

LS-DYNA Implicit Mechanical Analysis

Ansys LS-DYNA® Implicit Mechanics provides a comprehensive set of analysis tools for engineering applications. It is fully integrated with its Explicit Mechanics counterpart, using the same element and material libraries, so you can use one model for a broad range of analyses. You can also seamlessly switch between Implicit and Explicit modes during the same simulation, thereby increasing the level of applicability.

The Implicit solver provides both linear and nonlinear analysis options, including the choice of static or various kinds of dynamic solution schemes.

/ Applications

Implicit mechanical analysis can be used for a wide variety of applications, including but not limited to:

Automotive

- Gravity loading
- Dummy seating
- Door sag
- Roof crush
- Seat pull

Aerospace

- Fuselage drop test
- Jet engine startup
- Analysis of seats
- Satellite stress and vibration tests

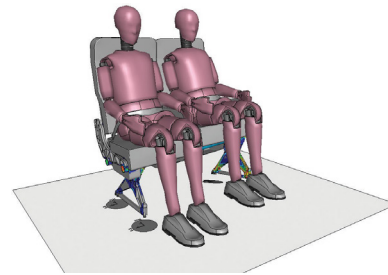
Consumer Goods

- Drop test
- Vibration computations for acoustical analysis

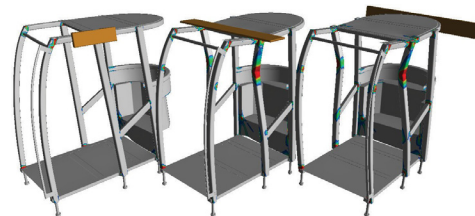
/ Features

- Linear and nonlinear analysis
- Buckling, vibration and modal analysis
- Shared memory parallel (SMP)
- Massive parallel processing (MPP)
- Hybrid parallel: combines SMP and MPP for scalability that can exceed 10K cores

/ Aerospace Seat Pre-Loading



/ Rollover Protection Structure



/ Door Sag



/ Crank Shaft

