



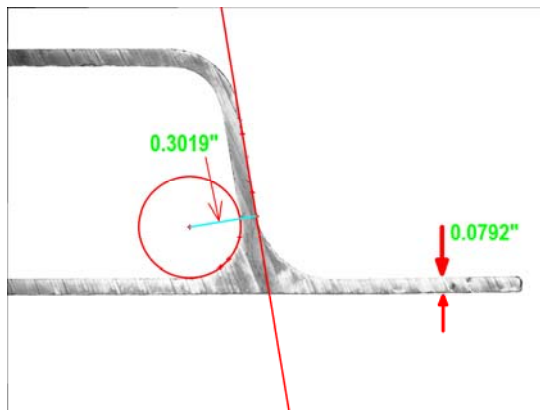
## Application Note

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

### THE PERFECT SOLUTION FOR CHECKING EXTRUSIONS

- Automatically compare difficult-to-inspect extrusions 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 works equally well on both fixtured and unfixtured parts.
- 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 difficult challenges of extrusion inspection.

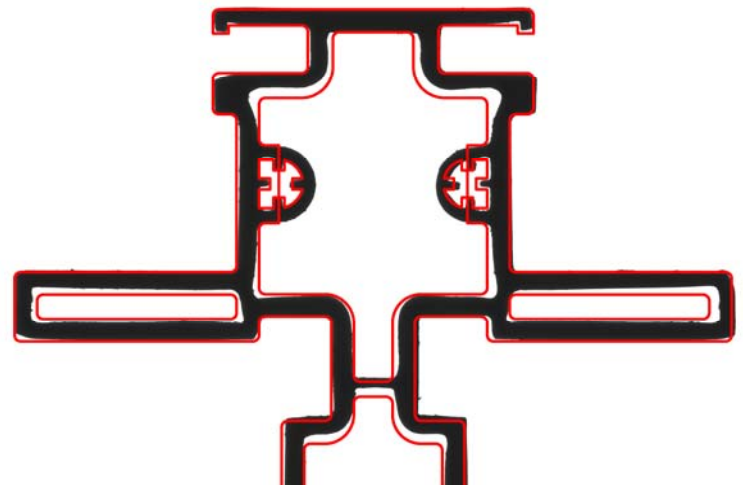
The VisionGauge® Digital Optical Comparator is the new standard for carrying out fast and accurate inspections in the extrusion industry.



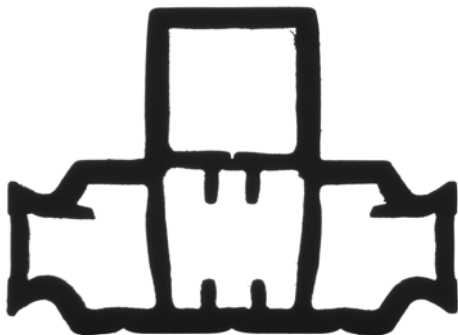
Front (reflected) illumination allows you to clearly see internal and surface features, along with the part's outer profile

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

**PASS**



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



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

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

- 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 <sup>1</sup>   |
| 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   | 0.5 micron <sup>2</sup>   |
| 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"> <li>• LED-based (for very stable illumination conditions, with a very long life)</li> <li>• Programmable and computer-controlled (for repeatable illumination conditions)</li> <li>• Both reflected (i.e. front) and transmitted (i.e. back) illumination modules are available</li> </ul> |
| 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 <sup>3</sup>  |
| Overall Quad-Monitor size   | 35" (wide) x 27" (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 <sup>4</sup>   |
| 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)   |

<sup>1</sup> Available in both single magnification and multi-mag configurations. Other optical magnifications available on request.

<sup>2</sup> Other encoder resolutions available on request.

<sup>3</sup> 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.

<sup>4</sup> Other operating systems available on request.

## Distributed By:



## Developed By:

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