

Altair Inspire™ Streamlined Stamping Simulation

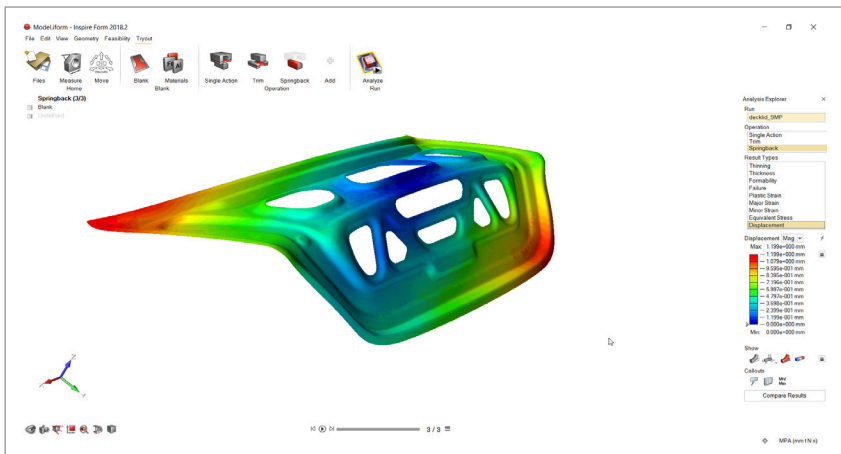
Form

Altair Inspire Form allows users to better design products while reducing lead time by enabling early consideration of formability, process parameters, material utilization, and cost.

Fast, Easy, Accurate and, Affordable

Comprehensive Sheet Metal Forming Simulation without the Complexity

Altair Inspire Form is a complete stamping simulation environment that can effectively be used by product designers and process engineers to optimize designs, simulate robust manufacturing and reduce material costs. With the fast and easy feasibility module, users can analyze parts in seconds to predict formability early in the product development cycle. The automated blank nesting proposes an efficient layout of the flattened blank on the sheet coil to maximize material utilization. The tryout module includes a highly scalable incremental solver, helping users to iterate and simulate multi-stage forming, trimming and springback in a modern and intuitive user interface, reducing complexity and making the production of high quality parts more economical.

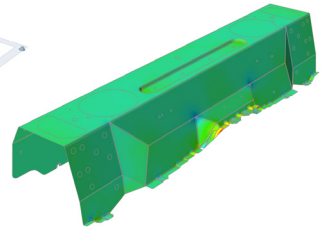
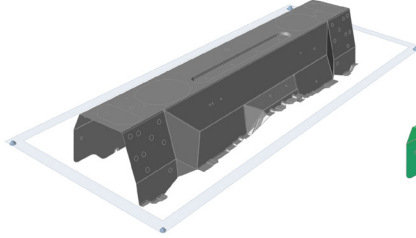
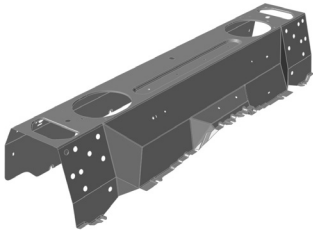


“Altair Inspire Form is a valuable tool to check part formability, material utilization, and process feasibility for stamping. The user interface and workflow to go from CAD to final results is really simple and intuitive for beginners as well as experts.”

DR. ATANU MAITY
Head, Engineering Design Group.
CMERI

Metal Forming Simulation

Altair Inspire Form Feasibility Workflow



Import Geometry

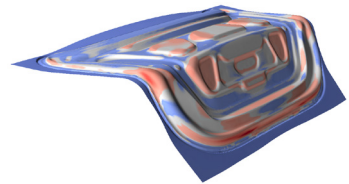
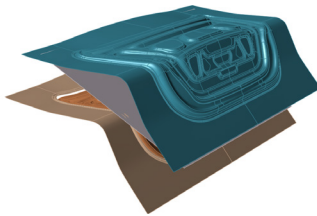
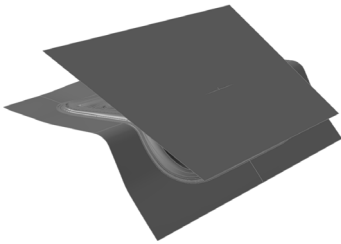
Set Up Model

Analyze Formability

Improve Design

Altair Inspire Form Feasibility module enables users to quickly and reliably check the formability of the part early in the product design by predicting potential for splits, wrinkles and loose metal. It provides the geometry of the flat blank which can be automatically fitted inside regular shapes such as rectangle and trapezoid as well as nested on a sheet coil for maximum material utilization.

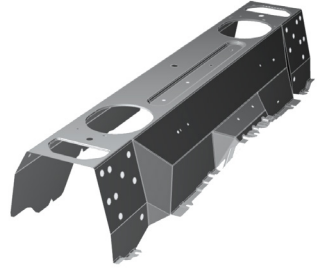
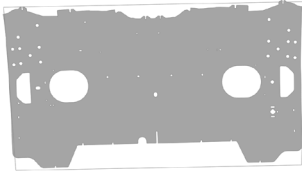
Altair Inspire Form Tryout Workflow



Import Model

Set Up Drawing

Analyze Drawing



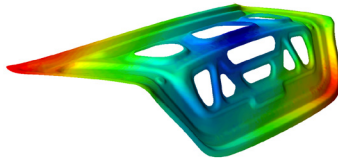
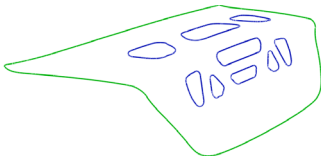
Flatten & Fit Blank

Nest Blanks

Form

Improve Process

Altair Inspire Form Tryout module enables users to intuitively setup complex stamping processes including gravity, draw, redraw, flanging and springback with all tools and blanks. Iterate on blank holder force and drawbead location and force to improve part quality.

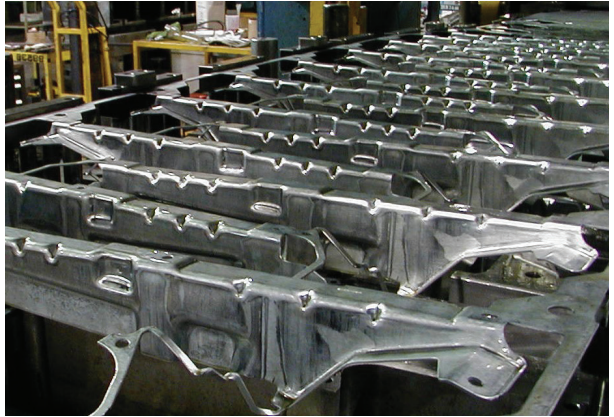
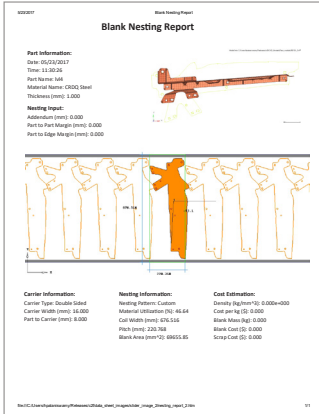


Set Up Trimming & Springback

Analyze Springback

Form

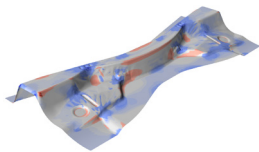
Detailed Blank Nesting Report



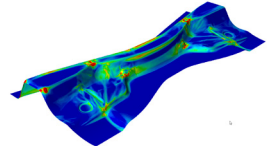
Improve Material Utilization

Altair Inspire Form allows users to accurately predict blank shape and cost estimation. It allows users to fit to standard shapes such as rectangular, trapezoidal, chevron, and more. Users can optimize blank nesting layout for transfer or progressive dies to maximize material utilization.

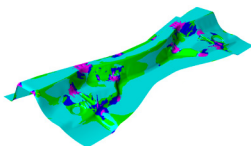
Powerful Result Visualization



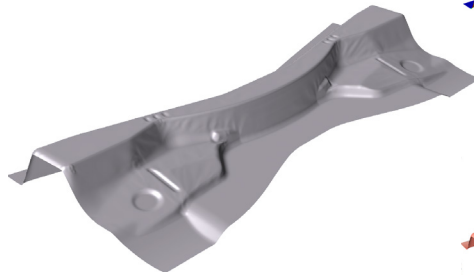
Thinning (%)



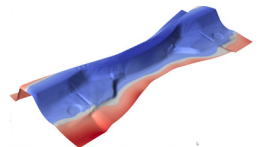
Plastic Strain



Formability



Stamped Part



Springback

Altair Inspire Form Benefits

Altair Inspire Form offers an innovative user experience to seamlessly transition between design and analysis through a highly intuitive user interface designed for beginners and experts alike. It enables part and process designers to evaluate manufacturability early in the development cycle to avoid costly trials downstream. Altair Inspire Form automatically generates a report for fitted and nested blanks to help maximize material utilization.

Design Better Products

- Early check for stamping feasibility using part geometry
- Visualize potential defect areas such as splits, wrinkles and loose metal
- Modify geometry, thickness and material property using database

Improve Productivity

- Assess formability using draw die geometry
- Alter blank holder and drawbead forces
- Estimate press tonnage

Reduce Scrap and Improve Material Utilization

- Accurate blank shape prediction
- Blank fit for standard shapes
- Blank nesting for transfer and progressive dies

Optimize Process

- Setup single and multi-stage stamping processes with all tools
- Visualize accurate material flow, splits, wrinkles, loose metal and springback
- Iterate on process parameters such as blank holder force and drawbead location and force to improve part quality

Minimal Training with Maximum Benefit

By focusing on ease of use and managing all complexities in the background, Altair Inspire Form eliminates the costly and time consuming training most other sheet metal forming simulation software requires.

Altair Inspire Form is available for:





Windows 10, 8.1, 7

Supported Languages

Chinese	Japanese
English	Korean
French	Portuguese
German	Spanish
Italian	

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