

## Annexure - I

### Specifications for Sputter Coater – Automatic

1. The standard working sputter chamber should be of hard heat – resistant glass type material whose dimensions should be minimum 120 mm diameter & 120 mm height.
2. The base – plate of working chamber should contain the large area pumping port and a feedthrough port for the optional film thickness monitor.
3. The specimen table should hold up to 12 samples of diameter ½” (12.5mm). The height of the table must be adjustable.
4. Standard configuration should be complete, includes already the Au – target as standard.
5. The sputter head should be hinged top – plate type having planar magnetron sputtering system. The standard gold target of dimensions 57 mm diameter 1 mm thickness must be supplied with instrument. The target material could be changed quickly and easily.
6. The control system should be digital and programmable. The complete operation cycle should be under microprocessor control with user defined inputs to control sputtering current and coating time displayed on front panel. Gas & purge and leak functions with must be automatic process sequencing.
7. It should have anti – vibration, high performance and reliable pumping system that allow very fast pumping time. Pump down time to 0.1mb is 20/25 sec with 3.6 m<sup>3</sup>/hr and ultimate pressure up to 5 x 10<sup>-3</sup>mb.
8. The Pirani gauge and analogue meter for precise measurement of vacuum level down to 0.001mb. The same analogue meter measures the current during sputtering.
9. It should be independent power (sputtering current) and Ar pressure settings. The Ar pressure change must not affect the sputtering current. Current control independent of vacuum. Continuous variable current between 10 and 40 mA.
10. The manual must be delivered together the equipment to install and use the equipment.
11. It must be easy up-gradable and compatible with Film Thickness Monitor for measuring the final layer thickness with a resolution (precision) better than 0.1 nm.
12. After sales support or local support is required.