

## Digitally inspect as-built versus as-designed parts

*CAI software for design and manufacturing engineers. Geomagic Qualify enables fast, accurate, easy-to-understand graphical comparisons between CAD models and as-built parts. Automation is built in, with accuracy certified at the highest levels by PTB (Physikalisch-Technische Bundesanstalt).*

### Accelerate time to market with quick first-article inspections.

If products and parts are designed in 3D, they should be inspected in 3D.

Use Geomagic Qualify to:

- Quickly identify, graphically display and record deviation between as-built and as-designed parts.
- Complete inspections and approvals in hours instead of weeks.
- Gain a measurable competitive advantage in the design/manufacturing process.

### Measure and sustain manufacturing quality in real time.

- Maintain quality control for in-line production and shop-floor inspection.
  - Trend analysis enables statistical process control (SPC) on multiple samples, providing insight into deviation trends.
  - Deviation color maps allow users to instantly identify problem areas that can be further analyzed — now or later.

### Perform offline quality evaluations for in-depth product and process assessment.

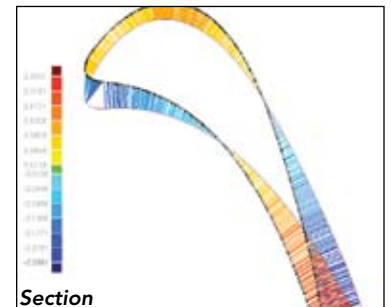
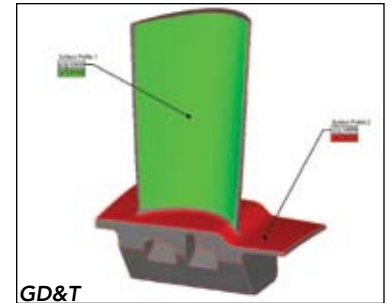
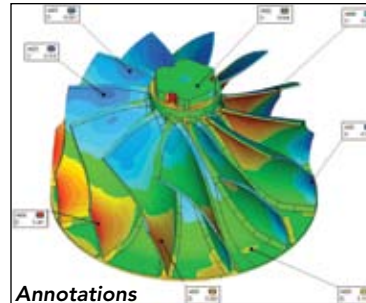
- Take advantage of the sophisticated analysis features including:
  - Wall thickness
  - Gap & Flush (G&F)
  - Edge comparison
  - Geometric dimensioning & tolerancing (GD&T)
  - 2D and 3D dimensioning
- Quickly assess out-of-tolerance conditions to enable immediate correction to the manufacturing process.

### Produce inspection reports and collaborate on the solution.

- Generate detailed reports with numeric inspection data, multiple views, annotated user-defined views, notes and conclusions.
- Use Geomagic Review™ to share inspection results online with engineers, suppliers, partners, contractors and customers at other physical locations.

### Inspect with contact and non-contact devices.

Geomagic Qualify supports non-contact optical scanner inspection devices as well as more traditional contact inspection devices.



The intuitive workflows in Qualify allow users to:

**Scan and align.** Compatible with all popular 3D scanners and hard-probing devices.

- Work with both ordered and unordered data.
- Define planes, axes, point datums and line target datums to align models using Datum alignment, Reference Point System, 3-2-1 or best fit.

**Compare.** Graphical displays and annotation tools make first-order analysis very simple, while providing accurate results. Specify graphical definitions to accelerate correct go/no-go decisions. Facilitate problem clarification with automatic annotation features.

**Evaluate.** Create dimensions of any type in cross-section and selected regions. Analyze sheet metal features, generate whisker plots of model cross-sections and perform wall-thickness analysis. Automatically detect and create features such as holes and slots. Create and evaluate GD&T callouts with full control over report displays. Compare boundary edges to assess springback and cutting errors. Access industry-specific analytical aids including airfoil and automotive analyses such as Gap & Flush.

**Report.** Select from a variety of automatically generated reports to satisfy customer and regulatory requirements. Create reports in several formats including HTML, PDF and MS Word. Export CSV and Unicode data for use in other applications such as SPC.

**Communicate and Collaborate.** Provide easy report access to everyone in the enterprise with Geomagic Review inspection analysis software, available as a free download from the web.

#### New Features

Geomagic Qualify 9 includes four major enhancements:

1. **Multicoordinate system.** Allows users to refer to the most suitable and desired coordinate system for better clarity and interpretation of results.
2. **More streamlined and comprehensive access to the CAD geometry.** Avoids IGES and STEP intermediate translation.
3. **Faster 2D dimensioning using constructed elements.** Enables faster workflow and cleaner models.
4. **Blade extension for turbomachinery applications.** Focuses on the turbine machinery industry, offering specific functionality to analyze rotors, stators, impellers and specific internal blade features.
  - With the multiple airfoil analysis, analyze and report dimensions related to turbine segments such as minimum opening (throat) and minimum distance between blade to blade.
  - Using the internal blade analysis feature, analyze complicated geometry by selecting the desired geometry rather than using tedious, time-consuming and operator-dependent cross-sectioning.

#### Multiple Languages

Qualify 9 is available from Geomagic and its worldwide distributors in:

- English
- Chinese
- French
- German
- Italian
- Japanese
- Spanish

#### Visit Us

To learn more about Geomagic Qualify, obtain detailed product specifications, download success stories or sign up for a Qualify 9 demo, go to [www.geomagic.com](http://www.geomagic.com).

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