

# CAPABILITY COMPARISON

# CREO 7-10



**Creo is a 3D CAD solution** that helps you accelerate product innovation so you can build better products faster. Easy-to-learn Creo seamlessly takes you from the earliest phases of product design to manufacturing and beyond. You can combine powerful, proven functionality with new technologies such as generative design, augmented reality, real-time simulation, additive manufacturing and the IoT, to iterate faster, reduce costs and improve product quality. The world of product development moves quickly, and only Creo delivers the transformative tools you need to build competitive advantage and gain market share.



These tables highlight the primary product capabilities delivered in Creo 10 compared with Creo 9, 8, and 7.

Creo Versions	7	8	9	10
<b>User Experience</b>				
Improved material assignment workflow via the model tree and right mouse button command	•	•	•	•
Enhanced dashboard layouts to increase ease of learning		•	•	•
Ability to detach and position multiple dashboard option panels		•	•	•
New quilts node in the model, listing individual quilts in the model tree		•	•	•
Design items group listing bodies & quilts at the top of the model tree		•	•	•
Create custom groups in the design item node containing quilts and bodies		•	•	•
View design items tree side by side with model tree		•	•	•
Streamlined children feature handling workflows when deleting or suppressing features.			•	•
Toolbar in model trees for improved usability			•	•
Clearer organization of model tree filters			•	•
Enhanced design items tree to support features in custom groups			•	•
New quilt/body evolution tree			•	•
Relationship viewer enhancements			•	•
Improved multibody workflows			•	•
Enhanced file open dialog				•
Insert here workflow improvements				•
Improved reorder/restructure workflows in model tree				•
Improved tree display style				•
Drag & drop between quilt/body evolution tree and design items tree				•
Full set of tree capabilities for quilt/body evolution tree (search, columns, UI settings)				•





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<b>User Experience - GRAPHICS</b>				
Custom floor orientation for rendering scene	•	•	•	•
Transparency display control for boundary (BREP) and mixed (facets) geometry in the view tab	•	•	•	•
Show datum planes as semi-transparent 3D objects to better understand datum plane position in 3D space		•	•	•
Global transparency control for bodies & quilts		•	•	•
User keyboard arrows to rotate the model by a predefined angle			•	•

Creo Versions	7	8	9	10
<b>User Experience - ASSEMBLY</b>				
Multibody support for data sharing features, component operations and analysis tools	•	•	•	•
Inseparable assemblies for purchase parts - create a single file for a multi-component assembly		•	•	•
Checkpoints can be merged in a design exploration session		•	•	•
Replace component enhancements			•	•
Retrieve missing component improvements			•	•
Group exploded view offset lines			•	•
Easier access to circular reference report			•	•
Manikin - improved manikin manipulation and constraint handling			•	•
Manikin - create custom manikin populations			•	•
Support multiple manikin reach envelopes per hand				•
Improved joint segment measurements for manikin				•
Updated manikin library stored as inseparable assemblies				•
Improved manikin usability				•



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<b>User Experience - PART MODELING</b>				
Multibody concept for flexible part design methodologies	•	•	•	•
Multi-material models	•	•	•	•
Draft already drafted faces	•	•	•	•
Freestyle - new edit mode allowing users to snap selected control mesh vertices onto selected triangulation objects	•	•	•	•
Showing a snapshot preview of the quilt/body geometry at point in time after regeneration of the selected feature		•	•	•
Copy quilt/body geometry at selected point in regeneration sequence of the design model		•	•	•
Create multiple holes in one feature based upon sketch location		•	•	•
Create a straight drilled hole in combination with the tapped, tapered hole section		•	•	•
Lightweight holes available for all hole types		•	•	•
Option to replace references of quilts recursively		•	•	•
Create a shortest distance curve on surface between 2 points		•	•	•
Dimension pattern supports re-definition of the hole type			•	•
Identical pattern regeneration option for geometry pattern to improve performance			•	•
New divide surface and unify surface features			•	•
Freestyle - new options to modify freestyle geometry using brushes			•	•
Freestyle - mirror shape support			•	•
New vision field analysis to analyze field of view from an eye point			•	•
Export weld information in XML for offline programming of machines			•	•
Hole notes and parameters for simple holes				•
ECAD holes with collaboration relevant parameters				•
Enhanced divide surface capability				•
Combined split/trim tool for multibody operations				•
New flip option in split operation providing additional flexibility				•
Appearance and reference propagation for boolean and split operations				•
Drive pattern member count for nested patterns				•
New pattern instance parameter				•
New closed loop curve feature				•
Specify a target curve for the spine operation inside the warp feature				•
Stretch model geometry to defined references in warp feature				•
Freestyle - support for rotational symmetry				•
Freestyle - ability to lock mesh elements to prevent accidental change				•
Enhanced visual field feature to include support for reflection analysis				•



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<b>User Experience - SKETCHER</b>				
Improved design intent visualization (constraints and dimension references)	•	•	•	•
Easily mirror about any straight sketch entity	•	•	•	•
Enhanced control over dimension appearance in sketcher		•	•	•
Modernized dimension dragger. Easier to see, easier to grab & drag		•	•	•
Auto-scale first sketch			•	•
Enhanced project/offset tool			•	•
Enhanced & enriched inspection tools			•	•

Creo Versions	7	8	9	10
<b>User Experience - SHEETMETAL</b>				
Design sheetmetal geometry in context of regular geometry (multibody)	•	•	•	•
Create multiple flat walls in one feature		•	•	•
Additional flexibility to work with composite curves created by project/offset tool				•
Improved centerline behavior during sketcher regeneration				•



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<b>User Experience - DETAILING</b>				
Streamlined and modernized sketching tools in drawings		•	•	•
Create construction draft entities in drawings		•	•	•
Create 2D views from selected draft entities		•	•	•
Streamlined placement & editing workflows for surface finish			•	•
New gallery for surface finish symbols including updated symbol to latest standards			•	•
Improved surface finish customization			•	•

Creo Versions	7	8	9	10
<b>User Experience - 3D ANNOTATIONS</b>				
Additional indicator options in Geometric Tolerance (GTOL) creation interface	•	•	•	•
Use intelligent surface collection methods in standalone annotation		•	•	•
Streamlined placement and editing workflows for symbols		•	•	•
Interactive gallery for symbols		•	•	•
Modernized and streamlined symbol customization		•	•	•
Semantic reference support for symbols		•	•	•
Streamlined placement & editing workflows for surface finish			•	•
New gallery for surface finish symbols including updated symbol to latest standards			•	•
Improved surface finish customization			•	•
Semantic support for surface finish			•	•
GD&T Advisor - updated for latest standards			•	•
GD&T Advisor - improved cross highlighting			•	•
New parameters on weld symbols to enable re-use in MPMLink			•	•
Relate symbols and surface finishes to other annotations				•
GD&T Advisor - improved semantic behavior for general profile tolerance				•
GD&T Advisor - usability improvements				•


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<b>User Experience - DATA EXCHANGE (included with Creo)</b>				
3MF export to include appearances	•	•	•	•
Import and export multibody parts	•	•	•	•
Solid weld geometry exported to STEP, JT or neutral as separate bodies		•	•	•
STEP AP242 support of additional references included in dimension annotations				•


**THE CREO ADVANTAGE:**

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

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