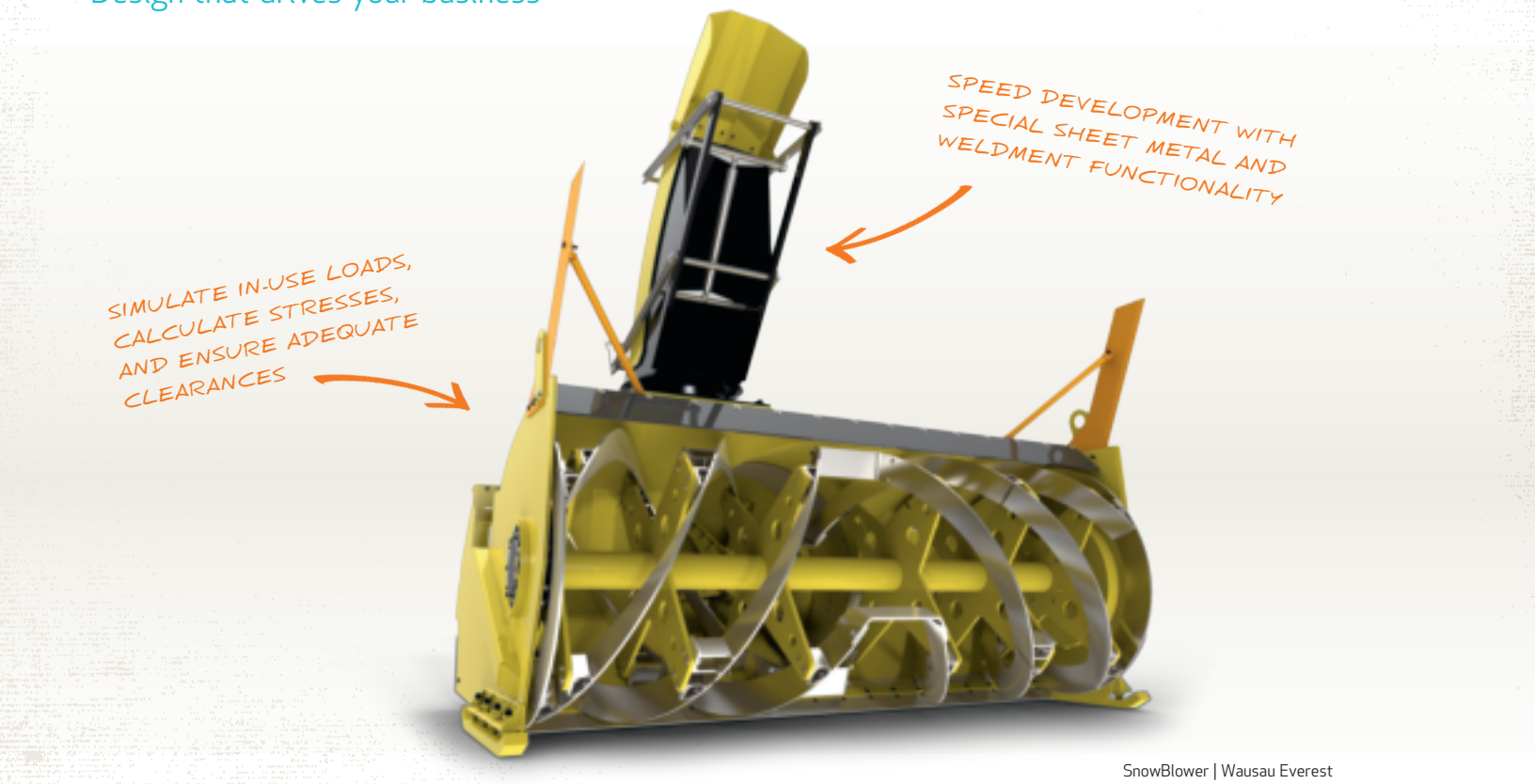
SOLIDWORKS **PREMIUM 2012**

Design that drives your business



SnowBlower | Wausau Everest

ONE PACKAGE TACKLES ALL YOUR DESIGN CHALLENGES

SolidWorks® Premium 2012 gives you powerful, easy-to-use functionality that increases your productivity and empowers innovative design. It automates the tasks you use most often and allows you to streamline your product development workflow.You can quickly define and validate the form, fit, and function of your design and clearly share your concepts with your team and clients.

Part of the SolidWorks suite of product development solutions—covering design, simulation, sustainable design, technical communication, and data management—SolidWorks Premium 2012 is a comprehensive solution for engineers and designers. By providing application-specific tools for sheet metal, weldments, routed systems, surfacing, and mold and die design, as well as an extensive component parts library, SolidWorks Premium 2012 helps you work more efficiently and make better design decisions throughout your product development process.

LEARN FAST, WORK FAST WITH INTUITIVE DESIGN

SolidWorks combines ease-of-use capabilities with a broad range of customization so that new users can learn fast, and experienced users can work faster.

Learn fast

Designed to make you instantly productive, the intuitive SolidWorks user interface is easy to learn and use. In-context menus present the right command at the right time. Toolbar commands are organized by design function for fast access. Automated Command Search takes you to any command instantly. And an extensive set of tutorials and support documentation keeps you progressing at a fast pace.

▶ CREATE AND COMMUNICATE

SolidWorks Premium 2012 is a comprehensive 3D design solution that enables you to create, validate, communicate, and manage your product designs. By integrating powerful design tools, including industry-leading part, assembly, and drawing capabilities, with built-in simulation, costing, rendering, animation, and product data management, SolidWorks Premium makes the development and sharing of design ideas faster, simpler, and smarter.

SOLIDWORKS

Work fast

Easy customization of the SolidWorks user interface allows you to dramatically increase design productivity. You can customize toolbars, in-context menus, hotkeys, and environment settings. Mouse gesture capabilities give you fast access with a movement of the mouse. Automatically perform design functions through API and batch processing capabilities.

Intelligent design and detailing capabilities

Intelligent design and detailing capabilities improve user productivity by automatically detecting and resolving modeling and detailing challenges that would typically frustrate new users or be considered tedious and time consuming by experienced users.

MOVE QUICKLY FROM IDEA TO REALITY

Advance your ideas from concept to market using rich 3D models as the foundation.

Part and assembly modeling

SolidWorks Premium allows you to design products for a broad range of industries and applications.

- **3D solid modeling:** create and edit 3D parts; drawings and assemblies automatically update with part changes
- **Large assembly design capabilities:** create and manage extremely large designs, and work in either detailed or simplified modes
- **Advanced surfacing:** create and edit complex solid and surface geometry, including stylish, curve-continuous (C2) surfaces
- **Sheet metal:** design from scratch or convert your 3D part to sheet metal—includes automatic flattening of sheet metal design with bend length compensation
- **Weldments:** quickly design welded structures composed of structural members, plates, and gussets; includes a library of pre-defined structural shapes
- **Mold design:** design molded parts and the tooling to make them, including core and cavity, draft, automated parting surfaces, and mold base components
- **Piping/tubing design:** generate and document 3D mechanical systems, including pipe/tube paths and a complete bill of materials (BOM)
- **Electrical cable/harness and conduit design:** import electrical connection information, generate and document 3D electrical route paths, and complete the BOM for your design

Speed up machine design and simulation with built-in specialized functionality for creating welded structures, production-quality drawings, and other tasks.

Packaging Machine | ABCO Automation, Inc.

"SOLIDWORKS WAS THE ONLY SOLUTION WITH INTEGRATED DESIGN, PIPING, STRUCTURAL, SIMULATION, AND DOCUMENTATION CAPABILITIES."

— **ORLANDO LINERO,** Plant Designer, Eastern Power Limited

Design reuse and automation

Speed up development of new designs by leveraging existing work using SolidWorks design automation tools.

- **SolidWorks Search:** search for any file—on your computer, network, SolidWorks PDM system, or the Internet
- **Design automation:** automate repetitive design tasks—including part, assembly, and drawing generation—using DriveWorksXpress
- **Configurations:** automatically create multiple versions of parts and assemblies, and save them in the same file for easy reference
- **Design Library:** save frequently used parts, features, templates, and more in the Design Library for easy access
- **3D models from suppliers:** reduce design time by using 2D and 3D catalog components from 3D ContentCentral®
- **Smart Components and Smart Fasteners:** reduce assembly time and promote standardization with smart hardware that automatically assembles, sizes, and even creates mounting holes and cuts in parts, as needed
- **Component Library:** SolidWorks Toolbox provides over one million hardware components and other items to add to your assemblies

Animations and photorealistic renderings

Clearly communicate your design intent with powerful visuals.

- **Photoview 360:** create photorealistic images and animations quickly, without being a graphics expert
- **Walk-through/fly-through animations:** take a virtual walk-through of your design or record a video to help explain it to others
- **Assembly animation:** demonstrate your design's basic operations by applying motion, gravity, and component contact, or by manually moving components; record and save a video

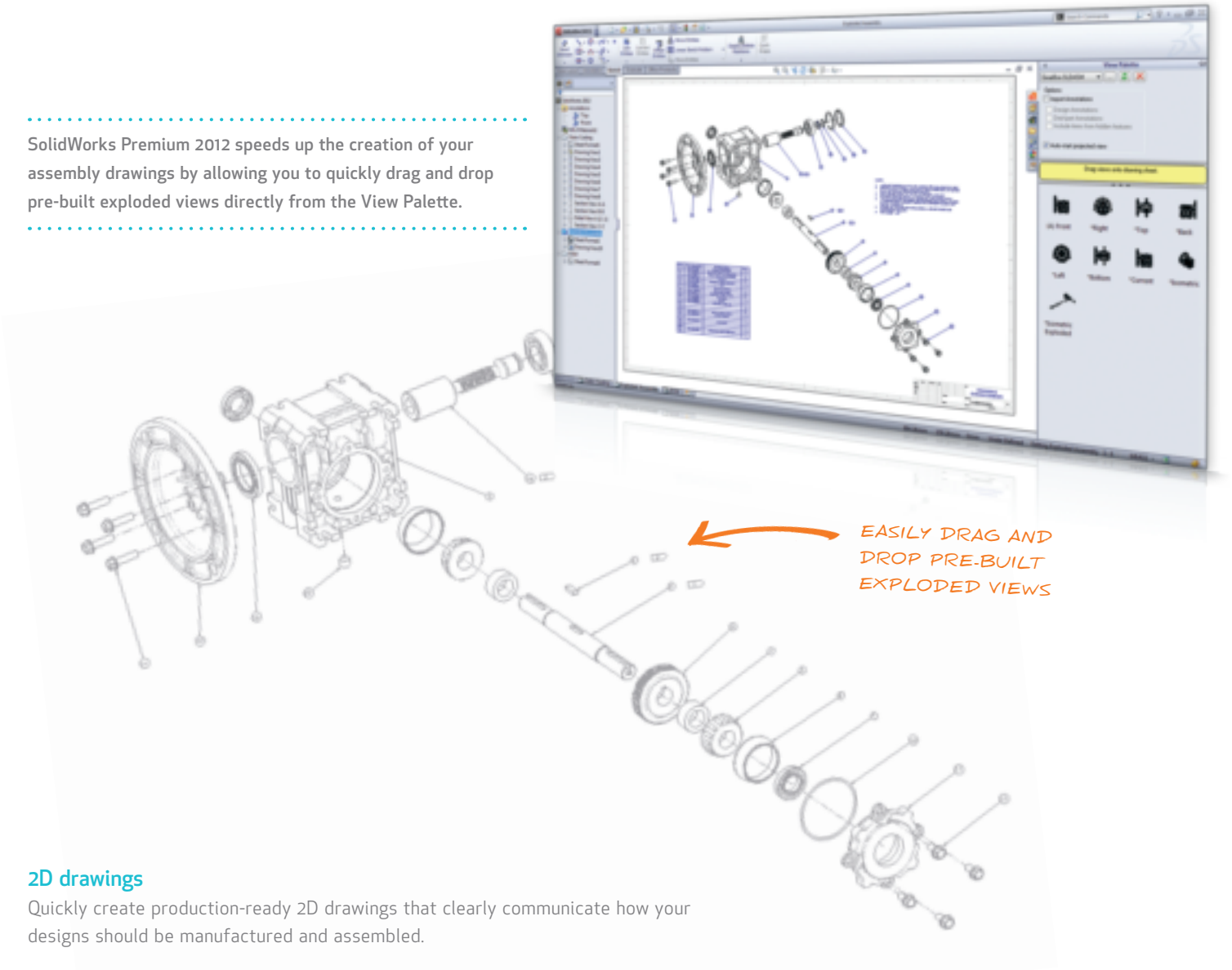
Photorealistic rendering allows you to share ideas without the need for physical prototypes.

CREATE ANY SHAPE DESIRED WITH ADVANCED SURFACING

ADD SHADOWS AND REFLECTIONS TO YOUR RENDERINGS

Bicycle | Trek Bicycle Corporation

SolidWorks Premium 2012 speeds up the creation of your assembly drawings by allowing you to quickly drag and drop pre-built exploded views directly from the View Palette.



2D drawings

Quickly create production-ready 2D drawings that clearly communicate how your designs should be manufactured and assembled.

- **Automatic Drawing View creation:** simply drag and drop the 3D model into a drawing to create views with or without hidden lines, wire frames, or even shaded views; automatically create any view type, such as isometric, section, partial section or detailed
- **Automated Drawing View updates:** keep drawing views in sync with automated updates to 3D part and assembly models
- **Dimensioning:** automate the generation and placement of dimensions and tolerances; dimensions that have changed since last file save are automatically highlighted
- **Bill of Materials (BOM):** generate automated BOMs with balloon note callouts and cut lists that update with model changes; output BOM directly from an assembly or drawing for printing or upload to ERP/MRP systems
- **Annotations:** create a complete drawing by adding all necessary tolerances, symbols, notes, hole call-outs, and tables
- **Standards checking:** compare your drawings to company standards to ensure consistency using the SolidWorks Design Checker tool
- **Drawing control:** control drawing revisions and graphically compare drawings to understand their differences

"INNOVATION HAS HELPED US GAIN A COMMANDING SHARE OF OUR MARKET, AND SOLIDWORKS SOFTWARE IS ONE OF THE TOOLS THAT HELPS US TO INNOVATE FREELY."

— **KAI BIRGER OLSEN,** Engineering Director, Ramboll Offshore Wind

SIMULATION ENSURES YOUR IDEAS WILL PERFORM AS DESIGNED

Virtually test your designs during development with tools built for designers and engineers who know their design best. You take the risk out of innovation by reducing the number of physical prototypes needed, by saving money, and by completing your products faster.

Motion simulation

SolidWorks Motion checks the kinematics of your product to verify you have met your design goals throughout the operating cycle.

Structural validation

Easily identify areas prone to failure and evaluate design changes to enhance product quality.

Sustainability

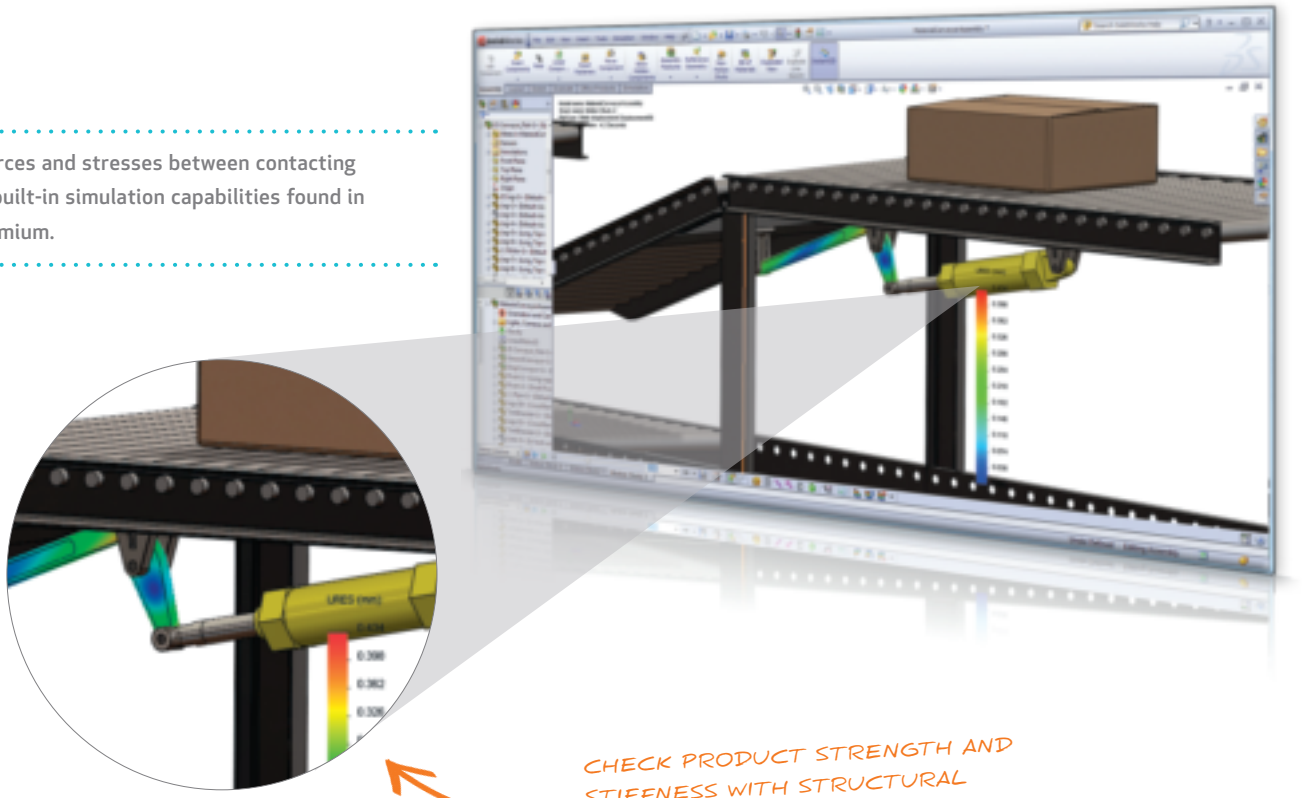
Use SolidWorks SustainabilityXpress to assess the environmental impact of your design, and to optimize material selection, part geometry, and sourcing.

Fluid flow simulation

SolidWorks FloXpress provides initial fluid flow simulation and reporting.

QUICKLY DETERMINE IF THE ACTUATORS OR MOTORS MEET PERFORMANCE GOALS WITH MOTION SIMULATION

Evaluate the forces and stresses between contacting parts with the built-in simulation capabilities found in SolidWorks Premium.



CHECK PRODUCT STRENGTH AND STIFFNESS WITH STRUCTURAL SIMULATION DURING THE DESIGN PROCESS

MEET COST TARGETS AND MANUFACTURE DESIGNS RIGHT THE FIRST TIME

Use SolidWorks Premium tools to verify that your design can be produced prior to manufacturing in order to significantly reduce waste and cost.

Cost estimation

- **Automatic cost estimation:** automatic estimates of part manufacturing costs using built-in cost templates; designers can make faster, repeatable, and more informed design decisions based on cost; manufacturers can automate their quoting processes
- **Customizable manufacturing settings:** manufacturing templates are customizable, allowing entry of your specific manufacturing costs and data, such as material, labor, machine speed and feeds, and setup costs

Eliminate interferences

- **Collision and interference detection:** check for interferences, collisions, and clearances between components in your design to ensure proper operation
- **Hole alignment checks in assembly design:** eliminate misalignments between holes in mating components to ensure proper fastener fitment prior to manufacturing
- **Tolerance stack-up analysis:** use SolidWorks TolAnalyst™ to automatically check the effects of tolerances on parts and assemblies and ensure consistent fit of components at assembly

Routed Systems

- **Electrical harness manufacturing:** automatically flatten wire harnesses to generate wire harness pin board drawings and wire cut lists for electrical manufacturing
- **Pipe-spool functionality:** design complete pipe networks and then break them into sections for better manufacturability or transport; includes automatic spool sectioning of long pipe runs

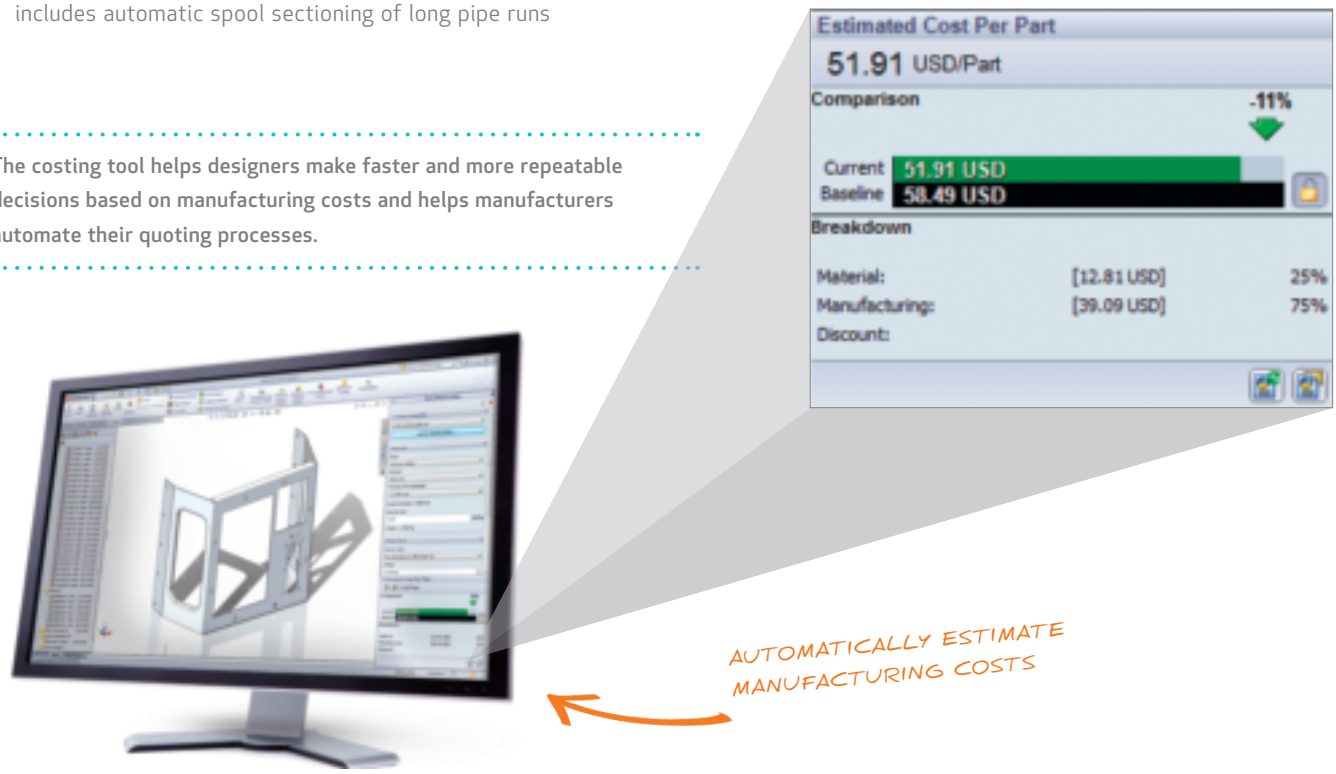
Design for manfacturability

- **DFMXpress:** use SolidWorks DFMXpress to check if aspects of your design are impossible or expensive to manufacture
- **Compare parts and drawings for changes:** use part and drawing comparison tools to graphically show differences between two versions of a part or drawing whenever updates occur to your design
- **Draft, undercut, and wall thickness checks:** automatically check for draft, undercut, and wall thickness issues in molded, cast, and forged parts and tooling
- **Sheet metal flat pattern:** automatically flatten your sheet metal design and document it for manufacturing; includes bend compensation to ensure proper blank sizing for manufacturing

Data output to manufacturing

- **3D for rapid prototyping:** output STL and other file formats for rapid prototype equipment directly from SolidWorks 3D models
- **Output 2D manufacturing data:** automatically export CNC-ready DXF and DWG file information directly from SolidWorks 3D models
- **Streamline production prep:** automatic output of hole charts, weld tables, cut lists, punch tool tables, and CNC pipe bending data
- **3D CAM partner integration:** automatically update NC tool paths directly inside SolidWorks—without the need for data translation—using CAM products from Certified Gold Solution partners

The costing tool helps designers make faster and more repeatable decisions based on manufacturing costs and helps manufacturers automate their quoting processes.



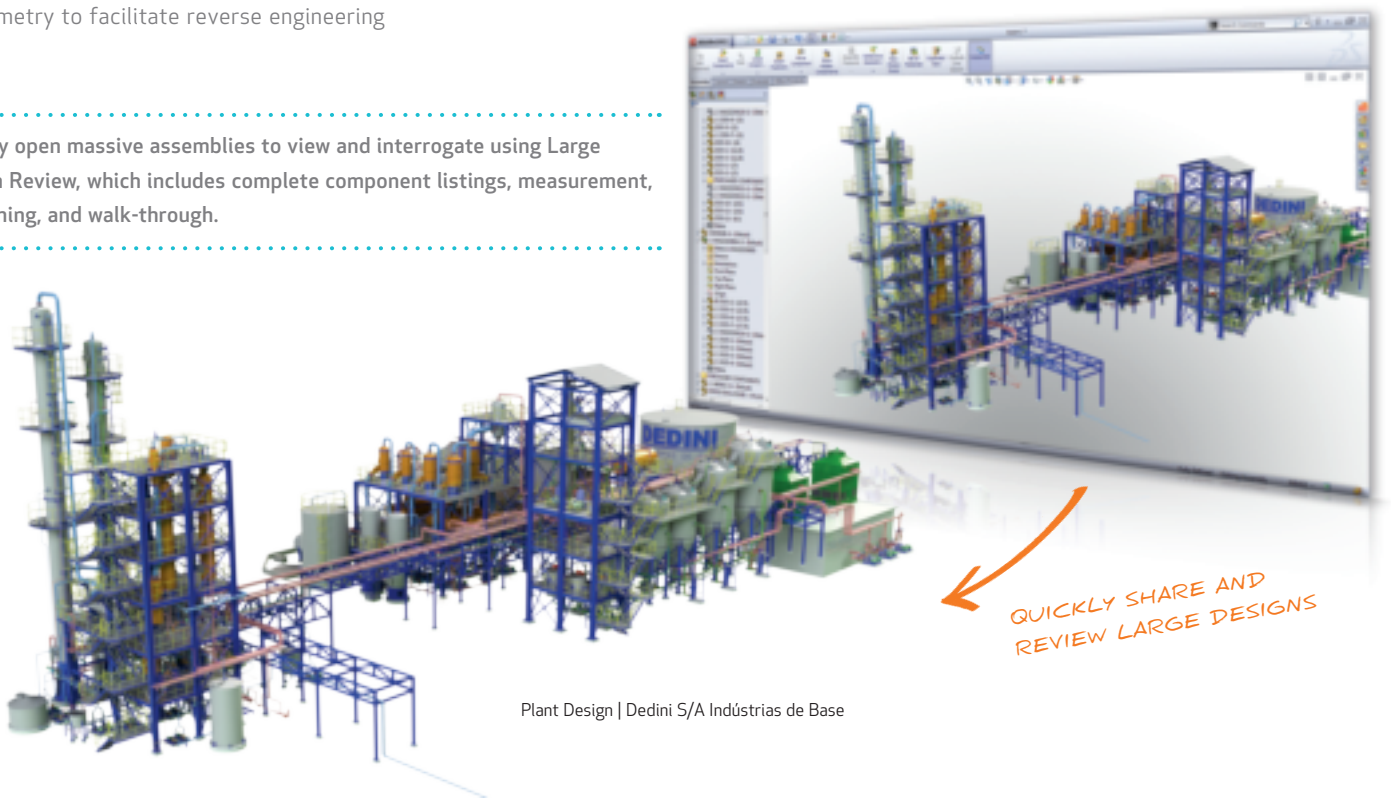
COLLABORATE AND COMMUNICATE YOUR IDEAS FASTER

Share CAD data with others, and collaborate quickly and easily on product designs.

Data exchange

- **Import/export:** convert CAD data into a format that meets your needs, including IFC file import/export to interact with AEC design software
- **Existing 2D DWG data:** maintain designs using SolidWorks 2D CAD tools
- **Automatic Feature Recognition:** automatically convert non-SolidWorks CAD data to make future design changes faster
- **ECAD-MCAD data exchange:** use CircuitWorks™ to provide two-way data exchange between mechanical and electrical designers
- **Import scanned data:** use SolidWorks ScanTo3D to convert scanned data into SolidWorks CAD geometry to facilitate reverse engineering

Quickly open massive assemblies to view and interrogate using Large Design Review, which includes complete component listings, measurement, sectioning, and walk-through.



Plant Design | Dedini S/A Indústrias de Base

Collaboration tools

- **Large Design Review:** quickly open, navigate, walk-through, measure, section, and create snapshot views with comments of massive assemblies to clearly communicate your design to your team
- **eDrawings®:** simultaneously review 2D drawing and 3D model data together with compact, email-friendly file viewing; eDrawings supports SolidWorks CAD, DWG, and numerous other CAD formats and enables design views including rotate, zoom, measure, mark-up, section, and virtual disassembly
- **Protect your intellectual property:** use SolidWorks Defeature technology to hide selected aspects of your design before sharing models

SolidWorks Product Data Management (PDM)

- **Manage your data:** manage your design data with automatic revision control, data security, and access control
- **Find your data:** search components for use in new designs, and find and leverage existing designs for re-use, saving development time and cost

"WE ARE NOW USING THE PDM SOFTWARE BOTH FOR REVISION AND ELECTRONIC DATA CONTROL, WHICH ENABLES US TO HAVE THE ELECTRONIC BACKUPS NEEDED FOR MEETING FDA (FOOD AND DRUG ADMINISTRATION) REQUIREMENTS."

— **PATRICK BROWN**, R&D Engineer, Berchtold Corporation

LEARNING AND SUPPORT

Access a worldwide network of learning and support

Dassault Systèmes SolidWorks Corp. offers a broad range of tools and resources for learning and support: tutorials, online help, blogs, forums, the SolidWorks user group network (www.SWUGN.org), and an extensive worldwide network of local resellers.

Tap into a global network of SolidWorks users to share best practices, refine tasks, and rapidly work through design challenges. Our value-added resellers are based around the world and work to make you productive, fast. With an average of 10 years experience in the CAD business and a primary focus in SolidWorks solutions, our resellers deliver world-class support, continuous training, and personalized service to always ensure your success.

SOLIDWORKS PRODUCT DEVELOPMENT SOLUTIONS

SolidWorks maximizes the productivity of your design and engineering resources to create products better, faster, and more cost-effectively. See the full range of SolidWorks solutions for design, simulation, sustainable design, technical communication, and data management at **www.solidworks.com/products2012**.

DATA EXCHANGE

SolidWorks Premium 2012 features built-in translators that let you exchange CAD data created in a wide variety of software applications and file formats, including:

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

SUPPORTED STANDARDS

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

For recommended system requirements, please visit: **www.solidworks.com/systemrequirements**

Visit www.solidworks.com/premium or contact your local authorized SolidWorks reseller to learn more.

www.solidworks.com

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SOLIDWORKS
LET'S GO DESIGN