

## Pro/ENGINEER Complete Mold Design

### Designing molds at breakneck speed

Pro/ENGINEER Complete Mold Design is a value packaging of the functionality found in Pro/ENGINEER Tool Design and Pro/ENGINEER Expert Moldbase. Pro/ENGINEER Complete Mold Design automates all stages of mold creation. It is a fully integrated mold design software solution providing flexible, parametric solid and surface modeling, moldability checks, automated mold cavity and moldbase assembly design, automated production drawing creation, automatic BOM creation, and automatic mold opening simulation and interference checking.

When combined with the appropriate Pro/ENGINEER foundation and production applications, Pro/ENGINEER Complete Mold Design enables the mold designer to work concurrently with part designers and NC programmers to increase productivity, reduce cycle times and improve quality by completing the entire job in Pro/ENGINEER.

### Pro/ENGINEER Tool Design - Mold Cavity Design

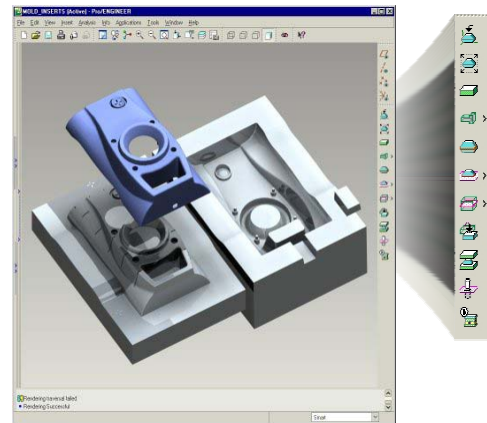
Pro/ENGINEER Tool Design provides the tools to quickly design mold cavity geometry. Through specialized functionality and an easy to use process-driven UI, mold designers can rapidly split a mold into inserts. Since the inserts created reference the design model directly, changes to the design model are automatically reflected in the tooling.

#### Capabilities

- Graphically evaluate draft, undercut and thickness as well as projected area
- Use the process-driven UI that guides you through easy step-by-step mold inserts creation
- Create/modify any feature required to improve moldability – draft, round, complex surfaces, parting line
- Compensate for shrinkage iso-tropically and anisio-tropically
- Automatically create the parting line by merely selecting the mold opening direction
- Automatically create parting surfaces including steel-to-steel shutoff surfaces
- Automatically check for mold lock condition with mold opening and interference checks
- Automatically calculate the fill volume
- Automatically split the mold into inserts
- Create mold specific features such as runners and gates

#### Benefits

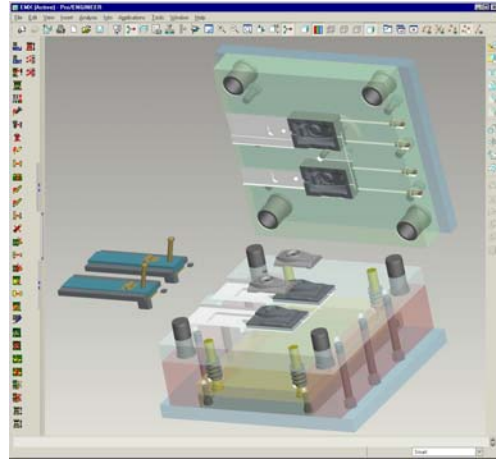
- Shortens the time to develop mold inserts and reduces modeling complexity
- Automates the difficult and time consuming process of making parting surfaces
- Allows users to come up the learning curve quickly with the easy-to-use UI
- Because the mold inserts are built by referencing design part geometry, the mold is always current with the design part
- Shrinkage compensation permits easy compensation by dimension or by scaling the entire model in X, Y and Z
- Integrated with Pro/ENGINEER Plastic Advisor for mold filling simulation
- Creates solid models of inserts can maintain an associative link to Pro/ENGINEER production applications – if the design part changes, the mold inserts and NC toolpath update



## Pro/ENGINEER Expert Moldbase - Moldbase Design

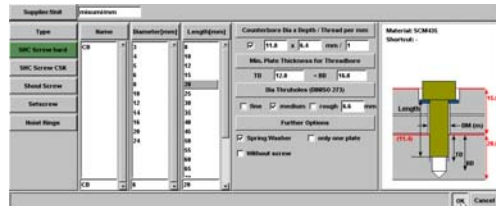
Pro/ENGINEER Expert Moldbase provides “smart” moldbases and mold components. When components are placed, operations such as clearance cuts and drilled and tapped holes, are automatically created in the appropriate neighboring plates and components, thereby relieving the mold designer of time consuming and repetitive mold detailing tasks.

Pro/ENGINEER Expert Moldbase employs a specialized graphical user interface (GUI) that allows quick, real-time previewing before the 3D component or assembly is automatically placed. Pro/ENGINEER Expert Moldbase allows companies to capture their own specific design standards and best practices directly within the mold assemblies and components.



### Capabilities

- Catalog support for all major mold component suppliers – Metric and English
- Process-driven user interface
- Quick-preview, customizable GUI's for configuration and selection of moldbases and components
- “Smart” moldbases and components – when components are placed, appropriate clearance cuts and threads are automatically created in the appropriate plates
- Automatic drawing, holechart and BOM creation
- Complete mold opening simulation with interference checking including slider, lifter and ejection
- Capture company best practices directly in easily customizable library of components
- Short learning curve – tutorials provided with software



### Benefits

- Big productivity gains in for creating and detailing moldbases since an entire library of moldbases and components are already provided and since drawing are automatically created behind the scenes for plates and assemblies
- Eliminates errors resulting from tedious repetitive tasks like clearance hole creation for screws and ejector pins
- Quick-preview GUI's allows quick investigation of what-if scenarios
- Library and drawings are easily customizable to your company's specific standards
- Short learning curve – users are typically productive with 2 to 3 days due to easy-to-use process driven UI, GUI's and included tutorials