

CAPABILITIES CHART ROCKY DEM 4.0	ROCKY DESIGNER ++	ROCKY PROFESSIONAL
General		
Materials Catalog	▪	▪
Interactions Catalog	▪	▪
Extend Simulation	▪	▪
Simulation Restart	▪	▪
Simulation Scheduler	▪	▪
Unit System Management	▪	▪
Parametric Support (Pre & Post)	▪	▪
Compressed Data Storage	▪	▪
Linux OS Support	▪	▪
Periodic Boundaries		▪
Python Scripting		▪
HPC and Parallel Process		
Parallel shared memory Solver (HPC licenses required)	+	▪
Single GPU and multiGPU Solver (HPC licenses required)		▪
Contact and Physical Models		
Rolling Resistance Model: Type 1 - Constant rolling resistance model	▪	▪
Rolling Resistance Model: Type 3 - Elastic-plastic spring-dashpot resistance model	▪	▪
Contact Model (Normal Forces): Linear Hysteresis & Linears Elastic Viscous	▪	▪
Contact Model (Tangential Forces): Elastic Coulomb & Coulomb Limit	▪	▪
Shear Wear Contour Plots	▪	▪
Wear (Surface Wear Modification)		▪
Particle Breakage		▪
Thermal Model		▪
Airflow Model (Lattice Boltzmann)		▪
Geometry Types		
Custom Inlets	▪	▪
Custom Geometries (import *.XGL, *.STL, and *.DXF Files)	▪	▪
Feed Conveyor Parametric	▪	▪
Receiving Conveyor Parametric	▪	▪
Custom Geometries (import *.CAS and *.MSH ANSYS Fluent Files)		▪

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Movement		
Rotation	▪	▪
Translation	▪	▪
Rotation Without Displacement	▪	▪
Translation Without Displacement	▪	▪
Motion Preview	▪	▪
Vibration		▪
Pendulum		▪
Periodic Motion		▪
6DOF (Six Degrees of Freedom)		▪
Replicate Geometry		▪
Combined Motions		▪
Particle Types		
Spherical Particles	▪	▪
Non-Round Particles	▪	▪
Particle Size Distribution	▪	▪
Adhesive Materials (Wet/Dry/Sticky Contact Rheologies)	▪	▪
Particle Detailed 3D View	▪	▪
Concave Particles		▪
Flexible Particles		▪
Data Export		
Export Image	▪	▪
Export Table Data	▪	▪
Export Curve Data	▪	▪
Collision Data Collection & Export for FEA Analysis (ANSYS Mechanical)	▪	▪
Collision Energy Spectrum		▪
Export Modified Wear Geometry		▪
Quantitative Calculations		
Cube Selection	▪	▪
Cylinder Selection	▪	▪
Plane Selection	▪	▪
Polyhedral Envelope Selection	▪	▪
Property Filter	▪	▪
Residence Time	▪	▪

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Particle Tagging	▪	▪
Eulerian Statistics		▪
Particle Time Statistics		▪
Particle Flip Count		▪
Post Processing Tools		
3D View	▪	▪
Time Plot	▪	▪
Space Plot	▪	▪
Histogram	▪	▪
Cross Plot	▪	▪
Video Animation	▪	▪
Motion Preview	▪	▪
MultiTime Plot		▪
Particle Inspector		▪
Particles Trajectory		▪
Particle Detailed 3D View		▪
External Coupling / Other Physics		
ANSYS Workbench Parametric Integration	▪	▪
ANSYS Mechanical 1-Way Coupling (DEM-to-FEA)	▪	▪
ANSYS Fluent 1-Way Coupling (CFD-to-DEM)	▪	▪
ANSYS Fluent 2-Way Coupling		▪
DYNARDO optisLang Integration		▪

+ Additional Product Required

++ Rocky Designer - Max. 1.000.000 Particles