



# AUTODESK® PRODUCT DESIGN & MANUFACTURING COLLECTION

Everything your team needs to design and make great products.



Included Products	Inventor Professional	Product Design Suite	Collection
<b>Inventor Professional</b> <i>Professional-grade 3D mechanical design, documentation, and simulation.</i>	✓	✓	✓
<b>Autodesk Nastran In-CAD</b> <i>CAD-integrated FEA tools for engineers and analysts, powered by the Autodesk Nastran solver.</i>	-	-	✓
<b>HSM</b> <i>Integrated 2.5- to 5-axis CAM programming for Inventor and SOLIDWORKS.</i>	-	-	✓
<b>Fusion 360</b> <i>3D CAD, CAM, and simulation in a single cloud-based platform on a Mac or PC.</i>	-	✓	✓
<b>AutoCAD</b> <i>Work with TrustedDWG™ technology for 2D and 3D design, and collaborate across desktop, cloud, and mobile.</i>	-	✓	✓
<b>AutoCAD Mechanical</b> <i>All the functionality of AutoCAD, plus comprehensive libraries of mechanical parts and design tools.</i>	-	✓	✓
<b>AutoCAD Electrical</b> <i>All the functionality of AutoCAD, plus a complete set of tools for electrical design.</i>	-	✓	✓
<b>AutoCAD Architecture</b> <i>Architectural drafting and documentation facilitates collaboration for factory design.</i>	-	-	✓
<b>Factory Design Utilities</b> <i>Provides the tools to plan and design the factory layout and improve production performance.</i>	-	-	✓
<b>Navisworks Manage</b> <i>Coordinate entire projects in one interface for simulation and review among team members and stakeholders.</i>	-	✓	✓
<b>ReCap Pro</b> <i>Convert reality capture into a 3D model or 2D drawing that is utilized in the design process.</i>	-	✓	✓
<b>3ds Max</b> <i>Produce professional-quality 3D animations, renderings, and models.</i>	-	✓	✓
<b>Vault Basic</b> <i>Organize design data, manage documentation, track revisions, and other development processes.</i>	✓	✓	✓

Product design & engineering	Inventor Professional	Product Design Suite	Collection
<b>3D mechanical design</b> <i>Professional-grade 3D mechanical design, documentation, and product simulation tools.</i>	✓	✓	✓
<b>Design automation &amp; product configuration</b> <i>Design standard components quickly and set up and deploy complex product configurations.</i>	✓	✓	✓
<b>Flexible modeling tools</b> <i>Use the appropriate modeling strategy for every job with parametric, freeform, and direct modeling tools.</i>	✓	✓	✓
<b>Shape generation</b> <i>Provides the optimal location of solid geometry based on applied loads.</i>	✓	✓	✓
<b>AnyCAD</b> <i>Work with data from major 3D CAD systems and maintain an associative link.</i>	✓	✓	✓
<b>Model-based definition</b> <i>Use 3D annotations to add tolerance dimensions, notes, and other engineering details to the 3D model.</i>	✓	✓	✓
<b>Electrical controls system design</b> <i>Link Inventor and AutoCAD Electrical data for better collaboration between mechanical and electrical design.</i>	-	✓	✓
<b>Native DWG documentation</b> <i>Compatible DWG technology for AutoCAD, Inventor, and Revit.</i>	✓	✓	✓

Simulation	Inventor Professional	Product Design Suite	Collection
<b>Linear static stress</b> <i>Virtually test parts and assemblies for high concentrations of stress and deflection.</i>	✓	✓	✓
<b>Natural frequency (modal)</b> <i>Determine the mode shapes and frequency levels of the design.</i>	✓	✓	✓
<b>Dynamic simulation</b> <i>Simulate and analyze the dynamic characteristics of an assembly in motion under various load conditions.</i>	✓	✓	✓
<b>Autodesk Nastran solver</b> <i>Gain FEA results from a trusted and accurate analysis solver.</i>	-	-	✓
<b>Nonlinear structural analysis</b> <i>Improved accuracy for large deflections, contact, and additional material models such as plastics and rubber.</i>	-	-	✓
<b>Fatigue</b> <i>Predict the life and durability of the design as cracks begin to form due to repetitive loading conditions.</i>	-	-	✓
<b>Heat-transfer</b> <i>Examine the temperature of components by analyzing conduction, convection, and radiation.</i>	-	-	✓
<b>Frequency response</b> <i>Determine the structural harmonic response based on frequency-dependent loads.</i>	-	-	✓

CAM	Inventor Professional	Product Design Suite	Collection
<b>3-axis milling and 3+2 positioning</b> <i>Choose from several 3-axis styles, and perform 3+2 axis positioning with the same CAM strategies.</i>	-	-	✓
<b>Traditional turning and advanced mill/turn</b> <i>Improve productivity with traditional turning, facing, grooving, and boring functions.</i>	-	-	✓
<b>5-axis and multiaxis operations</b> <i>Simultaneous 4- and 5-axis features for machining complex models.</i>	-	-	✓

Factory planning & design	Inventor Professional	Product Design Suite	Collection
<b>2D &amp; 3D factory layout</b> <i>Plan and validate factory layouts for efficient equipment placement to improve production performance.</i>	-	-	✓
<b>Process optimization</b> <i>Simulate manufacturing processes early before spending time in layout.</i>	-	-	✓
<b>Reality capture</b> <i>Convert reality capture into a 3D model or 2D drawing that is utilized in the design process.</i>	-	✓	✓
<b>Collision detection</b> <i>Detect equipment collisions prior to installation and commissioning.</i>	-	✓	✓
<b>Design review &amp; visual walkthrough</b> <i>Coordinate entire projects in one interface for simulation and review among team members and stakeholders.</i>	-	✓	✓
<b>Factory Asset Warehouse</b> <i>Access to a shared cloud-based library containing thousands of standard and name brand equipment.</i>	-	-	✓

Data management	Inventor Professional	Product Design Suite	Collection
<b>CAD integrated data management</b> <i>Experience the benefits of data management in the familiar CAD design environment.</i>	✓	✓	✓
<b>Advanced search tools</b> <i>Utilize part and assembly property information for single or combined search criteria.</i>	✓	✓	✓
<b>Design reuse</b> <i>Configure existing design files to replace, reuse, or copy for use in new design projects.</i>	✓	✓	✓
<b>File check-in and check-out</b> <i>Enable design teams to effectively work together on the same project.</i>	✓	✓	✓