



OPTEK
OPERATIONS TECHNOLOGY INC

VideoMic[®] 712JA

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VIDEO INSPECTION AND MEASUREMENT SYSTEM

The VideoMic 712JA offers a low-cost measurement solution while providing traditional OPTEK precision. This semi-automatic system has been designed for users who do not require full automation to gather a high volume of measurements. Its 2-axis coordinate measurement capability allows the user to verify critical dimensions on prototypes, first articles, or production parts. The deviations from nominal can be reported to quantify the corrections needed.

The operator positions the X/Y stage quietly and quickly with convenient joystick and trackball controls. High magnification optics relay the image to a high resolution CCD camera and from there to the frame grabber where our sub-pixeling algorithm permits sub-micron measurements. The software can be programmed to guide the operator from feature to feature.

A magnified view of the feature being measured is displayed on the screen and can be stored with all relevant data or printed on the optional color printer. Once measured, the feature coordinates can be stored, analyzed, and/or exported to other software programs for further in-depth analysis.

FEATURES

- Advanced metrology software provides a high degree of programming flexibility.
- Enhanced video edge detection (VED) for selective feature measurement.
- System has versatile (VED) tools such as Line Width, Circle, Center-of-Mass, and Buffer that speed the measuring process.
- Transports are lead screw driven by low maintenance micro-stepper motors.
- Measurements are referenced to the transport's precision glass scales and pixel calibration in the camera image.
- The Microsoft Windows environment is used with on-line help to ease training.
- Systems are equipped with high performance computer controllers permitting rapid feature detection and high-speed transport control.
- Hybrid transport, utilizing precision linear ways and air bearings, offers increased stability and positioning accuracy.
- Electronic file or printout of dimensional data as well as images is available.
- Network Capability is standard for exporting reports including size and position data.
- Tolerancing to Cartesian, as well as True Position, LMC, and MMC is provided.
- Manual programs can be automatically created from CAD data or by recording steps while measuring a part.
- Massive granite base for superior machine stability.
- Components manufactured with modern composites and plastics maintain durability while reducing weight, allowing easier maintenance access, and reducing noise.
- A large screen, high resolution, LCD color monitor displays metrology data as well as the video image.
- Adjustable ergonomic workstation including a compact control panel and standard keyboard maximizes operator performance.
- High resolution color camera provides brilliant video image.

SPECIFICATIONS

Model	712JA
X-Y Travel	710 mm X 610 mm (28" X 24")
Footprint Width	2.01 m (79")
Footprint Depth	1.96 m (77")
Total height	1.55 m (60.5")
Overhangs	Up to 635 mm (25") for Adjustable Control Station at front, 280 mm (11") for optional color printer at right
Weight (approx.)	2300 kg (5000 lbs)
Shipping Weight	Shipping Weight: add 100 kg (220 lbs) if palletized or 160 kg (350 lbs) if palletized & crated.
X-Y Stage Velocity	250 mm (10") per second
X-Y Stage Accuracy	$U_{95} = (2.0 + L/200) \mu\text{m}$ Applies to thermally stable system @ 20°C with a pixel value of 5 μm or less
Environment	20 \pm 0.5°C (67°-69°F) temperature range, 0.25°C (0.5°F)/Hr maximum rate of change. 30% - 80% RH non-condensing
Controller	High performance Pentium processor. Contact factory for latest configuration.
Utilities	115 VAC 10 A 50/60 Hz or 220 VAC 5 A 50/60 Hz Single Phase. 85 L/m (3 CFM) dry air at 7 to 8.25 Bar (100-120 PSI)
Training	On-Site by an OPTEK Engineer (Quoted Separately)
Warranty	One Year Parts and labor
OPTEK is committed to continuous improvement. Specifications are subject to change	

OPTIONS

- Programmable LED Quadrangle™ top light for illumination of surface features.
- Programmable LED bottom lighting for illumination of edges and through-holes.
- Z-Trac Lighting Module provides independent control of incident angle and height for edge enhancement.
- Hinged Glass Platen holds flat samples of various thicknesses.
- 7X or 12X Programmable Zoom Lenses provide preset calibrated magnifications.
- Optical Magnifications can be specified from 25X to 2000X to match feature sizes.
- Color Printer provides archived video images and measurement reports.
- File Conversion Utilities import and export CAD, artwork, drill, and rout files.
- Powerful EXCEL based SPC Package.
- High resolution LCD Alignment Monitor mounted above the transport.

Consult the Factory for additional information on configuration or applications.