

Jetline® Arc Length Control

Automation Accessories 

Quick Specs

Applications

Longitudinal seam welders
Side beam track and carriage systems
Welding positioners
Welding lathes
Weld head locators/manipulators
Fixed automated applications

Processes

TIG (GTAW)
Plasma arc welding (PAW)

Input Power

120 V (can be configured by end user for 240 V),
1-phase, 50/60 Hz

Power Cord

Standard 120 V, 6 ft. (1.8 m) long

Control Module Dimensions (H x W x D)

12 x 10.5 x 6.25 in.
(305 x 267 x 159 mm)

Jetline arc length control maintains a constant preset arc length via control of the arc voltage in TIG (GTAW) or plasma arc (PAW) welding applications.

Jetline arc length control measures arc voltage, compares the samples to the operator setting, and works with a field-proven servo drive to move the torch up or down as required to maintain the set arc length and arc voltage. Compatible with conventional and inverter TIG and plasma arc power sources, pulsed and non-pulsed processes, and AC and DC (straight and reverse polarities) welding currents. A simple remote cable interface is all that is required.

Arc length control:

- Maintains constant weld penetration on uneven surfaces.
- Regulates welding voltage for precise, repeatable welds.
- Provides easy setup between different parts.
- Minimizes requirements for operator intervention.
- Allows higher weld travel speeds.
- Compensates for electrode erosion.
- Allows automatic setting of the starting arc gap.

Electrical touch retract (electrode touches work and then retracts) provides the most sensitive and exact method of setting electrode-to-work distance. Minimum force is exerted on the workpiece during setup and allows the starting arc gap to be automatically preset for every weld — the operator has no need for feeler gauges or to view the distance.



Package includes:

- Control module
- Actuator with 6-inch (150 mm) stroke — optional 1-, 4- and 12-inch stroke actuators available
- 10-foot (3 m) interconnecting cable

Rugged servo-driven motor slide is built for years of continuous service. The ball-screw design, coupled with two hardened and ground shafts using recirculating ball bushings.

Weight capacity of 40 pounds (18 kg) on standard 6-inch stroke and optional 12-inch stroke actuators at the centerline of the torch allows mounting of wire delivery guide mechanism, magnetic arc probe, video monitoring camera or special gas purge shroud to the torch without worry of overloading.

Universal V-clamp torch holder.

Unique brake design prevents the torch from drifting into the work when the power is disabled.



Warrantied for three years, parts.



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9790 Control Module Features

Microprocessor-based control is high-frequency hardened and proven for use in welding environments to provide superior control of arc length.

Backlit graphic LCD display provides easy reading and setup regardless of shop lighting conditions. Displays up to four lines of information, including set voltage and actual voltage while welding. Also indicates if arc is on or off when remote from the welding operation.

Polycarbonate overlay includes integral “touch pads” in place of conventional push buttons.

Volt sensing of 5 to 50 volts, AC or DC.

Deadband of 0 to 3 volts around the required operating point.



Start delay of 0 to 99.9 seconds allows other operations to occur prior to the ALC taking over control.

Retract delay of 0 to 99.9 seconds allows post purge and other operations to occur after weld is complete.

Sensitivity of 0 to 99 percent allows immediate drive response to the smallest change in arc voltage.

Adjustable retraction speed allows high-speed part changes.

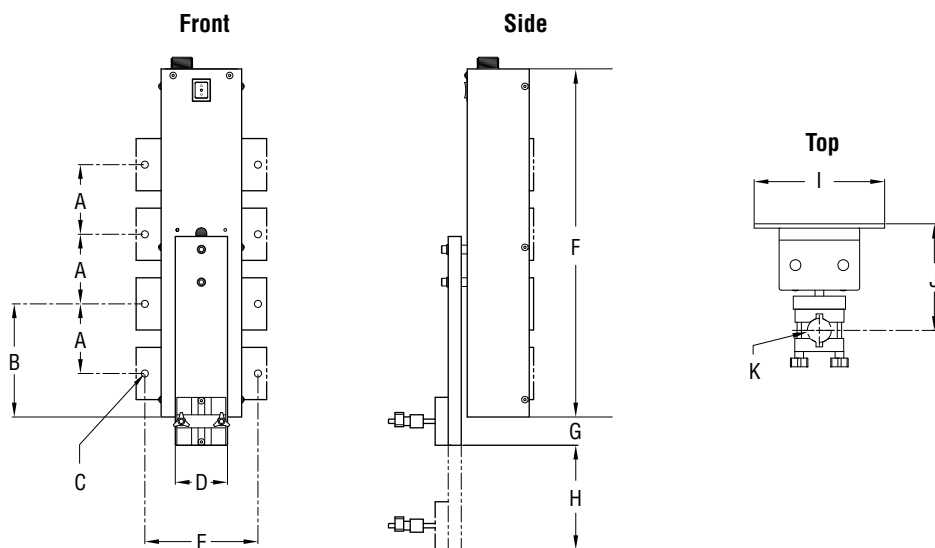
Sealed industrial-style steel cabinet with all connections made with industrial-grade Amphenol® plugs and sockets.

Designed for easy panel mounting and can be located up to 75 ft. (23 m) from the actuator holding the welding torch.

Control Module Specifications (Subject to change without notice.)

Stock No.	Power Cable	Input Power	Height	Width	Depth	Net Weight	Mounting Holes
9790	120 V, 6 ft. (1.8 m) included	120/240 V, 1-phase, 50/60 Hz	12 in. (305 mm)	10.5 in. (267 mm)	6.25 in. (159 mm)	24 lb. (11 kg)	Four 5/16 in. (8 mm) diameter thru-holes

ALC-401-60D Actuator Dimensions



	ALC-401-60D
A	4 in. (100 mm) CRS
B	6.5 in. (165 mm)
C	Alternate mounting positions
D	3 in. (75 mm)
E	6.5 in. (165 mm)
F	20 in. (500 mm)
G	1.625 in. (41 mm)
H	6 in. (150 mm) stroke
I	7.5 in. (19 mm)
J	6.125 in. (155 mm)
K	1.375 in. (35 mm) diameter

ALC-401-60D Actuator Specifications (Subject to change without notice.)

Stock No.	Stroke	Torch Diameter	Weight Capacity	Maximum Drive Speed	Accuracy	Prepositioning	Touch Retract	Stop Retract	Net Weight
ALC-401-60D	6 in. (150 mm)	3/4–1.5 in. (19–38 mm)	40 lb. (18 kg)	30 ipm (750 mm/min.)	+/-1% of setting or 0.1 V (whichever is greater)	+/-0.002 in. (0.05 mm)	0–1/4 in. (0–6 mm)	0–9.9 in. (0–250 mm)	22 lb. (10 kg)

Accessories

RP-401 Remote Pendant Control

Designed for use in applications where the operator is unable to conveniently reach the weld head or arc length control. The pendant is fitted with a 15 ft. (4.5 m) cable and Amphenol® plug and includes the following functions:

- Voltage control (10-turn potentiometer)
- Volt-sensing lockout switch (auto/manual)
- Actuator jog up/down switch



Mechanical or Magnetic Oscillators

For TIG (GTAW) and plasma arc (PAW) welding.



9900 Controller

The 9900 is an industrial computer using simple interfaces to control the full range of accompanying weld hardware modules. Due to the modular design, the system can easily be expanded or changed as new requirements arise. System parameters and variables are incorporated in the welding programs offering simplicity and efficiency for basic welding applications or full control of the most demanding ones.

Associated Products

Jetline designs and manufactures a complete range of controls and fixtures for TIG (GTAW) and plasma arc (PAW) welding.



Cold and Hot Wire Feeders

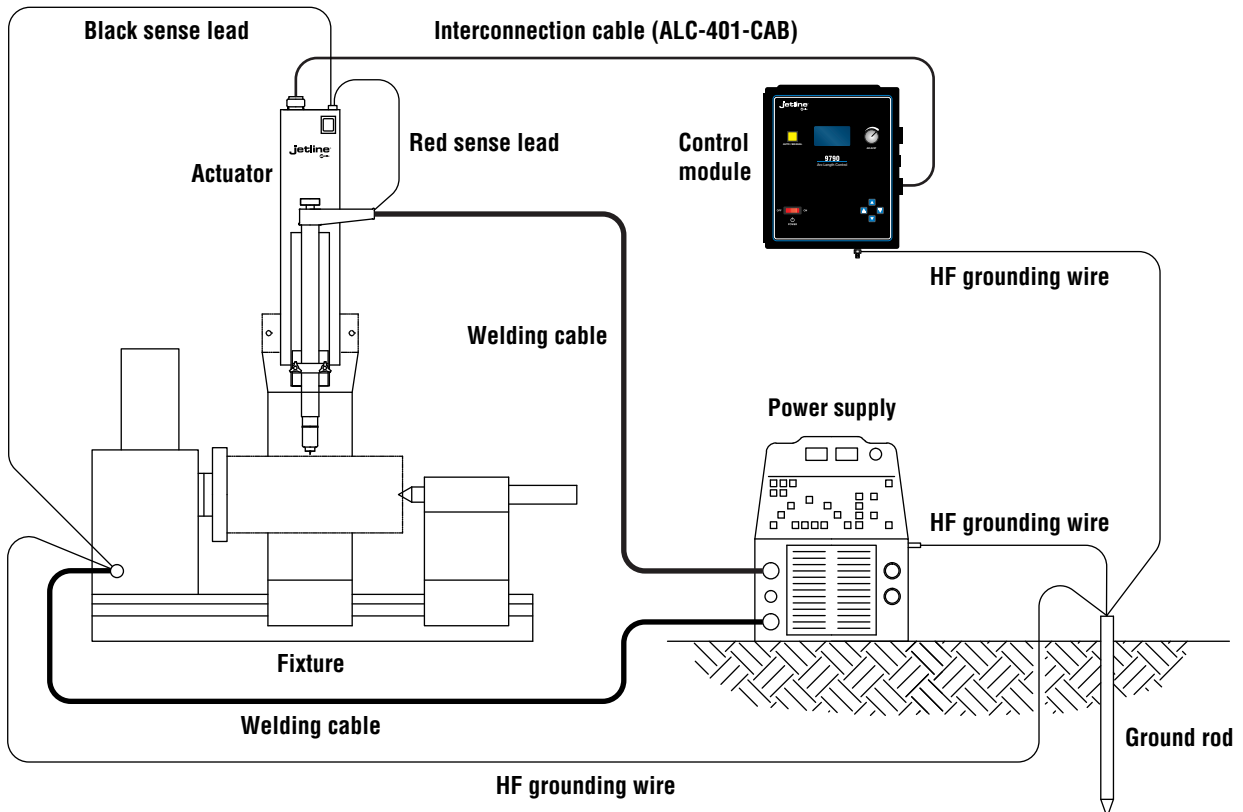
For precise delivery of filler metal to the weld pool, Jetline offers a complete range of wire feeders, both for cold and hot wire feeds.



9700T Controller

The standard Jetline controller and sequencer used on our motor-driven equipment can be used for longitudinal or circumferential welding systems. Works with TIG (GTAW), MIG (GMAW), submerged arc (SAW) and plasma arc (PAW) processes.

Typical Installation



Ordering Information (Order from Miller Welding Automation.)

Equipment	Stock No.	Description	Qty.	Price
Arc Length Control	ALC-701-6	Includes control module, 6-inch (150 mm) stroke actuator and 10 ft. (3 m) interconnecting cable		
Replacement Components				
Control Module	9790			
Actuator	ALC-401-60D	6-inch (150 mm) stroke — 150 lb. (68 kg), 4.5 in. (114 mm) slide		
Interconnecting Cable	ALC-401-CAB	10 ft. (3 m) cable connecting control module to actuator		
Options and Accessories				
Actuator	ALC-401-120D ALC-401-CH4A ALC-401-CH1A	12-inch (300 mm) stroke 4-inch (100 mm) stroke 1-inch (25 mm) stroke		
Interconnecting Cable	ALC-401-CAB-XX	Cable connecting control module to actuator — “XX” denotes cable length in inches		
Remote Pendant Control	RP-401	Includes 15 ft. (4.6 m) cable with Amphenol® plug		
Cable to Connect to 9700T Controller	9700S1-ALC-3	3 ft. (1 m) cable		
Precision Cross Slide	1016A	Precision single-axis manual adjust slide with 1.5-inch (38 mm) stroke		

Date:

Total Quoted Price:

In addition to its range of arc welding controls, Jetline designs and manufactures a superior family of fixturing products. These are used to hold and/or move the part to be welded or the welding torch and maintain their relative position.

Jetline fixturing includes:

- **Longitudinal Seam Welders**
Used for linear welding of sheets, cylinders, rectangles, cones, ovals and other part configurations.
- **Circumferential Welding Systems**
For circumferential welding of tanks and vessels, single- or multi-torch applications.
- **Precision Welding Lathes**
For precision filters, valves and other small critical parts.
- **Side Beam Tracks and Travel Carriages**
Moves welding equipment along a weld joint for linear welding.
- **Weld Head Locators**
For linear or circumferential welds over welding positioners, seam welders or other positioning fixtures.

Contact our Sales Department for further information on any of these products.

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