



# SMARTSCOPE ZIP LITE

## Automatic CNC Measurement Systems

	Travel	mm
<b>ZIP Lite 250</b>	X axis	250
	Y axis	150
	Z axis	150
<b>Extended X (option)</b>	X axis	300
<b>ZIP Lite 300</b>	X axis	300
	Y axis	300
	Z axis	150

**SmartScope ZIP® Lite** from OGP® is the cost-effective way of getting 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 5 to 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, over the life of the system. Optional lens attachments and adapter tubes expand the magnification range – a low cost way to increase system versatility. The high-resolution digital color camera provides high contrast, true-color images.
- Structural integrity.** SmartScope ZIP Lite features joystick-controlled precision mechanical bearing motorized XYZ stages (microstepper motors for XY, DC servo for Z and zoom), with 0.5 µm linear scales mounted to a metrologically stable granite base and column.
- Illumination flexibility.** SmartScope ZIP Lite systems provide illumination flexibility with green LED profile light, LED coaxial surface light, and the patented full-LED SmartRing™ light.
- Multisensor capability.** Add true multisensor versatility by choosing the optional touch probe or DRSTM™ 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"> <li>■ <b>Stage travel (XYZ):</b> 250 x 150 x 150 mm</li> <li>■ <b>Extended X axis:</b> 300 mm</li> <li>■ <b>Stage travel (XYZ):</b> 300 x 300 x 150 mm</li> <li>■ <b>Measuring unit dimensions (approx LWH):</b> 55 x 56 x 85 cm, 113 kg</li> <li>■ <b>Measuring unit dimensions, extended X axis (approx LWH):</b> 55 x 71 x 85 cm, 115 kg</li> <li>■ <b>Measuring unit dimensions (approx LWH):</b> 82 x 71 x 85 cm, 140 kg</li> <li>■ <b>XYZ scale resolution:</b> 0.5 μm</li> <li>■ <b>Motor drives:</b> X,Y microstepper; Z DC servo; with joystick control (X, Y, Z, zoom), 3 button</li> <li>■ <b>Worktable:</b> Hardcoat anodized with removable stage glass, 14 kg load capacity</li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>Zoom lens:</b> Patented<sup>†</sup> 5:1 AccuCentric<sup>®</sup> auto-calibrating, motorized, 10 position</li> <li>■ <b>Lens attachments:</b> 0.5x, 0.75x, 1.5x, 2.0x</li> <li>■ <b>Front replacement lens:</b> 1.0x 2.0x</li> <li>■ <b>Adapter tubes:</b> 1.0x 0.67x, 2.0x</li> <li>■ <b>Camera:</b> High resolution color CCD with 768 x 494 pixel array</li> <li>■ <b>Illumination:</b> LED profile light (collimated, green), LED coaxial TTL surface (white), patented<sup>††</sup> 8 sector/6 ring SmartRing<sup>™</sup> LED (white)</li> <li>■ <b>Image processing:</b> 256 level grayscale processing with 10:1 sub-pixel resolution</li> <li>■ <b>Multisensor options:</b> Touch probe and change rack, off-axis DRS<sup>™</sup> laser</li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>Power requirements:</b> 115/230 vac, ± 5%, 50/60 Hz, 1 φ, 300 W</li> <li>■ <b>Rated environment:</b> Temperature between 18 and 22° C, stable to ± 1° C; 30-80% humidity (non-condensing); vibration &lt;0.001g below 15 Hz</li> <li>■ <b>Operating environment, safe operation:</b> 15-30° C</li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>Metrology software:</b> OGP MeasureMind<sup>®</sup> 3D MultiSensor OGP Measure-X<sup>®</sup> (in lieu of MeasureMind 3D)</li> <li>■ <b>Computer:</b> Minimum configuration Dual Core processor @ 1.8 GHz, 1.0 GB RAM, 80 GB hard drive, 1.44 MB floppy drive, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN</li> <li>■ <b>Computer accessory package:</b> Single or dual 22" flat panel LCD monitor(s), keyboard, 3-button mouse (or user supplied)</li> <li>■ <b>Operating system:</b> Microsoft<sup>®</sup> Windows<sup>™</sup> XP Professional</li> <li>■ <b>Software:</b> For use with Measure-X or MeasureMind 3D; MeasureFit<sup>®</sup> Plus, MeasureMenu<sup>™</sup>, SmartReport<sup>®</sup> powered by QC-Calc<sup>™</sup>, Scan-X<sup>®</sup></li> <li>■ <b>Software:</b> For use with MeasureMind<sup>®</sup> 3D only; SmartFit<sup>®</sup> 3D, SmartScript<sup>®</sup>, SmartTree<sup>™</sup>, SmartProfile<sup>™</sup></li> </ul>	
<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"> <li>■ <b>XY area accuracy:</b> <math>E_2 = (2.0 + 6L/1000) \mu\text{m}^*</math></li> <li>■ <b>XY area accuracy (extended X axis):</b> <math>E_2 = (2.0 + 8L/1000) \mu\text{m}^*</math></li> <li>■ <b>XY area accuracy:</b> <math>E_2 = (2.5 + 8L/1000) \mu\text{m}^*</math></li> <li>■ <b>Z linear accuracy:</b> <math>E_1 = (3.5 + 6L/1000) \mu\text{m}^{**}</math></li> <li>■ <b>Z linear accuracy:</b> <math>E_1 = (2.5 + 5L/1000) \mu\text{m}^{**}</math> (with optional TP-20 or -200 touch probe, or DRS-300 or -500 laser)</li> </ul>	
<ul style="list-style-type: none"> <li>■ <b>Warranty:</b> One year</li> <li>■ <b>Accessories:</b> Fixtures, calibration artifacts, rotary indexers</li> </ul>	

<sup>†</sup> Patent Number 5,389,774    <sup>††</sup> Patent Number 5,690,417

\* With evenly distributed 10 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: 25 intersection grid reticle in the standard measuring plane. 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.



Multisensor Measurements for Manufacturing Professionals

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