

SCS P-6708/6712
*Portable Precision
Spin Coaters*



Precise, Repeatable and Automated Spin Coating Results

SCS P-6708 (8-inch bowl) and P-6712 (12-inch bowl) desk top precision spin coating systems are designed for laboratory use and low volume production coating applications. They are designed to accurately apply a variety of liquid materials to planar substrates.

- Accurately apply photoresists, polyimides, metallo-organics, dopants, silica films and most organic and aqueous solutions.
- Compact units operate under programmable logic control to store and execute operator-selectable spin coat profiles.

- Acceleration/deceleration rates calculated automatically based on selected ramp times and RPM values.
- Coating functions programmed and controlled by means of front panel keypad and display. Optional start/stop foot control.
- Optional features include programmable dispenser for two coating materials, and interchangeable vacuum chucks.



Change Preset

Display Message

Optional Modes

Cursor Direction

Increase/Decrease Value

Clear/Enter

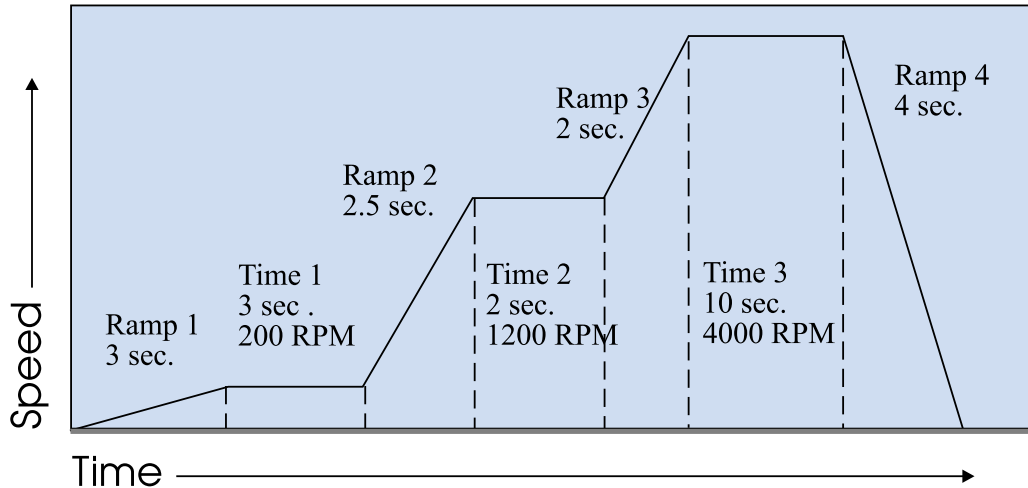
Front Panel Keypad

All functions are controlled through a ten-key keypad on the front panel. Primary keys (blue background) control spin coater operating modes, and secondary keys (gray) are used to control cursor movement and set displayed values.

Back Panel Features

The spin coater power switch is located on the back of the unit, along with a connector for the optional start/stop foot pedal control, and vacuum and air input ports.

Spin Coat Programming - Profile Example



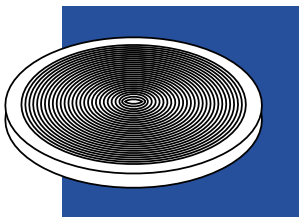
The spin coating profile shown here is a representative example of a cycle that can be easily and quickly programmed, saved and executed using the SCS system. Each phase of the cycle can be programmed in the range of 100 to 8,000 RPM, with ramp dwell times from 1 to 30 seconds. A single recipe may have a total time of up to 999 seconds, and a coating cycle can be interrupted by the operator at any point. SCS spin coaters - P-6708/P-6712 - are pre-programmed with 3/15 recipes that are easily edited.

Vacuum Chucks

Chucks are available in several materials including stainless-steel (standard), hard anodized aluminum, DELRIN®, and Teflon®. Chuck size is specified by the user to accommodate substrate dimensions. These components are machined to close tolerances to provide an exceptionally flat, rigid surface. A cross-scroll pattern distributes vacuum pressure across the entire mounting surface.

Chuck selection is based on substrate size and rigidity. SCS recommends a **chuck diameter ¼ to 1 inch less than the substrate diameter**. In the case of flexible or fragile substrates, or surfaces that are to be wiped or brushed during cleaning, the entire surface should be supported by the chuck.

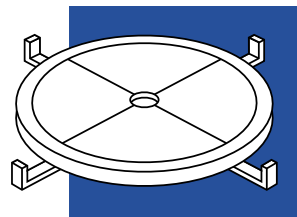
1. Type CS



Flat Surface Cross and Scroll Design Vacuum Chuck

Type CS - Used to hold a thin, planar surfaced substrate such as silicon, glass or germanium on a spinning shaft for maximum rotational speed. Has cross and scroll design.

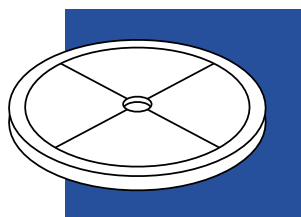
3. Type L



O-Ring Vacuum Holding Chuck with Mechanical Locating Fingers

Type L - Designed for heavy, large or unsymmetrical substrates. Guide fingers assist in positioning and holding of the substrates. An O-ring seal is also provided.

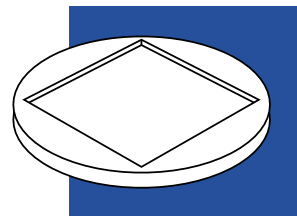
2. Type H



O-Ring Vacuum Holding Chuck

Type H - Used to hold relatively heavy substrates such as glass, quartz, ceramic and metal. Features O-ring vacuum seal.

4. Type R



Recessed Fixture Chuck — Custom-manufactured, requires user's precise substrate dimensions and tolerances.

Type R - Features custom milled recess for square or rectangular substrates. This design achieves uniform coating across the entire substrate.

Spin Coater System Specifications

Program storage	Model P-6708 - 3 individual profiles (recipes), consisting of four steps per profile (three ramp up and hold steps, one ramp down step) Model P-6712 - 15 individual profiles (recipes)
Bowl size	Model P-6708 - 8 inches in diameter, PTFE coated Model P-6712 - 12 inches in diameter, PTFE coated
Chuck rotation speed.....	Variable, 100-8,000 RPM
Ramp time.....	Variable, 1 to 30 seconds
Hold time	Variable, 0-999 seconds
Acceleration/Deceleration.....	Ramp times from 1.0 to 30 seconds
Screen display	Profile number, spin speed, process time remaining
Power input	115 VAC, 60 Hz, 8A, single phase (international voltages available)
Vacuum input	17 in. to 25 in. Hg, (430 to 635mm) Hg $\frac{1}{16}$ in./0.25 in. (.635cm) outside diameter fitting
Purge input.....	0.5 CFM @ 5 psi (14.16 CLM @ .035 kg/cm ²) air or nitrogen, 5 psi maximum (required for operation)
Dimensions.....	13.25in. W x 17in. D x 11.5in. H (33.5cm X 43cm X 29.25cm)



Photoresist Fluid Dispenser

- Functionally integrated with P-6700 series spin coaters
- Time/pressure dispensing via interchangeable Luer Lock needles
- Cleaning, N2 blow-off and dispensing accomplished at 0-10 psi regulated pressure
- Adjustable dispensing arm fitted with three needles
- Solvent dispensed at angle to remove bead build-up

Dispenser Specifications

Size	13.25in. W X 17in. D X 14in. H (33.5cm X 43cm X 33cm)
Dispense arm height.....	18in. (45.72cm)
Power input	110 VAC (international voltages available)
Nitrogen purge.....	0.5 CFM @ 5 psi (14.16 CLM @ .035kg/cm ²) air or nitrogen, 5 psi with interlock
Pot pressure	Air/Nitrogen, 30-70 psi (2.1 to 4.9kg/cm ²)
Construction	Stainless-steel fittings and valves
Dispense line	1/16in./0.0625in. (0.158cm) inside diameter