

Vision Gauge Digital Optical Comparator | Optical Comparator Measurement | Digital Optical Comparator Machine



The Vision Gauge Digital Optical Comparator is "The Fastest, Easiest, Most Accurate Way to Compare a Part to a CAD File. Vision Gauge Digital Optical Comparators are very robust. They are perfect for both the shop floor and the Quality Control lab. Standard 12" travel X-axis stage with 0.5 micron resolution encoder and protective bellows around the 6" travel Y-axis column. All 3 axes (X, Y and Z) have high-accuracy crossed roller movements for optimal linearity and positional repeatability and high load carrying capability. Hard chrome plated X-axis stage, made of hardened tooling steel and with dual industry-standard dovetail grooves for easy part fixturing.



Vision Gauge Digital Optical Comparators are complete, ready-to-run Windows-based solutions and are delivered network-ready. They are available in both horizontal and vertical configurations. They have industry standard dovetail mounting grooves for easy part fixturing.

Vision Gauge Digital Optical Comparators are available with transmitted (i.e. back) and / or reflected (i.e. front) illumination. All illumination is LED-based for very stable and repeatable illumination conditions over a very long life (no more bulbs to replace!). Furthermore, the illumination is programmable and computer-controlled. Everything is done through a single simple and intuitive software interface.



Vice with angle

Vision Gauge Digital Optical Comparators have power focus. They are available in industry standard 5X, 10X, 20X, 50X and 100X optical configurations. They are available in both single-mag configurations.



Rotary table

Vision Gauge Digital Optical Comparators and extremely easy to use. They are a "drop in" replacement for traditional optical comparators. An optional high-resolution LASER module is also

available for depth & height measurements. Motorized fixtures and extended travels are also available.

Benefits:

- Produce a very high contrast image with very sharp edge profiles so that there is no problem viewing it in full daylight.
- Are much more accurate
- Allow the user to be much more productive and get more work done with a single machine
- Have "Auto Pass / Fail"
- Can compute and display the part's deviation from nominal and compare it to bi-directional tolerances
- Work directly with the CAD data so that no overlays / templates / Mylars are required
- Can be used to collect images (either with or without the CAD data overlay and with or without annotations), measurements and data .
- Can also carry out fully automated measurements (like a video CMM)
- Have a smaller footprint and use less floor space
- Can be moved much more easily and without requiring re-calibration (i.e. "rolling cart" configuration is standard)
- Have a much greater optical depth of field, i.e. "everything is in focus all at once"
- Have a longer optical working distance (i.e. more clearance between the part and the lens)
- Allow 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)
- Have LED illumination for very stable illumination over a 10 year life. No more bulbs to change
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Source:

<http://www.mechanicalengineeringblog.com/category/measurements-and-controls/>