



SmartScope ZIP Advance

Fast, Accurate Metrology System



SmartScope ZIP® Advance 250 from OGP® is a high resolution, high accuracy video measuring system designed for critical applications not easily satisfied by other systems. It offers sharp, high-contrast images and full video field size, even with the TTL laser option. With its bright LED illuminators, SmartScope ZIP Advance is perfect for verifying critical dimensions.

- **Optics.** SmartScope ZIP Advance 250 provides twice the field of view of a standard ZIP system when using the same front replacement lens. For systems with the optional TTL laser, the laser lens enhances the performance of the laser without compromising video performance. When the optional 1.0x lens is used, the ZIP Advance has twice the field of view of the standard ZIP with no sacrifice in measurement quality.
- **Illumination.** The new 6-ring, 8-sector Vu-Light™ low incidence LED oblique ring light is ideally matched to the optical system to provide outstanding oblique surface illumination. The internal TTL 10 watt LED surface illuminator is unparalleled for brightness and contrast, producing the sharpest image fidelity possible.
- **Positioning.** DC servo motor drives provide accurate positioning control and high speed operation while the heavy duty all metal construction provides stability for accurate, repeatable metrology.
- **Metrology Software.** MeasureMind® 3D MultiSensor software provides full 3D capability with full sensor integration.
- **Multisensor Capability.** ZIP Advance is multisensor-capable — available with contact and non-contact probes that deploy and retract under program control for fully automatic operation. An available switchable TTL laser can be scanned to provide high resolution surface contour measurements.

	Travel	mm
ZIP Advance 250	X axis	250
	Y axis	150
	Z axis	200
Extended X (option)	X axis	300



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Features & Specifications

- Standard
- Optional

	Stage travel (XYZ)	Unit dim (LWH)	Crated dim (LWH)	Unit wt (kg)	Crated wt (kg)
■	250 x 150 x 200	see below	114 x 112 x 145 cm	120	280
■	300	see below	114 x 120 x 158 cm	140	300
■	XYZ scale resolution:	0.1 μm			
■		0.05 μm			
■	Motor drives:	DC servo			
■	Interactive stage control:	4 axis (X,Y,Z, zoom) with ergonomic, multi-function handheld controller			
■	Stage velocity:	150 mm/sec (X,Y), min 100 mm/sec (Z)			
■	Worktable:	Hardened, with fixture holes and removable stage glass, 25 kg load capacity			
■	Zoom lens:	Patented ¹ 5:1, AccuCentric [®] auto-calibrating, motorized, 10 position			
■	Optical back tube adapter:	0.5x*			
■	Front replacement lens:	2.0x laser lens (working distance 38 mm)			
■		1.0x (working distance 49 mm)			
■	Illumination:	High performance green LED backlight collimator, 10W white TTL surface illuminator, low incidence oblique white Vu-Light [™]			
■		Standard incidence white LED Vu-Light for use with 1.0x lens			
■		Adjustable 32 mm diameter fiber optic ring light (75W lamp), used in lieu of Vu-Light			
■	Camera:	1/2" format high resolution color CCD with 768 x 494 pixel array			
■		High resolution black and white (in lieu of color camera)			
■	Image processing:	256 level grayscale processing with 10:1 sub-pixel resolution			
■	Multisensor options:	Touch probe and change rack, off axis DRS [™] laser, on axis TTL laser, Rainbow Probe [™] scanning white light sensor, Feather Probe [™] , laser pointer (not available with TTL laser) (contact OGP for possible combinations of sensors)			
■	Power requirements:	115/230 vac, 50/60 Hz, 1 ϕ , 700 W			
■	Rated environment:	Temperature between 19 and 21° C, stable to 1° C; 30-80% humidity (non-condensing); vibration <0.001g below 15 Hz			
■	Operating environment, safe operation:	15-30° C			
■	Computer:	Minimum configuration Dual Core processor @ 2.66 GHz, 4 GB RAM, 160 GB hard drive, DVD/RW drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN			
■	Operating system:	Microsoft [®] Windows [™] XP Professional			
■	Computer accessory package:	22" flat panel LCD monitor, or dual 22" flat panel LCD monitors, keyboard, mouse (or user supplied)			
■	Metrology software:	MeasureMind [®] 3D MultiSensor			
■		Measure-X [®] (in lieu of MeasureMind 3D), MeasureMind 3D offline			
■	Software:	For use with Measure-X or MeasureMind 3D; MeasureFit [®] Plus, MeasureMenu [™] , SmartReport [®] powered by QC-Calc [™] , Scan-X [®]			
■	Software:	For use with MeasureMind 3D only; SmartFit [®] 3D, SmartScript [®] , SmartTree [™] , SmartProfile [®]			

Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.

- **XY area accuracy:** $E_2 = (1.0 + 6L/1000) \mu\text{m}^{**}$
- **Z linear accuracy:** $E_1 = (2.5 + 5L/1000) \mu\text{m}^{***}$
- **Z linear accuracy:** $E_1 = (2.0 + 5L/1000) \mu\text{m}^{***}$ (with optional TTL laser, or DRS-2000 laser)
- **Z linear accuracy:** $E_1 = (1.4 + 5L/1000) \mu\text{m}^{***}$ (with optional DRS-300 or -500 laser, or TP20 or TP200 touch probe)

- **Warranty:** One year
- **Accessories:** Calibration artifacts, rotary indexers

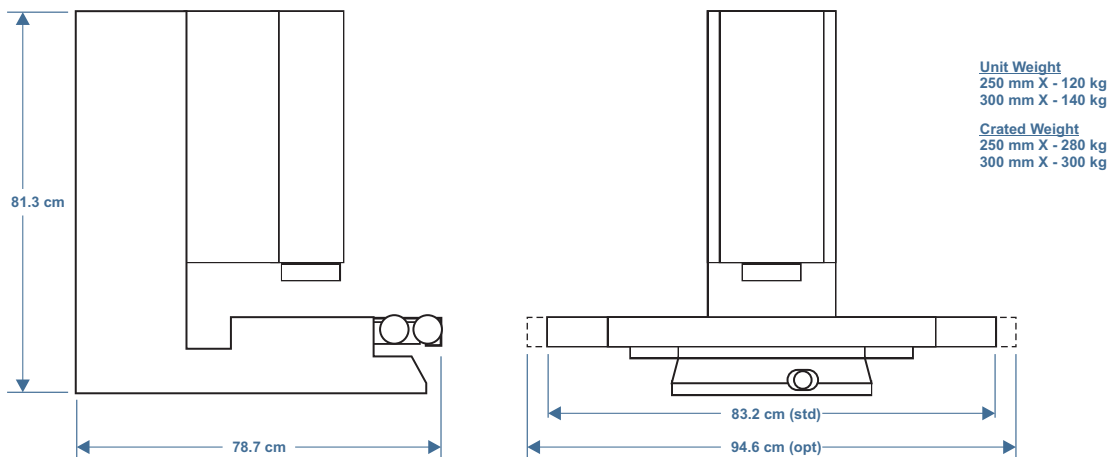
¹Patent Number 5,389,774

*The 0.5x back tube adapter can be field-changed to a standard ZIP 1.0x back tube adapter, allowing all standard ZIP replacement lenses and add-on lenses to be used.

**With evenly distributed 5 kg load in the standard measuring plane. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy. XY axis artifact: QVI 25 intersection grid reticle. The standard measuring plane is defined as a plane that is 25 mm above the worktable.

***Z axis artifact: QVI step gage or master gage blocks.

Made in USA



World Headquarters and Technology Center: 850 Hudson Avenue • Rochester, NY 14621 USA • Tel 585.544.0400 • Fax 585.544.8092

Western USA Regional Office: 1711 West 17th Street • Tempe, AZ 85281 USA • Tel 480.889.9056 • Fax 480.889.9059

OGP Shanghai Co, Ltd: 17 Lane 593 • East Jin An Rd • Pu Dong New District • Shanghai, China 201204 • Tel 86.21.5045.8383/8989 • Fax 86.21.6845.8800

OGP Messtechnik GmbH: Nassaustr. 11 • 65719 Hofheim-Wallau, Germany • Tel 49.6122.9968.0 • Fax 49.6122.9968.20

Optical Gaging (S) Pte Ltd: 21 Tannery Road, 347733 Singapore • Tel 65.67.41.8880 • Fax 65.68.46.8998

Internet: www.ogpnet.com • intl-sales@ogpnet.com