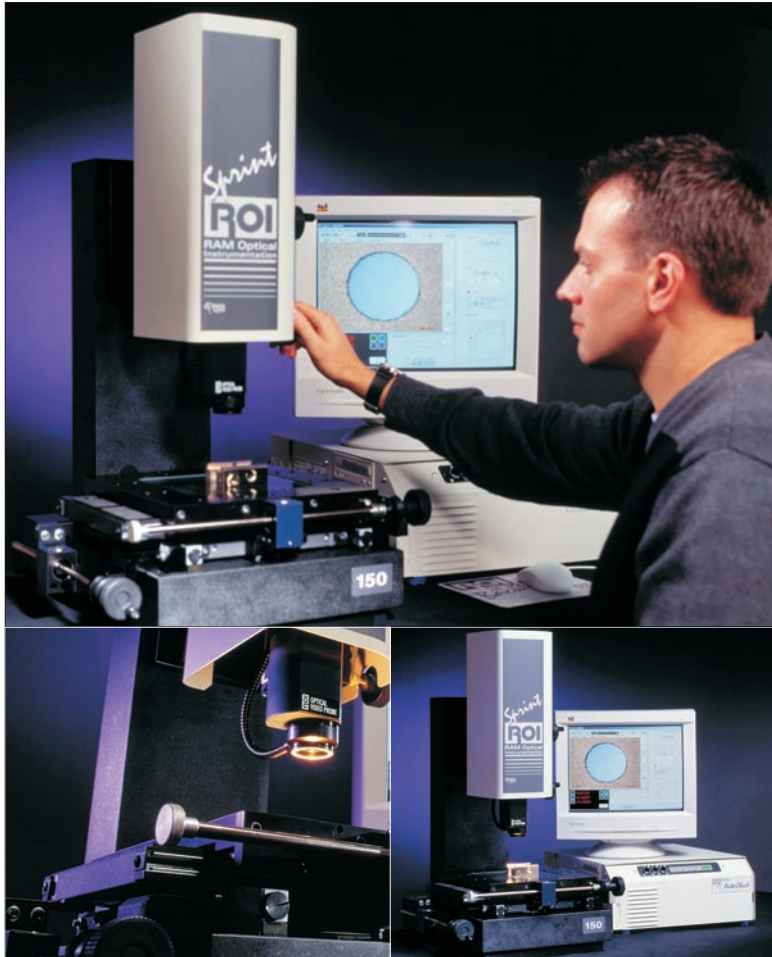


# Sprint Optical Measurement Systems

150  
200  
250  
250 Plus  
300

The Vision is Simplicity



## Cost-Effective Semi-Automatic Measurement System

**S**print™ series of benchtop dimensional measurement systems are available with a range of travels to accommodate most small parts. With RAM's emphasis on ease-of-use, any user can get accurate, repeatable measurements of the most complex parts. Incorporating the latest technology by Quality Vision International (QVI), Sprint systems are precision metrology tools you can depend on day after day.

## Intuitive Metrology Software

Gage-X™ metrology software provides an extensive set of functions for general purpose dimensional measurement, all accessible from an easy-to-use graphical interface. Gage-X guides users through measurement routines with innovative graphical icons and symbols.

## Precision Zoom Optics

The standard 6.5 to 1 motorized programmable zoom lens magnifies images as much as 135 times, in full color.

## Robust Staging

Precision mechanical bearing XYZ stages with 0.000040 inch linear glass scales mounted to a rock-solid granite base & column simplify part positioning & focusing. Manual quick release XY motion control allow rapid positioning, and adjustment knobs provide precise motion. Fine & coarse Z motion adjustment knobs simplify focusing.

## Image Processing

Sprint systems with Gage-X provide advanced image processing capabilities. A single monitor for live video and measurement results improves efficiency and saves space.

## Illumination

Sprint 100 with Gage-X includes an LED back light and fiber optic ring light. Illumination options include a fiber optic on-axis light and the patented VectorLight™ with its broad-band white LED ring and on-axis illumination.

## Features

- Complete dimensional measurement system - instrument, electronics and software
- Rock-solid granite base and column with precision stages
- High-resolution digital color camera & motorized zoom optics
- Gage-X metrology software with extensive set of measurement capabilities
- Small footprint, large capacity XYZ travels

6 x 6 x 6 in.	150 x 150 x 150 mm
8 x 6 x 6 in.	200 x 150 x 150 mm
10 x 6 x 6 in.	250 x 150 x 150 mm
12 x 6 x 6 in.	300 x 150 x 150 mm
12 x 12 x 6 in.	300 x 300 x 150 mm

# Sprint Optical Measurement Systems

150  
200  
250  
250 Plus  
300

## Technical Specifications

Optics	
Zoom Lens	6.5:1 (motorized)
Working Distance (with f/o ring light)	3.3"
Working Distance (with f/o on-axis light)	2.1"
Working Distance (with VectorLight)	2.4"
Magnification on 17" monitor	25X to 135X
Field of View (FOV), in./mm	0.35" to 0.070"/8.9 to 1.8 mm
Optional Auxiliary Lenses	0.5X; 1.5X; 2X
System	
Illumination (standard)	LED back light, fiber optic ring
Illumination (optional)	Fiber optic on-axis, patented* VectorLight™ ring and on-axis
Scale Resolution	0.00004"/1 μm
Maximum Workpiece Weight	30 lbs/ 14 kg
Camera	High resolution color CCD with 768 x 494 pixel array
Controller	Typical configuration: Intel® processor @ 1.7 GHz, 512 MB RAM, 40 GB hard drive, 1.44 MB floppy drive, CD-ROM, parallel, serial and USB ports on board 10/100 LAN
Operating System	Microsoft® Windows™ 2000
Optional Computer Accessory Packages	15 in. flat panel LCD monitor, keyboard, mouse 17 in. CRT monitor, keyboard, mouse
Metrology Software	32-bit Gage-X by QVI
Software Options	SmartReport™ Plus, GageFit™, QC-Calc™, SmartCAD™
System Options	Rotary; Footswitch; Dust Cover; Calibration Grid
Performance**	
XY Area Accuracy (150, 200, 250 systems)	$E_2 = \pm(140 + 6L) \mu\text{inch}$
XY Area Accuracy (300 system)	$E_2 = \pm(180 + 8L) \mu\text{inch}$
Z Accuracy	$E_1 = \pm(280 + 8L) \mu\text{inch}$
Environmental	
Temperature, Safe Operating	41°F -104°F/5°C - 40°C
Temperature to Meet Specifications	68°F ± 2°F/20°C ± 1°C
Power Requirements	
100-240 VAC, ±5%, 50/60 Hz, 1ø	

\*Patent # 5,690,417

\*\*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. 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. The standard measuring plane is defined as a plane that is 1" (25 mm) above the work table. Z axis artifact: QVI step gage.

	150	200	250	250 Plus	300
Mechanical					
XYZ Travel, in.	6 x 6 x 6	8 x 6 x 6	10 x 6 x 6	12 x 6 x 6	12 x 12 x 6
XYZ Travel, mm	150 x 150 x 150	200 x 150 x 150	250 x 150 x 150	300 x 150 x 150	300 x 300 x 150
Instrument Weight, approximate	243 lbs/110 kg	250 lbs/113 kg	254 lbs/115 kg	260 lbs/117 kg	309 lbs/140 kg
Instrument Dimensions, in. (XYZ)	18.75 x 21.75 x 31.5	21 x 21.25 x 31.5	22 x 21.25 x 31.5	23 x 21.25 x 31.5	23 x 32.25 x 31.5
Instrument Dimensions, mm (XYZ)	475 x 550 x 800	530 x 535 x 800	555 x 535 x 800	580 x 535 x 800	580 x 815 x 800

NOTE: Specifications apply to Sprint systems configured with AutoCheck and Gage-X software.

RAM Optical Instrumentation, Inc.  
A Quality Vision International Company  
615 S. Madison Drive Tempe, AZ 85281  
Sales: 480-505-3506 Service: 480-394-0833  
Support: 877-764-6397 Fax: 480-966-7117  
sales@ramoptical.com  
www.ramoptical.com

