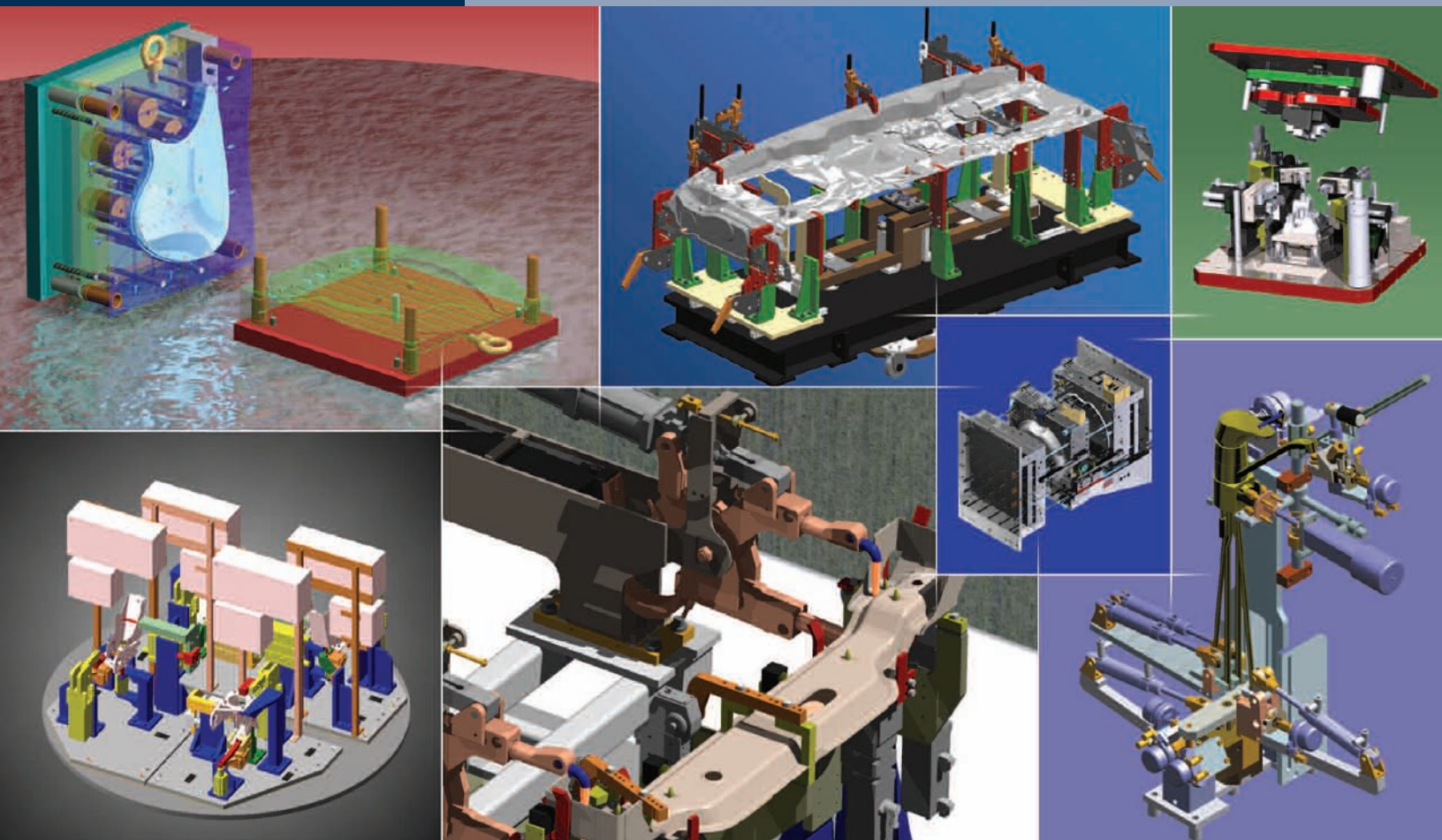


Solid Edge tool design

Designing better tooling faster and at lower cost

Siemens PLM Software

www.siemens.com/solidedge



On the critical path between product design and manufacturing, tooling and fixture development are essential to meeting overall time-to-market objectives. Successful tooling designers rely on Solid Edge® software to improve quality, reduce costs and meet shrinking delivery schedules.

SOLID EDGE

SIEMENS



Solid Edge design software provides the most complete and capable solutions for jig, fixture, mold tooling and electrode design and manufacturing available in the industry today. Solid Edge offers a proven solution that delivers all the tools needed to meet the increasing pressure on delivery times from your customers. With detailed part and assembly design, process-specific applications, scalable data management and 2D drafting, Solid Edge has everything you need to get down to the business of tooling design while meeting the critical delivery schedules you face every day.

Achieving your strategic business objectives

Solid Edge provides the tooling design solution you need to work with your customers to supply their molds and fixtures faster than ever before, keeping projects within budget and ahead of schedule. Solid Edge achieves this by creating designs that are not just accurate, but also intelligent, re-using the engineering knowledge captured in standard components to build functionally accurate tooling. Built-in and scalable design management allows you to manage your tooling or fixture designs along with your design and manufacturing process simultaneously in real time. This means that Solid Edge users can consistently reduce the time required to develop and manufacture new tooling.

Meet critical path delivery schedules. With Solid Edge, your design team can get more work done with less effort. Streamlined design operations in Solid Edge require fewer operations to get the job done faster, resulting in significant direct labor and time savings. In fact, Solid Edge completes the design of automotive fixture assemblies more than 40 percent faster and with significantly fewer errors than when using 2D systems alone.



Compressed lead times mean it is often essential to develop tooling and fixtures in parallel with product design. Using the same suite of tools, process-specific applications for Solid Edge (Mold Tooling and Electrode Design) provide collaboration between design and manufacturing teams, allowing you to respond to the latest design changes, ensuring these modifications are accurately reflected in your mold designs. Powerful associative drawing tools cut documentation time in half, further helping to deliver new products to market in less time. Using scalable data management from Siemens PLM Software ensures that this process is accurately managed in real time.

The move to 3D with Solid Edge reduces major time delays by verifying and correcting the CNC programming needed for specialized machinery in manufacturing. The re-use of 3D design data provides precision and time saving benefits unimaginable from 2D data alone. With the Evolve to 3D program, you can continue to use your exiting data without loss of productivity, while moving to 3D at your own pace, in a single design environment.

Fewer errors and design revisions. Solid Edge can significantly reduce the number of engineering change orders (ECOs) you must process through the development cycle of a new fixture. By creating virtual prototypes of tooling assemblies, designers can eliminate assembly fit and interference errors in the earliest stages of the design. For suppliers of assembly line fixturing, the ability to design in the context of an assembly allows designers to solve dimensional constraint problems between critical product datums in the assembly line and the ground.

To reduce costly design errors and ensure components have the correct design parameters, Femap® software and Express FEA (finite element analysis) allow you to eliminate design errors, thus reducing engineering changes and development time early in your design cycle.

Shorter design, manufacturing and delivery cycles. Solid Edge significantly reduces design time from engineering through detail design and drafting. Integrated applications for simulation, manufacturing and other functions support full-cycle efficiencies that deliver your fixtures on time on time and within budget. Process-specific environments allow for rapid, automated design of welded assemblies or mold tooling ready for manufacturing.

Faster bid response, quote preparation and proposal submission. Solid Edge utilizes data passed to you from your customer; manages critical predefined points of reference dimensions and designs in the context of a tooling fixture or mold assembly while re-using existing components or previous designs. Virtual mockups are created quickly for rapid cost estimation.

Unmatched interoperability leverages existing investments

Interoperability with all PLM products is a Siemens PLM Software core requirement. Siemens' clear and consistent development strategy provides a level of integration unique to the industry. Siemens' leadership position enables the company to offer a broad selection of products based on a safe and scalable approach for design and data management.

If you currently use products from our portfolio, Siemens is committed to providing functionality that allows Solid Edge to coexist within your organization and to delivering unique tools to ensure your investment in data will be preserved. If you are new to Siemens PLM Software, rest assured that your selection of Solid Edge is completely scalable and extensible to both NX® software and Teamcenter® software, when and if your business requirements change.

NX and Solid Edge interoperability

Siemens' associative embedding technology is production proven with many customers using combinations of NX and Solid Edge. Each product contains exclusive technology to allow part, assembly and attribute information to be passed between them. Solid Edge parts can be used in NX assemblies, with designers having the ability to update any of the parts from the assembly level in NX. Attributes such as hole information, which have been defined in Solid Edge, can be transferred to NX for use in machining, while NX parts can be opened in Solid Edge for downstream operations such as fixture design. Associative embedding ensures that updates to the original files will be recognized and acted upon in either system, keeping collaborative projects in sync at all times.

Import from other products

Solid Edge allows you to use data from other 3D systems, such as Pro/Engineer, Catia, Mechanical Desktop or SolidWorks, with tools that let you transfer them to Solid Edge at your own pace. Migration wizards step you through a simple and logical process for moving part, assembly and drawing information to Solid Edge, automatically checking files in to the PDM system where relevant. This powerful and trustworthy approach can save you a significant amount of time and money when compared to alternative approaches for translating 2D and 3D data.

Direct editing

Solid Edge includes powerful direct editing, allowing Solid Edge users to use 3D data no matter what the source and make direct changes to the geometry. For instance, toolmakers can make modifications to holes, draft angles and even offset geometry without the need to send the model back to the originator for modification. Although the changes described are somewhat subtle, more drastic changes can also be made such as move bodies or faces of a part, add draft angle by rotating a face, resize holes and rounds and even delete various entities and regions, while at the same time adding and maintaining parametric values.



Process-specific environments

Solid Edge boosts design productivity with specialized, process-specific environments for fixture components including sheet metal, weldments, and routed parts like tubing and wiring. These environments provide tailored commands and structured workflows that help you design these components much more quickly than with general-purpose design modeling tools.

Weldments: A customized command set within Solid Edge accelerates the design of fixture weldments. The weldment environment assists in defining the constituent parts of weldments, as well as weld beads, pre-weld surface treatments, and machining operations after the welds are applied. Solid Edge captures knowledge about relationships and dimensions and verifies that key clamping and welding positions are correct. Solid Edge drafting documents the entire weldment manufacturing process, with component drawings as well as pre-weld and post-machining views. Weldment designs can be placed and manipulated as single components in fixture models.

Sheet metal: Solid Edge's sheet metal environment uses standard sheet metal and fabrication terminology, with streamlined modeling commands for tabs, flanges, louvers, dimples, cutouts, mitered corners, corner breaks, and other sheet metal-specific part features. With automated placement of bend relief, bend allowance calculations, and flat pattern development, Solid Edge delivers the most advanced sheet metal design package available.

Routed parts: Solid Edge XpresRoute is an integrated add-on package that rapidly routes and models tubing and piping for hydraulic or pneumatic systems. XpresRoute helps you quickly define the 3D paths among assembly components. After defining these parameters, XpresRoute automatically creates a 3D solid model of the routed part, complete with end treatments. Routed components are dynamically associative to the components they connect, so that they automatically adjust when changes are made in related parts.

Analysis: To reduce costly design errors and ensure components have the correct design parameters, Solid Edge provides three complementary methods for designs to be analyzed and validated much earlier in the

GETTING RESULTS

► *"An integrated Catia translator for Solid Edge is great news for our company since we can use this to speed up and improve work with suppliers and customers who use Catia, particularly with cast parts."*

Jürgen Niesner
Maschinenfabrik Reinhausen GmbH
Regensburg, Germany

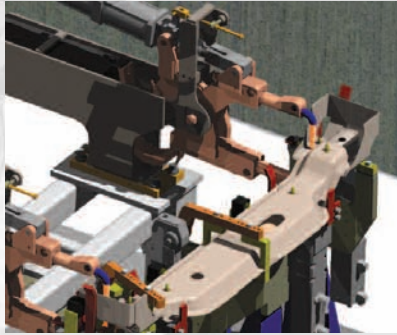
design cycle. The first – Femap Express software – offers step-by-step process guidance for fast, accurate analysis of solid and sheet metal parts. Second, Solid Edge has single-button associative transfer of Solid Edge parts and assemblies to full-blown Femap, the leading CAD-independent finite element analysis (FEA) tool for advanced analysis to ensure quality and optimize materials within complete assemblies. Both solutions utilize well-proven Nastran solver technology for accurate and repeatable results. At the same time, Solid Edge is open to the many third-party analysis applications available from Solid Edge Voyager partners, including integration with Mold Flow™, the industry leading solution for plastic injection mold analysis.



Design faster with built-in processes

Jig and fixture design

Solid Edge streamlines modeling of fixture assemblies. Fast engineering solutions to fixture design problems can be achieved with top-down and bottom-up techniques within the context of an assembly. With the ability to use data from other design systems, Solid Edge assembly design tools enable your engineering team to develop 3D models that capture and maintain the relationships among components. You can ensure accurate fit of parts by designing and modifying them within the assembly model, using geometry from adjacent parts or from 2D design layouts.



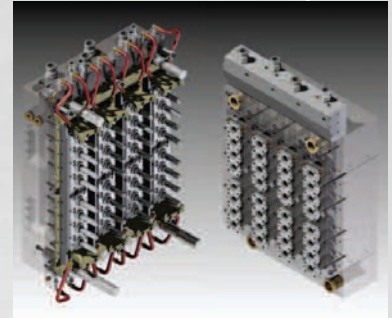
Many fixtures are built from standard parts that are assembled to create a fixture design. Solid Edge accommodates and manages third-party standard parts libraries, including tooling components, modular fixturing and related work holding products. With access to re-usable, off-the-shelf fixture components, designers can quickly develop assemblies using simple drag-and-drop techniques.

Whether a single, unique design or a complete family, Solid Edge is equally capable, producing families of parts or products by re-using engineering knowledge over and over again. For families of parts, similar configurations or for new projects based on others, Solid Edge gives you a major competitive advantage. No other system captures as much of the design intent for re-use. The assembly manipulation tools within Solid Edge allow much more flexibility to reorder parts and subassemblies than other mainstream systems.

Tooling designers can use the solid models of components and assemblies as well as drafting tools in Solid Edge to prepare assembly documentation and service manuals. Because Solid Edge is Windows and Microsoft Office compatible, it works directly with word processing and technical publications tools to simplify this task considerably.

Mold Tooling

Solid Edge Mold Tooling from Siemens is an integrated add-on package to Solid Edge Classic that establishes a powerful step-by-step process workflow for the design and manufacture of plastic injection molds. Solid Edge Mold Tooling offers dramatic time saving potential by removing much of the repetition prevalent in mold tooling design and freeing up your time for more important tasks. With accurate core and cavity creation, an extensive choice of industry-standard mold bases, automated generation of all required components and associative electrode design, Solid Edge Mold Tooling completes your mold designs faster and at lower cost.



Solid Edge Mold Tooling enables you to rapidly generate components and document the whole process, increasing your productivity and allowing you to help your customers reduce time-to-market for new products. Use Solid Edge native or imported data to increase productivity right across your entire mold design process. You need never decline a mold making job again because a part is too complex.

And with Solid Edge Mold Tooling, you can continue to maintain your highly regarded reputation among your customers.

Support for international standards. Many popular mold bases and components that support multiple international standards are delivered with Solid Edge Mold Tooling, including DME, Futaba, Hasco, LKM, Misumi, Petrotti, Rabourdin and Strack among others. Solid Edge Mold Tooling also adds related standard components such as bolts, ejector pins, return pins, leader pins and support pillars. Ejector pin ends are automatically shaped to match the contour of the parting surface.

GETTING RESULTS

- *“Solid Edge’s family of assemblies’ capability will reduce conceptual design time on our tooling by quickly providing different renditions of our models, helping us meet the shrinking design cycle times in the automotive industry.”*

*John Haning
Information Technology Manager
HMS
Troy, Michigan*

Efficient mold design. Water channels and add-in runners are easily modeled in the context of a mold assembly. Gates are defined by simply selecting the type of gate desired and its location. The selected gates are then automatically propagated through channels throughout the multicavity tool at the appropriate locations.

Slides and lifters. Mold tooling automatically creates the slide face along with the core/cavity blocks. The slide components themselves – slide body, gibs, wear plates, cam pins and heel blocks – can then be modeled as required. Undercuts on the core side of the part are optional.

Specialty molds. Solid Edge Mold Tooling also supports design of popular special-purpose molds. Included are stripper plate molds with “floating” plates to eject the parts off of their cores and 3-plate molds with an extra plate on the injection side and its associated die springs and shoulder bolts to eject the runner.

GETTING RESULTS

► *“Our customers are now cranking out part revisions daily and we needed a way to cope with that output and maintain our mold design in parallel with their product design, a key competitive ‘get-to-market first’ requirement.”*

Jean-Pierre Bernhard
Project Manager
K&K Tool Ltd.
St. Jean-sur-Richelieu, Quebec

Electrode design

Solid Edge Mold Tooling establishes a powerful step-by-step process workflow for removing much of the repetition prevalent in the design of plastic injection molds and the manufacture of single or compound electrodes. For the manufacturers of mold tools, Solid Edge Electrode design is a complementary product for the streamlined collaborative manufacture of mold tools.

Process oriented workflow. Using Solid Edge’s award winning SmartStep interface, users are guided through a logical step-by-step approach to develop the electrodes that are frequently necessary in the manufacture of complex mold components. Users simply identify the feature to be “burned” and Solid Edge will create a solid model of the electrode, using predefined parameters to adjust for the spark gap. Electrodes are created for the rough, semi-finish and finish stages of manufacturing, and all remain associative to the original mold design so any changes will be automatically recognized and the electrodes will update accordingly.

Output for manufacturing documentation. Solid Edge QuickSheet Templates provide a fast and efficient method for generating information for manufacturing. After selecting any number of electrodes, Solid Edge automatically creates a setup sheet for each one. The sheet contains three standard views of the electrode, along with the spark gap information and reference point coordinates. Users can also create an erosion output sheet – an assembly drawing that shows each electrode relative to the component being manufactured.

Electrode design highlights:

- Full set of electrode design tools for mold creation
- Included in Solid Edge Mold Tooling or available as separate application
- Import plate/insert
- Create front
- Create simple electrode
- Create compound electrode
- Generate setup sheets
- Generate erosion output



Tooling engineering aids

Solid Edge delivers design assistance innovations that aid in making fixture engineering decisions, while improving fixture quality, performance and reliability. Solid Edge's systems design philosophy places additional emphasis on the function of a product and how its components interact with each other, which enhances productivity by re-using knowledge already captured during the modeling process or applying existing engineering design principles.

Engineering Reference – Solid Edge Engineering Reference allows you to create parts using engineering calculations and formulas, in the knowledge that the components will be 'fit for purpose.' Engineering Reference provides quick access to powerful calculation-driven design tools that allow you to use known engineering data to design new or edit existing components with ease. If a design change is required, the component is modified using the same calculation-driven interface used to create the part, and is automatically updated to the new design parameters.

- Cams
- Bevel gears
- Shafts
- Extension springs
- Spur gears
- Compression springs

Systems Design – Where traditional assembly design focuses primarily on how parts fit together, Systems Design places additional emphasis on the function of a product and how components interact. Designers are empowered to create realistic models that emulate real-world situations. In virtual systems design, a group of interacting parts and subassemblies are modeled as a "whole," with sufficient information to describe how components relate to each other and how they need to perform to meet design criteria.

A system is a group of interacting parts and subassemblies, each containing sufficient knowledge to describe how it needs to perform in order to meet the design intent of the product.

Fastener systems – associatively matches mechanical fasteners, such as nuts, bolts, rivets, etc., to geometry in Solid Edge.

Capture fit – stores assembly relationships with 3D components, speeding up subsequent placement.

Sensors – constantly monitors critical dimensions and tolerances, providing live feedback of design violations.

Motion – provides powerful integrated AEM (assembly engineering manager) that performs realistic systems modeling and motion simulation.

Motion analysis – includes a built-in motion analysis package, MSC - Simply Motion, which automatically builds detailed motion analysis models from Solid Edge assemblies.

Adjustable assemblies – allows engineers to position the same subassembly (part number) in different stages of motion within a design.

Family of assemblies – provides the capability to create two or more unique assemblies where some parts and subassemblies differ between the individual assemblies.

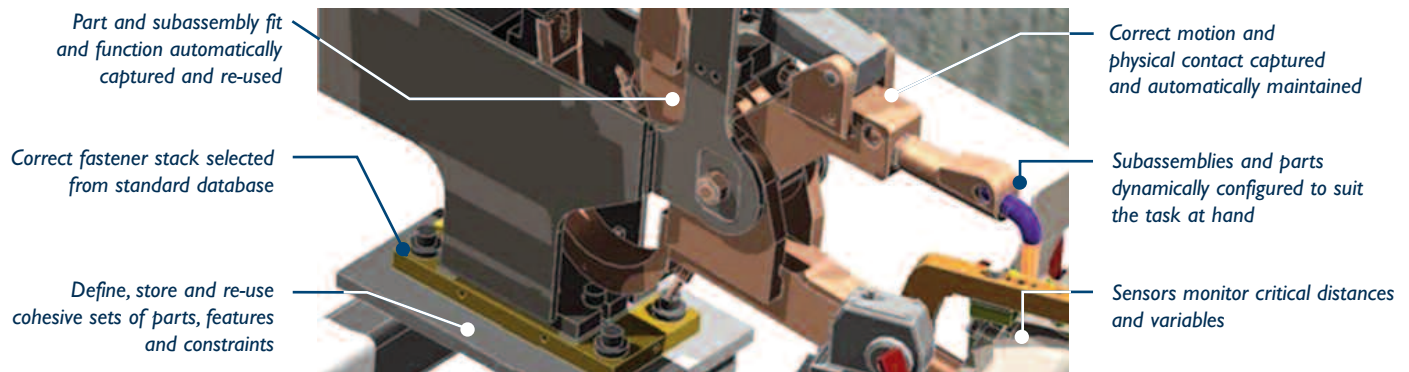
Alternate components – easily replaces or swaps components within the assembly to create design variations.

GETTING RESULTS

► *"The main benefit is a reduction in errors. If the Solid Edge model goes together then so will the manufactured parts, because we build the assembly in Solid Edge the same way the fitter will build the physical fixture."*

Mick Waller
CAD/CAM manager
Steelcraft Precision Tools Ltd.
UK

Systems design – capturing and maintaining design intent



Scalable design management

A new standard in CAD/PDM integration

With its groundbreaking Insight technology, Solid Edge became the only mainstream mechanical system to merge design management capabilities with the CAD tools that designers use every day. Setting a new standard in CAD/PDM integration, Solid Edge builds on the success of Insight, letting customers choose from a range of easily scalable cPDM solutions. Solid Edge Insight continues to provide proven management capabilities for departmental teams. Solid Edge's integration with the powerful Teamcenter platform provides seamless and transparent connectivity between the applications. All essential Solid Edge commands are encapsulated, making sophisticated data management functions easily available to the Solid Edge user. Solid Edge-related data is easily captured for re-use in future projects without placing an additional burden on the CAD user, while full scalability means customers can grow their cPDM solution to meet growing business demands without starting from scratch.

Solid Edge Insight, delivered with every seat of Solid Edge, is an innovative solution that seamlessly integrates CAD, design management and web-based collaboration into a single tool that is easy to implement and easy to manage. Insight removes the perceived barriers to successful PDM implementation while providing the fundamental capabilities for well-defined workgroups to successfully manage Solid Edge data.

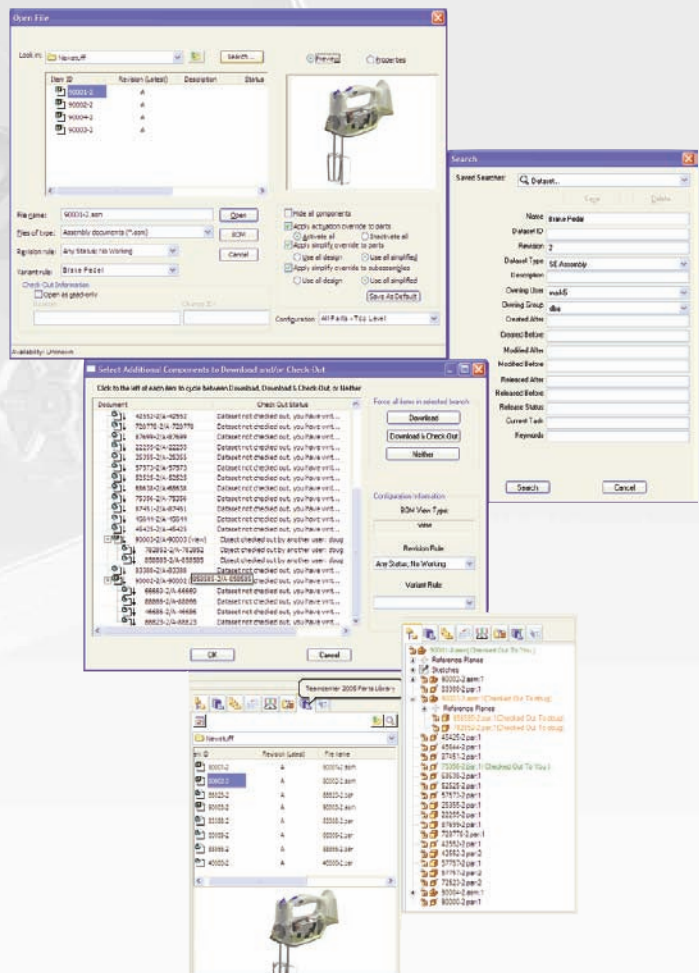
Teamcenter Express is a preconfigured, easy-to-deploy and easy-to-use product data management solution and the entry point into the powerful Teamcenter platform. Teamcenter Express is designed for mid-sized manufacturing companies that need to collaborate across multiple departments and across multiple sites, support multiple design systems and require additional workflow capabilities to manage product release and ECOs. Teamcenter Express helps companies transform their process of innovation by applying preconfigured best practices to everyday engineering tasks and processes.

For companies requiring a complete PLM solution, Solid Edge provides a seamless CAD-centric integration with Teamcenter's engineering process management capabilities, the industry standard for cPDM. Teamcenter provides flexible and configurable management solutions addressing the full PLM process in a global environment. Unlike traditional PDM solutions, the Solid Edge integration with the Teamcenter platform makes sophisticated data management functions completely transparent to the designer. Both Solid Edge and Teamcenter are developed by Siemens, ensuring a level of integration that is updated and synchronized with every release.

Collaboration

XpresReview is an electronic design review solution that elegantly solves the problem of how to share multiple documents in a collaborative environment while ensuring that users are never working with out-of-date information. Supported by Solid Edge and NX, XpresReview is a no-cost, easily downloadable viewer that delivers a streamlined process-enabling solution for OEMs and their suppliers to exchange information. XpresReview "packages" (.PCFs) can contain lightweight representations of Solid Edge CAD files along with links to the original 2D drawings, Microsoft Word documents, Adobe PDFs, or virtually any other file. Users may now conduct PLM processes such as sending a complete design review package or a supplier bid package with requirements, terms and conditions and schedules.

Teamcenter Express provides a proven multisite option enabling data to be replicated between geographically remote sites. Multisite collaboration is especially valuable for mid-size companies that have geographically dispersed design teams that need to work with synchronized product information retained in two or more databases.



Production-ready drafting and documentation

Solid Edge contains an unmatched set of capabilities for the 2D documentation process, with excellent drawing layout, detailing and diagramming annotation and dimensioning controls that automatically comply with the mechanical drafting standard you select.

Streamlined drawing creation

Solid Edge automatically creates and updates drawings from 3D models, quickly creating standard and auxiliary views, including section, detail, broken and isometric views. You can choose from a number of different display options to ensure your documents communicate their intent as clearly as possible. As changes are made to parts or assemblies, associated drawings update automatically. Solid Edge's comprehensive dimensioning and annotating tools enable you to create fully detailed drawings remarkably fast. Practical and intelligent dimensioning and annotation tools mean you can create fully dimensioned views in seconds. With Solid Edge, you have full control over every element of your drawings, so you know that they meet the requirements of organizational and international standards.

And, unlike other 3D-only products, Solid Edge lets you create 2D drawings from scratch or continue to make full use of your existing 2D legacy data. Intuitive wizards provide robust translation of existing 2D files such as AutoCAD, while 2D drafting tools not only emulate the workflows you already know but offer additional capabilities as well. Solid Edge also provides a familiar process for generating detail drawings from 2D layouts. Similar in concept to the model and paper space methodology in other 2D products, you develop 2D layouts at 1:1 scale and then create multiple detail views of the layout on separate drawing sheets. Each view can be scaled as required, while still maintaining correct dimensions and annotations. Any changes to the original 2D layout are automatically reflected in the detail views.

Documenting the largest assemblies

Solid Edge dramatically accelerates the production of assembly drawings by automatically creating exploded views, balloons, parts lists and bills of material for models of any size. Solid Edge customers are routinely creating and documenting massive assemblies, taking advantage of innovative management techniques for drawing view generation. You can place drawing views based on a search query and turn off all the components that are not essential for the purpose of the view. With significantly fewer hidden lines to calculate, drawing views can be placed and updated much faster. It's just one of many tools that will reduce the time you spend creating and updating your assembly drawings.

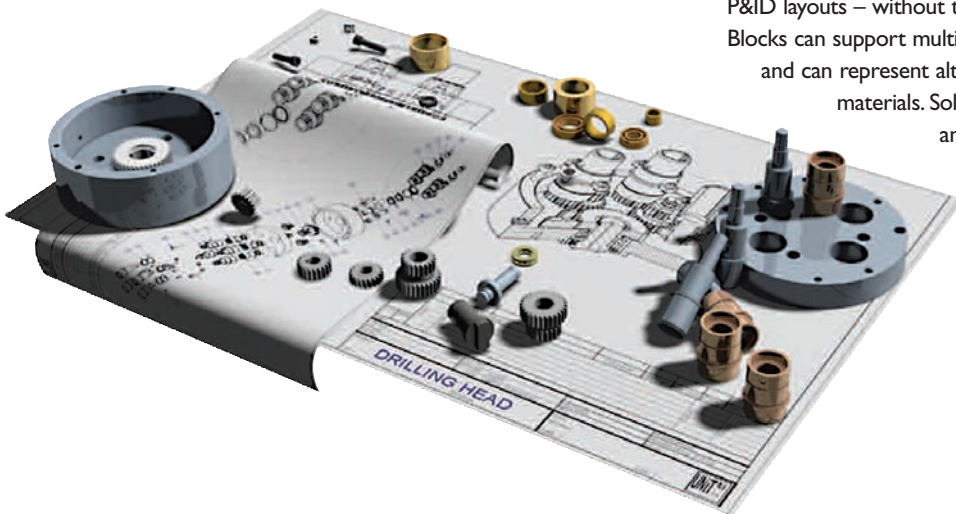
Solid Edge tracks drawing changes that result from alterations of the 3D model, eliminating the need for manual checking. Prominent visual cues signal when drawing views and annotations are out of date and instructions direct the designer to find and amend potential drawing errors.

Drawing automation with QuickSheet templates

Many manufacturing companies have standards for creating drawings, or common assemblies that require similar drawings to be made of each unique configuration. Using QuickSheet templates in Solid Edge, you can eliminate repetitive tasks by predefining a drawing layout and creating new drawings by simply dragging a different part or assembly into the template. All views then recompute to create the new drawing, including any derived views such as sections or detail view, as well as parts lists and auto balloons.

Diagramming

Solid Edge features drag-and-drop diagramming capabilities using industry-standard symbols (blocks) to automate the creation of 2D diagrams such as those commonly produced for electrical and P&ID layouts – without the need for dedicated schematic software. Blocks can support multiple occurrences of the same component and can represent alternate positions to ensure a correct bill of materials. Solid Edge delivers extensive built-in libraries and customers can use their existing block libraries with no translation necessary.



Solid Edge: the proven solution for tooling design

Solid Edge delivers a solution that covers all aspects of your design requirements, from project estimation, through data import, tooling layout, part and assembly design complete with process-specific applications, to collaborative design and engineering change management. With modern business pressures to get products to market faster, tooling has to occur in parallel with product design in real time.

Solid Edge features a unique ability to analyze, capture and re-use your engineering knowledge. It will help you prevent costly errors, enable you to complete your product design much faster and eliminate the need for expensive prototypes.

Solid Edge also manages your design and manufacturing data and ECO process from within the core software without the need for additional design management software. This eliminates the problems of integrating software from several different sources and ensures orderly progress throughout the tooling development process.

Leading tooling/fixture manufacturers worldwide recognize that Solid Edge delivers more productive tools with a lower cost of ownership, which yields a superior return on their design investment. Our customers rely on Solid Edge as a strategic tool to help them realize the benefits of better quality, lower costs and shorter delivery cycles.

Benefits

- Meet critical path delivery schedules for your customers to win new customers and repeat business
- Eliminate errors and ensure accuracy of data for “right the first time” design
- Satisfy design for manufacture requirements.
- Design mold tools in parallel with main design for reduced design cycle
- Solve complex three dimensional problems on the fly within the context of an assembly
- Reduce engineering changes and development time
- Capture design knowledge and experience, leveraging standard mold tool libraries and fixture components

Evolve to 3D

More and more tooling manufacturers are switching from 2D to 3D design while enjoying the inherent business and productivity benefits 3D design delivers. Solid Edge removes the roadblocks on the path to 3D, making the migration significantly less expensive and less difficult. By evolving to 3D with Solid Edge, you can avoid the massive sudden change that can disrupt your workflow and business profitability.

Evolve to 3D is Solid Edge's simple four-step process for moving from 2D design to complete 3D digital mockup with a minimum of disruption, allowing users to get their job done today while moving to 3D at their own pace.

Step 1 – Get the job done today, while moving to 3D at your own pace. Protect your investment in 2D designs (AutoCAD DWG/DXF, Mechanical Desktop, ME10, MicroStation DGN, IGES 2D) by converting them to Solid Edge with efficient translation wizards and use the exceptional capabilities of Solid Edge 2D drafting to get your job done today, while learning new techniques at your own pace.

Step 2 – Turn simple 2D geometry into real 3D parts. Quickly turn simple 2D geometry into intelligent, real 3D parts by using the Solid Edge 2D to 3D migration wizard. By simply selecting individual 2D drawing views and choosing first or third angle projection, 2D drawing views are quickly recreated on 2D planes within a 3D environment.

Step 3 – Apply the power of the new Solid Edge hybrid 2D/3D design workflow. Create assembly layouts for new designs using familiar 2D concepts and adding 3D as you progress. Harness Solid Edge's associative power by driving 3D part configurations directly from 2D layouts.

Zero D – Establish product structure before committing to geometry using Zero D to mix and match real and virtual components with 2D sketches and 3D parts to create your product structure more efficiently.

Step 4 – Realize the benefits of full 3D design. Move to full 3D digital mockup when ready and make use of the workflows learned and the data created to move to the productive world of solid modeling.

GETTING RESULTS

- *“The fundamental concern voiced by product developers considering a move from 2D to 3D CAD tools is a wish to preserve their existing process of product design in order to minimize risk and business impact. 2D layout is central to their process methodology today and the Solid Edge Hybrid 2D/3D tools address the concern head on. By incorporating product structure, 2D layout and 3D geometry into a single consistent approach that emulates the way they currently work and trust, users get the best of all worlds in their transition.”*

*Ken Versprille
PLM Research Director
CPD Associates
Stamford, CT*

About Solid Edge

Solid Edge with Synchronous Technology is the most complete feature-based 2D/3D CAD system available to the market today that combines the speed and flexibility of direct modeling with precise control of dimension-driven design, to provide the fastest, most flexible design experience possible. With superior part and assembly modeling, drafting, transparent data management, and built-in finite element analysis, Solid Edge with Synchronous Technology is a core component of the Velocity Series™ portfolio that eases the growing complexity of product design.

About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services with 4.6 million licensed seats and 51,000 customers worldwide. Headquartered in Plano, Texas, Siemens PLM Software's open enterprise solutions enable a world where organizations and their partners collaborate through Global Innovation Networks to deliver world-class products and services. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.

Solid Edge – www.siemens.com/solidedge

Americas	Europe	Asia-Pacific
800 807 2200	44 (0) 1202 243455	852 2230 3308
Fax 314 264 8922	Fax 44 (0) 1202 243465	Fax 852 2230 3210

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► For more information, contact your local Solid Edge representative: