

PTC® Creo® Tool Design Extension

Go From Design to Fabrication in Record Time

PTC Creo Tool Design Extension (TDX) is the essential 3D CAD tool for professional designers who need to rapidly create higher quality mold inserts, casting cavities, and patterns. Using PTC Creo TDX's powerful parametric surfacing capabilities, engineers can easily create even the most complex parting surfaces with unprecedented ease. By automating many time-consuming, complex processes, PTC Creo TDX enables you to focus less on tedious tasks and more on creating innovative, top quality tool designs.

Easy interfaces for mold and casting

PTC Creo TDX features a variety of 3D CAD tools specifically engineered to accelerate the design of molds and castings. With its robust functionality and two easy-to-use process-driven GUIs – one for molds and one for castings – designers can quickly develop inserts, casting cavities, and patterns regardless of the complexity of geometry.

Since the 3D models you create in PTC Creo Parametric™ automatically reference your mold and casting designs in PTC Creo TDX, any changes you make are instantly reflected in your tooling and patterns, which further speeds up the product development process.

Key benefits

- Create and modify any features such as drafts, rounds, complex surfaces, and parting lines to improve moldability
 - Compensate for both isotropic and anisotropic shrinkage
 - Build patterns and sand cores that reference design part geometry
- Graphically evaluate mold draft, undercut, thickness, and projected area, and then make instant repairs
 - Design within two process-driven user interfaces, one for mold, one for casting, each guiding you step-by-step through the process of creating mold and casting cavity and patterns



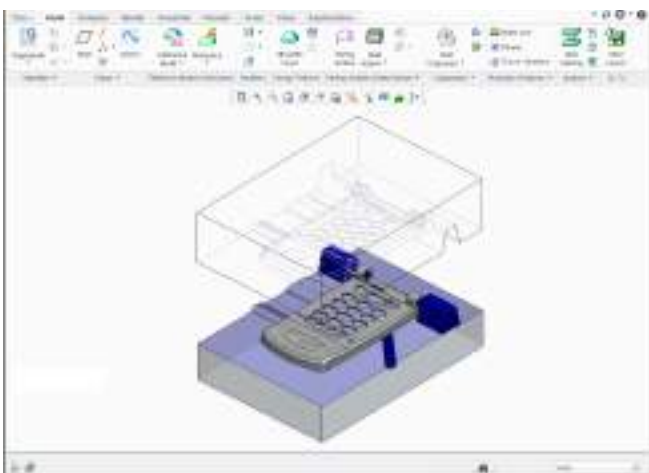
A PTC Creo rendering of core mold and plastic parts.

- Automatically:
 - Create parting lines by simply selecting the mold opening direction
 - Design parting surfaces, including steel-to-steel shutoff surfaces
 - Check for mold lock condition with mold opening and interference checks
 - Calculate fill volume
 - Split, using the parting surface, and create solid model mold components such as cores, cavities, and sliders

Features and specifications

Mold Assembly Functionality

- Create multi-cavity layout configurations including single, rectangular, circular, and variable
- Create waterlines and instantly analyze for thin wall conditions
- Simulate the mold opening sequence, including interference-checking
- Generate production-quality detail drawings, including Bill of Materials (BOMs) and balloon notes
- Produce runners, gates, and sprues instantly.



Process-oriented user interface for mold design.

Time-saving capabilities

- Dramatically shortens time-to-develop mold inserts, casting cavity, and pattern geometry while reducing modeling complexity
- Automates creating parting surfaces
- Ensures optimal quality due to mold inserts being built by referencing design part geometry which makes sure the cavity is always current with the design part
- Compensates for model shrinkage by enabling you to dimension or scale the entire model in X, Y, and Z
- Seamlessly integrates with PTC Creo Plastic Advisor Extension for mold filling simulation
- Produces solid models of inserts that maintain an associative link to PTC Creo NC offers; if the design part changes, the mold inserts and NC tool paths automatically update
- Eliminates the need to translate between part design, mold design, and NC due to seamless integration with other PTC Creo offers applications
- Erases costly rework from interference-checking and mold-opening simulation
- Enables new users to become productive immediately with easy-to-use interfaces both for mold and casting.

Language support

- English, German, French, Italian, Spanish, Russian Japanese, Chinese (Simplified and Traditional) and Korean

Platform support and system requirements

- Microsoft® Windows®



Please visit the [PTC support page](#) for the most up-to-date platform support and system requirements.

For more information, visit:

[PTC.com/product/creo/tool-design-extension](https://www.ptc.com/product/creo/tool-design-extension)

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