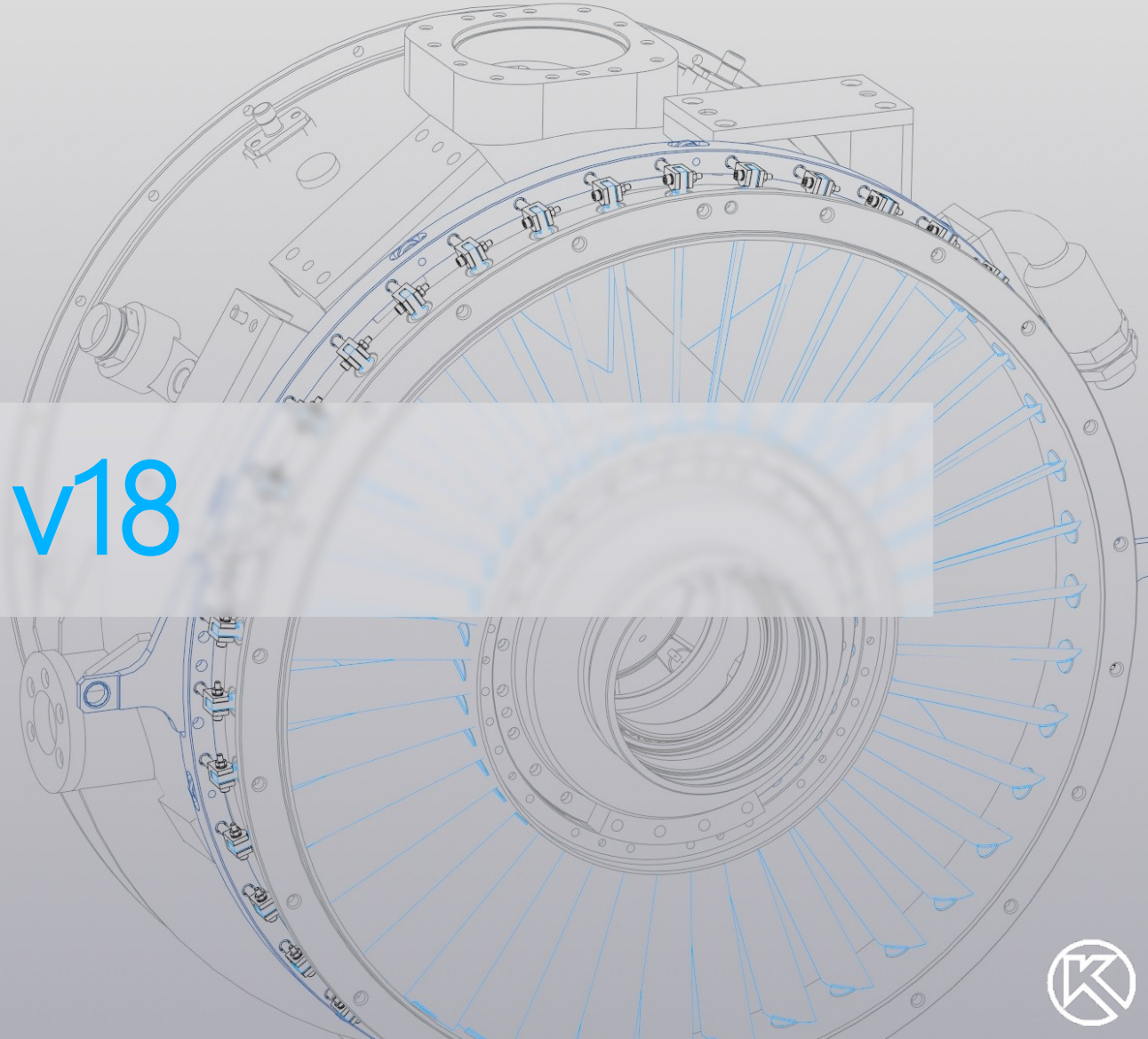
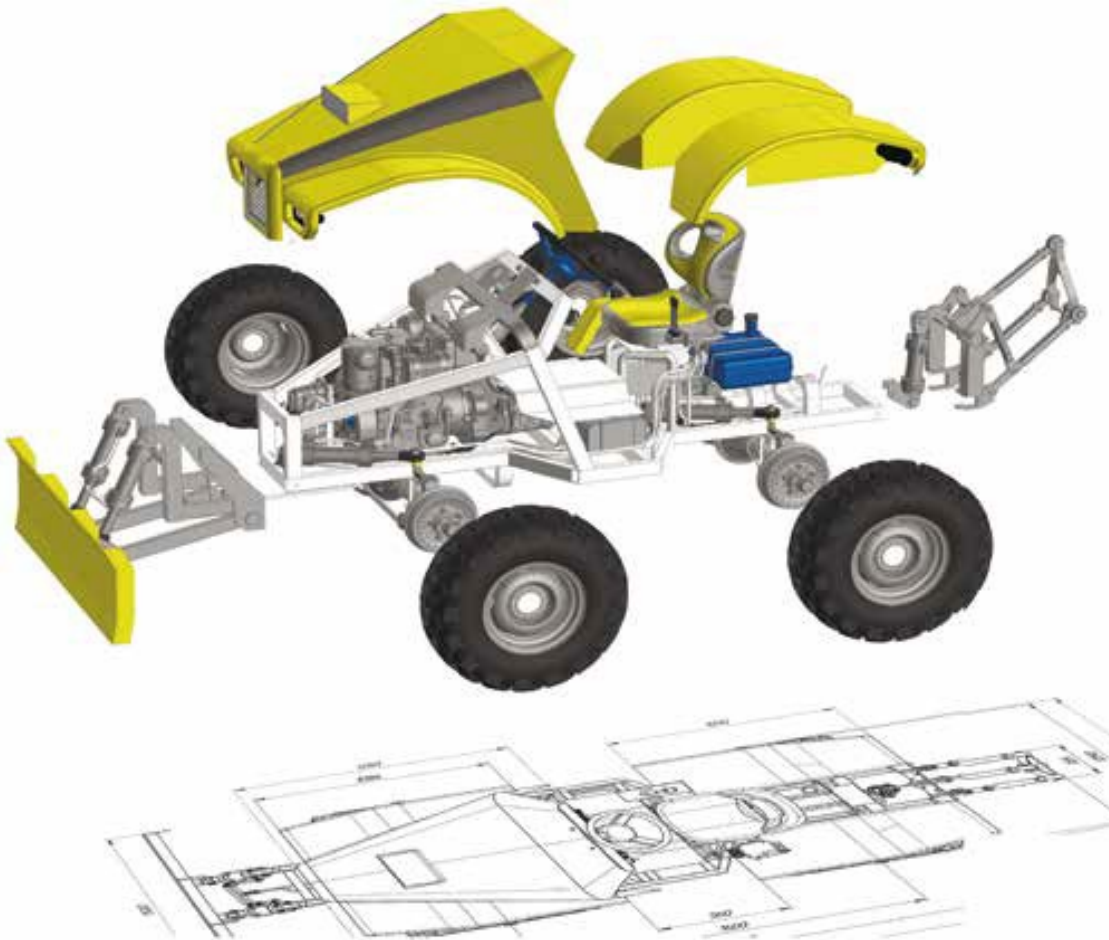
KOMPAS-3D v18



C3D [Inside]

Key features and benefits

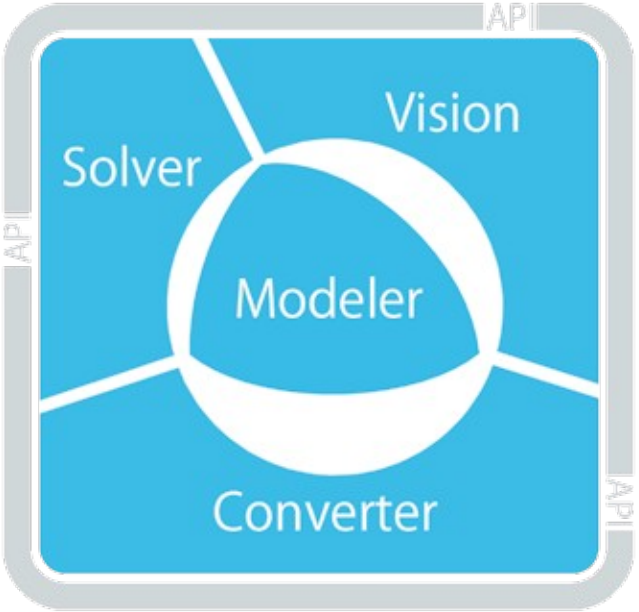
The KOMPAS MCAD Solution



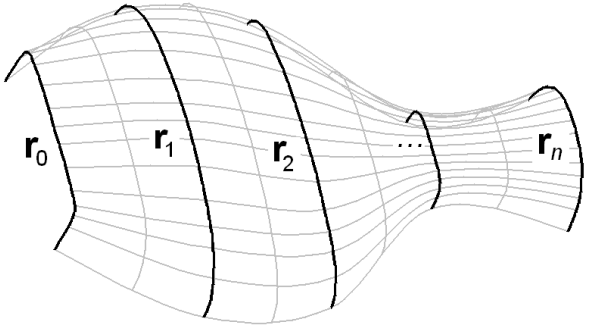
KOMPAS-3D is a mechanical CAD solution for parametrically designing parts and assemblies as 3D solid models.

Designers use KOMPAS-3D to develop effective industrial products, and to generate design and drafting documentation.

Mathematical Core



- The mathematical core of KOMPAS-3D is developed completely by ASCON in-house programmers.
- The core of KOMPAS-3D uses no libraries or other elements from any other developers.
- The core of KOMPAS-3D was developed with C++ in Microsoft Visual Studio.



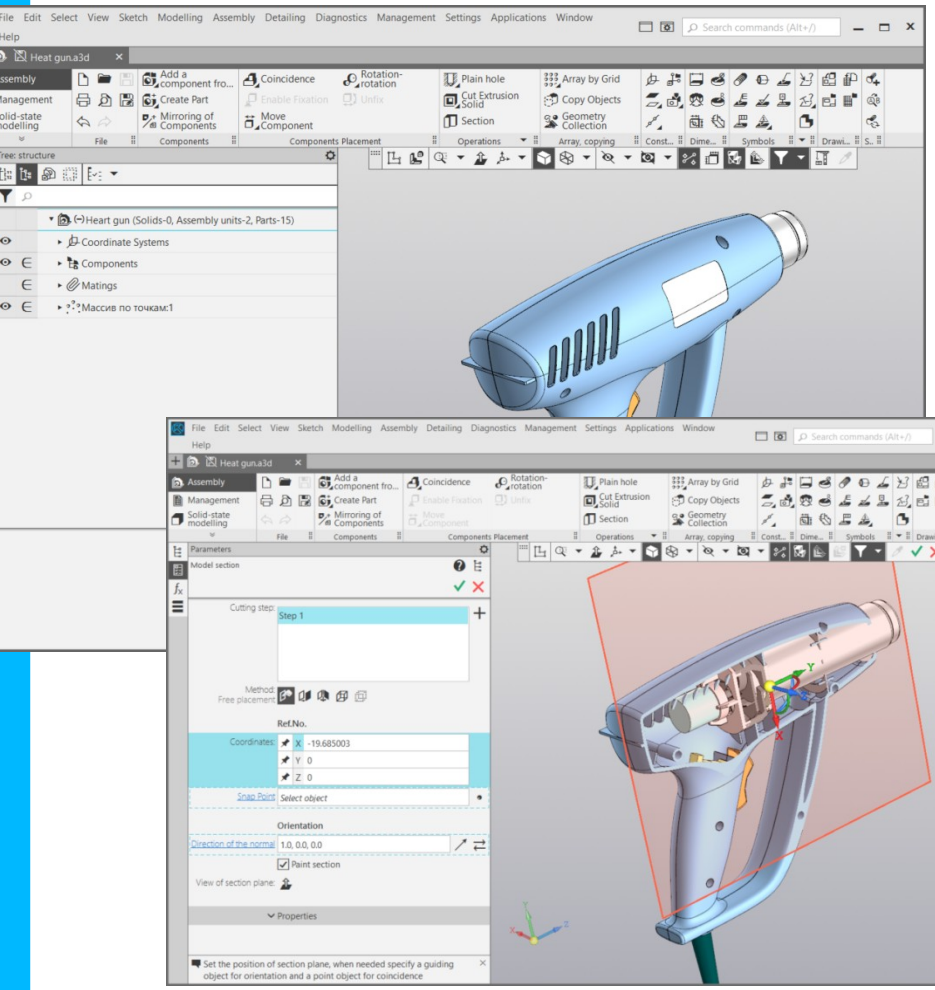
$$\mathbf{r}_1(u_1,v_1) = \mathbf{p} + r\cos u_1\mathbf{i}_x + r\sin u_1\mathbf{i}_y + h\,v_1\mathbf{i}_z$$
$$0 \le u_1 \le 2\pi, \quad 0 \le v_1 \le 1.$$

$$\mathbf{r}_2(u_2,v_2) = \mathbf{p} + u_2\mathbf{i}_x + v_2\mathbf{i}_y.$$
$$\mathbf{r}_3(u_3,v_3) = \mathbf{p} + u_3\mathbf{i}_x + v_3\mathbf{i}_y + h\,\mathbf{i}_z.$$

$$\mathbf{e}_{13}(t) = \begin{cases} \mathbf{r}_1(t,h) \\ \mathbf{r}_3(r\cos t, r\sin t) \end{cases}$$

$$e_{11}(t) = \begin{cases} r_1(0,ht) \\ r_1(2\pi,ht) \end{cases} \qquad \mathbf{e}_{12}(t) = \begin{cases} \mathbf{r}_1(t,0) \\ \mathbf{r}_2(r\cos t, r\sin t) \end{cases}$$

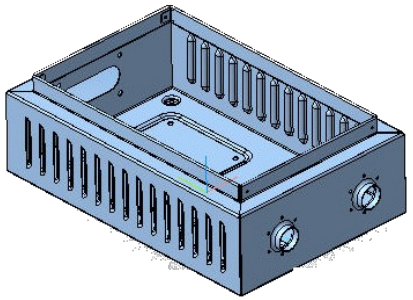
Interface

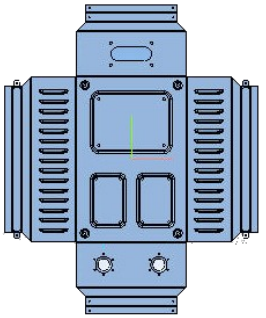


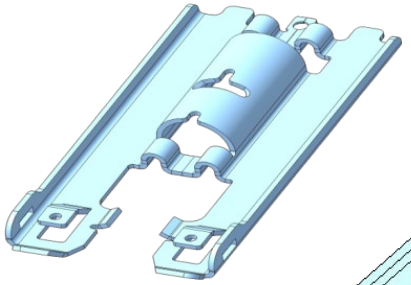
- The easy-to-learn and use features of Kompas-3D provides a unique experience for beginners in computer-aided drafting and modelling.

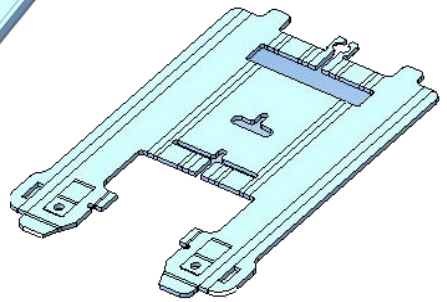
Designers work quickly and comfortably with its convenient and intuitive interface

Powerful Sheet Metal Functions







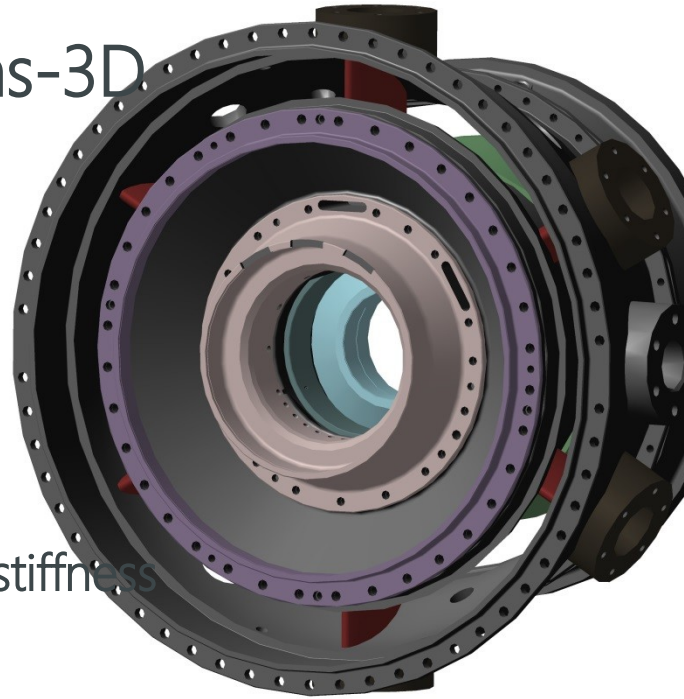


KOMPAS-3D rich collection of sheet metal modeling functions include bends, holes, louvers, fillets, punching (stamping), cuts, and cap closing of sheet metal bodies.

When the electro-mechanical designer is finished, KOMPAS-3D unwraps the sheet metal model, creating associative drawings of the unwrapped design.

Powerful 3D Modelling

All needed solid modeling functions in Kompas-3D for 3D mechanical design



- Powerful sketching mode
- Common geometric functions
  - Extrusion, cut, revolve, loft, sweep, and more
  - Structural elements, such as chamfers, fillets, holes, stiffness elements, thin-walled shells and more
- Boolean operations
- 3D patterning
- And more

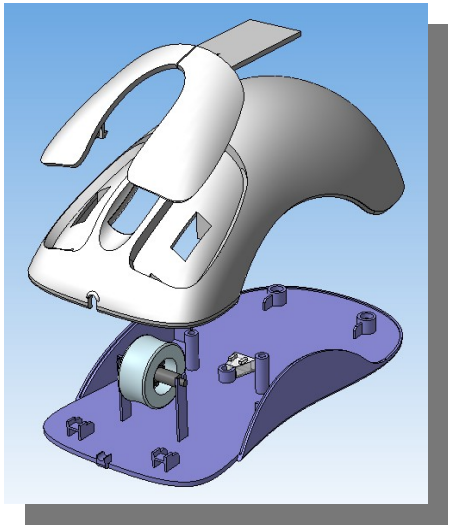
Advanced Surface Modelling

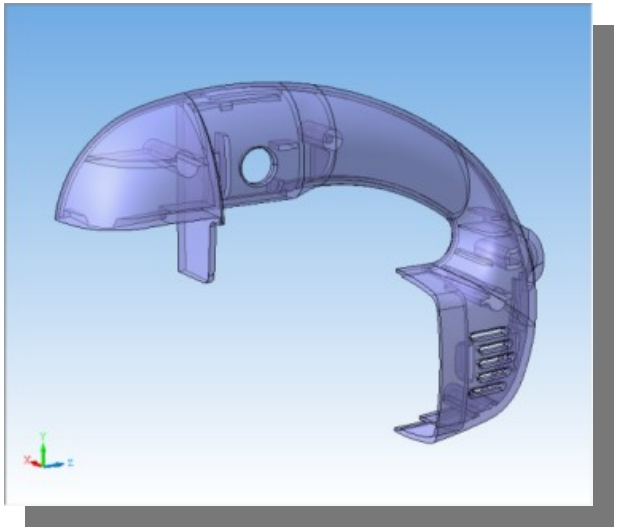
Advanced surface modelling:

Powerful tools for 3D sketching

Complex 3D curves

Advanced surface features





Collaboration

	2D Designs	3D Models	Text documentation, BOM
Import	DXF, DWG, IGES®, TIFF, GIF, JPEG, BMP, PNG, TGA	DXF, DWG, IGES®, STEP-242, JT, SAT, Parasolid	ASCII (DOS), ANSI (Windows) text file, RTF files, TIFF, GIF, JPEG, BMP, PNG, TGA
Export	DXF, DWG, 2D IGES®, e-drawing, TIFF, GIF, JPEG, BMP, PNG, TGA	IGES®, SAT, Parasolid, STEP, VRML, STL, e-drawing, TIFF, GIF, JPEG, BMP, PNG, TGA	ASCII (DOS), ANSI (Windows) text file, RTF, DBF, Microsoft Excel, TIFF, GIF, JPEG, BMP, PNG, TGA

- Easy collaboration and integration
- All basic CAD formats supported
- Free data exchange with 3D Model Recognition System

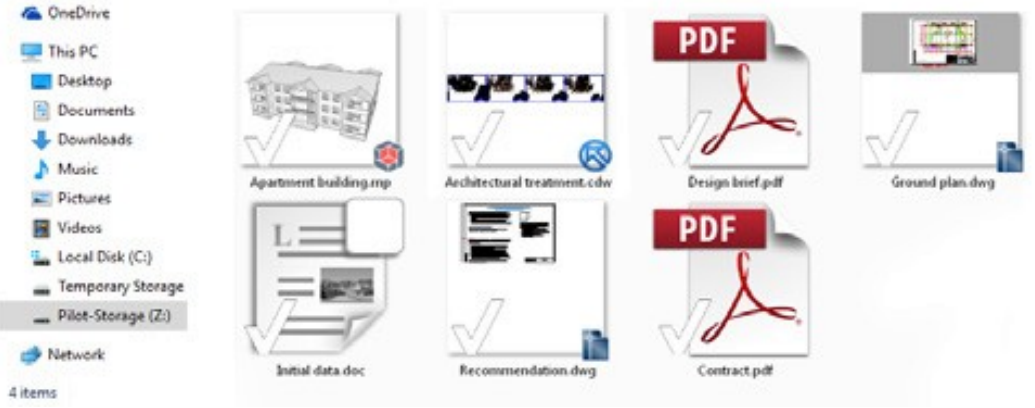
Areas of application

3D Storage

3D Storage enables team operations with your data. To collaborate with 3D Storage, you need to install Pilot-Server and Pilot-myAdmin.

Please consider the information below before the installation. We hope this helps to avoid possible issues and allows you to get started quickly. Only users with OS administration rights can install the system's components.

Two 3D-Storage connections to Pilot Server (five for Linux) become available free, right after installing it. For more licenses, please contact your local ASCON software reseller.

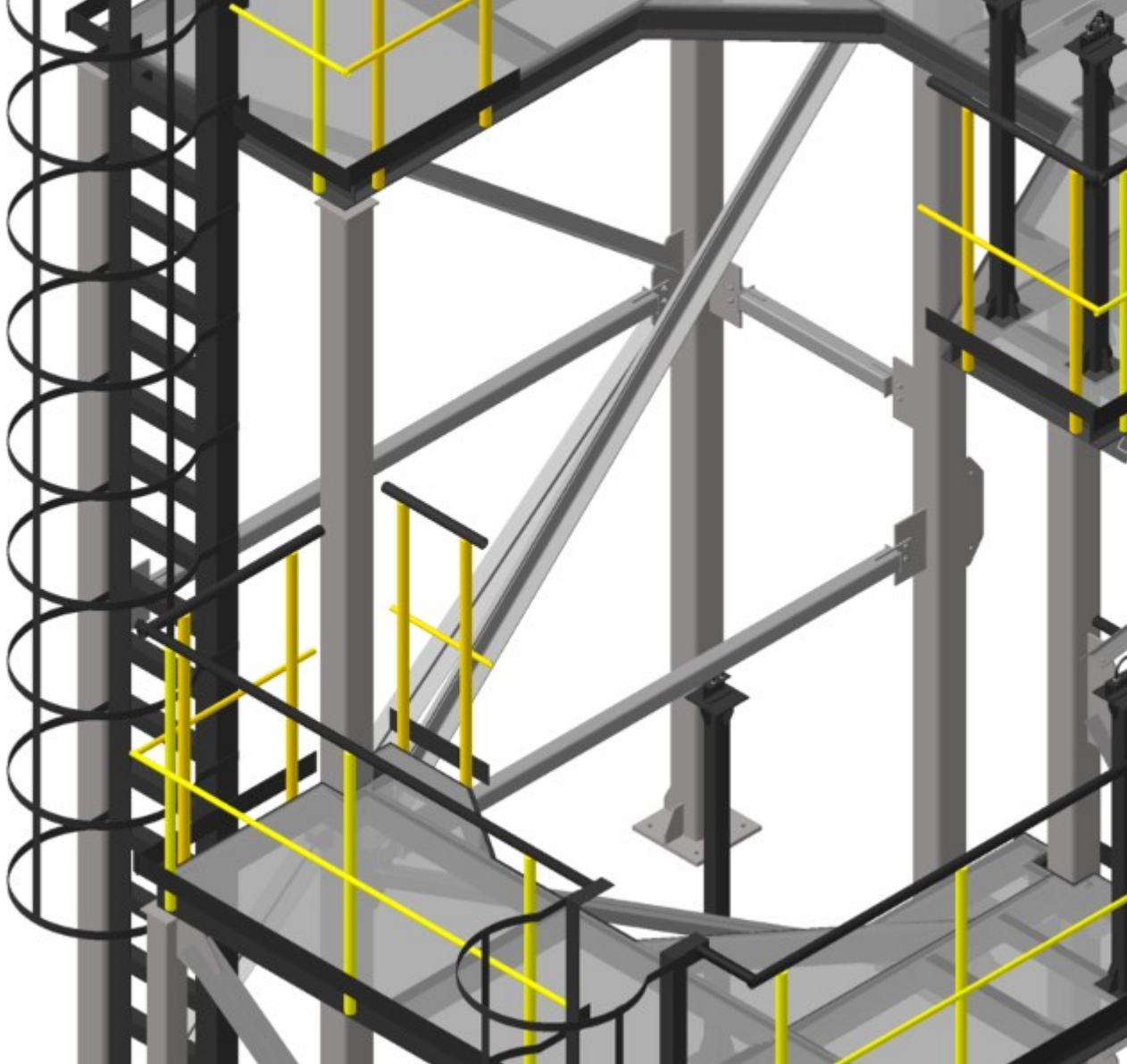


3D Pipelines

- Builds pipeline models along and creates insets and angles automatically
- Builds isometric diagrams of pipeline models, with the elements
- Generates reports on all of the pipeline's parameters

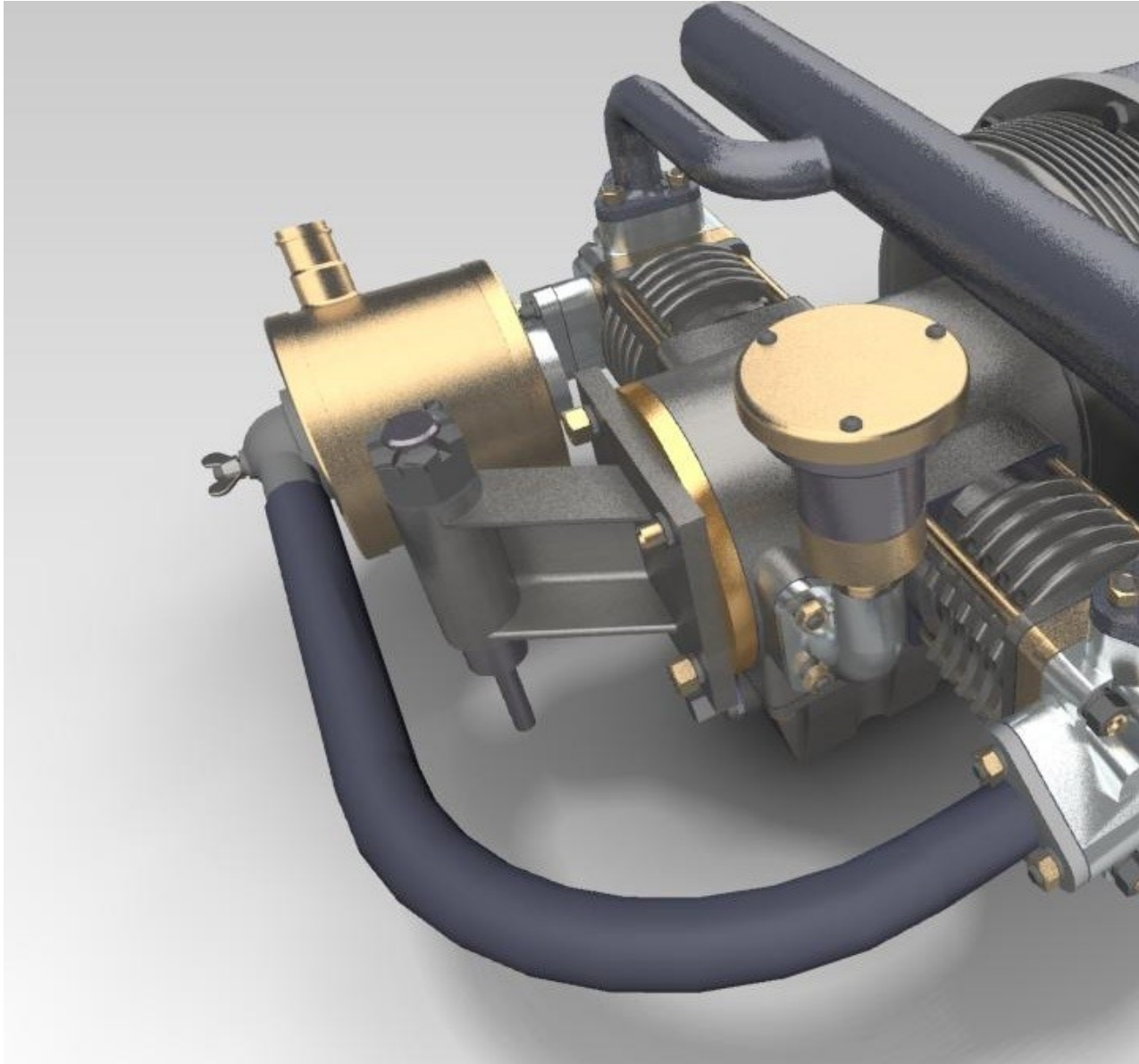
Steel Structure Design

The 3D Steel Structures add-in for KOMPAS-3D that helps automate the design of steel and other type of metal construction made from rolled profiles.
This steel design add-in is the perfect solution for designing steel frames and industrial structures.



Artisan Rendering

Get photorealistic
images of your projects



Photorendering

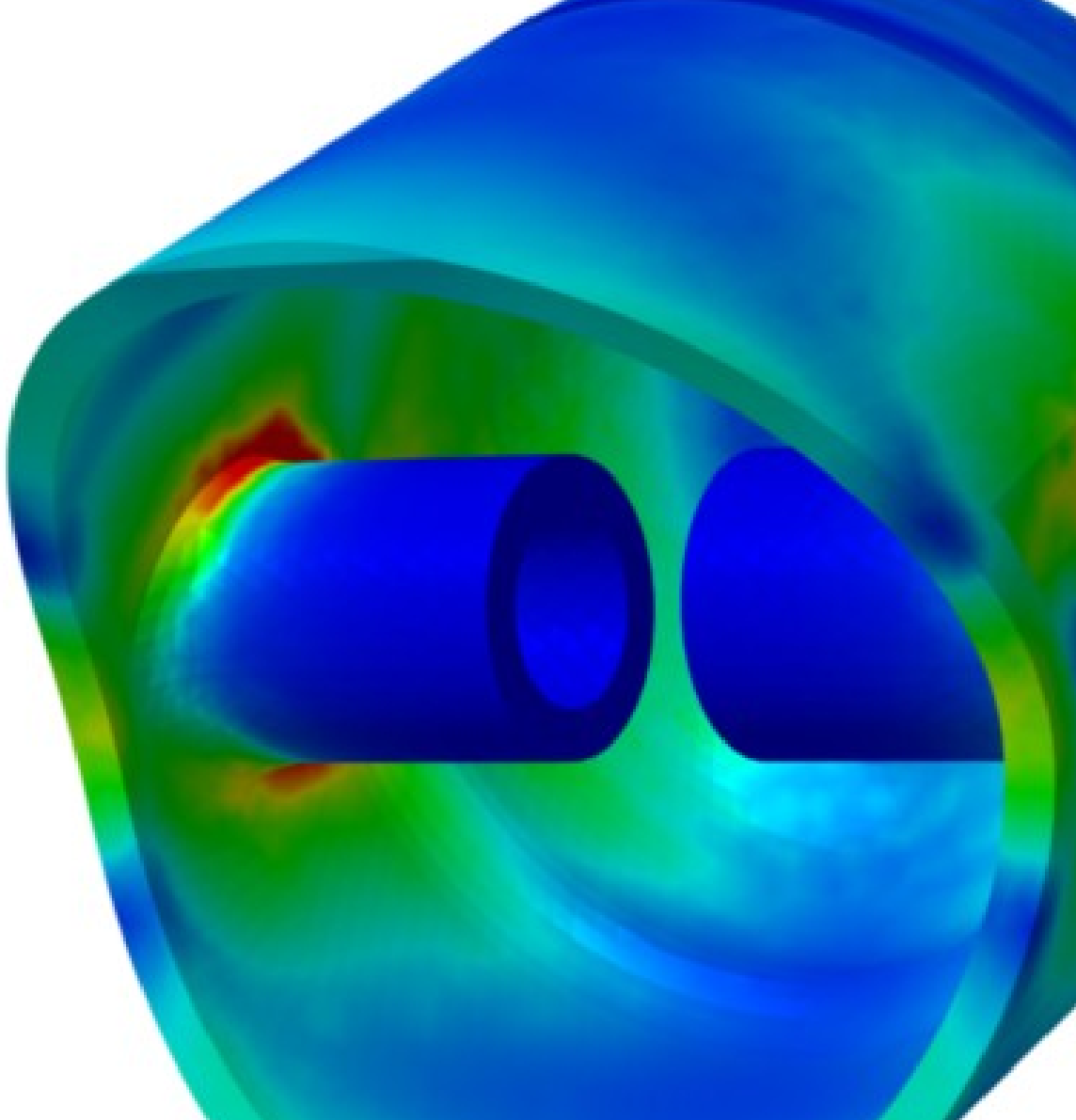
The Artisan Rendering add-in generates photo-realistic images from KOMPAS-3D models quickly and easily.

The add-in creates high quality images from 3D models of parts and assemblies, even as they are designed in KOMPAS-3D.

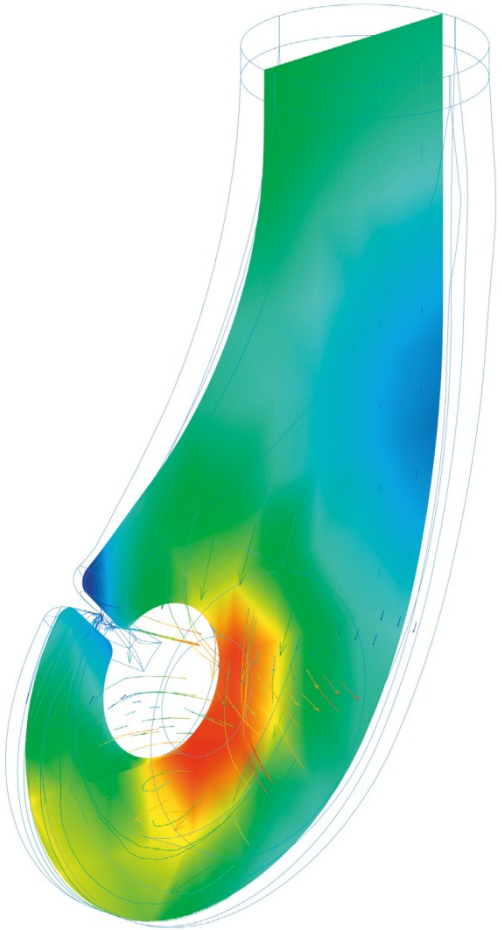
- APM FEM

Various CAE calculations

- Static,
- Buckling,
- Frequency
- Heat analysis



APM FEM

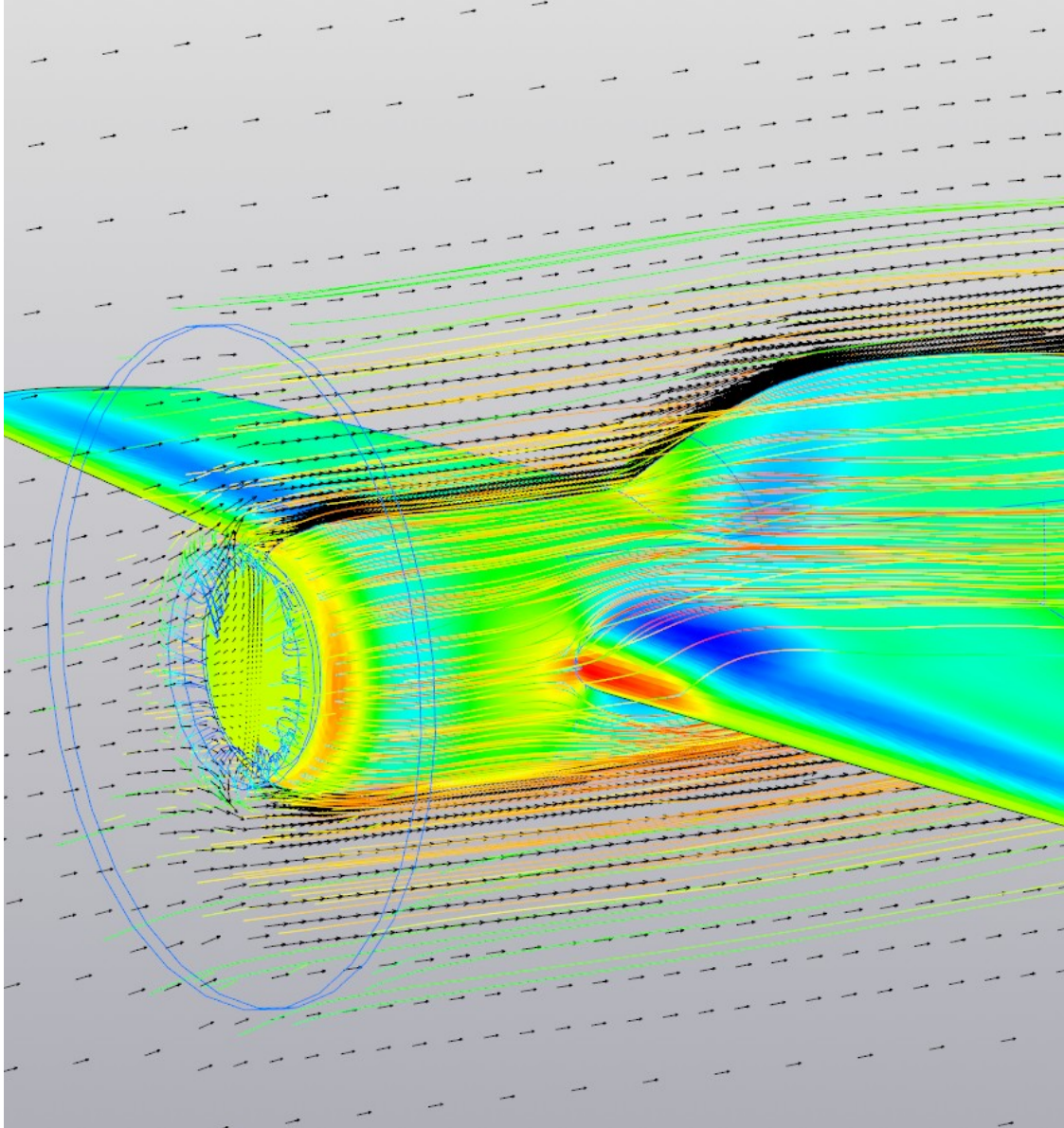


The APM FEM add-in performs strength analysis of machinery elements mechanisms, and structures designed in KOMPAS-3D using the established finite element method.

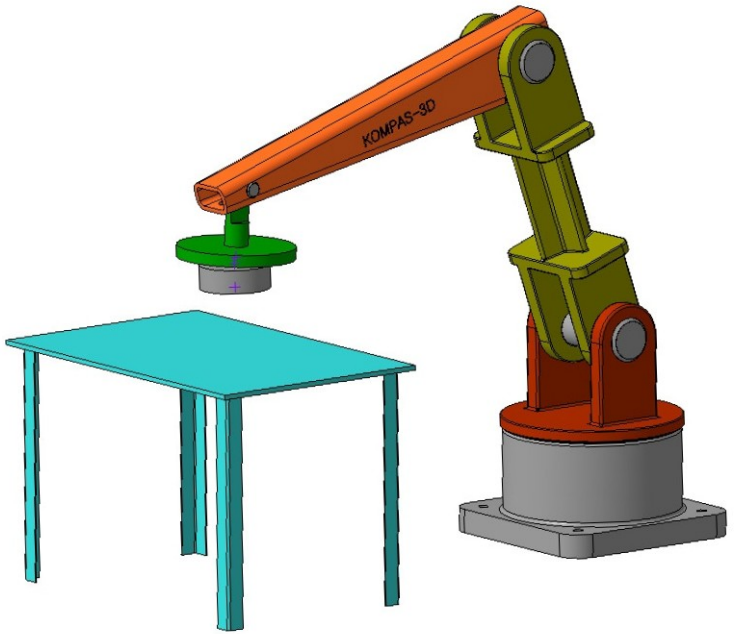
Designers use this add-on to analyze the behavior of a variety of influences on parts and assemblies, including statics, stability, and thermal loadings.

Express aero-hydrodynamics analysis of devices designed in the KOMPAS-3D

[KompasFlow]



Animation



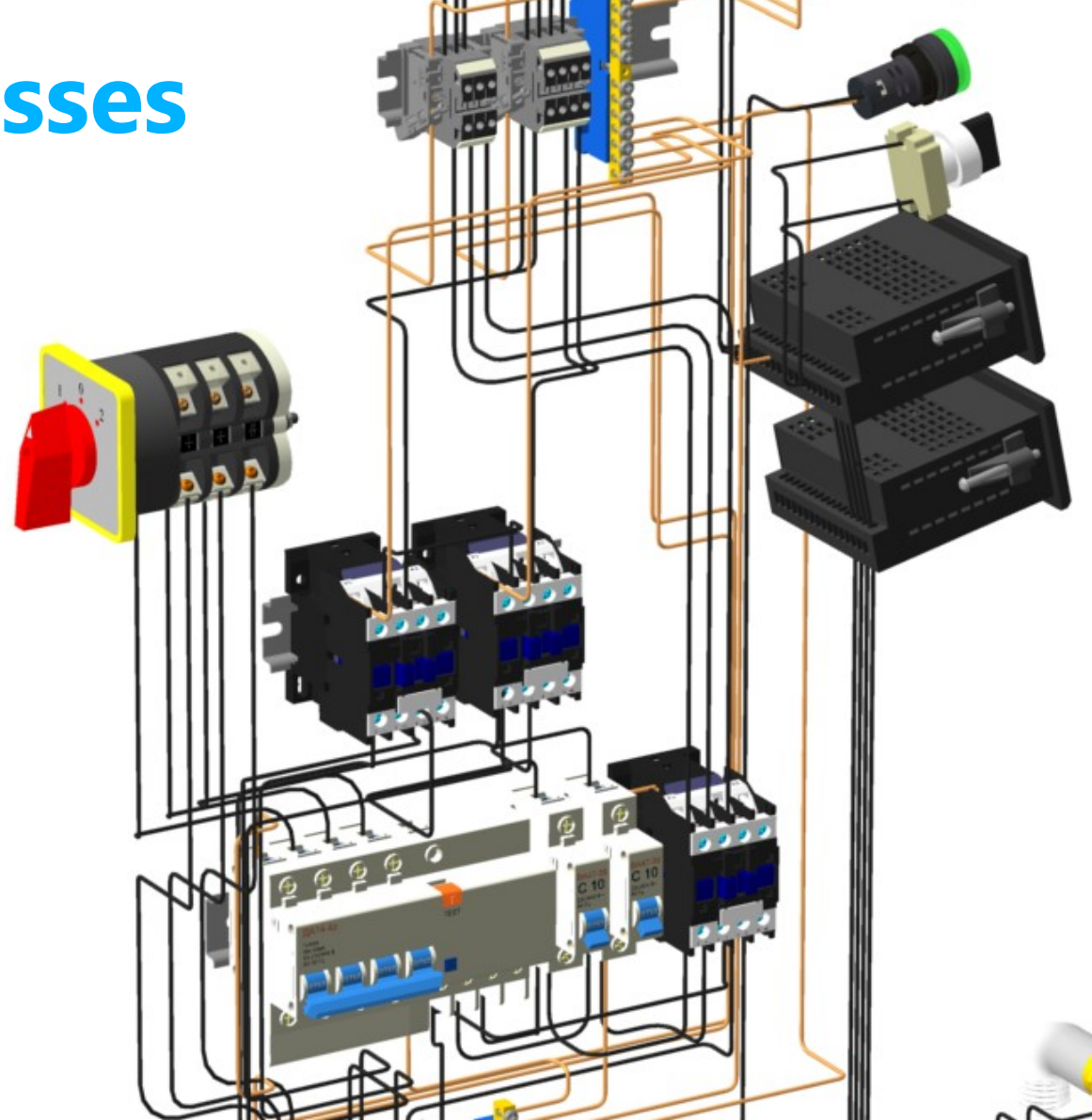
The Animation add-in performs motion simulation of 3D products developed with KOMPAS-3D. The types and parameters of part motions include velocity, rotation frequency, and duration.

Designers use this plug-in's automatic collision detection to prevent design errors. They record this plug-in's simulations of real-world motions of products and components as AVI video recordings.

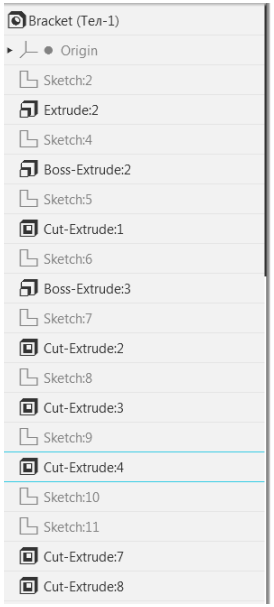
Cables and Harnesses

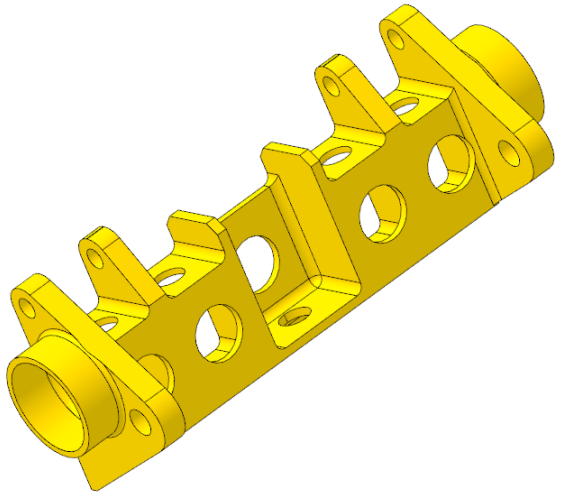
The Cables 3D add-in performs effective electric harness and cable design inside KOMPAS-3D.

Designers use it to add electrical systems to the mechanical designs.



3D Model Recognition System





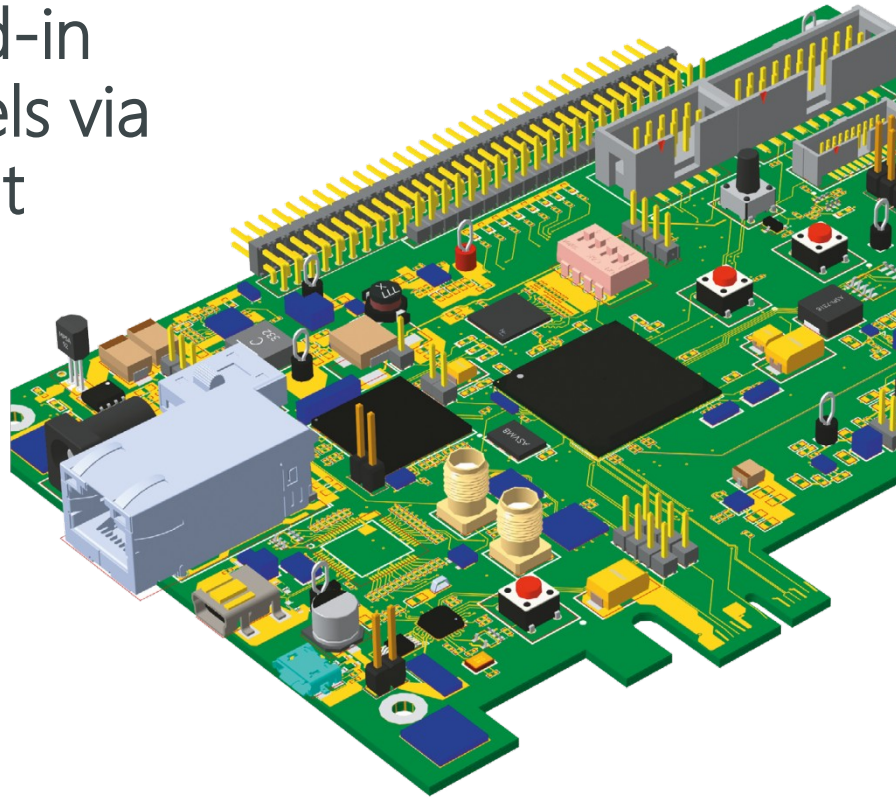
The 3D Model Recognition System recognizes elements of parts and assembly imported into KOMPAS-3D from other CAD systems. It recovers complete 3D models including history trees, saving considerable time in feature recognition.

Designers use this add-in to exchange models between different MCAD systems from clients and partners.

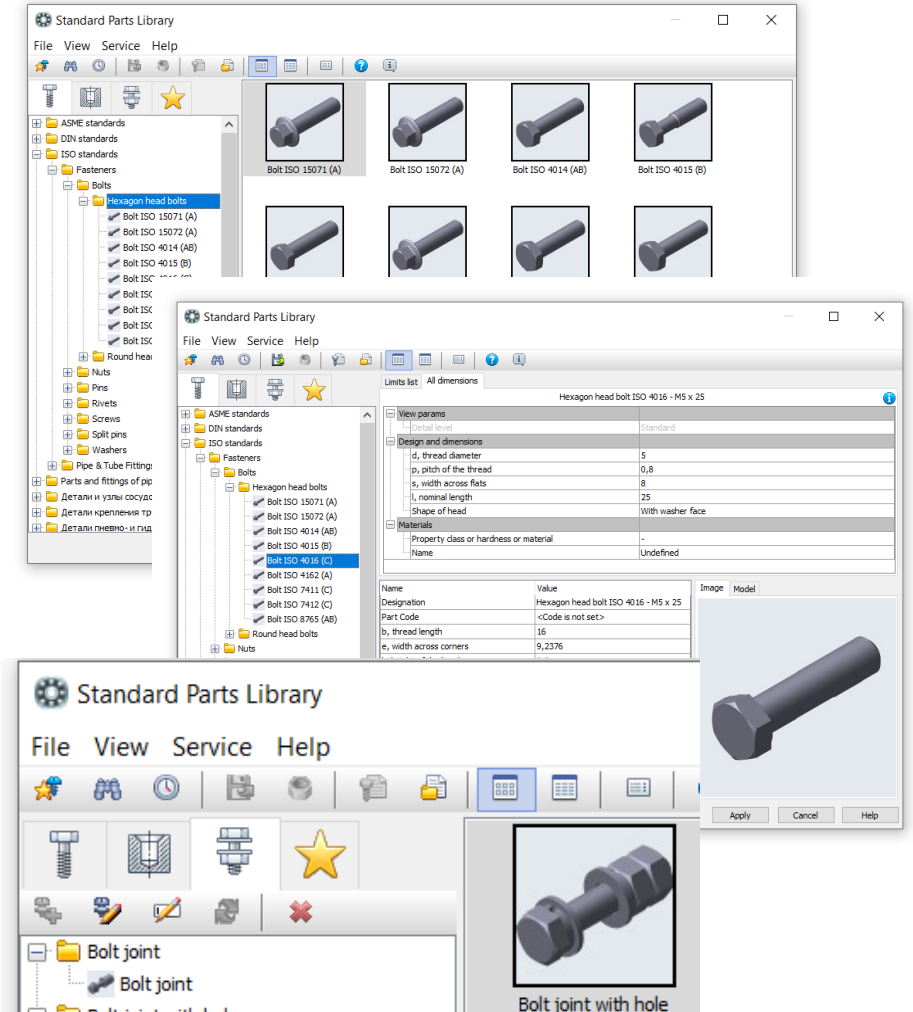
eCAD-KOMPAS-3D Converter

The eCAD-KOMPAS-3D Converter add-in imports 3D printed circuit board models via the standard IDF data exchange format exported from the following systems:

- Altium Designer
- Mentor Graphics
- P-CAD versions 2000 through 2006
- OrCAD version 9.X and higher
- Protel



Standard Parts Libraries



The ASCON Standard Parts library is supplied with KOMPAS-3D.

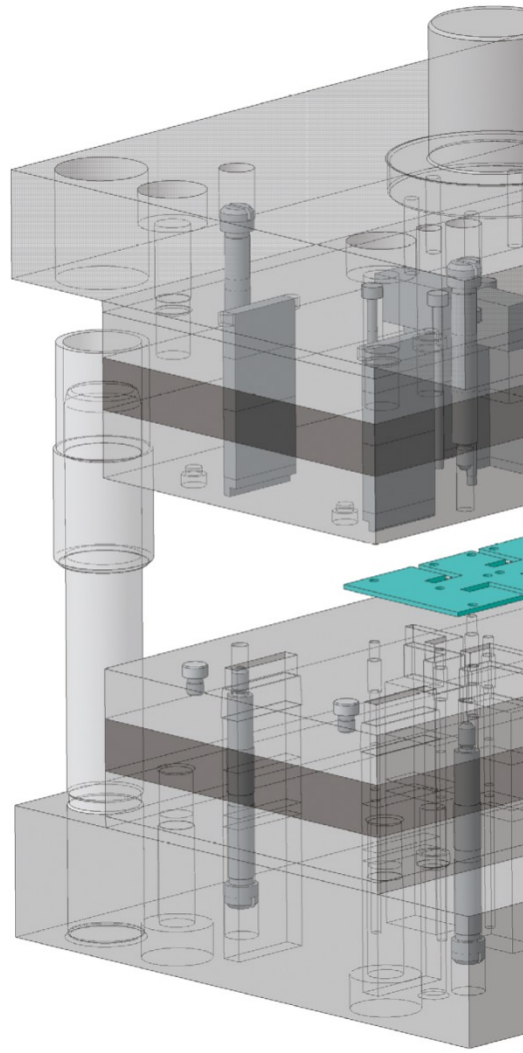
Designers use its database to select fasteners based on DIN and ISO standards.

Mould and Die Design

The Mould and Die Design add-in automates design, analysis, and construction of steel moulds for casting plastic parts from pressure casings:

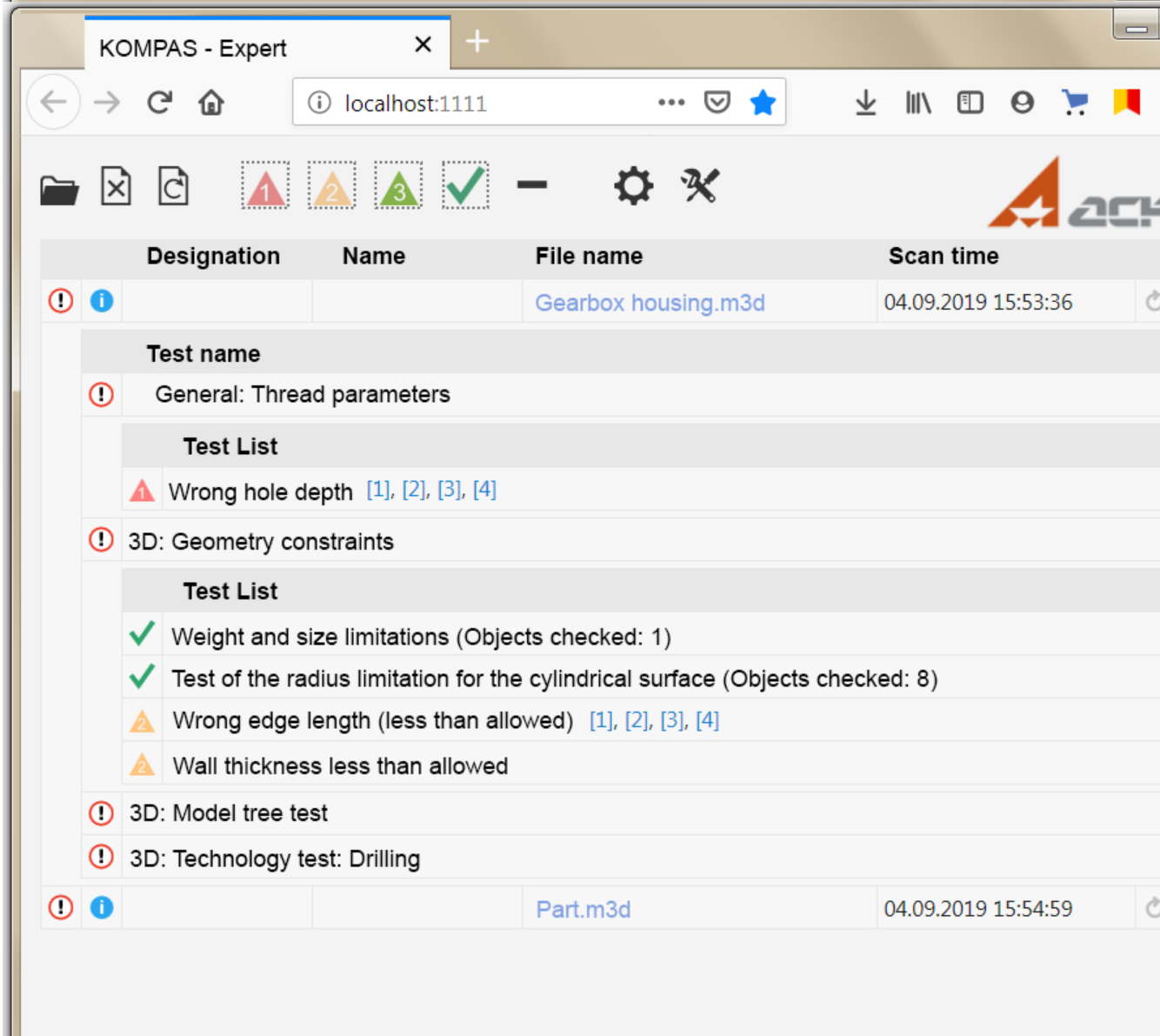
- Analyze 3D models
- Design shapes of die moulds
- Model mould channeling systems

Designers use this powerful add-in to increase their production performance, improve the quality of their designs, and so enhance the competitiveness of their company's products.



Searching for and fixing errors in KOMPAS-3D documents

[KOMPAS-Expert]



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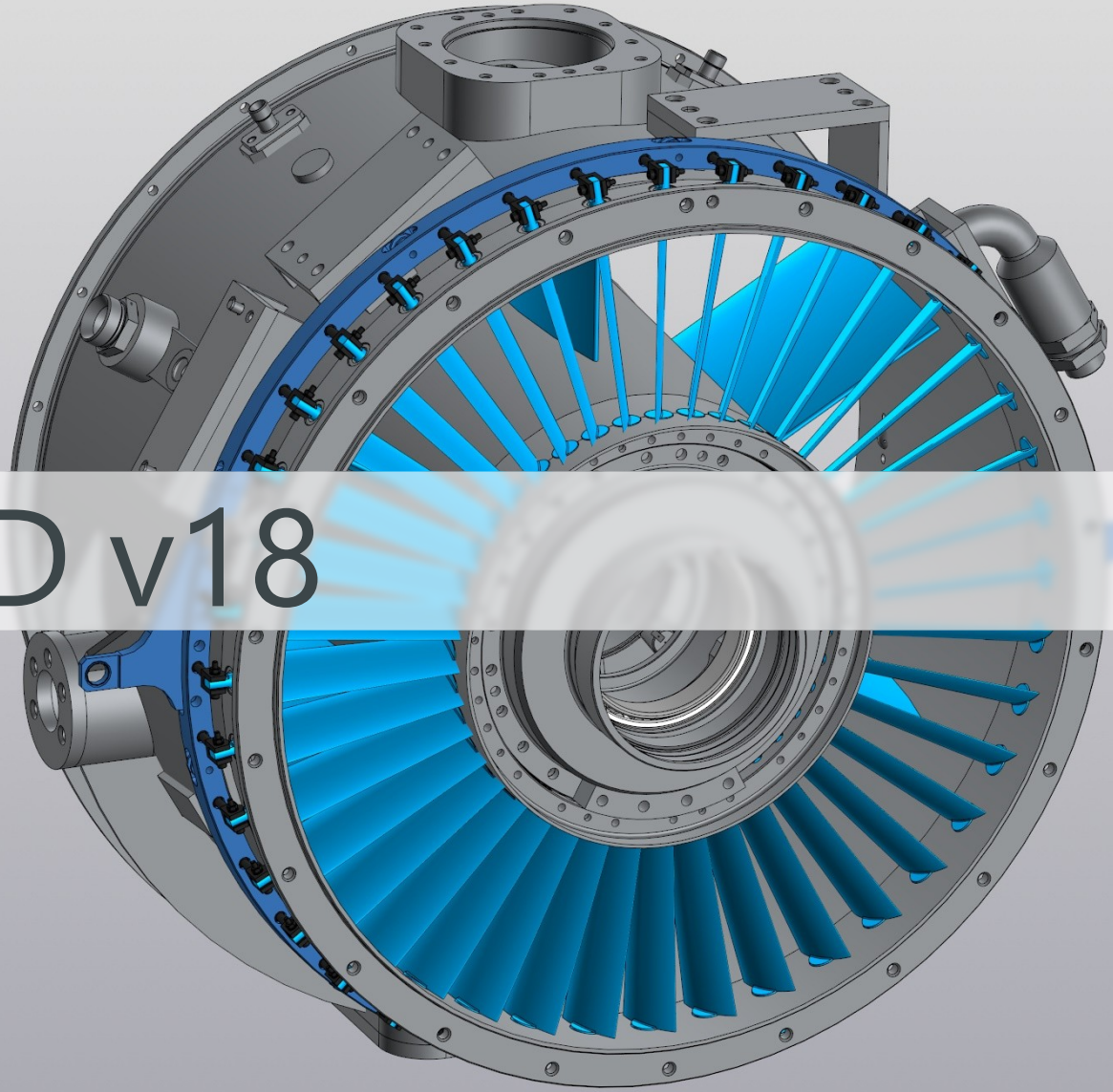
KOMPAS-3D v18



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