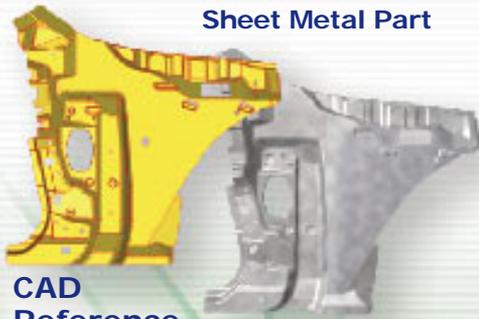


Automotive
Sheet Metal Part

geomagic qualify[®]

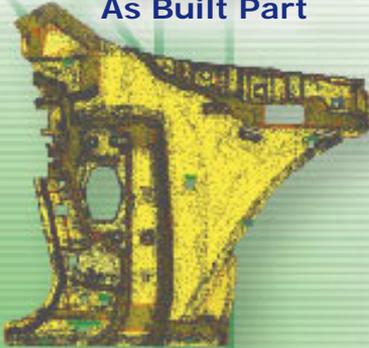
Computer-Aided Inspection Software



CAD
Reference

As Built Part

The only software that fully automates both instant, inline inspection & offline analysis



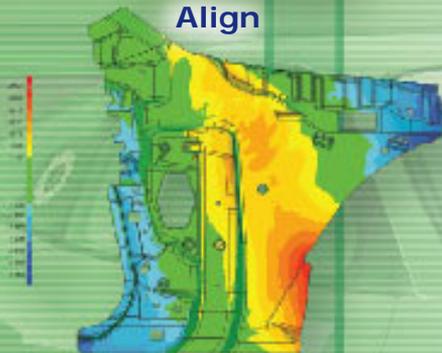
Align

Geomagic Qualify is the previously missing link between CAD and CAM, fulfilling the promise of a fully digital manufacturing environment. It enables 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.

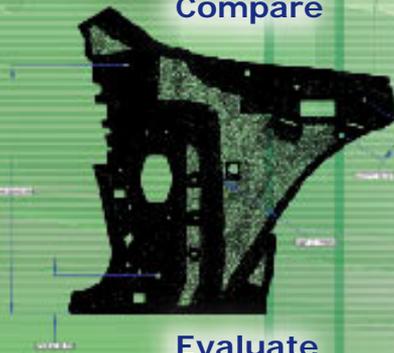
The customer's perspective

Customers such as Schneider Electric's Square D brand report the following benefits:

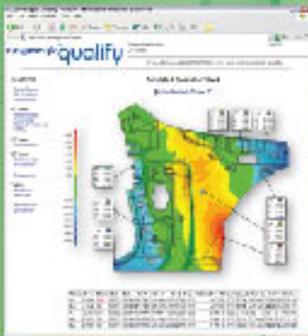
- **Significant time and money savings** - Inspection and approval can be completed in hours instead of weeks, enabling a much faster product development cycle.
- **Better process control** - Quality Control can be performed in-house without depending on third-party schedules and expenses.
- **Improved efficiency** - Geomagic Qualify is easy to use and an intuitive tool for designers, who no longer have to decipher tabular reports and convert 2D data to a 3D CAD model.
- **Better communication** - Automatically generated, web-ready reports improve communication across manufacturing functions and physical locations.
- **Greater accuracy** - Geomagic Qualify allows users to inspect quality for a surface that is defined by tens of thousands of points, compared to the five or ten points that might define a CMM surface.
- **Automated SPC** - Automated statistical process control on multiple samples can provide insight into deviation trends in a manufacturing process or used to verify the capability of a multiple cavity mold.



Compare



Evaluate



Report

"This process has opened a whole new world for us. The design engineers have better information about the quality of parts, which will ultimately save the company money and produce a better end product for the consumers."

- Major auto manufacturer

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Software Features

Datums and Features

- plane, axis, point, and target datums
- hole, slot, rectangle, rounded rectangle, and boundary line
- automatic datum and feature creation from reference models
- datum display modification

Alignment

- datum and feature-based alignment
- RPS (Reference Point System)
- 3-2-1
- best fit
- load / save / apply transformation

3D Analysis

- deviation color maps
- results displayed as mapped models or color point deviations
- fully customizable color spectrums with histograms
- failure (go / no-go) analysis and reporting
- CMM (sparse) data support
- deviation and text annotations
- pre-defined location set checking

2D Analysis

- deviation whisker plots
- boundary edge and springback analysis

Evaluation

- 3D dimensioning with features and datums
- 2D sectional dimensioning
- GD&T evaluation of flatness, parallelism, perpendicularity, angularity, cylindricity, and total runout
- feature comparison

Report Generation

- HTML for on-screen viewing and Internet collaboration
- PDF generation for high-quality printing and distribution
- Microsoft Word with standard output and fully customizable templates
- Microsoft Excel for spreadsheet data and trend charting
- CSV (comma-separated values)
- Unicode compatible

Automation

- complete process automation from registration to reporting
- behind-the-scenes recording of critical information during the inspection process, creating a template to repeat the inspection with no additional steps

Tools

- one-click snapshot images for including in reports
- mirror / scale / duplicate

Point and Polygon Processing

- sampling
- noise reduction with deviation display
- outlier and boundary selection
- wrap triangulation
- make open / closed manifold
- flip normals
- decimation

Large Data Handling

- intelligent memory management
- multi-threaded operations for multiple processors
- batch processing

User Interface

- customizable toolbars, right-mouse menu, and hotkeys
- user-defined color themes
- dockable toolbars and panels
- user-defined macros
- context-sensitive help

Developer Tools

- COM interface provides scripting access via Visual Basic, C, C++, or Java

File Import

Geomagic Qualify supports all 3D digitizers, cameras, and scanners in XYZ / ASCII format and handles ordered and unordered surface and volume data.

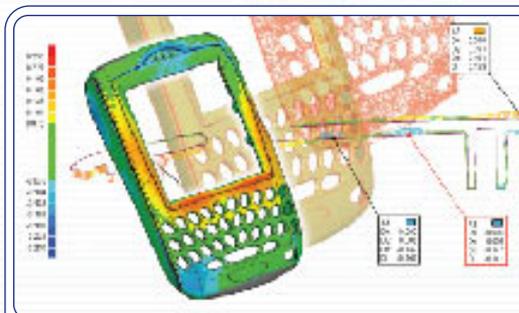
- native scan import formats:

- 3PI - ShapeGrabber
- AC - Steinbichler
- ASC - generic ASCII
- BIN, SWL - Perceptron
- BRE - Breuckmann
- CAM, CDM, VVD - Minolta
- CWK - Kreon
- DBT - Digibotics
- DPI - Dimensional Photonics
- G3D, SURF - GOM
- GPD - Geomagic
- GTI - Genex
- HYM - Hymarc
- MET, MTN - Metron
- NET - InSpec
- OPT - Open Technologies
- PIX - Roland
- PMJ/X - 3D Digital
- SAB2 - 3D Scanners
- SCN, PCN - LDI/Datasculpt
- XYZ - Opton
- XYZN - Cognitens

- polygon import/export: 3DS, DXF, IGS, LWO, NAS, OBJ, PLY, STL, VRML, WRP

- CAD import: IGES, STEP 203/214, Neutral, VDA, Pro/E PRT, SAT, Parasolid .x_t and .x_b

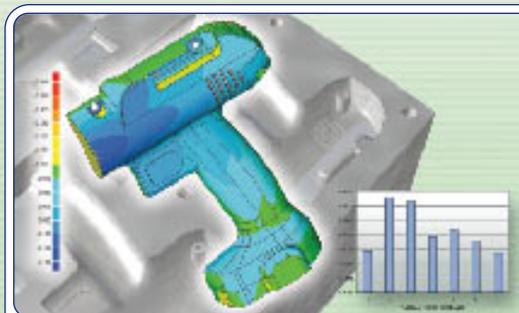
- available translators: CATIA V4 & V5



First Article Inspection

"We see the opportunity to use Geomagic Qualify to reduce product quality inspection time by at least 20 to 30 percent."

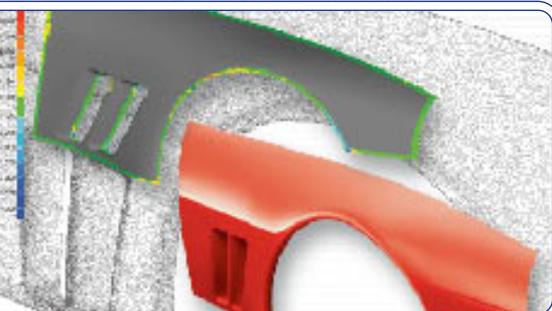
- VITEC, automotive supplier



Tool and Mold Comparison

"The ability of Geomagic Qualify to automatically analyze and generate statistical reports for batches of parts is going to save us countless hours of repetitive capture and analysis work."

- Square D



Sheet Metal Inspection

raindrop geomagic®

P.O. Box 12219
 Research Triangle Park, N.C. 27709
 1.800.251.5551
 1.919.474.0216 fax
 www.geomagic.com
 email: inquiry@geomagic.com