



SmartScope® Flash™ 302

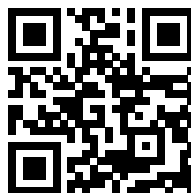
SmartScope Flash 302 is a unique high capacity benchtop multisensor measurement system and one of the most versatile benchtop systems OGP® offers. Flash 302 offers:

- **Precision Optics –**
High quality AccuCentric® zoom lens automatically compensates magnification for each zoom position.
- **Flexible Illumination –**
Standard profile light, coaxial surface light, and SmartRing™ light illuminate parts from all angles.
- **Multisensor Versatility –**
Optional touch probe, scanning probe, feather probe, TTL laser, and rotary indexers.

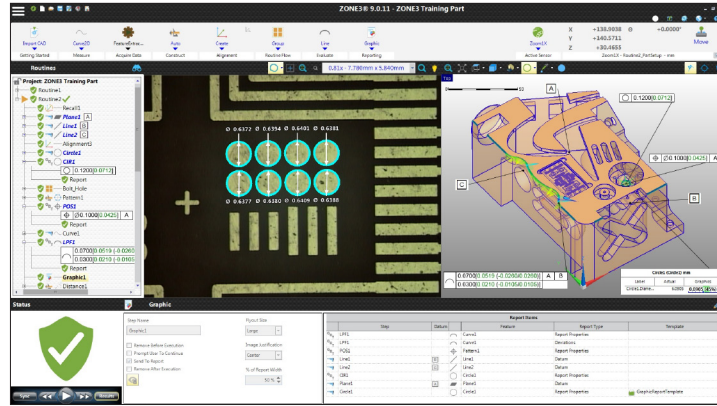
Benchtop Multisensor Measuring System with Floor Model Capacity



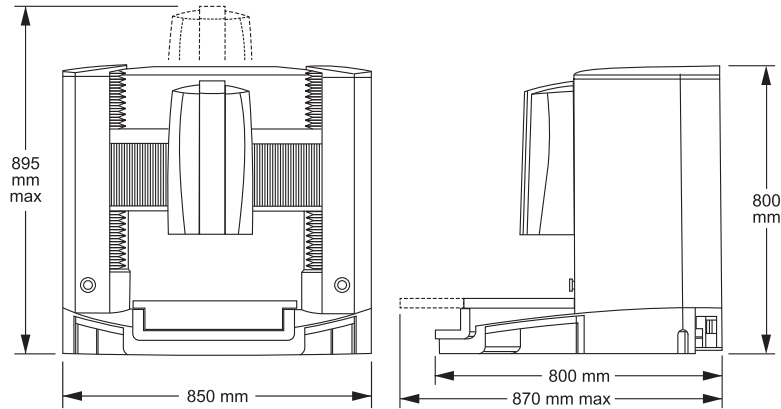
Shown with optional touch probe, MicroTheta™ Rotary Indexer and TTL Laser.



SmartScope® Flash™ 302



ZONE3® Metrology Software represents a totally new way of working with multisensor measurement systems, providing faster, easier, and more productive measurements.



System Weight: 160 kg
Shipping Weight: 340 kg

	Standard	Optional
XYZ Travel	300 x 300 x 250 mm	
XYZ Scale Resolution	0.1 µm, including dual Z-axis scales	
Drive System	DC servo with 4-axis control (X, Y, Z, zoom); with multifunction handheld controller	
Worktable	Hardcoat anodized, with fixture holes, removable stage glass, 30 kg recommended max payload	
Rotary Axis		Miniature Servo Rotary (MSR™), MicroTheta Rotary (MTR™)
Optics*	AccuCentric® auto-compensating zoom, motorized; 1.0x lens	Focus Grid Projector: LED Source Laser Adapter: Allows for field retrofit of TTL Laser. Includes Laser Pointer Replacement Lenses: 2.5x, 5.0x Laser Lenses: 2.0x (Included with TTL Laser), 5.0x Lens Attachments for 1.0x Lens: 0.5x, 0.75x, 1.5x, 2.0x
Illumination	Substage LED profile, coaxial LED surface, SmartRing LED ring light (white)	Red, Green, or Blue SmartRing; Flexible SmartRing for 0.5x lens attachment
Metrology Camera	Color metrology camera	Monochrome metrology camera
Field of View**	8.0 mm x 6.0 mm (low zoom) to 0.90 mm x 0.68 mm (high zoom)	14.6 mm x 10.9 mm (1.0x lens, 0.5x attachment) to 0.19mm x 0.14 mm (5.0x lens)
Working Distance	64 mm	Up to 97 mm (1.0x lens, 0.5x attachment)
Sensor Options***		Tactile: TP20 or TP200 Touch Probe, SP25 Scanning Probe, Feather Probe™ Non-Contact: Through-the-Lens (TTL) Laser
Software	<ul style="list-style-type: none"> • ZONE3 Express or Measure-X metrology software • QVI® Portal 	Metrology software: ZONE3 Prime, ZONE3 Pro Productivity software: Measure-X® Analyze, SmartFit® 3D, OGP® EVOLVE® Suite (Design, EVOLVE SPC, Manufacturing, SmartProfile®) Offline software: ZONE3, Measure-X
System Controller	Windows® based, with up-to-date processor and onboard networking/communication ports	
Accessories		24" flat panel, or dual 24" flat panel LCD monitors; keyboard, 3-button mouse (or user supplied)
Power Requirements	100-120 VAC or 200-240 VAC, 50/60 Hz, 1 phase, 800 W	
Safe Operating Environment	15-30 °C, non-condensing	
Rated Environment	Temperature 18-22 °C, stable to ± 1 °C, max rate of change 0.5 °C / hour, max vertical gradient of 1 °C / meter; 30-80% humidity; vibration <0.001g below 15 Hz	
XYZ Volumetric Accuracy		$E_3 = (3.8 + 5L/1000) \mu\text{m}$ (requires ZONE3)
XY Area Accuracy	$E_2 = (1.8 + 5L/1000) \mu\text{m}$	
Z Linear Accuracy	$E_1 = (3.4 + 5L/1000) \mu\text{m}$	$E_1 = (2.4 + 5L/1000) \mu\text{m}$ (requires optional TTL Laser or Touch Probe)

Accuracy is evaluated with a QVI verification procedure where "L" is measured length in millimeters. Specifications apply within the rated environment. Standard optical specifications apply at the maximum optical magnification of the standard configuration. XY Accuracy applies with an evenly distributed load up to 5 kg in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface. Depending on load distribution, accuracy at maximum payload may be less than standard.

*Lenses and lens attachments can be manually interchanged to change magnification and working distance. **FOV sizes with optional monochrome camera are 15% smaller in Measure-X. ***SP25 and Feather Probe only supported in ZONE3.



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