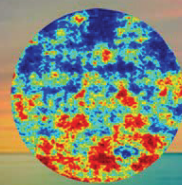
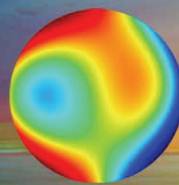


S-Series | 1MP



Fizeau Interferometer for Surface and Wavefront Metrology 1-Megapixel Imaging and Three Optional Sources

System Overview		S50 1MP	S100 1MP	S150 1MP
	Output Diameter	51 mm (2 inch)	102 mm (4 inch)	153 mm (6 inch)
	Optical Centerline	108 mm (4.25)	108 mm (4.25 inch)	133 mm (5.24 inch)
	Focus Range (position readout)	±0.5 meters	±2.0 meters	±4.5 meters
	Interferometer Size (L x W x H)	63 x 29 x 18 cm	70 x 32 x 26 cm	90.2 x 40.8 x 23.9 cm
	Weight	25 kg (55 lbs)	33 kg (73 lbs)	50 kg (110 lbs)
	Measurement Techniques	Fast/Sensitive Spectral Synchronous, Vibration-Tolerant PSI Plus Vibration-Insensitive Carrier Fringe		
	Alignment System	2-Spot with reticle with 2° Capture Range		
	Light Source	SCI SpectraÄ 2.0, HeNe Laser, and ÄTLas Wavelength Shifting		
	Laser Frequency Stability	<0.0001 nm		
	Temporal Coherence Length	SCI SpectraÄ 2.0 ≤2 meters, HeNe Laser >100 meters, ÄTLas ≤3 meters		
	Output Polarization	Circular (Linear optional for birefringent part measurement)		
	Camera Resolution	1024 x 1024		
	Camera Frame Rate (max)	90 Hz (25 Hz with SCI source)		
	Shutter Speed (shortest)	9 µs		
	Camera Digitization	8 bit		
	Computer & Software	High-Performance PC, Windows11, 64-bit OS & REVEAL Software		
	Mounting Configurations	Horizontal or Vertical		
Performance				
	Image Resolution	100µm (10 l/mm)	200 µm (5 l/mm)	300µm (3.3l/mm)
	Image Distortion	<0.1%		
	Fringe Resolution	>300 fr/aperture		
	Retrace Error³ @ 256 fringes	< λ/15		
	RMS Simple Repeatability¹	<0.6 nm RMS 2σ		
	RMS Wavefront Repeatability²	<0.6 nm RMS 2σ		
	Measurable Part Reflectivity	0.1%to 40% direct and >41% with attenuation filter or coatings		
Environment				
	Temperature	15°C to 30C		
	ΔT/Δt	<1.0°C/15 min		
	Humidity	5 to 95% relative, non-condensing		
	Vibration Isolation	Isolation System recommended for VTPSI		

¹ RMS Simple Repeatability Test: The RMS for 36 sequential measurements with each measurement the average of 16 measurements each of a short <2 mm plano cavity

² RMS Wavefront Repeatability Test: Measure 36 sequential Measurements (M1, M2...M30) each consisting of 16 averages. Then average all 36 measurements create a synthetic reference, "Ref". RMS wavefront repeatability equals the 2X the standard deviation of all 30 Ref - Mn results.

³ Retrace Error is defined as the PV residual error between a nulled measurement (the reference), subtracted from a measurement with 500 fringes of tilt, and expressed by the first 36 Zernike polynomials

⁴ λ/20 optionally available

⁵ Resolution is detector limited at 800 lines/aperture

REVEAL

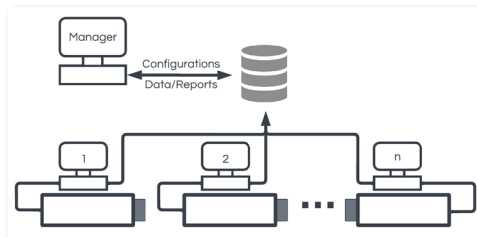
Metrology Software for Interferometers

Introducing REVEAL 24

REVEAL 24 Starts with the REVEAL Launcher

UNIQUE and NEW!: No interferometer is an island...with REVEAL 24

Load measurement recipes and report forms from a central controlled library. Automatically save data to your database. Eliminates setup errors, and user-to-user variations by standardizing the entire measurement process from a central, password controlled location.

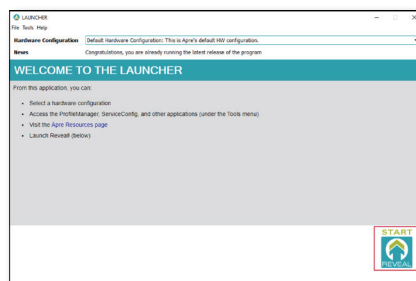


NEW! Setup user access and passwords:

In the Profile Manager grant or restrict global or individual access to measurements. Assign what can be edited, where data is saved, and then password (encrypted) protect.

NEW! Configure your hardware with a click:

ÄPRE state-of-the-art interferometers use multiple sources, which means multiple hardware configurations. Just switch the source, click the hardware configuration and launch REVEAL 24 to start measuring.



Inside REVEAL 24

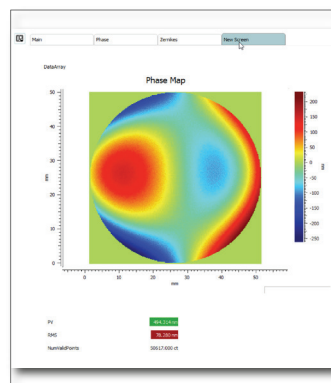
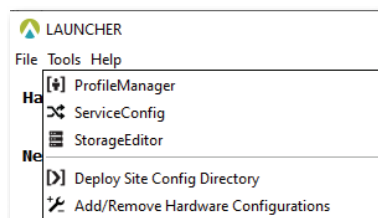
REVEAL functionality is maintained: All the menus, results, screens, data and setups are maintained. So there is no learning curve.

More Analyses are Standard: Standard analysis, Optical Shop Testing and Fourier Analysis are included in the standard package so licensing is easier.

NEW! Create Your Own Custom Screens: With an easy to use editor, display the graphs and results required and even set GO/NOGO tolerance flags on important results. Then save your custom screen for future use. The screen at the right was configured in five minutes! It's that easy.

NEW! "Undo" mask shapes. You're in the middle of creating a mask and you want to make a change. The new Undo function takes you back one step to retry. Less time lost, and more freedom to experiment.

NEW! Event Log: Sometimes "things" happen. To correct an error and to get production up and running the Event Log gives you just the important information. Now you can act on it, or contact ÄPRE with the key information, and save time.



Over ten years ago REVEAL innovated interferometer software

- *Traceable metrology via the analysis tree, saved with as-measured (.rvl) data*
- *Data analysis based on international standards and leading laboratories worldwide*
- *Apply filters/masks to data along the entire analysis tree*
- *Fast, consistent reporting via a default, and customizable report library*
- *64-bit operation to handle modern 9-Megapixel and larger cameras without crashing*
- *Remote training and debugging via TeamViewer*
- *Clean, browser like, non-overlapping screens*
- *Compatible with historic .dat data files*

Now REVEAL 24 tightens QC with enterprise control, increases security, and lets you customize screens



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Tucson, AZ 85705
520.639.8195
sales@apre-inst.com

Contact ÄPRE to get REVEAL 24 on your system today.