



SMARTSCOPE ZIP



Video and Multisensor Measurement for Large Parts

Field-Proven Performance For Large Part Measurement

	Travel	mm
ZIP 1200	X axis	900
	Y axis	1200
	Z axis	200
Extended Z (Option)	Z axis	300

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

SmartScope ZIP 1200 provides XYZ stage travel of 900 x 1200 x200 mm, with optional extended Z axis of 300 mm. Traditionally strong in video measurement, ZIP 1200 is also multisensor capable, and is available with contact and non-contact probes that deploy and retract under program control for fully automatic operation, as well as the unique switchable TTL (through-the-lens) laser.

- The patented AccuCentric® Zoom 70 motorized zoom lens automatically calibrates itself with each magnification change, and provides high quality images of virtually any part.
- The granite-based mechanical design combines the metrology benefits of rigid stage mounting with easy access for part fixturing.
- Frictionless linear motor drive on the Y-axis provides high speed and acceleration, with zero mechanical influence on the straightness of motion.
- Fast field-of-view (FOV) processing, autofocus, and MeasureMind® 3D MultiSensor metrology software, with full 3D geometric functionality and multisensor support, make measurement simple.
- Optional software extends utility, and includes contour fitting, and GD&T and SPC analysis.



Technical Specifications

■ Standard ■ Optional

<ul style="list-style-type: none"> ■ Stage travel (XYZ): 900 x 1200 x 200 mm ■ Extended Z axis: 300 mm ■ Measuring unit dimensions (approx LWH): 326 x 170 x 175 cm; Weight: 6350 kg ■ XYZ scale resolution: 0.1 μm ■ Motor drives: Y-axis, linear; X-axis, DC servo with rod drive; Z-axis, DC servo with ball screw drive ■ Interactive stage control: 4 axis (X,Y,Z, zoom) with ergonomic, multi-function handheld controller ■ Worktable: Hardened worktable with fixture holes, removable stage glass, and 75 kg load capacity
<ul style="list-style-type: none"> ■ Optics: Patented[†] AccuCentric[®] auto-calibrating, 7:1 motorized zoom lens system ■ Lens attachments: 0.5x, 0.75x, 1.5x, 2.0x ■ Front replacement lenses: 2.0x, 2.5x, 5.0x, 10.0x ■ Adapter tubes: 1.0x ■ 0.67x, 2.0x ■ Illumination: Substage LED profile light (green), TTL LED surface light (white), and patented^{††} SmartRing[™] LED ring light (white) ■ Vu-Light[™] oblique illuminator, small fiber optic ring light, fiber optic surface light, large fiber optic ring light, Autofocus grid projector (LED) ■ Camera: High resolution color metrology camera ■ High resolution black and white metrology camera (in lieu of color) ■ Image processing: 256 gray level processing with 10:1 sub-pixel resolution ■ Multisensor options: Touch probe and change rack, DRS[™] laser, TTL laser, Rainbow Probe[™] scanning white light sensor, Feather Probe[™], laser pointer (not available with TTL laser) (contact OGP for possible combinations of sensors)
<ul style="list-style-type: none"> ■ 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; vibration <0.001g below 15 Hz ■ Operating environment, safe operation: 15-30° C
<ul style="list-style-type: none"> ■ Computer: Minimum configuration Quad Core processor @ 2.5 GHz, 4.0 GB RAM, 160 GB hard drive, DVD-RW drive, parallel, serial, and USB 2.0 ports, on board 10/100/1000 LAN ■ Operating system: Microsoft[®] Windows[™] ■ Computer accessory package: 24" flat panel LCD monitor, or dual 24" flat panel LCD monitors, keyboard, 3-button mouse (or user supplied) ■ Metrology software: MeasureMind[®] 3D MultiSensor ■ Measure-X[®] (in lieu of MeasureMind 3D), MeasureMind 3D offline ■ Software: For use with Measure-X or MeasureMind 3D; MeasureFit[®] Plus, SmartReport[®] powered by QC-Calc[™], Scan-X[®], SmartFit[®] 3D, SmartProfile[®] ■ Software: For use with MeasureMind 3D only; SmartScript[®], SmartTree[™]
<p>Where L=measuring length in mm. Applies to thermally stable system in rated environment. All optical accuracy specifications at maximum zoom lens setting.</p> <ul style="list-style-type: none"> ■ XY area accuracy: $E_z = (2.5 + 5L/1000) \mu\text{m}^{1,2}$ ■ Z linear accuracy: $E_1 = (3.0 + 5L/1000) \mu\text{m}^3$ ■ Z linear accuracy: $E_1 = (2.0 + 5L/1000) \mu\text{m}^3$ (with optional 2.0x replacement lens/grid projector, TTL or DRS laser, or TP-20 or -200 touch probe)
<ul style="list-style-type: none"> ■ Warranty: One year ■ Accessories: Calibration artifacts, rotary indexers

[†]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 or QVI linear linescale in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface.
 3) Z axis artifact: QVI step gage, master gage blocks, or laser interferometer.



Multisensor Measurements for Manufacturing Professionals

World Headquarters and Technology Center: 850 Hudson Avenue • Rochester, NY 14621 USA • Tel 585.544.0400 • Fax 585.544.8092
Western USA Regional Office: 1711 West 17th Street • Tempe, AZ 85281 USA • Tel 480.889.9056 • Fax 480.889.9059
OGP Shanghai Co, Ltd: Building 8 • No. 11 Galileo Rd • Pu Dong New District • Shanghai, China 201203 • Tel 86.21.5045.8383/8989 • Fax 86.21.6845.8800
OGP Messtechnik GmbH: Nassaustr. 11 • 65719 Hofheim-Wallau, Germany • Tel 49.6122.9968.0 • Fax 49.6122.9968.20
Optical Gaging (S) Pte Ltd: 21 Tannery Road, 347733 Singapore • Tel 65.67.41.8880 • Fax 65.6846.8998
Internet: www.ogpnet.com • intl-sales@ogpnet.com