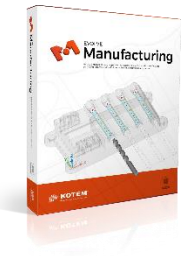
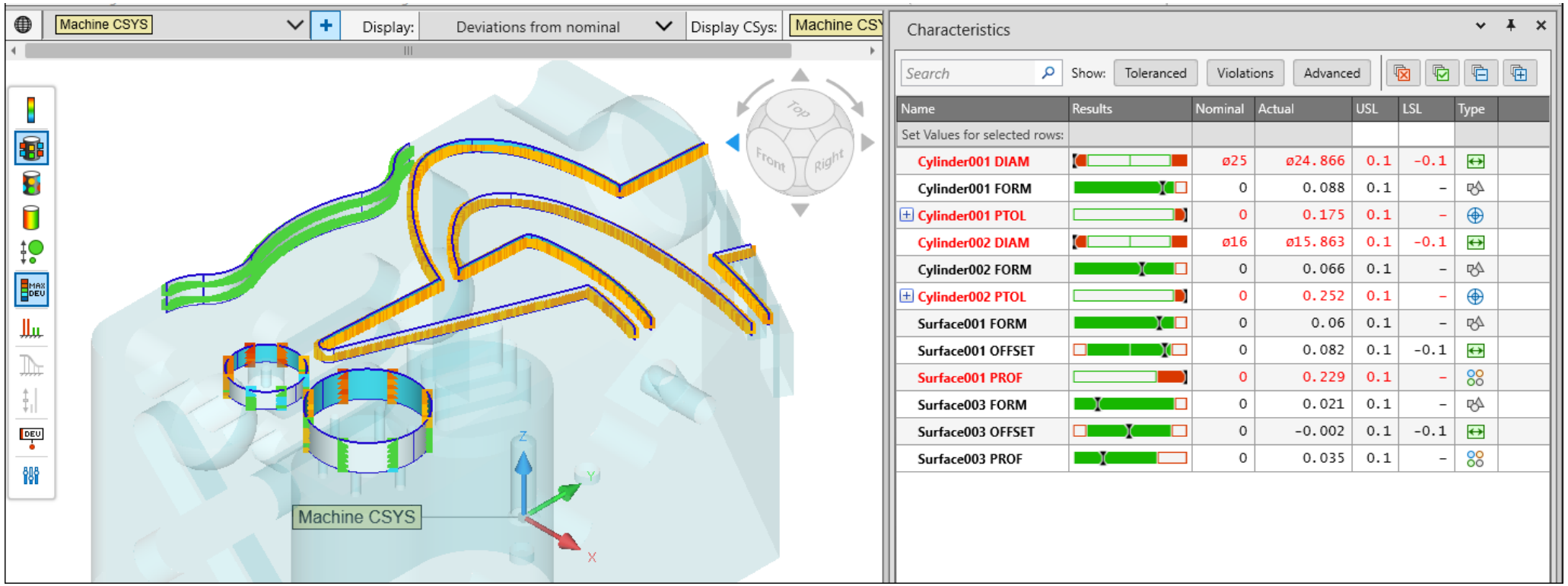
What’s new in EVOLVE Manufacturing 6.0?

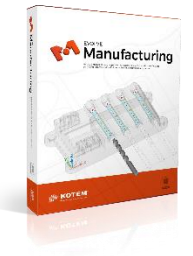
Manufacturing Characteristics



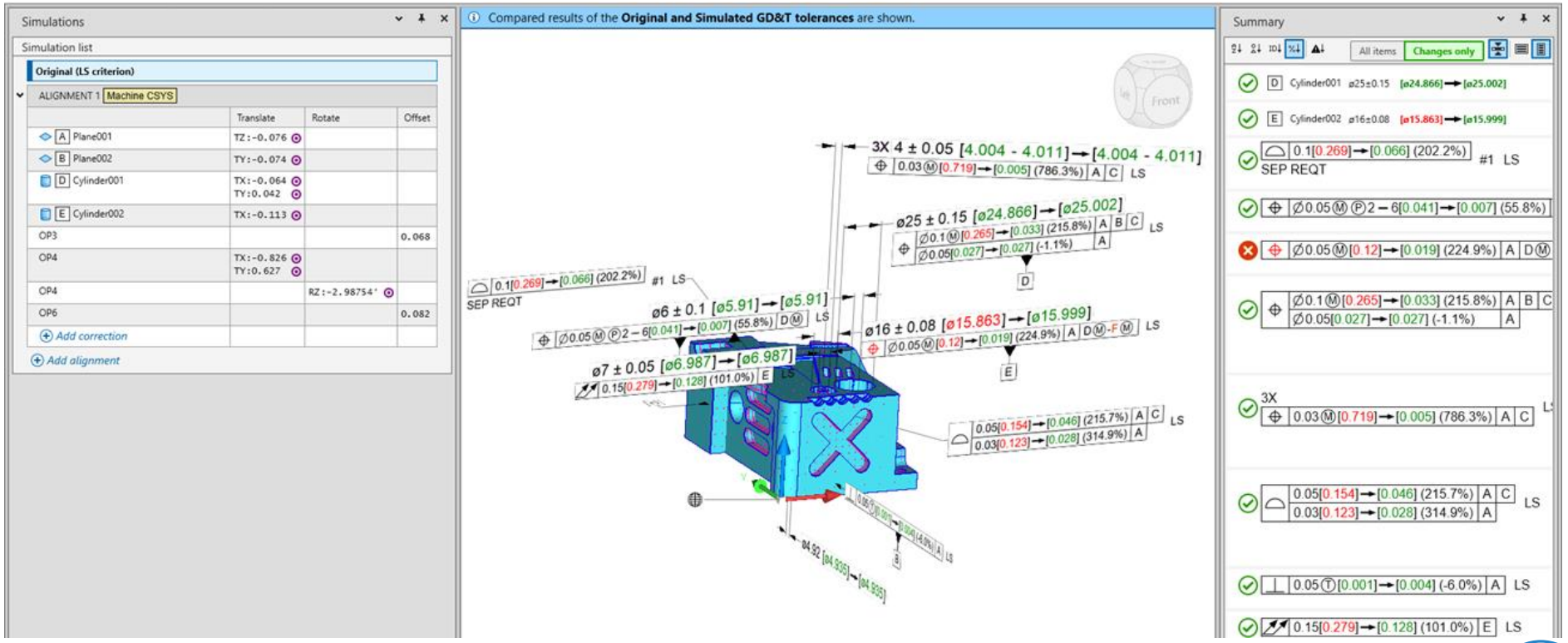
Ability to create Manufacturing Characteristics (manufacturing tolerances) in order to control the manufacturing process and see if any interaction is needed.



Simulation

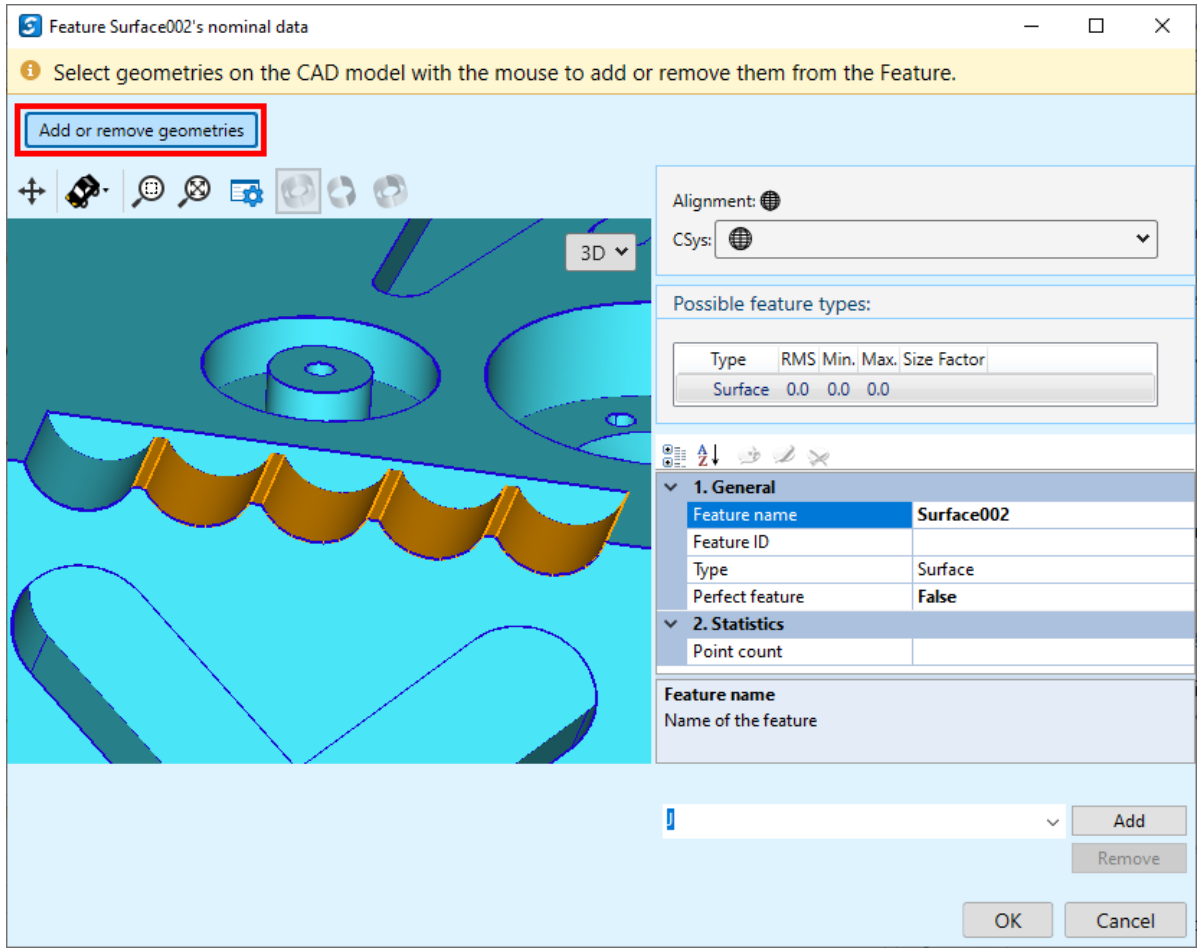


The new **Simulation** function helps to find the Manufacturing correction values which makes the functional part correct, i.e. it minimizes the results of the GD&T/GPS tolerances.



Feature manipulation

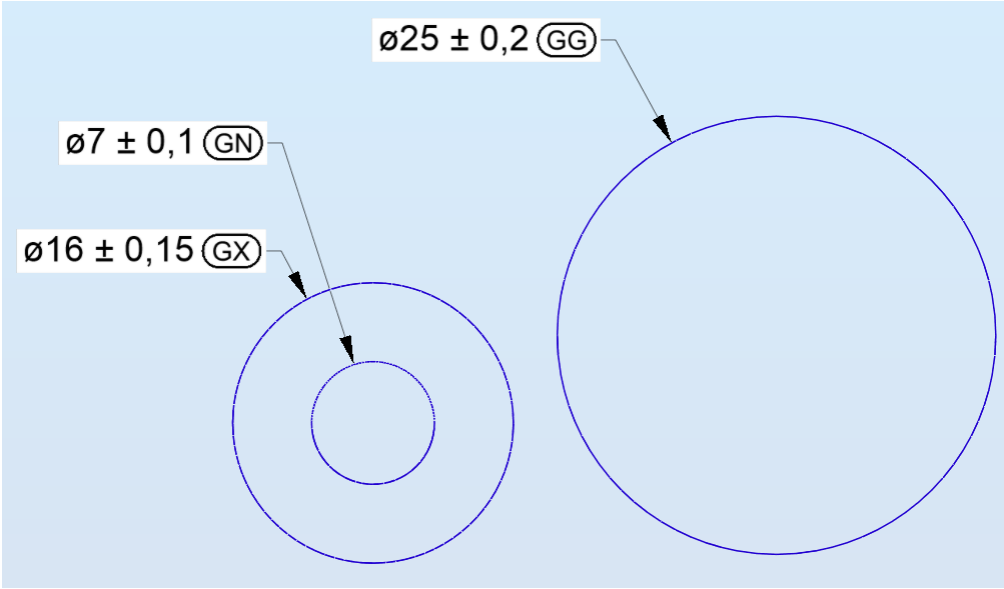
The existing features can be edited by adding or removing CAD geometries.



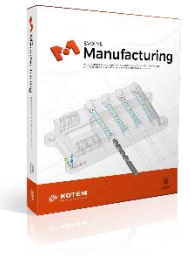
ISO 1101 improvements

Supporting ISO association symbols for size tolerances:

- GG - **Least-squares** association criterion
- GX - **Maximum inscribed** association criterion
- GN - **Minimum circumscribed** association criterion



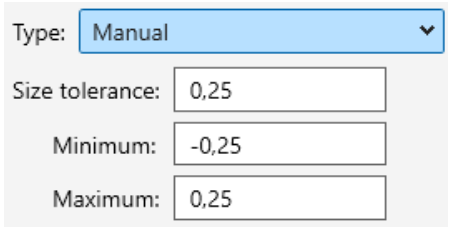
General tolerancing



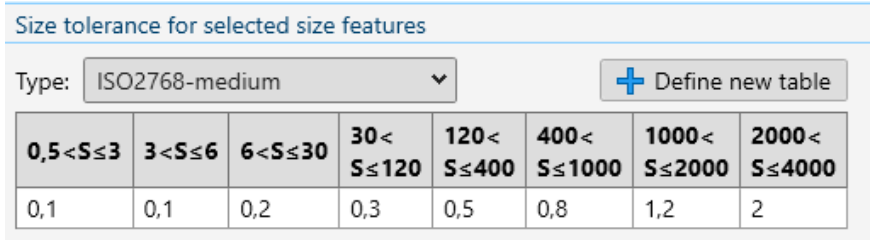
Ability to easily define general tolerances over the non-toleranced CAD geometries.

General size tolerance:

- Common size tolerance for every non-toleranced size feature regardless of nominal size



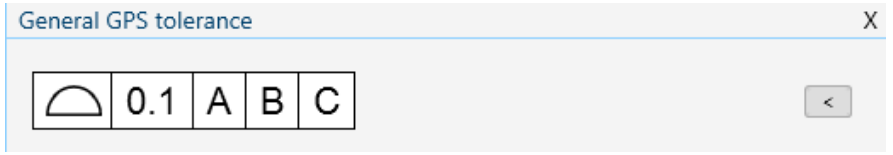
- Applying a tolerance table:
  - Tolerance value depends on the nominal size
  - Using default tables of ISO 2768



0,5<S≤3	3<S≤6	6<S≤30	30< S≤120	120< S≤400	400< S≤1000	1000< S≤2000	2000< S≤4000
0,1	0,1	0,2	0,3	0,5	0,8	1,2	2

General GD&T/GPS tolerance:

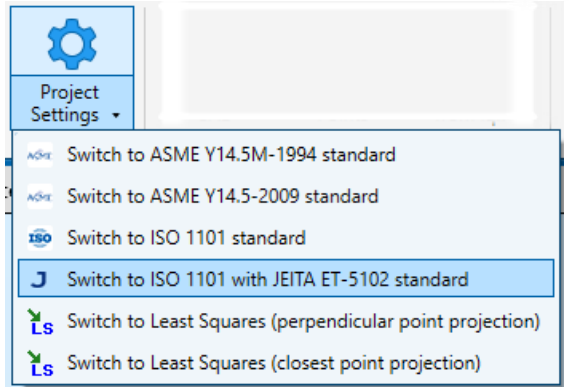
General profile tolerance can be defined to all of the non-toleranced geometries



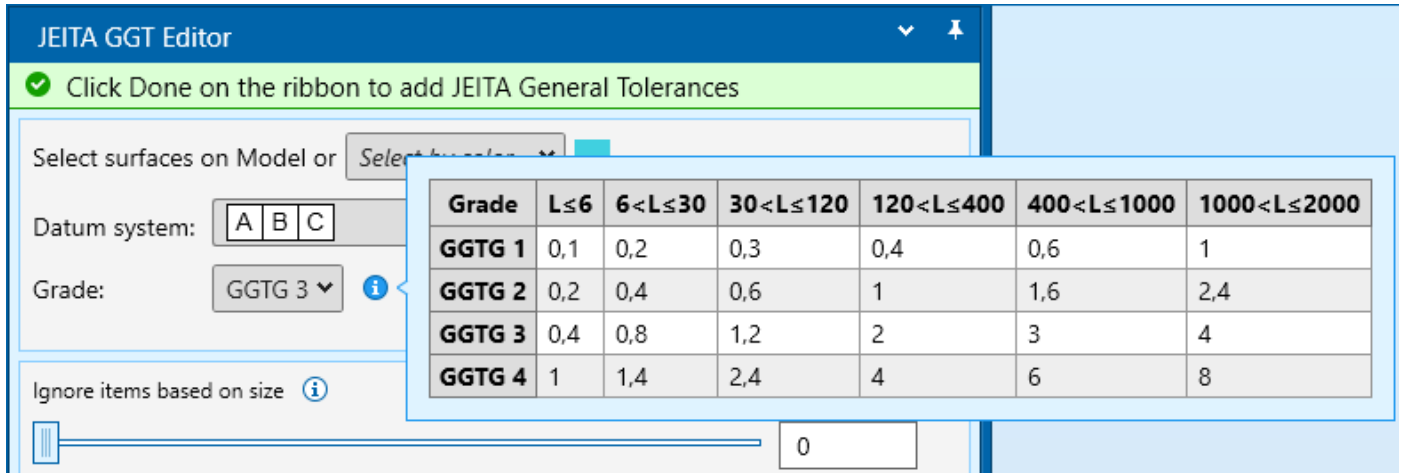
JEITA General tolerance

ISO 1101 with JEITA ET-5102 standard is available in v6.0.

JEITA (Japan Electronics and Information Technology Industries Association) ET-5102 is a general tolerancing standard.



It allows to define general tolerances over the non-toleranced CAD geometries based on the selected grade.



Grade	L≤6	6<L≤30	30<L≤120	120<L≤400	400<L≤1000	1000<L≤2000
GGTG 1	0,1	0,2	0,3	0,4	0,6	1
GGTG 2	0,2	0,4	0,6	1	1,6	2,4
GGTG 3	0,4	0,8	1,2	2	3	4
GGTG 4	1	1,4	2,4	4	6	8

New Constructed features

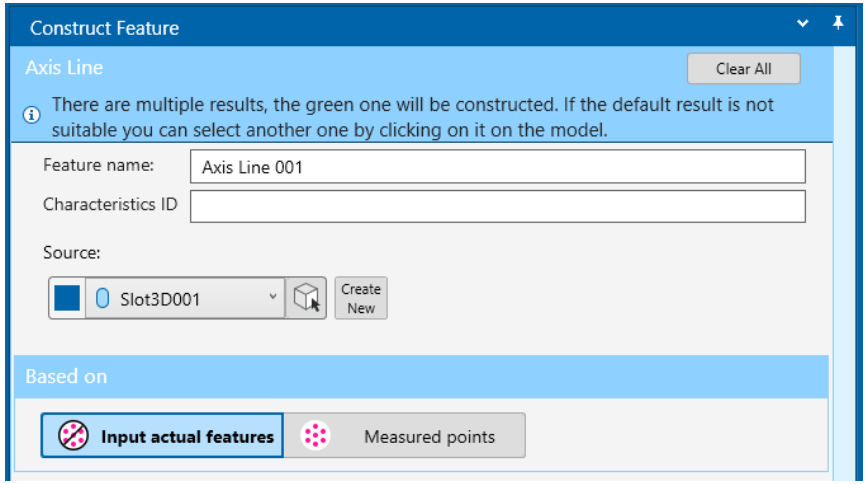
Version 6 supports the construction of

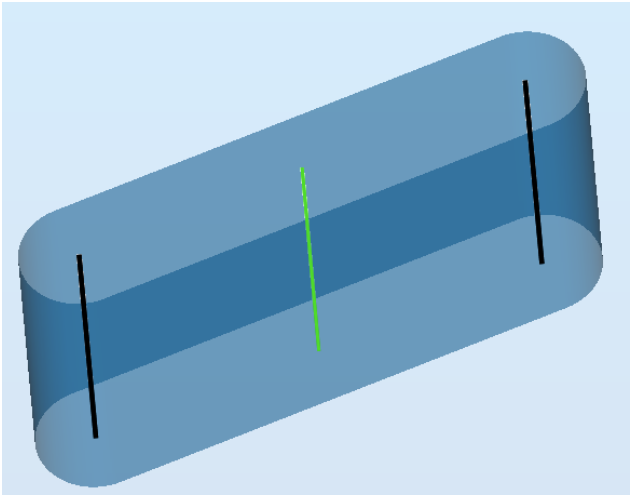
- **Midplane** of slots and widths

- **Axis Line** of slots

- **Tangent cylinder** to
  - two cylinders
  - a cylinder and a plane
  - two planes

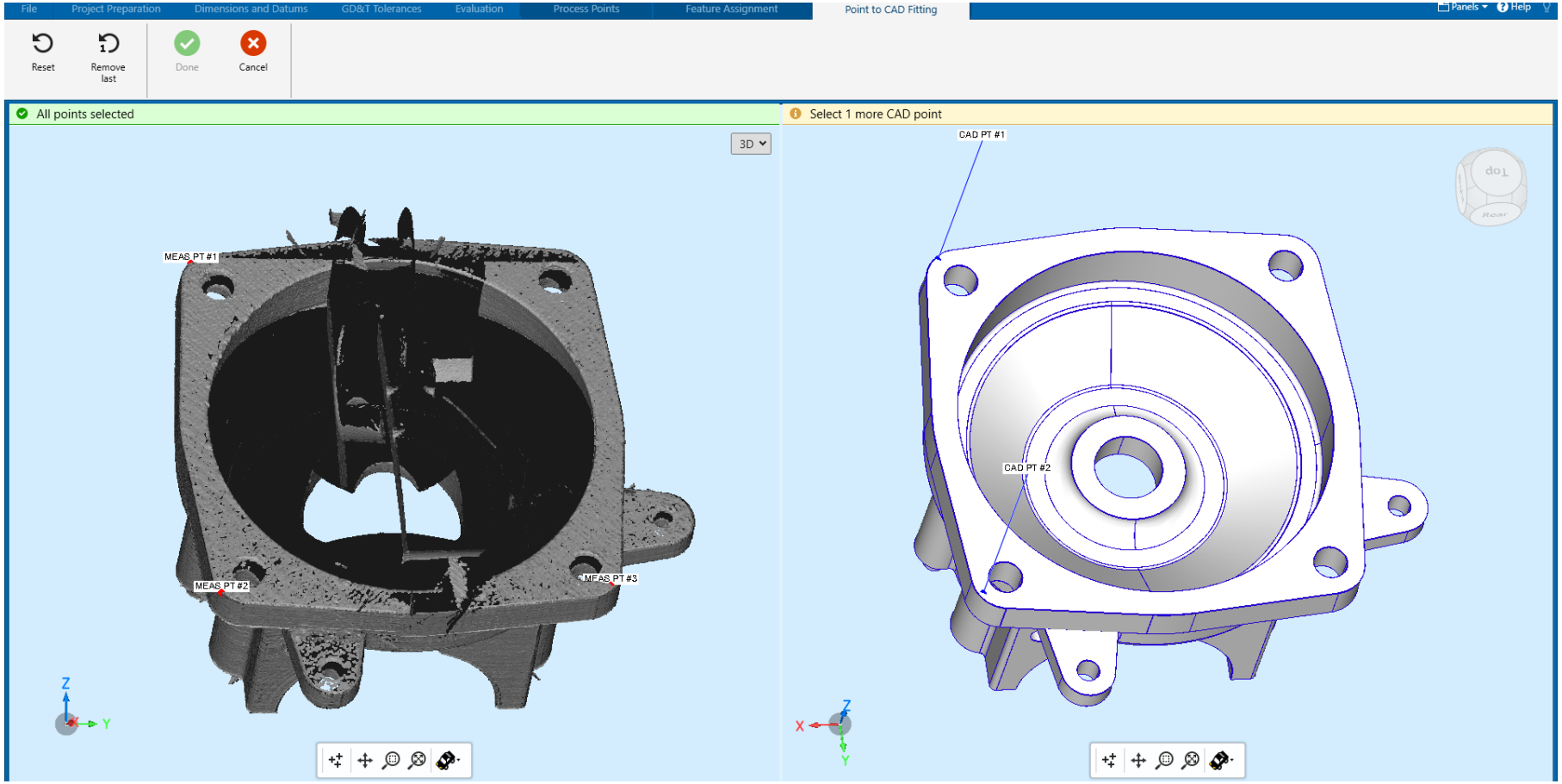
- **Tangent sphere** to cones





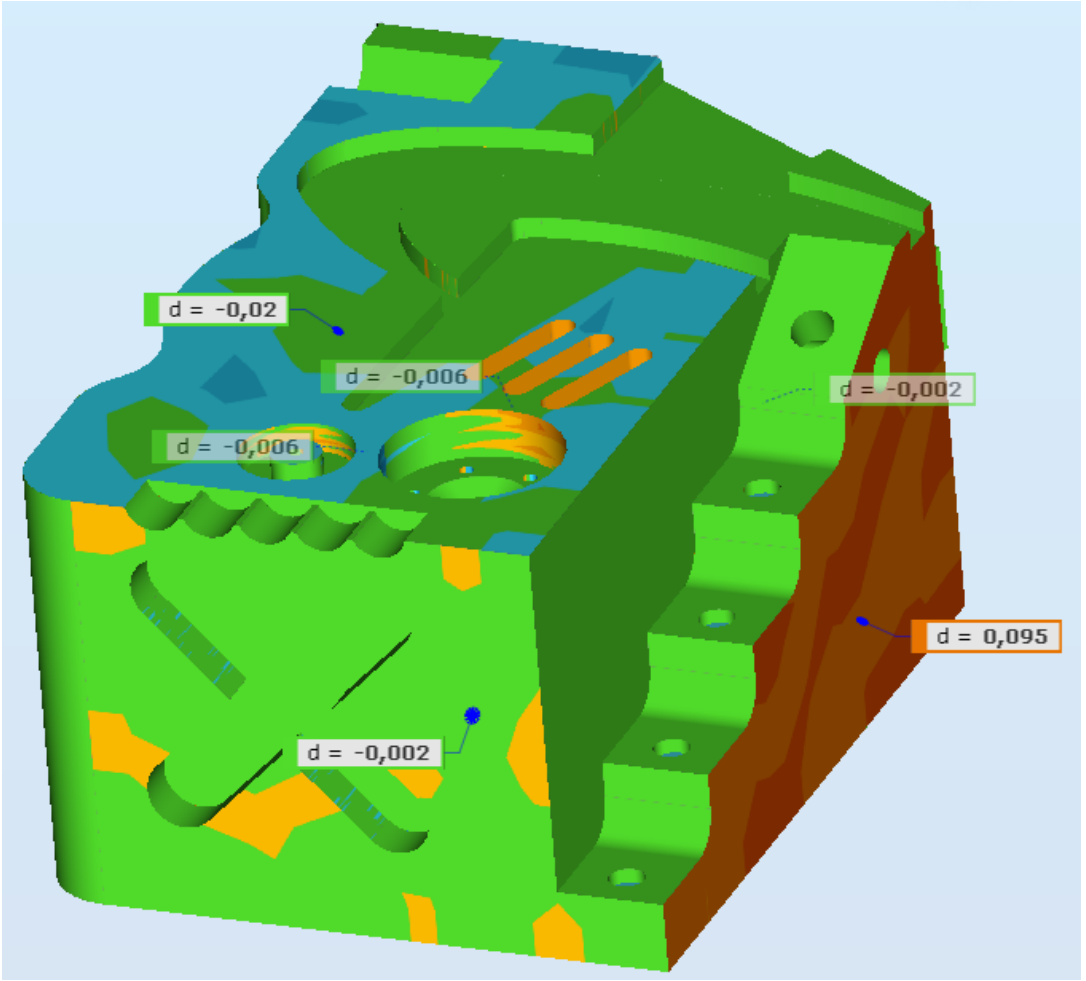
Point to CAD fitting

Separate views for points and CAD makes the selection easier



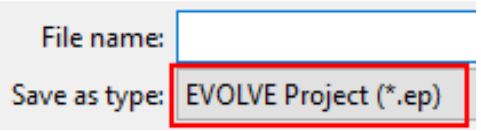
Deviation label visualization

Deviation labels belonging to hidden points are transparent in the graphics view.



Further enhancements

- New generic file format for the whole EVOLVE Suite:
  .EP (Evolve Project)



Free ResultViewer can open all .EP files regardless of the source product.

- Enhanced 'Dark UI Theme' for all products
- Improved language support
- Advanced installer and licensing for all products
- New and updated product videos: https://vimeo.com/kotem/

Further enhancements

- Faster loading of the project files (performance improvement)
- Enhanced QIF v3.0 PMI import and export
- CMM points with tip radius are supported by all point filters
- Global alignment deviation values can be exported into Text report
- Updated Evolve Capture utility for scanning with new ShapeGrabber sensors
- Quick and easy view manipulation in 3D (NaviCube)