EVOLVE Design

Part of the EVOLVE Model-Based Software Suite


FIXED ISSUE

HINT

WARNING

ISSUE

EVOLVE **Design**

Part of the EVOLVE Software Suite

EVOLVE Suite

The EVOLVE software suite from OGP optimizes design, production and inspection processes enabling manufacturers to shorten product design & development time, improve quality, and reduce costs through improved efficiency.

EVOLVE uses a part's three dimensional CAD model as the basis for all tolerance evaluations, statistics and manufacturing data.
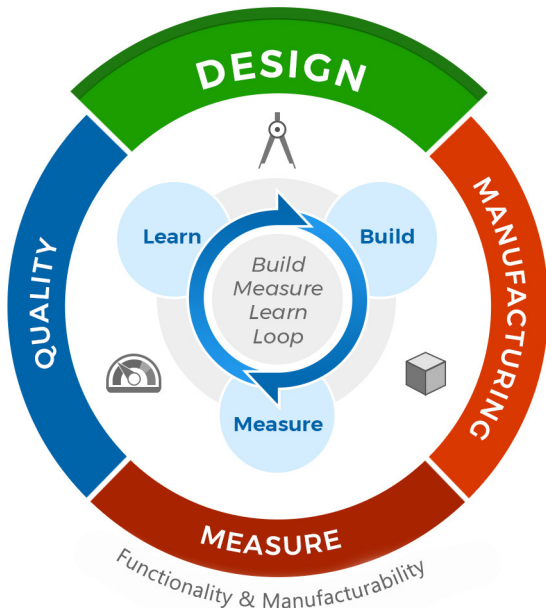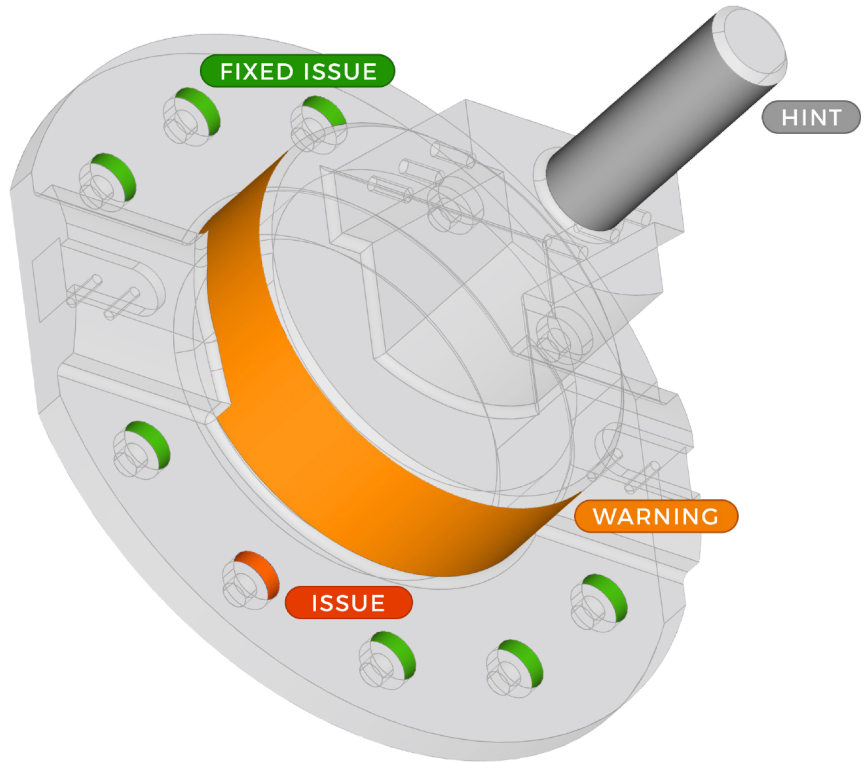
EVOLVE **Design**

EVOLVE Design is Computer-Aided Engineering (CAE) tolerancing software that helps design engineers apply GD&T (GPS) tolerances to their CAD models correctly.

EVOLVE Design **proofs GD&T** (GPS) tolerances directly in the model. It **highlights potential tolerancing problems** and **provides recommendations** through explanatory systems that show relevant guidance based on the chosen GD&T (GPS) standard.

EVOLVE **Manufacturing** analyzes measurement results from a manufacturing point of view, indicating why a part has failed the GD&T evaluation and helping the user determine specific corrective actions to the manufacturing process.

EVOLVE **SmartProfile** combines measurement data with the CAD model and automatically runs GD&T evaluations to ASME or ISO standards.

EVOLVE **SPC** is a full statistical process control software solution usable as a standalone product with existing measuring systems or integrated into the EVOLVE Suite.

**EVOLVE** Suite Model-Based Family of Software

GD&T Proofing in four easy steps

1 Import CAD and PMI

EVOLVE Design imports various CAD file formats such as **STEP**, **IGES**, **DXF**, or **QIF**.

CAD models with PMI information such as GD&T (datums and tolerances) can be imported from **QIF (Quality Information Framework)** and **STEP 242** files.

The **CAD Bridge** option provides simultaneous interactions between CAD software and EVOLVE Design making all changes directly in both.
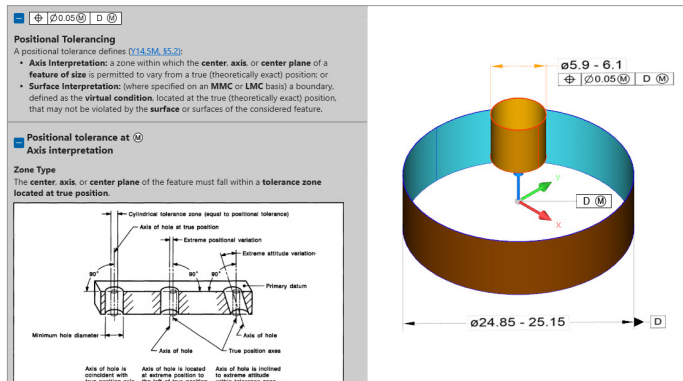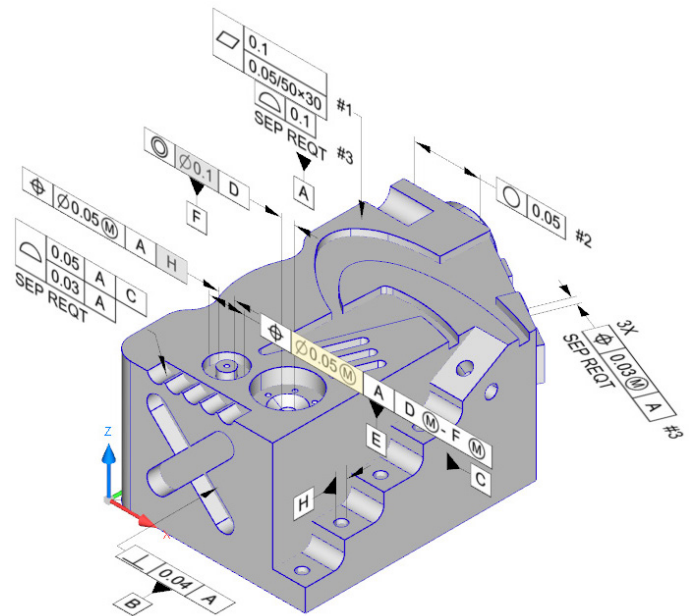
2 Define Tolerances

EVOLVE Design allows you to define GD&T (GPS) tolerances according to the chosen standard (ASME Y14.5M – 1994, ASME Y14.5 – 2009, ASME Y14.5 2018 or ISO 1101).

The EVOLVE Design **Explanatory system** reacts to state changes in the application and always shows relevant information about the current context.

With the **CAD Bridge** option users can apply tolerances in either the CAD model or in EVOLVE Design. Both get updated immediately.

3 Proof GD&T (GPS)

A powerful GD&T (GPS) engine checks the entire model and provides **visual notification of tolerance errors and warnings**. Any issues found are clearly explained and supported by links to the sections of the relevant standards.

Additional supporting tools: Snapshot keeps history of changes made. Tolerance Stack up and Point Generator help with better understanding of the impact of tolerance changes.

4 Save Results

After proofing issues are corrected, the changes to GD&T (GPS) can be saved as a QIF file, in a report, or as an EVOLVE project for future reference. EVOLVE projects can be imported into other EVOLVE products to evaluate parts and analyze problems.

The **CAD Bridge** option saves changes automatically in the native CAD model thus eliminating manual file transfers and avoiding possible transcription errors.

EVOLVE Design
CAD Bridge™

EVOLVE Design from OGP is a standalone software product built on the same powerful engine used across the EVOLVE software suite.
**CAD Bridge** enables users to work with both their CAD software and EVOLVE Design together in real time. Changes made in either software product are instantly present in the other.

Benefits

✓ Real time connection of CAD and EVOLVE Design software eliminates redundancy and reduces risks from transcription errors.

✓ CAD Bridge allows EVOLVE Design to communicate directly with popular CAD software products.

✓ Organizations with different brands of CAD software get consistent application of GD&T (GPS) standards for all CAD models.

After defining and proofing tolerances through EVOLVE Design, CAD files with this embedded GD&T information can then be used in measurement software's where PMI is supported. ZONE3 can import PMI information from multiple standard formats including directly from an EVOLVE project. Once imported, ZONE3 will automatically create routines to measure the necessary features based on the embedded GD&T, drastically reducing the programming time needed. This ensures the same tolerances proofed by EVOLVE Design are also being used for measurement evaluations in your metrology package.

ZONE3

CAD software

EVOLVE Design
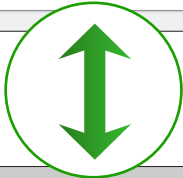
OGP – Confidence. When Results Matter

The EVOLVE software suite from OGP is developed by KOTEM®, who is the worldwide leading developer of software for dimensional analysis. The EVOLVE suite of advanced GD&T and fitting software helps manufacturers integrate quality inspection data with their manufacturing and design workflows. KOTEM and OGP are Quality Vision International companies.

QVI® (Quality Vision International) is the world's largest vision metrology company. Founded in 1945, QVI is the world leader in the application of optical, electronic and software technologies into vision and multisensor measuring systems for manufacturing quality control.

To learn more about the EVOLVE suite of software solutions, go to:

www.ogpnet.com/evolve

EVOLVE is fully compliant with all internationally accepted GD&T Standards:
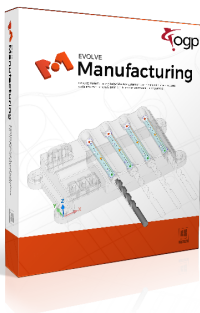
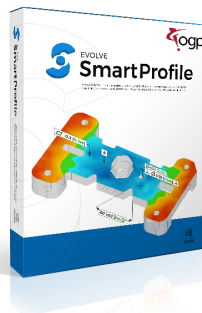| ISO 1101 | ASME Y14.5M-1 994 | ASME Y14.5-2009 | ASME Y14.5-2018 |

EVOLVE Suite

Check out the other members of our model based family of software:

EVOLVE Manufacturing analyzes measurement results from a manufacturing point of view, indicating why a part has failed the GD&T evaluation and helping the user determine specific corrective actions to the manufacturing process.

EVOLVE SmartProfile combines measurement data with the CAD model and automatically runs GD&T evaluations to ASME or ISO standards.

EVOLVE SPC is a full statistical process control software solution usable as a standalone product with existing measuring systems or integrated into the EVOLVE Suite.

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Confidence. When Results Matter.™