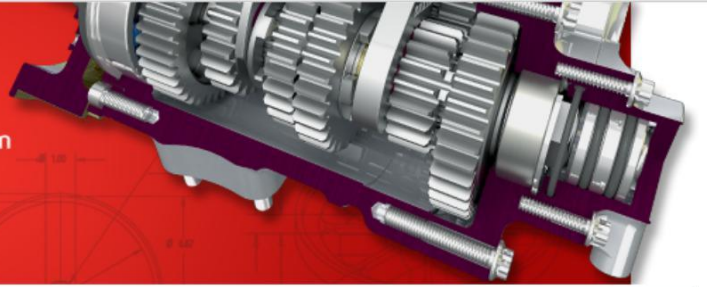


# 3D CAD

SOLIDWORKS 3D CAD solutions enable you and your team to quickly transform new ideas into great products.



## SOLIDWORKS 3D CAD MATRIX

|   | SOLIDWORKS PREMIUM       | SOLIDWORKS PROFESSIONAL  | SOLIDWORKS STANDARD      |
|---|--------------------------|--------------------------|--------------------------|
| <b>Ease of Use</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Learn Fast: InContext and Toolbar Menus, Command Search, BuiltIn Tutorials, Searchable Help Documentation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Work Fast: Hot Keys, Customizable Commands, APIs  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Get Help Fast: Local and Worldwide Support Services   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Part and Assembly Modeling</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3D Solid Modeling   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Conceptual Design   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Assembly Structure Planning: SOLIDWORKS Treehouse   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Direct Model Geometry Modification  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Large Assembly Design   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Advanced Surface Design   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sheet Metal Design  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Weldments   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Plastic Part Design   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mold Design   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>2D Drawings</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automatic Drawing View Creation   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automatic Drawing View Updates  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Drafting Standards: ANSI, ISO, DIN, JIS, BSI, GOST, GB  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Manual and Automated Dimensioning and Tolerancing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Annotations and Symbols   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automatic Bill of Materials (BOM), Exploded Views, Balloon Notes  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hole Tables, Weld Tables, Pipe Bend Tables, Cut Lists   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sheet Metal Bend Notes  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automated Creation of Radial/Cylindrical Exploded Views   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
| <b>Design Reuse and Automation</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Find Your Data (SOLIDWORKS Search)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Design Automation (DriveWorksXpress)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Part and Assembly Configurations  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Reuse 2D and 3D CAD Data  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3D CAD Models from Suppliers (3DContentCentral.com)                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Animation and Visualization</b>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Move Assembly by Dragging Components  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Move Assembly with Motors   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CAD Videos  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Basic CAD Rendering (RealView)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3D Walk Through/Fly Through   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Interference Check</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Collision and Interference Detection  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hole Alignment and Thread Checks  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Collaborate and Share CAD Data</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Read Printed Circuit Board Data as 3D Parts (IFC)                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Import/Export Over 30 CAD Formats   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Print directly to 3D printers: AMF and 3MF formats                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| MCAD to AEC: Prepare and export to AEC applications                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3D Models for CAD/CAM Integration with CAM Partners                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| View eDrawings® Files   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3D Dimensioning and Tolerancing (Model Based Definition)                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2D DXF®/DWG® Data   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Maintain and Update Existing 2D Drawings – edit and view DWG® files in DraftSight | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2D to 3D CAD Conversion Tools   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Convert 3D Solid Parts to Sheet Metal   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intellectual Property Protection (Defeature)                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Design Review Markup and Viewing (Large Design Review)                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Advanced CAD File Import</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interactive Feature Recognition and Conversion                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Automatic Feature Recognition and Conversion                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Basic Analysis Tools</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Part Environmental Impact Analysis  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Part Structural Analysis  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Basic Flow Analysis   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Productivity Tools</b>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Power Selection Tools   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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|--|--------------------------|--------------------------|--------------------------|
| Symmetry Check   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Copy Feature Info into Other Features (Feature Paint)        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Find and Replace in Drawing                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Design for Manufacturing</b>                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Thickness Analysis   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Geometry Check for CAM                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Compare Parts and Drawings for Changes                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rulesbased Manufacturability Checks (DFMXpress)              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Draft and Undercut Analysis                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sheet Metal Checks and Flat Pattern                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>SOLIDWORKS Visualize Standard</b>                         | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Must be on Active Subscription                               | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>CAD Libraries</b>   | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Over One Million Standard Fasteners and Components (Toolbox) | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Beam, Bearing, and Cam Design Wizard                         | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Automatic Assembly of Fasteners and Components               | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>Automatic Task Scheduling and Batch Processing</b>        | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>Design for Cost &amp; Cost Estimation</b>                 | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Compare Manufacturing Costs                                  | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Automated Manufacturing Cost Estimation                      | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Customizable Manufacturing Settings                          | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Output Cost Report   | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>ECAD/MCAD Collaboration (CircuitWorks™)</b>               | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Import/Export of Printed Circuit Board (PCB) Designs         | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Automatic Electrical Component Assembly                      | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| TwoWay Data Exchange: ECAD to MCAD MCAD to ECAD              | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| IDF, ProStep (IDX) or PADS (*.ASC)                           | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| PCB Outlines, KeepOut Areas, Maximum Heights                 | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Filter Display for Clarification                             | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Compare Board Designs for Differences                        | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Design Change Notes  | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>Advanced Photorealistic Rendering (PhotoView 360)</b>     | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Photo Quality Images and Animations                          | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Control Camera View, Lighting, Materials, Textures           | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>CAD Standards Checking</b>                                | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Verify Designs against Company Standards                     | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Automatically Correct NonConforming Issues                   | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| Customize Design Check Rules                                 | <input type="checkbox"/> | <input type="checkbox"/> |                          |
| <b>Automated Tolerance StackUp Analysis (TolAnalyst)</b>     | <input type="checkbox"/> | <input type="checkbox"/> |                          |

|   |                          |                          |  |
|---|--------------------------|--------------------------|--|
| Worst Case and RSS Maximum/Minimum  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Identify Highest Contributing Tolerances  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Automatic Update of Analysis when Design Changes  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <b>SOLIDWORKS File Management</b>   | <input type="checkbox"/> | <input type="checkbox"/> |  |
| User and Group Access Rights  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| File Vaulting   | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Secure Checkin and Checkout   | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Automated Revision Control  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <b>Reverse Engineering (ScanTo3D)</b>   | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Import, Edit, Evaluate, and Create Solid Geometry from Point Cloud and Mesh Data                | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Import Adobe® Illustrator® Files  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Import Image Files and Convert Raster to Vector Data  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <b>eDrawings® Professional</b>  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Create and Publish eDrawings Files  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Allow Measurement in eDrawings Files  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Enable Markup of eDrawings Files  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Exploded Views Support for eDrawings Files  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| View Assembly Animations  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Password Protect Intellectual Property  | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <b>Motion Analysis</b>  | <input type="checkbox"/> |                          |  |
| Kinematic and Dynamic Analysis  | <input type="checkbox"/> |                          |  |
| Inputs: Forces, Springs, Dampers, Gravity, Contact, Bushings                                    | <input type="checkbox"/> |                          |  |
| Outputs: Displacement, Velocities, Accelerations, Body Loads, Joint Forces                      | <input type="checkbox"/> |                          |  |
| View/Publish Animations, Graphs, Reports  | <input type="checkbox"/> |                          |  |
| <b>Structural Part and Assembly Analysis</b>  | <input type="checkbox"/> |                          |  |
| Inputs: Variable Forces/Pressures, Full Restraint Sets, Connectors, Gravity, Contact, Materials | <input type="checkbox"/> |                          |  |
| Outputs: Factor of Safety, Stress, Displacement, Strain   | <input type="checkbox"/> |                          |  |
| View/Publish Animations, Graphs, Reports  | <input type="checkbox"/> |                          |  |
| <b>LifeCycle Assessment (LCA) for Environmental Impact: SOLIDWORKS Sustainability</b>           | <input type="checkbox"/> |                          |  |
| <b>Routing of Pipes and Tubes</b>   | <input type="checkbox"/> |                          |  |
| Create Detailed Piping Systems  | <input type="checkbox"/> |                          |  |
| Create Flexible or Rigid Tubing Lines   | <input type="checkbox"/> |                          |  |
| Customizable Library of Piping Components   | <input type="checkbox"/> |                          |  |

|  |                          |  |  |
|--|--------------------------|--|--|
| Automatic Assembly of Hangers and Supports   | <input type="checkbox"/> |  |  |
| Output Tube Bend Data for Manufacturing  | <input type="checkbox"/> |  |  |
| Cut Length Calculations Automated for BOM  | <input type="checkbox"/> |  |  |
| Automatic Routing Option for Pipes and Tubes   | <input type="checkbox"/> |  |  |
| Minimum Bend Radius Check for Tubes  | <input type="checkbox"/> |  |  |
| Output of PCF files for ISOGEN® piping software  | <input type="checkbox"/> |  |  |
| <b>Routing of Electrical Cabling and Wiring Harnesses</b>                                | <input type="checkbox"/> |  |  |
| Create Detailed Electrical Cable and Wiring Harnesses                                    | <input type="checkbox"/> |  |  |
| Run Rigid or Flexible Electrical Conduit Segments  | <input type="checkbox"/> |  |  |
| Conduit  | <input type="checkbox"/> |  |  |
| Ribbon Cable   | <input type="checkbox"/> |  |  |
| Wire Lengths Automatically Calculated  | <input type="checkbox"/> |  |  |
| Automated Harness Flattening for Manufacturing   | <input type="checkbox"/> |  |  |
| BOM and Wire Cut Lists   | <input type="checkbox"/> |  |  |
| Automatic Routing Using Imported "FromTo" Connection Data                                | <input type="checkbox"/> |  |  |
| Mounting Hardware, Splices, Connectors, Insulation, Looms, HeatShrink Tubing, Cable Ties | <input type="checkbox"/> |  |  |
| <b>Routing of Rectangular and Other Sections</b>   | <input type="checkbox"/> |  |  |
| <b>Advanced Surface Flattening</b>   | <input type="checkbox"/> |  |  |
| <b>Assembly Level Cost Roll Up</b>   | <input type="checkbox"/> |  |  |