Trident SST
Advanced Spray Solvent Tools
For 50-200mm
Trident SST: bringing higher performance to today’s **Solvent Processing** needs
Trident Spray Solvent Tool — Overview

- One or two process chambers
- 2-, 4-, 6- or 8-tank models
- 50mm to 200mm wafer capability
- Wide range of rotors
- Automated recipe execution
- Windows®7-based Solaris™ controller
- Much more affordable than other SSTs
Applications

1, 2 or 3 Chemical system configuration to accommodate solvent based process applications

- Polymer Removal
- Positive or Negative Photoresist Strip
- Substrate Cleaning
- Resist Developing
- Metal Lift Off
- Dry Film Resist Stripping
- Post Plate Strip

Applications:

- Memory
- III-V
- WLP
- Logic
- DSP
- ASIC
- Power
- MEM’s
- Opto......
## Install Base: Trident Batch Spray Tools (selection)

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Stainless Steel Process Chamber

- Enclosed Controlled Environment
- In-Situ processing
- On-Axis Design
- Controlled Boundary Layer
- Dry-Dry Operation
- Semi-Automated Operation
- Efficient Use of DIW
Fluid Flow Example
Major advantages over wet benches

- Up to 75% less chemical usage
- Up to 30% less DI water usage
- Up to 30% less exhaust
- Recipes up to 70% faster
- Significantly smaller footprint
- Purged tank, no moisture absorption
- Minimal evaporation
- No human exposure to chemicals/fumes
One complete, efficient process — finishing with dry wafers

- Minimal wafer handling
- Maximum throughput and efficiency
- No need for an external dryer
- No need for frequent bath changes
- Trident utilizes filters to reclaim and reuse solvents
Advanced control, automation and reporting

- Windows®7-based Solaris controller
- Remote login
- Data logging
- GEM/SECSII communications
- Reliability reporting
Solaris Control System

Windows 7 Operating System on Intel Quad Core i7 Processor
High Speed EtherCAT IO and Motor Network
Semiconductor Process Equipment Software Framework

LCD Touch Screen
Keyboard / mouse pad

Quad Core Server
UI, GEM, AUX, Real Time

Factory MES
Automation

Modular IO System
Motor Controllers
Pump Controllers
Temperature Controllers
Solaris Trident SST

ClassOne Technology: Advanced Wet Processing Equipment for the Rest of Us
Solaris Features

Hardware
- Super Micro Systems Industrial Quad Core PC: Core i7 2.6GHz Processor, 8G ram, 465G hard drive.
- Windows 7 operating system.
- Dual Hard Drives with RAID backup Storage Technology.
- Ethernet and USB communications networks.
- USB and Ethernet ports on the front panel for all manual file transfers.
- Dual Flat Panel LCD Touch Screens from ELO Touch Solutions.
- Beckhoff EtherCat real time modular PLC IO controller.
- Servo motion control using Copley Controls motor controller and US Digital high resolution encoder.

Software
- Based on off the shelf industry proven software framework.
- Semi E95 complaint graphical user interface.
- Field configurable options and features.
- Advanced diagnostics and data logging.
- Remote control and service capability.
- Smooth low speed rotor rotation in both directions down to 1 rpm.
- Email notifications.
- Real time chemical consumption monitoring.
- Predictive maintenance functions.
- Single software release for all configurations.
Smarter engineering, easier maintenance

- Non-contact chemical heaters
- Filtered chemistry
- Tank designed for easy maintenance
Industry-proven components, easily replaced

- Trident uses component-level technology
- Non-proprietary electronic components, readily available
- Industry-rated diaphragm pneumatic pumps
A complete facility package that comes standard

- Providing all facility requirements
- *On-board* facility panel
- *On-board* DI and N2 regulation
- Precise control throughout
And operator safety is maximized throughout

- Emergency Power Off
- Exhaust failure sensors
- Liquid level leak detectors
- Fire suppression systems
Trident: A unique new class of SST that delivers...

- The performance you need
- At a price you can afford!
Semitool Class 1 Spray Solvent Tool

- Stainless Steel Cabinet
- Alarm/Process Status Light Tower
- Chemical Delivery Methods to Match Process Requirements

39” x 65” x 66”

39” x 78” x 66”