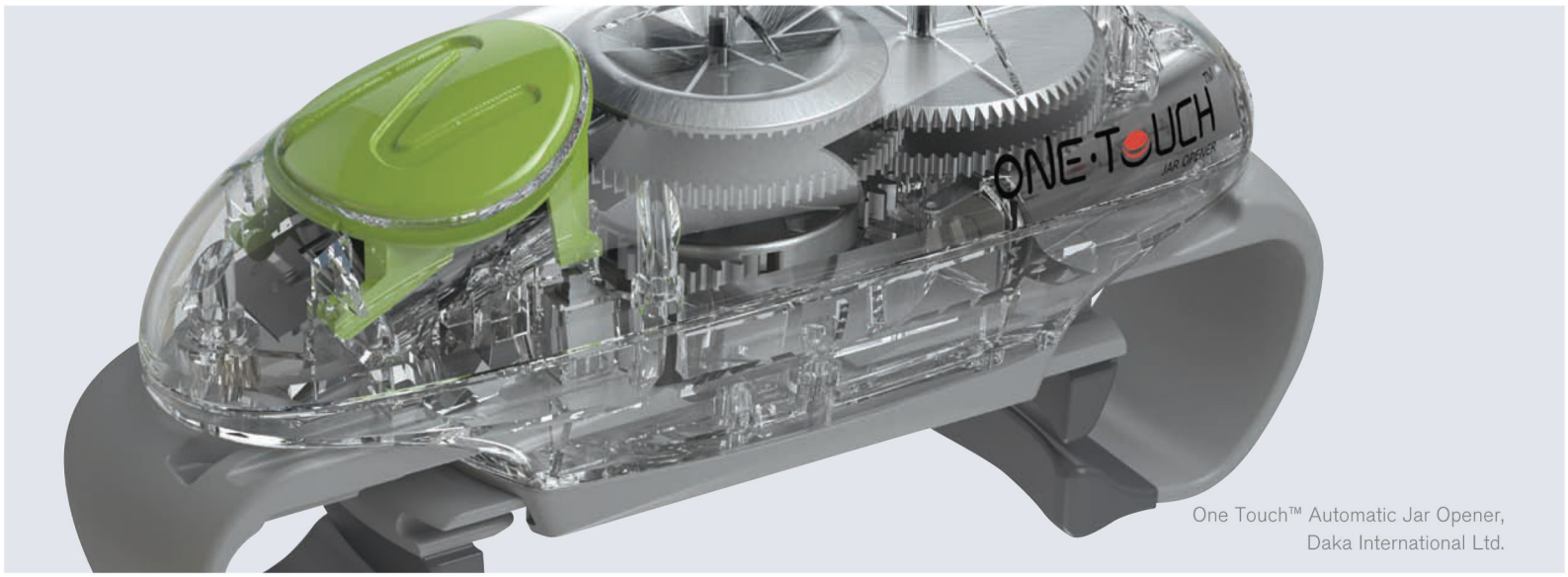
SolidWorks Premium 2009

THE COMPLETE 3D CAD SOLUTION FOR DESIGNING BETTER PRODUCTS



One Touch™ Automatic Jar Opener,
Daka International Ltd.

SolidWorks Premium 2009 – a complete 3D product design solution – provides unparalleled ease of use and performance combined with new powerful capabilities that allow you to design and deliver better products to your customers.

Ease of use. Reduce design steps through dozens of timesaving innovations. Lessen visual clutter with the Heads-up User Interface, as well as a set of intuitive display and control functions. Robust, context-sensitive tool bars and customizable shortcut menus keep mouse travel and clicks to a minimum. Find your CAD data fast – no matter where it is – with built-in, customizable search capabilities.

Design and detail large assemblies faster. SolidWorks® Premium 2009 is performance tuned to handle your largest designs. With the new and innovative SpeedPak functionality, you can quickly work on assemblies that consist of tens of thousands of parts – without sacrificing graphic details or drawing accuracy.

SolidWorks Intelligent Feature Technology (SWIFT™). Focus on your design, not the design software. Instant3D lets you drag model faces and sketches to create 3D geometry in real time. SketchXpert, FeatureXpert, FilletXpert, DraftXpert, and MateXpert automatically detect and resolve modeling challenges typically encountered by first-time users. DimXpert automatically creates dimensions and tolerances according to ANSI and ISO standards, and graphically indicates geometry that is under- or overdimensioned.

SolidWorks

Conceptia

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real performance

Help. SolidWorks Premium 2009 has an HTML-based Help system, complete with hyperlinks and animations, online tutorials, a design portfolio with how-to instructions, and a glossary.

Data exchange. SolidWorks Premium 2009 features built-in translators that let you exchange CAD data using a wide variety of file formats, including:

- DWG
- DXF
- Pro/ENGINEER®
- IAM (Autodesk Inventor®)
- IPT (Autodesk Inventor)
- Mechanical Desktop®
- Unigraphics®
- PAR (Solid Edge®)
- CADKEY®
- Rhino
- IGES
- IDF
- STEP
- Parasolid®
- SAT (ACIS®)
- VDA-FS
- VRML
- STL
- U3D (Universal 3D)
- TIFF
- JPG
- AI (Adobe® Illustrator®)
- PDF
- 3D XML
- CGR (CATIA® graphics)
- HCG (CATIA highly compressed graphics)
- HSF (Hoops)
- PSD (Adobe Photoshop®)

Supported standards:

- ANSI
- ISO
- JIS
- BSI
- DIN
- GOST
- GB

2D drawings. Develop production-quality engineering drawings, including all views, dimensions, tolerances, and bills of materials (BOMs) that automatically update each time you change your design. Completely annotate your drawings with tables, symbols, and automatic balloon notes. An intuitive user interface ensures that both occasional and full-time users can quickly complete fully detailed drawings. Automatic display and grid "snap" of dimensions saves time and improves drawing readability. Compare drawings and automatically highlight differences between versions.

Powerful modeling tools. Make use of a full range of custom functions and innovative capabilities that help you complete your designs faster, including the most difficult geometry.

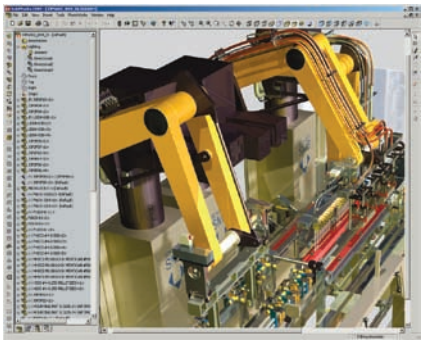
- Complex geometry and freeform surface creation – Create complex solid and surface geometry. The freeform surfacing tool lets you easily create surfaces to improve the aesthetics and ergonomics of product designs. Simply "push and pull" control points to create stylish, curve-continuous (C2) surfaces.
- Feature recognition – Import non-SolidWorks CAD data, preserve design intent, and make changes. Increase the value of translated files, while reducing the time spent rebuilding existing 3D models.
- Timesaving design utilities – Find the differences between two versions of a part. Identify and highlight problematic geometry that may affect downstream applications, such as manufacturing and analysis.
- CircuitWorks™ – Enable bidirectional collaboration between electrical and mechanical design engineers to ensure printed circuit boards (PCBs) fit and function in mechanical products. Permit accurate cooling studies and reduce the chances of interference between PCB and mechanical components.
- ScanTo3D – Scan concept sketches or data into SolidWorks using ScanTo3D and complete the product design in SolidWorks.
- Customized capabilities for specialized functions – SolidWorks offers design solutions in highly targeted areas:
  - → Streamline the design of machinery, industrial equipment, or processing facilities with automated design tasks for routing tubes, pipes, electrical cables, and harnesses. Speed design development with a library of routed system fittings, harnessing documentation, and drag-and-drop components.
  - → Design welded structures by sketching the frame layout and choosing the structural cross-section for each member. Capabilities include trimming and cutting members as well as creating welds, end caps, and gussets. Automatically create BOMs that include cut lengths.
  - → Leverage sheet-metal design capabilities, including edge flange, miter flange, selective fold/unfold, rip, tear, and auto-relief functionality. Design in flat or bent states with equal flexibility, and create flat patterns automatically, or instantly create sheet-metal designs directly from 3D solid models.
  - → Mold and die tooling – Import part geometry from other CAD systems, or use native SolidWorks to design mold and die tooling. Check and fix draft, undercut, and thickness problems. Automatically identify parting lines and create parting surfaces so you can quickly and easily extract core, cavity, or side-action geometry.

Leverage your existing 2D data. Preserve the value of your existing AutoCAD® 2D data by importing it into SolidWorks.

- SolidWorks DWGseries™ tools – Current and former AutoCAD users can open, edit, create, and share DWG data.
- DWGeditor® – Edit existing DWG files in their native format using a familiar user interface.
- DWGgateway™ – View files and work seamlessly with DWG data using any version of AutoCAD software.
- DWGviewer – View and share SolidWorks files and native AutoCAD DWG and DXF™ files with non-CAD users.

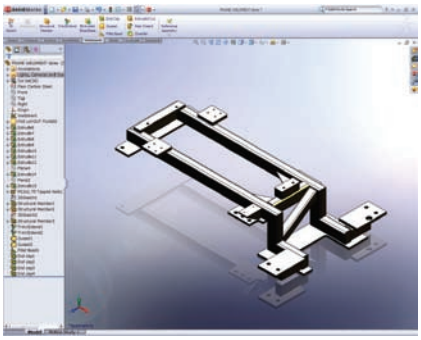
Automation and reuse. Use the SolidWorks search capability to locate any SolidWorks or DWG file. Mine metadata, including title blocks in drawings or file attributes. Reuse previous design work and reduce repetitive design tasks.

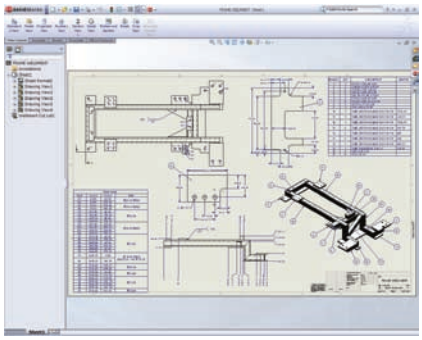
- DriveWorksXpress® – Automate repetitive design tasks by capturing valuable design rules inside SolidWorks and automatically generating parts, assemblies, and drawings.
- Configurations – Create multiple configurations of parts and assemblies and save them in the same file or document for easy reference and access. Develop and manage families of parts and models with different dimensions, components, or properties.
- Design Library – Save frequently used parts, features, templates, sketches, and more in the Design Library. Drag and drop library items into new machine designs, promoting reuse and providing a platform for company standards.
- Design Clipart – Extract features, sketches, views, and blocks from DWG files and reuse them in new SolidWorks designs.
- 3D ContentCentral® – Accelerate design time with 3D ContentCentral, an online component catalog. Download 3D models and 2D drawings of components from major suppliers directly into your designs.
- Smart Components and Smart Fasteners – Save time with assembly automation, which sizes and assembles components, fasteners, and fastener hardware. Automatically create holes and clearance cuts necessary to assemble components.



Gain unmatched performance for designing and detailing large assemblies.
Image courtesy of Gerhard Schubert GmbH

Speed the design of consumer products with enhanced tools for manipulating surfaces easily and intuitively.
Image courtesy of Garmin International Inc.





Speed machine design with built-in specialized functionality for creating welded structures and production-quality drawings.

Simulation and validation. Improve product quality and safety by testing 3D CAD models under real-world conditions prior to manufacture. Easy-to-use design validation modules provide powerful capabilities that reduce the need for physical prototypes.

- SolidWorks Motion – Study the physics of moving assemblies to help you refine designs, enhance reliability, and ultimately reduce the need for physical prototypes. Industry applications include estimating motor torque, understanding machine performance during operation, and minimizing force imbalances in rotating systems.
- SolidWorks Simulation – Enhance product quality by identifying areas prone to weakness and failure with SolidWorks Simulation, powerful design validation and optimization software created for use by engineers and designers. Explore the benefits of first-pass design checks without incurring physical prototyping costs, and validate the structural integrity of components.
- SolidWorks DFMXpress – Leverage this upfront design validation tool to identify geometry that is difficult, expensive, or impossible to manufacture by conventional machining operations, such as milling, drilling, and turning.
- SolidWorks FloXpress™ – Use a wizard-based tool for fluid flow simulation that displays results as slice planes or flow trajectories.
- TolAnalyst – Perform tolerance stack-up analysis and determine the effects that tolerances have on parts and assemblies, including maximum/minimum worst-case tolerance stack-up analysis. Validate tolerances and make necessary tolerance changes until you achieve the desired tolerance stack-up results.
- SolidWorks Design Checker – Streamline your design release process by automatically identifying elements inconsistent with your organization's design standards. Locate and remedy potential errors before releasing designs.

Collaboration and presentation. Collaborate easily and efficiently on product design concepts. Share design concepts using exciting visuals that enhance understanding and streamline the product development process.

- Rendering – Create photorealistic images from 3D CAD models, increasing the impact of presentations. Help customers and colleagues easily visualize designs. Use the single-click web-publishing capability to share 3D models on password-protected websites.
- Animation – Create effective animations of 3D CAD models that you can email or publish on the web. Accelerate the review of product designs and reduce time-to-market.
- SolidWorks Workgroup PDM – Control CAD file revisions and manage project data securely and efficiently. Workgroup PDM automatically captures file revision histories and allows your product design team to access desired files instantly, determine who has worked on them, and know when changes were made.
- SolidWorks eDrawings® – Collaborate conveniently and reliably with an email-enabled communication tool that allows you to share product design information. eDrawings files supply accurate representations of 3D models and 2D drawings.

SolidWorks

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