFill Contact Tip - 0.045 (1.2 mm) - Cored Wire
KP5344-047	HyperFill FCAW Contact Tip - .045 (1.2 mm)
KP5344-052	HyperFill FCAW Contact Tip - .052 (1.4 mm)
KP4481-1	HyperFill Water-Cooled Diffuser
KP5267-1	HyperFill Air-Cooled Diffuser

(4) Gun cable lengths over 20 ft (6.1m) are not recommended with 0.045/1.2 mm + diameter wire

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 GAS REGULATOR



Product Number	Description
3100856	Harris® 355-2 Heavy Duty Flow Meter/Regulator and Hose Kit

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
K5294-1	Gateway Pendant Hanger

*Comes with KP4735-2, K1543-8, and 200 lbs of HyperFill Steel License Credit.



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 Special Considerations

Procedures should be validated if HyperFill GMAW (solid wire) is used in multi-pass applications.

Recommended single pass fillet weld size by position

Position	Leg Size in. (mm)
1F (PA)	1/4 – 1/2 (6 – 12)
2F (PB)	1/4 – 5/16 (6 – 8)

HyperFill® Waveform Activation Capability

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.

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

Customer Assistance Policy

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications 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, or to provide engineering advice in relation to a specific situation or application. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and 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.

The Lincoln Electric Company
22801 St. Clair Avenue · Cleveland, OH · 44117-1199 · U.S.A.

www.lincolnelectric.com