



The Standard For Benchtop Video Metrology

The
Industry
Standard —
Updated

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

SmartScope® ZIP 250 has been the preferred video measurement system of manufacturers around the world. The new SmartScope ZIP builds upon all the features and capabilities that made ZIP so popular. Video measurement capabilities are enhanced by a new optional megapixel camera, and all-LED illumination provides enhanced imaging and improved signal processing. SmartScope ZIP 250 is also a multisensor machine. Available contact and non-contact probes deploy and retract under program control for fully automatic operation.

The innovative ergonomic joystick combines stage control and other important operational controls so they are right at hand.

System electronics are built into the column for easy access and improved efficiency.

SmartScope ZIP uses OGP® MeasureMind® 3D MultiSensor metrology software for three-dimensional measurement, combining a user-friendly interface with high-powered algorithms for dependable and reliable performance.

SmartScope ZIP — improved to continue to be the best choice for accurate video and multisensor metrology.

Technical Specifications

Standard Option

- Measuring range (XYZ):** 250 x 150 x 200 mm
- Extended X axis measuring range:** 300 mm
- Measuring unit dimensions (LWH):** 74 x 54-64 (std-ext X) x 80 cm, 120 kg
- Computer dimensions (LWH):** 76 x 45 x 56 cm, 23 kg
- Shipping crate dimensions (approx LWH):** 145 x 110 x 120 cm, 175 kg
- Scale resolution:** 0.25 μm
- 0.1 μm or 0.05 μm
- Motor drives:** DC servo
- Manual stage control:** 4 axis control (X,Y,Z, zoom) with ergonomic, multi-function QVI joystick
- Worktable:** Hardcoat anodized with fixture holes, stage glass, and 25 kg load capacity

- Zoom lens:** Patented[†] 7:1 AccuCentric[®] auto-calibrating
- Lens attachments:** 2.0x
- 0.5x, 0.75x, 1.5x, 2.5x, 5.0x, 10.0x
- Adapter tubes:** 0.67x, 2.0x
- Illumination:** Substage LED backlight (collimated), coaxial LED surface, and patented^{††} SmartRing[™] white LED illuminator
- Fiber optic ring light, fiber optic surface illumination
- Accessories:** Autofocus grid projector
- Camera:** 1/2" format color CCD with 768 x 494 pixel array
- High resolution grayscale camera (in lieu of color camera), megapixel camera
- Image processing:** 256 level grayscale processing with 10:1 sub-pixel resolution
- Multisensor options:** Touch probe and docking station, DRS laser, TTL laser, Rainbow Probe[™], Feather Probe[™]

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

- Power requirements:** 100-240 vac, $\pm 5\%$, 50/60 Hz, 1 ϕ , 700 W
- Rated environment:** 18-23° C $\pm 2^\circ$ C/hr, 30-80% humidity (non-condensing), vibration <0.002g below 15 Hz
- Operating environment:** 15-30° C

- Metrology software:** OGP MeasureMind[®] 3D MultiSensor
- Computer:** Minimum configuration Pentium[®] IV with 1.0 GB RAM, 40 GB hard drive, 1.44 MB floppy, CD-ROM, parallel, serial, and USB 2.0 ports, on board 10/100 LAN
- Computer accessories:** 15" flat panel LCD monitor, keyboard, three button mouse
- Operating system:** Microsoft[®] Windows[™] XP
- Software:** MeasureFit[®] Plus, SmartCAD[®], SmartFit[®] 3D, SmartReport[®] Plus, MeasureMenu[™], Scan-X[®]

- XY area accuracy:** $E_z = (1.8 + 4L/1000) \mu\text{m}^*$
- XY area accuracy (extended X axis):** $E_z = (2.0 + 4L/1000) \mu\text{m}^*$
- Z accuracy:** $E_x = (2.5 + 5L/1000) \mu\text{m}^*$
- Z accuracy:** $E_x = (2.0 + 5L/1000) \mu\text{m}^*$ (with optional 2.0x front lens/grid projector, TTL laser, or DRS-2000 laser)
- Z accuracy:** $E_x = (1.0 + 5L/1000) \mu\text{m}^*$ (with optional DRS-300 or -500 laser, or TP-20 or -200 touch probe)

*Where L=measuring length in mm. Applies to thermally stable system in rated environment, maximum zoom lens setting, 2.0x lens attachment, and evenly distributed 5 kg load. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy. XY axis artifact: QVI 25 intersection grid reticle at standard measuring plane. Z axis artifact: QVI step gage.

- Warranty:** One year
- Accessories:** Fixtures, calibration artifacts, rotary indexers



Multisensor Metrology

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