



# Expedition

## Precision Optical Coating Systems

*Now you can get all the great features and options of the **CITATION™** series coating systems in a platform tailored to your small batch or R & D needs!*

VPT's **EXPEDITION** series of Precision Optical Coating Systems provide an economical way to produce state-of-the-art coatings just like that of its big brother, the **CITATION™** Family of Precision Optical Coating Systems.

### *Flexible Configurations:*

**EXPEDITION** systems are each carefully tailored to support your specific coating application requirements. Configuration options include Thermal Evaporation, Electron Beam Evaporation, Ion Assisted Electron Beam, and Sputtering. Both crystal and automated optical monitoring for high accuracy and tight coating specifications are available.

Substrate fixturing is available in single rotation, planetary, and calotte. All systems are designed to maximize coating uniformity and production throughput.

**EXPEDITION** systems will support a wide range of coating applications.

Utilizing the PC \ PLC based control systems that are standard in all VPT coaters, user-friendly graphical interface screens allow easy process downloads to the **EXPEDITION** system for completely automated coating runs.



# EXPEDITION Base System and Options

<b>Chambers</b>	Standard Platforms (20 inches to 30 inches):
	Expedition 20-inch Precision Optical Coater
	Expedition 24-inch Precision Optical Coater
	Expedition 30-inch Precision Optical Coater
	<b>Custom sizes are also available.</b>
	304L SS, Water cooled, Ultimate leak rate $\leq 1 \times 10^{-8}$ atm-cc/s
<b>High Vacuum Pumping</b>	Single Cryopump configurations Single Diffusion Pump configurations
<b>Rough Vacuum Pumping</b>	Rotary vane Pump Optional Dry Pump
<b>Substrate Fixturing</b> (see also the <a href="#">Substrate Fixture brochure</a> )	Single rotation Flat Planetary rotation Optional single and multiple dome configurations
<b>Substrate Heating</b>	Front side quartz lamp assembly(s)
<b>Deposition Sources</b>	Single and Multi-pocket Electron Beam source(s) High current Thermal source(s) Magnetron Sputtering source(s)
<b>IAD Sources</b>	End-Hall Ion Source Package
<b>Layer Thickness Monitoring</b>	Physical - Quartz crystal (sensor numbers and locations as needed) Optical - VPT <a href="#">VLOM1 Optical Monitoring System</a> , reflectance and transmission operating modes
<b><a href="#">Control Systems</a> &amp; Automation</b>	PC / PLC platform with RSView 32 HMI operator interface VPT's DesignLink process control software package
<b>Process Gas</b>	Single channel O <sub>2</sub> pressure control Multi-channel flow control
<b>Utilities (30" typical)</b>	Electrical: voltage as required, 3 Phase, 22 kVA Air: 80 – 90 PSIG Water: 12 GPM, 60 – 70 degrees F