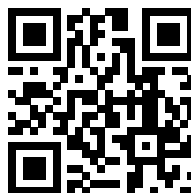


**SmartScope ZIP 250** sets the industry standard for benchtop vision metrology. Highly rugged and reliable, the ZIP 250 provides a wide range of optical configurations and is fully multisensor capable. ZIP 250 also offers:

- **Reliable and Precise –**  
Heavy-duty cast base and integral compound stage with Y-axis center drive for stability. DC Servo motors offer fast, accurate positioning while manual fine adjusters allow precise walk-up measurements.
- **Accurate Video Metrology –**  
AccuCentric® motorized zoom lens automatically compensates magnification for each zoom position. ZIP 250 offers optical configurations to suit a wide range of applications.
- **Multisensor Versatility –**  
Optional touch probes, lasers and micro-probes.

## The Industry Standard for Video Measuring Machines

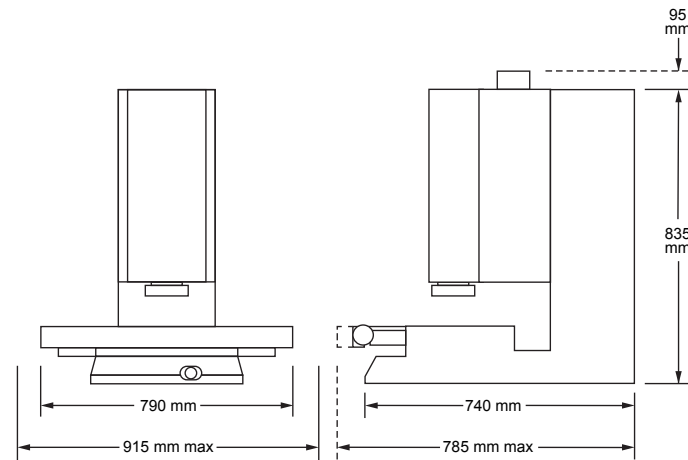


TP20 Touch Probe shown in top image.

# SmartScope ZIP® 250



ZONE3® Metrology Software represents a totally new way of working with multisensor measurement systems, providing faster, easier, and more productive measurements.



System Weight: 165 kg  
Shipping Weight: 280 kg

	Standard	Optional
<b>XYZ Travel</b>	300 x 150 x 200 mm	
<b>XYZ Scale Resolution</b>	0.1 µm	0.05 µm including dual X scales
<b>Drive System</b>	DC servo with 4-axis control (X, Y, Z zoom); with multifunction handheld controller	XY precision ball screw drive
<b>Worktable</b>	Hardcoat anodized, with fixture holes, removable stage glass, 25 kg recommended max payload	
<b>Rotary Axis</b>		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™)
<b>Optics*</b>	AccuCentric® auto-compensating zoom, motorized; 1.0x lens; 2.0x lens attachment; 1.0x adapter tube	<b>Focus Grid Projector:</b> LED or Tungsten fiber-optic sources <b>Laser Adapter:</b> Allows for field retrofit of TTL Laser. Includes Laser Pointer <b>Replacement Lenses:</b> 1.0x Long Working Distance (LWD), 2.5x, 5.0x <b>Laser Lenses:</b> 2.0x (included with TTL Laser), 5.0x <b>Lens Attachments for 1.0x Lens:</b> 0.5x, 0.75x, 1.5x <b>Factory Installed Adapter Tubes:</b> 0.67x, 2.0x
<b>Illumination</b>	Substage LED profile, coaxial LED surface, SmartRing™ LED ring light (white)	<b>Coax Light:</b> Tungsten Fiber-Optic <b>Ring Lights:</b> Red, Green, or Blue SmartRing; Standard or Low Incidence VuLight; Tungsten Fiber-Optic Ring mounted below, integrated with, or in lieu of SmartRing
<b>Metrology Camera</b>	Monochrome digital metrology camera	
<b>Field of View**</b>	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)
<b>Working Distance</b>	63 mm (no attachment) 24 mm (2.0x lens attachment)	Up to 98 mm (1.0x LWD, 0.5x attachment)
<b>Sensor Options***</b>		<b>Tactile:</b> TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™ <b>Non-Contact:</b> DRS™ Laser, Through-The-Lens (TTL) Laser, Rainbow Probe™, TeleStar® Probe
<b>Software</b>	<ul style="list-style-type: none"> <li>Choice of ZONE3 Express or Measure-X metrology software</li> <li>QVI® Portal</li> </ul>	<b>Metrology software:</b> ZONE3 Prime, ZONE3 Pro <b>Productivity software:</b> MeasureFit® Plus, SmartFit® 3D, OGP® EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) <b>Offline software:</b> ZONE3, Measure-X
<b>System Controller</b>	Windows® based, with up-to-date processor and onboard networking/communication ports	
<b>Controller Options</b>		24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied)
<b>Power Requirements</b>	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 700 W	
<b>Safe Operating Environment</b>	15-30 °C, non-condensing	
<b>Rated Environment</b>	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	
<b>XY Area Accuracy</b>	$E_2 = (1.8 + 6L/1000) \mu\text{m}$	$E_2 = (1.25 + 6L/1000) \mu\text{m}$ (requires optional 0.05 µm, dual X scales)
<b>Z Linear Accuracy</b>	$E_1 = (2.5 + 5L/1000) \mu\text{m}$	$E_1 = (2.0 + 5L/1000) \mu\text{m}$ (requires optional TTL Laser) $E_1 = (1.4 + 5L/1000) \mu\text{m}$ (requires optional DRS Laser, Touch Probe, 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. \*\*FOV sizes are 15% smaller in Measure-X. \*\*\*SP25, Feather Probe, Rainbow Probe, and TeleStar Probe only supported in ZONE3.



World Headquarters: Rochester, NY, USA • 585.544.0400 • [www.ogpnet.com](http://www.ogpnet.com)

OGP Shanghai Co, Ltd: Shanghai, China

86.21.5045.8383/8989 • [www.smartscope.com.cn](http://www.smartscope.com.cn)

OGP Messtechnik GmbH: Hofheim-Wallau, Germany

49.6122.9968.0 • [www.ogpmesstechnik.de](http://www.ogpmesstechnik.de)

Optical Gaging (S) Pte Ltd: Singapore • 65.6741.8880 • [www.smartscope.com.sg](http://www.smartscope.com.sg)

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