



SMARTSCOPE ZIP LITE



Automatic CNC Measurement Systems

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

SmartScope ZIP® Lite from OGP® is the cost-effective way to get the benefits of completely automatic video-based inspection and measurement, with advanced ZIP motorized zoom optics. All SmartScope ZIP Lite models include:

- **Powerful metrology software.** SmartScope ZIP Lite systems use MeasureMind® 3D MultiSensor metrology software, designed to take full advantage of a 3D measurement environment. It combines a user-friendly interface with high-powered algorithms for dependable and reliable performance.
- **Precision zoom optics.** SmartScope ZIP Lite includes a precise 7:1 motorized zoom lens that keeps images in focus and on-axis throughout the zoom range. The system uses patented AccuCentric® technology to automatically calibrate the zoom lens with each magnification change for optimum accuracy. Optional lens attachments and adapter tubes expand the magnification range. The high-resolution digital color camera provides high contrast color images.
- **Structural integrity.** SmartScope ZIP Lite features a stable granite base and column, and precision mechanical-bearing motorized XYZ stages with 0.5 µm resolution scales.
- **Illumination flexibility.** SmartScope ZIP Lite systems provide illumination flexibility with high brightness LED profile light, coaxial surface light, and the patented SmartRing™ LED ring light.
- **Multisensor capability.** One can add true multisensor versatility by choosing the optional touch probe or DRST™ laser to measure difficult-to-image or otherwise inaccessible features.

SmartScope ZIP performance
in a powerful CNC
video metrology system



Technical Specifications

■ Standard ■ Optional

250 300	
<ul style="list-style-type: none"> ■ Stage travel (XYZ): 250 x 150 x 150 mm ■ Extended X axis: 300 mm ■ Stage travel (XYZ): 300 x 300 x 150 mm ■ Measuring unit dimensions (approx LWH): 55 x 56 x 85 cm, 113 kg ■ Measuring unit dimensions, extended X axis (approx LWH): 55 x 71 x 85 cm, 115 kg ■ Measuring unit dimensions (approx LWH): 82 x 71 x 85 cm, 140 kg ■ XYZ scale resolution: 0.5 μm ■ Motor drives: X,Y microstepper; Z DC servo; with joystick control (X,Y,Z, zoom), 3 button ■ Worktable: Hardcoat anodized with removable stage glass, 20 kg (ZIP 250) or 25 kg (ZIP 300) load capacity 	
<ul style="list-style-type: none"> ■ Zoom lens: Patented[†] AccuCentric[®] auto-calibrating, 7:1 motorized zoom lens system ■ Lens attachments: 0.5x, 0.75x, 1.5x, 2.0x ■ Front replacement lens: 1.0x 2.0x ■ Adapter tubes: 1.0x 0.67x, 2.0x ■ Camera: High resolution color metrology camera ■ Illumination: LED profile light (green), LED coaxial TTL surface light (white), patented^{††} 8 sector/6 ring SmartRing[™] LED ring light (white) ■ Image processing: 256 gray level processing with 10:1 sub-pixel resolution ■ Multisensor options: Touch probe and change rack, DRS[™] laser 	
<ul style="list-style-type: none"> ■ Power requirements: 115/230 vac (± 5%), 50/60 Hz, 1 φ, 300 W ■ Rated environment: Temperature between 18 and 22° C, stable to ± 1° C; 30-80% humidity; vibration <0.001g below 15 Hz ■ Operating environment, safe operation: 15-30° C 	
<ul style="list-style-type: none"> ■ Metrology software: MeasureMind[®] 3D MultiSensor Measure-X[®] (in lieu of MeasureMind 3D) ■ Computer: Minimum configuration Quad Core processor @ 2.5 GHz, 4.0 GB RAM, 160 GB hard drive, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100/1000 LAN ■ Computer accessory package: Single or dual 24" flat panel LCD monitor(s), keyboard, 3-button mouse (or user supplied) ■ Operating system: Microsoft[®] Windows[™] ■ Software: For use with Measure-X or MeasureMind 3D; MeasureFit[®] Plus, SmartReport[®] powered by QC-Calc[™] 	
<p>Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.</p> <ul style="list-style-type: none"> ■ XY area accuracy: $E_2 = (2.0 + 6L/1000) \mu\text{m}^{1,2}$ ■ XY area accuracy (extended X axis): $E_2 = (2.0 + 8L/1000) \mu\text{m}^{1,2}$ ■ XY area accuracy: $E_2 = (2.5 + 8L/1000) \mu\text{m}^{1,2}$ ■ Z linear accuracy: $E_1 = (3.5 + 6L/1000) \mu\text{m}^3$ ■ Z linear accuracy: $E_1 = (2.5 + 5L/1000) \mu\text{m}^3$ (with optional TP-20 or -200 touch probe, or DRS-300 or -500 laser) 	
<ul style="list-style-type: none"> ■ Warranty: One year ■ Accessories: Fixtures, calibration artifacts, rotary indexers 	

[†] Patent Number 5,389,774 ^{††} Patent Number 5,690,417

1) With evenly distributed load up to 5 kg. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy.

2) XY axis artifact: QVI 25 intersection grid reticle in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface.

3) Z axis artifact: QVI step gage or master gage blocks.