

# P9000 Cluster System

The Solution to Reliable Coating and Developing

## Benefits

- Stacked modules offer wide range of flexibility
- Small footprint
- High-performance brushless motors for improved uniformity and reliability
- Precise edge bead removal

## Features

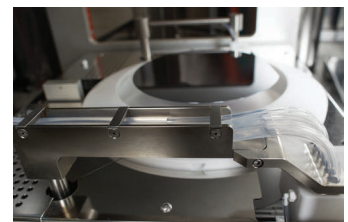
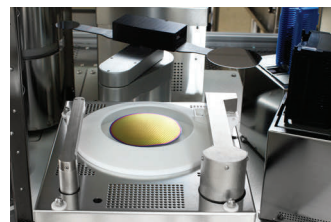
- Ability to process 50 mm - 300 mm substrates
- Run three wafer sizes without hardware change
- A central atmospheric robot with dual-end effector
- PC Windows-based operating system with smartPro GUI
- Barcode and recipe download capable
- CE Mark

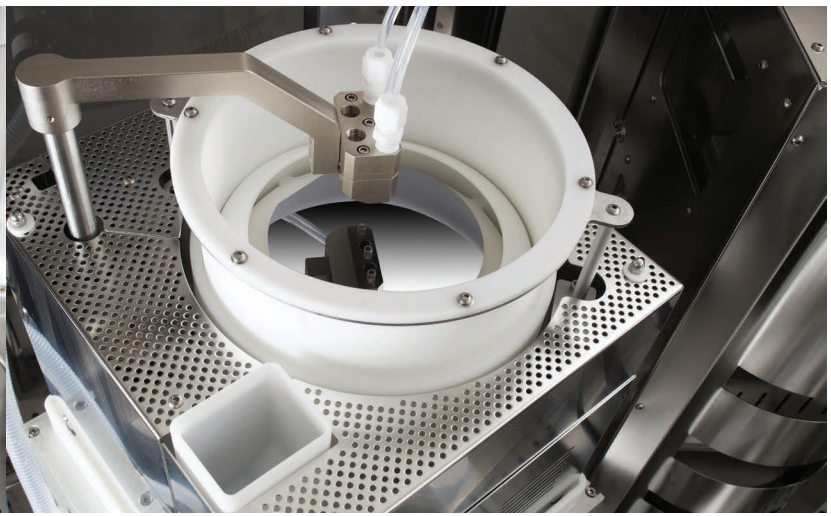
## Options

- Chemical cabinets
- Syringe dispense
- Remote chiller
- HEPA
- Environmental controls
- Exhaust controllers
- Fire suppression
- SECS/GEM compliance
- Contact C&D for more options

## Description

The P9000 Cluster System is a high-throughput, versatile wafer processing system that can be configured as a Coater, Developer, Vapor Prime, HPO, Chill Plate, etc. It can process a wide range of photoresist and photosensitive polymer applications. Its sophisticated system software, along with state-of-the-art hardware, allows the user to program hotplates at various bake temperatures, and prime, coat, and develop wafers in parallel. The system is also easily expandable to keep pace with business growth or process requirements.





### Coater module

Uniformity	Across wafer $\leq 25\text{\AA}$ , $3\sigma$ Wafer to wafer $\leq 30\text{\AA}$ , $3\sigma$ Multi-Layer (SW Station Reuse)
Interface	Windows-based PC with touchscreen panel
Dispense arm action range	Static – x axis (programmable) Dynamic – x axis (programmable) Vertical – Z axis (programmable)
PR Dispense Arm Nozzle	High resolution 5-Phase stepping motor with microstepping driver.
No. of dispenses	Up to five (5) dispenses
Spindle spin method	AC brushless servo motor with digital controller, 10 – 8000 RPM, 50K Acceleration
Spin increment	1 RPM
Top EBR	Separate arm for Top EBR. Programmable (0.10 mm increments or better).
Bottom EBR	Bottom EBR built-in catchup
Spin cup Spec	Low Turbulence, Built-in Vapor curtain dunker, metered solvent Self-cleaning catch cup Separate exhaust & fluids in process cup
Environment	Optional temperature, humidity and air flow control

### Alloy

Temperature range	50°C - to 500°C
Method	Atmospheric chamber / Special chamber for gases and nitrogen

### Vapor prime

Temperature range	25°C - 190°C
Method	Programmable and/or fixed proximity bake capability

### Chill plate

Temperature range	Controlled temp from ambient to 15°C
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### Hot plate

Temperature range	Ambient to 300°C
Temperature uniformity	+/-1% (across the wafer)
Temperature Rise/Time	From ambient to 150°C Stable temp - 10 min maximum / From ambient to 300°C - 20 min max
Temp display	Digital controller

### Developer module

Dispense arm action range	Static – x axis (programmable) Dynamic – x axis (programmable) Vertical – Z axis (programmable)
DI Rinse	Stationary low impact stream, optional DI water spray
Developer Solutions	Up to four (4)
Spindle spin method	AC brushless servo motor with digital controller, 10 – 8000 RPM, 50K Acceleration
Spin increment	1 RPM
CD uniformity	$\leq 0.35 \mu\text{m}$ , $3\sigma$ , $0.05\mu\text{m}$
Environment	Optional temperature, humidity and air flow control

### P9000 Technical Data

Feature Sizes	$\geq .35\mu$ Resist dependent and assumes temperature/humidity control within fab of $\pm 1.0^\circ\text{C}$ and $\pm 3\%$ relative humidity.
User Interface	Windows-based operating system with smartPro GUI
MTBF	$\geq 500$ hrs, or 12,000 wafers (Based on C&D's PM schedule)
MTRR	$\leq 1$ hour
Uptime	95% or better
Wafers Broken	1 in 10,000 wafers
Reliability	95% uptime in volume process manufacturing
System throughput	100+ wafers per hour (Configuration & Process Dependent)

System dimensions vary depending upon configuration.

