



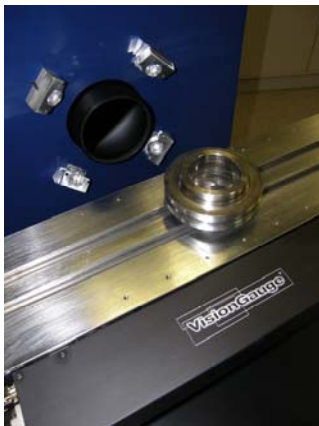
Application Note

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

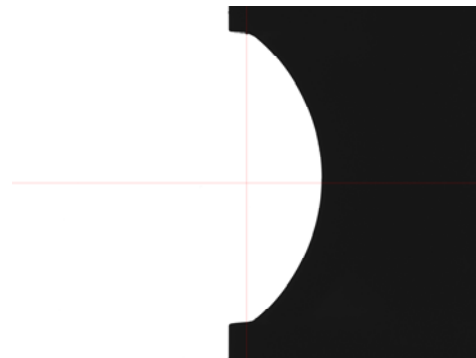
THE PERFECT SOLUTION FOR CHECKING THREAD ROLLING DIES

- Automatically compare difficult-to-inspect thread rolling dies against their CAD data (no more overlays!)
- The system has no limitations as to part geometry.
- The system's proprietary CAD-Auto-Align™ tool automatically lines up the CAD to the part, along one or multiple datums or by doing an overall "best fit".
- The system's proprietary CAD-Auto-Pass/Fail™ tool automatically produces an operator-independent PASS/FAIL result.
- The system can automatically locate and check the features of interest
- Demonstrated accurate, repeatable and operator-independent results, directly on the shop floor!
- The system supports both uniform and variable tolerances. You can apply tighter tolerances in critical areas and looser tolerances elsewhere.
- 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
- Much faster than traditional approaches and completely eliminates operator subjectivity!
- The system is extremely to use: it can be setup so that - for the operator - everything is done using the barcode reader.
- The system is perfectly suited to overcome the challenges of thread rolling die inspection.

The VisionGauge® Digital Optical Comparator is the new standard for carrying out fast and accurate inspections in the thread rolling die industry.



No fixturing is required.
The system can correct for part-to-part placement variation

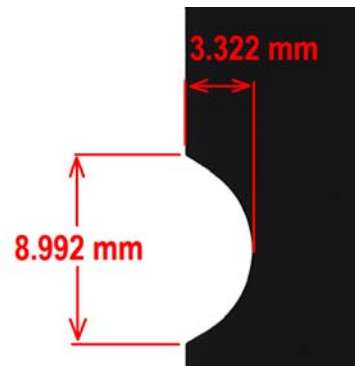


The system produces extremely crisp and clear super-high-resolution images.

You can see all of the fine details on your part!



Automatically compare a part to its CAD data and get an accurate, repeatable and operator-independent PASS/FAIL result



The system has a broad set of high-accuracy measurement tools

- Fast!
- Accurate!
- Repeatable!
- 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)	43"
Motorized X, Y & Z axes	Yes
X, Y & Z stage movement	High-accuracy crossed-roller movement
Auto-Focus	Yes
X & Y axis encoder resolution	0.5 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	<ul style="list-style-type: none"> • 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	38" (wide) x 22.25" (high)
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™ 7 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.

Distributed By:



Developed By:

VISIONx Inc.
 210 Brunswick
 Pointe-Claire, QC
 Canada H9R 1A6

Tel: (514) 694-9290
 Fax: (514) 694-9488
 Email: info@visionxinc.com
 Web: www.visionxinc.com