

THIN FILM DEPOSITION

Dynavac provides precise, reliable PECVD deposition systems for commercial and military infrared applications. Our systems produce films that create a hard, smooth film for hostile-environment protection across an array of optical surfaces, including germanium and silicon optics.



DIAMOND-LIKE CARBON (DLC) Thin Film Deposition Systems

System Highlights

- 21-inch diameter chamber allows for flexibility in substrate sizes
- PECVD process using 13.56 MHz excitation and auto-tuning network
- DLC films with unparalleled protection against wear, abrasion, and environmental conditions
- Deposition occurs at a constant rate set by plasma parameters with film thickness controlled by deposition time
- Automatic process with easy-to-use recipe

Characteristic Film Properties

- Uniformity: +/- 1% (across 16.7-inch plate)
- Transmission across 8-12 micron range: >88%
- Films pass environmental and durability testing per MIL standards:
 - ✓ Scotch™ tape adherence
 - ✓ Eraser abrasion
 - ✓ Salt-water immersion
 - ✓ Salt fog/spray
 - ✓ Cycled temperature/humidity
 - ✓ Sand slurry wiper testing

The flawless performance you expect

From Dynavac, the most respected name in vacuum deposition systems

www.dynavac.com

SPECIFICATIONS

Vacuum Chamber

- 21-inch diameter with mechanical top-lid hoist
- Turbomolecular pumping system

Process Control

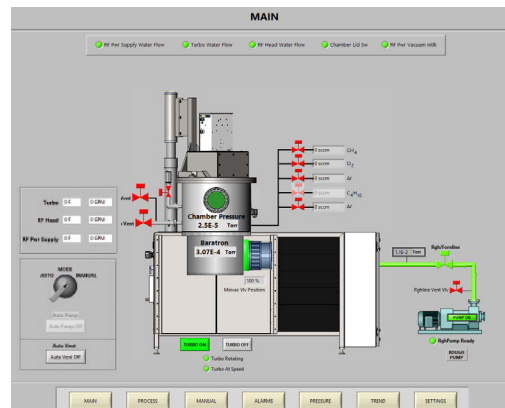
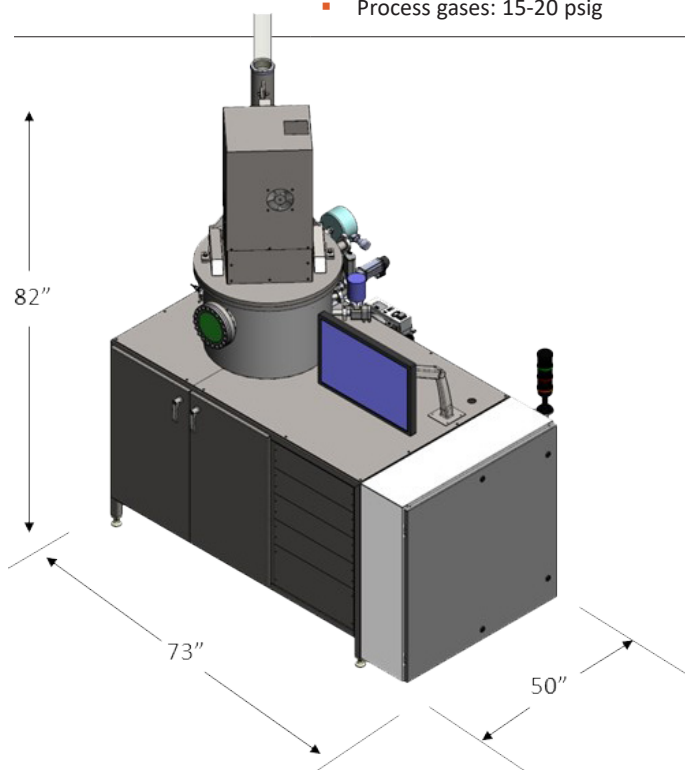
- Plasma-Enhanced Chemical Vapor Deposition (PECVD)
- 16.7-inch diameter substrate plate
- Constant deposition rate set by plasma parameters with film thickness controlled by time
- Chamber O2 cleaning process to maximize system uptime
- Process Gases: Argon, Oxygen, Methane, and Butane

User Interface

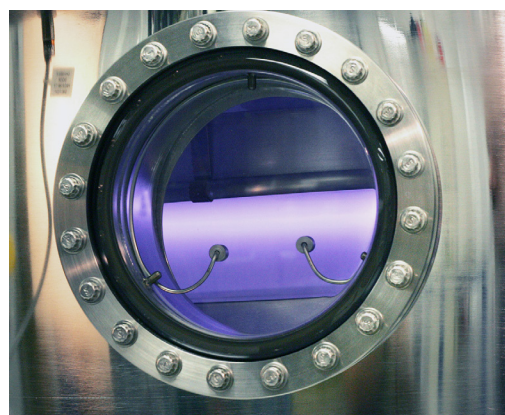
- System functions fully automated with a standard control platform
- User interface via menu-driven LabVIEW® HMI software
- Standard screens for System Overview, Process Recipe Development, Data Log/Process Trending and Alarm Status
- Remote system access

Utilities

- Electrical power: 208/220VAC, 3ph, 60Hz, 100A
- Compressed air: 80-100 psig
- Cooling water: 5-6 gpm @ 15-25°C
- Process gases: 15-20 psig



User Interface Screen



Dynavac delivers complete systems for thin film deposition, space simulation and custom/unique applications. Systems range from batch systems to large-scale, continuous production tools. Dynavac is committed to providing its customers with quality workmanship, cost-effective solutions, and excellent customer service.

Dynavac
40 Years of Innovation

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