

# NanoStructured Coatings Co.



## Nanostructured Coatings Co. The Products & Specification

Nanostructured Coatings Co. is the owner and manufacturer of the Sputter & Vacuum Coaters.

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## Sputter Coater DST3-T High Vacuum, Dual Target, Versatile Desktop Coater for Thermal Evaporation and Sputtering

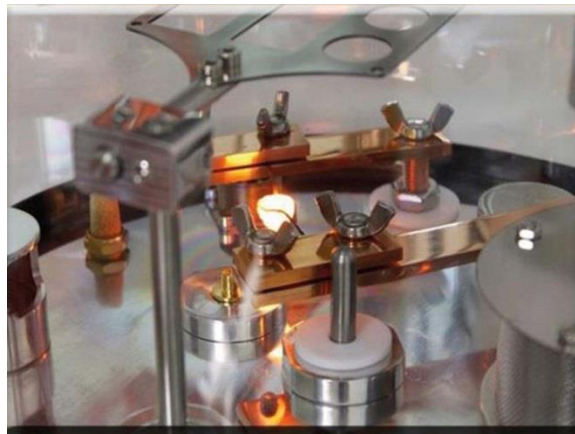
The DST3-T is a triple-target, turbo molecular-pumped, multi vacuum coater system, combines thermal evaporator and sputter coater in one single compact desktop system. It is suitable for deposition of a wide range of materials. The system can easily switch between evaporation and sputtering conditions.



### Features

- Sputtering and Thermal evaporation process in a compact system.
- High vacuum coating suitable for oxidizing and non-oxidizing metals.
- Equipped with DC and RF power supplies suitable for metals, semiconductors and dielectrics.

- Three water cooled angled, magnetron cathodes suitable for producing alloy films and. multilayer deposition.
- One thermal source installation.
- Two quartz crystal monitoring system for real time thickness measurement (1 nm precision).
- Manual or automatic Timed and Thickness deposition.
- Intuitive touch screen to control coating process and rapid data input.
- User friendly software that can be updated via network.
- Equipped with electronic shutter.
- Equipped with rotary sample holder with ability to tilt in direction of cathodes.
- 500 °C substrate heater.
- 300 V DC substrate bias voltages.
- Unlimited deposition time without breaking vacuum.
- Two-year warranty.



The DST3-T is equipped with a low-voltage (resistive) thermal evaporation platform suitable for a wide variety of thermal evaporation applications. The system allows controlled thermal evaporation of wide range materials onto substrate. Different types of thermal evaporation sources (Boat, Basket, and coil) can be installed on the thermal source holder.



## Clean Vacuum

The vacuum chamber is Cylindrical Pyrex with 300 mm OD and 200 mm H. The DST3-T is fitted with an internally mounted 90L/s turbo molecular pump, backed by a diaphragm pump. It introduces clean vacuum without oil contamination which normally exists with ordinary diffusion pump.

## Touch Screen Control

DST3-T, is equipped with a 7" colored touch screen and full automatic control and data input that can be operated by even inexperienced users. The vacuum, current and deposition information can be observed as digital data or curves on the touch screen. Information of the last 300 coating can also be saved in the history page.

## Applications

- Metal, Semiconductor and Dielectric Films
- Nano & Microelectronic
- Solar cell applications
- Co-Sputtering processes
- Glad sputtering
- Optical components coating
- Thin film sensors
- Magnetic thin film devices
- Computer memory applications
- Fine grain structural deposition for SEM & FE-SEM sample preparation

## Specification

- High vacuum turbo pump 300 l/s.
- Diaphragm backing pump.
- Ultimate Vacuum: Less than  $2 \times 10^{-6}$  torr.
- Independent sputtering control rate for each cathode to produce fine grain structures.
- Automatic control of deposition power independent of pressure.
- Automatic control of the cathode's temperatures to protect the life time of the magnets.

- Precision Mass Flow meter (MFC) for fine control of vacuum and pressure.
- Records and plots of coating parameters graphs.
- Transfers curves and deposition process data by a USB port to PC
- 0-1000 mA DC power supply.
- 0-100 A high current power supply.
- 300 W RF power supply with matching box.
- Utilities: 220V- 50HZ- 16A
- Box Dimensions: 50 cm H x 60 cm W x 47 cm D
- Shipping Weight:100kg (pump, rack and box)

## Options and Accessories

The DST3-T has the following options and accessories:

- Additional thermal evaporation insert
- High current power supply
- Quartz crystal
- Spare glass
- Sputtering targets
- Thermal source materials