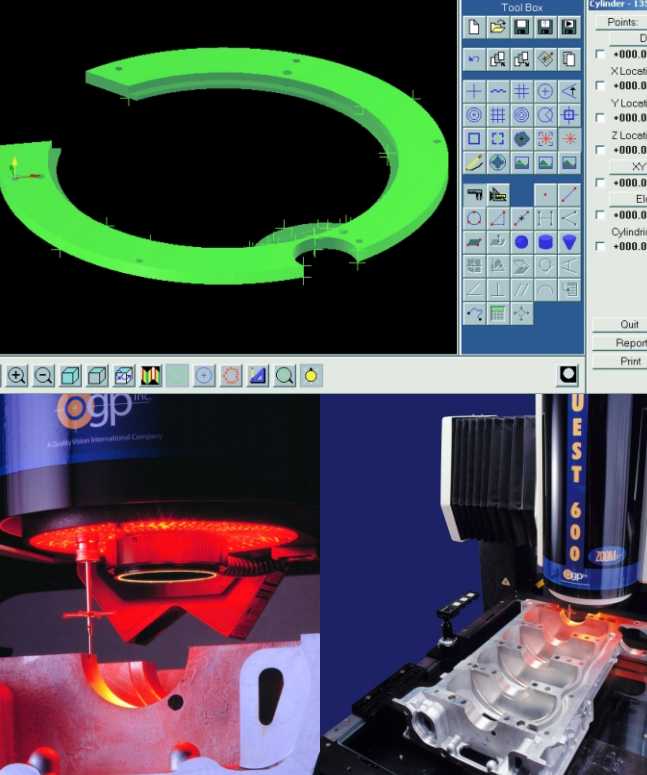
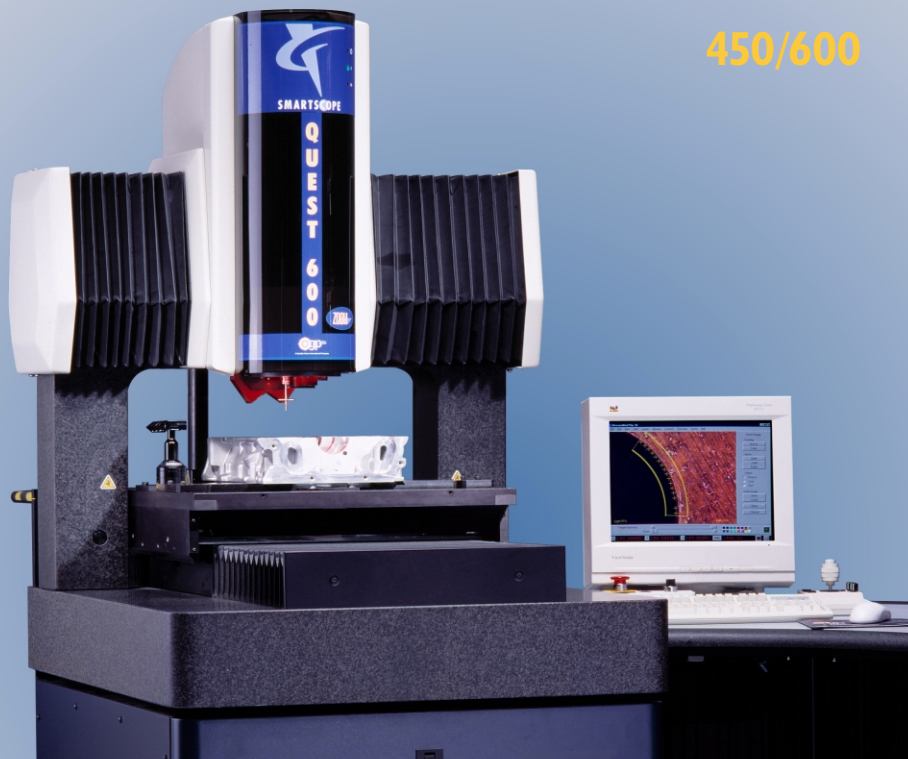




450/600



SMARTSCOPE QUEST

High-Accuracy
Multi-Sensor
Metrology System

	Range	mm	in
Quest 450	X axis	450	18
	Y axis	450	18
	Z axis	200	8
	(option) Z axis	250	10
Quest 600	X axis	450	18
	Y axis	610	24
	Z axis	200	8
	(option) Z axis	250	10

Premium
performance
and superb
optics

Take the innovative TeleStar™ optics — specially designed by OGP® for metrology — servo driven stages mated to a proven bridge platform, and the industry's favorite software and you get SmartScope® Quest™ — the system of choice for measuring large, complex parts with tight tolerances.

SmartScope Quest is more than a video measuring machine. It's designed from the ground up as a multi-sensor system. The patented Quest TeleStar zoom optics are diffraction limited, color corrected, and fully telecentric to provide superior imaging. Its popular and powerful MeasureMind® 3D MultiSensor metrology software easily handles video, the optional on-axis TTL or off-axis DRS laser, touch probe, scanning probe, and micro-probe. All measurement data are calibrated to the same reference — even if the part is mounted on an optional compound rotary indexer. Count on Quest to do the whole job — accurately.

Quest features include:

- Continuously variable 10:1 zoom lens with high-resolution color camera, stable bridge design, and 0.1 micron scales for high accuracy.
- Popular OGP MeasureMind 3D MultiSensor metrology software, featuring a flexible 3D datum environment with leveling, rotation, and origin definition.
- Exclusive OGP programmable illumination technology for true automation. Substage backlight with electronically controlled iris to synchronize illumination to magnification, coaxial surface light, and our patented SmartRing™ light are all standard on SmartScope Quest.



450 600		Technical Specifications					
■	Measuring range (XYZ): 450 x 450 x 200 mm						
■	Measuring range (XYZ): 450 x 450 x 250 mm						
■	Measuring range (XYZ): 450 x 610 x 200 mm						
■	Measuring range (XYZ): 450 x 610 x 250 mm						
■ ■	Measuring unit dimensions (approx DWH): 165 x 100 x 190 cm, 1300 kg						
■ ■	Workstation dimensions (approx DWH): 94 x 97 x 127 cm, 45 kg						
■ ■	XYZ scale resolution: 0.10 µm						
■ ■	0.05 µm						
■ ■	Motor drives: DC servo with joystick control (X, Y, Z, zoom)						
■ ■	Maximum XYZ stage speed/acceleration: 300 mm/sec; 750 mm/sec ²						
■ ■	Worktable: Hardcoat anodized with fixture holes and removable stage glass, 60 kg load capacity						
		<u>Optics</u>	<u>Characteristics</u>	<u>Mag. Range</u>	<u>Working Distance</u>	<u>On-Screen Mag.*</u>	<u>Field Size**</u>
■ ■	Zoom lens: Patented [†] 10:1 AccuCentric™ TeleStar™ auto-calibrating, telecentric			0.8x – 8x	68 mm	33.5x – 335x	9.5 mm
■ ■	Lens options: 2x front magnification lens, field-interchangeable***			2x – 15x	33 mm	83.75x – 628x	4.7 mm
■ ■	4x front magnification lens, field-interchangeable***			4x – 30x	33 mm	167.5x – 1256x	2.3 mm
■ ■	Camera: High resolution color CCD with 768 x 494 pixel array						
■ ■	High resolution, progressive scan grayscale with 768 x 494 pixel array (in lieu of color camera)						
■ ■	Illumination: Substage backlight (collimated), coaxial TTL surface, patented ^{††} 8 sector/6 ring SmartRing™ LED (white)						
■ ■	Image processing: 256 level grayscale processing with up to 50:1 sub-pixel resolution						
■ ■	Multi-sensor options: Touch probe/change rack, SP25 Continuous Contact Probe, Feather Probe™, Rainbow Probe™, on-axis TTL laser, off-axis DRS laser						
■ ■	Hardware options: Single and compound rotary indexers, color or black & white video printer, LCD grid projector						
■ ■	Power requirements: 100/110/220/240 vac, ± 5%, 50/60 Hz, 1 φ, 1800 W						
■ ■	Rated environment: 18-22° C ± 2° C/hr, 30-80% humidity (non-condensing), vibration <0.0015g below 15 Hz						
■ ■	Operating environment: 15-30° C						
■ ■	Metrology software: MeasureMind® 3D MultiSensor						
■ ■	Computer: Minimum configuration Pentium® IV processor @ 2.4 GHz, 512 MB RAM, 40 GB hard drive, 1.44 MB floppy, CD-ROM drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN, 17" video monitor, keyboard, three button mouse						
■ ■	Monitor options: Additional 17" video; 21" video; 15" or 17" flat panel LCD						
■ ■	Operating system: Microsoft® Windows™ 2000						
■ ■	Software: MeasureFit® Plus, SmartReport® Plus, MeasureMenu™, SmartCAD®, SoftSectioner™, XML import/export, IQ-FormFit™ 3D, QC-Calc™, Scan-X®						
■ ■	XY area accuracy: $E_2 = (1.5 + 4L/1000) \mu\text{m}^{****}$						
■ ■	Z accuracy: $E_1 = (2.5 + 5L/1000) \mu\text{m}^{****}$						
■ ■	Z accuracy: $E_1 = (1.8 + 5L/1000) \mu\text{m}^{****}$ (with optional 2x or 4x front lens and grid projector)						
■ ■	Z accuracy: $E_1 = (1.0 + 5L/1000) \mu\text{m}^{****}$ (with optional DRS-300 or -500 laser, or TP-20 or -200 touch probe)						
■ ■	Volumetric accuracy: $E_3 = (2.0 + 5L/1000) \mu\text{m}^{****}$ (with optional TP-200 touch probe)						
■ ■	Warranty: One year, on-site						
■ ■	Accessories and service: Fixtures and calibration artifacts, service and support contracts						

*On-screen magnification depends on monitor size. Figures shown are for a typical 17" video monitor. **Largest feature size that will fit in the field of view ***Not for simultaneous use with TeleStar TTL laser

[†]Patent Numbers: 5,389,774 (AccuCentric); 6,292,306 (TeleStar) ^{††}Patent Number 5,690,417

****Where L=measuring length in mm. Applies to thermally stable system in rated environment, maximum zoom lens setting, and evenly distributed 5 kg load. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy. XY axis artifact: QVI 25 intersection grid reticle at standard measuring plane. Z axis artifact: QVI step gage or master gage blocks.



**Optical
Gaging
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A Quality Vision International Company



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