

Digitally inspect as-built versus as-designed parts

The best-designed product is meaningless unless the as-built product complies with requirements and the CAD model. If product and process quality are important, rely on Geomagic Qualify for simple, fast, and cost-effective inspection.

Accelerate time to market with quick first-article inspections. Both manufacturers and parts suppliers can benefit from efficient in-house first-article inspections. If products and parts are designed in 3D, why not inspect them in 3D? Use Geomagic Qualify to quickly identify, graphically display, and record deviation between as-built and as-designed parts. Intuitive features make quick work of identifying changes essential to managing the manufacturing process. With inspections and approvals completed in hours instead of weeks, Geomagic Qualify provides measurable competitive advantage.

Measure and sustain manufacturing quality in real time. Extend Geomagic Qualify's value to quality control for in-line production. Trend analysis enables statistical process control (SPC) on multiple samples, providing insight into deviation trends. Geomagic Qualify helps make correct go/no-go decisions, and deviation color maps make it easy to instantly locate problem areas.

Perform sophisticated offline quality evaluations. Geomagic Qualify helps inspectors perform offline inspection for in-depth product and process assessment. Sophisticated analysis features—such as wall thickness, gap and flush, edge comparison, and Geometric Dimensioning & Tolerancing (GD&T)—support quick assessment of out-of-tolerance conditions, enabling swift correction to the manufacturing process.

Quickly produce inspection reports and collaborate on the solution. With a single click of the mouse, Geomagic Qualify generates detailed reports with numeric inspection data, multiple views, annotated user-defined views, notes and conclusions. Automatically generate reports in HTML or other popular formats. Geomagic Review, inspection analysis and collaboration software downloadable at no charge, facilitates online sharing of inspection results with engineers, suppliers and customers at other physical locations.

Inspect with contact and non-contact devices. A flexible solution, Geomagic Qualify supports the use of non-contact optical scanner inspection devices as well as more traditional contact inspection devices. Dedicated plug-ins for many devices that support real-time inspection are also available with Geomagic Qualify.



Enable fast, easy-to-understand graphical comparisons between CAD models and as-built parts for first-article inspection, inline or shop-floor inspection, trend analysis, 2D and 3D geometric dimensioning, and automated reporting. With accuracy certified at the highest levels by PTB*, Geomagic Qualify has built-in automation to yield accelerated first inspections and even faster ongoing product inspections. Intuitive workflows allow users to:



CAD REFERENCE



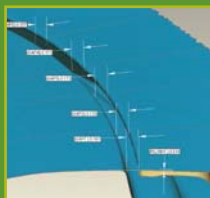
AS-BUILT PART



ALIGN



COMPARE



EVALUATE



REPORT

Scan and Align

Move quickly from scanned image to alignment with intuitive workflow. Compatible with all popular 3D scanners and hard-probing devices, Geomagic Qualify supports working with both ordered and unordered data.

Quickly import CAD models or use other scan data for comparison. Define plane, axis, point datums and line target datums on the reference model. Automatically generate datums and features from the reference model on the point cloud or polygons. Align models using the method of choice — datums, 3-2-1, reference point system, or best fit. Easily capture preferred alignment methods for future use.

Compare

Graphical displays and annotation tools make first-order analysis incredibly simple, while providing accurate results. Use Geomagic Qualify's customizable color-mapped deviation models and color point clouds to tell the story at a glance. Specify graphical definitions to accelerate correct go/no-go decisions. Automatic annotation features facilitate problem clarification.

Evaluate

Geomagic Qualify provides the perfect foundation for more sophisticated evaluation of discrepancies. Create dimensions of any type in cross-sections and selected regions. Analyze sheet metal features, generate deviation whisker plots of model cross-sections, and perform wall-thickness analysis.

Let Geomagic Qualify automatically detect and create features (holes, slots, etc.). Create and evaluate GD&T callouts with full control over report displays. Compare boundary edges to assess springback and cutting errors. Industry-specific analytic aids are also available, including blade and automotive analyses.

Automotive, aerospace, consumer product, and other manufacturing companies worldwide are saving time and money by engineering rigorous quality control into their manufacturing processes with Geomagic Qualify's patented digital shape sampling and processing (DSSP) technology.

* Physikalisch-Technische Bundesanstalt (PTB) institute certification is accepted worldwide as the leading indicator of accuracy, comparability and reliability for software that extracts measurement results from 3D scanners and coordinate measurement machine (CMM) devices.

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Report

Satisfy customer or regulatory requirements by selecting from a variety of automatically generated reports. Create HTML reports for online viewing and collaboration. Provide easy report access for collaborators when they download the no-charge Geomagic Review product.

Geomagic Qualify can also create reports in Adobe PDF or Microsoft Word formats if preferred. Access spreadsheets and charts in Microsoft Excel for trend analysis. Export CSV and Unicode data for use in other applications such as SPC.

New in Geomagic Qualify 8

Geomagic Qualify 8 introduces new analytic advances that increase both the speed and types of inspection that it supports. New features include:

- **Calculation of gap and flush** between two parts confirms precision assembly
- **Simulation of ring gauge** eliminates physical loading of parts into a gauge to insure conformity
- **Edge calculation** compares edges of as-built to as-designed parts for process validation
- **Laser tracker plug-ins and developer's kits** provide full device control and operating efficiencies
- **Wall thickness calculation** reduces the need for time-consuming sectioning and 2D dimensioning
- **Enhanced sectioning** speeds parts 2D dimensioning
- **Improved usability with a Licensing Wizard** that supports requesting and configuring licenses for new and existing users directly through the Internet

Learn More

Obtain detailed product specifications, download success stories, or sign up for a Geomagic Qualify demonstration at www.geomagic.com