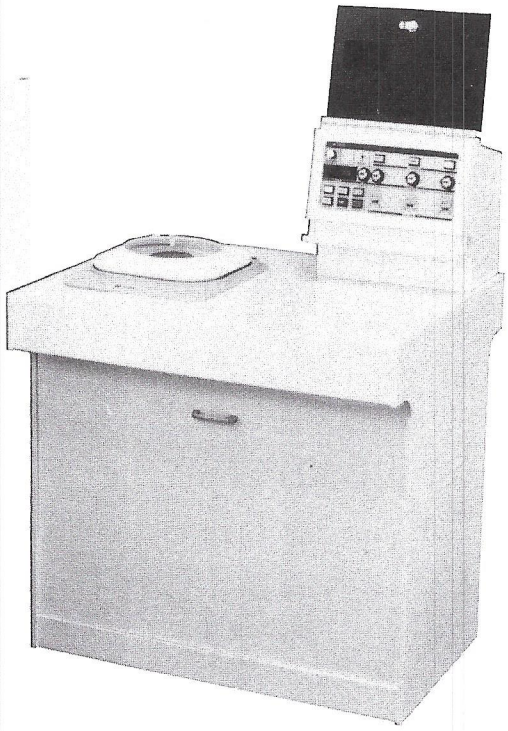
Model 5110C
Single Chuck Coater



APPLICATIONS

- Positive resist coatings on wafers, masks and substrates
- Negative resist coating on wafers, masks and substrates
- PMMA and E-Beam resist coating
- Silicon, GaAs, InP and other semiconductor materials
- Polyimide coatings on wafers, masks and substrates
- Photosensitive polyimide coating
- Multi-layer resists

FEATURES

- Single chuck for wafers, masks or substrates
- Solitec proprietary diaphragm type dispense pump
- 100Å, 3 sigma, full radius uniformity across a wafer
- Selectable process functions
- Downflow exhaust system for backsplash control
- N_2 motor purge and interlock
- Vacuum interlock on wafer chuck
- Optional auto solvent dispense for HMDS
- 5 gallon drain bucket with exhaust
- Closed loop servo speed control for tight process control
- 1,000 to 40,000 rpm/sec acceleration
- High uptime, easy maintenance design
- Polypropelene waste container
- Digital tachometer with direct optical encoder
- ± 10 rpm spin speed control
- Solvent dispense before coating (optional)
- N_2 blow-off (optional)
- One wafer chuck and loading paddle included

PRODUCT DESCRIPTION

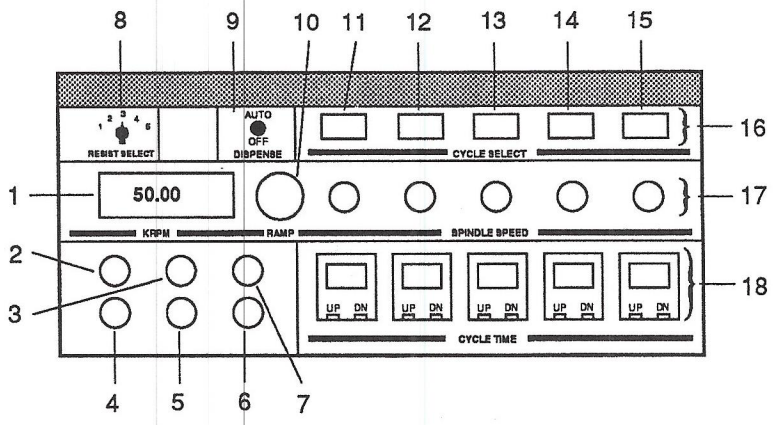
The 5110C is a manual load/unload spinner with automatic resist dispensing, spin timing and a 2-speed spread control. The system dispenses a selected amount of resist at low spin speed. A high-speed spin stretches the resist to its final thickness. The quantity of resist dispensed, spindle speeds, dwell and spin times are all variable and can be selected in advance. This allows the user to achieve predictable results, time and time again. An exhaust fan is mounted under the process bowl to allow continuous exhaust flow around the process area. A side mounted belt drive motor with N_2 purge, keeps solvents away from all moving parts. The Solitec diaphragm pump allows for accurate dispense volumes every time, and the adjustable teflon valve guarantees accurate and repeatable suckback.

SYSTEM SPECIFICATIONS

Wafer Handling
Manual with loading paddle to center wafer
Solvent Dispense
Pressurized tank required
Substrate Sizes (Max.)
9" round, 6" square, 9" diagonal rectangular
Tachometer
Digital readout from optical encoder
10 rpm resolution
Acceleration
Variable from 1,000 to 40,000 rpm/sec
Process Control
Digital timers with manual programming
Relay logic
Time
Variable from 1 to 999 seconds in 1 second increments
Resist Dispense
Automatic Teflon diaphragm pump with precise dispense adjustment; 0.5 to 38 ml±1%; viscosity 4 to 10,000 centistokes; separate drawback adjustment
Speed Control
Closed loop servo with ±10 rpm speed control
Adjustable from 200 to 10,000 rpm
Digital reference on spin and spread speeds
Standard Process Sequence
Resist coat (static or dynamic)
Spread
Spin

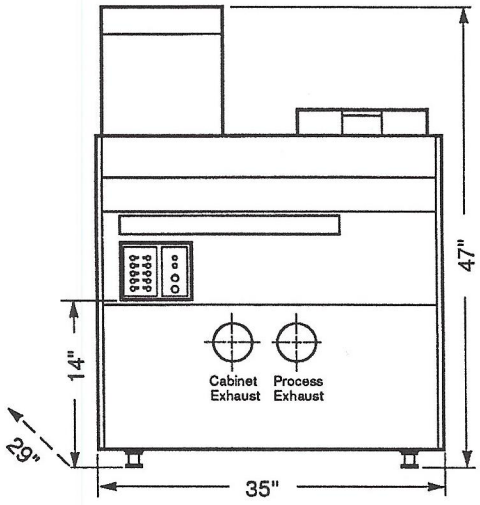
SYSTEM CONTROL PANELS

1. Digital Tachometer
2. Power ON/OFF
3. Vacuum ON/OFF
4. Start
5. Emergency Stop
6. Motor Purge Interlock
7. Vacuum Interlock
8. Resist Select
9. Dispense AUTO/OFF
10. Spindle Acceleration
11. Solvent (optional)
12. Nitrogen (optional)
13. Resist Dispense
14. Spread
15. Spin
16. Cycle Select
17. Spindle Speed
18. Digital Timers



FACILITIES AND INSTALLATION SPECIFICATIONS

Facilities	Flexible Tubing O.D.	5110C
Nitrogen – SCFM at 60 PSI	1/4"	20
Vacuum– Inches HG @ .20CFM	1/4"	20"
Power Volts		115V
Amps		8 Amp
Process Exhaust – SCFM at .5" of water	4.0"	80
Cabinet Exhaust – SCFM at .5" of water	4.0"	100
Shipping Weight		Approx. 250 lbs.



REAR VIEW

PROCESS OPTIONS

Option A - P/N 5110C-1
N_2 Spin
Resist dispense
Spread speed spin
Final high speed spin

Option B - P/N 5110C-2
Solvent Dispense
(Tank required)
Spin dry (No N_2)
Resist dispense
Spread speed spin
Final high speed spin

Option C - P/N 5110C-3
Solvent dispense (tank required)
N_2 Spin
Resist dispense
Spread speed spin
Final high speed spin

EQUIPMENT OPTIONS

- Extra Resist Pumps – P/N 0967
  Note: The 5110C can have up to total of 4 dispenses
  Example: You can have 4 resist dispenses w/no N_2 blow or solvent dispenses **or** 2 resist dispenses and 1 solvent and 1 N_2 blow.
- 3 gallon stainless steel tanks with metal sheathed teflon supply lines for solvents
  P/N 0066 For HMDS, and Xylene with Viton seals
  P/N 0070 For N-Butyl Acetate, Acetone, EGMEA and Alcohols with EPR seals. See page 67 for chemical compatability table.
- Extra loading Paddle
- Spares Kit – P/N 001525
- Pre-pump filter for positive or negative resist – P/N 0255
- Additional vacuum chucks – see pages 64 and 65
- Small volume, disposable cartridge dispense system for multiple dispense applications