SMARTSCOPE CNC

Large Capacity Dimensional Measurement System

	Travel	mm
CNC 1000	X axis Y axis Z axis	1000 610 200
Extended Z (option)	Z axis	300
Extended Z (option)	Z axis	400

SmartScope® CNC 1000 from OGP® offers large XY travel range in a moving gantry design for outstanding measurement stability. In addition to excellent video measurement performance, it is multisensor-ready — for touch probes, laser, or micro-probes — making it a highly productive general purpose dimensional measurement system.

- **Clear imaging, wide magnification range zoom optics.** The patented 12:1 AccuCentric® zoom lens calibrates itself automatically after every magnification change, ensuring highest accuracy throughout its range, over its entire lifetime.
- **Rugged, precise staging.** The stable moving gantry design uses precision mechanical bearing XYZ stages with DC servo motor drives and three-axis joystick control, assuring rapid, smooth, consistent motion. The high-load capacity stage can support 60 kg, and the thick granite base and three-point frame provide a metrologically stable structure.
- **Illumination.** Green LED back light, white coaxial surface light, and the patented SmartRing™ light provide the programmable power needed to image the most challenging parts.
- **Metrology software.** Measure-X® metrology software provides extensive functions and logical controls. Optional MeasureMind® 3D MultiSensor software provides full 3D capability with sensor and rotary integration. SmartScope CNC 1000 is easily programmed for fully automatic operation.

Great value in a large measurement capacity multisensor dimensional measurement system

Technical Specifications

■ Standard □ Optional

■	**Stage travel (XYZ):** 1000 x 610 x 200 mm
□	**Extended Z axis:** 300 mm, 400 mm
■	**Measuring unit dimensions (approx LWH), weight:** 187 x 176 x 165 cm, 2500 kg
□	**Measuring unit dimensions, extended Z axis:** Contact OGP for unit size/weight
■	**Crated dimensions (approx LWH), crated weight:** 204 x 219 x 193 cm (crate #1), 244 x 160 x 132 cm (crate #2), 3620 kg (total weight)
□	**Crated dimensions, extended Z axis:** Contact OGP for crated size/weight
■	**XYZ scale resolution:** 0.5 µm
■	**Motor drives:** DC servo with joystick control (X, Y, Z, zoom)
□	**Interactive stage control:** 4-axis (X,Y,Z,zoom) with ergonomic, multifunction hand controller (requires optional MeasureMind 3D metrology software)
■	**Worktable:** Nickel-plated, with fixture holes and removable stage glass, 60 kg load capacity
■	**Zoom lens:** Patented† 12:1 AccuCentric® auto-calibrating with up to 25 calibrated positions
□	**Optical accessories:** 0.5x, 0.75x, 1.5x, and 2.0x lens attachments; 2.5x and 5.0x replacement lenses; LED grid projector, laser pointer (not available with TTL laser)
■	**Camera:** ½" format high resolution color CCD with 768 x 494 pixel array
■	**Illumination:** Green LED substage, white LED coaxial TTL surface, patented†† 8 sector/8 ring SmartRing™ white LED illumination
■	**Image processing:** 256 level grayscale processing with 10:1 sub-pixel resolution
□	**Multisensor options:** Off-axis DRS™ laser, on-axis TTL laser, touch probe and change rack, Feather Probe™, Rainbow Probe™ scanning white light sensor (contact OGP for possible combinations of sensors)
■	**Power requirements:** 115/230 vac, 50/60 Hz, 1 ϕ, 900 W
■	**Rated environment:** Temperature between 18 and 22° C, stable to ± 1° C; 30-80% humidity (non-condensing); vibration <0.001g below 15 Hz
■	**Operating environment, safe operation:** 15-30° C
■	**Metrology software:** OGP Measure-X®
□	OGP MeasureMind® 3D MultiSensor
■	**Computer:** Minimum configuration Dual Core processor @ 1.8 GHz, 1 GB RAM, 80 GB hard drive, 1.44 MB floppy drive, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN
■	**Operating system:** Microsoft® Windows™ XP Professional
□	**Computer accessories:** Single or dual 22" flat panel LCD monitor(s), keyboard, three-button mouse (or user supplied)
□	**Software:** For use with Measure-X or MeasureMind 3D; MeasureFit® Plus, SmartReport® powered by QC-Calc™, MeasureMenu™, Scan-X®
□	**Software:** For use with MeasureMind 3D only; SmartScript®, SmartTree™, SmartProfile™
	Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.
■	**XY area accuracy:** E_2=(2.5 + 6L/1000) µm*
■	**Z linear accuracy:** E_1=(3.0 + 8L/1000) µm**
□	**Z linear accuracy:** E_1=(2.0 + 8L/1000) µm** (with optional 2.0x replacement lens/grid projector; or DRS-300, -500, or -2000 laser; or TTL laser; or TP-20 or -200 touch probe)
■	**Warranty:** One year
□	**Accessories:** Fixtures and calibration artifacts, rotary indexers

†Patent Number 5,389,774 ††Patent Number 5,690,417

*With evenly distributed 5 kg load in the standard measuring plane. 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 25 mm above the worktable.

**Z axis artifact: QVI step gage or master gage blocks.

Multisensor Measurements for Manufacturing Professionals

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