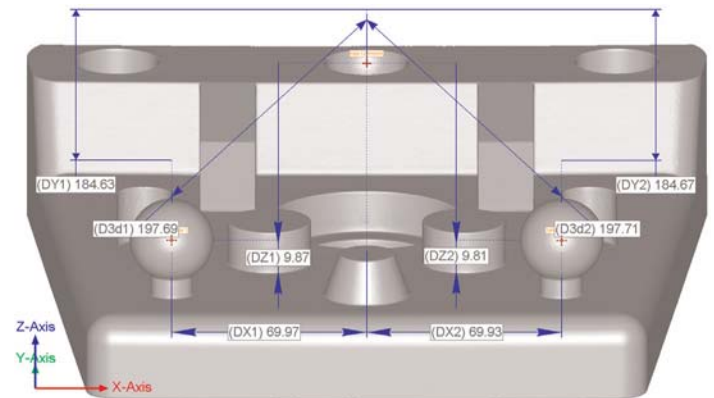


Inspection in 3D



QTSculptor 3D Scanner PT-M1280 and Rotary Device PT-R200



3D Dimensioning

Fast and reliable 3D acquisition

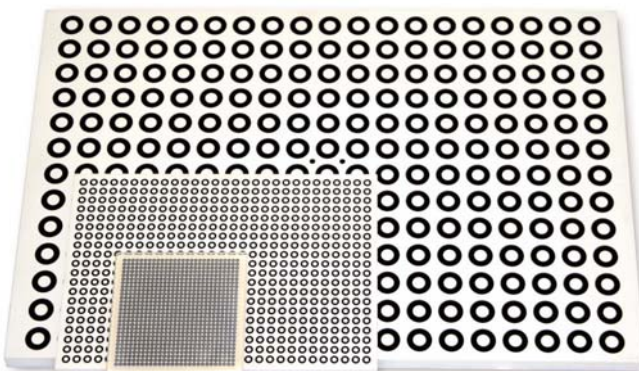
QTSculptor utilizes the structured light method for digitizing surfaces. A large number of reliable measuring points is acquired in a very short time. Multiple axis can be controlled for the automated combination of data from different viewing directions.

Complementary scans are easily added without the need to stick markers on the object. Thus it is possible to complete the geometry in areas that are difficult to reach, and even to combine different levels of detail in one model.

Evaluating the 3D data

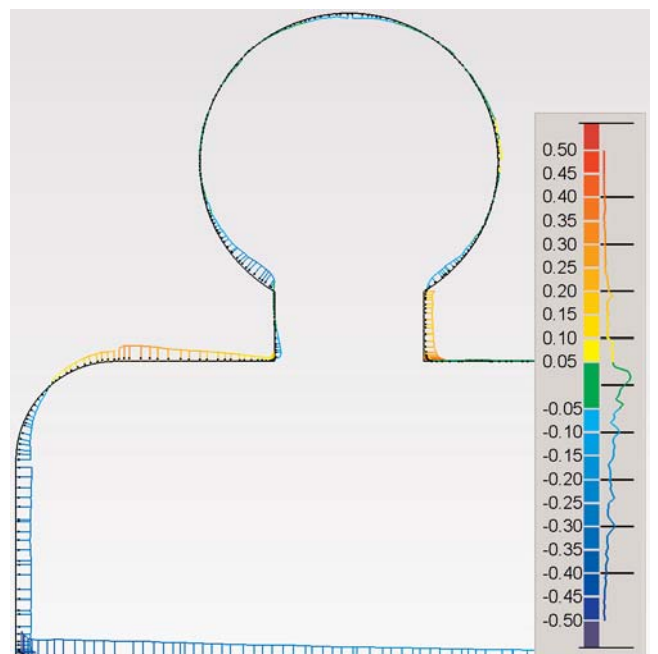
Graphical comparisons of “as designed” vs. “as manufactured” information aids the designer’s understanding of problems, enabling quicker turnaround time for design changes.

Geomagic Qualify® offers a variety of sophisticated analysis features including wall thickness, gap and flush, edge comparison, geometric dimensioning & tolerancing (GD&T), as well as 2D and 3D dimensioning.



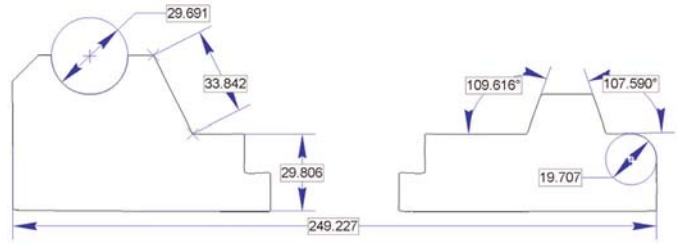
Reproducible accuracy

Our calibration equipment is based on specially developed CFK carrier material. It is pre-calibrated by Carl Zeiss and provides highest data accuracy. For the sensitive macro range Zerodur which has an extremely high dimensional stability is used as carrier material.



Visualizing deviations at cross-sections

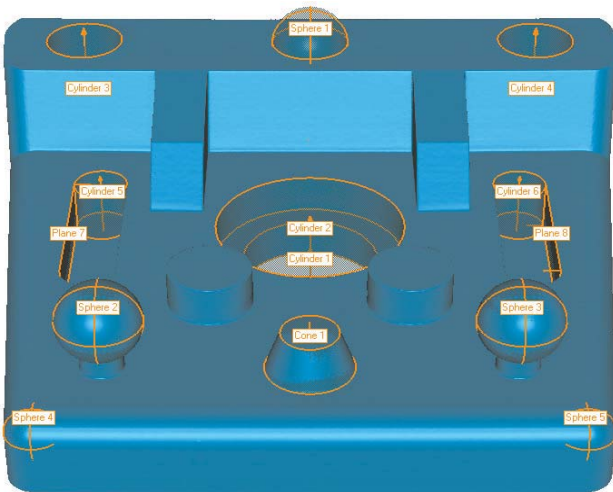
CAD data as well as scanned data can be used for comparing the current part. Existing features are automatically transferred from the reference to the test model, and will subsequently be used for aligning the data. Best-fit, 3-2-1 and reference point system are alternatively offered for aligning the coordinate systems.



2D measuring on cross-sections

Absolute and relative dimensions can be measured directly on the 3D Model. Furthermore Geomagic Qualify® offers a variety of functions for setting cross-sections and analyzing in 2D.

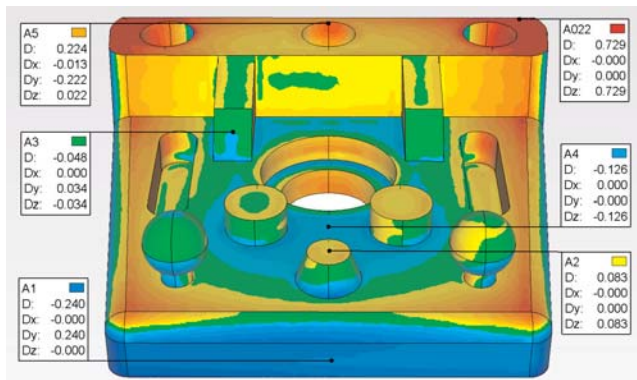
Analyze sheet metal features, generate whisker plots of model cross-sections to assess springback, cutting errors and perform wall-thickness analysis. Create and evaluate GD&T callouts with full control over report displays. Access industry-specific analytical aids including airfoil and automotive analyses such as Gap & Flush.



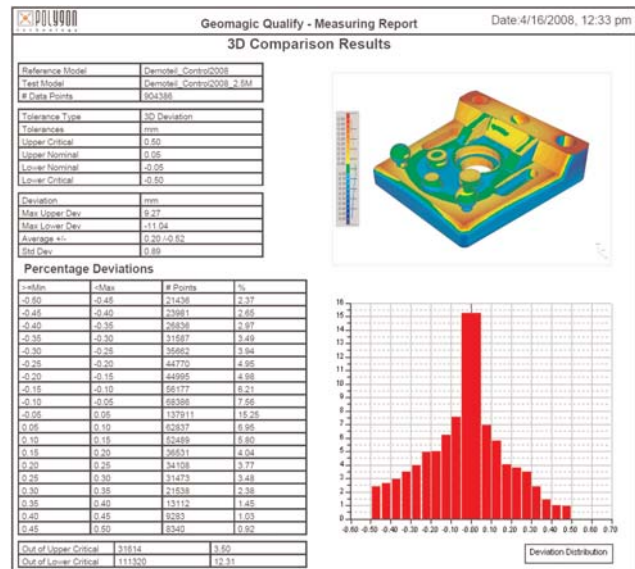
Fitting features to the 3D scan for alignment and evaluation

Graphical comparisons of “as designed” vs. “as manufactured” visualize variances in the produced part. Critical areas can automatically be annotated to check the tolerance.

This visual control helps to clarify problems in the manufacturing process and to accelerate go/no-go decisions.



Comparing as-built versus as-designed



Geomagic Qualify® combines the results to a report in several formats including HTML, PDF and MS Word. CSV and Unicode data can be exported for use in other applications such as SPC.