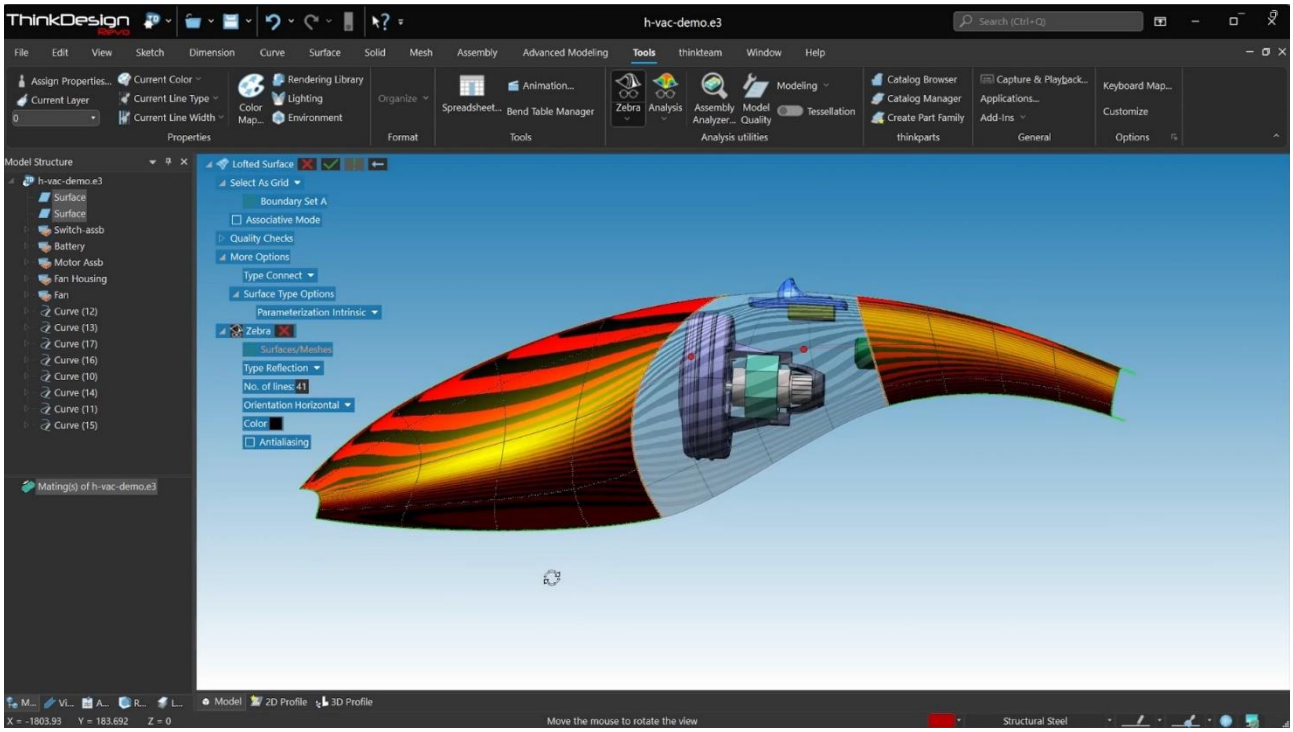
ThinkDesign 2024 Beta version

What's New

This document contains a list of short descriptions for each new feature, improvement and enhancement.

Ribbon-based User Interface

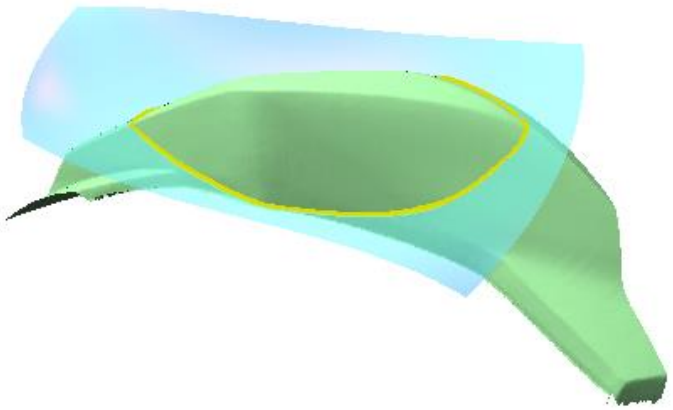
ThinkDesign 2024 introduces the new **Ribbon-based User Interface**: a more intuitive, well-organized and easily navigable interface empowering users and enhancing their design experiences.
Instead of the old menus and toolbars, the new ribbon-based UI organizes commands into tabs and groups allowing you to swiftly locate them.
After completing the installation, upon launching ThinkDesign for the first time, you will be able to choose the desired interface – Ribbon or Menus and Toolbars – using the Setting Wizard.



New Functionality: Intersection between Surfaces and Meshes, Intersection between Meshes and Meshes

Intersect Curve command (**Insert ⇨ Curve ⇨ Intersect**)

Until now, the command allowed the user to compute intersections between surfaces and create the intersecting curves.
For this new release, the **Intersect Curve** command has been significantly enhanced to enable the selection of meshes for intersecting surfaces with meshes and meshes with meshes.

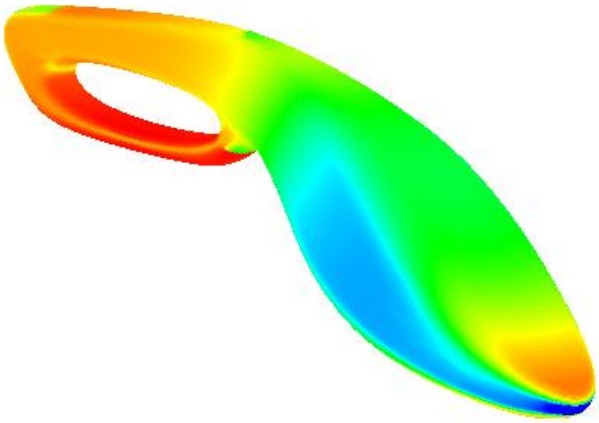


Intersection of the green mesh with the blue surface

New Analysis command: Thickness Analysis

Thickness Analysis command (**Tools ⇨ Info ⇨ Analysis ⇨ Thickness Analysis**)

With the new command **Thickness Analysis**, ThinkDesign 2024 introduces an important tool for inspecting wall thickness on solids or meshes.
The new command allows you to verify if the model meets minimum thickness requirements for successful 3D printing by also optimizing material usage and reducing print time.
Thanks to this analysis, you can avoid potential printing issues like warping, collapsing, or excessive fragility due to inadequate thickness, while promoting an efficient use of resources and cost-effectiveness in production.
The results are provided in the form of a color map and a graph of the thickness values.



Color map of a thickness analysis on a mesh

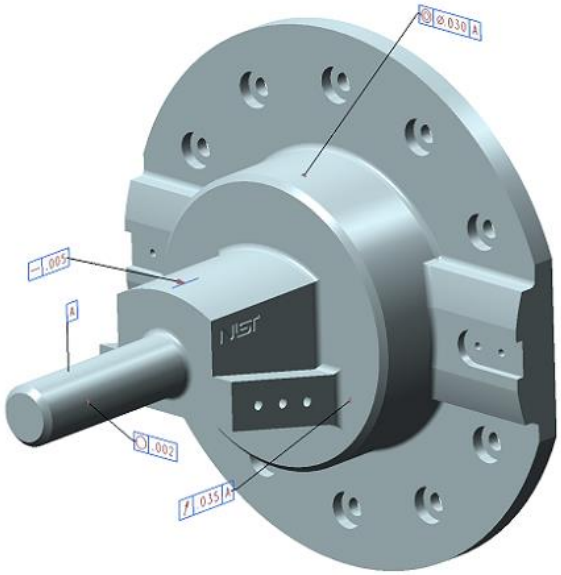
PMI – Product Manufacturing Information Input/Output

PMI is product manufacturing information: it includes labels, 3D annotations, geometric dimensions and tolerances, and other non-geometric data, which gets added to a 3D CAD model.
ThinkDesign 2024 allows you to reduce the unnecessary use of 2D drawings, boost production efficiency and enhance communication with the supply chain by embedding essential manufacturing details directly into the digital 3D model within ThinkDesign. You can now **import PMI** for the following file formats:

- **STEP AP242 (**Note that imported **PMI** from STEP are static dimensions while they are regular dimensions for the other file formats.)
- **CATIA® V5**
- **SolidWorks©**

- Siemens NX™ (Unigraphics)
- Creo®

ThinkDesign 2024 also enables to **export PMI** in STEP AP242 format.



Imported PMI from NX file format

Enhanced 2D Graphics Layer

ThinkDesign 2024 improves 2D Graphics performance introducing a cutting-edge graphics layer optimized for the most advanced graphics cards. This will allow users to experience unprecedented 2D graphics performances, better exploiting GPU capabilities.

ANSYS plug-in

Starting from this version, **ANSYS V23.1** plug-in is available.
The strategic collaboration with Ansys, global leader in engineering simulation products, will bring seamless integration of ThinkDesign with **Ansys Discovery** and **Ansys Mechanical**, empowering users to bridge the gap between design and simulation with unprecedented ease.

Data Exchange Functionalities and Improvements

TDXchangeReader is now capable to READ:

- Any **CATIA® V5** version up to **V5-6R2023**
- Any **SolidWorks©** version up to **2023**
- Any **Parasolid®** version up to **v36.0**
- Any **Siemens NX™ (Unigraphics)** version up to **NX 2306**
- Any **JT** version up to **10.9**
- Any **Creo - Pro/E** version up to **10.0**
- Any **Autodesk® Inventor®** version up to **2024**
- Any **ACIS®** version up to **2023**
- Any **Solid Edge®** version up to **2024**

TDXchangeWriter is now capable to WRITE:

- **Parasolid®** version **v12.1**
- **ACIS®** version **v5.0**
- **JT** version **v10.0**.

General Software Improvement and Better Reliability

The source code has been accurately revised to highly improve the program's robustness and reliability.