# Advanced Mask Cleaning Solutions Extendable to 45nm and Beyond

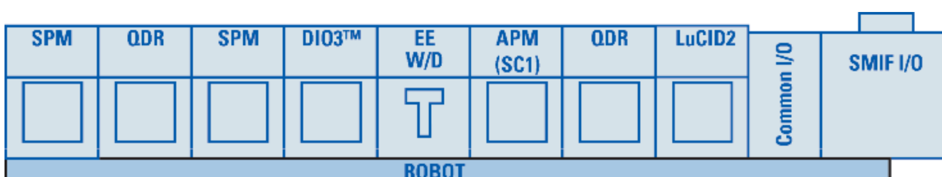
NAURA AKRION

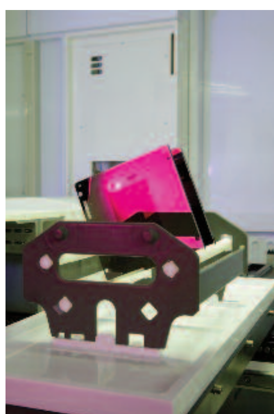
## ANYONE CAN SELL YOU A WET STATION....

At NAURA Akrion we hope to sell you on the value of our Process Knowledge, Applications Support, understanding of your Specific Processing Requirements, and above all, our total commitment to your success.

ClearIQ

## ONE FULLY EXTENDABLE PLATFORM



### ClearIQ System

- Strip and Clean in a single toolset (HF Etch Optional)
- Consistently lowest ionic levels
- Suitable for Binary and PSM Technologies
- Flexibility through Modular design
- High MTBF > 1500Hr E10-96; Low COO
- SMIF Compatible; High throughput capability
- Optional Chemistries: Solvents & HF Etch

## CLEARIQ PROCESS SPECIFICATIONS

| Metric | Binary Clear | Binary Dark | PSM Clear | PSM Absorber | EUV Absorber |
|---|---|---|---|---|---|
| Particles >.25µm | 94% | 90% | 92% | 87% | 95% |
| Particles > .10µm | 82% | 70% | 80% | 70% | 70% |
| Transmission Delta per Clean | N/A | N/A | < 0.03% | < 0.03% | N/A |
| Phase Loss per Clean | N/A | N/A | < 0.3 | < 0.3 | N/A |
| Surface Roughening | N/A | N/A | N/A | N/A | < 0.1nm |
| Ionic Contamination | < 5 ppb | < 10 ppb | < 5 ppb | < 10 ppb | < 10 ppb |

*First Pass Probabilities are for equipment sign-off*
*Typical performance is higher*

**NAURA Akrion**

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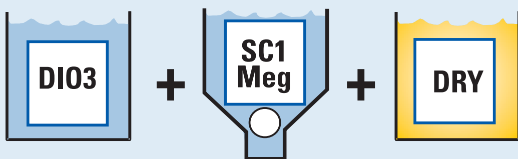
**Allentown Facility:**
**ISO9001:2000 Compliant**

# Binary & PSM Mask Cleaning Applications

## Sulfate-free Reticle & Photomask Cleaning with Proven Reliability:

- Patented Megasonic particle removal technology
- Patented DIO3™ organic removal technology
- Removes ionic and particulate residues associated with IC fabs

## Only 3 Tanks Required for sulfate-free reticle maintenance:




## Process Sequence:

DIO3 + SC1 Meg + Rinse + Dry

NAURA
AKRION

## Advanced Patented Technology

Our combination of patented DIO3 processing and advanced megasonic technology provides compact reticle cleaning solutions to increase the useful lifetime of advanced binary and phase shift masks.

### The NAURA Akrion Difference:

- **Worldwide process support**
- **24 x 7 technical support**
- **Experienced service staff**
- **Experienced management team**
- **Customer configurable flexible platforms**