

# Latest Generation VisionGauge® System Delivers as the New Standard for Turbine Disk Inspection & Measurement

*The VisionGauge® Disk Inspection & Measurement System inspects turbine disks and verifies all slots and features meet requirements and are within tolerance.*

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The process of manufacturing turbine and compress disk fir-tree slots and root forms with broaching, milling, or wire cutting results in parts with complex geometries and tight tolerances that are usually difficult and time-consuming to verify. For example, the pressure surfaces at the critical point of contact of the blade root and disk may have tolerances of 10 to 20 microns. To confirm disk slots match-

up exactly with corresponding turbine blade shapes and meet performance specifications, it is crucial to accurately control the position, shape, alignment, and orientation of the disk slots. VisionGauge® Disk Inspection & Measurement Systems are specifically designed to accomplish this task.

With unique and innovative patented technology, such as CAD Auto-Pass/Fail™ and CAD Auto-Align™ tools, the system produces very high accuracy results 100% automatically without operator subjectivity or dependence. The system is fast and carries out a complete inspection of every slot on every disk. Runtime depends on the specific part (for example: number of slots) and requirements but is generally in the order of just a few minutes for the fully-automated inspection of an entire disk.

The latest generation VisionGauge® Disk Inspection & Measurement System now offers new and enhanced capabilities to meet all of the manufacturing requirements for [turbine disk inspection](#)

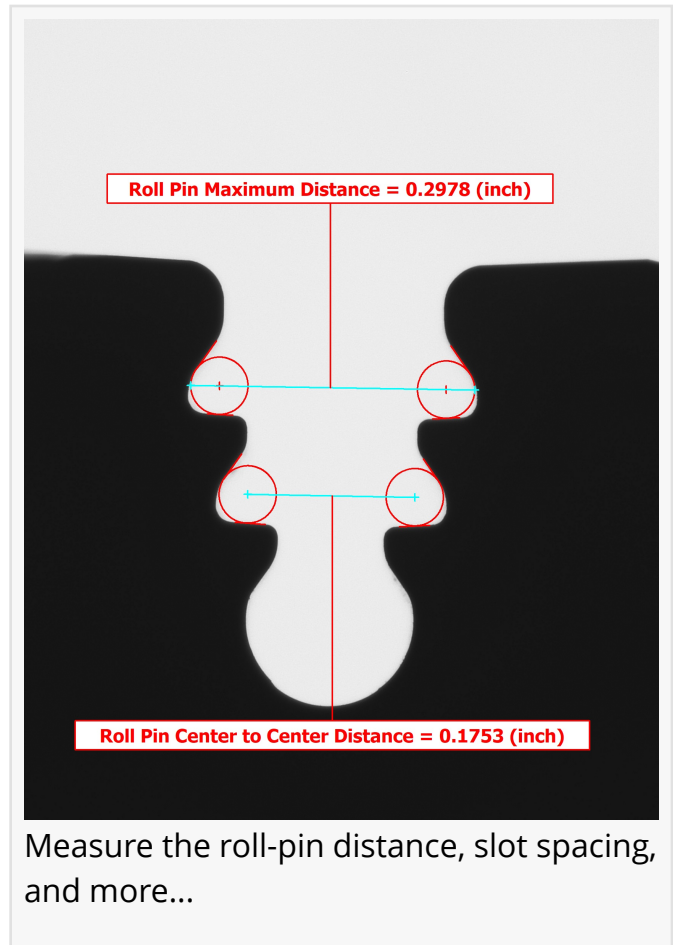


The VisionGauge® Disk Inspection & Measurement System is available in different sizes to accommodate all size disks, both large and small.

[and measurement.](#) Some of the capabilities of the latest-generation VisionGauge® Disk Inspection & Measurement System include:

- Completely automated fir tree and dovetail slot profile inspection
- Fully automated knife edge setup
- Slot spacing inspection
- Centerline inspection
- Radial length/Z plane distance inspection
- Cone & helix angles are supported
- Pressure face flatness/slot perpendicularity inspection and verification

The VisionGauge® Disk Inspection & Measurement System includes 5 axes of motion (X, Y, Z, Rotary, Tilt) to view slots properly at all angles, position the disk from slot to slot, etc. The systems are fast, accurate, easy-to-use, and simple to program. The software is intuitive and the operator interface is straightforward, allowing you to directly use your CAD data to build the inspection program and setup tolerances. These robust systems are even designed for use on the shopfloor.



VisionGauge® Disk Inspection & Measurement Systems also provide complete data capture, reporting, and analysis, including:

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These systems allow manufacturers to inspect 100% of the slots on every disk and ensure the dimensional accuracy meets ever-tighter tolerances while also reducing inspection time and overall cost.”

*VISIONx, Inc.*

- VisionGauge®'s [CAD Auto Pass/Fail™ Analysis mode](#) permits operators to easily review non-conforming profiles by snapping directly onto failed edges, providing full details when encountering any out-of-spec regions.
- Data review for each slot is as easy as double-clicking on its report entry in the Data Group to revisit a slot's specific location and inspection conditions.

The VisionGauge® Disk Inspection & Measurement System is the new standard for inspecting turbine disks and verifying that all their features are within tolerance. It allows turbine disks manufacturers to automatically inspect 100% of the slots on every disk and ensure that the dimensional accuracy of their products meets today's ever-tighter tolerances while also reducing inspection time and overall inspection cost. It eliminates operator-to-operator variation altogether and enables manufacturers to collect accurate numerical values

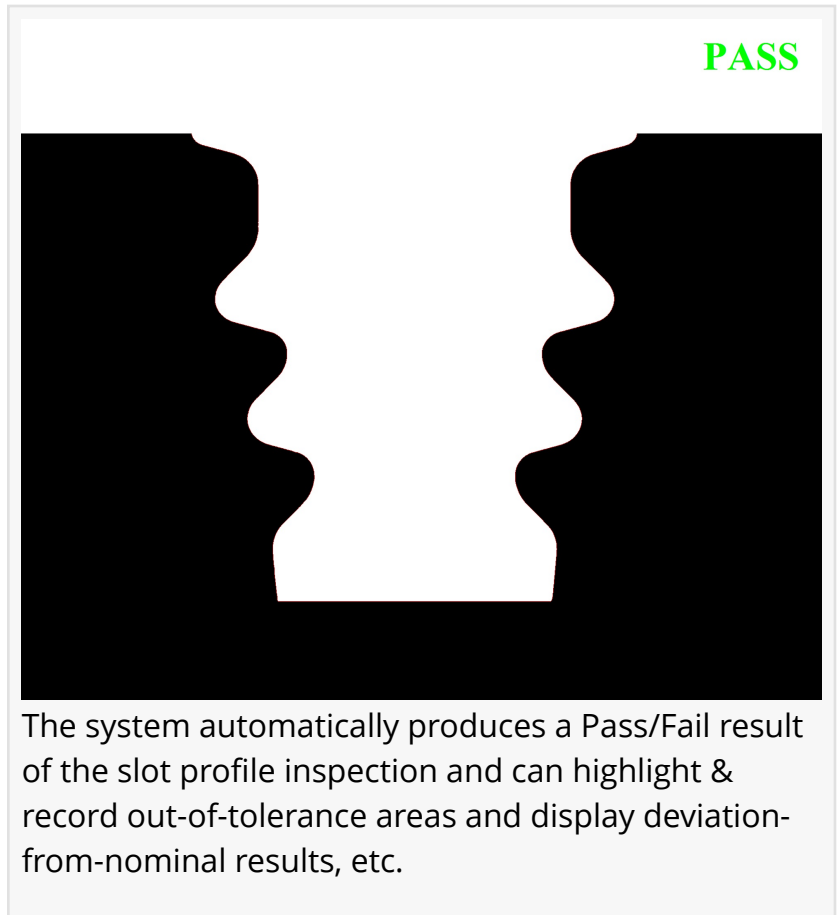
of all dimensions automatically, to compute process statistics and create complete inspection & measurement reports, making it a highly valuable tool for process control and improvement. The VisionGauge® Disk Inspection & Measurement System allows turbine disk manufacturers to gain a real advantage in today's competitive market.

To learn more about the benefits of the VisionGauge® Disk Inspection & Measurement System, please contact VISIONx, Inc., either by visiting [www.visionxinc.com](http://www.visionxinc.com) or by emailing [info@visionxinc.com](mailto:info@visionxinc.com).

VISIONx INC. specializes in automated imaging, visual inspection and high accuracy measurement solutions sold worldwide and is the manufacturer of the [VisionGauge® Digital Optical Comparator](#).

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The system automatically produces a Pass/Fail result of the slot profile inspection and can highlight & record out-of-tolerance areas and display deviation-from-nominal results, etc.

This press release can be viewed online at: <https://www.einpresswire.com/article/660901003>

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