

SOLIDWORKS SIMULATION

Feature Matrix

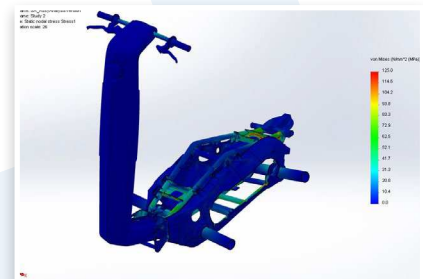
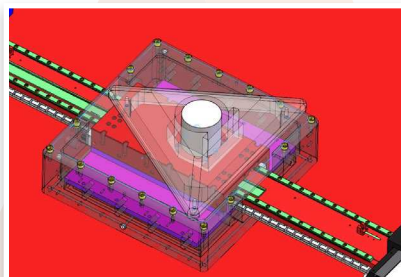


STANDARD

PRO

PREMIUM

Static Analysis	Solve part and assembly structural analysis problems for stress, strain, displacements, and safety factor.	✓	✓	✓
Fatigue Analysis	Estimate components fatigue life under high-cycle varying loads where the peak stress is below yield.	✓	✓	✓
Motion Analysis	Study the rigid kinematics of assemblies in motion under operational loads.	✓	✓	✓
Stress + Motion	Study the stress of parts in a motion analysis.	✓	✓	✓
Trend Tracker	Evaluate multiple iterations of a design in a single study.	✓	✓	✓
Thermal Analysis	Solve steady-state and transient thermal problems for temperature, temperature gradient, and heat flux.		✓	✓
Frequency Analysis	Determine a product's natural modes of vibration.		✓	✓
Buckling Analysis	Linear buckling load factor and the associated buckling mode shape.		✓	✓
Pressure Vessel Analysis	Calculate linearized stress, a key for safe pressure design.		✓	✓
Drop Test Analysis	Object falling from some height onto rigid or flexible ground.		✓	✓
Event-Based Motion	Motion analysis where actions and movements are triggered by the location or movement of components.		✓	✓
Optimization & Topology Studies	Enables you to discover new minimal material design alternatives under linear elastic static loading while still meeting component stiffness requirements.		✓	✓
Load Case Manager	An easier way to combine loads.		✓	✓
Submodeling	A two-step approach to analysis to save time studying critical model areas in fine detail.		✓	✓
Nonlinear Analysis	Static and dynamic analysis of complex material behavior, including post-yield and large deformation.			✓
Time History Analysis	Loads or base excitations vs. time, response vs. time.			✓
Harmonic Analysis	Peak steady state response due to harmonic loads or base excitations.			✓
Random Vibration Analysis	Response to non-deterministic loads and probability of failure.			✓
Response Spectrum Analysis	Base excitation vs. frequency, structural response.			✓
Composites	Analyze components built from composites materials. Component setup includes ply orientation and sandwich definition. Results include ply failure index as well as stress and deflections.			✓



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