EVOLVE
Design

FIXED ISSUE

HINT

WARNING

ISSUE

EVOLVE Suite   Model-Based Family of Software

EVOLVE **Design**

Part of the EVOLVE Software Suite

EVOLVE Suite

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

With its fully automatic GD&T evaluation of design tolerances, an annotated digital three-dimensional (3D) model of a product serves as the authoritative information source throughout a product's lifecycle in a Model Based Enterprise (MBE).
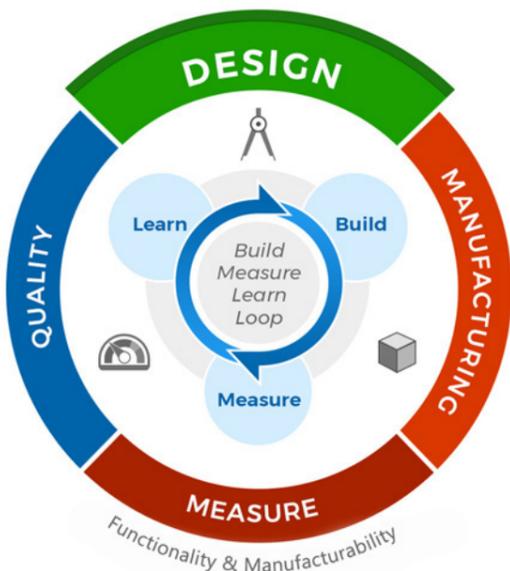
EVOLVE **Design**

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 identifies systematic problems with manufactured parts and recommends solutions to minimize future manufacturing errors.

EVOLVE SmartProfile provides guidance for adding or modifying part design tolerances. It combines measurement data with the CAD model of the part and automatically runs GD&T (ASME) and GPS (ISO) evaluations.

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.
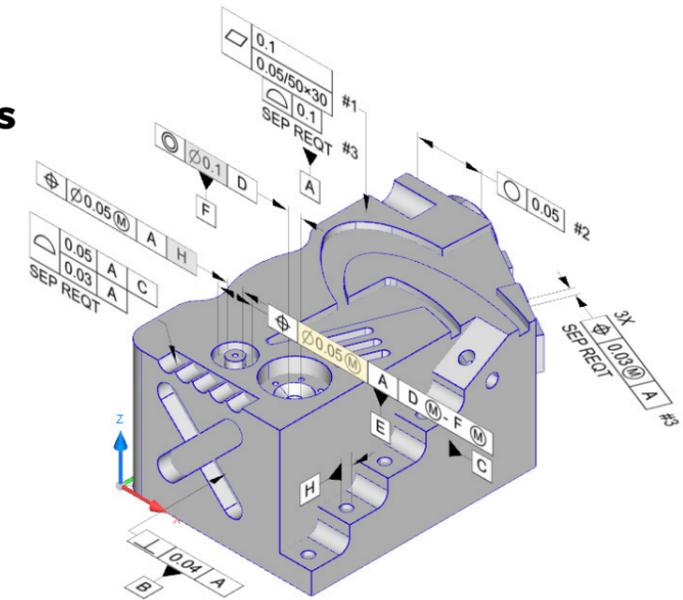
GD&T Proofing in four easy steps

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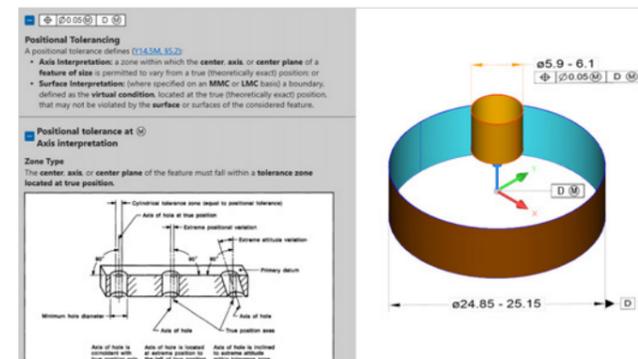
The **CAD Bridge** option provides simultaneous interactions between CAD software and EVOLVE Design making all changes directly in both.

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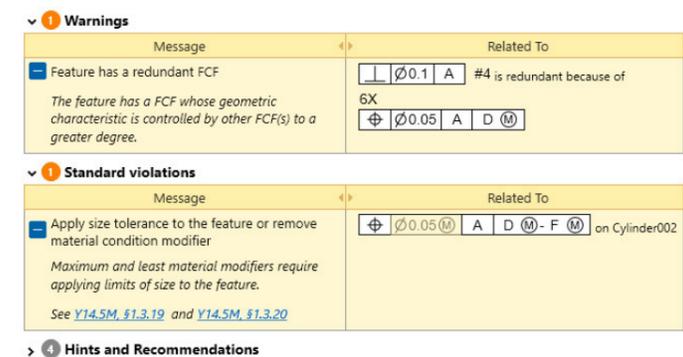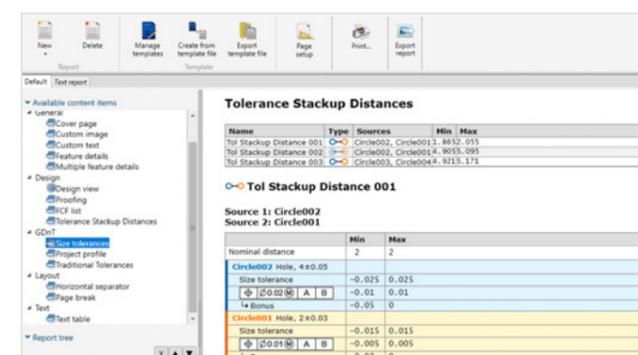
Additional supporting tools: Snapshot keeps history of changes made. Tolerance Stack up and Point Generator help with better understanding of the impact of tolerance changes.

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.
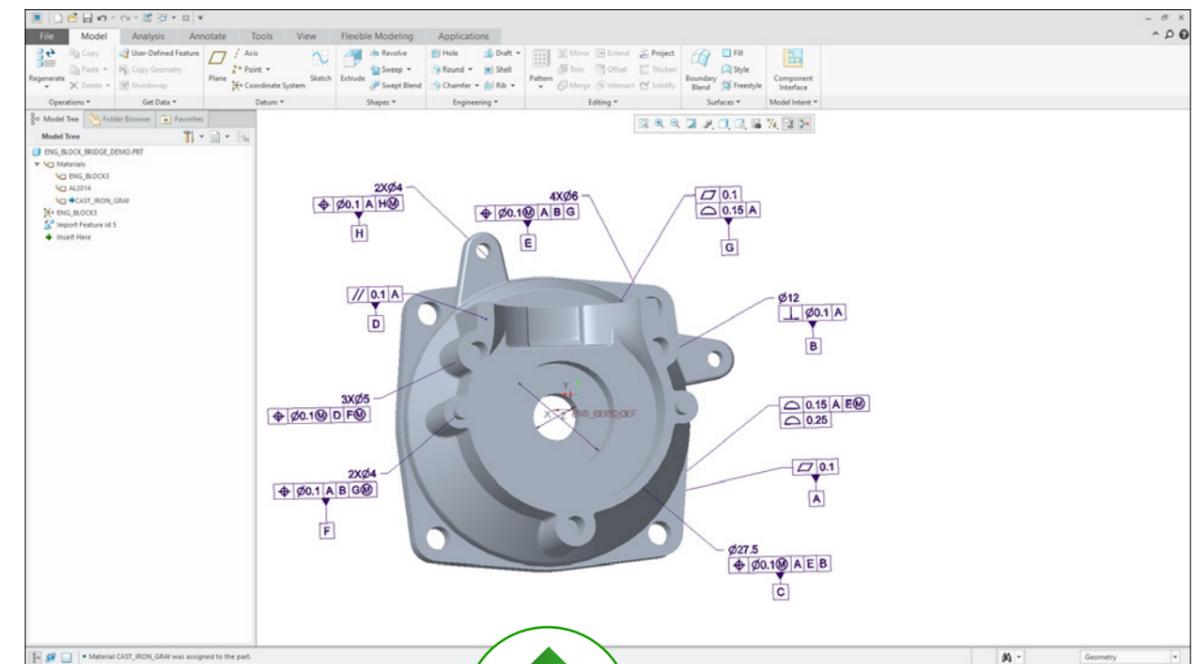
EVOLVE Design
CAD Bridge™

EVOLVE Design from KOTEM 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.

CAD software

EVOLVE Design
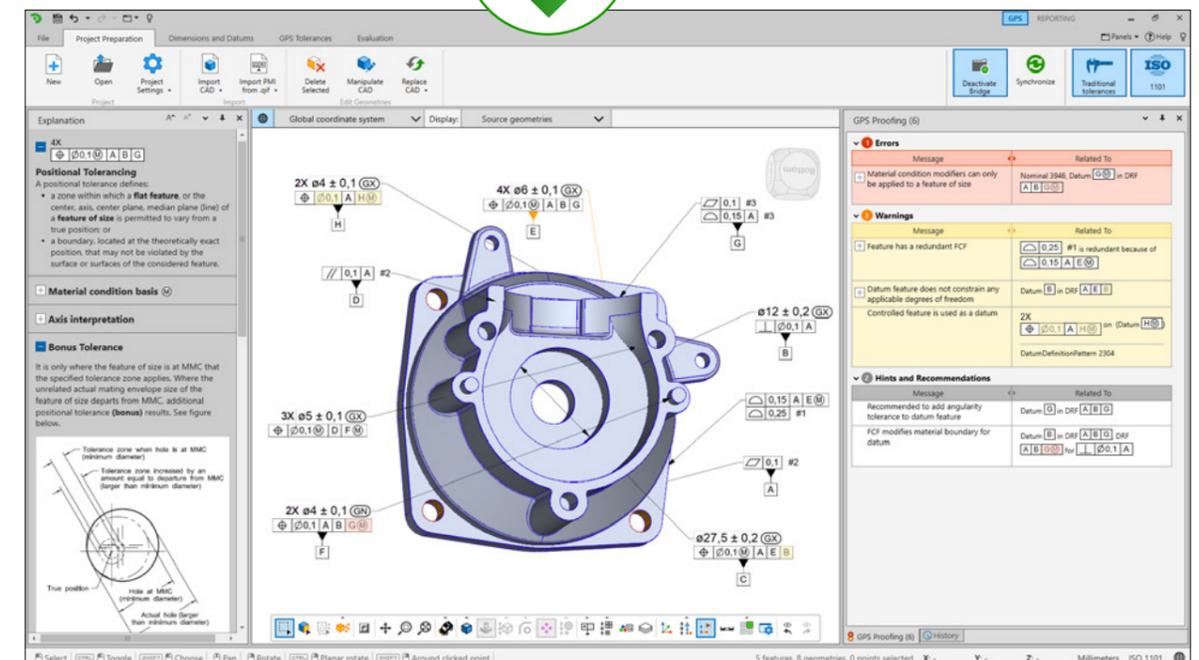
KOTEM

The leader in dimensional analysis software

KOTEM 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 is a Quality Vision International company.

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.kotem.com/evolve-suite

EVOLVE is fully compliant with all internationally accepted GD&T Standards:
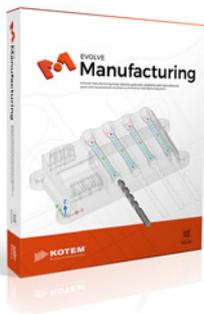
| ISO 1101 | ASME Y14.5M-1994 | ASME Y14.5-2009 | ASME Y14.5-2018 |

EVOLVE Suite

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

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