

MODEL 207-HP MICROPROCESSOR-CONTROLLED POWER SUPPLY



The Arc Machines, Inc. Model 207-HP is a 100 amp microprocessor-controlled tube welding power supply and controller specifically designed for use in cleanrooms and other areas where particulate shedding is of concern. The unique design and construction assures a significant reduction of particulate contaminants over conventional tube welding power supplies. The following features make this unit unsurpassed for all high-purity tube welding applications:

- All stainless steel gas system.
- Internal cooling system. No external air flow.
- High-purity, semiconductor-grade gas connections.
- Polished stainless steel housing.
- Control panel features soft-touch membrane switches.
- Weld Operate / Lock key-switch locks out unauthorized personnel.
- Weld program transfer capability for back-up and machine-to-machine downloading.
- Built-in printer provides a hard copy of the program library as well as detailed data on each weld program.
- Compatible with all Arc Machines' Model 9 series weld heads.

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The Model 207-HP Tube Welding Power Supply makes a significant step toward the reduction of airborne particulates (over conventional tube welding power supplies) in cleanroom and other high-purity tube welding applications. Its unique design enhances cleanability as well as minimizing particulate shedding. It is made from cleanroom approved materials and features a specially-designed sealed cooling system. Additional features incorporated to make this power supply truly ideal for cleanroom use are: all stainless steel gas controls, semiconductor grade gas connections, polished stainless steel housing and high-purity gasketing and support feet. The Model 207-HP is compatible with all AMI Model 9 series tube weld heads.

The Model 207-HP operating software is identical to the Model 207, with operator prompts to make operating and programming easy for first-time users. Built-in calculation functions automatically provide electrode length data as well as IPM / RPM conversions, and the Diagnostic Fault Detection System (DFDS) automatically checks the status of five internal functions including gas flow and input power, and up to three external sensors, such as an oxygen analyzer for I.D. purge verification. In the event of a DFDS fault, the built-in printer will automatically identify the fault and the operating software will prevent further welding until the fault is corrected.

The program library stores up to 100 (non-volatile) weld schedules and titles each schedule with a block of information including tube, pipe or fitting O.D., wall, material and weld type such as tube, pipe, fitting, etc. An optional External Memory Module may be added to store additional weld schedules or to transfer data from one machine to another. Welding quality control is enhanced by a built-in clock / counter, which keeps a running total of system "on" hours, and "arc" hours in addition to keeping track of the quantity of completed welds for each individual program as well as a total for the system.

In operation, both the power supply and (optional) remote operator's pendant allow the operator to modify weld schedules. The remote pendant can also be used for accessing alternate weld schedules remotely. Weld schedules may be written as single-pass or multi-pass and electrode rotation may be continuous or incremental (stepped). Total arc control is made possible through eight multi-level functions. Each of these functions maybe programmed to change values up to 100 times (levels) during the weld.

Standard Built-In Features Include:

- Stainless steel housing (specular finish)
- Sealed cooling system
- Diagnostic Fault Detection System (DFDS)
- Displays: Two LCD, E L Back-lit panels – English, French, German
- Printer, internal
- Weld / Operate / Lock key-switch
- Stainless steel gas system
- High-purity connections
- Calculation Functions: IPM/RPM, Electrode Length
- Control Panel: Membrane switches, dust / moisture proof and low particulate emitting
- Interlocks: Three external ports
- EMI protection

Optional Accessories:

- Remote operator's pendant
- Weld head extension cables
- Cleanroom cable jackets
- External memory module
- Remote pendant extension cables
- Reusable shipping case
- Manual torch and foot control
- Chart recorder, three-channel

Technical Data:

Process:	GTAW (TIG)	Weight:	72 lbs.
Arc Start System:	Injection Pulse Start	Dimensions:	Height: 9.25" Width: 22.75" Depth: 18.75"
Current Pulse Rate:	0.05 to 50 PPS	Enclosure:	Stainless steel (specular finish)
Overrides:	Programmable from 0% to 100%	Travel/Rotation Speeds:	Range depends on weld head type
Input Power:	100 to 240 VAC, \pm 10% Single phase, 50 / 60 Hz.	Memory Capacity:	Up to 100 weld schedules
Motor Control:	24 VDC, Tachometer Feedback		
Weld Current:	3 to 100 amps, DCSP, \pm 0.5%, 100% duty cycle		

ARC MACHINES, INC.