Denton Gold Sputter System

Revised 7/25/06

This machine sputters a thin layer of gold onto a substrate for the use of imaging with the SEM or collecting data on the Optical Profiler.

Power Up

- Login
- Place cleaned sample inside chamber. If tilting is needed, use one of the rubber blocks to prop the sample.
- Cover chamber with lid, ensuring the lid is aligned directly over chamber.
- If rotating of the sample is needed, set the rotation speed knob located on the top of the machine next to the sample holder.
- Turn on power by pressing the power switch located on right side of machine. The chamber will automatically begin pumping vacuum.

Operation

- Allow vacuum to pump down to 30mtorr.
- Press 'Sputter' switch, then press 'Off' switch – this purges the chamber of air by flushing with Argon. ** Do Not adjust Gas Flow knob**
- Allow vacuum to pump down to 20 mtorr.
- Press 'Sputter' switch again.
- Allow vacuum to pump down to 150 mtorr. If the pressure falls below 150 mtorr, ***slightly*** adjust gas flow knob until this pressure is steady. This knob should already be set to allow steady flow of Argon to maintain 150 mtorr inside chamber.
- Set timer (in seconds). Approximately 200 seconds will cover resist sufficiently for quality SEM imaging without deforming features. But you should determine the necessary processing for your application.
- Press the right-most 'Start' button.
- Set current to 45 mA. If the current is unsteady, slightly increase gas flow with the control knob.
- Plasma will coat substrate until the set time has expired.
- Reset current to zero by turning the 'current' knob counter-clockwise until it stops.
- Press power switch to turn off sputterer. The chamber will vent automatically.
- Open the lid to remove sample.
- Close the lid.

Power Down

- Logoff