

AVC-501 Arc Voltage Control Systems



The Cyclomatic Series Arc Voltage Control system automatically maintains precise arc length by controlling arc voltage to within ± 0.1 volts. The AVC-501 allows convenient, flexible control of all welding conditions and operating functions.

The new microprocessor-based controller features extremely rugged resistance to high frequency. The user-friendly control assists in minimizing set-up times and operator training times. Adjusting or setting control parameters is made easy via discreet dials providing fast and accurate changes to all key control features.

The patented Lift-Start™ feature allows the starting of a TIG arc without the use of high frequency when paired with a power source with similar features.

All in all, the new AVC-501 offers the control and flexibility you have come to expect from the Cyclomatic product line.

- Features**
- Two models available - standard 6" (152 mm) and compact 1" (25.4 mm) drive stroke.
 - Obtain higher speed welding from your existing equipment.
 - Fast detection of burn-through with automatic power shut off and arc head retraction for operator equipment protection.
 - GTAW and Plasma applications
 - Automatic compensation for electrode erosion.
 - Lower operator skill requirements.
 - Minimized set-up times.
 - Consistent quality, weld after weld.

Specifications

AVC Control Unit	
Voltage Control	$\pm 1\%$ of setting or 0.1V, whichever is greater
Start Delay	$\pm 3\%$ of setting or 0.05 seconds, whichever is greater
Arc Gap Pre positioning	$\pm 0.002"$ (0.05 mm)
Start Delay	0-12 seconds
Retract Delay	0-12 seconds
Voltage Sense Range	5-50 V DC or AC
Open Circuit Voltage	80 V maximum
Sensitivity	0-99% adjustable
Deadband	0-1.5V adjustable
Lockout Switch & Indicator	Standard
Manual Jog Switch	Standard
Operating Temperature	32-130° F (0-50° C)
Cooling	Unit is sealed - convection only
Power Cable	8 ft (2.4 m), 3 prong
Input Power	120/240 VAC, Single Phase, 50/60 Hz, 300VA
Weight	13.5 lb (6 kg)

CYCLOMATIC SERIES ARC VOLTAGE CONTROL

Specifications

AVC Drive Unit	Standard	Compact
Standard Stroke Length	6" (152 mm)	1" (25.4 mm)
Compensation Rate	22 ipm (560 mm/min) max	15 ipm (381 mm/min) max
Manual Rate	12 ipm (305 mm/min)	15.4 ipm (391 mm/min)
Load Capacity	45 lb (20 kg) @ center of torch	10 lb (4.5 kg) @ center of torch
Weight	15 lb (6.8 kg)	10 lb (4.5 kg)
Dimensions	18"x3.5"x5.5" (457x89x140 mm)	5.5"x2.25"x3.25" (140x57x83 mm)



Compact AVC Drive Unit

The space saving, compact drive unit is limited to a 1" (25.4 mm) stroke. A stepper motor driving a precision ball screw provides motion. The high frequency filter enclosure mounts conveniently near the drive unit and features up/down jog buttons for torch positioning.

Standard AVC Drive Unit

The standard drive unit is a rugged electro-mechanical device designed to minimize mechanical play and backlash. A stepper motor driving a precision lead screw provides motion. A filter network provides high frequency protection. Manual up/down jog buttons are conveniently located on the side of the unit.



Ordering Information

Part Number	Description
System Packages	
AVC-501-6	Arc Voltage Control System, 6" (152 mm) drive stroke
AVC-501-1	Compact Arc Voltage Control System, 1" (25.4 mm) drive stroke
System packages consist of 9695 Microprocessor Control Unit, AVC-D6 or AVC-D1 drive unit with 8' (2.4 m) cable, 7.5' (2.2 m) AC power cable, 10' (3.3 m) remote interface cable, 10' (3.3 m) auxiliary remote interface cable.	

See Jetline price list for complete ordering information

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The right to make engineering refinements is reserved.
Dimensions and specifications are subject to change without notice.

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