

**JEOL Smart Coater
PN-SEM-003**

Thin film conductive coatings are effective in eliminating charging with non-conductive materials or enhancing secondary electron emission. JEOL's Smart Coater is a fully automated sputter coater that applies a fine grained gold or platinum coating on samples for imaging in a scanning electron microscope.

This coater uses a low voltage discharge technique with a magnetron electrode for high efficiency, cold sputtering. Low voltage sputtering, as well as having the sample isolated from the electrode, minimizes sample damage.

JEOL's Smart Coater is simple to use with fully automated vacuum and sputtering. Place the samples in the chamber, turn the Smart Coater on and select the sputtering time. The chamber will evacuate and sputtering will begin automatically. When the unit is powered down, it vents to atmosphere.

Thickness of the coating is influenced by distance from target and the center of the stage, as well as sputtering time. As a reference, listed below are basic coating conditions and resulting film thicknesses.

Gold (Au) Target: Sample at 20mm (WD)
5nm at 1min, 10nm at 2min

Platinum (Pt) Target: Sample at 20mm (WD)
4nm at 1min, 8nm at 2min

Basic Specifications:

	Specification
Pressure	~4 Pa
Chamber Size	86mm (d) x 100mm (h); hard glass
Target Size*	Au: 49.5mm (d) x 0.1mm (t)
Target Electrode	20mm (d)
Sample Stage Size	70mm (d)
Sample Stage Height	Adjustable to Target (10mm – 50mm)
Sputter Time	0.5min/1min/2min (Fixed)

*Note: Pt Target optionally available (49.5mm (d) x 0.05mm (t))

