

## TFDS-184 - Thin Film Deposition System



TDFS-184 is a load lock/process.

Two Chamber System, used for metal and/or dielectric layers deposition at the border of UHV technology.

Totally automated control via PLC, allows statistic data collection, control and programming of the system.

The system also has a bilateral RS232 communication capability. The PC included in the package makes the control a simple task. Software package includes Windows 95 and application programs including medical, metallurgical, telecommunications, micro-electronics, optics and superconductor research:

**System design answers most needs of multilayer technology:**

- Cleanest available system on the market. Totally oil free pumps
- Evaporation materials are not exposed to the atmosphere when a substrate is changed.
- Small chamber with adjustable substrate holder .
- Substrate cooling/ heating.
- In-situ elipsometry capability.
- Ion cleaning and ion assisted deposition (optional).
- Clean room compatible with a real small footprint.
- Easy Maintenance.
- Clear function display with user friendly interface.

### Technical Data

<b>Base pressure:</b>	2 x 10 <sup>-8</sup> Torr or better
<b>Typical Pumpdown Time Pumps:</b>	90 min (vent dry N <sub>2</sub> ) to 10 <sup>-8</sup> , 50 min to 10 <sup>-7</sup> Cryo pump CTI ON-BOARD 8, molecular pump & membrane pump
<b>Trap:</b>	Not used on dry system
<b>Bottom Chamber:</b>	85 Ltr, stainless steel, mirror-finished OD vertical door 520x360 mm , 2 ,viewport 4"OD with shutters, 12 flanges 2.75"CF for gauging, E-gun, shutter, baffle and spares, flange 10"CF for second E-gun (co-evaporation - optional) 10"CF pumping port
<b>Top Chamber:</b>	10 Ltr, 200mm ODx240mm H, stainless steel, mirror-finished OD, horizontal door 200mm OD, viewpoint 2.75"CF, shutter, vertical UHV manual manipulator 4" stroke, water cooled substrate holder 3", 4-5/8"CF flange for US-Gun (optional) two 2.75"CF flange for elipcometer (optional), thickness monitor head, electrical feedthrough, 4.5"CF pumping flange, spare flanges 2.75" and 1.33"CF
<b>Valves:</b>	Electro-pneumatic, stainless steel
<b>Multi-pocket e-beam gun:</b>	4, 6, 8, pockets, 7 to 25cc
<b>E-beam gun power supply:</b>	6 KW, 10KW, 15 KW (optional)
<b>Glow discharge (optional):</b>	AC, self limited power supply
<b>Heater (optional):</b>	2 Ion gauges; TC gauges; Pirani
<b>Thickness monitor:</b>	Maxtek MDC 360
<b>Shutters:</b>	Rotating Source Shutter Swinging Sample Shutter
<b>Vacuum Gauges:</b>	Combine digital gauge with two T/C and one cold cathode gauge
<b>Thickness Monitor:</b>	Maxtek 360 Deposition Controller
<b>Control:</b>	Control PLC integrated system