



SmartScope ZIP[®] 250

- **Accurate video metrology** – AccuCentric[®] motorized zoom lens automatically compensates magnification for each zoom position
- **Reliable & Precise** – Heavy-duty cast base and integral compound stage with Y-axis center drive for stability
- **Multisensor versatility** – Optional touch probes, lasers and micro-probes

Axis	Travel (mm)
X axis	300
Y axis	150
Z axis	200

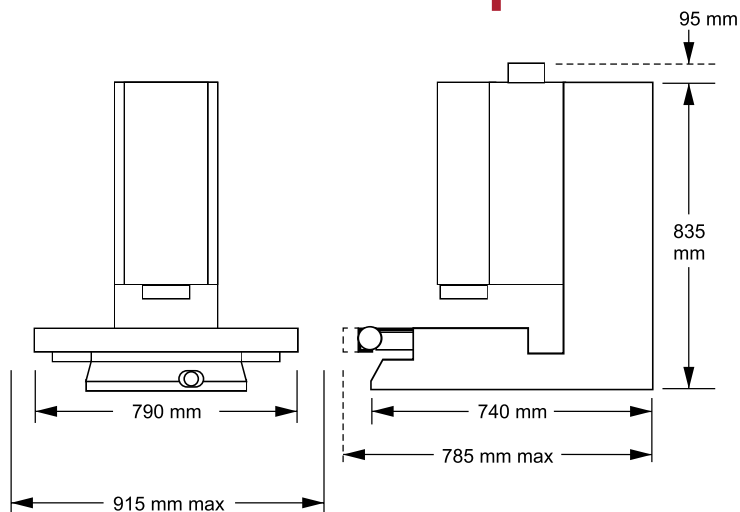
The Industry Standard for Video Measuring Machines



SmartScope ZIP® 250



Choose the metrology software best suited to your manufacturing setting — ZONE3®, MeasureMind® 3D or Measure-X®.



System Weight: 120 kg
Shipping Weight: 280 kg

	Standard	Optional
XYZ Travel	300 x 150 x 200 mm	
XYZ Scale Resolution	0.1 µm	0.05 µm including dual X scales
Drive System	DC servo with 4-axis control (X,Y,Z, zoom); with multifunction handheld controller	
Worktable	Hardcoat anodized, with fixture holes, removable stage glass, 25 kg recommended max payload	
Rotary Axis		Miniature Servo Rotary (MSR), MicroTheta Rotary (MTR)
Optics*	AccuCentric® auto-compensating zoom, motorized; 1.0x lens; 2.0x lens attachment; 1.0x adapter tube	Focus Grid Projector: LED or Tungsten fiber-optic sources Laser Adapter: Allows for field retrofit of TTL laser. Included Laser Pointer Replacement Lenses: 1.0x Long Working Distance (LWD), 2.5x, 5.0x Laser Lenses: 2.0x (included with TTL Laser), 5.0x Lens Attachment for 1.0x Lens: 0.5x, 0.75x, 1.5x Factory Installed Adapter Tubes: 0.67x, 2.0x
FOV Range	6.6 mm x 5.0 mm (no attachment, low zoom) to 0.7 mm x 0.5 mm (2.0x lens attachment, high zoom)	15.0 mm x 11.3 mm (0.67x tube, 1.0x lens, 0.5x attachment) to 0.13 mm x 0.10 mm (2.0x tube, 5x lens)
Working Distance	63 mm (no attachment) 24 mm (2.0x lens attachment)	Up to 98 mm (1.0x LWD, 0.5x attachment)
Illumination	Substage LED profile (green), coaxial LED surface (white), SmartRing LED ring light (white)	High performance all green LED illumination, tungsten illumination for coaxial and ring light, infrared illumination for coaxial and ring light Ring lights: VuLight™ with multiple angles of incidence; Fiber Optic Ring mounted below, integrated with, or in lieu of SmartRing light
Camera	Color digital metrology camera	Black & white digital metrology camera
Image Processing	256 level grayscale processing with 10:1 subpixel resolution	
Sensor Options**		Tactile: TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™ Non-Contact: DRS™ Laser, Through-The-Lens (TTL) Laser, Rainbow Probe™, TeleStar Probe
Controller	Windows® based, with up-to-date processor and on board networking/communication ports	
Controller Accessory Package		24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied)
Software	• Choice of ZONE3 Express, Measure-X or MeasureMind 3D metrology software • QVI Portal	Metrology software: ZONE3 Prime, ZONE3 Pro Productivity software: MeasureFit® Plus, SmartFit® 3D, SmartProfile®, E-SPC Offline software: ZONE3, MeasureMind 3D, Measure-X
Power Requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 700 W	
Operating Environment, Safe Operation	15-30 °C	
Rated Environment	Temperature 18-22 °C, stable to ±1 °C, max rate of change 1 °C / hour, max vertical gradient of 1 °C / meter; 30-80% humidity; vibration <0.001g below 15 Hz	
XY Area Accuracy	$E_2 = (1.8 + 6L/1000) \mu\text{m}$	$E_2 = (1.25 + 6L/1000) \mu\text{m}$ (requires optional 0.05 µm, dual X scales)
Z Linear Accuracy	$E_1 = (2.5 + 5L/1000) \mu\text{m}$	$E_1 = (2.0 + 5L/1000) \mu\text{m}$ (requires optional TTL laser) $E_1 = (1.4 + 5L/1000) \mu\text{m}$ (requires optional DRS laser, touch, or TeleStar probe)

Accuracy is evaluated with a QVI verification procedure where "L" is measured length in millimeters. Specifications apply within the rated environment. Standard optical specifications apply at the maximum optical magnification of the standard configuration. XY Accuracy applies with an evenly distributed load up to 5 kg in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface. Depending on load distribution, accuracy at maximum payload may be less than standard.

*Lenses and lens attachments can be manually interchanged to change magnification and working distance. Adapter tubes can be manually changed to change magnification without impacting work distance, but unlike lens changes, adapter tube changes require optical system realignment and recompensation. **SP25 only supported in ZONE3. Feather Probe, Rainbow Probe, and TeleStar Probe only supported in ZONE3 and MeasureMind 3D.



Confidence. When Results Matter.™

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