

# Overcoming Difficulties of 6 Inch Tube-to-Fitting with Orbital Welding at the Lonza Plant in Singapore

## Application:

- Biotechnology process piping system

## Material:

- 6" diameter tubing and fittings

## Welding Equipment:

### *Power Supply:*

- Model 207

### *Weld Head:*

- Model 8

## Benefits:

- ✓ Consistent, high-quality welds
- ✓ Increased productivity to manual welding
- ✓ Zero rejects

For further information, call AMI at 1-818-896-9556 or e-mail [sales@arcmachines.com](mailto:sales@arcmachines.com)



Model 207



Model 8



When Kenyon Engineering, a mechanical contractor at the Lonza biotechnology expansion in Singapore, encountered a problem with autogeneous orbital GTA welding of 6" diameter tubing to tee fittings they turned to Arc Machines for help.

Kenyon's weld problems occurred at tee joints done at high levels on a pipe rack. They experienced problems with tube roundness, joint, fit-ups, and over tacking. Even with Kenyon's extensive experience in orbital welding, having completed over 30,000 welds in just a couple of years, these problems were challenging.

Arc Machine's automated welding equipment, including micro-processor controlled **M207** power supplies and **M8** weld heads, were selected for this project. A special device was developed by Kenyon for adjusting the roundness of 6" tubing prior to tack welding for orbital welding.

Autogeneous orbital GTA welding has become the preferred joining technology of high purity process piping for bioprocess, semiconductor and other high purity applications due to its consistent delivery of high quality welds. By using Arc Machines sophisticated welding equipment not only was Kenyon able to work out a solution and complete the installation to the owner's satisfaction, but all of the welds passed inspection.

To read the full story, visit [www.arcmachines.com](http://www.arcmachines.com)



**Advanced Products, Systems & Solutions**

**AMI**  
**ARC MACHINES, INC.®**

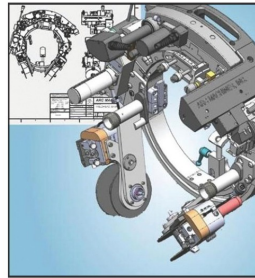
# LEADERS & INNOVATORS in Automated Orbital Welding



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](http://www.arcmachines.com)

# AMI

**ARC MACHINES, INC.®**

Arc Machines, Inc.  
10500 Orbital Way  
Pacoima, CA 91331 U.S.A.  
(818) 896-9556  
fax (818) 890-3724  
[sales@arcmachines.com](mailto:sales@arcmachines.com)

### 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"  
(279 mm x 578 mm x 476 mm)

#### Weight

79lbs.  
(36kg)



### M8 Series Weld Heads

#### OD Range

0.25" - 6.625"  
(6,3 mm - 169,0 mm)

#### Travel Motor

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

#### Head Weight

6 lbs. - 17 lbs.  
(2,7 kg - 7,7 kg)

#### Electrode Size

1/16" and 3/23"  
(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 (included with power supply)  
(extensions available)



Water cooling is recommended for heavy wall or high duty-cycle applications  
Compatible with all AMI Power Supplies