

SimSolid Overview



Capacity	Standard	Advanced	SimSolid Cloud	Inspire
Limits on assembly face facets	No limits	No limits	500k facets	No limits
Limits on parts in the CAD assembly	No limits	No limits	250 parts	No limits

Simulation Types	Standard	Advanced	SimSolid Cloud	Inspire
Structural linear	Yes	Yes	Yes	Yes
Contact non-linear	Yes	Yes	Yes	Yes
Material non-linear	Yes	Yes	No	No
Geometric non-linear	Yes	Yes	Yes	No
Incremental geometric non-linear	No	Yes	No	No
Linear buckling	No	Yes	No	Yes
Structural sequential	No	Yes	No	No
Structural thermal	Yes	Yes	Yes	No
Multi-loadcases	Yes	Yes	No	No
Thermal steady state	Yes	Yes	Yes	No
Thermal transient	No	Yes	No	No
Non-linear thermal transient	No	Yes	No	No
Thermal imported	Yes	Yes	No	No
Modal	Yes	Yes	Yes	Yes
Modal prestress	No	Yes	No	Yes
Linear dynamics	Yes	Yes	No	No
Frequency multi-loadcases	No	Yes	No	No
Squeak and rattle	No	Yes	No	No
Fatigue	No	Yes	No	No
Structural superposition	Yes	Yes	No	No
Structural envelope	Yes	Yes	No	No
Thermal superposition	Yes	Yes	No	No

Geometry Sources	Standard	Advanced	SimSolid Cloud	Inspire
Autodesk Fusion 360 direct integration	Yes	Yes	No	Yes
Onshape direct integration	Yes	Yes	No	Yes
STL files	Yes	Yes	No	Yes
ACIS files	Yes	Yes	Yes	Yes
CATIA (V4, V5, V6) files	Yes	Yes	Yes	Yes
CGR files	Yes	Yes	Yes	Yes
Inventor files	Yes	Yes	Yes	Yes
JT files	Yes	Yes	Yes	Yes
NX files	Yes	Yes	Yes	Yes
Parasolid files	Yes	Yes	Yes	Yes
PTC/Creo files	Yes	Yes	Yes	Yes
SolidWorks files	Yes	Yes	Yes	Yes
STEP files	Yes	Yes	Yes	Yes

Material Properties	Standard	Advanced	SimSolid Cloud	Inspire
Isotropic	Yes	Yes	Yes	Yes
Orthotropic	Yes	Yes	No	No
Rigid	Yes	Yes	Yes	No
Non-linear table driven stress-strain curves	Yes	Yes	No	No

Assembly	Standard	Advanced	SimSolid Cloud	Inspire
Inflated skins	Yes	Yes	No	Yes
Composites	Yes	Yes	No	No
Liquid Body	Yes	Yes	No	No
Gas Body	Yes	Yes	No	No

Connections	Standard	Advanced	SimSolid Cloud	Inspire
Bonded	Yes	Yes	Yes	Yes
Sliding	Yes	Yes	Yes	Yes
Separating contact with friction	Yes	Yes	Yes	Yes
Bolted	Yes	Yes	Yes	Yes
Virtual connectors	Yes	Yes	No	No
Spot welds	Yes	Yes	Yes	Yes
Laser welds	Yes	Yes	No	No
Fillet/seam welds	Yes	Yes	Yes	Yes
Adhesives	Yes	Yes	No	No
Align	Yes	Yes	No	No

Results Output	Standard	Advanced	SimSolid Cloud	Inspire
Contour plots	Yes	Yes	Yes	Yes
Animation (static and modal)	Yes	Yes	Yes	Yes
Max/min locations	Yes	Yes	Yes	Yes
Point value probes	Yes	Yes	Yes	Yes
XY plots	Yes	Yes	No	No
Reaction/contact forces	Yes	Yes	Yes	Yes
Safety factors	Yes	Yes	Yes	Yes
Frequencies and mode shapes	Yes	Yes	Yes	Yes
Bolt/nut resultant forces	Yes	Yes	Yes	Yes
Bolt internal forces	Yes	Yes	No	No
Rivet forces	Yes	Yes	No	No
Spot/seam weld resultant forces	Yes	Yes	Yes	Yes
Contact response	Yes	Yes	No	No

User Productivity	Standard	Advanced	SimSolid Cloud	Inspire
Bookmark browser	Yes	Yes	No	Yes
Save animation (as .mp4 files)	Yes	Yes	No	Yes
Save images (as .png files)	Yes	Yes	No	Yes
Units manager	Yes	Yes	Yes	Yes
Default materials	Yes	Yes	No	Yes
Custom graphics labels	Yes	Yes	No	Yes
Standard views	Yes	Yes	Yes	Yes
User defined views	Yes	Yes	No	Yes
Measurement tool	Yes	Yes	No	Yes
Spot regions for custom load application	Yes	Yes	Yes	Yes

Boundary Conditions	Standard	Advanced	SimSolid Cloud	Inspire
Immovable constraint	Yes	Yes	Yes	Yes
Sliding constraint	Yes	Yes	Yes	Yes
Hinge constraint	Yes	Yes	Yes	Yes
Spring support (elastic foundation)	Yes	Yes	Yes	No
Prescribed displacements	Yes	Yes	Yes	Yes
Alignment	Yes	Yes	No	No
Cable tightening/Rod preload	Yes	Yes	No	No
Pressure	Yes	Yes	Yes	Yes
Force	Yes	Yes	Yes	Yes
Gravity	Yes	Yes	Yes	Yes
Temperature	Yes	Yes	Yes	No
Heat flux	Yes	Yes	Yes	No
Convection	Yes	Yes	Yes	No
Volumetric heat	Yes	Yes	Yes	No
Solar Load	Yes	Yes	No	No
Remote Force/moment	Yes	Yes	Yes	Yes
Bearing load	Yes	Yes	Yes	No
Bolt/nut preload	Yes	Yes	Yes	Yes
Hydrostatic load	Yes	Yes	Yes	No
Wind Load	Yes	Yes	No	No
Translational Inertia load	Yes	Yes	Yes	Yes
Rotational Inertia load	Yes	Yes	Yes	Yes
Distributed mass	Yes	Yes	Yes	No
Inertia relief	Yes	Yes	Yes	Yes
Table driven static loads	Yes	Yes	No	No
Table driven dynamic loads	Yes	Yes	No	No
Dynamic base excitation	Yes	Yes	No	No

Command Line Execution	Standard	Advanced	SimSolid Cloud	Inspire
Installation	Yes	Yes	N/A	Yes
Invocation	Yes	Yes	N/A	Yes
Batch mode	No	Yes	No	Yes