

# ULTRAPURE WATER TREATMENT

## RO-PEDI System for Microelectronics

Industry: Microelectronics  
System: 80 gpm Ultra Pure Water System  
Location: New York  
Goals: 18.2 meg-ohm/cm Ultrapure Water, Bacteria & Oxygen Removal

### Project Overview:

SAMCO's state-of-the-art Ultra Pure Water System (UPWS) installed at a leading company for their new Photoreceptor production line, utilizes a Reverse Osmosis & Portable Exchange Deionizer System (RO-PEDI) to purify city water to ultra high purity levels. It is designed to meet one of the highest water purity standards in the Microelectronics industry.

### Critical Issues:

18+ meg-ohm/cm quality ultra high purity water  
Fast-track project, concept to completion

Critical application needing high uptime  
Minimize operator attention

### Vision for Solution:

- RO for consistent ultra pure quality, reduced DI exchange frequency, and maximized ROI
- Jumbo 30 cu.ft. PEDI for off-site regeneration, minimum operator attention and reduced DI exchange frequency
- Membrane Degassifier for CO<sub>2</sub> & O<sub>2</sub> removal, thereby reduce DI exchange frequency
- Built-in system redundancy for high uptime
- Utilize our standard products & pre-packaged system design for fast-track turnkey project delivery of 18 weeks from concept to fabrication completion
- PLC w/ Remote Telemetry for minimum onsite operator attention

### Project Scope:

Concept Development	Detailed Design/Engineering
System Fabrication	Controls Integration
Commission/Startup	Ongoing Service

### Equipment Description:

Equalization Tank	Influent Booster Pumps
Triplex Sand Filters	Duplex Bag Filters
Heat Exchanger	Chemical Feeds
Reverse Osmosis(RO)	Membrane Degassifier
RO Storage Tank	Transfer Pumps
Jumbo 30 cu.ft. PEDI	Ultraviolet Sterilizer
0.2 Micron Filters	PLC/Remote Telemetry
Catwalks/Platforms	

### Special Features:

- PLC controlled system enables supervisory control & data acquisition from a remote site
- Process monitoring include flow, temperature, pressure, level, pH, resistivity, etc
- Membrane Cleaning Services for RO System
- Off-site Ion Exchange Regeneration Services for Jumbo PEDI

