

 RELEASE NOTES

Altair Inspire™ Studio 2021.1

New Features and Enhancements 2021.1

Altair Inspire Studio 2021.1 includes the following new features and enhancements.

Tags

Apply labels to faces using the Tags command. Tags are commonly used to label faces when sending geometry to simulation tools.

Sketch Profiles

Profiles are shaded when editing a sketch, indicating that the profile is closed.

Sketch Geometry Colors

The colors of sketch geometry are updated to align with other Altair products.

Virtual Wind Tunnel (VWT) Support

- Stream Lines
- Animated Mesh
- Motion Loop: Support for objects with embedded motion (coming from simulation results).

Drawing Views

When selecting the objects to include in the base drawing view, there is an option to set a custom view direction.

PolyNURBS

The **Select to Border** option was added to the right-click menu when editing PolyNURBS in face mode. Select to Border extends the selection to the border faces.

Updated **NURBS to Poly** tool.

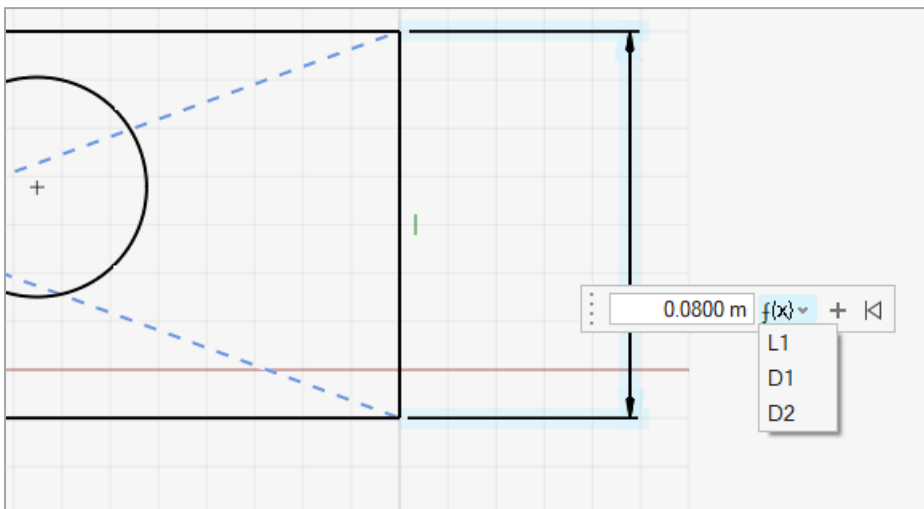
Variable Manager

Geometry based variables can be defined and referenced through the application providing unique flexibility to configure and explore design variations.

Use the Variable Manager to create new variables, edit variables, and import or export variables to a .csv file. You can then add and define variables for use with the sketching and geometry tools. You can also specify dependencies between the variables, which will cascade changes and update the model accordingly.

Name	Value/Expression	Type	Result	Details
1 D1	.5m	Length	0.5000 m	
2 L1	sin(D1)	Length	0.4794 m	
3 L2	0.2200 m	Length	0.2200 m	
4 D2	D1/2	Length	0.2500 m	
5 K	D1*1.5	Length	0.7500 m	
6 L3	0.2200 m	Length	0.2200 m	
7		Length		

Once defined, you can then apply variables when using the sketching and geometry tools from the tool microdialogs. You can select any available variable previously defined in the Variable Manager whose type matches the selected field. Click the f(x) button to choose from the available variables.



NURBS Curve

The UI when editing NURBS curves is simplified. Now, the points used to add CV points are only shown when you hold down the Alt key.

Animation Updates

- The **Animation Mode** can now be accessed at any time from the Home tools. You do not need to switch to the Animation tab to begin creating an animation.
- Keyframe and track enhancements
- **Rotation Around Axis** tool
- New animation panel with possibility to edit curves for velocity control

- Parameters in Design Table can now be animated

Python Installation Directory

The location of the Python installation is moved up one level in the Altair installation folder. This was done so that Python is only installed once when multiple Altair products are installed.

Enhanced Help

See the end of this document for more information about the following enhancements.

- Workflow help
- Context-sensitive help
- Offline help

File Loading

More improvements in file loading and tessellation speed.

- Loading of a Parasolid file is now 7x times faster (3m:40s to 30s)
- Multi-threaded tessellation
- Async loading of VB/IB to GPU memory
- Some other general optimization in loading and drawing

Vulkan API

We have switched to the Vulkan API. Please make sure you have the latest graphics driver.

3DConnexion Support

We now support 3DConnexion devices.

Die Design

New Enhancements

- Bridge addendum now supports single ribs and addendum start lines
- Bridge addendum now supports adjacent bridge addendum edges as the addendum start line
- You can now create a die with only a part and a binder, without any addendum

- New offset options were added for quick creation of a matching die
- You can now define the symmetry plane direction using 3 points
- Quick orientation of the rib plane using a reference curve for straight line ribs

Resolved Issues

- Reputative selection of addendum start line eliminated
- Multiple ribs created at a location for open addendum start line

Learn More About Inspire Studio

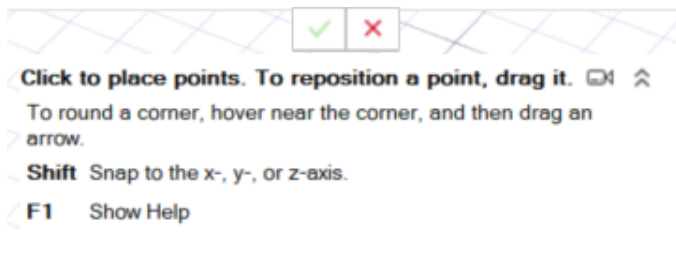
You can learn more about new and existing features in Inspire Studio using the following resources:

In-Application User Assistance

Workflow help appears when you select a tool that opens a guide bar or microdialog. The text prompts you what to do next.

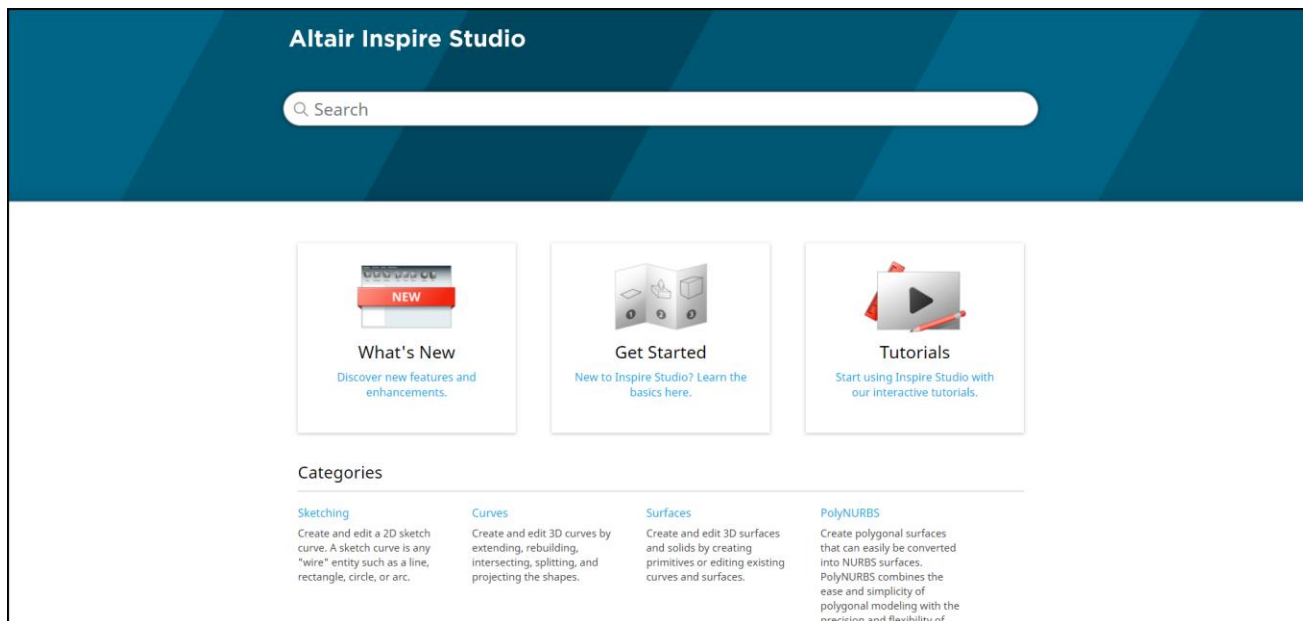


Click to view additional tips and shortcuts. Some tools also include a video .



Online and Offline Help

Press **F1** or select **File > Help > Help** to view the online help.



You can download an offline version by selecting **File > Help > Download Offline Help**. An internet connection is required to download.

