PVD Series
Thin Film Deposition Systems

PVD-10

Magnetron Sputtering
Thermal Evaporation
Advanced Hybrid Systems

Developing practical solutions for cutting edge technology
PVD-10 SYSTEM

The PVD-10 is a modular cost efficient system physical vapor deposition system. It is dedicated to the Evaporation or Sputtering deposition process of materials. The fully automated solution is ideal for small batch production in an R&D Environment.

CORE SYSTEM FEATURES

- D-shape Stainless Steel chamber with sliding door & viewing port
- Up to 10 rotatable substrate holders
- Pneumatic shutters
- Source selection switch
- Custom-made substrate holder of up to 4 inches
- Up to 2 Quartz sensors

DEPOSITION TECHNIQUES

THERMAL/ORGANIC EVAPORATION
- Evaporation by Joule effect
- Up to 10 metallic or organic evaporation sources
- Organic 2cc/Inorganic

E – BEAM EVAPORATION
- Electron beam bombardment
- 4x6cc HV source
- Multiple rotatable crucibles

MAGNETRON SPUTTERING
- RF, DC or DC Pulsed source power supplies
- Up to 4 sources

HYBRID CONFIGURATION
- Combined Sputtering & Evaporation processes
- Process switching controlled by Software
POWERFUL AUTOMATED SOFTWARE

Process Acquisition software with:

- Rate deposition
- Thickness control
- Pressure Display
- Temperature Control
- Valve/Shutter management

Fully & Semi Automatic modes

User mode Access Levels

Recipe modes for Thickness Rate & Deposition Time

- Pre-programmed recipe library

Hardware:
Integrated PC with windows XP or 7 (as standard)

OPTIONS

- Heating Coil
  Up to 600°C

- Sample Bias
  Etching
  Layer modification

- Ion Gun
  Substrate cleaning
  Assisted deposition

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Thickness Homogeneity (@ working distance of approx. 200 mm)</td>
<td>+/-2%</td>
</tr>
<tr>
<td>Thickness Reading Precision</td>
<td>0.1 A</td>
</tr>
<tr>
<td>Deposition Rate Reading Precision</td>
<td>0.01 A</td>
</tr>
<tr>
<td>Vacuum Base Pressure</td>
<td>10^{-7} mbar</td>
</tr>
<tr>
<td>Pumping-down Time (10^{-6} mbar)</td>
<td>&lt; 20 mins.</td>
</tr>
<tr>
<td>Turbo pump</td>
<td>700 L/s on N₂</td>
</tr>
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</table>
COMPATIBILITY MATRIX

<table>
<thead>
<tr>
<th>Configuration type</th>
<th>PVD-10 E</th>
<th>PVD-10 S</th>
<th>PVD-10 H</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBSTRATE HEATING (up to 600°C)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>SUBSTRATE COOLING (down to -150°C)</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>SUBSTRATE ROTATION</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>CATHODES (Up to 4)</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ORGANIC/ THERMAL (Up to 10)</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>GLOVE BOX COMPATIBILITY</td>
<td>-</td>
<td>-</td>
<td>X</td>
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<tr>
<td>SAMPLE BIAS</td>
<td>-</td>
<td>X</td>
<td>X</td>
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<tr>
<td>ION GUN</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>THROTTLE VALVE</td>
<td>-</td>
<td>X</td>
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ADVANTAGES

- FULL ACCESS INSIDE CHAMBER
- GLOVE BOX COMPATIBILITY
- FAST PUMPING SPEED
- PRESSURE MANAGEMENT
- THICKNESS MONITORING
- FULLY AUTOMATED

COMPANY HISTORY

Vinci Technologies manufacture and supply a broad range of laboratory and field instrumentation for the oil & gas industry. The vacuum division, formerly MECA2000 draws from a rich expertise to manufacture PVD-Sputtering & Thermal Evaporation, PECVD and PLD systems for vacuum coating thin inorganic and organic films.

For additional information, feel free to consult our catalogue online or contact us for a range of solutions customized to your requirements.