

MODEL 227 MICROPROCESSOR-CONTROLLED POWER SUPPLY



Model 227 Power Supply



Remote operator's pendant

The AMI Model 227 is an integrated microprocessor based weld power supply and weld head controller designed to be highly durable and easy to operate. The Model 227 is capable of operating with a wide variety of AMI orbital pipe weld heads equipped with AVC, Torch Oscillation (weaving), Wire Feed and Travel functions as well as Fusion only weld heads. The Model 227 has become an industry standard for orbital welding applications that require a highly durable, portable power supply without sacrificing versatility.

- Inverter-type GTAW welding power supply, fully computerized, 100 / 225 Amp DCSP output
- Internal memory holds up to 100 multi-level, multi-function weld schedules
- Easy to use and operate. Each screen is prompted in plain English (other languages available)
- Programmable, continuous or pulsed current, rotation, wire feed, oscillation and AVC up to 100 levels per pass
- Compatible with a variety of standard AMI weld heads - tube or pipe or tube-to- tubesheet (see inside page)
- Off-line programming option available (PC Compatible)

ARC MACHINES, INC.

AMI is an ISO Certified Company

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MODEL 227

MICROPROCESSOR-CONTROLLED POWER SUPPLY

The **Arc Machines, Inc. Model 227** is a 100 / 225 Amp pre-programmed / programmable power supply and controller designed for (but not limited to) automatic orbital welding applications that require the addition of filler material. Welds produced by this machine, together with Arc Machines' weld heads, meet or exceed the specifications required by industries as diverse as: food, dairy, brewery, pharmaceutical, power generation, petrochemical, chemical, pulp and paper, nuclear, shipbuilding, etc. Its small size makes it useful in field applications where portability is required. High-integrity, code-quality welds are easily reproduced at the touch of a button.

The program library stores up to 100 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. The optional External Memory Module may be used to store additional weld schedules or to transfer data from one machine to another. Welding quality control is enhanced by programmable override limits. This allows the operator to have control over some of the welding parameters but not violate the welding procedure.

In operation, both the power supply and 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 may be programmed to change values up to 100 times (levels) during the weld.

The Model 227 is very easy to operate and is designed with the welder in mind. All operator entries are made in actual values and do not require codes or computer programming. Languages available are English, French and German. (Spanish and Japanese pending)

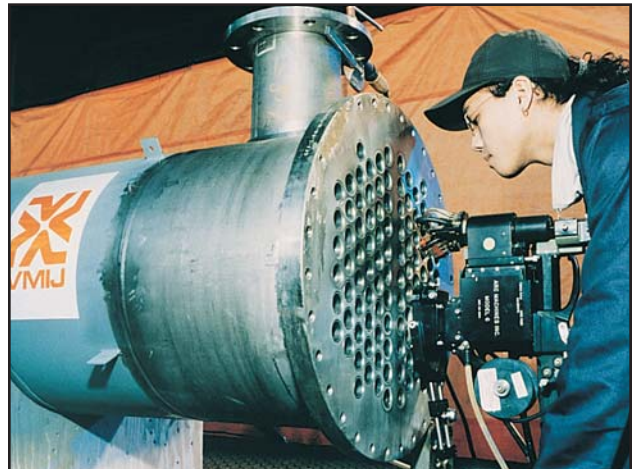


Photo Courtesy of Verolme Machinefabriek IJsselmonde b.v.

Model 6 Tube-to-Tubesheet weld head welding a Cu-Ni tubesheet in Holland.

Standard Built-in Features Include:

Internal Printer - Prints an array of information including program library, weld schedule settings and valuable Q.C. data linked to the Diagnostic Fault Detection System.

Key Switch - Locks out or limits operator overrides, access or programming capability.

Upper Alpha-Numeric Display - Provides prompts for the operator in plain language, making welding or programming simple for anyone.

Lower Alpha-Numeric Display - Provides all welding data information, program library read-out and numerous other functions such as Diagnostic Fault Detection System (DFDS) and System Interlock status.

Control Panel - Soft touch membrane switches are dust / moisture proof and accepted for cleanroom use, as well as being ideal for harsh environments.

Internal Memory - Can store up to 100 different weld schedules with 100 additional weld schedules available per memory module.

MODEL 227 AND COMPATIBLE WELDING HEADS



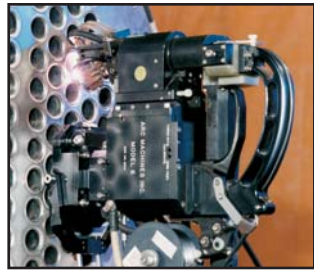
Model 227 without optional water cooling unit

Fusion weld heads without filler wire



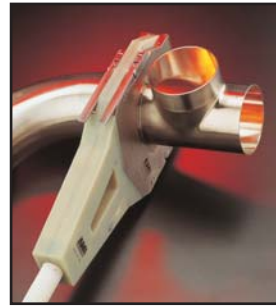
Model 96

Reliable tube-to-tubesheet weld head for welding flush or slightly projected tubes, fusion-only. Consult AMI for dimensional limitations.



Model 6

For welding flush, recessed or fillet tube-to-tubesheet welds requiring filler wire.



Model 8 series

Model 8 weld heads for fusion welding of fittings, tubing and thin-wall pipe. Range: 0.25" to 4.00" O.D.



Model 9 series

Model 9 weld heads for autogenous welding of tube or thin-wall pipe. Range: 0.125" to 7.50" O.D.

Pipe weld heads with filler wire



Model 81

Extremely compact weld head for welding from 1.9" O.D. to 5.563" O.D. 1.750" minimum radial, 6.074" minimum axial clearance.



Model 15

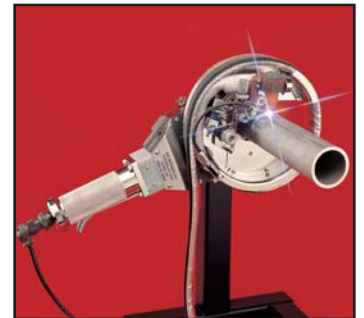
Rugged weld head for welding large bore thick-wall schedule piping such as 4", 6", 8", 10", 12", 18", etc. including flat plate.

Open-frame weld heads with or without filler wire



Model 79 series

Model 79 open-frame weld heads with Automatic Voltage Control (AVC) and Torch Oscillation.



Model 95 series

Model 95 open-frame weld heads with manual arc length and torch cross-seam adjustment.

The Model 79 and 95 series are high-precision economical weld heads that use an integral clamping system to center and square the weld head around the pipe. No guide rings or tracks are required.

MODEL 227 ACCESSORIES



Additional accessories available, but not shown include:

- Reusable Shipping Case
- Weld Head Extension Cables
- Pendant Extension Cables

Technical Data:

Process:	GTAW (TIG)	Wire Feed Speed:	Range depends on weld head size, typically 0 to 200 inch per minute
Arc Start System:	Injection Pulse Start	Input Power:	100 to 240 VAC, $\pm 10\%$, Single phase, 50 / 60 Hz.
Pulsation:	Programmable	Dimensions:	Height: 15" Width: 23" Depth: 20"
Overrides:	Programmable from 0% to 100%	Enclosure:	All metal, self-contained
Weld Current:	3 to 100 Amps DC. @ 100 / 120 VAC input, 100% Duty Cycle 3 to 225 Amps DC @ 200 / 240 VAC input, 100% Duty Cycle	Weight:	88 lbs.
Current Accuracy:	$\pm 1\%$	Applicable Spec. No.:	Spec No. 227
Travel / Rotation Speed:	Range depends on weld head type, typically 0.5 to 10 RPM or 0.1 to 20 IPM		
Cooling System:	Water cooling unit available		

Note: Maximum programmable pulsed current level is 225 amps.

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