

SOLIDWORKS 3D DESIGN PRODUCT FEATURES

SOLIDWORKS CAD PRODUCT FEATURES	SOLIDWORKS PREMIUM	SOLIDWORKS PROFESSIONAL	SOLIDWORKS STANDARD
▼ PART AND ASSEMBLY MODELLING			
3D Solid Modelling	■	■	■
Conceptual Design	■	■	■
Direct Model Geometry Modification	■	■	■
Large Assembly Design	■	■	■
Advanced Surface Design	■	■	■
Sheet Metal Design	■	■	■
Weldments	■	■	■
Plastic Part Design	■	■	■
Mold Design	■	■	■
Assembly Structure Planning: Treehouse	■	■	■
▼ 2D DRAWINGS			
Automatic Drawing View Creation	■	■	■
Automatic Drawing View Updates	■	■	■
Drafting Standards: ANSI, ISO, DIN, JIS, BSI, GOST, GB	■	■	■
Manual and Automated Dimensioning and Tolerancing	■	■	■
Automatic Bill of Materials (BOM), Exploded Views, Balloon Notes	■	■	■
Hole Tables, Weld Tables, Pipe Bend Tables, Cut Lists	■	■	■
▼ DESIGN REUSE AND AUTOMATION			
Design Automation (DriveWorksXpress)	■	■	■
Part and Assembly Configurations	■	■	■
Reuse 2D and 3D CAD Data	■	■	■
3D CAD Models from Suppliers (3dcontentcentral.com)	■	■	■
▼ ANIMATION AND VISUALISATION			
Move Assembly with Motors	■	■	■
Collision & Interference Detection	■	■	■
3D Walk Through/Fly Through	■	■	■
▼ COLLABORATE AND SHARE CAD DATA			
Import/Export Over 30 CAD Formats	■	■	■
2D DXF®/DWG® Data	■	■	■
2D to 3D CAD Conversion Tools	■	■	■
▼ BASIC ANALYSIS TOOLS			
Part Structural Analysis , Part Environmental Impact Analysis, Basic Flow Analysis	■	■	■
▼ DESIGN FOR MANUFACTURING			
Rules-Based Manufacturability Checks (DFMXpress)	■	■	■
▼ ADVANCE CAD FILE IMPORT			
Automatic & Interactive Feature Recognition And Conversion	■	■	■
▼ PRODUCTIVITY TOOLS			
Automatic Task Scheduling & Batch Processing	■	■	■
▼ CAD LIBRARIES			
Over One Million Standard Fasteners And Components (Toolbox)	■	■	
Automatic Assembly Of Fasteners And Components. Beam, Bearing & CAM Design Wizard	■	■	
▼ ADVANCED DESIGN FOR MANUFACTURING			
Geometry Check for CAM	■	■	
Thickness Analysis, Draft & Undercut Analysis	■	■	

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▼ DESIGN FOR COST/QUOTING (SOLIDWORKS COSTING)			
Compare Manufacturing Costs	■	■	
Automated Manufacturing Cost Estimation	■	■	
Customizable Manufacturing Settings	■	■	
Output Cost Report	■	■	
▼ ADVANCED PHOTOREALISTIC RENDERING (PHOTOVIEW 360)			
Photo Quality Images and Animations	■	■	
Control Camera View, Lighting, Materials, Textures	■	■	
▼ eDRAWINGS® PROFESSIONAL			
Create and Publish eDrawings Files	■	■	
Enable Markup of eDrawings Files	■	■	
View Assembly Animations	■	■	
Password Protect Intellectual Property	■	■	
▼ ECAD/MCAD COLLABORATION (CIRCUITWORKS™)			
Import/Export of Printed Circuit Board (PCB) Designs	■	■	
Two-Way Data Exchange: ECAD to MCAD - MCAD to ECAD	■	■	
IDF, ProStep (IDX) or PADS (*.ASC)	■	■	
PCB Outlines, Keep-Out Areas, Maximum Heights	■	■	
Compare Board Designs for Differences	■	■	
Automatic Electrical Component Assembly	■	■	
▼ SCAN TO 3D (REVERSE ENGINEERING)			
▼ AUTOMATED TOLERANCE STACK-UP ANALYSIS (TOLANALYST)			
Worst Case and RSS Maximum/Minimum	■	■	
Identify Highest Contributing Tolerances	■	■	
Automatic Update of Analysis When Design Changes	■	■	
▼ MOTION ANALYSIS			
Kinematic and Dynamic Analysis	■		
Inputs: Forces, Springs, Dampers, Gravity, Contact, Bushings	■		
Outputs: Displacement, Velocities, Accelerations, Body Loads, Joint Forces	■		
▼ STRUCTURAL PART AND ASSEMBLY ANALYSIS			
Inputs: Variable Forces/Pressures, Full Restraint Sets, Connectors, Gravity, Contact, Materials	■		
Outputs: Factor of Safety, Stress, Displacement, Strain	■		
View/Publish Animations, Graphs, Reports	■		
▼ ROUTING OF PIPES AND TUBES			
Create Detailed Piping Systems	■		
Create Flexible or Rigid Tubing Lines	■		
Customizable Library of Piping Components	■		
Output Tube Bend Data for Manufacturing	■		
Cut Length Calculations Automated for BOM	■		
Automatic Routing Option for Pipes and Tubes	■		
Minimum Bend Radius Check for Tubes	■		
Output of PCF Files for ISOGEN® Piping Software	■		
▼ ROUTING OF ELECTRICAL CABLING AND WIRING HARNESES			
Create Detailed Electrical Cable and Wiring Harnesses	■		
Run Rigid or Flexible Electrical Conduit Segments	■		
Conduit & Ribbon Cable	■		
Automated Harness Flattening for Manufacturing	■		
BOM and Wire Cut Lists	■		
Automatic Routing Using Imported "From-To" Connection Data	■		