



Cx Geomagic Control X

3D Inspection & Metrology





Professional metrology software that transforms how you measure, inspect, and ensure quality.

Making Inspection Simpler.

Design with Confidence

Solve manufacturability challenges before they slow you down. Identify and address issues like deformation after moulding 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

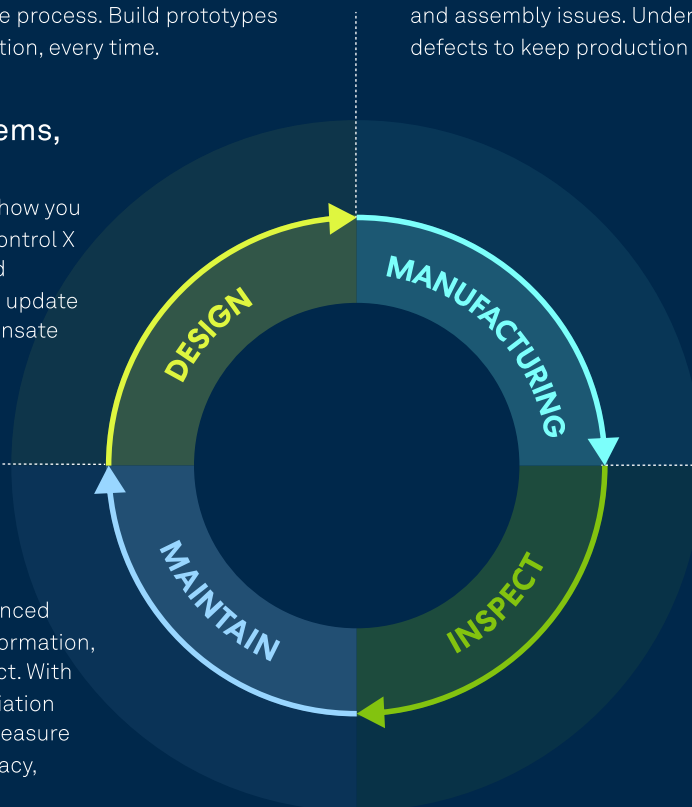
Catch defects early and save big. Geomagic Control X enables more team members to inspect incoming parts from suppliers, preventing defective components from reaching assembly. Eliminate costly rework, reduce waste, and ensure flawless production.

Tackle Any Challenge

Geomagic Control X delivers the tools you need to meet the most demanding quality control standards. Go beyond basic alignments and colour 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, analyse, 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.





Highlight Features



Use Any 3D Scanner with Confidence

Geomagic Control X offers seamless integration with any 3D scanner through built-in interfaces to leading systems, enabling immediate compatibility and future-ready scalability without changing your workflow.



Compare Scans to CAD

Intuitive, vivid colour 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.

Highlight Features



Clear, Interactive 3D Reports for Everyone

Customisable 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 specialised software.



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.



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.



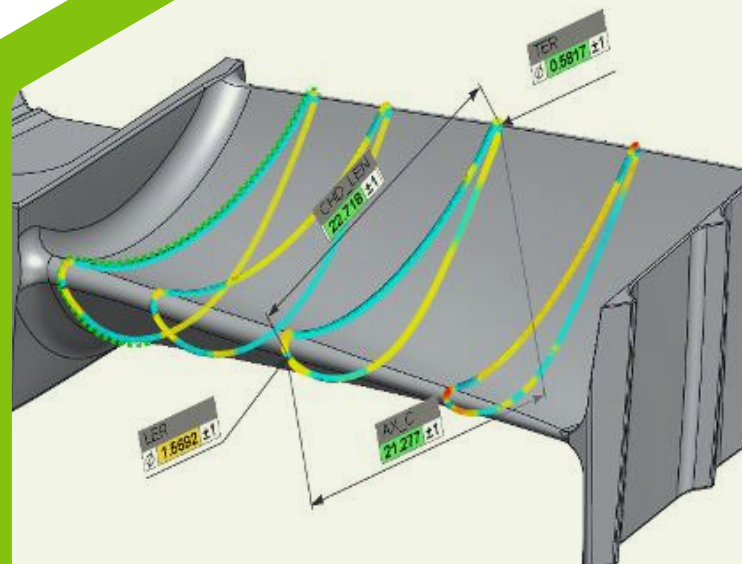
Analyze Airfoils

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.



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.





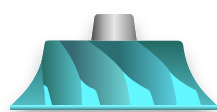
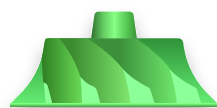
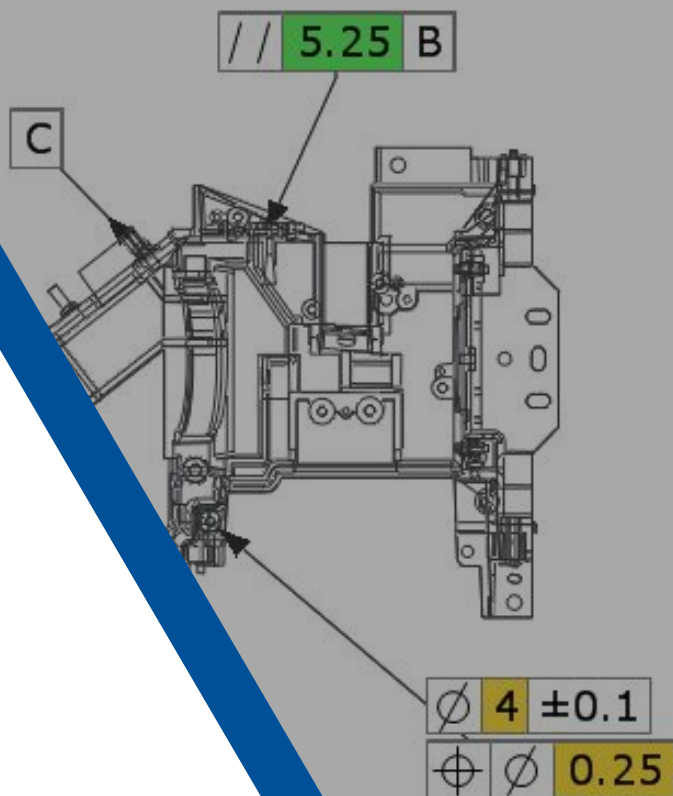
2D and 3D GD&T

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.

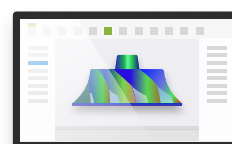
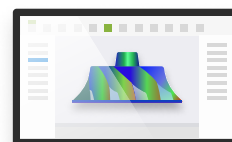
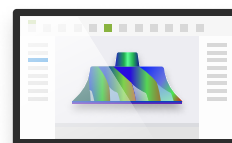


Automate the Entire Process

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.



.CXProj

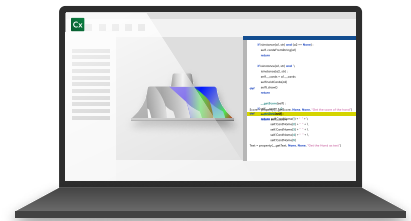




Automated Metrology for everyone

Python Scripting

Geomagic Control X brings the power of Python scripting to your workflow. Tap into a world of possibilities, utilising 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.

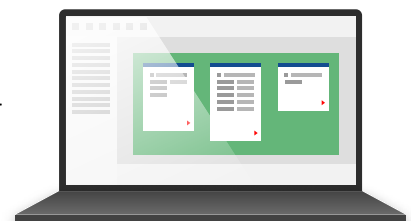
Integrate automated inspection into high-volume production to optimise throughput and streamline operations.

- 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 accessible to your entire team. Automate critical QA tasks to streamline collaboration, boost efficiency, and reduce human error for faster, more reliable results.

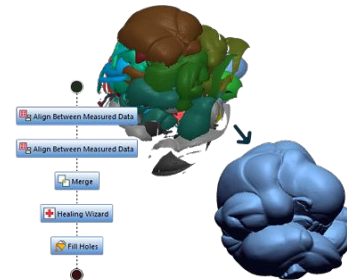


Batch Processing. Define once, run forever.

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 optimise multiple scan files, share presets across your team, and minimise 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.

Essentials

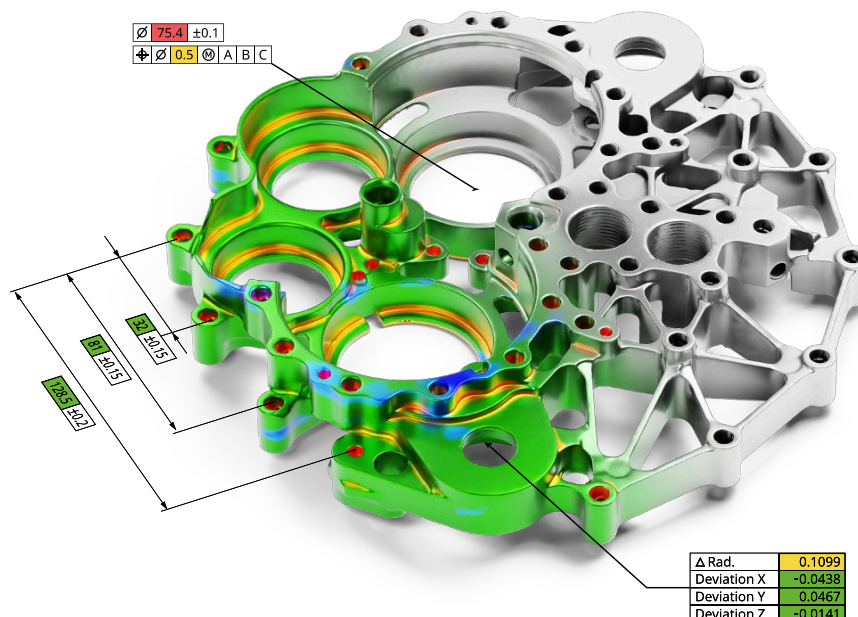
Powerful, Affordable Inspection for Everyone

Essentials Connect

Portable CMM & Scanner Inspection

Professional

Pro Inspection for Advanced Automation





Hexagon, is the global leader in precision technologies at any scale. Our digital twins, robotics and AI solutions are transforming the industries that shape our reality.

AUTHORIZED PARTNER/RESELLER

