

Solid Edge Mold Tooling

Automated step-by-step design for mold tooling

fact sheet

Siemens PLM Software

www.siemens.com/solidedge

► Summary

Solid Edge® Mold Tooling software from Siemens PLM Software 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.

Benefits

- Saves time and cost
- Reduces delivery times
- Increases accuracy
- Promotes standardization
- Trims material costs
- Improves customer communications

Features

- Step-by-step workflow
- Part preparation
- Single or multiple core and cavity creation
- Specialized stripper-plate and 3-plate molds
- Industry-standard and custom user-defined mold bases
- Automatic completion of mold details and components
- Associative electrode design for manufacturing
- Included industry leading Solid Edge tools:
 - Data import
 - Rapid Blue shape modeling
 - Documentation

Automated step-by-step design process

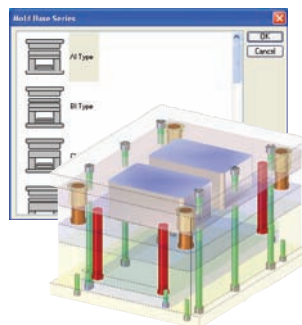
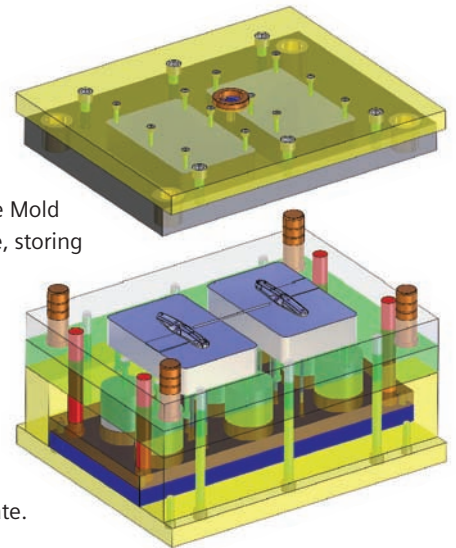
Solid Edge Mold Tooling leads users through a logical step-by-step approach to create plastic injection molds.

The process begins with the automatic application of an accurate shrinkage factor to the molded part. Solid Edge Mold Tooling supports both uniform and nonuniform shrinkage, storing common preferences for future use as you work.

Solid Edge Mold Tooling automatically creates a parting surface to determine correct geometry for the core and cavity, which can be machined directly into the plates or separate core and cavity blocks. The core and cavity blocks are automatically sized based upon the physical part size. Solid Edge Mold Tooling can also import predefined parting surfaces in a partial or completed state.

You can easily create a pattern of the blocks for multi-cavity molds.

Solid Edge Mold Tooling lets you quickly reorient the individual blocks and automatically center them in the mold base for a balanced runner system.



Support for international standards

Solid Edge includes mold bases and components that support multiple international standards, including DME, Futaba, Hasco, LKM, Misumi, Pedrotti, Rabourdin, Strack, PCS, Progressive, Meusburger, FCPK and others.

After selecting the mold base, Solid Edge Mold Tooling uses the cavity and core pattern to determine the appropriate catalog size for the "A" and "B" plates and creates the mold base. And when standard mold bases cannot accommodate the part, users can customize a standard base by redefining the plate sizes, thickness, component spacing and sizes and adding or removing plates to fit specific requirements. Then, users can choose which standard components to add.

A complete solution for mold design

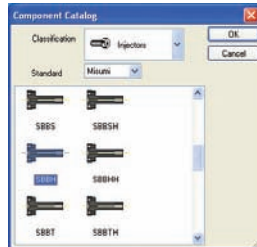
Solid Edge Mold Tooling is the cornerstone of a complete mold design solution that helps transform ideas into deliverable products faster and at lower cost by addressing challenges that are unique to the industry. Solid Edge helps both OEMs and dedicated mold shops overcome these challenges by combining industry-leading capabilities for data import, cleanup and shape modeling with a proven set of mold design automation tools, unparalleled documentation capabilities and seamless integration with best-in-class analysis and manufacturing solutions.

And Solid Edge is the first mold design solution to address the real source of bottlenecks – OEM/supplier communications. Solid Edge's industry-leading design management applications help you service your customers better by providing tools for managing design data, automating process workflows such as design reviews and enabling native view and markup of designs. Whether your customers are next door, or half way around the globe, improved communications mean minimized changes and reduced delivery times.



Fast track to a finished mold

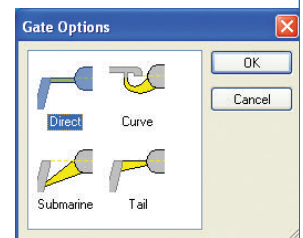
Once the mold base has been created, Solid Edge Mold Tooling adds related standard components such as bolts, ejector pins, return pins, leader pins and support pillars. After positioning a component, Solid Edge Mold Tooling ensures that all the necessary updates are made to the mold base and plates. When placing a bolt, for example, the correct tapped holes, clearance holes and counter-bores are created in each of the plates affected. Ejector pin ends are automatically shaped to match the contour of the parting surface.



Next, designers can create water channels and add-in runner bars and runners by modeling them in the context of a mold assembly. Gates are defined by simply selecting the type of gate desired and its location. The selected gate or gates are then automatically propagated channels throughout the multi-cavity tool at the appropriate locations.

Slides and lifters

Solid Edge Mold Tooling also helps users create slide molds through an interactive interface that is used to define the size, shape and area the slide is to affect. Mold tooling will then create 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. Lifters can also optionally be defined to create undercuts on the core side of the part.



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. Generic design tools also help to create other custom mold components as may be required, making for an automated, yet flexible design system.

Associative electrode design

Solid Edge Electrode Design extends the potential for dramatic time savings beyond tooling design and into manufacture. Users are guided through a logical step-by-step approach to develop single or compound electrodes that are frequently necessary in the manufacture of complex mold components. 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 manufacture, and all remain associative to the original mold design so any changes will be automatically recognized and the electrodes will update accordingly.

Predefined templates provide a fast and efficient method for generating information for manufacturing, and users can easily create an erosion output sheet – an assembly drawing that shows each electrode relative to the component being manufactured. Solid Edge Electrode Design is included in Solid Edge Mold Tooling, but can also be purchased separately to allow companies to select the appropriate tools depending on their design and manufacturing needs.

► For more information, contact your local Velocity Series™ portfolio representative:

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