

*Precision RAM Optical performance in a large capacity video measurement system.
Quality design. Quality construction.
Quality performance.*

FEATURES

Hardware:

- Granite base for rigidity
- Measuring ranges from 18 x 18 x 6 or 12 to 59 x 59 x 6 or 12 inches
- Anodized XY stage with multiple fixture holes
- .000020" scales XYZ
- Optional Renishaw probe and changer

Optics & Illumination:

- High resolution color camera
- Magnification range of 34X - 176X
- LED ring light & back light
- Optional square-on coaxial illumination

Software:

- ROI eBx full-featured metrology software
- Advanced image processing with high-level tools
- Powerful editing tools
- Single or dual monitor operation
- Software is Y14.5 compliant



Sprint CNC 700 system with workstation stand and LCD monitor.

LARGE MEASUREMENT SYSTEM

Sprint CNC 400, 600 & 700 Large Transport Three-Axis Measurement

Sprint™ CNC machines are large capacity, fully automatic dimensional measurement systems. Tightly integrated rack & pinion Z slide and compound XY stage with precision mechanical bearing, DC servo motor drives, zoom optics and all-LED illumination make Sprint CNC the ideal tool for automatic measurement of large parts and batches of small parts.

Mechanics

Rigid, mechanical bearing XYZ stages with .000020 inch linear scales mounted to a solid granite base ensures system repeatability and reproducibility. Motion in the X, Y, & Z axis can be accomplished using the 3-axis joystick or 3-axis mouse.

Optics

Precision zoom lens coupled to a high-resolution color camera provides on-screen magnification ranging from 35X to an excess of

750X with optional tubes and add-on lenses.

Illumination

Accurate measurement of an image requires the ability to illuminate the particular area of interest correctly. Along with the standard lights you expect, the patented VectorLight ring light has 48 adjustable segments with infinite intensity control. All illuminators use high-powered LEDs.

Software

With RAM eBx software, the end user may select the user interface they are most comfortable with, for single or dual monitors, from the three interfaces available.

TECHNICAL SPECIFICATIONS

	400	600	700
Metrology Platform			
XYZ Travel, in.	18 x 18 x 6 or 12	24 x 18 x 6 or 12	24 x 24 x 6 or 12
Weight, approximate	2866 lbs/1300 kg		
Platform Dimensions, in. (XYZ)	41 x 58 x 67		
Platform Dimensions, cm (XYZ)	104 x 148 x 170		
Camera	High resolution color CCD		
Illumination	White LED VectorLight (six concentric LED rings split into eight 45° sectors) White LED back light		
Optional Illuminator	LED surface (square-on)		
Zoom Lens	6.5:1 motorized		
Working Distance	2.75"		
Magnification on 20" LCD monitor	35X to 176X		
Optional Auxiliary Lenses	0.5X 1.5X 2.0X		
Scale Resolution (XYZ)	0.00002"/0.5 μm		
Load Capacity	66 lbs/30 kg		
Computer (minimum configuration)	Pentium™ IV with Microsoft® Windows™ XP Professional		
Optional Accessories	20 in. flat panel LCD monitor, keyboard, mouse		
Metrology Software	eBx Metrology Software by QVI		
Optional Software Packages	SmartReport™ Plus MeasureFit™ Plus QC-Calc™ SmartCAD™		
Hardware Options	Computer Workstation Stand Motorized Rotary Footswitch Calibration Grid		
Contact Sensor Option	Renishaw Touch Probe & Touch Probe Change Rack		
Temperature			
Safe Operating	58°F - 85°F/14°C - 29°C		
Meet Specifications	68°F ± 4°F/20°C ± 2°C		
Power Requirements	100-240 VAC±5%, 50/60 Hz, 1F , 700 W		
Performance			
XY Accuracy (CNC 400)	$E_2 = (120 + 8L) \mu\text{inch}$		
XY Accuracy (CNC 600)	$E_2 = (140 + 8L) \mu\text{inch}$		
XY Accuracy (CNC 700)	$E_2 = (400 + 8L) \mu\text{inch}$		
Z Measuring Accuracy	$E_1 = (140 + 8L) \mu\text{inch}$		
Z Measuring Accuracy	$E_1 = (100 + 8L) \mu\text{inch}$ (with optional Touch Probe)		

Where 'L' is travel in inches. 1 μinch=0.000001 inches. Applies to thermally stable system in rated environment, maximum zoom lens setting, and evenly distributed 10 lb load. XY axis artifact: QVI 25 intersection grid reticle at standard measuring plane. The standard measuring plane is defined as a plane that is 1" (25 mm) above the work table. Z axis artifact: QVI step gage.

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