

HIGH VACUUM, SINGLE MAGNETRON TARGET DESK SPUTTER COATER DST1-300



The High Vacuum, Single Magnetron Target Desk Sputter Coater DST1-300 is a versatile coating system capable of applying coatings on semiconductors, dielectrics, and both oxidizing and non-oxidizing metals. It excels in producing uniform thin films with fine-grain sizes in a short cycle time.

APPLICATIONS

Desk Carbon Coater DCR is a compact carbon fiber coating system suitable for sample preparation for the use in scanning electron microscope (SEM), Transmission electron microscope (TEM) and X-Ray analysis (EDX).

This device is available in two formats:

- DCR is a rotary-pumped carbon coater that is suitable for SEM sample preparation, EDS/WDS and thin film applications.
- DCT is a turbo-pumped carbon coater that is ideal for FE-SEM, EDS/WDS, TEM, EBSD and thin film applications. This high vacuum coater offers high quality uniform carbon films with fine grain sizes which are suitable for specimens that require high resolution and high quality characterization.

FEATURES

- High vacuum turbomolecular pump

Pumping Speed	90 l/s	350 l/s
Ultimate Pressure	7 x10-6 Torr	7×10-7 Torr

- Two-stage rotary vane pump as a backing pump
- Full range vacuum gauge (Leybold)
- High-precision quartz crystal thickness monitor
- DC power supply rated at 600W
- Intuitive touchscreen interface for easy coating process control and rapid data input
- User-friendly software with network update capability
- Control functionality to adjust coating rate for achieving finer grain structures
- Offers both manual and automatic timed and thickness sputtering options
- GLAD (Glancing Angle Deposition) Sputtering capability
- Plasma Cleaning functionality
- Ability to record and plot coating parameter graphs
- Equipped with an electronic shutter
- Easily interchangeable specimen stages, with a rotation stage included as standard
- Backed by a two-year warranty
- Vac Coat Products are globally covered by both public and product liability insurance, ensuring protection in case of property damage or personal injury caused by Vac Coat systems.

Touch screen control with colorful display

The DST1-300 features a user-friendly 7-inch color touchscreen interface with full automatic control and data input capabilities, making it accessible even for inexperienced users. Through this touchscreen, users can easily operate the system and view vacuum levels, current values, and deposition information either as digital data or in graphical curve forms.

Additionally, the system has the capacity to store information related to the last 300 coatings, which can be conveniently accessed in the history page for reference.

Clean Vacuum

The vacuum chamber is constructed from cylindrical Pyrex and has dimensions of 300 mm in outer diameter (OD) and 200 mm in height (H). The DST1-300 is equipped with an internally mounted 90 l/s turbomolecular pump, which is supported by a two-stage rotary pump. This configuration ensures a clean vacuum environment, free from the oil contamination commonly associated with ordinary diffusion pumps.

THEORY & METHOD

The spacious chamber of the DST1-300, available with 2, 3, or 4-inch magnetron and a water-cooled cathode, is well-suited for coating large specimens with diameters of up to 15 cm or multiple smaller specimens with similar diameters. Its unlimited sputtering time makes it ideal for depositing thick layers.

Equipped with a 600W DC power supply and an optional 300W RF power supply with an auto-matching box, this Single Target Coater offers flexibility. The high vacuum system enables the deposition of a wide range of materials on various surfaces, catering to thin film applications, including micro and nanoelectronics and SEM sample preparation.

The Magnetron Sputter Coater model DST1-300 is a versatile coating system capable of applying coatings to semiconductors, dielectrics, and both oxidizing and non-oxidizing metals. It excels at producing uniform thin films with fine-grain sizes quickly.

The spacious DST1-300 chamber, available with 2, 3, or 4-inch magnetron options and a water-cooled cathode, is ideally suited for coating large specimens with diameters of up to 15 cm or multiple smaller specimens of similar size.

With unlimited sputtering time, it's well-suited for depositing thick layers. The Single Target Coater comes equipped with a 600W DC power supply and offers an optional 300W RF power supply with an auto-matching box for added flexibility.

The high vacuum system can deposit a wide range of materials onto different surfaces, making it suitable for thin film applications such as micro and nanoelectronics, as well as SEM sample preparation.

TECHNICAL SPECIFICATIONS

This system is suitable for various applications, including:

- Deposition of metal, semiconductor, and dielectric films
- Nano and microelectronic applications
- Solar cell manufacturing
- Coating of optical components
- Development of thin film sensors
- Production of magnetic thin film devices
- Applications in computer memory
- Achieving fine-grain structural deposition for SEM and FE-SEM sample preparation

It offers versatility across a range of industries and research areas.

Options and Accessories

- Substrate bias voltage
- RF generator and auto matching box
- Substrate heater (up to 500°C)
- Quartz crystal sensor
- Spare vacuum cylindrical glass chamber

- Thermal evaporation system with one source
- Sputtering targets
- Sealing gaskets



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 🇨🇦

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 🇺🇸

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 🇦🇪

Phone: +971 488 19252
Email: me@torontech.com

