VisionGauge®

Digital Optical Comparator / Digital Profile Projector
(PATENTED & OTHER PATENTS PENDING)

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

VisionGauge® Digital Optical Comparator 500 Series

Super-Extended-Travel Configurations

These precision systems are designed specifically to inspect & measure big & heavy parts. They have up to 60" of travel and support loads of up to 300 lbs!

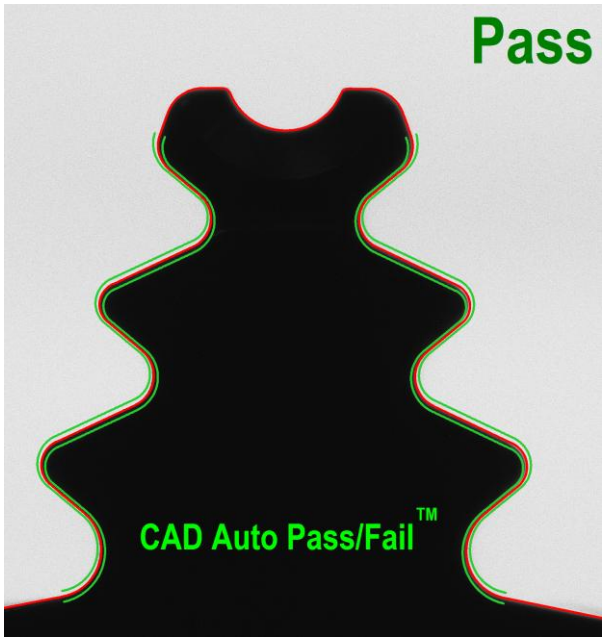
Parts are set on the system's X-Axis stage, which is built using precision rails and is set on a floor-mounted granite base. The camera is mounted on the Z-axis and the entire assembly, along with the front & back illumination, move up & down on the Y-Axis. In this way, the Y and Z axes are completely disconnected from the rugged granite-base-mounted X-axis that supports all of the part's weight. The axes have 0.25µm resolution encoders for high-accuracy positional feedback.

This innovative configuration is designed to provide optimal rigidity and eliminate any mechanical deflections. Everything is optimized to allow the system to produce very accurate measurements of long & heavy parts.

The system provides all of the benefits of the 500 Series VisionGauge® Digital Optical Comparator. It:

- **Is very accurate**
- **Is fast & provides very high throughput**
- **Has patented CAD Auto-Align™ & CAD Auto Pass/Fail™ tools**
- **Is extremely easy to use**
- **Is very robust & shop-floor-ready**
- **Can easily carry out fully-automated measurements**
- **Works directly with the CAD data so that no overlay or template is needed**
- **Can automatically compute and display the part's deviation from nominal and compare it to bi-directional tolerances**
- **Can collect full inspection & measurement data and automatically create reports including digital images & records with the CAD overlay and the deviations from nominal, measurements, statistics, etc…**
- **Produce a beautiful and very high-resolution high-contrast image with very sharp edge profiles. You can see very fine details very clearly.**
- **Has a very large depth of field, i.e. "everything is in focus at once"**
- **Has Power-Focus and Auto-Focus**
- **Has a long working distance (i.e. more clearance between the part & the lens)**
- **Allows you to compare a part to its CAD data beyond the optical field-of-view! (because the CAD data tracks the part and follows the stage motion)**
- **Has all-LED illumination (for very stable & repeatable illumination conditions, very stable & repeatable results, low heat, low power consumption and no bulbs to change)**

These super-long travel systems are ideally suited for the precision measurement of big & heavy parts!



- **Fully automated: no operator-dependent variation!**
- **Little or no programming, i.e.: "I've got a part, I've got a CAD file and I've got a minute"**
- **Super-high resolution monitor!**
- **Large field-of-view (i.e. see more of the part at once)**
- **Extremely intuitive software interface**
- **Very powerful & widely applicable**

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