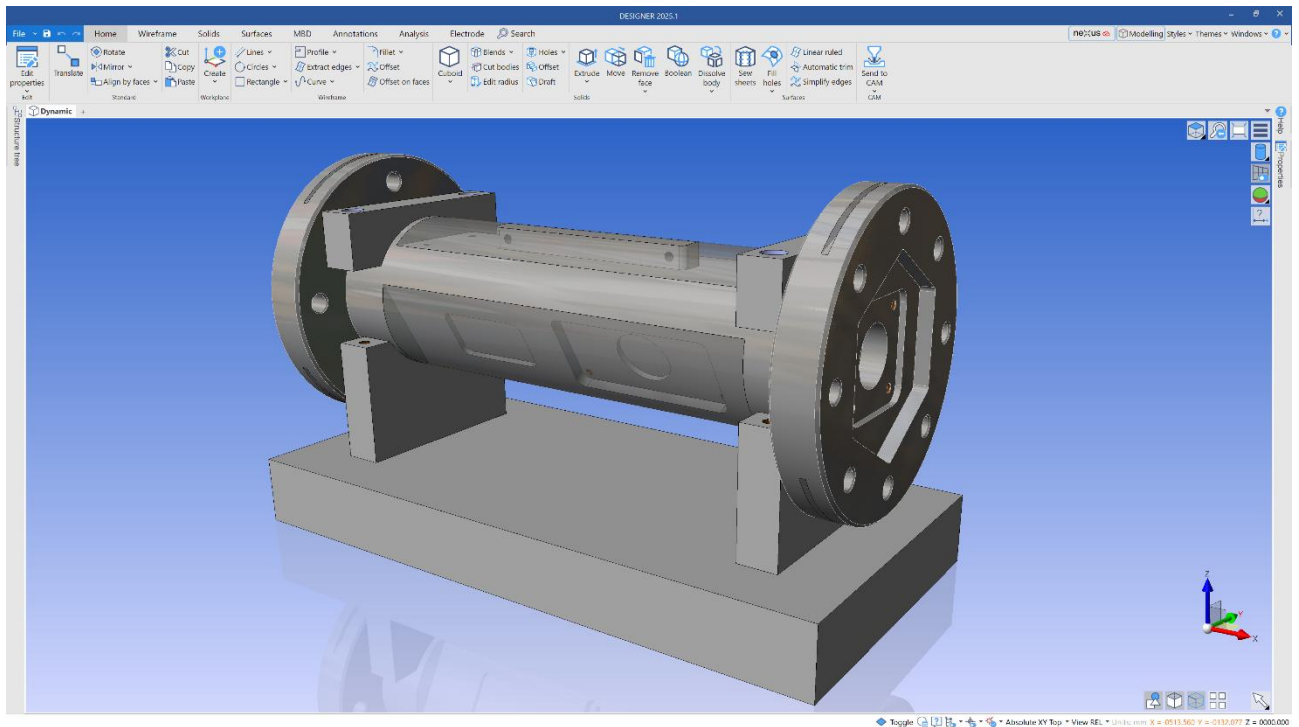


What's New in DESIGNER 2025.1



This document highlights new product features and enhancements in DESIGNER 2025.1.

28 February 2025

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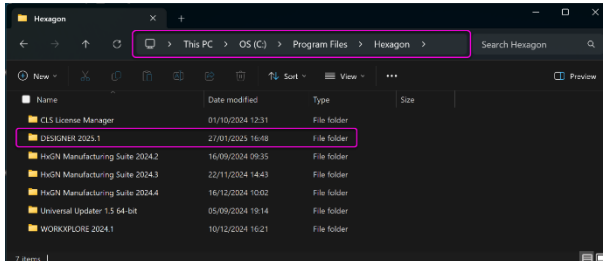
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Highlights

- Quickly convert complex machine models into simpler shapes using the new **Reduce** command.
- Constraints:
 - Improved user-experience for creating and editing sketches.
- Recreate one-click surface:
 - A new preview state for quick visualisation of the surface patches on the mesh.
 - A new option to 're-mesh' the object in-situ to improve surfacing success rate.

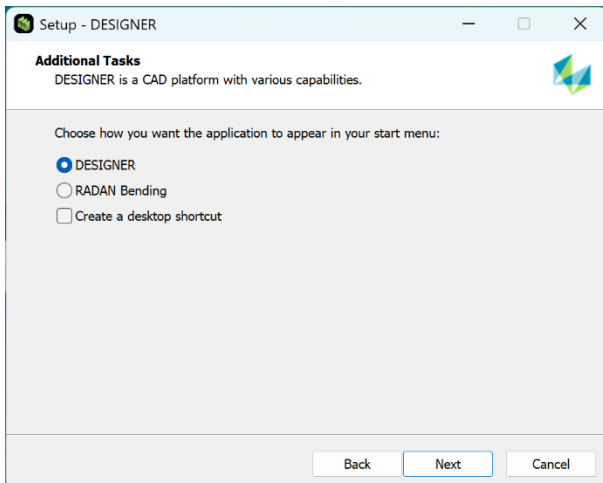
General Enhancements

Installer renamed to DESIGNER



- The 'HxGN Manufacturing Suite' name has been retired.
- The installer is now called DESIGNER and will be installed under the DESIGNER name.
- Benefits:
 - Easy to find the installation folders.

Installer: Choose your application

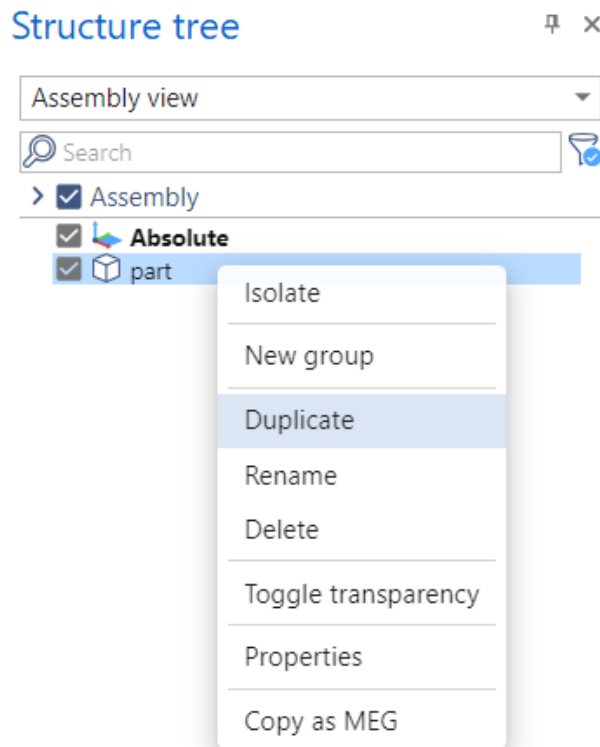


- In the latest version of DESIGNER, you can choose which application name should appear in your Start menu:
 - DESIGNER.
 - RADAN Bending.
- This is in preparation for the RADAN Bending launch which is built on the DESIGNER CAD Platform.
- Benefits:
 - Easier for everyone to use their favourite application.



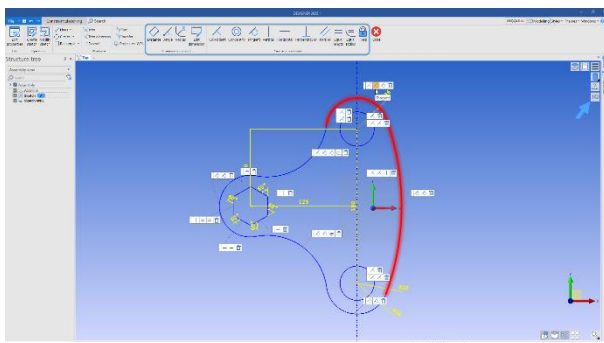
Modelling Enhancements

Duplicate from the structure tree



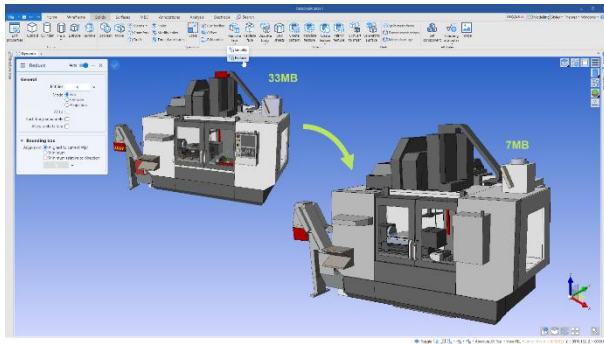
- You can now duplicate elements from the new structure tree.
- Benefits:
 - No need to copy and paste.
 - Fewer clicks to create a quick copy.
 - Simply right click on the selected part.

Constraint Sketching Enhancements



- Enhanced Constraint Sketching ribbon containing all constraints.
- Constraints displayed as graphical symbols.
- Constraint labels are now always visible when in Constraint Sketching mode unless you disable them from the new HUD button.
- Selecting a constraint highlights its related segments or points.
- Delete constraints by direct selection.
- Dimensional constraints can be selected to be edited or deleted.
- Constraint labels can be dragged around the sketch (limitations).
- Ability to toggle the visibility of the constraint icons.
- Support for horizontal and vertical constraints between points.
- Benefits:
 - Improved user experience.
 - Quicker and easier application of constraints.
 - Improved interrogation and fixing of sketches.

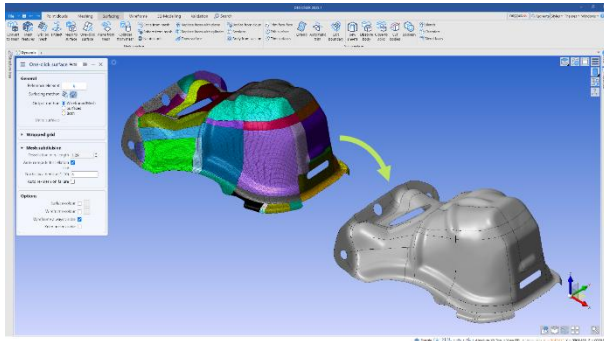
Reduce Command



- The new **Reduce** command can be used to quickly reduce complex parts into their envelope shapes.
- The command can also be used to simplify complex machine models to use in, for example, simulations, post processors and digital twins:
 - Ability to select from the following simplification modes: **Box**, **Cylinder** and **Projection**.
 - Ability to select alignment options for **Box** and **Cylinder** modes.
 - Ability to select entities such as bodies, faces, edges and sheets.
- Benefits:
 - Improves efficiency when processing models for digital twins and post processors.
 - Less time-consuming process.
 - Reduces the size and complexity of the models.

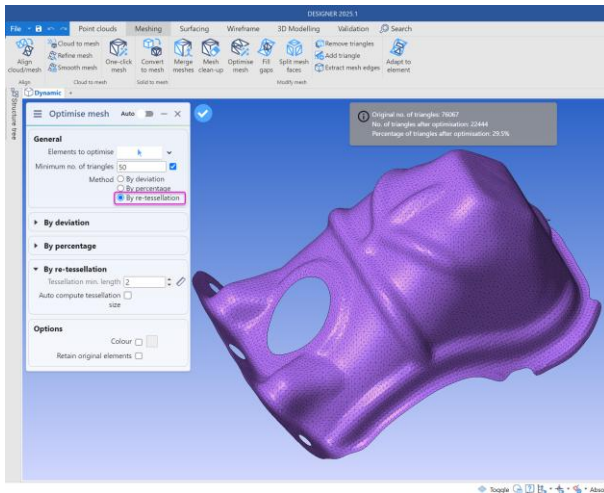
Recreate Enhancements

Enhanced One-click surface Command



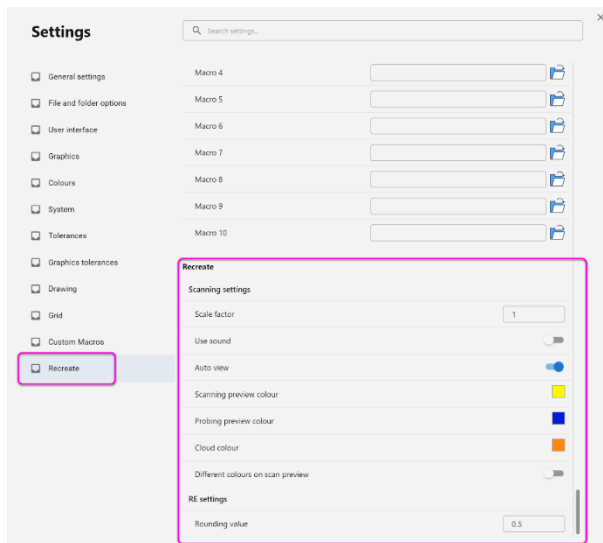
- Users will be able to see the mesh subdivision result in preview mode for faster visualisation of surface patches.
- New **Auto re-mesh on failure** option to 're-mesh' if the automatic surfacing result fails.
- Benefits:
 - Users can choose to see the mesh subdivision result in preview or to split the mesh into the preview patchwork for reverse engineering at a later date.
 - The new **Auto re-mesh on failure** option helps the auto-surfacing function when the original mesh is not good enough quality.

Optimise mesh command: Ability to re-mesh



- A new option is now available in the **Optimise mesh** command.
- Ability to 're-tessellate' or 're-mesh' into a quad mesh.
- Benefits:
 - More downstream operations can be possible with the quad mesh.
 - Users can encounter fewer issues when working with the meshes.

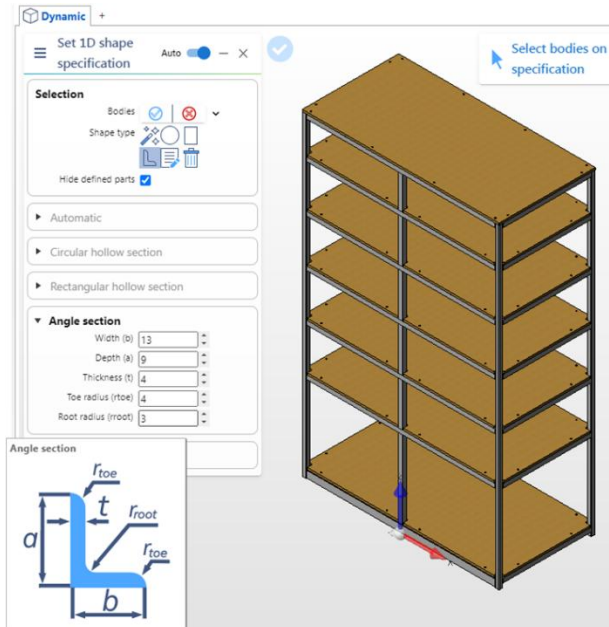
Migratable Recreate Settings



- Aligned with the other settings in DESIGNER.
- The Recreate settings are now in the new format and migratable.
- Benefits:
 - Custom settings can be easily migrated from version to version.

Sheet Metal Enhancements

Automatic Tube Detection: Equal and Unequal Angles



- Angle section shapes are now manually and automatically supported in the **Set 1D shape** command.
- Angle section PMI is shown in the Properties Window.
- Angle section PMI is contained in the BOM file of the Manufacturing pack.
- Width and Depth are now supported for 1D Other sections using the **Other** section option.
- Benefits:
 - Wider variety of shape detection.
 - Increased accuracy.