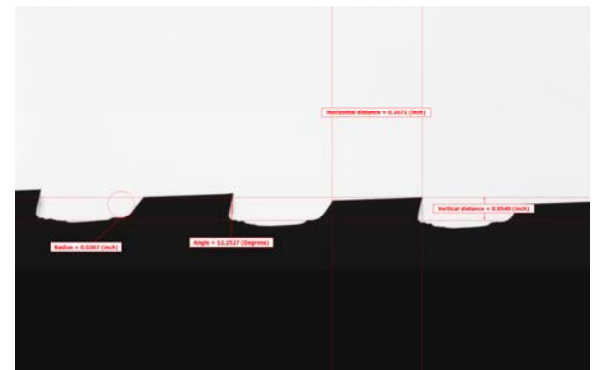*The Fastest, Easiest, Most Accurate Way to Compare a Part to a CAD File™*

THE PERFECT SOLUTION FOR CHECKING BROACH CUTTERS!

The VisionGauge® Digital Optical Comparator is used by manufacturers to check broach cutters:

- Quickly check 100% of your production, directly on the shop floor!
- Eliminate operator subjectivity!
- Much faster & much more accurate than traditional approaches.
- Because the system doesn't require any programming, it is extremely fast and well adapted for quick part changeover
- The system is appropriate for both small & large parts. You can check parts across the entire stage travel so that even large parts can be checked at high magnification, with very fine resolution.
- With its extended optical depth-of-field and Auto-Focus tool, the system is perfectly suited to deal with the challenges of precision broach cutter inspection.
- Advanced patented & patent-pending technology!
- Automatically measure and display deviations from nominal and quickly identify out-of-tolerance areas.
- Automatically collect measurements, statistics, images and other data for complete documentation & reporting.
- The VisionGauge® Digital Optical Comparator is a drop-in replacement for traditional optical comparators.
- The system has a broad set of measurement tools to quickly, easily and very accurately carry out all required verifications.

The VisionGauge® Digital Optical Comparator is the new standard for inspecting all kinds of precision broach cutters.

Automatically compare the part to its CAD file and carry out a wide range of high-accuracy measurements

Much higher accuracy, directly on the shop floor!

Accurately check a wide range of broach cutters

- **Fast!**
- **Accurate!**
- **Easy to operate!**

VisionGauge® Digital Optical Comparator 500 Series - Principal Specifications

Available configurations	Both horizontal and vertical
Standard optical magnifications (equivalent to traditional comparators)	5X, 10X, 20X, 50X and 100X [1]
Image viewing area (diagonal)	38"
Motorized X, Y & Z axes	Yes
X, Y & Z stage movement	High-accuracy crossed-roller movement
Auto-Focus	Yes
X & Y axis encoder resolution	0.25 micron [2]
LASER module (for Z-axis measurement)	Optional
High-accuracy rotary axes	Optional
Extended stage travels	Optional (along all 3 axes)
External 3-axis, 3-speed joystick to control the stage	Yes
Illumination	- LED-based (for very stable illumination conditions, with a very long life) - Programmable and computer-controlled (for repeatable illumination conditions) - Both reflected (i.e. front) and transmitted (i.e. back) illumination modules are available
Lens	Very low distortion telecentric, with long working distance and extended depth-of-field
Real-time mathematical image processing, enhancement and correction	Yes
Multi-monitor display	Yes [3]
Overall monitor size	35" (wide) x 27" (high)
Patented CAD Auto Pass / Fail™ (to automatically determine, to very high accuracy, if the part matches the CAD data, with no operator-to-operator variation)	Yes, with user-selectable bi-directional tolerances
Patented CAD Auto-Align™ (for fast, operator-independent alignment of the CAD to the part along one or multiple datums or through an overall "best-fit")	Yes: automatically align the CAD data to the part (either XY or XY & Rotation alignment) along an arbitrary number of user-specified datums.
Extended set of high-accuracy measurement tools	Yes
Sub-pixel accurate edge detection	Yes
Quickly carry out on-screen measurements using either the mouse or joystick	Yes
Joysticks	3-axis, 3-speed industrial grade
Image annotation tools	Yes
Quickly and easily save images of parts, either with or without the CAD overlay, and either with or without measurements as well as time & date information	Yes
Built-in SPC capabilities, with automatic numerical charts & PASS / FAIL graphs	Yes
Automatic data export to Excel™	Yes
Automatic data export to other applications	Yes (through Windows™ DDE or other mechanisms)
Built-in Dynamic Data Exchange (DDE) support	Yes
Easy file data import & export	Yes
Supervisor-level / operator-level password protection	Yes
Operating System	Windows™ 10 [4]
Built-in "F1 Help"	Yes
Fan & filter unit on main cabinet	Yes (to create a positive pressure and keep dust out)
Power requirements	Either 110V or 220V, 15 Amp (single cord)
CE Markings	Available upon request
Operating temperature	10 °C - 35 °C
Clear and easy-to-use documentation (both printed and electronic "pdf" format)	Yes
Support (by phone, fax & email)	Included for a full year
Warranty	1 year (complete)

[1] Available in both single magnification and multi-mag configurations. Other optical magnifications available on request.
[2] Other encoder resolutions available on request.
[3] Basic system configuration includes a quad-high-resolution-monitor display that allows real-time viewing of the live video image in full 1:1 resolution.
[4] Other operating systems available on request.

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