



SEMCOATER

COATING SOLUTIONS FOR ELECTRON MICROSCOPY



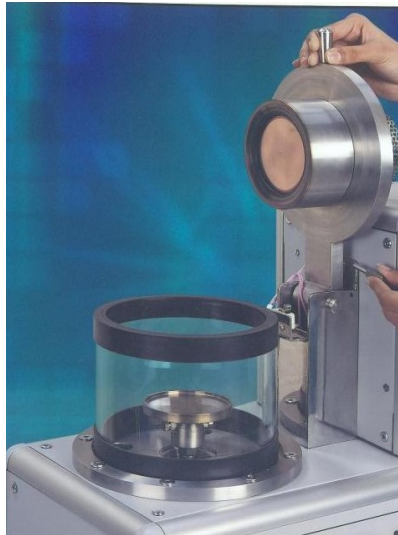
“SEMCOATER” is compact portable table top sputtering equipment specifically designed for deposition of continuous and uniform conducting layer on specimen surfaces for scanning electron microscopy applications. Equipment incorporates 57 mm diameter magnetron capable of coating large number of specimens in one cycle. Main features of the equipment are fast pump down and rapid specimen processing coupled with simple but safe operation with excellent reproducibility. The system can be operated through HMI-PLC based control located on the front panel.

Carbon film evaporation assembly compatible with this coater is offered as option for X-ray micro-analysis applications.

MAIN FEATURES

- COMPLETELY STAND ALONE TABLE TOP MODEL
- UNIQUE DESIGN OF MAGNETRON SPUTTERING TARGET ASSEMBLY WITH EASILY REMOVABLE TARGET / BONDING PLATES
- USER FRIENDLY TOUCH SCREEN COLOUR LCD BASED HMI CONTROL
- SPECIMEN HOLDER TO PROVIDE TILT, ROTATION AND DISTANCE ADJUSTMENT (FROM TARGET)
- PROCESS AUTOMATION TO PROVIDE EXECUTION OF PROCESS BY ONE TOUCH
- CLEAN ROOM COMPATIBLE ENCLOSURE





1. **Substrate Assembly:**

It is made up of Stainless Steel. Substrate can be clamped to the base. The substrate base can be tilted, rotated, for uniform coating. Height of the substrate base can also be changed as per requirement.

2. **Magnetron Assembly:**

It broadly consists of Aluminum target holder, Magnet module & target mounting plate, and Shield. Aluminum target holder along with Magnet module & target mounting plate is fix plate from sputtering. The Target is bonded to the backing plate of the Target Plate and is fixed with four screws. (These can be unscrewed to Remove / replace the target.)

On the TOP PLATE there are 12 holes provided for Air cooling. Air is pulled inside the TOP PLATE by convective pulling which cools the target on the upper side and is pulled with Fan Assembly attached on the TOP PLATE.

3. **Glass Chamber:**

Borosilicate Glass chamber is placed on the Base Plate. It has two rubber gaskets

fixed at the top & bottom for sealing. On the top-side it houses TOP PLATE with Magnetron Assembly with facility to mount Target. It can be evacuated by rotary pump. During the process predetermined Argon is vented in the chamber through micrometer needle valve. The Chamber can be Vented with Air or Nitrogen after completion of the coating process.

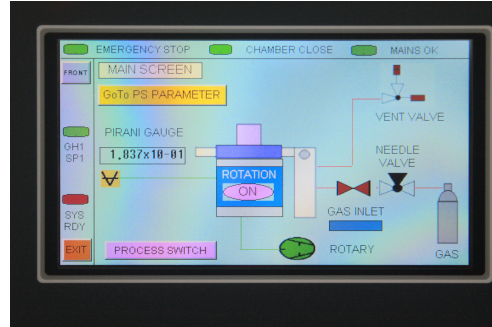
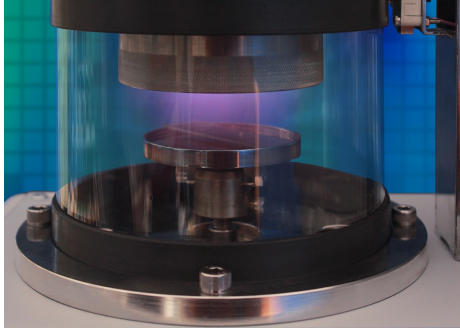
4. **Top Plate:**

It is made of high quality anodized Aluminum. It houses FAN ASSEMBLY on the top and Magnetron Assembly with facility to mount target beneath it. It has 12 holes for cooling on the upper side of the top plate. Top Plate can be lifted and allowed to rest on the specially designed Lifting Assembly attached on the Top Panel. This allows easy removal of Glass Chamber for cleaning/easy change of Target or Substrate. The lifting assembly has a specially designed Limit Switch which interlocks process operation in chamber open condition.

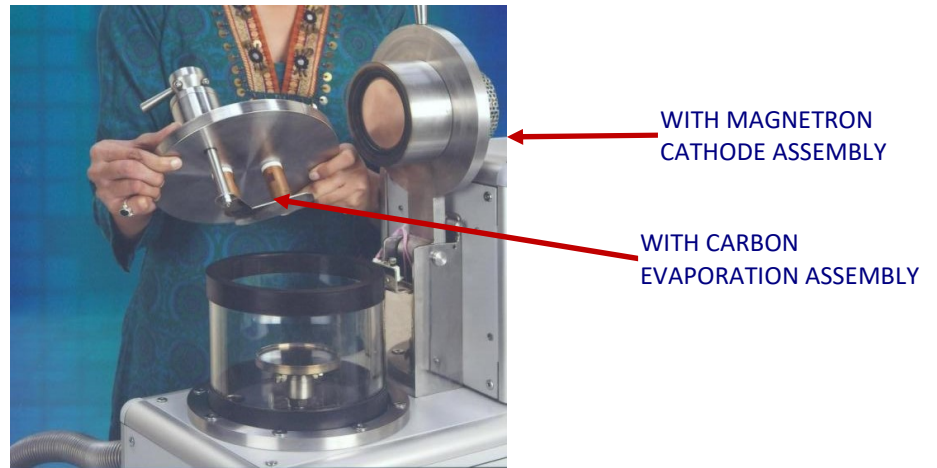
5. **Fan Assembly:**

Mainly consist of Exhaust Fan with cover used for cooling of the Magnetron Assembly and Target.





CARBON EVAPORATION ASSEMBLY



The assembly can be directly adapted to the MILMAN 'SEMCOATER'.

MAIN FEATURES:

1. Source assembly designed to directly fit on Glass Chamber of SEMCOATER.
2. Fully solid state Triac Controlled Low Tension (LT) Power Supply.
3. Easy to Install.
4. Rugged Mechanical Design.

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