

Compare SOLIDWORKS Packages

	SW PREM.	SIM STD.	SIM PRO.	SIM PREM.
Concurrent Engineering	✓	✓	✓	✓
Fully Embedded in SOLIDWORKS 3D CAD Full Associativity with 3D Design Changes Support SOLIDWORKS Configurations SOLIDWORKS Material Properties Support				
Finite Element Analysis	✓	✓	✓	✓
Solid, Shell and Beam modeling h and p adaptive element type Mesh control capabilities Failure Mesh Diagnostic Simplify model tool for meshing Customisable Material Library				
Contacts and Connectors	✓	✓	✓	✓
Bonded contact condition Node-to-node, surface-to-surface contact condition Shrink Fit condition Virtual Wall condition Connectors: bolt, spring, pin, elastic support and bearing Connectors Safety Check				
Post Processing	✓	✓	✓	✓
Contour, Iso-Surface, Surface, Section Result Plot Probe tool Design Insight Compare test data List values on selected entities Animation of Results				
Communication	✓	✓	✓	✓
Customisable simulation report eDrawings of Simulation results				

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	SW PREM.	SIM STD.	SIM PRO.	SIM PREM.
Linear Static Simulation for Assembly	✓	✓	✓	✓
Analyse the structural behavior of parts and assemblies under loading Fixtures to prescribe zero or non-zero displacements Structural loads Temperature loading Import Flow/Thermal Effects Calculation of stress, strain, displacement and FOS Calculation of reaction forces and moments				
Time Based Mechanism Motion Simulation	✓	✓	✓	✓
Design Comparison Studies	✓	✓	✓	✓
What-if scenarios based on defined variables (dimensions, mass properties, simulation data)				
Fatigue Simulation		✓	✓	✓
Analyse the life expectancy of structure under repeated loading Theory of Cumulative Damage Fatigue Check Plot Outputs: life, damage and factor of safety plots				
Trend Tracker		✓	✓	✓
Detect trends in results from different iterations of a static study				
Design Optimisation			✓	✓
Advanced Contacts & Connectors			✓	✓
Thermal contact resistance condition Insulated condition Edge and spot weld connector				

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Event-Based Motion Simulation			✓	✓
Frequency Simulation Analyse the natural frequencies and mode shape of parts and assemblies Import Flow/Thermal Effects Load Stiffening			✓	✓
Buckling or Collapse Simulation Analyse slender structure for critical buckling factors a the associated buckling mode shapes Import Flow/Thermal Effects			✓	✓
Structural Thermal Simulation			✓	✓
Drop Test Simulation Analyse the effect of the impact of a part or an assembly on a target surface Inputs: drop height, gravity, velocity at impact Outputs: stress, displacement, and strains			✓	✓
Pressure Vessel Design Simulation Analyse the structural behavior or parts and assemblies under loading Linear combination and square root of the sum of the squares (SRSS)			✓	✓
Submodeling Simulation Analyse the structural resistance of a sub model from a main assembly			✓	✓
2D Simplification Plane Stress Plane Strain Axisymmetric			✓	✓

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Non Linear Simulation				✓
Transient (time dependent) loads Large component deformation Nonlinear materials				
Dynamic Simulation				✓
Modal Time History Analysis Harmonic Analysis Random Vibration Analysis Response Spectrum Analysis				
Composites Components Simulation				✓