

Capability Comparison of Pro/ENGINEER® Wildfire® and PTC® Creo® Parametric™

PTC Creo Parametric offers powerful, reliable, yet easy-to-use modeling tools that accelerate the design of parts and assemblies. The software lets you perform analysis, create renderings and animations, and optimize productivity across a full range of other mechanical design tasks. PTC Creo Parametric will help you design higher quality products faster and allow you to communicate more efficiently with manufacturing and your suppliers.

This table highlights the primary product capabilities delivered in PTC Creo Parametric 2.0 compared with Pro/ENGINEER Wildfire 5.0:

Short Description	Pro/ENGINEER Wildfire 5.0	PTC Creo Parametric 2.0
User Experience		
Real-time dynamic feature editing	•	•
Enhanced real-time photorealistic shadows and reflections, perspective views, and exploded-state animations rendering	•	•
Graphical browsing and thumbnails of files so users can find the right file fast	•	•
Open last session option to fully restore models from the last session	•	•
Named views with thumbnails to quickly reach different views of models	•	•
Streamlined, familiar ribbon interface		•
Optimized, consistent user interface and workflows across sketching, part modeling, assembly modeling, drawing, and 3D annotation		•
Improved shading of smooth surfaces with enhanced Phong shading		•

Short Description	Pro/ENGINEER Wildfire 5.0	PTC Creo Parametric 2.0
User Experience (continued)		
Embedded command finder for quickly locating capabilities when needed		•
Expanded real-time dynamic feature editing for workflows and usability		•
Intuitive 3D dragger and in-graphics toolbar for more efficient designing		•
Tutorials and help topics with the integrated PTC® Learning Connector™, all available in context as needed		•
200+ free tutorials, available online through the PTC Learning Connector		•
3D dragger for moving components as desired		•
Ribbon, hotkeys, and environment settings for configuring work space to individual preferences		•
Measurement tool to automatically determine dimensions based on the type of geometry selected		•
Options for measuring From Axis, As Plane, and As Normal		•
Full screen anti-aliasing option for improved display options		•
Install Assistant to streamline license acquisition, license installation, product acquisition, and installation		•
“Typical user” defaults within Install Assistant for easiest installations		•
Sketching		
Geometry coordinate system within sketcher	•	•
Ellipse, Parallelogram, and Offset sketching options	•	•
Streamlined and familiar ribbon interface within Sketching mode		•
Intelligent right-click mouse mapping for fast menu picking		•
Direct loading of data from PTC® Creo® Sketch™ for creating new models		•
Improved action/object-based dimensioning for sketching		•

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Sketching (continued)		
Center rectangle, Fillet with construction lines, and Construction mode options in Sketching mode		●
Sketching mode accessible by selecting an existing sketch, planar face, or datum		●
Section orientation tool		●
Context-sensitive ALT key options for adding references to sketches		●
Dimension draggers for isolating and changing individual dimensions within sketching when previewing features		●
Part Modeling		
Real-time dynamic feature editing to make onscreen changes simply by grabbing and moving a drag handle	●	●
Real-time repositioning of user-defined features with simple mouse dragging	●	●
Improved 3D draft analysis capabilities	●	●
Consolidated part properties menu	●	●
Improved plastic design with point patterns and intelligent rib feature	●	●
Weld features for design of welded structures	●	●
Streamlined and familiar ribbon interfaces in Part Modeling mode. Commands are faster to access and use		●
Updated freestyle design features for creating freeform shapes and surfaces		●
Improved and intelligent workflows for Helical Sweep, Curve from equation, Curve from Cross-section, and Curve through points		●
Tapered extrude option		●
Intelligent cosmetic thread		●
Multilevel subdivisional modeling in Freestyle for more control to the surface mesh, enabling finer detailing without altering the existing shape		●

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Part Modeling (continued)		
Features within Freestyle to dynamically extrude, revolve, or scale the control mesh to add detail		•
Features within Freestyle to planarize the control mesh normal to the view screen		•
Improved Parallel and Rotational Blending. Plus options for creating sketches in 3D space, using geometry to define the axis of revolution, setting the start point of a section at the feature level, and selecting nonparallel sections		•
Track changes features available when loading models created in PTC Creo Parametric that were modified in PTC® Creo® Direct™ (review, accept/reject, preview and inspect)		•
Collapse feature option for features added in PTC Creo Direct when seen in PTC Creo Parametric		•
Dynamic definition of cross sections via draggers to dynamically control and view cross sections		•
On-the-fly selection of planes for a cross section		•
Real-time precise preview of resulting feature (including cut-outs and through-cuts)		•
Autogeneration of feature when creating real-time changes to sketches		•
Assembly Modeling		
Direct dragging to easily position components in exploded views	•	•
Automatic real-time animation of components as they move into exploded view	•	•
Assembly restructuring with simple drag-and-drop of parts and subassemblies	•	•
Streamlined and familiar ribbon interface for Assembly mode commands		•
Track changes capabilities to see exactly what has been modified within an assembly		•
Streamlined new component placement constraints		•
Fast loading of assemblies as Light Graphics representation		•

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Assembly Modeling (continued)		
Light Graphics representation for quickly restructuring, reordering, and renaming components in assembly designs		•
New constraint types (Normal constraints for surfaces, distance, angle offset, and normal constraints for points and lines)		•
Dynamic definition of cross sections via draggers to dynamically control and view cross sections		•
On-the-fly selection of planes for a cross section		•
Automatic detection and visualization of interference in cross sections		•
Cross section creation by simply selecting geometry in a model. Dynamically edit cross sections by dragging with the mouse		•
Cross sections accessible directly from the Model Tree		•
Sheet Metal		
Sheet metal wall patterns: Create	•	•
Sheet metal wall patterns: Mirror	•	•
Streamlined and familiar ribbon interface in Sheet Metal mode for faster access to commands		•
Dynamic real-time editing and preview of sheet metal parts, corner reliefs, etc.		•
Streamlined workflows in common tools such as bend and wall creation		•
New flat pattern preview and feature		•
Form feature creation (with optional rounds and taper) or a partial piercing from a sketch		•
Sheet metal walls from two intersecting walls with a bend between them		•
Automatic creation of a flat pattern family table instance from a sheet metal model		•
Automatic highlighting of overlapping geometry in the flat pattern preview window		•

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Detailing		
Improved user interface and workflows for key stages of detailing drawings	●	●
Direct selection of annotation items from the new Drawing Tree	●	●
Precise print preview, including pen mappings and line weights	●	●
Streamlined and familiar ribbon interface in Drawing mode for faster access to commands		●
Optimized drawing tables workflow focused on most common user interactions		●
Improved workflow for creating and inserting tables		●
Tables Gallery for previews of predefined tables		●
Properties dialog for tables and BOM balloon regions		●
Text wrapping in table cells		●
Extended controls and setting for BOM balloons, including type and reference text		●
Dynamic repositioning of dimensions by freely dragging the dimension text		●
Dynamic repositioning of dimensions and snap to the center of witness lines or adjacent dimensions		●
Dynamic repositioning of dimensions by locking dimension lines, while still freely moving dimension text		●

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3D Annotations		
Streamlined and familiar ribbon interface in 3D Annotation mode for faster access to commands	•	•
Tools to set and manage annotation plane orientations	•	•
Streamlined tools for creating and manipulating annotation content		•
Tools to create and manage combination states		•
Tools to create 3D annotations based on existing model dimensions		•
3D Detail options to control cosmetic appearance of annotations on models		
3D Detail options to control appearance of annotations per 3D standards (ASME Y14.41-2003, ISO 16792, etc.)		•
Options to dynamically reposition dimensions in 3D drawings just like dynamic dimension repositioning in 2D drawings		
Dynamic dragging of dimensions in 3D with intelligent snapping to center of witness lines and adjacent dimensions		•
Selection of endpoints of edges as references for dimension annotations in 3D		
Selection of edges as edge references for dimensions if they are normal to the annotation plane		•
Data Exchange (included in PTC Creo Parametric)		
Associative Solid Shrink-wrap for sharing the volume envelope of models with third parties	•	•
Improved workflow and capabilities for Import Data Doctor™	•	•
Autodesk Inventor import*	•	•
SolidWorks import*	•	•
AutoCAD® 2012 drawing import*		•
Non-geometric data import from PTC® Creo® Elements/Direct®, including PMI across assemblies and mapping of docuplanes		•

* Installation of relevant libraries required.

PTC Creo offers you the highest level of performance of any 3D parametric modeling software. These PTC Creo apps provide you with a greater depth of capabilities, along with more optional extensions to meet your specific product design needs.

PTC Creo Sketch™

Free, dedicated, easy-to-use, natural digital sketching tool

PTC Creo Layout™

Develop a concept in 2D and then reuse that data to drive the 3D design in PTC Creo Parametric

PTC Creo Schematics™

Create 2D diagrams for electrical, mechanical, and hydraulic systems and automatically route them in PTC Creo Parametric

PTC Creo Direct™

Simple and intuitive 3D CAD app for a broad range of users across the enterprise

PTC Creo Simulate™

3D virtual prototyping to test a range of structural and thermal properties of designs early

PTC Creo Options Modeler™

Streamline the creation and validation of 3D modular product assemblies

PTC Creo View ECAD™

Quickly and easily visualize PCB-related designs by themselves or in parallel with overall product designs

PTC Creo View MCAD™

Visualize products and gain valuable engineering design insight. Supports 3D data from all major MCAD tools

PTC Creo Illustrate™

Dedicated environment to create rich, 3D technical illustrations from 3D data

PTC Creo Parametric offers optional 3D CAD, CAID, CAM, and CAE extensions to allow you to design faster than ever, while maximizing innovation and quality to ultimately create exceptional products.

See the entire list here: [PTC.com/product/creo/parametric](https://www.ptc.com/product/creo/parametric)

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