

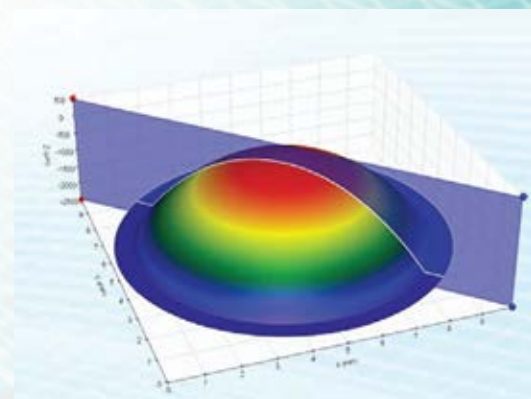
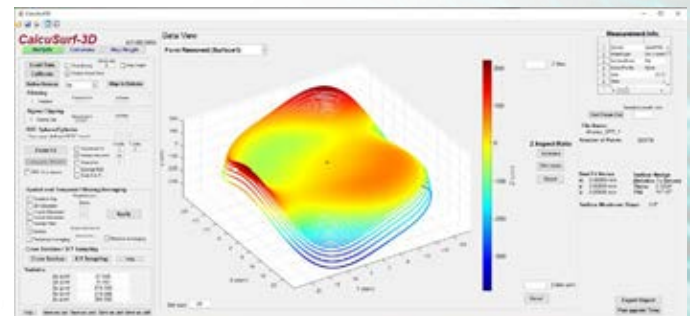
QuickPRO-RPS™

High-Speed, High-Accuracy, Non-Contact 3D Rotary Profiler Station (RPS)

The Rotary Profiler Station (RPS) is designed specifically for measuring the surface topography and transparent film thickness of rotationally symmetric samples such as diamond-tuned optical surfaces and molded or polished aspheric lenses.

Features

- The RPS-150 is perfect for samples with diameters equal or less than 150mm
- Non-contact, high-resolution, high-speed chromatic confocal point sensor with three available probe resolutions
- Integrated high-precision air-bearing centration/tilt table with adjustable piezo lever probe for fast and easy sample/chuck/fixture alignment
- Nanometer encoded C/R/Z (rotational, radial, vertical) motion with direct drive rotary air bearing (C-axis) and direct drive linear mechanical bearing (R- & Z-axis)
- Granite base with dimensionally stable Invar metrology frame
- Available vacuum bell chucks for secure sample holding
- Nanometer precision motion control with thermal compensation and error mapped Invar encoder gating scales
- User-friendly QuickPRO™ instrument control and data acquisition software permits easy set-up and optimized measurement sampling density for best coverage at highest throughput
- Powerful CalcuSurf-3D™ software for surface plotting, form fitting and data reporting



QuickPRO-RPS™

SYSTEM		
Dimensions (L: W: H)	700mm x 630mm x 660mm	
Weight Approx.	60kg	
System Controller	Motion and sensor control; high-speed data link	
Power Requirements	110-220V AC, 50-60 Hz, 2 amps (220V), 5 amps (110V)	
Compressed Air	114 liters/min [2 CFM] @ 413 kPa [60 psi]	
MOTION		
Measurement Area (X : Y : Z)	Ø150mm x 50mm	
Rotary Stage	Ultra-precision air-bearing (< 50nm TIR) with Ironless rotary servo drive	
Rotary Stage Speed	Up to 720 RPM	
Z Stage	Linear servo motor w/magnetic counterbalance	
Z Axis Scan Speed	50mm/s	
Radial Stage	Linear servo motor	
R Axis Scan Speed	100mm/s	
Scan Type/Path	Spiral	
Load Capacity	50kg	
SENSOR		
Technique	Chromatic Confocal Point Sensor	
Applications	Surface Profile, Centration, and Tilt; Thickness	
Sampling	Up to 66,000 points/sec/sensor	
Available Probes	0.5mm (HS)	1.0mm
Lateral Resolution	5µm	2µm
Working Distance	11mm	19mm
Axial Resolution	20nm	4nm
Maximum Slope	> ±45°	±45°
Thickness Range (n=1.5)	30µm - 750µm	45µm - 1500µm
MEASUREMENTS		
Form Accuracy	150nm PV	
Surface Decenter Accuracy	0.005mm	Relative to datum surfaces
Surface Tilt Accuracy	0.01° [36 arcsec]	Relative to datum surfaces

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