108 auto/SE SPUTTER COATER

FOR PRODUCT DETAILS AND COMPLETE SELECTIONS
www.tedpella.com

For Applications Where Coating Thickness Must Have a Very High Degree of Uniformity

Shown with Optional MTM-20 High Resolution Thickness Controller and Optional Rotary-Planetary-Tilting Stage (RTP)

The 108 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 for the 208HR High Resolution Coater model.

Expanded features of this Special Equipment version include:

- **Increased Chamber Diameter**
  Chamber size has been increased to permit coating of larger samples. Standard chamber 150mm diameter x 165mm.
- **Target Shutter**
  Target shutter has been added to condition special targets prior to coating.
- **Variable Chamber Geometry (optional)**
  Adjustable chamber height is used to improve coating uniformity and vary the deposition rate from 0.0001 to 1.0nm/sec.
- **Sample Stage Movements (optional)**
  Separate rotary, planetary and tilting sample movements to optimize coating distribution and coverage.
- **Superior Sputter Head Design**
  Stronger magnetic field for improved deposition rate.

ROTARY PLANETARY TILTING STAGE (OPTIONAL)

This stage offers multi-angle movements of multiple samples for sputter coating and carbon coating evaporation. The R-P-T stage can be configured with 4 specific holders for most types of SEM mounts, large specimen mounts and cross sections; see the listing below. The R-P-T enables better uniformity and more conform coating on topographic samples than with a static stage. It enables coating of a larger number of samples. The R-P-T fits all larger chamber configurations found on the 208 and the 108/SE series of Cressington coaters. With the special Large Sample Adapter, the R-P-T stage can be used as a rotary stage.

THICKNESS CONTROLLER MTM-20 (OPTIONAL)

- Microprocessor based
- 4 digit display
- 5 time/sec. display update rate
- 6MHz crystal with life-time check
- Thickness range: 0 - 999.9nm (pos./neg.)
- Resolution: 0.1nm gold or carbon
- Density Range: 0.50 - 30.00gm/cm^3
- Tooling Factor Range: 0.25 - 8.0
- Data Change Facility: 4 source memory
- Termination range: 0 - 999.9nm

See reverse side for complete ordering information.

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TECHNICAL SPECIFICATIONS FOR 108 Auto/SE

Chamber Size	150mm OD x 165mm height (5.9" x 6.5"); Variable height, 165mm to 250mm (6.5" to 9.8")
Target	Au fitted as standard, Au:Pd, Pt, Pt:Pd optional. 57mm dia. x 0.1mm thick
Sample Table	Holds 12 SEM pin mounts; Height adjustable through 60mm
Sputter Supply	Microprocessor based; Safety interlocked; Current control independent of vacuum; Digitally selectable current (10, 20, 30, or 40mA)
Sputter Head	High field low voltage planar magnetron; Quick target change; Wrap-around dark-space shield; Target shutter
Analog Metering	Vacuum Atm - 0.001mb
Thickness Monitoring (optional)	Use automatic terminating MTM-20 High Resolution Thickness Controller
Control Method	Automatic operation of gas purge and leak functions; Automatic process sequencing; Full manual override; Digital timer (0-300 sec) with pause; Automatic vent
Desktop System	Vacuum pump is installed behind coater; All metal integrated coupling system
Electrical Requirements	100-120 or 200-240 VAC, 50/60Hz (specify on order)
Power Requirements	500VA (coater and pumping system together)
Argon Gas	Purity, min. 99.99%; Working pressure 5-6 psi (0.4 bar); Hose connection, 6.0mm (1/4")

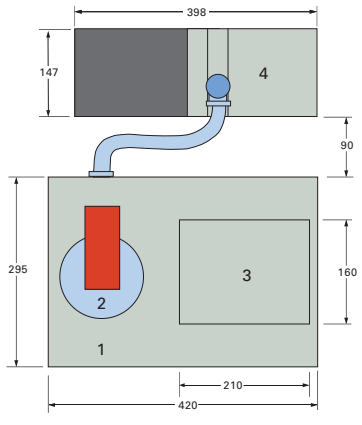
RVP 100 - 3.5

- Pumping Speed: high speed, direct drive, 2-stage rotary pump 5/6 m^3/hr (50-60Hz)
- Pumpdown Time: >25/30 sec. to 0.1mb
- Desktop System: Rotary pump is positioned on desktop behind coater
- All metal vacuum integrated coupling system, includes exhaust filter

DUAL-VACSET KIT AVAILABLE

- Connects two Cressington 108 series Coaters to one vacuum pump
- Two fully separate coating systems, each with optimized controls
- High throughput, efficient setup
- No cross-contamination between sputter (metal) and carbon coater

FOOTPRINT



Dimensions (mm)

1. Control Unit
2. Vacuum Chamber
3. Thickness Monitor
4. Rotary Pump

ORDERING INFORMATION

7008	108 Auto/SE Sputter Coater, 115V*	each
7008-220	108 Auto/SE Sputter Coater, 220V*	each
92080	Rotary Pump, High Speed, 115V/208-230V, 50/60Hz	each
92080-108	All Metal Connection Kit	each
92080-200	Dual-VacSet for 92080 Pump, fits Cressington 108 Coaters	each
93006	Thickness Controller MTM-20, 115V**	each
93006-220	Thickness Controller MTM-20, 220V**	each
93009	Replacement Crystals	pkg/10
8025	O-Ring, 150mm, for Glass Cylinder	pkg/2
8006	Glass Cylinder Tall (150mm D x 150mm H) light deposition	each
8009	Glass Cylinder Short (150mm D x 65mm H) heavy deposition	each
92061	Oil Mist Filter for 92080 Pump	each

* The 108 Auto/SE Sputter Coater includes: 1 Gold Target (91110) 57mm dia. x 0.1mm; Specimen Table for 12 Pin-Mounts (7021); Operating Instructions

** The Thickness Controller MTM-20 includes: Vacuum Feedthrough; Cables; Oscillator Box; Crystal Holder; Test Crystal; Instructions

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