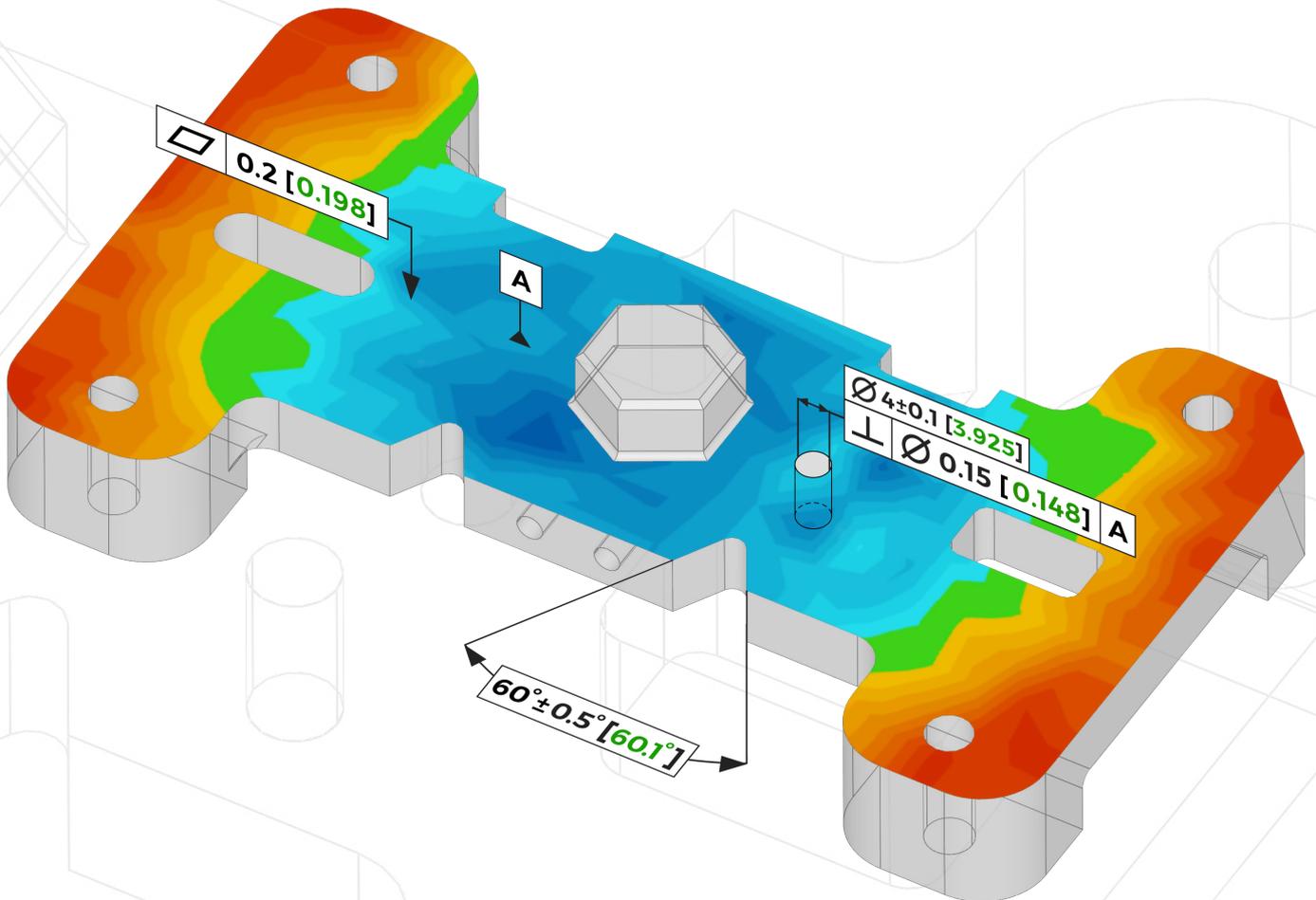




EVOLVE

# SmartProfile

*Comprehensive GD&T Evaluation Software  
for Manufacturing Quality Control*



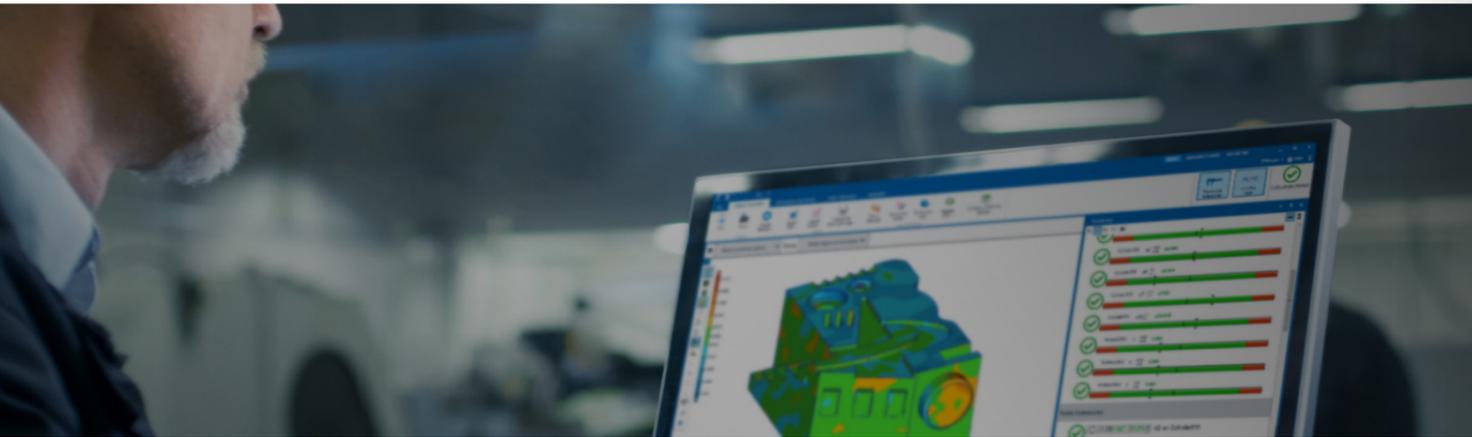
**EVOLVE Suite** Model-Based Family of Software





# EVOLVE SmartProfile

Comprehensive GD&T Evaluation Software for Manufacturing Quality Control

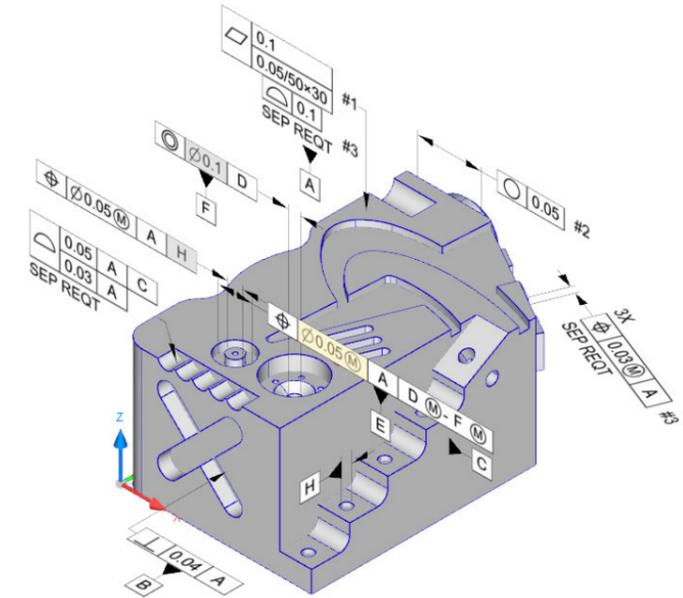


## Easy to Use GD&T Evaluation

### 1 Import CAD Model

EVOLVE SmartProfile can import various CAD file formats such as STEP, IGES, DXF, or QIF.

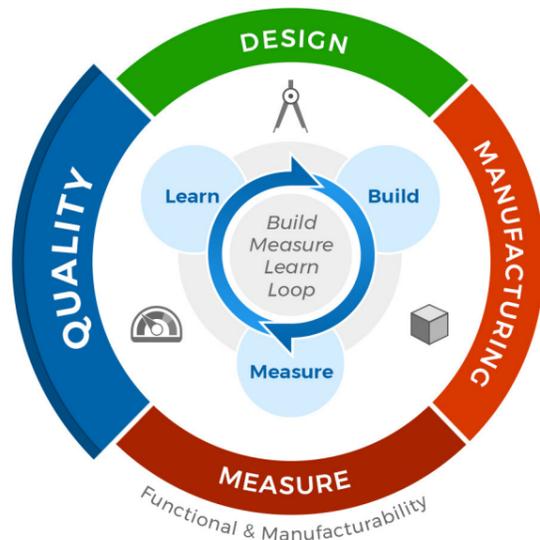
CAD models with PMI information can be imported from QIF (Quality Information Framework) files.



## EVOLVE Suite

EVOLVE is a model-based family of software that seamlessly connects Design, Production and Inspection Teams across a manufacturing enterprise. EVOLVE optimizes the design process, provides fully automatic GD&T evaluation for part acceptance, unparalleled manufacturing

setup, specific feedback and correction simulations enabling manufacturers to shorten product design/development time, normalize inspection and measurement techniques, improve process control, and manage product tolerances throughout the manufacturing process.



## EVOLVE SmartProfile

EVOLVE SmartProfile® from KOTEM is the world's leading dimensional analysis software used by manufacturers all around the world.

SmartProfile takes point clouds from part measurements performed on any measurement system, combines that data with the CAD model of the part and automatically runs GD&T evaluation.

The software's model-based interface naturally leads project workflow from importing data to generating the report.



**EVOLVE Design** helps designers with GD&T (GPS) specification by proofing the callouts and providing guidance on the standard.



**EVOLVE Manufacturing** helps identify systematic problems with manufactured parts and recommends solutions to minimize manufacturing errors.



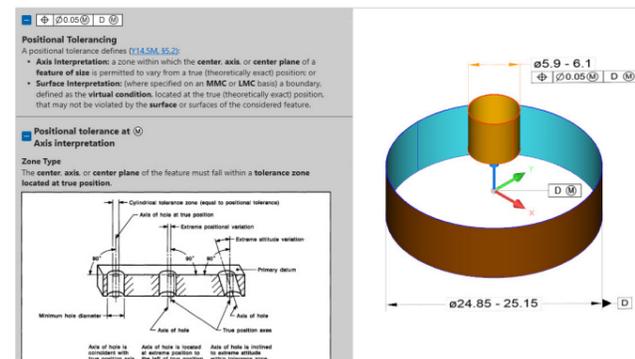
**EVOLVE SPC** is a full statistical process control software that can be used as either a standalone product with existing measuring systems or integrated into the EVOLVE Suite.

## 2 Define Tolerances

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

The built-in Explanatory system always shows relevant information from the current context.

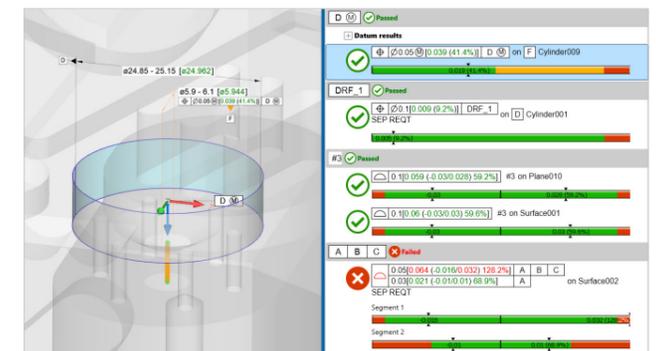
SmartProfile supports enhanced GD&T callouts including: multi-tier tolerances, compound datums, simultaneous & separate requirements, and more.



## 3 Evaluate GD&T

Import measured point clouds from any measuring device: CMM, laser scanner, CT and others. Process the point cloud using Data Preparation tools when necessary.

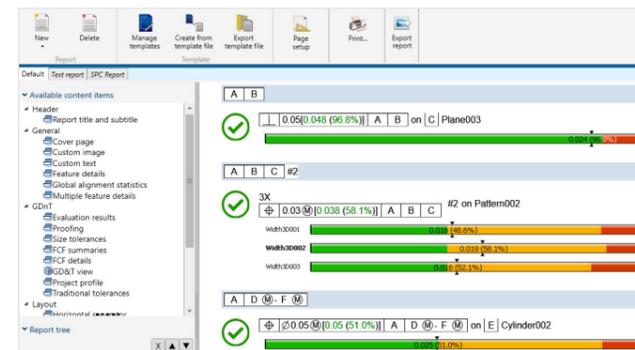
Evaluate the whole GD&T project with one-click. Using EVOLVE SmartProfile eliminates results variability caused by different evaluation techniques and human interpretation.



## 4 Save Results

Custom graphical and text reports can be easily created from the results and they can be exported into Excel, PDF, text and other file formats.

The project can be saved for future reference and can be imported into other EVOLVE products.



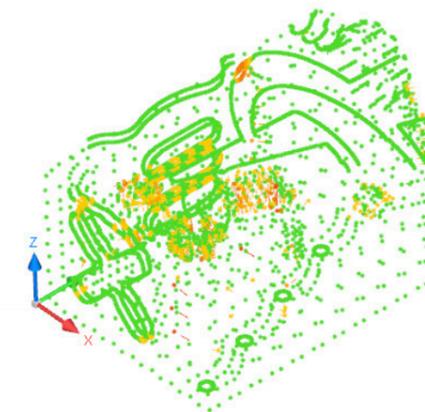
EVOLVE SmartProfile's

# Data Preparation Tool

Data Preparation allows importing and handling of scan measurements with large numbers of points.

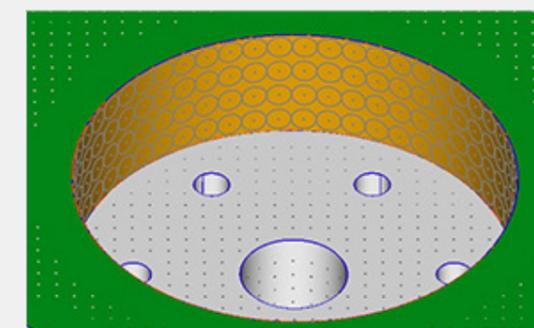
## Deviation Coloring

Deviation Coloring while processing points: source vs. result coloring or CAD vs. result point deviation coloring.



## CMM-like Sampler

A CMM-like Sampler tool for extracting reliable representative surface points from dense and noisy point clouds.



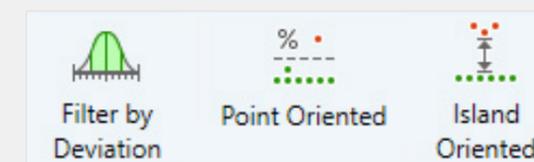
## Noise Reduction

Noise Reduction enhanced with surface and curve based options, depending on the point structure.



## Filter by Deviation

Filter by Deviation tool for eliminating outliers, islands and unnecessary points based on the deviation from the CAD model.



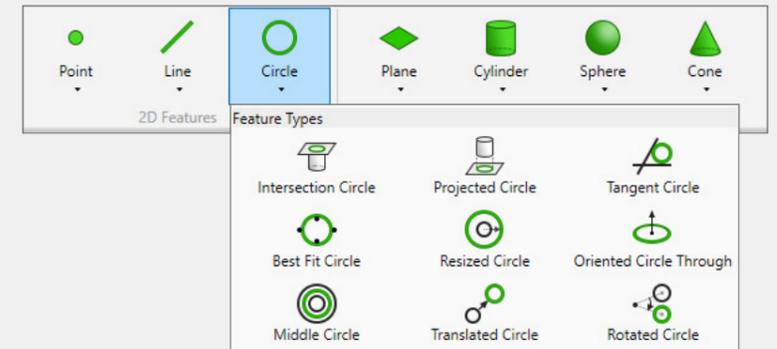
# EVOLVE SmartProfile's Features



Construct features, define distances, visualize deviations and do much more with SmartProfile.

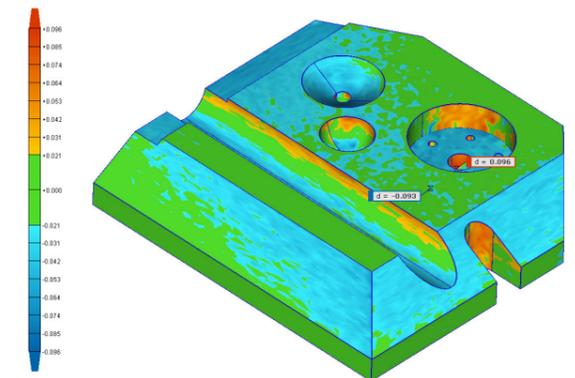
## Constructions

Construct new features from existing CAD geometries.



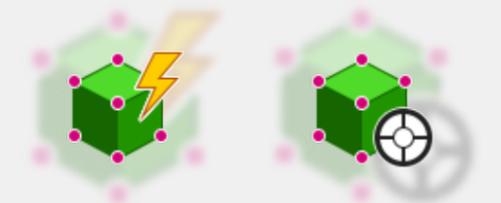
## Best-Fit Alignment

Best-Fit Alignment deviation mode supports the ability to visualize sample deviations on a color map, locate deviation labels and document those deviations as part of the completed report.



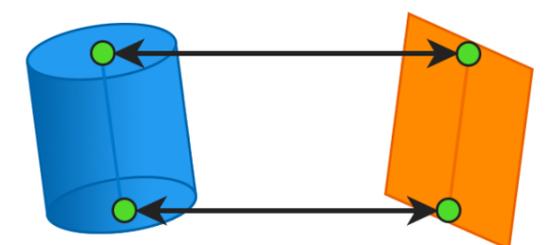
## Quick Align

Enhanced Quick Align and Finalize Assignment algorithms automatically detect outliers resulting in a much more robust and proper fit.



## Traditional Tolerances

Define plus-minus distances and angle tolerances between two arbitrary features.





# KOTEM

The leader in dimensional analysis software

KOTEM is the worldwide leader in dimensional analysis software. Our family of advanced GD&T and fitting software helps manufacturers integrate quality inspection data with their manufacturing and design work flows. 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 optical, electronic and software technologies for vision and multisensor measuring systems.

To learn more about the EVOLVE family go to [www.kotem.com/evolve-suite](http://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