

# SIMULIA SIMULATION ENGINEER 2018 MATRIX

	SOLIDWORKS SIMULIA Engineer
SOLIDWORKS Simulation Connector	✓
Linked through SOLIDWORKS add-on	✓
Simulation nonlinear models and features transferred	✓
Geometry	✓
Transferred directly from SOLIDWORKS	✓
Associativity with SOLIDWORKS to capture geometry changes	✓
Materials	✓
Linear isotropic	✓
Metal plasticity	✓
Hyperelasticity	✓
Hyperfoam	✓
Time dependent elasticity and plasticity	✓
Material failure	✓
Loads & Boundary Conditions	✓
Fixed restraint	✓
Roller/Slider	✓
Fixed Hinge	✓
Force (uniform)	✓
Force (distributed)	✓
Pressure	✓
Mapped spatial pressure	✓
Prescribed displacement	✓
Bolt Force	✓
Bearing Load	✓
Torque, Remote Torque	✓



Imported Force	✓
Gravity	✓
Inertia Relief	✓
Meshing	✓
Global mesh	✓
Comprehensive mesh definition and edition capabilities	✓
Beams, Shells (quad dominant and triangle) and solid (tet and hex dominant) mesh capabilities	✓
Robust Contact	✓
Simple to use General Contact	✓
Contact Pairs	✓
Geometry based correction capability	✓
Abstractions	✓
Rigid Body	✓
Connections	✓
Virtual Bolts	✓
Couplings	✓
Springs	✓
Tie	✓
Point and Line Fasteners	✓
Rigid Connection	✓
Virtual Pin	✓
Connector Elements	✓
Procedures	✓
Static	✓
Quasi-static stress (e.g. Creep)	✓
Static Perturbation	✓
Critical buckling	✓
Natural Frequency	✓



Harmonic response	✓
Modal Dynamic	✓
Thermal Steady-State	✓
Thermal Transient	✓
Thermal Stress	✓
Post-Processing	✓
Model plotting	✓
Deformed, contour, vector plotting	✓
Linked viewports and view synchronization	✓
Animation	✓
Extreme values	✓
Probe/query tools	✓
Display of pre-processing data (loads, restraints, ...)	✓
Iso-surfaces, View cuts	✓
X-Y plots	✓
Automatic report generation	✓
Team Collaboration	✓
Dashboarding for review and approval	✓
Data on the cloud for single source of truth	✓
3D Play for simple results access from anywhere by team	✓
Physics Method Reuse	✓
Capture and share best practices	✓



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