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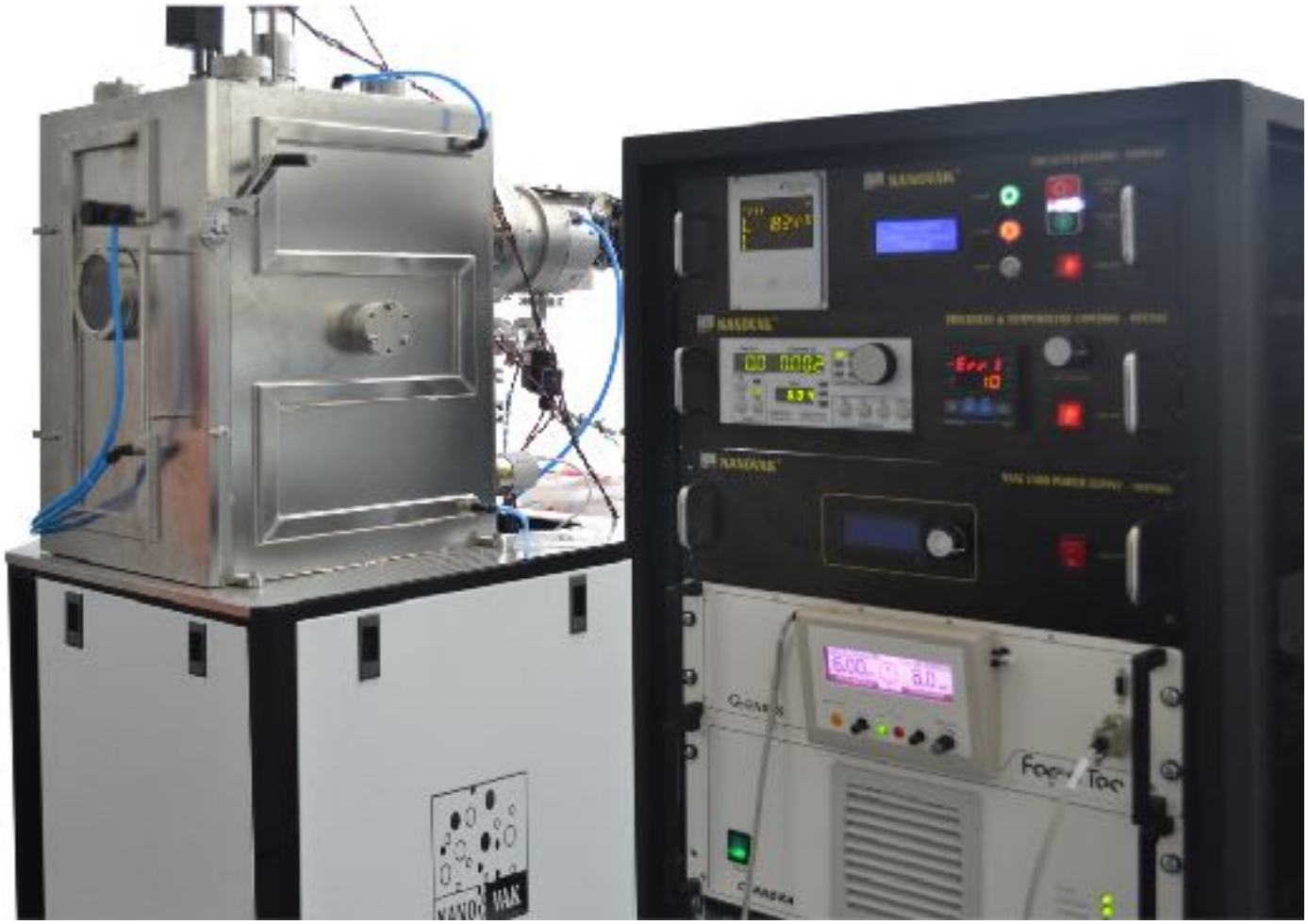
NVEB-600-4EB1TH e-Beam System



Water cooled cylindrical/prismatic vacuum chambers are produced out of SS304 materials. This system have 1-2 thermal and/or 4-crucible e-beam sources enabling the user to do full co-evaporation. Typical properties of the system are given below. Multi-layered thin films of different materials can be prepared by NVEB system. NANOVAK® E-Beam System can be tailored to fit user desires in order to produce multilayered, nanosize metallic, oxide, carbide or nitride films.

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e-Beam System

- Fully automatic computer control and/or automatic panel control with real time LCD displays
- Prismatic / cylindrical vacuum chamber made of SS304. In 40x40x60 cm sizes. Feather-touch clean, electro-polished surface, SS304 liner, water cooled surfaces
- UV-blocking, front observation window, rotatable shutter. Shutter-thickness control via PC
- Standard 1", QF, CF, ISO ports as desired
- Internal lighting and baking unit and internal baking up to 120°C
- Turbomolecular + Mechanical pump, $2x10^{-6}$ Torr vacuum level in 30 minutes. 10^{-7} Torr vacuum level in one hour, for fully loaded system
- Vent and isolation valves, The chamber remains under vacuum with an isolation valve when not in use
- 10^{-8} Torr base pressure level, 10^{-7} Torr vacuum level in one hour, for fully loaded system
- 10 KV, adjustable power supply, 1000 mA beam current. Arc protection ability
- Ability to evaporate Al, Pt, Ni, ... metals and oxides TiO_2, SiO_2, at high rates
- Wide range (1000 - 10^{-9} Torr) vacuum control and measurement
- 50-800°C PID controlled sample heating, ±1°C sensitivity, 1-10 cm sample attachments, 3", 4", 6" wafer loading ability
- 2-30 rpm sample rotation unit, continuous adjustment ability, panel-PC control
- Automatic closed loop water cooling system, interlock controlled, automatic on-off process control to prevent premature use of power supplies without water
- 0.1 Å/s dual-channel precision thickness-rate measuring unit with two QCM's
- One 10V-200A sequential, one channel thermal source for co-evaporation and doping. Ability to prevent cross contamination, easy replacement of sources
- 1.5 hour experiment cycle-time, possibility for 4-6 experiments per day, 2 year warranty
- 1.5 hour experiment cycle-time, possibility for 4-6 experiments per day
- 85x180 cm footprint, lockable wheels. Easily passes through the standard doors
- One year warranty for design, materials and workmanship

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