

KW-4X-II

PILOT-SCALE AUTOMATED SPIN COATER

The KW-4X-II is an automated pilot-line spin coating and developing system engineered for substrates from 5 mm to 200 mm. It integrates a 4-channel automated fluid dispense system with suck-back functionality, a 360-degree programmable robotic arm, Edge Bead Removal (EBR), and an integrated substrate heating stage up to 200°C for complete process flow execution.



AT A GLANCE

Applicable Substrate **5 - 200 mm**

Speed Range **10 – 12,000 rpm**

Fluid Dispense **4-Way Auto-Dispense**

Robotic Arm **0 - 360° Positioning**

Heating Range **RT – 200°C**

Multi-Channel Automated Dispense

Standard configuration includes a 4-channel fluid dispense and developing module with dedicated suck-back control to prevent nozzle dripping.

Robotic Arm Substrate Handling

Features a 360-degree programmable mechanical arm for precise dispense-head positioning across the substrate area.

Double-Sided Edge Bead Removal

Equipped with a dual-nozzle Edge Bead Removal (EBR) mechanical arm for simultaneous front and back side edge cleaning.

Integrated Substrate Heating

Supports in-process substrate heating up to 200°C, achieving 100°C in 1 second and 200°C in 2 seconds for thermal-curing workflows.

Technical Specifications

Process Capabilities	
Applicable Substrate	5 mm to 200 mm
Glue Coating / Developing Function	4-way automated dispense/develop with suck-back function
Speed Adjustment Range	10 – 12,000 rpm
Acceleration Range / Profile	10 – 10,000 rpm/s (Adjustable) / Lifting auxiliary mechanism
Motor Speed Stability / Uniformity	± 1 rpm / ± 1 %
Thermal Processing Module	
Heating Range	Room Temperature to 200°C
Heating Rate	To 100°C in 1s ; To 200°C in 2s
Automation & Controls	
Robotic Arm	0 - 360 Degrees Arbitrary Positioning
Edge Bead Removal (EBR)	With 2 EBR Front and Back Side Edge Removal Mechanical Arm
Wafer Holder / Human-Machine Interface	Special Anti-Glue Ingress Wafer Holder / 8-Inch Touchscreen
Data Protection	Default with Power Failure Protection Function
Power & Facilities	
Power Supply / Power (Coater)	AC 100–250 V, 1-Phase, 50/60 Hz / 5 kW
Vacuum Pump Type / Power	SC-550V Oil-Free Pump / 350 W
Power Supply (Vacuum Pump)	AC 220V (Standard) / AC 110V (Optional)
Pumping Speed / Max Vacuum	≥ 60 L/min / -85 kPa
System Weights	50 kg (Coater) / 9 kg (Pump)
Operating Environment / Acoustics	0 - 40 °C / < 85% RH (Non-condensing) / Acoustic Level: ≤ 55 dB
Warranty Period	1 Year

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