



VIEW Benchmark 450

The VIEW Benchmark 450 from QVI delivers the performance and reliability you expect in a large travel, non-contact metrology system. It includes a 450 x 450 mm stage suitable for large footprint parts or nested groups of smaller parts. Advanced optics, illumination, and image processing make the Benchmark 450 a world-class metrology system.

The VIEW Benchmark 450 provides precision measurements in the Q/A laboratory or on the production floor.

- High-precision, single or dual magnification fixed lens optical system
- Advanced image processing for high speed, accuracy, and precision
- Choice of powerful metrology software and data analysis tools

	X	Y	Z
Travel (mm)	450	450	200

A high value, high accuracy dimensional metrology system



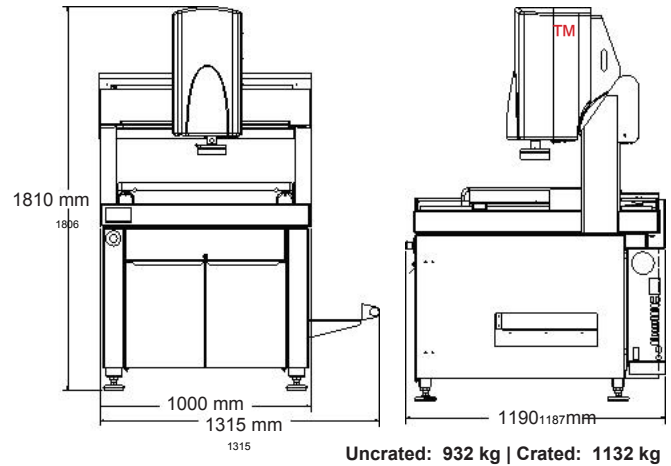
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Metrology Software:

- VIEW Metrology Software (VMS)
- Optional: Elements[®] metrology software
- Optional: Measure-X[®] metrology software

Available Optional Software Modules:

- Area Multi-Focus
- Continuous Image Capture (CIC)
- Advanced image filtering, image stitching, custom UI
- MeasureFit[®] Plus
- SmartProfile 3D GD&T evaluation software
- VMS Offline workstation software
- Digital I/O



	Standard		Optional	
X,Y,Z Travel (mm)	450 x 450 x 200			
X,Y,Z Scale Resolution	0.1 μm (dual Y-axis scales)			
Stage Drive System	DC Servo Motor, X,Y,Z			
Max Velocity	X,Y - 150 mm/sec Z - 100 mm/sec			
Max Recommended Load	65 kg			
Imaging Optics	Dual magnification, fixed lens optics with field interchangeable front lens. VIEW 2.5X front lens included as standard.		Single magnification, fixed lens optics with factory configurable back tube and field interchangeable front lens. VIEW 1X back tube and 2.5X front lens included as standard.	
Front Lens (Field Interchangeable)	Lens	FOV (mm)	Lens	FOV (mm)
	VIEW 0.8X	Low: 8.34 x 6.23 High: 1.91 x 1.43	VIEW 0.8X	8.34 x 6.23
	VIEW 1X	Low: 6.46 x 4.82 High: 1.59 x 1.19	VIEW 1X	6.46 x 4.82
	VIEW 2.5X	Low: 2.78 x 2.07 High: 0.64 x 0.48	VIEW 2.5X	2.78 x 2.07
	VIEW 5X	Low: 1.35 x 1.01 High: 0.31 x 0.23	VIEW 5X	1.35 x 1.01
	VIEW 10X	Low: 0.69 x 0.52 High: 0.16 x 0.12	VIEW 10X	0.69 x 0.52
	VIEW 25X	Low: 0.28 x .021 High: 0.06 x 0.05	VIEW 25X	0.28 x 0.21
Back Tube (Factory Installed)			VIEW 2X back tube (single magnification optics only)	
Metrology Camera	1.4 megapixel (1392 x 1040), 1/2-inch, digital, monochrome		1.4 megapixel (1392 x 1040), 2/3-inch, digital, monochrome 2.0 megapixel (1628 x 1236), 1/2-inch digital, monochrome *Other camera options available by request	
Illumination	Programmable LED illumination system for coaxial through-the-lens surface light and below-the-stage backlight		Multi-color programmable ring light with motorized incidence angle control; Grid autofocus system	
Sensor Options			Through-the-lens (TTL) laser Spectra Probe white light range sensor Off-axis triangulation laser	
Measurement Modes	High Speed Move And Measure (MAM)		Continuous Image Capture (CIC)	
System Controller	Quad core processor, Windows 7 Operating System and on-board networking and communication ports			
Controller Accessory Package	3-axis joystick for manual stage control, with stop/start button		Single LCD flat panel display, computer keyboard and mouse Dual LCD flat panel displays, computer keyboard and mouse Integrated, adjustable operator workstation	
Power Requirements	115/230 VAC, 50/60 Hz, 1-Phase, 700W			
Rated Environment	Temperature: 18°-22° C, stable to ± 1° C Relative Humidity: 30% - 80% Vibration below 15Hz: <0.0015g			
XY Area Accuracy ^{1,2,3,4,5,6}	E _z : (2.5+5L/1000) μm			
Z Linear Accuracy ^{1,2,5,6}	E _t : (2.0+8L/1000) μm		E _t : (2.0+8L/1000) μm (with TTL Laser and optional 5X lens)	
Notes: All specifications apply to a thermally stable machine and a certified artifact at 20°C	1. Maximum rate of temperature change: 1° C/Hour 2. Maximum vertical temperature gradient: 1° C/Meter 3. At rated velocity with evenly distributed load of 5 kg. Depending on load distribution, accuracy at higher loads may be less than standard accuracy. 4. Measured in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface. 5. Accuracy specifications applicable to standard and optional optical configurations with 2.5X or higher objective lens magnification at the highest available magnification setting. 6. E _t : Z axis linear and E _z : XY area accuracy standards are described in QVI Publication Number 790762.			