



# Dynavac Optical Coating Systems



Dynavac manufactures precision optical coating systems for the commercial production of thin films. These systems are used for a variety of industrial applications, from ultraviolet and visible coatings with ion-assisted deposition to complex infrared coatings.

## System Highlights

- Compact, split-bell jar design minimizes floor space and provides easy access to interior
- Available in standard sizes of 32, 39, 48, and 54-inch chamber diameter. Other sizes and configurations available
- Designed and fabricated to ensure maximum uptime with high reliability and easy maintenance
- Fully integrated process control systems for simple and efficient "one-button" operation
- Download capability from standard thin film design packages enable rapid, accurate entry of complex designs
- Standard quartz crystal monitoring or optical monitoring to ensure precise and uniform deposition
- Ion source delivers high-current, low-energy beam to substrates for smooth, high-density films, especially for oxide materials
- Responsive customer support team with expertise in all design disciplines

## Standard Features

### Typical Performance Characteristics

- Coating uniformity: <2-3%, <0.5% available
- Roughing time: 10-20 minutes
- Base pressure:  $2 \times 10^{-6}$  Torr -  $5 \times 10^{-7}$  Torr
- Time to base pressure: 1-2 hours



### Vacuum Chamber

- Split-cylinder design for easy interior access and small footprint
- Electropolished exterior and interior surfaces
- Exterior traced with water-cooling channels
- Two sets of stainless-steel wall liners

### Pumping Equipment

- Roughing systems using oil-sealed or dry mechanical pumps
- Cryopump or diffusion pump for high-vacuum pumping
- Removable evaporation baffle for easy cleaning
- Meissner coil option with liquid nitrogen or closed-cycle cryogenerator

### Substrate Fixturing

- Planetary mechanism or single-rotation dome
- Custom tooling available including flipping mechanism

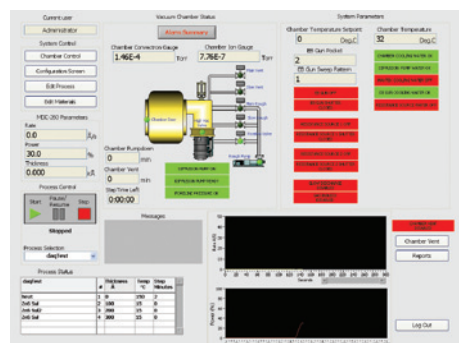
### Available Deposition Equipment

- Electron-beam sources
- Resistance-evaporation sources
- Quartz-crystal monitor for rate and thickness control

- Optical monitoring system
- Glow-discharge cleaning system
- Ion source for substrate cleaning or ion-assisted deposition
- Substrate heating system up to 300°C

### System Control

- Industrial programmable logic controller for high reliability
- Menu-driven graphical interface via LabVIEW® software



- Data logging with user-selected variables
- Download capability from standard thin film design programs
- Remote diagnostic capability

### ABOUT DYNAVAC

Dynavac delivers complete systems for thin film deposition, space simulation, and custom/unique applications. Systems range from compact, batch-type chambers to large-scale, continuous production tools.

Dynavac is committed to providing its customers with quality workmanship, cost-effective solutions, and excellent customer service. For a consultation on the best solution for your needs, call 781-740-8600 or e-mail a Dynavac customer representative at [sales@dynavac.com](mailto:sales@dynavac.com).

