



TAP INTO MAXIMUM WELDING POTENTIAL

ALUMAFAB® 500, POWER WAVE® S350, ADVANCED MODULE

LINCOLN[®]
ELECTRIC



K4189-1
AlumaFab Multi-Process Welder

K4188-1
Power Wave S350 Aluminum

Tap Into Maximum Welding Potential

Aluminum can be a challenging material for manufacturing, but not every manufacturer faces the same challenges. That's why Lincoln Electric offers three unique, feature-packed solutions tailored to a user's specific needs, but all that include the essential attributes you should expect for success in welding aluminum.



The New Industry Standard

Built on a simple platform, the AlumaFab® multi-process system is easy to set up and easy to operate, yet rugged enough for any heavy-duty aluminum application. AlumaFab leverages key technologies available in all of our industrial aluminum platforms to overcome common welding issues like erratic feeding, arc instability and soot.

Improving the Basics

With the AlumaFab, we have taken the most commonly used waveforms for Aluminum and simplified them so you don't have to worry about using the correct settings. Just dial in and weld. For those of you who just want a simple, the AlumaFab system has the standard CV Pulse and CV Spray modes to satisfy your most essential Aluminum welding needs. CC Pulse (Constant Current Pulse) improves upon the standard pulse waveform to provide better stability while whipping or shuffling the weld puddle with a smooth arc, while still maintaining excellent starts and stops.

The Complete Solution

When your operation requires a machine that can handle the most challenging of aluminum applications, the Power Wave® S350 with Advanced Module package is the answer. This system is capable of multiple processes for Aluminum, including AC MIG and AC TIG. If large gaps or burnthrough are typical challenges you face, you'll immediately realize the value of AC MIG. The Power Wave S350 with Advanced Module is also the ideal solution for robotic applications.

Processes »

MIG, Pulse MIG, CC Pulse, Pulse-on-Pulse, AC Pulse, AC TIG, AC MIG

Applications »

Automotive, Trailer Manufacturing, General/Heavy Fabrication, Shipbuilding

Output »



Input »



Product Number »

- K4189-1 AlumaFab Base Unit
- K4188-1 Power Wave S350 Aluminum Base Unit



FEATURES	AlumaFab	Power Wave S350	Power Wave S350 with Advanced Module
Easy Feeding	•	•	•
Clean Welds	•	•	•
Arc Stability	•	•	•
Auto Settings ¹⁾		•	•
CV	•	•	•
Pulse	•	•	•
CC Pulse ²⁾	•	•	•
Power Mode		•	•
Auto Calibrate ³⁾	•	•	•
Pulse-on-Pulse		•	•
AC Pulse			•
AC TIG			•
AC TIG w/ High Frequency Starting			•

¹⁾Auto-Settings – Automatically sets a value, synergic with the wire feed speed, for multiple welding variables for perfect starts and stops.

²⁾CC Pulse – A modified pulse waveform provides better stability while whipping or shuffling the weld for better bead appearance.

³⁾Auto Calibrate – This feature is used to provide an automatic means of configuring the push-pull gun to operate with the optimal settings.

• Included

ALUMAFAB

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Input Current @ Rated Output	Rated Output Current/Duty Cycle	Output Range ^(b)	H x W x D in (mm)	Net Weight lb (kg)
AlumaFab Multi-Process Welder Base Unit	K4189-1	460/575/3/60	3 Ph / 60% Duty Cycle: 39 3 Ph / 100% Duty Cycle: 33	GMAW (CV): 450A/36.5V/100% GMAW (CV): 500A/39V/60% GMAW-P (CV): 450A/36.5V/100% GMAW-P (CV): 500A/39V/60%	5-500A	18.8 x 14 x 26.5 (477 x 356 x 673)	120 (54.4)
AlumaFab Air-Cooled 15 ft Gun One-Pak®	K4186-1					38 x 40 x 45 (965 x 1016 x 1143)	411 (186)
AlumaFab Air-Cooled 35 ft Gun One-Pak	K4186-3					38 x 40 x 45 (965 x 1016 x 1143)	419 (190)
AlumaFab Air-Cooled 50 ft Gun One-Pak	K4186-4					38 x 40 x 45 (965 x 1016 x 1143)	425 (193)
AlumaFab Air-Cooled 25 ft Gun Ready-Pak®	K4186-2					38 x 40 x 45 (965 x 1016 x 1143)	536 (243)
AlumaFab Water-Cooled 15 ft Gun One-Pak	K4187-1					49 x 30 x 45 (1245 x 762 x 1143)	547 (248)
AlumaFab Water-Cooled 35 ft Gun One-Pak	K4187-3					49 x 30 x 45 (1245 x 762 x 1143)	555 (252)
AlumaFab Water-Cooled 50 ft Gun One-Pak	K4187-4					49 x 30 x 45 (1245 x 762 x 1143)	560 (254)
AlumaFab Water-Cooled 25 ft Gun Ready-Pak	K4187-2					49 x 30 x 45 (1245 x 762 x 1143)	635.2 (288)

POWER WAVE S350 ALUMINUM

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Input Current @ Rated Output	Rated Output Current/Duty Cycle	Output Range ^(b)	H x W x D in (mm)	Net Weight lb (kg)
Power Wave S350 Aluminum Base Unit	K4188-1	208/230/380-415/460/575 /1/3/50/60	3 Ph / 40% Duty Cycle: 39/35/19/17/14 3 Ph / 100% Duty Cycle: 31/28/15/14/11 1 Ph / 40% Duty Cycle: 60/67 ^(a) /NA/NA/NA 1 Ph / 100% Duty Cycle: 60/53/NA/NA/NA	GMAW: 350A/31.5V/40% ^(a) GMAW: 300A/29V/100% SMAW: 325A/33V/40% ^(a) SMAW: 250A/30V/100% GTAW-DC: 350A/24V/40% GTAW-DC: 300A/22V/100%	5-350A	20.40 x 14 x 24.80 (518 x 356 x 630)	85 (38.6)
Power Wave S350 Aluminum Air-Cooled 25 ft Gun One-Pak	K4184-5					52 x 39 x 26 (1321 x 991 x 660)	489 (222)
Power Wave S350 Aluminum Air-Cooled 15 ft Gun One-Pak	K4184-1					52 x 39 x 26 (1321 x 991 x 660)	357 (162)
Power Wave S350 Aluminum Air-Cooled 35 ft Gun One-Pak	K4184-3					52 x 39 x 26 (1321 x 991 x 660)	366 (166)
Power Wave S350 Aluminum Air-Cooled 50 ft Gun One-Pak	K4184-4					52 x 39 x 26 (1321 x 991 x 660)	372 (169)
Power Wave S350 (Advanced Air-Cooled 25 ft Gun) Ready-Pak	K4184-2					52 x 39 x 26 (1321 x 991 x 660)	450 (204.1)
Power Wave S350 Aluminum Water-Cooled 15 ft Gun One-Pak	K4185-1					52 x 39 x 26 (1321 x 991 x 660)	493 (224)
Power Wave S350 Aluminum Water-Cooled 25 ft Gun One-Pak	K4185-2					52 x 39 x 26 (1321 x 991 x 660)	497 (225)
Power Wave S350 Aluminum Water-Cooled 35 ft Gun One-Pak	K4185-3					52 x 39 x 26 (1321 x 991 x 660)	483 (219)
Power Wave S350 Aluminum Water-Cooled 50 ft Gun One-Pak	K4185-4	52 x 39 x 26 (1321 x 991 x 660)	507 (230)				

^(a) Based on the U.S. National Electrical Code ^(b) On 230 Volt / 1 Phase inputs, the peak rating is at a duty cycle of 30%, except for GTAW processes ^(c) On 208 Volt inputs, the maximum output is limited to 300 amps

ALUMAFAB WHAT'S INCLUDED

AIR-COOLED ONE-PAKS AND READY-PAK ⁽¹⁾	Product Number	One-Pak (K4186-1)	One-Pak (K4186-3)	One-Pak (K4186-4)	Ready-Pak (K4186-2)
AlumaFab Multi-Process Welder	K4189-1	•	•	•	•
Power Feed [®] 25M Semi-Automatic Wire Feeder	K4191-1	•	•	•	•
Inverter and Wire Feeder Cart	K3059-2	•	•	•	•
Magnum [®] PRO AL G225A Push/Pull Air-Cooled Gun w/15 ft (4.5 mm) Cable	K3355-1	•			
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/25 ft (7.6 mm) Cable	K3355-2				•
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/35 ft (10.6 mm) Cable	K3355-3		•		
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/50 ft (15.2 mm) Cable	K3355-4			•	
Harris [®] Aluminum Flow/Regulator, 355-2CD 100-580	3100546	•	•	•	•
WATER-COOLED ONE-PAKS [®] AND READY-PAK ⁽²⁾	Product Number	One-Pak (K4187-1)	One-Pak (K4187-3)	One-Pak (K4187-4)	Ready-Pak (K4187-2)
AlumaFab Multi-Process Welder	K4189-1	•	•	•	•
Power Feed 25M Semi-Automatic Wire Feeder	K4191-1	•	•	•	•
CoolArc [®] 55 Aluminum Water Cooler	K4190-1	•	•	•	•
Inverter and Wire Feeder Cart	K3059-2	•	•	•	•
Magnum [®] PRO AL G450W Push/Pull Water-Cooled Gun w/15 ft (4.5 mm) Cable	K3357-1	•			
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/25 ft (7.6 mm) Cable	K3357-2				•
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/35 ft (10.6 mm) Cable	K3357-3		•		
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/50 ft (15.2 mm) Cable	K3357-4			•	
Harris [®] Aluminum Flow/Regulator, 355-2CD 100-580	3100546	•	•	•	•

⁽¹⁾ AlumaFab Air-Cooled Ready-Pak and One-Paks include the following accessories: drive roll kits, diffusers, nozzles, tips, liners, work lead package, base mounting assembly and ArcLink[®] control cable.

⁽²⁾ AlumaFab Water-Cooled Ready-Pak and One-Paks include the following accessories: drive roll kits, coolant, tips, liners, work lead package, base mounting assembly and ArcLink[®] control cable.

• Included



K4187-2 AlumaFab Water-Cooled Ready-Pak

POWER WAVE S350 ALUMINUM WHAT'S INCLUDED

AIR-COOLED ONE-PAKS ⁽¹⁾	Product Number	One-Pak (K4184-1)	One-Pak (K4184-3)	One-Pak (K4184-4)	One-Pak (K4184-5)
Power Wave S350 Power Source Aluminum	K4188-1	•	•	•	•
Power Feed 25M Semi-Automatic Wire Feeder	K4191-1	•	•	•	•
Power Wave Advanced Module Aluminum	K4192-1				•
Inverter and Wire Feeder Cart	K3059-2	•	•	•	•
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/15 ft (4.5 m) Cable	K3355-1	•			
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/25 ft (7.6 m) Cable	K3355-2				•
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/35 ft (10.6 m) Cable	K3355-3		•		
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/50 ft (15.2 m) Cable	K3355-4			•	
Harris® Aluminum Flow/Regulator, 355-2CD 100-580	3100546	•	•	•	•
WATER-COOLED ONE-PAKS ⁽²⁾	Product Number	One-Pak (K4185-1)	One-Pak (K4185-2)	One-Pak (K4185-3)	One-Pak (K4185-4)
Power Wave S350 Power Source Aluminum	K4188-1	•	•	•	•
Power Feed 25M Semi-Automatic Wire Feeder	K4191-1	•	•	•	•
CoolArc 55 Water Cooler Aluminum	K4190-1	•	•	•	•
Inverter and Wire Feeder Cart	K3059-2	•	•	•	•
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/15 ft (4.5 m) Cable	K3357-1	•			
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/25 ft (7.6 m) Cable	K3357-2		•		
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/35 ft (10.6 m) Cable	K3357-3			•	
Magnum PRO AL G450W Push/Pull Water-Cooled Gun w/50 ft (15.2 m) Cable	K3357-4				•
Harris® Aluminum Flow/Regulator, 355-2CD 100-580	3100546	•	•	•	•
AIR-COOLED READY-PAK ⁽¹⁾	Product Number	Ready-Pak (K4184-2)			
Power Wave S350 Power Source Aluminum	K4188-1	•			
Power Feed 25M Semi-Automatic Wire Feeder	K4191-1	•			
Inverter and Wire Feeder Cart	K3059-2	•			
Magnum PRO AL G225A Push/Pull Air-Cooled Gun w/25' Cable	K3355-2	•			
Harris® Aluminum Flow/Regulator, 355-2CD 100-58	3100546	•			

⁽¹⁾ Power Wave S350 Aluminum Air-Cooled Ready-Pak and One-Paks include the following accessories: drive roll kits, diffusers, nozzles, tips, liners, work lead package. K4184-5 Advanced Module One-Pak also includes: foot pedal, TIG torch and TIG kit.

⁽²⁾ Power Wave S350 Aluminum Water-Cooled One-Paks include the following accessories: drive roll kits, coolant, tips, liners, work lead package.

• Included



K4184-4 Power Wave S350 Aluminum Air-Cooled One-Pak

ACCESSORIES	Product Number	AlumaFab Base Unit (K4189-1)	Power Wave S350 Aluminum Base Unit (K4188-1)
GENERAL			
Inverter and Wire Feeder Cart	K3059-2	•	•
Cool Arc Aluminum Water Cooler	K4190-1		•
Power Feed 25M Aluminum	K4191-1	•	•
Power Wave Advanced Module Aluminum	K4192-1		•
Magnum® PRO AL G225A Push/Pull Air-Cooled Gun w/25 ft (7.6 m) Cable	K3355-2	•	•
Magnum® PRO AL G450W Push/Pull Water-Cooled Gun w/25 ft (7.6 m) Cable	K3357-2	•	•
Work and Wire Feeder 2/0 Weld Package	K1803-2		•
Work Lead Package	K2149-1	•	•
Base Mounting Assembly	K3056-2	•	
Foot Amptrol™ with 12-Pin Universal Connector	K870-2		•
Magnum® Parts Kit for PTA-17	KP507		•
TIG Torch	K1781-9		•
Harris® Aluminum Flow/Regulator, 355-2CD 100-580	3100546	•	•

• Optional

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.