

# **RELEASE NOTES**

# Altair<sup>®</sup> Inspire<sup>™</sup> Form 2021.2 and 2021.2.1



# **New Features and Enhancements 2021.2**

The Inspire Form 2021.2 release includes the following new features and enhancements.

## Geometry

#### Extrude, Pattern, and Offset Geometry Tools

Three new geometry tools have been added that enable you to:

- Extrude sketch profiles in one or two directions. Create a new part of combine, subtract, or intersect the extruded shape with existing parts.
- Create a linear or circular pattern of parts or faces.
- Offset parts or surfaces. You can also thicken parts.

## Feasibility

#### **FE Mesh Support**

FE mesh representation can now be used for model setup. The Orient and Constraint tools have been updated to work on mesh topology.

#### Orient

Draw direction orientation can be defined for FE mesh representation. Normal of FE mesh elements can also be selected to define draw direction.

#### Constraints

- The Blankholder constraint can be defined on a group of elements for FE mesh representation model setup.
- The Drawbead constraint can be defined on free and internal element edges for FE mesh representation model setup.
- The Pin constraint can be defined on free edge, internal element edge, and individual nodes for FE mesh representation model setup.

#### **Blank Nesting**

- Measure box has been added to get a better understanding of the overall size of the blank before blank fit or nesting.
- Blank can be custom rotated to user-preferred orientation before nesting to get optimal nesting pattern without rotation.
- Carrier has been added to strip layout in the report and to the layout exported as iges/dxf files.

## Tryout

#### Gravity

- The performance of Gravity runs is improved with the solver running in MPI mode.
- Animation is supported for Gravity operation results.



#### **Post-Processing**

- Improvement has been made in performance when loading and animating large model results.
- Export formed part results in LS-DYNA format.
- Add callouts for Current and Max values in Time History Plot.
- New result types are supported:
  - Delta thinning: Thinning due to deformation in the current operation only, ignoring history.
  - Delta plastic strain: Thinning due to deformation in the current operation only, ignoring history.
  - Curvature: Element curvature due to bending during forming. Includes principal and local values.
  - Dominant deformation mode: Indicates dominant deformation mode during forming. Ranges from 0 to 1, with 0 indicating stretching, and 1 indicating bending.

## **Resolved Issues**

The following issues have been resolved for the 2021.2 release:

- Blank shape prediction succeeding with no output has been fixed.
- Successive iterations of the blank shape predictions taking longer to run has been fixed.
- Trimming operation has been sped up when the pierce and trim boundaries are planar.
- You can now import multiple solver format mesh files.



# **New Features and Enhancements 2021.2.1**

Inspire Form 2021.2.1 includes the following new features, enhancements, or resolved issues.

## **Resolved Issues**

- Fixed a crash when opening files saved in 2021.2 and earlier versions.
- Fixed a crash when starting a run from files saved in 2021.2 version.
- Fixed a crash when generating report in Feasibility.
- Fixed an issue where blank nesting failed for locked rotation option.
- Fixed an issue where model failed during runs for models with line beads.
- Fixed issue with inability to restart the run for models where the first operation was Gravity.
- Fixed an issue with an error in blank position in second stage for models with a flat binder.



# Learn More About Inspire Form

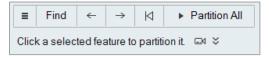
You can learn more about new and existing features in Inspire Form using the following resources:

### In-Application User Assistance

Inspire Form provides two types of user assistance. **Enhanced tooltips** appear when you hover over icons and other features. They describe what the tool does.

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Pa	Patch Fill in missing surfaces, or remove and remake problematic surfaces.					
	😽 Press F1 for more help.					

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



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≡	Find	~	$\rightarrow$		Partition All	
Click a selected feature to partition it.     ⊐4						
Holes and pockets are automatically selected and shown in red, but you can manually select faces as well.						
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Ctrl+	🖱 Add/	Add/remove from selection.				
Del	Rem	Remove a partition.				
F1	Show	Show Help				

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## **Online and Offline Help**

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

Altair Inspire <sup>™</sup>		
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