

Brewer Science® Cee® 300XD

Spray/Puddle Developer



The Brewer Science® Cee® 300XD spray/puddle developer combines an intuitive Windows®-based operating system, extremely accurate spin speed control, and an extremely high horsepower drive for aggressive acceleration. The 300XD spray/puddle developer offers direct fan-jet spray, side-angle puddle, and stream dispense options. These features combine to ensure the elimination of process variables for a large array of process chemicals and applications. The 300XD has a state-of-the-art user interface and has been designed specifically for 300-mm round substrates and large LCD squares up to 14" X 14".

Benefits

- ▶ PC control for enhanced interface capabilities and connectivity
- ▶ Enhanced lid-lift assist feature (gas spring opens $\geq 45^\circ$)
- ▶ Direct-angle continuous and/or side-angle spray puddle develop
- ▶ New streamlined design for minimized footprint
- ▶ Full-color, 7-inch touch screen display
- ▶ Highest horsepower drive (indirect) system in its class
- ▶ Compatible with stand alone exhausted cabinet (chemical storage)
- ▶ X-PRO Workstation integrates stand alone cabinet with an upper exhaust enclosure for creating mini-environment (monitors and data logs ambient conditions)

Developer Options

Spray, puddle and stream dispense options are offered on our Cee® Model 300XD. These dispense methods are normally used in conjunction with a pressure can dispenser which holds the developer.

Spray Dispense (Puddle/Direct)

This option utilizes two spray nozzles to apply developer solution and deionized (DI) water. It uses an open UHMW lid with spray nozzles mounted either outside the wafer plane, spraying inward from the center of the wafer out (puddle), or directly over the substrate for continuous (direct) spray applications.



- ▶ Uses 1-gallon pressure cans as reservoirs for developer solutions
- ▶ Can use a maximum of six spray nozzles
- ▶ Can be configured to accommodate up to four center puddle/direct dispenses

Stream Dispense (Puddle)

This option uses a standard automated center dispense option with pressure cans. It functions by "streaming" the developer and DI water onto the top of the substrate.

- ▶ Very economical
- ▶ Utilizes standard auto-dispense Lexan® lid or open developer lid
- ▶ Uses suck back dispense valves
- ▶ Minimizes material usage

DI Water Rinse

Both topside and backside DI water rinse options are available. This method of dispense is normally used in conjunction with a pressure can dispense or by using a house DI water supply.

Dimensions

- ▶ 27.75" (70.5 cm) W x 34.75" (88.3 cm) L x 20.25" (51.5 cm) H
- ▶ Machine Weight: ~115 lb (52.2 kg)
- ▶ Shipping Weight: ~250 lb (113.4 kg)

Programmability

- ▶ PC controlled
- ▶ Touch screen interface and display
- ▶ 250,000 spin process programs onboard
- ▶ Virtually unlimited steps per spin program
- ▶ 0.1 s resolution for step times with a range of 0 to 9,999.9 s /step
- ▶ Spin speed: 0 to 6,000 rpm (4000 rpm and 3000 rpm option available for additional acceleration capabilities)
- ▶ Spin speed acceleration:
 - 0 to 30,000 rpm/s unloaded
 - 0 to 23,000 rpm/s for 300 mm substrate
 - 0 to 3,000 rpm/s for 350 mm x 6 mm round recessed spin chuck
 - 0 to 400 rpm/s for 14" x 14" x 0.250" photomask recessed chuck
- ▶ Connectivity: USB/Ethernet port for communication of uploading/downloading process parameters with offline firmware standard (offline recipe number and steps unlimited)
- ▶ System capable of controlling third-party host software for high-end IDI/Cybor/Mykrolis positive displacement pumps
- ▶ Simultaneous trigger of multiple (up to 16) automated dispense nozzle capability
- ▶ Bidirectional speed control/oscillating chuck
- ▶ Iteration software (recipe looping)
- ▶ Dispense or component outputs: 50
- ▶ Security: password protection available at no charge
- ▶ In-process/dynamic speed/acceleration control

Precision

- ▶ Spin speed repeatability: < 0.2 rpm
- ▶ Spin speed resolution: < 0.2 rpm
- ▶ Substrate sizes: < 1 cm to 450 mm round; 14" x 14" square

Reliability

- ▶ Indirect drive system protects the spin motor from accidental contact with process chemicals and solvents
- ▶ Vacuum and lid interlock standard
- ▶ Exceptional reliability and uptime
- ▶ 1-year full warranty on parts and labor
- ▶ Free remote technical support (phone, email, fax) for the life of the product
- ▶ Application process assistance for life of the product

Bowl and Exhaust Hood Design

- ▶ Stainless steel construction
- ▶ Optional ETFE spin bowl for material compatibility
- ▶ Optional polyethylene/Teflon® bowl non-disposable bowl liner
- ▶ Closed and optional open lid design for process flexibility
- ▶ Optional polyethylene/Teflon® splash ring
- ▶ Drain and exhaust ports located in the bottom of bowl
- ▶ Optional nitrogen purge for an inert spin environment
- ▶ Optional auto nitrogen blow-off nozzle
- ▶ Optional auto-drain separator (solvent/aqueous)

Utilities

- ▶ Power requirements: 200-240 VAC, 1350 watts, 7.0 amp
- ▶ Drain port: 1" OD
- ▶ Exhaust port: 1.5" OD
- ▶ Vacuum: 20-25" Hg
- ▶ Exhaust: 20-50 cfm at 0.2" water
- ▶ Nitrogen or CDA (for automated dispenses): 70 psi
- ▶ DI water for developer spray and backside rinse (if hard-plumbed) max flow 80 psi regulator to be supplied by purchaser



Also available with direct spray dispense chimney hood configuration (shown)

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F.6.6.7051.A2 Effective Date: 03/28/2012