QVI ogp

Confidence. When Results Matter.™



PRODUCT CATALOG

DIMENSIONAL MEASURING SYSTEMS FOR MANUFACTURING QUALITY CONTROL



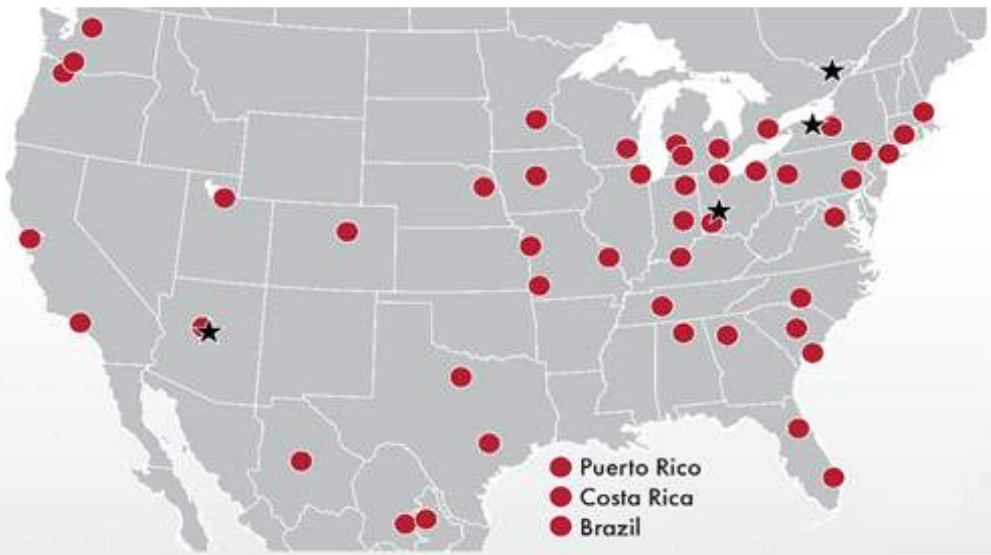
Optical Gaging Products (OGP)

OGP (Optical Gaging Products) is a division of Quality Vision International Inc (QVI®), a world-leading manufacturer of precision multisensor metrology systems for industrial quality control. Our metrology systems focus on measurement technologies that help manufacturers monitor dimensional compliance to design specifications.

Today, OGP offerings have expanded to include a line of innovative multisensor VMMs, 3D scanning systems and measuring systems with unique capabilities to support high volume production.

Global Sales and Support Offices

North and South America



Support Office Locations:

Americas
- Rochester, NY, USA
- Dayton, OH, USA
- Phoenix, AZ, USA
- Ottawa, ON, Canada

Europe and Africa



Support Office Locations:

Europe and Africa
- Budapest, Hungary
- Hofheim-Wallau, Germany
- Turin, Italy

Asia



Support Office Locations:

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

★ Support Offices ● Sales Representatives ● Agents

Confidence. When Results Matter.™

75+ Years of Transforming Dimensional Metrology



1945 — OGP is Founded
Rochester, NY



1956 — Projectron™
The first electronic edge detection system for optical comparators



1980 — Vidicom Qualifier
First sub-pixel gray scale processing vision system



1984 — Vidiprobe Contour Projector®
First video projector hybrid system



1986 — Intelligent Qualifier 2000
First multisensor geometric feature extraction algorithm measurement system

1991 — SmartScope® Launched
Color video camera, digital overlay charts, and programmable zoom optics



1994 — AccuCentric® Innovation
First self-calibrating zoom lens



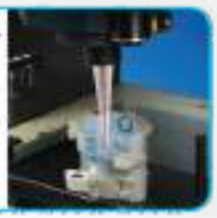
2000 — SmartScope Flash™ CNC Debut
Elevating bridge design with embedded SmartRing™ Light surface illumination flexibility



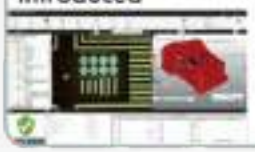
2002 — TeleStar® Zoom Lens
Telecentric 10:1 zoom lens introduced



2010 — TeleStar® TTL Laser Launched
First interferometric, long working distance, high accuracy, through-the-lens (TTL) laser



2014 — ZONE3® Metrology Software Introduced
Comprehensive CAD based multisensor user experience



2018 — VersaFlex™
Patented articulating all in one three sensor (Telecentric Video, Scanning Probe, and Interferometric Laser) probe head



2022 — ShapeGrabber®
ShapeGrabber redesigned with three new models, scan heads, QVI transports, and optical technology.



2024 — IntelliCentric™-M Optical System
Advanced camera and optical technology provides remarkable image quality and large zoom range with instant magnification change.



HIGH VALUE AT LOW PRICE POINT..!

SmartScope E-series

SmartScope E-Series systems are automatic digital zoom metrology systems that set the standard for 3-axis video measurement performance. The IntelliCentric™ fixed lens optical system with high resolution colour camera and digital zoom provide a high-resolution image engineered for video edge detection metrology.

- VIRTUAL ZOOM™, Instant Magnification Changes
- Optional TP-20 and TP-200 Touch Probes&MSR™ Miniature Servo Rotary.
- Reliability – No moving parts in the optical system.
- Measure-X Metrology Software that capable for Efficient, Accurate Multisensor Measurements



SmartScope E7

Benchtop Model, Compound Stage
XYZ Travel in mm:
250 x 150 x 200 Extended X-axis, 300



SmartScope E45

Floor Model, Moving Bridge
XYZ Travel in mm:
500 x 450 x 200 Extended
Y-axis: 610 & Z-axis: 300

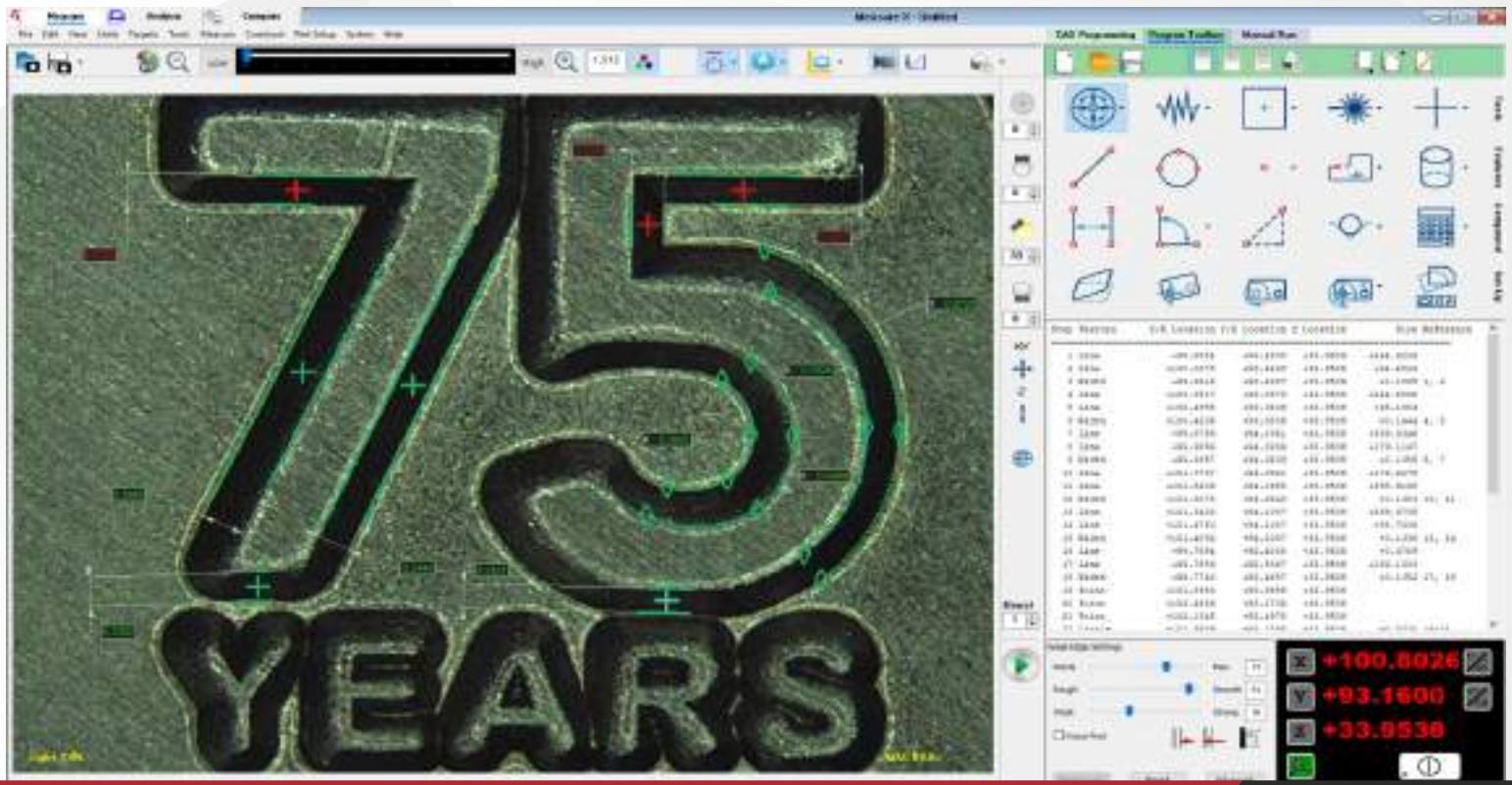
OPTICAL SENSORS/ACCESSORIES

TACTILE PROBES

Measure-X® Metrology Software

Measure-X® is a user-friendly metrology software designed for a range of applications, from simple measurements to complex GD&T analysis. It Supports touch probes, laser, and rotary indexers.

- Automated program generation from CAD files (DXF, etc.).
- Visually compare part images to CAD models for quick acceptance checks.



THE NEXT EVOLUTION OF THE WORLDWIDE STANDARD IN 3D MULTISENSOR METROLOGY..!!

Smartscope M Series

SmartScope M-Series feature the patented IntelliCentric™-M Optical System fully telecentric fixed lens optics and VIRTUAL ZOOM™ technology, paired with a high-density 20 MP digital metrology camera and a built-in electronic aperture, delivering an ultra-high-resolution image with low distortion – perfect for high-speed edge detection metrology.

- Optional Tactile, Laser, Advanced Non-Contact Probes and 4th and 5th Axis Rotaries
- Minimum Feature size 5 micron
- ZONE3 Metrology Software



SmartScope M7

Benchtop Model, Compound Stage
XYZ Travel in mm: 250 x 150 x 200
Extended X-axis, 300



SmartScope M20

Benchtop Model, Eleveting Bridge
XYZ Travel in mm: 300 x 300 x 250



SmartScope M45

Large Capacity Floor Model, Moving Bridge
XYZ Travel in mm:500 x 450 x 200
Extended Y- Axis, 610 Z-axis, 300



SmartScope M50

Heavy DutyFloor Model, Moving Bridge
XYZ Travel in: 450 x 600 x 200
Extended Z-axis, 300 or 400 mm

OPTICAL SENSORS/ACCESSORIES



TACTILE PROBES



LASER SENSORS



PRECISION AT YOUR FINGERTIPS: SNAP VIDEO MEASUREMENT SYSTEMS..!!

Snap

SNAP™ systems use their unique fully telecentric large field-of-view (LFOV) optical system to measure small parts with fine features. Combined with a megapixel camera, SNAP optics produce high accuracy, and low distortion images.

- ❖ Instant measurement
- ❖ Large FOV, telecentric dual magnification optics available
- ❖ Exclusive Zoom Anywhere technology
- ❖ Measure-X™ & ZONE3 for efficient 2D measurement and analysis.



SNAP 100

Optics: Telecentric, single optical magnification
Measuring Range: 62mm X 46mm
Stage Motion: Z: 75mm



SNAP 200

Optics: Telecentric, Dual optical magnification
Field of View: Low Mag. 100mm
High Mag. 32mm X 32mm (4x)
Measuring Range: 250 mm X 100 mm
Stage Motion:X: 150, Z: 75mm



SNAP 300

Optics: Telecentric, single optical magnification
Field of View: Low Mag. 100mm
High Mag. 32mm X 32mm (4x)
13mm X 13mm (10x) optional
Measuring Range: 250 mm X 100 mm
Stage Motion:X:150, Y:50, Z: 75mm



SNAP 350

Optics: Telecentric, Dual optical magnification
Field of View: Low Mag. 100mm
High Mag. 32mm X 32mm (4x)
13mm X 13mm (10x) optional
Measuring Range in mm: 450 X 450or 610 X 450
Stage Motion in mm:X: 350, Y: 350, Z: 150
X: 610 Optional

OPTICAL SENSORS/ACCESSORIES

VERSATILE "ALL-IN-ONE" 3D MULTISENSOR MEASUREMENT SYSTEM BUILT TO HANDLE A WIDE VARIETY OF MEASUREMENT TASKS..!!

Smartscope Flash

SmartScope Flash™/CNC Systems from OGP are versatile multisensor measuring systems built to handle a wide variety of measurement tasks. These systems include a motorized zoom optical system with 12:1 AccuCentric® auto-compensating zoom lens. All LED coaxial, substage profile, and SmartRing light illumination is standard.

- Illumination to Measure the Most Challenging Parts from All Angles
- Ability to Bring Mirror-polished and Transparent Parts into Focus
- ZONE3® software enables 3D CAD-based measurement with all sensors, combining optical, laser, tactile options, Grid projector & Rotary options



SmartScope FLASH CNC 200

Benchtop Model, Eleveting Bridge
XYZ Travel in mm:
200 x 200 x 150



SmartScope FLASH CNC 300

Benchtop Model, Eleveting Bridge
XYZ Travel in mm:
300 x 300 x 250



SmartScope CNC 500

Floor Model, Fixed Bridge
XYZ Travel in mm:
500 x 450 x 200,
Extended Y-axis: 610 OR Z- Axis: 300



SmartScope CNC 635

Floor Model, Moving Bridge
Air Bearing Y-axis
XYZ Travel in mm:
635 x 635 x 200,



SmartScope CNC 670

Floor Model, Moving Bridge
XYZ Travel in mm:
635 x 635 x 200,
Extended Z-axis: 300 OR Z- Axis: 400



SmartScope FLASH 1500|1550|1552

Floor Model, Moving Bridge
XYZ Travel in mm:
1500 Model: 900 x 1500 x 200
1500 Model: 1250 x 1500 x 200
1500 Model: 1500 x 1500 x 200

OPTICAL SENSORS/ACCESSORIES

TACTILE PROBES

LASER SENSORS

A VERSATILE, RELIABLE AUTOMATIC DIMENSIONAL MEASUREMENT SYSTEM – TRUSTED BY CUSTOMERSAROUND THE WORLD..!!

Smartscope Zip

SmartScope ZIP® systems offer superior optical performance and numerous sensor options for multisensor versatility. These systems feature a motorized zoom optical system with a range of lens and back tube configurations to suit a wide variety of applications. The AccuCentric retile auto-compensates the optics after every magnification change. All LED coaxial, sub stage profile, and Smart Ring light illumination is standard.

- **Superior Optical Performance:** AccuCentric® motorized zoom it auto compensating 7:1 zoom optics.
- **Optional VuLight™ Oblique Illuminator:** Highlights surface details.
- Accuracy Start from 1 micron
- ZONE3® software enables 3D CAD-based measurement with all sensors, combining optical, laser, tactile options, Grid projector & 5th axis Rotary Indexer



SmartScope ZIP 250

Benchtop Model, Compound Stage
XYZ Travel in mm:
250 * 150 * 200 Extended X-axis, 300



SmartScope ZIP 250

Floor Model, Compound Stage
XYZ Travel in mm:
300 * 300 * 200 Extended Z-axis, 300



SmartScope ZIP 250

Floor Model, Fixed Bridge
XYZ Travel in mm:
450 x 450 x 200, Extended Y-axis: 610,
Extended Z-Axis: 300



SmartScope ZIP 635

Floor Model, Fixed Bridge
Air Bearing Y axis
XYZ Travel in mm:
635 * 635 * 200



SmartScope ZIP 800

Floor Model, Fixed Bridge
XYZ Travel in mm:
800 x 820 x 200,
Extended Z-Axis: 300

OPTICAL SENSORS/ACCESSORIES

TACTILE PROBES

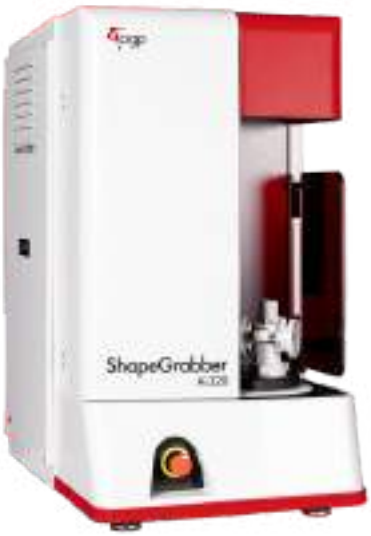
LASER SENSORS

SHAPEGRABBER: HIGH ACCURATE, PRECISE, FAST & ADVANCED 3D LASER SCANNING SYSTEMS..!!

Shapegrabber

ShapeGrabber 3D Laser Scanning systems deliver fast, accurate and automated 3D measurement. Using multiple motion axes, ShapeGrabber laser scanners are easily programmed for repetitive measurements and eliminate the need for software alignment and registration. All ShapeGrabber systems collect accurate, high-density point data, and provide reports of results, including GD&T.

- ❖ High-resolution 3D scan heads with high dynamic range
- ❖ Capture more than 1.5 Lacks point per Second
- ❖ Delivers accurate measurement of a wide variety of materials, colours, textures, and finishes
- ❖ The ShapeGrabber is ideal for measuring complex shapes such as moulded plastics, castings, stampings, and machined parts and that are time-consuming, costly, and difficult to measure



ShapeGrabber Ai320

Measuring Range in mm
300 L X 100 Ø



ShapeGrabber Ai620

Measuring Range in mm
600 L X 185 Ø

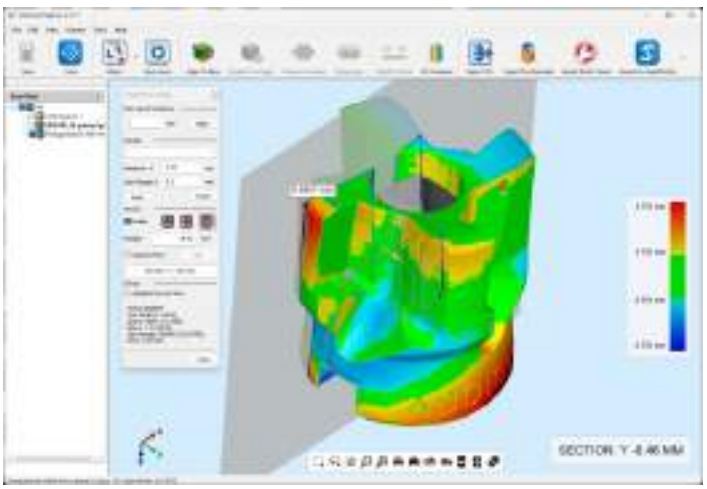


ShapeGrabber Ai620

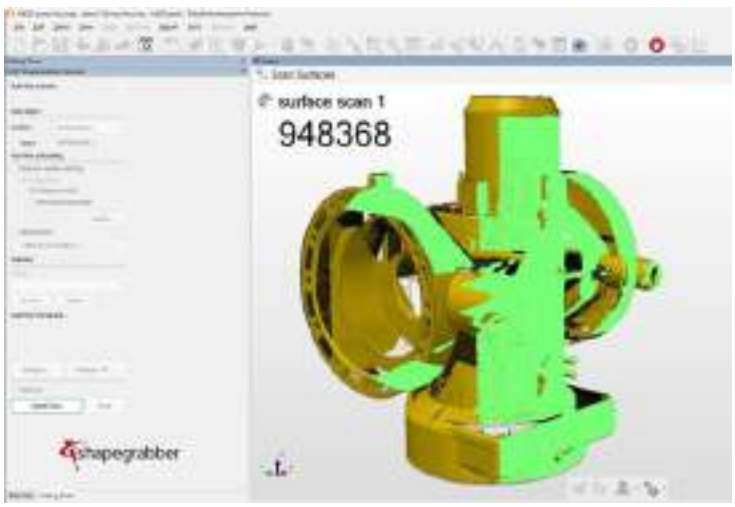
Measuring Range in mm
Vertical: 750 L X 500 Ø
Horizontal: 1200L X 400 X 500 Ø
(Optional)

Software

The data captured by ShapeGrabber 3D scanners is processed by leading 3D scanner software. These supported software products are proven to work with ShapeGrabber automated scanners to accurately analyse, graph and model all data points consistently and rapidly. ShapeGrabber Supports SG Smartcapture, QuickSurface, Polyworks & Geomagic software



SG Smartcapture



Polyworks

OPTICAL COMPARATORS: CUTTING-EDGE OPTICS, LIGHTING, AND AUTOMATION TECHNOLOGIES FOR ENHANCED PRODUCTIVITY AND PROFITABILITY..!!

Optical Comparators

Optical Comparators from OGP combine cutting-edge optics, lighting, and automation technologies for enhanced productivity and profitability. The benchtop and floor model offerings are the industry's best value and performance solutions for non-contact shop floor measurement.

CONTOUR PROJECTORS



Focus

XY Travel in mm: 300 X 125
Lens Option: 10X, 20X, 31.25X, 50X, 100X



QL-20

XY Travel in mm: 380 X 225
Optional: 380 X 250, 455 X 225, 455 X 250
Lens Option: 10X, 20X, 31.25X, 50X, 100X

C- VISION



C-Vision Lite

XYZ Travel in mm:
300 X 125 X 32
Optical System:
Fixed Magnification
48 mm Field of View
Digital Zoom



C-Vision Benchtop

XYZ Travel in mm:
380 X 150 X 50
Optional: 450 X 150 X 50
Optical System:
Motorized Dual Mag. turret
80 mm low mag Field of View
4X High mag. Lens



C-Vision Floor Model

XYZ Travel in mm:
380 X 225 X 50
Optional: 380 X 250 X 50, 455 X 225 X 50
455 X 250 X 50
Optical System:
Motorized Dual Mag. Turret
100 mm low mag Field of View
4X High mag. Lens
Optional: 10X High mag. Lens in lieu of 4X

OPTICAL SENSORS/ACCESSORIES

MULTISENSOR OPTIONS & ACCESSORIES

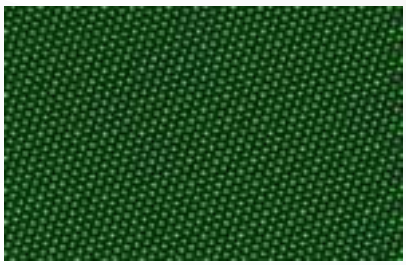
Video Sensor

Fast, non-contact video measurement, the core technology of Smart Scope systems, provides high accuracy and repeatability for defined dimensions.



Grid Projector

It enables precise autofocus on Transparent & reflective surfaces for quick, easy focusing even on mirror-polished metals.



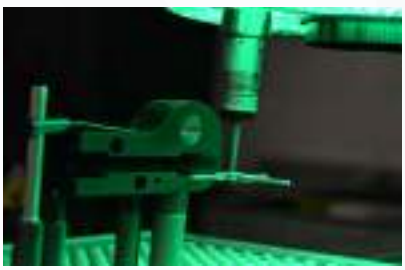
Rotary Indexers (4th & 5th Axis)

Rotary indexers can be mounted together with their axis perpendicular to one another to add two axes of part positioning



Touch Probe Sensor

Using a touch trigger probe, you can measure features that are difficult to image, or surface boundaries that are inaccessible to video.



Scanning Probe (SP25M)

Provides continuous contact scanning which offers high speed data generating on complex surfaces, large or small variation s in surface contours.



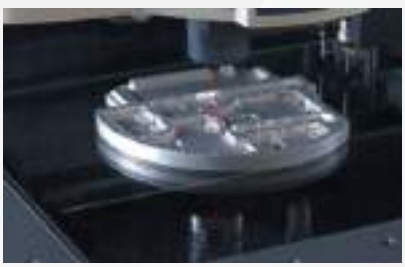
Feather Probe ™

Feather Probe™ from OGP uses a unique sensing technology to measure small, sensitive features. Its tiny styli (as small as 0.125 mm).



Through the Lens (TTL) Laser

Through-the-Lens Lasers offer anon-contact method for measuring surfaces, using point focus for single-point measurements or scanning for multi-point measurements



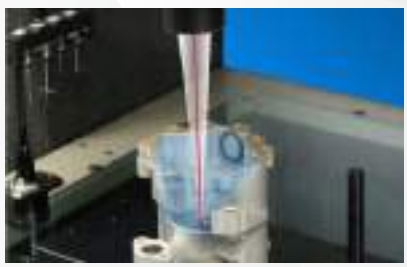
DRS (Digital Range Sensor) Laser

DRS are off-axis lasers that provide noncontact, high resolution surface profiling, excelling at fast and accurate Z-axis point acquisition.



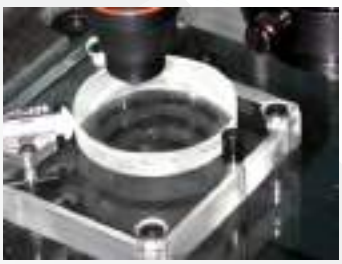
TeleStar Interferometric Sensors

TeleStar Sensors offers sub-micron resolution, providing excellent performance on both specular and light-scattering diffuse surfaces.



Rainbow Probe

Rainbow Probe™ is an electro-optical device that easily measures transparent, translucent, fragile, liquid or easily deformable surfaces and are a mounted in mechanical deployment mechanisms.



Articulating Probe Head (PH10M PLUS)

For the ultimate in probing flexibility use either a touch trigger or scanning probe with a PH10M PLUS articulating head.

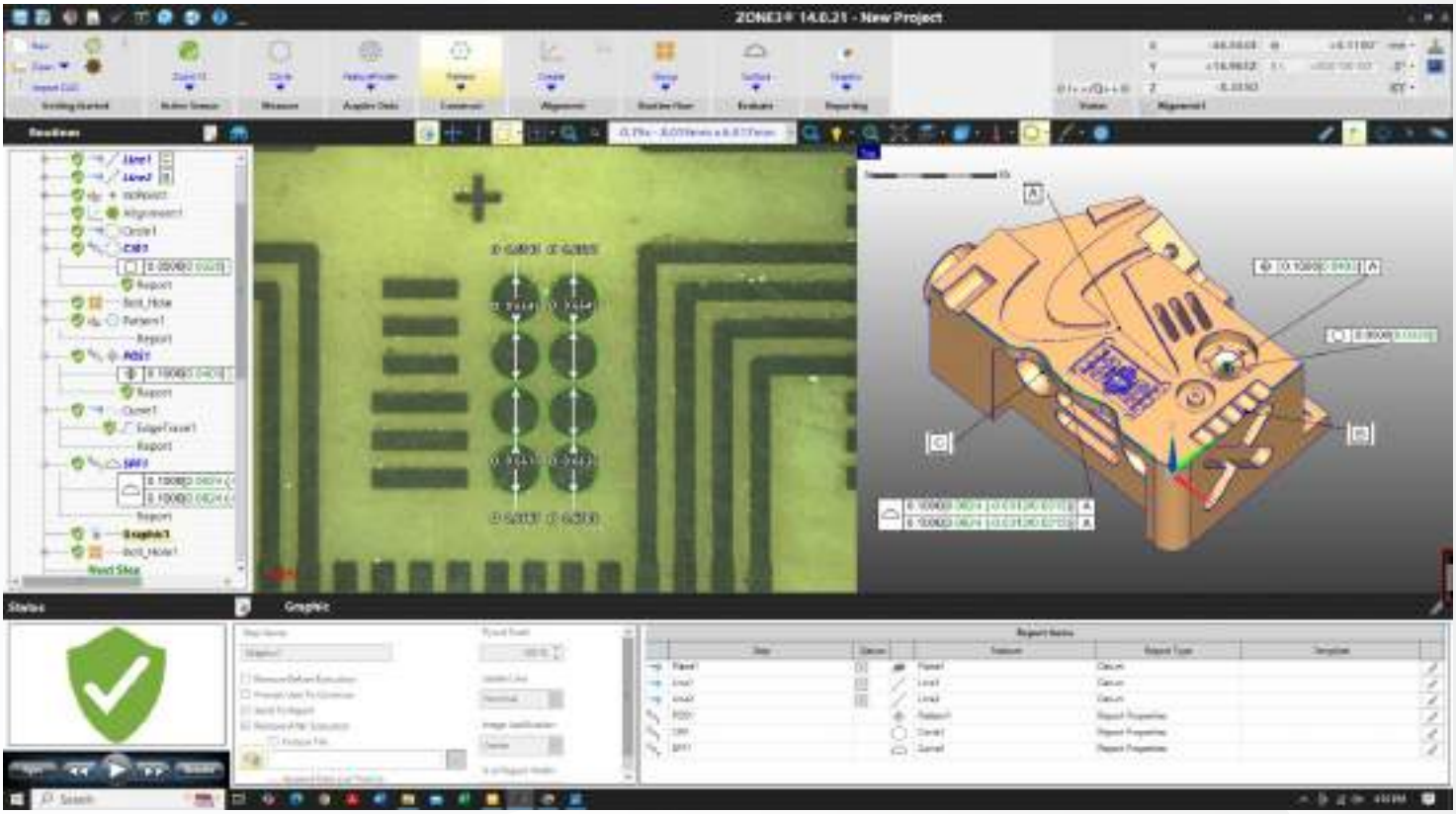


THE WORLD'S MOST COMPREHENSIVE METROLOGY SOFTWARE..!!

ZONE 3

ZONE3® metrology software puts the power of OGP's 30+ years of multisensor experience into your measurement system for faster, easier and more productive measurements than ever before. Its interface clearly displays relationships between parts, sensors, datum alignments, and machine accessories.

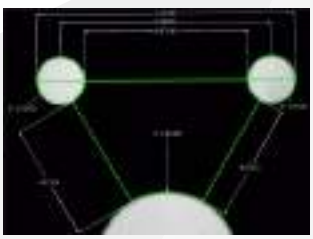
- ZONE3® is capable
- ZONE3 is fast
- ZONE3 is easy to learn.



THE ZONE 3 PROCESS

➢ Initiate

Manual Measurement:



- Quick and easy walk-up measurements using manual targets.
- Manual measurements can be read directly off the DRO.
- FeatureExtractor automatically identifies and measures features within the field of view.



Part Identification:



ZONE3's AutoID automatically identifies parts on the stage by comparing their outlines to registered thumbnail images in its database and then executes the corresponding default routine

Video Align to CAD:

The Reposition via Video tool automatically aligns a part to a CAD model.

LaunchPad:

Simplified and highly configurable user interface were Users with minimal training can launch and run programs.

➢ Multisensor Programing

ZONE3® software enables 3D CAD-based measurement with all sensors, combining optical, laser, tactile options, Grid projector & Rotary options.

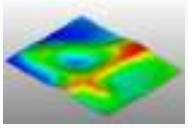
➢ Data Acuiasition

Visual Validation: ZONE3 previews each measurement operation before execution, providing visual feedback to prevent errors and unintended consequences.

Advanced Video Tools:



Parallel Processing combined with Intelligent Routine Optimization can be used to Measures many features as can seen simultaneously.



Area Multi-Focus uses optical focus to create an array of 3D data points that can be used in constructions or feature definitions

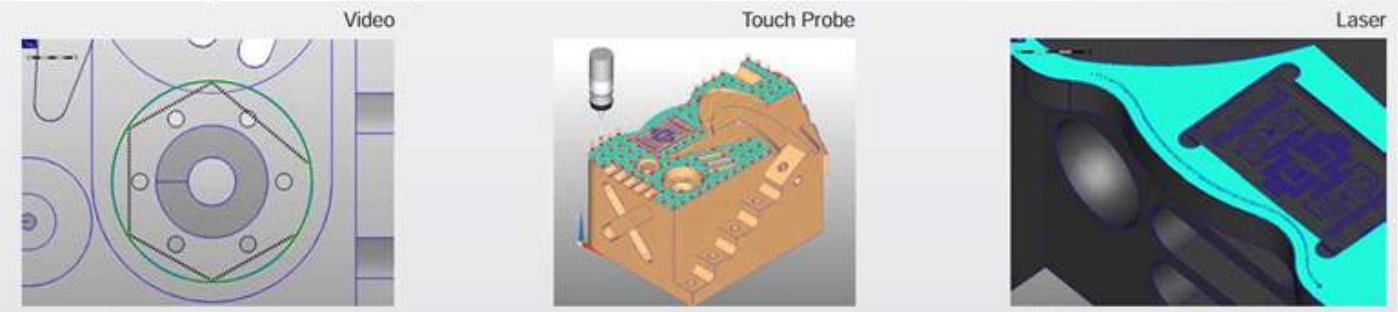


The Acquire Image tool allows a video image to be acquired and archived, or used in a subsequent re-measurement (useful for visualization and documentation of part conditions).



The Blob finder locates irregular geometries and reports advanced results such as area, centroid, perimeter, bounding length/width, etc. in single or multiple FOV's. Also useful for searching an area of unknown defects or features.

Path Generation: ZONE3 Auto path uses CAD nominal to automaticaly create an optimal path for each measurment.

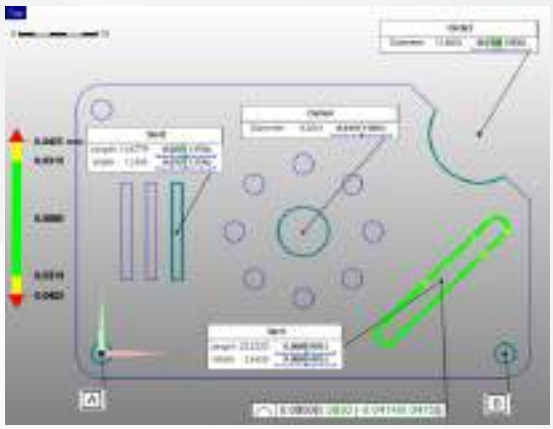


Kinematic Model Simulation: Detects potential collisions between machine, part, and sensors.

➢ Evaluation & Reporting:

- ❖ Dedicated modules for evaluating surface roughness, gears, and threads.
- ❖ ASME Y14.5 and ISO 1101 standards for GD&T.
- ❖ Animated Tolerance Zones
- ❖ Customisable Header and footer.
- ❖ Versatile Output





➢ Logic/Feedback:

- ❖ Team Integration
- ❖ Customization
- ❖ Automation Integration
- ❖ Industry 4.0 Readiness

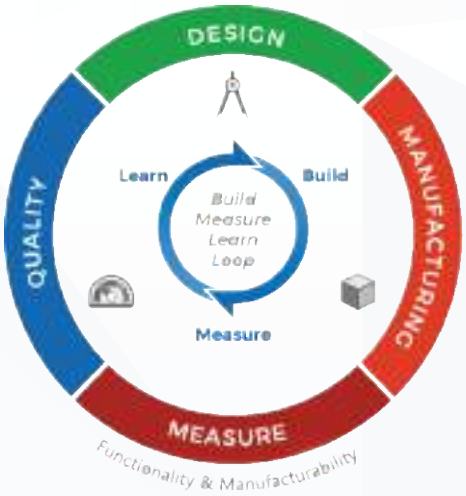


MODEL-BASED FAMILY OF SOFTWARE..!!

Evolve Suite

The EVOLVE software suite from OGP optimizes design, production and inspection processes enabling manufacturers to shorten product design & development time, improve quality, and reduce costs through improved efficiency.

- One understanding and consistent use of the language of Geometric Dimensioning and Tolerancing (GD&T) and Geometrical Product Specification (GPS)
- Designers get assistance and help directly in the model they are working on.
- Reduce rework costs of design changes by getting them right the first time.
- One standards rules engine for all users reduces uncertainty from differing software algorithms.
- Seamlessly move models downstream and upstream.
- Normalize inspection processes with hardware-independent software.



EVOLVE Design

EVOLVE Design is Computer-Aided Engineering (CAE) tolerancing software that helps design engineers apply GD&T (GPS) tolerances to their CAD models correctly.

EVOLVE Manufacturing

EVOLVE Manufacturing helps identify systematic problems and recommends solutions to minimize manufacturing errors.

EVOLVE SmartProfile

EVOLVE SmartProfile merges point data from any measurement system with a part's nominal CAD model and automatically performs comprehensive GD&T and GPS evaluations

EVOLVE SPC

EVOLVE SPC is a full statistical process control software available as either a standalone product for use with measuring systems or integrated into the EVOLVE Suite

SOFTWARE CONTROL SYSTEM PREPARED FOR METROLOGY IN INDUSTRY 4.0..!!

Smart SCS

SMART SCS for easy shop-floor user interface for many Inspection systems - QVI® video measurement systems, companies CMM's, CT, Laser and fringe projection Systems. SmartSCS is Designed for production users, provides GAMP/FDA compliance, adds text, pictures or video instructions.

Available Versions

- SmartSCS Lite
- SmartSCS Basic
- SmartSCS Basic with Access Control
- SmartSCS Basic with GAMP/FDA
- SmartSCS AutoSCS
- SmartSCS Monitor



SCAN FIT & MEASURE (SFM) IS A FAST, ACCURATE, AND RELIABLE OFF-LINE 2D SYSTEM FOR THE EXTRUSION INDUSTRY..!!

Scan Fit & Measure (SFM)

SFM is an off-line 2D measurement system for inspection of the profile geometry for Aluminium and PVC extrusion. SFM offers precise measurement of size, position, wall thickness and Geometric Dimensioning and Tolerancing (GD&T). SFM ensures that your products conform to all industry standards and meet customer specifications and requirements.

- One button measurement with automatic Best Fit part alignment, Automatic Part recognition (AutoID)
- Profile Tolerance with whiskers and zone visualization
- Profile, dimensional and comparator's views for evaluation.
- Touchscreen comparator for automatic and manual visual inspection
- Multiple parts measured with one scan
- Measurement Data Centre (MDC) for statistics, results analyses and report generation.

Systems

Scanner 250



Maximal Measuring Area
200mm x 250mm (8.5/8" x 10")
Maximal Part Height
80mm (3.1/8")

Scanner 400



Maximal Measuring Area
300mm x 400mm (11.3/4" x 15.3/4")
Maximal Part Height
130mm (5.1/8^ prime prime)

Scanner 600



Maximal Measuring Area
400mm x 600mm (16" x 24")
Maximal Part Height
110mm (4")

Aplications



Aluminium Extrusion



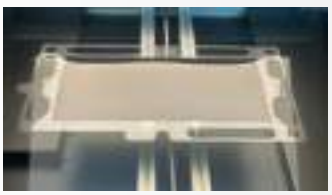
PVC



Wood



Medical Part



Membrane Electrode Assembly (MEAs)



Gasket

MDC (Measurement Data Center)

MDC is a data collection software that ensures that each measurement is tracked and stored on a local server or in the cloud. The software enhances traceability in quality control while serving as a collaborative platform for storing templates, routines, and results

- Adds Traceability
- Reports and Analyses
- Cloud or Local Server
- Real-Time Monitoring





INDUSTRIES SERVED

With over 75 years of technical innovation for metrology, OGP is recognized worldwide as a customer trusted supplier of non-contact and multisensor dimensional measuring systems. At OGP, we have decades of experience with supplied metrology solutions in relation to a variety of different industry applications.

Aerospace



Automotive



Energy



Manufacturing



Medical



Plastics



Explore a range of Knowledge assets to help guide your research!

ogp SmartScope

Knowledge Center

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