



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 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"> ■ 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, 14 kg load capacity | |
| <ul style="list-style-type: none"> ■ Zoom lens: Patented[†] 5:1 AccuCentric[®] auto-calibrating, motorized, 10 position ■ 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 CCD with 768 x 494 pixel array ■ Illumination: LED profile light (collimated, green), LED coaxial TTL surface (white), patented^{††} 8 sector/6 ring SmartRing[™] LED (white) Vu-Light oblique illuminator, high performance ■ Image processing: 256 level grayscale processing with 10:1 sub-pixel resolution ■ Multisensor options: Touch probe and change rack, off-axis 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 (non-condensing); vibration <0.001g below 15 Hz ■ Operating environment, safe operation: 15-30° C | |
| <ul style="list-style-type: none"> ■ Metrology software: OGP MeasureMind[®] 3D MultiSensor OGP Measure-X[®] (in lieu of MeasureMind 3D) ■ Computer: 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 ■ Computer accessory package: Single or dual 22" flat panel LCD monitor(s), keyboard, 3-button mouse (or user supplied) ■ Operating system: Microsoft[®] Windows[™] XP Professional ■ 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[™] | |
| <ul style="list-style-type: none"> ■ XY area accuracy: $E_2 = (2.0 + 6L/1000) \mu\text{m}^*$ ■ XY area accuracy (extended X axis): $E_2 = (2.0 + 8L/1000) \mu\text{m}^*$ ■ XY area accuracy: $E_2 = (2.5 + 8L/1000) \mu\text{m}^*$ ■ Z linear accuracy: $E_1 = (3.5 + 6L/1000) \mu\text{m}^{**}$ ■ Z linear accuracy: $E_1 = (2.5 + 5L/1000) \mu\text{m}^{**}$ (with optional TP-20 or -200 touch probe, or DRS-300 or -500 laser) | <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"> ■ Warranty: One year ■ Accessories: Fixtures, calibration artifacts, rotary indexers | |

[†] Patent Number 5,389,774 ^{††} 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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