

Reducing Costs and Improving Quality with Orbital Welding

Application:

- Water treatment system

Material:

- 316L stainless steel

Welding Equipment:

Power Supplies:

- Model 207
- Model 227

Weld Heads:

- Model 9ER-4500
- Model 8-4000

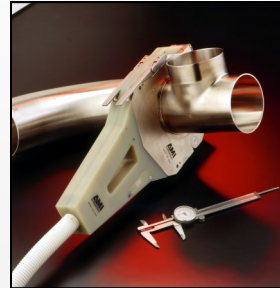
Benefits:

- ✓ Reduced welding time from 5 min. to 22 sec. per nipple
- ✓ No post-weld cleaning (50% labor reduction)
- ✓ User-friendly software
- ✓ Easy weld schedule development

For further information, call AMI at 1-818-896-9556 or e-mail sales@arcmachines.com



Model 207



Model 8-4000



Model 9

Aquafine Corporation has pioneered commercial ultraviolet (UV) water treatment systems since 1949, primarily serving the Semiconductor, Pharmaceutical, and Food and Beverage industries. The water treatment unit consists of a cylinder ranging from 3 1/2" to 18" diameter with 1 to 36 seam, circumferential or tube-to-tubesheet type of welds. Until 1990 these welds were produced using the manual GTAW process (with filler). When Aquafine began looking for ways to be more competitive both in quality and in technology, they switched to autogenous fusion weld, not requiring filler wire.

When the inlet and outlet fitting design was changed to allow the use of the T-Drill process, Aquafine purchased a **Model 207** power supply and a **Model 9ER-4500** weld head from Arc Machines, Inc., to make these T-Drill welds. The selection of the orbital welding system resulted in significant cost savings to the welding and finishing processes.

Aquafine also purchased a **Model 227** power supply and torch for welding the larger – 6" and up – end flanges onto the cylinders. For smaller end flanges and sanitary fittings with little axial clearance, Aquafine used the extremely narrow **Model 8-4000** weld head.

In addition to the welding man-hour cost savings, post-weld treatment labor has been reduced by 50 % and production has increased with high quality and low defect rates. As a result of successful welding automation, Aquafine has moved from a 40,000 sq. ft. facility to a 100,000 sq. ft. plant and has showed significantly increased sales.

To read the full story, visit www.arcmachines.com



Advanced Products, Systems & Solutions



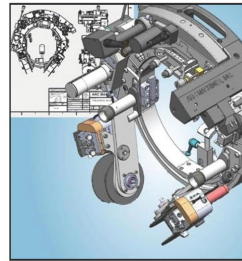
LEADERS & INNOVATORS in Automated Orbital Welding



Cutting Edge Narrow-Groove
Pipe Welding Technology



Advanced Fusion Welding
and Process Control



High-Tech Designs &
Engineering Services



Turnkey Integrated Systems

Advanced Products, Systems & Solutions



With over 3000 customer relationships in over 50 countries, Arc Machines, Inc. has set the standard for Automated Orbital Welding Equipment for over 30 years, combining Quality and Durability with Innovative Engineering and Design. Around the world, leading manufacturers and contractors rely on AMI for their expertise in automated orbital welding and to develop customized solutions for new welding challenges.

www.arcmachines.com

AMI

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M207 Power Supply

QUICK SPECS

Input Power

100 - 240 VAC service
single-phase
50/60 Hz

Weld Current

100 - 150 A DC
100% Duty Cycle

I/O Device

M-207EMM

Memory Capacity

100 weld schedules maximum,
100 levels per schedule maximum

Water Cooler

Optional

Dimensions

11" x 22.75" x 18.75"
(280 mm x 578 mm x 476 mm)

Weight

79 lbs.
(36 kg)



M8-4000 Weld Head

OD Range

0.50" - 4.00"
(12,7 mm - 101,6 mm)

Travel Motor

D.C., P.M., D.C. Tachometer

Head Weight

10lbs.
(4,5 kg)

Electrode Size

1/16" and 3/32"
(1,6 mm and 2,3 mm)

Rotor RPM

0.1 - 10.0

Cable Length

25 ft. (7,6 m) when connected to adapter cable

➔ Water cooling is recommended

➔ Compatible with all AMI Power Supplies

M9 Series Weld Heads

OD Range

0.093" to 7.500"
(2,362 mm - 190,500 mm)

Travel Motor

D.C., P.M., D.C. Tachometer

Head Weight

11 lbs. - 35 lbs.
(4,9 kg - 15,9 kg)

Electrode Size

0.040", 1/16", 3/32"
(1 mm, 1,6 mm, 2,3 mm)

Rotor RPM

0.1 - 20

Cable Length

25 ft. (7,6 m) when connected to adapter cable. (extensions available)

➔ Removable tube clamps

➔ Pre-plumbed for water-cooling

➔ Compatible with all AMI Power Supplies