

Vapor Surface Engineering with the RPX-210, -210P

This compact, bench top vapor deposition system is ideally suited for Research and Development laboratories and pilot production.

Typical Applications

- Silane Surface Modification
- MEMS Anti-Stiction layers
- Semiconductor fabrication and Packaging coatings
- DNA Microarray preparation
- Biocompatible surfaces
- Hydrophilic μ -fluidic films
- Hydrophobic protection films
- Adhesion promoters
- Atomic Layer Deposition (ALD) of inorganic oxides



Process Control

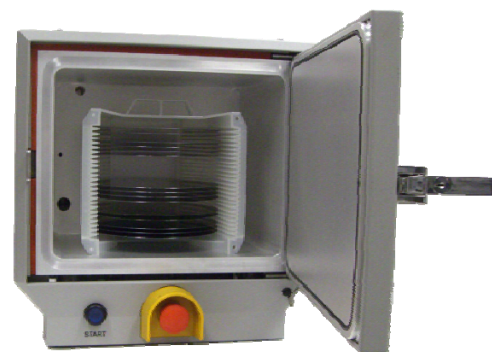
- Accurate precursor delivery with Labview® creates superior monolayers. This surface modification is achieved by precise chemical “dosing”, or by easy sequential and alternating programming.
- IST’s open architecture allows users to create novel nano-composite structures.
- IST’s cartridge design* provides easy chemical change-over for multiple applications in the same system.

The IST Advantage

- Process Flexibility
- Superior Uniformity
- Repeatability: within substrate, substrate-to-substrate, batch-to-batch
- Lowest Cost-of-Ownership (COO) in the industry
- Large batch processing
- Efficient and minimal chemical usage

Summary

- Surface engineering requires stringent control of precursor delivery and process parameter programming. **With IST’s system you can easily tune surfaces for your specific application.**



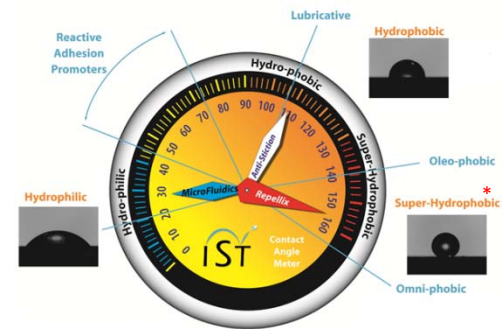
Capacity to hold a full 8" wafer cassette.

Integrated Surface Technologies, Inc. manufactures equipment and provides specialty chemicals for nano-scale surface engineering. IST's patented films and state-of-the-art process technology provides unique capabilities unsurpassed in the industry.

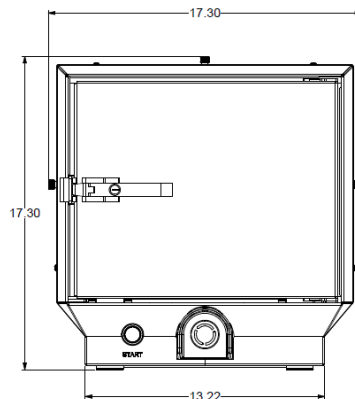
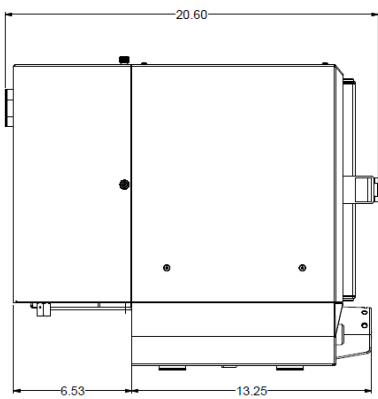
The model -210P has a high efficiency RF plasma source using capacitive and inductive coupled electrodes.



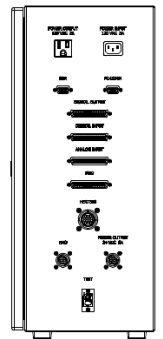
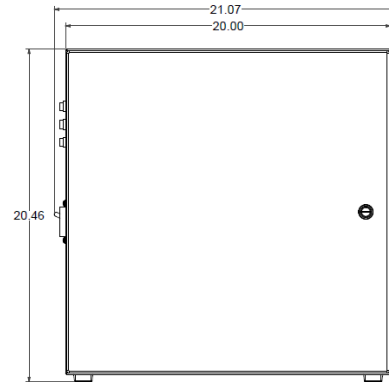
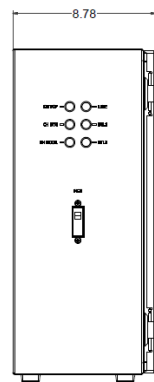
Common Surface Modifications	Contact Angle / Surface Energy (dyne/cm)
Perfluoro-C10 (FDTs)	110° / 20
ALD Oxide* (SiO ₂)	20° / 75
ALD Alumina (Al ₂ O ₃)	15° / 80
Amino-Propyl	58° / 37
Mercapto	70° / 41
Glycidoxy-Propyl	59° / 43
Many others available – Call us for a quote	



* Available on the RPX-540, RGM-560



Chamber Dimensions (inches)



Facilities Box Layout (inches)

Hardware	
Chamber Material	6061 Al – Solid Block
Chamber Size	12.5" (W) x 9.6" (D) x 10" (H)
Number of Precursors	2 Cartridges (Interchangeable) + Carrier Gas or Ozone (Optional)
Pressure Gauge	10-Torr Capacitance Manometer (Heated 100°C)
Temperature Control	Room Temp to 125°C
Weight (Chamber)	130 lbs.
Weight (Facilities Box)	45 lbs.
Crate Dimensions (~)	40" (W) x 38" (D) x 36. (H)

Control	
MS Windows PC	Dual-Core, 2GB RAM, 512GB SSHD 19" LCD Monitor, RS-232 Serial
Controller Interface	NI Labview® / NI cRio®
I/O	16-Channel Digital Out 16-Channel Digital In 16-Bit Analog Input
Temperature Sense	8 Channel RTD, ±0.1°C accuracy
Number of Recipes	Only limited by hard disk space
Sequencing	Programmable. Up to 32,000 conditional steps in an Excel spreadsheet.

Facilities	
Power	220VAC, 1Φ, 20Amp
Pneumatics	80 PSI CDA or N ₂
Vent Gas	Dry Nitrogen preferred or Bone Dry Air @ 10 PSI
Vacuum Requirements	KF25, >15 CFM, <5x10 ⁻³ mbar



Vaporrix™ Interchangeable Chemical Cartridges

Specifications subject to change without notice.