



SmartScope ZIP 800

Large-Travel Metrology System

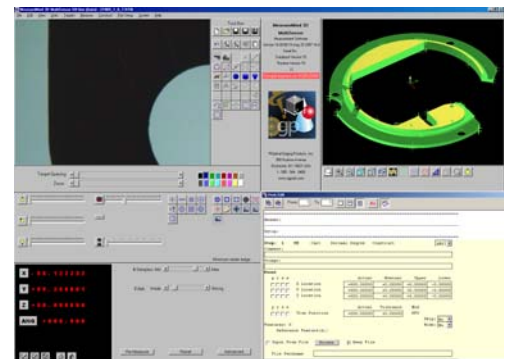


OGP® SmartScope ZIP® measurement systems are a popular choice in manufacturing facilities worldwide. These systems have a reputation for extreme reliability and proven metrological performance.

SmartScope ZIP 800 provides XYZ stage travel of 760 x 760 x 200 mm. Traditionally strong in video measurement, ZIP 800 is also multisensor capable, and is available with contact and non-contact probes that deploy and retract under program control for fully automatic operation, including the unique switchable TTL laser.

- **Auto-calibrating Optics.** The patented AccuCentric® Zoom 75 motorized zoom lens automatically calibrates itself with each magnification change, and provides high quality images of virtually any part.
- **Rigid Mechanical Design.** The granite-based mechanical design of SmartScope ZIP 800 combines the metrology benefits of rigid, orthogonal stage mounting with easy access for part fixturing.
- **Precision Positioning.** DC servo motor drives provide accurate XYZ positioning control and high speed operation. The heavy duty metal and granite construction provides maximum metrological stability for accurate, repeatable measurements.
- **Metrology Software.** Fast field-of-view (FOV) processing, powerful autofocus algorithms, and MeasureMind® 3D MultiSensor metrology software with full 3D geometric functionality and multisensor support make measurement simple.
- **Extended Software Utility.** Optional software, including applications for contour fitting, GD&T analysis, and SPC, extends utility and enhances productivity further.

	Travel	mm
ZIP 800	X axis	760
	Y axis	760
	Z axis	200



SmartScope ZIP 800 Features & Specifications

- Standard
- Optional

- | <u>Stage travel (XYZ)</u> | <u>Unit dim (LWH), Weight</u> |
|---|--|
| ■ 760 x 760 x 200 mm | ■ 132.5 x 180 x 182.5 cm, 1300 kg (contact OGP for crated dimensions/weight) |
| ■ XYZ scale resolution: 0.1 μm | |
| ■ Motor drives: DC servo | |
| ■ Interactive stage control: 4 axis (X,Y,Z, zoom) with ergonomic, multi-function handheld controller | |
| ■ Worktable: Hardened, with fixture holes and removable stage glass, 75 kg load capacity | |

- **Zoom lens:** Patented† Zoom 75, AccuCentric® auto-calibrating, motorized, 10 position
 - **Lens attachments:** 0.5x, 0.75x, 1.5x, 2.0x
 - **Front replacement lenses:** 2.0x, 2.5x, 5.0x, 10x
 - **Adapter tubes:** 1.0x
 - 0.67x, 2.0x
 - **Illumination:** Substage LED backlight (collimated, green), white TTL LED surface illumination, and patented†† SmartRing™ white LED illuminator
 - **Vu-Light oblique illuminator, small fiber optic ring light, fiber optic surface light, large fiber optic ring light**
 - **Camera:** ½" format high resolution color CCD with 768 x 494 pixel array
 - High resolution black and white (in lieu of color camera)
 - **Image processing:** 256 level grayscale processing with 10:1 sub-pixel resolution
 - **Multisensor options:** Touch probe and change rack, on-axis TTL laser (contact OGP for possible combination of sensors)
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- **Power requirements:** 115/230 vac, 50/60 Hz, 1 φ, 1380 W
 - **Rated environment:** Temperature between 18 and 22° C, stable to ±1° C; 30-80% humidity (non-condensing); vibration <0.002g below 15 Hz
 - **Operating environment, safe operation:** 15-30° C

- **Computer:** Minimum configuration Dual Core processor @ 2.66 GHz, 4 GB RAM, 160 GB hard drive, DVD/RW drive, parallel, serial, and USB 2.0 ports, on board 10/100 LAN
- **Operating system:** Microsoft® Windows™ XP Professional
- **Computer accessory package:** 22" flat panel LCD monitor, or dual 22" flat panel LCD monitors, keyboard, mouse (or user supplied)
- **Metrology software:** MeasureMind® 3D MultiSensor
 - MeasureMind 3D offline
- **Software:** MeasureFit® Plus, SmartReport® powered by QC-Calc™, Scan-X®, SmartFit® 3D, 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:** $E_2 = (2.5 + 5L/1000) \mu\text{m}^{1,2}$
- **Z linear accuracy:** $E_1 = (2.5 + 5L/1000) \mu\text{m}^3$
- **Z linear accuracy:** $E_1 = (2.0 + 5L/1000) \mu\text{m}^3$ (with optional 2.0x replacement lens/grid projector)
- **Z linear accuracy:** $E_1 = (1.5 + 5L/1000) \mu\text{m}^3$ (with optional TTL laser)
- **Z linear accuracy:** $E_1 = (1.4 + 5L/1000) \mu\text{m}^3$ (with optional TP-20 or -200 touch probe)

- **Warranty:** One year
- **Accessories:** Calibration artifacts, rotary indexers, grid projector for autofocus on shiny surfaces

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

1) With evenly distributed load up to 5 kg. Depending on load distribution, accuracy at maximum rated load may be less than standard accuracy.

2) XY axis artifact: QVI 25 intersection grid reticle in the standard measuring plane. The standard measuring plane is defined as a plane that is 25 mm above the worktable.

3) Z axis artifact: QVI step gage or master gage blocks.



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