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

THE PERFECT SOLUTION FOR CHECKING MEDICAL INSTRUMENTS!

Surgical and medical instruments play a critical role in a wide range of medical procedures and can directly impact patient safety and outcome. It is of paramount importance for medical device manufacturers to ensure that the various surgical and medical instruments they produce meet all their design requirements and dimensional characteristics.

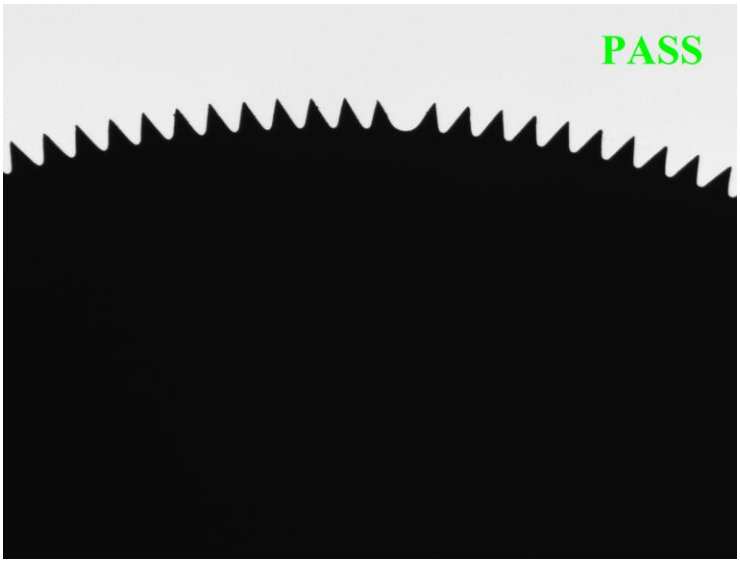
The VisionGauge® Digital Optical Comparator is the ideal solution for achieving this goal. It was designed in close collaboration with a large medical OEM and it has the flexibility to handle the wide variety of surgical and medical instruments that exist. The system can verify all the complex features found on surgical and medical instruments and meet the wide range of measurement requirements these parts can present.

The VisionGauge® Digital Optical Comparator is a non-contact solution that provides transmitted as well as various types of on-axis and oblique reflected illumination to allow users to inspect all areas of the parts, even those with very complex geometries!

Perfect to check a wide range of surgical & medical instruments

Because it's a fast system that can be used directly on the production floor, when it identifies a defect users can often take direct corrective action and remedy the problem, rather than continuing adding value to an out-of-spec part. The VisionGauge® Digital Optical Comparator really does make the measurement process more efficient and helps reduce cost for manufacturers. It allows them to increase productivity and shorten inspection & measurement times.

The VisionGauge® Digital Optical Comparator offers a deep toolbox of specialized inspection and measurement modes to enable, for example, the accurate measurement of the location of grooves, markings and other types of unconventional features that specialized medical instruments can display. The system is also ideal for dealing with complex surfaces and geometries and parts made of unconventional and difficult-to-measure materials.



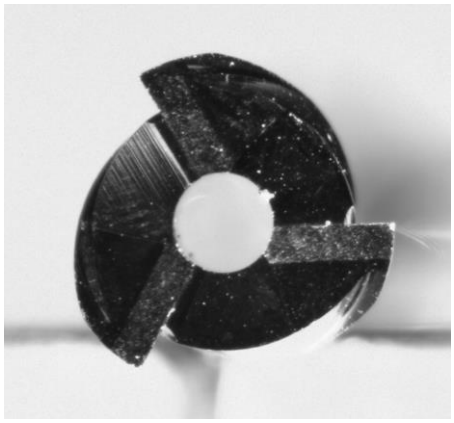
Automatically Compare Parts to their CAD File
and Get an Automatic PASS / FAIL Result

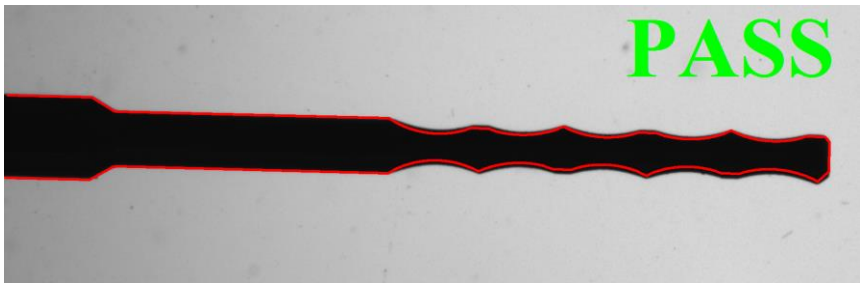
- **Fast!**
- **Accurate!**
- **Very General-Purpose & Widely-Applicable System!**
- **Easy to operate!**

The VisionGauge® Digital Optical Comparator is an all-in-one solution for the inspection and measurement of surgical and medical instruments. It provides manufacturers with the flexibility and repeatability they need to optimise even their most challenging workflows.
The VisionGauge® Digital Optical Comparator is a multi-purpose machine that has the flexibility to support the quality needs of the full range of products produced by medical manufacturers.

With VisionGauge®, instruments with cutting edges such as scissors, rongeurs, chisels, curettes, etc., can be checked for sharpness and to ensure that there are no dull spots, chips, or dents. Hinged instruments such as clamps and forceps can be checked for alignment of jaws and teeth. And so on… The system's great ease-of-use and flexibility make it the ideal solution for just about every type of medical instrument.

The VisionGauge® Digital Optical Comparator delivers maximum performance and is ideal for fast and automated data collection & reporting. It is perfect for ensuring the traceability of medical instruments!





Perfect to check a wide range of medical instruments

There are many reasons why the VisionGauge® Digital Optical Comparator is widely used by many manufacturers in the medical industry - both large and small - to check medical instruments:

- Automatically compare parts to their CAD data (no more overlays!)
- With its proprietary patented CAD-Auto-Align™ and CAD-Auto-Pass/Fail™ tools, the system can check parts completely automatically!
- Demonstrated accuracy down to +/-0.0001" in real-world applications, directly on the shop floor!
- Eliminate operator subjectivity!
- Much faster than traditional approaches.
- Because there is no programming, this system is especially well adapted for small lots & quick part changeover
- Automatically collect measurements, statistics, images and other data for complete documentation. Automatically collect complete device history!
- The system is not limited to the camera's field-of-view; It can compare a part to its CAD data across the entire stage travel. So 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 medical instrument inspection.
- Different types of adapted computer-controlled LED illumination are available to eliminate glare and make defects stand out
- Automatically measure and display deviations from nominal and quickly identify out-of-tolerance areas. The system has an extensive measurement toolset!
- The system is extremely easy-to-use and is perfectly adapted for the production floor!

The VisionGauge® Digital Optical Comparator is rapidly becoming the new standard for inspecting instruments in the medical industry.

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
Single Monitor size (Diagonal)	43"
Auto Pass / Fail (to determine if the part matches the CAD data)	Yes, with user-selectable bi-directional tolerances
CAD Auto-Align	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 [3]
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] Other operating systems available on request.

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