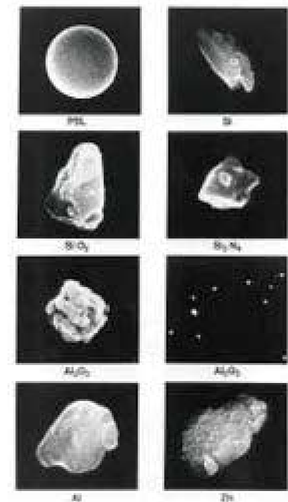
PSL AND PARTICLE WAFER DEPOSITION SYSTEMS

- MODELS 2300XP1 AND XP2

2300 XP1

2300XP2

These high performance particle deposition systems feature the most advanced atomization, electrostatic classification, and deposition technologies for creating standard polystyrene latex (PSL) wafers for calibrating KLA-Tencor, Applied Materials, TopCon, Hitachi, and ADE wafer inspection systems. They can also deposit uniform-sized process particles on wafers to create wet/dry-clean standards for improving cleaning system performance. Efficiency and throughput improvement of 0.5% to 10% for cleaning systems is possible with these advanced particle deposition tools from MSP. Uniform sized process particles of SiO2, Al2O3, TiO2, Si3N4, Si, Ti, W, Ta, Cu, etc. can be deposited on wafers to provide realistic particle/wafer adhesion so that wafer cleaning tools can be realistically evaluated. Both the 2300XP1 and XP2 systems feature recipe control and automatic multi-spot and multi-size deposition. Wafer loading and unloading is manual with the XP1, while the XP2 features automatic wafer transfer from open cassettes or FOUPS, permitting truly hands-off, fully automatic operation



FEATURES & APPLICATIONS

- High resolution, NIST (National Institute of Standards and Technology) traceable, DMA sizing and classification exceed proposed SEMI Standards 3094 protocol for PSL size accuracy and size distribution width.
- Advanced Differential Mobility Analyzer (DMA) technology featuring automatic temperature and pressure compensation for improved system stability and measurement accuracy.

- Calendar PM alerts to flat-panel display (FPD) to remind operator that maintenance is required.
- User-friendly recipe-controlled software
- Automatic deposition process provides multiple-spot deposition on one wafer, followed by self-clean and purge.
- Automatic nozzle positioning and wafer rotation allows a variety of deposition shapes to be created: multiple spot, ring-shaped, full-wafer deposition, and other custom-shapes.
- Automatic wafer handling provides fast, hands-free, computer handling for 200 mm and 300 mm wafers.
- CE Mark, Semi S2, S8, S14 compliant, SEMI standards compliant
- 30nm to 4.0µm PSL size deposition; 30nm to 1µm process particle size deposition.
- Four sonicating atomizers keep PSL spheres and process particles suspended in solution for effective and rapid deposition of up to 8 different PSL sizes and four different process particle materials in a single setup
- Dual DMA option permitting PSL sphere and process particle deposition from 30 nm to 1 µm
- Deposit process particle on wafers to provides realistic adhesion between particle and wafer surface for cleaning process development and cleaning system improvement to increase efficiency and through-put.
- Deposit PSL spheres on wafers to create calibration standards for KLA-Tencor, Applied Materials, TopCon, Hitachi, and ADE wafer inspection systems.
- Deposit PSL spheres and process particles on bare, film-layered, and patterned wafer to study influence of wafer surface, and particle refractive index on optical response of wafer inspection systems.

SPECIFICATIONS (subject to change without notice)

Please contact MSP for detailed product specifications.