Power Wave® S700

Processes
Stick, TIG, MIG, Pulsed MIG, Flux-Cored, Tandem MIG®, Carbon Arc Gouging

Product Number
K3279-1 Power Wave® S700

Input Power
380-415/440-460/500/575/3/50/60

Rated Output (60Hz)
GMAW: 700A/44V/100%
GMAW: 900A/44V/60%

Input Current @ Rated Output (60Hz)
3 Ph / 100% Duty Cycle: 55/46/42/38

Output Range
20-900A

Weight
385 lbs. (175 kg)

Dimensions (H x W x D)
30.1 x 19.1 x 36.7 in.
(765 x 485 x 932 mm)

Flexible Configuration. Endless Possibilities.

Choose the Power Wave® S700 model for high amperage, high duty cycle applications in the heavy equipment, transportation and other fabrication industries. Typically recommended for 1/16 inch (1.6 mm) wire diameter and up, the Power Wave® S700 can be used in semiautomatic, hard automation or robotic environments – even for high deposition synchronized tandem welding applications. The machine is also suitable for arc gouging.

FEATURES

- **Wide Input Voltage Range –** Set up operations almost anywhere (380-575 VAC, 3 phase, 50/60Hz voltage).
- **Add AutoDrive® 19 Tandem modules** to access waveform modes specifically designed for Synchronized Tandem MIG multi-arc applications. A sync connection is provided for easy tandem power source operation.
- **Low Operating Cost –** Operates at a high 88% efficiency with a 95% minimum power factor (at rated output).
- **Severe Duty –** Can be stored outdoors. IP23 rated to withstand harsh environments.
- **iARC™ Digital Control –** 90 times faster than the previous generation, delivering a responsive arc.
- **Standard ArcLink®, Ethernet, and DeviceNet™ Communication –** Offers remote process monitoring, control and troubleshooting.
- **True Energy™ –** Measures, calculates and displays instantaneous energy in the weld for critical heat input calculations.
- **Checkpoint™ –** A cloud-based data collection tool allows customers to view and analyze welding data. Track equipment usage, store weld data, configure fault limits and more.

APPLICATIONS

- Semiautomatic
- Automation
- Hard Automation
- Heavy Equipment
- Transportation
- Fabrication

Shown: K3279-1 Power Wave S700

FEATURES, CONT'D.

- **Fan-As-Needed™ (F.A.N.) -** Reduces power consumption and the amount of debris that gets drawn into the machine by shutting the fan down when it is not needed.
- **Standard 115V (10A) AC Duplex Auxiliary Power Receptacle -** Features patent pending Surge Blocker™ Technology to ensure simultaneous welding performance is not compromised by high starting current devices such as grinders (typically requiring 60A or more peak surge current).

UNIT REQUIRES

- CE Filter for CE Territory Operations.
- Recommended semiautomatic wire feeders: Power Feed® 84 Bench and Boom, Power Feed® 25M.
- Recommended automatic and robotic wire feeders and controllers: Power Feed® 10R, AutoDrive® 19, AutoDrive® 19 Tandem, AutoDrive® 4R220.

INPUT 3 PHASE, 50/60 Hz

OUTPUT CC CV, DC

IP23 Rated

THE LINCOLN ELECTRIC GREEN INITIATIVE
Inverter Technology
reduces energy demand
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LINCOLN ELECTRIC®
THE WELDING EXPERTS®

Publication E5.120 | Issue Date 04/17

KEY CONTROLS

Shown with front stud cover panel open

FRONT

1. **Power Switch: On/Off**
2. **Status LED**
3. **Thermal Indicator LED**
4. **Access Panel**
5. **Positive Output Studs**
6. **Negative Output Studs**

BACK

7. **DeviceNet™ Connector**
8. **ArcLink® (5-pin)**
9. **Sync Tandem Connector**
10. **Work Sense Lead Connector (4-pin)**
11. **Ethernet Connector**
12. **Circuit Breaker for 115V Auxiliary Output Recpetacle**
13. **Circuit Breaker for ArcLink® Receptacle**
14. **115V/10A Auxiliary Output Receptacle**

iARC™ High Speed Digital Controls

iARC™ (Intelligent Architecture for Regulation and Control) digital welding controls are more than 10 times faster than the previous generation, with 128 times more RAM, and 8 times more flash memory. It also features 100Mbps Full Duplex Ethernet.

Coaxial Transformer Technology™

Eliminates inefficiency and power loss. Regardless of the size (power level), a coaxial transformer has superior coupling and efficiency. This is obtained through the coaxial orientation of the primary and secondary windings. The benefits for the customer include:

- Higher power capabilities with a less complex design.
- Higher efficiency (reduced energy costs).
- Higher reliability (lower stresses on components).
- Proven reliability.

Rugged Reliability

Like all Lincoln Electric welding equipment, the Power Wave® S700 was tested under severe conditions to ensure proper operation in the harshest environments:

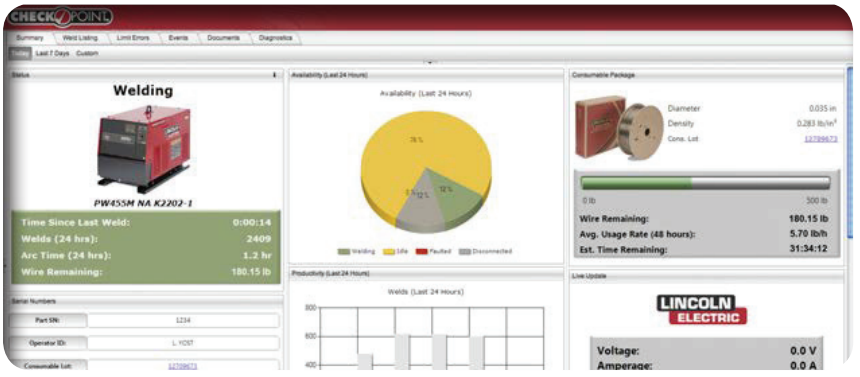
- Extreme Temperature Ranges
- Extreme Humidity
- Rain
- Dirt and Dust
- IP23 Rated Performance

True Energy™ Get Easy, Accurate Heat Input Calculations

- Built-in to ALL Lincoln Electric Power Wave® power sources.
- Easily comply with upcoming ASME code changes TODAY!
- No extra equipment or measuring tools necessary.

CheckPoint™

CheckPoint™ cloud server-based and mobile delivery solutions are the welding industry's most advanced weld data collection and monitoring tools, allowing fabricators to analyze their welding operations and processes. CheckPoint™ can provide necessary data for customer ISO, Six Sigma, statistical process control (SPC), quality cost delivery (QCD), overall equipment effectiveness (OEE) and lean manufacturing efforts. CheckPoint™ Standard Edition is offered at no charge with every Power Wave® purchase. An advanced capability Premium Subscription Edition is also available.



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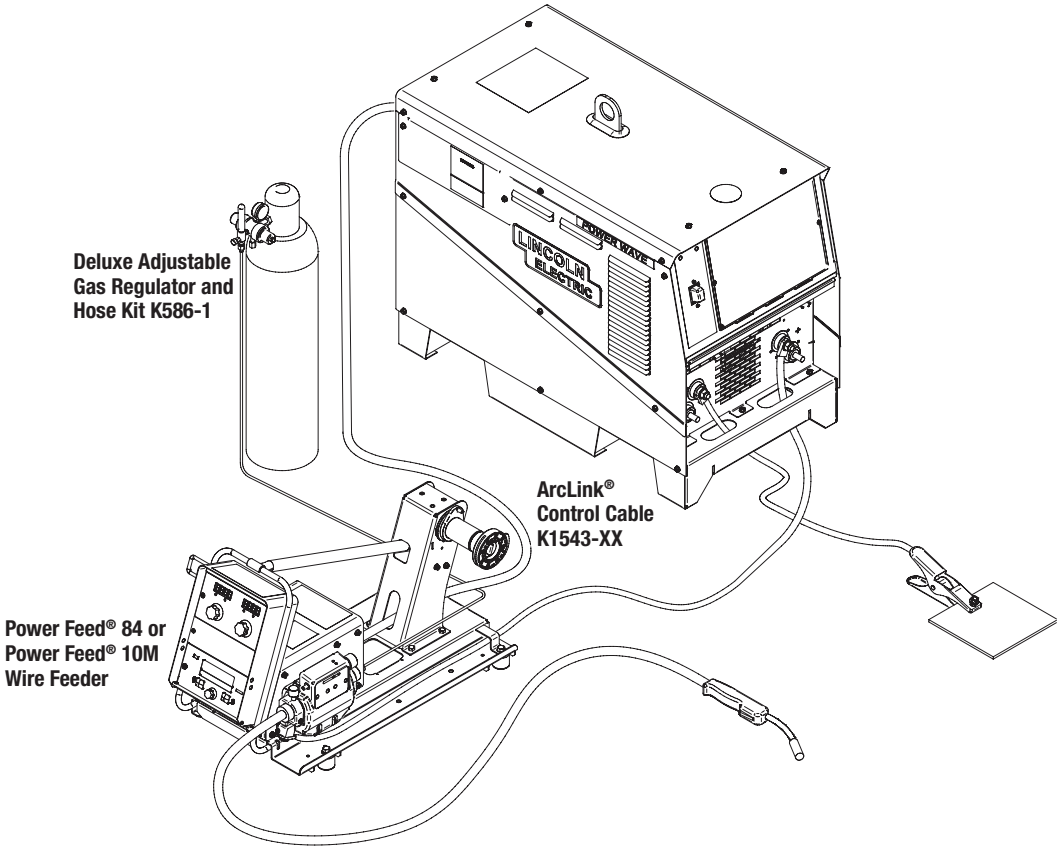
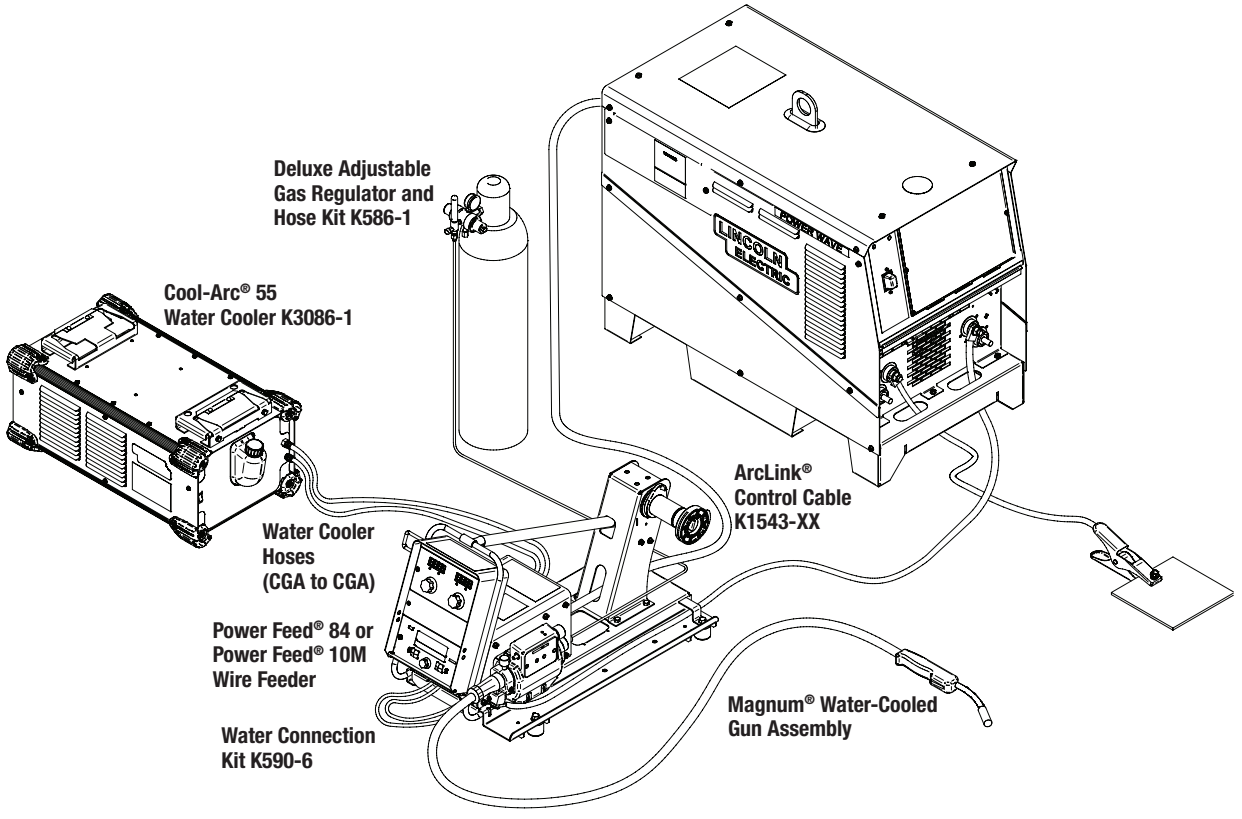
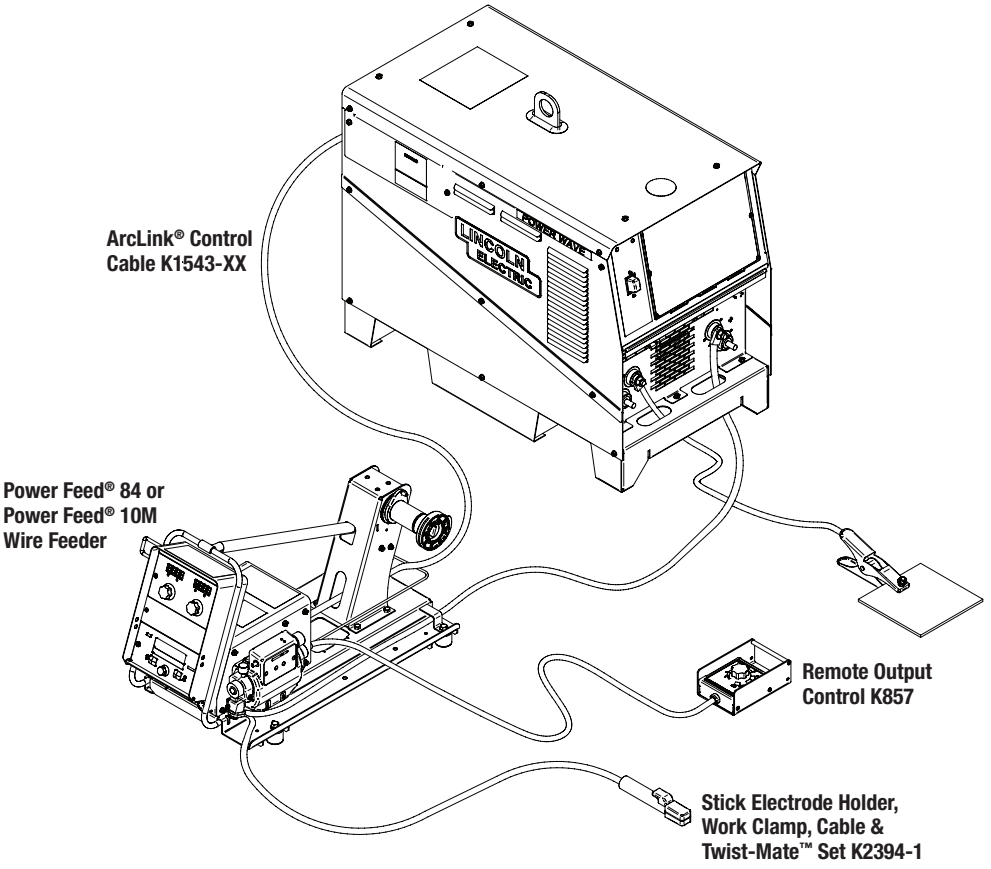
MIG Process Set-up



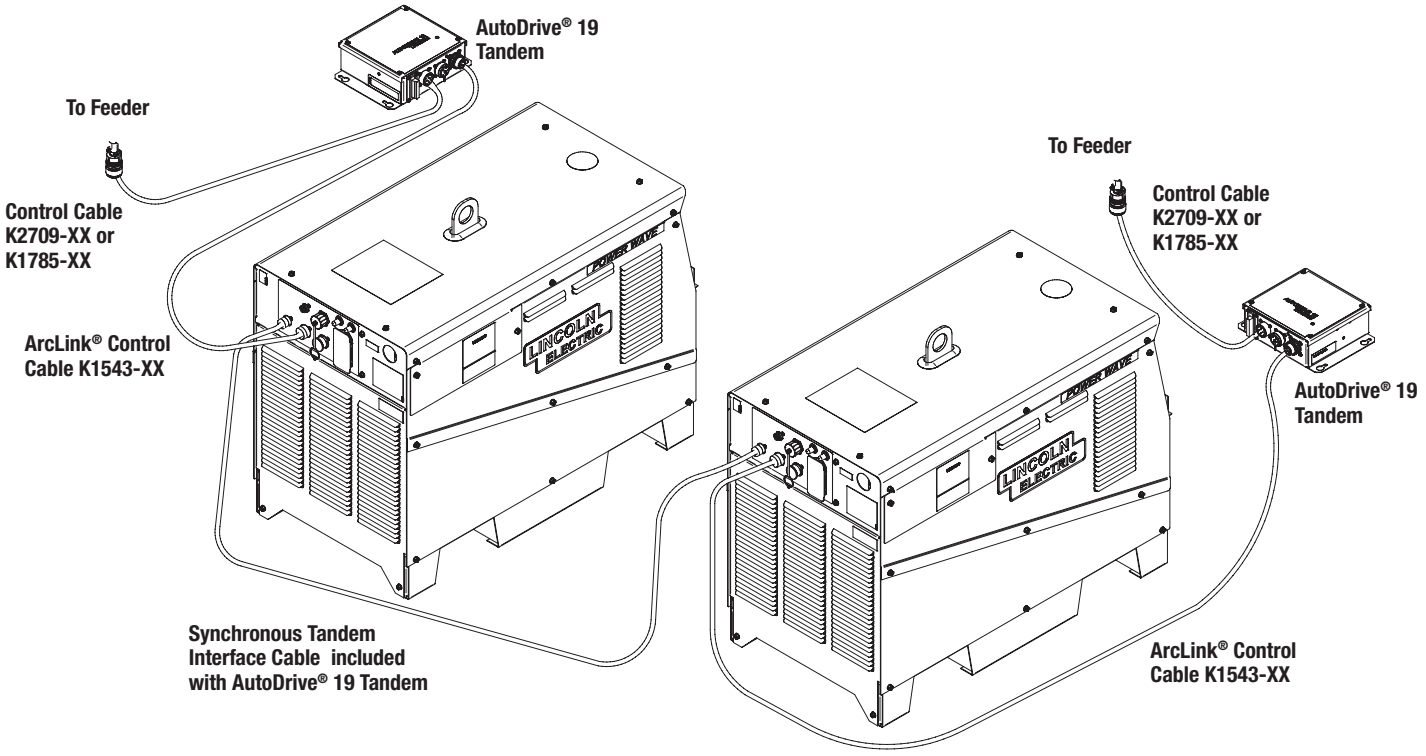
Water-Cooled MIG Process Set-up



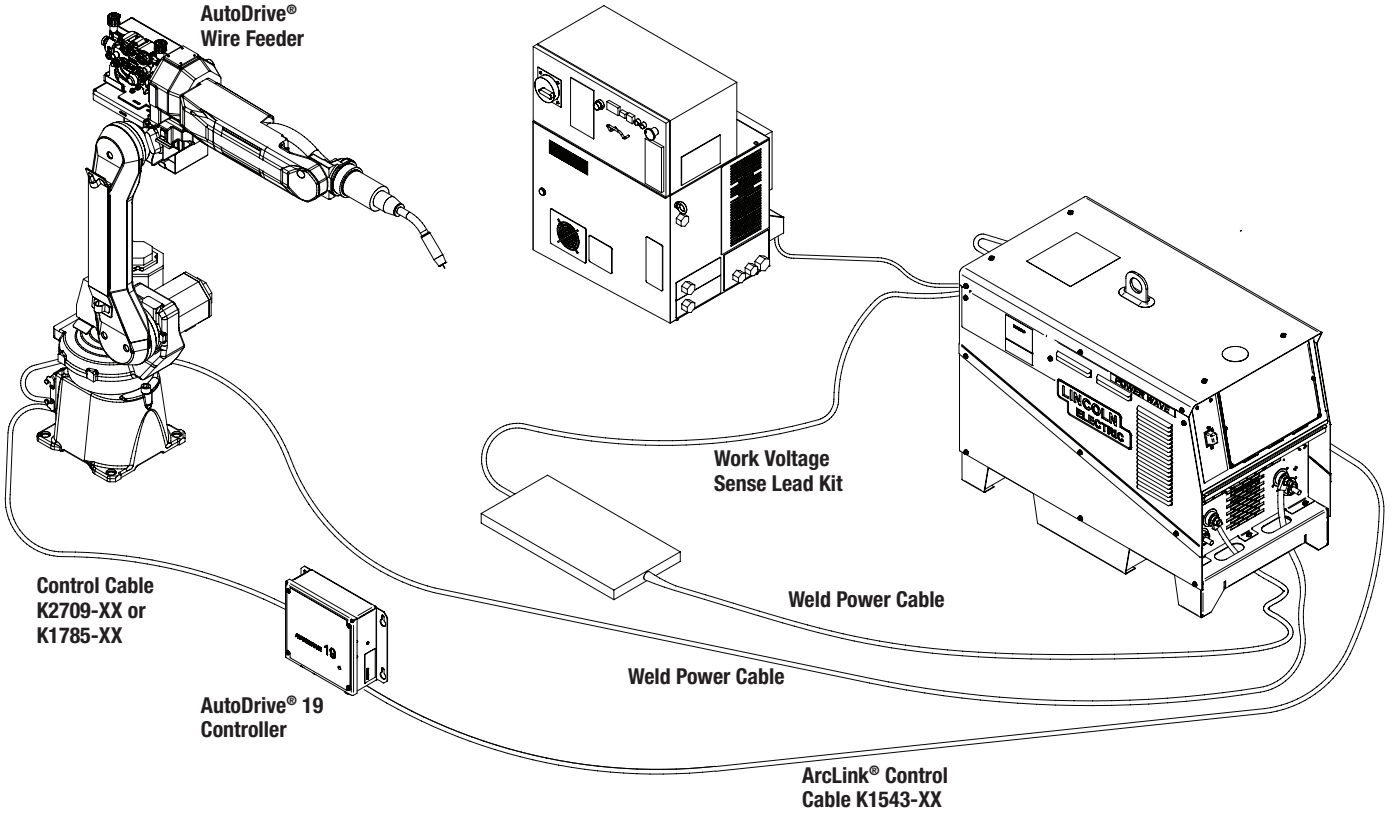
Stick Process Set-up



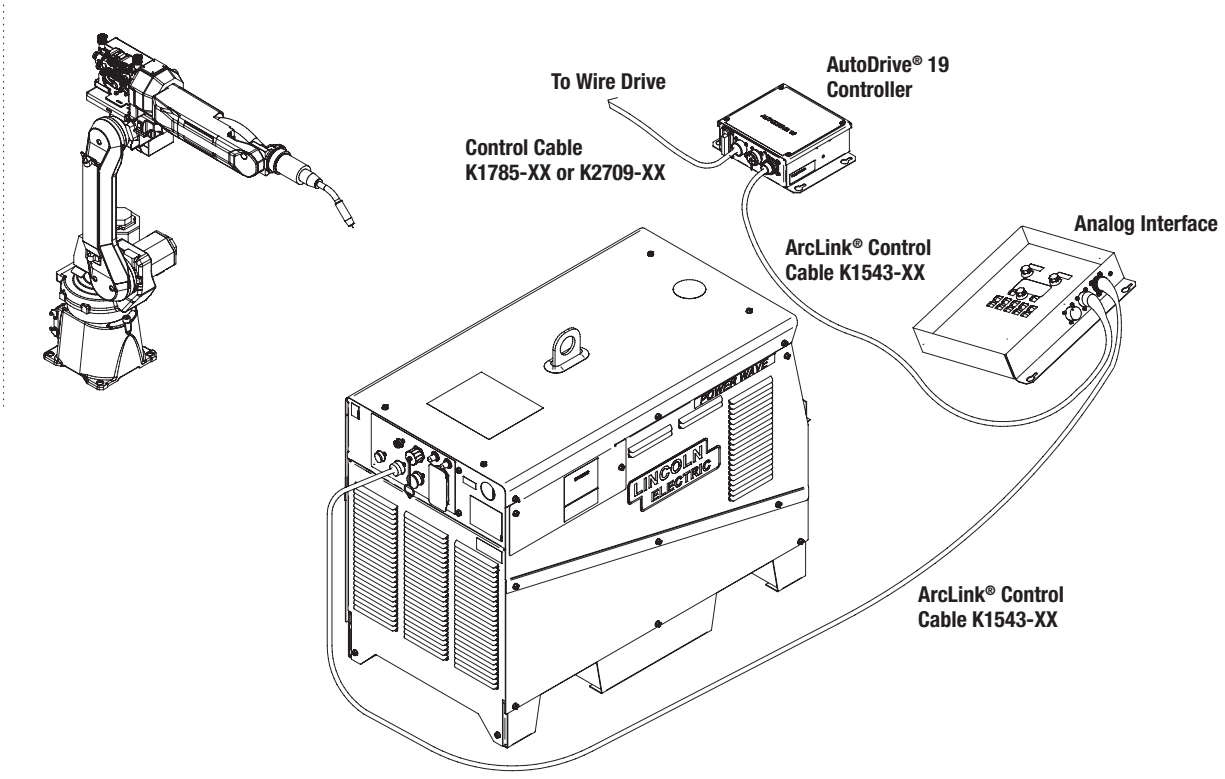
Synchronized Tandem Set-up



Robotic Single Arm Process Set-up



Analog Interface Box Set-up



CABLES

ARCLINK®/LINC-NET™ CONTROL CABLES	
Description	**Order Number**
8 ft. (2.5 m) Without weld cable	K1543-8
25 ft. (7.6 m) Without weld cable	K1543-25
50 ft. (15.2 m) Without weld cable	K1543-50
100 ft.(30.4 m) Without weld cable	K1543-100
25 ft. (7.6 m) Heavy Duty – Without weld cable	K2683-25
50 ft. (15.2 m) Heavy Duty – Without weld cable	K2683-50
100 ft. (30.4 m) Heavy Duty – Without weld cable	K2683-100

WELD POWER CABLES	
Description	**Order Number**
Lug to Lug, 3/0, 600A, 60% Duty Cycle, 10 ft. (3.1 m)	K1842-10
Lug to Lug, 3/0, 600A, 60% Duty Cycle, 35 ft. (10.7 m)	K1842-35
Lug to Lug, 3/0, 600A, 60% Duty Cycle, 60 ft. (18.3 m)	K1842-60
Lug to Lug, 4/0, 600A, 60% Duty Cycle, 110 ft. (33.5 m)	K1842-110
Lug to Lug, 4/0, 35 ft. (10.7 m)	K2163-35[1]
Lug to Lug, 4/0, 60 ft. (18.3 m)	K2163-60[1]

[1] Two cables per package.

14-PIN TO 14-PIN CONTROL CABLES	
For use with FANUC® arms having integrated cable	**Order Number**
18 in. (0.45 m)	K1785-2
2 ft. (0.61 m)	K1785-3
4 ft. (1.2 m)	K1785-4
12 ft. (3.6 m)	K1785-12
16 ft. (4.8 m)	K1785-16
25 ft. (7.6 m)	K1785-25
40 ft. (12.2 m)	K1785-40
50 ft. (15.2 m)	K1785-50
100 ft. (30.4 m)	K1785-100
For external dress of FANUC® arm or hard automation	**Order Number**
25 ft. (7.6 m)	K2709-25
50 ft. (15.2 m)	K2709-50
100 ft. (30.4 m)	K2709-100

K1543-XX

K1842-XX

K1785-XX

RECOMMENDED ACCESSORIES

GENERAL OPTIONS

CE Filter
High power filter that enables a Power Wave® CE "ready" machine to conform to the EMC standards of Europe and Australia.
Order K2444-4

Deluxe Adjustable Gas Regulator and Hose Kit
Accommodates CO_2, argon, or argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose.
Order K586-1

Welding Fume Extractors
Lincoln offers a wide variety of welding fume extraction environmental system solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.
Request Publication MC08-70

Work Voltage Sense Lead Kit
Required to accurately monitor voltage at the arc.
Order K940-25 for 25 ft. (7.6 m)
Order K1811-50 for 50 ft. (15.2 m)
Order K1811-100 (shown) for 100 ft. (30.5 m)

WIRE FEEDER OPTIONS

Cool Arc® 55 Water Cooler
Designed to integrate directly with Power Wave® S-Series power sources, the Cool Arc® 55 is a rugged, reliable water cooler capable of cooling torches rated up to 500 amps. It is recommended for robotic and hand-held MIG, TIG and plasma cutting applications. Input power: 115V/1/60.
Order K3086-1

Water Cooler Hoses (CGA to CGA)
For 5/8 inch (15.9 mm) LH CGA fitting applications at both cooler and wire feeder. Kit contains two 25 ft. (7.6 m) hoses with 5/8 inch left hand CGA fittings on both ends of hose.
Order K1859-2

Water Connection Kit
Includes quick connect fittings on front and back of wire drive for use with water-cooled guns and coolers, Kit provides for one gun.
Order K590-6

AutoDrive® 19 Controller
Relays wire feed commands from Power Wave® S Series power source to any AutoDrive® Series robotic wire drive for automated welding operation. Not compatible with Power Wave® R-Series power sources.
Order K3004-1

AutoDrive® 19 Tandem Controller
Relays wire feed commands from Power Wave® S-Series power source to any AutoDrive® Series robotic wire drive for automated tandem welding operations.
Order K3171-1

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power Voltage/Phase/Hertz	Rated Output Current/Voltage/Duty Cycle	Input Current @ Rated Output	Output Range	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® S700	K3279-1[(1)]	380-415/440-460/ 500/575/3/50/60	700A / 44V / 100% (900A / 44V / 60%)	55A/46A/42A/38A (74A/60A/56A/49A)	20 - 900A	30.1 x 19.1 x 36.7 (765 x 485 x 932)	385 (175)

[(1)] Internal filter is required to meet CE conducted emission requirements. K2444-4 CE Filter Module must be used with K3279-1.

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

Manufactured at a facility with certified ISO Quality and Environmental Management Systems.

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