

scia Multi 1500

MULTILAYER COATINGS FOR LARGE SUBSTRATES

Features & Benefits

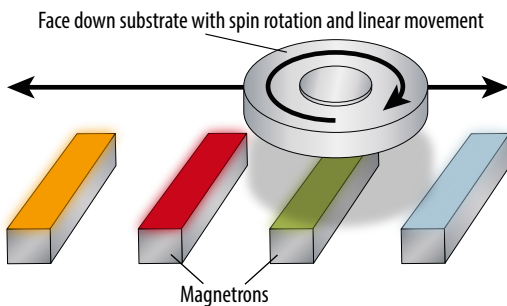
- Homogeneous or gradient films on curved substrates by synchronized linear movement and spin rotation
- Inline arrangement with multiple process and buffer chambers for complete crossing over the magnetrons
- 4 magnetrons in each process chamber
- Optional pretreatment with additional ion beam source
- Substrate face-down orientation for minimized particle load

Applications

- Gradient multilayer coatings of mirrors for soft X-ray and anti-reflective coatings
- Multilayer stacks for X-ray mirrors for beam line and analytic applications
- Multilayer coating for UV and VIS optics

Principle

- Magnetron Sputtering
 - Inline arrangement with 4 magnetrons in each process module
 - Linear substrate movement across magnetrons and superimposed rotation of the substrate



Technical Data

Substrate size (up to)	1500 mm dia., 850 kg
Sputter source	4 rectangular magnetrons (1200 mm x 90 mm) per chamber, ion beam source possible
Sputter modes	DC in cw or pulsed mode (6 kW) and/or RF (6 kW, 13.56 MHz)
Typical deposition rates	Si: 48 nm/min, Mo: 78 nm/min
Uniformity variation	< 0.5 % (σ /mean) over 1200 mm dia.
Base pressure	< 2×10^{-8} mbar
System dimension (W x D x H)	11.00 m x 4.20 m x 5.00 m, for 1 process chamber (without electrical rack and pumps)
Configuration	Inline system with multiple coating chambers and 2 buffer chambers, single substrate load-lock, optional loading and balancing stage
Software interface	OPC

Application Example

- Typical multilayer stack for soft X-ray mirrors

