

KW-4L

HEAVY-DUTY SPIN COATER

The KW-4L is an industrial-grade spin coater designed for large-area substrates up to 200 mm (optional 600 mm) and continuous 24/7 operation. The processing chamber is fully constructed from solid PTFE for exceptional chemical compatibility. Control is facilitated via an 8-inch touch interface and RS485 MODBUS-RTU protocol for seamless external automation integration.



AT A GLANCE

Max Substrate	Ø 200 mm (Up to 600 mm Opt)
Speed Range	10 – 12,000 rpm (Opt: 20k)
Chamber Material	Solid PTFE
Communication	RS485 / MODBUS-RTU
Interface	8" Touch Screen

Solid PTFE Processing Chamber

The entire processing chamber is constructed from Polytetrafluoroethylene (PTFE), ensuring superior corrosion resistance against aggressive chemicals and solvents.

Industrial Automation (RS485)

Equipped with an RS485 interface utilizing standard MODBUS-RTU protocols. Includes free remote communication software for full system integration.

24/7 Continuous Operation

Engineered with a heavy-duty motor drive capable of extreme acceleration (up to 30,000 RPM/s) and sustained 24/7 uninterrupted industrial operations.

Comprehensive Safety Interlocks

Integrates fluid intrusion protection and a real-time vacuum interlock to automatically inhibit operation during insufficient adsorption force.

Technical Specifications

Process Capabilities	
Substrate Compatibility	5 - 200 mm (Standard) / Up to 600 mm (Optional)
Speed Range	10 – 12,000 rpm (Standard) / Up to 20,000 rpm (Optional)
Acceleration Profile	10 – 30,000 rpm/s (Adjustable)
Rotation Direction	Bidirectional (Forward / Reverse)
Speed Stability	± 1 rpm
Spin Coating Uniformity	± 1 %
Control System & Interface	
Human-Machine Interface (HMI)	8-inch Touch Screen
Communication Interface	RS485 (Standard MODBUS-RTU protocol) & USB
External Peripherals	Supports wireless mouse/keyboard and USB disk storage
Data Storage	Unlimited recipes (Standard: 15 speed steps per recipe)
Step Time	0 – 10,000 seconds per step
Data Protection	Power-down memory protection function
Power & Vacuum System	
Power Supply (Spin Coater)	AC 100–250 V, 1-Phase, 50/60 Hz
Power Consumption (Coater)	650 W
Power Supply (Vacuum Pump)	AC 220V Standard / AC 110V Optional
Vacuum Pump Model	SC-550V (350 W)
Pumping Speed / Max Vacuum	≥ 60 L/min / -85 kPa
Facilities & Mechanical Data	
Dimensions: Coater Unit (W×D×H)	340 mm × 500 mm × 250 mm
System Weight	18 kg (Coater) / 9 kg (Pump)
Acoustic Level	≤ 55 dB
Operating Environment	0 - 40 °C / < 85% RH (Supports 24/7 Uninterrupted Operation)
Warranty	1 Year