Apogee® 450 Spin Developer

With DataStream™ Technology

The Cee® Apogee® 450 Developer offers unmatched precision for up to 450-mm substrates and 14" LCD squares. Its high-torque drive ensures perfect control, eliminating process variability. Compact and durable, with user-friendly operation, the Apogee® 450 Developer delivers consistent, production class results to give your lab or fab a competitive edge.

Cost Effective Equipment

Serving the Semiconductor Industry Since 1987

BENEFITS

- ETL Listed via Intertek's Nationally Recognized Testing Laboratory
- Compact design for minimized footprint
- Enhanced logging
- Vacuum and lid interlock
- DataStream™ technology
- Durable benchtop design *also available in a flange/ deck mountable configuration*
- Optional X-Pro II workstation integrates equipment with an upper exhaust enclosure for process fume control.

BOWL DESIGN

- High-density polyethylene (HDPE) spin bowl for material compatibility
- Direct fanjet spray, side-angle puddle, and stream dispense options
- Integrated drain and exhaust ports
- Optional auto-nitrogen blow-off nozzle
- Optional auto-drain separator (solvent/aqueous)

PROGRAMMABILITY

- Full-color touchscreen graphical user interface (GUI)
- Supports unlimited user-defined program steps for each recipe
- 0.1 second step time resolution (9,999.9 seconds maximum step time)
- Spin speeds up to 6,000rpm
- Spin speed acceleration up to 30,000rpm/s unloaded
- Up/download DataStream™ process parameters via native USB and Ethernet ports
- Multiple simultaneous automated dispense capability
- In-process, bidirectional speed & acceleration control

PRECISION

- Substrate sizes: 450mm round; 14" x 14" square *(max)*
- Spin speed repeatability: 0.2rpm (per standard spin module)
- Spin speed resolution: 0.2rpm (per standard spin module)
- Acceleration resolution <0.2rpm/s
  - 0 to 30,000 rpm/s unloaded
  - 0 to 23,000rpm/s with a typical 300mm silicon wafer
  - 0 to 3,000rpm/s with a 350mm x 6mm round recessed spin chuck
  - 0 to 400rpm/s with a 14" x 14" x 0.05" photomask in a recessed chuck

RELIABILITY

- Industry leading uptime
- 1-year full warranty on parts and labor
- Complimentary remote technical support for the life of the product
- Application process assistance for the life of the product
- Indirect drive system protects the spin motor from contact with process chemicals and solvents

UTILITIES

- Voltage Ranges: 208-230VAC
- Power Requirements: 1440 Watts (6A) max
- Drain Port: 3/4" OD
- Exhaust Port: 1 ½” OD(2” OD A-X or X-Pro Models), 0.4” H2O @ 30CFM (100Pa @ 50CMH)
- Vacuum: <20” Hg (33kPa abs)
- N2/CDA (automated dispense): 70psi (482kPa)
- DI water for developer spray & backside rinse (if hard plumbed): <30psi (206.8 kPa)

DIMENSIONS

- 27 5/8” (701.7mm) W x 30 ¾” (781.1mm) D x 23 ½” (597mm) H
- Machine weight: 115lb (52.2kg) *excluding accessories*

DATASTREAM™ TECHNOLOGY: CONNECTING THE SEMICONDUCTOR INDUSTRY

DataStream™ technology gives you access to all of your connected Apogee® manufacturing equipment in one place to track, access, and modify your systems via a web browser. This technology provides manufacturers with the ability to process and visualize data in real time and search and export that data into a number of different formats.

Real-Time Process Information

- Constant feedback of process information for monitoring critical process parameters
- Streamlined interface between different process modules
- Visual cues on process status & health

Advanced Recipe Creation

- Seamless switching between basic and advanced recipe creation methods
- Plain-English recipe translation
- Predefined process commands
- Unlimited process steps
- Unlimited recipe storage

Environmental Monitoring

- Monitoring of temperature & humidity allows for stricter control of critical processes
- Set preconditions and tolerances for monitored parameters
- On-screen, colored visual cues for deviation from controlled specs

Data Logging & Export

- Export data logs into commonly readable formats for further analysis and process troubleshooting
- Increase process efficiency
- Identify process control deviations
- Analyze multiple processes for best known method (BKM) development

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