BENCHTOP EVAPORATION SYSTEM

nanoPVD-T15A

Compact thermal and low-temperature evaporation for metals, organics and sensitive thin-film materials.

4″	<5×10⁻⁷	4	500°C
MAX SUBSTRATE	BASE PRESSURE (MBAR)	LTE SOURCES (UP TO)	SUBSTRATE HEATING

Research-grade evaporation in a compact benchtop platform

The nanoPVD-T15A is a benchtop evaporation system optimised for thermal evaporation of high-melting-point metals and volatile organics onto substrates up to 4″ (100 mm). It can be equipped with box-shielded TE1 resistive sources for metals and low-thermal-mass LTE sources for organics. A tall, high-aspect-ratio chamber gives high-uniformity coating, while turbomolecular pumping, recipe-based touchscreen operation and easy servicing complete the platform — as compact as an electron-microscopy coater, but with research-grade hardware.

- Thermal (TE1) and low-temperature (LTE) evaporation
- High aspect-ratio chamber for uniform coating
- Turbomolecular high-vacuum pumping
- For metals, organics, electrodes and optical films
- Recipe-driven operation via touchscreen HMI
- Lower infrastructure burden than modular systems

Why choose the nanoPVD-T15A

Faster evaporation cycles
Keep evaporation of electrodes, contacts and specialist materials close to the group so early-stage changes happen quickly.

Ease of use for mixed teams
A compact format, touchscreen HMI and recipe-based operation make it approachable while preserving research-grade control.

Research-grade flexibility
Practical evaporation of metals, volatile organics and sensitive materials where local access and careful development matter.

Lower operational friction
Useful PVD capability without the access complexity, services load and training burden of larger infrastructure.

Key features

Compact benchtop design
Research-grade evaporation in a space-efficient format for labs, teaching spaces and cleanrooms.

Thermal & LTE sources
Box-shielded TE1 sources for metals; low-thermal-mass LTE sources for volatile organics.

High aspect-ratio chamber
A tall chamber geometry supports high-uniformity coating via evaporation.

High-vacuum performance
Turbomolecular pumping for low-contamination operation below 5×10^{-7} mbar.

Recipe-based touchscreen control
7″ HMI with fully automatic operation and multiple saved process recipes.

Gentle on sensitive materials
Low-temperature evaporation suits organics and films that plasma sputtering would damage.

Typical configurations

Start with a proven configuration, then tailor source, gas, stage and monitoring options around your materials and target films.

Metals deposition

Contact metals, electrodes and interfaces for device prototyping.

- Two TE1 thermal sources
- Shutters for clean deposition
- Quartz crystal sensor (rate/thickness)

Organics deposition

Volatile organics and sensitive materials needing low-temperature sources.

- Four LTE low-temperature sources
- Low thermal mass for organics
- QCM sensor and shutters

Metals + organics

Combined workflow for electrodes plus organic or interface layers.

- Two TE1 + two LTE sources
- Metals and organics in one chamber
- Shutters and QCM sensor

Technical specifications

Parameter	Specification
System type	Benchtop PVD — thermal & LTE evaporation
Base pressure	<5×10^{-7} mbar (turbo-pumped)
Evaporation method	Thermal (TE1) + low-temperature (LTE)
Evaporation sources	Up to 4 LTE; up to 2 TE1 (metals)
Rate / thickness	Quartz crystal sensor head (option)
Pumping	Turbomolecular high-vacuum
Chamber	Tall, high aspect-ratio for uniformity

Parameter	Specification
Max substrate size	4″ (100 mm)
Substrate heating	Up to 500°C optional
Substrate cooling	Not available
Substrate handling	Rotation, Z-shift & shutters (option)
Process control	Industrial PLC + 7″ HMI touchscreen
Recipe control	Recipe save / load standard
Glovebox compatible	No
Warranty	2 years

Exact specifications depend on final configuration and are confirmed at quotation.

Selected publications citing the nanoPVD range

- Enhanced photocurrent and electrically pumped quantum-dot emission from plasmonic nanoantennas — University of Cambridge
- A photolithographable electrolyte for deeply rechargeable Zn microbatteries — Chemnitz University of Technology
- Benign solution-processed Sb_2Se_3 nanowires for photovoltaic applications — Ben-Gurion University of the Negev
- High-sensitivity ethanol vapour detection using In_2O_3@ZnO core–shell nanomeshes — Warsaw University of Technology
- Single-molecule mid-infrared spectroscopy via vibrationally assisted luminescence — University of Cambridge
- Decoupled high-mobility graphene on Cu(111)/sapphire via CVD — Italian Institute of Technology