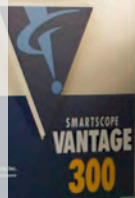




Optical Gaging Products



A Division of Quality Vision International



SmartScope® Vantage 800



- *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, SP25 continuous contact scanning probe, and PH10 motorized probe head
- *State-of-the-art metrology software* – Choose from MeasureMind® 3D MultiSensor that tracks all data points in 3D space and incorporates them into a common coordinate system, or intuitive yet powerful Measure-X®

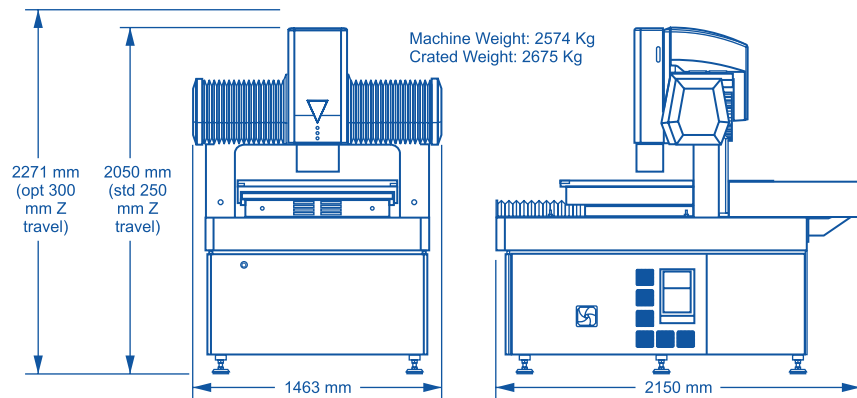
Extremely Large Volume Multisensor Dimensional Measuring System



Axis	Travel (mm)
X axis	790
Y axis	815
Z axis	250
Extended Z (opt)	300



SmartScope® Vantage 800



	Standard	Optional
XYZ travel	790 x 815 x 250 mm	Extended Z axis, 300 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 (for MeasureMind® 3D) or joystick (for Measure-X®)	XY liquid cooled linear motor drives; Z and zoom, DC servo with multifunction handheld controller (for MeasureMind® 3D) or joystick (for Measure-X®)
Worktable	Hardcoat anodized, with fixture holes, removable stage glass, 75 kg recommended max payload	
Optics	Patented* 10:1 AccuCentric® TeleStar® auto-calibrating, telecentric zoom, motorized; mag range 0.8x-8x, with up to 10 calibrated positions; 1.0x replacement lens	Replacement lenses, optical: 0.5x/130 mm WD, 2.0x/32 mm WD, 4.0x/20 mm WD Replacement lenses, optical/laser: 0.45x/200 mm WD, 0.5x/130 mm WD, 2.0x, 4.0x Optical accessories: LED grid projector, laser adapter (includes laser pointer)
FOV size (std optical configuration)	Measured diagonally, 8.9 mm (low mag) to 0.9 mm (high mag)	
Illumination	Patented** servo-driven high performance substage backlight (green), LED coaxial TTL surface (green), patented*** 8 sector/6 ring SmartRing™ LED (green)	Large fiber optic ring light (white), small fiber optic ring light (white), patented**** 8 sector/6 ring SmartRing™ LED (white)
Camera	High resolution, black & white digital metrology camera	High resolution color camera
Image processing	256 level grayscale processing with 10:1 subpixel resolution	
Sensor options (contact OGP for possible combinations of sensors)		Touch probe and change rack, SP25 scanning probe, patented**** on-axis TeleStar Plus interferometric TTL laser, off-axis DRS™ laser, Feather Probe™, Rainbow Probe™ scanning white light sensor, PH10 motorized probe head
Controller	Windows® based, with up-to-date processor and networking/communication ports	
Controller accessory package		24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied)
Metrology software	MeasureMind® 3D MultiSensor	Measure-X®, MeasureMind 3D Offline
Productivity software		MeasureFit® Plus, SmartReport® powered by QC-Calc, SmartFit® 3D, SmartProfile®, Scan-X®, TrueMap™, SmartScript®, SmartTree™
Power requirements	115/230 vac, 50/60 Hz, 1 phase, 1380 W	
Rated environment	Temperature 18-22° C, stable to ±1° C; 30-80% humidity; vibration <0.001g below 15 Hz	
Operating environment, safe operation	15-30° C	
XYZ volumetric accuracy¹	$E_3 = (2.8 + 5L/1000) \mu\text{m}^{2.4,5}$	$E_3 = (2.5 + 6L/1000) \mu\text{m}^{2.4,5}$
XY area accuracy¹	$E_2 = (2.0 + 5L/1000) \mu\text{m}^{2.3,4}$	$E_2 = (1.8 + 6L/1000) \mu\text{m}^{2.3,4}$ (with optional 0.05 µm scale resolution)
Z linear accuracy¹	$E_1 = (2.5 + 5L/1000) \mu\text{m}^4$	$E_1 = (1.5 + 5L/1000) \mu\text{m}^4$ (with optional 2.0x replacement lens and grid projector; on-axis TeleStar Plus TTL laser; off-axis DRS-300 or -500 laser, or TP20 or 200 touch probe)

*Patent Number 6,292,306 **Patent Number 6,488,398 ***Patent Number 5,690,417 ****Patent Number 7,791,731

¹Where 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 CSP.

²With evenly distributed load up to 10 kg. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy.

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

⁴E₁, Z axis linear, E₂, XY area, and E₃, XYZ volumetric accuracy standards are described in QVI Publication Number 790762. ⁵On-site verification optional.



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