

## Altair Inspire™ Extrude Metal

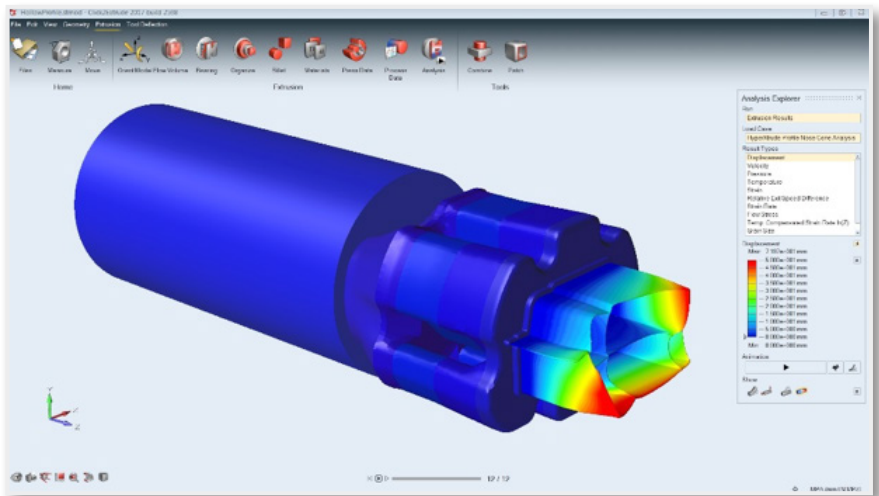
### Streamlined Metal Extrusion Simulation

Altair Inspire Extrude Metal allows users to enhance and optimize the extrusion process to drastically improve productivity and quality.

Fast, Easy, Accurate, and Affordable

# Powerful and Accurate Extrusion Simulation without the Complexity

Altair Inspire Extrude Metal has been designed with its end users in mind. The entire simulation environment has been upgraded to address a wide variety of users, from beginners to experts and from production engineers to process designers. Altair Inspire Extrude Metal allows for simulations to be performed quickly and accurately without the inconvenience of complicated tools and interfaces.

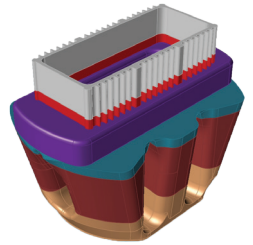


“Altair Inspire Extrude Metal is a big step ahead in the model meshing for extrusion simulation. We reduce the time required by 50% and the element’s quality is drastically better. Altair Inspire Extrude Metal` is also easy to use; a new engineer can become independent in a month’s time.”

Tommaso Pinter  
Chief Technology Officer  
Alumat & Almax Mori Group

# Metal Extrusion Simulation

## Extrusion Process



Import & Orient

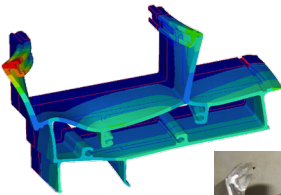
Extract Flow Volume

Extract Bearing & Organize

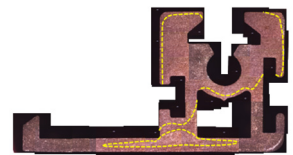
## Improve Quality

Visualize, predict, and fix visible and invisible extrusion defects upfront before fabricating the dies for production. Save on expensive tryouts using Altair Inspire Extrude Metal early in the design cycle.

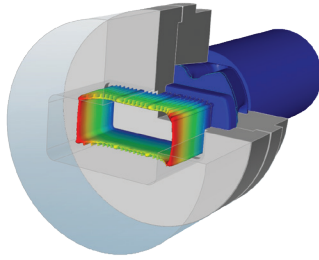
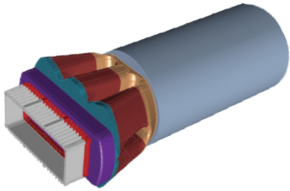
## Altair Inspire Extrude Metal Identifies Costly Defects Such As:



Profile Distortion



Charge Weld Defect



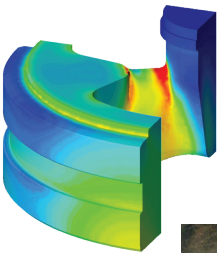
Define Material & Process

Simulate & Analyze

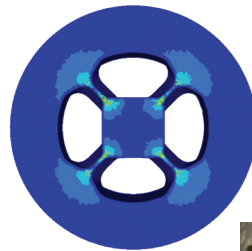
Extrude

Increase Productivity

Identify areas and causes of possible failure and rectify them upfront to reduce costly processes and die repairs.

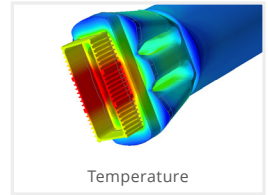
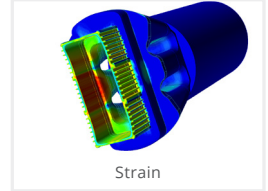
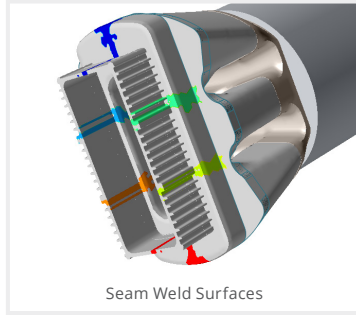
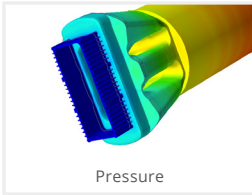
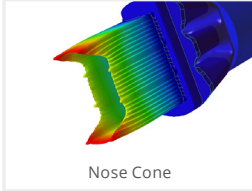


Tool Damage from Deflection



Tool Damage from Excessive Cycling

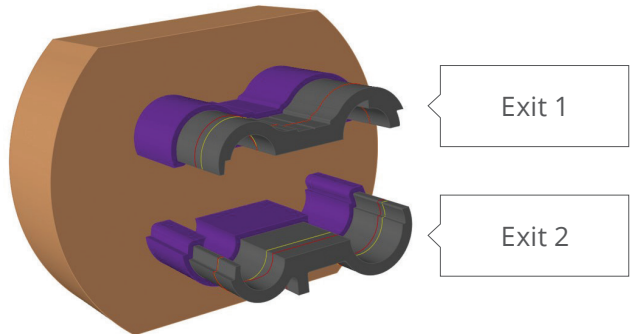
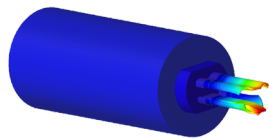
## Powerful Result Visualization



## Optimize Extrusion Process

Balancing the die by fine tuning the bearing lengths manually and iteratively in production can be time consuming and expensive. Altair Inspire Extrude Metal automatically optimizes the die with leading numerical methods in a single set up.

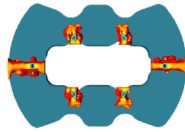
## Bearing Length Optimization



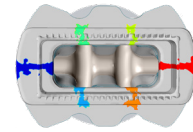
Initial & Optimized Bearing

"With Altair Inspire Extrude's newly designed interface I have cut my modeling and preprocessing time on average from 2 hours to 10 minutes."

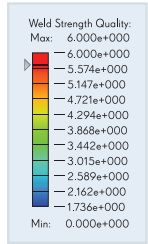
Jeff Skinner  
Sales & Technical Representative  
Thumb Tool & Die Engineering



Weld Strength



Seam Weld Surfaces



## Altair Inspire Extrude Metal Benefits

Altair Inspire Extrude Metal is a simulation environment designed to help metal extrusion companies meet the ever increasing demands to produce complex profiles at reduced costs. Altair Inspire Extrude Metal is a virtual press in which users can visualize material flow and temperature inside a die during extrusion in order to make necessary changes to ensure balanced flow, while identifying and eliminating product defects.

### Early Detection Of Visible Defects Such As:

- Profile distortion
- Uneven wall thickness
- Die pickup lines (streak lines)

### Early Detection Of Invisible Defects Such As:

- Charge weld between multiple cycles
- Seam weld in hollow profiles
- Skin defects (backend defects)
- Accurate grain size prediction

### Maintain Production Schedules By Early Detection Of:

- Incorrect bearing lengths and automatic bearing length optimization
- Die deflection
- Dummy block failures
- Container line expansion
- Die wear and excessive heating
- Improper thermal management

### Minimal Training with Maximum Benefit

By focusing on ease of use and managing all complexities in the background, Altair Inspire Extrude Metal eliminates the costly and time consuming training most other extrusion simulation software requires.

Altair Inspire Extrude Metal is available for:




Windows 10, 8,1, 7

Supported Languages

|         |            |
|---------|------------|
| Chinese | Japanese   |
| English | Korean     |
| French  | Portuguese |
| German  | Spanish    |
| Italian |            |

Learn more at  
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