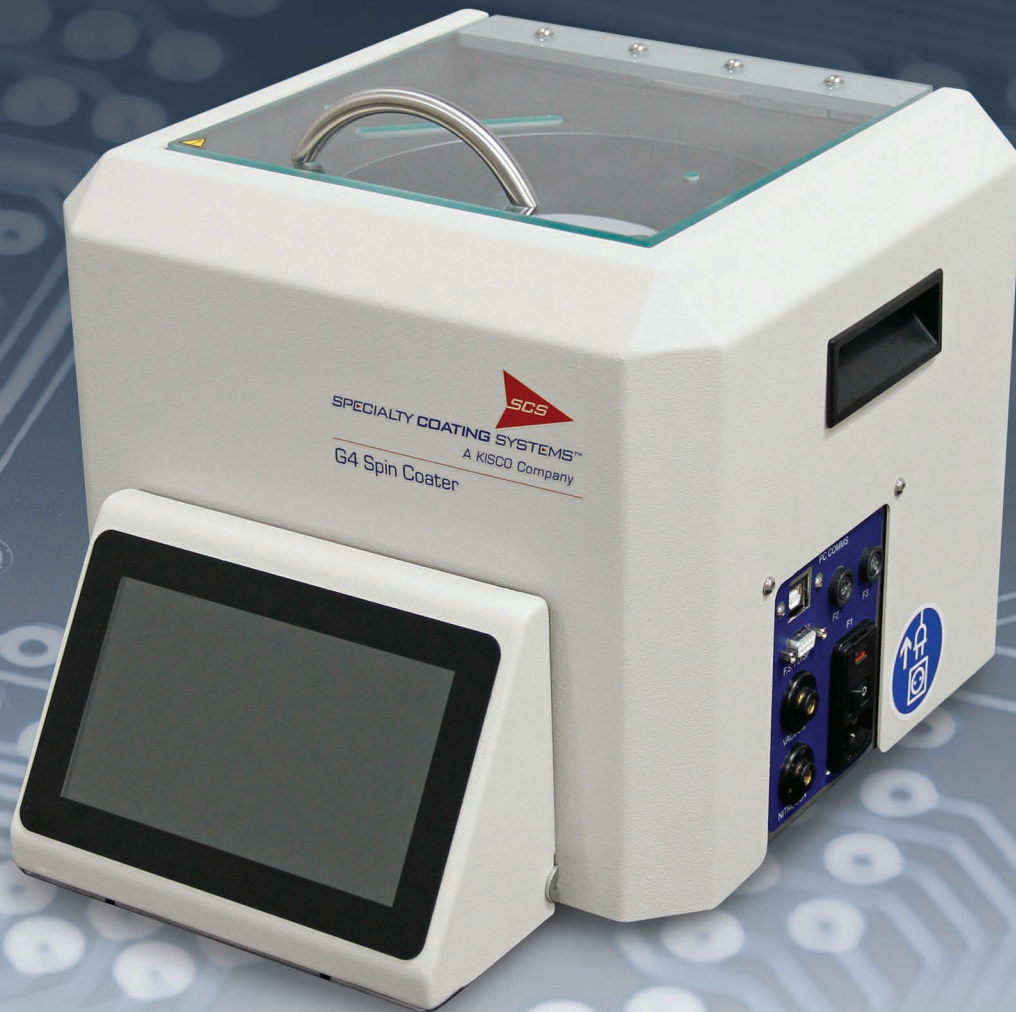




SCS G4 SPIN COATER SERIES



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SCS

SCS G4 SPIN COATER SERIES

The SCS G4 Spin Coater series sets the standard in operating precision and programming flexibility, with a high level of rotation accuracy and repeatability along with precise acceleration and deceleration control. The G4 series accurately applies liquid coating materials such as photoresists, polyimides, metallo-organics, dopants and silica films on planar substrates. Fully programmable G4 Spin Coaters can store and execute up to 30 programs with 20 steps each, providing excellent flexibility. Designed with user convenience in mind, the spin coaters feature a removable touchscreen, making them ideal for use in fume hoods and glove box configurations.

PROGRAM SPECIFICATIONS AND PROFILE

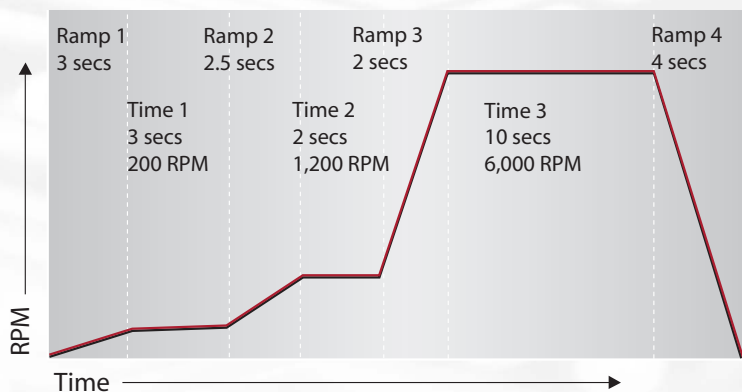
Figure 1 shows a representative example of a coating cycle that is easily and quickly programmed, saved and executed. Each step of the cycle can be defined in the range of 0 to 9,999 RPM, with ramp times from 0.1 to 25.5 seconds. A single step may have a dwell time of up to 999 seconds, and coating cycles may be interrupted by the operator at any time. Ramp-up time is dependent on the chuck size and substrate weight.

G4 SERIES PERFORMANCE

Characteristic	Range	Tolerance
Rotational Speed	0 to 9,999 RPM in 1 RPM increments	± 1 to 3 RPM full scale
Acceleration/ Deceleration Time*	0.1 to 25.5 seconds in 0.1 second increments	± 0.05 seconds
Dwell Time	0 to 999 seconds in 0.1 second increments	± 0.05 seconds
Dispense Time (Optional feature)	0 to 25.5 seconds in 0.1 second increments	± 0.05 seconds
Acceleration/ Deceleration Linearity		± 0.1 percent

* Size and weight of substrate will affect acceleration values.

FIGURE 1: Representative Coating Cycle



G4 SERIES CONTROL PANEL FEATURES

- Removable touchscreen
- Recipe number
- Speed
- Remaining process time
- Start and stop

OPTIONAL SOFTWARE

When G4 Spin Coaters are paired with SCS' proprietary Windows®-compatible software, users are able to control their system via Bluetooth® wireless communication. This feature enables external programming, profile storage, diagnostics, vacuum control, low-speed centering and a programmable park position.



G4 Removable Touchscreen



G4 Spin Coater

SCS MULTI-DISPENSE

An SCS G4 Spin Coater coupled with the SCS Multi-Dispense enables research and development laboratories to easily and efficiently develop and refine coating applications for a variety of uses. SCS's Multi-Dispense allows users to dispense up to four liquid materials to an SCS spin coater (three with the use of N₂). Materials can include coatings, solvents and cleaning solutions in addition to N₂ for blow-off or drying. The Multi-Dispense eliminates the need for time-consuming cleaning and change-over, while providing accurate and controlled dispensing of coatings that you have come to expect from SCS.

SCS MULTI-DISPENSE SPECIFICATIONS

Control Unit

- Powered and operated by spin coater
- Controls up to four dispense modules
- Nitrogen Supply: 30 psi/2.1 bar, >1 cfm/0.472 L/s
- Weight: 5 lb/2.3 kg

Stainless Steel Dispense Module

- 1 qt (0.95 L) stainless steel
- Pneumatically-controlled material valve
- Maximum pressure: 15 psi/1.034 bar
- Various needle sizes available
- Luer lock needle port

HDPE Dispense Module

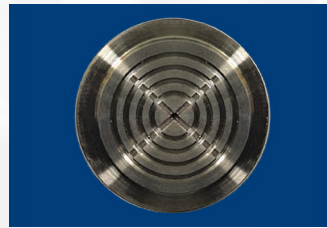
- 2.1 qt (2 L) HDPE
- Pneumatically-controlled material valve
- Maximum pressure: 5 psi/0.344 bar
- Various needle sizes available
- Luer lock needle port



SCS Multi-Dispense

VACUUM CHUCKS

Stainless steel and hard anodized aluminum accessory chucks are available for various substrate types and dimensions. Customers can choose from three standard options or request custom chucks tailored to their specific needs. Chuck components are precisely machined to close tolerances for flatness, rigidity and longevity. The active surface of a vacuum chuck must be entirely encompassed by the substrate, and fragile substrates should be supported across their entire surface.



Type CS:

Flat Surface Cross and Scroll

Used to hold a thin, planar substrate such as silicon, glass or germanium. Evenly distributes vacuum force on the substrate.



Type H:

O-Ring Vacuum-Holding

Used to hold relative heavy substrates, such as glass, quartz, ceramic and metal. Includes O-ring vacuum seal.



Type L:

O-Ring Vacuum-Holding with Mechanical Locating Fingers

Designed for heavy, large or asymmetrical substrates. Guide fingers assist in positioning and holding substrates. Includes an O-ring vacuum seal.

Note: Delrin® and PTFE chucks are available per special order. Delrin is a registered trademark of E.I. du Pont de Nemours and Company.

G4 SERIES SPECIFICATIONS

Program Storage	Up to 30 programs, 20 steps each
Bowl Diameter	8 in / 20.3 cm 12 in / 30.5 cm
Power Input	120/230 VAC, 50/60 Hz, 1Ø
Vacuum Input	Minimum 17 in Hg / 430 mm Hg (approx. -8.3 psig) Maximum 25 in Hg / 635 mm Hg (approx. -12.3 psig) O.D. fitting: 0.25 in / 0.635 cm
Purge Input	0.55 CFM at 2 psi / 14.2 CLM at 0.35 kg/cm ² clean/dry air or nitrogen
Dimensions (W x D x H)	8 in 12 in 12.1 x 15.6 x 11.7 in / 30.8 x 39.7 x 29.8 cm 16.1 x 19.8 x 11.7 in / 41.0 x 50.4 x 29.8 cm
Optional Features	• Windows®-compatible software that features Bluetooth® wireless communication • Foot pedal • Fume exhaust adapter • External vacuum pump • Manual dispense • Automated dispense (SCS Multi-Dispense) • Stainless steel dispense module with 50 psi maximum pressure (SCS Multi-Dispense)

INNOVATIVE SOLUTIONS FOR ADVANCED TECHNOLOGIES

With over 50 years of experience and locations around the world, Specialty Coating Systems is the global leader in conformal coatings and technologies. This extensive coating and application experience is leveraged on each and every customer project, including the industry-leading systems that SCS designs and manufactures. From conformal coating, dispensing and cure systems to ionic contamination test systems, SCS equipment is used in environments that range from university and research labs to high-volume production facilities. SCS' proactive approach to production and quality requirements—testing, validating, documenting and processing—enables customers and their advanced technologies to meet the most challenging industry specifications and quality requirements.

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