



# SSC-600

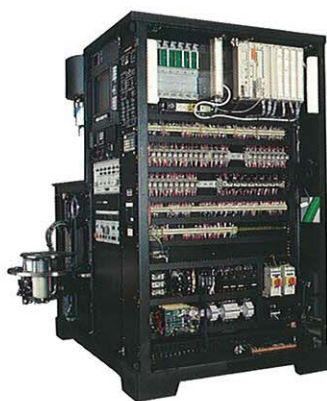
## SPUTTERING SYSTEMS

The SSC-600 Sputtering System incorporates upper and lower base plates for sputter up or sputter down operation. Substrates and stations are accessible from the top or bottom of the process chamber. Lower baseplate swings out for access through cabinet doors. Upper baseplate is elevated for substrate access and may be rotated outward for station access.

The SSC-600 is provided with

up to four DC or RF round cathodes. System features include a single plane, multi-substrate rotating fixture and a rotating shutter for predeposition and positive thickness cutoff control. The system utilizes 8-inch pumping stack components.

A built-in electronics rack assembly located alongside the chamber access doors contains all system controls. Customer has choice of computer or Autotech control option.



Integrated electronics cabinet shows ease of access

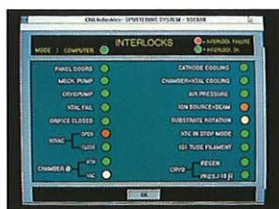


SSC-600 System controls

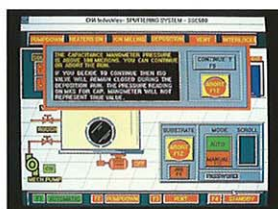


Substrate carrier swings out for loading

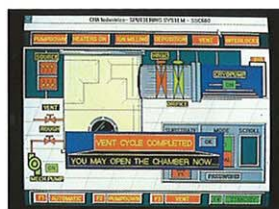
## Deposition Process Display Screens



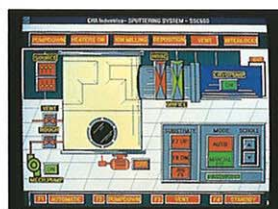
Interlocks and status



Fault screen and troubleshooting guide



Process chamber before pump down



Process chamber after pump down



Run aborted

# SSC-1000

## SPUTTERING SYSTEMS

The SSC-1000 Sputtering System incorporates upper and lower base plates for sputter up or sputter down operation. Base plates move out of cabinet for substrate loading and station access. System cabinet doors allow for through-the-wall mounting of the system.

The SSC-1000 is a multi-station system and may be configured with up to four DC or RF round cathodes. System features include a single plane, multi-substrate rotating fixture and a rotating shutter for predeposition and positive thickness cutoff control. The system utilizes 12-inch pumping stack components.



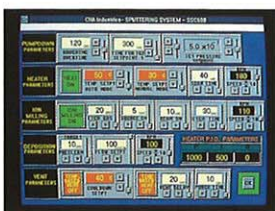
SSC-1000 ready for deposition



Substrate carrier rolls out for loading



Upper cathode/fixture plate swings out for service



Vent cycle

Programming system and process



**SSC-600**



**SSC-1000**



**SUPERIOR SPUTTERING FEATURES**

|  |                               |                     |
|--|-------------------------------|---------------------|
| Sputter up                               |                               |                     |
| Sputter Down                             | ■                             | ■                   |
| Sputter Side                             |                               |                     |
| Dual, Sputtering & evaporation           |                               |                     |
| Rectangular cathodes, RF or DC           |                               |                     |
| Round cathodes, RF or DC                 | Up to 4                       | Up to 4             |
| Co-deposit                               | ■                             | ■                   |
| Bias, RF or DC                           | ■                             | ■                   |
| Substrate heating, 360°C, multi-element  |                               |                     |
| Substrate heating, station               | ■                             | ■                   |
| Sputter etching                          | ■                             | ■                   |
| Ion beam pre-clean/etch                  | ■                             | ■                   |
| Cathode to substrate spacing, adjustable | ■                             | ■                   |
| Moving substrates                        | ■                             | ■                   |
| Fixturing Rotating Disk                  | STD                           | STD                 |
| Fixturing Rotating Dome                  |                               |                     |
| Fixturing Flat Planetary 3 or 4          | OPT                           | OPT                 |
| Fixturing Dome Planetary 3 or 6          |                               |                     |
| Fixturing Adjustable angle planet        |                               |                     |
| Fixturing Vertical Drum with pallets     |                               |                     |
| Shutter(s)                               | Rotating disk, flag           | Rotating disk, flag |
| Film uniformity*                         |                               |                     |
| Ultimate vacuum                          | ■                             | ■                   |
| System 10 <sup>9</sup> Torr              | ■                             | ■                   |
| Chamber 10 <sup>8</sup> Torr             | ■                             | ■                   |
| Process chamber                          | 14" x 19.5" D                 | 14" x 28" D         |
| Pumping—cryo, turbo, or diffusion        | ■                             | ■                   |
| Mechanical pump min. CFM                 | ■                             | ■                   |
| Molecular sieve trap                     | ■                             | ■                   |
| High vacuum valve, vertical seal         | 8"                            | 12"                 |
| Foreline/roughing valves, vertical seal  | 3"                            | 3"                  |
| Cold trap LN <sub>2</sub> , pump trap    |                               |                     |
| LN <sub>2</sub> level control            | ■                             | ■                   |
| Ionization gauge control                 | ■                             | ■                   |
| Gas controls                             | ■                             | ■                   |
| Cathode observation port(s)              | ■                             | ■                   |
| RGA port                                 | ■                             | ■                   |
| Water                                    | 2 GPM                         | 3 GPM               |
| Air                                      | 90-125 psig                   | 90-125 psig         |
| Footprint                                | 64.25"W x 44.625"D x 71.625"H | 68"W x 54"D x 72"H  |

\* Fixture dependent