The High Resolution Sputter Coater 208HR offers real solutions to the problems encountered when coating difficult samples for FESEM. In order to minimize the effects of grain size, the 208HR offers a full range of coating materials and gives unprecedented control over thickness and deposition conditions. To minimize charging effects, the 208HR stage design and wide range of operating pressures allow precise control of the uniformity and conformity of the coating. The HIGH/LOW chamber configuration allows easy adjustment of working distance.

- **Wide Choice of Coating Materials**
  Magnetron head design and effective gas handling allow a wide choice of target materials

- **Precision Thickness Control**
  Thickness optimized to the FESEM operating voltage using the MTM-20 High Resolution Thickness Controller

- **Multiple Sample Stage Movements**
  Separate rotary, planetary and tilting stage movements ensure uniform coating with excellent conformity, even on highly topographic samples.

- **Variable Chamber Geometry**
  Chamber geometry is used to adjust deposition rates from 1.0nm/sec to 0.002nm/sec to optimize structure

- **Wide Range of Operating Pressures**
  Independent power/pressure adjustment allows operation at argon gas pressure range of 0.2-0.005mbar

- **Compact Modern Benchtop Design**
  Space and energy saving design eliminates need for floor space, water or specialized electrical connections

### Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000</td>
<td>High Resolution Sputter Coater 208HR, 115VAC, 50/60Hz, Cr and Pt/Pd target*</td>
</tr>
<tr>
<td>8000-220</td>
<td>High Resolution Sputter Coater 208HR, 220VAC, 50/60Hz, Cr and Pt/Pd target*</td>
</tr>
<tr>
<td>8002</td>
<td>Iridium Coater for FESEM 208HR, 115VAC, 50/60Hz, Ir target*</td>
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<tr>
<td>8002-220</td>
<td>Iridium Coater for FESEM 208HR, 220VAC, 50/60Hz, Ir target*</td>
</tr>
<tr>
<td>8004</td>
<td>High Resolution Sputter Coater for FESEM 208HR, Dry-Pumping System, 115VAC, 50/60Hz, Cr and Pt/Pd target*</td>
</tr>
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<td>8004-220</td>
<td>High Resolution Sputter Coater for FESEM 208HR, Dry-Pumping System, 220VAC, 50/60Hz, Cr and Pt/Pd target*</td>
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<tr>
<td>8008</td>
<td>Iridium Coater for FESEM 208HR, Dry Pumping System, 115VAC, 50/60Hz, Ir target*</td>
</tr>
<tr>
<td>8008-220</td>
<td>Iridium Coater for FESEM 208HR, Dry Pumping System, 220VAC, 50/60Hz, Ir target*</td>
</tr>
</tbody>
</table>

*The High Resolution Sputter Coater 208HR includes: pumping system, Thickness Controller MTM-20, Rotary-Planetary-Tilting Sample Stage with 4 holders, one Cr and one Pt/Pd Target or one Ir Target, Instruction Manual.
VACUUM COATING & SPUTTERING

Main Features

- Voltage controlled rod source gives multiple evaporation capabilities
- Automated evaporation control gives ease-of-use in a busy environment
- MTM-10 thickness monitor provides reproducible results
- 67 L/second pump on a 150mm chamber provides rapid pumpdown
- Reduces operation cost in several ways: No diffusion pump to leave on continuously; no need for water cooling; no need for LN2 (dry nitrogen gas optional)
- Rotary-planetary-tilting (RPT) stage (optional)
- Rotary-tilting (RT) stage for TEM shadowing techniques (optional)
- Compact, space-saving, modern benchtop design

Evaporation Supply

This coater has a fully integrated electronic feedback-controlled power design. Current and voltage are monitored by sensor wires in the head, where the evaporation source is part of the feedback loop. This gives the conventional rod fed source superior stability and reproducibility. The evaporation source can be operated in automatic, manual, manual-pulse, or manual-continuous modes. The pulsed mode, when used in conjunction with the optional MTM-10 thickness monitor, gives absolute control over the desired thickness of the carbon coating.

208C Specimen Chamber

This modular design accepts a wide range of attachments. There is a simple, rapid adjustment from long to short working distanc-

High Vacuum Turbo Carbon Coater shown with Rotary-Planetary-Tilting Stage and Thickness Monitor MTM-10, Metal Evaporation Accessory and Auxiliary Power Supply

208 carbon HIGH VACUUM TURBO CARBON COATER

High Quality Coating For TEM, FESEM, EBSD or Microprobe Applications

Ordering Information

9620  High Vacuum Turbo Carbon Coater 208C, 115V ........... each
9620-220  High Vacuum Turbo Carbon Coater 208C, 220V ........... each
9624  High Vacuum Turbo Carbon Coater 208C, Dry Pumping System, 115V...................................................... each
9624-220  High Vacuum Turbo Carbon Coater 208C, Dry Pumping System, 220V...................................................... each
93004  Thickness Monitor MTM-10, 115V (for static table) ...... each
93004-220  Thickness Monitor MTM-10, 220V (for static table) .... each
93005  Thickness Monitor MTM-10, 115V (for RPT stage)....... each
93005-220  Thickness Monitor MTM-10, 220V (for RPT stage)...... each
9524 Rotary-Planetary-Tilting (RPT) Stage, 9V Battery ............. each
9631  RPT or RT 9V DC Converter Kit, 115V ......................... each
9660  Rotary-Tilting Stage for TEM, 115V ............................ each
9650  Metal Evaporation Accessory (requires 9640 or 9640-220) ................................................................. each
9640  Auxiliary Power Unit for Accessories, 115V................. each
9640-220  Auxiliary Power Unit for Accessories, 220V .......... each
9626  Aperture Cleaning Accessory (requires 9640 or 9640-220) ................................................................. each
108 Manual SPUTTER COATER

- This coater is ideal for routine SEM sample preparation. It is compact, economical and simple to operate. It offers rapid pumpdown times, fine-grain coatings and negligible sample heating.
- Fully variable current control, digital process timer with “pause”, variable height specimen table, hinged top plate and O-ring sealed vacuum chamber.
- Sputtering is achieved with a very efficient DC magnetron. A quick-change target allows for a range of metals to be used. (Au, Au:Pd, Pt, Pt:Pd). Au target is included as standard. The current controller allows independent choice of sputter current and argon pressure. Coverage and grain size are optimized for any specimen.
- The safety interlocked sputtering supply is fully variable; setting the sputter current is not influenced by vacuum level. The optional Thickness Monitor is recommended for accurate measurements of depositions.
- The manual coater can be factory fitted with an optional Prod. No. 93004, Film Thickness Monitor MTM-10 (optional).

108 Auto SPUTTER COATER

- This coater offers the choice of manual or automated operation. The specifications also include automatic vent (with a choice of vent gas) and argon purge control.
- In automatic mode, the coater is controlled in two ways. First, the digital timer can be used to give repeatable coatings or the Film Thickness Controller MTM-20 (optional) can be used to measure and terminate the sputtering process at the desired thickness. The Film Thickness Monitor MTM-10 (optional) measures thickness down to 0.1nm (as does the MTM-20).
- The sputter current is set on a digital programmer and is not dependent on the argon gas pressure in the sputtering chamber. Pressure and current adjustment are carried out separately.
- Supplied with an adjustable height (or variable height) 12-pin mount table.

108 Auto/SE SPUTTER COATER

The auto/SE is intended for use in applications where the coating thickness must have a very high degree of uniformity. The chamber size has been increased to 150mm diameter to accommodate the optional Rotary-Planetary-Tilting Stage, developed originally only for the High Resolution Coater model 208HR.

108 Carbon/A AUTOMATED CARBON COATER

- Static-free coatings suitable for SEM/EDX.
- A unique feedback-controlled rod evaporation system gives multiple evaporations of 20nm thickness without the need for shaping or adjustment. The option of high resolution thickness monitoring allows conducting carbon films to be tailored to the exact requirements of the sample. The coater is compact, simple to operate and have very rapid pumping cycles.
- The 108 Carbon/A (automated) uses a novel evaporation supply. Current and voltage are monitored by sensor wires in the head and the evaporation source is controlled as part of a feedback loop.
- The supply gives the conventional rod fed source unusual stability and reproducibility. Power consumption is low and the source shows exceptional re-starting characteristics. The evaporation source can be operated in “pulse” or “continuous” modes.
- The 108 Carbon/A offers a choice of either manual or automated evaporation. In manual mode the evaporation source operates at programmed voltage for a programmed time. The programmer is simple to adjust and displays voltage and time digitally.

108 Carbon/A/SE AUTOMATED CARBON COATER

The 108 Carbon/A/SE Auto Carbon Coater Special Equipment version has the same technical specifications regarding carbon coating capabilities as the standard 108 Carbon/A Auto Carbon Coater. The special feature of the 108 Carbon/A/SE is the larger, 150mm diameter chamber which will accommodate the optional Rotary Tilting Stage or Rotary Planetary Tilting Stage. The advantage of using the Rotary Planetary Tilting Stage is that highly topographic specimens or larger specimens can be uniformly coated to give better conductivity when performing EDX analysis on such specimens.
The PELCO easiShaper™ is a motor driven carbon rod sharpener which offers easy, quick and clean carbon rod shaping for carbon evaporators which are using either 1/4", 1/8" or 3/16" stepped carbon or graphite rods. The PELCO easiShaper™ produces more consistent, smooth and uniform carbon tips than any hand shaper. It is designed for cutting single and double stepped carbon rods (used in the Cressington carbon coaters). The cutting head incorporates two tungsten carbide cutting blades, a top guiding bearing and vortex design to keep the carbon dust in the dust collector. The PELCO easiShaper™ carbon rod shaper is ideally suited for busy, multiple user labs, high throughput microprobe labs and presents a clean alternative to hand rod shapers. The integrated carbon dust collector is easily removed for cleaning and/or blade adjustment. Universal power supply for 100-240V and 50/60Hz. UL listed and CE certified.

DISC OR ANNULAR SPUTTER TARGETS FOR SPUTTER COATERS

High purity disc type sputter targets for a wide variety of sputter or ion coater brands: PELCO®, Cressington, Agar, Bal-Tec, Bio-Rad, Denton, Edwards, Emitech, Emscope, Gatan, ISI, JEOL, LEICA, Polaron, Quorum, and SPI. The disc or foil type sputter targets are available in 60, 57, 54, 50, 38 and 19mm diameter. Most of the disc type targets are clamped to the target holder by a target clamping ring; simply unscrew the clamping ring and change the target. Annular targets, 82mm in diameter are available in gold or gold/palladium.

- High purity sputter targets compared to other brands
- Sizes: 2 3/8” (60mm), 2 1/4” (57mm), 2 1/8” (54mm), 1 1/2” (38mm), 3/4” (19mm)
- Disc and annular targets
- Used target recycling program
- Materials: gold, gold/palladium, iridium, platinum, silver, chromium..... and more.
- Ultra high purity gold targets

For Product Details and Complete Selection of Sputter Targets or Sputter Coaters: www.tedpella.com/cressington_html/Cressington-Targets.htm