Video Measuring Systems

Semi-automatic and Automatic, Non-Contact Measuring Systems

A Tradition of Innovation

OGP® is a world-leading manufacturer of precision multisensor metrology systems for industrial quality control. For over 75 years, OGP metrology systems have helped manufacturers monitor dimensional compliance to design specifications.

Today, OGP's systems extend beyond the famous SmartScope® product family, including TurnCheck™ Shaft Measurement Systems, c-vision™ Video Contour Projectors® and ShapeGrabber® 3D Laser Scanning Systems.

Semi-Automatic and Automatic Zoom Video Measuring Systems

OGP StarLite™ and **SprintMVP**™ Video Measuring systems combine a digital metrology camera and motorized zoom lens to automatically inspect and measure features on a part. OGP Video Measuring systems are ideal for measuring high and low contrast features, focusing on surfaces and measuring features larger than a single Field of View. Fully automated operation ensures repeatable measurements – by all operators, under all conditions.

SprintMVP is shown with VectorLight™ and motorized zoom optics.

Lighting, Optics, and Performance

StarLite and SprintMVP systems feature three standard light sources – backlight, coaxial through-the lens surface light and oblique VectorLight – all with high brightness, cool operating monochromatic LEDs. All light sources are programmable, ensuring the optimal lighting for each measurement each and every time. StarLite systems have an integrated light control panel while motorized SprintMVP systems have light controls on the multi-function hand-controller.

The motorized 6.5:1 zoom lens offers the flexibility to measure at multiple magnifications within a single program, while the high-resolution color megapixel camera with 3:1 digital zoom provides an on-screen display magnification of up to 370x on a standard size monitor.

For increased FOV size or higher magnification, optional lens attachments are available that easily mount to the standard lens. A 0.5x lens attachment doubles the standard FOV size to 14.6 x 11.0 mm, while a 2.0x lens attachment increases the max on-screen magnification to 740x.

Video autofocus provides for accurate Z-height measurements and ensures the best focus when taking edge measurements. Fully automatic focus is standard on all SprintMVP systems and most StarLite systems.

SprintMVP Automatic Zoom Measurement Systems

Versatile Measurement Performance, Productivity Made Simple

SprintMVP systems set the standard for fully automatic 3-axis measurement performance. The rugged granite construction, precision motorized state and, flexible zoom optics make a SprintMVP system a great value with the capability to measure a very broad range of parts.

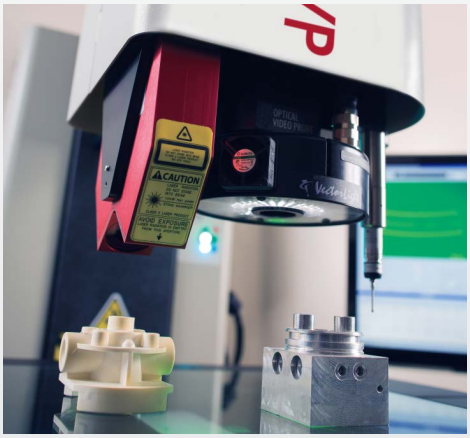
Video Measurement System with Multisensor Capability

Additional sensors provide the flexibility to make more measurements within a single routine. Depending upon the characteristic needed, an optional laser or touch probe may provide shorter measurement times, or measure a feature that cannot be seen by the optics.

SprintMVP models have the following (optional) sensors:

Laser Focus and Scanning

Laser sensors excel at fast and accurate Z-axis point acquisition. Use a laser for height, depth, and planar measurements, or for surface profiling on complex curves and surfaces. Lasers on SprintMVP systems deploy automatically and retract out of the way when not in use.



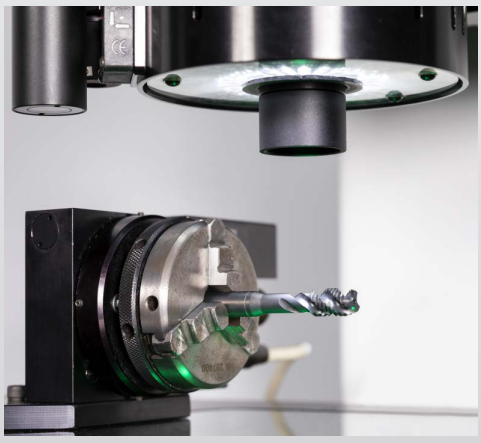
Optional DRS™ Laser and Touch Probe Sensors offer additional measurement capability for complex measurements on challenging parts.

Touch Probe

Touch probing extends the measurement versatility of a SprintMVP system, accessing features that are difficult to image, or surface boundaries that are inaccessible to the optics. To increase the versatility of a measurement system, add a 2, 4, or 6 position change rack to hold the most used probes.

Rotary Indexers

Symmetric parts and parts with important features on many sides can be characterized on SprintMVP systems with a rotary indexer. Available with different capacities and resolutions, rotaries allow complete measurement in a single setup.



Optional rotary indexers automatically index parts for the complete measurement of programmed features.

SprintMVP Automatic Zoom Video Measurement Systems

SprintMVP systems offer fully automatic measurement with high performance and affordability. There are two benchtop models and five floor models available to suit any measurement need.

	SprintMVP 250 | 300	SprintMVP 400 | 600	SprintMVP 1500 | 1550 | 1552
System Highlights	**Benchtop Systems** deliver high productivity on the workbench. A precision compound stage along with a granite base and post provides measurement stability. An extended Z axis measuring range is available to accommodate tall parts.	**Floor Model Systems** extend measurement capability to large parts or large batches of smaller parts. SprintMVP floor models feature heavy-duty construction from stable materials for use in harsh shop-floor conditions. An extended Z axis measuring range is available on SprintMVP 400 models to accommodate tall parts.	**Extra Large Capacity Floor Model Systems** feature a massive granite base and moving bridge design where the part remains stationary. Dual Y-axis drives and scales are standard.
Features			
XYZ Travel			
Standard	250: 300 x 150 x 150 mm 300: 300 x 300 x 150 mm	400: 450 x 450 x 150 mm 600: 610 x 450 x 150 mm	1500: 900 x 1500 x 200 mm 1550: 1250 x 1500 x 200 mm 1552: 1500 x 1500 x 200 mm
Optional	250 mm Extended Z Axis	300 mm Extended Z Axis (400 only)	–
Drive System	Compound motorized XY stage and DC servo Z axis with 3-axis joystick control		Moving bridge style XYZ transport with dual Y-axis drives and scales
Optics			
Standard	Motorized 6.5:1 zoom lens system		
Optional	Add-on lenses: 0.5x, 0.75x, 1.5x and 2.0x		
Illumination			
Standard	LED VectorLight SP programmable ring light with 6 rings and 7 sectors, LED backlight, LED square-on surface light		
Optional	LED VectorLight SF programmable ring light with 6 rings and 8 sectors (reduced working clearance)		
Metrology Camera	Digital megapixel color metrology camera		
Field of View *Uses optical and digital zoom			
Standard	Low Mag : 7.3 mm x 5.5 mm High Mag*:0.5 mm x 0.4 mm		
Optional	Low Mag (0.5x): 14.6 mm x 11.0 mm High Mag* (2.0x): 0.27 mm x 0.20 mm		
Sensor Options			
Optional	Touch Probe and Change Rack, off-axis DRS Laser		
Software			
Standard	Measure-X®		
Optional	Measure-X Offline, MeasureFit®, EVOLVE® SmartProfile, EVOLVE SPC		

StarLite Semi-Automatic Measurement Systems

Measurements Made Simple

StarLite systems are the easiest to use precision measurement systems offered by OGP. The StarLite combines versatile zoom optics with a digital color camera and an easy-to-operate stage, for the ultimate in simplicity. Fully automatic software guides the operator to position the stage to each measurement location where the programmed detection measurement tool(s) automatically measure the part feature. The optional footswitch allows for “Hands-free measurement”.

	StarLite 150	StarLite 250 | 300
System Highlights	A compact, 3-axis semi-automatic measuring system that is reliable, accurate and, easy to use. Built on a rigid cast metal base and column, StarLite 150 provides solid, repeatable performance, even in harsh shop conditions.	Expand the available measurement capacity and take semi-automatic performance to the next level with solid granite bases for rigid, stable 3-axis measuring capability and motorized Z-axis for autofocus capability. Precision ball-slide stages with ergonomic controls make operation easy.
Features		
XYZ Travel	150 x 75 x 125 mm	250: 300 x 150 x 150 mm 300: 300 x 300 x 150 mm
Drive System	Manual with coarse and fine XYZ position adjustment knobs	Precision compound stage with manual XY axes, motorized Z-axis
Optics		
Standard	Motorized 6.5:1 zoom lens system	
Optional	Add-on lenses: 0.5x, 0.75x, 1.5x and 2.0x	
Illumination		
Standard	LED VectorLight SP programmable ring light with 6 rings and 7 sectors, LED backlight, LED square-on surface light	
Optional	LED VectorLight SF programmable ring light with 6 rings and 8 sectors (reduced working clearance)	
Metrology Camera	Digital megapixel color metrology camera	
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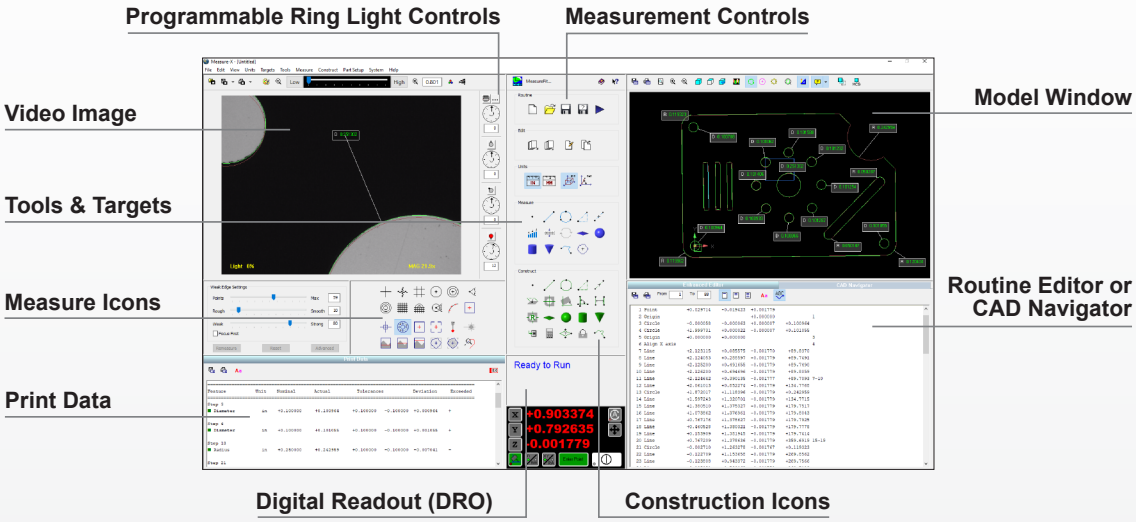
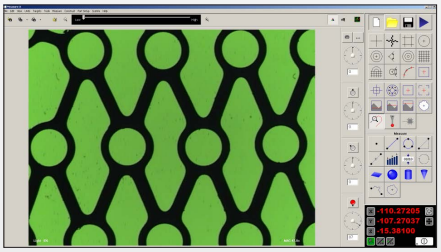
Software		
Standard	Measure-X	
Optional	Measure-X Offline, MeasureFit, EVOLVE SmartProfile, EVOLVE SPC	

Measure-X – The Easy Way to High-Powered Measurements

Easy to Use Screen Layout



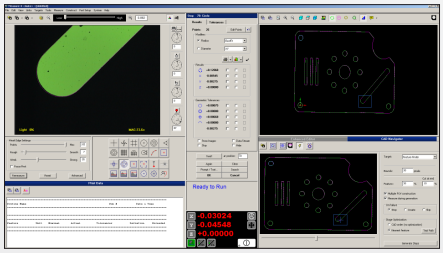
Simple to Use



Easy Part Routine Set-Up and Operation

Walk-Up and Measure

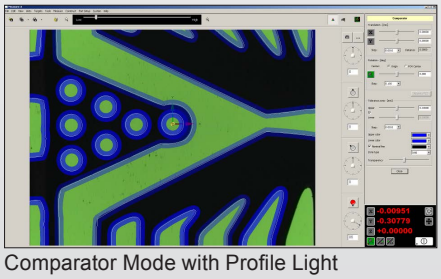
Position, focus and measure a part feature in the video window, go on to other features to incrementally build a virtual model of the entire part. Measure relationships directly in the model window, set axis alignments and define datums, create constructions to gather more measurements and define relationships between discrete part features. Each action becomes a step in a part routine you can save to repeat later automatically.



Program from CAD (Optional)

Import DXF and other popular 2D CAD file formats for automatic generation of measurement routines. Simply load the CAD file and select features to be measured. Measure-X does the programming for you.

Complete Capabilities

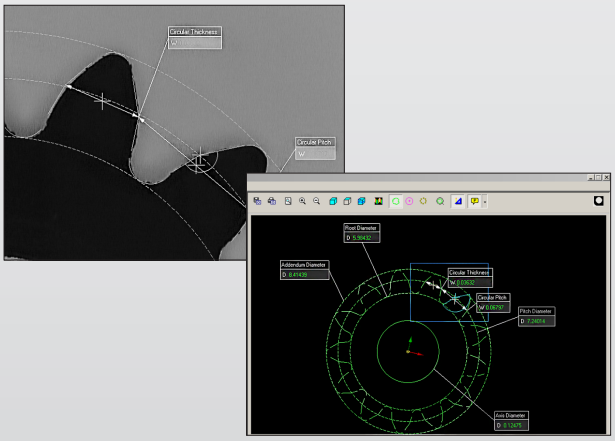


Comparator Mode with Profile Light

Comparator Mode (Optional)

Simple to use Comparator Mode overlays the part model and tolerance bands on the video image for direct visual comparison of the actual and nominal dimensions.

Comparator mode works equally well with either backlight or surface light.



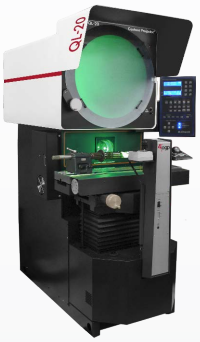
Interactive Labels and Flyouts

It's easy to display labels for critical dimensions directly in the model or image windows. Hover the mouse pointer over any feature in the model window and select the label and dimensions you would like to display.

Optional Software

- **MeasureFit** – fully automated fitting analysis with GD&T capability to handle multiple datums. Analysis tools can be integrated directly into a Measure-X inspection routine.
- **EVOLVE SmartProfile** – the world's leading dimensional analysis software that combines measurement data with the CAD model of the part and automatically runs GD&T (ASME) and GPS (ISO) evaluations.
- **EVOLVE SPC** – Full statistical process control software with interactive tables and graphs that make it easy to visualize process variations by characteristic.

OGP Offers a Complete Line of Systems with the World's Most Advanced Measurement Technologies.

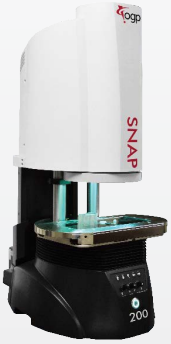


Optical Comparators

Optical Comparators from OGP combine cutting-edge optics, lighting, and automation technologies for enhanced productivity and profitability.

Contour Projectors – Optical comparators are a mainstay of shop-floor measurement. Their tough construction and big viewing screen make measurements fast and easy. Benchtop and floor model optical comparators from OGP offer the industry's best value and performance for non-contact measurement.

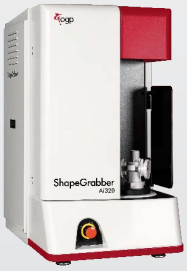
The **c-vision Video Contour Projector** combines the speed and accuracy of a video measurement system with the rugged capacity of an optical comparator to create the world's easiest-to-use shopfloor measuring tools.



Large FOV Video Measuring Systems

SNAP™ Large FOV Video Measurement Systems are compact measuring systems that integrate perfectly from the shopfloor, to the lab, or as part of an automated work cell. Rugged construction and an open work envelope make the SNAP easy to implement in virtually any manufacturing setting.

All SNAP systems feature large field of view optics, fully telecentric lens, high resolution cameras, and lighting custom-designed to optimize the image, creating a complete optical system. Camera, optics, lighting, and platform are matched and tuned for optimum performance that excels at measuring small parts with fine features. Software tools allow SNAP to accurately identify, orient, and measure parts without the need for complex fixturing.



Laser Scanning Systems

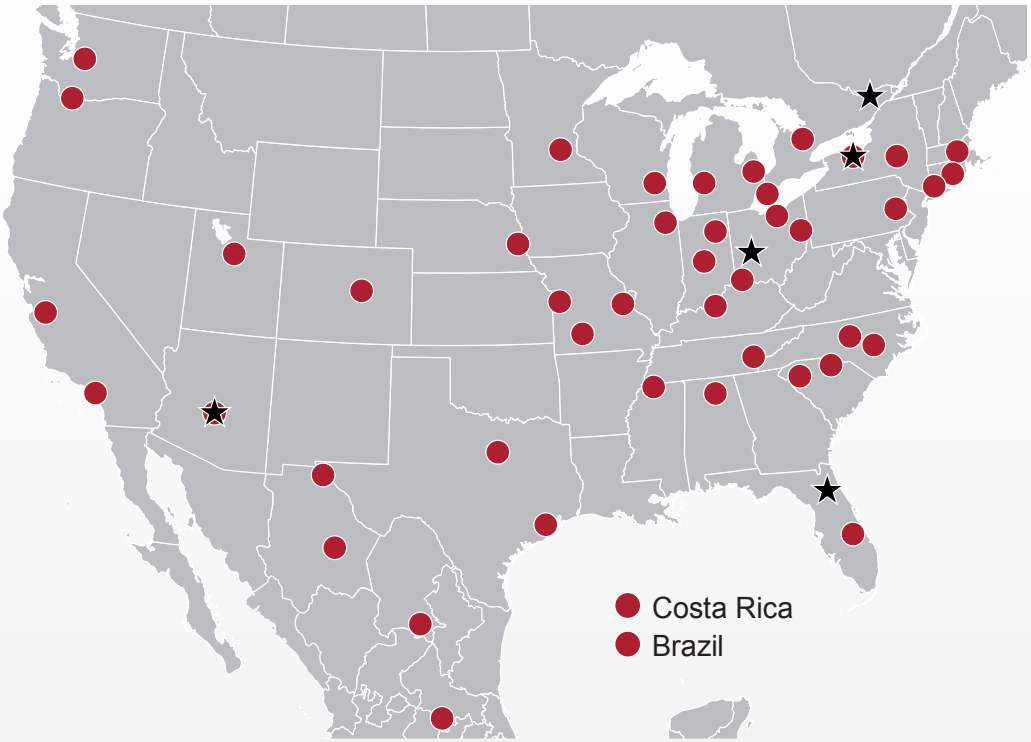
ShapeGrabber 3D Laser Scanning systems deliver fast, accurate and, automated 3D measurement. The ShapeGrabber is ideal for measuring complex shapes such as molded plastics, castings, stampings, and machined parts that are time-consuming, costly, and difficult to measure. Using multiple motion axes, ShapeGrabber laser scanners eliminate the need for software alignment and registration and ensure fast, accurate results.

Shaft Measurement Systems

TurnCheck systems offer a fast, easy way to measure shafts, cylinders, and other turned, ground, or extruded parts. Designed to be placed on the shop floor with machine tools, TurnCheck systems provide improved process control through immediate feedback. A part can be placed and measured in seconds!

Global Sales & Support Offices

The Americas



Support Office Locations:

Americas

- Rochester, NY, USA
- Dayton, OH, USA
- Gainesville, FL, USA
- Tempe, AZ, USA
- Ottawa, Canada

Europe

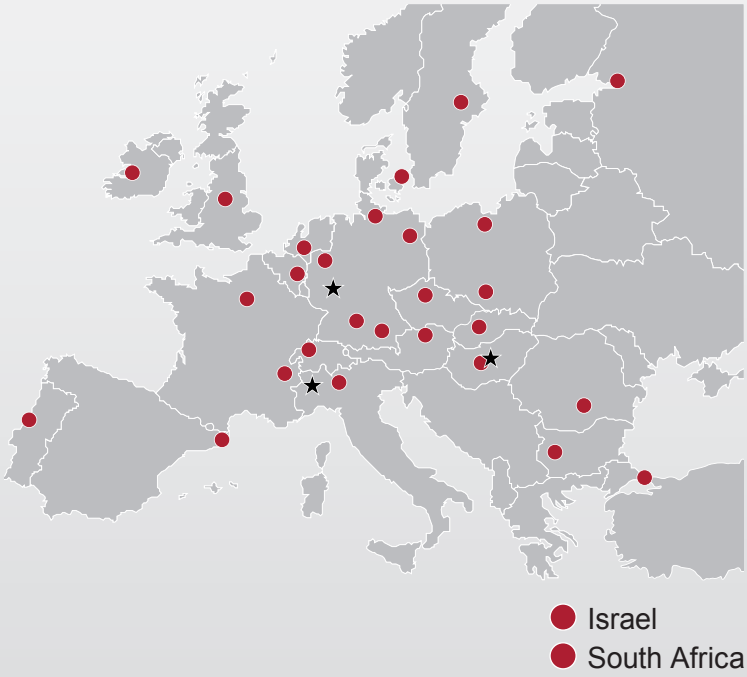
- Budapest, Hungary
- Hofheim-Wallau, Germany
- Turin, Italy

Asia

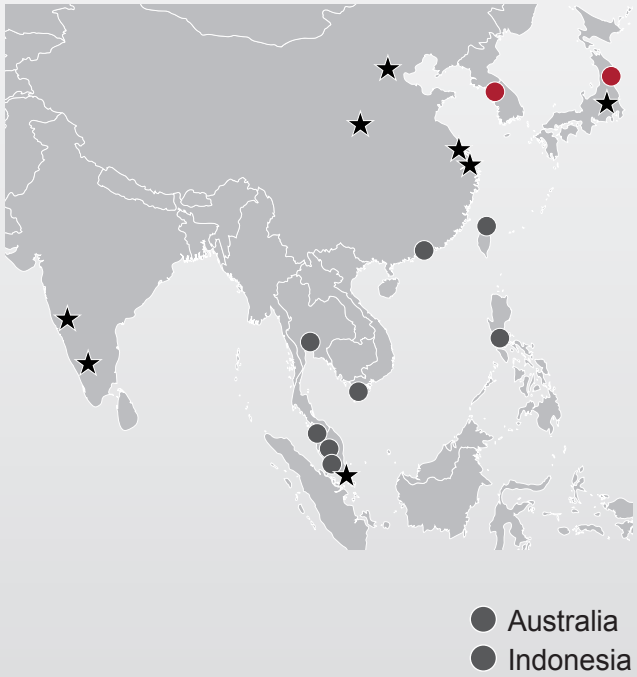
- Beijing, Shanghai, Suzhou, Xi'an, China
- Bengaluru & Pune, India
- Singapore
- Tokyo, Japan

★ Support Offices
● Sales Representatives
● Agents

Europe, Middle East and Africa



Asia



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