Starrett®

METROLOGY SOLUTIONS

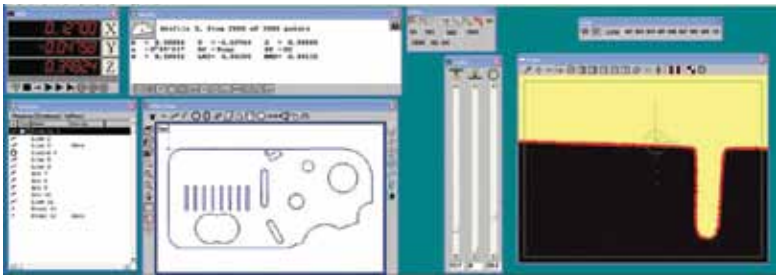
Large Format (LF) Premier Vision Line

Large Format (LF) Series CNC Vision Metrology Systems with Multi-Sensor Capability

Designed for large parts and CNC operation, LF Series floor-standing metrology systems are available in travel sizes ranging from 12" x 12" x 8" (300 x 300 x 200 mm) to 50" x 36" x 8" (1270 x 915 x 200 mm). Standard features include a massive granite base and granite bridge, air bearings and linear motors for the X and Y axes, video edge detection (VED) with a 1/3" CCD color video camera,12:1 optical zoom, and 4 µin (0.1 µm) of scale resolution. Options include a choice of Renishaw touch probes, an Optimet laser probe with a choice of objectives, and a 4" (100 mm) rotary stage. The video probe, touch probe and laser probe can be mounted simultaneously and be invoked as needed via powerful QC5300 multi-sensor 3D metrology software for maximum measurement flexibility on the same part.

Standard Features, All LF Models

- Massive granite base and bridge for stability
- Machine pedestal with swing out keyboard and monitor
- Air bearings and linear motors for X and Y axes
- 3-channel LED illumination: top ring light, sub-stage light, and coaxial light
- 1/2" CCD color camera for video edge detection
- 12:1 Navitar zoom optics
- X-Y-Z resolution of 4 µin (0.1 µm)
- X-Y-Z accuracy of 2.5 µm + 5L/1000
- Control via rack-mount PC
- MS Windows operating system
- Metronics QC5300 CNC 3D multi-sensor metrology software
- Large 24" flat-screen color monitor for parts image, metrology tools and data viewing
- Operator interface via keyboard, mouse and joystick-trackball
- Chrome-on-glass FOV VED calibration standard



Options, All LF Models

- Renishaw touch probe (choice of probes)
- Touch probe changing rack
- Optimet laser probe (choice of objective lenses)
- 4" (100 mm) CNC rotary stage
- LED dark-field quadrant illumination
- Parts holding fixtures
- Large chrome-on-glass X-Y glass calibration standards

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Specifications, All LF Models	
X-Y Transport	Air bearings with linear motors
Z Transport	Mechanical bearings with ball-screw and servo motor
X-Y-Z Accuracy	2.5µm + 5L/1000
X-Y-Z Resolution	4µin (0.1µm)
Video Camera	Color 1/3" CCD
VGA Monitor	Color 24" (61cm) LCD, 1024 x 768 pixel resolution
Zoom Optics	Navitar 12:1 motorized zoom
Magnification	26X to 290X on 24" (61cm) monitor
Auxiliary Lenses	0.5X, 1.5X, 2.0X
Touch Probe Repeatability	15µin (0.35µm) with 20mm stylus 25µin (0.65µm) with 60mm stylus
Laser Probe Data Rate	Up to 800 points/sec
Laser Probe Focal Lengths	16, 25, 50, 75, 100mm
Laser Probe Resolution	0.2, 0.5, 0.6, 1.0, 1.4 mil (5, 12, 15, 25, 35µm) horizontal 4µin (0.1µm) vertical
Rotary Stage Diameter	4" (100mm)
Rotary Stage Resolution	0.0008°
Rotary Stage Accuracy	0.009°
Ambient Temperature	68 ± 1°F (20 ± 0.5°C)
Temperature Rate of Change	0.5°F (0.25°C) per hour
Electrical Requirement	115/230 VAC, 50/60Hz, 1kW
Compressed Air Requirement	3cfm (85L/min) at 100-120 psi (8.25)