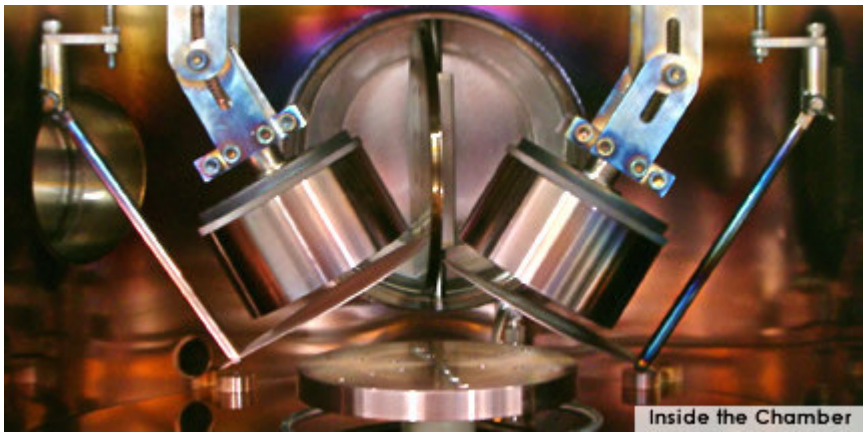
Sputter Deposition System

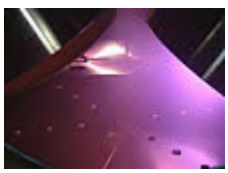
The sputtering process is widely used in both production and R&D. NTI has expertise in process recipe creation, system design and manufacturing. In addition, by using its proprietary high voltage/high frequency pulsed DC generator, NTI's sputtering system offers users easy and effective solutions for substrate cleaning to generate coatings with quality surpassing that of conventional sputtering processes.


Inside the Chamber

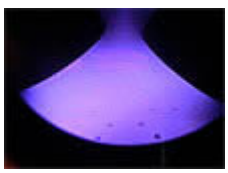
Key features:

- Vacuum chamber can be either batch or load-lock.
- Substrate holder can be rotational, heated or cooled.
- Incorporated plasma cleaning or ion beam cleaning.
- Cathode is DC, pulsed DC and RF compatible.
- Sequential or co-sputtering configuration.
- System for either production or R&D.
- Precise down-stream process pressure control.
- Robust and user-friendly automatic control with full data-logging capability.


Cu-DC magnetron


Al-RF magnetron


Co-sputtering


Substrate plasma cleaning

System Features:

- Two con-focal, distance and angle adjustable internal mounting magnetrons with shutters
- ±5% thickness uniformity
- RF and/or DC power supply
- Substrate which is self-rotating & water cooled
- Precise down-stream process pressure control
- Fully automated system operation
- Real time process monitoring
- User-friendly PC interface
- Full recipe and data-log support

Sputter Deposition System

System Configuration

System Features	Specification
Chamber	SUS 304
Power Supplies	600W RF Power Supply with Matching Network 1000W DC Power Supply
Cathodes	3" Diameter Cathode (2 sets) with Shutter
Substrate	Self rotation & Water Cooling
High Vacuum Pump	450 l/s Turbo Molecular Pump or 1500 l/s (Optional)
Mechanical / Backing Pump	30 m^3/hour - 2 Stage Rotary Vane Pump
Controls Cabinet(s)	Air Cooled 19" Rack
Pressure Control & Measurement Controls	Capacitance Manometer, 2 channel MFC, Power Supply with Digital Readout & Ratio Control, PLC Process Control, Safety Interlock, PC with Touch Screen
View ports	Ø100mm Mounted in Chamber Door (with Shutter)
Overall Dimensions (m)	LxWxH: 1.7x1.2x2.0

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