

SmartScope® Quest™ 800

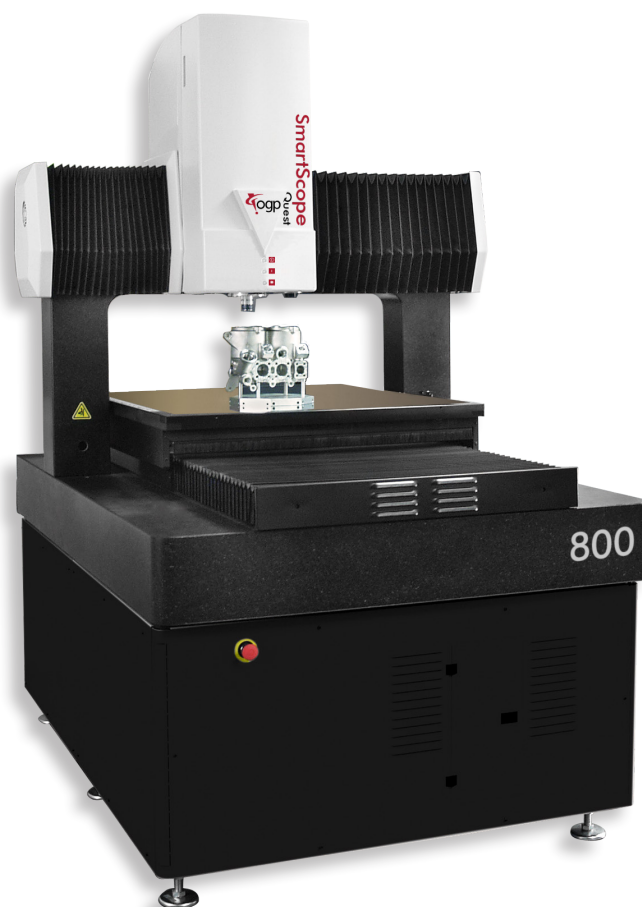
SmartScope Quest 800 –

An extremely accurate floor model coordinate measurement system incorporating scanning probe, touch probe, micro-probes, and the patented TeleStar® Plus TTL Laser for versatility and accuracy.

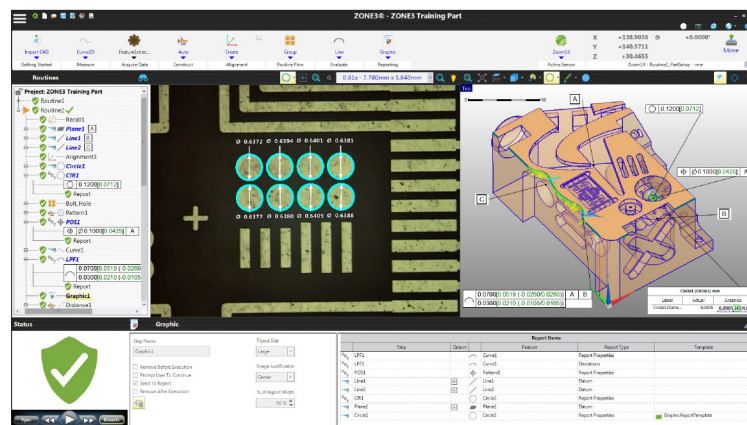
Quest 800, with its extensive measurement volume (and available 400 mm Z-travel), is designed to measure very large parts. A solid granite bridge platform and sturdy steel support structure results in measurement stability. Quest 800 offers:

- **Accurate Video Metrology –**
TeleStar® telecentric 10:1 zoom optics for the highest level of optical performance.
- **Multisensor Versatility –**
Optional touch probe, SP25 continuous contact scanning probe, PH10 motorized probe head, Feather Probe™, off-axis DRS™ Laser, on-axis TeleStar TTL interferometric Laser, Rainbow Probe™, and 4th and 5th axis rotary indexers.
- **State-of-the-art Software –**
Powerful ZONE3® metrology software, and other productivity and offline software applications, to suit your requirements.

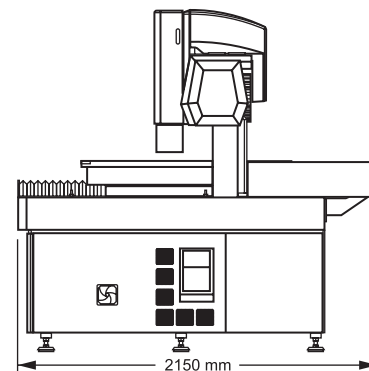
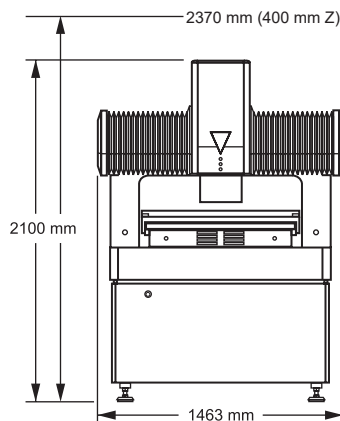
Large Volume Multisensor Dimensional Measuring System



SmartScope® Quest™ 800



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: 2575 kg
Shipping Weight: 2675 kg

	Standard	Optional
XYZ Travel	790 mm x 815 mm x 300 mm	Extended Z axis, 400 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	XY liquid cooled linear motor drives
Worktable	Hardcoat anodized, with fixture holes, removable stage glass, 75 kg recommended max payload	
Rotary Axis		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™), Heavy Duty Rotary (HDR), High Precision Rotary (HPR™), Dual Rotary (requires optional 400 mm Z axis)
Optics*	AccuCentric® auto-compensating, fully telecentric zoom, motorized; 1x lens	Focus Grid Projector: LED source Laser Pointer: Not available with optional TTL Laser Replacement / Laser Lenses: 0.45x, 0.5x, 2.0x, 4.0x
Illumination	Substage LED profile, coaxial LED surface, SmartRing™ LED ring light	Flexible SmartRing light for 0.45x and 0.5x lenses, Tungsten Fiber-Optic Ring in lieu of SmartRing (1x lens only)
Metrology Camera	Monochrome digital metrology camera	
Field of View	8.1 mm x 6.1 mm (low zoom) to 0.81 mm x 0.61 mm (high zoom)	14.6 mm x 11.0 mm (0.45x lens), to 0.20 mm x 0.15 mm (4.0x lens)
Working Distance	65 mm	Up to 200 mm (0.45x lens)
Sensor Options		Tactile: TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe, PH10 motorized probe head (requires 400 mm Z and compressed air) Non-Contact: TeleStar Plus Interferometric TTL Laser, DRS Laser, Rainbow Probe
Software	• ZONE3 Express metrology software • QVI® Portal	Metrology software: ZONE3 Prime, ZONE3 Pro Productivity software: SmartFit® 3D, OGP® EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) Offline software: ZONE3
System Controller	Windows® based, with up-to-date processor and on board networking/communication ports	
Controller Options	24" flat panel LCD monitor, keyboard, 3-button mouse; Ergonomic sit / stand operator workstation	Dual 24" flat panel LCD monitors
Power Requirements	100-200 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 1250 W	
Safe Operating Environment	15-30 °C, non-condensing	
Rated Environment	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	
XYZ Volumetric Accuracy	$E_3 = (2.8 + 5L/1000) \mu m$	
XY Area Accuracy	$E_2 = (2.0 + 5L/1000) \mu m$	$E_2 = (1.4 + 5L/1000) \mu m$ (requires optional 0.05 µm scales)
Z Linear Accuracy	$E_1 = (2.5 + 5L/1000) \mu m$	$E_1 = (1.5 + 5L/1000) \mu m$ (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. Standard optical specifications apply at the maximum optical magnification of the standard configuration. XY Accuracy applies with an evenly distributed load up to 10 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. On-site verification of volumetric accuracy is optional.
*Lenses can be manually interchanged to change magnification and working distance.



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