



# SmartScope® Vantage™ 250

## SmartScope Vantage 250 –

An advanced-technology 3D multisensor measurement system. This benchtop system is specifically designed to measure smaller parts, or for situations where space is at a premium. The rigid structural design provides full access to the measurement volume for fixturing flexibility. Vantage 250 offers:

- **Accurate Video Metrology –** TeleStar® telecentric 10:1 zoom optics for the highest level of optical performance.
- **Multisensor Versatility –** Optional touch probe, off-axis DRS™ Laser or on-axis TeleStar Plus TTL Interferometric Laser, micro-probes, and SP25 continuous contact scanning probe.
- **State-of-the-art Software –** Powerful ZONE3® metrology software, and other productivity and offline software applications, to suit your requirements.

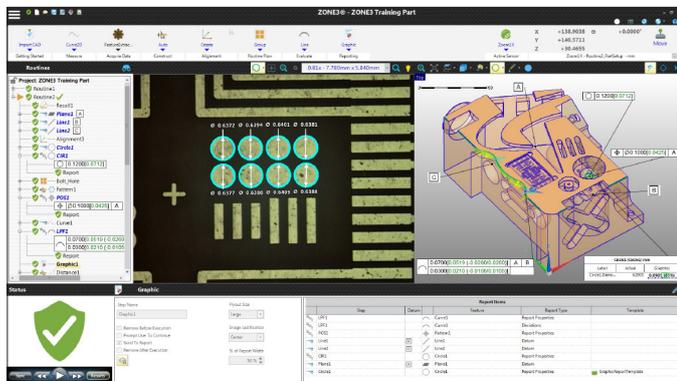
## Advanced-Technology Dimensional Measuring System Designed for the Workbench



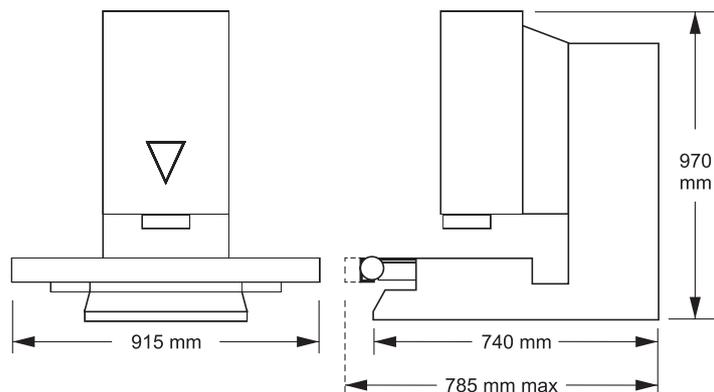
Equipped with optional touch probe and change rack.



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ZONE3 Metrology Software represents a totally new way of working with multisensor measurement systems – robust programming capabilities provide faster, easier, and more productive measurements.



System Weight: 165 kg  
Shipping Weight: 275 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	
<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, fully telecentric zoom, motorized; 1x lens	<b>Focus Grid Projector:</b> LED source <b>Laser Pointer:</b> Not available with optional TTL laser <b>Replacement / Laser Lenses:</b> 0.5x, 2.0x, 4.0x
<b>Illumination</b>	Substage LED profile, coaxial LED surface, SmartRing™ LED ring light	Flexible SmartRing light for 0.5x lens
<b>Metrology Camera</b>	Monochrome digital metrology camera	
<b>Field of View</b>	8.1 mm x 6.1 mm (low zoom) to 0.81 mm x 0.61 mm (high zoom)	13.1 mm x 9.8 mm (0.5x lens), to 0.20 mm x 0.15 mm (4.0x lens)
<b>Working Distance</b>	65 mm	Up to 127 mm (0.5x lens)
<b>Sensor Options</b>		<b>Tactile:</b> TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™ <b>Non-Contact:</b> TeleStar Plus Interferometric TTL laser, DRS Laser, Rainbow Probe™
<b>Software</b>	<ul style="list-style-type: none"> <li>• ZONE3 Express metrology software</li> <li>• QVI® Portal</li> </ul>	<b>Metrology software:</b> ZONE3 Prime, ZONE3 Pro <b>Productivity software:</b> SmartFit® 3D, EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) <b>Offline software:</b> ZONE3
<b>System Controller</b>	Windows® based, with up-to-date processor and on board 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, 1250 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 0.5 °C / hour; max vertical gradient of 1 °C / meter; 30-80% humidity; vibration <0.001g below 15 Hz	
<b>XY Area Accuracy</b>	$E_2 = (1.8 + 4L/1000) \mu\text{m}$	$E_2 = (1.0 + 6L/1000) \mu\text{m}$ (requires optional 0.05 µm scale resolution)
<b>Z Linear Accuracy</b>	$E_1 = (2.5 + 5L/1000) \mu\text{m}$	$E_1 = (1.5 + 5L/1000) \mu\text{m}$ (requires optional TeleStar Plus TTL Laser, DRS Laser, or touch probe)

Accuracy is evaluated with a QVI verification procedure where "L" is measured length in millimeters. Specifications apply within the rated environment. Accuracy specifications are verified with the imaging sensor unless otherwise specified. 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. This equipment complies with EMC directive EN IEC 61326-1, Class A. \*Lenses can be manually interchanged to change magnification and working distance.



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