

## ULTRAPURE WATER TREATMENT

# RO for Display Device Manufacturing

Industry:	Microelectronics
System:	300 gpm Duplex Ultra Pure Water System with Distribution Loop
Location:	New York
Goals:	0.5+ meg-ohm/cm High Purity Water

### Project Overview:

SAMCO's state-of-the-art Ultra Pure Water System, installed at a leading company's High Definition Display Devices production line, utilizes Reverse Osmosis System (RO) to purify city water to ultra high purity levels. A future wastewater recycle/reuse RO and polishing Ion Exchange System add-on capability is also included. It is designed to meet water quality standards for Microelectronics industry.

### Critical Issues:

Wastewater recycle/reuse & varied product quality needs	Critical application needing 99% uptime
Fast-track project, concept to completion	Minimize operator attention

### Vision for Solution:

- RO for consistent high quality water with superior removal of TDS, silica & organic compounds with future add-on capability
- Pretreatment w/ Antiscalant & Sodium Bisulfite feeds in lieu of softener & activated carbon for higher product quality & lower cost
- RO maximizes ROI with a two year payback versus buying water from an adjoining firm
- Duplex independent trains design for 100% redundancy & 99% uptime
- Utilize our standard products & pre-packaged system design for fast-track project delivery and performance guarantee
- PLC w/ Remote Telemetry for minimum onsite operator attention



### Project Scope:

Detailed Design/Engineering	System Fabrication
Controls Integration	Field Installation Support
Commission/Startup/Training	Ongoing Service

### Equipment Description:

Antiscalant/Bisulfite Feeds	Bag Pre-Filters
Reverse Osmosis (RO)	RO Storage Tank
Distribution Pumps	UV Sterilizer
PLC/Remote Telemetry	RO Cleaning Skid



### Special Features:

- PLC controlled system enables supervisory control & data acquisition from a remote site
- Process monitoring include flow, temperature, pressure, level, pH, resistivity, etc
- Stainless steel RO pressure vessels and cartridge filters
- Clean-in-place system enables easy cleaning of membranes, for time and costs saving
- Future wastewater recycle/reuse RO add-on capability
- Future polishing Ion Exchange add-on capability