SOLIDWORKS 3D CAD

TRANSFORM IDEAS INTO INNOVATIVE PRODUCTS WITH INTUITIVE AND POWERFUL DESIGN AND MANUFACTURING SOLUTION
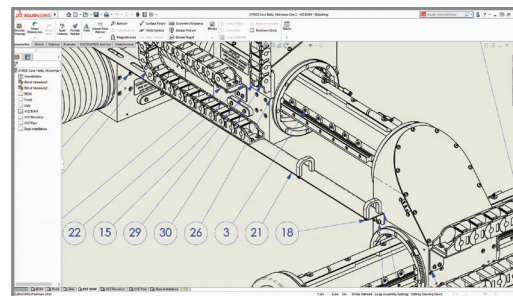
Dramatically improve the way you develop and manufacture products with comprehensive tools for design, simulation, manufacturing, data management, and collaboration, helping you reduce costs and improve quality.

OVERVIEW

SOLIDWORKS® 3D CAD, the foundation of the entire SOLIDWORKS portfolio of solutions, provides engineers, designers, and manufacturers with easy-to-learn, extremely powerful functionality to design and deliver products. All SOLIDWORKS solutions support a single-window complete integration with SOLIDWORKS 3D CAD. As a result, all SOLIDWORKS products work together seamlessly, using the same design data, so each design change is updated automatically across all applications. New SOLIDWORKS 3D CAD licenses include access to the cloud-based **3DEXPERIENCE®** platform with SOLIDWORKS subscription. This access enables you to mark up and share 3D designs with anyone, securely store and access designs from a central place, and formally manage design changes.

Capabilities

- 3D Design and 2D Drawings - Create designs faster and more accurately, including 3D models and 2D drawings of complex parts and large assemblies.

- Specific Tools for Specific Design Tasks - Work more efficiently with application-specific tools for holes, fasteners, sheet metal, injection molds, plastic and cast parts, weldments, surfacing, mesh models, reverse engineering, piping, and electrical routing.

- Piping, Tubing, and Electrical Routing - Complete your design, including all your piping, tubing, and electrical routes, using tools specifically designed to speed these tasks.

- Design Changes That Propagate Downstream - Make design changes at any time. Changes flow quickly and easily to all downstream departments.

- Design Automation and Configurability - Automate design and drawing creation with built-in configurability tools.

- Premade Library of Components – Leverage the extensive components and parts library so you don't have to waste time modeling common parts such as bolts, nuts, washers, and other common hardware items.

- Elimination of Design Errors and Manufacturing Rework - Eliminate errors and rework before designs get to manufacturing by using automatic interference checking and virtual testing of designs, with integrated motion and stress analysis tools.

- Automatic Interference Checking - Automatically check for interferences and misalignments before going to manufacturing.

- Integrated Design and Manufacturing - Enable design and manufacturing teams to work concurrently in one seamlessly integrated system.

- Accurate Bills of Materials - Output accurate bills of materials (BOMs) needed by manufacturing with the click of a mouse.

- Cost and Production Optimization - Design for cost and design for manufacturing by using automatic manufacturing-cost estimation tools and manufacturability checks.

- Advanced Surface Flattening - Save time and material using advanced surface-flattening tools in order to determine the initial blank size of textile and metal components that have complex, nondevelopable shapes.

- Direct Collaboration With Others Who Use SOLIDWORKS - Share data directly with your suppliers and customers who also use SOLIDWORKS and eliminate data translation, which wastes time and can introduce design errors.

- CAD Interoperability - Open and work with most types of 3D CAD data with the option to link to and work with the model in its original CAD format or convert it automatically to a SOLIDWORKS file.

- Reduced Costs for Maintaining Several CAD Systems - Significantly reduce costs associated with supporting multiple design and manufacturing tools by implementing one seamlessly integrated design-to-manufacturing solution.

- Simulation Tools - Reduce costs and get to market faster with simulation tools for motion and structural analysis that allow you to understand how your designs will perform in the real world without the need to manufacture expensive and time-consuming prototypes.

- CAM Programming – Automate CAM programming with embedded, easily customizable, rules-based machining using SOLIDWORKS CAM powered by CAMWorks™.

- Data Management - Manage interactions between team members and control revisions using data management tools.

- Photorealistic Images - Communicate ideas more effectively using tools to create, publish, and view lifelike, photorealistic images of designs.

- Support for AR and VR - Dramatically simplify the path from SOLIDWORKS CAD to augmented reality (AR) and virtual reality (VR) with an export option (extended reality).

- Environmental Impact - Check the environmental impact of your design with built-in analysis tools.

- Fast and Easy Learning - Get up to speed quickly with online help and tutorials, live technical support, and training.

- Connected Design-to-Manufacturing Ecosystem - With access to the **3D**EXPERIENCE cloud-based platform, easily share your CAD data, collaborate with others, and use a growing suite of connected tools to design, manufacture, and manage your products.

Our **3D**EXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3D**EXPERIENCE® Company, is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating virtual twin experiences of the real world with our **3D**EXPERIENCE platform and applications, our customers can redefine the creation, production, and life-cycle-management processes of their offer and thus have a meaningful impact to make the world more sustainable. The beauty of the Experience Economy is that it is a human-centered economy for the benefit of all—consumers, patients, and citizens. Dassault Systèmes brings value to more than 300,000 customers of all sizes, in all industries, in more than 150 countries. For more information, **visit www.3ds.com**.

3DEXPERIENCE®

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