

## Hummer® 6.6

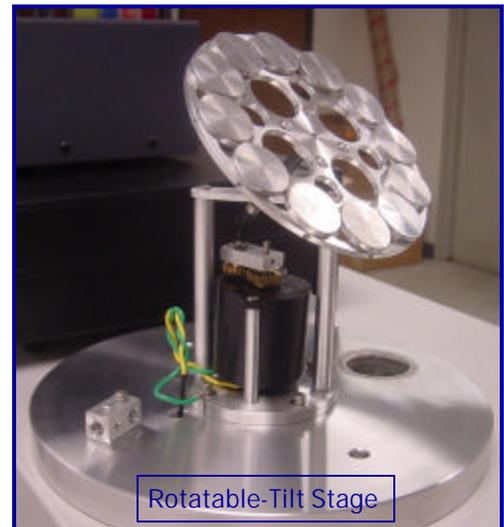
SEM, R&D, FA, Material Research,  
Quartzing and other Thin Film Requirements

### Cold deposition sputtering systems for SEM sample preparation

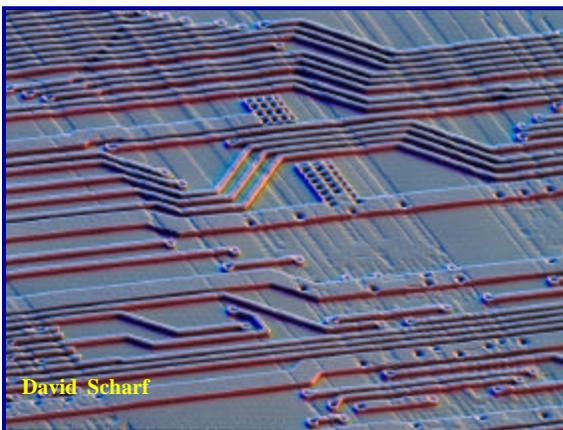


Options for the Hummer 6.6 :

- US Domestic and Euro CE models
- Carbon Evaporation Accessory for energy dispersive X-Ray Analysis
- Thin Film Thickness Monitor
- Rotatable-Tilt Stage
- Turbo Pumping



Rotatable-Tilt Stage



David Scharf

68040 Computer Chip



David Scharf

Mosquito Larva Hairs

Introducing electron microscope images by scientist/photographer David Scharf

## Plating with a Hummer®

Depending on the metal source installed, Hummers can deposit thin films of Noble: gold, gold/palladium, silver, platinum and other noble alloys. To use a different metal source, simply pull out one, and push in another. The HUMMER top plate lifts off for easy sample loading and retrieval. The stage accepts many different types of SEM stubs. A magnet inside the metal source ring and a dark space shield eliminate heating by deflecting electrons away from the specimen. The cool, Omni directional shower of secondary ions and neutrals produces finer grain deposits than thermal coating processes.

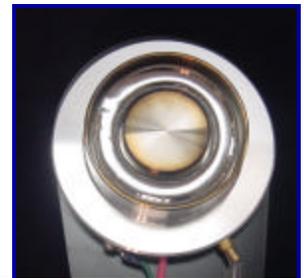
When processing is finished, a solenoid controlled vent valve slowly brings the process chamber to atmospheric pressure, preventing turbulence. This also assures that oil cannot migrate from pump to process chamber, as can happen with manually vented systems.

## Vacuum System

Each Hummer is totally enclosed in a single cabinet, so it occupies less space and produces less noise than systems with remote pumps. The vacuum pump is near the process chamber allowing fast pump down. Vacuum connections are made and checked for leakage during manufacture, assuring vacuum integrity and allowing quick startup because little assembly is required. Safety interlocks protect both operator and equipment.

## Standard Features

- Grain size of less than 2 nanometers for SEM preparation.
- Magnetically enhanced sputter-head minimizes sample heating.
- Automatic slow venting at termination of process.
- Sample stage accommodates up to 6" diameter substrates or 12 SEM stubs.
- Stage rotates up to 2-RPM and adjusts 2" vertically.
- Self-contained two-stage direct drive rotary pump assures rapid pump-down.
- The system requires less lab space than systems with remote pumps.
- Easy access to pump oil fill and drain ports simplifies maintenance.



**Target Holder - target installed  
Hummer 6.2 and 6.6**

## Options

### **Available in US Domestic and Euro CE Compliant models.**

- Wide selection of targets made from precious metals.
- Carbon Evaporation Accessory (**CEA**) for producing conductive coatings on samples for x-ray studies.
- Dedicated chamber supplied with CEA
- Turbo-molecular pumping and sputter guns for chrome plating.
- RF option for sputtering insulators.

## System Specifications

- Power consumption - 115 VAC, 60 Hz, 6 amps - (CE) 220-250 VAC, 50 Hz, 5 amps
- Power output - 0-3000 Volts, 0-50 mA . Chamber dimensions 200-mm x 200-mm
- System dimensions - 22" W x 29" D x 26" H Shipping weight - 120 lbs. estimated



**Hummer 6.6 with Carbon Evaporation  
Accessory and Thickness Monitor**

**CALL ANATECH USA TODAY TO DISCUSS YOUR APPLICATION !!!**

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