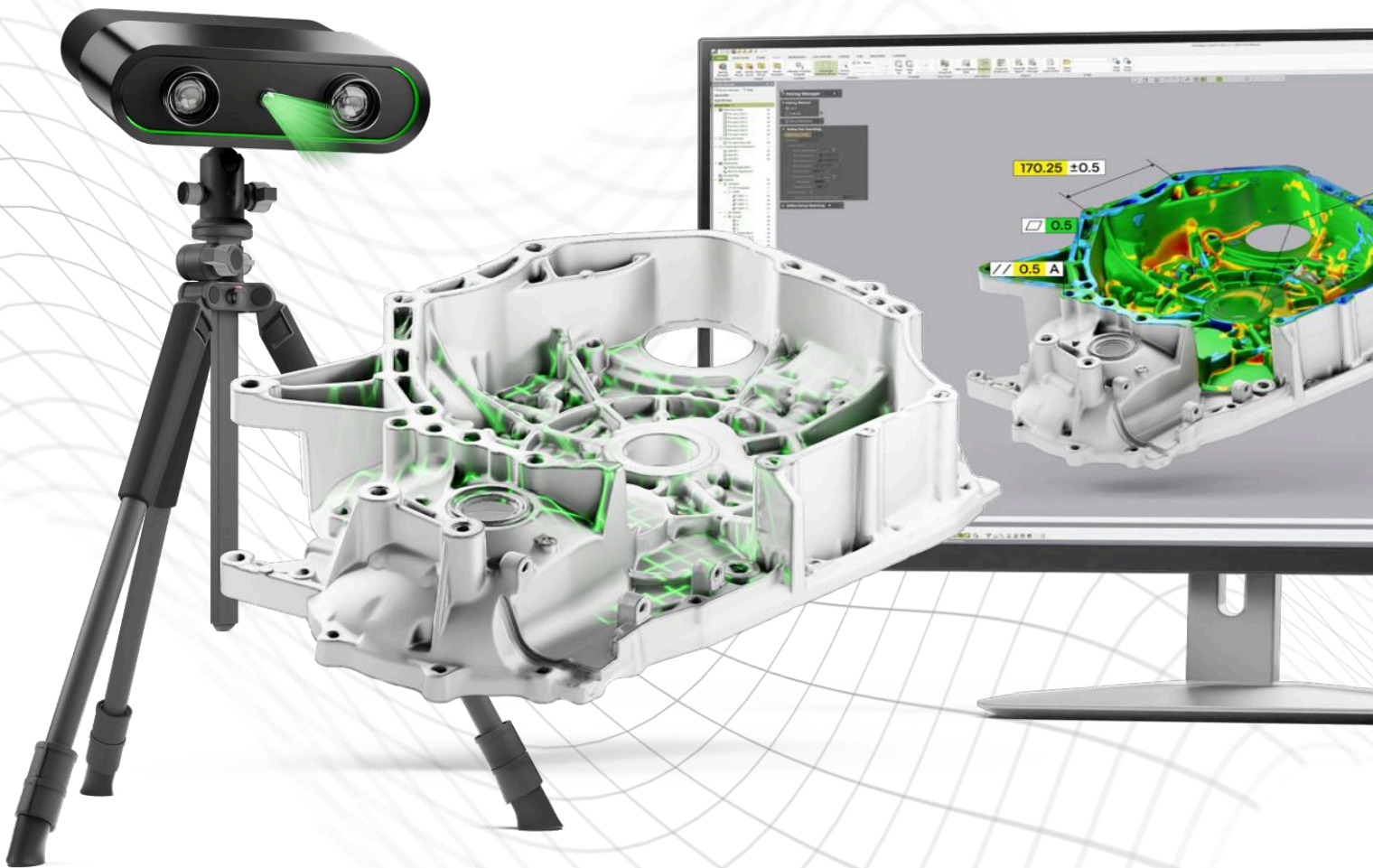




Geomagic Control X

3D Inspection & Metrology





Geomagic Control X

Professional metrology software that transforms how you measure, inspect, and ensure quality. Harness the power of 3D scanners and other devices to capture and process data with unmatched accuracy.

Making Inspection Simpler.

Design with Confidence

Solve manufacturability challenges before they slow you down. Identify and address issues like deformation after molding or casting early in the process. Build prototypes designed for seamless production, every time.

Don't Just Find Problems, Fix Them

Any inspection software can show you where parts are out of spec. Control X integrates tightly with CAD and Geomagic Design X so you can update your 3D CAD models to compensate for any problems.

Measure Wear, Master Precision

Geomagic Control X uses advanced scanning to reveal wear or deformation—even in places you didn't expect. With automated alignment and deviation analysis, you can locate and measure damage with consistent accuracy, every time.

Stay Ahead of Failures

Prevent downtime before it starts. Monitor how a part's geometry changes over time to spot potential issues early. With trend analysis and reporting, you'll predict failures before they happen and take action to keep operations running smoothly.

Spot Problems. Solve Them. Stay on Track

With a complete view of your parts from scanning, Geomagic Control X gives you the tools to identify and resolve manufacturing and assembly issues. Understand the "how" and "why" behind defects to keep production moving smoothly.

Stop Scrap Before It Starts

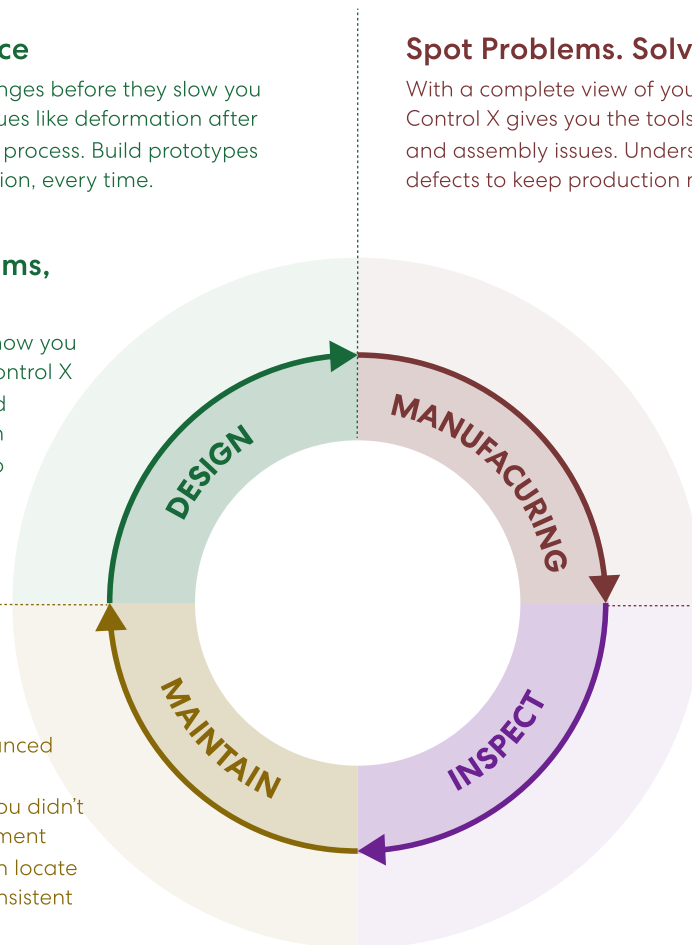
Catch defects early and save big. Geomagic Control X enables more team members to inspect incoming parts from suppliers, preventing defective components from reaching assembly. Eliminate costly rework, reduce waste, and ensure flawless production.

Tackle Any Challenge

Geomagic Control X delivers the tools you need to meet the most demanding quality control standards. Go beyond basic alignments and color maps—solve your toughest measurement problems with confidence.

Redefine Quality Documentation

A 3D scan creates a complete digital record of your part's geometry, letting you measure, analyze, and verify long after the physical part is gone. Found an issue months later? Simply revisit the scan to check any dimension—no remeasuring required.



Streamline Quality Control

Geomagic Control X is so intuitive, anyone can use it—no advanced metrology expertise required. Paired with the portability of 3D scanning, it empowers more people across your organization to perform fast, accurate inspections and keep workflows moving.

Highlight Features



Use Any 3D Scanner with Confidence

Designed to work seamlessly with data from any 3D scanner, Geomagic Control X makes integration easy. We've built direct interfaces to today's most popular systems—and you're ready for the future, too. Add any 3D scanner at any time without learning a new workflow.



Compare Scans to CAD

Intuitive, vivid color maps show you exactly what's in or out of tolerance, and by how much. Geomagic Control X supports a wide range of comparison techniques—3D, 2D cross-sections, boundaries, curves, silhouettes, and more. Plus, you get native interfaces with all major CAD systems.



Align the Way You Want

Choose the perfect alignment technique for any scenario. From automatic feature-based alignment to best-fit methods with constraints, Geomagic Control X streamlines it all. Options include RPS, datum, 3-2-1 alignments, adaptive and homing alignments.



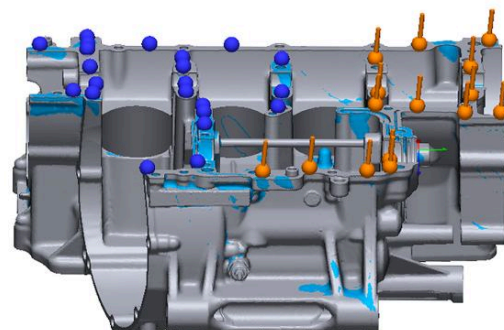
Inspect Surface Damage or Wear

Detect even the slightest imperfections. Intelligently interpret a scanned object's ideal shape and measure deviations to quantify surface damage and wear with precision.



Combine 3D Scans with Probing

Enjoy the best of both worlds. With non-contact scanning and tactile probing in one integrated interface, Geomagic Control X supports walk-up inspections and pre-planned workflows with graphical and audio guidance.





Clear, Interactive 3D Reports for Everyone

Customizable reports made simple. Use templates, track changes over time with trend analysis, and share findings via 3D PDFs. Accessible anywhere—PC, Mac, or mobile—without specialized software.



Compare Scans to Golden Parts

Use a golden part as a perfect reference model for comparison. Geomagic Control X treats the scanned nominal like a CAD model, adding feature intelligence automatically for seamless, consistent inspection.



Iterate and Explore to Understand

Make adjustments anytime, anywhere. Experiment with different alignments, re-measure as needed, and replace reference data. Let Control X recalculate your entire inspection instantly. Inspection and exploration have never been this easy.



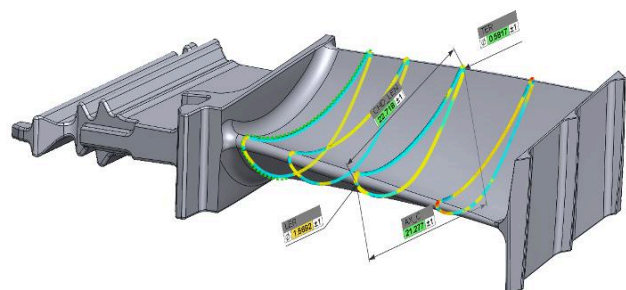
Measure Dimensions Instantly

Quickly and accurately measure dimensions, whether it's nominal models or golden parts. Thanks to automatic recognition, measuring in 2D or 3D is a breeze.



Analyze Airfoils

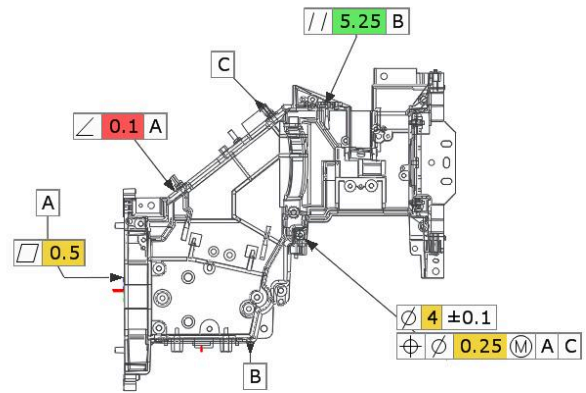
Perfect airfoil measurement made simple. Assess turbines, blades, and blisks with dedicated analysis tools. Geomagic Control X automates checks for profiles, positions, thicknesses, chord angles, and more.





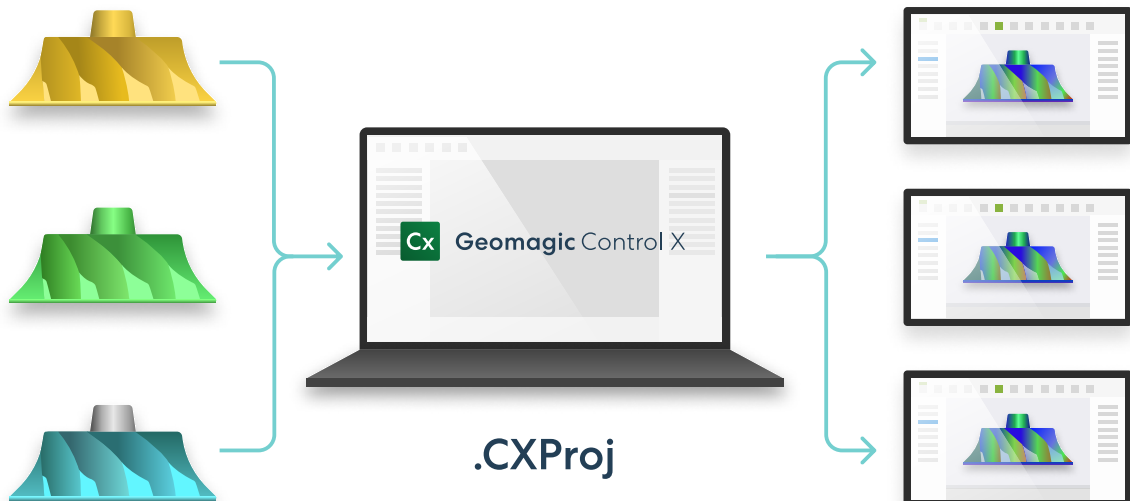
2D and 3D GD&T

Master every detail with built-in Geometric Dimensioning & Tolerancing. Geomagic Control X measures size, form, orientation, and location to ASME Y14.5M standards. Evaluate everything from straightness and flatness to concentricity and total runout.



Automate the Entire Process

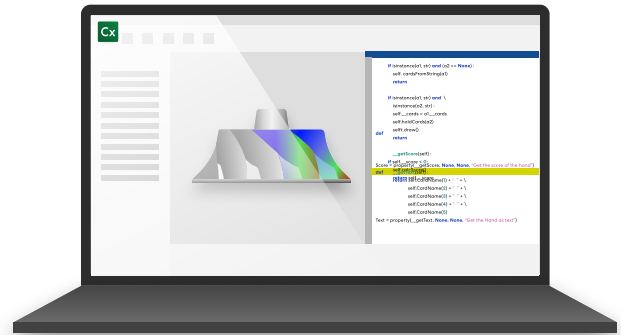
Record your inspection project in Control X's model manager for full traceability. Batch process scans with ease across multiple PCs, saving clicks—and time.



Automated Metrology for everyone

Python Scripting

Geomagic Control X brings the power of Python scripting to your workflow. Tap into a world of possibilities, utilizing AI-assisted code generation and third-party libraries. Alternatively, keep it simple and record macros to automate repetitive tasks effortlessly.



Maximize PC utilization with the Automation Server.

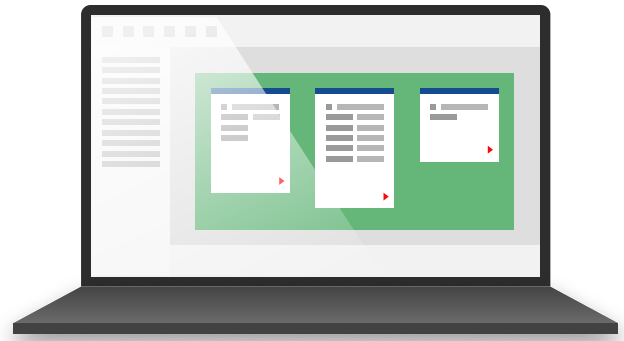
Integrate automated inspection into high-volume production to optimize throughput and streamline operations.

- Leverage the Automation Server for simultaneous, parallel job processing across server and client PCs.
- Send Pass/Fail results to external systems to keep production running smoothly.



Visual Scripting. No programming knowledge needed.

Drag and drop operations into the scripting environment to build complete workflows that anyone on your team can access. Streamline collaboration, boost efficiency, and eliminate human error by automating critical quality assurance tasks, ensuring faster, more reliable results.



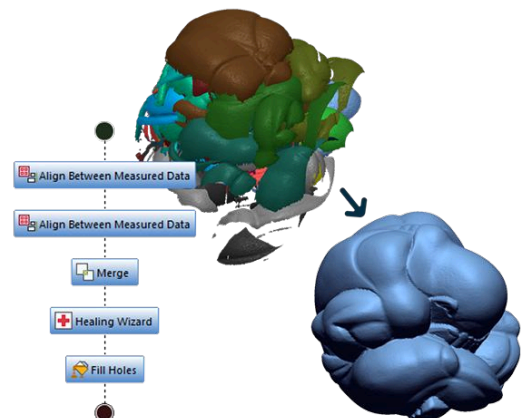
Batch Processing. Define once, run forever.

Execute a series of inspection jobs without manual intervention. Define your inspection routine once and run as long as the part is in production.



Process scan data quickly with no manual intervention.

Streamline scan processing with the intuitive Scan Process Designer. Create reusable workflows to optimize multiple scan files, share presets across your team, and minimize setup time. Automate routine steps to eliminate human error and boost throughput, ensuring consistent, efficient data processing every time.



Choose Your Plan

Geomagic Control X offers three software plans to best fit your inspection needs.

Plans Comparison	Essentials Affordable and Powerful Inspection for Everyone	Essentials Connect Powerful Inspection for Portable CMMs and Scanners	Professional Professional Inspection for Advanced and Automated Workflows
Comprehensive Inspection Tools (Import, Edit, Align, Extract, Compare)	•	•	•
Import/Export Neutral CAD & Scan formats (IGES, STEP, STL, PTS, etc.)	•	•	•
Import/Export Native CAD & Scan formats			•
Import PMI CAD			•
Reporting Tools	•	•	•
Geometric Dimensioning & Tolerancing Tools	•	•	•
Mesh and Point Cloud Processing Tools	•	•	•
Repeatable Inspection Routines	•	•	•
Direct Plugin Scanning		•	•
Portable Metrology Device Support and Tools		•	•
Automated Inspection			•
Replace Reference Data			•
Multi-Result Inspection			•
Surface Defect Inspection Tools			•
Native CAD Importer			•
Airfoil Analysis			•
Visual Scripting			•
Python Scripting			•