Large Batch Coating System

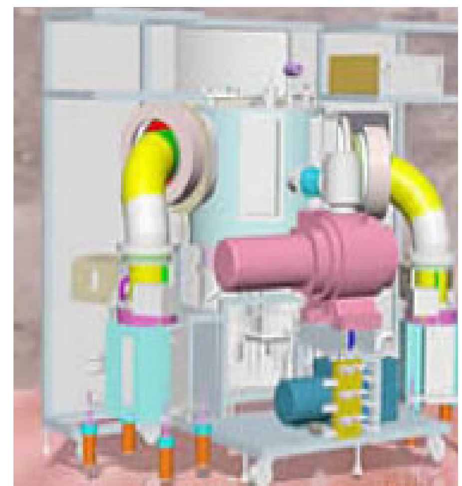
Our Large Batch Coating System combines the latest FCVA technology with Sputtering deposition and Ion Beam cleaning/etching. The design of this system allows coatings on industrial cutting tools, forming dies, plastic moulds and other wear-resistive applications to be carried out in a massive and cost-effective manner.

System Features:

- Versatile holder for easy work-piece loading and unloading
- Innovational 3-axis rotation of work-piece
- Batch system for work-piece up to 300 pcs
- Real Time Process Monitoring
- User-Friendly Interface
- User Defined Coating Recipe
- Data Log for Parameters and Events
- Multi-Source Process Chamber
  - FCVA Source
  - Ion Beam Source (optional)
  - Sputtering Source (optional)
- Dynamic Real Time Compensation (Optional)
  - Excellent process repeatability

Unique FCVA Features:

- Pure Plasma Beam Deposition
- Adjustable Energy Of Coating Species
- Off Plane Double Bend
  - Obtain particle free deposition
  - Improve plasma transport efficiency
- Innovative Anode/Cathode Design
  - Produce stable arc and plasma beam
- Computer Controlled Beam Scanning
  - Achieve large area uniformity
- Robust Target Grinding
  - Prolong production up-time
- Room Temperature Deposition
- Programmable Deposition Rate and Area
- Fully Automated Operation



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Performance

Parameter	FCVA	Sputtering	Ion Beam
Uniformity Coverage	< ±5%		
Repeatability	±10% (normal mode) ±5% (compensation mode)	±5%	±5%
Macro-Particle Level	< $0.5/cm^2$ (for particles > 0.3 µm)	NA	NA
Base Pressure	~ 10^{-6} torr (process chamber)		
Batch to Batch pumping cycle time	40 mins		
Work-piece Holder Rotation Speed	<5 rpm		

Specification

Dimension	3000 x 2500 x 2000 mm (LxWxH)
Power Input	3 Phase, 30 kW
Cooling Water	30 l/min @ 0.3MPa (22 °C)
Compressed Gas	Dry N_2 for venting, Ar for ion beam and sputtering
Pumping System	TP or Cryo for Process Chamber

Ion Beam Source (optional)

Source Type	Gridless
Process Gas	Ar, O_2, N_2, Ke
Ion Beam Energy	150 - 1800eV
Ion Beam Current	0.3 - 4 A

Sputter Cathode (optional)

Maximum Sputtering Power	2kW - DC/RF
Cathode Voltage	100 - 1000 V
Discharge Current	1 - 10 A
Working Pressure	0.5 to 5.0×10^{-2} torr

*Specifications and performance provided are subject to changes without prior notice.