

## THE COMPLETE 3D PRODUCT DESIGN SOLUTION

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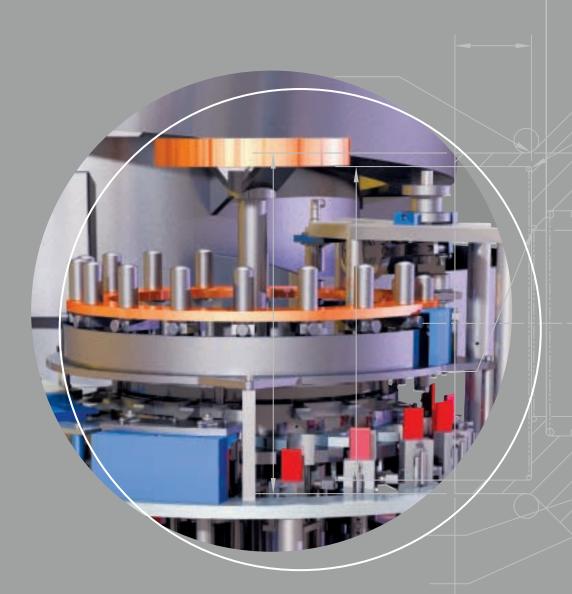
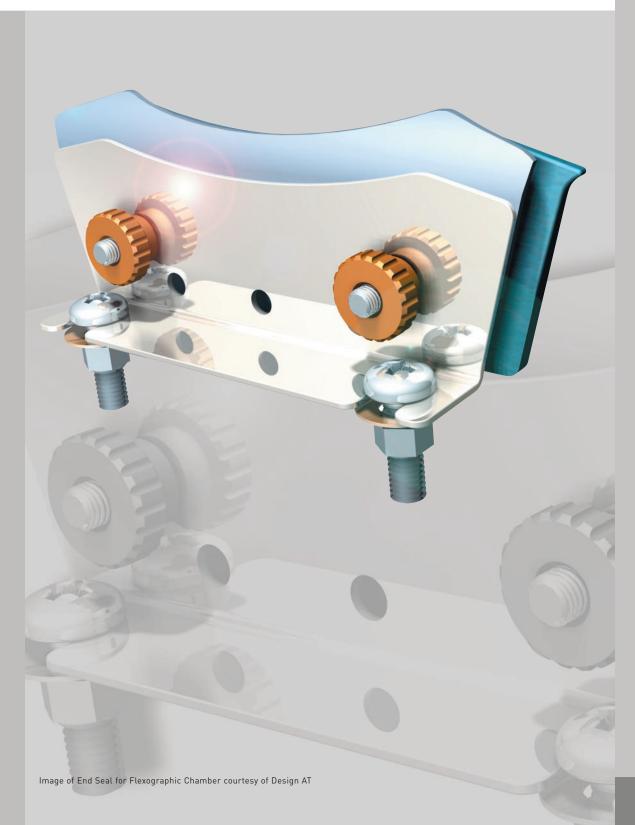


Image of Aerosol Valve Assembly Machine courtesy of Haumiller Engineering Company



## The Complete 3D Product Design Solution

SOLIDWORKS OFFICE PREMIUM IS THE COMPLETE 3D PRODUCT DESIGN SOLUTION, PROVIDING YOUR PRODUCT DESIGN TEAM WITH ALL THE DESIGN ENGINEERING, DATA MANAGEMENT, AND COMMUNICATION TOOLS THAT THEY NEED IN ONE PACKAGE



# SolidWorks Office Premium

#### SolidWorks software

SolidWorks is the world's #1 3D mechanical design software for the mainstream market based on the number of users in production, customer satisfaction, and sales.\* SolidWorks offers best-in-class solid modeling and 2D drawing capabilities, plus more time-saving innovations than any other 3D CAD system.

# COSMOSWorks Designer design validation software

COSMOSWorks Designer is the first powerful design validation software created for nonspecialists, enabling any designer or engineer to improve product quality and safety by testing 3D CAD models under real-world conditions prior to manufacture.

### PDMWorks data management software

The PDMWorks® product data management (PDM) solution is easy to set up and use, allowing your design team to control CAD file revisions and manage all project data more securely and efficiently.

### SolidWorks Routing software

SolidWorks Routing software automates and simplifies the design of all types of piping, tubing, and electrical cabling systems. It also includes a library of special fittings for routed systems, plus harnessing documentation capabilities that further ease the design of electronic subsystems.

#### Design communication tools

Demonstrate more effectively how products will look and perform with SolidWorks design communication tools:

eDrawings™ Professional – Collaborate easily and quickly on product designs with innovative publishing and viewing software that allows an unlimited number of recipients to mark up and supply feedback via email.

**3D Instant Website** – Publish live websites with 3D interactive content with this easy-to-use tool.

PhotoWorks<sup>™</sup> - Create photorealistic images with ease by using innovative rendering software.

**SolidWorks Animator** – Create compelling AVI files from SolidWorks parts and assemblies with simple-to-use animation software.

#### CAD productivity enhancements

Reduce design steps with SolidWorks CAD productivity enhancements:

SolidWorks Toolbox – Access a timesaving library of standard parts providing automated assembly through SolidWorks Smart Part Technology.

SolidWorks Utilities – Find the differences between two versions of the same part or locate, modify, and suppress features within a model.

FeatureWorks® – Simplify the reuse of 3D CAD data created in various file formats with feature recognition software.

**SolidWorks Task Schedule** – Schedule resource-intensive tasks during periods when you'll be away from your computer with this easy-to-use software utility.

\*See www.solidworks.com/number1in3D for details.

## SolidWorks Software

THE WORLD'S #1 MAINSTREAM 3D MECHANICAL DESIGN SOFTWARE

SolidWorks software offers the best performance and the most time-saving innovations of any 3D product design solution available. SolidWorks lets you work faster through unmatched ease-of-use, including familiar Windows® functions like drag-and-drop, point-and-click, and cut-and-paste. With SolidWorks, design data is 100% editable, and relationships among parts, assemblies, and drawings always stay up to date.

### Ease-of-use

**Heads-up user interaction** – Reduce design steps, lessen visual clutter, and minimize fatigue with a set of intuitive display and control functions.

### 2D-to-3D transition tools

**DWGEditor** – Edit and maintain DWG files in their native format with an editing tool that provides an interface familiar to AutoCAD® users.

**Productivity enhancements** – Ease the transition from 2D to 3D design with support for reusable 2D geometry, comprehensive help documentation, and innovative tools for building 3D models from legacy 2D data.

### Unique capabilities

**Design communication** – Share design concepts easily with eDrawings, the first free publishing and viewing software that dramatically simplifies the sharing of product design data across multiple CAD environments.

**Built-in part analysis** – Analyze design integrity easily with COSMOSXpress<sup>™</sup>, the first built-in analysis tool available for testing part designs quickly and simply within a 3D mechanical design system.

Machine design tools – Make use of a full set of weldment design and documentation tools. Get best-in-class, fully associative sheet-metal capabilities and easy access to a library of machine design features.

**Mold design tools** – Automate the creation of cores and cavities with built-in mold design tools. Use MoldflowXpress, a wizard-based design validation tool, for quickly and easily testing the manufacturability of plastic injection-molded parts.

**Consumer product design tools** – Speed design of consumer products with enhanced tools for manipulating surfaces easily, maintaining curvature continuity in designs, and creating indentations in thin-walled parts.

Online access to ready-made components – Save time with 3D ContentCentral<sup>™</sup>, the first built-in web resource that supplies 3D CAD system users with access to ready-made components via leading online catalogs.

**Configuration Management** – Simplify design reuse and iterations by creating multiple design variations of a part or an assembly model within a single document.

**Smart Part Technology** – Snap components into place effortlessly and insert scores of standard bolts into holes automatically.

**File translators** – Preserve the value of DWG files and other legacy data with more than 20 built-in CAD file translators.

**Physical simulation** – Avoid potential design flaws by simulating true motion and mechanical interaction between solids.

**Single-window integration with add-on software** – Extend design applications through full integration with more than 45 best-in-class add-on solutions.



## SolidWorks Software

### Best-in-class 3D mechanical design functions

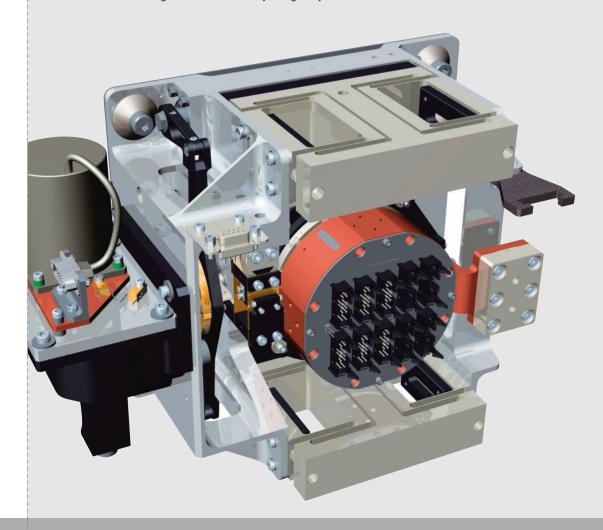
Part modeling – Create designs easily with extrudes, revolves, thin features, lofts and sweeps, advanced shelling, feature patterns, and holes using unique feature-based part modeling capabilities.

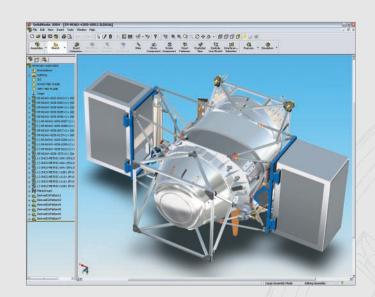
**Assembly modeling** – Reference parts directly, maintain relationships when creating new parts, and drag and drop features easily into place.

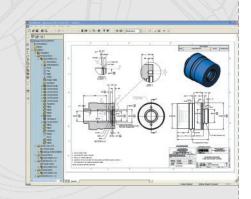
Large assemblies – Work on large assemblies without having to load all components into memory and gain unparalleled performance for designing large assemblies consisting of tens of thousands of parts.

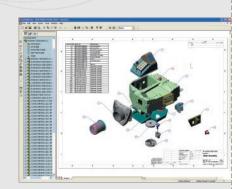
**2D drawing** – Develop complete, production-ready engineering drawings without drawing a single line or arc, make revisions quickly and accurately, and generate bills of materials and balloons automatically, easily controlling orientation and alignment of balloons.

**Surfacing** – Create complex surfaces using lofts and sweeps with guide curves, fill-in holes, and drag-handles for easy tangency control.









Images at left and above courtesy of National Optical Astronomy Observatory, operated by the Association of Universities for Research in Astronomy, under cooperative agreement with the National Science Foundation.

## COSMOSWorks Designer

THE FIRST POWERFUL DESIGN VALIDATION SOFTWARE THAT'S EASY TO USE AND AFFORDABLE FOR ANY PRODUCT DESIGNER

COSMOSWorks Designer is the first powerful design validation software created for nonspecialists, enabling any designer or engineer to improve product quality and safety by testing 3D CAD models under real-world conditions prior to manufacture. Use COSMOSWorks Designer to improve product quality by identifying areas prone to weakness and failure. You can also lower costs by trimming excess material and minimizing the need for physical prototypes.

### Ease-of-use

Tight integration with SolidWorks 3D product design software – COSMOSWorks Designer allows SolidWorks users to update all design changes automatically and become immediately productive using familiar Windows functions and commands.

## Best-in-class design validation

Part and assembly analysis – Compare multiple alternative configurations easily by studying stress, strain, and displacement for both parts and assemblies. Perform shell analysis on sheet-metal parts or SolidWorks surfaces.

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Automation of analysis – Automate meshing of parts and assemblies. Create and clone analysis studies quickly and easily with simple drag-and-drop functions. Compare multiple designs automatically using the Design Scenario tool.

**Simulation of real-world conditions** – Apply known displacements and a variety of loads and restraints, including forces and pressures, torque, bearing loads, and fixed or directional restraints. Simulate the effects of gravity and centrifugal forces.

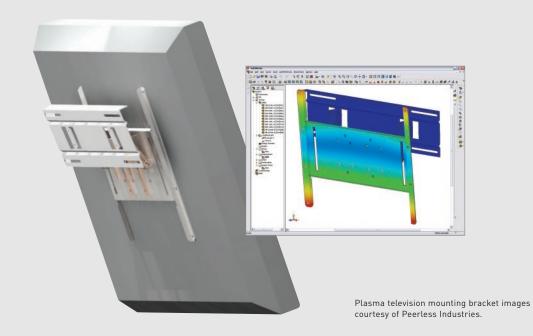
**Understanding component interactions within assemblies** – Specify how different assembly components will interact using virtual assembly connections, such as pins, springs, and bolts. Understand contact forces and stresses for parts that may come into contact during operation.

Tools for visualizing results – Interpret validation results with a full range of powerful, intuitive visualization tools, offering valuable insights that help you evaluate design alternatives more quickly and easily. Study 3D distribution of results, such as stresses and displacements, and animate part and assembly deformations.

Tools for comparing analysis results with physical tests – Import physical test results at a specified location and compare them to analysis results or export analysis data at critical locations for physical testing.

**Communication capabilities** – Generate customizable HTML reports with a single mouse click. Publish and share eDrawings files containing results visualization. Save results plots in standard formats, such as VRML, XGL, bitmaps, and JPEG.

Materials library – Save time by accessing nearly 200 materials from a built-in library that you can expand by adding your own materials.



## **PDMWorks Software**

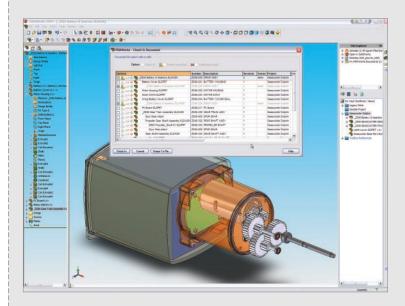
PRODUCT DATA MANAGEMENT SOFTWARE THAT IS EASY TO SET UP AND USE

PDMWorks is a production-proven product data management (PDM) solution that is uniquely suited to the requirements of SolidWorks engineering workgroups. Unlike enterprise PDM solutions, which can require considerable planning effort to implement effectively, PDMWorks is easy to set up and use, allowing your design team to control CAD file revisions and to manage all project data more efficiently.

### Unique capabilities

**Simple interface** – Maximize productivity with a simple set of visual cues as well as intuitive drag-and-drop and right-mouse-click capabilities optimized for the SolidWorks design environment.

Easy setup – Become immediately more productive with minimal technical support and virtually no customization effort. Installing and configuring the software typically takes less than two hours.



### Best-in-class workgroup PDM functions

Data management – Manage documents and data more efficiently, including properties such as description, status, number, and costs. Make changes simply by selecting items and keying in updated values, automatically updating all associated bills of materials and reports.

**Revision control** – Avoid the accidental overwriting of files and time spent working on incorrect files by providing controlled access to all project files.

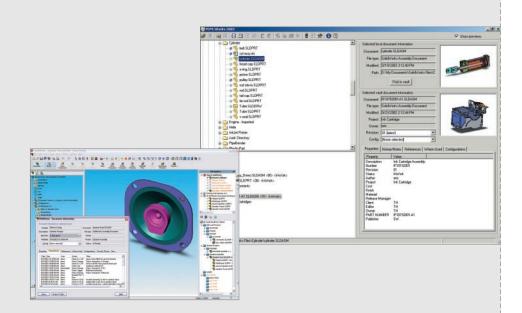
File histories – Capture file histories automatically, allowing your product design team to access the desired files, determine who has worked on them, and see exactly when changes were made.

Secure vaulting – Gain an additional level of security with easy-to-use administrative controls. Unlike common network or local folders, the PDMWorks vault protects your design information from unauthorized access as well as accidental overwrites and deletions.

Reuse of product design data – Use fast search capabilities to access content easily and reuse previously developed design work more efficiently, reducing duplicated efforts.

**Extended access** – Enable non-CAD users, such as manufacturing and purchasing staff, to access and add documents to the vault with the standalone version.

**Web-based viewing** – Provide web-based viewing into the PDMWorks vault and enable customized, automatic communication of information to people or business systems using PDMWorks Advanced Server.



# SolidWorks Routing Software

ROUTED SYSTEMS DESIGN SOFTWARE AND FITTING LIBRARY

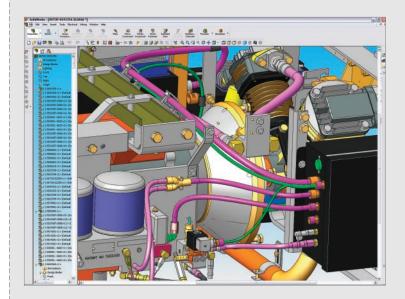
SolidWorks Routing software automates and simplifies the design of all types of piping, tubing, and electrical cabling systems. In addition, for designers that need to detail electrical cable and harness routes for manufacturing, SolidWorks Routing offers harness documentation capabilities that further enhance productivity in the design of electrical subsystems.

### Ease-of-use

Intuitive creation of routed systems – Speed the creation of piping, tubing, and electrical cabling and harnessing systems. Streamline the design process with drag-and-drop placement, automatic sizing, auto-routing, copying and mirroring, and auto-insertion of components. Generate routes in the context of assemblies to ensure accuracy.

### Best-in-class routing design functions

Easy editing of routed systems – Edit route segments easily using dynamic drag-and-drop functions. Insert a standard or custom component into a route by selecting and dragging it to the correct location within the design.

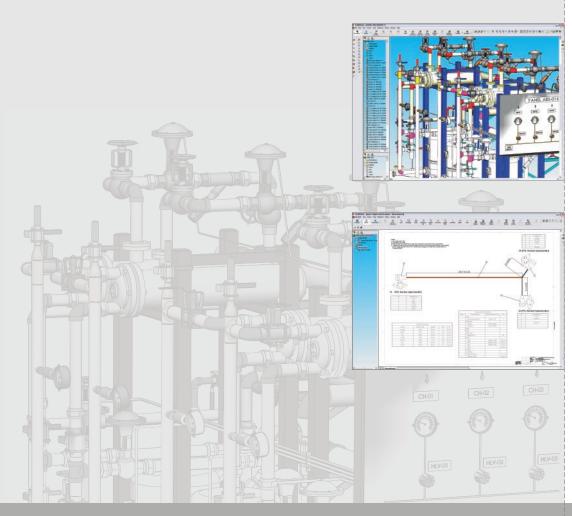


**Automated documentation** – Automatically create engineering drawings and bills of materials with complete information, including cut lengths for pipe and tube routes.

Additional electrical cabling and harness documentation tools – Generate electrical cabling and harnessing manufacturing documentation easily by flattening 3D routes. Create automatic reports, including wire list, wire summary, and harness bills of materials and connection information. Enhance drawings with details such as connector views, costs, and electrical assembly and test specifications.

Data reuse – Reuse data created with electrical CAD software and other tools when creating new cabling and harnessing route designs. Enable electrical engineers and mechanical engineers to collaborate more easily.

Library of ready-made components – Speed the design with a library of ready-made tubing, piping, and electrical cabling and harnessing components. Contents include pipes, pipe fittings, tube fittings, electrical connectors, receptacles, plugs, and other standard parts.



# **Design Communication Tools**

Share product design concepts and collaborate more easily. Innovative SolidWorks design communication tools allow your organization to begin marketing activities early and to streamline all phases of the product development process.

### eDrawings Professional

- Let reviewers provide design input without having to purchase their own markup tools
- View, mark up, and measure eDrawings files
- Enhance viewers' understanding with innovative interpretation tools and instant animations

Communicate product designs more effectively with eDrawings Professional – innovative publishing and viewing software for collaborating easily on product designs, allowing an unlimited number of recipients to supply feedback via email. Generate accurate representations of 2D and 3D models that anyone can view, mark up, and measure without having to purchase their own markup tools. Use eDrawings Professional to share product design information more easily with other product designers, marketing and manufacturing staff, suppliers, and customers.

### 3D Instant Website

- Create and publish live webpages with 3D interactive content
- Share designs with your extended product development team
- Choose from a variety of templates and viewing formats

3D Instant Website is a single-click web publishing tool that allows you to share 3D models with your customers, coworkers, and suppliers. Instantly create a password-protected website that enables visitors to view, rotate, zoom, and pan your 3D models and provide comments. With 3D Instant Website, you can choose from a variety of customizable templates, style sheets, and viewing formats, bringing a higher level of quality to your product design reviews.

### **PhotoWorks**

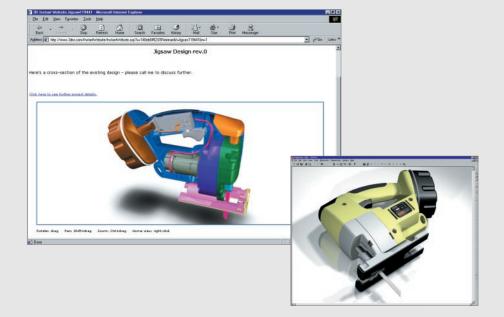
- Create compelling photorealistic images
- Enhance images with advanced visual effects
- Market product concepts more effectively

PhotoWorks is a best-in-class rendering solution for creating photorealistic images from 3D CAD models, increasing the impact of presentations and proposals. Help your customers and colleagues to visualize your designs more easily. Take advantage of advanced visual effects, such as user-defined lighting, and an extensive library of materials and textures as well as background scenery. Start marketing product concepts early in the development cycle and get to market faster.

### SolidWorks Animator

- Create exciting AVI files from SolidWorks parts and assemblies
- Observe in real time how moving parts interact as true solids
- Visually document product design processes

With SolidWorks Animator, you can create compelling AVI files from SolidWorks parts and assemblies, allowing you to communicate design concepts more effectively with anyone who has a Windows PC. SolidWorks Animator helps you to present product designs more effectively by capturing parts and assemblies in motion.



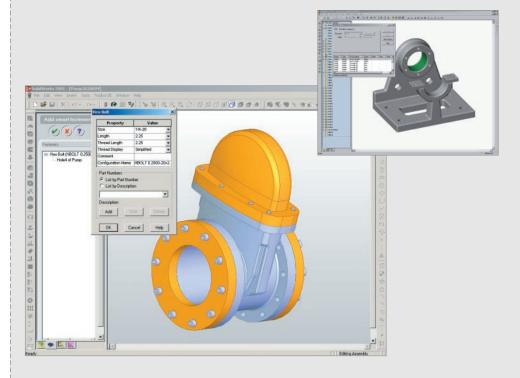
# **CAD Productivity Enhancements**

Increase efficiency with SolidWorks CAD productivity enhancements that automate frequently performed design tasks and improve your ability to reuse previously created design work.

### SolidWorks Utilities

- Compare geometry or features between parts
- Find and highlight specific geometry in a part
- · Identify problems with imported geometry

SolidWorks Utilities lets you easily find the differences between two versions of the same part or locate, modify, and suppress features within a model. The software supplies a full range of productivity enhancements to make your life easier.



### **FeatureWorks**

- Share 3D models among different CAD systems
- Introduce new design intent into legacy 3D models
- Apply intelligence to static CAD data, making it ready for use within SolidWorks software

FeatureWorks lets you make changes to static geometric data, increasing the value of translated files and reducing the time spent rebuilding models. With FeatureWorks, you can preserve or introduce new design intent when bringing 3D models created in other software applications into the SolidWorks environment. Once intelligence is applied, features become fully editable, associative, and parametric. Results include better product designs, faster development cycles, lower costs, and increased revenues.

#### SolidWorks Task Scheduler

- Increase productivity by performing resource-intensive computing tasks during breaks and after hours
- Schedule batch printing jobs, generate drawings, and run analyses and custom macros
- Import, export, or update files and custom properties

SolidWorks Task Scheduler is an easy-to-use software utility that saves time by enabling you to schedule resource-intensive tasks during periods when you'll be away from your computer. With SolidWorks Task Scheduler, you can defer common tasks to a more convenient time, such as batch printing, creation of production-level drawings and high-quality eDrawings files, running of analyses, and updating of project files, including all associated files and properties.

### SolidWorks Toolbox

- Access a time-saving library of standard components
- Automatically select fasteners and assemble them in the proper sequence
- Configure parts parametrically, quickly, and accurately

SolidWorks Toolbox uses SolidWorks Smart Part Technology to automatically select the appropriate fasteners and assemble them in the proper sequence. With SolidWorks Toolbox, you gain access to an affordable, time-saving library of standard parts – a virtual *Machinery's Handbook®*. SolidWorks Toolbox is an easy way to make sure that every product design you create adheres to industry standards or your company's standards.

### For More Information

For more information about SolidWorks Office Premium, contact your local SolidWorks reseller, or visit www.solidworks.com to find the SolidWorks location or reseller nearest you. You may also call SolidWorks toll-free at 1 800 693 9000 for additional information or to speak with a SolidWorks sales representative. If you are calling from outside the US, please dial +1 978 371 5011.

### SolidWorks Corporation

SolidWorks Corporation was the first company to develop powerful 3D mechanical design software that was easy to use and affordable. Today, SolidWorks software is the world's #1 3D product design software for the mainstream market based on the number of users in production, customer satisfaction, and sales.\*

SolidWorks Corporation is a Dassault Systèmes, S.A. (Nasdaq: DASTY, Euronext Paris: #13065, DSY.PA) company. Dassault Systèmes is the premier global software developer of Product Lifecycle Management (PLM) solutions.

