

THIN FILM DEPOSITION

## System Upgrades



*Dynavac delivers the results you expect with the trusted support of a market leader*

A well-manufactured deposition system can last for decades, but eventually upgrades are required to keep current with technological advances and/or replace worn components. Dynavac offers a complete platform of equipment and services to extend the life or capabilities of your existing system, protecting its value for several more years to come.

Whether it's a complete top-to-bottom refurbishment or improvement of process control capability, Dynavac has both standard and custom-engineered solutions available for most any type of system. All upgrades come with the backing of Dynavac's engineering and manufacturing experts so that you can achieve your process, production, and schedule objectives.

Dynavac has been designing, manufacturing, and supporting thin film deposition systems for over 30 years. Our customers represent a wide range of industries, but they share the same expectation: top-quality performance, consistent coating results, and exceptional operational support.

**The flawless performance you expect**

*From the most respected name in precision optical coating systems: Dynavac*



## Available Options

<b>Vacuum Chamber Modifications</b>	Dynavac has full-service fabrication capabilities to refurbish and retrofit vacuum chambers either at your facility or our plant.
<b>Control System Upgrades</b>	Improve system control and reliability with Dynavac's Film-Pro Control System package. Its PC/PLC-based architecture with HMI interface provides fully automated control and management of coating processes.
<b>Process Control</b>	Dynavac's process control solutions support production of today's most sophisticated coatings. Our monitoring solutions include: <ul style="list-style-type: none"> <li>• Quartz crystal monitoring</li> <li>• Spectrum-Pro Optical Monitor enables a wide range of monitoring strategies including reflectance, transmittance and direct monitoring.</li> <li>• Spectrum-Pro Broadband Monitor uses a real-time coating characteristic program to measure, analyze, and control coating deposition.</li> </ul>
<b>Substrate Fixturing</b>	Choose from a variety of standard designs for single rotation and planetary mechanisms. Customization is available for high speed rotation, substrate flipping, angled planets, etc.
<b>Pumping Systems</b>	Replace or upgrade pumping systems to improve system performance. Enhanced water-vapor pumping options are available using mechanical refrigeration or liquid nitrogen.
<b>Substrate Heating</b>	Substrate heating solutions are available using infrared quartz lamps or resistance-type heaters.
<b>Process Equipment</b>	A variety of options are available to support evaporation, sputtering, ion-assisted deposition and glow discharge.
<b>Turnkey Installation</b>	Our team will work with you to perform upgrades with minimal interruption to production schedules. Complete, turnkey installations are offered including system training and updated documentation.



Planetary Mechanism



Dynavac Spectrum-Pro Optical Monitor



Control System Upgrade