VisionGauge®

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

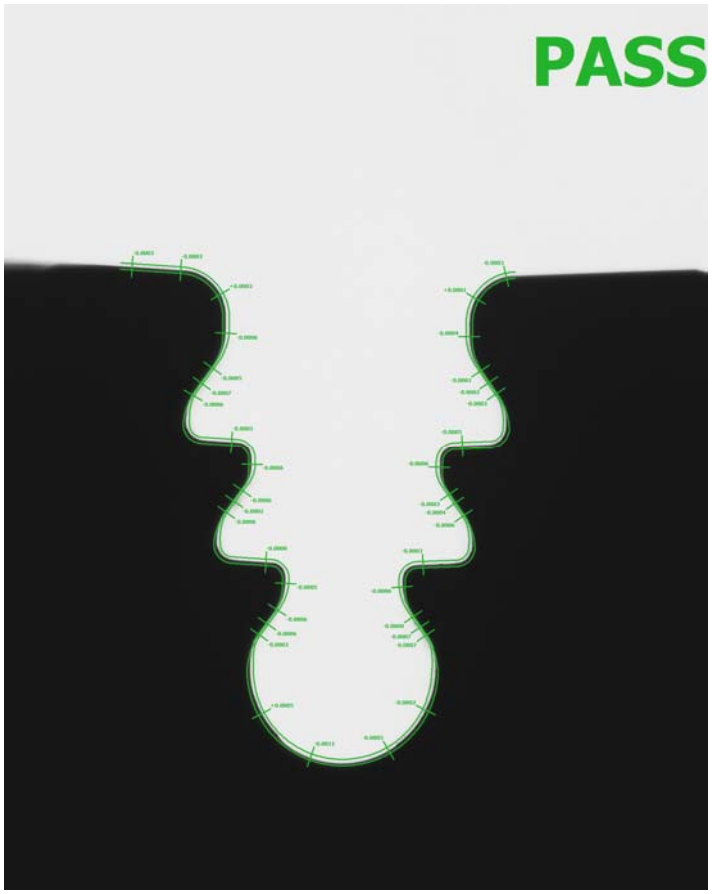
The Fastest, Easiest, Most Accurate Way to Compare a Part to a CAD File™

VisionGauge® Digital Optical Comparator
Disk Inspection and Measurement Systems

The VisionGauge® Disk Inspection & Measurement System is the ideal solution for the automated high-accuracy inspection & measurement of slots in turbine disks, both large & small.

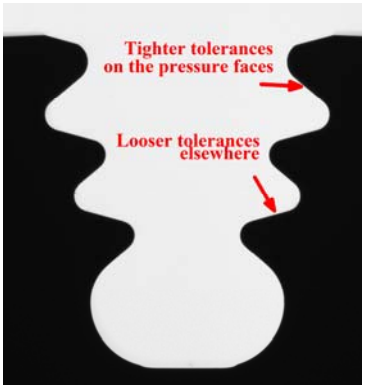
VisionGauge® Digital Optical Comparator
Disk Inspection & Measurement System

- **5 axes of motion (X, Y, Z, Rotary, Tilt) to properly view slots at all angles, increment from slot-to-slot, etc…**
- **Fully-automated operation.**
- **No operator-to-operator variation**
- **Quickly, easily and accurately inspect 100% of a disk's slots**
- **Easy to program (can use your CAD data directly!)**
- **Fast, accurate & easy-to-use**
- **Extensive set of measurement tools**
- **Straightforward operator interface: barcode-reader and joystick**
- **Intuitive software**
- **Patented & patent pending technology**
- **Powerful & innovative software tools**
- **Sharp, clear & ultra-high resolution image!**
- **Ultra-bright all-LED computer-controlled illumination is standard!**
- **High-resolution precision optics to resolve very fine details with great clarity**
- **Extended optical depth of field and extended working distance for maximum flexibility!**
- **Automatically create reports and collect measurements, statistics, images and other data for complete documentation**
- **Automatic image & data collection with built-in SPC and data-exchange capabilities**
- **Fast and intuitive "operator review" mode to quickly revisit out-of-tolerance areas**
- **High-precision movements on all axes**
- **All axes are encoded**
- **Extended travels available to accommodate large disks**
- **High load capacity (for large & heavy disks)**
- **Robust shop-floor design**

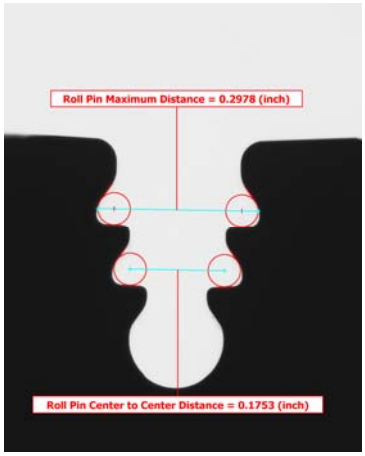


The system's patented CAD Auto-Align™ & CAD Auto-Pass/Fail™ tools allow you to automatically check the slot profile, get deviations from nominal, etc...

These very accurate tools produce results that are completely operator-independent



Variable tolerances support for maximum flexibility



Measure roll-pin distance, slot spacing, etc...

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VisionGauge® Digital Optical Comparator
Disk Inspection & Measurement System - Principal Specifications

	Model # **VGDIMS-30V-20X**	Model # **VGDIMS-30V-20X**
Number of motorized axes	5 (X, Y, Z, Tilt & Rotary)	
Standard travels (note: extended travels also available)	X axis travel = 12" (300 mm) Y axis travel = 12" (300 mm) Z axis travel = 12" (300 mm)	X axis travel = 12" (300 mm) Y axis travel = 24" (600 mm) Z axis travel = 12" (300 mm)
	A (tilt) axis range from - 40 deg to +40 deg. B (rotary) axis range from 0 deg to +360 deg.	
All axes have closed-loop encoder feedback	X axis encoder resolution = 0.25µm Y axis encoder resolution = 0.25µm Z axis encoder resolution = 0.25µm A axis encoder resolution = 0.005 deg B axis encoder resolution = 0.005 deg	
Stage movement	X, Y and Z axes: high-accuracy preloaded crossed-roller movement A and B axes: precision worm gear with high-accuracy preloaded crossed-roller movement	
End-of-travel limits	Optical (for high repeatability)	
Mounting system	System 3R Macro Chuck (p/n 3R-600.24-S) (Other mounting systems available upon request)	
High-resolution optical system	20X equivalent optical magnification (approx.)	
	Working distance = 9.0" (228 mm)	
	Depth-of-field = 1.8" (45 mm) Field of view = 2.0" (51mm) x 1.2" (32 mm) = 2.4" (60 mm) diag. Optical system accuracy: better than +/- 0.00015" (4 µm)	
LED illumination	• Ultra-bright, all-LED based (for stable and repeatable illumination conditions & results as well as long life) • Fully computer-controlled & programmable • Includes both bi-telecentric transmitted (i.e. back) illumination and reflected (i.e. front) illumination	
VisionGauge® Software	• Powerful and easy-to-use • Intuitive, windows-based graphical user interface (i.e. “point & click”) • Advanced software corrections with full 3D mapping across the system's entire work envelope • Includes a wide range of powerful inspection and measurement tools • Robust & field-proven, with a broad installed base (over 3500 license in use worldwide)	
Patented CAD Auto-Align™ tool	Yes	
Patented CAD Auto-Pass/Fail™ tool	Yes	
Digital Read-Out (i.e. DRO)	Yes (on-screen)	
Auto-focus	Yes (with programmable region-of-interest)	
Camera	High-resolution, digital (9 Megapixel)	
Live video “refresh”	Real-time	
Real-time mathematical image processing, enhancement and correction	Yes	
Multi-monitor display	Yes	
Extended set of high-accuracy measurement tools	Yes	
Sub-pixel accurate edge detection	Yes	
Image annotation tools	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 and other mechanisms)	
Built-in Dynamic Data Exchange (DDE) support	Yes	
Easy file data import & export	Yes	
Automatic operation & program launch using the system’s barcode reader	Yes	
Barcode reader	Honeywell, industrial grade	
Supervisor-level / operator-level password protection	Yes	
Operating System	Windows™ 10	
Built-in “F1 Help”	Yes	
Power requirements	110V, 15 Amp	
Operating temperature	10 °C - 40 °C	
Clear and easy-to-use documentation (both printed and electronic “pdf” format)	Yes	
Support (by phone, fax & email)	Included for a full year	
Free software updates	Included for a full year	
Warranty	1 year (complete)	

Note: specifications subject to change without notice.