

MAXsa™ 10 controller

ArcLink® - enabled Controller for Power Wave® AC/DC 1000® SD Systems

The MAXsa® 10 controller offers a single monitoring and control point for the entire hard automation welding system. Operators have full control over AC and DC welding parameters and easy PLC interfacing to control fixture travel, timers and other system commands.



Features

- Severe duty ready – the controller is IP23 rated and ready for operation in harsh environments.
- Pendant box – mount the controller in the standard protective box or remove the pendant for hand-held operation. Extend hand-held operation from 1.2m up to 30.5m with an ArcLink® extension cable.
- Eight procedure memories – pre-set and save your optimal welding parameters for repeating applications and recall later for fast changeovers.
- User-friendly controls – clear digital display and controls make it easy to set weld modes, AC operation, strike/start/end options, travel stop/start, timers and other parameters.
- Limit control – apply operator procedure limits or lockout on any or all parameters.
- Waveform Control Technology® – allows the user to choose from a library of pre-programmed weld modes. Parameters for each mode can be adjusted within a limited range to achieve optimal balance between deposition rate and penetration.

Technical Specifications

Product	Item Number	Input Power	Weight (kg)	Dimensions HxWxD (mm)
MAXsa™ 10	K2814-1	40V DC	11.3	381 x 259 x 102

Processes

- Submerged arc

Recommended Power Source

- Power Wave® AC/DC 1000® SD

Key Options

- K2462-1 MAXsa® 10 Mounting Bracket (only required for TC-3 Travel Carriage)



Digital Wire Feeder

MAXsa™ 22 Feed Head

Submerged Arc Hard Automation Wire Drive for Power Wave® AC/DC 1000® SD Systems

Designed specifically for hard automation applications, the MAXsa® 22 Wire Drive delivers accurate wire feeding of submerged arc wires. Based on Lincoln's proven gearbox and extruded aluminium feedplate, the MAXsa® 22 model features a 32VDC permanent magnet, high torque motor that delivers plenty of torque to push up to 5.6 mm diameter solid wire. A top speed of up to 12.7 m/min can be achieved by changing the gear ratio.



Features

- Flexible configuration – can be used in single, tandem, Twinarc® or multiple arc applications.
- Closed loop speed control – facilitates full control over starting, running and stopping wire feed speed.
- IP23 rated – tested to withstand harsh environments.
- Standard conversion kits – used to change the speed ratio to match the requirements of your application.
- Multi-axis rotation – rotational feed head adjustment in two planes allows flexible, accurate setup for fixturing or arc locating. Additional positioning flexibility can be achieved with the optional horizontal and vertical lift adjuster.



Processes

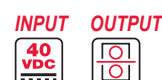
- Submerged arc

Unit Includes

- Adjustable wire straightener
- Cross-seam adjuster
- Electrical valve flux hopper
- Mounting bracket

Key Options

- K2163-60 Weld Power Cable, 18m
- K1842-110 Weld Power Cable, 33m
- K219 Flux Hopper Assembly
- K231-1 Contact Nozzle (2.4, 3.2, 4.0 mm)
- K148A Positive Contact Nozzle (2.4-3.2 mm)
- K148B Positive Contact Nozzle (4.0-4.8 mm)
- KP2721-1 Nozzle Extension, 5 inches
- K149-5/32 Nozzle Extension (4.0 mm)
- K386 Narrow Gap Nozzle
- KP2108-1B1 Contact tip
- K285 Concentric Flux Cone Assembly
- K225 Sub Arc Twinarc® Nozzle for 2.0-2.4 mm
- K129-x Tiny Twinarc® (1.6/2.0/2.4 mm)
- K281 Tiny Twinarc® Solid Wire Straightener
- K162-1 Spindle Kit, 2 Inch Hub
- K29 Vertical Lift Adjuster, 100 mm
- K96 Horizontal Adjuster, 50 mm
- K278-1 Spreadarc Oscillator



Technical Specifications

Product	Item Number	Input Power	Rated Output	Gear Box	Wire Feed Speed range (m/min)	Wire Size Range ⁽¹⁾ Solid (mm)	Weight (kg)	Dimensions HxWxD (mm)
MAXsa™ 22 Head	K2370-2	40V DC	1000A / 100%	142:1 95:1 ⁽¹⁾ 57:1 ⁽¹⁾	0.4-5.0 0.4-7.6 1.3-12.7	2.4-5.6 1.6-3.2 1.6-2.4	36.3	305 x 355 x 254

⁽¹⁾ 142:1 gear box is standard. Conversion Kit supplied for conversion to 95:1 with Wire Drive (K2370-2, K2312-2, or K2311-1)

MAXsa™ 19 Controller

Submerged Arc Systems for Integrators and Robotic Applications for Power Wave® AC/DC 1000® SD Systems

The MAXsa® 19 controller is specifically designed to relay wire feed commands to the MAXsa® 29 when a customer-supplied user interface is used in place of the MAXsa® 10 controller. Typically, this occurs in a variety of third party integrator solutions that include integration hardware like turning rolls, panel lines, seamers and pipe mills fixturing.

Features

- Compact size – makes it easy to position in custom integrator solutions.
- Fast digital communication – with the Power Wave® AC/DC 1000® SD via ArcLink® cable and to the wire drive via a 14-pin control cable.
- Standard I/O connector block – for start/stop, forward/reverse feed and shutdown input interfacing with external accessories.
- Standard status indicator – aids diagnostic system troubleshooting.
- IP23 rated – tested to withstand harsh environments.



Processes
• Submerged arc



Technical Specifications

Product	Item Number	Input Power	Weight (kg)	Dimensions HxWxD (mm)
MAXsa™ 19	K2626-2	40V DC	3.2	229 x 267 x 76

MAXsa™ 29 Feed Head

Submerged Arc Systems for Integrators and Robotic Applications for Power Wave® AC/DC 1000® SD Systems

The compact MAXsa® 29 Feed Head is intended for integrator solutions, as well as the latest submerged arc robotic applications.

Features

- Closed loop speed control – facilitates full control over starting, running and stopping wire feed speed.
- 32V DC permanent magnet, high torque motor – delivers plenty of torque to push up to 5.6 mm diameter solid wire. Top speed of up to 12.7 m/min can be achieved by changing the gear ratio.
- IP23 rated – tested to withstand harsh environments.
- Standard conversion kits – used to change the speed ratio to match the requirements of your application.
- Multi-axis rotation – rotational feed head adjustment in one plane allows flexible, accurate setup for fixturing.
- Standard adjustable wire straightener.



Processes
• Submerged arc



Key Options

- K2163-60 Weld Power Cable, 18 m
- K1842-110 Weld Power Cable, 33 m
- K219 Flux Hopper Assembly
- K231-1 Contact Nozzle (2.4, 3.2, 4.0 mm)
- K148A Positive Contact Nozzle (2.4-3.2 mm)
- K148B Positive Contact Nozzle (4.0-4.8 mm)
- KP2721-1 Nozzle Extension, 5 inches
- K149-5/32 Nozzle Extension (4.0 mm)
- K386 Narrow Gap Nozzle
- KP2108-1B1 Contact tip
- K285 Concentric Flux Cone Assembly
- K225 Sub Arc Twinarc® Nozzle for 2.0-2.4 mm
- K129-x Tiny Twinarc® (1.6/2.0/2.4 mm)
- K281 Tiny Twinarc® Solid Wire Straightener
- K162-1 Spindle Kit, 2 Inch Hub
- K29 Vertical Lift Adjuster, 100 mm
- K96 Horizontal Adjuster, 50 mm
- K278-1 Spreadarc Oscillator



Technical Specifications

Product	Item Number	Input Power	Rated Output	Gear Box ⁽¹⁾	Wire Feed Speed Range ⁽¹⁾ (m/min)	Wire size Range ⁽¹⁾ Solid (mm)	Weight (kg)	Dimensions HxWxD (mm)
MAXsa™ 29 Head	K2312-2	40V DC	1000A / 100%	142:1 95:1 ⁽¹⁾ 57:1 ⁽¹⁾	0.4-5.0 0.4-7.6 1.3-12.7	2.4-5.6 1.6-3.2 1.6-2.4	35	330 x 406 x 254

⁽¹⁾ 142:1 gear box is standard. Conversion Kit supplied for conversion to 95:1 with Wire Drive (K2370-2, K2312-2, or K2311-1)