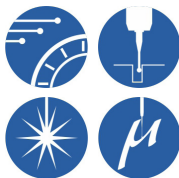




# SmartScope® Quest 300

- *Accurate video metrology* – TeleStar® telecentric 10:1 zoom optics for the highest level of optical performance
- *Multisensor versatility* – Optional touch probe, TTL interferometric laser, micro-probes, and SP25 continuous contact scanning probe
- *State-of-the-art software* – Choose from a variety of powerful QVI metrology, productivity and offline software applications, to suit your requirements

## Advanced-Technology, Large Volume Dimensional Measuring System that Fits on a Benchtop



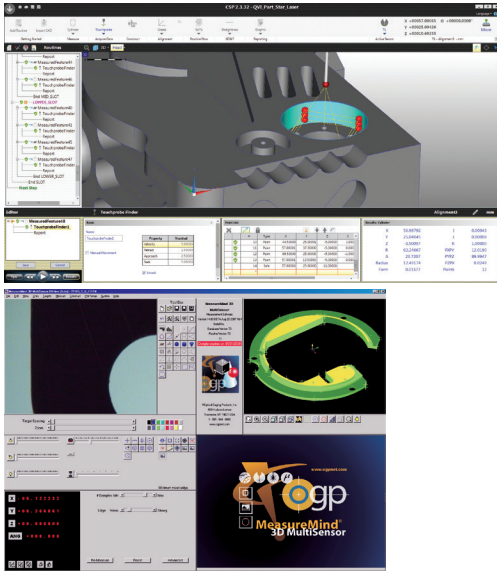
Axis	Travel (mm)
X axis	300
Y axis	300
Z axis	250



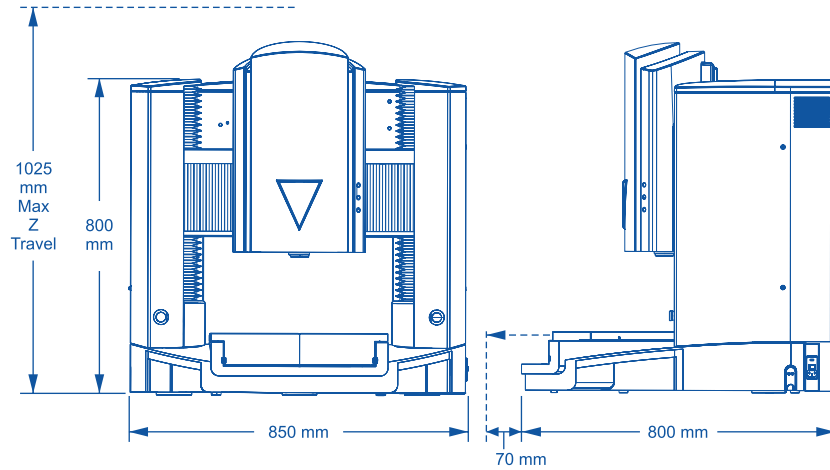
Shown with optional touch probe



# SmartScope® Quest 300



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



Machine Weight: 159 Kg  
Crated Weight: 218 Kg

	Standard	Optional
<b>XYZ travel</b>	300 x 300 x 250 mm	
<b>XYZ scale resolution</b>	0.1 µm	0.05 µm
<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, 30 kg recommended max payload	
<b>Optics</b>	Patented <sup>†</sup> 10:1 AccuCentric® TeleStar® auto-calibrating, telecentric zoom, motorized; mag range 0.8x-8x, with up to 10 calibrated positions; 1.0x replacement lens	<b>Replacement lenses, optical:</b> 0.5x/130 mm WD, 2.0x/32 mm WD, 4.0x/20 mm WD <b>Replacement lenses, optical/laser:</b> 0.5x/130 mm WD, 2.0x, 4.0x <b>Optical accessories:</b> LED grid projector, laser pointer (not available w/TTL laser)
<b>FOV size (std optical configuration)</b>	Measured diagonally, 8.9 mm (low mag) to 0.9 mm (high mag)	
<b>Illumination</b>	Patented <sup>††</sup> LED numeric matching monochromatic substage, LED coaxial TTL surface, 8 sector/6 ring SmartRing™ LED	
<b>Camera</b>	High resolution, black & white digital metrology camera	High resolution color metrology camera
<b>Image processing</b>	256 level grayscale processing with 10:1 subpixel resolution	
<b>Sensor options (contact OGP for possible combinations of sensors)</b>		Touch probe and change rack, SP25 scanning probe, patented <sup>†††</sup> on-axis TeleStar Plus interferometric TTL laser, Feather Probe™
<b>Controller</b>	Windows® based, with up-to-date processor and networking/communication ports	
<b>Controller accessory package</b>	24" flat panel LCD monitor, keyboard, 3-button mouse	24" flat panel LCD monitor for dual monitor display
<b>Software</b>	<b>QVI Portal, including:</b> • Portal Navigator • Independent Calibration Engine (ICE) • Multimedia Content Viewer • SmartLink™	<b>Metrology software:</b> ZONE3® or ZONE3 Pro, MeasureMind® 3D MultiSensor <b>Productivity software:</b> MeasureFit® Plus, SmartFit® 3D, SmartProfile® <b>Offline software:</b> ZONE3, MeasureMind 3D MultiSensor
<b>Power requirements</b>	115/230 vac, 50/60 Hz, 1 phase, 600 W	
<b>Rated environment</b>	Temperature 18-22° C, stable to ±1° C; 30-80% humidity; vibration <0.001g below 15 Hz	
<b>Operating environment, safe operation</b>	15-30° C	
<b>XYZ volumetric accuracy<sup>1</sup></b>	$E_3 = (3.0 + 5L/1000) \mu\text{m}^{2,4,5}$	
<b>XY area accuracy<sup>1</sup></b>	$E_2 = (1.5 + 5L/1000) \mu\text{m}^{2,3,4}$	
<b>Z linear accuracy<sup>1</sup></b>	$E_1 = (2.5 + 5L/1000) \mu\text{m}^4$	$E_1 = (2.0 + 5L/1000) \mu\text{m}^4$ (with optional 2.0x replacement lens and grid projector; on-axis TeleStar Plus TTL laser; or TP20 or TP200 touch probe)

<sup>†</sup>Patent Number 6,292,306    <sup>††</sup>Patent Number 6,161,940    <sup>†††</sup>Patent Number 7,791,731

<sup>1</sup>Where 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. Volumetric accuracy performance requires use of QVI 3D metrology software, such as MeasureMind 3D or ZONE3.

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

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

<sup>4</sup>E<sub>z</sub> Z axis linear, E<sub>xy</sub> XY area, and E<sub>xyz</sub> XYZ volumetric accuracy standards are described in QVI Publication Number 790762.    <sup>5</sup>On-site verification optional.



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