



SmartScope ZIP® 250

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

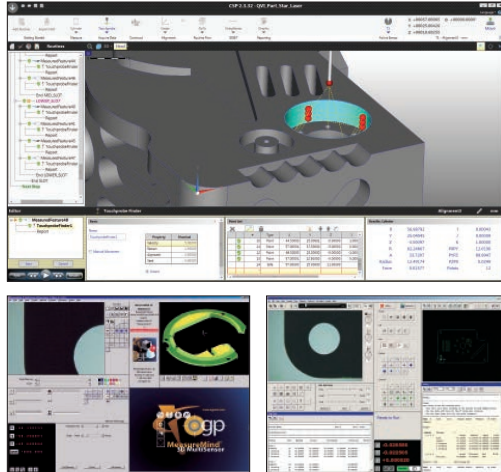
**The Industry Standard
for Benchtop Video
Metrology**

Axis	Travel (mm)
X axis	250
Y axis	150
Z axis	200
Extended X (opt)	300

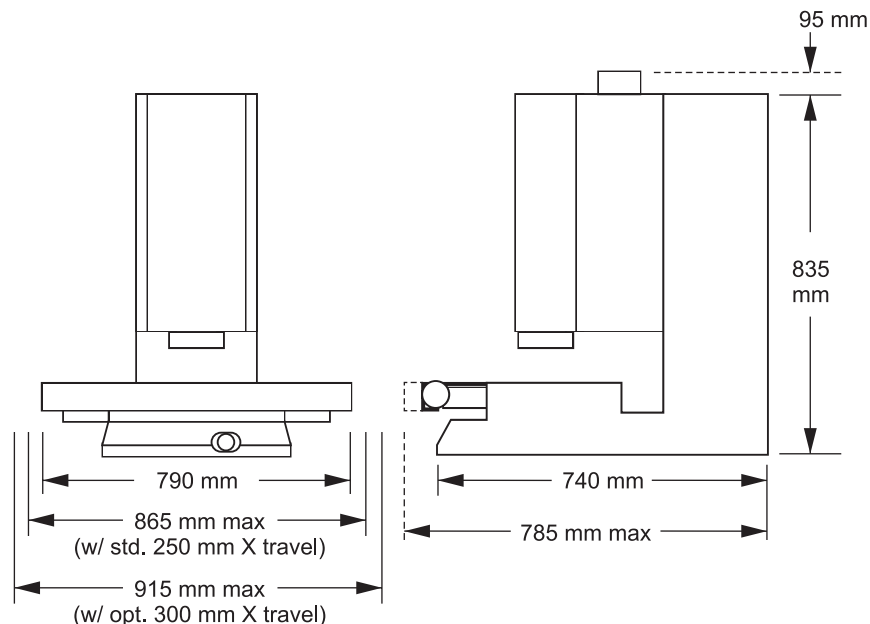


Shown with optional touch probe & change rack

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



Machine Weight: 120 kg
Crated Weight: 280 kg

	Standard	Optional
XYZ travel	250 x 150 x 200 mm	Extended X axis, 300 mm
XYZ scale resolution	0.1 µm	0.05 µm
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 front replacement lens; 1.0x adapter tube; 2.0x lens attachment	0.5x, 0.75x, 1.5x lens attachments; 1.0x LWD (not for use with SmartRing™ light), 2.5x, 5.0x, 10.0x front replacement lenses; 0.67x, 2.0x adapter tubes; autofocus LED grid projector; laser pointer (not available with optional TTL laser)
FOV size (std optical configuration)	Measured diagonally, 5.0 mm (low mag) to 0.9 mm (high mag)	
Illumination	Substage LED profile (monochromatic), coaxial LED surface (white), SmartRing LED ring light (white)	VuLight™ oblique illuminator, small fiber optic ring light, fiber optic surface light, large fiber optic ring light
Camera	High resolution color digital metrology camera	High resolution black & white digital metrology camera
Image processing	256 level grayscale processing with 10:1 subpixel resolution	
Sensor options (contact OGP for possible combinations of sensors)		Touch probe and change rack, off-axis DRS™ laser, on-axis TTL laser, Rainbow Probe™ scanning white light sensor, Feather 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	<ul style="list-style-type: none"> Choice of ZONE3 Express or Measure-X or MeasureMind 3D metrology software QVI Portal Portal Navigator Independent Calibration Engine (ICE) Multimedia Content Viewer SmartLink™ 	Metrology software: ZONE3 Express, Prime, or Pro; MeasureMind 3D; Measure-X Productivity software: MeasureFit® Plus, SmartFit® 3D, SmartProfile® Offline software: ZONE3, MeasureMind 3D, Measure-X
Power requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 700 W	
Rated environment	Temperature 18-22 °C, stable to ±1 °C; 30-80% humidity; vibration <0.001g below 15 Hz	
Operating environment, safe operation	15-30 °C	
XY area accuracy	$E_z = (1.8 + 6L/1000) \mu\text{m}^{1.2,3,4}$	
Z linear accuracy	$E_z = (2.5 + 5L/1000) \mu\text{m}^{1.4}$ (with 2.0x lens attachment)	$E_z = (2.0 + 5L/1000) \mu\text{m}^{1.4}$ (with optional TTL laser, or DRS-2000 laser) $E_z = (1.4 + 5L/1000) \mu\text{m}^{1.4}$ (with optional DRS-300 or -500 laser, or TP20 or TP200 touch probe)

¹Where L = measuring length in mm. Applies to thermally stable system in rated environment. Maximum rate of temperature change: 1 °C/hour. Maximum vertical temperature gradient: 1 °C/meter. All optical accuracy specifications at maximum zoom lens setting.

²With evenly distributed load up to 5 kg. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy.

³Measured in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface.

⁴ E_z , Z axis linear and E_z , XY area accuracy standards are described in QVI Publication Number 790762.



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